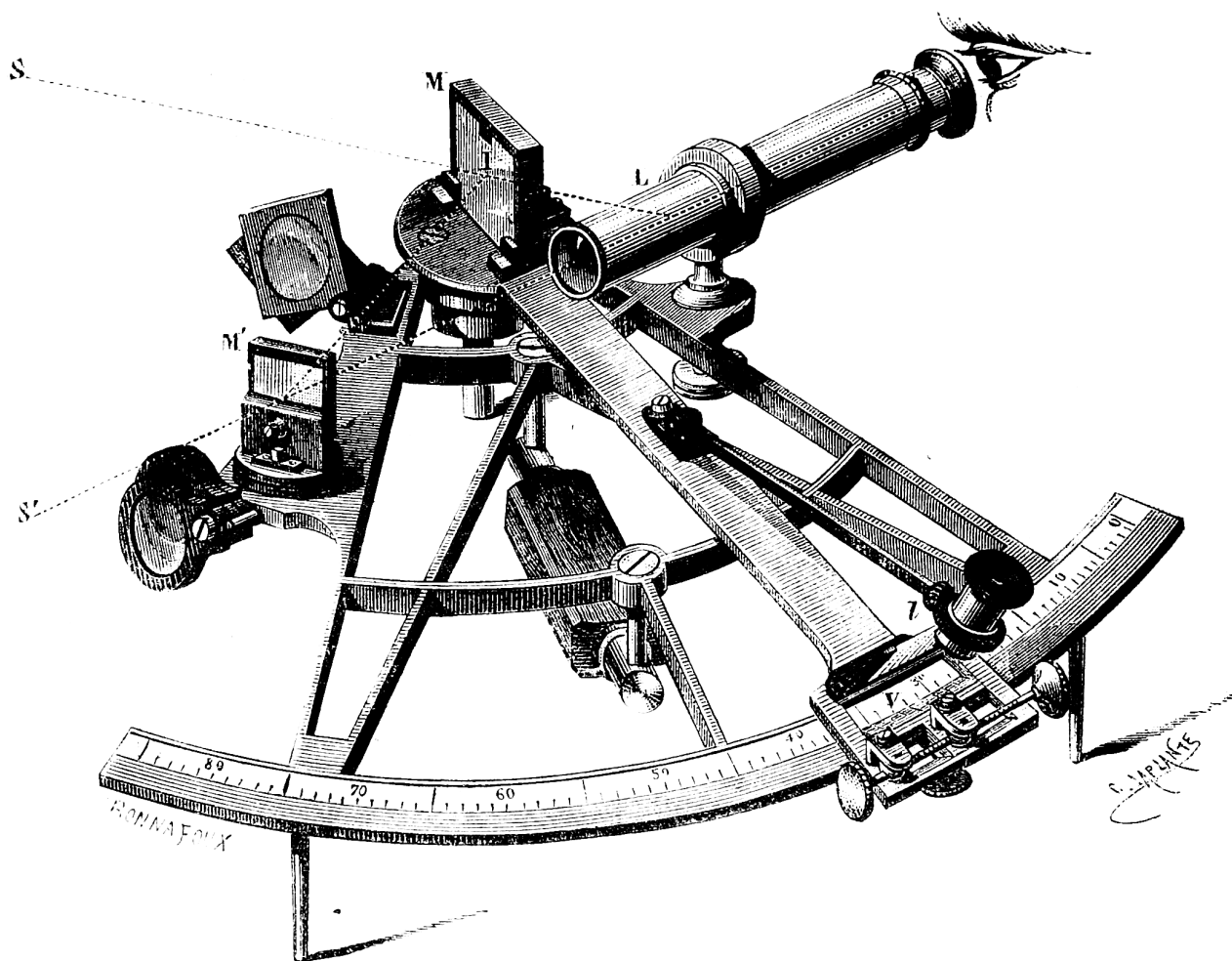




ALMANAQUE NÁUTICO PERSEIS 2002

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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			Edad: 17 ^d 1 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 60'0													
	PMG: 12 ^h 03 ^m 5			SD: 16'3 PMG: 1 ^h 38 ^m R°: 60 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	179	10.6	-23 02.0	336	25.8	+22 47.0			60 N	7 09	8 06	9 02	17 34	98	10 52	22	
1	194	10.3	01.8	350	49.4	46 41.6	54		58	7 02	7 54	8 46	17 49	94	36	26	
2	209	10.0	01.6	5	13.0	46 35.9	57		56	6 56	44	31	18 02	91	23	29	
3	224	09.8	01.4	19	36.6	46 30.2	57		54	50	36	19	14	87	11	32	
4	239	09.5	01.2	34	00.2	46 24.2	60		52	44	28	8 08	24	85	10 00	35	
5	254	09.2	-23 01.0	48	23.9	47 +22 18.1	61		50	6 39	7 20	7 59	18 33	83	9 51	36	
6	269	08.9	-23 00.8	62	47.7	48 +22 11.9	62		45	6 28	7 05	7 38	18 52	78	9 31	40	
7	284	08.6	00.6	77	11.5	48 +22 05.5	64		40	18	6 51	22	19 08	74	14	44	
8	299	08.3	00.3	91	35.4	49 +21 59.0	65		35	08	40	7 08	21	71	9 00	47	
9	314	08.0	-23 00.1	105	59.3	49 52.3	67		30	6 00	30	6 56	32	69	8 48	49	
10	329	07.7	-22 59.9	120	23.2	49 45.4	69		20	5 44	6 11	35	19 51	65	28	52	
11	344	07.4	-22 59.7	134	47.2	50 +21 38.4	70		10 N	5 28	5 54	6 17	20 08	61	8 10	56	
12	359	07.1	-22 59.5	149	11.3	51 +21 31.3	71		0	5 11	5 37	6 00	20 24	57	7 53	59	
13	14	06.8	59.3	163	35.4	51 24.0	73		10 S	4 53	5 20	5 43	40 53		36	61	
14	29	06.5	59.1	177	59.6	52 16.5	75		20	30	4 59	24	20 56	50	7 17	65	
15	44	06.2	58.9	192	23.9	53 08.9	76		30	4 02	35	5 02	21 15	46	6 56	69	
16	59	05.9	58.7	206	48.2	53 +21 01.2	77		35	3 43	20	4 50	27	43	44	70	
17	74	05.6	-22 58.5	221	12.5	53 +20 53.3	79		40	3 21	4 02	4 35	21 39	41	6 29	74	
18	89	05.3	-22 58.3	235	37.0	55 +20 45.3	80		45	2 51	3 40	4 17	21 54	37	6 12	77	
19	104	05.1	58.0	250	01.5	55 37.2	81		50	2 07	3 11	3 55	22 12	33	5 51	81	
20	119	04.8	57.8	264	26.0	55 28.9	83		52	1 41	2 56	45	21 30		41	83	
21	134	04.5	57.6	278	50.6	56 20.4	85		54	1 00	39	33	31 27		29	85	
22	149	04.2	57.4	293	15.3	57 11.9	85		56	** **	2 18	19	41 25		16	88	
23	164	03.9	57.2	307	40.1	58 +20 03.2	87		58	** **	1 50	3 02	22 54	21	5 01	92	
24	179	03.6	-22 57.0	322	04.9	58 +19 54.3	89		60 S	** **	1 06	2 43	23 08	17	4 42	97	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 15 ^m 3		Mag: -4.0 PMG: 11 ^h 50 ^m			Mag: +0.8 PMG: 16 ^h 30 ^m			Mag: -2.7 PMG: 0 ^h 05 ^m			Mag: -0.3 PMG: 21 ^h 46 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	100	28.3	182 39.0	-23 38.8		112 16.0	-5 49.5		358 52.2	+23 00.8		32 32.4	+20 03.8				
1	115	30.8	197 38.1	38.7		127 16.8	48.8		13 55.1	00.8		47 35.0	03.8				
2	130	33.2	212 37.1	38.6		142 17.6	48.0		28 57.9	00.8		62 37.7	03.8				
3	145	35.7	227 36.1	38.6		157 18.4	47.3		44 00.7	00.9		77 40.3	03.8				
4	160	38.2	242 35.1	38.5		172 19.2	46.5		59 03.6	00.9		92 42.9	03.7				
5	175	40.6	257 34.2	-23 38.4		187 20.0	-5 45.7		74 06.4	+23 00.9		107 45.6	+20 03.7				
6	190	43.1	272 33.2	-23 38.3		202 20.8	-5 45.0		89 09.2	+23 01.0		122 48.2	+20 03.7				
7	205	45.6	287 32.2	38.2		217 21.5	44.2		104 12.0	01.0		137 50.8	03.7				
8	220	48.0	302 31.3	38.2		232 22.3	43.5		119 14.9	01.0		152 53.5	03.7				
9	235	50.5	317 30.3	38.1		247 23.1	42.7		134 17.7	01.1		167 56.1	03.7				
10	250	53.0	332 29.3	38.0		262 23.9	42.0		149 20.5	01.1		182 58.7	03.6				
11	265	55.4	347 28.4	-23 37.9		277 24.7	-5 41.2		164 23.4	+23 01.1		198 01.4	+20 03.6				
12	280	57.9	2 27.4	-23 37.8		292 25.5	-5 40.4		179 26.2	+23 01.2		213 04.0	+20 03.6				
13	296	00.3	17 26.4	37.7		307 26.3	39.7		194 29.0	01.2		228 06.6	03.6				
14	311	02.8	32 25.4	37.6		322 27.1	38.9		209 31.9	01.2		243 09.2	03.6				
15	326	05.3	47 24.5	37.5		337 27.9	38.2		224 34.7	01.3		258 11.9	03.6				
16	341	07.7	62 23.5	37.4		352 28.7	37.4		239 37.5	01.3		273 14.5	03.6				
17	356	10.2	77 22.5	-23 37.3		7 29.4	-5 36.6		254 40.3	+23 01.3		288 17.1	+20 03.5				
18	11	12.7	92 21.6	-23 37.2		22 30.2	-5 35.9		269 43.2	+23 01.4		303 19.8	+20 03.5				
19	26	15.1	107 20.6	37.1		37 31.0	35.1		284 46.0	01.4		318 22.4	03.5				
20	41	17.6	122 19.6	37.0		52 31.8	34.4		299 48.8	01.4		333 25.0	03.5				
21	56	20.1	137 18.7	36.9		67 32.6	33.6		314 51.7	01.5		348 27.7	03.5				
22	71	22.5	152 17.7	36.8		82 33.4	32.8		329 54.5	01.5		3 30.3	03.5				
23	86	25.0	167 16.7	36.7		97 34.2	32.1		344 57.3	01.5		18 32.9	03.4				
24	101	27.4	182 15.8	-23 36.6		112 35.0	-5 31.3		0 00.2	+23 01.6		33 35.6	+20 03.4				
Dif	—		-10 +1			+8 +8			-8972 0			+26 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 18 ^d 1 PHE { 4 ^h : 60'0 12 ^h : 60'0 20 ^h : 60'0											
	PMG: 12 ^h 04 ^m 0			SD: 16:3 PMG: 2 ^h 38 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	03.6	-22 57.0	322	04.9	+19 54.3	59	60 N	15 06	16 03	16 59	19 12 99		11 14 14	
1	194	03.3		336	29.8	45.4	89	58	23	14	17 06	23 95		11 02 18	
2	209	03.0		350	54.8	36.3	91	56	37	24	13	33 91		10 52 21	
3	224	02.7		5	19.9	27.1	92	54	15 49	33	19	41 88		43 24	
4	239	02.4		19	45.0	17.7	94	52	16 00	41	24	49 85		35 26	
5	254	02.1	-22 55.9	34	10.2	+19 08.2	95	50	16 10	16 48	17 29	19 56 82		10 27 29	
6	269	01.8	-22 55.6	48	35.4	+18 58.6	96	45	16 30	17 03	17 40	20 10 78		10 11 34	
7	284	01.5		63	00.8	48.9	97	40	16 46	17	17 50	22 74		9 58 38	
8	299	01.3		77	26.2	39.0	99	35	17 00	28	18 00	32 70		47 41	
9	314	01.0		91	51.7	29.1	99	30	12	38	08	41 67		37 44	
10	329	00.7		106	17.2	19.0	101	20	33	17 57	24	20 56 62		20 48	
11	344	00.4	-22 54.5	120	42.9	+18 08.8	102	10 N	17 51	18 13	18 40	21 09 58		9 06 52	
12	359	00.1	-22 54.3	135	08.6	+17 58.5	103	0	18 08	18 30	18 56	21 21 54		8 52 55	
13	13	59.8		149	34.4	48.0	105	10 S	25	18 48	19 15	33 51		37 60	
14	28	59.5		164	00.2	37.5	105	20	18 43	19 08	19 37	21 46 46		22 64	
15	43	59.2		178	26.2	26.8	107	30	19 05	32	20 05	22 01 41		8 05 68	
16	58	58.9		192	52.2	16.1	107	35	18	19 47	23	10 38		7 54 72	
17	73	58.6	-22 53.2	207	18.3	+17 05.2	109	40	19 32	20 05	20 46	22 20 34		7 43 74	
18	88	58.4	-22 52.9	221	44.5	+16 54.2	110	45	19 50	20 27	21 15	22 31 31		7 29 78	
19	103	58.1		236	10.7	43.1	111	50	20 11	20 55	21 59	45 26		12 83	
20	118	57.8		250	37.1	31.9	112	52	22	21 10	22 24	51 24		7 04 85	
21	133	57.5		265	03.5	20.7	112	54	34	27	23 03	22 58 21		6 54 89	
22	148	57.2		279	30.0	+16 09.3	114	56	20 47	21 48	** ** *	23 06 18		44 92	
23	163	56.9		293	56.6	+15 57.8	115	58	21 03	22 15	** ** *	15 15		33 95	
24	178	56.6	-22 51.5	308	23.2	+15 46.2	116	60 S	21 23	22 57	** ** *	23 25 11		6 19 100	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 17 ^h 11 ^m 3		Mag: -4.0 PMG: 11 ^h 52 ^m			Mag: +0.8 PMG: 16 ^h 29 ^m			Mag: -2.7 PMG: 23 ^h 55 ^m			Mag: -0.3 PMG: 21 ^h 42 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	101	27.4	182	15.8	-23 36.6	112	35.0	-5 31.3	0 00.2	+23 01.6	33 35.6	+20 03.4			
1	116	29.9	197	14.8	36.5	127	35.8	30.6	15 03.0	01.6	48 38.2	03.4			
2	131	32.4	212	13.8	36.4	142	36.6	29.8	30 05.8	01.6	63 40.8	03.4			
3	146	34.8	227	12.8	36.3	157	37.4	29.0	45 08.7	01.7	78 43.4	03.4			
4	161	37.3	242	11.9	36.2	172	38.2	28.3	60 11.5	01.7	93 46.1	03.4			
5	176	39.8	257	10.9	-23 36.1	187	38.9	-5 27.5	75 14.3	+23 01.7	108 48.7	+20 03.4			
6	191	42.2	272	09.9	-23 36.0	202	39.7	-5 26.8	90 17.1	+23 01.8	123 51.3	+20 03.3			
7	206	44.7	287	09.0	35.9	217	40.5	26.0	105 20.0	01.8	138 54.0	03.3			
8	221	47.2	302	08.0	35.8	232	41.3	25.2	120 22.8	01.8	153 56.6	03.3			
9	236	49.6	317	07.0	35.6	247	42.1	24.5	135 25.6	01.9	168 59.2	03.3			
10	251	52.1	332	06.1	35.5	262	42.9	23.7	150 28.5	01.9	184 01.8	03.3			
11	266	54.6	347	05.1	-23 35.4	277	43.7	-5 23.0	165 31.3	+23 01.9	199 04.5	+20 03.3			
12	281	57.0	2	04.1	-23 35.3	292	44.5	-5 22.2	180 34.1	+23 02.0	214 07.1	+20 03.2			
13	296	59.5	17	03.2	35.2	307	45.3	21.4	195 37.0	02.0	229 09.7	03.2			
14	312	01.9	32	02.2	35.0	322	46.1	20.7	210 39.8	02.0	244 12.4	03.2			
15	327	04.4	47	01.2	34.9	337	46.9	19.9	225 42.6	02.1	259 15.0	03.2			
16	342	06.9	62	00.3	34.8	352	47.7	19.2	240 45.4	02.1	274 17.6	03.2			
17	357	09.3	76	59.3	-23 34.7	7	48.5	-5 18.4	255 48.3	+23 02.1	289 20.2	+20 03.2			
18	12	11.8	91	58.3	-23 34.5	22	49.2	-5 17.6	270 51.1	+23 02.1	304 22.9	+20 03.2			
19	27	14.3	106	57.4	34.4	37	50.0	16.9	285 53.9	02.2	319 25.5	03.1			
20	42	16.7	121	56.4	34.3	52	50.8	16.1	300 56.8	02.2	334 28.1	03.1			
21	57	19.2	136	55.4	34.1	67	51.6	15.4	315 59.6	02.2	349 30.7	03.1			
22	72	21.7	151	54.5	34.0	82	52.4	14.6	331 02.4	02.3	4 33.4	03.1			
23	87	24.1	166	53.5	33.9	97	53.2	13.8	346 05.3	02.3	19 36.0	03.1			
24	102	26.6	181	52.5	-23 33.7	112	54.0	-5 13.1	1 08.1	+23 02.3	34 38.6	+20 03.1			
Dif	—		-10 +1		+8 +8		+28 0		+26 0		0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 04 ^m 5				Edad: 19 ^d 1 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 9 20 ^h : 59 ^m 8 PMG: 3 ^h 34 ^m R°: 54 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	56.6	-22	51.5	308	23.2	+15	46.2	60 N	7 09	8 05	9 01	20 51	96	11 28	10	
1	193	56.3		51.3	322	49.9	77	34.5 ¹¹⁷	58	7 02	7 54	8 45	20 58	92	20	14	
2	208	56.0		51.0	337	16.7	78	22.8 ¹¹⁷	56	6 55	44	31	21 04	89	13	17	
3	223	55.8		50.8	351	43.6	79	+15 10.9 ¹¹⁹	54	49	35	19	09 87		07	19	
4	238	55.5		50.6	6	10.6	80	+14 59.0 ¹¹⁹	52	44	27	8 08	14 84		11 01	22	
5	253	55.2	-22	50.3	20	37.6	80	+14 46.9 ¹²¹	50	6 39	7 20	7 58	21 18	82	10 56	24	
6	268	54.9	-22	50.1	35	04.7	81	+14 34.8 ¹²¹	45	6 28	7 05	7 38	21 28	76	10 45	29	
7	283	54.6		49.8	49	31.9	82	22.6 ¹²²	40	18	6 52	22	36 72		36	32	
8	298	54.3		49.6	63	59.1	82	+14 10.3 ¹²³	35	09	40	7 08	42 69		28	36	
9	313	54.0		49.4	78	26.5	84	+13 57.9 ¹²⁴	30	6 00	30	6 56	48 66		21	39	
10	328	53.7		49.1	92	53.9	84	45.5 ¹²⁴	20	5 44	6 12	36	21 58	60	10 08	44	
11	343	53.5	-22	48.9	107	21.4	85	+13 32.9 ¹²⁶	10 N	5 29	5 55	6 18	22 07	56	9 58	48	
12	358	53.2	-22	48.6	121	48.9	85	+13 20.3 ¹²⁶	0	5 12	5 38	6 01	22 15	52	9 47	53	
13	13	52.9		48.4	136	16.6	87	+13 07.7 ¹²⁶	10 S	4 54	21	5 44	24 46		37	57	
14	28	52.6		48.1	150	44.3	87	+12 54.9 ¹²⁸	20	32	5 01	25	32 43		26	61	
15	43	52.3		47.9	165	12.0	87	42.1 ¹²⁸	30	4 03	4 36	5 04	42 37		13	67	
16	58	52.0		47.6	179	39.9	89	29.2 ¹²⁹	35	3 45	22	4 51	48 34		9 06	69	
17	73	51.7	-22	47.4	194	07.8	89	+12 16.2 ¹³⁰	40	3 23	4 04	4 36	22 54	31	8 57	73	
18	88	51.5	-22	47.1	208	35.8	90	+12 03.2 ¹³⁰	45	2 53	3 42	4 19	23 02	27	8 47	77	
19	103	51.2		46.9	223	03.9	91	+11 50.1 ¹³¹	50	2 10	3 13	3 57	11 22		35	82	
20	118	50.9		46.6	237	32.0	91	36.9 ¹³²	52	1 44	2 59	47	15 20		29	85	
21	133	50.6		46.4	252	00.2	92	23.7 ¹³²	54	1 06	42	35	19 18		23	87	
22	148	50.3		46.1	266	28.5	93	+11 10.4 ¹³³	56	** **	2 21	21	24 15		16	90	
23	163	50.0		45.9	280	56.8	93	+10 57.1 ¹³³	58	** **	1 54	3 05	30 12		8 08	94	
24	178	49.7	-22	45.6	295	25.2	94	+10 43.7 ¹³⁴	60 S	** **	1 12	2 46	23 36	9	7 59	98	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 07 ^m 4		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: +0.8 PMG: 16 ^h 28 ^m		Mag: -2.7 PMG: 23 ^h 51 ^m		Mag: -0.3 PMG: 21 ^h 38 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	102	26.6	181	52.5	-23	33.7	112	54.0	-5	13.1
1	117	29.1	196	51.6		33.6	127	54.8		12.3
2	132	31.5	211	50.6		33.5	142	55.6		11.6
3	147	34.0	226	49.6		33.3	157	56.4		10.8
4	162	36.4	241	48.7		33.2	172	57.2		10.0
5	177	38.9	256	47.7	-23	33.1	187	58.0	-5	09.3
6	192	41.4	271	46.7	-23	32.9	202	58.8	-5	08.5
7	207	43.8	286	45.8		32.8	217	59.6		07.8
8	222	46.3	301	44.8		32.6	233	00.3		07.0
9	237	48.8	316	43.9		32.5	248	01.1		06.2
10	252	51.2	331	42.9		32.3	263	01.9		05.5
11	267	53.7	346	41.9	-23	32.2	278	02.7	-5	04.7
12	282	56.2	1	41.0	-23	32.0	293	03.5	-5	04.0
13	297	58.6	16	40.0		31.9	308	04.3		03.2
14	313	01.1	31	39.0		31.7	323	05.1		02.4
15	328	03.6	46	38.1		31.6	338	05.9		01.7
16	343	06.0	61	37.1		31.4	353	06.7		00.9
17	358	08.5	76	36.1	-23	31.3	8	07.5	-5	00.2
18	13	10.9	91	35.2	-23	31.1	23	08.3	-4	59.4
19	28	13.4	106	34.2		30.9	38	09.1		58.6
20	43	15.9	121	33.2		30.8	53	09.9		57.9
21	58	18.3	136	32.3		30.6	68	10.7		57.1
22	73	20.8	151	31.3		30.5	83	11.5		56.3
23	88	23.3	166	30.4		30.3	98	12.3		55.6
24	103	25.7	181	29.4	-23	30.1	113	13.1	-4	54.8
Dif	—		-10		+2		+8		+8	
							+28		0	
									+26	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 16:3 PMG: 12 ^h 04 ^m 9			Edad: 20 ^d 1 PHE { SD: 16:3 PMG: 4 ^h 28 ^m					Civil			Náutico	Hora	Rº	Hora	Rº								
	hG ☉	Dec		hG ☾	Dif	Dec			Dif															
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m								
0	178	49.7	-22	45.6	295	25.2	+10	43.7	60 N	15 10	16 06	17 02	22 27	94	11 38	8								
1	193	49.5		45.4	309	53.7 ⁹⁵		30.2 ¹³⁵	58	26	17	09	30	90	34	11								
2	208	49.2		45.1	324	22.2 ⁹⁵		16.7 ¹³⁵	56	40	26	15	33	87	30	14								
3	223	48.9		44.8	338	50.8 ⁹⁶	+10	03.2 ¹³⁵	54	15 52	35	21	36	84	26	17								
4	238	48.6		44.6	353	19.5 ⁹⁷	+9	49.6 ¹³⁶	52	16 02	43	26	38	81	23	19								
5	253	48.3	-22	44.3	7	48.2 ⁹⁷	+9	35.9 ¹³⁷	50	16 12	16 50	17 31	22 40	79	11 20	21								
6	268	48.0	-22	44.1	22	17.0 ⁹⁸	+9	22.2 ¹³⁷	45	16 32	17 05	17 42	22 44	75	11 14	26								
7	283	47.8		43.8	36	45.8 ⁹⁸	+9	08.4 ¹³⁸	40	16 48	18	17 52	48	70	08	30								
8	298	47.5		43.5	51	14.7 ⁹⁹	+8	54.7 ¹³⁷	35	17 02	29	18 01	51	67	04	33								
9	313	47.2		43.3	65	43.7 ¹⁰⁰		40.8 ¹³⁹	30	13	40	09	54	63	11 00	36								
10	328	46.9		43.0	80	12.7 ¹⁰⁰		26.9 ¹³⁹	20	34	17 58	25	22 58	59	10 52	42								
11	343	46.6	-22	42.8	94	41.8 ¹⁰¹	+8	13.0 ¹³⁹	10 N	17 52	18 15	18 41	23 03	53	10 46	46								
12	358	46.3	-22	42.5	109	10.9 ¹⁰¹	+7	59.0 ¹⁴⁰	0	18 09	18 31	18 57	23 07	49	10 40	50								
13	13	46.1		42.2	123	40.1 ¹⁰²		45.0 ¹⁴⁰	10 S	26	18 49	19 15	10	45	34	54								
14	28	45.8		42.0	138	09.4 ¹⁰³		31.0 ¹⁴⁰	20	18 44	19 08	19 37	15	40	27	59								
15	43	45.5		41.7	152	38.7 ¹⁰³		16.9 ¹⁴¹	30	19 05	32	20 05	19	36	20	64								
16	58	45.2		41.4	167	08.0 ¹⁰³	+7	02.8 ¹⁴¹	35	18	19 47	23	22	32	15	68								
17	73	44.9	-22	41.2	181	37.4 ¹⁰⁴	+6	48.7 ¹⁴¹	40	19 32	20 05	20 46	23 25	29	10 10	71								
18	88	44.6	-22	40.9	196	06.9 ¹⁰⁵	+6	34.6 ¹⁴¹	45	19 49	20 26	21 15	23 29	25	10 04	76								
19	103	44.4		40.6	210	36.4 ¹⁰⁵		20.4 ¹⁴²	50	20 11	20 55	21 57	33	20	9 57	81								
20	118	44.1		40.4	225	06.0 ¹⁰⁶	+6	06.2 ¹⁴²	52	21	21 09	22 22	35	18	54	83								
21	133	43.8		40.1	239	35.6 ¹⁰⁶	+5	51.9 ¹⁴³	54	33	26	22 58	37	16	50	86								
22	148	43.5		39.8	254	05.2 ¹⁰⁶		37.6 ¹⁴³	56	20 46	21 46	** ** *	39	14	46	89								
23	163	43.2		39.5	268	34.9 ¹⁰⁷		23.4 ¹⁴²	58	21 02	22 13	** ** *	42	11	42	91								
24	178	43.0	-22	39.3	283	04.7 ¹⁰⁸	+5	09.1 ¹⁴³	60 S	21 21	22 52	** ** *	23 45	7	9 37	95								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 17 ^h 03 ^m 5			Mag: -4.0 PMG: 11 ^h 55 ^m			Mag: +0.8 PMG: 16 ^h 26 ^m			Mag: -2.7 PMG: 23 ^h 46 ^m			Mag: -0.3 PMG: 21 ^h 33 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec	hG ♏	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	103	25.7	181	29.4	-23	30.1	113	13.1	-4	54.8	2	16.0	+23	03.1	35	41.6	+20	02.7						
1	118	28.2	196	28.4		30.0	128	13.9		54.1	17	18.8		03.1	50	44.2		02.7						
2	133	30.7	211	27.5		29.8	143	14.6		53.3	32	21.7		03.2	65	46.9		02.7						
3	148	33.1	226	26.5		29.6	158	15.4		52.5	47	24.5		03.2	80	49.5		02.7						
4	163	35.6	241	25.5		29.5	173	16.2		51.8	62	27.3		03.2	95	52.1		02.7						
5	178	38.0	256	24.6	-23	29.3	188	17.0	-4	51.0	77	30.1	+23	03.3	110	54.7	+20	02.7						
6	193	40.5	271	23.6	-23	29.1	203	17.8	-4	50.3	92	33.0	+23	03.3	125	57.4	+20	02.6						
7	208	43.0	286	22.7		28.9	218	18.6		49.5	107	35.8		03.3	141	00.0		02.6						
8	223	45.4	301	21.7		28.8	233	19.4		48.7	122	38.6		03.4	156	02.6		02.6						
9	238	47.9	316	20.7		28.6	248	20.2		48.0	137	41.5		03.4	171	05.2		02.6						
10	253	50.4	331	19.8		28.4	263	21.0		47.2	152	44.3		03.4	186	07.8		02.6						
11	268	52.8	346	18.8	-23	28.2	278	21.8	-4	46.4	167	47.1	+23	03.5	201	10.5	+20	02.6						
12	283	55.3	1	17.9	-23	28.0	293	22.6	-4	45.7	182	50.0	+23	03.5	216	13.1	+20	02.6						
13	298	57.8	16	16.9		27.9	308	23.4		44.9	197	52.8		03.5	231	15.7		02.5						
14	314	00.2	31	15.9		27.7	323	24.2		44.2	212	55.6		03.6	246	18.3		02.5						
15	329	02.7	46	15.0		27.5	338	25.0		43.4	227	58.4		03.6	261	20.9		02.5						
16	344	05.2	61	14.0		27.3	353	25.8		42.6	243	01.3		03.6	276	23.6		02.5						
17	359	07.6	76	13.1	-23	27.1	8	26.6	-4	41.9	258	04.1	+23	03.7	291	26.2	+20	02.5						
18	14	10.1	91	12.1	-23	26.9	23	27.4	-4	41.1	273	06.9	+23	03.7	306	28.8	+20	02.5						
19	29	12.5	106	11.1		26.7	38	28.2		40.3	288	09.8		03.7	321	31.4		02.5						
20	44	15.0	121	10.2		26.6	53	29.0		39.6	303	12.6		03.7	336	34.1		02.4						
21	59	17.5	136	09.2		26.4	68	29.8		38.8	318	15.4		03.8	351	36.7		02.4						
22	74	19.9	151	08.3		26.2	83	30.6		38.1	333	18.2		03.8	6	39.3		02.4						
23	89	22.4	166	07.3		26.0	98	31.4		37.3	348	21.1		03.8	21	41.9		02.4						
24	104	24.9	181	06.3	-23	25.8	113	32.1	-4	36.5	3	23.9	+23	03.9	36	44.5	+20	02.4						
Dif	—			-10			+2			+8			+8			+28			0			+26		

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 05 ^m 4			Edad: 21 ^d 1 PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/1 PMG: 5 ^h 18 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	43.0	-22	39.3	283	04.7	+5	09.1	60 N	7 08	8 04	9 00	** ** *		11 46	8		
1	193	42.7		39.0	297	34.4	+4	54.7 ¹⁴⁴	58	7 01	7 53	8 44	** ** *		45	10		
2	208	42.4		38.7	312	04.3		40.4 ¹⁰⁹	56	6 55	43	30	** ** *		44	11		
3	223	42.1		38.4	326	34.1		26.0 ¹⁴⁴	54	49	35	18	** ** *		43	16		
4	238	41.8		38.2	341	04.1	+4	11.6 ¹⁴⁴	52	44	27	8 07	23 59	81	42	18		
5	253	41.6	-22	37.9	355	34.0	+3	57.2 ¹⁴⁴	50	6 39	7 20	7 58	23 59	78	11 41	20		
6	268	41.3	-22	37.6	10	04.0	+3	42.8 ¹⁴⁴	45	6 28	7 05	7 38	23 59	73	11 40	24		
7	283	41.0		37.3	24	34.0		28.4 ¹⁴⁴	40	18	6 52	22	58	69	38	29		
8	298	40.7		37.0	39	04.1	+3	14.0 ¹⁴⁴	35	09	41	7 09	58	66	37	32		
9	313	40.4		36.8	53	34.2	+2	59.6 ¹⁴⁴	30	6 01	30	6 57	57	63	36	34		
10	328	40.2		36.5	68	04.3		45.1 ¹⁴⁵	20	5 45	6 12	36	57	57	34	40		
11	343	39.9	-22	36.2	82	34.5	+2	30.7 ¹⁴⁴	10 N	5 30	5 56	6 18	23 56	53	11 32	44		
12	358	39.6	-22	35.9	97	04.7	+2	16.2 ¹⁴⁵	0	5 13	5 39	6 02	23 56	48	11 30	49		
13	13	39.3		35.6	111	34.9	+2	01.8 ¹⁴⁴	10 S	4 55	22	5 45	55	45	28	54		
14	28	39.0		35.3	126	05.2	+1	47.3 ¹⁴⁵	20	33	5 02	26	55	40	26	58		
15	43	38.8		35.1	140	35.4		32.9 ¹⁴⁴	30	4 05	4 38	5 05	55	34	24	63		
16	58	38.5		34.8	155	05.8		18.4 ¹⁴⁵	35	3 47	23	4 53	54	32	23	66		
17	73	38.2	-22	34.5	169	36.1	+1	04.0 ¹⁴⁴	40	3 25	4 06	4 38	23 54	28	11 21	70		
18	88	37.9	-22	34.2	184	06.5	+0	49.5 ¹⁴⁵	45	2 56	3 44	4 21	23 54	24	11 20	74		
19	103	37.7		33.9	198	36.8		35.1 ¹⁴⁴	50	2 13	16	3 59	53	20	18	78		
20	118	37.4		33.6	213	07.3		20.6 ¹⁴⁵	52	1 49	3 02	49	53	18	17	81		
21	133	37.1		33.3	227	37.7	+0	06.2 ¹⁴⁴	54	1 12	2 45	37	53	16	16	83		
22	148	36.8		33.0	242	08.1	-0	08.2 ¹⁴⁴	56	** ** *	2 24	24	53	13	15	86		
23	163	36.6		32.7	256	38.6		22.6 ¹⁴⁴	58	** ** *	1 58	3 08	53	10	13	90		
24	178	36.3	-22	32.5	271	09.1	-0	37.0 ¹⁴⁴	60 S	** ** *	1 19	2 49	23 52	8	11 12	93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 59 ^m 6		Mag: -4.0 PMG: 11 ^h 56 ^m			Mag: +0.8 PMG: 16 ^h 25 ^m			Mag: -2.7 PMG: 23 ^h 42 ^m			Mag: -0.2 PMG: 21 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	104	24.9	181	06.3	-23	25.8	113	32.1	-4	36.5	3	23.9	+23	03.9	36	44.5	+20	02.4
1	119	27.3	196	05.4		25.6	128	32.9		35.8	18	26.7		03.9	51	47.1		02.4
2	134	29.8	211	04.4		25.4	143	33.7		35.0	33	29.6		03.9	66	49.8		02.4
3	149	32.3	226	03.5		25.2	158	34.5		34.2	48	32.4		04.0	81	52.4		02.4
4	164	34.7	241	02.5		25.0	173	35.3		33.5	63	35.2		04.0	96	55.0		02.3
5	179	37.2	256	01.5	-23	24.8	188	36.1	-4	32.7	78	38.0	+23	04.0	111	57.6	+20	02.3
6	194	39.7	271	00.6	-23	24.6	203	36.9	-4	32.0	93	40.9	+23	04.1	127	00.2	+20	02.3
7	209	42.1	285	59.6		24.4	218	37.7		31.2	108	43.7		04.1	142	02.9		02.3
8	224	44.6	300	58.7		24.2	233	38.5		30.4	123	46.5		04.1	157	05.5		02.3
9	239	47.0	315	57.7		24.0	248	39.3		29.7	138	49.4		04.2	172	08.1		02.3
10	254	49.5	330	56.8		23.7	263	40.1		28.9	153	52.2		04.2	187	10.7		02.3
11	269	52.0	345	55.8	-23	23.5	278	40.9	-4	28.1	168	55.0	+23	04.2	202	13.3	+20	02.2
12	284	54.4	0	54.8	-23	23.3	293	41.7	-4	27.4	183	57.8	+23	04.3	217	16.0	+20	02.2
13	299	56.9	15	53.9		23.1	308	42.5		26.6	199	00.7		04.3	232	18.6		02.2
14	314	59.4	30	52.9		22.9	323	43.3		25.9	214	03.5		04.3	247	21.2		02.2
15	330	01.8	45	52.0		22.7	338	44.1		25.1	229	06.3		04.3	262	23.8		02.2
16	345	04.3	60	51.0		22.5	353	44.9		24.3	244	09.2		04.4	277	26.4		02.2
17	0	06.8	75	50.1	-23	22.3	8	45.7	-4	23.6	259	12.0	+23	04.4	292	29.0	+20	02.2
18	15	09.2	90	49.1	-23	22.0	23	46.5	-4	22.8	274	14.8	+23	04.4	307	31.7	+20	02.2
19	30	11.7	105	48.2		21.8	38	47.3		22.0	289	17.6		04.5	322	34.3		02.1
20	45	14.1	120	47.2		21.6	53	48.1		21.3	304	20.5		04.5	337	36.9		02.1
21	60	16.6	135	46.2		21.4	68	48.9		20.5	319	23.3		04.5	352	39.5		02.1
22	75	19.1	150	45.3		21.2	83	49.7		19.7	334	26.1		04.6	7	42.1		02.1
23	90	21.5	165	44.3		20.9	98	50.5		19.0	349	28.9		04.6	22	44.7		02.1
24	105	24.0	180	43.4	-23	20.7	113	51.3	-4	18.2	4	31.8	+23	04.6	37	47.4	+20	02.1
Dif	—		-10		+2		+8		+8		+28		0		+26		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 8				Edad: 22 ^d 1 PHE { SD: 16:1 PMG: 6 ^h 07 ^m 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'6 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	178	36.3	-22	32.5	271	09.1	-0	37.0	60 N	15 13	16 09	17 04	0 01 92	11 54	7			
1	193	36.0		32.2	285	39.6 ¹¹⁵	-0	51.4 ¹⁴⁴	58	29	19	11	00 89	55	11			
2	208	35.7		31.9	300	10.2 ¹¹⁶	-1	05.8 ¹⁴⁴	56	43	29	17	00 86	57	14			
3	223	35.4		31.6	314	40.7 ¹¹⁵		20.1 ¹⁴³	54	15 55	37	23	0 00 83	11 59	16			
4	238	35.2		31.3	329	11.3 ¹¹⁶		34.5 ¹⁴⁴	52	16 05	45	28	** ** *	12 00	19			
5	253	34.9	-22	31.0	343	41.8 ¹¹⁵	-1	48.8 ¹⁴³	50	16 14	16 52	17 33	** ** *	12 01	21			
6	268	34.6	-22	30.7	358	12.4 ¹¹⁶	-2	03.1 ¹⁴³	45	16 34	17 07	17 44	** ** *	12 04	25			
7	283	34.3		30.4	12	43.0 ¹¹⁶		17.4 ¹⁴³	40	16 50	20	17 54	** ** *	07	29			
8	298	34.1		30.1	27	13.6 ¹¹⁶		31.7 ¹⁴³	35	17 03	31	18 03	** ** *	09	32			
9	313	33.8		29.8	41	44.2 ¹¹⁶	-2	45.9 ¹⁴²	30	15	41	11	** ** *	10	36			
10	328	33.5		29.5	56	14.9 ¹¹⁷	-3	00.1 ¹⁴²	20	35	17 59	26	** ** *	14	40			
11	343	33.2	-22	29.2	70	45.5 ¹¹⁶	-3	14.3 ¹⁴²	10 N	17 53	18 16	18 42	** ** *	12 16	45			
12	358	33.0	-22	28.9	85	16.1 ¹¹⁶	-3	28.5 ¹⁴²	0	18 10	18 32	18 58	** ** *	12 19	49			
13	13	32.7		28.6	99	46.8 ¹¹⁷		42.6 ¹⁴¹	10 S	26	18 49	19 16	** ** *	22	52			
14	28	32.4		28.3	114	17.4 ¹¹⁶	-3	56.7 ¹⁴¹	20	18 44	19 09	19 38	** ** *	24	58			
15	43	32.2		28.0	128	48.1 ¹¹⁷	-4	10.8 ¹⁴¹	30	19 05	33	20 05	** ** *	27	63			
16	58	31.9		27.7	143	18.7 ¹¹⁶		24.9 ¹⁴¹	35	18	19 47	23	** ** *	29	66			
17	73	31.6	-22	27.4	157	49.4 ¹¹⁷	-4	38.9 ¹⁴⁰	40	19 32	20 04	20 45	** ** *	12 31	69			
18	88	31.3	-22	27.1	172	20.0 ¹¹⁶	-4	52.9 ¹⁴⁰	45	19 49	20 26	21 14	** ** *	12 34	73			
19	103	31.1		26.8	186	50.7 ¹¹⁷	-5	06.8 ¹³⁹	50	20 10	20 54	21 55	** ** *	36	78			
20	118	30.8		26.4	201	21.3 ¹¹⁶		20.8 ¹⁴⁰	52	21	21 08	22 19	** ** *	38	80			
21	133	30.5		26.1	215	52.0 ¹¹⁷		34.6 ¹³⁸	54	32	24	22 54	** ** *	39	83			
22	148	30.2		25.8	230	22.6 ¹¹⁶	-5	48.5 ¹³⁹	56	20 45	21 44	** ** *	** ** *	41	85			
23	163	30.0		25.5	244	53.2 ¹¹⁶	-6	02.3 ¹³⁸	58	21 01	22 10	** ** *	** ** *	43	88			
24	178	29.7	-22	25.2	259	23.9 ¹¹⁷	-6	16.1 ¹³⁸	60 S	21 19	22 47	** ** *	** ** *	12 45	91			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 55 ^m 6		Mag: -4.0 PMG: 11 ^h 58 ^m				Mag: +0.8 PMG: 16 ^h 24 ^m				Mag: -2.7 PMG: 23 ^h 37 ^m				Mag: -0.2 PMG: 21 ^h 25 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	105	24.0	180	43.4	-23	20.7	113	51.3	-4	18.2	4	31.8	+23	04.6	37	47.4	+20	02.1
1	120	26.5	195	42.4		20.5	128	52.1		17.5	19	34.6		04.7	52	50.0		02.1
2	135	28.9	210	41.5		20.2	143	52.9		16.7	34	37.4		04.7	67	52.6		02.0
3	150	31.4	225	40.5		20.0	158	53.7		15.9	49	40.3		04.7	82	55.2		02.0
4	165	33.9	240	39.6		19.8	173	54.5		15.2	64	43.1		04.7	97	57.8		02.0
5	180	36.3	255	38.6	-23	19.6	188	55.3	-4	14.4	79	45.9	+23	04.8	113	00.4	+20	02.0
6	195	38.8	270	37.7	-23	19.3	203	56.1	-4	13.6	94	48.7	+23	04.8	128	03.0	+20	02.0
7	210	41.3	285	36.7		19.1	218	56.9		12.9	109	51.6		04.8	143	05.7		02.0
8	225	43.7	300	35.8		18.8	233	57.7		12.1	124	54.4		04.9	158	08.3		02.0
9	240	46.2	315	34.8		18.6	248	58.5		11.3	139	57.2		04.9	173	10.9		02.0
10	255	48.6	330	33.8		18.4	263	59.3		10.6	155	00.0		04.9	188	13.5		01.9
11	270	51.1	345	32.9	-23	18.1	279	00.1	-4	09.8	170	02.9	+23	05.0	203	16.1	+20	01.9
12	285	53.6	0	31.9	-23	17.9	294	00.8	-4	09.1	185	05.7	+23	05.0	218	18.7	+20	01.9
13	300	56.0	15	31.0		17.6	309	01.6		08.3	200	08.5		05.0	233	21.3		01.9
14	315	58.5	30	30.0		17.4	324	02.4		07.5	215	11.4		05.1	248	24.0		01.9
15	331	01.0	45	29.1		17.2	339	03.2		06.8	230	14.2		05.1	263	26.6		01.9
16	346	03.4	60	28.1		16.9	354	04.0		06.0	245	17.0		05.1	278	29.2		01.9
17	1	05.9	75	27.2	-23	16.7	9	04.8	-4	05.2	260	19.8	+23	05.2	293	31.8	+20	01.9
18	16	08.4	90	26.2	-23	16.4	24	05.6	-4	04.5	275	22.7	+23	05.2	308	34.4	+20	01.8
19	31	10.8	105	25.3		16.2	39	06.4		03.7	290	25.5		05.2	323	37.0		01.8
20	46	13.3	120	24.3		15.9	54	07.2		02.9	305	28.3		05.2	338	39.6		01.8
21	61	15.7	135	23.4		15.7	69	08.0		02.2	320	31.1		05.3	353	42.3		01.8
22	76	18.2	150	22.4		15.4	84	08.8		01.4	335	34.0		05.3	8	44.9		01.8
23	91	20.7	165	21.5		15.2	99	09.6	-4	00.6	350	36.8		05.3	23	47.5		01.8
24	106	23.1	180	20.5	-23	14.9	114	10.4	-3	59.9	5	39.6	+23	05.4	38	50.1	+20	01.8
Dif	—		-10 +2				+8 +8				+28 0				+26 0			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 2				Edad: 23 ^d 1 PHE { SD: 15 ^h 9 PMG: 6 ^h 56 ^m												
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	29.7	-22	25.2	259	23.9	-6	16.1	60 N	7 07	8 03	8 58	1 33	92	12 01	10	
1	193	29.4		24.9	273	54.5 ¹¹⁶		29.8 ¹³⁷	58	7 00	7 52	42	29	88	06	13	
2	208	29.2		24.6	288	25.1 ¹¹⁶		43.5 ¹³⁷	56	6 54	43	29	26	85	11	16	
3	223	28.9		24.3	302	55.7 ¹¹⁶	-6	57.1 ¹³⁶	54	49	34	17	23	82	15	18	
4	238	28.6		24.0	317	26.3 ¹¹⁶	-7	10.7 ¹³⁶	52	43	27	8 07	20	79	19	20	
5	253	28.3	-22	23.6	331	56.9 ¹¹⁶	-7	24.2 ¹³⁵	50	6 39	7 20	7 57	1 17	78	12 22	23	
6	268	28.1	-22	23.3	346	27.5 ¹¹⁶	-7	37.7 ¹³⁵	45	6 28	7 05	7 38	1 12	72	12 29	28	
7	283	27.8		23.0	0	58.0 ¹¹⁵	-7	51.2 ¹³⁵	40	18	6 52	22	07	69	36	30	
8	298	27.5		22.7	15	28.6 ¹¹⁶	-8	04.6 ¹³⁴	35	09	41	7 09	04	65	41	34	
9	313	27.3		22.4	29	59.1 ¹¹⁵		17.9 ¹³³	30	6 01	31	6 57	1 00	62	46	36	
10	328	27.0		22.1	44	29.7 ¹¹⁶		31.3 ¹³⁴	20	5 46	6 13	37	0 54	58	12 54	41	
11	343	26.7	-22	21.7	59	00.2 ¹¹⁵	-8	44.5 ¹³²	10 N	5 30	5 56	6 19	0 49	53	13 01	45	
12	358	26.5	-22	21.4	73	30.6 ¹¹⁴	-8	57.7 ¹³²	0	5 14	5 40	6 03	0 44	49	13 08	49	
13	13	26.2		21.1	88	01.1 ¹¹⁵	-9	10.8 ¹³¹	10 S	4 56	23	5 46	40	45	14	54	
14	28	25.9		20.8	102	31.6 ¹¹⁵		23.9 ¹³¹	20	34	5 03	28	35	40	22	57	
15	43	25.6		20.4	117	02.0 ¹¹⁴		37.0 ¹³¹	30	4 07	4 40	5 07	29	36	30	62	
16	58	25.4		20.1	131	32.4 ¹¹⁴	-9	49.9 ¹²⁹	35	3 49	25	4 54	26	33	35	65	
17	73	25.1	-22	19.8	146	02.8 ¹¹⁴	-10	02.8 ¹²⁹	40	3 27	4 08	4 40	0 22	30	13 40	69	
18	88	24.8	-22	19.5	160	33.2 ¹¹⁴	-10	15.7 ¹²⁹	45	2 58	3 47	4 23	0 18	26	13 47	72	
19	103	24.6		19.2	175	03.5 ¹¹³		28.5 ¹²⁸	50	2 17	19	4 02	13	22	54	77	
20	118	24.3		18.8	189	33.9 ¹¹⁴		41.2 ¹²⁷	52	1 53	3 05	3 52	11	20	13 58	79	
21	133	24.0		18.5	204	04.2 ¹¹³	-10	53.9 ¹²⁷	54	1 19	2 48	40	09	17	14 02	81	
22	148	23.8		18.2	218	34.4 ¹¹²	-11	06.5 ¹²⁶	56	** ** *	28	27	06	15	06	84	
23	163	23.5		17.8	233	04.7 ¹¹³		19.0 ¹²⁵	58	** ** *	2 03	3 12	03	12	11	88	
24	178	23.2	-22	17.5	247	34.9 ¹¹²	-11	31.5 ¹²⁵	60 S	** ** *	1 26	2 53	0 00	8	14 16	92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 51 ^m 7	Mag: -4.0 PMG: 11 ^h 59 ^m	Mag: +0.8 PMG: 16 ^h 22 ^m	Mag: -2.7 PMG: 23 ^h 33 ^m	Mag: -0.2 PMG: 21 ^h 21 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	106	23.1	180	20.5	-23	14.9	114	10.4	-3	59.9	5	39.6	+23	05.4	38	50.1	+20	01.8
1	121	25.6	195	19.6		14.6	129	11.2		59.1	20	42.4		05.4	53	52.7		01.8
2	136	28.1	210	18.6		14.4	144	12.0		58.4	35	45.3		05.4	68	55.3		01.7
3	151	30.5	225	17.7		14.1	159	12.8		57.6	50	48.1		05.5	83	57.9		01.7
4	166	33.0	240	16.7		13.9	174	13.6		56.8	65	50.9		05.5	99	00.5		01.7
5	181	35.5	255	15.8	-23	13.6	189	14.4	-3	56.1	80	53.7	+23	05.5	114	03.2	+20	01.7
6	196	37.9	270	14.8	-23	13.3	204	15.2	-3	55.3	95	56.6	+23	05.5	129	05.8	+20	01.7
7	211	40.4	285	13.9		13.1	219	16.0		54.5	110	59.4		05.6	144	08.4		01.7
8	226	42.9	300	12.9		12.8	234	16.8		53.8	126	02.2		05.6	159	11.0		01.7
9	241	45.3	315	12.0		12.5	249	17.6		53.0	141	05.0		05.6	174	13.6		01.7
10	256	47.8	330	11.1		12.3	264	18.4		52.2	156	07.9		05.7	189	16.2		01.6
11	271	50.2	345	10.1	-23	12.0	279	19.2	-3	51.5	171	10.7	+23	05.7	204	18.8	+20	01.6
12	286	52.7	0	09.2	-23	11.7	294	20.0	-3	50.7	186	13.5	+23	05.7	219	21.4	+20	01.6
13	301	55.2	15	08.2		11.5	309	20.8		49.9	201	16.4		05.8	234	24.0		01.6
14	316	57.6	30	07.3		11.2	324	21.6		49.2	216	19.2		05.8	249	26.6		01.6
15	332	00.1	45	06.3		10.9	339	22.4		48.4	231	22.0		05.8	264	29.3		01.6
16	347	02.6	60	05.4		10.6	354	23.2		47.7	246	24.8		05.9	279	31.9		01.6
17	2	05.0	75	04.4	-23	10.4	9	24.0	-3	46.9	261	27.7	+23	05.9	294	34.5	+20	01.6
18	17	07.5	90	03.5	-23	10.1	24	24.8	-3	46.1	276	30.5	+23	05.9	309	37.1	+20	01.5
19	32	10.0	105	02.5		09.8	39	25.6		45.4	291	33.3		05.9	324	39.7		01.5
20	47	12.4	120	01.6		09.5	54	26.4		44.6	306	36.1		06.0	339	42.3		01.5
21	62	14.9	135	00.7		09.2	69	27.2		43.8	321	38.9		06.0	354	44.9		01.5
22	77	17.4	149	59.7		09.0	84	28.0		43.1	336	41.8		06.0	9	47.5		01.5
23	92	19.8	164	58.8		08.7	99	28.8		42.3	351	44.6		06.1	24	50.1		01.5
24	107	22.3	179	57.8	-23	08.4	114	29.6	-3	41.5	6	47.4	+23	06.1	39	52.7	+20	01.5
Dif	—		-9		+3		+8		+8		+28		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 7			Edad: 24 ^d 1 PHE { SD: 15 ^h 8 PMG: 7 ^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	h m	m	
0	178	23.2	-22	17.5	247	34.9	-11	31.5	60 N	15 17	16 12	17 07	3 05	91		12 11	12	
1	193	23.0		17.2	262	05.1 ¹¹²		43.9 ¹²⁴	58	32	22	14	2 57	87		19 16		
2	208	22.7		16.9	276	35.3 ¹¹²	-11	56.2 ¹²³	56	46	32	20	51	84		27 19		
3	223	22.4		16.5	291	05.4 ¹¹¹	-12	08.5 ¹²³	54	15 57	40	25	45	81		33 22		
4	238	22.2		16.2	305	35.5 ¹¹¹		20.7 ¹²²	52	16 08	48	31	39	79		39 25		
5	253	21.9	-22	15.9	320	05.6 ¹¹¹	-12	32.8 ¹²¹	50	16 17	16 54	17 35	2 35	76		12 45	26	
6	268	21.6	-22	15.5	334	35.7 ¹¹¹	-12	44.9 ¹²¹	45	16 36	17 09	17 46	2 24	72		12 57	30	
7	283	21.4		15.2	349	05.7 ¹¹⁰	-12	56.9 ¹²⁰	40	16 52	22	17 55	16	68		13 06	35	
8	298	21.1		14.9	3	35.7 ¹¹⁰	-13	08.8 ¹¹⁹	35	17 05	33	18 04	09	65		15 37		
9	313	20.8		14.5	18	05.7 ¹¹⁰		20.6 ¹¹⁸	30	17	17 43	12	2 02	63		22 40		
10	328	20.6		14.2	32	35.6 ¹⁰⁹		32.3 ¹¹⁷	20	36	18 00	28	1 52	57		35 44		
11	343	20.3	-22	13.8	47	05.5 ¹⁰⁹	-13	44.0 ¹¹⁷	10 N	17 54	18 17	18 43	1 42	54		13 46	48	
12	358	20.1	-22	13.5	61	35.4 ¹⁰⁹	-13	55.6 ¹¹⁶	0	18 10	18 33	18 59	1 33	50		13 57	51	
13	13	19.8		13.2	76	05.2 ¹⁰⁸	-14	07.1 ¹¹⁵	10 S	27	18 50	19 17	25	46		14 08	54	
14	28	19.5		12.8	90	35.0 ¹⁰⁸		18.5 ¹¹⁴	20	18 45	19 09	19 38	15	43		19 58		
15	43	19.3		12.5	105	04.8 ¹⁰⁸		29.9 ¹¹⁴	30	19 06	33	20 05	1 05	38		32 62		
16	58	19.0		12.1	119	34.5 ¹⁰⁷		41.2 ¹¹³	35	18	19 47	23	0 59	35		40 64		
17	73	18.7	-22	11.8	134	04.2 ¹⁰⁷	-14	52.3 ¹¹¹	40	19 32	20 04	20 45	0 52	32		14 49	67	
18	88	18.5	-22	11.5	148	33.9 ¹⁰⁷	-15	03.4 ¹¹¹	45	19 49	20 25	21 13	0 44	29		14 59	71	
19	103	18.2		11.1	163	03.5 ¹⁰⁶		14.5 ¹¹¹	50	20 10	20 52	21 53	35	24		15 11	76	
20	118	17.9		10.8	177	33.1 ¹⁰⁶		25.4 ¹⁰⁹	52	20	21 06	22 16	31	22		17 78		
21	133	17.7		10.4	192	02.7 ¹⁰⁶		36.2 ¹⁰⁸	54	31	22	22 49	26	20		23 80		
22	148	17.4		10.1	206	32.2 ¹⁰⁵		47.0 ¹⁰⁸	56	44	21 42	** **	21	17		30 83		
23	163	17.2		09.7	221	01.7 ¹⁰⁵	-15	57.6 ¹⁰⁶	58	20 59	22 06	** **	15	14		39 86		
24	178	16.9	-22	09.4	235	31.1 ¹⁰⁴	-16	08.2 ¹⁰⁶	60 S	21 17	22 41	** **	0 08	11		15 48	90	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 47 ^m 8			Mag: -4.0 PMG: 12 ^h 01 ^m			Mag: +0.8 PMG: 16 ^h 21 ^m			Mag: -2.7 PMG: 23 ^h 28 ^m			Mag: -0.2 PMG: 21 ^h 17 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	107	22.3	179	57.8	-23	08.4	114	29.6	-3	41.5	6	47.4	+23	06.1	39	52.7	+20	01.5
1	122	24.7	194	56.9		08.1	129	30.4		40.8	21	50.2		06.1	54	55.4		01.5
2	137	27.2	209	55.9		07.8	144	31.2		40.0	36	53.1		06.2	69	58.0		01.5
3	152	29.7	224	55.0		07.5	159	32.0		39.2	51	55.9		06.2	85	00.6		01.4
4	167	32.1	239	54.0		07.2	174	32.8		38.5	66	58.7		06.2	100	03.2		01.4
5	182	34.6	254	53.1	-23	06.9	189	33.6	-3	37.7	82	01.5	+23	06.2	115	05.8	+20	01.4
6	197	37.1	269	52.2	-23	06.6	204	34.4	-3	36.9	97	04.4	+23	06.3	130	08.4	+20	01.4
7	212	39.5	284	51.2		06.4	219	35.2		36.2	112	07.2		06.3	145	11.0		01.4
8	227	42.0	299	50.3		06.1	234	36.0		35.4	127	10.0		06.3	160	13.6		01.4
9	242	44.5	314	49.3		05.8	249	36.8		34.6	142	12.8		06.4	175	16.2		01.4
10	257	46.9	329	48.4		05.5	264	37.6		33.9	157	15.7		06.4	190	18.8		01.4
11	272	49.4	344	47.5	-23	05.2	279	38.4	-3	33.1	172	18.5	+23	06.4	205	21.4	+20	01.3
12	287	51.9	359	46.5	-23	04.9	294	39.2	-3	32.4	187	21.3	+23	06.5	220	24.0	+20	01.3
13	302	54.3	14	45.6		04.6	309	40.0		31.6	202	24.1		06.5	235	26.6		01.3
14	317	56.8	29	44.6		04.3	324	40.8		30.8	217	27.0		06.5	250	29.2		01.3
15	332	59.2	44	43.7		04.0	339	41.6		30.1	232	29.8		06.5	265	31.9		01.3
16	348	01.7	59	42.8		03.6	354	42.4		29.3	247	32.6		06.6	280	34.5		01.3
17	3	04.2	74	41.8	-23	03.3	9	43.2	-3	28.5	262	35.4	+23	06.6	295	37.1	+20	01.3
18	18	06.6	89	40.9	-23	03.0	24	44.0	-3	27.8	277	38.2	+23	06.6	310	39.7	+20	01.3
19	33	09.1	104	39.9		02.7	39	44.8		27.0	292	41.1		06.7	325	42.3		01.3
20	48	11.6	119	39.0		02.4	54	45.6		26.2	307	43.9		06.7	340	44.9		01.2
21	63	14.0	134	38.1		02.1	69	46.4		25.5	322	46.7		06.7	355	47.5		01.2
22	78	16.5	149	37.1		01.8	84	47.2		24.7	337	49.5		06.8	10	50.1		01.2
23	93	19.0	164	36.2		01.5	99	48.0		23.9	352	52.4		06.8	25	52.7		01.2
24	108	21.4	179	35.2	-23	01.2	114	48.8	-3	23.2	7	55.2	+23	06.8	40	55.3	+20	01.2
Dif	—			-9 +3			+8 +8			+28 0			+26 0					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3 PMG: 12 ^h 07 ^m 1				Edad: 25 ^d 1 PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 3 20 ^h : 57 ^m 1 PMG: 8 ^h 36 ^m R°: 52 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	16.9	-22	09.4	235	31.1	-16	08.2	60 N	7 06	8 01	8 56	4 36	89	12 23	19			
1	193	16.6		09.0	250	00.5 ¹⁰⁴		18.7 ¹⁰⁵	58	6 59	7 51	40	24	85	35	23			
2	208	16.4		08.7	264	29.9 ¹⁰⁴		29.1 ¹⁰⁴	56	53	41	27	15	81	46	26			
3	223	16.1		08.3	278	59.2 ¹⁰³		39.4 ¹⁰³	54	48	33	16	4 06	78	12 55	29			
4	238	15.9		08.0	293	28.5 ¹⁰³		49.6 ¹⁰²	52	43	26	8 06	3 58	76	13 04	30			
5	253	15.6	-22	07.6	307	57.8 ¹⁰³	-16	59.7 ¹⁰¹	50	6 38	7 19	7 56	3 51	74	13 11	32			
6	268	15.3	-22	07.3	322	27.0 ¹⁰²	-17	09.7 ¹⁰⁰	45	6 27	7 04	7 37	3 36	70	13 27	36			
7	283	15.1		06.9	336	56.2 ¹⁰²		19.6 ⁹⁹	40	18	6 52	22	24	67	41	39			
8	298	14.8		06.6	351	25.3 ¹⁰¹		29.4 ⁹⁸	35	09	41	7 09	14	64	13 52	41			
9	313	14.6		06.2	5	54.4 ¹⁰¹		39.1 ⁹⁷	30	6 01	31	6 57	3 05	61	14 02	43			
10	328	14.3		05.9	20	23.5 ¹⁰¹		48.7 ⁹⁶	20	5 46	6 13	37	2 49	58	19	47			
11	343	14.0	-22	05.5	34	52.5 ¹⁰⁰	-17	58.2 ⁹⁵	10 N	5 31	5 57	6 20	2 36	54	14 34	50			
12	358	13.8	-22	05.2	49	21.5 ¹⁰⁰	-18	07.6 ⁹⁴	0	5 15	5 41	6 03	2 23	52	14 48	52			
13	13	13.5		04.8	63	50.4 ⁹⁹		16.9 ⁹³	10 S	4 57	24	5 47	2 11	48	15 02	55			
14	28	13.3		04.4	78	19.4 ¹⁰⁰		26.1 ⁹²	20	36	5 05	29	1 58	45	17	58			
15	43	13.0		04.1	92	48.2 ⁹⁸		35.2 ⁹¹	30	4 09	4 41	5 08	43	41	34	62			
16	58	12.7		03.7	107	17.1 ⁹⁹		44.2 ⁹⁰	35	3 51	27	4 56	34	39	44	64			
17	73	12.5	-22	03.4	121	45.9 ⁹⁸	-18	53.1 ⁸⁹	40	3 29	4 10	4 42	1 24	37	15 56	66			
18	88	12.2	-22	03.0	136	14.6 ⁹⁷	-19	01.9 ⁸⁸	45	3 01	3 49	4 25	1 13	33	16 10	68			
19	103	12.0		02.6	150	43.3 ⁹⁷		10.6 ⁸⁷	50	2 21	22	4 05	0 59	29	27	72			
20	118	11.7		02.3	165	12.0 ⁹⁷		19.1 ⁸⁵	52	1 58	3 08	3 55	53	27	35	74			
21	133	11.5		01.9	179	40.7 ⁹⁷		27.6 ⁸⁵	54	1 25	2 52	43	46	25	43	77			
22	148	11.2		01.5	194	09.3 ⁹⁶		35.9 ⁸³	56	** ** *	32	30	38	22	16 53	79			
23	163	10.9		01.2	208	37.9 ⁹⁶		44.2 ⁸³	58	** ** *	2 08	3 15	29	19	17 05	82			
24	178	10.7	-22	00.8	223	06.4 ⁹⁵	-19	52.3 ⁸¹	60 S	** ** *	1 33	2 57	0 19	15	17 18	86			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 43 ^m 8		Mag: -4.0 PMG: 12 ^h 02 ^m		Mag: +0.8 PMG: 16 ^h 20 ^m		Mag: -2.7 PMG: 23 ^h 24 ^m		Mag: -0.2 PMG: 21 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	108	21.4	179	35.2	-23	01.2	114	48.8	-3	23.2	7	55.2	+23	06.8	40	55.3	+20	01.2
1	123	23.9	194	34.3		00.8	129	49.6		22.4	22	58.0		06.8	55	57.9		01.2
2	138	26.3	209	33.4		00.5	144	50.4		21.6	38	00.8		06.9	71	00.5		01.2
3	153	28.8	224	32.4	-23	00.2	159	51.2		20.9	53	03.7		06.9	86	03.1		01.2
4	168	31.3	239	31.5	-22	59.9	174	52.0		20.1	68	06.5		06.9	101	05.7		01.2
5	183	33.7	254	30.6	-22	59.6	189	52.8	-3	19.3	83	09.3	+23	07.0	116	08.3	+20	01.1
6	198	36.2	269	29.6	-22	59.2	204	53.6	-3	18.6	98	12.1	+23	07.0	131	10.9	+20	01.1
7	213	38.7	284	28.7		58.9	219	54.4		17.8	113	14.9		07.0	146	13.5		01.1
8	228	41.1	299	27.8		58.6	234	55.3		17.0	128	17.8		07.0	161	16.1		01.1
9	243	43.6	314	26.8		58.3	249	56.1		16.3	143	20.6		07.1	176	18.7		01.1
10	258	46.1	329	25.9		57.9	264	56.9		15.5	158	23.4		07.1	191	21.3		01.1
11	273	48.5	344	25.0	-22	57.6	279	57.7	-3	14.7	173	26.2	+23	07.1	206	23.9	+20	01.1
12	288	51.0	359	24.0	-22	57.3	294	58.5	-3	14.0	188	29.0	+23	07.2	221	26.5	+20	01.1
13	303	53.5	14	23.1		56.9	309	59.3		13.2	203	31.9		07.2	236	29.1		01.1
14	318	55.9	29	22.2		56.6	325	00.1		12.4	218	34.7		07.2	251	31.7		01.0
15	333	58.4	44	21.2		56.3	340	00.9		11.7	233	37.5		07.3	266	34.4		01.0
16	349	00.8	59	20.3		55.9	355	01.7		10.9	248	40.3		07.3	281	37.0		01.0
17	4	03.3	74	19.4	-22	55.6	10	02.5	-3	10.2	263	43.2	+23	07.3	296	39.6	+20	01.0
18	19	05.8	89	18.4	-22	55.3	25	03.3	-3	09.4	278	46.0	+23	07.3	311	42.2	+20	01.0
19	34	08.2	104	17.5		54.9	40	04.1		08.6	293	48.8		07.4	326	44.8		01.0
20	49	10.7	119	16.6		54.6	55	04.9		07.9	308	51.6		07.4	341	47.4		01.0
21	64	13.2	134	15.6		54.2	70	05.7		07.1	323	54.4		07.4	356	50.0		01.0
22	79	15.6	149	14.7		53.9	85	06.5		06.3	338	57.3		07.5	11	52.6		01.0
23	94	18.1	164	13.8		53.6	100	07.3		05.6	354	00.1		07.5	26	55.2		00.9
24	109	20.6	179	12.8	-22	53.2	115	08.1	-3	04.8	9	02.9	+23	07.5	41	57.8	+20	00.9
Dif	—		-9		+3		+8		+8		+28		0		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 26 ^d 1	PHE {	4 ^h : 56'9 12 ^h : 56'8 20 ^h : 56'6			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 07 ^m 5								PMG: 9 ^h 28 ^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	10.7	-22 00.8	223	06.4	-19 52.3	80	60 N	15 21	16 15	17 10	6 05	82	12 42	28
1	193	10.4	00.4	237	34.9	-20 00.3	79	58	36	25	17	5 49	78	12 58	32
2	208	10.2	-22 00.1	252	03.4	08.2	78	56	15 49	35	23	36	75	13 12	34
3	223	09.9	-21 59.7	266	31.8	16.0	78	54	16 00	43	28	24	73	24	36
4	238	09.7	59.3	281	00.2	23.6	76	52	10	50	33	14	71	34	39
5	253	09.4	-21 59.0	295	28.6	-20 31.2	76	50	16 19	16 57	17 38	5 05	70	13 43	40
6	268	09.2	-21 58.6	309	56.9	-20 38.6	74	45	16 38	17 11	17 48	4 46	66	14 03	43
7	283	08.9	58.2	324	25.2	45.9	73	40	16 54	24	17 57	31	64	20	44
8	298	08.6	57.9	338	53.4	-20 53.2	73	35	17 07	34	18 06	18	62	33	47
9	313	08.4	57.5	353	21.7	-21 00.2	70	30	18	17 44	14	4 06	61	14 45	48
10	328	08.1	57.1	7	49.9	07.2	70	20	38	18 02	29	3 47	58	15 06	50
11	343	07.9	-21 56.7	22	18.0	-21 14.0	68	10 N	17 55	18 18	18 44	3 30	56	15 24	51
12	358	07.6	-21 56.4	36	46.2	-21 20.8	68	0	18 11	18 33	18 59	3 15	53	15 40	54
13	13	07.4	56.0	51	14.3	27.4	66	10 S	28	18 50	19 17	2 59	51	15 57	55
14	28	07.1	55.6	65	42.3	33.9	65	20	18 45	19 09	19 38	43	48	16 15	57
15	43	06.9	55.2	80	10.4	40.2	63	30	19 06	33	20 05	24	46	36	59
16	58	06.6	54.9	94	38.4	46.5	63	35	18	19 47	22	13	44	16 48	60
17	73	06.4	-21 54.5	109	06.4	-21 52.6	61	40	19 31	20 03	20 44	2 01	42	17 02	61
18	88	06.1	-21 54.1	123	34.4	-21 58.6	60	45	19 48	20 24	21 11	1 46	39	17 18	64
19	103	05.9	53.7	138	02.3	-22 04.4	58	50	20 08	20 51	21 51	28	36	39	66
20	118	05.6	53.3	152	30.2	10.2	58	52	18	21 04	22 13	20	34	17 49	67
21	133	05.4	53.0	166	58.1	15.8	56	54	29	20	22 44	11	32	18 00	68
22	148	05.1	52.6	181	26.0	21.3	55	56	42	21 39	** **	1 00	30	12	70
23	163	04.9	52.2	195	53.8	26.7	54	58	20 57	22 03	** **	0 48	27	27	72
24	178	04.6	-21 51.8	210	21.6	-22 31.9	52	60 S	21 14	22 36	** **	0 34	23	18 44	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 16 ^h 39 ^m 9		Mag: -4.0 PMG: 12 ^h 04 ^m		Mag: +0.8 PMG: 16 ^h 19 ^m		Mag: -2.7 PMG: 23 ^h 19 ^m		Mag: -0.2 PMG: 21 ^h 08 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	109	20.6	179	12.8	-22 53.2	115	08.1	-3 04.8	9 02.9	+23 07.5	41 57.8	+20 00.9
1	124	23.0	194	11.9	52.9	130	08.9	04.0	24 05.7	07.5	57 00.4	00.9
2	139	25.5	209	11.0	52.5	145	09.7	03.3	39 08.5	07.6	72 03.0	00.9
3	154	28.0	224	10.0	52.2	160	10.5	02.5	54 11.4	07.6	87 05.6	00.9
4	169	30.4	239	09.1	51.8	175	11.3	01.7	69 14.2	07.6	102 08.2	00.9
5	184	32.9	254	08.2	-22 51.5	190	12.1	-3 01.0	84 17.0	+23 07.7	117 10.8	+20 00.9
6	199	35.3	269	07.3	-22 51.1	205	12.9	-3 00.2	99 19.8	+23 07.7	132 13.4	+20 00.9
7	214	37.8	284	06.3	50.8	220	13.7	-2 59.4	114 22.6	07.7	147 16.0	00.9
8	229	40.3	299	05.4	50.4	235	14.5	58.7	129 25.5	07.7	162 18.6	00.9
9	244	42.7	314	04.5	50.1	250	15.3	57.9	144 28.3	07.8	177 21.2	00.8
10	259	45.2	329	03.5	49.7	265	16.1	57.1	159 31.1	07.8	192 23.8	00.8
11	274	47.7	344	02.6	-22 49.3	280	16.9	-2 56.4	174 33.9	+23 07.8	207 26.4	+20 00.8
12	289	50.1	359	01.7	-22 49.0	295	17.7	-2 55.6	189 36.7	+23 07.9	222 29.0	+20 00.8
13	304	52.6	14 00.8	48.6	310 18.5	54.8	204 39.5	07.9	204 39.5	07.9	237 31.6	00.8
14	319	55.1	28 59.8	48.3	325 19.3	54.1	219 42.4	07.9	219 42.4	07.9	252 34.2	00.8
15	334	57.5	43 58.9	47.9	340 20.1	53.3	234 45.2	08.0	234 45.2	08.0	267 36.8	00.8
16	350	00.0	58 58.0	47.5	355 20.9	52.5	249 48.0	08.0	249 48.0	08.0	282 39.4	00.8
17	5 02.5	73 57.1	-22 47.2	10 21.7	-2 51.8	264 50.8	+23 08.0	297 42.0	+20 00.8			
18	20 04.9	88 56.1	-22 46.8	25 22.5	-2 51.0	279 53.6	+23 08.0	312 44.5	+20 00.8			
19	35 07.4	103 55.2	46.4	40 23.3	50.2	294 56.5	08.1	327 47.1	00.7			
20	50 09.8	118 54.3	46.1	55 24.1	49.5	309 59.3	08.1	342 49.7	00.7			
21	65 12.3	133 53.4	45.7	70 24.9	48.7	325 02.1	08.1	357 52.3	00.7			
22	80 14.8	148 52.4	45.3	85 25.7	47.9	340 04.9	08.2	12 54.9	00.7			
23	95 17.2	163 51.5	44.9	100 26.5	47.2	355 07.7	08.2	27 57.5	00.7			
24	110 19.7	178 50.6	-22 44.6	115 27.4	-2 46.4	10 10.6	+23 08.2	43 00.1	+20 00.7			
Dif	—	-9	+4	+8	+8	+28	0	+26	0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3			Edad: 27 ^d 1 PHE { 4 ^h : 56'5 12 ^h : 56'3 20 ^h : 56'1													
	PMG: 12 ^h 07 ^m 9			SD: 15'4													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	178	04.6	-21	51.8		210	21.6	-22	31.9	51	60 N	7 05	7 59	8 54	7 27 68	13 10 44	
1	193	04.4		51.4		224	49.4	88	37.0	51	58	6 58	49	38	7 07 66	30 45	
2	208	04.1		51.1		239	17.2	88	42.0	50	56	52	40	26	6 51 65	13 46 47	
3	223	03.9		50.7		253	44.9	87	46.9	49	54	47	32	14	37 64	14 00 48	
4	238	03.6		50.3		268	12.7	88	51.6	47	52	42	25	8 04	25 63	13 48	
5	253	03.4	-21	49.9		282	40.4	87	-22	56.2	46	50	6 37	7 18	7 55	6 15 61	14 23 49
6	268	03.1	-21	49.5		297	08.1	87	-23	00.6	44	45	6 27	7 04	7 37	5 52 61	14 46 50
7	283	02.9		49.1		311	35.8	87	05.0	44	40	18	6 51	21	35 59	15 04 51	
8	298	02.6		48.7		326	03.5	87	09.2	42	35	09	41	7 08	20 58	20 51	
9	313	02.4		48.3		340	31.2	87	13.3	41	30	6 02	31	6 57	5 07 57	33 52	
10	328	02.1		47.9		354	58.8	86	17.2	39	20	5 47	6 14	37	4 45 56	15 56 52	
11	343	01.9	-21	47.6		9	26.4	86	-23	21.1	39	10 N	5 32	5 58	6 20	4 26 54	16 15 54
12	358	01.6	-21	47.2		23	54.1	87	-23	24.7	36	0	5 16	5 42	6 04	4 08 54	16 34 53
13	13	01.4		46.8		38	21.7	86	28.3	36	10 S	4 58	25	5 48	3 50 53	16 52 54	
14	28	01.1		46.4		52	49.3	86	31.7	34	20	37	5 06	30	31 52	17 12 55	
15	43	00.9		46.0		67	16.9	86	35.0	33	30	4 10	4 43	5 10	3 10 50	35 55	
16	58	00.6		45.6		81	44.5	86	38.2	32	35	3 53	29	4 58	2 57 49	17 48 55	
17	73	00.4	-21	45.2		96	12.1	86	-23	41.2	30	40	3 32	4 12	4 44	2 43 47	18 03 56
18	88	00.1	-21	44.8		110	39.7	86	-23	44.1	29	45	3 04	3 52	4 28	2 25 47	18 22 56
19	102	59.9		44.4		125	07.3	86	46.9	28	50	2 25	25	4 07	2 04 45	45 56	
20	117	59.7		44.0		139	34.9	86	49.5	26	52	2 03	3 11	3 57	1 54 44	18 56 57	
21	132	59.4		43.6		154	02.5	86	52.0	25	54	1 32	2 56	46	43 42	19 08 58	
22	147	59.2		43.2		168	30.0	85	54.4	24	56	0 30	37	34	30 41	22 58	
23	162	58.9		42.8		182	57.6	86	56.6	22	58	** **	2 13	19	1 15 39	19 39 58	
24	177	58.7	-21	42.4		197	25.2	86	-23	58.7	21	60 S	** **	1 40	3 02	0 57 36	20 00 58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 36 ^m 0		Mag: -4.0 PMG: 12 ^h 05 ^m		Mag: +0.9 PMG: 16 ^h 17 ^m		Mag: -2.7 PMG: 23 ^h 15 ^m		Mag: -0.2 PMG: 21 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	110	19.7	178	50.6	-22	44.6	115	27.4	-2	46.4	10	10.6	+23	08.2	43	00.1	+20	00.7
1	125	22.2	193	49.7		44.2	130	28.2		45.6	25	13.4		08.2	58	02.7		00.7
2	140	24.6	208	48.7		43.8	145	29.0		44.9	40	16.2		08.3	73	05.3		00.7
3	155	27.1	223	47.8		43.4	160	29.8		44.1	55	19.0		08.3	88	07.9		00.7
4	170	29.6	238	46.9		43.1	175	30.6		43.3	70	21.8		08.3	103	10.5		00.7
5	185	32.0	253	46.0	-22	42.7	190	31.4	-2	42.6	85	24.6	+23	08.4	118	13.1	+20	00.6
6	200	34.5	268	45.1	-22	42.3	205	32.2	-2	41.8	100	27.5	+23	08.4	133	15.7	+20	00.6
7	215	37.0	283	44.1		41.9	220	33.0		41.0	115	30.3		08.4	148	18.3		00.6
8	230	39.4	298	43.2		41.5	235	33.8		40.3	130	33.1		08.4	163	20.9		00.6
9	245	41.9	313	42.3		41.2	250	34.6		39.5	145	35.9		08.5	178	23.5		00.6
10	260	44.3	328	41.4		40.8	265	35.4		38.7	160	38.7		08.5	193	26.1		00.6
11	275	46.8	343	40.5	-22	40.4	280	36.2	-2	38.0	175	41.5	+23	08.5	208	28.7	+20	00.6
12	290	49.3	358	39.5	-22	40.0	295	37.0	-2	37.2	190	44.4	+23	08.6	223	31.3	+20	00.6
13	305	51.7	13	38.6		39.6	310	37.8		36.4	205	47.2		08.6	238	33.9		00.6
14	320	54.2	28	37.7		39.2	325	38.6		35.7	220	50.0		08.6	253	36.5		00.6
15	335	56.7	43	36.8		38.8	340	39.4		34.9	235	52.8		08.6	268	39.1		00.5
16	350	59.1	58	35.9		38.4	355	40.2		34.1	250	55.6		08.7	283	41.7		00.5
17	6	01.6	73	34.9	-22	38.0	10	41.0	-2	33.4	265	58.4	+23	08.7	298	44.3	+20	00.5
18	21	04.1	88	34.0	-22	37.6	25	41.8	-2	32.6	281	01.2	+23	08.7	313	46.8	+20	00.5
19	36	06.5	103	33.1		37.2	40	42.6		31.8	296	04.1		08.8	328	49.4		00.5
20	51	09.0	118	32.2		36.8	55	43.4		31.1	311	06.9		08.8	343	52.0		00.5
21	66	11.4	133	31.3		36.4	70	44.2		30.3	326	09.7		08.8	358	54.6		00.5
22	81	13.9	148	30.4		36.0	85	45.0		29.5	341	12.5		08.8	13	57.2		00.5
23	96	16.4	163	29.4		35.6	100	45.8		28.8	356	15.3		08.9	28	59.8		00.5
24	111	18.8	178	28.5	-22	35.2	115	46.6	-2	28.0	11	18.1	+23	08.9	44	02.4	+20	00.5
Dif	—		-9 +4		+8 +8		+28 0		+26 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 3				Edad: 28 ^d 1 PHE { 4 ^h : 56/0 12 ^h : 55/8 20 ^h : 55/7 PMG: 11 ^h 15 ^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	177	58.7	-21	42.4	197	25.2	-23	58.7	60 N	15 25	16 19	17 13	8 35	49	13 54	61		
1	192	58.4		42.0	211	52.8 86	-24	00.7 20	58	40	29	20	8 13	50	14 15	60		
2	207	58.2		41.6	226	20.4 86		02.5 18	56	15 52	38	25	7 56	50	33	59		
3	222	57.9		41.2	240	48.0 86		04.2 17	54	16 03	46	31	41 50		14 48	58		
4	237	57.7		40.8	255	15.7 87		05.8 16	52	13	53	35	28 51		15 01	58		
5	252	57.5	-21	40.4	269	43.3 86	-24	07.2 14	50	16 22	16 59	17 40	7 16	52	15 12	58		
6	267	57.2	-21	40.0	284	10.9 86	-24	08.5 13	45	16 41	17 14	17 50	6 53	52	15 36	57		
7	282	57.0		39.6	298	38.6 87		09.7 12	40	16 56	26	17 59	34 52		15 55	56		
8	297	56.7		39.2	313	06.2 86		10.7 10	35	17 09	36	18 07	18 52		16 11	55		
9	312	56.5		38.8	327	33.9 87		11.6 9	30	20	17 46	15	6 04	53	25	55		
10	327	56.2		38.3	342	01.6 87		12.4 8	20	39	18 03	30	5 41	53	16 48	54		
11	342	56.0	-21	37.9	356	29.3 87	-24	13.1 7	10 N	17 56	18 19	18 45	5 20	54	17 09	53		
12	357	55.8	-21	37.5	10	57.0 87	-24	13.6 5	0	18 12	18 34	19 00	5 02	53	17 27	53		
13	12	55.5		37.1	25	24.8 88		14.0 4	10 S	28	18 51	17	4 43	53	17 46	52		
14	27	55.3		36.7	39	52.5 87		14.2 2	20	18 45	19 10	19 38	23	53	18 07	51		
15	42	55.0		36.3	54	20.3 88		14.3 1	30	19 05	32	20 05	4 00	53	30	50		
16	57	54.8		35.9	68	48.1 88		14.3 0	35	17	19 46	22	3 46	54	43	50		
17	72	54.6	-21	35.5	83	16.0 89	-24	14.2 1	40	19 31	20 03	20 43	3 30	54	18 59	49		
18	87	54.3	-21	35.1	97	43.8 88	-24	13.9 3	45	19 47	20 23	21 10	3 12	53	19 18	48		
19	102	54.1		34.6	112	11.7 89		13.5 4	50	20 07	20 49	21 48	2 49	53	41	47		
20	117	53.8		34.2	126	39.6 89		12.9 6	52	17	21 02	22 10	38	53	19 53	45		
21	132	53.6		33.8	141	07.5 89		12.3 8	54	28	18	22 38	25	53	20 06	44		
22	147	53.4		33.4	155	35.5 90		11.5 8	56	40	36	23 29	2 11	52	20	44		
23	162	53.1		33.0	170	03.5 90		10.6 9	58	20 54	21 59	** **	1 54	52	37	43		
24	177	52.9	-21	32.6	184	31.5 90	-24	09.5 11	60 S	21 11	22 30	** **	1 33	52	20 58	41		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 32 ^m 0		Mag: -4.0 PMG: 12 ^h 07 ^m			Mag: +0.9 PMG: 16 ^h 16 ^m			Mag: -2.7 PMG: 23 ^h 10 ^m			Mag: -0.2 PMG: 21 ^h 00 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	111	18.8	178	28.5	-22	35.2	115	46.6	-2	28.0	11	18.1	+23	08.9	44	02.4	+20	00.5
1	126	21.3	193	27.6		34.8	130	47.5		27.2	26	21.0		08.9	59	05.0		00.5
2	141	23.8	208	26.7		34.4	145	48.3		26.5	41	23.8		08.9	74	07.6		00.4
3	156	26.2	223	25.8		34.0	160	49.1		25.7	56	26.6		09.0	89	10.2		00.4
4	171	28.7	238	24.9		33.6	175	49.9		24.9	71	29.4		09.0	104	12.8		00.4
5	186	31.2	253	24.0	-22	33.2	190	50.7	-2	24.2	86	32.2	+23	09.0	119	15.4	+20	00.4
6	201	33.6	268	23.0	-22	32.8	205	51.5	-2	23.4	101	35.0	+23	09.1	134	18.0	+20	00.4
7	216	36.1	283	22.1		32.4	220	52.3		22.6	116	37.8		09.1	149	20.5		00.4
8	231	38.6	298	21.2		32.0	235	53.1		21.9	131	40.7		09.1	164	23.1		00.4
9	246	41.0	313	20.3		31.6	250	53.9		21.1	146	43.5		09.1	179	25.7		00.4
10	261	43.5	328	19.4		31.1	265	54.7		20.3	161	46.3		09.2	194	28.3		00.4
11	276	45.9	343	18.5	-22	30.7	280	55.5	-2	19.6	176	49.1	+23	09.2	209	30.9	+20	00.4
12	291	48.4	358	17.6	-22	30.3	295	56.3	-2	18.8	191	51.9	+23	09.2	224	33.5	+20	00.4
13	306	50.9	13	16.7		29.9	310	57.1		18.0	206	54.7		09.3	239	36.1		00.3
14	321	53.3	28	15.8		29.5	325	57.9		17.3	221	57.5		09.3	254	38.7		00.3
15	336	55.8	43	14.8		29.1	340	58.7		16.5	237	00.3		09.3	269	41.3		00.3
16	351	58.3	58	13.9		28.6	355	59.5		15.7	252	03.2		09.3	284	43.9		00.3
17	7	00.7	73	13.0	-22	28.2	11	00.3	-2	15.0	267	06.0	+23	09.4	299	46.5	+20	00.3
18	22	03.2	88	12.1	-22	27.8	26	01.1	-2	14.2	282	08.8	+23	09.4	314	49.0	+20	00.3
19	37	05.7	103	11.2		27.4	41	01.9		13.4	297	11.6		09.4	329	51.6		00.3
20	52	08.1	118	10.3		26.9	56	02.7		12.7	312	14.4		09.5	344	54.2		00.3
21	67	10.6	133	09.4		26.5	71	03.5		11.9	327	17.2		09.5	359	56.8		00.3
22	82	13.1	148	08.5		26.1	86	04.4		11.1	342	20.0		09.5	14	59.4		00.3
23	97	15.5	163	07.6		25.6	101	05.2		10.4	357	22.8		09.5	30	02.0		00.3
24	112	18.0	178	06.7	-22	25.2	116	06.0	-2	09.6	12	25.7	+23	09.6	45	04.6	+20	00.2
Dif	—		-9		+4		+8		+8		+28		0		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 08 ^m 7			Edad: 29 ^d 1 PHE { 4 ^h : 55:5 12 ^h : 55:4 20 ^h : 55:2 R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	52.9	-21	32.6	184	31.5	-24	09.5	60 N	7 03	7 57	8 51	9 24	31	14 55	74
1	192	52.7		32.1	198	59.6		08.3	58	6 57	47	36	9 03	35	15 15	71
2	207	52.4		31.7	213	27.7		07.0	56	51	39	24	8 46	37	32	68
3	222	52.2		31.3	227	55.8		05.6	54	46	31	13	31	39	46	67
4	237	51.9		30.9	242	24.0		04.0	52	41	24	8 03	19	40	15	59
5	252	51.7	-21	30.5	256	52.2	-24	02.3	50	6 37	7 17	7 54	8 08	41	16 10	63
6	267	51.5	-21	30.0	271	20.4	-24	00.5	45	6 26	7 03	7 36	7 45	43	16 33	61
7	282	51.2		29.6	285	48.7	-23	58.6	40	17	6 51	21	26	45	16 51	59
8	297	51.0		29.2	300	17.1		56.5	35	09	40	7 08	7 10	47	17 06	58
9	312	50.8		28.8	314	45.4		54.3	30	6 02	31	6 57	6 57	47	20	56
10	327	50.5		28.3	329	13.8		52.0	20	5 47	6 14	38	34	49	17 42	54
11	342	50.3	-21	27.9	343	42.3	-23	49.6	10 N	5 32	5 58	6 21	6 14	50	18 02	52
12	357	50.1	-21	27.5	358	10.8	-23	47.0	0	5 17	5 43	6 05	5 55	52	18 20	51
13	12	49.8		27.0	12	39.3		44.3	10 S	5 00	26	5 49	36	53	38	49
14	27	49.6		26.6	27	07.9		41.5	20	4 39	5 08	32	5 16	54	18 58	47
15	42	49.4		26.2	41	36.5		38.6	30	4 12	4 45	12	4 53	56	19 20	45
16	57	49.1		25.8	56	05.2		35.5	35	3 55	31	5 00	40	56	33	43
17	72	48.9	-21	25.3	70	33.9	-23	32.4	40	3 35	4 14	4 46	4 24	58	19 48	42
18	87	48.7	-21	24.9	85	02.7	-23	29.1	45	3 07	3 54	4 30	4 05	59	20 06	39
19	102	48.4		24.5	99	31.5		25.7	50	2 29	28	10	3 42	61	28	37
20	117	48.2		24.0	114	00.4		22.2	52	2 08	15	4 01	31	61	38	36
21	132	48.0		23.6	128	29.3		18.5	54	1 39	3 00	3 50	18	63	20 50	34
22	147	47.7		23.2	142	58.3		14.8	56	0 48	2 41	37	3 03	64	21 04	32
23	162	47.5		22.7	157	27.4		10.9	58	** **	2 19	23	2 46	66	20	29
24	177	47.3	-21	22.3	171	56.5	-23	06.9	60 S	** **	1 48	3 06	2 25	68	21 39	25
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 16 ^h 28 ^m 1		Mag: -4.0 PMG: 12 ^h 08 ^m			Mag: +0.9 PMG: 16 ^h 15 ^m			Mag: -2.7 PMG: 23 ^h 06 ^m			Mag: -0.2 PMG: 20 ^h 56 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	112	18.0	178	06.7	-22	25.2	116	06.0	-2	09.6	12	25.7	+23	09.6	45	04.6
1	127	20.4	193	05.8		24.8	131	06.8		08.8	27	28.5		09.6	60	07.2
2	142	22.9	208	04.9		24.3	146	07.6		08.1	42	31.3		09.6	75	09.8
3	157	25.4	223	03.9		23.9	161	08.4		07.3	57	34.1		09.6	90	12.3
4	172	27.8	238	03.0		23.5	176	09.2		06.5	72	36.9		09.7	105	14.9
5	187	30.3	253	02.1	-22	23.0	191	10.0	-2	05.8	87	39.7	+23	09.7	120	17.5
6	202	32.8	268	01.2	-22	22.6	206	10.8	-2	05.0	102	42.5	+23	09.7	135	20.1
7	217	35.2	283	00.3		22.2	221	11.6		04.2	117	45.3		09.8	150	22.7
8	232	37.7	297	59.4		21.7	236	12.4		03.5	132	48.1		09.8	165	25.3
9	247	40.2	312	58.5		21.3	251	13.2		02.7	147	51.0		09.8	180	27.9
10	262	42.6	327	57.6		20.8	266	14.0		01.9	162	53.8		09.8	195	30.5
11	277	45.1	342	56.7	-22	20.4	281	14.8	-2	01.2	177	56.6	+23	09.9	210	33.0
12	292	47.6	357	55.8	-22	19.9	296	15.6	-2	00.4	192	59.4	+23	09.9	225	35.6
13	307	50.0	12	54.9		19.5	311	16.4	-1	59.6	208	02.2		09.9	240	38.2
14	322	52.5	27	54.0		19.0	326	17.2		58.9	223	05.0		09.9	255	40.8
15	337	54.9	42	53.1		18.6	341	18.0		58.1	238	07.8		10.0	270	43.4
16	352	57.4	57	52.2		18.1	356	18.9		57.3	253	10.6		10.0	285	46.0
17	7	59.9	72	51.3	-22	17.7	11	19.7	-1	56.6	268	13.4	+23	10.0	300	48.6
18	23	02.3	87	50.4	-22	17.2	26	20.5	-1	55.8	283	16.2	+23	10.1	315	51.1
19	38	04.8	102	49.5		16.8	41	21.3		55.0	298	19.1		10.1	330	53.7
20	53	07.3	117	48.6		16.3	56	22.1		54.3	313	21.9		10.1	345	56.3
21	68	09.7	132	47.7		15.9	71	22.9		53.5	328	24.7		10.1	0	58.9
22	83	12.2	147	46.8		15.4	86	23.7		52.7	343	27.5		10.2	16	01.5
23	98	14.7	162	45.9		15.0	101	24.5		52.0	358	30.3		10.2	31	04.1
24	113	17.1	177	45.0	-22	14.5	116	25.3	-1	51.2	13	33.1	+23	10.2	46	06.6
Dif	—		-9 +4			+8 +8			+28 0			+26 0				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 09 ^m 0			Edad: 30 ^d 1 PHE { 4 ^h : 55/1 12 ^h : 55/0 20 ^h : 54/8 PMG: 12 ^h 59 ^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	47.3	-21 22.3	171	56.5	-23 06.9	41	60 N	15 29	16 22	17 17	9 55	20	16 09	79	
1	192	47.0	21.9	186	25.6 ¹⁰¹	-23 02.8	41	58	44	32	23	38	24	26	75	
2	207	46.8	21.4	200	54.8 ¹⁰²	-22 58.6	42	56	15 56	41	28	23	27	40	73	
3	222	46.6	21.0	215	24.1 ¹⁰³	54.3	43	54	16 07	49	33	9 10	29	16 53	70	
4	237	46.3	20.5	229	53.4 ¹⁰³	49.8	45	52	16	16 56	38	8 59	31	17 04	68	
5	252	46.1	-21 20.1	244	22.8 ¹⁰⁴	-22 45.3	45	50	16 25	17 02	17 42	8 49	33	17 13	67	
6	267	45.9	-21 19.7	258	52.2 ¹⁰⁴	-22 40.6	47	45	16 43	17 16	17 52	8 28	36	17 34	63	
7	282	45.6	19.2	273	21.7 ¹⁰⁵	35.9	47	40	16 58	28	18 01	8 11	38	17 50	60	
8	297	45.4	18.8	287	51.3 ¹⁰⁶	31.0	49	35	17 10	38	09	7 57	40	18 04	58	
9	312	45.2	18.3	302	20.9 ¹⁰⁶	26.0	50	30	21	17 47	17	44	42	16	56	
10	327	45.0	17.9	316	50.5 ¹⁰⁶	20.9	51	20	40	18 04	31	23	44	36	53	
11	342	44.7	-21 17.5	331	20.3 ¹⁰⁸	-22 15.7	52	10 N	17 57	18 20	18 45	7 04	47	18 54	50	
12	357	44.5	-21 17.0	345	50.1 ¹⁰⁸	-22 10.4	53	0	18 13	18 35	19 01	6 47	49	19 11	47	
13	12	44.3	16.6	0	19.9 ¹⁰⁸	-22 05.0	54	10 S	28	18 51	18	29	51	27	45	
14	27	44.1	16.1	14	49.9 ¹¹⁰	-21 59.4	56	20	18 46	19 10	19 38	6 10	54	19 45	42	
15	42	43.8	15.7	29	19.8 ¹⁰⁹	53.8	56	30	19 05	32	20 04	5 49	56	20 05	39	
16	57	43.6	15.2	43	49.9 ¹¹¹	48.1	57	35	17	19 46	21	36	58	16	38	
17	72	43.4	-21 14.8	58	20.0 ¹¹¹	-21 42.3	58	40	19 30	20 02	20 42	5 22	59	20 30	35	
18	87	43.1	-21 14.3	72	50.2 ¹¹²	-21 36.3	60	45	19 46	20 22	21 08	5 04	62	20 45	33	
19	102	42.9	13.9	87	20.4 ¹¹²	30.3	60	50	20 06	20 47	21 45	4 43	65	21 05	29	
20	117	42.7	13.4	101	50.7 ¹¹³	24.2	61	52	15	21 00	22 06	32	67	14	27	
21	132	42.5	13.0	116	21.1 ¹¹⁴	18.0	62	54	26	15	22 33	21	68	24	25	
22	147	42.2	12.5	130	51.5 ¹¹⁴	11.7	63	56	38	33	23 17	4 07	71	36	23	
23	162	42.0	12.1	145	22.0 ¹¹⁵	-21 05.2	65	58	20 52	21 55	** **	3 52	73	21 49	20	
24	177	41.8	-21 11.6	159	52.6 ¹¹⁶	-20 58.7	65	60 S	21 08	22 24	** **	3 33	77	22 04	17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag: -4.0			Mag: +0.9			Mag: -2.7			Mag: -0.2				
	16 ^h 24 ^m 2		PMG: 12 ^h 10 ^m			PMG: 16 ^h 13 ^m			PMG: 23 ^h 01 ^m			PMG: 20 ^h 52 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	113	17.1	177 45.0	-22 14.5	116 25.3	-1 51.2	13 33.1	+23 10.2	46 06.6	+20 00.0						
1	128	19.6	192 44.1	14.0	131 26.1	50.4	28 35.9	10.2	61 09.2	00.0						
2	143	22.1	207 43.2	13.6	146 26.9	49.7	43 38.7	10.3	76 11.8	00.0						
3	158	24.5	222 42.3	13.1	161 27.7	48.9	58 41.5	10.3	91 14.4	00.0						
4	173	27.0	237 41.4	12.6	176 28.5	48.1	73 44.3	10.3	106 17.0	00.0						
5	188	29.4	252 40.5	-22 12.2	191 29.3	-1 47.4	88 47.1	+23 10.4	121 19.6	+20 00.0						
6	203	31.9	267 39.6	-22 11.7	206 30.1	-1 46.6	103 49.9	+23 10.4	136 22.2	+20 00.0						
7	218	34.4	282 38.7	11.2	221 30.9	45.8	118 52.8	10.4	151 24.7	00.0						
8	233	36.8	297 37.8	10.8	236 31.7	45.1	133 55.6	10.4	166 27.3	00.0						
9	248	39.3	312 37.0	10.3	251 32.6	44.3	148 58.4	10.5	181 29.9	00.0						
10	263	41.8	327 36.1	09.8	266 33.4	43.5	164 01.2	10.5	196 32.5	00.0						
11	278	44.2	342 35.2	-22 09.4	281 34.2	-1 42.8	179 04.0	+23 10.5	211 35.1	+20 00.0						
12	293	46.7	357 34.3	-22 08.9	296 35.0	-1 42.0	194 06.8	+23 10.5	226 37.6	+20 00.0						
13	308	49.2	12 33.4	08.4	311 35.8	41.2	209 09.6	10.6	241 40.2	+19 59.9						
14	323	51.6	27 32.5	07.9	326 36.6	40.5	224 12.4	10.6	256 42.8	59.9						
15	338	54.1	42 31.6	07.5	341 37.4	39.7	239 15.2	10.6	271 45.4	59.9						
16	353	56.5	57 30.7	07.0	356 38.2	38.9	254 18.0	10.6	286 48.0	59.9						
17	8 59.0	72 29.8	-22 06.5	11 39.0	-1 38.2	269 20.8	+23 10.7	301 50.6	+19 59.9							
18	24 01.5	87 28.9	-22 06.0	26 39.8	-1 37.4	284 23.6	+23 10.7	316 53.1	+19 59.9							
19	39 03.9	102 28.0	05.5	41 40.6	36.6	299 26.4	10.7	331 55.7	59.9							
20	54 06.4	117 27.1	05.1	56 41.4	35.9	314 29.2	10.8	346 58.3	59.9							
21	69 08.9	132 26.2	04.6	71 42.2	35.1	329 32.0	10.8	2 00.9	59.9							
22	84 11.3	147 25.4	04.1	86 43.0	34.3	344 34.8	10.8	17 03.5	59.9							
23	99 13.8	162 24.5	03.6	101 43.8	33.6	359 37.6	10.8	32 06.0	59.9							
24	114 16.3	177 23.6	-22 03.1	116 44.7	-1 32.8	14 40.5	+23 10.9	47 08.6	+19 59.9							
Dif	—	-9	+5	+8	+8	+28	0	+26	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 4			Edad: 1 ^d 4 PHE { 4 ^h : 54:7 12 ^h : 54:6 20 ^h : 54:5 R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	41.8	-21	11.6	159	52.6	-20	58.7	60 N	7 01	7 55	8 48	10 15	14	17 28	81
1	192	41.6		11.2	174	23.2 ¹¹⁶		52.1 ⁶⁶	58	6 55	45	34	10 02	16	41	77
2	207	41.3		10.7	188	53.9 ¹¹⁷		45.4 ⁶⁷	56	50	37	21	9 50	19	17 53	74
3	222	41.1		10.3	203	24.7 ¹¹⁸		38.6 ⁶⁸	54	45	29	11	39	22	18 03	77
4	237	40.9		09.8	217	55.5 ¹¹⁸		31.7 ⁶⁹	52	40	22	8 01	30	24	12	69
5	252	40.7	-21	09.3	232	26.4 ¹¹⁹	-20	24.7 ⁷⁰	50	6 36	7 16	7 53	9 22	25	18 20	67
6	267	40.5	-21	08.9	246	57.4 ¹²⁰	-20	17.7 ⁷⁰	45	6 26	7 02	7 35	9 04	29	18 37	63
7	282	40.2		08.4	261	28.4 ¹²⁰		10.5 ⁷²	40	17	6 50	20	8 49	33	18 50	60
8	297	40.0		08.0	275	59.5 ¹²¹	-20	03.3 ⁷²	35	09	40	7 08	37	35	19 02	57
9	312	39.8		07.5	290	30.7 ¹²²	-19	55.9 ⁷⁴	30	6 01	31	6 57	26	37	12	55
10	327	39.6		07.1	305	01.9 ¹²²		48.5 ⁷⁴	20	5 47	6 14	38	8 07	41	29	52
11	342	39.3	-21	06.6	319	33.2 ¹²³	-19	41.0 ⁷⁵	10 N	5 33	5 59	6 21	7 51	43	19 44	48
12	357	39.1	-21	06.1	334	04.6 ¹²⁴	-19	33.4 ⁷⁶	0	5 18	5 44	6 06	7 36	46	19 58	45
13	12	38.9		05.7	348	36.0 ¹²⁴		25.7 ⁷⁷	10 S	5 01	27	5 50	20	49	20	12
14	27	38.7		05.2	3	07.5 ¹²⁵		17.9 ⁷⁸	20	4 40	5 09	33	7 04	52	27	39
15	42	38.5		04.7	17	39.1 ¹²⁶		10.1 ⁷⁹	30	4 14	4 47	13	6 45	56	44	35
16	57	38.2		04.3	32	10.7 ¹²⁶	-19	02.2 ⁷⁹	35	3 58	33	5 02	34	58	20 54	33
17	72	38.0	-21	03.8	46	42.4 ¹²⁷	-18	54.1 ⁸¹	40	3 37	4 17	4 49	6 21	60	21 05	30
18	87	37.8	-21	03.4	61	14.1 ¹²⁷	-18	46.1 ⁸⁰	45	3 11	3 57	4 33	6 06	63	21 18	27
19	102	37.6		02.9	75	46.0 ¹²⁹		37.9 ⁸²	50	2 33	31	13	5 48	67	34	23
20	117	37.4		02.4	90	17.9 ¹²⁹		29.6 ⁸³	52	2 13	19	4 04	39	69	41	22
21	132	37.1		01.9	104	49.8 ¹²⁹		21.3 ⁸³	54	1 46	3 04	3 53	29	71	49	20
22	147	36.9		01.5	119	21.8 ¹³⁰		12.9 ⁸⁴	56	1 02	2 46	41	18	73	21 59	17
23	162	36.7		01.0	133	53.9 ¹³¹	-18	04.4 ⁸⁵	58	** **	2 24	27	5 05	77	22 09	14
24	177	36.5	-21	00.5	148	26.1 ¹³²	-17	55.9 ⁸⁵	60 S	** **	1 55	3 11	4 50	80	22 21	11
UT	ARIES PMG 16 ^h 20 ^m 2		VENUS Mag: -4.0 PMG: 12 ^h 11 ^m			MARTE Mag: +0.9 PMG: 16 ^h 12 ^m			JÚPITER Mag: -2.7 PMG: 22 ^h 57 ^m			SATURNO Mag: -0.2 PMG: 20 ^h 48 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	114	16.3	177	23.6	-22	03.1	116	44.7	-1	32.8	14	40.5	+23	10.9	47	08.6
1	129	18.7	192	22.7		02.6	131	45.5		32.0	29	43.3		10.9	62	11.2
2	144	21.2	207	21.8		02.1	146	46.3		31.3	44	46.1		10.9	77	13.8
3	159	23.7	222	20.9		01.6	161	47.1		30.5	59	48.9		10.9	92	16.4
4	174	26.1	237	20.0		01.1	176	47.9		29.7	74	51.7		11.0	107	18.9
5	189	28.6	252	19.1	-22	00.7	191	48.7	-1	29.0	89	54.5	+23	11.0	122	21.5
6	204	31.0	267	18.3	-22	00.2	206	49.5	-1	28.2	104	57.3	+23	11.0	137	24.1
7	219	33.5	282	17.4	-21	59.7	221	50.3		27.4	120	00.1		11.0	152	26.7
8	234	36.0	297	16.5		59.2	236	51.1		26.7	135	02.9		11.1	167	29.3
9	249	38.4	312	15.6		58.7	251	51.9		25.9	150	05.7		11.1	182	31.8
10	264	40.9	327	14.7		58.2	266	52.7		25.1	165	08.5		11.1	197	34.4
11	279	43.4	342	13.8	-21	57.7	281	53.5	-1	24.4	180	11.3	+23	11.2	212	37.0
12	294	45.8	357	13.0	-21	57.2	296	54.3	-1	23.6	195	14.1	+23	11.2	227	39.6
13	309	48.3	12	12.1		56.7	311	55.1		22.8	210	16.9		11.2	242	42.1
14	324	50.8	27	11.2		56.2	326	56.0		22.1	225	19.7		11.2	257	44.7
15	339	53.2	42	10.3		55.7	341	56.8		21.3	240	22.5		11.3	272	47.3
16	354	55.7	57	09.4		55.1	356	57.6		20.5	255	25.3		11.3	287	49.9
17	9	58.2	72	08.5	-21	54.6	11	58.4	-1	19.8	270	28.1	+23	11.3	302	52.5
18	25	00.6	87	07.7	-21	54.1	26	59.2	-1	19.0	285	30.9	+23	11.3	317	55.0
19	40	03.1	102	06.8		53.6	42	00.0		18.2	300	33.7		11.4	332	57.6
20	55	05.5	117	05.9		53.1	57	00.8		17.5	315	36.5		11.4	348	00.2
21	70	08.0	132	05.0		52.6	72	01.6		16.7	330	39.3		11.4	3	02.8
22	85	10.5	147	04.1		52.1	87	02.4		15.9	345	42.1		11.4	18	05.3
23	100	12.9	162	03.3		51.6	102	03.2		15.2	0	44.9		11.5	33	07.9
24	115	15.4	177	02.4	-21	51.1	117	04.0	-1	14.4	15	47.7	+23	11.5	48	10.5
Dif	—		-9		+5	+8		+8	+28		0		+26			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 09 ^m 7			Edad: 2 ^d 4 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2 PMG: 14 ^h 33 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
	°	'	°	°	'	°			'	h	m	h	m	h	m
0	177	36.5	-21 00.5	148	26.1	-17 55.9	86	60 N	15 34	16 26	17 20	10 29 9	18 49 79		
1	192	36.3	-21 00.1	162	58.3 ¹³²	47.3	86	58	15 48	36	26	18 13	18 58 76		
2	207	36.1	-20 59.6	177	30.6 ¹³³	38.6	87	56	16 00	44	31	09 15	19 07 73		
3	222	35.8	59.1	192	02.9 ¹³³	29.8	88	54	10	52	36	10 01 18	14 71		
4	237	35.6	58.7	206	35.4 ¹³⁵	20.9	89	52	19	16 58	41	9 54 19	21 68		
5	252	35.4	-20 58.2	221	07.8 ¹³⁴	-17 12.0	89	50	16 28	17 05	17 45	9 47 22	19 27 66		
6	267	35.2	-20 57.7	235	40.4 ¹³⁶	-17 03.0	90	45	16 46	17 18	17 55	9 33 25	19 40 62		
7	282	35.0	57.2	250	13.0 ¹³⁶	-16 54.0	90	40	17 00	30	18 03	22 28	50 59		
8	297	34.8	56.8	264	45.6 ¹³⁶	44.9	91	35	12	40	11	12 31	19 59 56		
9	312	34.5	56.3	279	18.3 ¹³⁷	35.7	92	30	23	17 49	18	9 03 33	20 07 54		
10	327	34.3	55.8	293	51.1 ¹³⁸	26.4	93	20	42	18 05	32	8 48 37	21 49		
11	342	34.1	-20 55.3	308	24.0 ¹³⁹	-16 17.1	93	10 N	17 58	18 20	18 46	8 34 41	20 32 47		
12	357	33.9	-20 54.9	322	56.9 ¹³⁹	-16 07.7	94	0	18 13	18 36	19 01	8 22 44	20 43 43		
13	12	33.7	54.4	337	29.9 ¹⁴⁰	-15 58.3	94	10 S	29	18 51	18	8 09 47	20 54 40		
14	27	33.5	53.9	352	02.9 ¹⁴⁰	48.8	95	20	18 46	19 10	19 38	7 56 51	21 06 36		
15	42	33.3	53.4	6	36.0 ¹⁴¹	39.2	96	30	19 05	32	20 04	41 54	19 32		
16	57	33.1	52.9	21	09.1 ¹⁴¹	29.6	96	35	16	19 45	20	32 56	27 29		
17	72	32.8	-20 52.5	35	42.3 ¹⁴²	-15 19.9	97	40	19 29	20 01	20 40	7 21 60	21 35 27		
18	87	32.6	-20 52.0	50	15.6 ¹⁴³	-15 10.1	98	45	19 45	20 20	21 06	7 09 63	21 45 24		
19	102	32.4	51.5	64	48.9 ¹⁴³	-15 00.3	98	50	20 04	45	21 42	6 55 66	21 57 20		
20	117	32.2	51.0	79	22.3 ¹⁴⁴	-14 50.5	98	52	13	20 58	22 02	48 68	22 03 18		
21	132	32.0	50.5	93	55.7 ¹⁴⁴	40.5	100	54	23	21 12	22 28	40 71	09 16		
22	147	31.8	50.0	108	29.2 ¹⁴⁵	30.5	100	56	35	29	23 06	31 74	16 13		
23	162	31.6	49.5	123	02.7 ¹⁴⁵	20.5	100	58	20 49	21 50	** ** *	22 76	23 11		
24	177	31.4	-20 49.1	137	36.3 ¹⁴⁶	-14 10.4	101	60 S	21 05	22 18	** ** *	6 10 80	22 32 8		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 16 ^m 3			Mag: -4.0 PMG: 12 ^h 13 ^m			Mag: +0.9 PMG: 16 ^h 11 ^m			Mag: -2.7 PMG: 22 ^h 53 ^m			Mag: -0.2 PMG: 20 ^h 44 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	115	15.4	177 02.4	-21 51.1	117 04.0	-1 14.4	15	47.7	+23 11.5	48 10.5	+19 59.7				
1	130	17.9	192 01.5	50.5	132 04.8	13.6	30	50.5	11.5	63 13.1	59.7				
2	145	20.3	207 00.6	50.0	147 05.6	12.9	45	53.3	11.5	78 15.6	59.7				
3	160	22.8	221 59.8	49.5	162 06.5	12.1	60	56.1	11.6	93 18.2	59.7				
4	175	25.3	236 58.9	49.0	177 07.3	11.3	75	58.9	11.6	108 20.8	59.7				
5	190	27.7	251 58.0	-21 48.5	192 08.1	-1 10.6	91	01.7	+23 11.6	123 23.4	+19 59.7				
6	205	30.2	266 57.1	-21 47.9	207 08.9	-1 09.8	106	04.5	+23 11.7	138 25.9	+19 59.7				
7	220	32.7	281 56.3	47.4	222 09.7	09.0	121	07.3	11.7	153 28.5	59.7				
8	235	35.1	296 55.4	46.9	237 10.5	08.3	136	10.1	11.7	168 31.1	59.6				
9	250	37.6	311 54.5	46.4	252 11.3	07.5	151	12.9	11.7	183 33.7	59.6				
10	265	40.0	326 53.6	45.8	267 12.1	06.7	166	15.7	11.8	198 36.2	59.6				
11	280	42.5	341 52.8	-21 45.3	282 12.9	-1 06.0	181	18.5	+23 11.8	213 38.8	+19 59.6				
12	295	45.0	356 51.9	-21 44.8	297 13.7	-1 05.2	196	21.3	+23 11.8	228 41.4	+19 59.6				
13	310	47.4	11 51.0	44.2	312 14.5	04.4	211	24.1	11.8	243 44.0	59.6				
14	325	49.9	26 50.1	43.7	327 15.3	03.7	226	26.9	11.9	258 46.5	59.6				
15	340	52.4	41 49.3	43.2	342 16.2	02.9	241	29.7	11.9	273 49.1	59.6				
16	355	54.8	56 48.4	42.6	357 17.0	02.1	256	32.5	11.9	288 51.7	59.6				
17	10	57.3	71 47.5	-21 42.1	12 17.8	-1 01.4	271	35.3	+23 11.9	303 54.2	+19 59.6				
18	25	59.8	86 46.6	-21 41.6	27 18.6	-1 00.6	286	38.1	+23 12.0	318 56.8	+19 59.6				
19	41	02.2	101 45.8	41.0	42 19.4	-0 59.8	301	40.9	12.0	333 59.4	59.6				
20	56	04.7	116 44.9	40.5	57 20.2	59.1	316	43.7	12.0	349 02.0	59.6				
21	71	07.1	131 44.0	40.0	72 21.0	58.3	331	46.5	12.0	4 04.5	59.6				
22	86	09.6	146 43.2	39.4	87 21.8	57.5	346	49.3	12.1	19 07.1	59.6				
23	101	12.1	161 42.3	38.9	102 22.6	56.8	1	52.1	12.1	34 09.7	59.6				
24	116	14.5	176 41.4	-21 38.3	117 23.4	-0 56.0	16	54.9	+23 12.1	49 12.3	+19 59.6				
Dif	—			-9	+5	+8	+8	+28			0	+26			0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 10 ^m 1			Edad: 3 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 41 ^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	31.4	-20	49.1	137	36.3	-14	10.4	60 N	6 59	7 53	8 45	10 38	7	20 08	77		
1	192	31.2		48.6	152	09.9 ¹⁴⁶	-14	00.3 ¹⁰¹	58	53	43	31	31	10	14	75		
2	207	30.9		48.1	166	43.6 ¹⁴⁷	-13	50.1 ¹⁰²	56	48	35	19	24	13	20	72		
3	222	30.7		47.6	181	17.4 ¹⁴⁸		39.8 ¹⁰³	54	43	27	8 09	19	14	25	66		
4	237	30.5		47.1	195	51.2 ¹⁴⁸		29.5 ¹⁰³	52	39	21	7 59	13	17	29	68		
5	252	30.3	-20	46.6	210	25.1 ¹⁴⁹	-13	19.2 ¹⁰³	50	6 34	7 15	7 51	10 09	18	20 33	66		
6	267	30.1	-20	46.1	224	59.0 ¹⁴⁹	-13	08.8 ¹⁰⁴	45	6 25	7 01	7 34	9 58	23	20 42	62		
7	282	29.9		45.6	239	32.9 ¹⁴⁹	-12	58.3 ¹⁰⁵	40	16	6 50	19	50	25	49	58		
8	297	29.7		45.1	254	06.9 ¹⁵⁰		47.8 ¹⁰⁵	35	09	40	7 07	43	28	20 55	56		
9	312	29.5		44.7	268	41.0 ¹⁵¹		37.2 ¹⁰⁶	30	6 01	31	6 56	36	31	21 01	53		
10	327	29.3		44.2	283	15.1 ¹⁵¹		26.7 ¹⁰⁵	20	5 47	6 14	38	25	35	10	49		
11	342	29.1	-20	43.7	297	49.2 ¹⁵¹	-12	16.0 ¹⁰⁷	10 N	5 33	5 59	6 22	9 15	38	21 19	44		
12	357	28.9	-20	43.2	312	23.4 ¹⁵²	-12	05.3 ¹⁰⁷	0	5 19	5 44	6 06	9 06	42	21 26	41		
13	12	28.7		42.7	326	57.6 ¹⁵²	-11	54.6 ¹⁰⁷	10 S	5 02	28	5 51	8 56	46	34	37		
14	27	28.5		42.2	341	31.9 ¹⁵³		43.8 ¹⁰⁸	20	4 42	5 10	34	47	48	42	34		
15	42	28.3		41.7	356	06.3 ¹⁵⁴		33.0 ¹⁰⁸	30	16	4 48	15	35	53	51	30		
16	57	28.0		41.2	10	40.6 ¹⁵³		22.1 ¹⁰⁹	35	4 00	35	5 04	28	56	21 56	27		
17	72	27.8	-20	40.7	25	15.0 ¹⁵⁴	-11	11.2 ¹⁰⁹	40	3 40	4 19	4 51	8 21	58	22 02	25		
18	87	27.6	-20	40.2	39	49.5 ¹⁵⁵	-11	00.3 ¹⁰⁹	45	3 14	4 00	4 35	8 12	62	22 09	21		
19	102	27.4		39.7	54	24.0 ¹⁵⁵	-10	49.3 ¹¹⁰	50	2 38	3 35	16	8 01	66	17	17		
20	117	27.2		39.2	68	58.5 ¹⁵⁵		38.3 ¹¹⁰	52	2 18	22	4 07	7 56	68	21	15		
21	132	27.0		38.7	83	33.1 ¹⁵⁶		27.2 ¹¹¹	54	1 53	3 08	3 57	51	70	25	14		
22	147	26.8		38.2	98	07.7 ¹⁵⁶		16.1 ¹¹¹	56	1 14	2 51	45	45	72	29	12		
23	162	26.6		37.7	112	42.4 ¹⁵⁷	-10	05.0 ¹¹¹	58	** **	30	32	38	75	34	10		
24	177	26.4	-20	37.2	127	17.1 ¹⁵⁷	-9	53.8 ¹¹²	60 S	** **	2 03	3 16	7 30	78	22 40	7		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 16 ^h 12 ^m 4			Mag: -4.0 PMG: 12 ^h 14 ^m			Mag: +0.9 PMG: 16 ^h 10 ^m			Mag: -2.7 PMG: 22 ^h 48 ^m			Mag: -0.2 PMG: 20 ^h 40 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	116	14.5	176	41.4	-21	38.3	117	23.4	-0	56.0	16	54.9	+23	12.1	49	12.3	+19	59.6
1	131	17.0	191	40.6		37.8	132	24.2		55.2	31	57.7		12.1	64	14.8		59.5
2	146	19.5	206	39.7		37.2	147	25.0		54.5	47	00.5		12.2	79	17.4		59.5
3	161	21.9	221	38.8		36.7	162	25.9		53.7	62	03.3		12.2	94	20.0		59.5
4	176	24.4	236	38.0		36.2	177	26.7		52.9	77	06.1		12.2	109	22.5		59.5
5	191	26.9	251	37.1	-21	35.6	192	27.5	-0	52.2	92	08.9	+23	12.2	124	25.1	+19	59.5
6	206	29.3	266	36.2	-21	35.1	207	28.3	-0	51.4	107	11.7	+23	12.3	139	27.7	+19	59.5
7	221	31.8	281	35.4		34.5	222	29.1		50.6	122	14.5		12.3	154	30.2		59.5
8	236	34.3	296	34.5		34.0	237	29.9		49.9	137	17.3		12.3	169	32.8		59.5
9	251	36.7	311	33.6		33.4	252	30.7		49.1	152	20.0		12.3	184	35.4		59.5
10	266	39.2	326	32.8		32.8	267	31.5		48.4	167	22.8		12.4	199	38.0		59.5
11	281	41.6	341	31.9	-21	32.3	282	32.3	-0	47.6	182	25.6	+23	12.4	214	40.5	+19	59.5
12	296	44.1	356	31.1	-21	31.7	297	33.1	-0	46.8	197	28.4	+23	12.4	229	43.1	+19	59.5
13	311	46.6	11	30.2		31.2	312	33.9		46.1	212	31.2		12.4	244	45.7		59.5
14	326	49.0	26	29.3		30.6	327	34.7		45.3	227	34.0		12.5	259	48.2		59.5
15	341	51.5	41	28.5		30.1	342	35.6		44.5	242	36.8		12.5	274	50.8		59.5
16	356	54.0	56	27.6		29.5	357	36.4		43.8	257	39.6		12.5	289	53.4		59.5
17	11	56.4	71	26.7	-21	28.9	12	37.2	-0	43.0	272	42.4	+23	12.5	304	55.9	+19	59.5
18	26	58.9	86	25.9	-21	28.4	27	38.0	-0	42.2	287	45.2	+23	12.6	319	58.5	+19	59.5
19	42	01.4	101	25.0		27.8	42	38.8		41.5	302	48.0		12.6	335	01.1		59.4
20	57	03.8	116	24.2		27.2	57	39.6		40.7	317	50.8		12.6	350	03.6		59.4
21	72	06.3	131	23.3		26.7	72	40.4		39.9	332	53.6		12.6	5	06.2		59.4
22	87	08.8	146	22.5		26.1	87	41.2		39.2	347	56.4		12.7	20	08.8		59.4
23	102	11.2	161	21.6		25.5	102	42.0		38.4	2	59.2		12.7	35	11.3		59.4
24	117	13.7	176	20.7	-21	25.0	117	42.8	-0	37.6	18	02.0	+23	12.7	50	13.9	+19	59.4
Dif	—		-9		+6		+8		+8		+28		0		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 10 ^m 4			Edad: 4 ^d 4 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:1 R°: 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		
0	177	26.4	-20	37.2	127	17.1	-9	53.8	60 N	15 38	16 30	17 24	10 45	6	21 25	77
1	192	26.2		36.7	141	51.8 ¹⁵⁷		42.6 ¹¹²	58	15 52	39	29	41	8	29	74
2	207	26.0		36.2	156	26.6 ¹⁵⁸		31.3 ¹¹³	56	16 03	48	34	37	11	32	71
3	222	25.8		35.7	171	01.4 ¹⁵⁸		20.0 ¹¹³	54	14	16 55	39	33	13	34	69
4	237	25.6		35.2	185	36.2 ¹⁵⁸		-9 08.7 ¹¹³	52	23	17 01	44	30	15	37	67
5	252	25.4	-20	34.7	200	11.1 ¹⁵⁹		-8 57.4 ¹¹³	50	16 31	17 07	17 48	10 27	17	21 39	65
6	267	25.2	-20	34.2	214	46.0 ¹⁵⁹		-8 46.0 ¹¹⁴	45	16 48	17 21	17 57	10 21	20	21 44	61
7	282	25.0		33.6	229	20.9 ¹⁵⁹		34.6 ¹¹⁴	40	17 02	32	18 05	15	24	47	58
8	297	24.8		33.1	243	55.8 ¹⁵⁹		23.1 ¹¹⁵	35	14	42	13	11	26	51	55
9	312	24.6		32.6	258	30.8 ¹⁶⁰		11.6 ¹¹⁵	30	25	17 51	20	07	29	54	52
10	327	24.4		32.1	273	05.9 ¹⁶¹		-8 00.1 ¹¹⁵	20	43	18 07	34	10 00	33	21 59	48
11	342	24.2	-20	31.6	287	40.9 ¹⁶⁰		-7 48.6 ¹¹⁵	10 N	17 59	18 21	18 47	9 53	38	22 03	44
12	357	24.0	-20	31.1	302	16.0 ¹⁶¹		-7 37.0 ¹¹⁶	0	18 14	18 36	19 02	9 48	40	22 07	41
13	12	23.8		30.6	316	51.1 ¹⁶¹		25.4 ¹¹⁶	10 S	29	18 52	18	42	44	11	37
14	27	23.6		30.1	331	26.2 ¹⁶¹		13.8 ¹¹⁶	20	18 46	19 09	19 38	35	49	16	33
15	42	23.4		29.6	346	01.4 ¹⁶²		-7 02.2 ¹¹⁶	30	19 04	31	20 03	28	53	21	28
16	57	23.2		29.0	0	36.5 ¹⁶¹		-6 50.5 ¹¹⁷	35	16	19 44	19	24	55	23	27
17	72	23.0	-20	28.5	15	11.7 ¹⁶²		-6 38.8 ¹¹⁷	40	19 28	20 00	20 39	9 19	58	22 27	23
18	87	22.8	-20	28.0	29	46.9 ¹⁶²		-6 27.1 ¹¹⁷	45	19 44	20 19	21 04	9 14	61	22 30	20
19	102	22.6		27.5	44	22.2 ¹⁶³		15.3 ¹¹⁸	50	20 02	43	39	07	66	34	17
20	117	22.4		27.0	58	57.4 ¹⁶²		-6 03.5 ¹¹⁸	52	11	20 55	21 58	04	67	36	15
21	132	22.2		26.5	73	32.7 ¹⁶³		-5 51.7 ¹¹⁸	54	21	21 09	22 22	9 01	69	39	12
22	147	22.0		26.0	88	08.0 ¹⁶³		39.9 ¹¹⁸	56	32	26	22 57	8 57	72	41	11
23	162	21.8		25.4	102	43.3 ¹⁶³		28.1 ¹¹⁸	58	20 45	21 46	** **	53	74	44	8
24	177	21.6	-20	24.9	117	18.7 ¹⁶⁴		-5 16.2 ¹¹⁹	60 S	21 01	22 12	** **	8 48	77	22 47	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 08 ^m 4		Mag: -4.0 PMG: 12 ^h 15 ^m		Mag: +0.9 PMG: 16 ^h 08 ^m		Mag: -2.7 PMG: 22 ^h 44 ^m		Mag: -0.2 PMG: 20 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	117	13.7	176	20.7	-21	25.0	117	42.8	-0	37.6
1	132	16.1	191	19.9		24.4	132	43.6		36.9
2	147	18.6	206	19.0		23.8	147	44.5		36.1
3	162	21.1	221	18.2		23.3	162	45.3		35.3
4	177	23.5	236	17.3		22.7	177	46.1		34.6
5	192	26.0	251	16.5	-21	22.1	192	46.9	-0	33.8
6	207	28.5	266	15.6	-21	21.5	207	47.7	-0	33.0
7	222	30.9	281	14.7		20.9	222	48.5		32.3
8	237	33.4	296	13.9		20.4	237	49.3		31.5
9	252	35.9	311	13.0		19.8	252	50.1		30.7
10	267	38.3	326	12.2		19.2	267	50.9		30.0
11	282	40.8	341	11.3	-21	18.6	282	51.7	-0	29.2
12	297	43.2	356	10.5	-21	18.0	297	52.5	-0	28.4
13	312	45.7	11	09.6		17.5	312	53.4		27.7
14	327	48.2	26	08.8		16.9	327	54.2		26.9
15	342	50.6	41	07.9		16.3	342	55.0		26.1
16	357	53.1	56	07.1		15.7	357	55.8		25.4
17	12	55.6	71	06.2	-21	15.1	12	56.6	-0	24.6
18	27	58.0	86	05.4	-21	14.5	27	57.4	-0	23.8
19	43	00.5	101	04.5		13.9	42	58.2		23.1
20	58	03.0	116	03.7		13.3	57	59.0		22.3
21	73	05.4	131	02.8		12.7	72	59.8		21.6
22	88	07.9	146	02.0		12.2	88	00.6		20.8
23	103	10.4	161	01.1		11.6	103	01.5		20.0
24	118	12.8	176	00.3	-21	11.0	118	02.3	-0	19.3
Dif	—		-9		+6		+8		+8	
									+28	
									0	
									+26	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 5 ^d 4 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:2 R°: 41 ^m											
	PMG: 12 ^h 10 ^m 7														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	177	21.6	-20	24.9	117	18.7	-5	16.2	60 N	6 57	7 50	8 41	10 51	5	22 42 78
1	192	21.5		24.4	131	54.0 ¹⁶³	-5	04.3 ¹¹⁹	58	51	41	28	49	8	43 74
2	207	21.3		23.9	146	29.4 ¹⁶⁴	-4	52.4 ¹¹⁹	56	46	33	17	48	10	43 72
3	222	21.1		23.4	161	04.7 ¹⁶³		40.5 ¹¹⁹	54	41	26	8 06	46	13	43 70
4	237	20.9		22.8	175	40.1 ¹⁶⁴		28.6 ¹¹⁹	52	37	19	7 57	45	15	44 67
5	252	20.7	-20	22.3	190	15.5 ¹⁶⁴	-4	16.6 ¹²⁰	50	6 33	7 13	7 49	10 44	16	22 44 66
6	267	20.5	-20	21.8	204	50.9 ¹⁶⁴	-4	04.6 ¹²⁰	45	6 24	7 00	7 32	10 41	21	22 45 61
7	282	20.3		21.3	219	26.4 ¹⁶⁵	-3	52.7 ¹¹⁹	40	16	6 49	18	39	24	45 58
8	297	20.1		20.7	234	01.8 ¹⁶⁴		40.6 ¹²¹	35	08	39	7 06	37	27	46 55
9	312	19.9		20.2	248	37.2 ¹⁶⁴		28.6 ¹²⁰	30	6 01	30	6 56	36	29	46 53
10	327	19.7		19.7	263	12.7 ¹⁶⁵		16.6 ¹²⁰	20	5 47	14	38	33	33	47 48
11	342	19.5	-20	19.2	277	48.1 ¹⁶⁴	-3	04.5 ¹²¹	10 N	5 34	6 00	6 22	10 31	36	22 47 45
12	357	19.3	-20	18.6	292	23.6 ¹⁶⁵	-2	52.5 ¹²⁰	0	5 19	5 45	6 07	10 28	41	22 48 40
13	12	19.1		18.1	306	59.0 ¹⁶⁴		40.4 ¹²¹	10 S	5 03	29	5 52	26	44	48 37
14	27	19.0		17.6	321	34.5 ¹⁶⁵		28.3 ¹²¹	20	4 43	5 12	36	24	48	49 33
15	42	18.8		17.1	336	10.0 ¹⁶⁵		16.2 ¹²¹	30	18	4 50	17	21	52	49 29
16	57	18.6		16.5	350	45.4 ¹⁶⁴	-2	04.1 ¹²¹	35	4 02	37	5 06	19	55	50 26
17	72	18.4	-20	16.0	5	20.9 ¹⁶⁵	-1	51.9 ¹²²	40	3 43	4 22	4 53	10 17	58	22 50 23
18	87	18.2	-20	15.5	19	56.4 ¹⁶⁵	-1	39.8 ¹²¹	45	3 18	4 03	4 38	10 15	61	22 50 21
19	102	18.0		14.9	34	31.8 ¹⁶⁴		27.7 ¹²¹	50	2 43	3 38	19	13	65	51 16
20	117	17.8		14.4	49	07.3 ¹⁶⁵		15.5 ¹²²	52	2 24	26	10	11	68	51 15
21	132	17.6		13.9	63	42.7 ¹⁶⁴	-1	03.3 ¹²²	54	1 59	3 12	4 00	10 70		51 13
22	147	17.4		13.3	78	18.2 ¹⁶⁵	-0	51.2 ¹²¹	56	1 25	2 56	3 49	09 71		52 10
23	162	17.3		12.8	92	53.6 ¹⁶⁴		39.0 ¹²²	58	** **	36	36	07 74		52 8
24	177	17.1	-20	12.3	107	29.1 ¹⁶⁵	-0	26.8 ¹²²	60 S	** **	2 10	3 21	10 05	77	22 52 6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 04 ^m 5		Mag: -4.0 PMG: 12 ^h 17 ^m		Mag: +0.9 PMG: 16 ^h 07 ^m		Mag: -2.7 PMG: 22 ^h 39 ^m		Mag: -0.2 PMG: 20 ^h 31 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	118	12.8	176	00.3	-21	11.0	118	02.3	-0	19.3
1	133	15.3	190	59.5		10.4	133	03.1		18.5
2	148	17.7	205	58.6		09.8	148	03.9		17.7
3	163	20.2	220	57.8		09.2	163	04.7		17.0
4	178	22.7	235	56.9		08.6	178	05.5		16.2
5	193	25.1	250	56.1	-21	08.0	193	06.3	-0	15.4
6	208	27.6	265	55.2	-21	07.4	208	07.1	-0	14.7
7	223	30.1	280	54.4		06.8	223	07.9		13.9
8	238	32.5	295	53.6		06.1	238	08.7		13.1
9	253	35.0	310	52.7		05.5	253	09.6		12.4
10	268	37.5	325	51.9		04.9	268	10.4		11.6
11	283	39.9	340	51.0	-21	04.3	283	11.2	-0	10.8
12	298	42.4	355	50.2	-21	03.7	298	12.0	-0	10.1
13	313	44.8	10	49.3		03.1	313	12.8		09.3
14	328	47.3	25	48.5		02.5	328	13.6		08.5
15	343	49.8	40	47.7		01.9	343	14.4		07.8
16	358	52.2	55	46.8		01.3	358	15.2		07.0
17	13	54.7	70	46.0	-21	00.7	13	16.0	-0	06.3
18	28	57.2	85	45.2	-21	00.0	28	16.8	-0	05.5
19	43	59.6	100	44.3	-20	59.4	43	17.7		04.7
20	59	02.1	115	43.5		58.8	58	18.5		04.0
21	74	04.6	130	42.6		58.2	73	19.3		03.2
22	89	07.0	145	41.8		57.6	88	20.1		02.4
23	104	09.5	160	41.0		56.9	103	20.9		01.7
24	119	12.0	175	40.1	-20	56.3	118	21.7	-0	00.9
Dif	—		-8 +6		+8 +8		+28 0		+26 0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 6 ^d 4	PHE {	4 ^h : 54:3 12 ^h : 54:4 20 ^h : 54:6			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 0								PMG: 17 ^h 19 ^m			R°: 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	
0	177	17.1	-20	12.3	107	29.1	-0	26.8	60 N	15 43	16 34	17 27	10 56	6	*** ** *
1	192	16.9		11.7	122	04.5 ¹⁶⁴		14.6 ¹²²	58	15 56	43	33	57	9	23 57 77
2	207	16.7		11.2	136	39.9 ¹⁶⁴	-0	02.4 ¹²²	56	16 07	51	38	58	11	55 74
3	222	16.5		10.7	151	15.3 ¹⁶⁴	+0	09.8 ¹²²	54	17	16 58	42	10 59	13	53 72
4	237	16.3		10.1	165	50.7 ¹⁶⁴		22.0 ¹²²	52	26	17 04	46	11 00	15	51 70
5	252	16.1	-20	09.6	180	26.1 ¹⁶⁴	+0	34.2 ¹²²	50	16 34	17 10	17 50	11 00	17	23 50 67
6	267	16.0	-20	09.0	195	01.5 ¹⁶⁴	+0	46.4 ¹²²	45	16 51	17 23	17 59	11 02	20	23 46 63
7	282	15.8		08.5	209	36.9 ¹⁶⁴	+0	58.6 ¹²²	40	17 05	34	18 07	03	24	43 60
8	297	15.6		08.0	224	12.2 ¹⁶³	+1	10.8 ¹²²	35	16	44	14	04	27	41 57
9	312	15.4		07.4	238	47.6 ¹⁶⁴		23.0 ¹²²	30	27	17 52	21	05	29	39 54
10	327	15.2		06.9	253	22.9 ¹⁶³		35.3 ¹²³	20	17 44	18 08	35	06	34	35 49
11	342	15.0	-20	06.3	267	58.2 ¹⁶³	+1	47.5 ¹²²	10 N	18 00	18 22	18 48	11 07	38	23 32 45
12	357	14.8	-20	05.8	282	33.5 ¹⁶³	+1	59.7 ¹²²	0	18 15	18 37	19 02	11 09	41	23 28 42
13	12	14.7		05.3	297	08.7 ¹⁶²	+2	11.9 ¹²²	10 S	29	18 52	18	10	45	25 39
14	27	14.5		04.7	311	44.0 ¹⁶³		24.1 ¹²²	20	18 45	19 09	19 38	12	48	22 34
15	42	14.3		04.2	326	19.2 ¹⁶²		36.3 ¹²²	30	19 04	30	20 02	13	53	18 30
16	57	14.1		03.6	340	54.4 ¹⁶²	+2	48.5 ¹²²	35	15	43	18	14	56	16 28
17	72	13.9	-20	03.1	355	29.5 ¹⁶¹	+3	00.7 ¹²²	40	19 27	19 58	20 37	11 15	59	23 13 25
18	87	13.8	-20	02.5	10	04.7 ¹⁶²	+3	12.9 ¹²²	45	19 42	20 17	21 02	11 16	63	23 11 21
19	102	13.6		02.0	24	39.8 ¹⁶¹		25.1 ¹²²	50	20 00	41	36	18	67	07 18
20	117	13.4		01.4	39	14.9 ¹⁶¹		37.3 ¹²²	52	09	20 52	21 54	19	68	06 15
21	132	13.2		00.9	53	50.0 ¹⁶¹	+3	49.5 ¹²²	54	19	21 06	22 16	20	70	04 14
22	147	13.0	-20	00.3	68	25.0 ¹⁶⁰	+4	01.7 ¹²²	56	30	22	22 48	20	73	02 12
23	162	12.9	-19	59.8	83	00.0 ¹⁶⁰		13.8 ¹²¹	58	42	21 41	** ** *	21	76	23 00 9
24	177	12.7	-19	59.2	97	35.0 ¹⁶⁰	+4	26.0 ¹²²	60 S	20 57	22 05	** ** *	11 22	79	22 58 6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.0		Mag: +0.9		Mag: -2.7		Mag: -0.1	
	16 ^h 00 ^m 6		PMG: 12 ^h 18 ^m		PMG: 16 ^h 06 ^m		PMG: 22 ^h 35 ^m		PMG: 20 ^h 27 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	119	12.0	175	40.1	118	21.7	-0	00.9	20	15.7
1	134	14.4	190	39.3	133	22.5	-0	00.1	35	18.5
2	149	16.9	205	38.5	148	23.3	+0	00.6	50	21.3
3	164	19.3	220	37.6	163	24.1		01.4	65	24.1
4	179	21.8	235	36.8	178	24.9		02.2	80	26.9
5	194	24.3	250	36.0	193	25.8	+0	02.9	95	29.7
6	209	26.7	265	35.1	208	26.6	+0	03.7	110	32.4
7	224	29.2	280	34.3	223	27.4		04.4	125	35.2
8	239	31.7	295	33.5	238	28.2		05.2	140	38.0
9	254	34.1	310	32.6	253	29.0		06.0	155	40.8
10	269	36.6	325	31.8	268	29.8		06.7	170	43.6
11	284	39.1	340	31.0	283	30.6	+0	07.5	185	46.3
12	299	41.5	355	30.2	298	31.4	+0	08.3	200	49.1
13	314	44.0	10	29.3	313	32.2		09.0	215	51.9
14	329	46.5	25	28.5	328	33.1		09.8	230	54.7
15	344	48.9	40	27.7	343	33.9		10.6	245	57.5
16	359	51.4	55	26.8	358	34.7		11.3	261	00.2
17	14	53.8	70	26.0	13	35.5	+0	12.1	276	03.0
18	29	56.3	85	25.2	28	36.3	+0	12.9	291	05.8
19	44	58.8	100	24.4	43	37.1		13.6	306	08.6
20	60	01.2	115	23.5	58	37.9		14.4	321	11.4
21	75	03.7	130	22.7	73	38.7		15.1	336	14.1
22	90	06.2	145	21.9	88	39.5		15.9	351	16.9
23	105	08.6	160	21.1	103	40.3		16.7	6	19.7
24	120	11.1	175	20.3	118	41.2	+0	17.4	21	22.5
Dif	—	-8	+6	+8	+8	+28	0	+26		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 11 ^m 3			Edad: 7 ^d 4 PHE { SD: 14'9 PMG: 18 ^h 00 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	177	12.7	-19	59.2	97	35.0	+4	26.0	60 N	6 54	7 47	8 38	11 02	8	0 00	79		
1	192	12.5		58.7	112	09.9 ¹⁵⁹		38.1 ¹²¹	58	49	38	25	06	10	** ** *	**		
2	207	12.3		58.1	126	44.8 ¹⁵⁹	+4	50.3 ¹²²	56	44	30	14	09	13	** ** *	**		
3	222	12.1		57.6	141	19.7 ¹⁵⁹	+5	02.4 ¹²¹	54	39	23	8 04	12	15	** ** *	**		
4	237	12.0		57.0	155	54.5 ¹⁵⁸		14.5 ¹²¹	52	35	17	7 55	15	17	** ** *	**		
5	252	11.8	-19	56.5	170	29.3 ¹⁵⁸	+5	26.6 ¹²¹	50	6 31	7 11	7 47	11 17	19	** ** *	**		
6	267	11.6	-19	55.9	185	04.1 ¹⁵⁸	+5	38.7 ¹²¹	45	6 23	6 59	7 31	11 22	23	** ** *	**		
7	282	11.4		55.4	199	38.8 ¹⁵⁷	+5	50.8 ¹²¹	40	15	48	17	27	26	** ** *	**		
8	297	11.3		54.8	214	13.5 ¹⁵⁷	+6	02.8 ¹²⁰	35	08	38	7 06	31	28	** ** *	**		
9	312	11.1		54.2	228	48.2 ¹⁵⁷		14.9 ¹²¹	30	6 01	30	6 55	34	31	** ** *	**		
10	327	10.9		53.7	243	22.8 ¹⁵⁶		26.9 ¹²⁰	20	5 47	14	38	40	36	** ** *	**		
11	342	10.7	-19	53.1	257	57.3 ¹⁵⁵	+6	38.9 ¹²⁰	10 N	5 34	6 00	6 22	11 45	40	** ** *	**		
12	357	10.6	-19	52.6	272	31.8 ¹⁵⁵	+6	50.9 ¹²⁰	0	5 20	5 46	6 08	11 50	43	** ** *	**		
13	12	10.4		52.0	287	06.3 ¹⁵⁵	+7	02.9 ¹²⁰	10 S	5 04	30	5 53	11 55	47	** ** *	**		
14	27	10.2		51.5	301	40.7 ¹⁵⁴		14.9 ¹²⁰	20	4 45	5 13	37	12 00	51	23 56	38		
15	42	10.0		50.9	316	15.1 ¹⁵⁴		26.8 ¹¹⁹	30	20	4 52	19	06	56	48	33		
16	57	09.9		50.3	330	49.4 ¹⁵³		38.7 ¹¹⁹	35	4 05	39	5 08	10	58	44	30		
17	72	09.7	-19	49.8	345	23.7 ¹⁵³	+7	50.6 ¹¹⁹	40	3 46	4 24	4 55	12 14	61	23 38	28		
18	87	09.5	-19	49.2	359	57.9 ¹⁵²	+8	02.5 ¹¹⁹	45	3 21	4 06	4 41	12 19	64	23 32	24		
19	102	09.3		48.6	14	32.1 ¹⁵²		14.4 ¹¹⁹	50	2 47	3 42	23	25	68	25	20		
20	117	09.2		48.1	29	06.2 ¹⁵¹		26.2 ¹¹⁸	52	29	30	14	27	71	21	19		
21	132	09.0		47.5	43	40.3 ¹⁵¹		38.0 ¹¹⁸	54	2 06	17	4 04	30	73	18	16		
22	147	08.8		47.0	58	14.3 ¹⁵⁰	+8	49.8 ¹¹⁸	56	1 35	3 01	3 53	33	75	14	13		
23	162	08.7		46.4	72	48.3 ¹⁵⁰	+9	01.6 ¹¹⁸	58	** ** *	2 42	41	37	78	09	11		
24	177	08.5	-19	45.8	87	22.2 ¹⁴⁹	+9	13.3 ¹¹⁷	60 S	** ** *	2 18	3 26	12 41	81	23 04	8		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 56 ^m 6			Mag: -4.0 PMG: 12 ^h 19 ^m			Mag: +1.0 PMG: 16 ^h 04 ^m			Mag: -2.7 PMG: 22 ^h 30 ^m			Mag: -0.1 PMG: 20 ^h 23 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	120	11.1	175	20.3	-20	41.1	118	41.2	+0	17.4	21	22.5	+23	14.5	53	18.2	+19	59.1
1	135	13.6	190	19.4		40.4	133	42.0		18.2	36	25.2		14.5	68	20.8		59.1
2	150	16.0	205	18.6		39.8	148	42.8		19.0	51	28.0		14.5	83	23.3		59.1
3	165	18.5	220	17.8		39.1	163	43.6		19.7	66	30.8		14.5	98	25.9		59.1
4	180	20.9	235	17.0		38.5	178	44.4		20.5	81	33.6		14.5	113	28.4		59.1
5	195	23.4	250	16.1	-20	37.8	193	45.2	+0	21.3	96	36.4	+23	14.6	128	31.0	+19	59.1
6	210	25.9	265	15.3	-20	37.1	208	46.0	+0	22.0	111	39.1	+23	14.6	143	33.5	+19	59.1
7	225	28.3	280	14.5		36.5	223	46.8		22.8	126	41.9		14.6	158	36.1		59.1
8	240	30.8	295	13.7		35.8	238	47.6		23.5	141	44.7		14.6	173	38.7		59.1
9	255	33.3	310	12.9		35.2	253	48.5		24.3	156	47.5		14.7	188	41.2		59.1
10	270	35.7	325	12.1		34.5	268	49.3		25.1	171	50.2		14.7	203	43.8		59.1
11	285	38.2	340	11.2	-20	33.9	283	50.1	+0	25.8	186	53.0	+23	14.7	218	46.3	+19	59.1
12	300	40.7	355	10.4	-20	33.2	298	50.9	+0	26.6	201	55.8	+23	14.7	233	48.9	+19	59.1
13	315	43.1	10	09.6		32.5	313	51.7		27.4	216	58.6		14.8	248	51.4		59.1
14	330	45.6	25	08.8		31.9	328	52.5		28.1	232	01.3		14.8	263	54.0		59.1
15	345	48.1	40	08.0		31.2	343	53.3		28.9	247	04.1		14.8	278	56.5		59.1
16	0	50.5	55	07.2		30.5	358	54.1		29.7	262	06.9		14.8	293	59.1		59.1
17	15	53.0	70	06.3	-20	29.9	13	54.9	+0	30.4	277	09.7	+23	14.8	309	01.6	+19	59.1
18	30	55.4	85	05.5	-20	29.2	28	55.8	+0	31.2	292	12.4	+23	14.9	324	04.2	+19	59.1
19	45	57.9	100	04.7		28.5	43	56.6		31.9	307	15.2		14.9	339	06.7		59.1
20	61	00.4	115	03.9		27.9	58	57.4		32.7	322	18.0		14.9	354	09.3		59.1
21	76	02.8	130	03.1		27.2	73	58.2		33.5	337	20.8		14.9	9	11.8		59.1
22	91	05.3	145	02.3		26.5	88	59.0		34.2	352	23.5		15.0	24	14.4		59.1
23	106	07.8	160	01.5		25.9	103	59.8		35.0	7	26.3		15.0	39	16.9		59.1
24	121	10.2	175	00.7	-20	25.2	119	00.6	+0	35.8	22	29.1	+23	15.0	54	19.5	+19	59.1
Dif	—			-8	+7	+8	+8	+8	+28			0			+26			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna	
	SD: 16 ^h 3		Edad: 8 ^d 4		PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 5 20 ^h : 55 ^m 7 R°: 47 ^m								
	PMG: 12 ^h 11 ^m 6	PMG: 18 ^h 44 ^m	hG ☾	Dif		Dec			Dif				
	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	177	08.5	-19 45.8	87	22.2	+9 13.3	60 N	15 48	16 39	17 31	11 10 9	1 19 83	
1	192	08.3	45.3	101	56.0 ¹⁴⁸	25.0 ¹¹⁷	58	16 01	47	36	16 13	14 79	
2	207	08.1	44.7	116	29.8 ¹⁴⁸	36.7 ¹¹⁷	56	11	16 55	41	22 15	09 76	
3	222	08.0	44.1	131	03.5 ¹⁴⁷	+9 48.4 ¹¹⁷	54	21	17 01	45	27 18	05 73	
4	237	07.8	43.6	145	37.2 ¹⁴⁷	+10 00.0 ¹¹⁶	52	30	08	49	32 20	1 01 71	
5	252	07.6	-19 43.0	160	10.8 ¹⁴⁶	+10 11.6 ¹¹⁶	50	16 37	17 13	17 53	11 36 22	0 57 70	
6	267	07.5	-19 42.4	174	44.3 ¹⁴⁵	+10 23.1 ¹¹⁵	45	16 53	17 26	18 02	11 45 26	0 49 66	
7	282	07.3	41.8	189	17.8 ¹⁴⁵	34.7 ¹¹⁶	40	17 07	36	09	53 29	43 62	
8	297	07.1	41.3	203	51.2 ¹⁴⁴	46.2 ¹¹⁵	35	18	45	16	11 59 33	38 58	
9	312	07.0	40.7	218	24.6 ¹⁴⁴	+10 57.6 ¹¹⁴	30	28	17 54	23	12 05 35	33 56	
10	327	06.8	40.1	232	57.9 ¹⁴³	+11 09.1 ¹¹⁵	20	17 46	18 09	36	16 39	24 52	
11	342	06.6	-19 39.6	247	31.1 ¹⁴²	+11 20.5 ¹¹⁴	10 N	18 01	18 23	18 49	12 25 42	0 17 48	
12	357	06.5	-19 39.0	262	04.2 ¹⁴¹	+11 31.8 ¹¹³	0	18 15	18 37	19 03	12 33 46	0 10 45	
13	12	06.3	38.4	276	37.3 ¹⁴¹	43.1 ¹¹³	10 S	30	18 52	18	42 49	0 04 41	
14	27	06.1	37.8	291	10.3 ¹⁴⁰	+11 54.4 ¹¹³	20	18 45	19 09	19 37	12 51 53	** ** *	
15	42	06.0	37.3	305	43.2 ¹³⁹	+12 05.7 ¹¹³	30	19 03	30	20 01	13 02 57	** ** *	
16	57	05.8	36.7	320	16.1 ¹³⁹	16.9 ¹¹²	35	14	42	17	08 60	** ** *	
17	72	05.6	-19 36.1	334	48.8 ¹³⁷	+12 28.0 ¹¹¹	40	19 26	19 57	20 35	13 15 63	** ** *	
18	87	05.5	-19 35.5	349	21.5 ¹³⁷	+12 39.2 ¹¹²	45	19 40	20 15	20 59	13 23 67	23 56 29	
19	102	05.3	35.0	3	54.2 ¹³⁷	+12 50.2 ¹¹⁰	50	19 58	38	21 32	33 71	45 24	
20	117	05.1	34.4	18	26.7 ¹³⁵	+13 01.3 ¹¹¹	52	20 06	20 49	21 49	38 73	40 22	
21	132	05.0	33.8	32	59.2 ¹³⁵	12.3 ¹¹⁰	54	16	21 02	22 11	43 75	34 20	
22	147	04.8	33.2	47	31.6 ¹³⁴	23.2 ¹⁰⁹	56	26	18	22 40	48 78	27 18	
23	162	04.6	32.6	62	03.9 ¹³³	34.1 ¹⁰⁹	58	39	36	23 31	13 55 81	20 15	
24	177	04.5	-19 32.1	76	36.1 ¹³²	+13 44.9 ¹⁰⁸	60 S	20 53	21 59	** **	14 02 85	23 12 11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 52 ^m 7	Mag: -4.0 PMG: 12 ^h 21 ^m	Mag: +1.0 PMG: 16 ^h 03 ^m	Mag: -2.7 PMG: 22 ^h 26 ^m	Mag: -0.1 PMG: 20 ^h 19 ^m					
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄					
h	°	'	°	'	°	'	°	'	°	'
0	121	10.2	175 00.7	-20 25.2	119 00.6	+0 35.8	22 29.1	+23 15.0	54 19.5	+19 59.1
1	136	12.7	189 59.8	24.5	134 01.4	36.5	37 31.8	15.0	69 22.0	59.1
2	151	15.2	204 59.0	23.8	149 02.2	37.3	52 34.6	15.0	84 24.6	59.1
3	166	17.6	219 58.2	23.2	164 03.1	38.0	67 37.4	15.1	99 27.1	59.1
4	181	20.1	234 57.4	22.5	179 03.9	38.8	82 40.2	15.1	114 29.6	59.1
5	196	22.6	249 56.6	-20 21.8	194 04.7	+0 39.6	97 42.9	+23 15.1	129 32.2	+19 59.1
6	211	25.0	264 55.8	-20 21.1	209 05.5	+0 40.3	112 45.7	+23 15.1	144 34.7	+19 59.1
7	226	27.5	279 55.0	20.4	224 06.3	41.1	127 48.5	15.2	159 37.3	59.0
8	241	29.9	294 54.2	19.8	239 07.1	41.9	142 51.2	15.2	174 39.8	59.0
9	256	32.4	309 53.4	19.1	254 07.9	42.6	157 54.0	15.2	189 42.4	59.0
10	271	34.9	324 52.6	18.4	269 08.7	43.4	172 56.8	15.2	204 44.9	59.0
11	286	37.3	339 51.8	-20 17.7	284 09.6	+0 44.1	187 59.5	+23 15.3	219 47.5	+19 59.0
12	301	39.8	354 51.0	-20 17.0	299 10.4	+0 44.9	203 02.3	+23 15.3	234 50.0	+19 59.0
13	316	42.3	9 50.2	16.3	314 11.2	45.7	218 05.1	15.3	249 52.6	59.0
14	331	44.7	24 49.4	15.6	329 12.0	46.4	233 07.9	15.3	264 55.1	59.0
15	346	47.2	39 48.6	15.0	344 12.8	47.2	248 10.6	15.3	279 57.7	59.0
16	1	49.7	54 47.7	14.3	359 13.6	48.0	263 13.4	15.4	295 00.2	59.0
17	16	52.1	69 46.9	-20 13.6	14 14.4	+0 48.7	278 16.2	+23 15.4	310 02.8	+19 59.0
18	31	54.6	84 46.1	-20 12.9	29 15.2	+0 49.5	293 18.9	+23 15.4	325 05.3	+19 59.0
19	46	57.0	99 45.3	12.2	44 16.0	50.2	308 21.7	15.4	340 07.8	59.0
20	61	59.5	114 44.5	11.5	59 16.9	51.0	323 24.5	15.5	355 10.4	59.0
21	77	02.0	129 43.7	10.8	74 17.7	51.8	338 27.2	15.5	10 12.9	59.0
22	92	04.4	144 42.9	10.1	89 18.5	52.5	353 30.0	15.5	25 15.5	59.0
23	107	06.9	159 42.1	09.4	104 19.3	53.3	8 32.8	15.5	40 18.0	59.0
24	122	09.4	174 41.3	-20 08.7	119 20.1	+0 54.1	23 35.5	+23 15.5	55 20.6	+19 59.0
Dif	—	-8	+7	+8	+8	+8	+28	0	+25	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2			Edad: 9 ^d 4 PHE { 4 ^h : 55:9 12 ^h : 56:2 20 ^h : 56:5 R°: 51 ^m												
	PMG: 12 ^h 11 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	04.5	-19 32.1	76	36.1	+13 44.9	108	60 N	6 51	7 44	8 34	11 19	14	2 42	86	
1	192	04.3	31.5	91	08.3	+13 55.7	108	58	46	35	21	29	18	33	82	
2	207	04.2	30.9	105	40.4	+14 06.5	108	56	42	28	11	37	21	25	79	
3	222	04.0	30.3	120	12.3	+14 17.2	107	54	37	21	8 01	45	23	18	77	
4	237	03.8	29.7	134	44.2	+14 27.8	106	52	33	15	7 53	52	25	12	74	
5	252	03.7	-19 29.1	149	16.1	+14 38.4	106	50	6 30	7 09	7 45	11 58	27	2 07	71	
6	267	03.5	-19 28.6	163	47.8	+14 49.0	106	45	6 21	6 57	7 29	12 11	32	1 55	67	
7	282	03.4	28.0	178	19.4	+14 59.4	104	40	14	47	16	22	35	45	64	
8	297	03.2	27.4	192	51.0	+15 09.9	105	35	07	38	7 05	32	37	36	62	
9	312	03.0	26.8	207	22.4	+15 20.2	103	30	6 00	29	6 55	40	40	29	59	
10	327	02.9	26.2	221	53.8	+15 30.5	103	20	5 47	14	38	12 55	43	16	55	
11	342	02.7	-19 25.6	236	25.1	+15 40.8	103	10 N	5 35	6 00	6 22	13 07	47	1 05	51	
12	357	02.6	-19 25.0	250	56.3	+15 51.0	102	0	5 21	5 46	6 08	13 19	50	0 55	48	
13	12	02.4	24.4	265	27.4	+16 01.1	101	10 S	5 05	31	5 54	31	54	45	44	
14	27	02.2	23.9	279	58.4	+16 11.2	101	20	4 46	5 15	5 38	44	57	34	41	
15	42	02.1	23.3	294	29.3	+16 21.2	100	30	22	4 54	20	13 59	61	21	37	
16	57	01.9	22.7	309	00.1	+16 31.1	99	35	4 07	42	5 10	14 08	63	14	34	
17	72	01.8	-19 22.1	323	30.9	+16 41.0	99	40	3 49	4 27	4 58	14 18	65	0 06	31	
18	87	01.6	-19 21.5	338	01.5	+16 50.8	98	45	3 25	4 09	4 43	14 30	68	***	***	
19	102	01.5	20.9	352	32.0	+17 00.5	97	50	2 52	3 46	26	44	73	***	***	
20	117	01.3	20.3	7	02.5	+17 10.1	96	52	35	35	17	51	75	***	***	
21	132	01.1	19.7	21	32.8	+17 19.7	96	54	2 13	22	4 08	14 58	78	23 54	27	
22	147	01.0	19.1	36	03.0	+17 29.2	95	56	1 44	3 06	3 58	15 06	81	45	24	
23	162	00.8	18.5	50	33.2	+17 38.7	95	58	0 53	2 48	45	16	84	35	21	
24	177	00.7	-19 17.9	65	03.2	+17 48.0	93	60 S	**	**	2 25	3 31	15 27	88	23 23	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 48 ^m 8		Mag: -4.0 PMG: 12 ^h 22 ^m		Mag: +1.0 PMG: 16 ^h 02 ^m		Mag: -2.7 PMG: 22 ^h 22 ^m		Mag: -0.1 PMG: 20 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	122	09.4	174	41.3	-20	08.7	119	20.1	+0	54.1	23	35.5	+23	15.5	55	20.6	+19	59.0
1	137	11.8	189	40.5		08.0	134	20.9		54.8	38	38.3		15.6	70	23.1		59.0
2	152	14.3	204	39.7		07.3	149	21.7		55.6	53	41.1		15.6	85	25.7		59.0
3	167	16.8	219	39.0		06.6	164	22.5		56.3	68	43.8		15.6	100	28.2		59.0
4	182	19.2	234	38.2		05.9	179	23.3		57.1	83	46.6		15.6	115	30.7		59.0
5	197	21.7	249	37.4	-20	05.2	194	24.2	+0	57.9	98	49.4	+23	15.6	130	33.3	+19	59.0
6	212	24.2	264	36.6	-20	04.5	209	25.0	+0	58.6	113	52.1	+23	15.7	145	35.8	+19	59.0
7	227	26.6	279	35.8		03.8	224	25.8	+0	59.4	128	54.9		15.7	160	38.4		59.0
8	242	29.1	294	35.0		03.1	239	26.6	+1	00.1	143	57.7		15.7	175	40.9		59.0
9	257	31.5	309	34.2		02.4	254	27.4		00.9	159	00.4		15.7	190	43.5		59.0
10	272	34.0	324	33.4		01.7	269	28.2		01.7	174	03.2		15.8	205	46.0		59.0
11	287	36.5	339	32.6	-20	01.0	284	29.0	+1	02.4	189	06.0	+23	15.8	220	48.5	+19	59.0
12	302	38.9	354	31.8	-20	00.2	299	29.8	+1	03.2	204	08.7	+23	15.8	235	51.1	+19	59.0
13	317	41.4	9	31.0	-19	59.5	314	30.7		04.0	219	11.5		15.8	250	53.6		59.0
14	332	43.9	24	30.2		58.8	329	31.5		04.7	234	14.2		15.8	265	56.2		59.0
15	347	46.3	39	29.4		58.1	344	32.3		05.5	249	17.0		15.9	280	58.7		59.0
16	2	48.8	54	28.6		57.4	359	33.1		06.2	264	19.8		15.9	296	01.2		59.0
17	17	51.3	69	27.8	-19	56.7	14	33.9	+1	07.0	279	22.5	+23	15.9	311	03.8	+19	59.0
18	32	53.7	84	27.1	-19	56.0	29	34.7	+1	07.8	294	25.3	+23	15.9	326	06.3	+19	59.0
19	47	56.2	99	26.3		55.2	44	35.5		08.5	309	28.1		16.0	341	08.9		59.0
20	62	58.7	114	25.5		54.5	59	36.3		09.3	324	30.8		16.0	356	11.4		59.0
21	78	01.1	129	24.7		53.8	74	37.2		10.0	339	33.6		16.0	11	13.9		59.0
22	93	03.6	144	23.9		53.1	89	38.0		10.8	354	36.3		16.0	26	16.5		59.0
23	108	06.0	159	23.1		52.4	104	38.8		11.6	9	39.1		16.0	41	19.0		59.0
24	123	08.5	174	22.3	-19	51.6	119	39.6	+1	12.3	24	41.9	+23	16.1	56	21.6	+19	59.0
Dif	—		-8		+7		+8		+8		+28		0		+25			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 12 ^m 1			Edad: 10 ^d 4 PHE { SD: 15:4 PMG: 20 ^h 22 ^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	177	00.7	-19	17.9	65	03.2	+17	48.0	60 N	15 53	16 43	17 35	11 33	23	4 08 87
1	192	00.5		17.3	79	33.2 ¹¹⁰	+17	57.3 ⁹³	58	16 05	51	40	47	26	3 55 83
2	207	00.4		16.7	94	03.0 ¹⁰⁸	+18	06.5 ⁹²	56	16	16 58	44	11 58	30	44 80
3	222	00.2		16.1	108	32.7 ¹⁰⁷		15.7 ⁹²	54	25	17 05	49	12 08	32	35 77
4	237	00.1		15.5	123	02.4 ¹⁰⁷		24.7 ⁹⁰	52	33	11	52	17	34	26 75
5	251	59.9	-19	14.9	137	31.9 ¹⁰⁵	+18	33.7 ⁹⁰	50	16 40	17 16	17 56	12 25	36	3 18 73
6	266	59.8	-19	14.3	152	01.3 ¹⁰⁴	+18	42.6 ⁸⁹	45	16 56	17 28	18 04	12 43	39	3 02 69
7	281	59.6		13.7	166	30.7 ¹⁰⁴	+18	51.3 ⁸⁷	40	17 09	38	11	12 57	42	2 49 66
8	296	59.5		13.1	180	59.9 ¹⁰²	+19	00.1 ⁸⁸	35	20	47	18	13 09	45	38 63
9	311	59.3		12.5	195	29.0 ¹⁰¹		08.7 ⁸⁶	30	30	17 56	25	20 46		28 61
10	326	59.2		11.9	209	58.0 ¹⁰⁰		17.2 ⁸⁵	20	17 47	18 10	37	38 50		2 11 58
11	341	59.0	-19	11.3	224	27.0 ¹⁰⁰	+19	25.7 ⁸⁵	10 N	18 02	18 24	18 50	13 54	52	1 56 55
12	356	58.9	-19	10.7	238	55.8 ⁹⁸	+19	34.0 ⁸³	0	18 16	18 38	19 03	14 09	55	1 43 52
13	11	58.7		10.1	253	24.5 ⁹⁷		42.3 ⁸³	10 S	30	18 52	18	25 56		29 49
14	26	58.6		09.5	267	53.1 ⁹⁶		50.4 ⁸¹	20	18 45	19 09	19 37	14 41	59	1 15 46
15	41	58.4		08.9	282	21.6 ⁹⁵	+19	58.5 ⁸¹	30	19 02	29	20 00	15 00	62	0 58 43
16	56	58.3		08.3	296	49.9 ⁹³	+20	06.5 ⁸⁰	35	13	41	15	11 64		48 41
17	71	58.1	-19	07.7	311	18.2 ⁹³	+20	14.4 ⁷⁹	40	19 25	19 55	20 33	15 23	67	0 37 39
18	86	58.0	-19	07.1	325	46.4 ⁹²	+20	22.1 ⁷⁷	45	19 39	20 13	20 57	15 38	70	0 25 35
19	101	57.8		06.5	340	14.5 ⁹¹		29.8 ⁷⁷	50	19 56	35	21 28	15 57	73	09 31
20	116	57.7		05.9	354	42.4 ⁸⁹		37.4 ⁷⁶	52	20 04	46	21 45	16 06	74	0 02 29
21	131	57.5		05.3	9	10.3 ⁸⁹		44.8 ⁷⁴	54	13	20 59	22 05	16 76		** ** *
22	146	57.4		04.7	23	38.0 ⁸⁷		52.2 ⁷⁴	56	23	21 13	22 32	27 79		** ** *
23	161	57.2		04.0	38	05.7 ⁸⁷	+20	59.5 ⁷³	58	35	31	23 14	40 82		23 56 32
24	176	57.1	-19	03.4	52	33.2 ⁸⁵	+21	06.6 ⁷¹	60 S	20 48	21 53	** **	16 55	86	23 40 28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 44 ^m 8		Mag: -4.0 PMG: 12 ^h 23 ^m		Mag: +1.0 PMG: 16 ^h 00 ^m		Mag: -2.7 PMG: 22 ^h 17 ^m		Mag: -0.1 PMG: 20 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	123	08.5	174	22.3	-19	51.6	119	39.6	+1	12.3	24	41.9	+23	16.1	56	21.6	+19	59.0
1	138	11.0	189	21.5		50.9	134	40.4		13.1	39	44.6		16.1	71	24.1		59.0
2	153	13.4	204	20.8		50.2	149	41.2		13.8	54	47.4		16.1	86	26.6		59.0
3	168	15.9	219	20.0		49.5	164	42.0		14.6	69	50.1		16.1	101	29.2		59.0
4	183	18.4	234	19.2		48.7	179	42.8		15.4	84	52.9		16.1	116	31.7		59.0
5	198	20.8	249	18.4	-19	48.0	194	43.7	+1	16.1	99	55.7	+23	16.2	131	34.3	+19	59.0
6	213	23.3	264	17.6	-19	47.3	209	44.5	+1	16.9	114	58.4	+23	16.2	146	36.8	+19	59.0
7	228	25.8	279	16.8		46.6	224	45.3		17.6	130	01.2		16.2	161	39.3		59.0
8	243	28.2	294	16.1		45.8	239	46.1		18.4	145	03.9		16.2	176	41.9		59.0
9	258	30.7	309	15.3		45.1	254	46.9		19.2	160	06.7		16.3	191	44.4		59.0
10	273	33.1	324	14.5		44.4	269	47.7		19.9	175	09.5		16.3	206	46.9		59.0
11	288	35.6	339	13.7	-19	43.6	284	48.5	+1	20.7	190	12.2	+23	16.3	221	49.5	+19	59.0
12	303	38.1	354	12.9	-19	42.9	299	49.3	+1	21.4	205	15.0	+23	16.3	236	52.0	+19	59.0
13	318	40.5	9	12.2		42.2	314	50.1		22.2	220	17.7		16.3	251	54.6		59.0
14	333	43.0	24	11.4		41.4	329	51.0		23.0	235	20.5		16.4	266	57.1		59.0
15	348	45.5	39	10.6		40.7	344	51.8		23.7	250	23.2		16.4	281	59.6		59.0
16	3	47.9	54	09.8		39.9	359	52.6		24.5	265	26.0		16.4	297	02.2		59.0
17	18	50.4	69	09.0	-19	39.2	14	53.4	+1	25.2	280	28.8	+23	16.4	312	04.7	+19	59.0
18	33	52.9	84	08.3	-19	38.5	29	54.2	+1	26.0	295	31.5	+23	16.4	327	07.2	+19	59.0
19	48	55.3	99	07.5		37.7	44	55.0		26.8	310	34.3		16.5	342	09.8		59.0
20	63	57.8	114	06.7		37.0	59	55.8		27.5	325	37.0		16.5	357	12.3		59.0
21	79	00.3	129	05.9		36.2	74	56.6		28.3	340	39.8		16.5	12	14.8		59.0
22	94	02.7	144	05.2		35.5	89	57.5		29.0	355	42.5		16.5	27	17.4		59.0
23	109	05.2	159	04.4		34.7	104	58.3		29.8	10	45.3		16.6	42	19.9		59.0
24	124	07.6	174	03.6	-19	34.0	119	59.1	+1	30.6	25	48.0	+23	16.6	57	22.4	+19	59.0
Dif	—		-8		+7		+8		+8		+28		0		+25			

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 3			Edad: 11 ^d 4 PHE { 4 ^h : 57/7 12 ^h : 58/0 20 ^h : 58/3 R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	57.1	-19	03.4	52	33.2	+21	06.6	60 N	6 48	7 40	8 30	11 56	37	5 35	82		
1	191	56.9		02.8	67	00.6		13.6	58	43	32	18	12 13	41	18	79		
2	206	56.8		02.2	81	28.0		20.6	56	39	25	8 08	28 43		5 04	76		
3	221	56.6		01.6	95	55.2		27.4	54	35	19	7 59	40 45		4 52	74		
4	236	56.5		01.0	110	22.3		34.1	52	31	13	50	12 51	47	41	72		
5	251	56.4	-19	00.4	124	49.3	+21	40.7	50	6 28	7 07	7 43	13 01	48	4 31	71		
6	266	56.2	-18	59.8	139	16.2	+21	47.1	45	6 20	6 56	7 27	13 22	50	4 11	68		
7	281	56.1		59.1	153	43.0		53.5	40	13	45	15	39 52		3 55	66		
8	296	55.9		58.5	168	09.7	+21	59.7	35	06	37	7 04	13 54	53	41	65		
9	311	55.8		57.9	182	36.3	+22	05.8	30	6 00	29	6 54	14 06	54	29	63		
10	326	55.6		57.3	197	02.8		11.8	20	5 47	14	37	28 55		3 09	60		
11	341	55.5	-18	56.7	211	29.2	+22	17.7	10 N	5 35	6 00	6 23	14 46	58	2 51	59		
12	356	55.4	-18	56.1	225	55.5	+22	23.4	0	5 21	5 47	6 09	15 04	58	2 35	56		
13	11	55.2		55.4	240	21.7		29.0	10 S	5 06	32	5 55	21 60		18	55		
14	26	55.1		54.8	254	47.8		34.5	20	4 48	5 16	40	15 40	62	2 01	52		
15	41	54.9		54.2	269	13.8		39.9	30	25	4 56	22	16 02	63	1 41	50		
16	56	54.8		53.6	283	39.7		45.1	35	4 10	44	12	15 64		29	48		
17	71	54.6	-18	53.0	298	05.5	+22	50.2	40	3 51	4 29	5 00	16 30	65	1 16	46		
18	86	54.5	-18	52.3	312	31.1	+22	55.1	45	3 28	4 12	4 46	16 48	66	1 00	44		
19	101	54.4		51.7	326	56.7	+23	00.0	50	2 57	3 50	29	17 10	68	0 40	41		
20	116	54.2		51.1	341	22.2	+23	04.6	52	40	39	21	20 69		31	39		
21	131	54.1		50.5	355	47.7		09.2	54	2 20	26	12	32 71		21	37		
22	146	54.0		49.8	10	13.0		13.6	56	1 53	3 12	4 02	17 46	72	0 09	35		
23	161	53.8		49.2	24	38.2		17.9	58	1 11	2 54	3 50	18 02	73	** ** *	**		
24	176	53.7	-18	48.6	39	03.3	+23	22.0	60 S	** ** *	2 32	3 37	18 21	76	** ** *	**		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 15 ^h 40 ^m 9			Mag: -4.0 PMG: 12 ^h 24 ^m			Mag: +1.0 PMG: 15 ^h 59 ^m			Mag: -2.7 PMG: 22 ^h 13 ^m			Mag: -0.1 PMG: 20 ^h 07 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	124	07.6	174	03.6	-19	34.0	119	59.1	+1	30.6	25	48.0	+23	16.6	57	22.4	+19	59.0
1	139	10.1	189	02.9		33.2	134	59.9		31.3	40	50.8		16.6	72	25.0		59.0
2	154	12.6	204	02.1		32.5	150	00.7		32.1	55	53.6		16.6	87	27.5		59.0
3	169	15.0	219	01.3		31.7	165	01.5		32.8	70	56.3		16.6	102	30.0		59.0
4	184	17.5	234	00.5		31.0	180	02.3		33.6	85	59.1		16.7	117	32.6		59.0
5	199	20.0	248	59.8	-19	30.2	195	03.1	+1	34.4	101	01.8	+23	16.7	132	35.1	+19	59.0
6	214	22.4	263	59.0	-19	29.5	210	04.0	+1	35.1	116	04.6	+23	16.7	147	37.6	+19	59.0
7	229	24.9	278	58.2		28.7	225	04.8		35.9	131	07.3		16.7	162	40.2		59.0
8	244	27.4	293	57.5		28.0	240	05.6		36.6	146	10.1		16.7	177	42.7		59.0
9	259	29.8	308	56.7		27.2	255	06.4		37.4	161	12.8		16.8	192	45.2		59.0
10	274	32.3	323	55.9		26.5	270	07.2		38.2	176	15.6		16.8	207	47.8		59.0
11	289	34.8	338	55.1	-19	25.7	285	08.0	+1	38.9	191	18.3	+23	16.8	222	50.3	+19	59.0
12	304	37.2	353	54.4	-19	25.0	300	08.8	+1	39.7	206	21.1	+23	16.8	237	52.8	+19	59.0
13	319	39.7	8	53.6		24.2	315	09.7		40.4	221	23.8		16.8	252	55.4		59.0
14	334	42.1	23	52.8		23.4	330	10.5		41.2	236	26.6		16.9	267	57.9		59.0
15	349	44.6	38	52.1		22.7	345	11.3		42.0	251	29.3		16.9	283	00.4		59.0
16	4	47.1	53	51.3		21.9	0	12.1		42.7	266	32.1		16.9	298	03.0		59.0
17	19	49.5	68	50.6	-19	21.1	15	12.9	+1	43.5	281	34.8	+23	16.9	313	05.5	+19	59.0
18	34	52.0	83	49.8	-19	20.4	30	13.7	+1	44.2	296	37.6	+23	16.9	328	08.0	+19	59.0
19	49	54.5	98	49.0		19.6	45	14.5		45.0	311	40.3		17.0	343	10.6		59.0
20	64	56.9	113	48.3		18.9	60	15.3		45.7	326	43.1		17.0	358	13.1		59.0
21	79	59.4	128	47.5		18.1	75	16.2		46.5	341	45.8		17.0	13	15.6		59.0
22	95	01.9	143	46.7		17.3	90	17.0		47.3	356	48.6		17.0	28	18.2		59.0
23	110	04.3	158	46.0		16.5	105	17.8		48.0	11	51.3		17.0	43	20.7		59.0
24	125	06.8	173	45.2	-19	15.8	120	18.6	+1	48.8	26	54.1	+23	17.1	58	23.2	+19	59.0
Dif	—			-8	+8		+8	+8		+28	0		+25	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 5				Edad: 12 ^d 4 PHE { SD: 15/9 PMG: 22 ^h 17 ^m												
	hG ☉		Dec		hG ☾		Dif							Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	176	53.7	-18	48.6	39	03.3	+23	22.0	60 N	15 58	16 47	17 39	12 33	61	6 57	66	
1	191	53.5		48.0	53	28.4		26.0	58	16 10	16 55	44	12 54	61	37	65	
2	206	53.4		47.3	67	53.3		29.8	56	20	17 02	48	13 11	61	20	65	
3	221	53.3		46.7	82	18.2		33.5	54	29	08	52	25	62	6 06	64	
4	236	53.1		46.1	96	43.0		37.1	52	37	14	55	38	61	5 53	65	
5	251	53.0	-18	45.5	111	07.6	+23	40.5	50	16 44	17 19	17 59	13 49	62	5 42	64	
6	266	52.9	-18	44.8	125	32.3	+23	43.7	45	16 59	17 31	18 06	14 12	62	5 19	64	
7	281	52.7		44.2	139	56.8		46.8	40	17 12	41	13	31	62	5 01	63	
8	296	52.6		43.6	154	21.2		49.8	30	22	49	20	14 47	61	4 46	62	
9	311	52.5		42.9	168	45.6		52.6	28	32	17 57	26	15 00	62	32	62	
10	326	52.3		42.3	183	09.9		55.3	27	20	17 48	18 11	23	62	4 09	62	
11	341	52.2	-18	41.7	197	34.1	+23	57.8	25	10 N	18 03	18 25	15 44	61	3 50	61	
12	356	52.1	-18	41.0	211	58.2	+24	00.1	23	0	18 16	18 38	16 02	62	3 31	61	
13	11	51.9		40.4	226	22.3		02.3	22	10 S	30	18 52	21	62	3 13	60	
14	26	51.8		39.8	240	46.3		04.3	20	20	18 45	19 08	16 42	61	2 53	59	
15	41	51.7		39.1	255	10.2		06.2	19	30	19 02	28	17 05	61	31	58	
16	56	51.5		38.5	269	34.0		07.9	17	35	12	40	19	61	17	58	
17	71	51.4	-18	37.9	283	57.8	+24	09.4	15	40	19 23	19 54	17 35	60	2 02	57	
18	86	51.3	-18	37.2	298	21.5	+24	10.8	14	45	19 37	20 11	17 54	60	1 44	55	
19	101	51.1		36.6	312	45.2		12.0	12	50	19 53	32	18 18	59	21	54	
20	116	51.0		36.0	327	08.8		13.1	11	52	20 01	43	29	59	1 10	54	
21	131	50.9		35.3	341	32.3		14.0	9	54	10	20 55	43	58	0 58	53	
22	146	50.7		34.7	355	55.8		14.7	7	56	20	21 09	22	59	44	52	
23	161	50.6		34.1	10	19.2		15.3	6	58	31	26	19 15	57	28	50	
24	176	50.5	-18	33.4	24	42.6	+24	15.7	4	60 S	20 44	21 46	19 37	56	0 08	48	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 37 ^m 0		Mag: -3.9 PMG: 12 ^h 26 ^m		Mag: +1.0 PMG: 15 ^h 58 ^m		Mag: -2.7 PMG: 22 ^h 08 ^m		Mag: -0.1 PMG: 20 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	125	06.8	173	45.2	-19	15.8	120	18.6	+1	48.8	26	54.1	+23	17.1	58	23.2	+19	59.0
1	140	09.3	188	44.5		15.0	135	19.4		49.5	41	56.8		17.1	73	25.7		59.0
2	155	11.7	203	43.7		14.2	150	20.2		50.3	56	59.6		17.1	88	28.3		59.0
3	170	14.2	218	42.9		13.5	165	21.0		51.1	72	02.3		17.1	103	30.8		59.0
4	185	16.6	233	42.2		12.7	180	21.8		51.8	87	05.1		17.1	118	33.3		59.0
5	200	19.1	248	41.4	-19	11.9	195	22.7	+1	52.6	102	07.8	+23	17.2	133	35.9	+19	59.0
6	215	21.6	263	40.7	-19	11.1	210	23.5	+1	53.3	117	10.6	+23	17.2	148	38.4	+19	59.0
7	230	24.0	278	39.9		10.4	225	24.3		54.1	132	13.3		17.2	163	40.9		59.0
8	245	26.5	293	39.2		09.6	240	25.1		54.8	147	16.1		17.2	178	43.4		59.0
9	260	29.0	308	38.4		08.8	255	25.9		55.6	162	18.8		17.3	193	46.0		59.0
10	275	31.4	323	37.6		08.0	270	26.7		56.4	177	21.6		17.3	208	48.5		59.0
11	290	33.9	338	36.9	-19	07.2	285	27.5	+1	57.1	192	24.3	+23	17.3	223	51.0	+19	59.0
12	305	36.4	353	36.1	-19	06.5	300	28.3	+1	57.9	207	27.1	+23	17.3	238	53.6	+19	59.0
13	320	38.8	8	35.4		05.7	315	29.2		58.6	222	29.8		17.3	253	56.1		59.0
14	335	41.3	23	34.6		04.9	330	30.0	+1	59.4	237	32.5		17.4	268	58.6		59.0
15	350	43.8	38	33.9		04.1	345	30.8	+2	00.1	252	35.3		17.4	284	01.1		59.0
16	5	46.2	53	33.1		03.3	0	31.6		00.9	267	38.0		17.4	299	03.7		59.0
17	20	48.7	68	32.4	-19	02.5	15	32.4	+2	01.7	282	40.8	+23	17.4	314	06.2	+19	59.0
18	35	51.1	83	31.6	-19	01.8	30	33.2	+2	02.4	297	43.5	+23	17.4	329	08.7	+19	59.0
19	50	53.6	98	30.9		01.0	45	34.0		03.2	312	46.3		17.5	344	11.2		59.0
20	65	56.1	113	30.1	-19	00.2	60	34.8		03.9	327	49.0		17.5	359	13.8		59.0
21	80	58.5	128	29.4	-18	59.4	75	35.7		04.7	342	51.8		17.5	14	16.3		59.0
22	96	01.0	143	28.6		58.6	90	36.5		05.4	357	54.5		17.5	29	18.8		59.0
23	111	03.5	158	27.9		57.8	105	37.3		06.2	12	57.2		17.5	44	21.3		59.0
24	126	05.9	173	27.1	-18	57.0	120	38.1	+2	07.0	28	00.0	+23	17.6	59	23.9	+19	59.0
Dif	—		-8		+8		+8		+8		+27		0		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 12 ^m 7			Edad: 13 ^d 4 PHE { SD: 16:2 PMG: 23 ^h 19 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	176	50.5	-18	33.4	24	42.6	+24	15.7	2	60 N	6 45	7 37	8 26	13 34	84	8 03	45
1	191	50.4		32.8	39	05.9		43		58	41	29	14	13 55	81	7 42	48
2	206	50.2		32.1	53	29.2		43		56	36	22	8 04	14 12	79	25	50
3	221	50.1		31.5	67	52.4		42		54	33	16	7 56	27 77		7 10	52
4	236	50.0		30.9	82	15.6		42		52	29	10	48	39 76		6 58	52
5	251	49.8	-18	30.2	96	38.7	+24	15.2	4	50	6 26	7 05	7 41	14 51	74	6 46	54
6	266	49.7	-18	29.6	111	01.8	+24	14.6	6	45	6 18	6 54	7 26	15 14	72	6 23	55
7	281	49.6		28.9	125	24.9		41		40	11	44	13	33 70		6 04	57
8	296	49.5		28.3	139	47.9		40		35	6 05	36	7 02	15 48	69	5 48	58
9	311	49.3		27.6	154	10.9		40		30	5 59	28	6 53	16 02	68	34	59
10	326	49.2		27.0	168	33.8		39		20	47	14	37	25 66		5 11	60
11	341	49.1	-18	26.3	182	56.7	+24	09.0	15	10 N	5 35	6 01	6 23	16 45	64	4 51	61
12	356	49.0	-18	25.7	197	19.6	+24	07.4	16	0	5 22	5 47	6 09	17 04	62	4 32	62
13	11	48.8		25.1	211	42.5		39		10 S	5 07	33	5 56	23 60		4 13	62
14	26	48.7		24.4	226	05.3		38		20	4 49	5 17	41	17 43	58	3 52	64
15	41	48.6		23.8	240	28.2	+24	01.4	22	30	27	4 58	24	18 06	56	29	64
16	56	48.5		23.1	254	51.0	+23	59.1	23	35	4 12	46	14	20 54		3 15	65
17	71	48.3	-18	22.5	269	13.7	+23	56.6	25	40	3 54	4 32	5 03	18 35	53	2 59	66
18	86	48.2	-18	21.8	283	36.5	+23	54.0	26	45	3 32	4 15	4 49	18 54	51	2 39	68
19	101	48.1		21.2	297	59.3		38		50	3 02	3 53	33	19 17	48	15	69
20	116	48.0		20.5	312	22.0		37		52	2 46	43	25	28 47		2 04	69
21	131	47.9		19.9	326	44.8		38		54	26	31	16	41 44		1 51	69
22	146	47.7		19.2	341	07.5		37		56	2 02	17	4 06	19 55	42	36	70
23	161	47.6		18.6	355	30.2		37		58	1 25	3 00	3 55	20 12	40	1 18	71
24	176	47.5	-18	17.9	9	53.0	+23	34.3	37	60 S	** **	2 40	3 42	20 33	35	0 56	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 33 ^m 1		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: +1.0 PMG: 15 ^h 57 ^m		Mag: -2.7 PMG: 22 ^h 04 ^m		Mag: -0.1 PMG: 19 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	126	05.9	173	27.1	120	38.1	28	00.0	59	23.9
1	141	08.4	188	26.4	135	38.9	43	02.7	74	26.4
2	156	10.9	203	25.6	150	39.7	58	05.5	89	28.9
3	171	13.3	218	24.9	165	40.5	73	08.2	104	31.4
4	186	15.8	233	24.1	180	41.4	88	11.0	119	34.0
5	201	18.3	248	23.4	195	42.2	103	13.7	134	36.5
6	216	20.7	263	22.6	210	43.0	118	16.4	149	39.0
7	231	23.2	278	21.9	225	43.8	133	19.2	164	41.5
8	246	25.6	293	21.2	240	44.6	148	21.9	179	44.1
9	261	28.1	308	20.4	255	45.4	163	24.7	194	46.6
10	276	30.6	323	19.7	270	46.2	178	27.4	209	49.1
11	291	33.0	338	18.9	285	47.0	193	30.1	224	51.6
12	306	35.5	353	18.2	300	47.9	208	32.9	239	54.2
13	321	38.0	8	17.5	315	48.7	223	35.6	254	56.7
14	336	40.4	23	16.7	330	49.5	238	38.4	269	59.2
15	351	42.9	38	16.0	345	50.3	253	41.1	285	01.7
16	6	45.4	53	15.2	44.2	0 51.1	268	43.8	300	04.2
17	21	47.8	68	14.5	-18	43.4	283	46.6	315	06.8
18	36	50.3	83	13.8	-18	42.6	298	49.3	330	09.3
19	51	52.8	98	13.0	41.8	45 53.5	313	52.0	345	11.8
20	66	55.2	113	12.3	40.9	60 54.4	328	54.8	0	14.3
21	81	57.7	128	11.5	40.1	75 55.2	343	57.5	15	16.9
22	97	00.1	143	10.8	39.3	90 56.0	359	00.3	30	19.4
23	112	02.6	158	10.1	38.5	105 56.8	14	03.0	45	21.9
24	127	05.1	173	09.3	-18	37.7	29	05.7	60	24.4
Dif	—		-7		+8		+27		0	
									+25	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 12 ^m 9			Edad: 14 ^d 4 PHE { SD: 16:4 PMG: **h **m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	47.5	-18	17.9	9	53.0	+23 34.3	60 N	16 03	16 52	17 43	14 58	100	8 48	28
1	191	47.4		17.3	24	15.7	37 30.4	58	14	16 59	48	15 16	95	30	32
2	206	47.3		16.6	38	38.4	37 26.4	56	24	17 06	52	31	91	15	35
3	221	47.1		15.9	53	01.2	38 22.2	54	33	12	55	44	88	8	02
4	236	47.0		15.3	67	23.9	37 17.8	52	40	17	17 59	15 55	86	7	50
5	251	46.9	-18	14.6	81	46.7	38 +23 13.2	50	16 47	17 22	18 02	16 05	83	7	40
6	266	46.8	-18	14.0	96	09.5	38 +23 08.5	45	17 02	17 33	18 09	16 26	79	7	18
7	281	46.7		13.3	110	32.2	37 +23 03.6	40	14	43	16	43	76	7	01
8	296	46.5		12.7	124	55.0	38 +22 58.5	35	24	51	22	16 57	73	6	46
9	311	46.4		12.0	139	17.9	39 53.3	30	34	17 59	28	17 10	70	33	53
10	326	46.3		11.3	153	40.7	38 47.9	20	17 49	18 13	39	31	67	6	11
11	341	46.2	-18	10.7	168	03.6	39 +22 42.3	10 N	18 03	18 25	18 51	17 49	64	5	52
12	356	46.1	-18	10.0	182	26.4	38 +22 36.5	0	18 16	18 38	19 04	18 06	60	5	34
13	11	46.0		09.4	196	49.4	40 30.6	10 S	30	18 52	18	23	57	5	15
14	26	45.8		08.7	211	12.3	39 24.5	20	18 44	19 08	35	18 41	54	4	56
15	41	45.7		08.0	225	35.3	40 18.3	30	19 01	27	19 58	19 02	50	33	70
16	56	45.6		07.4	239	58.3	40 11.9	35	10	38	20 12	14	48	20	72
17	71	45.5	-18	06.7	254	21.3	40 +22 05.3	40	19 21	19 52	20 29	19 28	45	4	05
18	86	45.4	-18	06.1	268	44.4	41 +21 58.6	45	19 34	20 08	20 51	19 45	41	3	47
19	101	45.3		05.4	283	07.5	41 51.7	50	51	29	21 20	20 05	37	24	80
20	116	45.2		04.7	297	30.6	41 44.7	52	19 58	39	35	15	35	13	81
21	131	45.0		04.1	311	53.8	42 37.4	54	20 07	20 51	21 54	25	33	3	00
22	146	44.9		03.4	326	17.1	43 30.1	56	16	21 04	22 17	37	30	2	46
23	161	44.8		02.7	340	40.3	42 22.5	58	27	20	22 49	20 52	25	29	90
24	176	44.7	-18	02.1	355	03.6	43 +21 14.9	60 S	20 39	21 40	** **	21 08	21	2	09

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 29 ^m 1		Mag: -3.9 PMG: 12 ^h 28 ^m		Mag: +1.0 PMG: 15 ^h 55 ^m		Mag: -2.7 PMG: 22 ^h 00 ^m		Mag: -0.1 PMG: 19 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	127	05.1	173	09.3	-18	37.7	120	57.6	+2	25.1
1	142	07.5	188	08.6		36.9	135	58.4		25.9
2	157	10.0	203	07.9		36.1	150	59.2		26.6
3	172	12.5	218	07.1		35.2	166	00.1		27.4
4	187	14.9	233	06.4		34.4	181	00.9		28.1
5	202	17.4	248	05.7	-18	33.6	196	01.7	+2	28.9
6	217	19.9	263	04.9	-18	32.8	211	02.5	+2	29.6
7	232	22.3	278	04.2		32.0	226	03.3		30.4
8	247	24.8	293	03.5		31.1	241	04.1		31.1
9	262	27.2	308	02.7		30.3	256	04.9		31.9
10	277	29.7	323	02.0		29.5	271	05.7		32.6
11	292	32.2	338	01.3	-18	28.7	286	06.6	+2	33.4
12	307	34.6	353	00.6	-18	27.8	301	07.4	+2	34.2
13	322	37.1	7	59.8		27.0	316	08.2		34.9
14	337	39.6	22	59.1		26.2	331	09.0		35.7
15	352	42.0	37	58.4		25.3	346	09.8		36.4
16	7	44.5	52	57.7		24.5	1	10.6		37.2
17	22	47.0	67	56.9	-18	23.7	16	11.4	+2	37.9
18	37	49.4	82	56.2	-18	22.9	31	12.3	+2	38.7
19	52	51.9	97	55.5		22.0	46	13.1		39.4
20	67	54.4	112	54.8		21.2	61	13.9		40.2
21	82	56.8	127	54.0		20.4	76	14.7		40.9
22	97	59.3	142	53.3		19.5	91	15.5		41.7
23	113	01.7	157	52.6		18.7	106	16.3		42.4
24	128	04.2	172	51.9	-18	17.8	121	17.1	+2	43.2
Dif	—		-7 +8		+8		+8		+27 0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 15 ^d .4 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 60'9 R°: 59 ^m													
	PMG: 12 ^h 13 ^m 1			SD: 16'5 PMG: 0 ^h 21 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m
0	176	44.7	-18 02.1	355	03.6	+21 14.9	79	60 N	6 42	7 33	8 21	16 38	103	9 16	18		
1	191	44.6	01.4	9	27.0	44 +21 07.0	80	58	37	26	10	16 51	98	9 02	22		
2	206	44.5	00.7	23	50.4	44 +20 59.0	81	56	34	19	8 01	17 02	95	8 50	26		
3	221	44.4	-18 00.1	38	13.9	45 50.9	81	54	30	13	7 52	12 91		40	28		
4	236	44.3	-17 59.4	52	37.4	45 42.6	83	52	27	08	45	21 88		31	30		
5	251	44.1	-17 58.7	67	01.0	46 +20 34.1	85	50	6 24	7 03	7 38	17 28	87	8 22	33		
6	266	44.0	-17 58.1	81	24.6	46 +20 25.6	85	45	6 17	6 52	7 23	17 45	81	8 04	38		
7	281	43.9	57.4	95	48.3	47 16.8	88	40	10	43	11	17 59	77	7 50	41		
8	296	43.8	56.7	110	12.0	47 +20 07.9	89	35	6 04	34	7 01	18 10	74	37	45		
9	311	43.7	56.0	124	35.8	48 +19 58.9	90	30	5 58	27	6 52	20 71		26	47		
10	326	43.6	55.4	138	59.7	49 49.7	92	20	47	13	36	38 65		7 07	52		
11	341	43.5	-17 54.7	153	23.6	49 +19 40.4	93	10 N	5 35	6 01	6 23	18 53	61	6 51	55		
12	356	43.4	-17 54.0	167	47.6	50 +19 30.9	95	0	5 23	5 48	6 10	19 06	58	6 35	59		
13	11	43.3	53.3	182	11.6	50 21.3	96	10 S	5 08	34	5 56	20 54		19	63		
14	26	43.2	52.7	196	35.7	51 11.6	97	20	4 51	19	42	35 50		6 03	66		
15	41	43.1	52.0	210	59.9	52 +19 01.7	99	30	29	5 00	26	19 52	45	5 43	71		
16	56	43.0	51.3	225	24.1	52 +18 51.7	100	35	4 15	4 48	16	20 02	42	32	73		
17	71	42.8	-17 50.6	239	48.4	53 +18 41.6	101	40	3 57	4 35	5 05	20 13	39	5 18	77		
18	86	42.7	-17 50.0	254	12.8	54 +18 31.3	103	45	3 36	4 18	4 52	20 26	35	5 03	80		
19	101	42.6	49.3	268	37.3	55 20.9	104	50	3 06	3 57	36	42 30		4 44	85		
20	116	42.5	48.6	283	01.8	55 +18 10.4	105	52	2 51	47	29	50 27		34	88		
21	131	42.4	47.9	297	26.3	55 +17 59.7	107	54	33	36	20	20 58	24	24	91		
22	146	42.3	47.3	311	51.0	57 49.0	107	56	2 10	22	11	21 07	21	4 12	94		
23	161	42.2	46.6	326	15.7	57 38.1	109	58	1 37	3 06	4 00	17 18		3 59	98		
24	176	42.1	-17 45.9	340	40.5	58 +17 27.0	111	60 S	** **	2 47	3 48	21 29	14	3 43	103		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 15 ^h 25 ^m 2		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: +1.0 PMG: 15 ^h 54 ^m		Mag: -2.6 PMG: 21 ^h 55 ^m		Mag: -0.1 PMG: 19 ^h 51 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'			
0	128	04.2	172	51.9	-18 17.8	121	17.1	+2 43.2	30	11.3	+23 18.5	61	24.8	+19 59.1
1	143	06.7	187	51.1	17.0	136	17.9	44.0	45	14.0	18.5	76	27.4	59.1
2	158	09.1	202	50.4	16.2	151	18.8	44.7	60	16.8	18.5	91	29.9	59.1
3	173	11.6	217	49.7	15.3	166	19.6	45.5	75	19.5	18.5	106	32.4	59.1
4	188	14.1	232	49.0	14.5	181	20.4	46.2	90	22.2	18.6	121	34.9	59.1
5	203	16.5	247	48.3	-18 13.6	196	21.2	+2 47.0	105	25.0	+23 18.6	136	37.4	+19 59.1
6	218	19.0	262	47.5	-18 12.8	211	22.0	+2 47.7	120	27.7	+23 18.6	151	39.9	+19 59.1
7	233	21.5	277	46.8	12.0	226	22.8	48.5	135	30.4	18.6	166	42.4	59.1
8	248	23.9	292	46.1	11.1	241	23.6	49.2	150	33.1	18.6	181	45.0	59.2
9	263	26.4	307	45.4	10.3	256	24.5	50.0	165	35.9	18.6	196	47.5	59.2
10	278	28.9	322	44.7	09.4	271	25.3	50.7	180	38.6	18.7	211	50.0	59.2
11	293	31.3	337	44.0	-18 08.6	286	26.1	+2 51.5	195	41.3	+23 18.7	226	52.5	+19 59.2
12	308	33.8	352	43.2	-18 07.7	301	26.9	+2 52.2	210	44.0	+23 18.7	241	55.0	+19 59.2
13	323	36.2	7	42.5	06.9	316	27.7	53.0	225	46.8	18.7	256	57.5	59.2
14	338	38.7	22	41.8	06.0	331	28.5	53.7	240	49.5	18.7	272	00.0	59.2
15	353	41.2	37	41.1	05.2	346	29.3	54.5	255	52.2	18.8	287	02.6	59.2
16	8	43.6	52	40.4	04.3	1	30.1	55.2	270	54.9	18.8	302	05.1	59.2
17	23	46.1	67	39.7	-18 03.5	16	31.0	+2 56.0	285	57.7	+23 18.8	317	07.6	+19 59.2
18	38	48.6	82	39.0	-18 02.6	31	31.8	+2 56.8	301	00.4	+23 18.8	332	10.1	+19 59.2
19	53	51.0	97	38.3	01.8	46	32.6	57.5	316	03.1	18.8	347	12.6	59.2
20	68	53.5	112	37.5	-18 00.9	61	33.4	58.3	331	05.8	18.8	2	15.1	59.2
21	83	56.0	127	36.8	-18 00.0	76	34.2	59.0	346	08.6	18.9	17	17.6	59.2
22	98	58.4	142	36.1	-17 59.2	91	35.0	+2 59.8	1	11.3	18.9	32	20.1	59.2
23	114	00.9	157	35.4	58.3	106	35.8	+3 00.5	16	14.0	18.9	47	22.6	59.2
24	129	03.4	172	34.7	-17 57.5	121	36.7	+3 01.3	31	16.7	+23 18.9	62	25.2	+19 59.2
Dif	—		-7 +8		+8 +8		+27 0		+25 0		+25 0		0 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^d 2 PMG: 12 ^h 13 ^m 3			Edad: 16 ^d 4 PHE { 4 ^h : 60 ^m 9 12 ^h : 60 ^m 9 20 ^h : 60 ^m 9 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	176	42.1	-17	45.9	340	40.5	+17 27.0	60 N	16 08	16 56	17 48	18 21	101	9 34	11
1	191	42.0		45.2	355	05.4	59 15.9 ¹¹¹	58	19	17 04	52	29	98	24	16
2	206	41.9		44.5	9	30.3	59 +17 04.7 ¹¹²	56	28	10	55	37	94	16	19
3	221	41.8		43.9	23	55.3	60 +16 53.3 ¹¹⁴	54	36	16	17 59	43	91	08	22
4	236	41.7		43.2	38	20.4	61 41.8 ¹¹⁵	52	44	21	18 02	49	88	9 01	25
5	251	41.6	-17	42.5	52	45.5	61 +16 30.2 ¹¹⁶	50	16 50	17 26	18 05	18 55	85	8 55	27
6	266	41.5	-17	41.8	67	10.8	63 +16 18.5 ¹¹⁷	45	17 05	17 36	18 11	19 06	80	8 42	32
7	281	41.4		41.1	81	36.1	63 +16 06.7 ¹¹⁸	40	16	45	18	16	76	31	36
8	296	41.3		40.4	96	01.5	64 +15 54.7 ¹²⁰	35	26	17 53	24	24	72	22	39
9	311	41.2		39.8	110	26.9	64 42.7 ¹²⁰	30	35	18 00	29	31	69	8 13	43
10	326	41.1		39.1	124	52.4	65 30.6 ¹²¹	20	17 51	14	40	43	64	7 59	47
11	341	41.0	-17	38.4	139	18.0	66 +15 18.3 ¹²³	10 N	18 04	18 26	18 51	19 54	59	7 46	52
12	356	40.9	-17	37.7	153	43.7	67 +15 06.0 ¹²³	0	18 17	18 38	19 04	20 04	54	7 34	56
13	11	40.8		37.0	168	09.5	68 +14 53.5 ¹²⁵	10 S	30	18 52	18	14	50	22	60
14	26	40.7		36.3	182	35.3	68 41.0 ¹²⁵	20	18 44	19 07	35	25	45	7 09	65
15	41	40.6		35.6	197	01.2	69 28.4 ¹²⁶	30	19 00	25	19 56	37	40	6 54	70
16	56	40.5		34.9	211	27.2	70 15.7 ¹²⁷	35	09	37	20 10	44	37	45	74
17	71	40.4	-17	34.3	225	53.2	70 +14 02.9 ¹²⁸	40	19 20	19 50	20 27	20 52	33	6 35	77
18	86	40.3	-17	33.6	240	19.4	72 +13 50.0 ¹²⁹	45	19 32	20 06	20 48	21 01	29	6 23	81
19	101	40.2		32.9	254	45.6	72 37.0 ¹³⁰	50	48	26	21 16	12	24	09	86
20	116	40.1		32.2	269	11.8	72 23.9 ¹³¹	52	19 55	36	31	17	22	6 02	89
21	131	40.0		31.5	283	38.2	74 +13 10.8 ¹³¹	54	20 03	20 47	21 48	22	20	5 55	91
22	146	39.9		30.8	298	04.6	74 +12 57.5 ¹³³	56	12	21 00	22 10	28	17	46	95
23	161	39.8		30.1	312	31.1	75 44.2 ¹³³	58	23	15	22 39	35	14	37	98
24	176	39.7	-17	29.4	326	57.7	76 +12 30.8 ¹³⁴	60 S	20 34	21 33	23 30	21 43	10	5 26	103
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 21 ^m 3			Mag: -3.9 PMG: 12 ^h 30 ^m			Mag: +1.0 PMG: 15 ^h 53 ^m			Mag: -2.6 PMG: 21 ^h 51 ^m			Mag: -0.1 PMG: 19 ^h 47 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	129	03.4	172	34.7	-17	57.5	121	36.7	+3 01.3	31	16.7	+23 18.9	62	25.2	+19 59.2
1	144	05.8	187	34.0		56.6	136	37.5	02.0	46	19.5	18.9	77	27.7	59.2
2	159	08.3	202	33.3		55.7	151	38.3	02.8	61	22.2	19.0	92	30.2	59.2
3	174	10.7	217	32.6		54.9	166	39.1	03.5	76	24.9	19.0	107	32.7	59.2
4	189	13.2	232	31.9		54.0	181	39.9	04.3	91	27.6	19.0	122	35.2	59.2
5	204	15.7	247	31.2	-17	53.2	196	40.7	+3 05.0	106	30.3	+23 19.0	137	37.7	+19 59.2
6	219	18.1	262	30.5	-17	52.3	211	41.5	+3 05.8	121	33.1	+23 19.0	152	40.2	+19 59.2
7	234	20.6	277	29.8		51.4	226	42.3	06.5	136	35.8	19.0	167	42.7	59.2
8	249	23.1	292	29.1		50.6	241	43.2	07.3	151	38.5	19.1	182	45.2	59.2
9	264	25.5	307	28.3		49.7	256	44.0	08.0	166	41.2	19.1	197	47.7	59.2
10	279	28.0	322	27.6		48.8	271	44.8	08.8	181	43.9	19.1	212	50.3	59.2
11	294	30.5	337	26.9	-17	48.0	286	45.6	+3 09.5	196	46.7	+23 19.1	227	52.8	+19 59.3
12	309	32.9	352	26.2	-17	47.1	301	46.4	+3 10.3	211	49.4	+23 19.1	242	55.3	+19 59.3
13	324	35.4	7	25.5		46.2	316	47.2	11.0	226	52.1	19.2	257	57.8	59.3
14	339	37.8	22	24.8		45.4	331	48.0	11.8	241	54.8	19.2	273	00.3	59.3
15	354	40.3	37	24.1		44.5	346	48.9	12.5	256	57.5	19.2	288	02.8	59.3
16	9	42.8	52	23.4		43.6	1	49.7	13.3	272	00.3	19.2	303	05.3	59.3
17	24	45.2	67	22.7	-17	42.7	16	50.5	+3 14.0	287	03.0	+23 19.2	318	07.8	+19 59.3
18	39	47.7	82	22.0	-17	41.9	31	51.3	+3 14.8	302	05.7	+23 19.2	333	10.3	+19 59.3
19	54	50.2	97	21.3		41.0	46	52.1	15.5	317	08.4	19.3	348	12.8	59.3
20	69	52.6	112	20.6		40.1	61	52.9	16.3	332	11.1	19.3	3	15.3	59.3
21	84	55.1	127	19.9		39.2	76	53.7	17.0	347	13.8	19.3	18	17.8	59.3
22	99	57.6	142	19.2		38.3	91	54.5	17.8	2	16.6	19.3	33	20.3	59.3
23	115	00.0	157	18.6		37.5	106	55.4	18.5	17	19.3	19.3	48	22.8	59.3
24	130	02.5	172	17.9	-17	36.6	121	56.2	+3 19.3	32	22.0	+23 19.4	63	25.4	+19 59.3
Dif	—			-7	+9		+8	+8		+27	0		+25		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16:2			Edad: 17 ^d 4	PHE {	4 ^h : 60'8 12 ^h : 60'7 20 ^h : 60'6	SD: 16:6	PMG: 2 ^h 17 ^m		R ^o : 54 ^m	Náutico		Civil		Hora	R ^o	Hora	R ^o				
	hG ☉	Dec									hG ☾		Dif	Dec					Dif			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	176	39.7	-17	29.4	326	57.7	+12	30.8	60 N	6	38	7	29	8	17	20	02	98	9	45	9	
1	191	39.6		28.7	341	24.3	76	17.4	58	34	22	8	06	07	94			40	12			
2	206	39.5		28.0	355	51.1	78	+12	03.8	56	31	16	7	57	11	91		35	15			
3	221	39.5		27.3	10	17.9	78	+11	50.2	54	27	10	49	14	88			30	18			
4	236	39.4		26.6	24	44.7	78	36.5	52	24	05	42		17	86			26	21			
5	251	39.3	-17	25.9	39	11.7	80	+11	22.8	50	6	21	7	00	7	35	20	20	84	9	22	23
6	266	39.2	-17	25.2	53	38.7	80	+11	09.0	45	6	15	6	50	7	21	20	26	79	9	14	28
7	281	39.1		24.6	68	05.7	80	+10	55.1	40	09	41	10		32	74			07	32		
8	296	39.0		23.9	82	32.9	82	41.2	35	6	03	33	7	00	36	70			9	01	35	
9	311	38.9		23.2	97	00.1	82	27.2	30	5	57	26	6	51	40	67			8	56	38	
10	326	38.8		22.5	111	27.4	83	+10	13.1	20	46	13	36	47	61			46	44			
11	341	38.7	-17	21.8	125	54.8	84	+9	59.0	10 N	5	35	6	01	6	23	20	53	56	8	38	49
12	356	38.6	-17	21.1	140	22.2	84	+9	44.8	0	5	23	5	48	6	10	20	58	52	8	30	53
13	11	38.5		20.4	154	49.7	85	30.6	10 S	5	09	35	5	57	21	04	47			22	58	
14	26	38.4		19.7	169	17.2	85	16.4	20	4	52	20	43		10	43			14	62		
15	41	38.3		19.0	183	44.8	86	+9	02.0	30	31	5	02	28	17	37			8	04	68	
16	56	38.3		18.3	198	12.5	87	+8	47.7	35	17	4	51	18	21	34			7	59	71	
17	71	38.2	-17	17.6	212	40.3	88	+8	33.3	40	4	00	4	37	5	08	21	25	30	7	52	75
18	86	38.1	-17	16.9	227	08.1	88	+8	18.8	45	3	39	4	21	4	55	21	30	26	7	44	80
19	101	38.0		16.1	241	36.0	89	+8	04.3	50	3	11	4	01	40		36	22		35	85	
20	116	37.9		15.4	256	03.9	89	+7	49.8	52	2	57	3	52	32		39	19		31	87	
21	131	37.8		14.7	270	31.9	90	35.2	54	39	40	24		42	17		26	90				
22	146	37.7		14.0	285	00.0	91	20.6	56	2	18	28	15		45	14		21	93			
23	161	37.6		13.3	299	28.1	91	+7	05.9	58	1	49	3	12	4	05	49	11		15	97	
24	176	37.6	-17	12.6	313	56.3	92	+6	51.3	60 S	0	58	2	54	3	53	21	53	8	7	09	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 17 ^m 3		Mag: -3.9 PMG: 12 ^h 31 ^m		Mag: +1.0 PMG: 15 ^h 51 ^m		Mag: -2.6 PMG: 21 ^h 47 ^m		Mag: -0.1 PMG: 19 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	130	02.5	172	17.9	121	56.2	32	22.0	63	25.4
1	145	05.0	187	17.2	136	57.0	47	24.7	78	27.9
2	160	07.4	202	16.5	151	57.8	62	27.4	93	30.4
3	175	09.9	217	15.8	166	58.6	77	30.1	108	32.9
4	190	12.3	232	15.1	181	59.4	92	32.8	123	35.4
5	205	14.8	247	14.4	197	00.2	107	35.6	138	37.9
6	220	17.3	262	13.7	212	01.0	122	38.3	153	40.4
7	235	19.7	277	13.0	227	01.9	137	41.0	168	42.9
8	250	22.2	292	12.3	242	02.7	152	43.7	183	45.4
9	265	24.7	307	11.6	257	03.5	167	46.4	198	47.9
10	280	27.1	322	10.9	272	04.3	182	49.1	213	50.4
11	295	29.6	337	10.2	287	05.1	197	51.8	228	52.9
12	310	32.1	352	09.6	302	05.9	212	54.5	243	55.4
13	325	34.5	7	08.9	317	06.7	227	57.3	258	57.9
14	340	37.0	22	08.2	332	07.6	243	00.0	274	00.4
15	355	39.5	37	07.5	347	08.4	258	02.7	289	02.9
16	10	41.9	52	06.8	2	09.2	273	05.4	304	05.4
17	25	44.4	67	06.1	17	10.0	288	08.1	319	07.9
18	40	46.8	82	05.4	32	10.8	303	10.8	334	10.4
19	55	49.3	97	04.7	47	11.6	318	13.5	349	12.9
20	70	51.8	112	04.1	62	12.4	333	16.2	4	15.4
21	85	54.2	127	03.4	77	13.2	348	18.9	19	17.9
22	100	56.7	142	02.7	92	14.1	3	21.7	34	20.4
23	115	59.2	157	02.0	107	14.9	18	24.4	49	22.9
24	131	01.6	172	01.3	122	15.7	33	27.1	64	25.4
Dif	—		-7	+9	+8	+7	+27	0	+25	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 13 ^m 6			Edad: 18 ^d 4 PHE { SD: 16'5 PMG: 3 ^h 11 ^m 4 ^h : 60'5 12 ^h : 60'3 20 ^h : 60'1 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	h m m			
0	176	37.6	-17	12.6	313	56.3	+6	51.3	60 N	16 14	17 01	17 52	21 40 96	9 54 8				
1	191	37.5		11.9	328	24.5		36.5 ¹⁴⁸	58	24	08	55	41 92	52 11				
2	206	37.4		11.2	342	52.8		21.8 ¹⁴⁷	56	33	14	17 59	42 89	50 14				
3	221	37.3		10.5	357	21.2		+6 07.0 ¹⁴⁸	54	40	19	18 02	42 87	48 17				
4	236	37.2		09.8	11	49.6		+5 52.2 ¹⁴⁸	52	47	24	05	43 83	47 18				
5	251	37.1	-17	09.1	26	18.0		+5 37.4 ¹⁴⁸	50	16 54	17 29	18 08	21 44 81	9 45 21				
6	266	37.0	-17	08.4	40	46.5		+5 22.6 ¹⁴⁸	45	17 08	17 39	18 14	21 45 76	9 42 25				
7	281	37.0		07.7	55	15.1		+5 07.7 ¹⁴⁹	40	19	47	20	46 71	39 30				
8	296	36.9		07.0	69	43.7		+4 52.8 ¹⁴⁹	35	28	17 55	25	46 69	36 33				
9	311	36.8		06.2	84	12.4		38.0 ¹⁴⁸	30	37	18 02	31	47 65	34 36				
10	326	36.7		05.5	98	41.1		23.0 ¹⁵⁰	20	17 52	15	41	48 60	30 42				
11	341	36.6	-17	04.8	113	09.9		+4 08.1 ¹⁴⁹	10 N	18 05	18 27	18 52	21 49 55	9 27 46				
12	356	36.5	-17	04.1	127	38.7		+3 53.2 ¹⁴⁹	0	18 17	18 39	19 04	21 50 51	9 23 51				
13	11	36.5		03.4	142	07.5		38.2 ¹⁵⁰	10 S	29	18 52	17	51 46	20 56				
14	26	36.4		02.7	156	36.5 ¹⁰⁰		23.3 ¹⁴⁹	20	43	19 06	34	53 41	16 61				
15	41	36.3		02.0	171	05.4 ⁹⁹		+3 08.3 ¹⁵⁰	30	18 58	24	19 55	54 36	12 66				
16	56	36.2		01.3	185	34.4 ¹⁰⁰		+2 53.3 ¹⁵⁰	35	19 07	35	20 08	55 32	10 69				
17	71	36.1	-17	00.5	200	03.4 ¹⁰⁰		+2 38.4 ¹⁴⁹	40	19 18	19 48	20 24	21 55 30	9 07 73				
18	86	36.0	-16	59.8	214	32.5 ¹⁰¹		+2 23.4 ¹⁵⁰	45	19 30	20 03	20 45	21 56 26	9 04 77				
19	101	36.0		59.1	229	01.6 ¹⁰¹		+2 08.4 ¹⁵⁰	50	45	23	21 12	58 20	9 00 82				
20	116	35.9		58.4	243	30.8 ¹⁰²		+1 53.4 ¹⁵⁰	52	19 52	32	26	58 19	8 58 85				
21	131	35.8		57.7	258	00.0 ¹⁰²		38.5 ¹⁴⁹	54	20 00	43	21 42	59 16	56 87				
22	146	35.7		57.0	272	29.2 ¹⁰²		23.5 ¹⁵⁰	56	08	20 55	22 02	21 59 14	54 90				
23	161	35.6		56.2	286	58.5 ¹⁰³		+1 08.5 ¹⁵⁰	58	18	21 09	22 29	22 00 11	52 93				
24	176	35.6	-16	55.5	301	27.8 ¹⁰³		+0 53.6 ¹⁴⁹	60 S	20 30	21 27	23 10	22 01 8	8 49 97				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 13 ^m 4		Mag: -3.9 PMG: 12 ^h 32 ^m				Mag: +1.0 PMG: 15 ^h 50 ^m				Mag: -2.6 PMG: 21 ^h 42 ^m				Mag: -0.1 PMG: 19 ^h 39 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	131	01.6	172	01.3	-17	15.2	122	15.7	+3	37.3	33	27.1	+23	19.8	64	25.4	+19	59.4
1	146	04.1	187	00.6		14.3	137	16.5		38.0	48	29.8		19.8	79	27.9		59.4
2	161	06.6	202	00.0		13.4	152	17.3		38.8	63	32.5		19.8	94	30.4		59.4
3	176	09.0	216	59.3		12.5	167	18.1		39.5	78	35.2		19.8	109	32.9		59.4
4	191	11.5	231	58.6		11.6	182	18.9		40.2	93	37.9		19.8	124	35.4		59.4
5	206	13.9	246	57.9	-17	10.7	197	19.7	+3	41.0	108	40.6	+23	19.9	139	37.9	+19	59.5
6	221	16.4	261	57.2	-17	09.8	212	20.6	+3	41.7	123	43.3	+23	19.9	154	40.4	+19	59.5
7	236	18.9	276	56.6		08.9	227	21.4		42.5	138	46.0		19.9	169	42.9		59.5
8	251	21.3	291	55.9		08.0	242	22.2		43.2	153	48.7		19.9	184	45.4		59.5
9	266	23.8	306	55.2		07.1	257	23.0		44.0	168	51.4		19.9	199	47.9		59.5
10	281	26.3	321	54.5		06.2	272	23.8		44.7	183	54.1		19.9	214	50.4		59.5
11	296	28.7	336	53.8	-17	05.2	287	24.6	+3	45.5	198	56.8	+23	20.0	229	52.9	+19	59.5
12	311	31.2	351	53.2	-17	04.3	302	25.4	+3	46.2	213	59.5	+23	20.0	244	55.4	+19	59.5
13	326	33.7	6	52.5		03.4	317	26.3		47.0	229	02.3		20.0	259	57.9		59.5
14	341	36.1	21	51.8		02.5	332	27.1		47.7	244	05.0		20.0	275	00.4		59.5
15	356	38.6	36	51.1		01.6	347	27.9		48.5	259	07.7		20.0	290	02.9		59.5
16	11	41.1	51	50.5	-17	00.7	2	28.7		49.2	274	10.4		20.0	305	05.4		59.5
17	26	43.5	66	49.8	-16	59.8	17	29.5	+3	50.0	289	13.1	+23	20.1	320	07.9	+19	59.5
18	41	46.0	81	49.1	-16	58.9	32	30.3	+3	50.7	304	15.8	+23	20.1	335	10.4	+19	59.5
19	56	48.4	96	48.5		57.9	47	31.1		51.4	319	18.5		20.1	350	12.9		59.5
20	71	50.9	111	47.8		57.0	62	31.9		52.2	334	21.2		20.1	5	15.4		59.5
21	86	53.4	126	47.1		56.1	77	32.8		52.9	349	23.9		20.1	20	17.9		59.5
22	101	55.8	141	46.4		55.2	92	33.6		53.7	4	26.6		20.1	35	20.4		59.5
23	116	58.3	156	45.8		54.3	107	34.4		54.4	19	29.3		20.2	50	22.9		59.6
24	132	00.8	171	45.1	-16	53.3	122	35.2	+3	55.2	34	32.0	+23	20.2	65	25.4	+19	59.6
Dif	—		-7		+9		+8		+7		+27		0		+25			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 7			Edad: 19 ^d 4 PHE { SD: 16/3 PMG: 4 ^h 02 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	35.6	-16	55.5	301	27.8	+0 53.6	60 N	6 34	7 25	8 12	23 16	94	10 02	8
1	191	35.5		54.8	315	57.2 ¹⁰⁴	38.6 ¹⁵⁰	58	31	18	8 02	13 90		03 11	
2	206	35.4		54.1	330	26.5 ¹⁰³	23.7 ¹⁴⁹	56	28	12	7 53	11 87		04 14	
3	221	35.3		53.4	344	56.0 ¹⁰⁵	+0 08.8 ¹⁴⁹	54	24	07	46	09 84		05 16	
4	236	35.3		52.7	359	25.4 ¹⁰⁴	-0 06.2 ¹⁵⁰	52	22	7 02	39	06 82		05 19	
5	251	35.2	-16	51.9	13	54.9 ¹⁰⁵	-0 21.1 ¹⁴⁹	50	6 19	6 58	7 32	23 05	79	10 06	21
6	266	35.1	-16	51.2	28	24.4 ¹⁰⁵	-0 35.9 ¹⁴⁸	45	6 13	6 48	7 19	23 01	74	10 07	26
7	281	35.0		50.5	42	53.9 ¹⁰⁵	-0 50.8 ¹⁴⁹	40	07	39	7 08	22 57	71	09 29	
8	296	35.0		49.8	57	23.5 ¹⁰⁶	-1 05.7 ¹⁴⁹	35	6 01	32	6 58	55 66		09 33	
9	311	34.9		49.0	71	53.0 ¹⁰⁵	20.5 ¹⁴⁸	30	5 56	25	50	52 64		10 36	
10	326	34.8		48.3	86	22.7 ¹⁰⁷	35.3 ¹⁴⁸	20	46	12	35	48 58		12 41	
11	341	34.7	-16	47.6	100	52.3 ¹⁰⁶	-1 50.1 ¹⁴⁸	10 N	5 35	6 00	6 22	22 44	54	10 13	46
12	356	34.7	-16	46.9	115	22.0 ¹⁰⁷	-2 04.8 ¹⁴⁷	0	5 23	5 49	6 10	22 41	49	10 14	50
13	11	34.6		46.1	129	51.6 ¹⁰⁶	19.6 ¹⁴⁸	10 S	5 10	36	5 58	37 46		16 54	
14	26	34.5		45.4	144	21.3 ¹⁰⁷	34.3 ¹⁴⁷	20	4 54	21	45	34 41		17 59	
15	41	34.4		44.7	158	51.1 ¹⁰⁸	-2 49.0 ¹⁴⁷	30	33	5 04	29	30 36		18 65	
16	56	34.4		44.0	173	20.8 ¹⁰⁷	-3 03.6 ¹⁴⁶	35	20	4 53	20	27 33		19 68	
17	71	34.3	-16	43.2	187	50.6 ¹⁰⁸	-3 18.2 ¹⁴⁶	40	4 03	4 40	5 10	22 25	30	10 20	71
18	86	34.2	-16	42.5	202	20.3 ¹⁰⁷	-3 32.8 ¹⁴⁶	45	3 43	4 25	4 58	22 22	26	10 21	75
19	101	34.1		41.8	216	50.1 ¹⁰⁸	-3 47.4 ¹⁴⁶	50	16	4 05	43	18 22		22 81	
20	116	34.1		41.1	231	19.9 ¹⁰⁸	-4 01.9 ¹⁴⁵	52	3 02	3 56	36	17 19		23 82	
21	131	34.0		40.3	245	49.8 ¹⁰⁹	16.3 ¹⁴⁴	54	2 46	45	28	15 17		23 86	
22	146	33.9		39.6	260	19.6 ¹⁰⁸	30.8 ¹⁴⁵	56	2 26	33	20	13 14		24 88	
23	161	33.9		38.9	274	49.5 ¹⁰⁹	45.2 ¹⁴⁴	58	1 59	19	4 10	11 11		25 91	
24	176	33.8	-16	38.1	289	19.3 ¹⁰⁸	-4 59.5 ¹⁴³	60 S	1 18	3 01	3 59	22 09	8	10 26	95
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 09 ^m 5			Mag: -3.9 PMG: 12 ^h 34 ^m			Mag: +1.1 PMG: 15 ^h 49 ^m			Mag: -2.6 PMG: 21 ^h 38 ^m			Mag: -0.1 PMG: 19 ^h 35 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	132	00.8		171	45.1	-16 53.3	122	35.2	+3 55.2	34	32.0	+23 20.2	65	25.4	+19 59.6
1	147	03.2		186	44.4	52.4	137	36.0	55.9	49	34.7	20.2	80	27.9	59.6
2	162	05.7		201	43.8	51.5	152	36.8	56.7	64	37.4	20.2	95	30.4	59.6
3	177	08.2		216	43.1	50.6	167	37.6	57.4	79	40.1	20.2	110	32.9	59.6
4	192	10.6		231	42.4	49.7	182	38.4	58.2	94	42.8	20.2	125	35.4	59.6
5	207	13.1		246	41.8	-16 48.7	197	39.3	+3 58.9	109	45.5	+23 20.3	140	37.9	+19 59.6
6	222	15.5		261	41.1	-16 47.8	212	40.1	+3 59.7	124	48.2	+23 20.3	155	40.4	+19 59.6
7	237	18.0		276	40.4	46.9	227	40.9	+4 00.4	139	50.9	20.3	170	42.9	59.6
8	252	20.5		291	39.8	46.0	242	41.7	01.1	154	53.6	20.3	185	45.4	59.6
9	267	22.9		306	39.1	45.0	257	42.5	01.9	169	56.3	20.3	200	47.9	59.6
10	282	25.4		321	38.4	44.1	272	43.3	02.6	184	59.0	20.3	215	50.3	59.6
11	297	27.9		336	37.8	-16 43.2	287	44.1	+4 03.4	200	01.7	+23 20.4	230	52.8	+19 59.6
12	312	30.3		351	37.1	-16 42.2	302	44.9	+4 04.1	215	04.4	+23 20.4	245	55.3	+19 59.6
13	327	32.8		6	36.4	41.3	317	45.8	04.9	230	07.1	20.4	260	57.8	59.6
14	342	35.3		21	35.8	40.4	332	46.6	05.6	245	09.8	20.4	276	00.3	59.6
15	357	37.7		36	35.1	39.4	347	47.4	06.4	260	12.5	20.4	291	02.8	59.7
16	12	40.2		51	34.5	38.5	2	48.2	07.1	275	15.2	20.4	306	05.3	59.7
17	27	42.7		66	33.8	-16 37.6	17	49.0	+4 07.8	290	17.9	+23 20.5	321	07.8	+19 59.7
18	42	45.1		81	33.1	-16 36.6	32	49.8	+4 08.6	305	20.6	+23 20.5	336	10.3	+19 59.7
19	57	47.6		96	32.5	35.7	47	50.6	09.3	320	23.3	20.5	351	12.8	59.7
20	72	50.0		111	31.8	34.8	62	51.4	10.1	335	25.9	20.5	6	15.3	59.7
21	87	52.5		126	31.2	33.8	77	52.3	10.8	350	28.6	20.5	21	17.8	59.7
22	102	55.0		141	30.5	32.9	92	53.1	11.6	5	31.3	20.5	36	20.3	59.7
23	117	57.4		156	29.8	31.9	107	53.9	12.3	20	34.0	20.5	51	22.7	59.7
24	132	59.9		171	29.2	-16 31.0	122	54.7	+4 13.1	35	36.7	+23 20.6	66	25.2	+19 59.7
Dif	—			-7	+9		+8	+7		+27		0	+25		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 12 ^h 13 ^m 8			Edad: 20 ^d 4 PHE { SD: 16/2 PMG: 4 ^h 52 ^m 4 ^h : 59/2 12 ^h : 59/0 20 ^h : 58/8 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
0	176	33.8	-16	38.1	289	19.3	-4	59.5	60 N	16 19	17 06	17 56	** ** *	**	10 10	9	
1	191	33.7		37.4	303	49.2 ¹⁰⁹	-5	13.9 ¹⁴⁴	58	29	12	18 00	** ** *	**	14	12	
2	206	33.7		36.7	318	19.1 ¹⁰⁹		28.1 ¹⁴²	56	37	18	03	** ** *	**	18	15	
3	221	33.6		35.9	332	49.0 ¹⁰⁹		42.4 ¹⁴³	54	44	23	05	** ** *	**	21	18	
4	236	33.5		35.2	347	18.9 ¹⁰⁹	-5	56.6 ¹⁴²	52	51	28	08	** ** *	**	24	20	
5	251	33.4	-16	34.5	1	48.8 ¹⁰⁹	-6	10.7 ¹⁴¹	50	16 57	17 32	18 11	** ** *	**	10 27	22	
6	266	33.4	-16	33.7	16	18.7 ¹⁰⁹	-6	24.8 ¹⁴¹	45	17 10	17 42	18 17	** ** *	**	10 33	27	
7	281	33.3		33.0	30	48.6 ¹⁰⁹		38.8 ¹⁴⁰	40	21	50	22	** ** *	**	38	31	
8	296	33.2		32.3	45	18.5 ¹⁰⁹	-6	52.8 ¹⁴⁰	35	31	17 57	27	** ** *	**	42	34	
9	311	33.2		31.5	59	48.4 ¹⁰⁹	-7	06.8 ¹⁴⁰	30	39	18 04	32	23 56 63		46	37	
10	326	33.1		30.8	74	18.3 ¹⁰⁹		20.7 ¹³⁹	20	17 53	16	42	46 59		53	41	
11	341	33.0	-16	30.1	88	48.3 ¹¹⁰	-7	34.5 ¹³⁸	10 N	18 05	18 27	18 53	23 38 54		10 59	46	
12	356	33.0	-16	29.3	103	18.2 ¹⁰⁹	-7	48.3 ¹³⁸	0	18 17	18 39	19 04	23 30 51		11 04	50	
13	11	32.9		28.6	117	48.1 ¹⁰⁹	-8	02.0 ¹³⁷	10 S	29	18 51	17	23 46		10	54	
14	26	32.8		27.9	132	18.0 ¹⁰⁹		15.7 ¹³⁷	20	42	19 05	33	15 42		16	58	
15	41	32.8		27.1	146	48.0 ¹¹⁰		29.3 ¹³⁶	30	18 57	23	19 53	06 37		23	63	
16	56	32.7		26.4	161	17.9 ¹⁰⁹		42.8 ¹³⁵	35	19 06	33	20 06	23 00 35		27	66	
17	71	32.6	-16	25.6	175	47.8 ¹⁰⁹	-8	56.3 ¹³⁵	40	19 16	19 45	20 22	22 55 31		11 31	70	
18	86	32.6	-16	24.9	190	17.7 ¹⁰⁹	-9	09.7 ¹³⁴	45	19 27	20 00	20 41	22 48 28		11 36	74	
19	101	32.5		24.2	204	47.6 ¹⁰⁹		23.1 ¹³⁴	50	42	19	21 08	40 23		43	78	
20	116	32.5		23.4	219	17.5 ¹⁰⁹		36.4 ¹³³	52	48	28	21	36 21		45	81	
21	131	32.4		22.7	233	47.4 ¹⁰⁹	-9	49.6 ¹³²	54	19 56	38	36	32 19		49	83	
22	146	32.3		21.9	248	17.3 ¹⁰⁹	-10	02.8 ¹³²	56	20 04	20 50	21 55	27 17		52	86	
23	161	32.3		21.2	262	47.1 ¹⁰⁸		15.9 ¹³¹	58	14	21 04	22 20	22 14		11 56	90	
24	176	32.2	-16	20.5	277	17.0 ¹⁰⁹	-10	28.9 ¹³⁰	60 S	20 24	21 20	22 55	22 17 10		12 01	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 05 ^m 5		Mag: -3.9 PMG: 12 ^h 35 ^m		Mag: +1.1 PMG: 15 ^h 47 ^m		Mag: -2.6 PMG: 21 ^h 34 ^m		Mag: -0.1 PMG: 19 ^h 31 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	132	59.9	171	29.2	-16	31.0	122	54.7	+4	13.1	35	36.7	+23	20.6	66	25.2	+19	59.7
1	148	02.4	186	28.5		30.1	137	55.5		13.8	50	39.4		20.6	81	27.7		59.7
2	163	04.8	201	27.9		29.1	152	56.3		14.5	65	42.1		20.6	96	30.2		59.7
3	178	07.3	216	27.2		28.2	167	57.1		15.3	80	44.8		20.6	111	32.7		59.7
4	193	09.8	231	26.6		27.2	182	57.9		16.0	95	47.5		20.6	126	35.2		59.7
5	208	12.2	246	25.9	-16	26.3	197	58.8	+4	16.8	110	50.2	+23	20.6	141	37.7	+19	59.7
6	223	14.7	261	25.3	-16	25.4	212	59.6	+4	17.5	125	52.9	+23	20.7	156	40.2	+19	59.8
7	238	17.2	276	24.6		24.4	228	00.4		18.3	140	55.6		20.7	171	42.7		59.8
8	253	19.6	291	24.0		23.5	243	01.2		19.0	155	58.3		20.7	186	45.2		59.8
9	268	22.1	306	23.3		22.5	258	02.0		19.7	171	01.0		20.7	201	47.7		59.8
10	283	24.5	321	22.6		21.6	273	02.8		20.5	186	03.6		20.7	216	50.1		59.8
11	298	27.0	336	22.0	-16	20.6	288	03.6	+4	21.2	201	06.3	+23	20.7	231	52.6	+19	59.8
12	313	29.5	351	21.3	-16	19.7	303	04.4	+4	22.0	216	09.0	+23	20.8	246	55.1	+19	59.8
13	328	31.9	6	20.7		18.7	318	05.3		22.7	231	11.7		20.8	261	57.6		59.8
14	343	34.4	21	20.0		17.8	333	06.1		23.5	246	14.4		20.8	277	00.1		59.8
15	358	36.9	36	19.4		16.8	348	06.9		24.2	261	17.1		20.8	292	02.6		59.8
16	13	39.3	51	18.7		15.9	3	07.7		24.9	276	19.8		20.8	307	05.1		59.8
17	28	41.8	66	18.1	-16	14.9	18	08.5	+4	25.7	291	22.5	+23	20.8	322	07.6	+19	59.8
18	43	44.3	81	17.5	-16	14.0	33	09.3	+4	26.4	306	25.2	+23	20.8	337	10.0	+19	59.8
19	58	46.7	96	16.8		13.0	48	10.1		27.2	321	27.8		20.9	352	12.5		59.8
20	73	49.2	111	16.2		12.0	63	10.9		27.9	336	30.5		20.9	7	15.0		59.9
21	88	51.6	126	15.5		11.1	78	11.7		28.7	351	33.2		20.9	22	17.5		59.9
22	103	54.1	141	14.9		10.1	93	12.6		29.4	6	35.9		20.9	37	20.0		59.9
23	118	56.6	156	14.2		09.2	108	13.4		30.1	21	38.6		20.9	52	22.5		59.9
24	133	59.0	171	13.6	-16	08.2	123	14.2	+4	30.9	36	41.3	+23	20.9	67	25.0	+19	59.9
Dif	—		-7 +9		+8 +7		+27 0		+25 0									

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 9			Edad: 21 ^d 4 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 3 20 ^h : 58 ^m 0 PMG: 5 ^h 42 ^m R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	32.2	-16	20.5	277	17.0	-10	28.9	60 N	6 30	7 21	8 07	0 50	92	10 19	11	
1	191	32.1		19.7	291	46.9 ¹⁰⁹		41.9 ¹³⁰	58	27	14	7 58	43	89	26	15	
2	206	32.1		19.0	306	16.7 ¹⁰⁸	-10	54.8 ¹²⁹	56	24	09	49	38	85	33	18	
3	221	32.0		18.2	320	46.5 ¹⁰⁸	-11	07.6 ¹²⁸	54	21	7 04	42	33	82	39	2	
4	236	32.0		17.5	335	16.3 ¹⁰⁸		20.3 ¹²⁷	52	19	6 59	35	28	80	44	23	
5	251	31.9	-16	16.7	349	46.1 ¹⁰⁸	-11	33.0 ¹²⁷	50	6 16	6 55	7 29	0 24	78	10 49	25	
6	266	31.8	-16	16.0	4	15.9 ¹⁰⁸	-11	45.6 ¹²⁶	45	6 11	6 46	7 17	0 15	73	11 00	29	
7	281	31.8		15.2	18	45.7 ¹⁰⁸	-11	58.1 ¹²⁵	40	05	37	7 06	08	69	09	33	
8	296	31.7		14.5	33	15.5 ¹⁰⁸	-12	10.6 ¹²⁵	35	6 00	30	6 57	0 01	66	16	36	
9	311	31.7		13.7	47	45.2 ¹⁰⁷		22.9 ¹²³	30	5 55	24	49	**	**	23	39	
10	326	31.6		13.0	62	14.9 ¹⁰⁷		35.2 ¹²³	20	45	12	35	**	**	34	44	
11	341	31.5	-16	12.3	76	44.7 ¹⁰⁸	-12	47.5 ¹²³	10 N	5 35	6 00	6 22	**	**	11 45	47	
12	356	31.5	-16	11.5	91	14.4 ¹⁰⁷	-12	59.6 ¹²¹	0	5 24	5 49	6 10	**	**	11 54	51	
13	11	31.4		10.8	105	44.0 ¹⁰⁶	-13	11.6 ¹²⁰	10 S	5 11	37	5 59	**	**	12 04	54	
14	26	31.4		10.0	120	13.7 ¹⁰⁷		23.6 ¹²⁰	20	4 55	23	46	23	57	14	58	
15	41	31.3		09.3	134	43.3 ¹⁰⁶		35.5 ¹¹⁹	30	35	5 05	31	43	41	26	63	
16	56	31.3		08.5	149	12.9 ¹⁰⁶		47.3 ¹¹⁸	35	22	4 55	22	35	38	33	65	
17	71	31.2	-16	07.8	163	42.5 ¹⁰⁶	-13	59.0 ¹¹⁷	40	4 06	4 43	5 12	23	26	12 41	68	
18	86	31.1	-16	07.0	178	12.1 ¹⁰⁶	-14	10.6 ¹¹⁶	45	3 47	4 28	5 01	23	16	12 50	72	
19	101	31.1		06.3	192	41.7 ¹⁰⁶		22.2 ¹¹⁶	50	21	09	4 47	23	03	13 01	77	
20	116	31.0		05.5	207	11.2 ¹⁰⁵		33.6 ¹¹⁴	52	3 08	4 00	40	22	57	06	79	
21	131	31.0		04.7	221	40.7 ¹⁰⁵		45.0 ¹¹⁴	54	2 52	3 50	33	51	23	12	81	
22	146	30.9		04.0	236	10.2 ¹⁰⁵	-14	56.3 ¹¹³	56	33	38	24	44	20	18	84	
23	161	30.9		03.2	250	39.7 ¹⁰⁵	-15	07.5 ¹¹²	58	2 09	25	15	36	17	26	87	
24	176	30.8	-16	02.5	265	09.1 ¹⁰⁴	-15	18.5 ¹¹⁰	60 S	1 33	3 08	4 04	22	27	13 34	91	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 01 ^m 6		Mag: -3.9 PMG: 12 ^h 36 ^m			Mag: +1.1 PMG: 15 ^h 46 ^m			Mag: -2.6 PMG: 21 ^h 29 ^m			Mag: -0.1 PMG: 19 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	133	59.0	171	13.6	-16	08.2	123	14.2	+4	30.9	36	41.3	+23	20.9	67	25.0	+19	59.9
1	149	01.5	186	12.9		07.2	138	15.0		31.6	51	44.0		21.0	82	27.5		59.9
2	164	04.0	201	12.3		06.3	153	15.8		32.4	66	46.7		21.0	97	29.9		59.9
3	179	06.4	216	11.7		05.3	168	16.6		33.1	81	49.3		21.0	112	32.4		59.9
4	194	08.9	231	11.0		04.4	183	17.4		33.8	96	52.0		21.0	127	34.9		59.9
5	209	11.4	246	10.4	-16	03.4	198	18.2	+4	34.6	111	54.7	+23	21.0	142	37.4	+19	59.9
6	224	13.8	261	09.7	-16	02.4	213	19.1	+4	35.3	126	57.4	+23	21.0	157	39.9	+19	59.9
7	239	16.3	276	09.1		01.5	228	19.9		36.1	142	00.1		21.0	172	42.4		59.9
8	254	18.8	291	08.4	-16	00.5	243	20.7		36.8	157	02.8		21.1	187	44.8	+19	59.9
9	269	21.2	306	07.8	-15	59.5	258	21.5		37.5	172	05.4		21.1	202	47.3	+20	00.0
10	284	23.7	321	07.2		58.6	273	22.3		38.3	187	08.1		21.1	217	49.8		00.0
11	299	26.1	336	06.5	-15	57.6	288	23.1	+4	39.0	202	10.8	+23	21.1	232	52.3	+20	00.0
12	314	28.6	351	05.9	-15	56.6	303	23.9	+4	39.8	217	13.5	+23	21.1	247	54.8	+20	00.0
13	329	31.1	6	05.3		55.7	318	24.7		40.5	232	16.2		21.1	262	57.3		00.0
14	344	33.5	21	04.6		54.7	333	25.5		41.3	247	18.9		21.2	277	59.8		00.0
15	359	36.0	36	04.0		53.7	348	26.4		42.0	262	21.5		21.2	293	02.2		00.0
16	14	38.5	51	03.3		52.8	3	27.2		42.7	277	24.2		21.2	308	04.7		00.0
17	29	40.9	66	02.7	-15	51.8	18	28.0	+4	43.5	292	26.9	+23	21.2	323	07.2	+20	00.0
18	44	43.4	81	02.1	-15	50.8	33	28.8	+4	44.2	307	29.6	+23	21.2	338	09.7	+20	00.0
19	59	45.9	96	01.4		49.8	48	29.6		45.0	322	32.3		21.2	353	12.2		00.0
20	74	48.3	111	00.8		48.9	63	30.4		45.7	337	34.9		21.2	8	14.6		00.0
21	89	50.8	126	00.2		47.9	78	31.2		46.4	352	37.6		21.3	23	17.1	+20	00.0
22	104	53.3	140	59.5		46.9	93	32.0		47.2	7	40.3		21.3	38	19.6	+20	00.1
23	119	55.7	155	58.9		45.9	108	32.9		47.9	22	43.0		21.3	53	22.1		00.1
24	134	58.2	170	58.3	-15	45.0	123	33.7	+4	48.6	37	45.7	+23	21.3	68	24.6	+20	00.1
Dif	—		-6 +10			+8 +7			+27 0			+25 0						

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 0			Edad: 22 ^d 4 PHE { 4 ^h : 57 ^m 8 12 ^h : 57 ^m 5 20 ^h : 57 ^m 3 SD: 15 ^h 8 PMG: 6 ^h 33 ^m R°: 51 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	30.8	-16	02.5	265	09.1	-15 18.5	60 N	16 24	17 10	18 01	2 22 90	10 30 17
1	191	30.8		01.7	279	38.5 ¹⁰⁴	29.5 ¹¹⁰	58	33	16	04	12 86	41 21
2	206	30.7		01.0	294	07.9 ¹⁰⁴	40.5 ¹¹⁰	56	41	22	06	2 03 83	10 51 23
3	221	30.7	-16	00.2	308	37.3 ¹⁰⁴	-15 51.3 ¹⁰⁸	54	48	27	09	1 55 80	11 00 29
4	236	30.6	-15	59.5	323	06.6 ¹⁰³	-16 02.0 ¹⁰⁷	52	16 55	31	11	48 77	07 29
5	251	30.6	-15	58.7	337	36.0 ¹⁰⁴	-16 12.6 ¹⁰⁶	50	17 01	17 35	18 14	1 42 75	11 14 31
6	266	30.5	-15	57.9	352	05.3 ¹⁰³	-16 23.1 ¹⁰⁵	45	17 13	17 44	18 19	1 28 71	11 29 35
7	281	30.5		57.2	6	34.5 ¹⁰²	33.6 ¹⁰⁵	40	24	52	24	17 67	42 37
8	296	30.4		56.4	21	03.8 ¹⁰³	43.9 ¹⁰³	35	33	17 59	29	1 07 65	11 52 40
9	311	30.4		55.7	35	33.0 ¹⁰²	-16 54.1 ¹⁰²	30	40	18 05	34	0 59 62	12 02 42
10	326	30.3		54.9	50	02.2 ¹⁰²	-17 04.3 ¹⁰²	20	17 54	17	43	45 58	18 45
11	341	30.3	-15	54.2	64	31.3 ¹⁰¹	-17 14.3 ¹⁰⁰	10 N	18 06	18 28	18 53	0 32 55	12 32 49
12	356	30.2	-15	53.4	79	00.5 ¹⁰²	-17 24.2 ⁹⁹	0	18 17	18 39	19 04	0 21 51	12 45 52
13	11	30.2		52.6	93	29.6 ¹⁰¹	34.1 ⁹⁹	10 S	29	18 51	16	0 09 48	12 58 55
14	26	30.1		51.9	107	58.7 ¹⁰¹	43.8 ⁹⁷	20	41	19 05	32	*** ** *	13 12 58
15	41	30.1		51.1	122	27.7 ¹⁰⁰	-17 53.4 ⁹⁶	30	18 56	21	19 52	** ** *	29 61
16	56	30.0		50.4	136	56.8 ¹⁰¹	-18 02.9 ⁹⁵	35	19 04	31	20 04	** ** *	38 64
17	71	30.0	-15	49.6	151	25.8 ¹⁰⁰	-18 12.3 ⁹⁴	40	19 14	19 43	20 19	** ** *	13 49 66
18	86	29.9	-15	48.8	165	54.8 ¹⁰⁰	-18 21.6 ⁹³	45	19 25	19 58	20 38	23 48 37	14 02 69
19	101	29.9		48.1	180	23.7 ⁹⁹	30.8 ⁹²	50	39	20 16	21 03	31 33	18 73
20	116	29.8		47.3	194	52.6 ⁹⁹	39.9 ⁹¹	52	45	24	16	23 32	25 75
21	131	29.8		46.5	209	21.5 ⁹⁹	48.9 ⁹⁰	54	19 52	34	31	14 30	33 78
22	146	29.7		45.8	223	50.4 ⁹⁹	-18 57.8 ⁸⁹	56	20 00	45	21 48	23 04 27	42 81
23	161	29.7		45.0	238	19.2 ⁹⁸	-19 06.5 ⁸⁷	58	09	20 58	22 11	22 53 24	14 53 83
24	176	29.6	-15	44.2	252	48.0 ⁹⁸	-19 15.2 ⁸⁷	60 S	20 19	21 14	22 42	22 40 20	15 05 88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 57 ^m 7		Mag: -3.9 PMG: 12 ^h 37 ^m		Mag: +1.1 PMG: 15 ^h 45 ^m		Mag: -2.6 PMG: 21 ^h 25 ^m		Mag: 0.0 PMG: 19 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	134	58.2	170	58.3	-15	45.0	123	33.7	+4	48.6
1	150	00.6	185	57.7		44.0	138	34.5		49.4
2	165	03.1	200	57.0		43.0	153	35.3		50.1
3	180	05.6	215	56.4		42.0	168	36.1		50.9
4	195	08.0	230	55.8		41.0	183	36.9		51.6
5	210	10.5	245	55.1	-15	40.1	198	37.7	+4	52.3
6	225	13.0	260	54.5	-15	39.1	213	38.5	+4	53.1
7	240	15.4	275	53.9		38.1	228	39.3		53.8
8	255	17.9	290	53.2		37.1	243	40.2		54.6
9	270	20.4	305	52.6		36.1	258	41.0		55.3
10	285	22.8	320	52.0		35.1	273	41.8		56.0
11	300	25.3	335	51.4	-15	34.2	288	42.6	+4	56.8
12	315	27.7	350	50.7	-15	33.2	303	43.4	+4	57.5
13	330	30.2	5	50.1		32.2	318	44.2		58.3
14	345	32.7	20	49.5		31.2	333	45.0		59.0
15	0	35.1	35	48.9		30.2	348	45.8	+4	59.7
16	15	37.6	50	48.3		29.2	3	46.6	+5	00.5
17	30	40.1	65	47.6	-15	28.2	18	47.5	+5	01.2
18	45	42.5	80	47.0	-15	27.2	33	48.3	+5	01.9
19	60	45.0	95	46.4		26.2	48	49.1		02.7
20	75	47.5	110	45.8		25.3	63	49.9		03.4
21	90	49.9	125	45.1		24.3	78	50.7		04.2
22	105	52.4	140	44.5		23.3	93	51.5		04.9
23	120	54.9	155	43.9		22.3	108	52.3		05.6
24	135	57.3	170	43.3	-15	21.3	123	53.1	+5	06.4
Dif	—		-6		+10		+8		+7	
									+27	
									0	
									+25	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 1			Edad: 23 ^d 4 PHE { 4 ^h : 57'1 12 ^h : 56'8 20 ^h : 56'6 SD: 15'6 PMG: 7 ^h 24 ^m R°: 53 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	29.6	-15 44.2	252	48.0	-19 15.2	60 N	6 26	7 16	8 02	3 52	85	10 47	24	
1	191	29.6	43.5	267	16.8 98	23.7 85	58	23	10	7 53	38	80	11 02	28	
2	206	29.5	42.7	281	45.6 98	32.2 85	56	21	05	45	26	76	14	32	
3	221	29.5	41.9	296	14.3 97	40.5 83	54	18	7 00	38	15	74	26	33	
4	236	29.5	41.2	310	43.0 97	48.7 82	52	16	6 56	32	3 05	73	36	35	
5	251	29.4	-15 40.4	325	11.7 97	-19 56.8 81	50	6 14	6 52	7 26	2 57	70	11 45	37	
6	266	29.4	-15 39.6	339	40.4 97	-20 04.8 80	45	6 08	6 43	7 14	2 39	67	12 04	40	
7	281	29.3	38.9	354	09.0 96	12.6 78	40	6 03	35	7 04	24	64	19	43	
8	296	29.3	38.1	8	37.6 96	20.4 78	35	5 59	29	6 55	12	62	32	45	
9	311	29.2	37.3	23	06.2 96	28.0 76	30	54	22	47	2 01	60	12 44	46	
10	326	29.2	36.6	37	34.7 95	35.5 75	20	45	11	34	1 43	57	13 03	49	
11	341	29.2	-15 35.8	52	03.2 95	-20 42.9 74	10 N	5 35	6 00	6 22	1 27	54	13 21	50	
12	356	29.1	-15 35.0	66	31.7 95	-20 50.2 72	0	5 24	5 49	6 11	1 12	52	13 37	52	
13	11	29.1	34.2	81	00.2 95	-20 57.4 73	10 S	5 12	37	5 59	0 57	50	13 53	55	
14	26	29.0	33.5	95	28.7 95	-21 04.4 70	20	4 56	24	47	41	48	14 10	57	
15	41	29.0	32.7	109	57.1 94	11.4 70	30	37	5 07	33	24	44	30	59	
16	56	28.9	31.9	124	25.5 94	18.2 68	35	24	4 57	24	13	42	42	60	
17	71	28.9	-15 31.1	138	53.9 94	-21 24.8 66	40	4 09	4 45	5 15	0 01	40	14 55	63	
18	86	28.9	-15 30.4	153	22.3 94	-21 31.4 66	45	3 50	4 31	5 04	*** ** *	**	15 11	65	
19	101	28.8	29.6	167	50.6 93	37.9 65	50	26	13	4 50	*** ** *	**	31	67	
20	116	28.8	28.8	182	18.9 93	44.2 63	52	3 13	4 04	44	23	55	40	69	
21	131	28.8	28.0	196	47.2 93	50.4 62	54	2 58	3 55	37	44	38	15 51	70	
22	146	28.7	27.3	211	15.5 93	-21 56.5 61	56	40	44	29	31	37	16 03	72	
23	161	28.7	26.5	225	43.8 93	-22 02.4 59	58	2 18	31	20	17	34	16	76	
24	176	28.6	-15 25.7	240	12.0 92	-22 08.2 58	60 S	1 47	3 15	4 10	23 00	31	16 33	78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 53 ^m 7		Mag: -3.9 PMG: 12 ^h 38 ^m			Mag: +1.1 PMG: 15 ^h 44 ^m			Mag: -2.6 PMG: 21 ^h 21 ^m			Mag: 0.0 PMG: 19 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	135	57.3	170 43.3	-15 21.3	123 53.1	+5 06.4	38 49.8	+23 21.7	69 24.1	+20 00.3					
1	150	59.8	185 42.7	20.3	138 53.9	07.1	53 52.5	21.7	84 26.5	00.3					
2	166	02.2	200 42.0	19.3	153 54.7	07.8	68 55.2	21.7	99 29.0	00.3					
3	181	04.7	215 41.4	18.3	168 55.6	08.6	83 57.9	21.7	114 31.5	00.3					
4	196	07.2	230 40.8	17.3	183 56.4	09.3	99 00.5	21.7	129 34.0	00.3					
5	211	09.6	245 40.2	-15 16.3	198 57.2	+5 10.0	114 03.2	+23 21.7	144 36.4	+20 00.3					
6	226	12.1	260 39.6	-15 15.3	213 58.0	+5 10.8	129 05.9	+23 21.7	159 38.9	+20 00.3					
7	241	14.6	275 39.0	14.3	228 58.8	11.5	144 08.5	21.8	174 41.4	00.3					
8	256	17.0	290 38.4	13.3	243 59.6	12.3	159 11.2	21.8	189 43.9	00.4					
9	271	19.5	305 37.7	12.3	259 00.4	13.0	174 13.9	21.8	204 46.3	00.4					
10	286	22.0	320 37.1	11.3	274 01.2	13.7	189 16.5	21.8	219 48.8	00.4					
11	301	24.4	335 36.5	-15 10.3	289 02.0	+5 14.5	204 19.2	+23 21.8	234 51.3	+20 00.4					
12	316	26.9	350 35.9	-15 09.3	304 02.9	+5 15.2	219 21.9	+23 21.8	249 53.8	+20 00.4					
13	331	29.4	5 35.3	08.3	319 03.7	15.9	234 24.5	21.8	264 56.2	00.4					
14	346	31.8	20 34.7	07.3	334 04.5	16.7	249 27.2	21.9	279 58.7	00.4					
15	1	34.3	35 34.1	06.3	349 05.3	17.4	264 29.9	21.9	295 01.2	00.4					
16	16	36.7	50 33.5	05.3	4 06.1	18.1	279 32.5	21.9	310 03.7	00.4					
17	31	39.2	65 32.8	-15 04.2	19 06.9	+5 18.9	294 35.2	+23 21.9	325 06.1	+20 00.4					
18	46	41.7	80 32.2	-15 03.2	34 07.7	+5 19.6	309 37.9	+23 21.9	340 08.6	+20 00.4					
19	61	44.1	95 31.6	02.2	49 08.5	20.3	324 40.5	21.9	355 11.1	00.5					
20	76	46.6	110 31.0	01.2	64 09.3	21.1	339 43.2	21.9	10 13.5	00.5					
21	91	49.1	125 30.4	-15 00.2	79 10.1	21.8	354 45.9	22.0	25 16.0	00.5					
22	106	51.5	140 29.8	-14 59.2	94 11.0	22.5	9 48.5	22.0	40 18.5	00.5					
23	121	54.0	155 29.2	58.2	109 11.8	23.3	24 51.2	22.0	55 21.0	00.5					
24	136	56.5	170 28.6	-14 57.2	124 12.6	+5 24.0	39 53.8	+23 22.0	70 23.4	+20 00.5					
Dif	—		-6		+10	+8	+7	+27	0	+25					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 24 ^d 4 PHE { 4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0 PMG: 8 ^h 17 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	28.6	-15	25.7	240	12.0	-22	08.2	60 N	16 29	17 15	18 05	5 17 72	11 11 38	
1	191	28.6		24.9	254	40.2	92	13.9	58	38	21	08	4 58 69	30 41	
2	206	28.6		24.2	269	08.4	92	19.5	56	46	26	10	42 68	46 42	
3	221	28.5		23.4	283	36.6	92	25.0	54	53	30	12	29 66	11 59 44	
4	236	28.5		22.6	298	04.8	92	30.3	52	16 59	35	15	18 64	12 11 45	
5	251	28.5	-15	21.8	312	33.0	92	-22	50	17 04	17 38	18 17	4 07 64	12 22 46	
6	266	28.4	-15	21.0	327	01.1	91	-22	45	17 16	17 47	18 22	3 46 61	12 44 47	
7	281	28.4		20.3	341	29.2	91	45.6	40	26	17 54	26	28 60	13 02 48	
8	296	28.4		19.5	355	57.3	91	50.4	35	35	18 01	31	14 59	17 49	
9	311	28.3		18.7	10	25.4	91	55.1	30	42	07	35	3 01 58	30 50	
10	326	28.3		17.9	24	53.5	91	-22	20	17 55	18	44	2 40 56	13 52 51	
11	341	28.3	-15	17.1	39	21.6	91	-23	10 N	18 07	18 28	18 53	2 21 55	14 11 53	
12	356	28.2	-15	16.4	53	49.7	91	-23	0	18 18	18 39	19 04	2 04 53	14 29 54	
13	11	28.2		15.6	68	17.7	90	12.6	10 S	29	18 50	16	1 47 51	14 48 53	
14	26	28.2		14.8	82	45.8	91	16.7	20	41	19 04	31	29 50	15 07 55	
15	41	28.1		14.0	97	13.8	90	20.6	30	18 54	20	19 50	1 08 48	29 56	
16	56	28.1		13.2	111	41.9	91	24.4	35	19 02	29	20 02	0 55 47	42 57	
17	71	28.1	-15	12.4	126	09.9	90	-23	40	19 11	19 41	20 16	0 41 46	15 58 57	
18	86	28.0	-15	11.7	140	37.9	90	-23	45	19 22	19 55	20 35	0 25 43	16 16 58	
19	101	28.0		10.9	155	05.9	90	35.1	50	35	20 12	20 59	0 04 41	38 59	
20	116	28.0		10.1	169	33.9	90	38.4	52	41	20	21 11	** ** *	16 49 59	
21	131	27.9		09.3	184	02.0	91	41.5	54	48	30	25	** ** *	17 01 60	
22	146	27.9		08.5	198	30.0	90	44.5	56	19 56	40	21 42	** ** *	15 61	
23	161	27.9		07.7	212	58.0	90	47.4	58	20 04	20 53	22 02	23 51 48	32 62	
24	176	27.8	-15	06.9	227	26.0	90	-23	60 S	20 14	21 07	22 30	23 31 47	17 51 64	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 49 ^m 8		Mag: -3.9 PMG: 12 ^h 39 ^m		Mag: +1.1 PMG: 15 ^h 42 ^m		Mag: -2.6 PMG: 21 ^h 17 ^m		Mag: 0.0 PMG: 19 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	136	56.5	170	28.6	-14	57.2	124	12.6	+5	24.0
1	151	58.9	185	28.0		56.2	139	13.4		24.8
2	167	01.4	200	27.4		55.1	154	14.2		25.5
3	182	03.9	215	26.8		54.1	169	15.0		26.2
4	197	06.3	230	26.2		53.1	184	15.8		27.0
5	212	08.8	245	25.6	-14	52.1	199	16.6	+5	27.7
6	227	11.2	260	25.0	-14	51.1	214	17.4	+5	28.4
7	242	13.7	275	24.4		50.1	229	18.2		29.2
8	257	16.2	290	23.8		49.0	244	19.1		29.9
9	272	18.6	305	23.2		48.0	259	19.9		30.6
10	287	21.1	320	22.6		47.0	274	20.7		31.4
11	302	23.6	335	22.0	-14	46.0	289	21.5	+5	32.1
12	317	26.0	350	21.4	-14	45.0	304	22.3	+5	32.8
13	332	28.5	5	20.8		43.9	319	23.1		33.6
14	347	31.0	20	20.2		42.9	334	23.9		34.3
15	2	33.4	35	19.6		41.9	349	24.7		35.0
16	17	35.9	50	19.0		40.9	4	25.5		35.8
17	32	38.3	65	18.4	-14	39.8	19	26.3	+5	36.5
18	47	40.8	80	17.8	-14	38.8	34	27.1	+5	37.2
19	62	43.3	95	17.2		37.8	49	28.0		38.0
20	77	45.7	110	16.6		36.8	64	28.8		38.7
21	92	48.2	125	16.0		35.7	79	29.6		39.4
22	107	50.7	140	15.4		34.7	94	30.4		40.2
23	122	53.1	155	14.8		33.7	109	31.2		40.9
24	137	55.6	170	14.2	-14	32.7	124	32.0	+5	41.6
Dif	—		-6		+10		+8		+7	
							+27		0	
									+25	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 14 ^m 2			Edad: 25 ^d 4 PHE { 4 ^h : 55/9 12 ^h : 55/7 20 ^h : 55/5 R°: 52 ^m	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾												
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	27.8	-15 06.9	227	26.0	-23 50.2	60 N	6	22	7	12	7	57	6	29
1	191	27.8	06.2	241	54.0	52.9	58	20	06	49	6	07	54	12	11
2	206	27.8	05.4	256	22.0	55.4	56	17	7 01	41	5	50	54	28	55
3	221	27.8	04.6	270	50.0	-23 57.7	54	15	6 57	35	35	54	43	55	
4	236	27.7	03.8	285	18.0	-24 00.0	52	13	53	29	22	54	12	56	54
5	251	27.7	-15 03.0	299	46.0	-24 02.1	50	6 11	6 49	7 23	5	11	54	13	08
6	266	27.7	-15 02.2	314	14.1	-24 04.1	45	6 06	6 41	7 11	4	47	54	13	31
7	281	27.6	01.4	328	42.1	06.0	40	6 01	33	7 02	28	54	13	50	54
8	296	27.6	-15 00.6	343	10.1	07.7	35	5 57	27	6 53	4	13	53	14	06
9	311	27.6	-14 59.8	357	38.2	09.3	30	53	21	46	3	59	53	20	53
10	326	27.6	59.0	12	06.3	10.8	20	44	10	33	36	53	14	43	53
11	341	27.5	-14 58.2	26	34.3	-24 12.1	10 N	5 35	6 00	6 22	3	16	53	15	04
12	356	27.5	-14 57.5	41	02.4	-24 13.3	0	5 24	5 49	6 11	2	57	53	15	23
13	11	27.5	56.7	55	30.5	14.4	10 S	5 12	38	6 00	38	53	15	41	52
14	26	27.5	55.9	69	58.6	15.4	20	4 58	25	5 48	2	19	52	16	02
15	41	27.4	55.1	84	26.7	16.2	8	30	39	5 09	34	1	56	51	25
16	56	27.4	54.3	98	54.9	16.9	7	35	27	4 59	26	42	52	39	51
17	71	27.4	-14 53.5	113	23.0	-24 17.4	40	4 12	4 48	5 17	1	27	51	16	55
18	86	27.4	-14 52.7	127	51.2	-24 17.9	45	3 54	4 34	5 07	1	08	51	17	14
19	101	27.4	51.9	142	19.4	18.2	3	50	30	17	4 54	0	45	50	37
20	116	27.3	51.1	156	47.6	18.4	2	52	18	4 09	48	35	49	17	48
21	131	27.3	50.3	171	15.8	18.4	0	54	3 04	3 59	41	22	49	18	01
22	146	27.3	49.5	185	44.1	18.3	1	56	2 47	49	33	0	08	48	16
23	161	27.3	48.7	200	12.3	18.1	2	58	2 27	36	25	**	**	**	34
24	176	27.2	-14 47.9	214	40.6	-24 17.8	3	60 S	1 59	3 22	4 15	**	**	**	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 45 ^m 9		Mag: -3.9 PMG: 12 ^h 40 ^m		Mag: +1.1 PMG: 15 ^h 41 ^m		Mag: -2.6 PMG: 21 ^h 12 ^m		Mag: 0.0 PMG: 19 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	137	55.6	170	14.2	124	32.0	40	57.7	71	22.7
1	152	58.1	185	13.6	139	32.8	56	00.3	86	25.2
2	168	00.5	200	13.0	154	33.6	71	03.0	101	27.6
3	183	03.0	215	12.4	169	34.4	86	05.6	116	30.1
4	198	05.5	230	11.8	184	35.2	101	08.3	131	32.6
5	213	07.9	245	11.2	199	36.1	116	10.9	146	35.0
6	228	10.4	260	10.6	214	36.9	131	13.6	161	37.5
7	243	12.8	275	10.0	229	37.7	146	16.2	176	39.9
8	258	15.3	290	09.5	244	38.5	161	18.9	191	42.4
9	273	17.8	305	08.9	259	39.3	176	21.5	206	44.9
10	288	20.2	320	08.3	274	40.1	191	24.2	221	47.3
11	303	22.7	335	07.7	289	40.9	206	26.8	236	49.8
12	318	25.2	350	07.1	304	41.7	221	29.5	251	52.3
13	333	27.6	5	06.5	319	42.5	236	32.1	266	54.7
14	348	30.1	20	05.9	334	43.3	251	34.8	281	57.2
15	3	32.6	35	05.3	349	44.1	266	37.4	296	59.7
16	18	35.0	50	04.8	4	44.9	281	40.1	312	02.1
17	33	37.5	65	04.2	19	45.8	296	42.7	327	04.6
18	48	40.0	80	03.6	34	46.6	311	45.4	342	07.0
19	63	42.4	95	03.0	49	47.4	326	48.0	357	09.5
20	78	44.9	110	02.4	64	48.2	341	50.7	12	12.0
21	93	47.3	125	01.8	79	49.0	356	53.3	27	14.4
22	108	49.8	140	01.3	94	49.8	11	56.0	42	16.9
23	123	52.3	155	00.7	109	50.6	26	58.6	57	19.4
24	138	54.7	170	00.1	124	51.4	42	01.3	72	21.8
Dif	—		-6	+10	+8	+7	+27	0	+25	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 26 ^d 4 PHE { 4 ^h : 55 ^m /4 12 ^h : 55 ^m /2 20 ^h : 55 ^m /1 R°: 52 ^m											
	PMG: 12 ^h 14 ^m 2			SD: 15 ^h 1 PMG: 10 ^h 02 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	27.2	-14 47.9	214	40.6	-24 17.8	5	60 N	16 35	17 20	18 10	7 23 36		12 44 70	
1	191	27.2	47.1	229	09.0 ⁹⁴	17.3	5	58	43	25	12	7 01 39		13 05 68	
2	206	27.2	46.3	243	37.3 ⁹³	16.7	6	56	50	30	14	6 44 40		23 65	
3	221	27.2	45.5	258	05.7 ⁹⁴	16.0	7	54	16 57	34	16	29 42		38 63	
4	236	27.2	44.7	272	34.1 ⁹⁴	15.2	8	52	17 02	38	18	16 43		13 50 63	
5	251	27.1	-14 43.9	287	02.5 ⁹⁴	-24 14.2	10	50	17 08	17 42	18 20	6 05 43		14 02 61	
6	266	27.1	-14 43.1	301	31.0 ⁹⁵	-24 13.1	11	45	17 19	17 50	18 24	5 41 45		14 25 59	
7	281	27.1	42.3	315	59.5 ⁹⁵	11.9	12	40	28	17 57	29	22 47		14 44 58	
8	296	27.1	41.5	330	28.0 ⁹⁵	10.6	13	35	37	18 03	33	5 06 48		15 00 56	
9	311	27.1	40.7	344	56.5 ⁹⁵	09.1	15	30	44	08	37	4 52 49		13 56	
10	326	27.0	39.9	359	25.1 ⁹⁶	07.5	16	20	17 56	19	45	29 50		36 54	
11	341	27.0	-14 39.1	13	53.7 ⁹⁶	-24 05.8	17	10 N	18 07	18 29	18 54	4 09 50		15 56 52	
12	356	27.0	-14 38.3	28	22.4 ⁹⁷	-24 04.0	18	0	18 18	18 39	19 04	3 50 51		16 15 51	
13	11	27.0	37.5	42	51.1 ⁹⁷	-24 02.0	20	10 S	28	18 50	15	31 52		33 50	
14	26	27.0	36.7	57	19.8 ⁹⁷	-23 59.9	21	20	40	19 03	30	3 11 53		16 53 48	
15	41	27.0	35.9	71	48.6 ⁹⁸	57.7	22	30	18 53	18	19 48	2 47 55		17 16 46	
16	56	26.9	35.1	86	17.4 ⁹⁸	55.4	23	35	19 00	27	20 00	34 55		30 44	
17	71	26.9	-14 34.3	100	46.2 ⁹⁸	-23 52.9	25	40	19 09	19 38	20 14	2 18 56		17 45 43	
18	86	26.9	-14 33.5	115	15.1 ⁹⁹	-23 50.3	26	45	19 19	19 52	20 31	1 59 57		18 03 42	
19	101	26.9	32.7	129	44.0 ⁹⁹	47.7	26	50	32	20 08	20 54	35 58		26 39	
20	116	26.9	31.8	144	13.0 ¹⁰⁰	44.8	29	52	38	16	21 06	24 59		37 38	
21	131	26.9	31.0	158	42.0 ¹⁰⁰	41.9	29	54	44	25	19	1 11 59		18 49 37	
22	146	26.9	30.2	173	11.1 ¹⁰¹	38.9	30	56	51	35	35	0 56 61		19 03 35	
23	161	26.8	29.4	187	40.2 ¹⁰¹	35.7	32	58	19 59	20 47	21 54	39 61		20 32	
24	176	26.8	-14 28.6	202	09.3 ¹⁰¹	-23 32.4	33	60 S	20 09	21 01	22 20	0 18 62		19 40 29	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 14 ^h 41 ^m 9			Mag: -3.9 PMG: 12 ^h 40 ^m			Mag: +1.1 PMG: 15 ^h 40 ^m			Mag: -2.6 PMG: 21 ^h 08 ^m			Mag: 0.0 PMG: 19 ^h 07 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	138	54.7	170 00.1	-14 07.7	124 51.4	+5 59.1	42 01.3	+23 22.6	72 21.8	+20 01.0			72 21.8	+20 01.0	
1	153	57.2	184 59.5	06.7	139 52.2	+5 59.9	57 03.9	22.7	87 24.3	01.0			87 24.3	01.0	
2	168	59.7	199 58.9	05.6	154 53.0	+6 00.6	72 06.6	22.7	102 26.7	01.0			102 26.7	01.0	
3	184	02.1	214 58.3	04.6	169 53.8	01.3	87 09.2	22.7	117 29.2	01.0			117 29.2	01.0	
4	199	04.6	229 57.8	03.5	184 54.7	02.1	102 11.8	22.7	132 31.7	01.1			132 31.7	01.1	
5	214	07.1	244 57.2	-14 02.5	199 55.5	+6 02.8	117 14.5	+23 22.7	147 34.1	+20 01.1			147 34.1	+20 01.1	
6	229	09.5	259 56.6	-14 01.5	214 56.3	+6 03.5	132 17.1	+23 22.7	162 36.6	+20 01.1			162 36.6	+20 01.1	
7	244	12.0	274 56.0	-14 00.4	229 57.1	04.3	147 19.8	22.7	177 39.0	01.1			177 39.0	01.1	
8	259	14.5	289 55.4	-13 59.3	244 57.9	05.0	162 22.4	22.8	192 41.5	01.1			192 41.5	01.1	
9	274	16.9	304 54.9	58.3	259 58.7	05.7	177 25.1	22.8	207 44.0	01.1			207 44.0	01.1	
10	289	19.4	319 54.3	57.2	274 59.5	06.4	192 27.7	22.8	222 46.4	01.1			222 46.4	01.1	
11	304	21.8	334 53.7	-13 56.2	290 00.3	+6 07.2	207 30.3	+23 22.8	237 48.9	+20 01.1			237 48.9	+20 01.1	
12	319	24.3	349 53.1	-13 55.1	305 01.1	+6 07.9	222 33.0	+23 22.8	252 51.3	+20 01.2			252 51.3	+20 01.2	
13	334	26.8	4 52.6	54.1	320 01.9	08.6	237 35.6	22.8	267 53.8	01.2			267 53.8	01.2	
14	349	29.2	19 52.0	53.0	335 02.7	09.3	252 38.3	22.8	282 56.3	01.2			282 56.3	01.2	
15	4 31.7	34 51.4	52.0	52.0	350 03.5	10.1	267 40.9	22.8	297 58.7	01.2			297 58.7	01.2	
16	19 34.2	49 50.8	50.9	50.9	5 04.3	10.8	282 43.6	22.9	313 01.2	01.2			313 01.2	01.2	
17	34 36.6	64 50.3	-13 49.9	20 05.2	+6 11.5	297 46.2	+23 22.9	328 03.6	+20 01.2				328 03.6	+20 01.2	
18	49 39.1	79 49.7	-13 48.8	35 06.0	+6 12.3	312 48.8	+23 22.9	343 06.1	+20 01.2				343 06.1	+20 01.2	
19	64 41.6	94 49.1	47.7	50 06.8	13.0	327 51.5	22.9	358 08.5	01.2				358 08.5	01.2	
20	79 44.0	109 48.6	46.7	65 07.6	13.7	342 54.1	22.9	13 11.0	01.2				13 11.0	01.2	
21	94 46.5	124 48.0	45.6	80 08.4	14.4	357 56.8	22.9	28 13.5	01.3				28 13.5	01.3	
22	109 48.9	139 47.4	44.6	95 09.2	15.2	12 59.4	22.9	43 15.9	01.3				43 15.9	01.3	
23	124 51.4	154 46.8	43.5	110 10.0	15.9	28 02.0	22.9	58 18.4	01.3				58 18.4	01.3	
24	139 53.9	169 46.3	-13 42.4	125 10.8	+6 16.6	43 04.7	+23 23.0	73 20.8	+20 01.3				73 20.8	+20 01.3	
Dif	—		-6	+11		+8	+7		+26	0		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 27 ^d 4 PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'7 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	176	26.8	-14	28.6	202	09.3	-23	32.4	60 N	6 18	7 07	7 52	7 59	23	13 54	78		
1	191	26.8		27.8	216	38.5 ¹⁰²		29.0 ³⁴	58	16	7 02	44	40	26	14 13	74		
2	206	26.8		27.0	231	07.7 ¹⁰²		25.5 ³⁵	56	13	6 57	37	24	29	28	71		
3	221	26.8		26.2	245	37.0 ¹⁰³		21.9 ³⁶	54	11	53	31	7 11	31	41	69		
4	236	26.8		25.4	260	06.4 ¹⁰⁴		18.1 ³⁸	52	10	49	25	6 59	33	14 53	67		
5	251	26.8	-14	24.6	274	35.7 ¹⁰³	-23	14.3 ³⁸	50	6 08	6 46	7 20	6 48	35	15 03	65		
6	266	26.8	-14	23.8	289	05.2 ¹⁰⁵	-23	10.3 ⁴⁰	45	6 03	6 38	7 09	6 26	38	15 24	62		
7	281	26.8		22.9	303	34.7 ¹⁰⁵		06.2 ⁴¹	40	5 59	31	6 59	6 09	40	42	59		
8	296	26.7		22.1	318	04.2 ¹⁰⁵	-23	02.0 ⁴²	35	55	25	51	5 54	41	15 56	58		
9	311	26.7		21.3	332	33.8 ¹⁰⁶	-22	57.7 ⁴³	30	51	20	44	41	43	16 09	55		
10	326	26.7		20.5	347	03.4 ¹⁰⁶		53.3 ⁴⁴	20	43	6 09	32	5 19	45	30	53		
11	341	26.7	-14	19.7	1	33.1 ¹⁰⁷	-22	48.8 ⁴⁵	10 N	5 34	5 59	6 21	4 59	48	16 48	51		
12	356	26.7	-14	18.9	16	02.8 ¹⁰⁷	-22	44.1 ⁴⁷	0	5 25	5 49	6 11	4 41	50	17 06	48		
13	11	26.7		18.1	30	32.6 ¹⁰⁸		39.4 ⁴⁷	10 S	5 13	39	6 00	23	52	23	46		
14	26	26.7		17.3	45	02.5 ¹⁰⁹		34.5 ⁴⁹	20	4 59	26	5 49	4 04	54	17 41	44		
15	41	26.7		16.4	59	32.4 ¹⁰⁹		29.5 ⁵⁰	30	41	11	36	3 42	56	18 02	41		
16	56	26.7		15.6	74	02.3 ¹⁰⁹		24.5 ⁵⁰	35	29	5 02	28	29	57	14	39		
17	71	26.7	-14	14.8	88	32.3 ¹¹⁰	-22	19.3 ⁵²	40	4 15	4 51	5 20	3 14	58	18 28	37		
18	86	26.7	-14	14.0	103	02.4 ¹¹¹	-22	14.0 ⁵³	45	3 58	4 37	5 10	2 56	60	18 45	34		
19	101	26.6		13.2	117	32.5 ¹¹¹		08.6 ⁵⁴	50	35	21	4 57	33	64	19 05	31		
20	116	26.6		12.4	132	02.7 ¹¹²	-22	03.1 ⁵⁵	52	23	13	51	23	64	15	29		
21	131	26.6		11.5	146	32.9 ¹¹²	-21	57.5 ⁵⁶	54	3 10	4 04	45	2 10	67	26	27		
22	146	26.6		10.7	161	03.2 ¹¹³		51.8 ⁵⁷	56	2 54	3 54	38	1 57	68	38	25		
23	161	26.6		09.9	175	33.6 ¹¹⁴		46.0 ⁵⁸	58	35	42	30	40	71	19 52	23		
24	176	26.6	-14	09.1	190	04.0 ¹¹⁴	-21	40.1 ⁵⁹	60 S	2 10	3 29	4 21	1 20	75	20 09	19		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 38 ^m 0		Mag: -3.9 PMG: 12 ^h 41 ^m				Mag: +1.1 PMG: 15 ^h 38 ^m				Mag: -2.6 PMG: 21 ^h 04 ^m				Mag: 0.0 PMG: 19 ^h 03 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	139	53.9	169	46.3	-13	42.4	125	10.8	+6	16.6	43	04.7	+23	23.0	73	20.8	+20	01.3
1	154	56.3	184	45.7		41.4	140	11.6		17.3	58	07.3		23.0	88	23.3		01.3
2	169	58.8	199	45.1		40.3	155	12.4		18.1	73	09.9		23.0	103	25.7		01.3
3	185	01.3	214	44.6		39.3	170	13.2		18.8	88	12.6		23.0	118	28.2		01.3
4	200	03.7	229	44.0		38.2	185	14.0		19.5	103	15.2		23.0	133	30.7		01.3
5	215	06.2	244	43.4	-13	37.1	200	14.8	+6	20.2	118	17.9	+23	23.0	148	33.1	+20	01.4
6	230	08.7	259	42.9	-13	36.1	215	15.7	+6	21.0	133	20.5	+23	23.0	163	35.6	+20	01.4
7	245	11.1	274	42.3		35.0	230	16.5		21.7	148	23.1		23.0	178	38.0		01.4
8	260	13.6	289	41.7		33.9	245	17.3		22.4	163	25.8		23.1	193	40.5		01.4
9	275	16.1	304	41.2		32.9	260	18.1		23.2	178	28.4		23.1	208	42.9		01.4
10	290	18.5	319	40.6		31.8	275	18.9		23.9	193	31.0		23.1	223	45.4		01.4
11	305	21.0	334	40.0	-13	30.7	290	19.7	+6	24.6	208	33.7	+23	23.1	238	47.8	+20	01.4
12	320	23.4	349	39.5	-13	29.7	305	20.5	+6	25.3	223	36.3	+23	23.1	253	50.3	+20	01.4
13	335	25.9	4	38.9		28.6	320	21.3		26.1	238	38.9		23.1	268	52.7		01.5
14	350	28.4	19	38.3		27.5	335	22.1		26.8	253	41.6		23.1	283	55.2		01.5
15	5	30.8	34	37.8		26.4	350	22.9		27.5	268	44.2		23.1	298	57.7		01.5
16	20	33.3	49	37.2		25.4	5	23.7		28.2	283	46.8		23.2	314	00.1		01.5
17	35	35.8	64	36.7	-13	24.3	20	24.5	+6	29.0	298	49.5	+23	23.2	329	02.6	+20	01.5
18	50	38.2	79	36.1	-13	23.2	35	25.3	+6	29.7	313	52.1	+23	23.2	344	05.0	+20	01.5
19	65	40.7	94	35.5		22.1	50	26.1		30.4	328	54.7		23.2	359	07.5		01.5
20	80	43.2	109	35.0		21.1	65	26.9		31.1	343	57.4		23.2	14	09.9		01.5
21	95	45.6	124	34.4		20.0	80	27.8		31.8	359	00.0		23.2	29	12.4		01.6
22	110	48.1	139	33.9		18.9	95	28.6		32.6	14	02.6		23.2	44	14.8		01.6
23	125	50.6	154	33.3		17.8	110	29.4		33.3	29	05.3		23.2	59	17.3		01.6
24	140	53.0	169	32.7	-13	16.8	125	30.2	+6	34.0	44	07.9	+23	23.2	74	19.7	+20	01.6
Dif	—		-6		+11		+8		+7		+26		0		+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 28 ^d 4 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 46 ^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	26.6	-14 09.1	190	04.0	-21 40.1	60	60 N	16 40	17 25	18 14	8 22 14	15 12 81	
1	191	26.6	08.3	204	34.5 ¹¹⁵	34.1	60	58	48	30	16	8 06 19	27 76	
2	206	26.6	07.4	219	05.0 ¹¹⁵	28.0	61	56	16 55	34	18	7 53 22	39 74	
3	221	26.6	06.6	233	35.6 ¹¹⁶	21.8	62	54	17 01	38	20	42 24	15 50 71	
4	236	26.6	05.8	248	06.2 ¹¹⁶	15.5	63	52	06	42	21	32 26	16 00 69	
5	251	26.6	-14 05.0	262	36.9 ¹¹⁷	-21 09.2	63	50	17 11	17 45	18 23	7 23 28	16 08 67	
6	266	26.6	-14 04.2	277	07.7 ¹¹⁸	-21 02.7	65	45	17 22	17 52	18 27	7 04 31	16 26 64	
7	281	26.6	03.3	291	38.5 ¹¹⁸	-20 56.1	66	40	31	17 59	31	6 49 34	41 60	
8	296	26.6	02.5	306	09.4 ¹¹⁹	49.4	67	35	39	18 05	34	35 37	16 54 57	
9	311	26.6	01.7	320	40.4 ¹²⁰	42.6	68	30	45	10	38	24 38	17 04 56	
10	326	26.6	00.9	335	11.4 ¹²⁰	35.8	68	20	17 57	20	46	6 04 42	23 52	
11	341	26.6	-14 00.1	349	42.4 ¹²⁰	-20 28.8	70	10 N	18 08	18 29	18 54	5 47 44	17 39 49	
12	356	26.6	-13 59.2	4	13.6 ¹²²	-20 21.8	70	0	18 18	18 39	19 04	5 31 47	17 54 46	
13	11	26.6	58.4	18	44.8 ¹²²	14.6	72	10 S	28	18 49	15	5 15 49	18 09 43	
14	26	26.6	57.6	33	16.0 ¹²²	07.4	72	20	39	19 01	28	4 58 52	25 39	
15	41	26.6	56.8	47	47.3 ¹²³	-20 00.1	73	30	51	16	46	38 55	43 36	
16	56	26.6	55.9	62	18.7 ¹²⁴	-19 52.7	74	35	18 58	25	19 57	26 58	18 53 34	
17	71	26.6	-13 55.1	76	50.2 ¹²⁵	-19 45.2	75	40	19 07	19 36	20 11	4 12 60	19 05 32	
18	86	26.6	-13 54.3	91	21.7 ¹²⁵	-19 37.6	76	45	19 17	19 48	20 28	3 56 63	19 19 29	
19	101	26.6	53.5	105	53.2 ¹²⁵	29.9	77	50	28	20 04	20 50	37 66	36 25	
20	116	26.6	52.6	120	24.8 ¹²⁶	22.2	77	52	34	12	21 01	27 69	44 23	
21	131	26.6	51.8	134	56.5 ¹²⁷	14.4	78	54	40	20	13	17 70	19 53 21	
22	146	26.6	51.0	149	28.3 ¹²⁸	-19 06.4	80	56	47	30	28	3 05 73	20 03 19	
23	161	26.6	50.1	164	00.1 ¹²⁸	-18 58.4	80	58	19 54	41	21 46	2 51 76	15 15	
24	176	26.6	-13 49.3	178	31.9 ¹²⁸	-18 50.4	80	60 S	20 03	20 54	22 09	2 35 79	20 28 12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 14 ^h 34 ^m 1		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: +1.1 PMG: 15 ^h 37 ^m		Mag: -2.6 PMG: 21 ^h 00 ^m		Mag: 0.0 PMG: 19 ^h 00 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	140	53.0	169	32.7	-13 16.8	125	30.2	+6 34.0	44	07.9	+23 23.2	74	19.7	+20 01.6
1	155	55.5	184	32.2	15.7	140	31.0	34.7	59	10.5	23.3	89	22.2	01.6
2	170	57.9	199	31.6	14.6	155	31.8	35.5	74	13.1	23.3	104	24.6	01.6
3	186	00.4	214	31.1	13.5	170	32.6	36.2	89	15.8	23.3	119	27.1	01.6
4	201	02.9	229	30.5	12.5	185	33.4	36.9	104	18.4	23.3	134	29.5	01.6
5	216	05.3	244	30.0	-13 11.4	200	34.2	+6 37.6	119	21.0	+23 23.3	149	32.0	+20 01.7
6	231	07.8	259	29.4	-13 10.3	215	35.0	+6 38.4	134	23.7	+23 23.3	164	34.4	+20 01.7
7	246	10.3	274	28.8	09.2	230	35.8	39.1	149	26.3	23.3	179	36.9	01.7
8	261	12.7	289	28.3	08.1	245	36.6	39.8	164	28.9	23.3	194	39.3	01.7
9	276	15.2	304	27.7	07.1	260	37.4	40.5	179	31.5	23.4	209	41.8	01.7
10	291	17.7	319	27.2	06.0	275	38.2	41.2	194	34.2	23.4	224	44.2	01.7
11	306	20.1	334	26.6	-13 04.9	290	39.0	+6 42.0	209	36.8	+23 23.4	239	46.7	+20 01.7
12	321	22.6	349	26.1	-13 03.8	305	39.9	+6 42.7	224	39.4	+23 23.4	254	49.1	+20 01.8
13	336	25.1	4	25.5	02.7	320	40.7	43.4	239	42.0	23.4	269	51.6	01.8
14	351	27.5	19	25.0	01.6	335	41.5	44.1	254	44.7	23.4	284	54.0	01.8
15	6	30.0	34	24.4	-13 00.5	350	42.3	44.9	269	47.3	23.4	299	56.5	01.8
16	21	32.4	49	23.9	-12 59.5	5	43.1	45.6	284	49.9	23.4	314	58.9	01.8
17	36	34.9	64	23.3	-12 58.4	20	43.9	+6 46.3	299	52.5	+23 23.5	330	01.4	+20 01.8
18	51	37.4	79	22.8	-12 57.3	35	44.7	+6 47.0	314	55.2	+23 23.5	345	03.8	+20 01.8
19	66	39.8	94	22.2	56.2	50	45.5	47.7	329	57.8	23.5	0	06.3	01.8
20	81	42.3	109	21.7	55.1	65	46.3	48.5	345	00.4	23.5	15	08.7	01.9
21	96	44.8	124	21.1	54.0	80	47.1	49.2	0	03.0	23.5	30	11.2	01.9
22	111	47.2	139	20.6	52.9	95	47.9	49.9	15	05.6	23.5	45	13.6	01.9
23	126	49.7	154	20.0	51.8	110	48.7	50.6	30	08.3	23.5	60	16.0	01.9
24	141	52.2	169	19.5	-12 50.7	125	49.5	+6 51.4	45	10.9	+23 23.5	75	18.5	+20 01.9
Dif	—		-6		+11	+8		+7	+26		0	+24		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: 29 ^d 4 PHE { SD: 14'8 PMG: 12 ^h 29 ^m 4 ^h : 54'3 12 ^h : 54'2 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	176	26.6	-13 49.3	178	31.9	-18 50.4	82	60 N	6 13	7 02	7 47	8 36	10	16 33	79
1	191	26.6			03.9 ¹³⁰		42.2	58	11	6 58	39	25	13	43	77
2	206	26.6			35.9 ¹³⁰		34.0	56	10	53	33	15	16	16 53	73
3	221	26.6			07.9 ¹³⁰		25.7	54	08	49	27	8 06	18	17 01	71
4	236	26.6			40.0 ¹³¹		17.3	52	06	46	21	7 58	21	09	68
5	251	26.6	-13 45.2	251	12.2 ¹³²	-18 08.8	85	50	6 05	6 43	7 16	7 51	22	17 15	67
6	266	26.6	-13 44.3	265	44.4 ¹³²	-18 00.2	86	45	6 01	6 35	7 06	7 35	27	17 30	62
7	281	26.6			16.7 ¹³³	-17 51.6	87	40	5 57	29	6 57	23	29	41	60
8	296	26.6			49.1 ¹³⁴		42.9	35	54	23	49	12	32	17 51	57
9	311	26.6			21.5 ¹³⁴		34.1	30	50	18	43	7 02	35	18 00	54
10	326	26.6			53.9 ¹³⁴		25.3	20	42	6 08	31	6 46	38	15	50
11	341	26.7	-13 40.2	338	26.5 ¹³⁶	-17 16.4	89	10 N	5 34	5 59	6 21	6 31	42	18 28	46
12	356	26.7	-13 39.4	352	59.1 ¹³⁶	-17 07.4	90	0	5 25	5 50	6 11	6 18	45	18 40	43
13	11	26.7	38.5	7	31.7 ¹³⁶	-16 58.3	91	10 S	14	39	6 01	6 04	48	18 52	40
14	26	26.7	37.7	22	04.4 ¹³⁷	49.2	91	20	5 00	27	5 50	5 50	51	19 04	37
15	41	26.7	36.9	36	37.2 ¹³⁸	40.0	92	30	4 43	13	38	33	55	19	33
16	56	26.7	36.0	51	10.0 ¹³⁸	30.8	92	35	32	5 04	31	24	57	27	31
17	71	26.7	-13 35.2	65	42.9 ¹³⁹	-16 21.4	94	40	4 18	4 53	5 22	5 12	60	19 37	28
18	86	26.7	-13 34.3	80	15.8 ¹³⁹	-16 12.0	94	45	4 01	4 41	5 13	4 59	63	19 48	24
19	101	26.7	33.5	94	48.8 ¹⁴⁰	-16 02.6	94	50	3 39	25	5 01	43	67	20 01	21
20	116	26.7	32.7	109	21.8 ¹⁴⁰	-15 53.1	95	52	29	17	4 55	36	68	07	19
21	131	26.7	31.8	123	55.0 ¹⁴²	43.5	96	54	16	4 09	49	27	71	14	17
22	146	26.7	31.0	138	28.1 ¹⁴¹	33.8	97	56	3 01	3 59	42	18	73	22	14
23	161	26.8	30.2	153	01.3 ¹⁴²	24.1	97	58	2 43	48	35	4 07	76	30	12
24	176	26.8	-13 29.3	167	34.6 ¹⁴³	-15 14.3	98	60 S	2 20	3 35	4 26	3 54	80	20 40	9
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 14 ^h 30 ^m 1		Mag: -3.9 PMG: 12 ^h 43 ^m			Mag: +1.1 PMG: 15 ^h 36 ^m			Mag: -2.6 PMG: 20 ^h 56 ^m			Mag: 0.0 PMG: 18 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	141	52.2	169	19.5	-12 50.7	125	49.5	+6 51.4	45	10.9	+23 23.5	75	18.5	+20 01.9	
1	156	54.6	184	18.9	49.7	140	50.3	52.1	60	13.5	23.5	90	20.9	01.9	
2	171	57.1	199	18.4	48.6	155	51.1	52.8	75	16.1	23.6	105	23.4	01.9	
3	186	59.5	214	17.8	47.5	170	51.9	53.5	90	18.8	23.6	120	25.8	02.0	
4	202	02.0	229	17.3	46.4	185	52.7	54.2	105	21.4	23.6	135	28.3	02.0	
5	217	04.5	244	16.8	-12 45.3	200	53.5	+6 55.0	120	24.0	+23 23.6	150	30.7	+20 02.0	
6	232	06.9	259	16.2	-12 44.2	215	54.4	+6 55.7	135	26.6	+23 23.6	165	33.2	+20 02.0	
7	247	09.4	274	15.7	43.1	230	55.2	56.4	150	29.2	23.6	180	35.6	02.0	
8	262	11.9	289	15.1	42.0	245	56.0	57.1	165	31.8	23.6	195	38.1	02.0	
9	277	14.3	304	14.6	40.9	260	56.8	57.8	180	34.5	23.6	210	40.5	02.0	
10	292	16.8	319	14.0	39.8	275	57.6	58.6	195	37.1	23.6	225	42.9	02.1	
11	307	19.3	334	13.5	-12 38.7	290	58.4	+6 59.3	210	39.7	+23 23.7	240	45.4	+20 02.1	
12	322	21.7	349	13.0	-12 37.6	305	59.2	+7 00.0	225	42.3	+23 23.7	255	47.8	+20 02.1	
13	337	24.2	4	12.4	36.5	321	00.0	+7 00.7	240	44.9	23.7	270	50.3	02.1	
14	352	26.7	19	11.9	35.4	336	00.8	01.4	255	47.6	23.7	285	52.7	02.1	
15	7	29.1	34	11.3	34.3	351	01.6	02.1	270	50.2	23.7	300	55.2	02.1	
16	22	31.6	49	10.8	33.2	6	02.4	02.9	285	52.8	23.7	315	57.6	02.1	
17	37	34.0	64	10.3	-12 32.1	21	03.2	+7 03.6	300	55.4	+23 23.7	331	00.1	+20 02.2	
18	52	36.5	79	09.7	-12 31.0	36	04.0	+7 04.3	315	58.0	+23 23.7	346	02.5	+20 02.2	
19	67	39.0	94	09.2	29.9	51	04.8	05.0	331	00.6	23.8	1	04.9	02.2	
20	82	41.4	109	08.6	28.8	66	05.6	05.7	346	03.2	23.8	16	07.4	02.2	
21	97	43.9	124	08.1	27.7	81	06.4	06.5	1	05.9	23.8	31	09.8	02.2	
22	112	46.4	139	07.6	26.6	96	07.2	07.2	16	08.5	23.8	46	12.3	02.2	
23	127	48.8	154	07.0	25.5	111	08.0	07.9	31	11.1	23.8	61	14.7	02.2	
24	142	51.3	169	06.5	-12 24.4	126	08.8	+7 08.6	46	13.7	+23 23.8	76	17.1	+20 02.3	
Dif	—		-5		+11	+8		+7	+26		0	+24			

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: 30 ^d 4 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 R°: 42 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	176	26.8	-13 29.3	167	34.6	-15 14.3	60 N	16 45	17 30	18 19	8 46	8	17 52	79			
1	191	26.8		182	07.9 ¹⁴³	-15 04.5 ⁹⁸	58	53	34	20	38	11	18 00	75			
2	206	26.8		196	41.3 ¹⁴⁴	-14 54.6 ⁹⁹	56	16 59	38	22	31	13	06	73			
3	221	26.8		211	14.7 ¹⁴⁴	44.6 ¹⁰⁰	54	17 05	42	23	24	16	12	70			
4	236	26.8		225	48.2 ¹⁴⁵	34.6 ¹⁰⁰	52	10	45	25	19	17	17	68			
5	251	26.8	-13 25.1	240	21.7 ¹⁴⁵	-14 24.6 ¹⁰⁰	50	17 15	17 48	18 26	8 13	19	18 22	66			
6	266	26.8	-13 24.3	254	55.3 ¹⁴⁶	-14 14.4 ¹⁰²	45	17 25	17 55	18 30	8 02	23	18 32	62			
7	281	26.8		269	29.0 ¹⁴⁷	-14 04.3 ¹⁰¹	40	33	18 01	33	7 52	26	41	58			
8	296	26.9		284	02.7 ¹⁴⁷	-13 54.0 ¹⁰³	35	40	06	36	44	29	48	56			
9	311	26.9		298	36.4 ¹⁴⁷	43.7 ¹⁰³	30	47	11	40	37	31	18 54	53			
10	326	26.9		313	10.2 ¹⁴⁸	33.4 ¹⁰³	20	17 58	21	47	24	35	19 05	49			
11	341	26.9	-13 20.1	327	44.0 ¹⁴⁸	-13 23.0 ¹⁰⁴	10 N	18 08	18 30	18 55	7 13	39	19 14	46			
12	356	26.9	-13 19.2	342	17.9 ¹⁴⁹	-13 12.6 ¹⁰⁴	0	18 18	18 39	19 04	7 03	42	19 23	42			
13	11	26.9		356	51.9 ¹⁵⁰	-13 02.1 ¹⁰⁵	10 S	27	18 49	14	6 52	46	32	38			
14	26	26.9		11	25.8 ¹⁴⁹	-12 51.5 ¹⁰⁶	20	37	19 00	27	41	49	41	35			
15	41	27.0		25	59.9 ¹⁵¹	40.9 ¹⁰⁶	30	49	14	44	28	54	52	30			
16	56	27.0		40	34.0 ¹⁵¹	30.3 ¹⁰⁶	35	18 56	23	19 55	21	56	19 58	28			
17	71	27.0	-13 15.0	55	08.1 ¹⁵¹	-12 19.6 ¹⁰⁷	40	19 04	19 33	20 08	6 12	59	20 05	25			
18	86	27.0	-13 14.2	69	42.3 ¹⁵²	-12 08.9 ¹⁰⁷	45	19 14	19 45	20 24	6 02	62	20 12	22			
19	101	27.0		84	16.5 ¹⁵²	-11 58.1 ¹⁰⁸	50	25	20 00	45	5 50	66	22	18			
20	116	27.0		98	50.7 ¹⁵²	47.3 ¹⁰⁸	52	30	08	20 55	44	69	26	16			
21	131	27.1		113	25.0 ¹⁵³	36.4 ¹⁰⁹	54	36	16	21 07	38	71	31	14			
22	146	27.1		127	59.4 ¹⁵⁴	25.5 ¹⁰⁹	56	42	25	22	31	73	36	12			
23	161	27.1		142	33.8 ¹⁵⁴	14.6 ¹⁰⁹	58	49	35	21 38	23	76	42	10			
24	176	27.1	-13 09.1	157	08.2 ¹⁵⁴	-11 03.6 ¹¹⁰	60 S	19 58	20 48	22 00	5 14	79	20 49	7			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 26 ^m 2		Mag: -3.9 PMG: 12 ^h 44 ^m		Mag: +1.2 PMG: 15 ^h 35 ^m		Mag: -2.6 PMG: 20 ^h 51 ^m		Mag: 0.0 PMG: 18 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	142	51.3	169	06.5	126	08.8	46	13.7	76	17.1
1	157	53.8	184	06.0	141	09.6	61	16.3	91	19.6
2	172	56.2	199	05.4	156	10.4	76	18.9	106	22.0
3	187	58.7	214	04.9	171	11.3	91	21.5	121	24.5
4	203	01.2	229	04.4	186	12.1	106	24.1	136	26.9
5	218	03.6	244	03.8	201	12.9	121	26.8	151	29.4
6	233	06.1	259	03.3	216	13.7	136	29.4	166	31.8
7	248	08.5	274	02.8	231	14.5	151	32.0	181	34.2
8	263	11.0	289	02.2	246	15.3	166	34.6	196	36.7
9	278	13.5	304	01.7	261	16.1	181	37.2	211	39.1
10	293	15.9	319	01.2	276	16.9	196	39.8	226	41.6
11	308	18.4	334	00.6	291	17.7	211	42.4	241	44.0
12	323	20.9	349	00.1	306	18.5	226	45.0	256	46.4
13	338	23.3	3	59.6	321	19.3	241	47.6	271	48.9
14	353	25.8	18	59.1	336	20.1	256	50.2	286	51.3
15	8	28.3	33	58.5	351	20.9	271	52.8	301	53.7
16	23	30.7	48	58.0	6	21.7	286	55.4	316	56.2
17	38	33.2	63	57.5	21	22.5	301	58.1	331	58.6
18	53	35.6	78	56.9	36	23.3	317	00.7	347	01.1
19	68	38.1	93	56.4	51	24.1	332	03.3	2	03.5
20	83	40.6	108	55.9	66	24.9	347	05.9	17	05.9
21	98	43.0	123	55.4	81	25.7	2	08.5	32	08.4
22	113	45.5	138	54.8	96	26.5	17	11.1	47	10.8
23	128	48.0	153	54.3	111	27.3	32	13.7	62	13.2
24	143	50.4	168	53.8	126	28.1	47	16.3	77	15.7
Dif	—		-5		+11		+26		+24	

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 7 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 13 ^h 55 ^m R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	27.1	-13	09.1	157	08.2	-11	03.6	60 N	6 08	6 57	7 41	8 54	6	19 11 77
1	191	27.1		08.3	171	42.7 ¹⁵⁵	-10	52.5 ¹¹¹	58	07	53	34	49	8	15 74
2	206	27.2		07.4	186	17.2 ¹⁵⁵		41.4 ¹¹¹	56	06	49	28	44	11	19 7
3	221	27.2		06.6	200	51.7 ¹⁵⁵		30.3 ¹¹¹	54	04	46	22	40	13	22 70
4	236	27.2		05.7	215	26.3 ¹⁵⁶		19.2 ¹¹¹	52	03	42	17	36	15	25 68
5	251	27.2	-13	04.9	230	00.9 ¹⁵⁶	-10	08.0 ¹¹²	50	6 01	6 39	7 13	8 32	17	19 28 65
6	266	27.2	-13	04.0	244	35.6 ¹⁵⁷	-9	56.7 ¹¹³	45	5 58	6 33	7 03	8 25	21	19 34 61
7	281	27.3		03.2	259	10.3 ¹⁵⁷		45.5 ¹¹²	40	55	27	6 55	18	24	39 58
8	296	27.3		02.3	273	45.0 ¹⁵⁷		34.2 ¹¹³	35	52	21	47	13	27	44 54
9	311	27.3		01.5	288	19.8 ¹⁵⁸		22.8 ¹¹⁴	30	48	16	41	8 08	29	47 53
10	326	27.3	-13	00.6	302	54.6 ¹⁵⁸	-9	11.5 ¹¹³	20	41	6 07	30	7 59	34	19 54 48
11	341	27.3	-12	59.8	317	29.4 ¹⁵⁸	-9	00.0 ¹¹⁵	10 N	5 34	5 59	6 20	7 52	37	20 00 44
12	356	27.4	-12	58.9	332	04.3 ¹⁵⁹	-8	48.6 ¹¹⁴	0	5 25	5 50	6 11	7 45	41	20 05 40
13	11	27.4		58.1	346	39.2 ¹⁵⁹		37.1 ¹¹⁵	10 S	14	40	6 01	38	44	10 37
14	26	27.4		57.2	1	14.1 ¹⁵⁹		25.6 ¹¹⁵	20	5 02	28	5 51	30	49	16 33
15	41	27.4		56.4	15	49.1 ¹⁶⁰		14.1 ¹¹⁵	30	4 45	14	39	22	52	22 29
16	56	27.5		55.5	30	24.1 ¹⁶⁰	-8	02.5 ¹¹⁶	35	34	5 06	33	17	55	26 26
17	71	27.5	-12	54.7	44	59.1 ¹⁶⁰	-7	50.9 ¹¹⁶	40	4 21	4 56	5 25	7 11	58	20 30 23
18	86	27.5	-12	53.8	59	34.2 ¹⁶¹	-7	39.3 ¹¹⁶	45	4 05	4 44	5 15	7 04	62	20 34 21
19	101	27.5		53.0	74	09.3 ¹⁶¹		27.7 ¹¹⁶	50	3 44	29	5 04	6 56	66	40 16
20	116	27.6		52.1	88	44.4 ¹⁶¹		16.0 ¹¹⁷	52	34	22	4 59	53	67	42 15
21	131	27.6		51.2	103	19.5 ¹⁶¹	-7	04.3 ¹¹⁷	54	22	13	53	49	69	45 13
22	146	27.6		50.4	117	54.7 ¹⁶²	-6	52.5 ¹¹⁸	56	3 08	4 04	47	44	72	48 11
23	161	27.6		49.5	132	29.9 ¹⁶²		40.8 ¹¹⁷	58	2 51	3 54	40	39	75	52 8
24	176	27.7	-12	48.7	147	05.1 ¹⁶²	-6	29.0 ¹¹⁸	60 S	2 30	3 42	4 32	6 33	78	20 56 5
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 22 ^m 3			Mag: -3.9 PMG: 12 ^h 45 ^m			Mag: +1.2 PMG: 15 ^h 33 ^m			Mag: -2.6 PMG: 20 ^h 47 ^m			Mag: 0.0 PMG: 18 ^h 48 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	143	50.4	168	53.8	-11	57.7	126	28.1	+7	25.8	47	16.3	+23	24.1	77
1	158	52.9	183	53.3		56.5	141	28.9		26.5	62	18.9		24.1	92
2	173	55.4	198	52.7		55.4	156	29.7		27.2	77	21.5		24.1	107
3	188	57.8	213	52.2		54.3	171	30.5		27.9	92	24.1		24.1	122
4	204	00.3	228	51.7		53.2	186	31.3		28.7	107	26.7		24.1	137
5	219	02.8	243	51.2	-11	52.1	201	32.2	+7	29.4	122	29.3	+23	24.1	152
6	234	05.2	258	50.7	-11	50.9	216	33.0	+7	30.1	137	31.9	+23	24.1	167
7	249	07.7	273	50.1		49.8	231	33.8		30.8	152	34.5		24.1	182
8	264	10.1	288	49.6		48.7	246	34.6		31.5	167	37.1		24.2	197
9	279	12.6	303	49.1		47.6	261	35.4		32.2	182	39.7		24.2	212
10	294	15.1	318	48.6		46.4	276	36.2		32.9	197	42.3		24.2	227
11	309	17.5	333	48.1	-11	45.3	291	37.0	+7	33.6	212	44.9	+23	24.2	242
12	324	20.0	348	47.5	-11	44.2	306	37.8	+7	34.4	227	47.5	+23	24.2	257
13	339	22.5		47.0		43.1	321	38.6		35.1	242	50.1		24.2	272
14	354	24.9	18	46.5		41.9	336	39.4		35.8	257	52.7		24.2	287
15	9	27.4	33	46.0		40.8	351	40.2		36.5	272	55.3		24.2	302
16	24	29.9	48	45.5		39.7	6	41.0		37.2	287	57.9		24.2	317
17	39	32.3	63	44.9	-11	38.6	21	41.8	+7	37.9	303	00.5	+23	24.2	332
18	54	34.8	78	44.4	-11	37.4	36	42.6	+7	38.6	318	03.1	+23	24.3	347
19	69	37.2	93	43.9		36.3	51	43.4		39.3	333	05.7		24.3	3
20	84	39.7	108	43.4		35.2	66	44.2		40.1	348	08.3		24.3	18
21	99	42.2	123	42.9		34.0	81	45.0		40.8	3	10.9		24.3	33
22	114	44.6	138	42.4		32.9	96	45.8		41.5	18	13.5		24.3	48
23	129	47.1	153	41.9		31.8	111	46.6		42.2	33	16.1		24.3	63
24	144	49.6	168	41.3	-11	30.6	126	47.4	+7	42.9	48	18.7	+23	24.3	78
Dif	—			-5	+11		+8	+7			+26	0		+24	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: 2 ^d 7 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 R°: 40 ^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	176	27.7	-12 48.7	147	05.1	-6	29.0	60 N	16 51	17 35	18 23	9 00	5	20 28	77
1	191	27.7		161	40.3 ¹⁶²		17.2 ¹¹⁸	58	16 57	39	25	8 57	8	29	74
2	206	27.7		176	15.6 ¹⁶³	-6	05.4 ¹¹⁸	56	17 03	42	26	55	10	30	72
3	221	27.7		190	50.9 ¹⁶³	-5	53.5 ¹¹⁹	54	09	46	27	53	12	32	69
4	236	27.8		205	26.2 ¹⁶³		41.6 ¹¹⁹	52	14	49	28	51	15	33	67
5	251	27.8	-12 44.4	220	01.5 ¹⁶³	-5	29.8 ¹¹⁸	50	17 18	17 51	18 29	8 49	17	20 33	66
6	266	27.8	-12 43.5	234	36.8 ¹⁶³	-5	17.8 ¹²⁰	45	17 28	17 58	18 32	8 46	20	20 35	62
7	281	27.9		249	12.2 ¹⁶⁴	-5	05.9 ¹¹⁹	40	36	18 03	35	42	24	37	58
8	296	27.9		263	47.6 ¹⁶⁴	-4	54.0 ¹¹⁹	35	42	08	38	40	26	38	55
9	311	27.9		278	23.0 ¹⁶⁴		42.0 ¹²⁰	30	49	13	41	37	29	40	52
10	326	27.9		292	58.4 ¹⁶⁴		30.0 ¹²⁰	20	17 59	22	48	33	33	42	48
11	341	28.0	-12 39.3	307	33.8 ¹⁶⁴	-4	18.0 ¹²⁰	10 N	18 09	18 30	18 55	8 29	37	20 44	44
12	356	28.0	-12 38.4	322	09.2 ¹⁶⁴	-4	06.0 ¹²⁰	0	18 18	18 39	19 03	8 26	40	20 45	41
13	11	28.0		336	44.7 ¹⁶⁵	-3	53.9 ¹²¹	10 S	27	48	13	22	44	47	37
14	26	28.1		351	20.1 ¹⁶⁴		41.9 ¹²⁰	20	36	18 59	26	19	47	49	33
15	41	28.1		5	55.6 ¹⁶⁵		29.8 ¹²¹	30	48	19 13	42	14	53	51	28
16	56	28.1		20	31.1 ¹⁶⁵		17.7 ¹²¹	35	18 54	21	19 52	12	55	52	26
17	71	28.2	-12 34.1	35	06.6 ¹⁶⁵	-3	05.7 ¹²⁰	40	19 02	19 30	20 05	8 09	58	20 53	23
18	86	28.2	-12 33.2	49	42.1 ¹⁶⁵	-2	53.5 ¹²²	45	19 10	19 42	20 20	8 06	61	20 55	20
19	101	28.2		64	17.6 ¹⁶⁵		41.4 ¹²¹	50	21	19 56	40	02	65	56	16
20	116	28.3		78	53.1 ¹⁶⁵		29.3 ¹²¹	52	26	20 03	20 50	8 00	67	57	15
21	131	28.3		93	28.7 ¹⁶⁶		17.2 ¹²¹	54	32	11	21 02	7 58	69	58	12
22	146	28.3		29.8	108 04.2 ¹⁶⁵	-2	05.0 ¹²²	56	38	20	15	56	72	20 59	10
23	161	28.4		28.9	122 39.7 ¹⁶⁵	-1	52.9 ¹²¹	58	44	30	31	54	74	21 00	8
24	176	28.4	-12 28.0	137	15.3 ¹⁶⁶	-1	40.7 ¹²²	60 S	19 52	20 41	21 50	7 51	77	21 01	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 14 ^h 18 ^m 3		Mag: -3.9 PMG: 12 ^h 46 ^m		Mag: +1.2 PMG: 15 ^h 32 ^m		Mag: -2.6 PMG: 20 ^h 43 ^m		Mag: 0.0 PMG: 18 ^h 44 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	144	49.6	168	41.3	-11 30.6	126	47.4	+7 42.9	48	18.7	+23 24.3	78	14.1	+20 03.0
1	159	52.0	183	40.8	29.5	141	48.2	43.6	63	21.3	24.3	93	16.5	03.0
2	174	54.5	198	40.3	28.4	156	49.0	44.3	78	23.9	24.3	108	19.0	03.0
3	189	57.0	213	39.8	27.2	171	49.8	45.0	93	26.5	24.4	123	21.4	03.0
4	204	59.4	228	39.3	26.1	186	50.6	45.7	108	29.1	24.4	138	23.8	03.0
5	220	01.9	243	38.8	-11 25.0	201	51.4	+7 46.5	123	31.6	+23 24.4	153	26.2	+20 03.1
6	235	04.4	258	38.3	-11 23.8	216	52.2	+7 47.2	138	34.2	+23 24.4	168	28.7	+20 03.1
7	250	06.8	273	37.8	22.7	231	53.0	47.9	153	36.8	24.4	183	31.1	03.1
8	265	09.3	288	37.3	21.6	246	53.8	48.6	168	39.4	24.4	198	33.5	03.1
9	280	11.7	303	36.7	20.4	261	54.6	49.3	183	42.0	24.4	213	36.0	03.1
10	295	14.2	318	36.2	19.3	276	55.4	50.0	198	44.6	24.4	228	38.4	03.1
11	310	16.7	333	35.7	-11 18.2	291	56.2	+7 50.7	213	47.2	+23 24.4	243	40.8	+20 03.2
12	325	19.1	348	35.2	-11 17.0	306	57.0	+7 51.4	228	49.8	+23 24.4	258	43.3	+20 03.2
13	340	21.6	3	34.7	15.9	321	57.8	52.1	243	52.4	24.5	273	45.7	03.2
14	355	24.1	18	34.2	14.7	336	58.6	52.8	258	55.0	24.5	288	48.1	03.2
15	10	26.5	33	33.7	13.6	351	59.4	53.6	273	57.6	24.5	303	50.5	03.2
16	25	29.0	48	33.2	12.5	7	00.2	54.3	289	00.2	24.5	318	53.0	03.2
17	40	31.5	63	32.7	-11 11.3	22	01.0	+7 55.0	304	02.7	+23 24.5	333	55.4	+20 03.2
18	55	33.9	78	32.2	-11 10.2	37	01.8	+7 55.7	319	05.3	+23 24.5	348	57.8	+20 03.3
19	70	36.4	93	31.7	09.0	52	02.6	56.4	334	07.9	24.5	4	00.3	03.3
20	85	38.9	108	31.2	07.9	67	03.4	57.1	349	10.5	24.5	19	02.7	03.3
21	100	41.3	123	30.7	06.8	82	04.2	57.8	4	13.1	24.5	34	05.1	03.3
22	115	43.8	138	30.2	05.6	97	05.0	58.5	19	15.7	24.5	49	07.5	03.3
23	130	46.2	153	29.7	04.5	112	05.8	59.2	34	18.3	24.6	64	10.0	03.3
24	145	48.7	168	29.1	-11 03.3	127	06.6	+7 59.9	49	20.9	+23 24.6	79	12.4	+20 03.4
Dif	—		-5		+11	+8		+7	+26		0	+24		

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: 3 ^d 7 PHE { 4 ^h : 54:0 12 ^h : 54:1 20 ^h : 54:2 R°: 41 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	28.4	-12	28.0	137	15.3	-1	40.7	60 N	6 04	6 52	7 36	9 05	6	21 45	78	
1	191	28.4		27.2	151	50.8 ¹⁶⁵		28.5 ¹²²	58	03	48	29	05	9	43	75	
2	206	28.5		26.3	166	26.4 ¹⁶⁶		16.3 ¹²²	56	01	45	24	05	11	42	72	
3	221	28.5		25.5	181	01.9 ¹⁶⁵		-1 04.2 ¹²¹	54	6 00	42	18	05	13	41	70	
4	236	28.5		24.6	195	37.5 ¹⁶⁶		-0 52.0 ¹²²	52	5 59	39	14	06	14	40	68	
5	251	28.6	-12	23.7	210	13.0 ¹⁶⁵		-0 39.8 ¹²²	50	5 58	6 36	7 09	9 06	16	21 39	66	
6	266	28.6	-12	22.9	224	48.5 ¹⁶⁵		-0 27.6 ¹²²	45	5 55	6 30	7 00	9 06	20	21 37	62	
7	281	28.6		22.0	239	24.1 ¹⁶⁶		15.4 ¹²²	40	53	24	6 52	06	23	35	58	
8	296	28.7		21.1	253	59.6 ¹⁶⁵		-0 03.2 ¹²²	35	50	19	45	06	26	33	56	
9	311	28.7		20.3	268	35.2 ¹⁶⁶		+0 09.0 ¹²²	30	47	15	39	06	29	32	53	
10	326	28.7		19.4	283	10.7 ¹⁶⁵		21.3 ¹²³	20	40	6 06	29	06	33	30	48	
11	341	28.8	-12	18.5	297	46.2 ¹⁶⁵		+0 33.5 ¹²²	10 N	5 33	5 58	6 19	9 06	37	21 28	44	
12	356	28.8	-12	17.7	312	21.7 ¹⁶⁵		+0 45.7 ¹²²	0	5 25	5 50	6 11	9 06	41	21 26	41	
13	11	28.9		16.8	326	57.3 ¹⁶⁶		+0 57.9 ¹²²	10 S	15	40	6 02	06	44	24	37	
14	26	28.9		15.9	341	32.8 ¹⁶⁵		+1 10.1 ¹²²	20	5 03	29	5 52	06	49	22	33	
15	41	28.9		15.1	356	08.2 ¹⁶⁴		22.3 ¹²²	30	4 47	16	41	07	52	19	29	
16	56	29.0		14.2	10	43.7 ¹⁶⁵		34.5 ¹²²	35	36	5 08	34	07	55	18	27	
17	71	29.0	-12	13.3	25	19.2 ¹⁶⁵		+1 46.7 ¹²²	40	4 24	4 58	5 27	9 07	58	21 16	24	
18	86	29.1	-12	12.4	39	54.7 ¹⁶⁵		+1 58.9 ¹²²	45	4 08	4 47	5 18	9 07	62	21 15	20	
19	101	29.1		11.6	54	30.1 ¹⁶⁴		+2 11.1 ¹²²	50	3 48	33	08	07	66	12	17	
20	116	29.1		10.7	69	05.5 ¹⁶⁴		23.3 ¹²²	52	39	26	5 03	07	68	12	14	
21	131	29.2		09.8	83	40.9 ¹⁶⁴		35.5 ¹²²	54	27	18	4 58	07	70	10	13	
22	146	29.2		09.0	98	16.3 ¹⁶⁴		47.7 ¹²²	56	3 14	4 09	52	08	71	09	11	
23	161	29.3		08.1	112	51.7 ¹⁶⁴		+2 59.9 ¹²²	58	2 58	3 59	45	08	74	08	8	
24	176	29.3	-12	07.2	127	27.1 ¹⁶⁴		+3 12.1 ¹²²	60 S	2 39	3 48	4 37	9 08	77	21 07	5	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 14 ^m 4		Mag: -3.9 PMG: 12 ^h 46 ^m		Mag: +1.2 PMG: 15 ^h 31 ^m		Mag: -2.5 PMG: 20 ^h 39 ^m		Mag: 0.0 PMG: 18 ^h 40 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	145	48.7	168	29.1	-11	03.3	127	06.6	+7	59.9
1	160	51.2	183	28.6		02.2	142	07.4	+8	00.6
2	175	53.6	198	28.1	-11	01.0	157	08.2		01.3
3	190	56.1	213	27.6	-10	59.9	172	09.0		02.1
4	205	58.6	228	27.1		58.7	187	09.8		02.8
5	221	01.0	243	26.6	-10	57.6	202	10.6	+8	03.5
6	236	03.5	258	26.1	-10	56.4	217	11.4	+8	04.2
7	251	06.0	273	25.6		55.3	232	12.3		04.9
8	266	08.4	288	25.1		54.1	247	13.1		05.6
9	281	10.9	303	24.6		53.0	262	13.9		06.3
10	296	13.3	318	24.1		51.8	277	14.7		07.0
11	311	15.8	333	23.6	-10	50.7	292	15.5	+8	07.7
12	326	18.3	348	23.1	-10	49.5	307	16.3	+8	08.4
13	341	20.7	3	22.6		48.4	322	17.1		09.1
14	356	23.2	18	22.2		47.2	337	17.9		09.8
15	11	25.7	33	21.7		46.1	352	18.7		10.5
16	26	28.1	48	21.2		44.9	7	19.5		11.2
17	41	30.6	63	20.7	-10	43.8	22	20.3	+8	11.9
18	56	33.1	78	20.2	-10	42.6	37	21.1	+8	12.7
19	71	35.5	93	19.7		41.5	52	21.9		13.4
20	86	38.0	108	19.2		40.3	67	22.7		14.1
21	101	40.5	123	18.7		39.2	82	23.5		14.8
22	116	42.9	138	18.2		38.0	97	24.3		15.5
23	131	45.4	153	17.7		36.9	112	25.1		16.2
24	146	47.8	168	17.2	-10	35.7	127	25.9	+8	16.9
Dif	—		-5		+12		+8		+7	
							+26		0	
									+24	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 4 ^d 7	PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5									
	PMG: 12 ^h 14 ^m 0													
	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	176	29.3	-12 07.2	127	27.1	+3 12.1		60 N	16 56	17 39	18 28	9 11 6	23 03 80	
1	191	29.3	06.3	142	02.4 ¹⁶³	24.2 ¹²¹		58	17 02	43	29	14 9	22 58 77	
2	206	29.4	05.5	156	37.8 ¹⁶⁴	36.4 ¹²²		56	08	46	30	16 11	54 75	
3	221	29.4	04.6	171	13.1 ¹⁶³	+3 48.5 ¹²¹		54	13	49	31	18 14	51 72	
4	236	29.5	03.7	185	48.3 ¹⁶²	+4 00.6 ¹²¹		52	17	52	32	20 16	48 69	
5	251	29.5	-12 02.8	200	23.6 ¹⁶³	+4 12.8 ¹²²		50	17 21	17 55	18 32	9 22 17	22 45 67	
6	266	29.6	-12 02.0	214	58.8 ¹⁶²	+4 24.9 ¹²¹		45	17 30	18 00	18 35	9 26 21	22 39 63	
7	281	29.6	01.1	229	34.1 ¹⁶³	37.0 ¹²¹		40	38	06	37	29 25	33 60	
8	296	29.6	-12 00.2	244	09.2 ¹⁶¹	+4 49.1 ¹²¹		35	44	10	40	32 27	29 57	
9	311	29.7	-11 59.4	258	44.4 ¹⁶²	+5 01.1 ¹²⁰		30	17 50	14	43	35 30	25 54	
10	326	29.7	58.5	273	19.5 ¹⁶¹	13.2 ¹²¹		20	18 00	23	48	39 34	18 50	
11	341	29.8	-11 57.6	287	54.6 ¹⁶¹	+5 25.3 ¹²¹		10 N	18 09	18 30	18 55	9 43 38	22 12 46	
12	356	29.8	-11 56.7	302	29.7 ¹⁶¹	+5 37.3 ¹²⁰		0	18 17	18 39	19 03	9 47 41	22 07 42	
13	11	29.9	55.8	317	04.8 ¹⁶¹	+5 49.3 ¹²⁰		10 S	26	47	13	50 46	22 01 39	
14	26	29.9	55.0	331	39.8 ¹⁶⁰	+6 01.3 ¹²⁰		20	35	18 58	24	55 49	21 55 35	
15	41	30.0	54.1	346	14.8 ¹⁶⁰	13.3 ¹²⁰		30	46	19 11	40	9 59 54	48 31	
16	56	30.0	53.2	0	49.7 ¹⁵⁹	25.2 ¹¹⁹		35	52	18	19 50	10 02 56	45 28	
17	71	30.0	-11 52.3	15	24.6 ¹⁵⁹	+6 37.2 ¹²⁰		40	18 59	19 27	20 02	10 05 59	21 40 26	
18	86	30.1	-11 51.5	29	59.5 ¹⁵⁹	+6 49.1 ¹¹⁹		45	19 07	19 39	20 17	10 09 62	21 35 23	
19	101	30.1	50.6	44	34.3 ¹⁵⁸	+7 01.0 ¹¹⁹		50	17	52	36	13 67	29 19	
20	116	30.2	49.7	59	09.1 ¹⁵⁸	12.9 ¹¹⁹		52	22	19 59	45	15 69	26 17	
21	131	30.2	48.8	73	43.9 ¹⁵⁸	24.8 ¹¹⁹		54	27	20 06	20 56	17 71	23 15	
22	146	30.3	47.9	88	18.6 ¹⁵⁷	36.6 ¹¹⁸		56	33	14	21 08	19 74	20 12	
23	161	30.3	47.1	102	53.3 ¹⁵⁷	+7 48.4 ¹¹⁸		58	39	24	23	22 76	16 10	
24	176	30.4	-11 46.2	117	28.0 ¹⁵⁷	+8 00.2 ¹¹⁸		60 S	19 46	20 35	21 42	10 25 79	21 12 7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 10 ^m 5		Mag: -3.9 PMG: 12 ^h 47 ^m			Mag: +1.2 PMG: 15 ^h 29 ^m			Mag: -2.5 PMG: 20 ^h 35 ^m			Mag: 0.0 PMG: 18 ^h 36 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	146	47.8	168	17.2	-10 35.7	127	25.9	+8 16.9	50	22.8	+23 24.8	80	10.6	+20 03.8
1	161	50.3	183	16.7	34.5	142	26.7	17.6	65	25.4	24.8	95	13.0	03.8
2	176	52.8	198	16.2	33.4	157	27.5	18.3	80	28.0	24.8	110	15.4	03.8
3	191	55.2	213	15.7	32.2	172	28.3	19.0	95	30.5	24.8	125	17.8	03.8
4	206	57.7	228	15.2	31.1	187	29.1	19.7	110	33.1	24.8	140	20.2	03.8
5	222	00.2	243	14.7	-10 29.9	202	29.9	+8 20.4	125	35.7	+23 24.8	155	22.7	+20 03.9
6	237	02.6	258	14.3	-10 28.7	217	30.7	+8 21.1	140	38.3	+23 24.8	170	25.1	+20 03.9
7	252	05.1	273	13.8	27.6	232	31.5	21.8	155	40.8	24.9	185	27.5	03.9
8	267	07.6	288	13.3	26.4	247	32.3	22.5	170	43.4	24.9	200	29.9	03.9
9	282	10.0	303	12.8	25.3	262	33.1	23.2	185	46.0	24.9	215	32.4	03.9
10	297	12.5	318	12.3	24.1	277	33.9	23.9	200	48.6	24.9	230	34.8	03.9
11	312	14.9	333	11.8	-10 22.9	292	34.7	+8 24.6	215	51.1	+23 24.9	245	37.2	+20 04.0
12	327	17.4	348	11.3	-10 21.8	307	35.5	+8 25.3	230	53.7	+23 24.9	260	39.6	+20 04.0
13	342	19.9	3	10.8	20.6	322	36.2	26.0	245	56.3	24.9	275	42.0	04.0
14	357	22.3	18	10.3	19.5	337	37.0	26.7	260	58.9	24.9	290	44.4	04.0
15	12	24.8	33	09.9	18.3	352	37.8	27.4	276	01.4	24.9	305	46.9	04.0
16	27	27.3	48	09.4	17.1	7	38.6	28.1	291	04.0	24.9	320	49.3	04.1
17	42	29.7	63	08.9	-10 16.0	22	39.4	+8 28.8	306	06.6	+23 24.9	335	51.7	+20 04.1
18	57	32.2	78	08.4	-10 14.8	37	40.2	+8 29.5	321	09.2	+23 25.0	350	54.1	+20 04.1
19	72	34.7	93	07.9	13.6	52	41.0	30.2	336	11.7	25.0	5	56.5	04.1
20	87	37.1	108	07.4	12.5	67	41.8	30.9	351	14.3	25.0	20	59.0	04.1
21	102	39.6	123	06.9	11.3	82	42.6	31.6	6	16.9	25.0	36	01.4	04.1
22	117	42.1	138	06.5	10.1	97	43.4	32.3	21	19.4	25.0	51	03.8	04.2
23	132	44.5	153	06.0	09.0	112	44.2	33.0	36	22.0	25.0	66	06.2	04.2
24	147	47.0	168	05.5	-10 07.8	127	45.0	+8 33.7	51	24.6	+23 25.0	81	08.6	+20 04.2
Dif	—		-5	+12		+8	+7		+26	0		+24		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'2 PMG: 12 ^h 13 ^m 9				Edad: 5 ^d 7 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 R°: 44 ^m																	
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	176	30.4	-11	46.2	117	28.0	+8	00.2	60 N	5	59	6	47	7	30	9	17	8				
1	191	30.4		45.3	132	02.6 ¹⁵⁶		12.0 ¹¹⁸	58	58	44		24		23	11		*** ** *				
2	206	30.5		44.4	146	37.1 ¹⁵⁵		23.7 ¹¹⁷	56	57	40		19		27	14		*** ** *				
3	221	30.5		43.5	161	11.7 ¹⁵⁶		35.4 ¹¹⁷	54	56	38		14		32	16		*** ** *				
4	236	30.6		42.7	175	46.1 ¹⁵⁴		47.1 ¹¹⁷	52	56	35		10		36	18		23 57 72				
5	251	30.6	-11	41.8	190	20.6 ¹⁵⁵	+8	58.8 ¹¹⁷	50	5	55	6	32	7	05	9	39	20	23 52 70			
6	266	30.7	-11	40.9	204	54.9 ¹⁵³	+9	10.4 ¹¹⁶	45	5	53	6	27	6	57	9	47	24	23 42 65			
7	281	30.7		40.0	219	29.3 ¹⁵⁴		22.0 ¹¹⁶	40	50	22		49		54	27		33	62			
8	296	30.8		39.1	234	03.6 ¹⁵³		33.6 ¹¹⁶	35	48	17		43		9	59	31		26	59		
9	311	30.8		38.3	248	37.8 ¹⁵²		45.1 ¹¹⁵	30	45	13		37		10	05	32		19	57		
10	326	30.9		37.4	263	12.0 ¹⁵²	+9	56.6 ¹¹⁵	20	39	6	05	28		13	37		23	08	52		
11	341	30.9	-11	36.5	277	46.1 ¹⁵¹	+10	08.1 ¹¹⁵	10 N	5	33	5	57	6	19	10	21	41		22	58	49
12	356	31.0	-11	35.6	292	20.2 ¹⁵¹	+10	19.6 ¹¹⁵	0	5	25	5	49	6	11	10	28	44		22	49	45
13	11	31.0		34.7	306	54.2 ¹⁵⁰		31.0 ¹¹⁴	10 S	16	41		6	02		36	47		40	42		
14	26	31.1		33.8	321	28.2 ¹⁵⁰		42.4 ¹¹⁴	20	5	04	30	5	53		44	51		30	39		
15	41	31.2		32.9	336	02.1 ¹⁴⁹	+10	53.7 ¹¹³	30	4	48	18	43		53	55		19	35			
16	56	31.2		32.1	350	36.0 ¹⁴⁹	+11	05.0 ¹¹³	35	39	10		36		10	58	58		13	32		
17	71	31.3	-11	31.2	5	09.8 ¹⁴⁸	+11	16.3 ¹¹³	40	4	27	5	01	5	29	11	04	61		22	06	29
18	86	31.3	-11	30.3	19	43.5 ¹⁴⁷	+11	27.5 ¹¹²	45	4	12	4	50	5	21	11	11	65		21	58	25
19	101	31.4		29.4	34	17.2 ¹⁴⁷		38.7 ¹¹²	50	3	53	36	11		20	68		48	21			
20	116	31.4		28.5	48	50.8 ¹⁴⁶	+11	49.9 ¹¹²	52	44	30		07		24	70		43	20			
21	131	31.5		27.6	63	24.4 ¹⁴⁶	+12	01.0 ¹¹¹	54	33	23		5	02		28	73		38	18		
22	146	31.5		26.7	77	57.9 ¹⁴⁵		12.1 ¹¹¹	56	20	14		4	56		33	75		32	15		
23	161	31.6		25.9	92	31.4 ¹⁴⁵		23.1 ¹¹⁰	58	3	05	4	05	50		38	79		26	12		
24	176	31.6	-11	25.0	107	04.7 ¹⁴³	+12	34.1 ¹¹⁰	60 S	2	47	3	54	4	43	11	44	82		21	19	9

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 06 ^m 6		Mag: -3.9 PMG: 12 ^h 48 ^m			Mag: +1.2 PMG: 15 ^h 28 ^m			Mag: -2.5 PMG: 20 ^h 31 ^m			Mag: 0.0 PMG: 18 ^h 32 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	147	47.0	168	05.5	-10	07.8	127	45.0	+8	33.7	51	24.6	+23	25.0	81	08.6	+20	04.2
1	162	49.4	183	05.0		06.6	142	45.8		34.4	66	27.1		25.0	96	11.0		04.2
2	177	51.9	198	04.5		05.5	157	46.6		35.1	81	29.7		25.0	111	13.5		04.2
3	192	54.4	213	04.1		04.3	172	47.4		35.8	96	32.3		25.0	126	15.9		04.2
4	207	56.8	228	03.6		03.1	187	48.2		36.5	111	34.8		25.0	141	18.3		04.3
5	222	59.3	243	03.1	-10	01.9	202	49.0	+8	37.2	126	37.4	+23	25.1	156	20.7	+20	04.3
6	238	01.8	258	02.6	-10	00.8	217	49.8	+8	37.9	141	40.0	+23	25.1	171	23.1	+20	04.3
7	253	04.2	273	02.1	-9	59.6	232	50.6		38.6	156	42.5		25.1	186	25.5		04.3
8	268	06.7	288	01.6		58.4	247	51.4		39.3	171	45.1		25.1	201	27.9		04.3
9	283	09.2	303	01.2		57.3	262	52.2		40.0	186	47.7		25.1	216	30.4		04.4
10	298	11.6	318	00.7		56.1	277	53.0		40.7	201	50.2		25.1	231	32.8		04.4
11	313	14.1	333	00.2	-9	54.9	292	53.8	+8	41.4	216	52.8	+23	25.1	246	35.2	+20	04.4
12	328	16.5	347	59.7	-9	53.7	307	54.6	+8	42.1	231	55.4	+23	25.1	261	37.6	+20	04.4
13	343	19.0	2	59.3		52.6	322	55.4		42.8	246	57.9		25.1	276	40.0		04.4
14	358	21.5	17	58.8		51.4	337	56.2		43.5	262	00.5		25.1	291	42.4		04.4
15	13	23.9	32	58.3		50.2	352	57.0		44.2	277	03.1		25.1	306	44.8		04.5
16	28	26.4	47	57.8		49.0	7	57.8		44.9	292	05.6		25.2	321	47.3		04.5
17	43	28.9	62	57.3	-9	47.9	22	58.6	+8	45.6	307	08.2	+23	25.2	336	49.7	+20	04.5
18	58	31.3	77	56.9	-9	46.7	37	59.4	+8	46.3	322	10.7	+23	25.2	351	52.1	+20	04.5
19	73	33.8	92	56.4		45.5	53	00.2		47.0	337	13.3		25.2	6	54.5		04.5
20	88	36.3	107	55.9		44.3	68	01.0		47.7	352	15.9		25.2	21	56.9		04.6
21	103	38.7	122	55.4		43.2	83	01.8		48.4	7	18.4		25.2	36	59.3		04.6
22	118	41.2	137	55.0		42.0	98	02.6		49.1	22	21.0		25.2	52	01.7		04.6
23	133	43.7	152	54.5		40.8	113	03.4		49.8	37	23.5		25.2	67	04.1		04.6
24	148	46.1	167	54.0	-9	39.6	128	04.2	+8	50.5	52	26.1	+23	25.2	82	06.6	+20	04.6
Dif	—		-5		+12		+8		+7		+26		0		+24			

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 8			Edad: 6 ^d 7 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 3 20 ^h : 55 ^m 5 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	176	31.6	-11	25.0	107	04.7	+12	34.1	60 N	17 01	17 44	18 33	9 25 11	0 23 83				
1	191	31.7		24.1	121	38.1 ¹⁴⁴		45.1 ¹¹⁰	58	07	48	33	34 14	15 80				
2	206	31.8		23.2	136	11.3 ¹⁴²	+12	56.0 ¹⁰⁹	56	12	50	34	41 18	09 76				
3	221	31.8		22.3	150	44.5 ¹⁴²	+13	06.8 ¹⁰⁸	54	17	53	34	48 20	0 03 73				
4	236	31.9		21.4	165	17.6 ¹⁴¹		17.6 ¹⁰⁸	52	21	56	35	54 22	** ** *				
5	251	31.9	-11	20.5	179	50.7 ¹⁴¹	+13	28.4 ¹⁰⁸	50	17 25	17 58	18 36	9 59 25	** ** *				
6	266	32.0	-11	19.6	194	23.6 ¹³⁹	+13	39.1 ¹⁰⁷	45	17 33	18 03	18 37	10 11 28	** ** *				
7	281	32.1		18.8	208	56.5 ¹³⁹	+13	49.8 ¹⁰⁷	40	40	08	39	21 31	** ** *				
8	296	32.1		17.9	223	29.4 ¹³⁹	+14	00.4 ¹⁰⁶	35	46	12	42	30 34	** ** *				
9	311	32.2		17.0	238	02.1 ¹³⁷		11.0 ¹⁰⁶	30	17 52	16	44	37 37	** ** *				
10	326	32.2		16.1	252	34.8 ¹³⁷		21.5 ¹⁰⁵	20	18 01	23	49	10 50 40	** ** *				
11	341	32.3	-11	15.2	267	07.5 ¹³⁷	+14	31.9 ¹⁰⁴	10 N	18 09	18 31	18 55	11 02 43	23 47 52				
12	356	32.3	-11	14.3	281	40.0 ¹³⁵	+14	42.4 ¹⁰⁵	0	18 17	18 38	19 03	11 12 47	23 34 49				
13	11	32.4		13.4	296	12.5 ¹³⁵	+14	52.7 ¹⁰³	10 S	25	47	12	23 50	22 46				
14	26	32.5		12.5	310	44.9 ¹³⁴	+15	03.0 ¹⁰³	20	34	18 56	23	35 54	23 09 42				
15	41	32.5		11.6	325	17.2 ¹³³		13.3 ¹⁰³	30	44	19 09	38	48 58	22 54 38				
16	56	32.6		10.7	339	49.4 ¹³²		23.4 ¹⁰¹	35	50	16	47	11 56 60	45 37				
17	71	32.7	-11	09.8	354	21.6 ¹³²	+15	33.6 ¹⁰²	40	18 56	19 25	19 59	12 05 63	22 35 34				
18	86	32.7	-11	08.9	8	53.7 ¹³¹	+15	43.6 ¹⁰⁰	45	19 04	19 35	20 13	12 16 66	22 23 31				
19	101	32.8		08.1	23	25.7 ¹³⁰	+15	53.7 ¹⁰¹	50	14	48	31	28 71	09 27				
20	116	32.8		07.2	37	57.6 ¹²⁹	+16	03.6 ⁹⁹	52	18	19 54	40	34 73	22 03 25				
21	131	32.9		06.3	52	29.4 ¹²⁸		13.5 ⁹⁹	54	23	20 01	20 50	41 75	21 56 22				
22	146	33.0		05.4	67	01.2 ¹²⁸		23.3 ⁹⁸	56	28	09	21 02	48 78	47 21				
23	161	33.0		04.5	81	32.9 ¹²⁷		33.1 ⁹⁸	58	34	18	16	12 57 80	38 18				
24	176	33.1	-11	03.6	96	04.5 ¹²⁶	+16	42.8 ⁹⁷	60 S	19 41	20 28	21 33	13 06 85	21 28 14				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 02 ^m 6		Mag: -3.9 PMG: 12 ^h 49 ^m			Mag: +1.2 PMG: 15 ^h 27 ^m			Mag: -2.5 PMG: 20 ^h 27 ^m			Mag: 0.0 PMG: 18 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	148	46.1	167	54.0	-9	39.6	128	04.2	+8	50.5	52	26.1	+23	25.2	82	06.6	+20	04.6
1	163	48.6	182	53.6		38.4	143	05.0		51.2	67	28.7		25.2	97	09.0		04.7
2	178	51.0	197	53.1		37.3	158	05.8		51.9	82	31.2		25.2	112	11.4		04.7
3	193	53.5	212	52.6		36.1	173	06.6		52.6	97	33.8		25.2	127	13.8		04.7
4	208	56.0	227	52.1		34.9	188	07.4		53.3	112	36.3		25.3	142	16.2		04.7
5	223	58.4	242	51.7	-9	33.7	203	08.2	+8	54.0	127	38.9	+23	25.3	157	18.6	+20	04.7
6	239	00.9	257	51.2	-9	32.5	218	09.0	+8	54.7	142	41.5	+23	25.3	172	21.0	+20	04.7
7	254	03.4	272	50.7		31.4	233	09.8		55.4	157	44.0		25.3	187	23.4		04.8
8	269	05.8	287	50.3		30.2	248	10.6		56.1	172	46.6		25.3	202	25.8		04.8
9	284	08.3	302	49.8		29.0	263	11.4		56.8	187	49.1		25.3	217	28.3		04.8
10	299	10.8	317	49.3		27.8	278	12.2		57.5	202	51.7		25.3	232	30.7		04.8
11	314	13.2	332	48.8	-9	26.6	293	13.0	+8	58.2	217	54.2	+23	25.3	247	33.1	+20	04.8
12	329	15.7	347	48.4	-9	25.4	308	13.8	+8	58.9	232	56.8	+23	25.3	262	35.5	+20	04.9
13	344	18.2	2	47.9		24.3	323	14.6	+8	59.6	247	59.3		25.3	277	37.9		04.9
14	359	20.6	17	47.4		23.1	338	15.3	+9	00.3	263	01.9		25.3	292	40.3		04.9
15	14	23.1	32	47.0		21.9	353	16.1		01.0	278	04.5		25.3	307	42.7		04.9
16	29	25.5	47	46.5		20.7	8	16.9		01.7	293	07.0		25.4	322	45.1		04.9
17	44	28.0	62	46.0	-9	19.5	23	17.7	+9	02.4	308	09.6	+23	25.4	337	47.5	+20	05.0
18	59	30.5	77	45.6	-9	18.3	38	18.5	+9	03.0	323	12.1	+23	25.4	352	49.9	+20	05.0
19	74	32.9	92	45.1		17.1	53	19.3		03.7	338	14.7		25.4	7	52.3		05.0
20	89	35.4	107	44.6		16.0	68	20.1		04.4	353	17.2		25.4	22	54.8		05.0
21	104	37.9	122	44.2		14.8	83	20.9		05.1	8	19.8		25.4	37	57.2		05.0
22	119	40.3	137	43.7		13.6	98	21.7		05.8	23	22.3		25.4	52	59.6		05.1
23	134	42.8	152	43.2		12.4	113	22.5		06.5	38	24.9		25.4	68	02.0		05.1
24	149	45.3	167	42.8	-9	11.2	128	23.3	+9	07.2	53	27.4	+23	25.4	83	04.4	+20	05.1
Dif	—		-5		+12		+8		+7		+26		0		+24		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 13 ^m 7			Edad: 7 ^d 7 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/3 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	33.1	-11	03.6	96	04.5	+16	42.8	60 N	5 54	6 42	7 25	9 36	18	1 46	85
1	191	33.2		02.7	110	36.0 ¹²⁵	+16	52.4	58	53	39	19	48	21	35	81
2	206	33.2		01.8	125	07.4 ¹²⁴	+17	01.9	56	53	36	14	9 59	24	25	78
3	221	33.3	-11	00.9	139	38.7 ¹²³		11.4	54	52	33	10	10 08	27	16	75
4	236	33.3	-11	00.0	154	10.0 ¹²³		20.8	52	52	31	05	16	29	09	72
5	251	33.4	-10	59.1	168	41.1 ¹²¹	+17	30.2	50	5 51	6 29	7 02	10 24	30	1 02	70
6	266	33.5	-10	58.2	183	12.2 ¹²¹	+17	39.5	45	5 50	6 24	6 54	10 39	35	0 47	67
7	281	33.5		57.3	197	43.2 ¹²⁰		48.7	40	48	19	47	10 52	38	35	63
8	296	33.6		56.4	212	14.1 ¹¹⁹	+17	57.8	35	46	15	41	11 04	40	25	61
9	311	33.7		55.5	226	44.9 ¹¹⁸	+18	06.9	30	43	11	36	14	41	16	58
10	326	33.7		54.6	241	15.6 ¹¹⁷		15.8	20	38	6 04	26	30	46	0 00	55
11	341	33.8	-10	53.7	255	46.2 ¹¹⁶	+18	24.8	10 N	5 32	5 57	6 18	11 45	49	**	**
12	356	33.9	-10	52.8	270	16.8 ¹¹⁶	+18	33.6	0	5 25	5 49	6 10	11 59	51	**	**
13	11	33.9		51.9	284	47.2 ¹¹⁴		42.3	10 S	16	41	6 02	12 13	54	**	**
14	26	34.0		51.0	299	17.6 ¹¹⁴		51.0	20	5 05	31	5 54	29	56	23	51
15	41	34.1		50.1	313	47.8 ¹¹²	+18	59.6	30	4 50	19	44	46	60	32	46
16	56	34.1		49.2	328	18.0 ¹¹²	+19	08.1	35	41	12	38	12 56	62	22	43
17	71	34.2	-10	48.3	342	48.1 ¹¹¹	+19	16.5	40	4 29	5 03	5 32	13 08	64	23	09
18	86	34.3	-10	47.4	357	18.0 ¹⁰⁹	+19	24.8	45	4 15	4 53	5 24	13 22	67	22	54
19	101	34.3		46.5	371	47.9 ¹⁰⁹		33.1	50	3 57	40	15	39	71	36	35
20	116	34.4		45.6	386	17.7 ¹⁰⁸		41.2	52	48	34	11	47	73	28	33
21	131	34.5		44.7	401	47.4 ¹⁰⁷		49.3	54	38	27	06	13 56	75	18	31
22	146	34.6		43.8	416	17.0 ¹⁰⁶	+19	57.3	56	26	19	5 01	14 06	78	22	08
23	161	34.6		42.9	431	46.5 ¹⁰⁵	+20	05.1	58	3 12	11	4 55	17	81	21	56
24	176	34.7	-10	42.0	446	15.9 ¹⁰⁴	+20	12.9	60 S	2 56	4 00	4 48	14 31	85	21	42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 58 ^m 7		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: +1.2 PMG: 15 ^h 26 ^m		Mag: -2.5 PMG: 20 ^h 23 ^m		Mag: 0.0 PMG: 18 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	45.3	167	42.8	128	23.3	+9	07.2	53	27.4
1	164	47.7	182	42.3	143	24.1		07.9	68	30.0
2	179	50.2	197	41.9	158	24.9		08.6	83	32.5
3	194	52.6	212	41.4	173	25.7		09.3	98	35.1
4	209	55.1	227	40.9	188	26.5		10.0	113	37.6
5	224	57.6	242	40.5	203	27.3	+9	10.7	128	40.2
6	240	00.0	257	40.0	218	28.1	+9	11.4	143	42.7
7	255	02.5	272	39.5	233	28.9		12.1	158	45.3
8	270	05.0	287	39.1	248	29.7		12.8	173	47.8
9	285	07.4	302	38.6	263	30.5		13.4	188	50.4
10	300	09.9	317	38.2	278	31.3		14.1	203	52.9
11	315	12.4	332	37.7	293	32.1	+9	14.8	218	55.5
12	330	14.8	347	37.2	308	32.9	+9	15.5	233	58.0
13	345	17.3	2	36.8	323	33.7		16.2	249	00.5
14	0	19.8	17	36.3	338	34.4		16.9	264	03.1
15	15	22.2	32	35.9	353	35.2		17.6	279	05.6
16	30	24.7	47	35.4	8	36.0		18.3	294	08.2
17	45	27.1	62	34.9	23	36.8	+9	19.0	309	10.7
18	60	29.6	77	34.5	38	37.6	+9	19.7	324	13.3
19	75	32.1	92	34.0	48.5	38.4		20.4	339	15.8
20	90	34.5	107	33.6	47.3	39.2		21.0	354	18.4
21	105	37.0	122	33.1	46.1	40.0		21.7	9	20.9
22	120	39.5	137	32.7	44.9	40.8		22.4	24	23.4
23	135	41.9	152	32.2	43.7	41.6		23.1	39	26.0
24	150	44.4	167	31.8	42.5	42.4	+9	23.8	54	28.5
Dif	—		-5		+12		+8		+25	
									0	
									+24	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 8 ^d 7 PHE { 4 ^h : 56'6 12 ^h : 56'9 20 ^h : 57'2 R°: 56 ^m											
	PMG: 12 ^h 13 ^m 6		SD: 15'4 PMG: 19 ^h 03 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	34.7	-10	42.0	84	15.9	+20 12.9	60 N	17 06	17 49	18 38	9 54 28	3 11 83	
1	191	34.8		41.1	98	45.2 ¹⁰³	20.6 ⁷⁷	58	12	52	38	10 09 33	2 56 79	
2	206	34.8		40.2	113	14.4 ¹⁰²	28.2 ⁷⁶	56	16	55	38	23 35	43 76	
3	221	34.9		39.3	127	43.5 ¹⁰¹	35.7 ⁷⁵	54	21	57	38	35 37	31 74	
4	236	35.0		38.4	142	12.5 ¹⁰⁰	43.2 ⁷⁵	52	25	17 59	38	45 39	21 72	
5	251	35.1	-10	37.5	156	41.4 ⁹⁹	+20 50.5 ⁷³	50	17 28	18 01	18 39	10 54 41	2 12 70	
6	266	35.1	-10	36.6	171	10.3 ⁹⁹	+20 57.7 ⁷²	45	17 36	18 06	18 40	11 14 43	1 54 66	
7	281	35.2		35.7	185	39.0 ⁹⁷	+21 04.8 ⁷¹	40	43	10	42	30 46	38 65	
8	296	35.3		34.8	200	07.6 ⁹⁶	11.8 ⁷⁰	35	48	14	43	44 47	26 62	
9	311	35.3		33.9	214	36.1 ⁹⁵	18.7 ⁶⁹	30	17 53	17	45	11 55 49	1 14 61	
10	326	35.4		33.0	229	04.5 ⁹⁴	25.5 ⁶⁸	20	18 02	24	50	12 16 51	0 55 58	
11	341	35.5	-10	32.1	243	32.9 ⁹⁴	+21 32.2 ⁶⁷	10 N	18 10	18 31	18 56	12 34 53	0 39 55	
12	356	35.6	-10	31.2	258	01.1 ⁹²	+21 38.8 ⁶⁵	0	18 17	18 38	19 02	12 50 55	0 23 53	
13	11	35.6		30.3	272	29.2 ⁹¹	45.3 ⁶⁶	10 S	24	46	11	13 07 57	0 08 50	
14	26	35.7		29.4	286	57.3 ⁹¹	51.6 ⁶³	20	33	18 55	21	25 59	** * *	**
15	41	35.8		28.5	301	25.2 ⁸⁹	+21 57.9 ⁶³	30	42	19 06	36	46 61	** * *	**
16	56	35.9		27.6	315	53.0 ⁸⁸	+22 04.0 ⁶¹	35	47	13	45	13 58 62	** * *	**
17	71	35.9	-10	26.6	330	20.8 ⁸⁸	+22 10.1 ⁶¹	40	18 54	19 22	19 55	14 12 64	23 50 50	
18	86	36.0	-10	25.7	344	48.4 ⁸⁶	+22 16.0 ⁵⁹	45	19 01	19 32	20 09	14 29 66	23 33 48	
19	101	36.1		24.8	359	15.9 ⁸⁵	21.8 ⁵⁸	50	10	44	26	14 50 68	11 46	
20	116	36.2		23.9	13	43.4 ⁸⁵	27.5 ⁵⁷	52	14	50	35	15 00 70	23 01 45	
21	131	36.2		23.0	28	10.7 ⁸³	33.0 ⁵⁵	54	18	19 56	44	11 72	22 49 44	
22	146	36.3		22.1	42	38.0 ⁸³	38.5 ⁵⁵	56	23	20 04	20 56	24 73	36 42	
23	161	36.4		21.2	57	05.2 ⁸²	43.8 ⁵³	58	29	12	21 09	38 77	21 39	
24	176	36.5	-10	20.3	71	32.2 ⁸⁰	+22 49.0 ⁵²	60 S	19 35	20 22	21 24	15 56 80	22 03 36	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 54 ^m 8		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: +1.2 PMG: 15 ^h 24 ^m		Mag: -2.5 PMG: 20 ^h 19 ^m		Mag: 0.0 PMG: 18 ^h 21 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	150	44.4	167	31.8	128	42.4	54	28.5	84	02.1				
1	165	46.9	182	31.3	143	43.2	69	31.1	99	04.5				
2	180	49.3	197	30.8	158	44.0	84	33.6	114	06.9				
3	195	51.8	212	30.4	173	44.8	99	36.2	129	09.3				
4	210	54.3	227	29.9	188	45.6	114	38.7	144	11.7				
5	225	56.7	242	29.5	203	46.4	129	41.2	159	14.1				
6	240	59.2	257	29.0	218	47.2	144	43.8	174	16.5				
7	256	01.6	272	28.6	233	48.0	159	46.3	189	18.9				
8	271	04.1	287	28.1	248	48.8	174	48.8	204	21.3				
9	286	06.6	302	27.7	263	49.5	189	51.4	219	23.7				
10	301	09.0	317	27.2	278	50.3	204	53.9	234	26.1				
11	316	11.5	332	26.8	293	51.1	219	56.5	249	28.5				
12	331	14.0	347	26.3	308	51.9	234	59.0	264	30.9				
13	346	16.4	2	25.9	323	52.7	250	01.5	279	33.3				
14	1	18.9	17	25.4	338	53.5	265	04.1	294	35.7				
15	16	21.4	32	25.0	353	54.3	280	06.6	309	38.1				
16	31	23.8	47	24.5	8	55.1	295	09.1	324	40.5				
17	46	26.3	62	24.1	23	55.9	310	11.7	339	42.9				
18	61	28.8	77	23.6	38	56.7	325	14.2	354	45.3				
19	76	31.2	92	23.2	53	57.5	340	16.8	9	47.7				
20	91	33.7	107	22.7	68	58.3	355	19.3	24	50.1				
21	106	36.1	122	22.3	83	59.1	10	21.8	39	52.5				
22	121	38.6	137	21.8	98	59.9	25	24.4	54	54.9				
23	136	41.1	152	21.4	114	00.7	40	26.9	69	57.3				
24	151	43.5	167	20.9	129	01.5	55	29.4	84	59.7				
Dif	—		-5 +12		+8 +7		+25 0		+24 0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 5			Edad: 9 ^d 7	PHE { 4 ^h : 57'5 12 ^h : 57'8 20 ^h : 58'1													
				SD: 15'6 PMG: 19 ^h 59 ^m		R°: 59 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m	
0	176	36.5	-10 20.3	71	32.2	+22	49.0	51	60 N	5 48	6 37	7 19	10 22	47	4 34	73		
1	191	36.5		85	59.2	80	54.1	51	58	48	34	14	42	49	4 15	70		
2	206	36.6		100	26.1	79	+22	59.1	50	56	48	31	09	10 58	51	3 59		
3	221	36.7		114	52.8	77	+23	03.9	48	54	48	29	05	11 12	52	45		
4	236	36.8		129	19.5	77	08.6	47	52	48	27	7 01	24	53	33	67		
5	251	36.9	-10 15.7	143	46.1	76	+23	13.2	46	50	5 48	6 25	6 58	11 35	53	3 22		
6	266	36.9	-10 14.8	158	12.6	75	+23	17.6	44	45	5 46	6 21	6 50	11 57	55	3 00		
7	281	37.0		172	39.0	74	21.9	43	40	45	45	17	44	12 16	55	2 43		
8	296	37.1		187	05.4	74	26.1	42	35	43	43	13	38	31	56	28		
9	311	37.2		201	31.6	72	30.1	40	30	41	41	09	34	12 44	57	2 15		
10	326	37.3		215	57.7	71	34.1	40	20	37	6 03	25	13 07	57	1 53			
11	341	37.3	-10 10.3	230	23.8	71	+23	37.8	37	10 N	5 31	5 56	6 17	13 27	58	1 34		
12	356	37.4	-10 09.4	244	49.7	69	+23	41.5	37	0	5 25	5 49	6 10	13 45	59	1 16		
13	11	37.5		259	15.6	69	45.0	35	10 S	16	41	6 03	14 04	59	0 58			
14	26	37.6		273	41.4	68	48.3	33	20	5 06	32	5 55	24	60	39			
15	41	37.7		288	07.1	67	51.6	33	30	4 52	21	46	14 47	60	18			
16	56	37.7		302	32.7	66	54.6	30	35	43	14	40	15 00	61	0 05			
17	71	37.8	-10 04.8	316	58.3	66	+23	57.6	30	40	4 32	5 06	5 34	15 16	61	** ** *		
18	86	37.9	-10 03.9	331	23.7	64	+24	00.4	28	45	4 19	4 56	5 27	15 35	62	** ** *		
19	101	38.0		345	49.1	64	03.0	26	50	4 01	44	18	15 58	63	23			
20	116	38.1		0	14.4	63	05.5	25	52	3 53	38	14	16 10	62	46			
21	131	38.2		14	39.6	62	07.9	24	54	43	32	10	23	62	33			
22	146	38.2	-10 00.2	29	04.8	62	10.1	22	56	32	24	5 05	37	64	18			
23	161	38.3	-9 59.3	43	29.8	60	12.2	21	58	19	16	4 59	16 55	64	23			
24	176	38.4	-9 58.4	57	54.8	60	+24	14.1	19	60 S	3 04	4 06	4 53	17 16	65	22		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 50 ^m 8		Mag: -3.9 PMG: 12 ^h 51 ^m		Mag: +1.2 PMG: 15 ^h 23 ^m		Mag: -2.5 PMG: 20 ^h 15 ^m		Mag: 0.0 PMG: 18 ^h 17 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	151	43.5	167	20.9	-8	13.7	129	01.5	+9	40.3
1	166	46.0	182	20.5		12.4	144	02.2		41.0
2	181	48.5	197	20.0		11.2	159	03.0		41.7
3	196	50.9	212	19.6		10.0	174	03.8		42.4
4	211	53.4	227	19.1		08.8	189	04.6		43.1
5	226	55.9	242	18.7	-8	07.6	204	05.4	+9	43.7
6	241	58.3	257	18.3	-8	06.4	219	06.2	+9	44.4
7	257	00.8	272	17.8		05.2	234	07.0		45.1
8	272	03.2	287	17.4		04.0	249	07.8		45.8
9	287	05.7	302	16.9		02.8	264	08.6		46.5
10	302	08.2	317	16.5		01.6	279	09.4		47.2
11	317	10.6	332	16.0	-8	00.3	294	10.2	+9	47.8
12	332	13.1	347	15.6	-7	59.1	309	11.0	+9	48.5
13	347	15.6	2	15.2		57.9	324	11.8		49.2
14	2	18.0	17	14.7		56.7	339	12.6		49.9
15	17	20.5	32	14.3		55.5	354	13.3		50.6
16	32	23.0	47	13.8		54.3	9	14.1		51.3
17	47	25.4	62	13.4	-7	53.1	24	14.9	+9	51.9
18	62	27.9	77	12.9	-7	51.8	39	15.7	+9	52.6
19	77	30.4	92	12.5		50.6	54	16.5		53.3
20	92	32.8	107	12.1		49.4	69	17.3		54.0
21	107	35.3	122	11.6		48.2	84	18.1		54.7
22	122	37.7	137	11.2		47.0	99	18.9		55.4
23	137	40.2	152	10.8		45.8	114	19.7		56.0
24	152	42.7	167	10.3	-7	44.5	129	20.5	+9	56.7
Dif	—		-4		+12		+8		+7	
							+25		0	
									+24	

UT	SOL		LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 10 ^d 7 PHE { 4 ^h : 58'5 12 ^h : 58'8 20 ^h : 59'1												
	PMG: 12 ^h 13 ^m 4		SD: 15'9 PMG: 20 ^h 58 ^m R°: 61 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	176	38.4	-9 58.4	57	54.8	+24 14.1	60 N	17 11	17 54	18 42	11 09 72	5 47 54			
1	191	38.5	57.5	72	19.7	59 15.9	58	16	56	42	31 70	25 55			
2	206	38.6	56.6	86	44.6	59 17.5	56	21	59	42	11 49 69	5 08 56			
3	221	38.7	55.7	101	09.3	57 18.9	54	25	18 01	42	12 04 68	4 53 56			
4	236	38.7	54.7	115	34.1	58 20.2	52	28	03	42	17 67	40 57			
5	251	38.8	-9 53.8	129	58.7	56 +24 21.4	50	17 32	18 04	18 42	12 28 67	4 28 58			
6	266	38.9	-9 52.9	144	23.3	56 +24 22.4	45	17 39	18 09	18 43	12 52 66	4 04 59			
7	281	39.0	52.0	158	47.8	55 23.2	40	45	12	44	13 11 65	3 45 59			
8	296	39.1	51.1	173	12.2	54 23.9	35	50	16	45	27 64	30 58			
9	311	39.2	50.2	187	36.6	54 24.4	30	17 55	19	47	13 41 63	3 16 59			
10	326	39.3	49.2	202	00.9	53 24.8	20	18 03	25	51	14 04 63	2 52 60			
11	341	39.4	-9 48.3	216	25.2	53 +24 25.0	10 N	18 10	18 31	18 56	14 25 61	2 32 60			
12	356	39.4	-9 47.4	230	49.4	52 +24 25.0	0	18 17	18 38	19 02	14 44 61	2 13 60			
13	11	39.5	46.5	245	13.5	51 24.9	10 S	24	45	10	15 03 60	1 54 60			
14	26	39.6	45.6	259	37.6	51 24.7	20	31	18 54	20	24 58	34 60			
15	41	39.7	44.7	274	01.6	50 24.2	30	40	19 04	33	15 47 58	1 10 60			
16	56	39.8	43.7	288	25.6	50 23.6	35	45	11	42	16 01 57	0 56 60			
17	71	39.9	-9 42.8	302	49.6	50 +24 22.8	40	18 51	19 19	19 52	16 17 56	0 40 60			
18	86	40.0	-9 41.9	317	13.5	49 +24 21.9	45	18 57	19 28	20 05	16 37 54	0 21 60			
19	101	40.1	41.0	331	37.3	48 20.8	50	19 06	40	22	17 01 52	** ** *			
20	116	40.1	40.1	346	01.1	48 19.6	52	09	45	30	12 52	** ** *			
21	131	40.2	39.1	0	24.9	48 18.1	54	14	51	39	25 51	** ** *			
22	146	40.3	38.2	14	48.6	47 16.6	56	18	19 58	20 49	41 48	** ** *			
23	161	40.4	37.3	29	12.3	47 14.8	58	23	20 06	21 02	17 59 46	** ** *			
24	176	40.5	-9 36.4	43	35.9	46 +24 12.9	60 S	19 29	20 15	21 16	18 21 43	23 38 83			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 46 ^m 9		Mag: -3.9 PMG: 12 ^h 52 ^m		Mag: +1.2 PMG: 15 ^h 22 ^m		Mag: -2.5 PMG: 20 ^h 11 ^m		Mag: 0.0 PMG: 18 ^h 13 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	152	42.7	167	10.3	129	20.5	56	30.1	85	57.1
1	167	45.1	182	09.9	144	21.3	71	32.6	100	59.5
2	182	47.6	197	09.4	159	22.1	86	35.1	116	01.9
3	197	50.1	212	09.0	174	22.9	101	37.7	131	04.3
4	212	52.5	227	08.6	189	23.6	116	40.2	146	06.7
5	227	55.0	242	08.1	204	24.4	131	42.7	161	09.1
6	242	57.5	257	07.7	219	25.2	146	45.2	176	11.5
7	257	59.9	272	07.3	234	26.0	161	47.7	191	13.9
8	273	02.4	287	06.8	249	26.8	176	50.3	206	16.3
9	288	04.9	302	06.4	264	27.6	191	52.8	221	18.7
10	303	07.3	317	05.9	279	28.4	206	55.3	236	21.1
11	318	09.8	332	05.5	294	29.2	221	57.8	251	23.4
12	333	12.2	347	05.1	309	30.0	237	00.3	266	25.8
13	348	14.7	2	04.6	324	30.8	252	02.9	281	28.2
14	3	17.2	17	04.2	339	31.6	267	05.4	296	30.6
15	18	19.6	32	03.8	354	32.3	282	07.9	311	33.0
16	33	22.1	47	03.3	9	33.1	297	10.4	326	35.4
17	48	24.6	62	02.9	24	33.9	312	12.9	341	37.8
18	63	27.0	77	02.5	39	34.7	327	15.5	356	40.2
19	78	29.5	92	02.0	54	35.5	342	18.0	11	42.6
20	93	32.0	107	01.6	69	36.3	357	20.5	26	44.9
21	108	34.4	122	01.2	84	37.1	12	23.0	41	47.3
22	123	36.9	137	00.7	99	37.9	27	25.5	56	49.7
23	138	39.4	152	00.3	114	38.7	42	28.0	71	52.1
24	153	41.8	166	59.9	129	39.5	57	30.5	86	54.5
Dif	—		-4	+12	+8	+7	+25	0	+24	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 2			Edad: 11 ^d 7 PHE { 4 ^h : 59/4 12 ^h : 59/7 20 ^h : 60/0 PMG: 21 ^h 59 ^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				
0	176	40.5	-9	36.4	43	35.9	+24	12.9	21	60 N	5	43	6	31	7	14	12	21	93	6	41	34
1	191	40.6		35.5	57	59.5		10.8	21	58	44	29		09		41	89		20	39		
2	206	40.7		34.5	72	23.1		08.5	23	56	44	27		04		12	58	85	6	04	44	
3	221	40.8		33.6	86	46.7		06.1	24	54	44	25		01		13	12	83	5	49	44	
4	236	40.9		32.7	101	10.2		03.5	26	52	44	23				14	44	69	4	15	55	
5	251	41.0	-9	31.8	115	33.7	+24	00.7	28	50	5	44	6	21	6	54	13	35	79	5	26	47
6	266	41.1	-9	30.8	129	57.2	+23	57.8	29	45	5	43	6	17	6	47	13	58	75	5	03	50
7	281	41.1		29.9	144	20.6		54.7	31	40	42	14		41		14	16	73	4	44	52	
8	296	41.2		29.0	158	44.1		51.4	33	35	41	10		36		31	71		28	54		
9	311	41.3		28.1	173	07.5		48.0	34	30	40	07		32		14	44	69	4	15	55	
10	326	41.4		27.2	187	30.8		44.4	36	20	36	6	01	24		15	07	66	3	52	57	
11	341	41.5	-9	26.2	201	54.2	+23	40.6	38	10 N	5	31	5	55	6	17	15	26	64	3	32	59
12	356	41.6	-9	25.3	216	17.6	+23	36.7	39	0	5	25	5	49	6	10	15	45	61	3	13	61
13	11	41.7		24.4	230	40.9		32.6	41	10 S	17	42	6	03		16	03	58	2	54	63	
14	26	41.8		23.5	245	04.3		28.3	43	20	5	07	33	5	56		22	56		34	64	
15	41	41.9		22.5	259	27.6		23.8	45	30	4	54	23	47		45	52		2	10	67	
16	56	42.0		21.6	273	50.9		19.2	46	35	45	16	42			16	58	51	1	56	68	
17	71	42.1	-9	20.7	288	14.3	+23	14.4	48	40	4	35	5	08	5	36	17	13	49	1	40	70
18	86	42.2	-9	19.8	302	37.6	+23	09.5	49	45	4	22	4	59	5	30	17	31	46	1	21	71
19	101	42.3		18.8	317	00.9	+23	04.3	52	50	4	06	48	22		17	53	42	0	57	74	
20	116	42.4		17.9	331	24.2	+22	59.1	52	52	3	58	42	18		18	04	40		46	74	
21	131	42.5		17.0	345	47.5		53.6	55	54	49	36	14			16	37		33	76		
22	146	42.6		16.0	0	10.9		48.0	56	56	38	29	09			29	35		18	77		
23	161	42.7		15.1	14	34.2		42.2	58	58	26	21	5	04		18	45	32	0	00	80	
24	176	42.8	-9	14.2	28	57.6	+22	36.2	60	60 S	3	11	4	12	4	59	19	04	27	**	**	**

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 43 ^m 0		Mag: -3.9 PMG: 12 ^h 52 ^m			Mag: +1.2 PMG: 15 ^h 21 ^m			Mag: -2.5 PMG: 20 ^h 07 ^m			Mag: 0.0 PMG: 18 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	153	41.8	166	59.9	-7	129	39.5	+10	13.0	57	30.5	+23	26.1	86	54.5	+20	07.1	
1	168	44.3	181	59.5		144	40.3		13.7	72	33.1		26.1	101	56.9		07.1	
2	183	46.7	196	59.0		159	41.0		14.4	87	35.6		26.1	116	59.3		07.1	
3	198	49.2	211	58.6		174	41.8		15.1	102	38.1		26.1	132	01.7		07.2	
4	213	51.7	226	58.2		189	42.6		15.7	117	40.6		26.1	147	04.0		07.2	
5	228	54.1	241	57.7	-7	204	43.4	+10	16.4	132	43.1	+23	26.1	162	06.4	+20	07.2	
6	243	56.6	256	57.3	-7	219	44.2	+10	17.1	147	45.6	+23	26.2	177	08.8	+20	07.2	
7	258	59.1	271	56.9		234	45.0		17.8	162	48.1		26.2	192	11.2		07.2	
8	274	01.5	286	56.4		249	45.8		18.5	177	50.6		26.2	207	13.6		07.3	
9	289	04.0	301	56.0		264	46.6		19.1	192	53.2		26.2	222	16.0		07.3	
10	304	06.5	316	55.6		279	47.4		19.8	207	55.7		26.2	237	18.4		07.3	
11	319	08.9	331	55.2	-7	294	48.2	+10	20.5	222	58.2	+23	26.2	252	20.7	+20	07.3	
12	334	11.4	346	54.7	-7	309	48.9	+10	21.2	238	00.7	+23	26.2	267	23.1	+20	07.4	
13	349	13.9	1	54.3	-6	324	49.7		21.8	253	03.2		26.2	282	25.5		07.4	
14	4	16.3	16	53.9		339	50.5		22.5	268	05.7		26.2	297	27.9		07.4	
15	19	18.8	31	53.5		354	51.3		23.2	283	08.2		26.2	312	30.3		07.4	
16	34	21.2	46	53.0		9	52.1		23.9	298	10.7		26.2	327	32.7		07.4	
17	49	23.7	61	52.6	-6	24	52.9	+10	24.5	313	13.2	+23	26.2	342	35.1	+20	07.5	
18	64	26.2	76	52.2	-6	39	53.7	+10	25.2	328	15.7	+23	26.2	357	37.4	+20	07.5	
19	79	28.6	91	51.8		54	54.5		25.9	343	18.3		26.2	12	39.8		07.5	
20	94	31.1	106	51.3		69	55.3		26.6	358	20.8		26.2	27	42.2		07.5	
21	109	33.6	121	50.9		84	56.0		27.2	13	23.3		26.2	42	44.6		07.6	
22	124	36.0	136	50.5		99	56.8		27.9	28	25.8		26.3	57	47.0		07.6	
23	139	38.5	151	50.1		114	57.6		28.6	43	28.3		26.3	72	49.4		07.6	
24	154	41.0	166	49.6	-6	129	58.4	+10	29.2	58	30.8	+23	26.3	87	51.7	+20	07.6	
Dif	—		-4	+12		+8	+7			+25		0		+24		0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 12 ^d 7 PHE { 4 ^h : 60:3 12 ^h : 60:6 20 ^h : 60:8 R°: 59 ^m SD: 16:4 PMG: 23 ^h 00 ^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	42.8	-9 14.2	28	57.6	+22 36.2	61	60 N	17 17	17 59	18 47	13 54 103	7 15 22	
1	191	42.9	13.3	43	20.9	43	61	58	21	18 01	46	14 10 98	6 59 26	
2	206	42.9	12.3	57	44.3	44	63	56	25	03	46	23 94	45 30	
3	221	43.0	11.4	72	07.7	44	64	54	29	05	46	35 91	33 33	
4	236	43.1	10.5	86	31.1	44	67	52	32	06	45	45 88	22 35	
5	251	43.2	-9 09.6	100	54.5	44	67	50	17 35	18 08	18 45	14 54 86	6 13 37	
6	266	43.3	-9 08.6	115	17.9	44	70	45	17 42	18 11	18 45	15 13 81	5 53 41	
7	281	43.4	07.7	129	41.4	45	71	40	47	14	46	29 77	36 45	
8	296	43.5	06.8	144	04.8	44	73	35	52	17	47	42 74	22 48	
9	311	43.6	05.8	158	28.3	45	74	30	17 56	20	48	15 53 72	5 10 50	
10	326	43.7	04.9	172	51.9	46	76	20	18 03	26	51	16 13 67	4 49 54	
11	341	43.8	-9 04.0	187	15.4	45	77	10 N	18 10	18 31	18 56	16 30 63	4 31 57	
12	356	43.9	-9 03.1	201	39.0	46	79	0	18 16	18 37	19 02	16 46 59	4 14 60	
13	11	44.0	02.1	216	02.6	46	81	10 S	23	44	09	17 01 56	3 57 63	
14	26	44.1	01.2	230	26.3	47	82	20	30	18 52	18	18 52	38 67	
15	41	44.2	-9 00.3	244	49.9	46	83	30	38	19 02	31	37 48	17 70	
16	56	44.3	-8 59.3	259	13.6	47	86	35	42	08	39	17 49 45	3 04 73	
17	71	44.4	-8 58.4	273	37.4	48	86	40	18 48	19 16	19 49	18 02 41	2 50 75	
18	86	44.5	-8 57.5	288	01.2	48	89	45	18 54	19 25	20 01	18 17 38	2 32 79	
19	101	44.6	56.5	302	25.0	48	90	50	19 02	35	17	35 33	11 83	
20	116	44.7	55.6	316	48.8	48	91	52	05	41	24	44 30	2 00 86	
21	131	44.8	54.7	331	12.7	49	93	54	09	46	33	18 53 28	1 49 88	
22	146	44.9	53.7	345	36.7	50	94	56	13	19 53	43	19 04 25	35 91	
23	161	45.1	52.8	0	00.7	50	96	58	18	20 00	20 55	17 21	20 94	
24	176	45.2	-8 51.9	14	24.7	50	97	60 S	19 23	20 09	21 08	19 31 17	1 01 100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 39 ^m 0		Mag: -3.9 PMG: 12 ^h 53 ^m		Mag: +1.2 PMG: 15 ^h 19 ^m		Mag: -2.5 PMG: 20 ^h 03 ^m		Mag: 0.0 PMG: 18 ^h 06 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	154	41.0	166	49.6	-6 45.7	129	58.4	+10 29.2	58	30.8	+23 26.3	87	51.7	+20 07.6
1	169	43.4	181	49.2	44.5	144	59.2	29.9	73	33.3	26.3	102	54.1	07.7
2	184	45.9	196	48.8	43.3	160	00.0	30.6	88	35.8	26.3	117	56.5	07.7
3	199	48.3	211	48.4	42.0	175	00.8	31.3	103	38.3	26.3	132	58.9	07.7
4	214	50.8	226	47.9	40.8	190	01.6	31.9	118	40.8	26.3	148	01.3	07.7
5	229	53.3	241	47.5	-6 39.6	205	02.4	+10 32.6	133	43.3	+23 26.3	163	03.7	+20 07.7
6	244	55.7	256	47.1	-6 38.3	220	03.1	+10 33.3	148	45.8	+23 26.3	178	06.0	+20 07.8
7	259	58.2	271	46.7	37.1	235	03.9	34.0	163	48.3	26.3	193	08.4	07.8
8	275	00.7	286	46.3	35.9	250	04.7	34.6	178	50.8	26.3	208	10.8	07.8
9	290	03.1	301	45.8	34.6	265	05.5	35.3	193	53.3	26.3	223	13.2	07.8
10	305	05.6	316	45.4	33.4	280	06.3	36.0	208	55.8	26.3	238	15.6	07.9
11	320	08.1	331	45.0	-6 32.2	295	07.1	+10 36.6	223	58.3	+23 26.3	253	17.9	+20 07.9
12	335	10.5	346	44.6	-6 30.9	310	07.9	+10 37.3	239	00.8	+23 26.3	268	20.3	+20 07.9
13	350	13.0	1	44.2	29.7	325	08.7	38.0	254	03.3	26.3	283	22.7	07.9
14	5	15.5	16	43.7	28.5	340	09.5	38.7	269	05.8	26.3	298	25.1	08.0
15	20	17.9	31	43.3	27.2	355	10.2	39.3	284	08.3	26.4	313	27.5	08.0
16	35	20.4	46	42.9	26.0	10	11.0	40.0	299	10.8	26.4	328	29.8	08.0
17	50	22.8	61	42.5	-6 24.7	25	11.8	+10 40.7	314	13.3	+23 26.4	343	32.2	+20 08.0
18	65	25.3	76	42.1	-6 23.5	40	12.6	+10 41.3	329	15.8	+23 26.4	358	34.6	+20 08.0
19	80	27.8	91	41.6	22.3	55	13.4	42.0	344	18.3	26.4	13	37.0	08.1
20	95	30.2	106	41.2	21.0	70	14.2	42.7	359	20.8	26.4	28	39.4	08.1
21	110	32.7	121	40.8	19.8	85	15.0	43.3	14	23.3	26.4	43	41.7	08.1
22	125	35.2	136	40.4	18.5	100	15.8	44.0	29	25.8	26.4	58	44.1	08.1
23	140	37.6	151	40.0	17.3	115	16.5	44.7	44	28.3	26.4	73	46.5	08.2
24	155	40.1	166	39.6	-6 16.1	130	17.3	+10 45.4	59	30.8	+23 26.4	88	48.9	+20 08.2
Dif	—		-4		+12		+8	+7		+25	0		+24	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 12 ^m 9			Edad: 13 ^d 7 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	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	45.2	-8 51.9	14	24.7	+19 25.2	98	60 N	5 38	6 26	7 08	15 37	105	7 37	14	
1	191	45.3	50.9	28	48.8	51 15.4	100	58	38	24	03	48	100	25	18	
2	206	45.4	50.0	43	12.9	51 +19 05.4	102	56	39	22	7 00	15 57	97	15	21	
3	221	45.5	49.1	57	37.0	51 +18 55.2	102	54	40	20	6 56	16 06	93	7 06	24	
4	236	45.6	48.2	72	01.2	52 45.0	102	52	40	19	53	13	91	6 57	28	
5	251	45.7	-8 47.2	86	25.5	53 +18 34.5	105	50	5 40	6 17	6 50	16 20	88	6 50	30	
6	266	45.8	-8 46.3	100	49.8	53 +18 24.0	105	45	5 40	6 14	6 44	16 34	83	6 34	35	
7	281	45.9	45.3	115	14.2	54 13.3	107	40	40	11	38	46	78	21	39	
8	296	46.0	44.4	129	38.6	54 +18 02.5	108	35	39	08	34	16 56	75	10	42	
9	311	46.1	43.5	144	03.0	54 +17 51.5	110	30	38	05	29	17 05	71	6 00	45	
10	326	46.2	42.5	158	27.5	55 40.4	111	20	34	6 00	22	20	66	5 43	50	
11	341	46.3	-8 41.6	172	52.1	56 +17 29.2	112	10 N	5 30	5 55	6 16	17 33	61	5 28	54	
12	356	46.4	-8 40.7	187	16.7	56 +17 17.9	113	0	5 24	5 49	6 10	17 45	57	5 14	58	
13	11	46.5	39.7	201	41.4	57 +17 06.4	115	10 S	17	42	6 03	17 57	53	5 00	62	
14	26	46.6	38.8	216	06.1	57 +16 54.8	116	20	5 08	34	5 56	18 10	48	4 45	66	
15	41	46.7	37.9	230	30.9	58 43.1	117	30	4 55	24	49	25	43	27	72	
16	56	46.8	36.9	244	55.7	58 31.3	118	35	47	18	44	34	39	17	74	
17	71	46.9	-8 36.0	259	20.6	59 +16 19.3	120	40	4 38	5 11	5 39	18 43	36	4 05	78	
18	86	47.0	-8 35.1	273	45.6	60 +16 07.3	120	45	4 25	5 02	5 33	18 55	32	3 51	82	
19	101	47.2	34.1	288	10.6	60 +15 55.1	122	50	10	4 51	25	19 08	27	34	87	
20	116	47.3	33.2	302	35.7	61 42.8	123	52	4 02	46	22	14	25	26	90	
21	131	47.4	32.3	317	00.8	61 30.4	124	54	3 54	40	18	21	22	17	92	
22	146	47.5	31.3	331	26.0	62 17.8	126	56	44	34	14	29	19	3 06	97	
23	161	47.6	30.4	345	51.2	62 +15 05.2	126	58	32	27	09	38	15	2 54	101	
24	176	47.7	-8 29.4	0	16.5	63 +14 52.5	127	60 S	3 19	4 18	5 04	19 48	11	2 41	105	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 35 ^m 1		Mag: -3.9 PMG: 12 ^h 54 ^m		Mag: +1.3 PMG: 15 ^h 18 ^m		Mag: -2.5 PMG: 19 ^h 59 ^m		Mag: +0.1 PMG: 18 ^h 02 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	155	40.1	166	39.6	130	17.3	59	30.8	88	48.9
1	170	42.6	181	39.1	145	18.1	74	33.3	103	51.2
2	185	45.0	196	38.7	160	18.9	89	35.8	118	53.6
3	200	47.5	211	38.3	175	19.7	104	38.3	133	56.0
4	215	50.0	226	37.9	190	20.5	119	40.8	148	58.4
5	230	52.4	241	37.5	205	21.3	134	43.3	164	00.8
6	245	54.9	256	37.1	220	22.1	149	45.8	179	03.1
7	260	57.3	271	36.6	235	22.8	164	48.3	194	05.5
8	275	59.8	286	36.2	250	23.6	179	50.8	209	07.9
9	291	02.3	301	35.8	265	24.4	194	53.3	224	10.3
10	306	04.7	316	35.4	280	25.2	209	55.8	239	12.6
11	321	07.2	331	35.0	295	26.0	224	58.2	254	15.0
12	336	09.7	346	34.6	310	26.8	240	00.7	269	17.4
13	351	12.1	1	34.2	325	27.6	255	03.2	284	19.8
14	6	14.6	16	33.8	340	28.3	270	05.7	299	22.1
15	21	17.1	31	33.3	355	29.1	285	08.2	314	24.5
16	36	19.5	46	32.9	10	29.9	300	10.7	329	26.9
17	51	22.0	61	32.5	25	30.7	315	13.2	344	29.3
18	66	24.4	76	32.1	40	31.5	330	15.7	359	31.6
19	81	26.9	91	31.7	55	32.3	345	18.2	14	34.0
20	96	29.4	106	31.3	70	33.1	0	20.7	29	36.4
21	111	31.8	121	30.9	85	33.8	15	23.1	44	38.8
22	126	34.3	136	30.5	100	34.6	30	25.6	59	41.1
23	141	36.8	151	30.0	115	35.4	45	28.1	74	43.5
24	156	39.2	166	29.6	130	36.2	60	30.6	89	45.9
Dif	—		-4	+12	+8	+7	+25	0	+24	0

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 7		Edad: 14 ^d 7 PHE { 4 ^h : 61 ^h 4 12 ^h : 61 ^h 4 20 ^h : 61 ^h 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	176	47.7	-8 29.4	0	16.5	+14 52.5	60 N	17 22	18 04	18 52	17 22	103	7 51	10
1	191	47.8	28.5	14	41.9	64 39.6 ¹²⁹	58	26	05	51	28	100	43	14
2	206	47.9	27.6	29	07.3	64 26.7 ¹²⁹	56	29	07	50	34	96	36	17
3	221	48.0	26.6	43	32.8	65 13.6 ¹³¹	54	33	08	49	39	93	30	20
4	236	48.1	25.7	57	58.3	65 +14 00.5 ¹³¹	52	36	10	49	44	90	25	22
5	251	48.2	-8 24.7	72	23.9	66 +13 47.2 ¹³³	50	17 38	18 11	18 48	17 48	87	7 20	25
6	266	48.4	-8 23.8	86	49.6	67 +13 33.9 ¹³³	45	17 44	18 14	18 48	17 57	82	7 09	30
7	281	48.5	22.9	101	15.3	67 20.5 ¹³⁴	40	49	17	48	18 04	78	7 00	34
8	296	48.6	21.9	115	41.1	68 +13 06.9 ¹³⁶	35	54	19	48	11	73	6 52	38
9	311	48.7	21.0	130	06.9	68 +12 53.3 ¹³⁶	30	17 57	22	49	16	70	45	41
10	326	48.8	20.0	144	32.8	69 39.6 ¹³⁷	20	18 04	26	52	26	64	33	47
11	341	48.9	-8 19.1	158	58.8	70 +12 25.8 ¹³⁸	10 N	18 10	18 31	18 56	18 34	60	6 22	52
12	356	49.0	-8 18.2	173	24.8	70 +12 12.0 ¹³⁸	0	18 16	18 37	19 01	18 42	55	6 12	56
13	11	49.1	17.2	187	50.8	70 +11 58.0 ¹⁴⁰	10 S	22	43	08	50	50	6 02	61
14	26	49.2	16.3	202	17.0	72 44.0 ¹⁴⁰	20	28	18 51	17	18 58	45	5 51	66
15	41	49.4	15.3	216	43.2	72 29.9 ¹⁴¹	30	36	19 00	29	19 08	39	39	71
16	56	49.5	14.4	231	09.4	72 15.7 ¹⁴²	35	40	06	36	13	37	31	75
17	71	49.6	-8 13.5	245	35.7	73 +11 01.4 ¹⁴³	40	18 45	19 13	19 46	19 19	33	5 23	78
18	86	49.7	-8 12.5	260	02.1	74 +10 47.1 ¹⁴³	45	18 51	19 21	19 57	19 27	28	5 13	83
19	101	49.8	11.6	274	28.5	74 32.6 ¹⁴⁵	50	18 58	31	20 12	35	23	5 01	88
20	116	49.9	10.6	288	54.9	74 18.2 ¹⁴⁴	52	19 01	36	19	39	21	4 56	90
21	131	50.0	09.7	303	21.5	76 +10 03.6 ¹⁴⁶	54	04	41	27	43	19	49	94
22	146	50.1	08.8	317	48.1	76 +9 49.0 ¹⁴⁶	56	08	47	37	48	16	43	96
23	161	50.3	07.8	332	14.7	76 34.4 ¹⁴⁶	58	12	19 54	20 48	53	13	35	100
24	176	50.4	-8 06.9	346	41.4	77 +9 19.6 ¹⁴⁸	60 S	19 17	20 02	21 00	19 59	9	4 26	105
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 31 ^m 2		Mag: -3.9 PMG: 12 ^h 54 ^m		Mag: +1.3 PMG: 15 ^h 17 ^m		Mag: -2.5 PMG: 19 ^h 55 ^m		Mag: +0.1 PMG: 17 ^h 58 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	156	39.2	166 29.6	-5 46.2	130 36.2	+11 01.4	60	30.6	+23 26.5	89 45.9	+20 08.8			
1	171	41.7	181 29.2	45.0	145 37.0	02.0	75	33.1	26.5	104 48.3	08.8			
2	186	44.2	196 28.8	43.7	160 37.8	02.7	90	35.6	26.5	119 50.6	08.8			
3	201	46.6	211 28.4	42.5	175 38.6	03.4	105	38.1	26.6	134 53.0	08.8			
4	216	49.1	226 28.0	41.2	190 39.3	04.0	120	40.6	26.6	149 55.4	08.9			
5	231	51.6	241 27.6	-5 40.0	205 40.1	+11 04.7	135	43.0	+23 26.6	164 57.7	+20 08.9			
6	246	54.0	256 27.2	-5 38.7	220 40.9	+11 05.3	150	45.5	+23 26.6	180 00.1	+20 08.9			
7	261	56.5	271 26.8	37.5	235 41.7	06.0	165	48.0	26.6	195 02.5	08.9			
8	276	58.9	286 26.4	36.3	250 42.5	06.7	180	50.5	26.6	210 04.9	08.9			
9	292	01.4	301 26.0	35.0	265 43.3	07.3	195	53.0	26.6	225 07.2	09.0			
10	307	03.9	316 25.6	33.8	280 44.1	08.0	210	55.5	26.6	240 09.6	09.0			
11	322	06.3	331 25.1	-5 32.5	295 44.8	+11 08.7	225	58.0	+23 26.6	255 12.0	+20 09.0			
12	337	08.8	346 24.7	-5 31.3	310 45.6	+11 09.3	241	00.4	+23 26.6	270 14.3	+20 09.0			
13	352	11.3	1 24.3	30.0	325 46.4	10.0	256	02.9	26.6	285 16.7	09.1			
14	7	13.7	16 23.9	28.8	340 47.2	10.6	271	05.4	26.6	300 19.1	09.1			
15	22	16.2	31 23.5	27.5	355 48.0	11.3	286	07.9	26.6	315 21.5	09.1			
16	37	18.7	46 23.1	26.3	10 48.8	12.0	301	10.4	26.6	330 23.8	09.1			
17	52	21.1	61 22.7	-5 25.0	25 49.6	+11 12.6	316	12.8	+23 26.6	345 26.2	+20 09.2			
18	67	23.6	76 22.3	-5 23.8	40 50.3	+11 13.3	331	15.3	+23 26.6	0 28.6	+20 09.2			
19	82	26.1	91 21.9	22.5	55 51.1	14.0	346	17.8	26.6	15 30.9	09.2			
20	97	28.5	106 21.5	21.2	70 51.9	14.6	1	20.3	26.6	30 33.3	09.2			
21	112	31.0	121 21.1	20.0	85 52.7	15.3	16	22.8	26.6	45 35.7	09.3			
22	127	33.4	136 20.7	18.7	100 53.5	15.9	31	25.2	26.7	60 38.0	09.3			
23	142	35.9	151 20.3	17.5	115 54.3	16.6	46	27.7	26.7	75 40.4	09.3			
24	157	38.4	166 19.9	-5 16.2	130 55.0	+11 17.3	61	30.2	+23 26.7	90 42.8	+20 09.3			
Dif	—		-4	+12	+8	+7	+25		0	+24		0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 15 ^d 7 PHE { 4 ^h : 61 ^m 4 12 ^h : 61 ^m 4 20 ^h : 61 ^m 3												
	PMG: 12 ^h 12 ^m 5			SD: 16 ^h 7 PMG: 0 ^h 55 ^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		h m m	
0	176	50.4	-8 06.9	346	41.4		+9 19.6		60 N	5 32	6 20	7 02	19 05 101	8 01 8		
1	191	50.5	05.9	1	08.1	77	+9 04.8	148	58	33	19	6 58	08 97	7 57 12		
2	206	50.6	05.0	15	34.9	78	+8 50.0	148	56	34	17	55	10 94	53 15		
3	221	50.7	04.0	30	01.8	79	35.1	149	54	35	16	51	12 90	50 18		
4	236	50.8	03.1	44	28.7	79	20.1	150	52	36	15	49	14 88	47 20		
5	251	51.0	-8 02.2	58	55.7	80	+8 05.1	150	50	5 36	6 13	6 46	19 15 86	7 45 22		
6	266	51.1	-8 01.2	73	22.7	80	+7 50.1	150	45	5 37	6 11	6 40	19 19 80	7 39 27		
7	281	51.2	-8 00.3	87	49.7	80	35.0	151	40	37	08	35	22 75	34 32		
8	296	51.3	-7 59.3	102	16.9	82	19.9	151	35	36	06	31	24 72	30 35		
9	311	51.4	58.4	116	44.0	81	+7 04.7	152	30	36	6 03	27	26 69	26 39		
10	326	51.5	57.4	131	11.2	82	+6 49.5	152	20	33	5 59	21	30 63	20 44		
11	341	51.6	-7 56.5	145	38.5	83	+6 34.2	153	10 N	5 29	5 54	6 15	19 34 57	7 14 49		
12	356	51.8	-7 55.5	160	05.8	83	+6 18.9	153	0	5 24	5 48	6 09	19 37 53	7 08 54		
13	11	51.9	54.6	174	33.2	84	+6 03.6	153	10 S	18	42	6 03	40 48	7 03 58		
14	26	52.0	53.7	189	00.6	84	+5 48.2	154	20	5 09	35	5 57	43 44	6 57 63		
15	41	52.1	52.7	203	28.0	84	32.8	154	30	4 57	26	50	47 38	50 69		
16	56	52.2	51.8	217	55.5	85	17.4	154	35	49	20	46	50 34	46 72		
17	71	52.4	-7 50.8	232	23.0	85	+5 01.9	155	40	4 40	5 13	5 41	19 52 31	6 41 77		
18	86	52.5	-7 49.9	246	50.6	86	+4 46.5	154	45	4 29	5 05	5 35	19 55 26	6 36 81		
19	101	52.6	48.9	261	18.2	86	31.0	155	50	14	4 55	29	19 58 22	29 87		
20	116	52.7	48.0	275	45.9	87	+4 15.5	155	52	4 07	50	25	20 00 19	26 89		
21	131	52.8	47.0	290	13.6	87	+3 59.9	156	54	3 59	45	22	02 17	23 92		
22	146	52.9	46.1	304	41.4	88	44.4	155	56	49	39	18	04 14	19 95		
23	161	53.1	45.1	319	09.1	87	28.8	156	58	39	32	14	06 11	15 99		
24	176	53.2	-7 44.2	333	37.0	89	+3 13.2	156	60 S	3 26	4 24	5 09	20 08 8	6 11 102		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 27 ^m 2		Mag: -3.9 PMG: 12 ^h 55 ^m		Mag: +1.3 PMG: 15 ^h 16 ^m		Mag: -2.5 PMG: 19 ^h 51 ^m		Mag: +0.1 PMG: 17 ^h 54 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	157	38.4	166	19.9	-5	16.2	130	55.0	+11	17.3
1	172	40.8	181	19.5		15.0	145	55.8		17.9
2	187	43.3	196	19.1		13.7	160	56.6		18.6
3	202	45.8	211	18.7		12.5	175	57.4		19.2
4	217	48.2	226	18.3		11.2	190	58.2		19.9
5	232	50.7	241	17.9	-5	10.0	205	59.0	+11	20.6
6	247	53.2	256	17.5	-5	08.7	220	59.7	+11	21.2
7	262	55.6	271	17.1		07.5	236	00.5		21.9
8	277	58.1	286	16.6		06.2	251	01.3		22.5
9	293	00.5	301	16.2		05.0	266	02.1		23.2
10	308	03.0	316	15.8		03.7	281	02.9		23.8
11	323	05.5	331	15.4	-5	02.4	296	03.7	+11	24.5
12	338	07.9	346	15.0	-5	01.2	311	04.4	+11	25.2
13	353	10.4	1	14.6	-4	59.9	326	05.2		25.8
14	8	12.9	16	14.2		58.7	341	06.0		26.5
15	23	15.3	31	13.8		57.4	356	06.8		27.1
16	38	17.8	46	13.4		56.2	11	07.6		27.8
17	53	20.3	61	13.0	-4	54.9	26	08.4	+11	28.5
18	68	22.7	76	12.6	-4	53.7	41	09.1	+11	29.1
19	83	25.2	91	12.2		52.4	56	09.9		29.8
20	98	27.7	106	11.8		51.1	71	10.7		30.4
21	113	30.1	121	11.4		49.9	86	11.5		31.1
22	128	32.6	136	11.0		48.6	101	12.3		31.7
23	143	35.0	151	10.6		47.4	116	13.1		32.4
24	158	37.5	166	10.2	-4	46.1	131	13.8	+11	33.0
Dif	—		-4		+13		+8		+7	
							+25		0	
									+24	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^d 1 PMG: 12 ^h 12 ^m 4			Edad: 16 ^d 7 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 0 20 ^h : 60 ^m 8 PMG: 1 ^h 49 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	53.2	-7 44.2	333	37.0	+3 13.2	88	60 N	17 27	18 09	18 57	20 46	99	8 09	8
1	191	53.3	43.2	348	04.8	+2 57.6	156	58	30	10	55	45	95	09	11
2	206	53.4	42.3	2	32.7	89	42.0	56	34	11	54	44	91	08	14
3	221	53.5	41.3	17	00.7	90	26.4	54	37	12	53	42	89	08	17
4	236	53.7	40.4	31	28.6	89	+2 10.8	52	39	13	52	42	86	07	20
5	251	53.8	-7 39.4	45	56.6	90	+1 55.2	50	17 42	18 14	18 52	20 41	83	8 07	22
6	266	53.9	-7 38.5	60	24.7	91	+1 39.6	45	17 47	18 17	18 51	20 39	78	8 06	27
7	281	54.0	37.5	74	52.8	91	24.0	40	52	19	50	37	74	06	30
8	296	54.2	36.6	89	20.9	91	+1 08.4	35	55	21	50	36	70	05	34
9	311	54.3	35.6	103	49.0	91	+0 52.8	30	17 59	23	51	35	67	05	37
10	326	54.4	34.7	118	17.2	92	37.2	20	18 05	27	53	33	61	04	42
11	341	54.5	-7 33.7	132	45.4	92	+0 21.6	10 N	18 10	18 32	18 56	20 31	57	8 03	48
12	356	54.6	-7 32.8	147	13.6	92	+0 06.0	0	18 16	18 37	19 01	20 30	52	8 02	52
13	11	54.8	31.8	161	41.8	92	-0 09.6	10 S	21	42	07	28	48	01	57
14	26	54.9	30.9	176	10.1	93	25.2	20	27	49	15	27	42	8 00	62
15	41	55.0	29.9	190	38.4	93	40.7	30	33	18 58	26	25	37	7 59	68
16	56	55.1	29.0	205	06.7	93	-0 56.2	35	37	19 03	34	24	34	58	72
17	71	55.3	-7 28.0	219	35.1	94	-1 11.8	40	18 42	19 10	19 42	20 23	30	7 58	75
18	86	55.4	-7 27.1	234	03.5	94	-1 27.2	45	18 47	19 17	19 53	20 21	27	7 57	79
19	101	55.5	26.1	248	31.9	94	42.7	50	53	27	20 07	20	22	56	85
20	116	55.6	25.2	263	00.3	94	-1 58.2	52	18 56	31	14	19	20	55	88
21	131	55.8	24.2	277	28.7	94	-2 13.6	54	19 00	36	22	19	16	55	90
22	146	55.9	23.3	291	57.2	95	29.0	56	03	42	31	18	14	54	93
23	161	56.0	22.3	306	25.7	95	44.3	58	07	48	41	17	11	54	96
24	176	56.1	-7 21.4	320	54.2	95	-2 59.7	60 S	19 11	19 56	20 53	20 16	8	7 53	100
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 23 ^m 3		Mag: -3.9 PMG: 12 ^h 56 ^m			Mag: +1.3 PMG: 15 ^h 14 ^m			Mag: -2.5 PMG: 19 ^h 47 ^m			Mag: +0.1 PMG: 17 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	158	37.5	166	10.2	-4 46.1	131	13.8	+11 33.0	62	29.6	+23 26.8	91	39.6	+20 09.9	
1	173	40.0	181	09.8	44.9	146	14.6	33.7	77	32.1	26.8	106	41.9	10.0	
2	188	42.4	196	09.5	43.6	161	15.4	34.4	92	34.5	26.8	121	44.3	10.0	
3	203	44.9	211	09.1	42.3	176	16.2	35.0	107	37.0	26.8	136	46.7	10.0	
4	218	47.4	226	08.7	41.1	191	17.0	35.7	122	39.5	26.8	151	49.0	10.0	
5	233	49.8	241	08.3	-4 39.8	206	17.7	+11 36.3	137	41.9	+23 26.8	166	51.4	+20 10.1	
6	248	52.3	256	07.9	-4 38.6	221	18.5	+11 37.0	152	44.4	+23 26.8	181	53.8	+20 10.1	
7	263	54.8	271	07.5	37.3	236	19.3	37.6	167	46.9	26.8	196	56.1	10.1	
8	278	57.2	286	07.1	36.0	251	20.1	38.3	182	49.3	26.8	211	58.5	10.1	
9	293	59.7	301	06.7	34.8	266	20.9	38.9	197	51.8	26.8	227	00.8	10.2	
10	309	02.1	316	06.3	33.5	281	21.7	39.6	212	54.3	26.8	242	03.2	10.2	
11	324	04.6	331	05.9	-4 32.3	296	22.4	+11 40.2	227	56.7	+23 26.8	257	05.6	+20 10.2	
12	339	07.1	346	05.5	-4 31.0	311	23.2	+11 40.9	242	59.2	+23 26.8	272	07.9	+20 10.2	
13	354	09.5	1 05.1	29.7	29.7	326	24.0	41.6	258	01.7	26.8	287	10.3	10.3	
14	9	12.0	16	04.7	28.5	341	24.8	42.2	273	04.1	26.8	302	12.6	10.3	
15	24	14.5	31	04.3	27.2	356	25.6	42.9	288	06.6	26.8	317	15.0	10.3	
16	39	16.9	46	03.9	26.0	11	26.3	43.5	303	09.0	26.8	332	17.4	10.4	
17	54	19.4	61	03.5	-4 24.7	26	27.1	+11 44.2	318	11.5	+23 26.8	347	19.7	+20 10.4	
18	69	21.9	76	03.1	-4 23.4	41	27.9	+11 44.8	333	14.0	+23 26.9	2	22.1	+20 10.4	
19	84	24.3	91	02.7	22.2	56	28.7	45.5	348	16.4	26.9	17	24.5	10.4	
20	99	26.8	106	02.3	20.9	71	29.5	46.1	3	18.9	26.9	32	26.8	10.5	
21	114	29.3	121	01.9	19.6	86	30.3	46.8	18	21.4	26.9	47	29.2	10.5	
22	129	31.7	136	01.5	18.4	101	31.0	47.4	33	23.8	26.9	62	31.5	10.5	
23	144	34.2	151	01.1	17.1	116	31.8	48.1	48	26.3	26.9	77	33.9	10.5	
24	159	36.6	166	00.8	-4 15.9	131	32.6	+11 48.7	63	28.7	+23 26.9	92	36.3	+20 10.6	
Dif	—		-4 +13			+8 +7			+25 0			+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: 17 ^d 7 PHE { 4 ^h : 60'6 12 ^h : 60'3 20 ^h : 60'1 SD: 16'5 PMG: 2 ^h 42 ^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	176	56.1	-7	21.4	320	54.2	-2	59.7	60 N	5	26	6	14	6	56	22	25
1	191	56.3		20.4	335	22.7	95	-3	15.0	58	28		13	53	20	93	
2	206	56.4		19.5	349	51.2	95		30.2	56	29		12	50	15	90	
3	221	56.5		18.5	4	19.8	96	-3	45.5	54	30		11	47	11	87	
4	236	56.6		17.6	18	48.3	95	-4	00.7	52	31		10	44	08	84	
5	251	56.8	-7	16.6	33	16.9	96	-4	15.8	50	5	32	6	09	22	04	
6	266	56.9	-7	15.7	47	45.5	96	-4	31.0	45	5	33	6	07	21	57	
7	281	57.0		14.7	62	14.1	96	-4	46.0	40	34		05	32	51	73	
8	296	57.1		13.8	76	42.7	96	-5	01.1	35	34		03	29	46	69	
9	311	57.3		12.8	91	11.3	96		16.1	30	33		6	01	42	66	
10	326	57.4		11.9	105	40.0	97		31.0	20	32		5	57	34	61	
11	341	57.5	-7	10.9	120	08.6	96	-5	45.9	10 N	5	28	5	53	21	28	
12	356	57.6	-7	09.9	134	37.2	96	-6	00.7	0	5	24	5	48	21	22	
13	11	57.8		09.0	149	05.9	97		15.5	10 S	18		42	6	04	16	
14	26	57.9		08.0	163	34.6	97		30.3	20	5	10	36	5	58	09	
15	41	58.0		07.1	178	03.2	96		45.0	30	4	59	27	51	21	02	
16	56	58.2		06.1	192	31.9	97	-6	59.6	35	51		22	48	20	58	
17	71	58.3	-7	05.2	207	00.6	97	-7	14.2	40	4	43	5	16	20	53	
18	86	58.4	-7	04.2	221	29.3	97	-7	28.7	45	4	32	5	08	20	48	
19	101	58.5		03.3	235	57.9	96		43.1	50	18		4	59	42	23	
20	116	58.7		02.3	250	26.6	97	-7	57.5	52	11		54	29	39	21	
21	131	58.8		01.3	264	55.3	97	-8	11.9	54	4	03	49	26	35	19	
22	146	58.9	-7	00.4	279	24.0	97		26.1	56	3	55	43	22	32	16	
23	161	59.1	-6	59.4	293	52.7	97		40.4	58	45		37	19	28	13	
24	176	59.2	-6	58.5	308	21.4	97	-8	54.5	60 S	3	33	4	30	20	24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 19 ^m 4		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: +1.3 PMG: 15 ^h 13 ^m		Mag: -2.5 PMG: 19 ^h 43 ^m		Mag: +0.1 PMG: 17 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	159	36.6	166	00.8	131	32.6	63	28.7	92	36.3
1	174	39.1	181	00.4	146	33.4	78	31.2	107	38.6
2	189	41.6	196	00.0	161	34.2	93	33.7	122	41.0
3	204	44.0	210	59.6	176	34.9	108	36.1	137	43.3
4	219	46.5	225	59.2	191	35.7	123	38.6	152	45.7
5	234	49.0	240	58.8	206	36.5	138	41.0	167	48.0
6	249	51.4	255	58.4	221	37.3	153	43.5	182	50.4
7	264	53.9	270	58.0	236	38.1	168	46.0	197	52.8
8	279	56.4	285	57.6	251	38.8	183	48.4	212	55.1
9	294	58.8	300	57.2	266	39.6	198	50.9	227	57.5
10	310	01.3	315	56.8	281	40.4	213	53.3	242	59.8
11	325	03.7	330	56.4	296	41.2	228	55.8	258	02.2
12	340	06.2	345	56.0	311	42.0	243	58.2	273	04.5
13	355	08.7	0	55.7	326	42.7	259	00.7	288	06.9
14	10	11.1	15	55.3	341	43.5	274	03.2	303	09.3
15	25	13.6	30	54.9	356	44.3	289	05.6	318	11.6
16	40	16.1	45	54.5	11	45.1	304	08.1	333	14.0
17	55	18.5	60	54.1	26	45.8	319	10.5	348	16.3
18	70	21.0	75	53.7	41	46.6	334	13.0	3	18.7
19	85	23.5	90	53.3	56	47.4	349	15.4	18	21.0
20	100	25.9	105	52.9	71	48.2	4	17.9	33	23.4
21	115	28.4	120	52.5	86	49.0	19	20.3	48	25.8
22	130	30.9	135	52.1	101	49.7	34	22.8	63	28.1
23	145	33.3	150	51.8	116	50.5	49	25.2	78	30.5
24	160	35.8	165	51.4	131	51.3	64	27.7	93	32.8
Dif	—		-4	+13	+8	+6	+25	0	+24	0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1		Edad: 18 ^d 7 PHE { 4 ^h : 59/8 12 ^h : 59/5 20 ^h : 59/2															
	PMG: 12 ^h 11 ^m 9		SD: 16 ^h 3 PMG: 3 ^h 34 ^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	m	h m m	m				
0	176	59.2	-6	58.5	308	21.4	-8	54.5	60 N	17 32	18 14	19 02	** ** *	8 25 11				
1	191	59.3		57.5	322	50.0	-9	08.6 ¹⁴¹	58	35	14	19 00	23 53 90	32 14				
2	206	59.4		56.6	337	18.7		22.6 ¹⁴⁰	56	38	15	18 58	45 87	37 17				
3	221	59.6		55.6	351	47.4		36.5 ¹³⁹	54	40	16	57	38 84	42 20				
4	236	59.7		54.7	6	16.1	-9	50.4 ¹³⁹	52	43	17	56	32 81	47 22				
5	251	59.8	-6	53.7	20	44.7	-10	04.1 ¹³⁷	50	17 45	18 17	18 55	23 26 79	8 51 25				
6	267	00.0	-6	52.7	35	13.4	-10	17.9 ¹³⁸	45	17 50	18 19	18 53	23 14 74	9 00 29				
7	282	00.1		51.8	49	42.0		31.5 ¹³⁶	40	54	21	52	23 04 70	07 33				
8	297	00.2		50.8	64	10.7		45.1 ¹³⁶	35	17 57	23	52	22 55 68	14 36				
9	312	00.4		49.9	78	39.3	-10	58.5 ¹³⁴	30	18 00	24	52	48 65	19 40				
10	327	00.5		48.9	93	08.0	-11	11.9 ¹³⁴	20	06	28	53	35 60	29 45				
11	342	00.6	-6	47.9	107	36.6	-11	25.3 ¹³⁴	10 N	18 11	18 32	18 56	22 24 56	9 38 48				
12	357	00.8	-6	47.0	122	05.2	-11	38.5 ¹³²	0	18 15	18 36	19 00	22 14 52	9 46 53				
13	12	00.9		46.0	136	33.8	-11	51.7 ¹³²	10 S	20	41	06	22 03 49	9 55 56				
14	27	01.0		45.1	151	02.4	-12	04.7 ¹³⁰	20	25	47	13	21 53 45	10 03 61				
15	42	01.2		44.1	165	31.0		17.7 ¹³⁰	30	31	18 55	24	40 41	14 65				
16	57	01.3		43.2	179	59.6		30.6 ¹²⁹	35	35	19 00	31	33 38	19 69				
17	72	01.4	-6	42.2	194	28.2	-12	43.4 ¹²⁸	40	18 39	19 06	19 39	21 25 35	10 26 72				
18	87	01.6	-6	41.2	208	56.7	-12	56.2 ¹²⁸	45	18 44	19 14	19 49	21 16 31	10 34 76				
19	102	01.7		40.3	223	25.3	-13	08.8 ¹²⁶	50	49	22	20 03	05 26	43 81				
20	117	01.8		39.3	237	53.8		21.4 ¹²⁶	52	52	27	09	21 00 24	48 83				
21	132	02.0		38.4	252	22.3		33.8 ¹²⁴	54	55	31	16	20 54 22	53 85				
22	147	02.1		37.4	266	50.8		46.2 ¹²⁴	56	18 58	37	25	48 19	10 58 88				
23	162	02.2		36.4	281	19.3	-13	58.4 ¹²²	58	19 02	43	34	41 16	11 04 92				
24	177	02.4	-6	35.5	295	47.8	-14	10.6 ¹²²	60 S	19 06	19 49	20 45	20 33 12	11 11 96				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 15 ^m 4		Mag: -3.9 PMG: 12 ^h 57 ^m			Mag: +1.3 PMG: 15 ^h 12 ^m			Mag: -2.4 PMG: 19 ^h 39 ^m			Mag: +0.1 PMG: 17 ^h 43 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	160	35.8	165	51.4	-3	45.5	131	51.3	+12	04.3	64	27.7	+23	27.0	93	32.8	+20	11.2
1	175	38.2	180	51.0		44.2	146	52.1		04.9	79	30.1		27.0	108	35.2		11.2
2	190	40.7	195	50.6		42.9	161	52.9		05.6	94	32.6		27.0	123	37.5		11.2
3	205	43.2	210	50.2		41.7	176	53.6		06.2	109	35.0		27.0	138	39.9		11.3
4	220	45.6	225	49.8		40.4	191	54.4		06.9	124	37.5		27.0	153	42.2		11.3
5	235	48.1	240	49.4	-3	39.1	206	55.2	+12	07.5	139	39.9	+23	27.0	168	44.6	+20	11.3
6	250	50.6	255	49.0	-3	37.9	221	56.0	+12	08.2	154	42.4	+23	27.0	183	46.9	+20	11.3
7	265	53.0	270	48.7		36.6	236	56.7		08.8	169	44.8		27.0	198	49.3		11.4
8	280	55.5	285	48.3		35.3	251	57.5		09.5	184	47.3		27.0	213	51.6		11.4
9	295	58.0	300	47.9		34.1	266	58.3		10.1	199	49.7		27.0	228	54.0		11.4
10	311	00.4	315	47.5		32.8	281	59.1		10.7	214	52.2		27.0	243	56.4		11.5
11	326	02.9	330	47.1	-3	31.5	296	59.9	+12	11.4	229	54.6	+23	27.0	258	58.7	+20	11.5
12	341	05.4	345	46.7	-3	30.3	312	00.6	+12	12.0	244	57.1	+23	27.0	274	01.1	+20	11.5
13	356	07.8	0	46.3		29.0	327	01.4		12.7	259	59.5		27.0	289	03.4		11.5
14	11	10.3	15	46.0		27.7	342	02.2		13.3	275	02.0		27.0	304	05.8		11.6
15	26	12.7	30	45.6		26.4	357	03.0		14.0	290	04.4		27.0	319	08.1		11.6
16	41	15.2	45	45.2		25.2	12	03.7		14.6	305	06.9		27.0	334	10.5		11.6
17	56	17.7	60	44.8	-3	23.9	27	04.5	+12	15.2	320	09.3	+23	27.0	349	12.8	+20	11.6
18	71	20.1	75	44.4	-3	22.6	42	05.3	+12	15.9	335	11.8	+23	27.0	4	15.2	+20	11.7
19	86	22.6	90	44.0		21.4	57	06.1		16.5	350	14.2		27.0	19	17.5		11.7
20	101	25.1	105	43.6		20.1	72	06.9		17.2	5	16.6		27.0	34	19.9		11.7
21	116	27.5	120	43.3		18.8	87	07.6		17.8	20	19.1		27.0	49	22.2		11.8
22	131	30.0	135	42.9		17.5	102	08.4		18.5	35	21.5		27.0	64	24.6		11.8
23	146	32.5	150	42.5		16.3	117	09.2		19.1	50	24.0		27.1	79	26.9		11.8
24	161	34.9	165	42.1	-3	15.0	132	10.0	+12	19.7	65	26.4	+23	27.1	94	29.3	+20	11.8
Dif	—		-4		+13		+8		+6		+24		0		+24		0	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 19 ^d 7 PHE { 4 ^h : 58 ^m 9 12 ^h : 58 ^m 6 20 ^h : 58 ^m 3												
	PMG: 12 ^h 11 ^m 7			SD: 16 ^h 1 PMG: 4 ^h 26 ^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	177	02.4	-6 35.5	295	47.8	-14 10.6		60 N	5 21	6 09	6 50	0 02	95	8 36	14	
1	192	02.5		310	16.3	22.7	121	58	23	08	47	** ** *		46	18	
2	207	02.6	33.6	324	44.7	34.7	120	56	24	07	45	** ** *		8 54	22	
3	222	02.8	32.6	339	13.1	46.5	118	54	26	07	42	** ** *		9 02	25	
4	237	02.9	31.6	353	41.5	-14 58.3	118	52	27	06	40	** ** *		09	27	
5	252	03.0	-6 30.7	8	09.9	-15 10.0	117	50	5 28	6 05	6 38	** ** *		9 16	29	
6	267	03.2	-6 29.7	22	38.3	-15 21.6	116	45	5 30	6 04	6 33	** ** *		9 29	34	
7	282	03.3	28.7	37	06.7	33.1	115	40	31	02	29	** ** *		40	37	
8	297	03.4	27.8	51	35.1	44.4	113	35	31	6 01	26	** ** *		50	40	
9	312	03.6	26.8	66	03.4	-15 55.7	113	30	31	5 59	23	23 53	62	9 59	42	
10	327	03.7	25.9	80	31.7	-16 06.9	112	20	30	56	18	35 59	59	10 14	46	
11	342	03.9	-6 24.9	95	00.0	-16 17.9	110	10 N	5 27	5 52	6 13	23 20	56	10 26	50	
12	357	04.0	-6 23.9	109	28.3	-16 28.9	110	0	5 23	5 48	6 08	23 06	54	10 39	53	
13	12	04.1	23.0	123	56.6	39.8	109	10 S	18	43	6 04	22 52	51	10 51	56	
14	27	04.3	22.0	138	24.8	-16 50.5	107	20	11	36	5 59	38 47		11 04	60	
15	42	04.4	21.0	152	53.0	-17 01.1	106	30	5 00	29	53	21 44		19	64	
16	57	04.5	20.1	167	21.3	11.6	105	35	4 53	24	49	11 42		28	66	
17	72	04.7	-6 19.1	181	49.4	-17 22.1	105	40	4 45	5 18	5 45	22 00	39	11 38	69	
18	87	04.8	-6 18.2	196	17.6	-17 32.4	103	45	4 35	5 11	5 41	21 47	36	11 50	72	
19	102	05.0	17.2	210	45.8	42.5	101	50	22	5 02	35	31 32		12 04	77	
20	117	05.1	16.2	225	13.9	-17 52.6	101	52	15	4 58	33	24 30		11	79	
21	132	05.2	15.3	239	42.1	-18 02.6	100	54	08	53	30	16 28		18	82	
22	147	05.4	14.3	254	10.2	12.4	98	56	4 00	48	27	21 07	25	26	85	
23	162	05.5	13.3	268	38.2	22.2	98	58	3 51	42	23	20 57	22	36	88	
24	177	05.6	-6 12.4	283	06.3	-18 31.8	96	60 S	3 39	4 35	5 19	20 45	18	12 47	92	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 13 ^h 11 ^m 5		Mag: -3.9 PMG: 12 ^h 58 ^m			Mag: +1.3 PMG: 15 ^h 11 ^m			Mag: -2.4 PMG: 19 ^h 35 ^m			Mag: +0.1 PMG: 17 ^h 39 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	°
0	161	34.9	165	42.1	-3 15.0	132	10.0	+12 19.7	65	26.4	+23 27.1	94	29.3	+20 11.8		
1	176	37.4	180	41.7	13.7	147	10.7	20.4	80	28.9	27.1	109	31.6	11.9		
2	191	39.8	195	41.3	12.5	162	11.5	21.0	95	31.3	27.1	124	34.0	11.9		
3	206	42.3	210	40.9	11.2	177	12.3	21.7	110	33.7	27.1	139	36.3	11.9		
4	221	44.8	225	40.6	09.9	192	13.1	22.3	125	36.2	27.1	154	38.7	11.9		
5	236	47.2	240	40.2	-3 08.6	207	13.8	+12 22.9	140	38.6	+23 27.1	169	41.0	+20 12.0		
6	251	49.7	255	39.8	-3 07.4	222	14.6	+12 23.6	155	41.1	+23 27.1	184	43.4	+20 12.0		
7	266	52.2	270	39.4	06.1	237	15.4	24.2	170	43.5	27.1	199	45.7	12.0		
8	281	54.6	285	39.0	04.8	252	16.2	24.9	185	45.9	27.1	214	48.1	12.0		
9	296	57.1	300	38.6	03.6	267	16.9	25.5	200	48.4	27.1	229	50.4	12.1		
10	311	59.6	315	38.3	02.3	282	17.7	26.1	215	50.8	27.1	244	52.8	12.1		
11	327	02.0	330	37.9	-3 01.0	297	18.5	+12 26.8	230	53.3	+23 27.1	259	55.1	+20 12.1		
12	342	04.5	345	37.5	-2 59.7	312	19.3	+12 27.4	245	55.7	+23 27.1	274	57.5	+20 12.2		
13	357	07.0	0	37.1	58.5	327	20.1	28.1	260	58.1	27.1	289	59.8	12.2		
14	12	09.4	15	36.7	57.2	342	20.8	28.7	276	00.6	27.1	305	02.2	12.2		
15	27	11.9	30	36.4	55.9	357	21.6	29.3	291	03.0	27.1	320	04.5	12.2		
16	42	14.3	45	36.0	54.6	12	22.4	30.0	306	05.5	27.1	335	06.9	12.3		
17	57	16.8	60	35.6	-2 53.4	27	23.2	+12 30.6	321	07.9	+23 27.1	350	09.2	+20 12.3		
18	72	19.3	75	35.2	-2 52.1	42	23.9	+12 31.3	336	10.3	+23 27.1	5	11.5	+20 12.3		
19	87	21.7	90	34.8	50.8	57	24.7	31.9	351	12.8	27.1	20	13.9	12.4		
20	102	24.2	105	34.4	49.5	72	25.5	32.5	6	15.2	27.1	35	16.2	12.4		
21	117	26.7	120	34.1	48.3	87	26.3	33.2	21	17.6	27.1	50	18.6	12.4		
22	132	29.1	135	33.7	47.0	102	27.0	33.8	36	20.1	27.1	65	20.9	12.4		
23	147	31.6	150	33.3	45.7	117	27.8	34.4	51	22.5	27.1	80	23.3	12.5		
24	162	34.1	165	32.9	-2 44.4	132	28.6	+12 35.1	66	24.9	+23 27.1	95	25.6	+20 12.5		
Dif	—		-4	+13		+8	+6		+24	0		+23	0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 20 ^d 7 PHE { 4 ^h : 58 ^o 0 12 ^h : 57 ^o 7 20 ^h : 57 ^o 4 R ^o : 53 ^m														
	PMG: 12 ^h 11 ^m 5			SD: 15 ^h 8 PMG: 5 ^h 19 ^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	05.6	-6 12.4	283	06.3	-18 31.8	95	60 N	17 37	18 19	19 07	1 37 89		8 50 22				
1	192	05.8		297	34.4 91	41.3 95		58	40	19	04	23 85		9 04 26				
2	207	05.9		312	02.4 90	50.7 94		56	42	19	02	12 81		16 29				
3	222	06.1		326	30.4 90	-18 59.9 92		54	44	20	19 01	1 02 78		27 31				
4	237	06.2		340	58.4 90	-19 09.1 92		52	46	20	18 59	0 53 76		36 34				
5	252	06.3	-6 07.6	355	26.4 90	-19 18.1 90		50	17 48	18 21	18 58	0 45 74		9 45 35				
6	267	06.5	-6 06.6	9	54.4 90	-19 27.0 89		45	17 52	18 22	18 56	0 28 70		10 03 39				
7	282	06.6		24	22.3 89	35.8 88		40	56	23	54	14 68		17 42				
8	297	06.8		38	50.3 90	44.5 87		35	17 59	24	54	0 03 64		30 44				
9	312	06.9		53	18.2 89	-19 53.0 85		30	18 02	26	53	** ** *		10 41 46				
10	327	07.0		67	46.1 89	-20 01.4 84		20	06	28	54	** ** *		11 00 48				
11	342	07.2	-6 01.8	82	14.0 89	-20 09.7 83		10 N	18 11	18 32	18 56	** ** *		11 16 51				
12	357	07.3	-6 00.8	96	41.8 88	-20 17.9 80		0	18 15	18 36	19 00	** ** *		11 32 53				
13	12	07.5	-5 59.8	111	09.7 89	25.9 82		10 S	19	40	05	23 43 52		11 47 56				
14	27	07.6		58.9	125 37.5 88	33.9 80		20	24	46	12	25 50		12 04 58				
15	42	07.8		57.9	140 05.4 89	41.7 78		30	29	53	22	23 05 47		23 61				
16	57	07.9		56.9	154 33.2 88	49.3 76		35	32	18 58	28	22 53 46		34 63				
17	72	08.0	-5 56.0	169	01.0 88	-20 56.9 76		40	18 36	19 03	19 36	22 39 45		12 47 65				
18	87	08.2	-5 55.0	183	28.8 88	-21 04.3 74		45	18 40	19 10	19 45	22 23 42		13 02 68				
19	102	08.3		54.0	197 56.5 87	11.6 73		50	45	18	19 58	22 03 40		21 71				
20	117	08.5		53.1	212 24.3 88	18.8 72		52	47	22	20 04	21 54 38		30 72				
21	132	08.6		52.1	226 52.1 88	25.8 69		54	50	26	11	44 36		40 74				
22	147	08.7		51.1	241 19.8 87	32.7 70		56	53	31	18	32 34		13 51 77				
23	162	08.9		50.2	255 47.5 87	39.5 68		58	18 56	37	27	19 30		14 04 80				
24	177	09.0	-5 49.2	270	15.2 87	-21 46.2 67		60 S	19 00	19 43	20 38	21 03 27		14 19 84				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 07 ^m 6		Mag: -3.9 PMG: 12 ^h 58 ^m			Mag: +1.3 PMG: 15 ^h 09 ^m			Mag: -2.4 PMG: 19 ^h 31 ^m			Mag: +0.1 PMG: 17 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	162	34.1	165	32.9	-2	44.4	132	28.6	+12	35.1	66	24.9	+23	27.1	95	25.6	+20	12.5
1	177	36.5	180	32.5		43.2	147	29.4		35.7	81	27.4		27.1	110	28.0		12.5
2	192	39.0	195	32.2		41.9	162	30.1		36.3	96	29.8		27.1	125	30.3		12.5
3	207	41.5	210	31.8		40.6	177	30.9		37.0	111	32.2		27.1	140	32.7		12.6
4	222	43.9	225	31.4		39.3	192	31.7		37.6	126	34.7		27.1	155	35.0		12.6
5	237	46.4	240	31.0	-2	38.1	207	32.5	+12	38.3	141	37.1	+23	27.1	170	37.3	+20	12.6
6	252	48.8	255	30.6	-2	36.8	222	33.2	+12	38.9	156	39.5	+23	27.1	185	39.7	+20	12.7
7	267	51.3	270	30.3		35.5	237	34.0		39.5	171	42.0		27.1	200	42.0		12.7
8	282	53.8	285	29.9		34.2	252	34.8		40.2	186	44.4		27.2	215	44.4		12.7
9	297	56.2	300	29.5		33.0	267	35.5		40.8	201	46.8		27.2	230	46.7		12.7
10	312	58.7	315	29.1		31.7	282	36.3		41.4	216	49.3		27.2	245	49.1		12.8
11	328	01.2	330	28.7	-2	30.4	297	37.1	+12	42.1	231	51.7	+23	27.2	260	51.4	+20	12.8
12	343	03.6	345	28.4	-2	29.1	312	37.9	+12	42.7	246	54.1	+23	27.2	275	53.8	+20	12.8
13	358	06.1	0	28.0		27.8	327	38.6		43.3	261	56.5		27.2	290	56.1		12.9
14	13	08.6	15	27.6		26.6	342	39.4		44.0	276	59.0		27.2	305	58.4		12.9
15	28	11.0	30	27.2		25.3	357	40.2		44.6	292	01.4		27.2	321	00.8		12.9
16	43	13.5	45	26.9		24.0	12	41.0		45.2	307	03.8		27.2	336	03.1		12.9
17	58	15.9	60	26.5	-2	22.7	27	41.7	+12	45.9	322	06.3	+23	27.2	351	05.5	+20	13.0
18	73	18.4	75	26.1	-2	21.5	42	42.5	+12	46.5	337	08.7	+23	27.2	6	07.8	+20	13.0
19	88	20.9	90	25.7		20.2	57	43.3		47.1	352	11.1		27.2	21	10.2		13.0
20	103	23.3	105	25.3		18.9	72	44.1		47.8	7	13.5		27.2	36	12.5		13.0
21	118	25.8	120	25.0		17.6	87	44.8		48.4	22	16.0		27.2	51	14.8		13.1
22	133	28.3	135	24.6		16.3	102	45.6		49.0	37	18.4		27.2	66	17.2		13.1
23	148	30.7	150	24.2		15.1	117	46.4		49.7	52	20.8		27.2	81	19.5		13.1
24	163	33.2	165	23.8	-2	13.8	132	47.1	+12	50.3	67	23.2	+23	27.2	96	21.9	+20	13.2
Dif	—		-4		+13		+8		+6		+24		0		+23		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 21 ^d 7 PHE { 4 ^h : 57/1 12 ^h : 56/8 20 ^h : 56/5										
	PMG: 12 ^h 11 ^m 3			SD: 15 ^h 6 PMG: 6 ^h 12 ^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		h m m	
0	177	09.0	-5 49.2	270	15.2	-21 46.2	60 N	5 15	6 03	6 44	3 06 78		9 12 33	
1	192	09.2	48.2	284	42.9	87 52.7	58	17	03	42	2 48 74		30 37	
2	207	09.3	47.3	299	10.6	87 -21 59.1	56	19	02	39	33 72		45 39	
3	222	09.5	46.3	313	38.3	87 -22 05.4	54	21	02	37	20 70		9 58 4	
4	237	09.6	45.3	328	06.0	87 11.5	52	23	02	35	2 09 68		10 10 42	
5	252	09.8	-5 44.3	342	33.7	87 -22 17.5	50	5 24	6 01	6 33	1 59 67		10 20 44	
6	267	09.9	-5 43.4	357	01.4	87 -22 23.4	45	5 26	6 00	6 30	1 38 65		10 42 45	
7	282	10.0	42.4	11	29.0	86 29.2	40	28	5 59	26	22 62		10 59 47	
8	297	10.2	41.4	25	56.7	87 34.8	35	29	58	23	1 07 61		11 14 48	
9	312	10.3	40.5	40	24.3	86 40.2	30	29	57	21	0 55 60		27 49	
10	327	10.5	39.5	54	52.0	87 45.6	20	29	54	16	34 58		11 48 52	
11	342	10.6	-5 38.5	69	19.6	86 -22 50.8	10 N	5 26	5 51	6 12	0 16 56		12 07 53	
12	357	10.8	-5 37.6	83	47.3	87 -22 55.9	0	5 23	5 47	6 08	0 00 53		12 25 54	
13	12	10.9	36.6	98	14.9	86 -23 00.9	10 S	18	43	6 04	** ** *		12 43 55	
14	27	11.1	35.6	112	42.5	86 05.7	20	11	37	5 59	** ** *		13 02 56	
15	42	11.2	34.7	127	10.2	87 10.4	30	5 02	30	54	23 52 51		24 58	
16	57	11.3	33.7	141	37.8	86 14.9	35	4 55	26	51	39 50		37 58	
17	72	11.5	-5 32.7	156	05.5	87 -23 19.3	40	4 48	5 20	5 48	23 24 49		13 52 59	
18	87	11.6	-5 31.7	170	33.1	86 -23 23.6	45	4 38	5 14	5 44	23 05 49		14 10 60	
19	102	11.8	30.8	185	00.7	86 27.8	50	26	06	39	22 43 47		32 62	
20	117	11.9	29.8	199	28.4	87 31.8	52	20	5 02	36	32 47		42 64	
21	132	12.1	28.8	213	56.0	86 35.7	54	13	4 57	34	20 46		14 54 65	
22	147	12.2	27.9	228	23.7	87 39.4	56	4 05	53	31	22 06 45		15 08 66	
23	162	12.4	26.9	242	51.4	87 43.1	58	3 56	47	28	21 49 44		24 67	
24	177	12.5	-5 25.9	257	19.0	86 -23 46.6	60 S	3 46	4 41	5 24	21 30 41		15 43 70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 03 ^m 6		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: +1.3 PMG: 15 ^h 08 ^m		Mag: -2.4 PMG: 19 ^h 27 ^m		Mag: +0.1 PMG: 17 ^h 32 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	163	33.2	165	23.8	-2 13.8	132 47.1	+12 50.3	67 23.2	+23 27.2	96 21.9
1	178	35.7	180	23.5	12.5	147 47.9	50.9	82 25.7	27.2	111 24.2
2	193	38.1	195	23.1	11.2	162 48.7	51.6	97 28.1	27.2	126 26.5
3	208	40.6	210	22.7	10.0	177 49.5	52.2	112 30.5	27.2	141 28.9
4	223	43.1	225	22.3	08.7	192 50.2	52.8	127 32.9	27.2	156 31.2
5	238	45.5	240	22.0	-2 07.4	207 51.0	+12 53.4	142 35.4	+23 27.2	171 33.6
6	253	48.0	255	21.6	-2 06.1	222 51.8	+12 54.1	157 37.8	+23 27.2	186 35.9
7	268	50.4	270	21.2	04.8	237 52.6	54.7	172 40.2	27.2	201 38.2
8	283	52.9	285	20.8	03.6	252 53.3	55.3	187 42.6	27.2	216 40.6
9	298	55.4	300	20.4	02.3	267 54.1	56.0	202 45.0	27.2	231 42.9
10	313	57.8	315	20.1	-2 01.0	282 54.9	56.6	217 47.5	27.2	246 45.3
11	329	00.3	330	19.7	-1 59.7	297 55.6	+12 57.2	232 49.9	+23 27.2	261 47.6
12	344	02.8	345	19.3	-1 58.4	312 56.4	+12 57.9	247 52.3	+23 27.2	276 49.9
13	359	05.2	0 18.9	57.2	327 57.2	58.5	262 54.7	27.2	291 52.3	13.5
14	14	07.7	15 18.6	55.9	342 58.0	59.1	277 57.2	27.2	306 54.6	13.6
15	29	10.2	30 18.2	54.6	357 58.7	+12 59.7	292 59.6	27.2	321 57.0	13.6
16	44	12.6	45 17.8	53.3	12 59.5	+13 00.4	308 02.0	27.2	336 59.3	13.6
17	59	15.1	60 17.4	-1 52.0	28 00.3	+13 01.0	323 04.4	+23 27.2	352 01.6	+20 13.6
18	74	17.6	75 17.1	-1 50.8	43 01.0	+13 01.6	338 06.8	+23 27.2	7 04.0	+20 13.7
19	89	20.0	90 16.7	49.5	58 01.8	02.3	353 09.2	27.2	22 06.3	13.7
20	104	22.5	105 16.3	48.2	73 02.6	02.9	8 11.7	27.2	37 08.6	13.7
21	119	24.9	120 15.9	46.9	88 03.3	03.5	23 14.1	27.2	52 11.0	13.8
22	134	27.4	135 15.6	45.6	103 04.1	04.1	38 16.5	27.2	67 13.3	13.8
23	149	29.9	150 15.2	44.4	118 04.9	04.8	53 18.9	27.2	82 15.7	13.8
24	164	32.3	165 14.8	-1 43.1	133 05.7	+13 05.4	68 21.3	+23 27.3	97 18.0	+20 13.8
Dif	—		-4 +13		+8 +6		+24 0		+23 0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 22 ^d 7 PHE { 4 ^h : 56 ^s /3 12 ^h : 56 ^s /1 20 ^h : 55 ^s /8											
	PMG: 12 ^h 11 ^m 0			SD: 15 ^h 4 PMG: 7 ^h 06 ^m 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	h m m	
0	177	12.5	-5 25.9	257	19.0	-23 46.6	33	60 N	17 42	18 23	19 12	4 24 60	9 45 51		
1	192	12.7	25.0	271	46.7	49.9	87	58	44	23	09	4 02 59	10 07 51		
2	207	12.8	24.0	286	14.4	53.1	32	56	46	23	07	3 45 58	24 52		
3	222	13.0	23.0	300	42.1	56.2	31	54	48	24	05	30 58	39 52		
4	237	13.1	22.0	315	09.8	59.2	30	52	50	24	03	17 58	10 52 52		
5	252	13.3	-5 21.1	329	37.5	02.0	28	50	17 52	18 24	19 01	3 06 57	11 04 52		
6	267	13.4	-5 20.1	344	05.2	04.7	27	45	17 55	18 24	18 58	2 43 56	11 27 53		
7	282	13.6	19.1	358	33.0	07.2	25	40	17 58	25	56	24 56	11 46 53		
8	297	13.7	18.1	13	00.7	09.6	24	35	18 01	26	55	2 08 56	12 02 53		
9	312	13.9	17.2	27	28.5	11.9	23	30	03	27	55	1 55 55	16 53		
10	327	14.0	16.2	41	56.3	14.1	22	20	07	29	55	32 54	12 40 52		
11	342	14.2	-5 15.2	56	24.1	16.1	20	10 N	18 11	18 32	18 56	1 12 54	13 00 53		
12	357	14.3	-5 14.3	70	51.9	18.0	19	0	18 14	18 35	18 59	0 53 53	13 19 53		
13	12	14.5	13.3	85	19.7	19.7	17	10 S	18	39	19 04	35 52	38 53		
14	27	14.6	12.3	99	47.6	21.3	16	20	22	44	10	0 15 52	13 58 53		
15	42	14.8	11.3	114	15.4	22.8	15	30	27	51	19	** ** *	14 22 52		
16	57	14.9	10.4	128	43.3	24.2	14	35	29	18 55	25	** ** *	35 53		
17	72	15.1	-5 09.4	143	11.3	25.4	12	40	18 33	19 00	19 32	** ** *	14 51 53		
18	87	15.2	-5 08.4	157	39.2	26.5	11	45	18 36	19 06	19 41	23 54 55	15 10 53		
19	102	15.4	07.4	172	07.2	27.5	10	50	41	14	53	30 56	34 52		
20	117	15.5	06.5	186	35.1	28.3	8	52	43	17	59	19 56	46 51		
21	132	15.7	05.5	201	03.1	29.0	7	54	45	21	05	23 06 56	15 59 51		
22	147	15.8	04.5	215	31.2	29.5	5	56	48	26	12	22 51 57	16 14 51		
23	162	16.0	03.6	229	59.2	30.0	5	58	50	31	21	33 58	31 51		
24	177	16.1	-5 02.6	244	27.3	30.3	3	60 S	18 54	19 37	20 31	22 11 59	16 53 50		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 59 ^m 7		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: +1.3 PMG: 15 ^h 07 ^m		Mag: -2.4 PMG: 19 ^h 23 ^m		Mag: +0.1 PMG: 17 ^h 28 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	164	32.3	165	14.8	-1 43.1	133	05.7	+13 05.4	68	21.3	+23 27.3	97	18.0	+20 13.8
1	179	34.8	180	14.4	41.8	148	06.4	06.0	83	23.7	27.3	112	20.3	13.9
2	194	37.3	195	14.1	40.5	163	07.2	06.6	98	26.2	27.3	127	22.7	13.9
3	209	39.7	210	13.7	39.2	178	08.0	07.3	113	28.6	27.3	142	25.0	13.9
4	224	42.2	225	13.3	37.9	193	08.7	07.9	128	31.0	27.3	157	27.3	14.0
5	239	44.7	240	13.0	-1 36.7	208	09.5	+13 08.5	143	33.4	+23 27.3	172	29.7	+20 14.0
6	254	47.1	255	12.6	-1 35.4	223	10.3	+13 09.1	158	35.8	+23 27.3	187	32.0	+20 14.0
7	269	49.6	270	12.2	34.1	238	11.1	09.8	173	38.2	27.3	202	34.3	14.1
8	284	52.1	285	11.8	32.8	253	11.8	10.4	188	40.6	27.3	217	36.7	14.1
9	299	54.5	300	11.5	31.5	268	12.6	11.0	203	43.1	27.3	232	39.0	14.1
10	314	57.0	315	11.1	30.3	283	13.4	11.6	218	45.5	27.3	247	41.3	14.1
11	329	59.4	330	10.7	-1 29.0	298	14.1	+13 12.3	233	47.9	+23 27.3	262	43.7	+20 14.2
12	345	01.9	345	10.3	-1 27.7	313	14.9	+13 12.9	248	50.3	+23 27.3	277	46.0	+20 14.2
13	0	04.4	0	10.0	26.4	328	15.7	13.5	263	52.7	27.3	292	48.4	14.2
14	15	06.8	15	09.6	25.1	343	16.4	14.1	278	55.1	27.3	307	50.7	14.3
15	30	09.3	30	09.2	23.8	358	17.2	14.8	293	57.5	27.3	322	53.0	14.3
16	45	11.8	45	08.8	22.6	13	18.0	15.4	308	59.9	27.3	337	55.4	14.3
17	60	14.2	60	08.5	-1 21.3	28	18.7	+13 16.0	324	02.3	+23 27.3	352	57.7	+20 14.3
18	75	16.7	75	08.1	-1 20.0	43	19.5	+13 16.6	339	04.8	+23 27.3	8	00.0	+20 14.4
19	90	19.2	90	07.7	18.7	58	20.3	17.3	354	07.2	27.3	23	02.4	14.4
20	105	21.6	105	07.4	17.4	73	21.1	17.9	9	09.6	27.3	38	04.7	14.4
21	120	24.1	120	07.0	16.2	88	21.8	18.5	24	12.0	27.3	53	07.0	14.5
22	135	26.5	135	06.6	14.9	103	22.6	19.1	39	14.4	27.3	68	09.3	14.5
23	150	29.0	150	06.2	13.6	118	23.4	19.8	54	16.8	27.3	83	11.7	14.5
24	165	31.5	165	05.9	-1 12.3	133	24.1	+13 20.4	69	19.2	+23 27.3	98	14.0	+20 14.5
Dif	—		-4	+13		+8	+6		+24	0		+23		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16 ^h 1			Edad: 23 ^d 7	PHE { 4 ^h : 55 ^h /6 12 ^h : 55 ^h /4 20 ^h : 55 ^h /2															
	PMG: 12 ^h 10 ^m 8					SD: 15 ^h 2		PMG: 7 ^h 59 ^m			R ^o : 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	16.1	-5	244	27.3	-24	30.3	60 N	5	09	5	57	6	39	5	24	40	10	36	66
1	192	16.3		258	55.5		30.5	58	12		57	36		5	01	43	10	58	64	
2	207	16.4	-5	273	23.6		30.5	56	14		57	34		4	43	44	11	16	62	
3	222	16.6	-4	287	51.8		30.4	54	16		57	32			28	45		31	61	
4	237	16.7		302	20.0		30.2	52	18		57	31			15	46		44	60	
5	252	16.9	-4	316	48.2	-24	29.9	50	5	20	5	57	6	29	4	03	47	11	56	59
6	267	17.0	-4	331	16.5	-24	29.4	45	5	23	5	57	6	26	3	39	48	12	20	57
7	282	17.2		345	44.8		28.8	40	25		56	23			20	48		39	56	
8	297	17.3		0	13.2		28.1	35	26		55	21		3	04	49	12	55	55	
9	312	17.5		14	41.6		27.2	30	27		55	18		2	50	50	13	09	55	
10	327	17.6		29	10.0		26.2	20	27		52	15			26	51		32	54	
11	342	17.8	-4	43	38.4	-24	25.1	10 N	5	26	5	50	6	11	2	06	51	13	53	52
12	357	17.9	-4	58	06.9	-24	23.9	0	5	23	5	47	6	08	1	46	52	14	12	51
13	12	18.1		72	35.4		22.5	10 S	18		43	04			27	53		31	50	
14	27	18.2		87	04.0		21.1	20	12		38	6	00	1	07	53	14	51	49	
15	42	18.4		101	32.6		19.5	30	5	03	31	5	56	0	43	54	15	14	47	
16	57	18.6		116	01.3		17.7	35	4	57	27	53			29	55		28	46	
17	72	18.7	-4	130	30.0	-24	15.9	40	4	50	5	22	5	50	0	13	55	15	44	45
18	87	18.9	-4	144	58.7	-24	13.9	45	4	41	5	16	5	46	**	**	**	16	03	43
19	102	19.0		159	27.5		11.8	50	29		09	42		**	**	**	**	26	42	
20	117	19.2		173	56.3		9.6	52	24		05	40		**	**	**	**	37	41	
21	132	19.3		188	25.2		07.2	54	17		5	02	38	**	**	**	**	16	50	39
22	147	19.5		202	54.1		04.8	56	10		4	57	35	23	48	66	17	05	37	
23	162	19.6		217	23.1	-24	02.2	58	4	02	52	33			31	69		22	36	
24	177	19.8	-4	231	52.1	-23	59.5	60 S	3	52	4	46	5	30	23	10	72	17	43	33
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 12 ^h 55 ^m 8		Mag: -3.9 PMG: 13 ^h 00 ^m			Mag: +1.3 PMG: 15 ^h 06 ^m			Mag: -2.4 PMG: 19 ^h 20 ^m			Mag: +0.1 PMG: 17 ^h 24 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	165	31.5	165	05.9	-1	12.3	133	24.1	+13	20.4	69	19.2	+23	27.3	98	14.0	+20	14.5		
1	180	33.9	180	05.5		11.0	148	24.9		21.0	84	21.6		27.3	113	16.3		14.6		
2	195	36.4	195	05.1		09.7	163	25.7		21.6	99	24.0		27.3	128	18.7		14.6		
3	210	38.9	210	04.8		08.5	178	26.4		22.2	114	26.4		27.3	143	21.0		14.6		
4	225	41.3	225	04.4		07.2	193	27.2		22.9	129	28.8		27.3	158	23.3		14.7		
5	240	43.8	240	04.0	-1	05.9	208	28.0	+13	23.5	144	31.2	+23	27.3	173	25.7	+20	14.7		
6	255	46.3	255	03.6	-1	04.6	223	28.7	+13	24.1	159	33.6	+23	27.3	188	28.0	+20	14.7		
7	270	48.7	270	03.3		03.3	238	29.5		24.7	174	36.0		27.3	203	30.3		14.8		
8	285	51.2	285	02.9		02.0	253	30.3		25.3	189	38.5		27.3	218	32.7		14.8		
9	300	53.7	300	02.5	-1	00.8	268	31.0		26.0	204	40.9		27.3	233	35.0		14.8		
10	315	56.1	315	02.2	-0	59.5	283	31.8		26.6	219	43.3		27.3	248	37.3		14.8		
11	330	58.6	330	01.8	-0	58.2	298	32.6	+13	27.2	234	45.7	+23	27.3	263	39.7	+20	14.9		
12	346	01.0	345	01.4	-0	56.9	313	33.3	+13	27.8	249	48.1	+23	27.3	278	42.0	+20	14.9		
13	1	03.5	0	01.0		55.6	328	34.1		28.4	264	50.5		27.3	293	44.3		14.9		
14	16	06.0	15	00.7		54.3	343	34.9		29.1	279	52.9		27.3	308	46.6		15.0		
15	31	08.4	30	00.3		53.1	358	35.6		29.7	294	55.3		27.3	323	49.0		15.0		
16	46	10.9	44	59.9		51.8	13	36.4		30.3	309	57.7		27.3	338	51.3		15.0		
17	61	13.4	59	59.6	-0	50.5	28	37.2	+13	30.9	325	00.1	+23	27.3	353	53.6	+20	15.1		
18	76	15.8	74	59.2	-0	49.2	43	37.9	+13	31.5	340	02.5	+23	27.3	8	56.0	+20	15.1		
19	91	18.3	89	58.8		47.9	58	38.7		32.1	355	04.9		27.3	23	58.3		15.1		
20	106	20.8	104	58.5		46.6	73	39.5		32.8	10	07.3		27.3	39	00.6		15.1		
21	121	23.2	119	58.1		45.3	88	40.2		33.4	25	09.7		27.3	54	02.9		15.2		
22	136	25.7	134	57.7		44.1	103	41.0		34.0	40	12.1		27.3	69	05.3		15.2		
23	151	28.2	149	57.3		42.8	118	41.8		34.6	55	14.5		27.3	84	07.6		15.2		
24	166	30.6	164	57.0	-0	41.5	133	42.5	+13	35.2	70	16.9	+23	27.3	99	09.9	+20	15.3		
Dif	—		-4		+13	+8		+6	+24		0		+23							

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 24 ^d 7 PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 7														
	PMG: 12 ^h 10 ^m 6			SD: 15 ^h 0 PMG: 8 ^h 51 ^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	177	19.8	-4 39.2	231	52.1	-23 59.5	28	60 N	17 47	18 28	19 17	6 04 25	11 42 76					
1	192	19.9		246	21.1 ¹⁰⁰		56.7 ²⁸	58	49	28	14	5 44 29	12 02 72					
2	207	20.1		260	50.2 ¹⁰¹		53.7 ³⁰	56	51	28	11	27 32	18 70					
3	222	20.3		275	19.4 ¹⁰²		50.7 ³⁰	54	52	27	08	13 34	32 68					
4	237	20.4		289	48.6 ¹⁰²		47.5 ³²	52	54	27	06	5 01 35	44 66					
5	252	20.6	-4 34.3	304	17.8 ¹⁰²	-23 44.2	33	50	17 55	18 27	19 05	4 50 37	12 55 64					
6	267	20.7	-4 33.3	318	47.1 ¹⁰³	-23 40.8	34	45	17 58	18 27	19 01	4 27 39	13 17 62					
7	282	20.9		333	16.5 ¹⁰⁴		37.3 ³⁵	40	18 00	27	18 59	4 08 42	35 59					
8	297	21.0		347	45.9 ¹⁰⁴		33.6 ³⁷	35	02	28	57	3 53 43	13 50 58					
9	312	21.2		2	15.3 ¹⁰⁴		29.9 ³⁷	30	04	28	56	40 44	14 04 55					
10	327	21.3		16	44.8 ¹⁰⁵		26.0 ³⁹	20	08	30	55	3 17 46	26 53					
11	342	21.5	-4 28.4	31	14.4 ¹⁰⁶	-23 22.0	40	10 N	18 11	18 32	18 56	2 57 48	14 45 51					
12	357	21.7	-4 27.4	45	44.0 ¹⁰⁶	-23 17.9	41	0	18 14	18 35	18 59	2 38 50	15 03 49					
13	12	21.8		60	13.7 ¹⁰⁷		13.7 ⁴²	10 S	17	38	19 03	20 51	21 46					
14	27	22.0		74	43.4 ¹⁰⁷		09.4 ⁴³	20	20	42	08	2 00 53	15 40 44					
15	42	22.1		89	13.2 ¹⁰⁸		05.0 ⁴⁴	30	24	48	17	1 37 55	16 01 42					
16	57	22.3		103	43.0 ¹⁰⁸	-23 00.4	46	35	27	52	22	24 56	14 40					
17	72	22.4	-4 22.6	118	12.9 ¹⁰⁹	-22 55.8	46	40	18 30	18 57	19 29	1 08 58	16 29 38					
18	87	22.6	-4 21.6	132	42.9 ¹¹⁰	-22 51.1	47	45	18 33	19 02	19 37	0 49 60	16 46 36					
19	102	22.8		147	12.9 ¹¹⁰		46.2 ⁴⁹	50	37	09	48	26 62	17 08 32					
20	117	22.9		161	42.9 ¹¹⁰		41.2 ⁵⁰	52	38	13	19 54	15 63	18 31					
21	132	23.1		176	13.0 ¹¹¹		36.2 ⁵⁰	54	40	16	20 00	0 03 64	29 30					
22	147	23.2		190	43.2 ¹¹²		31.0 ⁵²	56	42	20	07	** ** *	42 28					
23	162	23.4		205	13.4 ¹¹²		25.7 ⁵³	58	45	25	14	** ** *	17 58 24					
24	177	23.6	-4 15.7	219	43.7 ¹¹³	-22 20.3	54	60 S	18 48	19 30	20 23	** ** *	18 16 20					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 12 ^h 51 ^m 8		Mag: -3.9 PMG: 13 ^h 01 ^m		Mag: +1.3 PMG: 15 ^h 04 ^m		Mag: -2.4 PMG: 19 ^h 16 ^m		Mag: +0.1 PMG: 17 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	166	30.6	164	57.0	-0	41.5	133	42.5	+13	35.2	70	16.9	+23	27.3	99	09.9	+20	15.3
1	181	33.1	179	56.6		40.2	148	43.3		35.8	85	19.3		27.3	114	12.3		15.3
2	196	35.5	194	56.2		38.9	163	44.1		36.5	100	21.7		27.3	129	14.6		15.3
3	211	38.0	209	55.9		37.6	178	44.8		37.1	115	24.1		27.3	144	16.9		15.4
4	226	40.5	224	55.5		36.4	193	45.6		37.7	130	26.5		27.3	159	19.2		15.4
5	241	42.9	239	55.1	-0	35.1	208	46.4	+13	38.3	145	28.9	+23	27.3	174	21.6	+20	15.4
6	256	45.4	254	54.8	-0	33.8	223	47.1	+13	38.9	160	31.3	+23	27.3	189	23.9	+20	15.4
7	271	47.9	269	54.4		32.5	238	47.9		39.5	175	33.7		27.3	204	26.2		15.5
8	286	50.3	284	54.0		31.2	253	48.7		40.2	190	36.0		27.3	219	28.5		15.5
9	301	52.8	299	53.7		29.9	268	49.4		40.8	205	38.4		27.3	234	30.9		15.5
10	316	55.3	314	53.3		28.6	283	50.2		41.4	220	40.8		27.3	249	33.2		15.6
11	331	57.7	329	52.9	-0	27.4	298	51.0	+13	42.0	235	43.2	+23	27.4	264	35.5	+20	15.6
12	347	00.2	344	52.5	-0	26.1	313	51.7	+13	42.6	250	45.6	+23	27.4	279	37.8	+20	15.6
13	2	02.7	359	52.2		24.8	328	52.5		43.2	265	48.0		27.4	294	40.2		15.7
14	17	05.1	14	51.8		23.5	343	53.3		43.8	280	50.4		27.4	309	42.5		15.7
15	32	07.6	29	51.4		22.2	358	54.0		44.5	295	52.8		27.4	324	44.8		15.7
16	47	10.0	44	51.1		20.9	13	54.8		45.1	310	55.2		27.4	339	47.1		15.7
17	62	12.5	59	50.7	-0	19.6	28	55.5	+13	45.7	325	57.6	+23	27.4	354	49.5	+20	15.8
18	77	15.0	74	50.3	-0	18.4	43	56.3	+13	46.3	341	00.0	+23	27.4	9	51.8	+20	15.8
19	92	17.4	89	50.0		17.1	58	57.1		46.9	356	02.4		27.4	24	54.1		15.8
20	107	19.9	104	49.6		15.8	73	57.8		47.5	11	04.8		27.4	39	56.4		15.9
21	122	22.4	119	49.2		14.5	88	58.6		48.1	26	07.2		27.4	54	58.8		15.9
22	137	24.8	134	48.9		13.2	103	59.4		48.7	41	09.5		27.4	70	01.1		15.9
23	152	27.3	149	48.5		11.9	119	00.1		49.3	56	11.9		27.4	85	03.4		16.0
24	167	29.8	164	48.1	-0	10.7	134	00.9	+13	50.0	71	14.3	+23	27.4	100	05.7	+20	16.0
Dif	—		-4	+13		+8	+6		+24		0		+23					

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 26 ^d 7 PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 2 20 ^h : 54 ^h 1 R°: 44 ^m											
	PMG: 12 ^h 10 ^m 0			SD: 14 ^h 8 PMG: 10 ^h 27 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	27.4	-3 52.2	208	08.7	-19 41.8	77	60 N	17 52	18 33	19 22	6 46 10	14 19 80		
1	192	27.6		222	40.4 ¹²⁷	34.1	78	58	53	32	18	33 14	31 76		
2	207	27.7	50.2	237	12.3 ¹²⁹	26.3	79	56	55	32	15	22 17	41 74		
3	222	27.9	49.2	251	44.2 ¹²⁹	18.4	80	54	56	31	12	12 20	50 77		
4	237	28.1	48.2	266	16.2 ¹³⁰	10.4	81	52	57	31	10	6 03 22	14 59 68		
5	252	28.2	-3 47.3	280	48.2 ¹³⁰	-19 02.3	81	50	17 58	18 30	19 08	5 56 23	15 06 67		
6	267	28.4	-3 46.3	295	20.3 ¹³¹	-18 54.2	81	45	18 00	18 30	19 04	5 39 27	15 21 63		
7	282	28.5	45.3	309	52.5 ¹³²	45.9	83	40	02	29	19 01	25 31	34 60		
8	297	28.7	44.3	324	24.7 ¹³²	37.6	83	35	04	29	18 59	14 32	45 57		
9	312	28.9	43.3	338	56.9 ¹³²	29.3	83	30	06	29	57	5 03 35	15 55 54		
10	327	29.0	42.4	353	29.3 ¹³⁴	20.8	85	20	08	30	56	4 46 38	16 11 50		
11	342	29.2	-3 41.4	8	01.7 ¹³⁴	-18 12.3	87	10 N	18 11	18 32	18 56	4 30 42	16 25 47		
12	357	29.4	-3 40.4	22	34.1 ¹³⁴	-18 03.6	85	0	18 13	18 34	18 58	4 16 45	16 38 44		
13	12	29.5	39.4	37	06.6 ¹³⁵	-17 55.0	86	10 S	16	37	19 01	4 01 48	16 51 41		
14	27	29.7	38.4	51	39.2 ¹³⁶	46.2	88	20	19	41	07	3 46 51	17 05 37		
15	42	29.8	37.4	66	11.8 ¹³⁶	37.4	88	30	22	46	14	28 55	20 34		
16	57	30.0	36.5	80	44.5 ¹³⁷	28.4	90	35	24	49	19	17 58	30 31		
17	72	30.2	-3 35.5	95	17.2 ¹³⁷	-17 19.5	89	40	18 26	18 54	19 26	3 05 60	17 40 28		
18	87	30.3	-3 34.5	109	50.0 ¹³⁸	-17 10.4	91	45	18 29	18 59	19 34	2 51 63	17 52 25		
19	102	30.5	33.5	124	22.8 ¹³⁸	-17 01.3	91	50	32	19 05	44	34 67	18 07 21		
20	117	30.7	32.5	138	55.7 ¹³⁹	-16 52.1	92	52	34	08	49	26 68	13 20		
21	132	30.8	31.5	153	28.7 ¹⁴⁰	42.8	93	54	35	11	19 54	16 71	21 17		
22	147	31.0	30.6	168	01.7 ¹⁴⁰	33.5	93	56	37	15	20 01	2 06 74	29 15		
23	162	31.2	29.6	182	34.8 ¹⁴¹	24.1	94	58	39	19	08	1 54 77	39 12		
24	177	31.3	-3 28.6	197	07.9 ¹⁴¹	-16 14.6	95	60 S	18 41	19 24	20 16	1 40 81	18 50 9		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 44 ^m 0		Mag: -3.9 PMG: 13 ^h 02 ^m			Mag: +1.3 PMG: 15 ^h 02 ^m			Mag: -2.4 PMG: 19 ^h 08 ^m			Mag: +0.1 PMG: 17 ^h 13 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	168	28.9	164 39.3	+0 20.2	134 19.2	+14 04.6	72 11.6	+23 27.4	101 01.4	+20 16.7					
1	183	31.4	179 38.9	21.5	149 20.0	05.2	87 13.9	27.4	116 03.8	16.8					
2	198	33.8	194 38.6	22.8	164 20.7	05.8	102 16.3	27.4	131 06.1	16.8					
3	213	36.3	209 38.2	24.1	179 21.5	06.4	117 18.7	27.4	146 08.4	16.8					
4	228	38.8	224 37.8	25.4	194 22.3	07.0	132 21.1	27.4	161 10.7	16.9					
5	243	41.2	239 37.5	+0 26.6	209 23.0	+14 07.6	147 23.5	+23 27.4	176 13.0	+20 16.9					
6	258	43.7	254 37.1	+0 27.9	224 23.8	+14 08.2	162 25.8	+23 27.4	191 15.4	+20 16.9					
7	273	46.1	269 36.7	29.2	239 24.5	08.8	177 28.2	27.4	206 17.7	16.9					
8	288	48.6	284 36.4	30.5	254 25.3	09.4	192 30.6	27.4	221 20.0	17.0					
9	303	51.1	299 36.0	31.8	269 26.1	10.0	207 33.0	27.4	236 22.3	17.0					
10	318	53.5	314 35.6	33.1	284 26.8	10.6	222 35.4	27.4	251 24.6	17.0					
11	333	56.0	329 35.3	+0 34.4	299 27.6	+14 11.2	237 37.7	+23 27.4	266 26.9	+20 17.1					
12	348	58.5	344 34.9	+0 35.6	314 28.3	+14 11.8	252 40.1	+23 27.4	281 29.3	+20 17.1					
13	4	00.9	359 34.5	36.9	329 29.1	12.4	267 42.5	27.4	296 31.6	17.1					
14	19	03.4	14 34.2	38.2	344 29.9	13.0	282 44.9	27.4	311 33.9	17.2					
15	34	05.9	29 33.8	39.5	359 30.6	13.6	297 47.2	27.4	326 36.2	17.2					
16	49	08.3	44 33.4	40.8	14 31.4	14.2	312 49.6	27.4	341 38.5	17.2					
17	64	10.8	59 33.1	+0 42.1	29 32.1	+14 14.8	327 52.0	+23 27.4	356 40.8	+20 17.3					
18	79	13.2	74 32.7	+0 43.4	44 32.9	+14 15.4	342 54.4	+23 27.4	11 43.2	+20 17.3					
19	94	15.7	89 32.3	44.6	59 33.7	16.0	357 56.7	27.4	26 45.5	17.3					
20	109	18.2	104 32.0	45.9	74 34.4	16.6	12 59.1	27.4	41 47.8	17.4					
21	124	20.6	119 31.6	47.2	89 35.2	17.2	28 01.5	27.4	56 50.1	17.4					
22	139	23.1	134 31.2	48.5	104 35.9	17.8	43 03.9	27.4	71 52.4	17.4					
23	154	25.6	149 30.9	49.8	119 36.7	18.4	58 06.2	27.4	86 54.7	17.5					
24	169	28.0	164 30.5	+0 51.1	134 37.5	+14 19.0	73 08.6	+23 27.4	101 57.0	+20 17.5					
Dif	—		-4	+13	+8	+6	+24	0	+23	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 27 ^d 7	PHE { 4 ^h : 54 ^l 1 12 ^h : 54 ^l 0 20 ^h : 54 ^l 0										
	PMG: 12 ^h 09 ^m 8					SD: 14 ^h 7		PMG: 11 ^h 11 ^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	177	31.3	-3	28.6	197	07.9	-16	14.6	60 N	4 57	5 45	6 27	6 56	8	15 39 79
1	192	31.5		27.6	211	41.1 ¹⁴²	-16	05.1 ⁹⁵	58	5 00	46	25	47	11	47 76
2	207	31.7		26.6	226	14.3 ¹⁴²	-15	55.5 ⁹⁶	56	04	47	24	39	13	15 55 73
3	222	31.8		25.6	240	47.6 ¹⁴³		45.9 ⁹⁶	54	07	48	23	32	15	16 01 77
4	237	32.0		24.7	255	20.9 ¹⁴³		36.1 ⁹⁸	52	09	48	22	25	18	07 69
5	252	32.2	-3	23.7	269	54.3 ¹⁴⁴	-15	26.4 ⁹⁷	50	5 11	5 49	6 21	6 19	20	16 13 66
6	267	32.3	-3	22.7	284	27.7 ¹⁴⁴	-15	16.5 ⁹⁹	45	5 15	5 49	6 19	6 06	24	16 24 62
7	282	32.5		21.7	299	01.2 ¹⁴⁵	-15	06.6 ⁹⁹	40	19	50	17	5 56	26	34 59
8	297	32.7		20.7	313	34.7 ¹⁴⁵	-14	56.7 ⁹⁹	35	21	50	15	46	30	42 56
9	312	32.8		19.7	328	08.3 ¹⁴⁶		46.6 ¹⁰¹	30	22	50	14	38	32	16 49 53
10	327	33.0		18.8	342	42.0 ¹⁴⁷		36.5 ¹⁰¹	20	24	49	11	24	36	17 01 49
11	342	33.2	-3	17.8	357	15.7 ¹⁴⁷	-14	26.4 ¹⁰¹	10 N	5 23	5 48	6 09	5 12	40	17 12 45
12	357	33.3	-3	16.8	11	49.4 ¹⁴⁷	-14	16.2 ¹⁰²	0	5 22	5 46	6 07	5 01	43	17 22 42
13	12	33.5		15.8	26	23.2 ¹⁴⁸	-14	06.0 ¹⁰²	10 S	19	43	04	4 49	46	32 38
14	27	33.7		14.8	40	57.0 ¹⁴⁸	-13	55.7 ¹⁰³	20	14	39	6 01	37	50	42 35
15	42	33.8		13.8	55	30.9 ¹⁴⁹		45.3 ¹⁰⁴	30	06	34	5 58	23	54	17 54 30
16	57	34.0		12.9	70	04.8 ¹⁴⁹		34.9 ¹⁰⁴	35	5 01	31	56	15	56	18 01 28
17	72	34.2	-3	11.9	84	38.8 ¹⁵⁰	-13	24.4 ¹⁰⁵	40	4 55	5 27	5 54	4 05	59	18 08 26
18	87	34.3	-3	10.9	99	12.8 ¹⁵⁰	-13	13.9 ¹⁰⁵	45	4 47	5 22	5 52	3 54	62	18 17 23
19	102	34.5		09.9	113	46.9 ¹⁵¹	-13	03.3 ¹⁰⁶	50	37	16	48	41	66	28 28
20	117	34.7		08.9	128	21.0 ¹⁵¹	-12	52.7 ¹⁰⁶	52	32	13	47	34	69	33 17
21	132	34.8		07.9	142	55.1 ¹⁵¹		42.0 ¹⁰⁷	54	26	10	45	27	71	38 15
22	147	35.0		07.0	157	29.3 ¹⁵²		31.3 ¹⁰⁷	56	20	06	44	20	73	44 13
23	162	35.2		06.0	172	03.6 ¹⁵³		20.5 ¹⁰⁸	58	13	5 02	42	11	76	51 10
24	177	35.3	-3	05.0	186	37.8 ¹⁵²	-12	09.7 ¹⁰⁸	60 S	4 05	4 57	5 40	3 01	79	18 59 7
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 40 ^m 1		Mag: -3.9 PMG: 13 ^h 02 ^m			Mag: +1.4 PMG: 15 ^h 01 ^m			Mag: -2.4 PMG: 19 ^h 04 ^m			Mag: +0.1 PMG: 17 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	169	28.0	164	30.5	+0	134	37.5	+14	73	08.6	+23	101	57.0	+20	17.5
1	184	30.5	179	30.2		149	38.2		88	11.0		116	59.4		17.5
2	199	33.0	194	29.8		164	39.0		103	13.3		132	01.7		17.5
3	214	35.4	209	29.4		179	39.7		118	15.7		147	04.0		17.6
4	229	37.9	224	29.1		194	40.5		133	18.1		162	06.3		17.6
5	244	40.4	239	28.7	+0	209	41.3	+14	148	20.5	+23	177	08.6	+20	17.6
6	259	42.8	254	28.3	+0	224	42.0	+14	163	22.8	+23	192	10.9	+20	17.7
7	274	45.3	269	28.0	+1	239	42.8		178	25.2		207	13.2		17.7
8	289	47.7	284	27.6		254	43.5		193	27.6		222	15.6		17.7
9	304	50.2	299	27.2		269	44.3		208	29.9		237	17.9		17.8
10	319	52.7	314	26.9		284	45.0		223	32.3		252	20.2		17.8
11	334	55.1	329	26.5	+1	299	45.8	+14	238	34.7	+23	267	22.5	+20	17.8
12	349	57.6	344	26.1	+1	314	46.6	+14	253	37.0	+23	282	24.8	+20	17.9
13	5	00.1	359	25.8		329	47.3		268	39.4		297	27.1		17.9
14	20	02.5	14	25.4		344	48.1		283	41.8		312	29.4		17.9
15	35	05.0	29	25.0		359	48.8		298	44.1		327	31.7		18.0
16	50	07.5	44	24.7		14	49.6		313	46.5		342	34.1		18.0
17	65	09.9	59	24.3	+1	29	50.4	+14	328	48.9	+23	357	36.4	+20	18.0
18	80	12.4	74	23.9	+1	44	51.1	+14	343	51.2	+23	12	38.7	+20	18.1
19	95	14.8	89	23.6		59	51.9		358	53.6		27	41.0		18.1
20	110	17.3	104	23.2		74	52.6		13	56.0		42	43.3		18.1
21	125	19.8	119	22.8		89	53.4		28	58.3		57	45.6		18.2
22	140	22.2	134	22.5		104	54.1		44	00.7		72	47.9		18.2
23	155	24.7	149	22.1		119	54.9		59	03.1		87	50.2		18.2
24	170	27.2	164	21.7	+1	134	55.7	+14	74	05.4	+23	102	52.5	+20	18.2
Dif	—		-4		+13	+8		+6	+24		0	+23		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 09 ^m 5			Edad: 28 ^d 7 PHE { 4 ^h : 53:9 12 ^h : 53:9 20 ^h : 53:9 R°: 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		
0	177	35.3	-3 05.0	186	37.8	-12 09.7	60 N	17 57	18 38	19 27	7 04 6		16 58 78		
1	192	35.5	04.0	201	12.2 ¹⁵⁴	-11 58.9 ¹⁰⁸	58	58	37	23	6 58 9		17 03 75		
2	207	35.7	03.0	215	46.5 ¹⁵³	47.9 ¹¹⁰	56	17 59	36	19	52 12		08 72		
3	222	35.8	02.0	230	20.9 ¹⁵⁴	37.0 ¹⁰⁹	54	18 00	35	16	47 14		12 70		
4	237	36.0	01.0	244	55.4 ¹⁵⁵	26.0 ¹¹⁰	52	01	34	14	43 15		16 67		
5	252	36.2	-3 00.1	259	29.8 ¹⁵⁴	-11 14.9 ¹¹¹	50	18 01	18 34	19 11	6 39 17		17 19 66		
6	267	36.3	-2 59.1	274	04.4 ¹⁵⁶	-11 03.9 ¹¹⁰	45	18 03	18 32	19 06	6 30 21		17 26 62		
7	282	36.5	58.1	288	38.9 ¹⁵⁵	-10 52.7 ¹¹²	40	04	31	03	22 25		33 58		
8	297	36.7	57.1	303	13.5 ¹⁵⁶	41.6 ¹¹¹	35	06	31	19 00	16 27		38 55		
9	312	36.8	56.1	317	48.1 ¹⁵⁶	30.3 ¹¹³	30	07	31	18 58	10 30		42 53		
10	327	37.0	55.1	332	22.8 ¹⁵⁷	19.1 ¹¹²	20	09	31	56	6 00 34		50 49		
11	342	37.2	-2 54.1	346	57.5 ¹⁵⁷	-10 07.8 ¹¹³	10 N	18 11	18 32	18 56	5 52 37		17 57 45		
12	357	37.4	-2 53.2	1	32.2 ¹⁵⁷	-9 56.5 ¹¹³	0	18 13	18 33	18 57	5 44 41		18 04 40		
13	12	37.5	52.2	16	07.0 ¹⁵⁸	45.1 ¹¹⁴	10 S	15	36	19 00	35 45		10 37		
14	27	37.7	51.2	30	41.8 ¹⁵⁸	33.7 ¹¹⁴	20	17	39	05	27 48		17 33		
15	42	37.9	50.2	45	16.6 ¹⁵⁸	22.3 ¹¹⁴	30	20	44	12	17 53		24 30		
16	57	38.0	49.2	59	51.5 ¹⁵⁹	-9 10.8 ¹¹⁵	35	21	47	16	11 55		29 26		
17	72	38.2	-2 48.2	74	26.4 ¹⁵⁹	-8 59.3 ¹¹⁵	40	18 23	18 50	19 22	5 04 59		18 34 24		
18	87	38.4	-2 47.2	89	01.3 ¹⁵⁹	-8 47.7 ¹¹⁶	45	18 25	18 55	19 30	4 56 62		18 40 20		
19	102	38.5	46.3	103	36.3 ¹⁶⁰	36.2 ¹¹⁵	50	28	19 00	39	47 66		46 17		
20	117	38.7	45.3	118	11.3 ¹⁶⁰	24.5 ¹¹⁷	52	29	03	44	43 68		50 14		
21	132	38.9	44.3	132	46.3 ¹⁶⁰	12.9 ¹¹⁶	54	30	06	49	38 70		53 13		
22	147	39.1	43.3	147	21.3 ¹⁶⁰	-8 01.2 ¹¹⁷	56	32	09	19 55	33 72		18 57 10		
23	162	39.2	42.3	161	56.4 ¹⁶¹	-7 49.5 ¹¹⁷	58	34	13	20 01	27 75		19 01 8		
24	177	39.4	-2 41.3	176	31.5 ¹⁶¹	-7 37.8 ¹¹⁷	60 S	18 35	19 18	20 09	4 20 78		19 06 5		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 36 ^m 1		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +1.4 PMG: 15 ^h 00 ^m		Mag: -2.4 PMG: 19 ^h 01 ^m		Mag: +0.1 PMG: 17 ^h 06 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	170	27.2	164	21.7	134	55.7	74	05.4	102	52.5					
1	185	29.6	179	21.4	149	56.4	89	07.8	117	54.9					
2	200	32.1	194	21.0	164	57.2	104	10.2	132	57.2					
3	215	34.6	209	20.6	179	57.9	119	12.5	147	59.5					
4	230	37.0	224	20.3	194	58.7	134	14.9	163	01.8					
5	245	39.5	239	19.9	209	59.4	149	17.2	178	04.1					
6	260	42.0	254	19.5	225	00.2	164	19.6	193	06.4					
7	275	44.4	269	19.2	240	01.0	179	22.0	208	08.7					
8	290	46.9	284	18.8	255	01.7	194	24.3	223	11.0					
9	305	49.3	299	18.4	270	02.5	209	26.7	238	13.3					
10	320	51.8	314	18.1	285	03.2	224	29.0	253	15.6					
11	335	54.3	329	17.7	300	04.0	239	31.4	268	17.9					
12	350	56.7	344	17.3	315	04.7	254	33.8	283	20.3					
13	5	59.2	359	17.0	330	05.5	269	36.1	298	22.6					
14	21	01.7	14	16.6	345	06.2	284	38.5	313	24.9					
15	36	04.1	29	16.3	0	07.0	299	40.8	328	27.2					
16	51	06.6	44	15.9	15	07.8	314	43.2	343	29.5					
17	66	09.1	59	15.5	30	08.5	329	45.6	358	31.8					
18	81	11.5	74	15.2	45	09.3	344	47.9	13	34.1					
19	96	14.0	89	14.8	60	10.0	359	50.3	28	36.4					
20	111	16.4	104	14.4	75	10.8	14	52.6	43	38.7					
21	126	18.9	119	14.1	90	11.5	29	55.0	58	41.0					
22	141	21.4	134	13.7	105	12.3	44	57.3	73	43.3					
23	156	23.8	149	13.3	120	13.0	59	59.7	88	45.6					
24	171	26.3	164	13.0	135	13.8	75	02.0	103	47.9					
Dif	—		-4	+13	+8	+6	+24	0	+23	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 29 ^d 7 PHE { 4 ^h : 53'9 12 ^h : 53'9 20 ^h : 53'9										
	PMG: 12 ^h 09 ^m 2			SD: 14'7										
				PMG: 12 ^h 35 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	177	39.4	-2 41.3	176	31.5	-7 37.8		4 50	5 39	6 21	7 10	5	18 16	77
1	192	39.6		40.3	191	06.6 ¹⁶¹	26.0 ¹¹⁸	55	41	20	07	7	18	74
2	207	39.7		39.4	205	41.7 ¹⁶¹	14.2 ¹¹⁸	4 58	42	19	04	10	20	72
3	222	39.9		38.4	220	16.9 ¹⁶²	-7 02.4 ¹¹⁸	5 02	43	18	7 01	12	22	69
4	237	40.1		37.4	234	52.1 ¹⁶²	-6 50.6 ¹¹⁸	04	44	17	6 58	15	23	68
5	252	40.3	-2 36.4	249	27.3 ¹⁶²	-6 38.7 ¹¹⁹		5 07	5 44	6 16	6 56	16	18 25	65
6	267	40.4	-2 35.4	264	02.5 ¹⁶²	-6 26.8 ¹¹⁹		5 12	5 46	6 15	6 51	20	18 28	61
7	282	40.6		34.4	278	37.8 ¹⁶³	14.9 ¹¹⁹	15	47	14	47	23	31	58
8	297	40.8		33.4	293	13.1 ¹⁶³	-6 02.9 ¹²⁰	18	47	12	43	26	33	55
9	312	40.9		32.5	307	48.4 ¹⁶³	-5 51.0 ¹¹⁹	20	48	11	40	29	35	52
10	327	41.1		31.5	322	23.7 ¹⁶³	39.0 ¹²⁰	22	48	10	34	33	39	47
11	342	41.3	-2 30.5	336	59.0 ¹⁶³	-5 27.0 ¹²⁰		5 22	5 47	6 08	6 29	37	18 42	44
12	357	41.5	-2 29.5	351	34.4 ¹⁶⁴	-5 14.9 ¹²¹	0	5 21	5 45	6 06	6 25	40	18 44	41
13	12	41.6		28.5	6	09.7 ¹⁶³	-5 02.9 ¹²⁰	19	43	04	20	44	47	37
14	27	41.8		27.5	20	45.1 ¹⁶⁴	-4 50.8 ¹²¹	10	14	40	6 02	15	48	50
15	42	42.0		26.5	35	20.5 ¹⁶⁴	38.7 ¹²¹	30	07	35	5 59	10	52	54
16	57	42.2		25.5	49	55.9 ¹⁶⁴	26.6 ¹²¹	5 03	33	58	06	55	55	26
17	72	42.3	-2 24.6	64	31.3 ¹⁶⁴	-4 14.5 ¹²¹		4 57	5 29	5 56	6 03	58	18 58	23
18	87	42.5	-2 23.6	79	06.8 ¹⁶⁵	-4 02.3 ¹²²		4 50	5 25	5 54	5 58	62	19 00	20
19	102	42.7		22.6	93	42.2 ¹⁶⁴	-3 50.1 ¹²²	40	19	52	53	66	03	16
20	117	42.8		21.6	108	17.7 ¹⁶⁵	38.0 ¹²¹	36	17	51	51	67	04	14
21	132	43.0		20.6	122	53.1 ¹⁶⁴	25.8 ¹²²	31	14	49	48	70	06	12
22	147	43.2		19.6	137	28.6 ¹⁶⁵	13.6 ¹²²	25	10	48	45	72	07	10
23	162	43.4		18.6	152	04.1 ¹⁶⁵	-3 01.3 ¹²³	18	07	46	42	74	09	8
24	177	43.5	-2 17.7	166	39.6 ¹⁶⁵	-2 49.1 ¹²²		4 11	5 02	5 45	5 38	78	19 11	5
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 32 ^m 2		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +1.4 PMG: 14 ^h 58 ^m		Mag: -2.4 PMG: 18 ^h 57 ^m		Mag: +0.1 PMG: 17 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	171	26.3	164	13.0	+1 52.8	135 13.8	+14 47.6	75 02.0	+23 27.4	103 47.9	+20 19.0			
1	186	28.8	179	12.6	54.0	150 14.5	48.2	90 04.4	27.4	118 50.2	19.1			
2	201	31.2	194	12.2	55.3	165 15.3	48.8	105 06.8	27.4	133 52.5	19.1			
3	216	33.7	209	11.9	56.6	180 16.1	49.4	120 09.1	27.4	148 54.9	19.1			
4	231	36.2	224	11.5	57.9	195 16.8	50.0	135 11.5	27.4	163 57.2	19.2			
5	246	38.6	239	11.1	+1 59.2	210 17.6	+14 50.5	150 13.8	+23 27.4	178 59.5	+20 19.2			
6	261	41.1	254	10.8	+2 00.5	225 18.3	+14 51.1	165 16.2	+23 27.4	194 01.8	+20 19.2			
7	276	43.6	269	10.4	01.8	240 19.1	51.7	180 18.5	27.4	209 04.1	19.3			
8	291	46.0	284	10.0	03.0	255 19.8	52.3	195 20.9	27.4	224 06.4	19.3			
9	306	48.5	299	09.7	04.3	270 20.6	52.9	210 23.2	27.4	239 08.7	19.3			
10	321	50.9	314	09.3	05.6	285 21.3	53.5	225 25.6	27.4	254 11.0	19.3			
11	336	53.4	329	08.9	+2 06.9	300 22.1	+14 54.1	240 27.9	+23 27.4	269 13.3	+20 19.4			
12	351	55.9	344	08.6	+2 08.2	315 22.8	+14 54.7	255 30.3	+23 27.4	284 15.6	+20 19.4			
13	6 58.3	359 08.2	09.5	330 23.6	55.2	270 32.6	27.4	270 32.6	27.4	299 17.9	19.4			
14	22 00.8	14 07.8	10.7	345 24.4	55.8	285 35.0	27.4	285 35.0	27.4	314 20.2	19.5			
15	37 03.3	29 07.5	12.0	0 25.1	56.4	300 37.3	27.4	300 37.3	27.4	329 22.5	19.5			
16	52 05.7	44 07.1	13.3	15 25.9	57.0	315 39.7	27.4	315 39.7	27.4	344 24.8	19.5			
17	67 08.2	59 06.7	+2 14.6	30 26.6	+14 57.6	330 42.0	+23 27.4	330 42.0	+23 27.4	359 27.1	+20 19.6			
18	82 10.7	74 06.4	+2 15.9	45 27.4	+14 58.2	345 44.4	+23 27.4	345 44.4	+23 27.4	14 29.4	+20 19.6			
19	97 13.1	89 06.0	17.2	60 28.1	58.8	0 46.7	27.4	0 46.7	27.4	29 31.7	19.6			
20	112 15.6	104 05.6	18.4	75 28.9	59.3	15 49.1	27.4	15 49.1	27.4	44 34.0	19.7			
21	127 18.1	119 05.3	19.7	90 29.6	+14 59.9	30 51.4	27.4	30 51.4	27.4	59 36.3	19.7			
22	142 20.5	134 04.9	21.0	105 30.4	+15 00.5	45 53.8	27.4	45 53.8	27.4	74 38.6	19.7			
23	157 23.0	149 04.5	22.3	120 31.1	01.1	60 56.1	27.4	60 56.1	27.4	89 40.9	19.8			
24	172 25.4	164 04.2	+2 23.6	135 31.9	+15 01.7	75 58.5	+23 27.4	75 58.5	+23 27.4	104 43.2	+20 19.8			
Dif	—		-4 +13		+8 +6		+24 0		+23					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 09 ^m 0			Edad: 30 ^d 7 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ¹ R°: 40 ^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	177	43.5	-2 17.7	166	39.6	-2 49.1	122	60 N	18 02	18 43	19 32	7 15 5	19 33 78	
1	192	43.7		181	15.1 ¹⁶⁵	36.9 ¹²²		58	02	42	28	14 8	32 75	
2	207	43.9		195	50.6 ¹⁶⁵	24.6 ¹²³		56	03	40	24	14 10	32 72	
3	222	44.1		210	26.1 ¹⁶⁵	12.3 ¹²³		54	04	39	20	13 12	31 70	
4	237	44.2		225	01.6 ¹⁶⁵	-2 00.1 ¹²²		52	04	38	17	13 14	31 68	
5	252	44.4	-2 12.7	239	37.2 ¹⁶⁶	-1 47.8 ¹²³		50	18 05	18 37	19 15	7 12 16	19 30 66	
6	267	44.6	-2 11.7	254	12.7 ¹⁶⁵	-1 35.5 ¹²³		45	18 06	18 35	19 09	7 11 20	19 29 62	
7	282	44.8		268	48.2 ¹⁶⁵	23.2 ¹²³		40	07	34	05	10 23	29 58	
8	297	44.9		283	23.7 ¹⁶⁵	-1 10.9 ¹²³		35	07	33	02	09 26	28 55	
9	312	45.1		297	59.3 ¹⁶⁶	-0 58.5 ¹²⁴		30	08	32	19 00	09 28	27 53	
10	327	45.3		312	34.8 ¹⁶⁵	46.2 ¹²³		20	10	32	18 57	07 33	26 49	
11	342	45.5	-2 06.8	327	10.3 ¹⁶⁵	-0 33.9 ¹²³		10 N	18 11	18 32	18 56	7 06 37	19 26 44	
12	357	45.6	-2 05.8	341	45.9 ¹⁶⁶	-0 21.6 ¹²³		0	18 12	18 33	18 57	7 05 41	19 25 40	
13	12	45.8		356	21.4 ¹⁶⁵	-0 09.2 ¹²⁴		10 S	14	35	18 59	04 44	24 37	
14	27	46.0		10	56.9 ¹⁶⁵	+0 03.1 ¹²³		20	15	37	19 03	03 48	23 33	
15	42	46.2		25	32.4 ¹⁶⁵	15.5 ¹²⁴		30	17	41	09	02 53	22 29	
16	57	46.3		40	07.9 ¹⁶⁵	27.8 ¹²³		35	19	44	13	01 56	21 26	
17	72	46.5	-2 00.9	54	43.4 ¹⁶⁵	+0 40.1 ¹²³		40	18 20	18 47	19 19	7 01 58	19 21 23	
18	87	46.7	-1 59.9	69	18.9 ¹⁶⁵	+0 52.5 ¹²⁴		45	18 22	18 51	19 26	7 00 61	19 20 20	
19	102	46.9		83	54.4 ¹⁶⁵	+1 04.8 ¹²³		50	24	56	34	6 59 65	19 16	
20	117	47.0		98	29.9 ¹⁶⁵	17.2 ¹²⁴		52	25	18 58	39	58 68	18 15	
21	132	47.2		113	05.4 ¹⁶⁵	29.5 ¹²³		54	26	19 01	43	58 69	18 12	
22	147	47.4		127	40.8 ¹⁶⁴	41.9 ¹²⁴		56	27	04	49	57 72	17 11	
23	162	47.6		142	16.3 ¹⁶⁵	+1 54.2 ¹²³		58	28	07	19 55	56 75	17 8	
24	177	47.7	-1 53.9	156	51.7 ¹⁶⁴	+2 06.5 ¹²³		60 S	18 29	19 11	20 02	6 56 77	19 16 5	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 28 ^m 3		Mag: -3.9 PMG: 13 ^h 04 ^m			Mag: +1.4 PMG: 14 ^h 57 ^m			Mag: -2.4 PMG: 18 ^h 53 ^m			Mag: +0.1 PMG: 16 ^h 59 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	172	25.4	164	04.2	+2 23.6	135	31.9	+15 01.7	75	58.5	+23 27.4	104	43.2	+20 19.8
1	187	27.9	179	03.8	24.9	150	32.6	02.3	91	00.8	27.4	119	45.5	19.8
2	202	30.4	194	03.4	26.1	165	33.4	02.8	106	03.1	27.4	134	47.8	19.9
3	217	32.8	209	03.1	27.4	180	34.1	03.4	121	05.5	27.4	149	50.1	19.9
4	232	35.3	224	02.7	28.7	195	34.9	04.0	136	07.8	27.4	164	52.4	19.9
5	247	37.8	239	02.3	+2 30.0	210	35.6	+15 04.6	151	10.2	+23 27.4	179	54.7	+20 20.0
6	262	40.2	254	02.0	+2 31.3	225	36.4	+15 05.2	166	12.5	+23 27.4	194	57.0	+20 20.0
7	277	42.7	269	01.6	32.5	240	37.1	05.8	181	14.9	27.4	209	59.3	20.0
8	292	45.2	284	01.2	33.8	255	37.9	06.3	196	17.2	27.4	225	01.6	20.1
9	307	47.6	299	00.9	35.1	270	38.6	06.9	211	19.6	27.4	240	03.9	20.1
10	322	50.1	314	00.5	36.4	285	39.4	07.5	226	21.9	27.4	255	06.2	20.1
11	337	52.5	329	00.1	+2 37.7	300	40.2	+15 08.1	241	24.2	+23 27.4	270	08.5	+20 20.2
12	352	55.0	343	59.8	+2 39.0	315	40.9	+15 08.7	256	26.6	+23 27.4	285	10.8	+20 20.2
13	7	57.5	358	59.4	40.2	330	41.7	09.2	271	28.9	27.4	300	13.1	20.2
14	22	59.9	13	59.0	41.5	345	42.4	09.8	286	31.3	27.4	315	15.4	20.3
15	38	02.4	28	58.7	42.8	0	43.2	10.4	301	33.6	27.3	330	17.7	20.3
16	53	04.9	43	58.3	44.1	15	43.9	11.0	316	35.9	27.3	345	20.0	20.3
17	68	07.3	58	57.9	+2 45.4	30	44.7	+15 11.6	331	38.3	+23 27.3	0	22.3	+20 20.4
18	83	09.8	73	57.6	+2 46.6	45	45.4	+15 12.1	346	40.6	+23 27.3	15	24.6	+20 20.4
19	98	12.3	88	57.2	47.9	60	46.2	12.7	1	43.0	27.3	30	26.9	20.4
20	113	14.7	103	56.8	49.2	75	46.9	13.3	16	45.3	27.3	45	29.2	20.5
21	128	17.2	118	56.5	50.5	90	47.7	13.9	31	47.6	27.3	60	31.5	20.5
22	143	19.7	133	56.1	51.8	105	48.4	14.5	46	50.0	27.3	75	33.8	20.5
23	158	22.1	148	55.7	53.0	120	49.2	15.0	61	52.3	27.3	90	36.1	20.6
24	173	24.6	163	55.4	+2 54.3	135	49.9	+15 15.6	76	54.7	+23 27.3	105	38.4	+20 20.6
Dif	—		-4		+13	+8		+6	+23		0	+23		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 1 ^d 9 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 2 20 ^h : 54 ^h 3 R°: 42 ^m											
	PMG: 12 ^h 08 ^m 7			PMG: 13 ^h 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	47.7	-1 53.9	156	51.7	+2 06.5		60 N	4 44	5 33	6 15	7 20	6	20 51	79
1	192	47.9		171	27.1 ¹⁶⁴	18.8 ¹²³		58	49	35	14	22	8	47	77
2	207	48.1		186	02.5 ¹⁶⁴	31.2 ¹²⁴		56	53	37	13	24	11	44	74
3	222	48.3		200	37.9 ¹⁶⁴	43.5 ¹²³		54	4 56	38	13	25	13	41	71
4	237	48.4		215	13.3 ¹⁶⁴	+2 55.8 ¹²³		52	5 00	39	13	27	15	39	69
5	252	48.6	-1 49.0	229	48.7 ¹⁶⁴	+3 08.1 ¹²³		50	5 02	5 40	6 12	7 28	17	20 36	67
6	267	48.8	-1 48.0	244	24.0 ¹⁶³	+3 20.4 ¹²³		45	5 08	5 42	6 11	7 31	20	20 31	63
7	282	49.0		258	59.4 ¹⁶⁴	32.6 ¹²²		40	12	43	10	33	24	27	59
8	297	49.1		273	34.7 ¹⁶³	44.9 ¹²³		35	15	45	10	35	27	23	57
9	312	49.3		288	10.0 ¹⁶³	+3 57.2 ¹²³		30	17	45	09	37	29	20	54
10	327	49.5		302	45.3 ¹⁶³	+4 09.4 ¹²²		20	20	46	08	40	34	15	49
11	342	49.7	-1 43.1	317	20.5 ¹⁶²	+4 21.7 ¹²³		10 N	5 21	5 46	6 07	7 43	38	20 10	45
12	357	49.9	-1 42.1	331	55.7 ¹⁶²	+4 33.9 ¹²²		0	5 21	5 45	6 05	7 46	41	20 05	42
13	12	50.0		346	30.9 ¹⁶²	46.1 ¹²²		10 S	19	43	04	48	45	20 01	38
14	27	50.2		1	06.1 ¹⁶²	+4 58.3 ¹²²		20	15	41	03	51	49	19 56	34
15	42	50.4		15	41.3 ¹⁶²	+5 10.5 ¹²²		30	09	37	01	55	53	51	30
16	57	50.6		30	16.4 ¹⁶¹	22.6 ¹²¹		35	5 05	34	6 00	57	55	47	28
17	72	50.7	-1 37.1	44	51.5 ¹⁶¹	+5 34.8 ¹²²		40	4 59	5 31	5 58	7 59	59	19 44	25
18	87	50.9	-1 36.2	59	26.6 ¹⁶¹	+5 46.9 ¹²¹		45	4 53	5 27	5 57	8 01	63	19 40	21
19	102	51.1		74	01.7 ¹⁶¹	+5 59.0 ¹²¹		50	44	23	55	04	67	35	17
20	117	51.3		88	36.7 ¹⁶⁰	+6 11.1 ¹²¹		52	40	20	54	06	68	33	15
21	132	51.5		103	11.7 ¹⁶⁰	23.2 ¹²¹		54	35	18	53	07	71	30	14
22	147	51.6		117	46.7 ¹⁶⁰	35.3 ¹²¹		56	30	15	52	09	73	28	11
23	162	51.8		132	21.6 ¹⁵⁹	47.3 ¹²⁰		58	23	11	51	11	76	25	8
24	177	52.0	-1 30.2	146	56.5 ¹⁵⁹	+6 59.3 ¹²⁰		60 S	4 16	5 08	5 50	8 13	79	19 21	6
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 12 ^h 24 ^m 3			Mag: -3.9 PMG: 13 ^h 05 ^m			Mag: +1.4 PMG: 14 ^h 56 ^m			Mag: -2.4 PMG: 18 ^h 49 ^m			Mag: +0.1 PMG: 16 ^h 55 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	173	24.6	163	55.4	+2 54.3	135	49.9	+15 15.6	76	54.7	+23 27.3	105	38.4	+20 20.6	
1	188	27.0	178	55.0		150	50.7	16.2	91	57.0	27.3	120	40.7	20.6	
2	203	29.5	193	54.6		165	51.4	16.8	106	59.3	27.3	135	43.0	20.7	
3	218	32.0	208	54.3		180	52.2	17.3	122	01.7	27.3	150	45.3	20.7	
4	233	34.4	223	53.9	+2 59.4	195	52.9	17.9	137	04.0	27.3	165	47.6	20.7	
5	248	36.9	238	53.5	+3 00.7	210	53.7	+15 18.5	152	06.3	+23 27.3	180	49.9	+20 20.8	
6	263	39.4	253	53.2	+3 02.0	225	54.4	+15 19.1	167	08.7	+23 27.3	195	52.2	+20 20.8	
7	278	41.8	268	52.8		240	55.2	19.7	182	11.0	27.3	210	54.5	20.8	
8	293	44.3	283	52.4		255	55.9	20.2	197	13.4	27.3	225	56.8	20.9	
9	308	46.8	298	52.1		270	56.7	20.8	212	15.7	27.3	240	59.1	20.9	
10	323	49.2	313	51.7		285	57.4	21.4	227	18.0	27.3	256	01.4	20.9	
11	338	51.7	328	51.3	+3 08.4	300	58.2	+15 22.0	242	20.4	+23 27.3	271	03.7	+20 21.0	
12	353	54.1	343	51.0	+3 09.7	315	58.9	+15 22.5	257	22.7	+23 27.3	286	06.0	+20 21.0	
13	8	56.6	358	50.6		330	59.7	23.1	272	25.0	27.3	301	08.3	21.0	
14	23	59.1	13	50.2		346	00.4	23.7	287	27.4	27.3	316	10.6	21.1	
15	39	01.5	28	49.9		1	01.2	24.3	302	29.7	27.3	331	12.9	21.1	
16	54	04.0	43	49.5		16	01.9	24.8	317	32.0	27.3	346	15.2	21.1	
17	69	06.5	58	49.1	+3 16.1	31	02.6	+15 25.4	332	34.4	+23 27.3	1	17.5	+20 21.2	
18	84	08.9	73	48.7	+3 17.4	46	03.4	+15 26.0	347	36.7	+23 27.3	16	19.7	+20 21.2	
19	99	11.4	88	48.4		61	04.1	26.5	2	39.0	27.3	31	22.0	21.2	
20	114	13.9	103	48.0		76	04.9	27.1	17	41.3	27.3	46	24.3	21.3	
21	129	16.3	118	47.6		91	05.6	27.7	32	43.7	27.3	61	26.6	21.3	
22	144	18.8	133	47.3		106	06.4	28.3	47	46.0	27.3	76	28.9	21.3	
23	159	21.3	148	46.9		121	07.1	28.8	62	48.3	27.3	91	31.2	21.4	
24	174	23.7	163	46.5	+3 25.0	136	07.9	+15 29.4	77	50.7	+23 27.3	106	33.5	+20 21.4	
Dif	—		-4	+13		+7	+6		+23		0	+23		0	

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 4			Edad: 2 ^d 9 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6 PMG: 14 ^h 37 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	52.0	-1 30.2	146	56.5	+6 59.3	60 N	18 07	18 48	19 38	7 26 7	22 10 82			
1	192	52.2	29.2	161	31.4 ¹⁵⁹	+7 11.3 ¹²⁰	58	07	46	33	30 10	22 04 78			
2	207	52.3	28.3	176	06.2 ¹⁵⁸	23.3 ¹²⁰	56	07	44	28	35 12	21 58 75			
3	222	52.5	27.3	190	41.0 ¹⁵⁸	35.2 ¹¹⁹	54	07	43	24	38 15	52 73			
4	237	52.7	26.3	205	15.8 ¹⁵⁸	47.2 ¹²⁰	52	08	41	21	42 16	48 70			
5	252	52.9	-1 25.3	219	50.5 ¹⁵⁷	+7 59.0 ¹¹⁸	50	18 08	18 40	19 18	7 45 18	21 43 69			
6	267	53.1	-1 24.3	234	25.2 ¹⁵⁷	+8 10.9 ¹¹⁹	45	18 08	18 37	19 12	7 51 23	21 34 64			
7	282	53.2	23.3	248	59.9 ¹⁵⁷	22.8 ¹¹⁹	40	09	36	07	7 57 26	26 61			
8	297	53.4	22.3	263	34.5 ¹⁵⁶	34.6 ¹¹⁸	35	09	34	04	8 02 29	20 58			
9	312	53.6	21.3	278	09.0 ¹⁵⁵	46.4 ¹¹⁸	30	09	33	19 01	06 32	14 55			
10	327	53.8	20.3	292	43.6 ¹⁵⁶	+8 58.1 ¹¹⁷	20	10	32	18 58	14 35	21 04 51			
11	342	54.0	-1 19.4	307	18.1 ¹⁵⁵	+9 09.9 ¹¹⁸	10 N	18 11	18 32	18 56	8 21 39	20 55 48			
12	357	54.1	-1 18.4	321	52.5 ¹⁵⁴	+9 21.5 ¹¹⁶	0	18 12	18 32	18 56	8 27 43	20 47 44			
13	12	54.3	17.4	336	26.9 ¹⁵⁴	33.2 ¹¹⁷	10 S	13	34	18 58	33 47	39 41			
14	27	54.5	16.4	351	01.3 ¹⁵⁴	44.9 ¹¹⁷	20	14	36	19 01	40 50	30 37			
15	42	54.7	15.4	5	35.6 ¹⁵³	+9 56.5 ¹¹⁶	30	15	39	07	48 54	21 32			
16	57	54.9	14.4	20	09.9 ¹⁵³	+10 08.0 ¹¹⁵	35	16	41	11	52 58	15 30			
17	72	55.0	-1 13.4	34	44.1 ¹⁵²	+10 19.6 ¹¹⁶	40	18 17	18 44	19 15	8 58 60	20 09 27			
18	87	55.2	-1 12.4	49	18.3 ¹⁵²	+10 31.0 ¹¹⁴	45	18 18	18 47	19 22	9 04 63	20 01 24			
19	102	55.4	11.4	63	52.5 ¹⁵²	42.5 ¹¹⁵	50	19	52	30	11 68	19 52 20			
20	117	55.6	10.5	78	26.5 ¹⁵⁰	+10 53.9 ¹¹⁴	52	20	54	34	14 70	48 18			
21	132	55.8	09.5	93	00.6 ¹⁵¹	+11 05.3 ¹¹⁴	54	21	56	38	18 72	44 16			
22	147	55.9	08.5	107	34.6 ¹⁵⁰	16.7 ¹¹⁴	56	21	18 59	43	22 75	39 14			
23	162	56.1	07.5	122	08.5 ¹⁴⁹	28.0 ¹¹³	58	22	19 02	49	27 77	33 11			
24	177	56.3	-1 06.5	136	42.4 ¹⁴⁹	+11 39.2 ¹¹²	60 S	18 23	19 05	19 56	9 32 81	19 27 8			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 20 ^m 4		Mag: -3.9 PMG: 13 ^h 05 ^m			Mag: +1.4 PMG: 14 ^h 55 ^m			Mag: -2.3 PMG: 18 ^h 46 ^m			Mag: +0.1 PMG: 16 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	174	23.7	163 46.5	+3 25.0	136 07.9	+15 29.4	77 50.7	+23 27.3		106 33.5	+20 21.4				
1	189	26.2	178 46.2	26.3	151 08.6	30.0	92 53.0	27.3		121 35.8	21.5				
2	204	28.6	193 45.8	27.6	166 09.4	30.6	107 55.3	27.3		136 38.1	21.5				
3	219	31.1	208 45.4	28.9	181 10.1	31.1	122 57.6	27.3		151 40.4	21.5				
4	234	33.6	223 45.1	30.1	196 10.9	31.7	138 00.0	27.3		166 42.7	21.6				
5	249	36.0	238 44.7	+3 31.4	211 11.6	+15 32.3	153 02.3	+23 27.3		181 45.0	+20 21.6				
6	264	38.5	253 44.3	+3 32.7	226 12.4	+15 32.8	168 04.6	+23 27.3		196 47.3	+20 21.6				
7	279	41.0	268 44.0	34.0	241 13.1	33.4	183 07.0	27.3		211 49.6	21.7				
8	294	43.4	283 43.6	35.3	256 13.9	34.0	198 09.3	27.3		226 51.9	21.7				
9	309	45.9	298 43.2	36.5	271 14.6	34.6	213 11.6	27.3		241 54.1	21.7				
10	324	48.4	313 42.8	37.8	286 15.4	35.1	228 13.9	27.3		256 56.4	21.8				
11	339	50.8	328 42.5	+3 39.1	301 16.1	+15 35.7	243 16.3	+23 27.3		271 58.7	+20 21.8				
12	354	53.3	343 42.1	+3 40.4	316 16.9	+15 36.3	258 18.6	+23 27.3		287 01.0	+20 21.8				
13	9	55.7	358 41.7	41.6	331 17.6	36.8	273 20.9	27.3		302 03.3	21.9				
14	24	58.2	13 41.4	42.9	346 18.3	37.4	288 23.2	27.3		317 05.6	21.9				
15	40	00.7	28 41.0	44.2	1 19.1	38.0	303 25.6	27.3		332 07.9	21.9				
16	55	03.1	43 40.6	45.5	16 19.8	38.5	318 27.9	27.3		347 10.2	22.0				
17	70	05.6	58 40.3	+3 46.7	31 20.6	+15 39.1	333 30.2	+23 27.3		2 12.5	+20 22.0				
18	85	08.1	73 39.9	+3 48.0	46 21.3	+15 39.7	348 32.5	+23 27.3		17 14.8	+20 22.0				
19	100	10.5	88 39.5	49.3	61 22.1	40.2	3 34.9	27.3		32 17.1	22.1				
20	115	13.0	103 39.1	50.6	76 22.8	40.8	18 37.2	27.3		47 19.3	22.1				
21	130	15.5	118 38.8	51.8	91 23.6	41.4	33 39.5	27.3		62 21.6	22.1				
22	145	17.9	133 38.4	53.1	106 24.3	41.9	48 41.8	27.3		77 23.9	22.2				
23	160	20.4	148 38.0	54.4	121 25.1	42.5	63 44.1	27.3		92 26.2	22.2				
24	175	22.9	163 37.7	+3 55.7	136 25.8	+15 43.1	78 46.5	+23 27.2		107 28.5	+20 22.2				
Dif	—		-4 +13		+7 +6		+23 0			+23 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 3 ^d 9	PHE {	4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0									
	PMG: 12 ^h 08 ^m 1							SD: 14 ^h 9			PMG: 15 ^h 20 ^m		R°: 46 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	56.3	-1 06.5	136	42.4	+11 39.2		60 N	4 38	5 27	6 08	7 33	9	23 32	84
1	192	56.5		151	16.2 ¹⁴⁸	+11 50.5 ¹¹³		58	43	29	08	40	13	22	80
2	207	56.7		165	50.0 ¹⁴⁸	+12 01.6 ¹¹¹		56	47	31	08	47	15	13	77
3	222	56.8		180	23.7 ¹⁴⁷		12.8 ¹¹²	54	51	33	08	53	18	23 05	74
4	237	57.0		194	57.4 ¹⁴⁷		23.9 ¹¹¹	52	55	34	08	7 58	21	22 58	72
5	252	57.2	-1 01.6	209	31.0 ¹⁴⁶	+12 34.9 ¹¹⁰		50	4 58	5 36	6 08	8 03	22	22 52	69
6	267	57.4	-1 00.6	224	04.5 ¹⁴⁵	+12 45.9 ¹¹⁰		45	5 04	5 38	6 07	8 14	26	22 38	66
7	282	57.6	-0 59.6	238	38.0 ¹⁴⁵	+12 56.9 ¹¹⁰		40	09	40	07	23	29	27	62
8	297	57.7		253	11.5 ¹⁴⁵	+13 07.8 ¹⁰⁹		35	12	42	07	31	32	18	59
9	312	57.9		267	44.9 ¹⁴⁴		18.7 ¹⁰⁹	30	15	43	07	38	34	22 09	58
10	327	58.1		282	18.2 ¹⁴³		29.5 ¹⁰⁸	20	19	44	06	8 49	39	21 55	53
11	342	58.3	-0 55.6	296	51.4 ¹⁴²	+13 40.3 ¹⁰⁸		10 N	5 20	5 45	6 05	9 00	42	21 43	50
12	357	58.5	-0 54.6	311	24.6 ¹⁴²	+13 51.0 ¹⁰⁷		0	5 20	5 44	6 05	9 10	45	21 31	47
13	12	58.7		325	57.8 ¹⁴²	+14 01.7 ¹⁰⁷		10 S	19	43	04	20	48	20	43
14	27	58.8		340	30.9 ¹⁴¹		12.3 ¹⁰⁶	20	16	41	03	30	52	21 07	41
15	42	59.0		355	03.9 ¹⁴⁰		22.8 ¹⁰⁵	30	10	38	02	42	57	20 53	37
16	57	59.2		9	36.8 ¹³⁹		33.3 ¹⁰⁵	35	06	36	01	50	58	45	34
17	72	59.4	-0 49.7	24	09.7 ¹³⁹	+14 43.8 ¹⁰⁵		40	5 02	5 33	6 00	9 58	61	20 36	32
18	87	59.6	-0 48.7	38	42.5 ¹³⁸	+14 54.2 ¹⁰⁴		45	4 55	5 30	5 59	10 07	65	20 25	29
19	102	59.7		53	15.3 ¹³⁸	+15 04.5 ¹⁰³		50	47	26	58	19	69	12	25
20	117	59.9		67	48.0 ¹³⁷		14.8 ¹⁰³	52	44	24	58	24	72	06	23
21	133	00.1		82	20.6 ¹³⁶		25.0 ¹⁰²	54	39	21	57	30	74	20 00	20
22	148	00.3		96	53.1 ¹³⁵		35.2 ¹⁰²	56	34	19	56	37	76	19 53	17
23	163	00.5		111	25.6 ¹³⁵		45.3 ¹⁰¹	58	29	16	55	44	80	44	15
24	178	00.7	-0 42.8	125	58.0 ¹³⁴	+15 55.3 ¹⁰⁰		60 S	4 22	5 13	5 54	10 53	83	19 35	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 12 ^h 16 ^m 5		Mag: -3.9 PMG: 13 ^h 06 ^m		Mag: +1.4 PMG: 14 ^h 54 ^m		Mag: -2.3 PMG: 18 ^h 42 ^m		Mag: +0.1 PMG: 16 ^h 48 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	175	22.9	163	37.7	+3 55.7	136	25.8	+15 43.1	78	46.5	+23 27.2	107	28.5	+20 22.2	
1	190	25.3	178	37.3		151	26.5		93	48.8		122	30.8		
2	205	27.8	193	36.9		166	27.3		108	51.1		137	33.1		
3	220	30.2	208	36.6	+3 59.5	181	28.0	44.8	123	53.4	27.2	152	35.4	22.3	
4	235	32.7	223	36.2	+4 00.8	196	28.8	45.3	138	55.7	27.2	167	37.7	22.4	
5	250	35.2	238	35.8	+4 02.0	211	29.5	+15 45.9	153	58.1	+23 27.2	182	39.9	+20 22.4	
6	265	37.6	253	35.4	+4 03.3	226	30.3	+15 46.5	169	00.4	+23 27.2	197	42.2	+20 22.4	
7	280	40.1	268	35.1		241	31.0	47.0	184	02.7	27.2	212	44.5	22.5	
8	295	42.6	283	34.7		256	31.8	47.6	199	05.0	27.2	227	46.8	22.5	
9	310	45.0	298	34.3		271	32.5	48.2	214	07.3	27.2	242	49.1	22.5	
10	325	47.5	313	34.0		286	33.3	48.7	229	09.7	27.2	257	51.4	22.6	
11	340	50.0	328	33.6	+4 09.7	301	34.0	+15 49.3	244	12.0	+23 27.2	272	53.7	+20 22.6	
12	355	52.4	343	33.2	+4 11.0	316	34.7	+15 49.8	259	14.3	+23 27.2	287	56.0	+20 22.7	
13	10	54.9	358	32.8		331	35.5	50.4	274	16.6	27.2	302	58.3	22.7	
14	25	57.4	13	32.5	13.5	346	36.2	51.0	289	18.9	27.2	318	00.5	22.7	
15	40	59.8	28	32.1	14.8	1	37.0	51.5	304	21.2	27.2	333	02.8	22.8	
16	56	02.3	43	31.7	16.0	16	37.7	52.1	319	23.6	27.2	348	05.1	22.8	
17	71	04.7	58	31.4	+4 17.3	31	38.5	+15 52.7	334	25.9	+23 27.2	3	07.4	+20 22.8	
18	86	07.2	73	31.0	+4 18.6	46	39.2	+15 53.2	349	28.2	+23 27.2	18	09.7	+20 22.9	
19	101	09.7	88	30.6	19.9	61	40.0	53.8	4	30.5	27.2	33	12.0	22.9	
20	116	12.1	103	30.2	21.1	76	40.7	54.3	19	32.8	27.2	48	14.3	22.9	
21	131	14.6	118	29.9		91	41.4	54.9	34	35.1	27.2	63	16.5	23.0	
22	146	17.1	133	29.5		106	42.2	55.5	49	37.4	27.2	78	18.8	23.0	
23	161	19.5	148	29.1		121	42.9	56.0	64	39.8	27.2	93	21.1	23.0	
24	176	22.0	163	28.7	+4 26.2	136	43.7	+15 56.6	79	42.1	+23 27.2	108	23.4	+20 23.1	
Dif	—		-4	+13		+7	+6		+23	0		+23	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 : 55 ^m /2 12 ^h : 55 ^m /3 20 ^h : 55 ^m /5									
	PMG: 12 ^h 07 ^m 8					SD: 15 ^h 0			PMG: 16 ^h 06 ^m		R°: 50 ^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	00.7	-0 42.8	125	58.0	+15 55.3	100	60 N	18 12	18 53	19 43	7 42 14	** ** *	** ** *
1	193	00.8	41.8	140	30.3 ¹³³	+16 05.3	99	58	11	51	37	7 53 18	** ** *	** ** *
2	208	01.0	40.8	155	02.6 ¹³³	15.2	99	56	11	48	33	8 02 21	** ** *	** ** *
3	223	01.2	39.8	169	34.8 ¹³²	25.1	99	54	11	46	28	11 23	** ** *	** ** *
4	238	01.4	38.8	184	06.9 ¹³¹	34.8	97	52	11	45	25	19 25	** ** *	** ** *
5	253	01.6	-0 37.8	198	39.0 ¹³¹	+16 44.6	98	50	18 11	18 43	19 21	8 25 28	** ** *	** ** *
6	268	01.7	-0 36.8	213	11.0 ¹³⁰	+16 54.2	96	45	18 11	18 40	19 14	8 40 32	23 44 65	
7	283	01.9	35.8	227	42.9 ¹²⁹	+17 03.8	96	40	11	38	09	8 52 35	29 63	
8	298	02.1	34.9	242	14.7 ¹²⁸	13.3	95	35	11	36	05	9 03 37	17 61	
9	313	02.3	33.9	256	46.5 ¹²⁸	22.8	95	30	11	35	19 02	12 39	23 07 58	
10	328	02.5	32.9	271	18.1 ¹²⁶	32.1	93	20	11	33	18 58	28 43	22 48 56	
11	343	02.7	-0 31.9	285	49.7 ¹²⁶	+17 41.4	93	10 N	18 11	18 32	18 56	9 42 46	22 33 52	
12	358	02.8	-0 30.9	300	21.3 ¹²⁶	+17 50.7	93	0	18 11	18 32	18 56	9 55 49	22 18 50	
13	13	03.0	29.9	314	52.7 ¹²⁴	+17 59.8	91	10 S	11	32	57	10 08 52	22 03 48	
14	28	03.2	28.9	329	24.1 ¹²⁴	+18 08.9	91	20	12	34	18 59	22 55	21 48 45	
15	43	03.4	27.9	343	55.4 ¹²³	17.9	90	30	13	36	19 04	39 58	30 42	
16	58	03.6	27.0	358	26.6 ¹²²	26.8	89	35	13	38	08	48 61	19 40	
17	73	03.8	-0 26.0	12	57.7 ¹²¹	+18 35.7	89	40	18 13	18 40	19 12	10 59 63	21 08 37	
18	88	03.9	-0 25.0	27	28.8 ¹²¹	+18 44.4	87	45	18 14	18 43	19 18	11 12 66	20 54 34	
19	103	04.1	24.0	41	59.8 ¹²⁰	+18 53.1	87	50	15	47	25	28 70	37 31	
20	118	04.3	23.0	56	30.7 ¹¹⁹	+19 01.7	86	52	15	49	29	36 71	29 29	
21	133	04.5	22.0	71	01.5 ¹¹⁸	10.2	85	54	16	51	33	44 74	20 27	
22	148	04.7	21.0	85	32.2 ¹¹⁷	18.7	85	56	16	53	38	11 53 77	20 10 24	
23	163	04.9	20.0	100	02.9 ¹¹⁷	27.0	83	58	17	56	43	12 04 80	19 59 21	
24	178	05.1	-0 19.0	114	33.4 ¹¹⁵	+19 35.3	83	60 S	18 17	18 59	19 49	12 16 85	19 46 17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 12 ^m 5		Mag: -3.9 PMG: 13 ^h 06 ^m			Mag: +1.4 PMG: 14 ^h 52 ^m			Mag: -2.3 PMG: 18 ^h 38 ^m			Mag: +0.1 PMG: 16 ^h 44 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	176	22.0	163	28.7	+4 26.2	136	43.7	+15 56.6	79	42.1	+23 27.2	108	23.4	+20 23.1
1	191	24.5	178	28.4	27.5	151	44.4	57.2	94	44.4	27.2	123	25.7	23.1
2	206	26.9	193	28.0	28.8	166	45.2	57.7	109	46.7	27.2	138	28.0	23.1
3	221	29.4	208	27.6	30.0	181	45.9	58.3	124	49.0	27.2	153	30.3	23.2
4	236	31.8	223	27.3	31.3	196	46.6	58.8	139	51.3	27.2	168	32.5	23.2
5	251	34.3	238	26.9	+4 32.6	211	47.4	+15 59.4	154	53.6	+23 27.2	183	34.8	+20 23.2
6	266	36.8	253	26.5	+4 33.8	226	48.1	+15 59.9	169	55.9	+23 27.2	198	37.1	+20 23.3
7	281	39.2	268	26.1	35.1	241	48.9	+16 00.5	184	58.2	27.2	213	39.4	23.3
8	296	41.7	283	25.8	36.4	256	49.6	01.1	200	00.6	27.2	228	41.7	23.3
9	311	44.2	298	25.4	37.7	271	50.4	01.6	215	02.9	27.2	243	44.0	23.4
10	326	46.6	313	25.0	38.9	286	51.1	02.2	230	05.2	27.2	258	46.2	23.4
11	341	49.1	328	24.6	+4 40.2	301	51.8	+16 02.7	245	07.5	+23 27.2	273	48.5	+20 23.5
12	356	51.6	343	24.3	+4 41.5	316	52.6	+16 03.3	260	09.8	+23 27.2	288	50.8	+20 23.5
13	11	54.0	358	23.9	42.7	331	53.3	03.9	275	12.1	27.2	303	53.1	23.5
14	26	56.5	13	23.5	44.0	346	54.1	04.4	290	14.4	27.1	318	55.4	23.6
15	41	59.0	28	23.1	45.3	1	54.8	05.0	305	16.7	27.1	333	57.7	23.6
16	57	01.4	43	22.8	46.5	16	55.5	05.5	320	19.0	27.1	348	59.9	23.6
17	72	03.9	58	22.4	+4 47.8	31	56.3	+16 06.1	335	21.3	+23 27.1	4	02.2	+20 23.7
18	87	06.3	73	22.0	+4 49.1	46	57.0	+16 06.6	350	23.6	+23 27.1	19	04.5	+20 23.7
19	102	08.8	88	21.6	50.3	61	57.8	07.2	5	25.9	27.1	34	06.8	23.7
20	117	11.3	103	21.3	51.6	76	58.5	07.7	20	28.2	27.1	49	09.1	23.8
21	132	13.7	118	20.9	52.9	91	59.3	08.3	35	30.6	27.1	64	11.4	23.8
22	147	16.2	133	20.5	54.1	107	00.0	08.9	50	32.9	27.1	79	13.6	23.8
23	162	18.7	148	20.1	55.4	122	00.7	09.4	65	35.2	27.1	94	15.9	23.9
24	177	21.1	163	19.8	+4 56.7	137	01.5	+16 10.0	80	37.5	+23 27.1	109	18.2	+20 23.9
Dif	—		-4		+13	+7		+6	+23		0	+23		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 : 55 ^m /7 12 ^h : 56 ^m /0 20 ^h : 56 ^m /2 R°: 53 ^m									
	PMG: 12 ^h 07 ^m 5													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m		h	m
0	178	05.1	-0	114	33.4	+19	35.3	4	31	5	21	6	02	7
1	193	05.2		129	03.9		43.5		37		24	03	8	11
2	208	05.4		143	34.3		51.6		42		26	03	23	30
3	223	05.6		158	04.7	+19	59.6		46		28	03	34	32
4	238	05.8		172	34.9	+20	07.5		50		30	03	44	34
5	253	06.0	-0	187	05.1	+20	15.3		4	53	5	31	6	03
6	268	06.2	-0	201	35.1	+20	23.1		5	00	5	35	6	04
7	283	06.3		216	05.1		30.7		05		37	04	27	41
8	298	06.5		230	35.0		38.3		09		39	04	40	43
9	313	06.7		245	04.9		45.7		13		40	04	9	51
10	328	06.9		259	34.6	+20	53.1		17		42	04	10	11
11	343	07.1	-0	274	04.2	+21	00.4		5	19	5	43	6	04
12	358	07.3	-0	288	33.8	+21	07.5		5	20	5	44	6	04
13	13	07.5		303	03.3		14.6		19		43	04	11	00
14	28	07.6		317	32.7		21.6		16		42	04	17	57
15	43	07.8		332	02.0		28.4		11		39	03	37	59
16	58	08.0		346	31.3		35.2		08		38	03	11	49
17	73	08.2	-0	1	00.4	+21	41.8		5	04	5	35	6	03
18	88	08.4	-0	15	29.5	+21	48.4		4	58	5	33	6	02
19	103	08.6	-0	29	58.4	+21	54.8		51		29	01	38	68
20	118	08.7	+0	44	27.3	+22	01.2		47		27	01	47	70
21	133	08.9		58	56.1		07.4		43		25	01	12	58
22	148	09.1		73	24.9		13.6		39		23	00	13	10
23	163	09.3		87	53.5		19.6		34		21	6	00	24
24	178	09.5	+0	102	22.1	+22	25.5		4	27	5	18	5	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 08 ^m 6		Mag: -3.9 PMG: 13 ^h 07 ^m		Mag: +1.4 PMG: 14 ^h 51 ^m		Mag: -2.3 PMG: 18 ^h 35 ^m		Mag: +0.1 PMG: 16 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	177	21.1	163	19.8	+4	56.7	137	01.5	+16	10.0
1	192	23.6	178	19.4		57.9	152	02.2		10.5
2	207	26.1	193	19.0	+4	59.2	167	03.0		11.1
3	222	28.5	208	18.6	+5	00.5	182	03.7		11.6
4	237	31.0	223	18.3		01.7	197	04.4		12.2
5	252	33.5	238	17.9	+5	03.0	212	05.2	+16	12.7
6	267	35.9	253	17.5	+5	04.3	227	05.9	+16	13.3
7	282	38.4	268	17.1		05.5	242	06.7		13.8
8	297	40.8	283	16.8		06.8	257	07.4		14.4
9	312	43.3	298	16.4		08.1	272	08.1		14.9
10	327	45.8	313	16.0		09.3	287	08.9		15.5
11	342	48.2	328	15.6	+5	10.6	302	09.6	+16	16.0
12	357	50.7	343	15.3	+5	11.9	317	10.4	+16	16.6
13	12	53.2	358	14.9		13.1	332	11.1		17.1
14	27	55.6	13	14.5		14.4	347	11.8		17.7
15	42	58.1	28	14.1		15.7	2	12.6		18.2
16	58	00.6	43	13.7		16.9	17	13.3		18.8
17	73	03.0	58	13.4	+5	18.2	32	14.1	+16	19.3
18	88	05.5	73	13.0	+5	19.5	47	14.8	+16	19.9
19	103	07.9	88	12.6		20.7	62	15.5		20.4
20	118	10.4	103	12.2		22.0	77	16.3		21.0
21	133	12.9	118	11.9		23.2	92	17.0		21.5
22	148	15.3	133	11.5		24.5	107	17.7		22.1
23	163	17.8	148	11.1		25.8	122	18.5		22.6
24	178	20.3	163	10.7	+5	27.0	137	19.2	+16	23.2
Dif	—		-4	+13		+7	+6	+23		0

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 2			Edad: 6 ^d 9 PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 7 20 ^h : 57 ^s 0 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	178	09.5	+0 04.7	102	22.1	+22 25.5	58	60 N	18 16	18 58	19 48	8 18 38	2 19 76	
1	193	09.7		116	50.5	31.3	58	58	16	55	42	37 40	2 01 73	
2	208	09.9	06.7	131	18.9	36.9	56	56	15	53	37	8 53 42	1 45 71	
3	223	10.0	07.6	145	47.2	42.5	56	54	15	50	32	9 06 44	32 69	
4	238	10.2	08.6	160	15.5	48.0	55	52	14	48	28	18 45	21 67	
5	253	10.4	+0 09.6	174	43.6	53.3	53	50	18 14	18 46	19 25	9 28 47	1 11 66	
6	268	10.6	+0 10.6	189	11.6	58.5	52	45	18 13	18 43	19 17	9 50 48	0 49 64	
7	283	10.8	11.6	203	39.6	03.6	51	40	13	40	11	10 08 50	32 62	
8	298	11.0	12.6	218	07.5	08.6	50	35	12	38	07	23 51	18 60	
9	313	11.2	13.6	232	35.3	13.5	49	30	12	36	19 04	36 52	0 05 59	
10	328	11.3	14.6	247	03.1	18.2	47	20	11	33	18 59	10 58 53	** ** *	
11	343	11.5	+0 15.5	261	30.7	22.8	46	10 N	18 11	18 32	18 56	11 18 54	** ** *	
12	358	11.7	+0 16.5	275	58.3	27.3	45	0	18 10	18 31	18 55	11 36 55	** ** *	
13	13	11.9	17.5	290	25.8	31.7	44	10 S	10	31	56	11 54 57	23 43 56	
14	28	12.1	18.5	304	53.2	35.9	42	20	10	32	18 58	12 14 57	23 56	
15	43	12.3	19.5	319	20.5	40.0	41	30	10	34	19 02	36 59	23 00 55	
16	58	12.5	20.5	333	47.8	44.0	40	35	10	35	05	12 50 59	22 46 55	
17	73	12.7	+0 21.5	348	15.0	47.9	39	40	18 10	18 37	19 09	13 05 61	22 30 54	
18	88	12.8	+0 22.5	2	42.1	51.6	37	45	18 10	18 40	19 14	13 23 62	22 11 54	
19	103	13.0	23.4	17	09.1	55.2	36	50	11	43	21	46 64	21 48 52	
20	118	13.2	24.4	31	36.1	58.7	35	52	11	44	24	13 57 64	37 51	
21	133	13.4	25.4	46	03.0	02.0	33	54	11	46	28	14 10 65	24 51	
22	148	13.6	26.4	60	29.8	05.2	32	56	11	48	32	24 66	21 09 50	
23	163	13.8	27.4	74	56.5	08.3	31	58	11	50	37	14 41 68	20 52 49	
24	178	14.0	+0 28.4	89	23.2	11.2	29	60 S	18 11	18 53	19 42	15 02 70	20 31 47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 04 ^m 7		Mag: -3.9 PMG: 13 ^h 08 ^m		Mag: +1.4 PMG: 14 ^h 50 ^m		Mag: -2.3 PMG: 18 ^h 31 ^m		Mag: +0.1 PMG: 16 ^h 37 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	178	20.3	163	10.7	+5 27.0	137	19.2	+16 23.2	81	32.7	+23 27.0	110	12.9	+20 24.8
1	193	22.7	178	10.3	28.3	152	20.0	23.7	96	35.0	27.0	125	15.2	24.8
2	208	25.2	193	10.0	29.6	167	20.7	24.3	111	37.3	27.0	140	17.5	24.8
3	223	27.7	208	09.6	30.8	182	21.4	24.8	126	39.6	27.0	155	19.7	24.9
4	238	30.1	223	09.2	32.1	197	22.2	25.4	141	41.9	27.0	170	22.0	24.9
5	253	32.6	238	08.8	+5 33.3	212	22.9	+16 25.9	156	44.1	+23 27.0	185	24.3	+20 24.9
6	268	35.1	253	08.5	+5 34.6	227	23.7	+16 26.5	171	46.4	+23 27.0	200	26.6	+20 25.0
7	283	37.5	268	08.1	35.9	242	24.4	27.0	186	48.7	27.0	215	28.8	25.0
8	298	40.0	283	07.7	37.1	257	25.1	27.6	201	51.0	27.0	230	31.1	25.0
9	313	42.4	298	07.3	38.4	272	25.9	28.1	216	53.3	27.0	245	33.4	25.1
10	328	44.9	313	06.9	39.6	287	26.6	28.7	231	55.6	27.0	260	35.7	25.1
11	343	47.4	328	06.6	+5 40.9	302	27.3	+16 29.2	246	57.9	+23 27.0	275	37.9	+20 25.2
12	358	49.8	343	06.2	+5 42.2	317	28.1	+16 29.7	262	00.2	+23 27.0	290	40.2	+20 25.2
13	13	52.3	358	05.8	43.4	332	28.8	30.3	277	02.5	27.0	305	42.5	25.2
14	28	54.8	13	05.4	44.7	347	29.6	30.8	292	04.8	27.0	320	44.8	25.3
15	43	57.2	28	05.0	45.9	2	30.3	31.4	307	07.1	27.0	335	47.0	25.3
16	58	59.7	43	04.7	47.2	17	31.0	31.9	322	09.4	27.0	350	49.3	25.3
17	74	02.2	58	04.3	+5 48.5	32	31.8	+16 32.5	337	11.7	+23 27.0	5	51.6	+20 25.4
18	89	04.6	73	03.9	+5 49.7	47	32.5	+16 33.0	352	13.9	+23 27.0	20	53.9	+20 25.4
19	104	07.1	88	03.5	51.0	62	33.2	33.6	7	16.2	27.0	35	56.1	25.4
20	119	09.6	103	03.1	52.2	77	34.0	34.1	22	18.5	27.0	50	58.4	25.5
21	134	12.0	118	02.7	53.5	92	34.7	34.6	37	20.8	27.0	66	00.7	25.5
22	149	14.5	133	02.4	54.7	107	35.4	35.2	52	23.1	27.0	81	03.0	25.5
23	164	16.9	148	02.0	56.0	122	36.2	35.7	67	25.4	26.9	96	05.2	25.6
24	179	19.4	163	01.6	+5 57.3	137	36.9	+16 36.3	82	27.7	+23 26.9	111	07.5	+20 25.6
Dif	—		-4	+13		+7	+5		+23		0	+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: 12 ^h 06 ^m 6			Edad: 8 ^d 9	PHE { 4 ^h : 58/2 12 ^h : 58/5 20 ^h : 58/8 R°: 59 ^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	178	18.5	+0 52.1	75	44.2	+24 38.9	7	60 N	18 21	19 03	19 54	9 55	82	4 35	41				
1	193	18.6	53.0	90	09.4	38.2	62	58	20	19 00	47	10 16	79	4 13	44				
2	208	18.8	54.0	104	34.6	37.4	8	56	19	18 57	42	34	76	3 56	45				
3	223	19.0	55.0	118	59.7	36.3	61	54	19	54	36	10 49	75	40	48				
4	238	19.2	56.0	133	24.8	35.2	61	52	18	52	32	11 02	73	27	49				
5	253	19.4	+0 57.0	147	49.8	+24 33.8	60	50	18 17	18 50	19 28	11 14	71	3 16	49				
6	268	19.6	+0 58.0	162	14.9	+24 32.4	61	45	18 16	18 45	19 20	11 38	69	2 52	51				
7	283	19.8	59.0	176	39.8	30.7	59	40	15	42	14	11 57	67	33	53				
8	298	20.0	+0 59.9	191	04.8	28.9	60	35	14	39	09	12 13	65	16	54				
9	313	20.2	+1 00.9	205	29.7	27.0	59	30	13	37	19 05	26	65	2 02	55				
10	328	20.3	01.9	219	54.6	24.9	59	20	12	34	18 59	12 50	62	1 39	56				
11	343	20.5	+1 02.9	234	19.4	+24 22.6	58	10 N	18 11	18 32	18 56	13 10	61	1 18	58				
12	358	20.7	+1 03.9	248	44.3	+24 20.2	59	0	18 10	18 31	18 55	13 29	59	0 59	58				
13	13	20.9	04.9	263	09.1	17.6	58	10 S	09	30	54	13 48	57	39	60				
14	28	21.1	05.9	277	33.9	14.8	58	20	08	30	56	14 08	56	0 19	60				
15	43	21.3	06.8	291	58.6	11.9	57	30	08	32	18 59	32	53	** ** *	**				
16	58	21.5	07.8	306	23.3	08.9	57	35	07	33	19 02	14 46	51	** ** *	**				
17	73	21.7	+1 08.8	320	48.1	+24 05.7	58	40	18 07	18 34	19 05	15 02	50	** ** *	**				
18	88	21.9	+1 09.8	335	12.8	+24 02.3	57	45	18 07	18 36	19 10	15 21	47	** ** *	**				
19	103	22.0	10.8	349	37.4	+23 58.7	56	50	06	38	16	44	45	23 46	76				
20	118	22.2	11.8	4	02.1	55.0	57	52	06	40	19	15 56	43	34	79				
21	133	22.4	12.8	18	26.7	51.2	56	54	06	41	22	16 08	42	22	80				
22	148	22.6	13.7	32	51.4	47.2	57	56	06	43	26	23	39	23 07	83				
23	163	22.8	14.7	47	16.0	43.0	56	58	05	44	31	16 41	36	22 50	86				
24	178	23.0	+1 15.7	61	40.6	+23 38.6	56	60 S	18 05	18 47	19 36	17 02	32	22 29	91				

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 56 ^m 8		Mag: -3.9 PMG: 13 ^h 09 ^m			Mag: +1.4 PMG: 14 ^h 48 ^m			Mag: -2.3 PMG: 18 ^h 24 ^m			Mag: +0.1 PMG: 16 ^h 29 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	180	18.5	162	52.4	+6 27.4	137	54.6	+16 49.2	83	22.5	+23 26.8	112	02.0	+20 26.5
1	195	21.0	177	52.0	28.6	152	55.3	49.7	98	24.8	26.8	127	04.3	26.5
2	210	23.5	192	51.6	29.9	167	56.0	50.3	113	27.1	26.8	142	06.6	26.6
3	225	25.9	207	51.2	31.1	182	56.8	50.8	128	29.3	26.8	157	08.8	26.6
4	240	28.4	222	50.8	32.4	197	57.5	51.3	143	31.6	26.8	172	11.1	26.6
5	255	30.9	237	50.5	+6 33.6	212	58.2	+16 51.9	158	33.9	+23 26.8	187	13.4	+20 26.7
6	270	33.3	252	50.1	+6 34.9	227	59.0	+16 52.4	173	36.2	+23 26.8	202	15.6	+20 26.7
7	285	35.8	267	49.7	36.1	242	59.7	52.9	188	38.5	26.8	217	17.9	26.7
8	300	38.3	282	49.3	37.4	258	00.4	53.5	203	40.7	26.8	232	20.2	26.8
9	315	40.7	297	48.9	38.6	273	01.2	54.0	218	43.0	26.8	247	22.4	26.8
10	330	43.2	312	48.5	39.9	288	01.9	54.5	233	45.3	26.8	262	24.7	26.9
11	345	45.7	327	48.1	+6 41.1	303	02.6	+16 55.1	248	47.6	+23 26.8	277	27.0	+20 26.9
12	0	48.1	342	47.7	+6 42.4	318	03.4	+16 55.6	263	49.8	+23 26.8	292	29.3	+20 26.9
13	15	50.6	357	47.4	43.6	333	04.1	56.1	278	52.1	26.8	307	31.5	27.0
14	30	53.0	12	47.0	44.9	348	04.8	56.7	293	54.4	26.8	322	33.8	27.0
15	45	55.5	27	46.6	46.1	3	05.6	57.2	308	56.7	26.8	337	36.1	27.0
16	60	58.0	42	46.2	47.4	18	06.3	57.7	323	58.9	26.8	352	38.3	27.1
17	76	00.4	57	45.8	+6 48.6	33	07.0	+16 58.3	339	01.2	+23 26.8	7	40.6	+20 27.1
18	91	02.9	72	45.4	+6 49.8	48	07.8	+16 58.8	354	03.5	+23 26.8	22	42.9	+20 27.1
19	106	05.4	87	45.0	51.1	63	08.5	59.3	9	05.8	26.8	37	45.1	27.2
20	121	07.8	102	44.6	52.3	78	09.2	+16 59.9	24	08.0	26.7	52	47.4	27.2
21	136	10.3	117	44.3	53.6	93	09.9	+17 00.4	39	10.3	26.7	67	49.7	27.3
22	151	12.8	132	43.9	54.8	108	10.7	00.9	54	12.6	26.7	82	51.9	27.3
23	166	15.2	147	43.5	56.1	123	11.4	01.4	69	14.9	26.7	97	54.2	27.3
24	181	17.7	162	43.1	+6 57.3	138	12.1	+17 02.0	84	17.1	+23 26.7	112	56.5	+20 27.4
Dif	—		-4	+12		+7	+5		+23	0		+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: 12 ^h 06 ^m 0			Edad: 10 ^d 9 PHE { 4 ^h : 59'9 12 ^h : 60'2 20 ^h : 60'5 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	h m m	h m m
0	178	27.5	+1 39.3	47	31.9	+21 07.4	83	60 N	18 26	19 08	20 00	12 54 103	5 41 16		
1	193	27.7	40.3	61	56.7	+20 59.1	83	58	25	04	19 52	13 07 99	27 20		
2	208	27.9	41.3	76	21.6	59	50.8	56	24	19 01	46	19 94	14 24		
3	223	28.1	42.3	90	46.4	58	42.2	54	22	18 58	41	29 91	5 04 27		
4	238	28.3	43.3	105	11.3	59	33.6	52	21	55	36	38 88	4 54 30		
5	253	28.5	+1 44.2	119	36.2	59	+20 24.8	50	18 20	18 53	19 31	13 46 86	4 45 32		
6	268	28.7	+1 45.2	134	01.1	59	+20 15.8	45	18 18	18 48	19 23	14 03 81	4 27 37		
7	283	28.9	46.2	148	26.1	60	+20 06.7	40	17	44	16	17 77	4 12 40		
8	298	29.0	47.2	162	51.1	60	+19 57.5	35	15	41	10	29 73	3 59 44		
9	313	29.2	48.2	177	16.1	60	48.1	30	14	38	06	39 71	48 46		
10	328	29.4	49.2	191	41.1	60	38.5	20	12	34	19 00	14 57 65	29 50		
11	343	29.6	+1 50.1	206	06.2	61	+19 28.9	10 N	18 11	18 32	18 56	15 12 61	3 12 54		
12	358	29.8	+1 51.1	220	31.3	61	+19 19.1	0	18 09	18 30	18 54	15 27 57	2 56 58		
13	13	30.0	52.1	234	56.5	62	+19 09.1	10 S	08	29	53	41 53	40 61		
14	28	30.2	53.1	249	21.6	61	+18 59.0	20	07	29	54	15 56 49	23 65		
15	43	30.4	54.1	263	46.8	62	48.8	30	05	29	57	16 13 44	2 03 70		
16	58	30.6	55.0	278	12.1	63	38.5	35	05	30	18 59	23 41	1 51 73		
17	73	30.8	+1 56.0	292	37.4	63	+18 28.0	40	18 04	18 31	19 02	16 35 38	1 38 75		
18	88	30.9	+1 57.0	307	02.7	63	+18 17.3	45	18 03	18 32	19 06	16 48 34	1 22 79		
19	103	31.1	58.0	321	28.0	63	+18 06.6	50	02	34	12	17 05 28	1 02 84		
20	118	31.3	+1 59.0	335	53.4	64	+17 55.7	52	01	35	14	12 27	0 53 86		
21	133	31.5	+2 00.0	350	18.8	64	44.7	54	01	36	17	21 23	42 89		
22	148	31.7	+2 00.9	4	44.3	65	33.6	56	00	37	21	30 21	30 93		
23	163	31.9	01.9	19	09.8	65	22.3	58	18 00	39	25	41 17	16 97		
24	178	32.1	+2 02.9	33	35.4	66	+17 10.9	60 S	17 59	18 40	19 29	17 53 13	0 00 101		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 11 ^h 48 ^m 9		Mag: -3.9 PMG: 13 ^h 10 ^m		Mag: +1.4 PMG: 14 ^h 45 ^m		Mag: -2.3 PMG: 18 ^h 16 ^m		Mag: +0.1 PMG: 16 ^h 22 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	182	16.8	162	33.7	+7 27.1	138	29.7	+17 14.6	85	11.6	+23 26.6	113	50.8	+20 28.3	
1	197	19.3	177	33.3	28.4	153	30.4	15.1	100	13.8	26.6	128	53.0	28.3	
2	212	21.8	192	32.9	29.6	168	31.1	15.6	115	16.1	26.6	143	55.3	28.3	
3	227	24.2	207	32.5	30.8	183	31.9	16.2	130	18.4	26.6	158	57.6	28.4	
4	242	26.7	222	32.1	32.1	198	32.6	16.7	145	20.6	26.6	173	59.8	28.4	
5	257	29.1	237	31.7	+7 33.3	213	33.3	+17 17.2	160	22.9	+23 26.6	189	02.1	+20 28.4	
6	272	31.6	252	31.3	+7 34.5	228	34.0	+17 17.7	175	25.1	+23 26.6	204	04.4	+20 28.5	
7	287	34.1	267	30.9	35.8	243	34.8	18.3	190	27.4	26.6	219	06.6	28.5	
8	302	36.5	282	30.5	37.0	258	35.5	18.8	205	29.7	26.6	234	08.9	28.6	
9	317	39.0	297	30.1	38.3	273	36.2	19.3	220	31.9	26.6	249	11.1	28.6	
10	332	41.5	312	29.7	39.5	288	37.0	19.8	235	34.2	26.5	264	13.4	28.6	
11	347	43.9	327	29.3	+7 40.7	303	37.7	+17 20.3	250	36.4	+23 26.5	279	15.7	+20 28.7	
12	2	46.4	342	28.9	+7 42.0	318	38.4	+17 20.9	265	38.7	+23 26.5	294	17.9	+20 28.7	
13	17	48.9	357	28.5	43.2	333	39.1	21.4	280	41.0	26.5	309	20.2	28.7	
14	32	51.3	12	28.1	44.4	348	39.9	21.9	295	43.2	26.5	324	22.4	28.8	
15	47	53.8	27	27.7	45.7	3	40.6	22.4	310	45.5	26.5	339	24.7	28.8	
16	62	56.3	42	27.3	46.9	18	41.3	22.9	325	47.7	26.5	354	27.0	28.8	
17	77	58.7	57	26.9	+7 48.1	33	42.1	+17 23.4	340	50.0	+23 26.5	9	29.2	+20 28.9	
18	93	01.2	72	26.5	+7 49.4	48	42.8	+17 24.0	355	52.3	+23 26.5	24	31.5	+20 28.9	
19	108	03.6	87	26.1	50.6	63	43.5	24.5	10	54.5	26.5	39	33.7	29.0	
20	123	06.1	102	25.7	51.8	78	44.2	25.0	25	56.8	26.5	54	36.0	29.0	
21	138	08.6	117	25.3	53.1	93	45.0	25.5	40	59.0	26.5	69	38.3	29.0	
22	153	11.0	132	24.9	54.3	108	45.7	26.0	56	01.3	26.5	84	40.5	29.1	
23	168	13.5	147	24.5	55.5	123	46.4	26.6	71	03.6	26.5	99	42.8	29.1	
24	183	16.0	162	24.1	+7 56.8	138	47.2	+17 27.1	86	05.8	+23 26.5	114	45.0	+20 29.1	
Dif	—		-4	+12		+7	+5		+23		0		+23		0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 11 ^d 9 PHE { 4 ^h : 60'7 12 ^h : 60'9 20 ^h : 61'1 R°: 55 ^m													
	PMG: 12 ^h 05 ^m 7			SD: 16:5 PMG: 22 ^h 37 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	178	32.1	+2 02.9	33	35.4		+17 10.9		60 N	4 11	5 02	5 44	14 37	104		5 57	11
1	193	32.3		48	00.9	65	+16 59.4	115	58	18	06	46	46	99		47	15
2	208	32.5		62	26.6	67		47.8	56	25	10	47	14	53	96	38	19
3	223	32.7		76	52.2	66		36.0	54	30	13	48	15	00	93	31	21
4	238	32.8		91	17.9	67		24.1	52	35	16	49	06	90		24	24
5	253	33.0	+2 07.8	105	43.7	68	+16 12.1	120	50	4 39	5 18	5 50	15 12	87		5 17	27
6	268	33.2	+2 08.8	120	09.4	67	+16 00.0	121	45	4 48	5 23	5 52	15 24	82		5 04	31
7	283	33.4		134	35.3	69	+15 47.8	122	40	4 55	27	54	34	77		4 52	36
8	298	33.6		149	01.1	68		35.5	35	5 01	30	56	42	74		43	39
9	313	33.8		163	27.0	69		23.0	30	05	33	57	15	50	70	34	42
10	328	34.0		177	53.0	70	+15 10.4	126	20	11	37	5 59	16 02	65		19	48
11	343	34.2	+2 13.7	192	19.0	70	+14 57.8	126	10 N	5 15	5 40	6 01	16 13	60		4 06	52
12	358	34.4	+2 14.7	206	45.0	70	+14 45.0	128	0	5 18	5 42	6 02	16 24	55		3 54	56
13	13	34.6		221	11.0	70		32.1	10 S	19	43	04	34	51		41	61
14	28	34.7		235	37.2	72		19.1	20	18	43	05	45	46		28	65
15	43	34.9		250	03.3	71	+14 06.0	131	30	15	43	07	16	57	41	13	70
16	58	35.1		264	29.5	72	+13 52.8	132	35	13	42	08	17	04	38	3 04	73
17	73	35.3	+2 19.6	278	55.7	72	+13 39.5	133	40	5 10	5 42	6 09	17 13	33		2 53	77
18	88	35.5	+2 20.5	293	22.0	73	+13 26.1	134	45	5 06	5 40	6 10	17 22	30		2 41	82
19	103	35.7		307	48.3	73	+13 12.6	135	50	5 01	39	11	33	25		26	87
20	118	35.9		322	14.7	74	+12 59.1	135	52	4 58	38	11	39	22		19	90
21	133	36.1		336	41.1	74		45.4	54	55	37	12	44	20		11	93
22	148	36.3		351	07.5	74		31.6	56	52	36	13	51	16		2 03	95
23	163	36.5		5	34.0	75		17.8	58	48	34	13	17	58	13	1 53	99
24	178	36.6	+2 26.4	20	00.5	75	+12 03.8	140	60 S	4 43	5 33	6 14	18 06	9		1 41	104
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 11 ^h 45 ^m 0			Mag: -3.9 PMG: 13 ^h 11 ^m			Mag: +1.4 PMG: 14 ^h 44 ^m			Mag: -2.3 PMG: 18 ^h 13 ^m			Mag: +0.1 PMG: 16 ^h 19 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	183	16.0	162 24.1	+7 56.8		138 47.2	+17 27.1		86 05.8	+23 26.5		114 45.0	+20 29.1				
1	198	18.4	177 23.7	58.0		153 47.9	27.6		101 08.1	26.5		129 47.3	29.2				
2	213	20.9	192 23.3	+7 59.2		168 48.6	28.1		116 10.3	26.5		144 49.5	29.2				
3	228	23.4	207 22.9	+8 00.4		183 49.3	28.6		131 12.6	26.4		159 51.8	29.3				
4	243	25.8	222 22.5	01.7		198 50.1	29.1		146 14.8	26.4		174 54.1	29.3				
5	258	28.3	237 22.1	+8 02.9		213 50.8	+17 29.6		161 17.1	+23 26.4		189 56.3	+20 29.3				
6	273	30.8	252 21.7	+8 04.1		228 51.5	+17 30.2		176 19.3	+23 26.4		204 58.6	+20 29.4				
7	288	33.2	267 21.3	05.4		243 52.2	30.7		191 21.6	26.4		220 00.8	29.4				
8	303	35.7	282 20.9	06.6		258 53.0	31.2		206 23.9	26.4		235 03.1	29.4				
9	318	38.1	297 20.5	07.8		273 53.7	31.7		221 26.1	26.4		250 05.4	29.5				
10	333	40.6	312 20.1	09.1		288 54.4	32.2		236 28.4	26.4		265 07.6	29.5				
11	348	43.1	327 19.7	+8 10.3		303 55.1	+17 32.7		251 30.6	+23 26.4		280 09.9	+20 29.6				
12	3	45.5	342 19.3	+8 11.5		318 55.9	+17 33.2		266 32.9	+23 26.4		295 12.1	+20 29.6				
13	18	48.0	357 18.9	12.7		333 56.6	33.8		281 35.1	26.4		310 14.4	29.6				
14	33	50.5	12 18.5	14.0		348 57.3	34.3		296 37.4	26.4		325 16.6	29.7				
15	48	52.9	27 18.1	15.2		3 58.0	34.8		311 39.6	26.4		340 18.9	29.7				
16	63	55.4	42 17.7	16.4		18 58.8	35.3		326 41.9	26.4		355 21.1	29.7				
17	78	57.9	57 17.3	+8 17.6		33 59.5	+17 35.8		341 44.1	+23 26.4		10 23.4	+20 29.8				
18	94	00.3	72 16.9	+8 18.9		49 00.2	+17 36.3		356 46.4	+23 26.4		25 25.7	+20 29.8				
19	109	02.8	87 16.5	20.1		64 00.9	36.8		11 48.6	26.4		40 27.9	29.9				
20	124	05.2	102 16.1	21.3		79 01.7	37.3		26 50.9	26.3		55 30.2	29.9				
21	139	07.7	117 15.7	22.5		94 02.4	37.8		41 53.1	26.3		70 32.4	29.9				
22	154	10.2	132 15.3	23.8		109 03.1	38.4		56 55.4	26.3		85 34.7	30.0				
23	169	12.6	147 14.9	25.0		124 03.8	38.9		71 57.6	26.3		100 36.9	30.0				
24	184	15.1	162 14.5	+8 26.2		139 04.6	+17 39.4		86 59.9	+23 26.3		115 39.2	+20 30.1				
Dif	—			-4	+12		+7	+5		+23	0		+23	0			

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 12 ^h 05 ^m 4			Edad: 12 ^d 9 PHE { 4 ^h : 61 ^h 2 12 ^h : 61 ^h 3 20 ^h : 61 ^h 4 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	178	36.6	+2	26.4	20	00.5	+12	03.8	60 N	18 31	19 13	20 05	16 21 103	6 08 8				
1	193	36.8		27.4	34	27.1	76	+11	49.8 ¹⁴⁰	58	29	09	19 57	25 99	6 02 12			
2	208	37.0		28.4	48	53.7	76		35.7 ¹⁴¹	56	28	05	51	29 96	5 57 15			
3	223	37.2		29.4	63	20.3	76		21.5 ¹⁴²	54	26	19 02	45	33 93	52 18			
4	238	37.4		30.3	77	47.0	77	+11	07.2 ¹⁴³	52	25	18 59	40	36 90	48 20			
5	253	37.6	+2	31.3	92	13.7	77	+10	52.8 ¹⁴⁴	50	18 24	18 56	19 35	16 39 88	5 44 23			
6	268	37.8	+2	32.3	106	40.4	77	+10	38.4 ¹⁴⁴	45	18 21	18 51	19 25	16 46 82	5 35 28			
7	283	38.0		33.3	121	07.2	78		23.9 ¹⁴⁵	40	19	46	18	51 77	28 32			
8	298	38.2		34.3	135	34.1	79	+10	09.3 ¹⁴⁶	35	17	42	12	16 56 73	22 36			
9	313	38.4		35.2	150	00.9	78	+9	54.7 ¹⁴⁶	30	16	39	08	17 00 70	16 39			
10	328	38.6		36.2	164	27.8	79		39.9 ¹⁴⁸	20	13	35	19 01	07 64	5 07 44			
11	343	38.7	+2	37.2	178	54.8	80	+9	25.2 ¹⁴⁷	10 N	18 11	18 32	18 56	17 13 59	4 58 50			
12	358	38.9	+2	38.2	193	21.7	79	+9	10.3 ¹⁴⁹	0	18 09	18 29	18 53	17 19 54	4 50 55			
13	13	39.1		39.1	207	48.7	80	+8	55.4 ¹⁴⁹	10 S	07	28	52	25 49	42 59			
14	28	39.3		40.1	222	15.8	81		40.4 ¹⁵⁰	20	05	27	52	31 44	33 64			
15	43	39.5		41.1	236	42.9	81		25.3 ¹⁵¹	30	03	27	54	38 38	23 70			
16	58	39.7		42.1	251	10.0	81	+8	10.2 ¹⁵¹	35	02	27	56	42 35	17 74			
17	73	39.9	+2	43.1	265	37.1	81	+7	55.1 ¹⁵¹	40	18 01	18 27	18 59	17 46 32	4 10 78			
18	88	40.1	+2	44.0	280	04.3	82	+7	39.9 ¹⁵²	45	17 59	18 28	19 02	17 52 27	4 03 82			
19	103	40.3		45.0	294	31.5	82		24.6 ¹⁵³	50	57	30	07	17 58 22	3 53 88			
20	118	40.5		46.0	308	58.7	82	+7	09.3 ¹⁵³	52	57	30	10	18 01 19	49 90			
21	133	40.6		47.0	323	26.0	83	+6	53.9 ¹⁵⁴	54	56	31	12	04 17	44 93			
22	148	40.8		47.9	337	53.3	83		38.5 ¹⁵⁴	56	55	32	15	07 14	38 97			
23	163	41.0		48.9	352	20.6	83		23.0 ¹⁵⁵	58	54	33	19	11 11	32 100			
24	178	41.2	+2	49.9	6	48.0	84	+6	07.5 ¹⁵⁵	60 S	17 53	18 34	19 23	18 15 8	3 25 104			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 41 ^m 1		Mag: -3.9 PMG: 13 ^h 11 ^m			Mag: +1.5 PMG: 14 ^h 43 ^m			Mag: -2.3 PMG: 18 ^h 09 ^m			Mag: +0.1 PMG: 16 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	184	15.1	162	14.5	+8	26.2	139	04.6	+17	39.4	86	59.9	+23	26.3	115	39.2	+20	30.1
1	199	17.6	177	14.1		27.4	154	05.3		39.9	102	02.1		26.3	130	41.4		30.1
2	214	20.0	192	13.7		28.7	169	06.0		40.4	117	04.4		26.3	145	43.7		30.1
3	229	22.5	207	13.3		29.9	184	06.7		40.9	132	06.6		26.3	160	46.0		30.2
4	244	25.0	222	12.9		31.1	199	07.5		41.4	147	08.9		26.3	175	48.2		30.2
5	259	27.4	237	12.4	+8	32.3	214	08.2	+17	41.9	162	11.1	+23	26.3	190	50.5	+20	30.2
6	274	29.9	252	12.0	+8	33.5	229	08.9	+17	42.4	177	13.4	+23	26.3	205	52.7	+20	30.3
7	289	32.4	267	11.6		34.8	244	09.6		42.9	192	15.6		26.3	220	55.0		30.3
8	304	34.8	282	11.2		36.0	259	10.4		43.4	207	17.9		26.3	235	57.2		30.4
9	319	37.3	297	10.8		37.2	274	11.1		44.0	222	20.1		26.3	250	59.5		30.4
10	334	39.7	312	10.4		38.4	289	11.8		44.5	237	22.4		26.3	266	01.7		30.4
11	349	42.2	327	10.0	+8	39.6	304	12.5	+17	45.0	252	24.6	+23	26.2	281	04.0	+20	30.5
12	4	44.7	342	09.6	+8	40.9	319	13.3	+17	45.5	267	26.8	+23	26.2	296	06.2	+20	30.5
13	19	47.1	357	09.2		42.1	334	14.0		46.0	282	29.1		26.2	311	08.5		30.5
14	34	49.6	12	08.8		43.3	349	14.7		46.5	297	31.3		26.2	326	10.7		30.6
15	49	52.1	27	08.4		44.5	4	15.4		47.0	312	33.6		26.2	341	13.0		30.6
16	64	54.5	42	08.0		45.7	19	16.2		47.5	327	35.8		26.2	356	15.2		30.7
17	79	57.0	57	07.6	+8	47.0	34	16.9	+17	48.0	342	38.1	+23	26.2	11	17.5	+20	30.7
18	94	59.5	72	07.1	+8	48.2	49	17.6	+17	48.5	357	40.3	+23	26.2	26	19.7	+20	30.7
19	110	01.9	87	06.7		49.4	64	18.3		49.0	12	42.6		26.2	41	22.0		30.8
20	125	04.4	102	06.3		50.6	79	19.0		49.5	27	44.8		26.2	56	24.3		30.8
21	140	06.8	117	05.9		51.8	94	19.8		50.0	42	47.0		26.2	71	26.5		30.8
22	155	09.3	132	05.5		53.0	109	20.5		50.5	57	49.3		26.2	86	28.8		30.9
23	170	11.8	147	05.1		54.3	124	21.2		51.0	72	51.5		26.2	101	31.0		30.9
24	185	14.2	162	04.7	+8	55.5	139	21.9	+17	51.5	87	53.8	+23	26.2	116	33.3	+20	31.0
Dif	—		-4	+12			+7	+5			+22	0			+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: 12 ^h 04 ^m 8			Edad: 14 ^d 9 PHE { 4 ^h : 61'3 12 ^h : 61'2 20 ^h : 61'0 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	m
0	178	45.8	+3 13.3	353	51.3	-0 12.3		60 N	18 36	19 19	20 11	19 46 102	6 24	7	
1	193	46.0		8	19.2	89	28.2	58	34	14	20 03	43 97	25	11	
2	208	46.2	15.3	22	47.0	88	-0 44.2	56	32	09	19 55	40 94	26	14	
3	223	46.3	16.2	37	14.9	89	-1 00.1	54	30	06	49	37 91	27	17	
4	238	46.5	17.2	51	42.8	89	16.0	52	28	19 02	43	35 88	27	20	
5	253	46.7	+3 18.2	66	10.6	88	-1 31.9	50	18 27	18 59	19 38	19 33 86	6 28	22	
6	268	46.9	+3 19.2	80	38.5	89	-1 47.8	45	18 24	18 53	19 28	19 29 80	6 30	27	
7	283	47.1	20.1	95	06.4	89	-2 03.6	40	21	48	20	25 76	31	31	
8	298	47.3	21.1	109	34.3	89	19.5	35	19	44	14	22 72	32	35	
9	313	47.5	22.1	124	02.2	89	35.3	30	17	41	09	19 69	33	38	
10	328	47.7	23.1	138	30.1	89	-2 51.1	20	13	35	19 01	14 63	35	44	
11	343	47.9	+3 24.0	152	58.0	89	-3 06.9	10 N	18 11	18 32	18 56	19 10 58	6 37	48	
12	358	48.1	+3 25.0	167	25.9	89	-3 22.6	0	18 08	18 29	18 53	19 06 54	6 38	53	
13	13	48.2	26.0	181	53.8	89	38.4	10 S	06	27	51	19 02 49	40	58	
14	28	48.4	27.0	196	21.7	89	-3 54.0	20	03	25	51	18 58 44	41	63	
15	43	48.6	27.9	210	49.6	89	-4 09.7	30	18 00	24	52	54 38	43	69	
16	58	48.8	28.9	225	17.5	89	25.3	35	17 59	24	53	51 36	44	72	
17	73	49.0	+3 29.9	239	45.4	89	-4 40.9	40	17 57	18 24	18 56	18 48 32	6 45	76	
18	88	49.2	+3 30.8	254	13.3	89	-4 56.4	45	17 55	18 25	18 59	18 45 28	6 46	81	
19	103	49.4	31.8	268	41.2	89	-5 12.0	50	53	25	19 03	41 23	48	86	
20	118	49.6	32.8	283	09.1	89	27.4	52	52	26	05	39 21	48	89	
21	133	49.8	33.8	297	36.9	88	42.8	54	51	26	07	37 18	49	92	
22	148	49.9	34.7	312	04.8	89	-5 58.2	56	50	27	10	35 15	50	94	
23	163	50.1	35.7	326	32.7	89	-6 13.5	58	49	27	13	33 12	51	98	
24	178	50.3	+3 36.7	341	00.6	89	-6 28.8	60 S	17 47	18 28	19 17	18 30 8	6 52	102	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 33 ^m 2		Mag: -3.9 PMG: 13 ^h 13 ^m		Mag: +1.5 PMG: 14 ^h 41 ^m		Mag: -2.3 PMG: 18 ^h 02 ^m		Mag: +0.1 PMG: 16 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	186	13.4	161 54.7	+9 24.5	139 39.2	+18 03.5	88 47.5	+23 26.0	117 27.2	+20 31.9
1	201	15.8	176 54.3	25.7	154 40.0	04.0	103 49.7	26.0	132 29.5	31.9
2	216	18.3	191 53.9	26.9	169 40.7	04.5	118 51.9	26.0	147 31.7	32.0
3	231	20.8	206 53.5	28.1	184 41.4	05.0	133 54.2	26.0	162 34.0	32.0
4	246	23.2	221 53.1	29.3	199 42.1	05.5	148 56.4	26.0	177 36.2	32.0
5	261	25.7	236 52.7	+9 30.5	214 42.8	+18 06.0	163 58.6	+23 26.0	192 38.5	+20 32.1
6	276	28.2	251 52.2	+9 31.7	229 43.6	+18 06.5	179 00.9	+23 25.9	207 40.7	+20 32.1
7	291	30.6	266 51.8	33.0	244 44.3	07.0	194 03.1	25.9	222 43.0	32.1
8	306	33.1	281 51.4	34.2	259 45.0	07.5	209 05.3	25.9	237 45.2	32.2
9	321	35.6	296 51.0	35.4	274 45.7	08.0	224 07.6	25.9	252 47.5	32.2
10	336	38.0	311 50.6	36.6	289 46.4	08.5	239 09.8	25.9	267 49.7	32.3
11	351	40.5	326 50.1	+9 37.8	304 47.2	+18 09.0	254 12.0	+23 25.9	282 52.0	+20 32.3
12	6	42.9	341 49.7	+9 39.0	319 47.9	+18 09.4	269 14.3	+23 25.9	297 54.2	+20 32.3
13	21	45.4	356 49.3	40.2	334 48.6	09.9	284 16.5	25.9	312 56.4	32.4
14	36	47.9	11 48.9	41.4	349 49.3	10.4	299 18.7	25.9	327 58.7	32.4
15	51	50.3	26 48.5	42.6	4 50.0	10.9	314 20.9	25.9	343 00.9	32.5
16	66	52.8	41 48.0	43.8	19 50.8	11.4	329 23.2	25.9	358 03.2	32.5
17	81	55.3	56 47.6	+9 45.0	34 51.5	+18 11.9	344 25.4	+23 25.9	13 05.4	+20 32.5
18	96	57.7	71 47.2	+9 46.2	49 52.2	+18 12.4	359 27.6	+23 25.9	28 07.7	+20 32.6
19	112	00.2	86 46.8	47.4	64 52.9	12.9	14 29.9	25.8	43 09.9	32.6
20	127	02.7	101 46.3	48.6	79 53.6	13.4	29 32.1	25.8	58 12.2	32.6
21	142	05.1	116 45.9	49.8	94 54.3	13.9	44 34.3	25.8	73 14.4	32.7
22	157	07.6	131 45.5	51.0	109 55.1	14.4	59 36.5	25.8	88 16.7	32.7
23	172	10.0	146 45.1	52.2	124 55.8	14.9	74 38.8	25.8	103 18.9	32.8
24	187	12.5	161 44.6	+9 53.4	139 56.5	+18 15.3	89 41.0	+23 25.8	118 21.1	+20 32.8
Dif	—	-4	+12		+7	+5	+22	0	+22	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 5			Edad: 15 ^d 9 PHE { 4 ^h : 60'9 12 ^h : 60'6 20 ^h : 60'4 PMG: 1 ^h 19 ^m R°: 53 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m						
0	178	50.3	+3	36.7	341	00.6	88	-6	28.8	60 N	3	57	4	50	5	32	21	28	100	6	31	9
1	193	50.5		37.6	355	28.4	88		44.1 ¹⁵³	58	4	06		55	34		20	96		36	13	
2	208	50.7		38.6	9	56.3	89	-6	59.2 ¹⁵¹	56		13	4	59	37		14	92		40	16	
3	223	50.9		39.6	24	24.1	88	-7	14.4 ¹⁵²	54		19	5	03	38		08	90		44	18	
4	238	51.1		40.6	38	51.9	88		29.4 ¹⁵⁰	52		25		06	40		21	03	87	47	21	
5	253	51.3	+3	41.5	53	19.7	88	-7	44.4 ¹⁵⁰	50	4	30	5	09	5	42	20	59	84	6	50	24
6	268	51.5	+3	42.5	67	47.6	89	-7	59.4 ¹⁵⁰	45	4	40	5	15	5	45	20	49	78	6	57	28
7	283	51.6		43.5	82	15.3	87	-8	14.3 ¹⁴⁹	40		48		21	48		41	74		7	02	33
8	298	51.8		44.4	96	43.1	88		29.1 ¹⁴⁸	35	4	55		25	50		34	71		07	36	
9	313	52.0		45.4	111	10.9	88		43.9 ¹⁴⁸	30	5	00		28	52		28	68		11	40	
10	328	52.2		46.4	125	38.7	88	-8	58.6 ¹⁴⁷	20		08		34	56		17	63		19	45	
11	343	52.4	+3	47.4	140	06.4	87	-9	13.2 ¹⁴⁶	10 N	5	13	5	38	5	59	20	08	58	7	25	50
12	358	52.6	+3	48.3	154	34.1	87	-9	27.8 ¹⁴⁶	0	5	16	5	41	6	01	20	00	54	7	31	54
13	13	52.8		49.3	169	01.9	88		42.2 ¹⁴⁴	10 S		18		43	04		19	51	50		38	58
14	28	53.0		50.3	183	29.6	87	-9	56.7 ¹⁴⁵	20		19		44	06		42	46		44	63	
15	43	53.2		51.2	197	57.2	86	-10	11.0 ¹⁴³	30		18		45	09		32	41		52	68	
16	58	53.3		52.2	212	24.9	87		25.3 ¹⁴³	35		16		46	11		27	37		7	56	72
17	73	53.5	+3	53.2	226	52.6	87	-10	39.5 ¹⁴²	40	5	14	5	46	6	13	19	20	35	8	01	75
18	88	53.7	+3	54.2	241	20.2	86	-10	53.6 ¹⁴¹	45	5	11	5	45	6	15	19	13	30	8	07	79
19	103	53.9		55.1	255	47.8	86	-11	07.6 ¹⁴⁰	50		07		45	17		04	25		14	85	
20	118	54.1		56.1	270	15.4	86		21.6 ¹⁴⁰	52		05		45	18		19	00	23		17	87
21	133	54.3		57.1	284	43.0	86		35.4 ¹³⁸	54		03		44	19		18	55	21		21	90
22	148	54.5		58.0	299	10.6	86	-11	49.2 ¹³⁸	56	5	00		44	21		50	18		24	94	
23	163	54.7	+3	59.0	313	38.1	85	-12	02.9 ¹³⁷	58	4	57		43	22		45	14		29	97	
24	178	54.9	+4	00.0	328	05.6	85	-12	16.5 ¹³⁶	60 S	4	54	5	42	6	24	18	38	11	8	34	101

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 29 ^m 3		Mag: -3.9 PMG: 13 ^h 13 ^m			Mag: +1.5 PMG: 14 ^h 40 ^m			Mag: -2.3 PMG: 17 ^h 59 ^m			Mag: +0.1 PMG: 16 ^h 04 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	187	12.5	161	44.6	+9	139	56.5	+18	89	41.0	+23	118	21.1	+20	32.8
1	202	15.0	176	44.2		154	57.2		104	43.2		133	23.4		32.8
2	217	17.4	191	43.8		169	57.9		119	45.4		148	25.6		32.9
3	232	19.9	206	43.4		184	58.7		134	47.7		163	27.9		32.9
4	247	22.4	221	42.9		199	59.4		149	49.9		178	30.1		33.0
5	262	24.8	236	42.5	+9	215	00.1	+18	164	52.1	+23	193	32.4	+20	33.0
6	277	27.3	251	42.1	+10	230	00.8	+18	179	54.3	+23	208	34.6	+20	33.0
7	292	29.8	266	41.7		245	01.5		194	56.6		223	36.8		33.1
8	307	32.2	281	41.2		260	02.2		209	58.8		238	39.1		33.1
9	322	34.7	296	40.8		275	03.0		225	01.0		253	41.3		33.1
10	337	37.2	311	40.4		290	03.7		240	03.2		268	43.6		33.2
11	352	39.6	326	40.0	+10	305	04.4	+18	255	05.5	+23	283	45.8	+20	33.2
12	7	42.1	341	39.5	+10	320	05.1	+18	270	07.7	+23	298	48.1	+20	33.3
13	22	44.5	356	39.1		335	05.8		285	09.9		313	50.3		33.3
14	37	47.0	11	38.7		350	06.5		300	12.1		328	52.5		33.3
15	52	49.5	26	38.3		5	07.3		315	14.4		343	54.8		33.4
16	67	51.9	41	37.8		20	08.0		330	16.6		358	57.0		33.4
17	82	54.4	56	37.4	+10	35	08.7	+18	345	18.8	+23	13	59.3	+20	33.5
18	97	56.9	71	37.0	+10	50	09.4	+18	0	21.0	+23	29	01.5	+20	33.5
19	112	59.3	86	36.5		65	10.1		15	23.2		44	03.8		33.5
20	128	01.8	101	36.1		80	10.8		30	25.5		59	06.0		33.6
21	143	04.3	116	35.7		95	11.6		45	27.7		74	08.2		33.6
22	158	06.7	131	35.2		110	12.3		60	29.9		89	10.5		33.7
23	173	09.2	146	34.8		125	13.0		75	32.1		104	12.7		33.7
24	188	11.7	161	34.4	+10	140	13.7	+18	90	34.3	+23	119	15.0	+20	33.7
Dif	—		-4		+12	+7		+5	+22		0	+22		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 2		Edad: 16 ^d 9 PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'6 SD: 16'4 PMG: 2 ^h 12 ^m R°: 55 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	54.9	+4	00.0	328	05.6	-12	16.5	60 N	18 41	19 24	20 17	23 08	97	6 40 12
1	193	55.0	+4	00.9	342	33.1 ⁸⁵		30.0 ¹³⁵	58	38	18	08	22 56	92	49 16
2	208	55.2		01.9	357	00.6 ⁸⁵		43.5 ¹³⁵	56	36	14	20 00	46 88		6 56 20
3	223	55.4		02.9	11	28.1 ⁸⁵		-12 56.8 ¹³³	54	34	10	19 53	38 84		7 02 22
4	238	55.6		03.8	25	55.5 ⁸⁴		-13 10.0 ¹³²	52	32	06	47	30 82		08 26
5	253	55.8	+4	04.8	40	22.9 ⁸⁴		-13 23.2 ¹³²	50	18 30	19 03	19 42	22 23	80	7 14 27
6	268	56.0	+4	05.8	54	50.3 ⁸⁴		-13 36.2 ¹³⁰	45	18 26	18 56	19 31	22 07	76	7 25 33
7	283	56.2		06.7	69	17.7 ⁸⁴		-13 49.2 ¹³⁰	40	23	50	22	21 55	72	35 36
8	298	56.4		07.7	83	45.1 ⁸⁴		-14 02.1 ¹²⁹	35	20	46	16	45 69		43 40
9	313	56.6		08.7	98	12.4 ⁸³		14.8 ¹²⁷	30	18	42	10	36 66		7 51 42
10	328	56.7		09.6	112	39.7 ⁸³		27.5 ¹²⁷	20	14	36	19 02	20 62		8 04 46
11	343	56.9	+4	10.6	127	07.0 ⁸³		-14 40.0 ¹²⁵	10 N	18 11	18 32	18 56	21 06	59	8 15 51
12	358	57.1	+4	11.6	141	34.3 ⁸³		-14 52.5 ¹²⁵	0	18 07	18 28	18 52	20 54	55	8 25 55
13	13	57.3		12.6	156	01.5 ⁸²		-15 04.8 ¹²³	10 S	04	26	50	41 52		36 58
14	28	57.5		13.5	170	28.8 ⁸³		17.1 ¹²³	20	18 01	23	49	28 48		8 47 63
15	43	57.7		14.5	184	56.0 ⁸²		29.2 ¹²¹	30	17 58	22	50	13 44		9 00 67
16	58	57.9		15.5	199	23.1 ⁸¹		41.2 ¹²⁰	35	56	21	51	20 04	42	08 70
17	73	58.1	+4	16.4	213	50.3 ⁸²		-15 53.1 ¹¹⁹	40	17 54	18 21	18 52	19 55	38	9 16 74
18	88	58.2	+4	17.4	228	17.4 ⁸¹		-16 04.9 ¹¹⁸	45	17 52	18 21	18 55	19 43	35	9 26 78
19	103	58.4		18.4	242	44.5 ⁸¹		16.6 ¹¹⁷	50	49	21	18 58	29 31		39 82
20	118	58.6		19.3	257	11.6 ⁸¹		28.2 ¹¹⁶	52	48	21	19 00	23 28		44 85
21	133	58.8		20.3	271	38.7 ⁸¹		39.7 ¹¹⁵	54	46	21	02	16 25		51 87
22	148	59.0		21.3	286	05.7 ⁸⁰		-16 51.0 ¹¹³	56	45	22	05	19 08	22	9 58 90
23	163	59.2		22.2	300	32.8 ⁸¹		-17 02.2 ¹¹²	58	43	22	07	18 59	19	10 06 94
24	178	59.4	+4	23.2	314	59.8 ⁸⁰		-17 13.4 ¹¹²	60 S	17 41	18 22	19 11	18 49	15	10 15 99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 25 ^m 3		Mag: -3.9 PMG: 13 ^h 14 ^m		Mag: +1.5 PMG: 14 ^h 38 ^m		Mag: -2.2 PMG: 17 ^h 55 ^m		Mag: +0.1 PMG: 16 ^h 01 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♏	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	188	11.7	161 34.4	+10 22.0	140 13.7	+18 27.0	90 34.3	+23 25.6	119 15.0	+20 33.7
1	203	14.1	176 34.0	23.1	155 14.4	27.5	105 36.6	25.6	134 17.2	33.8
2	218	16.6	191 33.5	24.3	170 15.1	28.0	120 38.8	25.6	149 19.4	33.8
3	233	19.0	206 33.1	25.5	185 15.8	28.4	135 41.0	25.6	164 21.7	33.8
4	248	21.5	221 32.7	26.7	200 16.6	28.9	150 43.2	25.6	179 23.9	33.9
5	263	24.0	236 32.2	+10 27.9	215 17.3	+18 29.4	165 45.4	+23 25.6	194 26.2	+20 33.9
6	278	26.4	251 31.8	+10 29.1	230 18.0	+18 29.9	180 47.6	+23 25.6	209 28.4	+20 34.0
7	293	28.9	266 31.4	30.3	245 18.7	30.4	195 49.9	25.5	224 30.6	34.0
8	308	31.4	281 30.9	31.4	260 19.4	30.9	210 52.1	25.5	239 32.9	34.0
9	323	33.8	296 30.5	32.6	275 20.1	31.3	225 54.3	25.5	254 35.1	34.1
10	338	36.3	311 30.1	33.8	290 20.8	31.8	240 56.5	25.5	269 37.4	34.1
11	353	38.8	326 29.6	+10 35.0	305 21.6	+18 32.3	255 58.7	+23 25.5	284 39.6	+20 34.2
12	8	41.2	341 29.2	+10 36.2	320 22.3	+18 32.8	271 00.9	+23 25.5	299 41.8	+20 34.2
13	23	43.7	356 28.8	37.4	335 23.0	33.3	286 03.2	25.5	314 44.1	34.2
14	38	46.1	11 28.3	38.5	350 23.7	33.7	301 05.4	25.5	329 46.3	34.3
15	53	48.6	26 27.9	39.7	5 24.4	34.2	316 07.6	25.5	344 48.5	34.3
16	68	51.1	41 27.4	40.9	20 25.1	34.7	331 09.8	25.5	359 50.8	34.4
17	83	53.5	56 27.0	+10 42.1	35 25.8	+18 35.2	346 12.0	+23 25.5	14 53.0	+20 34.4
18	98	56.0	71 26.6	+10 43.3	50 26.6	+18 35.6	1 14.2	+23 25.4	29 55.3	+20 34.4
19	113	58.5	86 26.1	44.4	65 27.3	36.1	16 16.4	25.4	44 57.5	34.5
20	129	00.9	101 25.7	45.6	80 28.0	36.6	31 18.7	25.4	59 59.7	34.5
21	144	03.4	116 25.3	46.8	95 28.7	37.1	46 20.9	25.4	75 02.0	34.5
22	159	05.9	131 24.8	48.0	110 29.4	37.5	61 23.1	25.4	90 04.2	34.6
23	174	08.3	146 24.4	49.1	125 30.1	38.0	76 25.3	25.4	105 06.5	34.6
24	189	10.8	161 24.0	+10 50.3	140 30.8	+18 38.5	91 27.5	+23 25.4	120 08.7	+20 34.7
Dif	—	—	-4	+12	+7	+5	+22	0	+22	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 9			Edad: 17 ^d 9 PHE { 4 ^h : 59'3 12 ^h : 58'9 20 ^h : 58'6 PMG: 3 ^h 07 ^m R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	59.4	+4	23.2	314	59.8	-17	13.4	60 N	3	50	4	43	5	26	** ** *
1	193	59.6		24.1	329	26.7	79	24.3	58	3	59		49	29	** ** *	7 05 23
2	208	59.7		25.1	343	53.7	80	35.2	56	4	07		53	31	** ** *	16 26
3	223	59.9		26.1	358	20.6	79	46.0	54	14	4	58	34	** ** *	25 22	
4	239	00.1		27.0	12	47.6	80	-17	56.6	20	5	01	36	23	52	75
5	254	00.3	+4	28.0	27	14.5	79	-18	07.1	4	25	5	05	5	37	23 43 73
6	269	00.5	+4	29.0	41	41.3	78	-18	17.5	4	36	5	12	5	41	23 23 69
7	284	00.7		29.9	56	08.2	79	27.8	40	45	17	45	23	07	67	8 11 41
8	299	00.9		30.9	70	35.0	78	37.9	35	52	22	47	22	54	65	23 44
9	314	01.0		31.9	85	01.8	78	47.9	30	4	58	26	50	42	63	33 46
10	329	01.2		32.8	99	28.6	78	-18	57.8	5	06	32	54	22	60	8 50 50
11	344	01.4	+4	33.8	113	55.4	78	-19	07.6	5	12	5	36	5	57	22 05 58
12	359	01.6	+4	34.8	128	22.2	78	-19	17.2	5	16	5	40	6	01	21 49 56
13	14	01.8		35.7	142	48.9	77	26.7	10 S	18	43	04	33	53	34	59
14	29	02.0		36.7	157	15.6	77	36.1	20	19	45	07	21	16	51	9 50 61
15	44	02.2		37.7	171	42.3	77	45.3	30	19	47	10	20	57	48	10 07 66
16	59	02.4		38.6	186	09.0	77	-19	54.4	18	47	12	46	46	18	67
17	74	02.5	+4	39.6	200	35.7	77	-20	03.4	5	16	5	48	6	15	20 33 44
18	89	02.7	+4	40.5	215	02.3	76	-20	12.3	5	14	5	48	6	17	20 18 41
19	104	02.9		41.5	229	29.0	77	21.0	50	10	48	20	20	00	37	11 01 73
20	119	03.1		42.5	243	55.6	76	29.5	52	09	48	22	19	51	35	09 79
21	134	03.3		43.4	258	22.2	76	38.0	54	07	48	23	41	34	18	82
22	149	03.5		44.4	272	48.8	76	46.3	56	04	48	25	30	31	28	85
23	164	03.7		45.4	287	15.4	76	-20	54.5	5	02	47	26	18	27	40 88
24	179	03.8	+4	46.3	301	42.0	76	-21	02.5	4	59	5	47	6	28	19 04 23
									60 S			6	28	11	54	92
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 21 ^m 4		Mag: -3.9 PMG: 13 ^h 15 ^m			Mag: +1.5 PMG: 14 ^h 37 ^m			Mag: -2.2 PMG: 17 ^h 52 ^m			Mag: +0.1 PMG: 15 ^h 57 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	189	10.8	161	24.0	+10	50.3	140	30.8	+18	38.5	91	27.5	+23	25.4	120	08.7
1	204	13.3	176	23.5		51.5	155	31.6		39.0	106	29.7		25.4	135	10.9
2	219	15.7	191	23.1		52.7	170	32.3		39.5	121	31.9		25.4	150	13.2
3	234	18.2	206	22.6		53.9	185	33.0		39.9	136	34.1		25.4	165	15.4
4	249	20.6	221	22.2		55.0	200	33.7		40.4	151	36.4		25.4	180	17.6
5	264	23.1	236	21.8	+10	56.2	215	34.4	+18	40.9	166	38.6	+23	25.3	195	19.9
6	279	25.6	251	21.3	+10	57.4	230	35.1	+18	41.3	181	40.8	+23	25.3	210	22.1
7	294	28.0	266	20.9		58.6	245	35.8		41.8	196	43.0		25.3	225	24.3
8	309	30.5	281	20.4	+10	59.7	260	36.5		42.3	211	45.2		25.3	240	26.6
9	324	33.0	296	20.0	+11	00.9	275	37.3		42.8	226	47.4		25.3	255	28.8
10	339	35.4	311	19.5		02.1	290	38.0		43.2	241	49.6		25.3	270	31.1
11	354	37.9	326	19.1	+11	03.2	305	38.7	+18	43.7	256	51.8	+23	25.3	285	33.3
12	9	40.4	341	18.7	+11	04.4	320	39.4	+18	44.2	271	54.0	+23	25.3	300	35.5
13	24	42.8	356	18.2		05.6	335	40.1		44.7	286	56.2		25.3	315	37.8
14	39	45.3	11	17.8		06.8	350	40.8		45.1	301	58.4		25.3	330	40.0
15	54	47.8	26	17.3		07.9	5	41.5		45.6	317	00.7		25.3	345	42.2
16	69	50.2	41	16.9		09.1	20	42.2		46.1	332	02.9		25.2	0	44.5
17	84	52.7	56	16.4	+11	10.3	35	42.9	+18	46.5	347	05.1	+23	25.2	15	46.7
18	99	55.1	71	16.0	+11	11.4	50	43.7	+18	47.0	2	07.3	+23	25.2	30	48.9
19	114	57.6	86	15.6		12.6	65	44.4		47.5	17	09.5		25.2	45	51.2
20	130	00.1	101	15.1		13.8	80	45.1		48.0	32	11.7		25.2	60	53.4
21	145	02.5	116	14.7		14.9	95	45.8		48.4	47	13.9		25.2	75	55.6
22	160	05.0	131	14.2		16.1	110	46.5		48.9	62	16.1		25.2	90	57.9
23	175	07.5	146	13.8		17.3	125	47.2		49.4	77	18.3		25.2	106	00.1
24	190	09.9	161	13.3	+11	18.4	140	47.9	+18	49.8	92	20.5	+23	25.2	121	02.3
Dif	—		-4	+12		+7	+5				+22		0		+22	

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16/0 PMG: 12 ^h 03 ^m 6			Edad: 18 ^d 9 PHE { 4 ^h : 58/3 12 ^h : 58/0 20 ^h : 57/6 PMG: 4 ^h 02 ^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	h m m		
0	179	03.8	+4	46.3	301	42.0	-21	02.5	60 N	18 46	19 29	20 23	0 45 87	7 11 28				
1	194	04.0		47.3	316	08.6	76	10.4	58	43	23	13	28 83	28 32				
2	209	04.2		48.2	330	35.1	75	18.1	56	40	18	20 05	14 80	42 36				
3	224	04.4		49.2	345	01.7	76	25.8	54	37	14	19 58	0 02 77	7 54 38				
4	239	04.6		50.2	359	28.2	75	33.3	52	35	10	51	** ** *	8 05 40				
5	254	04.8	+4	51.1	13	54.7	75	-21	50	18 33	19 06	19 46	** ** *	8 15 42				
6	269	05.0	+4	52.1	28	21.2	75	-21	45	18 29	18 58	19 34	** ** *	8 36 44				
7	284	05.1		53.1	42	47.7	75	-21	40	25	52	25	** ** *	8 52 47				
8	299	05.3		54.0	57	14.3	76	-22	35	22	47	17	23 59 59	9 07 48				
9	314	05.5		55.0	71	40.8	75	08.6	30	19	43	11	45 59	19 50				
10	329	05.7		55.9	86	07.3	75	15.2	20	14	37	19 02	22 58	40 52				
11	344	05.9	+4	56.9	100	33.7	74	-22	10 N	18 10	18 32	18 56	23 03 56	9 58 54				
12	359	06.1	+4	57.9	115	00.2	75	-22	0	18 07	18 28	18 52	22 45 55	10 16 55				
13	14	06.3		58.8	129	26.7	75	34.3	10 S	03	24	49	26 54	33 57				
14	29	06.4	+4	59.8	143	53.2	75	40.4	20	18 00	22	47	22 07 53	10 51 59				
15	44	06.6	+5	00.7	158	19.7	75	46.3	30	17 56	20	47	21 45 51	11 13 61				
16	59	06.8		01.7	172	46.2	75	52.1	35	53	19	48	32 50	25 63				
17	74	07.0	+5	02.7	187	12.7	75	-22	40	17 51	18 18	18 49	21 17 49	11 39 65				
18	89	07.2	+5	03.6	201	39.2	75	-23	45	17 48	18 17	18 51	20 59 48	11 57 66				
19	104	07.4		04.6	216	05.7	75	08.6	50	45	17	54	37 46	12 18 68				
20	119	07.6		05.5	230	32.2	75	13.8	52	43	17	56	26 45	28 70				
21	134	07.7		06.5	244	58.7	75	18.9	51	41	16	57	15 43	40 71				
22	149	07.9		07.5	259	25.2	75	23.8	56	39	16	18 59	20 01 42	12 53 73				
23	164	08.1		08.4	273	51.7	75	28.6	58	37	16	19 02	19 45 40	13 08 76				
24	179	08.3	+5	09.4	288	18.2	75	-23	60 S	17 35	18 16	19 05	19 27 36	13 26 79				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 17 ^m 5		Mag: -3.9 PMG: 13 ^h 16 ^m			Mag: +1.5 PMG: 14 ^h 36 ^m			Mag: -2.2 PMG: 17 ^h 48 ^m			Mag: +0.1 PMG: 15 ^h 53 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	190	09.9	161	13.3	+11	18.4	140	47.9	+18	49.8	92	20.5	+23	25.2	121	02.3	+20	35.6
1	205	12.4	176	12.9		19.6	155	48.6		50.3	107	22.7		25.2	136	04.6		35.6
2	220	14.9	191	12.4		20.8	170	49.3		50.8	122	24.9		25.2	151	06.8		35.7
3	235	17.3	206	12.0		21.9	185	50.1		51.2	137	27.1		25.1	166	09.0		35.7
4	250	19.8	221	11.5		23.1	200	50.8		51.7	152	29.3		25.1	181	11.3		35.8
5	265	22.2	236	11.1	+11	24.3	215	51.5	+18	52.2	167	31.5	+23	25.1	196	13.5	+20	35.8
6	280	24.7	251	10.6	+11	25.4	230	52.2	+18	52.6	182	33.7	+23	25.1	211	15.7	+20	35.8
7	295	27.2	266	10.2		26.6	245	52.9		53.1	197	35.9		25.1	226	18.0		35.9
8	310	29.6	281	09.7		27.7	260	53.6		53.6	212	38.1		25.1	241	20.2		35.9
9	325	32.1	296	09.3		28.9	275	54.3		54.0	227	40.3		25.1	256	22.4		36.0
10	340	34.6	311	08.9		30.1	290	55.0		54.5	242	42.5		25.1	271	24.7		36.0
11	355	37.0	326	08.4	+11	31.2	305	55.7	+18	55.0	257	44.7	+23	25.1	286	26.9	+20	36.0
12	10	39.5	341	08.0	+11	32.4	320	56.4	+18	55.4	272	46.9	+23	25.1	301	29.1	+20	36.1
13	25	42.0	356	07.5		33.6	335	57.2		55.9	287	49.1		25.0	316	31.4		36.1
14	40	44.4	11	07.0		34.7	350	57.9		56.4	302	51.3		25.0	331	33.6		36.2
15	55	46.9	26	06.6		35.9	5	58.6		56.8	317	53.5		25.0	346	35.8		36.2
16	70	49.4	41	06.1		37.0	20	59.3		57.3	332	55.7		25.0	1	38.1		36.2
17	85	51.8	56	05.7	+11	38.2	36	00.0	+18	57.8	347	57.9	+23	25.0	16	40.3	+20	36.3
18	100	54.3	71	05.2	+11	39.3	51	00.7	+18	58.2	3	00.1	+23	25.0	31	42.5	+20	36.3
19	115	56.7	86	04.8		40.5	66	01.4		58.7	18	02.3		25.0	46	44.8		36.4
20	130	59.2	101	04.3		41.7	81	02.1		59.1	33	04.5		25.0	61	47.0		36.4
21	146	01.7	116	03.9		42.8	96	02.8	+18	59.6	48	06.7		25.0	76	49.2		36.4
22	161	04.1	131	03.4		44.0	111	03.5	+19	00.1	63	08.9		25.0	91	51.4		36.5
23	176	06.6	146	03.0		45.1	126	04.2		00.5	78	11.1		24.9	106	53.7		36.5
24	191	09.1	161	02.5	+11	46.3	141	05.0	+19	01.0	93	13.3	+23	24.9	121	55.9	+20	36.6
Dif	—		-5		+12		+7		+5		+22		0		+22		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 3			Edad: 19 ^d 9 PHE { 4 ^h : 57/3 12 ^h : 57/0 20 ^h : 56/7 PMG: 4 ^h 58 ^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	179	08.3	+5	09.4	288	18.2	-23	33.3	44	60 N	3	43	4	37	5	20	
1	194	08.5		10.3	302	44.8	76	37.7	44	58	3	53	43	23	1	51	
2	209	08.7		11.3	317	11.3	75	42.1	44	56	4	01	48	26	34	65	
3	224	08.8		12.3	331	37.9	76	46.3	42	54	08	52	29	19	65	32	
4	239	09.0		13.2	346	04.5	76	50.4	41	52	15	4	56	31	1	07	
5	254	09.2	+5	14.2	0	31.1	76	-23	54.3	39	50	4	21	5	00	5	33
6	269	09.4	+5	15.1	14	57.7	76	-23	58.1	38	45	4	32	5	08	5	38
7	284	09.6		16.1	29	24.3	76	-24	01.7	36	40	42	14	41	0	14	
8	299	09.8		17.0	43	50.9	76	05.2	35	35	49	19	45	45	**	**	
9	314	09.9		18.0	58	17.6	77	08.6	34	30	4	55	23	47	**	**	
10	329	10.1		19.0	72	44.3	77	11.8	32	20	5	04	30	52	**	**	
11	344	10.3	+5	19.9	87	10.9	76	-24	14.8	30	10 N	5	11	5	35	5	56
12	359	10.5	+5	20.9	101	37.7	78	-24	17.7	29	0	5	15	5	39	6	00
13	14	10.7		21.8	116	04.4	77	20.5	28	10 S	18	43	04	04	20	54	
14	29	10.9		22.8	130	31.2	78	23.1	26	20	20	20	45	07	23	00	
15	44	11.1		23.7	144	57.9	77	25.6	25	30	20	48	12	22	36	54	
16	59	11.2		24.7	159	24.8	79	28.0	24	35	19	49	14	22	54	28	
17	74	11.4	+5	25.7	173	51.6	78	-24	30.2	22	40	5	18	5	50	6	17
18	89	11.6	+5	26.6	188	18.5	79	-24	32.2	20	45	5	16	5	50	6	20
19	104	11.8		27.6	202	45.3	78	34.2	20	50	14	51	23	23	54	26	
20	119	12.0		28.5	217	12.3	80	35.9	17	52	12	51	25	21	11	55	
21	134	12.2		29.5	231	39.2	79	37.6	17	54	10	51	27	20	58	54	
22	149	12.3		30.4	246	06.2	80	39.1	15	56	08	52	29	43	54	14	
23	164	12.5		31.4	260	33.2	80	40.4	13	58	06	52	31	25	54	24	
24	179	12.7	+5	32.3	275	00.3	81	-24	41.6	12	60 S	5	03	5	52	6	33
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	191	09.1		161	02.5	+11	46.3	141	05.0	+19	01.0	93	13.3	+23	24.9	121	55.9
1	206	11.5		176	02.1		47.4	156	05.7		01.5	108	15.5		24.9	136	58.1
2	221	14.0		191	01.6		48.6	171	06.4		01.9	123	17.7		24.9	152	00.4
3	236	16.5		206	01.2		49.7	186	07.1		02.4	138	19.9		24.9	167	02.6
4	251	18.9		221	00.7		50.9	201	07.8		02.8	153	22.1		24.9	182	04.8
5	266	21.4		236	00.2	+11	52.0	216	08.5	+19	03.3	168	24.3	+23	24.9	197	07.1
6	281	23.9		250	59.8	+11	53.2	231	09.2	+19	03.8	183	26.5	+23	24.9	212	09.3
7	296	26.3		265	59.3		54.4	246	09.9		04.2	198	28.7		24.9	227	11.5
8	311	28.8		280	58.9		55.5	261	10.6		04.7	213	30.9		24.9	242	13.7
9	326	31.2		295	58.4		56.7	276	11.3		05.1	228	33.1		24.8	257	16.0
10	341	33.7		310	58.0		57.8	291	12.0		05.6	243	35.3		24.8	272	18.2
11	356	36.2		325	57.5	+11	59.0	306	12.7	+19	06.1	258	37.5	+23	24.8	287	20.4
12	11	38.6		340	57.0	+12	00.1	321	13.4	+19	06.5	273	39.7	+23	24.8	302	22.7
13	26	41.1		355	56.6		01.2	336	14.2		07.0	288	41.9		24.8	317	24.9
14	41	43.6		10	56.1		02.4	351	14.9		07.4	303	44.1		24.8	332	27.1
15	56	46.0		25	55.7		03.5	6	15.6		07.9	318	46.3		24.8	347	29.3
16	71	48.5		40	55.2		04.7	21	16.3		08.3	333	48.5		24.8	2	31.6
17	86	51.0		55	54.7	+12	05.8	36	17.0	+19	08.8	348	50.7	+23	24.8	17	33.8
18	101	53.4		70	54.3	+12	07.0	51	17.7	+19	09.3	3	52.8	+23	24.7	32	36.0
19	116	55.9		85	53.8		08.1	66	18.4		09.7	18	55.0		24.7	47	38.3
20	131	58.4		100	53.4		09.3	81	19.1		10.2	33	57.2		24.7	62	40.5
21	147	00.8		115	52.9		10.4	96	19.8		10.6	48	59.4		24.7	77	42.7
22	162	03.3		130	52.4		11.6	111	20.5		11.1	64	01.6		24.7	92	44.9
23	177	05.7		145	52.0		12.7	126	21.2		11.5	79	03.8		24.7	107	47.2
24	192	08.2		160	51.5	+12	13.8	141	21.9	+19	12.0	94	06.0	+23	24.7	122	49.4
Dif	—			-5	+11			+7	+5			+22	0			+22	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 0			Edad: 20 ^d 9 PHE { SD: 15:4 PMG: 5 ^h 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	h m m
0	179	12.7	+5 32.3	275	00.3	-24 41.6	11	60 N	18 51	19 34	20 29	3 21 47	8 24 63	
1	194	12.9	33.3	289	27.4 81	42.7	9	58	47	28	19	2 58 49	8 47 62	
2	209	13.1	34.3	303	54.5 81	43.6	8	56	44	22	10	39 50	9 06 60	
3	224	13.2	35.2	318	21.6 81	44.4	8	54	41	17	20 02	24 50	22 55	
4	239	13.4	36.2	332	48.8 82	45.1	7	52	38	13	19 55	2 10 51	35 59	
5	254	13.6	+5 37.1	347	16.1 83	-24 45.6	5	50	18 36	19 09	19 49	1 58 52	9 47 58	
6	269	13.8	+5 38.1	1	43.4 83	-24 46.0	4	45	18 31	19 01	19 37	1 34 52	10 12 57	
7	284	14.0	39.0	16	10.7 83	46.3	3	40	27	18 54	27	1 14 53	31 57	
8	299	14.2	40.0	30	38.0 83	46.4	1	35	23	49	19	0 58 53	10 47 56	
9	314	14.3	40.9	45	05.4 84	46.3	1	30	20	44	13	44 53	11 02 55	
10	329	14.5	41.9	59	32.9 85	46.2	1	20	15	37	19 03	0 20 53	26 54	
11	344	14.7	+5 42.8	74	00.4 85	-24 45.9	3	10 N	18 10	18 32	18 56	** ** *	11 46 54	
12	359	14.9	+5 43.8	88	27.9 85	-24 45.4	5	0	18 06	18 27	18 51	** ** *	12 06 53	
13	14	15.1	44.7	102	55.5 86	44.9	5	10 S	18 02	23	48	** ** *	25 52	
14	29	15.3	45.7	117	23.1 86	44.2	7	20	17 58	20	46	23 54 54	12 46 51	
15	44	15.4	46.6	131	50.8 87	43.3	9	30	53	17	45	30 56	13 10 50	
16	59	15.6	47.6	146	18.5 87	42.4	9	35	51	16	45	16 57	24 49	
17	74	15.8	+5 48.6	160	46.3 88	-24 41.3	11	40	17 48	18 15	18 46	23 00 58	13 40 48	
18	89	16.0	+5 49.5	175	14.1 88	-24 40.0	13	45	17 44	18 14	18 48	22 41 60	13 59 48	
19	104	16.2	50.5	189	42.0 89	38.7	13	50	40	13	50	17 62	14 24 45	
20	119	16.3	51.4	204	09.9 89	37.2	15	52	38	12	51	22 06 62	35 45	
21	134	16.5	52.4	218	37.9 90	35.6	16	54	36	12	53	21 52 64	14 48 44	
22	149	16.7	53.3	233	05.9 90	33.8	18	56	34	11	54	37 65	15 04 42	
23	164	16.9	54.3	247	34.0 91	32.0	18	58	32	11	56	21 19 67	22 41	
24	179	17.1	+5 55.2	262	02.1 91	-24 29.9	21	60 S	17 29	18 11	18 59	20 57 70	15 44 38	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 09 ^m 6		Mag: -3.9 PMG: 13 ^h 17 ^m		Mag: +1.5 PMG: 14 ^h 34 ^m		Mag: -2.2 PMG: 17 ^h 41 ^m		Mag: +0.1 PMG: 15 ^h 46 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	192	08.2	160	51.5	+12 13.8	141	21.9	+19 12.0	94	06.0	+23 24.7	122	49.4	+20 37.5
1	207	10.7	175	51.0	15.0	156	22.6	12.4	109	08.2	24.7	137	51.6	37.5
2	222	13.1	190	50.6	16.1	171	23.3	12.9	124	10.4	24.7	152	53.8	37.6
3	237	15.6	205	50.1	17.3	186	24.0	13.4	139	12.6	24.7	167	56.1	37.6
4	252	18.1	220	49.7	18.4	201	24.7	13.8	154	14.8	24.6	182	58.3	37.7
5	267	20.5	235	49.2	+12 19.6	216	25.5	+19 14.3	169	16.9	+23 24.6	198	00.5	+20 37.7
6	282	23.0	250	48.7	+12 20.7	231	26.2	+19 14.7	184	19.1	+23 24.6	213	02.8	+20 37.7
7	297	25.5	265	48.3	21.8	246	26.9	15.2	199	21.3	24.6	228	05.0	37.8
8	312	27.9	280	47.8	23.0	261	27.6	15.6	214	23.5	24.6	243	07.2	37.8
9	327	30.4	295	47.3	24.1	276	28.3	16.1	229	25.7	24.6	258	09.4	37.9
10	342	32.9	310	46.9	25.3	291	29.0	16.5	244	27.9	24.6	273	11.7	37.9
11	357	35.3	325	46.4	+12 26.4	306	29.7	+19 17.0	259	30.1	+23 24.6	288	13.9	+20 37.9
12	12	37.8	340	45.9	+12 27.5	321	30.4	+19 17.4	274	32.3	+23 24.6	303	16.1	+20 38.0
13	27	40.2	355	45.5	28.7	336	31.1	17.9	289	34.4	24.5	318	18.3	38.0
14	42	42.7	10	45.0	29.8	351	31.8	18.3	304	36.6	24.5	333	20.6	38.1
15	57	45.2	25	44.5	30.9	6	32.5	18.8	319	38.8	24.5	348	22.8	38.1
16	72	47.6	40	44.1	32.1	21	33.2	19.2	334	41.0	24.5	3	25.0	38.1
17	87	50.1	55	43.6	+12 33.2	36	33.9	+19 19.7	349	43.2	+23 24.5	18	27.2	+20 38.2
18	102	52.6	70	43.1	+12 34.3	51	34.6	+19 20.1	4	45.4	+23 24.5	33	29.5	+20 38.2
19	117	55.0	85	42.6	35.5	66	35.3	20.6	19	47.6	24.5	48	31.7	38.3
20	132	57.5	100	42.2	36.6	81	36.0	21.0	34	49.7	24.5	63	33.9	38.3
21	148	00.0	115	41.7	37.7	96	36.7	21.5	49	51.9	24.5	78	36.1	38.3
22	163	02.4	130	41.2	38.9	111	37.4	21.9	64	54.1	24.4	93	38.4	38.4
23	178	04.9	145	40.8	40.0	126	38.1	22.4	79	56.3	24.4	108	40.6	38.4
24	193	07.3	160	40.3	+12 41.1	141	38.8	+19 22.8	94	58.5	+23 24.4	123	42.8	+20 38.5
Dif	—		-5		+11		+7	+5		+22	0		+22	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 7			Edad: 21 ^d 9 PHE { SD: 15 ^h 2 PMG: 6 ^h 46 ^m R°: 51 ^m 4 ^h : 55 ^h /7 12 ^h : 55 ^h /4 20 ^h : 55 ^h /2											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	17.1	+5 55.2	262	02.1	-24 29.9		60 N	3 35	4 30	5 14	4 08	30	9 27	76
1	194	17.2		276	30.3	92 27.8	21	58	46	37	18	3 47	33	9 49	72
2	209	17.4		290	58.6	93 25.6	22	56	3 55	42	21	29	36	10 06	69
3	224	17.6		305	26.9	93 23.2	24	54	4 03	47	24	14	37	21	67
4	239	17.8	+5 59.0	319	55.3	94 20.7	25	52	10	52	26	3 01	39	34	65
5	254	18.0	+6 00.0	334	23.7	94 -24 18.0	27	50	4 16	4 56	5 29	2 50	40	10 45	64
6	269	18.1	+6 00.9	348	52.2	95 -24 15.3	27	45	4 28	5 04	5 34	2 26	42	11 09	61
7	284	18.3	01.9	3	20.7	95 12.4	29	40	38	11	38	2 07	44	28	59
8	299	18.5	02.8	17	49.4	97 09.4	30	35	46	16	42	1 51	45	43	58
9	314	18.7	03.8	32	18.0	96 06.3	31	30	4 52	21	45	37	46	11 57	56
10	329	18.9	04.7	46	46.8	98 -24 03.0	33	20	5 02	28	50	1 13	49	12 20	54
11	344	19.0	+6 05.7	61	15.6	98 -23 59.7	33	10 N	5 09	5 34	5 55	0 53	50	12 40	52
12	359	19.2	+6 06.6	75	44.4	98 -23 56.2	35	0	5 15	5 39	5 59	0 34	51	12 59	50
13	14	19.4	07.6	90	13.3	99 52.6	36	10 S	18	43	6 04	0 14	53	13 17	48
14	29	19.6	08.5	104	42.3	100 48.9	37	20	20	46	08	** ** *	**	13 37	46
15	44	19.8	09.5	119	11.4	101 45.1	38	30	21	49	13	** ** *	**	14 00	44
16	59	19.9	10.4	133	40.5	101 41.1	40	35	21	50	16	** ** *	**	13	42
17	74	20.1	+6 11.4	148	09.6	101 -23 37.0	41	40	5 20	5 52	6 19	23 58	60	14 28	41
18	89	20.3	+6 12.3	162	38.9	103 -23 32.9	41	45	5 19	5 53	6 22	23 41	62	14 47	38
19	104	20.5	13.2	177	08.2	103 28.6	43	50	17	54	26	19	65	15 09	36
20	119	20.7	14.2	191	37.6	104 24.2	44	52	15	55	28	23 08	67	20	34
21	134	20.8	15.1	206	07.0	104 19.6	46	54	14	55	30	22 56	69	32	32
22	149	21.0	16.1	220	36.5	105 15.0	46	56	12	56	33	42	72	15 46	30
23	164	21.2	17.0	235	06.1	106 10.3	47	58	10	56	35	26	75	16 03	27
24	179	21.4	+6 18.0	249	35.7	106 -23 05.4	49	60 S	5 08	5 56	6 38	22 07	78	16 22	24
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 05 ^m 7		Mag: -3.9 PMG: 13 ^h 18 ^m			Mag: +1.5 PMG: 14 ^h 33 ^m			Mag: -2.2 PMG: 17 ^h 38 ^m			Mag: +0.1 PMG: 15 ^h 43 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	193	07.3	160	40.3	+12 41.1		141	38.8	+19 22.8	94	58.5	+23 24.4	123	42.8	+20 38.5
1	208	09.8	175	39.8	42.3		156	39.5	23.3	110	00.7	24.4	138	45.0	38.5
2	223	12.3	190	39.3	43.4		171	40.2	23.7	125	02.9	24.4	153	47.3	38.5
3	238	14.7	205	38.9	44.5		186	40.9	24.2	140	05.0	24.4	168	49.5	38.6
4	253	17.2	220	38.4	45.6		201	41.6	24.6	155	07.2	24.4	183	51.7	38.6
5	268	19.7	235	37.9	+12 46.8		216	42.4	+19 25.1	170	09.4	+23 24.4	198	53.9	+20 38.7
6	283	22.1	250	37.5	+12 47.9		231	43.1	+19 25.5	185	11.6	+23 24.4	213	56.1	+20 38.7
7	298	24.6	265	37.0	49.0		246	43.8	25.9	200	13.8	24.3	228	58.4	38.8
8	313	27.1	280	36.5	50.2		261	44.5	26.4	215	15.9	24.3	244	00.6	38.8
9	328	29.5	295	36.0	51.3		276	45.2	26.8	230	18.1	24.3	259	02.8	38.8
10	343	32.0	310	35.6	52.4		291	45.9	27.3	245	20.3	24.3	274	05.0	38.9
11	358	34.5	325	35.1	+12 53.5		306	46.6	+19 27.7	260	22.5	+23 24.3	289	07.3	+20 38.9
12	13	36.9	340	34.6	+12 54.7		321	47.3	+19 28.2	275	24.7	+23 24.3	304	09.5	+20 39.0
13	28	39.4	355	34.1	55.8		336	48.0	28.6	290	26.8	24.3	319	11.7	39.0
14	43	41.8	10	33.7	56.9		351	48.7	29.1	305	29.0	24.3	334	13.9	39.0
15	58	44.3	25	33.2	58.0		6	49.4	29.5	320	31.2	24.3	349	16.1	39.1
16	73	46.8	40	32.7	+12 59.1		21	50.1	29.9	335	33.4	24.2	4	18.4	39.1
17	88	49.2	55	32.2	+13 00.3		36	50.8	+19 30.4	350	35.6	+23 24.2	19	20.6	+20 39.2
18	103	51.7	70	31.7	+13 01.4		51	51.5	+19 30.8	5	37.7	+23 24.2	34	22.8	+20 39.2
19	118	54.2	85	31.3	02.5		66	52.2	31.3	20	39.9	24.2	49	25.0	39.2
20	133	56.6	100	30.8	03.6		81	52.9	31.7	35	42.1	24.2	64	27.3	39.3
21	148	59.1	115	30.3	04.7		96	53.6	32.2	50	44.3	24.2	79	29.5	39.3
22	164	01.6	130	29.8	05.9		111	54.3	32.6	65	46.5	24.2	94	31.7	39.4
23	179	04.0	145	29.3	07.0		126	55.0	33.0	80	48.6	24.2	109	33.9	39.4
24	194	06.5	160	28.9	+13 08.1		141	55.7	+19 33.5	95	50.8	+23 24.1	124	36.1	+20 39.4
Dif	—		-5		+11		+7		+4	+22		0	+22		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 22 ^d 9 PHE { 4 ^h : 55°0 12 ^h : 54°8 20 ^h : 54°7											
	PMG: 12 ^h 02 ^m 4			SD: 15°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
0	179	21.4	+6 18.0	249	35.7	-23 05.4		60 N	18 55	19 39	20 36	4 38 18		10 43 80	
1	194	21.6		264	05.4 ¹⁰⁷	-23 00.5	49	58	51	33	24	20 22		11 01 76	
2	209	21.7		278	35.2 ¹⁰⁸	-22 55.4	51	56	48	27	15	4 05 24		15 74	
3	224	21.9		293	05.0 ¹⁰⁸	50.2	52	54	45	21	20 07	3 51 28		28 71	
4	239	22.1		307	34.9 ¹⁰⁹	45.0	52	52	42	17	19 59	40 29		39 69	
5	254	22.3	+6 22.7	322	04.9 ¹¹⁰	-22 39.6	54	50	18 39	19 13	19 53	3 30 31		11 49 67	
6	269	22.4	+6 23.7	336	35.0 ¹¹¹	-22 34.1	55	45	18 34	19 04	19 40	3 08 35		12 10 63	
7	284	22.6	24.6	351	05.1 ¹¹¹	28.5	56	40	29	18 57	29	2 51 37		27 60	
8	299	22.8	25.6	5	35.3 ¹¹²	22.8	57	35	25	51	21	36 39		41 58	
9	314	23.0	26.5	20	05.5 ¹¹²	17.0	58	30	22	46	14	23 41		12 53 56	
10	329	23.2	27.4	34	35.8 ¹¹³	11.1	59	20	16	38	19 04	2 02 43		13 14 52	
11	344	23.3	+6 28.4	49	06.2 ¹¹⁴	-22 05.1	60	10 N	18 10	18 32	18 56	1 43 46		13 32 50	
12	359	23.5	+6 29.3	63	36.7 ¹¹⁵	-21 59.0	61	0	18 06	18 27	18 51	1 25 48		13 49 47	
13	14	23.7	30.3	78	07.2 ¹¹⁵	52.8	62	10 S	18 01	22	47	1 07 51		14 05 45	
14	29	23.9	31.2	92	37.8 ¹¹⁶	46.5	63	20	17 56	18	44	0 48 53		23 42	
15	44	24.0	32.2	107	08.5 ¹¹⁷	40.1	64	30	51	15	43	26 56		44 38	
16	59	24.2	33.1	121	39.2 ¹¹⁷	33.6	65	35	48	13	43	0 13 58		14 55 37	
17	74	24.4	+6 34.0	136	10.0 ¹¹⁸	-21 27.0	66	40	17 45	18 12	18 43	** ** *		15 09 34	
18	89	24.6	+6 35.0	150	40.9 ¹¹⁹	-21 20.3	67	45	17 41	18 10	18 44	** ** *		15 25 31	
19	104	24.8	35.9	165	11.8 ¹¹⁹	13.6	67	50	36	08	46	** ** *		45 28	
20	119	24.9	36.9	179	42.8 ¹²⁰	-21 06.7	69	52	34	08	47	** ** *		15 54 26	
21	134	25.1	37.8	194	13.9 ¹²¹	-20 59.7	70	54	32	07	48	** ** *		16 04 24	
22	149	25.3	38.8	208	45.0 ¹²¹	52.7	70	56	29	06	49	23 54 73		16 22	
23	164	25.5	39.7	223	16.3 ¹²³	45.5	72	58	26	06	51	41 76		30 18	
24	179	25.6	+6 40.6	237	47.5 ¹²²	-20 38.3	72	60 S	17 23	18 05	18 53	23 25 81		16 46 14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 01 ^m 8		Mag: -3.9 PMG: 13 ^h 19 ^m		Mag: +1.5 PMG: 14 ^h 32 ^m		Mag: -2.2 PMG: 17 ^h 34 ^m		Mag: +0.1 PMG: 15 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	194	06.5	160	28.9	141	55.7	95	50.8	124	36.1
1	209	09.0	175	28.4	156	56.4	110	53.0	139	38.4
2	224	11.4	190	27.9	171	57.1	125	55.2	154	40.6
3	239	13.9	205	27.4	186	57.8	140	57.3	169	42.8
4	254	16.3	220	26.9	201	58.5	155	59.5	184	45.0
5	269	18.8	235	26.5	216	59.2	171	01.7	199	47.2
6	284	21.3	250	26.0	231	59.9	186	03.9	214	49.5
7	299	23.7	265	25.5	247	00.6	201	06.0	229	51.7
8	314	26.2	280	25.0	262	01.3	216	08.2	244	53.9
9	329	28.7	295	24.5	277	02.0	231	10.4	259	56.1
10	344	31.1	310	24.0	292	02.7	246	12.6	274	58.3
11	359	33.6	325	23.5	307	03.4	261	14.7	290	00.6
12	14	36.1	340	23.1	322	04.1	276	16.9	305	02.8
13	29	38.5	355	22.6	337	04.8	291	19.1	320	05.0
14	44	41.0	10	22.1	352	05.5	306	21.3	335	07.2
15	59	43.4	25	21.6	7	06.2	321	23.4	350	09.4
16	74	45.9	40	21.1	22	06.9	336	25.6	5	11.6
17	89	48.4	55	20.6	37	07.6	351	27.8	20	13.9
18	104	50.8	70	20.1	52	08.3	6	29.9	35	16.1
19	119	53.3	85	19.7	67	09.0	21	32.1	50	18.3
20	134	55.8	100	19.2	82	09.7	36	34.3	65	20.5
21	149	58.2	115	18.7	97	10.4	51	36.5	80	22.7
22	165	00.7	130	18.2	112	11.1	66	38.6	95	25.0
23	180	03.2	145	17.7	127	11.8	81	40.8	110	27.2
24	195	05.6	160	17.2	142	12.5	96	43.0	125	29.4
Dif	—		-5	+11	+7	+4	+22	0	+22	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 1			Edad: 23 ^d 9 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 PMG: 8 ^h 25 ^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	179	25.6	+6 40.6	237	47.5	-20 38.3		60 N	3 28	4 24	5 08		4 56	11	12 03 81
1	194	25.8		252	18.9 ¹²⁴	31.0 ⁷³		58	39	31	12		42	15	17 77
2	209	26.0		266	50.3 ¹²⁴	23.6 ⁷⁴		56	49	37	16		29	19	29 74
3	224	26.2		281	21.8 ¹²⁵	16.1 ⁷⁵		54	3 57	42	19		19	20	39 71
4	239	26.3		295	53.3 ¹²⁵	08.5 ⁷⁶		52	4 05	47	22		09	23	48 69
5	254	26.5	+6 45.4	310	25.0 ¹²⁷	-20 00.8 ⁷⁷		50	4 11	4 51	5 24		4 01	25	12 56 67
6	269	26.7	+6 46.3	324	56.7 ¹²⁷	-19 53.0 ⁷⁸		45	4 24	5 00	5 30		3 43	28	13 13 63
7	284	26.9		339	28.4 ¹²⁷	45.2 ⁷⁸		40	35	07	35		28	32	27 60
8	299	27.0		354	00.2 ¹²⁸	37.3 ⁷⁹		35	43	13	39		15	34	39 57
9	314	27.2		8	32.1 ¹²⁹	29.3 ⁸⁰		30	4 50	18	43		3 04	37	13 49 55
10	329	27.4		23	04.1 ¹³⁰	21.2 ⁸¹		20	5 01	27	49		2 45	40	14 06 51
11	344	27.6	+6 51.0	37	36.1 ¹³⁰	-19 13.0 ⁸²		10 N	5 08	5 33	5 54		2 29	43	14 22 47
12	359	27.8	+6 51.9	52	08.2 ¹³¹	-19 04.8 ⁸²		0	5 14	5 38	5 59		2 13	46	14 36 44
13	14	27.9		66	40.3 ¹³¹	-18 56.5 ⁸³		10 S	18	42	6 04		1 58	49	14 50 41
14	29	28.1		81	12.5 ¹³²	48.0 ⁸⁵		20	21	46	09		41	52	15 05 38
15	44	28.3		95	44.8 ¹³³	39.6 ⁸⁴		30	22	50	14		22	55	22 34
16	59	28.5		110	17.1 ¹³³	31.0 ⁸⁶		35	22	52	17		1 11	57	32 32
17	74	28.6	+6 56.6	124	49.5 ¹³⁴	-18 22.4 ⁸⁶		40	5 22	5 54	6 21		0 58	60	15 43 30
18	89	28.8	+6 57.6	139	22.0 ¹³⁵	-18 13.7 ⁸⁷		45	5 21	5 55	6 25		0 43	63	15 56 27
19	104	29.0		153	54.5 ¹³⁵	-18 04.9 ⁸⁸		50	20	57	30		24	67	16 13 22
20	119	29.2	+6 59.4	168	27.1 ¹³⁶	-17 56.0 ⁸⁹		52	19	58	32		15	69	20 21
21	134	29.3	+7 00.4	182	59.8 ¹³⁷	47.1 ⁸⁹		54	18	59	34		0 05	71	28 19
22	149	29.5		197	32.5 ¹³⁷	38.1 ⁹⁰		56	16	5 59	37		** ** *	**	38 16
23	164	29.7		212	05.3 ¹³⁸	29.0 ⁹¹		58	15	6 00	40		** ** *	**	16 48 13
24	179	29.8	+7 03.2	226	38.1 ¹³⁸	-17 19.9 ⁹¹		60 S	5 13	6 01	6 43		** ** *	**	17 00 10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 57 ^m 8		Mag: -3.9 PMG: 13 ^h 19 ^m		Mag: +1.5 PMG: 14 ^h 30 ^m		Mag: -2.2 PMG: 17 ^h 31 ^m		Mag: +0.1 PMG: 15 ^h 36 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	195	05.6	160	17.2	+13 34.8	142	12.5	+19 44.0	96	43.0	+23 23.9	125	29.4	+20 40.4
1	210	08.1	175	16.7	35.9	157	13.2	44.4	111	45.1	23.8	140	31.6	40.4
2	225	10.6	190	16.2	37.0	172	13.9	44.8	126	47.3	23.8	155	33.8	40.5
3	240	13.0	205	15.7	38.1	187	14.6	45.3	141	49.5	23.8	170	36.0	40.5
4	255	15.5	220	15.2	39.2	202	15.3	45.7	156	51.6	23.8	185	38.3	40.6
5	270	17.9	235	14.8	+13 40.3	217	16.0	+19 46.1	171	53.8	+23 23.8	200	40.5	+20 40.6
6	285	20.4	250	14.3	+13 41.4	232	16.7	+19 46.6	186	56.0	+23 23.8	215	42.7	+20 40.6
7	300	22.9	265	13.8	42.5	247	17.4	47.0	201	58.2	23.8	230	44.9	40.7
8	315	25.3	280	13.3	43.6	262	18.1	47.4	217	00.3	23.8	245	47.1	40.7
9	330	27.8	295	12.8	44.7	277	18.8	47.8	232	02.5	23.7	260	49.3	40.8
10	345	30.3	310	12.3	45.8	292	19.5	48.3	247	04.7	23.7	275	51.6	40.8
11	0	32.7	325	11.8	+13 46.9	307	20.2	+19 48.7	262	06.8	+23 23.7	290	53.8	+20 40.8
12	15	35.2	340	11.3	+13 48.0	322	20.9	+19 49.1	277	09.0	+23 23.7	305	56.0	+20 40.9
13	30	37.7	355	10.8	49.1	337	21.6	49.6	292	11.2	23.7	320	58.2	40.9
14	45	40.1	10	10.3	50.2	352	22.3	50.0	307	13.3	23.7	336	00.4	41.0
15	60	42.6	25	09.8	51.3	7	23.0	50.4	322	15.5	23.7	351	02.6	41.0
16	75	45.1	40	09.3	52.4	22	23.7	50.8	337	17.7	23.7	6	04.9	41.1
17	90	47.5	55	08.8	+13 53.4	37	24.4	+19 51.3	352	19.8	+23 23.6	21	07.1	+20 41.1
18	105	50.0	70	08.3	+13 54.5	52	25.1	+19 51.7	7	22.0	+23 23.6	36	09.3	+20 41.1
19	120	52.4	85	07.8	55.6	67	25.7	52.1	22	24.1	23.6	51	11.5	41.2
20	135	54.9	100	07.3	56.7	82	26.4	52.6	37	26.3	23.6	66	13.7	41.2
21	150	57.4	115	06.8	57.8	97	27.1	53.0	52	28.5	23.6	81	15.9	41.3
22	165	59.8	130	06.3	+13 58.9	112	27.8	53.4	67	30.6	23.6	96	18.1	41.3
23	181	02.3	145	05.8	+14 00.0	127	28.5	53.8	82	32.8	23.6	111	20.4	41.3
24	196	04.8	160	05.3	+14 01.1	142	29.2	+19 54.3	97	35.0	+23 23.6	126	22.6	+20 41.4
Dif	—		-5 +11		+7 +4		+22 0		+22 0		+22 0		+22 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 24 ^d 9	PHE { 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/1	SD: 14°8			PMG: 9 ^h 10 ^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	179	29.8	+7 03.2	226	38.1	-17 19.9	92	60 N	19 00	19 45	20 42	5 07 8	13 24 80	
1	194	30.0	04.1	241	11.0 ¹³⁹	10.7	92	58	18 56	37	30	4 57 11	34 76	
2	209	30.2	05.1	255	43.9 ¹³⁹	-17 01.4	93	56	52	31	20	48 14	43 73	
3	224	30.4	06.0	270	17.0 ¹⁴¹	-16 52.0	94	54	49	25	11	39 17	50 71	
4	239	30.5	06.9	284	50.0 ¹⁴⁰	42.6	94	52	45	20	20 03	32 19	13 57 69	
5	254	30.7	+7 07.9	299	23.1 ¹⁴¹	-16 33.1	95	50	18 42	19 16	19 57	4 26 20	14 03 67	
6	269	30.9	+7 08.8	313	56.3 ¹⁴²	-16 23.6	95	45	18 36	19 06	19 43	4 11 25	14 16 62	
7	284	31.1	09.8	328	29.6 ¹⁴³	14.0	96	40	31	18 59	32	4 00 27	27 59	
8	299	31.2	10.7	343	02.9 ¹⁴³	-16 04.3	97	35	27	52	23	3 49 31	36 56	
9	314	31.4	11.6	357	36.2 ¹⁴³	-15 54.5	98	30	23	47	16	41 32	44 53	
10	329	31.6	12.6	12	09.6 ¹⁴⁴	44.7	98	20	16	38	19 04	25 37	14 57 50	
11	344	31.8	+7 13.5	26	43.1 ¹⁴⁵	-15 34.9	98	10 N	18 10	18 32	18 56	3 12 40	15 09 46	
12	359	31.9	+7 14.4	41	16.6 ¹⁴⁵	-15 24.9	100	0	18 05	18 26	18 50	2 59 44	15 20 43	
13	14	32.1	15.4	55	50.2 ¹⁴⁶	15.0	99	10 S	18 00	21	46	47 46	31 39	
14	29	32.3	16.3	70	23.8 ¹⁴⁶	-15 04.9	101	20	17 55	17	42	33 50	43 35	
15	44	32.4	17.2	84	57.5 ¹⁴⁷	-14 54.8	101	30	49	13	40	17 55	15 56 32	
16	59	32.6	18.2	99	31.2 ¹⁴⁷	44.6	102	35	45	11	40	2 08 57	16 04 29	
17	74	32.8	+7 19.1	114	05.0 ¹⁴⁸	-14 34.4	102	40	17 41	18 09	18 40	1 58 59	16 13 26	
18	89	33.0	+7 20.0	128	38.8 ¹⁴⁸	-14 24.1	103	45	17 37	18 06	18 40	1 46 62	16 23 23	
19	104	33.1	21.0	143	12.7 ¹⁴⁹	13.8	103	50	32	04	42	31 67	35 19	
20	119	33.3	21.9	157	46.6 ¹⁴⁹	-14 03.4	104	52	29	03	42	24 69	41 17	
21	134	33.5	22.8	172	20.6 ¹⁵⁰	-13 53.0	104	54	27	02	43	16 71	47 15	
22	149	33.6	23.8	186	54.6 ¹⁵⁰	42.5	105	56	24	01	44	1 07 74	16 54 12	
23	164	33.8	24.7	201	28.6 ¹⁵⁰	31.9	106	58	21	18 00	45	0 57 77	17 01 10	
24	179	34.0	+7 25.6	216	02.8 ¹⁵²	-13 21.3	106	60 S	17 17	17 59	18 47	0 46 80	17 10 7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 53 ^m 9		Mag: -3.9 PMG: 13 ^h 20 ^m		Mag: +1.5 PMG: 14 ^h 29 ^m		Mag: -2.2 PMG: 17 ^h 27 ^m		Mag: +0.1 PMG: 15 ^h 32 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	196	04.8	160	05.3	+14 01.1	142 29.2	+19 54.3	97 35.0	+23 23.6	126 22.6	+20 41.4
1	211	07.2	175	04.8	02.2	157 29.9	54.7	112 37.1	23.5	141 24.8	41.4
2	226	09.7	190	04.3	03.3	172 30.6	55.1	127 39.3	23.5	156 27.0	41.5
3	241	12.2	205	03.8	04.4	187 31.3	55.5	142 41.5	23.5	171 29.2	41.5
4	256	14.6	220	03.3	05.4	202 32.0	56.0	157 43.6	23.5	186 31.4	41.5
5	271	17.1	235	02.8	+14 06.5	217 32.7	+19 56.4	172 45.8	+23 23.5	201 33.6	+20 41.6
6	286	19.5	250	02.3	+14 07.6	232 33.4	+19 56.8	187 47.9	+23 23.5	216 35.9	+20 41.6
7	301	22.0	265	01.8	08.7	247 34.1	57.2	202 50.1	23.5	231 38.1	41.7
8	316	24.5	280	01.3	09.8	262 34.8	57.7	217 52.3	23.4	246 40.3	41.7
9	331	26.9	295	00.8	10.9	277 35.5	58.1	232 54.4	23.4	261 42.5	41.7
10	346	29.4	310	00.3	12.0	292 36.2	58.5	247 56.6	23.4	276 44.7	41.8
11	1	31.9	324	59.8	+14 13.0	307 36.9	+19 58.9	262 58.7	+23 23.4	291 46.9	+20 41.8
12	16	34.3	339	59.3	+14 14.1	322 37.6	+19 59.4	278 00.9	+23 23.4	306 49.1	+20 41.9
13	31	36.8	354	58.8	15.2	337 38.3	+19 59.8	293 03.1	23.4	321 51.3	41.9
14	46	39.3	9	58.3	16.3	352 39.0	+20 00.2	308 05.2	23.4	336 53.6	41.9
15	61	41.7	24	57.8	17.4	7 39.7	00.6	323 07.4	23.4	351 55.8	42.0
16	76	44.2	39	57.3	18.5	22 40.4	01.0	338 09.5	23.3	6 58.0	42.0
17	91	46.7	54	56.8	+14 19.5	37 41.1	+20 01.5	353 11.7	+23 23.3	22 00.2	+20 42.1
18	106	49.1	69	56.3	+14 20.6	52 41.8	+20 01.9	8 13.9	+23 23.3	37 02.4	+20 42.1
19	121	51.6	84	55.8	21.7	67 42.4	02.3	23 16.0	23.3	52 04.6	42.1
20	136	54.0	99	55.3	22.8	82 43.1	02.7	38 18.2	23.3	67 06.8	42.2
21	151	56.5	114	54.7	23.9	97 43.8	03.1	53 20.3	23.3	82 09.0	42.2
22	166	59.0	129	54.2	24.9	112 44.5	03.6	68 22.5	23.3	97 11.3	42.3
23	182	01.4	144	53.7	26.0	127 45.2	04.0	83 24.6	23.2	112 13.5	42.3
24	197	03.9	159	53.2	+14 27.1	142 45.9	+20 04.4	98 26.8	+23 23.2	127 15.7	+20 42.4
Dif	—		-5	+11		+7	+4	+22	0	+22	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 6			Edad: 25 ^d 9 PHE { SD: 14'7 PMG: 9 ^h 53 ^m R°: 41 ^m 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	34.0	+7	25.6	216	02.8	-13 21.3	60 N	3 20	4 18	5 02	5 15	6	14 44	78
1	194	34.2		26.6	230	36.9 ¹⁵¹	-13 10.7 ¹⁰⁶	58	33	25	06	08	9	50	76
2	209	34.3		27.5	245	11.1 ¹⁵²	-13 00.0 ¹⁰⁷	56	43	31	10	5 02	11	14 56	73
3	224	34.5		28.4	259	45.4 ¹⁵³	-12 49.2 ¹⁰⁸	54	52	37	14	4 56	14	15 01	70
4	239	34.7		29.4	274	19.7 ¹⁵³	38.4 ¹⁰⁸	52	3 59	42	17	51	15	06	67
5	254	34.8	+7	30.3	288	54.0 ¹⁵³	-12 27.6 ¹⁰⁸	50	4 06	4 47	5 20	4 46	17	15 10	66
6	269	35.0	+7	31.2	303	28.4 ¹⁵⁴	-12 16.7 ¹⁰⁹	45	4 20	4 56	5 27	4 36	21	15 18	62
7	284	35.2		32.2	318	02.8 ¹⁵⁴	-12 05.7 ¹¹⁰	40	31	5 04	32	27	25	26	58
8	299	35.4		33.1	332	37.2 ¹⁵⁴	-11 54.7 ¹¹⁰	35	40	11	36	20	27	32	55
9	314	35.5		34.0	347	11.7 ¹⁵⁵	43.7 ¹¹⁰	30	47	16	40	13	30	37	53
10	329	35.7		34.9	1	46.3 ¹⁵⁶	32.6 ¹¹¹	20	4 59	25	47	4 02	34	47	48
11	344	35.9	+7	35.9	16	20.9 ¹⁵⁶	-11 21.5 ¹¹¹	10 N	5 07	5 32	5 53	3 52	38	15 55	45
12	359	36.0	+7	36.8	30	55.5 ¹⁵⁶	-11 10.3 ¹¹²	0	5 13	5 37	5 58	3 43	41	16 03	41
13	14	36.2		37.7	45	30.1 ¹⁵⁶	-10 59.1 ¹¹²	10 S	18	42	6 04	33	45	10	38
14	29	36.4		38.7	60	04.8 ¹⁵⁷	47.9 ¹¹²	20	21	47	09	23	49	18	34
15	44	36.6		39.6	74	39.5 ¹⁵⁷	36.6 ¹¹³	30	23	51	15	12	53	28	29
16	59	36.7		40.5	89	14.3 ¹⁵⁸	25.2 ¹¹⁴	35	24	53	19	3 05	56	33	27
17	74	36.9	+7	41.4	103	49.1 ¹⁵⁸	-10 13.9 ¹¹³	40	5 24	5 56	6 23	2 57	59	16 39	24
18	89	37.1	+7	42.4	118	23.9 ¹⁵⁸	-10 02.5 ¹¹⁴	45	5 24	5 58	6 27	2 48	62	16 46	20
19	104	37.2		43.3	132	58.8 ¹⁵⁹	-9 51.0 ¹¹⁵	50	23	6 00	33	38	66	54	16
20	119	37.4		44.2	147	33.7 ¹⁵⁹	39.5 ¹¹⁵	52	22	01	35	33	68	16 58	14
21	134	37.6		45.2	162	08.6 ¹⁵⁹	28.0 ¹¹⁵	54	21	02	38	27	70	17 02	13
22	149	37.7		46.1	176	43.5 ¹⁵⁹	16.4 ¹¹⁶	56	20	03	41	21	73	06	11
23	164	37.9		47.0	191	18.5 ¹⁶⁰	-9 04.8 ¹¹⁶	58	19	04	44	14	76	11	8
24	179	38.1	+7	47.9	205	53.5 ¹⁶⁰	-8 53.2 ¹¹⁶	60 S	5 18	6 06	6 48	2 06	79	17 17	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 50 ^m 0		Mag: -3.9 PMG: 13 ^h 21 ^m		Mag: +1.5 PMG: 14 ^h 28 ^m		Mag: -2.2 PMG: 17 ^h 24 ^m		Mag: +0.1 PMG: 15 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	197	03.9	159	53.2	+14	27.1	142	45.9	+20	04.4
1	212	06.4	174	52.7		28.2	157	46.6		04.8
2	227	08.8	189	52.2		29.2	172	47.3		05.2
3	242	11.3	204	51.7		30.3	187	48.0		05.7
4	257	13.8	219	51.2		31.4	202	48.7		06.1
5	272	16.2	234	50.7	+14	32.5	217	49.4	+20	06.5
6	287	18.7	249	50.2	+14	33.5	232	50.1	+20	06.9
7	302	21.2	264	49.6		34.6	247	50.8		07.3
8	317	23.6	279	49.1		35.7	262	51.5		07.7
9	332	26.1	294	48.6		36.7	277	52.2		08.2
10	347	28.5	309	48.1		37.8	292	52.9		08.6
11	2	31.0	324	47.6	+14	38.9	307	53.5	+20	09.0
12	17	33.5	339	47.1	+14	39.9	322	54.2	+20	09.4
13	32	35.9	354	46.6		41.0	337	54.9		09.8
14	47	38.4	9	46.0		42.1	352	55.6		10.2
15	62	40.9	24	45.5		43.1	7	56.3		10.6
16	77	43.3	39	45.0		44.2	22	57.0		11.1
17	92	45.8	54	44.5	+14	45.3	37	57.7	+20	11.5
18	107	48.3	69	44.0	+14	46.3	52	58.4	+20	11.9
19	122	50.7	84	43.5		47.4	67	59.1		12.3
20	137	53.2	99	42.9		48.5	82	59.8		12.7
21	152	55.6	114	42.4		49.5	98	00.5		13.1
22	167	58.1	129	41.9		50.6	113	01.2		13.5
23	183	00.6	144	41.4		51.7	128	01.9		13.9
24	198	03.0	159	40.9	+14	52.7	143	02.6	+20	14.4
Dif	—		-5		+11		+7		+4	
									+22	0
										+22
										0

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0		Edad: 26 ^d 9		PHE {	4 ^h : 54:0			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 01 ^m 3		SD: 14:7			12 ^h : 54:0			20 ^h : 54:0		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	179	38.1	+7	47.9	205	53.5	-8 53.2	60 N	19 05	19 50	20 49	5 21 5	16 02 78		
1	194	38.2		48.9	220	28.6 ¹⁶¹	41.5 ¹¹⁷	58	19 00	42	36	17 8	06 74		
2	209	38.4		49.8	235	03.6 ¹⁶⁰	29.8 ¹¹⁷	56	18 56	36	25	13 10	09 72		
3	224	38.6		50.7	249	38.7 ¹⁶¹	18.1 ¹¹⁷	54	52	29	16	10 12	11 70		
4	239	38.7		51.6	264	13.8 ¹⁶¹	-8 06.3 ¹¹⁸	52	49	24	08	06 15	13 68		
5	254	38.9	+7	52.6	278	49.0 ¹⁶²	-7 54.5 ¹¹⁸	50	18 46	19 19	20 00	5 03 17	16 16 65		
6	269	39.1	+7	53.5	293	24.1 ¹⁶¹	-7 42.7 ¹¹⁸	45	18 39	19 09	19 45	4 57 20	16 20 62		
7	284	39.3		54.4	307	59.3 ¹⁶²	30.9 ¹¹⁸	40	33	19 01	34	52 23	24 58		
8	299	39.4		55.3	322	34.6 ¹⁶³	19.0 ¹¹⁹	35	28	18 54	25	47 26	27 56		
9	314	39.6		56.3	337	09.8 ¹⁶²	-7 07.0 ¹²⁰	30	24	48	17	43 29	30 53		
10	329	39.8		57.2	351	45.0 ¹⁶²	-6 55.1 ¹¹⁹	20	17	39	19 05	36 33	35 48		
11	344	39.9	+7	58.1	6	20.3 ¹⁶³	-6 43.1 ¹²⁰	10 N	18 10	18 32	18 56	4 30 37	16 40 44		
12	359	40.1	+7	59.0	20	55.6 ¹⁶³	-6 31.1 ¹²⁰	0	18 05	18 25	18 50	4 24 41	16 44 40		
13	14	40.3	+8	00.0	35	30.9 ¹⁶³	19.1 ¹²⁰	10 S	17 59	20	45	18 44	48 36		
14	29	40.4	+8	00.9	50	06.3 ¹⁶⁴	-6 07.1 ¹²⁰	20	53	15	41	12 48	52 33		
15	44	40.6		01.8	64	41.6 ¹⁶³	-5 55.0 ¹²¹	30	46	10	38	05 52	16 57 28		
16	59	40.8		02.7	79	17.0 ¹⁶⁴	42.9 ¹²¹	35	43	08	37	4 01 55	17 00 25		
17	74	40.9	+8	03.7	93	52.4 ¹⁶⁴	-5 30.8 ¹²¹	40	17 38	18 06	18 37	3 56 58	17 03 23		
18	89	41.1	+8	04.6	108	27.8 ¹⁶⁴	-5 18.6 ¹²²	45	17 33	18 03	18 37	3 50 62	17 06 20		
19	104	41.3		05.5	123	03.2 ¹⁶⁴	-5 06.5 ¹²¹	50	28	18 00	37	44 66	10 16		
20	119	41.4		06.4	137	38.6 ¹⁶⁴	-4 54.3 ¹²²	52	25	17 59	38	41 67	12 14		
21	134	41.6		07.4	152	14.0 ¹⁶⁴	42.1 ¹²²	54	22	58	38	37 70	15 12		
22	149	41.8		08.3	166	49.5 ¹⁶⁵	29.8 ¹²³	56	19	56	39	34 72	17 10		
23	164	41.9		09.2	181	24.9 ¹⁶⁴	17.6 ¹²²	58	15	55	40	30 74	19 8		
24	179	42.1	+8	10.1	196	00.4 ¹⁶⁵	-4 05.3 ¹²³	60 S	17 11	17 53	18 41	3 25 78	17 22 5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 46 ^m 0		Mag: -3.9 PMG: 13 ^h 22 ^m		Mag: +1.5 PMG: 14 ^h 27 ^m		Mag: -2.2 PMG: 17 ^h 20 ^m		Mag: +0.1 PMG: 15 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	198	03.0	159	40.9	+14	52.7	143	02.6	+20	14.4	99	18.5	+23	22.9	128	08.7	+20	43.3
1	213	05.5	174	40.3		53.8	158	03.2		14.8	114	20.6		22.9	143	10.9		43.4
2	228	08.0	189	39.8		54.8	173	03.9		15.2	129	22.8		22.9	158	13.1		43.4
3	243	10.4	204	39.3		55.9	188	04.6		15.6	144	24.9		22.9	173	15.3		43.5
4	258	12.9	219	38.8		57.0	203	05.3		16.0	159	27.1		22.8	188	17.5		43.5
5	273	15.4	234	38.3	+14	58.0	218	06.0	+20	16.4	174	29.2	+23	22.8	203	19.7	+20	43.5
6	288	17.8	249	37.7	+14	59.1	233	06.7	+20	16.8	189	31.4	+23	22.8	218	22.0	+20	43.6
7	303	20.3	264	37.2	+15	00.1	248	07.4		17.2	204	33.5		22.8	233	24.2		43.6
8	318	22.8	279	36.7		01.2	263	08.1		17.6	219	35.7		22.8	248	26.4		43.7
9	333	25.2	294	36.2		02.2	278	08.8		18.0	234	37.8		22.8	263	28.6		43.7
10	348	27.7	309	35.6		03.3	293	09.5		18.4	249	40.0		22.8	278	30.8		43.7
11	3	30.1	324	35.1	+15	04.3	308	10.2	+20	18.9	264	42.1	+23	22.7	293	33.0	+20	43.8
12	18	32.6	339	34.6	+15	05.4	323	10.8	+20	19.3	279	44.3	+23	22.7	308	35.2	+20	43.8
13	33	35.1	354	34.1		06.5	338	11.5		19.7	294	46.4		22.7	323	37.4		43.9
14	48	37.5	9	33.5		07.5	353	12.2		20.1	309	48.6		22.7	338	39.6		43.9
15	63	40.0	24	33.0		08.6	8	12.9		20.5	324	50.7		22.7	353	41.8		43.9
16	78	42.5	39	32.5		09.6	23	13.6		20.9	339	52.8		22.7	8	44.0		44.0
17	93	44.9	54	32.0	+15	10.7	38	14.3	+20	21.3	354	55.0	+23	22.7	23	46.2	+20	44.0
18	108	47.4	69	31.4	+15	11.7	53	15.0	+20	21.7	9	57.1	+23	22.6	38	48.4	+20	44.1
19	123	49.9	84	30.9		12.8	68	15.7		22.1	24	59.3		22.6	53	50.6		44.1
20	138	52.3	99	30.4		13.8	83	16.4		22.5	40	01.4		22.6	68	52.8		44.2
21	153	54.8	114	29.9		14.9	98	17.1		22.9	55	03.6		22.6	83	55.0		44.2
22	168	57.2	129	29.3		15.9	113	17.8		23.3	70	05.7		22.6	98	57.3		44.2
23	183	59.7	144	28.8		16.9	128	18.4		23.7	85	07.9		22.6	113	59.5		44.3
24	199	02.2	159	28.3	+15	18.0	143	19.1	+20	24.1	100	10.0	+23	22.5	129	01.7	+20	44.3
Dif	—		-5	+11		+7	+4			+21	0			+22				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 1			Edad: 27 ^d 9 PHE { SD: 14'7 PMG: 11 ^h 14 ^m R°: 41 ^m 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	42.1	+8 10.1	196	00.4	-4 05.3		60 N	3 13	4 11	4 56	5 26	5	17 20	78
1	194	42.3		210	35.9	-3 53.1	122	58	26	19	5 01	25 7		20 76	
2	209	42.4		225	11.4	40.8	123	56	37	26	05	23 10		21 72	
3	224	42.6		239	46.9	28.4	124	54	46	32	09	22 12		21 70	
4	239	42.7		254	22.4	16.1	123	52	3 54	38	13	21 13		21 68	
5	254	42.9	+8 14.7	268	57.9	-3 03.8	123	50	4 01	4 42	5 16	5 20 15		17 21	67
6	269	43.1	+8 15.6	283	33.4	-2 51.4	124	45	4 16	4 53	5 23	5 17 20		17 22	62
7	284	43.2		298	08.9	39.0	124	40	28	5 01	29	15 23		22 59	
8	299	43.4		312	44.4	26.7	123	35	37	08	34	13 26		23 55	
9	314	43.6		327	19.9	14.3	124	30	45	14	38	12 28		23 53	
10	329	43.7		341	55.5	-2 01.9	124	20	4 57	23	45	09 33		23 49	
11	344	43.9	+8 20.2	356	31.0	-1 49.4	125	10 N	5 06	5 31	5 52	5 07 36		17 24	44
12	359	44.1	+8 21.2	11	06.5	-1 37.0	124	0	5 13	5 37	5 58	5 05 40		17 24	41
13	14	44.2		25	42.0	24.6	124	10 S	18	42	6 04	02 44		24 37	
14	29	44.4		40	17.6	-1 12.1	125	20	22	47	10	5 00 48		25 33	
15	44	44.6		54	53.1	-0 59.7	124	30	25	52	16	4 57 53		25 29	
16	59	44.7		69	28.6	47.2	125	35	25	55	20	56 55		25 26	
17	74	44.9	+8 25.7	84	04.1	-0 34.7	125	40	5 26	5 57	6 25	4 54 58		17 26	23
18	89	45.0	+8 26.7	98	39.6	-0 22.3	124	45	5 26	6 00	6 30	4 52 62		17 26	20
19	104	45.2		113	15.1	-0 09.8	125	50	26	03	36	50 66		26 16	
20	119	45.4		127	50.6	+0 02.7	125	52	25	04	38	48 68		26 14	
21	134	45.5		142	26.1	15.2	125	54	25	06	41	47 70		27 11	
22	149	45.7		157	01.6	27.7	125	56	24	07	45	46 72		27 9	
23	164	45.9		171	37.0	40.2	125	58	23	09	48	44 75		27 7	
24	179	46.0	+8 32.2	186	12.5	+0 52.7	125	60 S	5 22	6 10	6 53	4 43 77		17 27	5
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 10 ^h 42 ^m 1		Mag: -3.9 PMG: 13 ^h 23 ^m			Mag: +1.5 PMG: 14 ^h 26 ^m			Mag: -2.2 PMG: 17 ^h 17 ^m			Mag: +0.1 PMG: 15 ^h 22 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	199	02.2	159	28.3	+15 18.0		143	19.1	+20 24.1	100	10.0	+23 22.5	129	01.7	+20 44.3
1	214	04.6	174	27.7		19.0	158	19.8	24.5	115	12.1	22.5	144	03.9	44.4
2	229	07.1	189	27.2		20.1	173	20.5	24.9	130	14.3	22.5	159	06.1	44.4
3	244	09.6	204	26.7		21.1	188	21.2	25.3	145	16.4	22.5	174	08.3	44.4
4	259	12.0	219	26.1		22.2	203	21.9	25.7	160	18.6	22.5	189	10.5	44.5
5	274	14.5	234	25.6	+15 23.2		218	22.6	+20 26.1	175	20.7	+23 22.5	204	12.7	+20 44.5
6	289	17.0	249	25.1	+15 24.2		233	23.3	+20 26.5	190	22.9	+23 22.5	219	14.9	+20 44.6
7	304	19.4	264	24.5		25.3	248	24.0	26.9	205	25.0	22.4	234	17.1	44.6
8	319	21.9	279	24.0		26.3	263	24.6	27.3	220	27.1	22.4	249	19.3	44.6
9	334	24.4	294	23.5		27.4	278	25.3	27.7	235	29.3	22.4	264	21.5	44.7
10	349	26.8	309	22.9		28.4	293	26.0	28.1	250	31.4	22.4	279	23.7	44.7
11	4 29.3		324	22.4	+15 29.4		308	26.7	+20 28.5	265	33.6	+23 22.4	294	25.9	+20 44.8
12	19	31.7	339	21.9	+15 30.5		323	27.4	+20 28.9	280	35.7	+23 22.4	309	28.1	+20 44.8
13	34	34.2	354	21.3		31.5	338	28.1	29.3	295	37.8	22.4	324	30.3	44.9
14	49	36.7	9	20.8		32.6	353	28.8	29.7	310	40.0	22.3	339	32.5	44.9
15	64	39.1	24	20.3		33.6	8	29.5	30.1	325	42.1	22.3	354	34.7	44.9
16	79	41.6	39	19.7		34.6	23	30.2	30.5	340	44.3	22.3	9	36.9	45.0
17	94	44.1	54	19.2	+15 35.7		38	30.8	+20 30.9	355	46.4	+23 22.3	24	39.1	+20 45.0
18	109	46.5	69	18.7	+15 36.7		53	31.5	+20 31.3	10	48.5	+23 22.3	39	41.3	+20 45.1
19	124	49.0	84	18.1		37.7	68	32.2	31.7	25	50.7	22.3	54	43.5	45.1
20	139	51.5	99	17.6		38.8	83	32.9	32.1	40	52.8	22.2	69	45.7	45.1
21	154	53.9	114	17.0		39.8	98	33.6	32.5	55	55.0	22.2	84	47.9	45.2
22	169	56.4	129	16.5		40.8	113	34.3	32.9	70	57.1	22.2	99	50.1	45.2
23	184	58.8	144	16.0		41.9	128	35.0	33.3	85	59.2	22.2	114	52.4	45.3
24	200	01.3	159	15.4	+15 42.9		143	35.7	+20 33.7	101	01.4	+23 22.2	129	54.6	+20 45.3
Dif	—		-5	+10			+7	+4		+21	0		+22	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 8			Edad: 28 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 3 R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	179	46.0	+8 32.2	186	12.5	+0 52.7	60 N	19 10	19 56	20 55	5 31	5	18 38	80	
1	194	46.2		200	47.9 ¹⁶⁴	+1 05.1 ¹²⁴	58	05	47	42	32	8	36	76	
2	209	46.4		215	23.4 ¹⁶⁵	17.6 ¹²⁵	56	19 00	40	30	33	10	33	74	
3	224	46.5		229	58.8 ¹⁶⁴	30.1 ¹²⁵	54	18 56	34	20	34	12	31	72	
4	239	46.7		244	34.2 ¹⁶⁴	42.6 ¹²⁵	52	52	28	12	34	15	29	69	
5	254	46.8	+8 36.7	259	09.6 ¹⁶⁴	+1 55.1 ¹²⁵	50	18 49	19 23	20 04	5 35	16	18 28	67	
6	269	47.0	+8 37.6	273	45.0 ¹⁶⁴	+2 07.6 ¹²⁵	45	18 41	19 12	19 48	5 37	20	18 24	63	
7	284	47.2		288	20.4 ¹⁶⁴	20.1 ¹²⁵	40	35	19 03	36	38	23	21	59	
8	299	47.3		302	55.7 ¹⁶³	32.6 ¹²⁵	35	30	18 56	27	39	26	18	56	
9	314	47.5		317	31.1 ¹⁶⁴	45.0 ¹²⁴	30	25	50	18	40	29	16	53	
10	329	47.6		332	06.4 ¹⁶³	+2 57.5 ¹²⁵	20	17	40	19 06	42	33	12	49	
11	344	47.8	+8 42.2	346	41.7 ¹⁶³	+3 10.0 ¹²⁵	10 N	18 10	18 32	18 57	5 43	38	18 08	45	
12	359	48.0	+8 43.1	1	16.9 ¹⁶²	+3 22.4 ¹²⁴	0	18 04	18 25	18 49	5 45	41	18 05	41	
13	14	48.1		15	52.2 ¹⁶³	34.9 ¹²⁵	10 S	17 58	19	44	46	45	18 01	38	
14	29	48.3		30	27.4 ¹⁶²	47.3 ¹²⁴	20	51	14	39	48	49	17 58	34	
15	44	48.5		45	02.7 ¹⁶³	+3 59.7 ¹²⁴	30	44	08	36	50	53	54	29	
16	59	48.6		59	37.8 ¹⁶¹	+4 12.1 ¹²⁴	35	40	05	35	51	56	51	27	
17	74	48.8	+8 47.7	74	13.0 ¹⁶²	+4 24.5 ¹²⁴	40	17 35	18 03	18 34	5 52	59	17 49	24	
18	89	48.9	+8 48.6	88	48.2 ¹⁶²	+4 36.9 ¹²⁴	45	17 30	18 00	18 33	5 54	62	17 46	20	
19	104	49.1		103	23.3 ¹⁶¹	+4 49.3 ¹²⁴	50	24	17 56	33	56	66	42	17	
20	119	49.3		117	58.4 ¹⁶¹	+5 01.7 ¹²⁴	52	21	55	34	56	69	40	15	
21	134	49.4		132	33.4 ¹⁶⁰	14.0 ¹²³	54	17	53	34	57	71	38	13	
22	149	49.6		147	08.5 ¹⁶¹	26.4 ¹²⁴	56	14	51	34	58	73	36	11	
23	164	49.7		161	43.5 ¹⁶⁰	38.7 ¹²³	58	10	50	35	5	59	34	8	
24	179	49.9	+8 54.1	176	18.4 ¹⁵⁹	+5 51.0 ¹²³	60 S	17 06	17 48	18 36	6 00	79	17 32	5	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 38 ^m 2		Mag: -3.9 PMG: 13 ^h 23 ^m		Mag: +1.5 PMG: 14 ^h 25 ^m		Mag: -2.2 PMG: 17 ^h 13 ^m		Mag: +0.1 PMG: 15 ^h 18 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	200	01.3	159	15.4	+15 42.9	143 35.7	+20 33.7	101 01.4	+23 22.2	129 54.6	+20 45.3
1	215	03.8	174	14.9	43.9	158 36.3	34.1	116 03.5	22.2	144 56.8	45.3
2	230	06.2	189	14.3	44.9	173 37.0	34.5	131 05.6	22.2	159 59.0	45.4
3	245	08.7	204	13.8	46.0	188 37.7	34.9	146 07.8	22.1	175 01.2	45.4
4	260	11.2	219	13.3	47.0	203 38.4	35.3	161 09.9	22.1	190 03.4	45.5
5	275	13.6	234	12.7	+15 48.0	218 39.1	+20 35.7	176 12.0	+23 22.1	205 05.6	+20 45.5
6	290	16.1	249	12.2	+15 49.0	233 39.8	+20 36.1	191 14.2	+23 22.1	220 07.8	+20 45.6
7	305	18.6	264	11.6	50.1	248 40.5	36.5	206 16.3	22.1	235 10.0	45.6
8	320	21.0	279	11.1	51.1	263 41.2	36.9	221 18.5	22.1	250 12.2	45.6
9	335	23.5	294	10.5	52.1	278 41.8	37.3	236 20.6	22.0	265 14.4	45.7
10	350	26.0	309	10.0	53.1	293 42.5	37.7	251 22.7	22.0	280 16.6	45.7
11	5	28.4	324	09.5	+15 54.2	308 43.2	+20 38.1	266 24.9	+23 22.0	295 18.8	+20 45.8
12	20	30.9	339	08.9	+15 55.2	323 43.9	+20 38.5	281 27.0	+23 22.0	310 21.0	+20 45.8
13	35	33.3	354	08.4	56.2	338 44.6	38.8	296 29.1	22.0	325 23.2	45.8
14	50	35.8	9	07.8	57.2	353 45.3	39.2	311 31.3	22.0	340 25.4	45.9
15	65	38.3	24	07.3	58.2	8 46.0	39.6	326 33.4	21.9	355 27.6	45.9
16	80	40.7	39	06.7	+15 59.3	23 46.6	40.0	341 35.5	21.9	10 29.8	46.0
17	95	43.2	54	06.2	+16 00.3	38 47.3	+20 40.4	356 37.7	+23 21.9	25 32.0	+20 46.0
18	110	45.7	69	05.6	+16 01.3	53 48.0	+20 40.8	11 39.8	+23 21.9	40 34.2	+20 46.0
19	125	48.1	84	05.1	02.3	68 48.7	41.2	26 41.9	21.9	55 36.4	46.1
20	140	50.6	99	04.5	03.3	83 49.4	41.6	41 44.1	21.9	70 38.6	46.1
21	155	53.1	114	04.0	04.3	98 50.1	42.0	56 46.2	21.9	85 40.8	46.2
22	170	55.5	129	03.4	05.4	113 50.8	42.4	71 48.3	21.8	100 43.0	46.2
23	185	58.0	144	02.9	06.4	128 51.4	42.8	86 50.4	21.8	115 45.2	46.3
24	201	00.4	159	02.3	+16 07.4	143 52.1	+20 43.1	101 52.6	+23 21.8	130 47.4	+20 46.3
Dif	—	—	-5	+10		+7	+4	+21	0	+22	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 00 ^m 5			Edad: 0 ^d 2 SD: 14'8 PMG: 12 ^h 36 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 43 ^m	Dif		Hora			R°	Hora		R°				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	179	49.9	+8	54.1	176	18.4	+5	51.0	60 N	3 05	4 05	4 50	5 36	6	19 58	82		
1	194	50.1		55.0	190	53.4 ¹⁶⁰	+6	03.3 ¹²³	58	19	13	4 55	40	9	52	79		
2	209	50.2		55.9	205	28.3 ¹⁵⁹		15.6 ¹²³	56	30	20	5 00	43	11	47	76		
3	224	50.4		56.8	220	03.2 ¹⁵⁹		27.8 ¹²²	54	40	27	04	46	14	43	73		
4	239	50.5		57.7	234	38.0 ¹⁵⁸		40.1 ¹²³	52	49	33	08	49	16	38	71		
5	254	50.7	+8	58.6	249	12.8 ¹⁵⁸	+6	52.3 ¹²²	50	3 57	4 38	5 12	5 51	18	19 35	68		
6	269	50.8	+8	59.5	263	47.6 ¹⁵⁸	+7	04.5 ¹²²	45	4 12	4 49	5 19	5 57	22	19 27	64		
7	284	51.0	+9	00.4	278	22.4 ¹⁵⁸		16.6 ¹²¹	40	25	4 58	26	6 01	26	20	61		
8	299	51.2		01.3	292	57.1 ¹⁵⁷		28.8 ¹²²	35	34	5 05	31	05	28	14	58		
9	314	51.3		02.2	307	31.7 ¹⁵⁶		40.9 ¹²¹	30	43	11	36	09	31	09	56		
10	329	51.5		03.1	322	06.4 ¹⁵⁷	+7	53.0 ¹²¹	20	4 55	21	44	15	35	19 01	51		
11	344	51.6	+9	04.0	336	41.0 ¹⁵⁶	+8	05.1 ¹²¹	10 N	5 05	5 30	5 51	6 21	39	18 53	47		
12	359	51.8	+9	05.0	351	15.5 ¹⁵⁵	+8	17.1 ¹²⁰	0	5 12	5 36	5 57	6 26	42	18 46	44		
13	14	52.0		05.9	5	50.1 ¹⁵⁶		29.1 ¹²⁰	10 S	18	42	6 04	31	46	39	40		
14	29	52.1		06.8	20	24.5 ¹⁵⁴		41.1 ¹²⁰	20	22	48	10	37	50	32	36		
15	44	52.3		07.7	34	59.0 ¹⁵⁵	+8	53.1 ¹²⁰	30	26	54	18	43	55	23	32		
16	59	52.4		08.6	49	33.4 ¹⁵⁴	+9	05.0 ¹¹⁹	35	27	56	22	47	57	18	29		
17	74	52.6	+9	09.5	64	07.7 ¹⁵³	+9	16.9 ¹¹⁹	40	5 28	5 59	6 27	6 51	60	18 13	26		
18	89	52.7	+9	10.4	78	42.0 ¹⁵³	+9	28.8 ¹¹⁹	45	5 29	6 03	6 32	6 56	64	18 06	23		
19	104	52.9		11.3	93	16.3 ¹⁵³		40.6 ¹¹⁸	50	29	06	39	7 02	68	17 59	19		
20	119	53.1		12.2	107	50.5 ¹⁵²	+9	52.4 ¹¹⁸	52	29	08	42	05	70	55	17		
21	134	53.2		13.1	122	24.7 ¹⁵²	+10	04.2 ¹¹⁸	54	28	09	45	08	72	51	15		
22	149	53.4		14.0	136	58.8 ¹⁵¹		15.9 ¹¹⁷	56	28	11	49	11	75	47	13		
23	164	53.5		14.9	151	32.9 ¹⁵¹		27.6 ¹¹⁷	58	27	13	53	15	78	42	10		
24	179	53.7	+9	15.8	166	06.9 ¹⁵⁰	+10	39.3 ¹¹⁷	60 S	5 27	6 15	6 57	7 19	81	17 37	7		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 10 ^h 34 ^m 2		Mag: -3.9 PMG: 13 ^h 24 ^m			Mag: +1.5 PMG: 14 ^h 24 ^m			Mag: -2.2 PMG: 17 ^h 10 ^m			Mag: +0.1 PMG: 15 ^h 15 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	201	00.4	159	02.3	+16	07.4	143	52.1	+20	43.1	101	52.6	+23	21.8	130	47.4	+20	46.3
1	216	02.9	174	01.8		08.4	158	52.8		43.5	116	54.7		21.8	145	49.6		46.3
2	231	05.4	189	01.2		09.4	173	53.5		43.9	131	56.8		21.8	160	51.8		46.4
3	246	07.8	204	00.7		10.4	188	54.2		44.3	146	59.0		21.8	175	54.0		46.4
4	261	10.3	219	00.1		11.4	203	54.9		44.7	162	01.1		21.7	190	56.2		46.5
5	276	12.8	233	59.6	+16	12.4	218	55.6	+20	45.1	177	03.2	+23	21.7	205	58.4	+20	46.5
6	291	15.2	248	59.0	+16	13.4	233	56.2	+20	45.5	192	05.4	+23	21.7	221	00.6	+20	46.5
7	306	17.7	263	58.5		14.5	248	56.9		45.9	207	07.5		21.7	236	02.8		46.6
8	321	20.2	278	57.9		15.5	263	57.6		46.2	222	09.6		21.7	251	05.0		46.6
9	336	22.6	293	57.3		16.5	278	58.3		46.6	237	11.7		21.7	266	07.2		46.7
10	351	25.1	308	56.8		17.5	293	59.0		47.0	252	13.9		21.6	281	09.4		46.7
11	6	27.6	323	56.2	+16	18.5	308	59.7	+20	47.4	267	16.0	+23	21.6	296	11.6	+20	46.7
12	21	30.0	338	55.7	+16	19.5	324	00.3	+20	47.8	282	18.1	+23	21.6	311	13.8	+20	46.8
13	36	32.5	353	55.1		20.5	339	01.0		48.2	297	20.3		21.6	326	16.0		46.8
14	51	34.9	8	54.6		21.5	354	01.7		48.5	312	22.4		21.6	341	18.1		46.9
15	66	37.4	23	54.0		22.5	9	02.4		48.9	327	24.5		21.6	356	20.3		46.9
16	81	39.9	38	53.5		23.5	24	03.1		49.3	342	26.6		21.5	11	22.5		47.0
17	96	42.3	53	52.9	+16	24.5	39	03.8	+20	49.7	357	28.8	+23	21.5	26	24.7	+20	47.0
18	111	44.8	68	52.3	+16	25.5	54	04.5	+20	50.1	12	30.9	+23	21.5	41	26.9	+20	47.0
19	126	47.3	83	51.8		26.5	69	05.1		50.5	27	33.0		21.5	56	29.1		47.1
20	141	49.7	98	51.2		27.5	84	05.8		50.8	42	35.1		21.5	71	31.3		47.1
21	156	52.2	113	50.7		28.5	99	06.5		51.2	57	37.3		21.5	86	33.5		47.2
22	171	54.7	128	50.1		29.5	114	07.2		51.6	72	39.4		21.4	101	35.7		47.2
23	186	57.1	143	49.5		30.5	129	07.9		52.0	87	41.5		21.4	116	37.9		47.2
24	201	59.6	158	49.0	+16	31.5	144	08.6	+20	52.4	102	43.6	+23	21.4	131	40.1	+20	47.3
Dif	—		-6		+10		+7		+4		+21		0		+22		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 12 ^h 00 ^m 3			Edad: 1 ^d 2 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 54'9 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	179	53.7	+9 15.8	166	06.9	+10 39.3	60 N	19 15	20 01	21 02	5 42 8	21 20 84			
1	194	53.8		180	40.9 ¹⁵⁰	+10 50.9 ¹¹⁶	58	09	19 52	20 48	49 11	11 80			
2	209	54.0		195	14.8 ¹⁴⁹	+11 02.5 ¹¹⁶	56	04	44	36	5 54 15	21 03 77			
3	224	54.1		209	48.7 ¹⁴⁹	14.1 ¹¹⁶	54	19 00	38	25	6 00 16	20 56 74			
4	239	54.3		224	22.5 ¹⁴⁸	25.6 ¹¹⁵	52	18 56	31	16	05 18	49 72			
5	254	54.5	+9 20.3	238	56.3 ¹⁴⁸	+11 37.1 ¹¹⁵	50	18 52	19 26	20 08	6 09 21	20 43 70			
6	269	54.6	+9 21.2	253	30.0 ¹⁴⁷	+11 48.5 ¹¹⁴	45	18 44	19 14	19 51	6 19 24	20 31 66			
7	284	54.8		268	03.7 ¹⁴⁷	+11 59.9 ¹¹⁴	40	37	19 05	39	27 28	21 62			
8	299	54.9		282	37.3 ¹⁴⁶	+12 11.2 ¹¹³	35	31	18 57	28	33 31	12 60			
9	314	55.1		297	10.8 ¹⁴⁵	22.5 ¹¹³	30	26	51	20	40 33	20 05 57			
10	329	55.2		311	44.3 ¹⁴⁵	33.8 ¹¹³	20	18	40	19 07	6 50 38	19 52 53			
11	344	55.4	+9 25.7	326	17.8 ¹⁴⁵	+12 45.0 ¹¹²	10 N	18 10	18 32	18 57	7 00 41	19 40 50			
12	359	55.5	+9 26.6	340	51.2 ¹⁴⁴	+12 56.2 ¹¹²	0	18 04	18 25	18 49	7 08 45	19 30 46			
13	14	55.7		355	24.5 ¹⁴³	+13 07.3 ¹¹¹	10 S	17 57	18	43	17 48	19 43			
14	29	55.9		9	57.8 ¹⁴³	18.3 ¹¹⁰	20	50	12	38	27 52	19 08 39			
15	44	56.0		24	31.0 ¹⁴²	29.4 ¹¹¹	30	42	06	34	38 56	18 55 35			
16	59	56.2		39	04.1 ¹⁴¹	40.3 ¹⁰⁹	35	37	03	32	44 59	47 33			
17	74	56.3	+9 31.1	53	37.2 ¹⁴¹	+13 51.2 ¹⁰⁹	40	17 32	18 00	18 31	7 51 62	18 39 30			
18	89	56.5	+9 32.0	68	10.3 ¹⁴¹	+14 02.1 ¹⁰⁹	45	17 26	17 56	18 30	8 00 65	18 29 27			
19	104	56.6		82	43.2 ¹³⁹	12.9 ¹⁰⁸	50	19	52	30	10 70	18 22			
20	119	56.8		97	16.2 ¹⁴⁰	23.7 ¹⁰⁸	52	16	50	29	15 72	12 21			
21	134	56.9		111	49.0 ¹³⁸	34.4 ¹⁰⁷	54	13	49	29	20 74	06 19			
22	149	57.1		126	21.8 ¹³⁸	45.0 ¹⁰⁶	56	09	47	30	26 77	18 00 15			
23	164	57.2		140	54.5 ¹³⁷	+14 55.6 ¹⁰⁶	58	05	44	30	33 80	17 52 13			
24	179	57.4	+9 37.4	155	27.2 ¹³⁷	+15 06.1 ¹⁰⁵	60 S	17 00	17 42	18 30	8 40 84	17 44 9			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 30 ^m 3		Mag: -3.9 PMG: 13 ^h 25 ^m			Mag: +1.6 PMG: 14 ^h 23 ^m			Mag: -2.2 PMG: 17 ^h 07 ^m			Mag: +0.1 PMG: 15 ^h 11 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	°	°	°	°	°	°	°	°	°	°				
0	201	59.6	158 49.0	+16 31.5	144 08.6	+20 52.4	102 43.6	+23 21.4	131 40.1	+20 47.3					
1	217	02.1	173 48.4	32.5	159 09.2	52.8	117 45.8	21.4	146 42.3	47.3					
2	232	04.5	188 47.8	33.5	174 09.9	53.1	132 47.9	21.4	161 44.5	47.4					
3	247	07.0	203 47.3	34.5	189 10.6	53.5	147 50.0	21.4	176 46.7	47.4					
4	262	09.4	218 46.7	35.5	204 11.3	53.9	162 52.1	21.3	191 48.9	47.5					
5	277	11.9	233 46.2	+16 36.5	219 12.0	+20 54.3	177 54.3	+23 21.3	206 51.1	+20 47.5					
6	292	14.4	248 45.6	+16 37.4	234 12.6	+20 54.7	192 56.4	+23 21.3	221 53.3	+20 47.5					
7	307	16.8	263 45.0	38.4	249 13.3	55.0	207 58.5	21.3	236 55.5	47.6					
8	322	19.3	278 44.5	39.4	264 14.0	55.4	223 00.6	21.3	251 57.7	47.6					
9	337	21.8	293 43.9	40.4	279 14.7	55.8	238 02.8	21.3	266 59.9	47.7					
10	352	24.2	308 43.3	41.4	294 15.4	56.2	253 04.9	21.2	282 02.1	47.7					
11	7	26.7	323 42.8	+16 42.4	309 16.1	+20 56.5	268 07.0	+23 21.2	297 04.3	+20 47.7					
12	22	29.2	338 42.2	+16 43.4	324 16.7	+20 56.9	283 09.1	+23 21.2	312 06.5	+20 47.8					
13	37	31.6	353 41.6	44.4	339 17.4	57.3	298 11.2	21.2	327 08.7	47.8					
14	52	34.1	8 41.1	45.4	354 18.1	57.7	313 13.4	21.2	342 10.9	47.9					
15	67	36.5	23 40.5	46.3	9 18.8	58.0	328 15.5	21.2	357 13.1	47.9					
16	82	39.0	38 39.9	47.3	24 19.5	58.4	343 17.6	21.1	12 15.2	47.9					
17	97	41.5	53 39.4	+16 48.3	39 20.2	+20 58.8	358 19.7	+23 21.1	27 17.4	+20 48.0					
18	112	43.9	68 38.8	+16 49.3	54 20.8	+20 59.2	13 21.8	+23 21.1	42 19.6	+20 48.0					
19	127	46.4	83 38.2	50.3	69 21.5	59.6	28 24.0	21.1	57 21.8	48.1					
20	142	48.9	98 37.6	51.2	84 22.2	+20 59.9	43 26.1	21.1	72 24.0	48.1					
21	157	51.3	113 37.1	52.2	99 22.9	+21 00.3	58 28.2	21.0	87 26.2	48.2					
22	172	53.8	128 36.5	53.2	114 23.6	00.7	73 30.3	21.0	102 28.4	48.2					
23	187	56.3	143 35.9	54.2	129 24.2	01.0	88 32.4	21.0	117 30.6	48.2					
24	202	58.7	158 35.4	+16 55.2	144 24.9	+21 01.4	103 34.6	+23 21.0	132 32.8	+20 48.3					
Dif	—	—	-6	+10	+7	+4	+21	0	+22	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 12 ^h 00 ^m 1			Edad: 2 ^d 2	PHE { 4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'3 R°: 49 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	57.4	+9 37.4	155	27.2	+15 06.1	105	60 N	2 57	3 58	4 44	5 50	12	22 44	85
1	194	57.5	38.3	169	59.8	136	16.6	58	3 12	4 07	50	6 00	15	31	80
2	209	57.7	39.2	184	32.3	135	27.0	56	24	15	4 55	09	18	20	77
3	224	57.8	40.1	199	04.7	134	37.3	54	35	22	5 00	16	21	10	74
4	239	58.0	41.0	213	37.1	134	47.6	52	44	28	04	23	24	22	72
5	254	58.1	+9 41.9	228	09.5	134	+15 57.8	50	3 52	4 34	5 08	6 30	25	21	70
6	269	58.3	+9 42.8	242	41.7	132	+16 08.0	45	4 08	4 45	5 16	6 43	30	21	66
7	284	58.5	43.7	257	13.9	132	18.1	40	21	4 55	23	6 55	32	23	63
8	299	58.6	44.6	271	46.0	131	28.1	35	32	5 02	28	7 04	36	12	60
9	314	58.8	45.5	286	18.1	131	38.1	30	40	09	34	13	37	21	58
10	329	58.9	46.4	300	50.1	130	48.0	20	4 53	20	42	28	41	20	54
11	344	59.1	+9 47.3	315	22.0	129	+16 57.8	10 N	5 04	5 28	5 50	7 41	44	20	52
12	359	59.2	+9 48.1	329	53.8	128	+17 07.5	0	5 11	5 36	5 57	7 53	48	20	49
13	14	59.4	49.0	344	25.6	128	17.2	10 S	18	42	6 04	8 05	51	20	46
14	29	59.5	49.9	358	57.3	127	26.8	20	23	49	11	19	54	19	47
15	44	59.7	50.8	13	28.9	126	36.4	30	27	55	19	34	58	30	40
16	59	59.8	51.7	28	00.5	126	45.8	35	28	5 58	24	43	60	20	38
17	75	00.0	+9 52.6	42	31.9	124	+17 55.2	40	5 30	6 01	6 29	8 53	63	19	35
18	90	00.1	+9 53.5	57	03.3	124	+18 04.5	45	5 31	6 05	6 35	9 05	66	18	56
19	105	00.3	54.4	71	34.7	124	13.7	50	32	09	42	20	70	40	28
20	120	00.4	55.3	86	05.9	122	22.9	52	32	11	45	27	72	33	26
21	135	00.6	56.2	100	37.1	122	32.0	54	32	13	49	34	75	25	24
22	150	00.7	57.1	115	08.2	121	41.0	56	32	15	53	43	78	15	22
23	165	00.9	58.0	129	39.3	121	49.9	58	32	17	6 57	9 53	81	18	05
24	180	01.0	+9 58.8	144	10.2	119	+18 58.7	60 S	5 31	6 20	7 02	10 04	85	17	53

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 10 ^h 26 ^m 4		Mag: -3.9 PMG: 13 ^h 26 ^m			Mag: +1.6 PMG: 14 ^h 22 ^m			Mag: -2.1 PMG: 17 ^h 03 ^m			Mag: +0.1 PMG: 15 ^h 08 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	202	58.7	158	35.4	+16 55.2	144	24.9	+21 01.4	103	34.6	+23 21.0	132	32.8	+20 48.3	
1	218	01.2	173	34.8	56.1	159	25.6	01.8	118	36.7	21.0	147	35.0	48.3	
2	233	03.7	188	34.2	57.1	174	26.3	02.2	133	38.8	21.0	162	37.2	48.4	
3	248	06.1	203	33.6	58.1	189	27.0	02.5	148	40.9	20.9	177	39.4	48.4	
4	263	08.6	218	33.1	+16 59.1	204	27.6	02.9	163	43.0	20.9	192	41.6	48.4	
5	278	11.0	233	32.5	+17 00.0	219	28.3	+21 03.3	178	45.1	+23 20.9	207	43.8	+20 48.5	
6	293	13.5	248	31.9	+17 01.0	234	29.0	+21 03.7	193	47.3	+23 20.9	222	46.0	+20 48.5	
7	308	16.0	263	31.3	02.0	249	29.7	04.0	208	49.4	20.9	237	48.2	48.6	
8	323	18.4	278	30.8	03.0	264	30.4	04.4	223	51.5	20.9	252	50.3	48.6	
9	338	20.9	293	30.2	03.9	279	31.1	04.8	238	53.6	20.8	267	52.5	48.7	
10	353	23.4	308	29.6	04.9	294	31.7	05.1	253	55.7	20.8	282	54.7	48.7	
11	8	25.8	323	29.0	+17 05.9	309	32.4	+21 05.5	268	57.8	+23 20.8	297	56.9	+20 48.7	
12	23	28.3	338	28.5	+17 06.8	324	33.1	+21 05.9	284	00.0	+23 20.8	312	59.1	+20 48.8	
13	38	30.8	353	27.9	07.8	339	33.8	06.2	299	02.1	20.8	328	01.3	48.8	
14	53	33.2	8	27.3	08.8	354	34.5	06.6	314	04.2	20.7	343	03.5	48.9	
15	68	35.7	23	26.7	09.8	9	35.1	07.0	329	06.3	20.7	358	05.7	48.9	
16	83	38.2	38	26.1	10.7	24	35.8	07.4	344	08.4	20.7	13	07.9	48.9	
17	98	40.6	53	25.6	+17 11.7	39	36.5	+21 07.7	359	10.5	+23 20.7	28	10.1	+20 49.0	
18	113	43.1	68	25.0	+17 12.6	54	37.2	+21 08.1	14	12.6	+23 20.7	43	12.3	+20 49.0	
19	128	45.5	83	24.4	13.6	69	37.9	08.5	29	14.8	20.7	58	14.5	49.1	
20	143	48.0	98	23.8	14.6	84	38.5	08.8	44	16.9	20.6	73	16.6	49.1	
21	158	50.5	113	23.2	15.5	99	39.2	09.2	59	19.0	20.6	88	18.8	49.2	
22	173	52.9	128	22.7	16.5	114	39.9	09.6	74	21.1	20.6	103	21.0	49.2	
23	188	55.4	143	22.1	17.5	129	40.6	09.9	89	23.2	20.6	118	23.2	49.2	
24	203	57.9	158	21.5	+17 18.4	144	41.2	+21 10.3	104	25.3	+23 20.6	133	25.4	+20 49.3	
Dif	—		-6		+10	+7		+4	+21		0	+22		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 8			Edad: 3 ^d 2 PHE { 4 ^h : 55'5 12 ^h : 55'6 20 ^h : 55'8 R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	01.0	+9 58.8	144	10.2	+18 58.7	88	60 N	19 20	20 07	21 10	6 02 18	*** ** *	*** ** *
1	195	01.2	+9 59.7	158	41.1 ¹¹⁹	+19 07.5	88	58	14	19 57	20 54	15 23	23 51	76
2	210	01.3	+10 00.6	173	11.9 ¹¹⁸	16.1	86	56	08	49	41	27 26	37 72	
3	225	01.5	01.5	187	42.7 ¹¹⁸	24.7	86	54	19 03	42	30	37 29	24 71	
4	240	01.6	02.4	202	13.3 ¹¹⁶	33.2	85	52	18 59	35	20	47 30	13 69	
5	255	01.7	+10 03.3	216	43.9 ¹¹⁶	+19 41.6	84	50	18 55	19 29	20 12	6 55 32	23 03	67
6	270	01.9	+10 04.2	231	14.4 ¹¹⁵	+19 49.9	83	45	18 46	19 17	19 55	7 13 36	22 43	64
7	285	02.0	05.1	245	44.9 ¹¹⁵	+19 58.2	83	40	39	19 07	41	27 39	26 62	
8	300	02.2	06.0	260	15.2 ¹¹³	+20 06.3	81	35	33	18 59	30	40 40	12 61	
9	315	02.3	06.8	274	45.5 ¹¹³	14.3	80	30	28	52	21	7 50 43	22 00	59
10	330	02.5	07.7	289	15.7 ¹¹²	22.3	80	20	18	41	19 07	8 09 46	21 39	57
11	345	02.6	+10 08.6	303	45.8 ¹¹¹	+20 30.2	79	10 N	18 11	18 32	18 57	8 25 49	21 22	54
12	0	02.8	+10 09.5	318	15.9 ¹¹¹	+20 37.9	77	0	18 03	18 24	18 49	8 41 51	21 05	52
13	15	02.9	10.4	332	45.9 ¹¹⁰	45.6	77	10 S	17 56	17	42	8 56 53	20 48	51
14	30	03.1	11.3	347	15.8 ¹⁰⁹	+20 53.2	76	20	48	11	36	9 13 56	30 49	
15	45	03.2	12.2	1	45.6 ¹⁰⁸	+21 00.6	74	30	40	04	32	32 59	20 10	46
16	60	03.4	13.0	16	15.3 ¹⁰⁷	08.0	74	35	35	18 00	30	43 61	19 58	44
17	75	03.5	+10 13.9	30	45.0 ¹⁰⁷	+21 15.3	73	40	17 29	17 57	18 28	9 56 63	19 44	43
18	90	03.7	+10 14.8	45	14.6 ¹⁰⁶	+21 22.5	72	45	17 23	17 53	18 27	10 11 66	19 28	40
19	105	03.8	15.7	59	44.1 ¹⁰⁵	29.6	71	50	15	48	26	30 69	19 08	37
20	120	04.0	16.6	74	13.5 ¹⁰⁴	36.5	69	52	12	46	25	39 71	18 59	35
21	135	04.1	17.5	88	42.9 ¹⁰⁴	43.4	69	54	08	44	25	10 49 73	49 32	
22	150	04.2	18.4	103	12.2 ¹⁰³	50.2	68	56	17 04	42	25	11 01 75	37 30	
23	165	04.4	19.2	117	41.4 ¹⁰²	+21 56.8	66	58	16 59	39	25	14 79	23 27	
24	180	04.5	+10 20.1	132	10.5 ¹⁰¹	+22 03.4	66	60 S	16 54	17 37	18 25	11 29 84	18 07	23
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 22 ^m 4		Mag: -3.9 PMG: 13 ^h 27 ^m			Mag: +1.6 PMG: 14 ^h 21 ^m			Mag: -2.1 PMG: 17 ^h 00 ^m			Mag: +0.1 PMG: 15 ^h 04 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	203	57.9	158	21.5	+17 18.4	144	41.2	+21 10.3	104	25.3	+23 20.6	133	25.4	+20 49.3
1	219	00.3	173	20.9	19.4	159	41.9	10.7	119	27.4	20.5	148	27.6	49.3
2	234	02.8	188	20.3	20.3	174	42.6	11.0	134	29.5	20.5	163	29.8	49.4
3	249	05.3	203	19.7	21.3	189	43.3	11.4	149	31.7	20.5	178	32.0	49.4
4	264	07.7	218	19.1	22.3	204	44.0	11.7	164	33.8	20.5	193	34.2	49.4
5	279	10.2	233	18.6	+17 23.2	219	44.6	+21 12.1	179	35.9	+23 20.5	208	36.4	+20 49.5
6	294	12.6	248	18.0	+17 24.2	234	45.3	+21 12.5	194	38.0	+23 20.5	223	38.6	+20 49.5
7	309	15.1	263	17.4	25.1	249	46.0	12.8	209	40.1	20.4	238	40.7	49.6
8	324	17.6	278	16.8	26.1	264	46.7	13.2	224	42.2	20.4	253	42.9	49.6
9	339	20.0	293	16.2	27.0	279	47.4	13.6	239	44.3	20.4	268	45.1	49.7
10	354	22.5	308	15.6	28.0	294	48.0	13.9	254	46.4	20.4	283	47.3	49.7
11	9	25.0	323	15.0	+17 28.9	309	48.7	+21 14.3	269	48.5	+23 20.4	298	49.5	+20 49.7
12	24	27.4	338	14.5	+17 29.9	324	49.4	+21 14.6	284	50.7	+23 20.3	313	51.7	+20 49.8
13	39	29.9	353	13.9	30.8	339	50.1	15.0	299	52.8	20.3	328	53.9	49.8
14	54	32.4	8	13.3	31.8	354	50.7	15.4	314	54.9	20.3	343	56.1	49.9
15	69	34.8	23	12.7	32.7	9	51.4	15.7	329	57.0	20.3	358	58.3	49.9
16	84	37.3	38	12.1	33.7	24	52.1	16.1	344	59.1	20.3	14	00.5	49.9
17	99	39.8	53	11.5	+17 34.6	39	52.8	+21 16.5	0	01.2	+23 20.3	29	02.6	+20 50.0
18	114	42.2	68	10.9	+17 35.6	54	53.5	+21 16.8	15	03.3	+23 20.2	44	04.8	+20 50.0
19	129	44.7	83	10.3	36.5	69	54.1	17.2	30	05.4	20.2	59	07.0	50.1
20	144	47.1	98	09.7	37.5	84	54.8	17.5	45	07.5	20.2	74	09.2	50.1
21	159	49.6	113	09.1	38.4	99	55.5	17.9	60	09.6	20.2	89	11.4	50.1
22	174	52.1	128	08.5	39.4	114	56.2	18.2	75	11.7	20.2	104	13.6	50.2
23	189	54.5	143	07.9	40.3	129	56.8	18.6	90	13.8	20.1	119	15.8	50.2
24	204	57.0	158	07.3	+17 41.2	144	57.5	+21 19.0	105	15.9	+23 20.1	134	18.0	+20 50.3
Dif	—		-6		+10	+7		+4	+21		0	+22		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 6				Edad: 4 ^d 2 PHE { 4 ^h : 56°0 12 ^h : 56°2 20 ^h : 56°4 R°: 55 ^m SD: 15°2 PMG: 15 ^h 44 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	04.5	+10	20.1	132	10.5	+22	03.4	60 N	2 49	3 52	4 38	6 20	31	0 09	79	
1	195	04.7		21.0	146	39.6 ¹⁰¹		09.8 ⁶⁴	58	3 05	4 01	45	38	34	***	***	
2	210	04.8		21.9	161	08.6 ¹⁰⁰		16.2 ⁶⁴	56	18	10	50	6 53	37	***	***	
3	225	05.0		22.8	175	37.5 ⁹⁹		22.4 ⁶²	54	29	17	4 55	7 06	39	***	***	
4	240	05.1		23.6	190	06.3 ⁹⁸		28.5 ⁶¹	52	38	23	5 00	17	41	***	***	
5	255	05.3	+10	24.5	204	35.1 ⁹⁸	+22	34.5 ⁶⁰	50	3 47	4 29	5 04	7 27	42	***	***	
6	270	05.4	+10	25.4	219	03.8 ⁹⁷	+22	40.4 ⁵⁹	45	4 04	4 42	5 12	7 49	44	23 47	60	
7	285	05.6		26.3	233	32.4 ⁹⁶		46.2 ⁵⁸	40	18	4 52	20	8 06	46	28	59	
8	300	05.7		27.2	248	00.9 ⁹⁵		51.8 ⁵⁶	35	29	5 00	26	20	48	23 13	58	
9	315	05.8		28.1	262	29.4 ⁹⁵	+22	57.4 ⁵⁶	30	38	07	31	33	49	22 59	58	
10	330	06.0		28.9	276	57.8 ⁹⁴	+23	02.8 ⁵⁴	20	4 52	18	41	8 55	51	36	57	
11	345	06.1	+10	29.8	291	26.1 ⁹³	+23	08.1 ⁵³	10 N	5 02	5 27	5 49	9 14	52	22 16	56	
12	0	06.3	+10	30.7	305	54.4 ⁹³	+23	13.3 ⁵²	0	5 11	5 35	5 56	9 32	54	21 57	55	
13	15	06.4		31.6	320	22.5 ⁹¹		18.4 ⁵¹	10 S	18	42	6 04	9 49	56	39	54	
14	30	06.6		32.4	334	50.7 ⁹²		23.4 ⁵⁰	20	23	49	11	10 09	56	21 19	53	
15	45	06.7		33.3	349	18.7 ⁹⁰		28.2 ⁴⁸	30	28	56	20	31	58	20 56	52	
16	60	06.8		34.2	3	46.7 ⁹⁰		32.9 ⁴⁷	35	30	5 59	25	44	60	42	51	
17	75	07.0	+10	35.1	18	14.6 ⁸⁹	+23	37.5 ⁴⁶	40	5 32	6 03	6 31	10 59	61	20 27	50	
18	90	07.1	+10	36.0	32	42.4 ⁸⁸	+23	41.9 ⁴⁴	45	5 33	6 07	6 37	11 17	62	20 08	49	
19	105	07.3		36.8	47	10.2 ⁸⁸		46.3 ⁴⁴	50	34	12	45	39	65	19 45	47	
20	120	07.4		37.7	61	37.9 ⁸⁷		50.5 ⁴¹	52	35	14	49	11 50	66	34	46	
21	135	07.6		38.6	76	05.5 ⁸⁶		54.6 ⁴¹	54	35	16	52	12 02	67	21	46	
22	150	07.7		39.5	90	33.1 ⁸⁶	+23	58.5 ³⁹	56	35	19	6 57	16	69	19 07	44	
23	165	07.8		40.3	105	00.6 ⁸⁵	+24	02.4 ³⁹	58	36	21	7 02	33	71	18 50	42	
24	180	08.0	+10	41.2	119	28.1 ⁸⁵	+24	06.1 ³⁷	60 S	5 36	6 24	7 07	12 53	74	18 30	39	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 18 ^m 5		Mag: -3.9 PMG: 13 ^h 28 ^m		Mag: +1.6 PMG: 14 ^h 20 ^m		Mag: -2.1 PMG: 16 ^h 57 ^m		Mag: +0.1 PMG: 15 ^h 01 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	204	57.0	158	07.3	144	57.5	105	15.9	134	18.0
1	219	59.5	173	06.8	159	58.2	120	18.1	149	20.2
2	235	01.9	188	06.2	174	58.9	135	20.2	164	22.3
3	250	04.4	203	05.6	189	59.6	150	22.3	179	24.5
4	265	06.9	218	05.0	205	00.2	165	24.4	194	26.7
5	280	09.3	233	04.4	220	00.9	180	26.5	209	28.9
6	295	11.8	248	03.8	235	01.6	195	28.6	224	31.1
7	310	14.3	263	03.2	250	02.3	210	30.7	239	33.3
8	325	16.7	278	02.6	265	02.9	225	32.8	254	35.5
9	340	19.2	293	02.0	280	03.6	240	34.9	269	37.7
10	355	21.6	308	01.4	295	04.3	255	37.0	284	39.8
11	10	24.1	323	00.8	310	05.0	270	39.1	299	42.0
12	25	26.6	338	00.2	325	05.6	285	41.2	314	44.2
13	40	29.0	352	59.6	340	06.3	300	43.3	329	46.4
14	55	31.5	7	59.0	355	07.0	315	45.4	344	48.6
15	70	34.0	22	58.4	10	07.7	330	47.5	359	50.8
16	85	36.4	37	57.8	25	08.4	345	49.6	14	53.0
17	100	38.9	52	57.2	40	09.0	0	51.7	29	55.1
18	115	41.4	67	56.6	55	09.7	15	53.8	44	57.3
19	130	43.8	82	56.0	70	10.4	30	55.9	59	59.5
20	145	46.3	97	55.4	85	11.1	45	58.0	75	01.7
21	160	48.7	112	54.8	100	11.7	61	00.1	90	03.9
22	175	51.2	127	54.2	115	12.4	76	02.2	105	06.1
23	190	53.7	142	53.6	130	13.1	91	04.3	120	08.3
24	205	56.1	157	52.9	145	13.8	106	06.4	135	10.4
Dif	—		-6	+9	+7	+4	+21	0	+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15/9 PMG: 11 ^h 59 ^m 4			Edad: 5 ^d 2 PHE { SD: 15/4 PMG: 16 ^h 39 ^m 4 ^h : 56/6 12 ^h : 56/8 20 ^h : 57/0 Rº: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	08.0	+10	41.2	119	28.1	+24	06.1	60 N	19 25	20 12	21 17	6 51	50	1 28	65		
1	195	08.1		42.1	133	55.5		09.7	58	18	20 02	21 00	7 12	52	1 07	64		
2	210	08.3		43.0	148	22.8		13.1	56	12	19 53	20 47	30	52	0 49	63		
3	225	08.4		43.8	162	50.0		16.4	54	07	46	35	45	53	35	62		
4	240	08.5		44.7	177	17.2		19.6	52	19 02	39	25	7 58	53	22	61		
5	255	08.7	+10	45.6	191	44.4	+24	22.6	50	18 58	19 33	20 16	8 09	54	0 10	61		
6	270	08.8	+10	46.5	206	11.5	+24	25.5	45	18 49	19 20	19 58	8 33	54	***	***	***	
7	285	09.0		47.3	220	38.5		28.3	40	41	09	43	8 52	55	***	***	***	
8	300	09.1		48.2	235	05.5		31.0	35	35	19 01	32	9 08	55	***	***	***	
9	315	09.2		49.1	249	32.4		33.5	30	29	18 54	23	22	55	23 57	55		
10	330	09.4		50.0	263	59.2		35.8	20	19	42	19 08	9 46	55	33	55		
11	345	09.5	+10	50.8	278	26.0	+24	38.1	10 N	18 11	18 32	18 57	10 06	56	23 12	56		
12	0	09.7	+10	51.7	292	52.8	+24	40.2	0	18 03	18 24	18 48	10 26	56	22 52	57		
13	15	09.8		52.6	307	19.5		42.1	10 S	17 55	16	41	10 45	56	33	57		
14	30	09.9		53.4	321	46.2		43.9	20	47	09	35	11 05	57	22 12	57		
15	45	10.1		54.3	336	12.8		45.6	17	38	18 02	30	29	57	21 48	58		
16	60	10.2		55.2	350	39.3		47.1	35	32	17 58	28	11 44	56	33	59		
17	75	10.4	+10	56.1	5	05.8	+24	48.5	40	17 26	17 54	18 25	12 00	57	21 17	59		
18	90	10.5	+10	56.9	19	32.3	+24	49.8	45	17 20	17 49	18 24	12 19	57	20 57	59		
19	105	10.6		57.8	33	58.7		50.9	50	11	44	22	44	57	32	60		
20	120	10.8		58.7	48	25.1		51.8	9	08	42	21	12 56	57	20	60		
21	135	10.9	+10	59.5	62	51.4		52.7	9	17 04	40	21	13 09	57	20 07	60		
22	150	11.1	+11	00.4	77	17.7		53.3	6	16 59	37	20	25	57	19 51	61		
23	165	11.2		01.3	91	44.0		53.9	6	54	34	20	13 44	56	32	61		
24	180	11.3	+11	02.1	106	10.2	+24	54.2	3	16 48	17 31	18 20	14 07	56	19 09	62		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 14 ^m 6		Mag: -3.9 PMG: 13 ^h 29 ^m				Mag: +1.6 PMG: 14 ^h 18 ^m				Mag: -2.1 PMG: 16 ^h 53 ^m				Mag: +0.1 PMG: 14 ^h 57 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	205	56.1	157	52.9	+18	03.6	145	13.8	+21	27.5	106	06.4	+23	19.7	135	10.4	+20	51.3
1	220	58.6	172	52.3		04.5	160	14.4		27.8	121	08.5		19.6	150	12.6		51.3
2	236	01.1	187	51.7		05.4	175	15.1		28.2	136	10.6		19.6	165	14.8		51.4
3	251	03.5	202	51.1		06.4	190	15.8		28.5	151	12.7		19.6	180	17.0		51.4
4	266	06.0	217	50.5		07.3	205	16.5		28.9	166	14.8		19.6	195	19.2		51.4
5	281	08.5	232	49.9	+18	08.2	220	17.1	+21	29.2	181	16.9	+23	19.6	210	21.4	+20	51.5
6	296	10.9	247	49.3	+18	09.1	235	17.8	+21	29.5	196	19.0	+23	19.5	225	23.6	+20	51.5
7	311	13.4	262	48.7		10.0	250	18.5		29.9	211	21.1		19.5	240	25.7		51.6
8	326	15.9	277	48.1		11.0	265	19.2		30.2	226	23.2		19.5	255	27.9		51.6
9	341	18.3	292	47.5		11.9	280	19.8		30.6	241	25.3		19.5	270	30.1		51.6
10	356	20.8	307	46.9		12.8	295	20.5		30.9	256	27.4		19.5	285	32.3		51.7
11	11	23.2	322	46.3	+18	13.7	310	21.2	+21	31.3	271	29.5	+23	19.4	300	34.5	+20	51.7
12	26	25.7	337	45.6	+18	14.6	325	21.9	+21	31.6	286	31.6	+23	19.4	315	36.7	+20	51.8
13	41	28.2	352	45.0		15.5	340	22.5		32.0	301	33.7		19.4	330	38.9		51.8
14	56	30.6	7	44.4		16.4	355	23.2		32.3	316	35.8		19.4	345	41.0		51.9
15	71	33.1	22	43.8		17.3	10	23.9		32.7	331	37.9		19.4	0	43.2		51.9
16	86	35.6	37	43.2		18.3	25	24.6		33.0	346	40.0		19.3	15	45.4		51.9
17	101	38.0	52	42.6	+18	19.2	40	25.2	+21	33.4	1	42.1	+23	19.3	30	47.6	+20	52.0
18	116	40.5	67	42.0	+18	20.1	55	25.9	+21	33.7	16	44.2	+23	19.3	45	49.8	+20	52.0
19	131	43.0	82	41.4		21.0	70	26.6		34.0	31	46.3		19.3	60	52.0		52.1
20	146	45.4	97	40.7		21.9	85	27.3		34.4	46	48.4		19.3	75	54.1		52.1
21	161	47.9	112	40.1		22.8	100	27.9		34.7	61	50.5		19.2	90	56.3		52.1
22	176	50.4	127	39.5		23.7	115	28.6		35.1	76	52.6		19.2	105	58.5		52.2
23	191	52.8	142	38.9		24.6	130	29.3		35.4	91	54.7		19.2	121	00.7		52.2
24	206	55.3	157	38.3	+18	25.5	145	29.9	+21	35.8	106	56.8	+23	19.2	136	02.9	+20	52.3
Dif	—		-6		+9		+7		+3		+21		0		+22		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 1				Edad: 6 ^d 2 PHE { 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/7 PMG: 17 ^h 35 ^m R°: 57 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	11.3	+11	02.1	106	10.2	+24	54.2	60 N	2	40	3	45	4	32	7	41	
1	195	11.5		03.0	120	36.4		54.5	58	2	57	3	55	39		8	04	
2	210	11.6		03.9	135	02.5		54.6	56	3	11	4	04	45		22	69	
3	225	11.7		04.7	149	28.6		54.5	54		23		12	50		38	67	
4	240	11.9		05.6	163	54.7		54.3	52		33		19	4	55	8	51	
5	255	12.0	+11	06.5	178	20.7	+24	54.0	50	3	42	4	25	5	00	9	03	
6	270	12.1	+11	07.3	192	46.7	+24	53.5	45	4	00	4	38	5	09	9	27	
7	285	12.3		08.2	207	12.7		52.8	40		14		48	17		9	47	
8	300	12.4		09.1	221	38.7		52.0	35		26	4	57	23		10	03	
9	315	12.6		09.9	236	04.6		51.1	30		35	5	05	29		17	61	
10	330	12.7		10.8	250	30.5		50.0	20	4	50		17	39	10	41	60	
11	345	12.8	+11	11.7	264	56.4	+24	48.8	10 N	5	01	5	26	5	48	11	02	
12	0	13.0	+11	12.5	279	22.2	+24	47.4	0	5	10	5	35	5	56	11	22	
13	15	13.1		13.4	293	48.0		45.8	10 S		18		42	6	04	11	41	
14	30	13.2		14.3	308	13.8		44.1	20		24		50	12		12	02	
15	45	13.4		15.1	322	39.6		42.3	30		29	5	57	21		26	53	
16	60	13.5		16.0	337	05.4		40.3	35		31	6	01	27		40	52	
17	75	13.6	+11	16.9	351	31.1	+24	38.2	40	5	34	6	05	6	33	12	57	
18	90	13.8	+11	17.7	5	56.9	+24	35.9	45	5	36	6	10	6	40	13	16	
19	105	13.9		18.6	20	22.6		33.4	50		37		15	48		41	46	
20	120	14.0		19.4	34	48.3		30.8	52		38		17	52		13	53	
21	135	14.2		20.3	49	14.0		28.1	54		39		20	6	56	14	06	
22	150	14.3		21.2	63	39.7		25.2	56		39		22	7	01	22	42	
23	165	14.4		22.0	78	05.4		22.2	58		40		25	06		14	40	
24	180	14.6	+11	22.9	92	31.0	+24	19.0	60 S	5	40	6	29	7	12	15	03	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 10 ^h 10 ^m 6		Mag: -3.9 PMG: 13 ^h 30 ^m				Mag: +1.6 PMG: 14 ^h 17 ^m				Mag: -2.1 PMG: 16 ^h 50 ^m				Mag: +0.1 PMG: 14 ^h 54 ^m			
	hG ♀		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	206	55.3	157	38.3	+18	25.5	145	29.9	+21	35.8	106	56.8	+23	19.2	136	02.9	+20	52.3
1	221	57.7	172	37.7		26.4	160	30.6		36.1	121	58.9		19.2	151	05.1		52.3
2	237	00.2	187	37.0		27.3	175	31.3		36.4	137	01.0		19.1	166	07.2		52.4
3	252	02.7	202	36.4		28.2	190	32.0		36.8	152	03.1		19.1	181	09.4		52.4
4	267	05.1	217	35.8		29.1	205	32.6		37.1	167	05.1		19.1	196	11.6		52.4
5	282	07.6	232	35.2	+18	30.0	220	33.3	+21	37.5	182	07.2	+23	19.1	211	13.8	+20	52.5
6	297	10.1	247	34.6	+18	30.9	235	34.0	+21	37.8	197	09.3	+23	19.1	226	16.0	+20	52.5
7	312	12.5	262	34.0		31.8	250	34.7		38.1	212	11.4		19.0	241	18.2		52.6
8	327	15.0	277	33.3		32.7	265	35.3		38.5	227	13.5		19.0	256	20.3		52.6
9	342	17.5	292	32.7		33.6	280	36.0		38.8	242	15.6		19.0	271	22.5		52.6
10	357	19.9	307	32.1		34.5	295	36.7		39.2	257	17.7		19.0	286	24.7		52.7
11	12	22.4	322	31.5	+18	35.4	310	37.4	+21	39.5	272	19.8	+23	19.0	301	26.9	+20	52.7
12	27	24.9	337	30.8	+18	36.3	325	38.0	+21	39.8	287	21.9	+23	18.9	316	29.1	+20	52.8
13	42	27.3	352	30.2		37.2	340	38.7		40.2	302	24.0		18.9	331	31.2		52.8
14	57	29.8	7	29.6		38.1	355	39.4		40.5	317	26.1		18.9	346	33.4		52.9
15	72	32.2	22	29.0		38.9	10	40.0		40.8	332	28.2		18.9	1	35.6		52.9
16	87	34.7	37	28.4		39.8	25	40.7		41.2	347	30.3		18.8	16	37.8		52.9
17	102	37.2	52	27.7	+18	40.7	40	41.4	+21	41.5	2	32.3	+23	18.8	31	40.0	+20	53.0
18	117	39.6	67	27.1	+18	41.6	55	42.1	+21	41.9	17	34.4	+23	18.8	46	42.2	+20	53.0
19	132	42.1	82	26.5		42.5	70	42.7		42.2	32	36.5		18.8	61	44.3		53.1
20	147	44.6	97	25.9		43.4	85	43.4		42.5	47	38.6		18.8	76	46.5		53.1
21	162	47.0	112	25.2		44.3	100	44.1		42.9	62	40.7		18.7	91	48.7		53.1
22	177	49.5	127	24.6		45.2	115	44.7		43.2	77	42.8		18.7	106	50.9		53.2
23	192	52.0	142	24.0		46.0	130	45.4		43.5	92	44.9		18.7	121	53.1		53.2
24	207	54.4	157	23.3	+18	46.9	145	46.1	+21	43.9	107	47.0	+23	18.7	136	55.2	+20	53.3
Dif	—		-6		+9		+7		+3		+21		0		+22		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 9			Edad: 7 ^d 2 SD: 15'8 PMG: 18 ^h 32 ^m PHE { 4 ^h : 58'0 12 ^h : 58'2 20 ^h : 58'5 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	180	14.6	+11	22.9	92	31.0	+24	19.0	60 N	19 30	20 18	21 25	8 54 90	3 19 29
1	195	14.7		23.7	106	56.7		15.6	58	23	20 07	21 07	9 14 85	2 58 33
2	210	14.8		24.6	121	22.4		12.1	56	17	19 58	20 52	31 82	41 36
3	225	15.0		25.5	135	48.0		08.5	54	11	50	40	45 80	27 38
4	240	15.1		26.3	150	13.7		04.7	52	06	43	29	9 58 77	14 40
5	255	15.2	+11	27.2	164	39.3	+24	00.7	50	19 01	19 36	20 20	10 09 75	2 03 42
6	270	15.4	+11	28.0	179	05.0	+23	56.6	45	18 51	19 23	20 01	10 31 72	1 40 45
7	285	15.5		28.9	193	30.6		52.3	40	43	12	19 46	10 50 69	21 47
8	300	15.6		29.8	207	56.3		47.9	35	36	19 03	34	11 05 67	1 05 49
9	315	15.8		30.6	222	21.9		43.4	30	30	18 55	24	18 65	0 52 50
10	330	15.9		31.5	236	47.6		38.7	20	20	42	19 09	11 41 62	28 53
11	345	16.0	+11	32.3	251	13.3	+23	33.8	10 N	18 11	18 32	18 57	12 00 60	0 08 55
12	0	16.2	+11	33.2	265	38.9	+23	28.8	0	18 02	18 23	18 48	12 19 56	*** **
13	15	16.3		34.0	280	04.6		23.7	10 S	17 54	15	40	37 54	*** **
14	30	16.4		34.9	294	30.3		18.4	20	45	08	34	12 56 52	*** **
15	45	16.6		35.7	308	56.0		12.9	30	36	18 00	28	13 19 48	23 49 66
16	60	16.7		36.6	323	21.7		07.3	35	30	17 56	25	32 46	36 69
17	75	16.8	+11	37.5	337	47.4	+23	01.6	40	17 24	17 51	18 23	13 47 44	23 22 71
18	90	16.9	+11	38.3	352	13.2	+22	55.7	45	17 16	17 46	18 20	14 05 41	23 04 75
19	105	17.1		39.2	6	38.9		49.6	50	08	41	18	27 38	22 43 79
20	120	17.2		40.0	21	04.7		43.4	52	17 04	38	17	38 35	33 81
21	135	17.3		40.9	35	30.5		37.1	54	16 59	36	17	14 50 33	21 83
22	150	17.5		41.7	49	56.3		30.6	56	54	33	16	15 04 30	22 08 86
23	165	17.6		42.6	64	22.1		24.0	58	49	29	15	20 26	21 52 90
24	180	17.7	+11	43.4	78	48.0	+22	17.2	60 S	16 43	17 26	18 14	15 39 22	21 33 96
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 06 ^m 7		Mag: -3.9 PMG: 13 ^h 31 ^m		Mag: +1.6 PMG: 14 ^h 16 ^m		Mag: -2.1 PMG: 16 ^h 47 ^m		Mag: +0.1 PMG: 14 ^h 50 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	207	54.4	157	23.3	145	46.1	107	47.0	136	55.2				
1	222	56.9	172	22.7	160	46.8	122	49.1	151	57.4				
2	237	59.4	187	22.1	175	47.4	137	51.2	166	59.6				
3	253	01.8	202	21.5	190	48.1	152	53.2	182	01.8				
4	268	04.3	217	20.8	205	48.8	167	55.3	197	04.0				
5	283	06.7	232	20.2	220	49.5	182	57.4	212	06.1				
6	298	09.2	247	19.6	235	50.1	197	59.5	227	08.3				
7	313	11.7	262	18.9	250	50.8	213	01.6	242	10.5				
8	328	14.1	277	18.3	265	51.5	228	03.7	257	12.7				
9	343	16.6	292	17.7	280	52.1	243	05.8	272	14.9				
10	358	19.1	307	17.0	295	52.8	258	07.9	287	17.0				
11	13	21.5	322	16.4	310	53.5	273	09.9	302	19.2				
12	28	24.0	337	15.8	325	54.2	288	12.0	317	21.4				
13	43	26.5	352	15.2	340	54.8	303	14.1	332	23.6				
14	58	28.9	7	14.5	355	55.5	318	16.2	347	25.8				
15	73	31.4	22	13.9	10	56.2	333	18.3	2	27.9				
16	88	33.8	37	13.2	25	56.8	348	20.4	17	30.1				
17	103	36.3	52	12.6	40	57.5	3	22.5	32	32.3				
18	118	38.8	67	12.0	55	58.2	18	24.5	47	34.5				
19	133	41.2	82	11.3	70	58.8	33	26.6	62	36.6				
20	148	43.7	97	10.7	85	59.5	48	28.7	77	38.8				
21	163	46.2	112	10.1	101	00.2	63	30.8	92	41.0				
22	178	48.6	127	09.4	116	00.9	78	32.9	107	43.2				
23	193	51.1	142	08.8	131	01.5	93	35.0	122	45.4				
24	208	53.6	157	08.2	146	02.2	108	37.0	137	47.5				
Dif	—		-6		+9		+21		+22					
							0		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 7			Edad: 8 ^d 2 PHE { 4 ^h : 58 ^m 7 12 ^h : 59 ^m 0 20 ^h : 59 ^m 2 PMG: 19 ^h 29 ^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	m
0	180	17.7	+11 43.4	78	48.0	+22 17.2	69	60 N	2 32	3 38	4 27	10 24	98	3 48	17
1	195	17.9	44.3	93	13.8	10.3	69	58	2 50	49	34	39	94	31	22
2	210	18.0	45.1	107	39.7	+22 03.2	71	56	3 05	3 59	40	10 53	89	17	26
3	225	18.1	46.0	122	05.6	+21 56.0	72	54	17	4 07	46	11 05	86	3 05	29
4	240	18.2	46.8	136	31.5	48.7	73	52	28	14	51	15	83	2 54	32
5	255	18.4	+11 47.7	150	57.5	+21 41.2	75	50	3 37	4 21	4 56	11 24	81	2 45	33
6	270	18.5	+11 48.5	165	23.5	+21 33.6	76	45	3 56	4 34	5 06	11 43	77	2 25	37
7	285	18.6	49.4	179	49.5	25.8	78	40	4 11	45	14	11 59	73	2 08	41
8	300	18.8	50.2	194	15.5	17.9	79	35	23	4 55	21	12 12	70	1 54	44
9	315	18.9	51.1	208	41.6	09.9	80	30	33	5 02	27	23	67	42	46
10	330	19.0	51.9	223	07.6	+21 01.7	82	20	4 48	15	38	12 43	63	21	50
11	345	19.1	+11 52.8	237	33.7	+20 53.3	84	10 N	5 00	5 25	5 47	13 00	59	1 03	53
12	0	19.3	+11 53.6	251	59.9	+20 44.9	84	0	5 10	5 34	5 55	13 15	56	0 46	56
13	15	19.4	54.5	266	26.1	36.3	86	10 S	18	42	6 04	31	52	29	59
14	30	19.5	55.3	280	52.3	27.6	87	20	24	50	13	13 48	48	0 10	63
15	45	19.6	56.2	295	18.5	18.7	89	30	30	5 58	23	14 07	44	***	***
16	60	19.8	57.0	309	44.7	09.7	90	35	33	6 02	28	18	42	***	***
17	75	19.9	+11 57.9	324	11.0	+20 00.5	92	40	5 35	6 07	6 35	14 31	38	***	***
18	90	20.0	+11 58.7	338	37.4	+19 51.3	92	45	5 38	6 12	6 42	14 46	35	***	***
19	105	20.1	+11 59.6	353	03.7	41.9	94	50	40	18	51	15 05	29	***	***
20	120	20.3	+12 00.4	7	30.1	32.4	95	52	41	20	6 55	13	28	23 54	85
21	135	20.4	01.3	21	56.5	22.7	97	54	42	23	7 00	23	25	44	89
22	150	20.5	02.1	36	23.0	12.9	98	56	43	26	05	34	22	34	92
23	165	20.7	02.9	50	49.5	+19 03.0	99	58	44	29	10	15 46	19	22	96
24	180	20.8	+12 03.8	65	16.0	+18 53.0	100	60 S	5 44	6 33	7 17	16 01	13	23 09	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 02 ^m 8		Mag: -3.9 PMG: 13 ^h 32 ^m		Mag: +1.6 PMG: 14 ^h 15 ^m		Mag: -2.1 PMG: 16 ^h 43 ^m		Mag: +0.1 PMG: 14 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	208	53.6	157 08.2	+19 07.8	146 02.2	+21 51.8	108 37.0	+23 18.2	137 47.5	+20 54.3
1	223	56.0	172 07.5	08.7	161 02.9	52.1	123 39.1	18.1	152 49.7	54.3
2	238	58.5	187 06.9	09.6	176 03.5	52.4	138 41.2	18.1	167 51.9	54.4
3	254	01.0	202 06.2	10.4	191 04.2	52.8	153 43.3	18.1	182 54.1	54.4
4	269	03.4	217 05.6	11.3	206 04.9	53.1	168 45.4	18.1	197 56.3	54.4
5	284	05.9	232 05.0	+19 12.1	221 05.5	+21 53.4	183 47.5	+23 18.1	212 58.4	+20 54.5
6	299	08.3	247 04.3	+19 13.0	236 06.2	+21 53.7	198 49.5	+23 18.0	228 00.6	+20 54.5
7	314	10.8	262 03.7	13.9	251 06.9	54.1	213 51.6	18.0	243 02.8	54.6
8	329	13.3	277 03.0	14.7	266 07.6	54.4	228 53.7	18.0	258 05.0	54.6
9	344	15.7	292 02.4	15.6	281 08.2	54.7	243 55.8	18.0	273 07.1	54.7
10	359	18.2	307 01.7	16.4	296 08.9	55.0	258 57.9	18.0	288 09.3	54.7
11	14	20.7	322 01.1	+19 17.3	311 09.6	+21 55.4	273 59.9	+23 17.9	303 11.5	+20 54.7
12	29	23.1	337 00.5	+19 18.1	326 10.2	+21 55.7	289 02.0	+23 17.9	318 13.7	+20 54.8
13	44	25.6	351 59.8	19.0	341 10.9	56.0	304 04.1	17.9	333 15.8	54.8
14	59	28.1	6 59.2	19.8	356 11.6	56.3	319 06.2	17.9	348 18.0	54.9
15	74	30.5	21 58.5	20.7	11 12.2	56.6	334 08.3	17.8	3 20.2	54.9
16	89	33.0	36 57.9	21.5	26 12.9	57.0	349 10.3	17.8	18 22.4	54.9
17	104	35.5	51 57.2	+19 22.4	41 13.6	+21 57.3	4 12.4	+23 17.8	33 24.6	+20 55.0
18	119	37.9	66 56.6	+19 23.2	56 14.3	+21 57.6	19 14.5	+23 17.8	48 26.7	+20 55.0
19	134	40.4	81 55.9	24.1	71 14.9	57.9	34 16.6	17.8	63 28.9	55.1
20	149	42.8	96 55.3	24.9	86 15.6	58.2	49 18.7	17.7	78 31.1	55.1
21	164	45.3	111 54.6	25.8	101 16.3	58.6	64 20.7	17.7	93 33.3	55.2
22	179	47.8	126 54.0	26.6	116 16.9	58.9	79 22.8	17.7	108 35.4	55.2
23	194	50.2	141 53.3	27.4	131 17.6	59.2	94 24.9	17.7	123 37.6	55.2
24	209	52.7	156 52.7	+19 28.3	146 18.3	+21 59.5	109 27.0	+23 17.6	138 39.8	+20 55.3
Dif	—		-6	+9	+7	+3	+21	0	+22	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 5			Edad: 9 ^d 2 PHE { SD: 16'2 PMG: 20 ^h 24 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	20.8	+12 03.8	65	16.0	+18 53.0	102	60 N	19 35	20 24	21 33	12 02	100	4 05	12
1	195	20.9	04.6	79	42.6	76	42.8	58	27	13	21 14	13 96		3 53	16
2	210	21.0	05.5	94	09.2	76	32.5	56	21	20 03	20 58	22 93		43	19
3	225	21.1	06.3	108	35.8	76	22.1	54	15	19 54	45	31 89		34	22
4	240	21.3	07.2	123	02.5	77	11.6	52	09	46	33	38 87		26	24
5	255	21.4	+12 08.0	137	29.2	77	+18 00.9	50	19 04	19 40	20 24	12 45	84	3 18	27
6	270	21.5	+12 08.8	151	55.9	77	+17 50.1	45	18 54	19 25	20 04	13 00	78	3 02	32
7	285	21.6	09.7	166	22.7	78	39.2	40	45	14	19 48	12 74		2 49	36
8	300	21.8	10.5	180	49.5	78	28.2	35	38	19 04	36	22 71		38	39
9	315	21.9	11.4	195	16.3	78	17.1	30	31	18 56	26	30 68		28	42
10	330	22.0	12.2	209	43.2	79	+17 05.8	20	20	43	19 10	46 62		2 11	47
11	345	22.1	+12 13.0	224	10.1	79	+16 54.5	10 N	18 11	18 32	18 57	13 59	58	1 56	51
12	0	22.3	+12 13.9	238	37.1	80	+16 43.0	0	18 02	18 23	18 48	14 11	54	1 42	55
13	15	22.4	14.7	253	04.1	80	31.4	10 S	17 53	15	39	23 50		28	58
14	30	22.5	15.6	267	31.1	80	19.7	20	44	18 06	32	36 46		1 13	62
15	45	22.6	16.4	281	58.2	81	+16 07.9	30	33	17 58	26	14 51	40	0 55	68
16	60	22.7	17.2	296	25.3	81	+15 56.0	35	28	53	23	15 00	37	45	70
17	75	22.9	+12 18.1	310	52.4	81	+15 43.9	40	17 21	17 49	18 20	15 09	34	0 33	74
18	90	23.0	+12 18.9	325	19.6	82	+15 31.8	45	17 13	17 43	18 17	15 21	30	0 19	78
19	105	23.1	19.8	339	46.8	82	19.6	50	17 04	37	15	34 25		0 02	83
20	120	23.2	20.6	354	14.1	83	+15 07.2	52	16 59	34	14	41 22		** ** *	**
21	135	23.4	21.4	8	41.3	82	+14 54.8	54	55	31	13	48 20		** ** *	**
22	150	23.5	22.3	23	08.7	84	42.2	56	49	28	11	15 56	17	** ** *	**
23	165	23.6	23.1	37	36.0	83	29.6	58	44	25	10	16 05	13	** ** *	**
24	180	23.7	+12 23.9	52	03.4	84	+14 16.8	60 S	16 37	17 21	18 09	16 14	10	** ** *	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 9 ^h 58 ^m 8		Mag: -3.9 PMG: 13 ^h 33 ^m			Mag: +1.6 PMG: 14 ^h 14 ^m			Mag: -2.1 PMG: 16 ^h 40 ^m			Mag: +0.1 PMG: 14 ^h 43 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	209	52.7	156	52.7	+19 28.3	146	18.3	+21 59.5	109	27.0	+23 17.6	138	39.8	+20 55.3	
1	224	55.2	171	52.0	29.1	161	18.9	+21 59.8	124	29.1	17.6	153	42.0	55.3	
2	239	57.6	186	51.4	30.0	176	19.6	+22 00.2	139	31.1	17.6	168	44.1	55.4	
3	255	00.1	201	50.7	30.8	191	20.3	00.5	154	33.2	17.6	183	46.3	55.4	
4	270	02.6	216	50.1	31.6	206	20.9	00.8	169	35.3	17.5	198	48.5	55.4	
5	285	05.0	231	49.4	+19 32.5	221	21.6	+22 01.1	184	37.4	+23 17.5	213	50.7	+20 55.5	
6	300	07.5	246	48.8	+19 33.3	236	22.3	+22 01.4	199	39.4	+23 17.5	228	52.8	+20 55.5	
7	315	10.0	261	48.1	34.1	251	22.9	01.7	214	41.5	17.5	243	55.0	55.6	
8	330	12.4	276	47.5	35.0	266	23.6	02.1	229	43.6	17.5	258	57.2	55.6	
9	345	14.9	291	46.8	35.8	281	24.3	02.4	244	45.7	17.4	273	59.4	55.7	
10	0	17.3	306	46.2	36.6	296	24.9	02.7	259	47.7	17.4	289	01.5	55.7	
11	15	19.8	321	45.5	+19 37.5	311	25.6	+22 03.0	274	49.8	+23 17.4	304	03.7	+20 55.7	
12	30	22.3	336	44.9	+19 38.3	326	26.3	+22 03.3	289	51.9	+23 17.4	319	05.9	+20 55.8	
13	45	24.7	351	44.2	39.1	341	27.0	03.6	304	54.0	17.3	334	08.1	55.8	
14	60	27.2	6	43.6	40.0	356	27.6	03.9	319	56.1	17.3	349	10.2	55.9	
15	75	29.7	21	42.9	40.8	11	28.3	04.3	334	58.1	17.3	4	12.4	55.9	
16	90	32.1	36	42.2	41.6	26	29.0	04.6	350	00.2	17.3	19	14.6	55.9	
17	105	34.6	51	41.6	+19 42.4	41	29.6	+22 04.9	5	02.3	+23 17.3	34	16.8	+20 56.0	
18	120	37.1	66	40.9	+19 43.3	56	30.3	+22 05.2	20	04.3	+23 17.2	49	18.9	+20 56.0	
19	135	39.5	81	40.3	44.1	71	31.0	05.5	35	06.4	17.2	64	21.1	56.1	
20	150	42.0	96	39.6	44.9	86	31.6	05.8	50	08.5	17.2	79	23.3	56.1	
21	165	44.4	111	38.9	45.7	101	32.3	06.1	65	10.6	17.2	94	25.5	56.2	
22	180	46.9	126	38.3	46.6	116	33.0	06.4	80	12.6	17.1	109	27.6	56.2	
23	195	49.4	141	37.6	47.4	131	33.6	06.7	95	14.7	17.1	124	29.8	56.2	
24	210	51.8	156	37.0	+19 48.2	146	34.3	+22 07.1	110	16.8	+23 17.1	139	32.0	+20 56.3	
Dif	—		-7	+8		+7	+3		+21	0		+22		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 3			Edad: 10 ^d 2 PHE { SD: 16'3 PMG: 21 ^h 18 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	23.7	+12	23.9	52	03.4	+14	16.8	60 N	2	23	3	32	4	21	13	42	
1	195	23.8		24.8	66	30.8	+14	04.0 ¹²⁸	58		42	43		29	49	97		
2	210	24.0		25.6	80	58.3	+13	51.1 ¹²⁹	56	2	58	3	53	35	13	55		
3	225	24.1		26.4	95	25.8		85 ¹³¹	54	3	11	4	02	41	14	00		
4	240	24.2		27.3	109	53.3		85 ¹³¹	52		23	10		47	05	87		
5	255	24.3	+12	28.1	124	20.9	+13	11.7 ¹³²	50	3	33	4	17	4	52	14	09	
6	270	24.4	+12	28.9	138	48.4	+12	58.4 ¹³³	45	3	53	4	31	5	02	14	18	
7	285	24.6		29.8	153	16.1		87 ¹³⁴	40	4	08		42	11	26	75		
8	300	24.7		30.6	167	43.7		86 ¹³⁵	35	20	4	52	19		33	71		
9	315	24.8		31.4	182	11.4		87 ¹³⁶	30	31	5	00	25		38	68		
10	330	24.9		32.3	196	39.1	+12	04.3 ¹³⁶	20	47	14		36		48	63		
11	345	25.0	+12	33.1	211	06.9	+11	50.5 ¹³⁸	10 N	4	59	5	24	5	46	14	57	
12	0	25.1	+12	33.9	225	34.7	+11	36.7 ¹³⁸	0	5	09	5	34	5	55	15	05	
13	15	25.3		34.8	240	02.5		88 ¹³⁹	10 S		18	42	6	04	13	48		
14	30	25.4		35.6	254	30.3	+11	08.8 ¹⁴⁰	20	25		51	13		22	43		
15	45	25.5		36.4	268	58.2	+10	54.8 ¹⁴⁰	30	31	5	59	24		31	38		
16	60	25.6		37.3	283	26.1		89 ¹⁴¹	35	34	6	04	30		37	35		
17	75	25.7	+12	38.1	297	54.0	+10	26.5 ¹⁴²	40	5	37	6	09	6	37	15	43	
18	90	25.9	+12	38.9	312	22.0	+10	12.2 ¹⁴³	45	5	40	6	14	6	45	15	51	
19	105	26.0		39.8	326	49.9	+9	57.8 ¹⁴⁴	50	43		21	54		15	59		
20	120	26.1		40.6	341	17.9		90 ¹⁴⁴	52	44	24		6	59	16	03		
21	135	26.2		41.4	355	46.0		91 ¹⁴⁵	54	45	27		7	03	08	17		
22	150	26.3		42.2	10	14.0	+9	14.4 ¹⁴⁵	56	46	30		09		13	14		
23	165	26.4		43.1	24	42.1	+8	59.8 ¹⁴⁶	58	47	33		15		18	11		
24	180	26.5	+12	43.9	39	10.2	+8	45.1 ¹⁴⁷	60 S	5	49	6	37	7	21	16	24	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 9 ^h 54 ^m 9		Mag: -3.9 PMG: 13 ^h 34 ^m			Mag: +1.6 PMG: 14 ^h 13 ^m			Mag: -2.1 PMG: 16 ^h 37 ^m			Mag: +0.1 PMG: 14 ^h 40 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	210	51.8	156	37.0	+19	48.2	146	34.3	+22	07.1	110	16.8	+23	17.1	139	32.0	+20	56.3
1	225	54.3	171	36.3		49.0	161	35.0		07.4	125	18.9		17.1	154	34.1		56.3
2	240	56.8	186	35.6		49.8	176	35.6		07.7	140	20.9		17.0	169	36.3		56.4
3	255	59.2	201	35.0		50.7	191	36.3		08.0	155	23.0		17.0	184	38.5		56.4
4	271	01.7	216	34.3		51.5	206	37.0		08.3	170	25.1		17.0	199	40.7		56.4
5	286	04.2	231	33.7	+19	52.3	221	37.6	+22	08.6	185	27.1	+23	17.0	214	42.8	+20	56.5
6	301	06.6	246	33.0	+19	53.1	236	38.3	+22	08.9	200	29.2	+23	16.9	229	45.0	+20	56.5
7	316	09.1	261	32.3		53.9	251	39.0		09.2	215	31.3		16.9	244	47.2		56.6
8	331	11.6	276	31.7		54.7	266	39.6		09.5	230	33.4		16.9	259	49.4		56.6
9	346	14.0	291	31.0		55.5	281	40.3		09.8	245	35.4		16.9	274	51.5		56.7
10	1	16.5	306	30.3		56.3	296	41.0		10.1	260	37.5		16.9	289	53.7		56.7
11	16	18.9	321	29.7	+19	57.2	311	41.6	+22	10.4	275	39.6	+23	16.8	304	55.9	+20	56.7
12	31	21.4	336	29.0	+19	58.0	326	42.3	+22	10.8	290	41.6	+23	16.8	319	58.0	+20	56.8
13	46	23.9	351	28.3		58.8	341	43.0		11.1	305	43.7		16.8	335	00.2		56.8
14	61	26.3	6	27.7	+19	59.6	356	43.6		11.4	320	45.8		16.8	350	02.4		56.9
15	76	28.8	21	27.0	+20	00.4	11	44.3		11.7	335	47.9		16.7	5	04.6		56.9
16	91	31.3	36	26.3		01.2	26	45.0		12.0	350	49.9		16.7	20	06.7		56.9
17	106	33.7	51	25.7	+20	02.0	41	45.6	+22	12.3	5	52.0	+23	16.7	35	08.9	+20	57.0
18	121	36.2	66	25.0	+20	02.8	56	46.3	+22	12.6	20	54.1	+23	16.7	50	11.1	+20	57.0
19	136	38.7	81	24.3		03.6	71	47.0		12.9	35	56.1		16.6	65	13.2		57.1
20	151	41.1	96	23.7		04.4	86	47.6		13.2	50	58.2		16.6	80	15.4		57.1
21	166	43.6	111	23.0		05.2	101	48.3		13.5	66	00.3		16.6	95	17.6		57.2
22	181	46.0	126	22.3		06.0	116	49.0		13.8	81	02.3		16.6	110	19.8		57.2
23	196	48.5	141	21.7		06.8	131	49.6		14.1	96	04.4		16.5	125	21.9		57.2
24	211	51.0	156	21.0	+20	07.6	146	50.3	+22	14.4	111	06.5	+23	16.5	140	24.1	+20	57.3
Dif	—		-7		+8		+7		+3		+21		0		+22		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 1		Edad: 11 ^d 2 SD: 16'5 PMG: 22 ^h 10 ^m		PHE { 4 ^h : 60'6 12 ^h : 60'7 20 ^h : 60'8 R°: 53 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	26.5	+12 43.9	39	10.2	+8 45.1	91	60 N	19 40	20 30	21 41	15 23	101	4 25	7
1	195	26.7	44.7	53	38.3	30.3	148	58	32	18	21	26	97	21	11
2	210	26.8	45.5	68	06.5	15.5	148	56	25	20 07	21 04	28	94	17	14
3	225	26.9	46.4	82	34.6	00.7	148	54	18	19 58	20 50	31	90	14	16
4	240	27.0	47.2	97	02.8	45.7	150	52	13	50	38	32	88	11	19
5	255	27.1	+12 48.0	111	31.0	30.8	149	50	19 07	19 43	20 28	15 34	86	4 08	21
6	270	27.2	+12 48.8	125	59.2	15.7	151	45	18 56	19 28	20 07	15 38	80	4 02	26
7	285	27.4	49.7	140	27.5	00.7	150	40	47	16	19 51	41	76	3 57	30
8	300	27.5	50.5	154	55.7	45.5	152	35	40	19 06	38	44	72	53	34
9	315	27.6	51.3	169	24.0	30.4	151	30	33	18 58	27	46	69	49	37
10	330	27.7	52.1	183	52.3	15.1	153	20	21	44	19 11	51	62	42	43
11	345	27.8	+12 53.0	198	20.6	59.9	152	10 N	18 11	18 33	18 58	15 54	57	3 36	48
12	0	27.9	+12 53.8	212	48.9	44.6	153	0	18 02	18 23	18 47	15 58	52	3 30	53
13	15	28.0	54.6	227	17.3	29.2	154	10 S	17 52	14	39	16 01	48	24	57
14	30	28.1	55.4	241	45.6	13.8	154	20	43	18 05	31	05	43	18	62
15	45	28.3	56.2	256	14.0	58.4	154	30	32	17 56	24	09	37	11	68
16	60	28.4	57.1	270	42.4	42.9	155	35	25	51	21	12	33	07	71
17	75	28.5	+12 57.9	285	10.7	27.4	155	40	17 18	17 46	18 18	16 14	30	3 02	75
18	90	28.6	+12 58.7	299	39.1	11.9	155	45	17 10	17 40	18 14	16 17	26	2 56	80
19	105	28.7	+12 59.5	314	07.5	56.3	156	50	17 00	33	11	21	21	49	86
20	120	28.8	+13 00.4	328	35.9	40.7	156	52	16 55	30	10	23	18	46	88
21	135	28.9	01.2	343	04.4	25.1	156	54	50	27	09	25	16	43	90
22	150	29.0	02.0	357	32.8	9.4	157	56	45	24	07	27	13	39	94
23	165	29.2	02.8	12	01.2	53.8	156	58	39	20	06	29	10	35	97
24	180	29.3	+13 03.6	26	29.6	38.1	157	60 S	16 32	17 16	18 04	16 32	6	2 30	101
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 51 ^m 0		Mag: -3.9 PMG: 13 ^h 35 ^m		Mag: +1.6 PMG: 14 ^h 12 ^m		Mag: -2.1 PMG: 16 ^h 33 ^m		Mag: +0.1 PMG: 14 ^h 36 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	211	51.0	156 21.0	+20 07.6	146 50.3	+22 14.4	111 06.5	+23 16.5	140 24.1	+20 57.3					
1	226	53.4	171 20.3	08.4	161 51.0	14.7	126 08.5	16.5	155 26.3	57.3					
2	241	55.9	186 19.6	09.2	176 51.6	15.0	141 10.6	16.5	170 28.4	57.4					
3	256	58.4	201 19.0	10.0	191 52.3	15.3	156 12.7	16.5	185 30.6	57.4					
4	272	00.8	216 18.3	10.8	206 53.0	15.6	171 14.7	16.4	200 32.8	57.4					
5	287	03.3	231 17.6	+20 11.6	221 53.6	+22 15.9	186 16.8	+23 16.4	215 35.0	+20 57.5					
6	302	05.8	246 16.9	+20 12.4	236 54.3	+22 16.2	201 18.9	+23 16.4	230 37.1	+20 57.5					
7	317	08.2	261 16.3	13.1	251 54.9	16.5	216 20.9	16.4	245 39.3	57.6					
8	332	10.7	276 15.6	13.9	266 55.6	16.8	231 23.0	16.3	260 41.5	57.6					
9	347	13.2	291 14.9	14.7	281 56.3	17.1	246 25.1	16.3	275 43.6	57.7					
10	2	15.6	306 14.2	15.5	296 56.9	17.4	261 27.1	16.3	290 45.8	57.7					
11	17	18.1	321 13.6	+20 16.3	311 57.6	+22 17.7	276 29.2	+23 16.3	305 48.0	+20 57.7					
12	32	20.5	336 12.9	+20 17.1	326 58.3	+22 18.0	291 31.3	+23 16.2	320 50.1	+20 57.8					
13	47	23.0	351 12.2	17.9	341 58.9	18.3	306 33.3	16.2	335 52.3	57.8					
14	62	25.5	6 11.5	18.7	356 59.6	18.6	321 35.4	16.2	350 54.5	57.9					
15	77	27.9	21 10.9	19.4	12 00.3	18.9	336 37.5	16.2	5 56.7	57.9					
16	92	30.4	36 10.2	20.2	27 00.9	19.2	351 39.5	16.1	20 58.8	57.9					
17	107	32.9	51 09.5	+20 21.0	42 01.6	+22 19.5	6 41.6	+23 16.1	36 01.0	+20 58.0					
18	122	35.3	66 08.8	+20 21.8	57 02.3	+22 19.8	21 43.6	+23 16.1	51 03.2	+20 58.0					
19	137	37.8	81 08.1	22.6	72 02.9	20.1	36 45.7	16.1	66 05.3	58.1					
20	152	40.3	96 07.5	23.3	87 03.6	20.4	51 47.8	16.0	81 07.5	58.1					
21	167	42.7	111 06.8	24.1	102 04.3	20.7	66 49.8	16.0	96 09.7	58.2					
22	182	45.2	126 06.1	24.9	117 04.9	21.0	81 51.9	16.0	111 11.8	58.2					
23	197	47.7	141 05.4	25.7	132 05.6	21.3	96 54.0	16.0	126 14.0	58.2					
24	212	50.1	156 04.7	+20 26.5	147 06.2	+22 21.5	111 56.0	+23 15.9	141 16.2	+20 58.3					
Dif	—		-7	+8	+7	+3	+21		0	+22	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 0				Edad: 12 ^d 2 PHE { SD: 16'6 PMG: 23 ^h 03 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	29.3	+13	03.6	26	29.6	+2	38.1	60 N	2	14	3	25	4	15	17	04
1	195	29.4		04.4	40	58.1		22.3	58		35		38		23	03	98
2	210	29.5		05.3	55	26.5	+2	06.6	56	2	52		48	31		02	94
3	225	29.6		06.1	69	55.0	+1	50.9	54	3	06	3	57	37		01	91
4	240	29.7		06.9	84	23.4		35.1	52		17	4	05	43		00	89
5	255	29.8	+13	07.7	98	51.8	+1	19.3	50	3	28	4	12	4	48	17	00
6	270	29.9	+13	08.5	113	20.3	+1	03.5	45	3	49	4	27	4	59	16	58
7	285	30.0		09.3	127	48.7	+0	47.7	40	4	05		40	5	08	57	76
8	300	30.1		10.2	142	17.1		31.9	35		18		50	16		56	72
9	315	30.3		11.0	156	45.6		16.1	30		28	4	58	23		55	68
10	330	30.4		11.8	171	14.0	+0	00.2	20		45	5	12	35		53	63
11	345	30.5	+13	12.6	185	42.4	-0	15.6	10 N	4	58	5	23	5	45	16	51
12	0	30.6	+13	13.4	200	10.8	-0	31.4	0	5	09	5	33	5	55	16	50
13	15	30.7		14.2	214	39.2	-0	47.2	10 S		18		42	6	04	49	48
14	30	30.8		15.0	229	07.6	-1	03.1	20	25	5	51		14		48	43
15	45	30.9		15.9	243	36.0		18.9	30	32	6	00		25		46	37
16	60	31.0		16.7	258	04.4		34.7	35	36		05		31		45	34
17	75	31.1	+13	17.5	272	32.8	-1	50.5	40	5	39	6	11	6	39	16	44
18	90	31.2	+13	18.3	287	01.2	-2	06.3	45	5	42	6	17	6	47	16	43
19	105	31.3		19.1	301	29.5		22.1	50	46		24		6	57	42	21
20	120	31.4		19.9	315	57.8		37.9	52	47		27		7	02	41	19
21	135	31.5		20.7	330	26.2	-2	53.6	54	48		30		07		41	16
22	150	31.7		21.5	344	54.5	-3	09.3	56	50		34		13		40	14
23	165	31.8		22.3	359	22.8		25.1	58	51		37		19		39	11
24	180	31.9	+13	23.1	13	51.1	-3	40.8	60 S	5	53	6	42	7	26	16	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 47 ^m 1		Mag: -3.9 PMG: 13 ^h 36 ^m		Mag: +1.6 PMG: 14 ^h 11 ^m		Mag: -2.1 PMG: 16 ^h 30 ^m		Mag: +0.1 PMG: 14 ^h 33 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	212	50.1	156	04.7	147	06.2	111	56.0	141	16.2
1	227	52.6	171	04.1	162	06.9	126	58.1	156	18.3
2	242	55.0	186	03.4	177	07.6	142	00.1	171	20.5
3	257	57.5	201	02.7	192	08.2	157	02.2	186	22.7
4	273	00.0	216	02.0	207	08.9	172	04.3	201	24.9
5	288	02.4	231	01.3	222	09.6	187	06.3	216	27.0
6	303	04.9	246	00.6	237	10.2	202	08.4	231	29.2
7	318	07.4	261	00.0	252	10.9	217	10.5	246	31.4
8	333	09.8	275	59.3	267	11.6	232	12.5	261	33.5
9	348	12.3	290	58.6	282	12.2	247	14.6	276	35.7
10	3	14.8	305	57.9	297	12.9	262	16.6	291	37.9
11	18	17.2	320	57.2	312	13.6	277	18.7	306	40.0
12	33	19.7	335	56.5	327	14.2	292	20.8	321	42.2
13	48	22.1	350	55.8	342	14.9	307	22.8	336	44.4
14	63	24.6	5	55.1	357	15.5	322	24.9	351	46.5
15	78	27.1	20	54.5	12	16.2	337	26.9	6	48.7
16	93	29.5	35	53.8	27	16.9	352	29.0	21	50.9
17	108	32.0	50	53.1	42	17.5	7	31.0	36	53.0
18	123	34.5	65	52.4	57	18.2	22	33.1	51	55.2
19	138	36.9	80	51.7	72	18.9	37	35.2	66	57.4
20	153	39.4	95	51.0	87	19.5	52	37.2	81	59.5
21	168	41.9	110	50.3	102	20.2	67	39.3	97	01.7
22	183	44.3	125	49.6	117	20.8	82	41.3	112	03.9
23	198	46.8	140	48.9	132	21.5	97	43.4	127	06.0
24	213	49.3	155	48.2	147	22.2	112	45.5	142	08.2
Dif	—		-7		+8		+21		+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 57 ^m 8			Edad: 13 ^d 2 PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'7 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	180	31.9	+13	23.1	13	51.1	-3 40.8	60 N	19 45	20 36	21 50	18 46 102	4 39 8				
1	195	32.0		24.0	28	19.3	-3 56.4 ¹⁵⁶	58	36	23	28	41 98	42 11				
2	210	32.1		24.8	42	47.6	-4 12.1 ¹⁵⁷	56	29	12	21 10	36 95	44 14				
3	225	32.2		25.6	57	15.8	27.7 ¹⁵⁶	54	22	20 02	20 55	32 92	46 18				
4	240	32.3		26.4	71	44.0	43.3 ¹⁵⁶	52	16	19 54	43	29 88	48 20				
5	255	32.4	+13	27.2	86	12.2	-4 58.9 ¹⁵⁶	50	19 11	19 46	20 32	18 25 86	4 50 22				
6	270	32.5	+13	28.0	100	40.3	-5 14.4 ¹⁵⁵	45	18 59	19 31	20 10	18 18 81	4 54 27				
7	285	32.6		28.8	115	08.5	29.9 ¹⁵⁵	40	49	18	19 53	13 75	4 57 32				
8	300	32.7		29.6	129	36.6	-5 45.4 ¹⁵⁵	35	41	19 08	40	08 72	5 00 35				
9	315	32.8		30.4	144	04.7	-6 00.8 ¹⁵⁴	30	34	18 59	29	18 03 69	03 38				
10	330	32.9		31.2	158	32.8	16.2 ¹⁵⁴	20	22	45	19 11	17 56 63	07 44				
11	345	33.0	+13	32.0	173	00.8	-6 31.5 ¹⁵³	10 N	18 11	18 33	18 58	17 49 59	5 11 49				
12	0	33.1	+13	32.8	187	28.8	-6 46.8 ¹⁵³	0	18 01	18 22	18 47	17 43 54	5 15 53				
13	15	33.2		33.6	201	56.8	-7 02.1 ¹⁵³	10 S	17 51	13	38	37 50	19 58				
14	30	33.3		34.4	216	24.8	17.3 ¹⁵²	20	41	18 04	30	31 44	23 63				
15	45	33.4		35.2	230	52.8	32.4 ¹⁵¹	30	30	17 54	22	23 40	27 69				
16	60	33.5		36.0	245	20.7	-7 47.5 ¹⁵¹	35	23	49	19	19 37	30 72				
17	75	33.6	+13	36.8	259	48.6	-8 02.6 ¹⁵¹	40	17 15	17 43	18 15	17 15 32	5 33 76				
18	90	33.7	+13	37.6	274	16.4	-8 17.6 ¹⁵⁰	45	17 07	17 37	18 12	17 09 29	5 36 81				
19	105	33.8		38.4	288	44.3	32.6 ¹⁵⁰	50	16 56	30	08	03 24	40 86				
20	120	33.9		39.2	303	12.1	-8 47.5 ¹⁴⁹	52	51	27	06	17 00 21	42 89				
21	135	34.0		40.0	317	39.8	-9 02.3 ¹⁴⁸	54	46	23	05	16 57 19	44 91				
22	150	34.1		40.8	332	07.6	17.1 ¹⁴⁸	56	40	19	03	54 15	46 95				
23	165	34.2		41.6	346	35.3	31.8 ¹⁴⁷	58	34	15	01	50 12	49 98				
24	180	34.3	+13	42.4	1	02.9	-9 46.4 ¹⁴⁶	60 S	16 26	17 11	18 00	16 45 9	5 52 102				

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 9 ^h 43 ^m 1		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: +1.6 PMG: 14 ^h 10 ^m		Mag: -2.1 PMG: 16 ^h 27 ^m			Mag: +0.1 PMG: 14 ^h 29 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	213	49.3	155	48.2	+20	44.8	147	22.2	+22	28.5	112	45.5	+23	15.3	142	08.2	+20	59.3
1	228	51.7	170	47.5		45.5	162	22.8		28.8	127	47.5		15.3	157	10.4		59.3
2	243	54.2	185	46.9		46.3	177	23.5		29.1	142	49.6		15.3	172	12.5		59.4
3	258	56.6	200	46.2		47.0	192	24.2		29.4	157	51.6		15.3	187	14.7		59.4
4	273	59.1	215	45.5		47.8	207	24.8		29.6	172	53.7		15.2	202	16.9		59.4
5	289	01.6	230	44.8	+20	48.5	222	25.5	+22	29.9	187	55.7	+23	15.2	217	19.0	+20	59.5
6	304	04.0	245	44.1	+20	49.3	237	26.1	+22	30.2	202	57.8	+23	15.2	232	21.2	+20	59.5
7	319	06.5	260	43.4		50.0	252	26.8		30.5	217	59.8		15.2	247	23.4		59.6
8	334	09.0	275	42.7		50.7	267	27.5		30.8	233	01.9		15.1	262	25.5		59.6
9	349	11.4	290	42.0		51.5	282	28.1		31.1	248	04.0		15.1	277	27.7		59.7
10	4	13.9	305	41.3		52.2	297	28.8		31.3	263	06.0		15.1	292	29.9		59.7
11	19	16.4	320	40.6	+20	53.0	312	29.5	+22	31.6	278	08.1	+23	15.0	307	32.0	+20	59.7
12	34	18.8	335	39.9	+20	53.7	327	30.1	+22	31.9	293	10.1	+23	15.0	322	34.2	+20	59.8
13	49	21.3	350	39.2		54.5	342	30.8		32.2	308	12.2		15.0	337	36.4		59.8
14	64	23.7	5	38.5		55.2	357	31.4		32.5	323	14.2		15.0	352	38.5		59.9
15	79	26.2	20	37.8		55.9	12	32.1		32.7	338	16.3		14.9	7	40.7		59.9
16	94	28.7	35	37.1		56.7	27	32.8		33.0	353	18.3		14.9	22	42.9	+20	59.9
17	109	31.1	50	36.4	+20	57.4	42	33.4	+22	33.3	8	20.4	+23	14.9	37	45.0	+21	00.0
18	124	33.6	65	35.7	+20	58.1	57	34.1	+22	33.6	23	22.4	+23	14.9	52	47.2	+21	00.0
19	139	36.1	80	35.0		58.9	72	34.8		33.9	38	24.5		14.8	67	49.4	+21	00.1
20	154	38.5	95	34.3	+20	59.6	87	35.4		34.1	53	26.6		14.8	82	51.5		00.1
21	169	41.0	110	33.6	+21	00.3	102	36.1		34.4	68	28.6		14.8	97	53.7		00.2
22	184	43.5	125	32.9		01.1	117	36.7		34.7	83	30.7		14.8	112	55.8		00.2
23	199	45.9	140	32.2		01.8	132	37.4		35.0	98	32.7		14.7	127	58.0		00.2
24	214	48.4	155	31.5	+21	02.5	147	38.1	+22	35.3	113	34.8	+23	14.7	143	00.2	+21	00.3
Dif	—		-7		+7		+7		+3		+21		0		+22		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 6				Edad: 14 ^d 2 PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'2 PMG: **h **m R°: **m												
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	34.3	+13	42.4	1	02.9	-9	46.4	60 N	2	04	3	19	4	10	20	28
1	195	34.4		43.2	15	30.6	87	-10	01.0	58	27	32	18		19	97	53
2	210	34.5		44.0	29	58.2	86		15.5	56	2	45	43	26	11	93	4
3	225	34.6		44.8	44	25.8	86		29.9	54	3	00	3	52	33	20	04
4	240	34.7		45.6	58	53.3	85		44.3	52	12	4	01	39	19	57	87
5	255	34.8	+13	46.4	73	20.8	85	-10	58.6	50	3	23	4	08	4	51	84
6	270	34.9	+13	47.2	87	48.3	85	-11	12.8	45	3	45	4	24	4	39	79
7	285	35.0		48.0	102	15.7	84		27.0	40	4	02	37	5	06	28	75
8	300	35.1		48.8	116	43.1	84		41.0	35	15	47	14	20	71	35	38
9	315	35.2		49.6	131	10.5	84	-11	55.0	30	26	4	56	21	19	12	69
10	330	35.3		50.4	145	37.8	83	-12	08.9	20	44	5	11	34	18	59	64
11	345	35.4	+13	51.2	160	05.1	83	-12	22.8	10 N	4	57	5	23	5	48	59
12	0	35.5	+13	52.0	174	32.3	82	-12	36.5	0	5	08	5	33	5	54	56
13	15	35.6		52.8	188	59.5	82	-12	50.1	10 S	18	43	6	04	17	51	57
14	30	35.7		53.6	203	26.7	82	-13	03.7	20	26	5	52	15	15	48	26
15	45	35.8		54.4	217	53.9	82		17.2	30	33	6	02	26	18	03	43
16	60	35.9		55.2	232	21.0	81		30.6	35	37	07	33	17	56	40	42
17	75	36.0	+13	56.0	246	48.0	80	-13	43.8	40	5	41	6	13	6	47	37
18	90	36.1	+13	56.8	261	15.0	80	-13	57.0	45	5	45	6	19	6	50	79
19	105	36.2		57.6	275	42.0	80	-14	10.1	50	48	26	7	00	27	27	85
20	120	36.3		58.4	290	09.0	80		23.1	52	50	30	05	21	26	11	87
21	135	36.4		59.1	304	35.9	79		36.0	54	52	33	11	16	22	15	91
22	150	36.5	+13	59.9	319	02.7	78	-14	48.8	56	53	37	17	09	20	21	94
23	165	36.6	+14	00.7	333	29.6	79	-15	01.5	58	55	41	23	17	02	16	98
24	180	36.7	+14	01.5	347	56.4	78	-15	14.1	60 S	5	57	6	46	7	34	102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 39 ^m 2		Mag: -3.9 PMG: 13 ^h 39 ^m		Mag: +1.6 PMG: 14 ^h 09 ^m		Mag: -2.1 PMG: 16 ^h 23 ^m		Mag: +0.1 PMG: 14 ^h 26 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	214	48.4	155	31.5	+21	02.5	147	38.1	+22	35.3
1	229	50.9	170	30.8		03.2	162	38.7		35.5
2	244	53.3	185	30.1		04.0	177	39.4		35.8
3	259	55.8	200	29.4		04.7	192	40.0		36.1
4	274	58.2	215	28.7		05.4	207	40.7		36.4
5	290	00.7	230	28.0	+21	06.1	222	41.4	+22	36.6
6	305	03.2	245	27.3	+21	06.9	237	42.0	+22	36.9
7	320	05.6	260	26.5		07.6	252	42.7		37.2
8	335	08.1	275	25.8		08.3	267	43.4		37.5
9	350	10.6	290	25.1		09.0	282	44.0		37.7
10	5	13.0	305	24.4		09.8	297	44.7		38.0
11	20	15.5	320	23.7	+21	10.5	312	45.3	+22	38.3
12	35	18.0	335	23.0	+21	11.2	327	46.0	+22	38.6
13	50	20.4	350	22.3		11.9	342	46.7		38.8
14	65	22.9	5	21.6		12.6	357	47.3		39.1
15	80	25.4	20	20.9		13.3	12	48.0		39.4
16	95	27.8	35	20.2		14.0	27	48.6		39.6
17	110	30.3	50	19.5	+21	14.8	42	49.3	+22	39.9
18	125	32.7	65	18.8	+21	15.5	57	50.0	+22	40.2
19	140	35.2	80	18.0		16.2	72	50.6		40.5
20	155	37.7	95	17.3		16.9	87	51.3		40.7
21	170	40.1	110	16.6		17.6	102	51.9		41.0
22	185	42.6	125	15.9		18.3	117	52.6		41.3
23	200	45.1	140	15.2		19.0	132	53.3		41.5
24	215	47.5	155	14.5	+21	19.7	147	53.9	+22	41.8
Dif	—		-7 +7		+7 +3		+20 0		+22 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^d 9 PMG: 11 ^h 57 ^m 5			Edad: 15 ^d 2 PHE { 4 ^h : 60 ⁰ 12 ^h : 59 ⁸ 20 ^h : 59 ⁵ PMG: 0 ^h 50 ^m R ^o : 56 ^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	36.7	+14	01.5	347	56.4	-15	14.1	60 N	19 50	20 42	22 00	22 10 96	4 56 15
1	195	36.8		02.3	2	23.1	77	26.6	58	41	28	21 35	21 56 91	5 07 19
2	210	36.9		03.1	16	49.8	77	39.0	56	33	17	16	44 87	16 22
3	225	37.0		03.9	31	16.5	77	-15 51.3	54	26	20 07	21 00	33 84	24 26
4	240	37.1		04.7	45	43.1	76	-16 03.5	52	19	19 58	20 47	24 81	31 28
5	255	37.2	+14	05.5	60	09.7	76	-16 15.5	50	19 14	19 50	20 36	21 15 80	5 38 30
6	270	37.3	+14	06.3	74	36.3	76	-16 27.5	45	19 01	19 34	20 13	20 58 75	5 52 35
7	285	37.4		07.0	89	02.8	75	39.3	40	18 51	20	19 56	43 72	6 03 39
8	300	37.5		07.8	103	29.3	75	-16 51.0	35	43	10	42	31 69	13 43
9	315	37.6		08.6	117	55.7	74	-17 02.6	30	35	19 00	30	21 67	22 45
10	330	37.6		09.4	132	22.2	75	14.1	20	22	18 45	19 12	20 03 63	37 50
11	345	37.7	+14	10.2	146	48.5	73	-17 25.5	10 N	18 11	18 33	18 58	19 47 60	6 51 53
12	0	37.8	+14	11.0	161	14.9	74	-17 36.7	0	18 01	18 22	18 47	19 33 57	7 03 57
13	15	37.9		11.8	175	41.2	73	47.8	10 S	17 51	12	37	18 54	16 60
14	30	38.0		12.5	190	07.4	72	-17 58.8	20	40	18 03	29	19 03 51	29 64
15	45	38.1		13.3	204	33.7	73	-18 09.7	30	28	17 52	21	18 46 47	45 68
16	60	38.2		14.1	218	59.8	71	20.5	35	21	47	17	36 44	7 54 71
17	75	38.3	+14	14.9	233	26.0	72	-18 31.1	40	17 13	17 41	18 13	18 24 42	8 04 74
18	90	38.4	+14	15.7	247	52.1	71	-18 41.6	45	17 04	17 34	18 09	18 11 38	8 16 78
19	105	38.5		16.5	262	18.2	71	-18 52.0	50	16 53	26	05	17 54 35	31 83
20	120	38.6		17.2	276	44.3	71	-19 02.2	52	47	23	03	47 32	38 85
21	135	38.7		18.0	291	10.3	70	12.3	54	42	19	18 01	38 30	46 87
22	150	38.7		18.8	305	36.3	70	22.3	56	36	15	17 59	29 27	8 55 90
23	165	38.8		19.6	320	02.3	70	32.1	58	29	11	57	18 23	9 05 94
24	180	38.9	+14	20.4	334	28.2	69	-19 41.9	60 S	16 21	17 06	17 55	17 06 18	9 16 99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 35 ^m 3		Mag: -3.9 PMG: 13 ^h 40 ^m		Mag: +1.6 PMG: 14 ^h 08 ^m		Mag: -2.1 PMG: 16 ^h 20 ^m		Mag: +0.1 PMG: 14 ^h 22 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	215	47.5	155	14.5	+21	19.7	147	53.9	+22	41.8	114	23.9	+23	14.1	143	52.1	+21	01.3
1	230	50.0	170	13.8		20.4	162	54.6		42.1	129	26.0		14.0	158	54.3		01.3
2	245	52.5	185	13.1		21.1	177	55.2		42.3	144	28.0		14.0	173	56.4		01.4
3	260	54.9	200	12.3		21.8	192	55.9		42.6	159	30.1		14.0	188	58.6		01.4
4	275	57.4	215	11.6		22.5	207	56.6		42.9	174	32.1		14.0	204	00.7		01.4
5	290	59.8	230	10.9	+21	23.2	222	57.2	+22	43.1	189	34.2	+23	13.9	219	02.9	+21	01.5
6	306	02.3	245	10.2	+21	23.9	237	57.9	+22	43.4	204	36.2	+23	13.9	234	05.1	+21	01.5
7	321	04.8	260	09.5		24.6	252	58.5		43.7	219	38.3		13.9	249	07.2		01.6
8	336	07.2	275	08.8		25.3	267	59.2		44.0	234	40.3		13.8	264	09.4		01.6
9	351	09.7	290	08.0		26.0	282	59.9		44.2	249	42.4		13.8	279	11.6		01.6
10	6	12.2	305	07.3		26.7	298	00.5		44.5	264	44.4		13.8	294	13.7		01.7
11	21	14.6	320	06.6	+21	27.4	313	01.2	+22	44.7	279	46.5	+23	13.8	309	15.9	+21	01.7
12	36	17.1	335	05.9	+21	28.1	328	01.8	+22	45.0	294	48.5	+23	13.7	324	18.0	+21	01.8
13	51	19.6	350	05.2		28.8	343	02.5		45.3	309	50.5		13.7	339	20.2		01.8
14	66	22.0	5	04.4		29.5	358	03.2		45.5	324	52.6		13.7	354	22.4		01.9
15	81	24.5	20	03.7		30.2	13	03.8		45.8	339	54.6		13.7	9	24.5		01.9
16	96	27.0	35	03.0		30.8	28	04.5		46.1	354	56.7		13.6	24	26.7		01.9
17	111	29.4	50	02.3	+21	31.5	43	05.1	+22	46.3	9	58.7	+23	13.6	39	28.8	+21	02.0
18	126	31.9	65	01.6	+21	32.2	58	05.8	+22	46.6	25	00.8	+23	13.6	54	31.0	+21	02.0
19	141	34.3	80	00.8		32.9	73	06.5		46.9	40	02.8		13.5	69	33.2		02.1
20	156	36.8	95	00.1		33.6	88	07.1		47.1	55	04.8		13.5	84	35.3		02.1
21	171	39.3	109	59.4		34.3	103	07.8		47.4	70	06.9		13.5	99	37.5		02.1
22	186	41.7	124	58.7		35.0	118	08.4		47.6	85	08.9		13.5	114	39.6		02.2
23	201	44.2	139	58.0		35.6	133	09.1		47.9	100	11.0		13.4	129	41.8		02.2
24	216	46.7	154	57.2	+21	36.3	148	09.8	+22	48.2	115	13.0	+23	13.4	144	44.0	+21	02.3
Dif	—		-7 +7		+7 +3				+20 0				+22 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 3				Edad: 16 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/0 20 ^h : 58/7 SD: 16/2 PMG: 1 ^h 46 ^m R°: 57 ^m																				
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	180	38.9	+14	20.4	334	28.2		–19	41.9		60 N	1	54	3	12	4	04	23	46	82	5	11	23		
1	195	39.0		21.1	348	54.1	69	–19	51.4	95	58	2	19		26		13		27	78		26	27		
2	210	39.1		21.9	3	20.0	69	–20	00.9	95	56		38		37	21		23	11	75		38	32		
3	225	39.2		22.7	17	45.8	68		10.2	93	54	2	54		48	28		22	57	73		50	34		
4	240	39.3		23.5	32	11.6	68		19.4	92	52	3	07		3	56	35		45	72		5	59	37	
5	255	39.4	+14	24.3	46	37.4	68	–20	28.4	90	50	3	18		4	04	4	40	22	35	70		6	08	39
6	270	39.5	+14	25.0	61	03.2	68	–20	37.3	89	45	3	41		4	21	4	53	22	13	68		6	27	42
7	285	39.6		25.8	75	28.9	67		46.0	87	40	3	59		34	5	03	21	55	66		42	45		
8	300	39.6		26.6	89	54.6	67	–20	54.7	87	35	4	13		45	12		40	65		6	56	47		
9	315	39.7		27.4	104	20.3	67	–21	03.1	84	30		24		4	54	19		28	63		7	07	49	
10	330	39.8		28.1	118	46.0	67		11.5	84	20		42		5	09	32		21	06	61		27	52	
11	345	39.9	+14	28.9	133	11.6	66	–21	19.6	81	10 N	4	56		5	22	5	43	20	47	59		7	44	55
12	0	40.0	+14	29.7	147	37.3	67	–21	27.7	81	0	5	08		5	33	5	54	20	30	57		8	00	57
13	15	40.1		30.5	162	02.9	66		35.6	79	10 S		18		43	6	04	20	12	56		16	60		
14	30	40.2		31.2	176	28.5	66		43.3	77	20		26		5	52	15		19	54	53		33	62	
15	45	40.3		32.0	190	54.0	65		50.9	76	30		35		6	03	28		33	51		8	53	65	
16	60	40.3		32.8	205	19.6	66	–21	58.4	75	35		39		08	35		20	50		9	05	67		
17	75	40.4	+14	33.6	219	45.1	65	–22	05.7	73	40	5	43		6	15	6	43	19	06	48		9	18	69
18	90	40.5	+14	34.3	234	10.7	66	–22	12.9	72	45	5	47		6	21	6	52	18	49	46		9	34	72
19	105	40.6		35.1	248	36.2	65		19.9	70	50		51		29	7	03		29	43		9	54	75	
20	120	40.7		35.9	263	01.7	65		26.8	69	52		53		33	08		19	41		10	03	77		
21	135	40.8		36.7	277	27.2	65		33.5	67	54		55		37	14		18	08	39		13	80		
22	150	40.9		37.4	291	52.6	64		40.0	65	56		57		41	20		17	56	37		25	82		
23	165	40.9		38.2	306	18.1	65		46.5	65	58	5	59		45	28		41	34		39	85			
24	180	41.0	+14	39.0	320	43.6	65	–22	52.7	62	60 S	6	01		6	50	7	36	17	24	30		10	55	90

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 9 ^h 31 ^m 3		Mag: –3.9 PMG: 13 ^h 41 ^m			Mag: +1.6 PMG: 14 ^h 07 ^m			Mag: –2.1 PMG: 16 ^h 17 ^m			Mag: +0.1 PMG: 14 ^h 19 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	216	46.7	154	57.2	+21	36.3	148	09.8	+22	48.2	115	13.0	+23	13.4	144	44.0	+21	02.3	
1	231	49.1	169	56.5		37.0	163	10.4		48.4	130	15.1		13.4	159	46.1		02.3	
2	246	51.6	184	55.8		37.7	178	11.1		48.7	145	17.1		13.3	174	48.3		02.3	
3	261	54.1	199	55.1		38.4	193	11.7		48.9	160	19.1		13.3	189	50.4		02.4	
4	276	56.5	214	54.3		39.0	208	12.4		49.2	175	21.2		13.3	204	52.6		02.4	
5	291	59.0	229	53.6	+21	39.7	223	13.1	+22	49.5	190	23.2	+23	13.3	219	54.8	+21	02.5	
6	307	01.5	244	52.9	+21	40.4	238	13.7	+22	49.7	205	25.3	+23	13.2	234	56.9	+21	02.5	
7	322	03.9	259	52.2		41.1	253	14.4		50.0	220	27.3		13.2	249	59.1		02.6	
8	337	06.4	274	51.4		41.7	268	15.0		50.2	235	29.3		13.2	265	01.2		02.6	
9	352	08.8	289	50.7		42.4	283	15.7		50.5	250	31.4		13.1	280	03.4		02.6	
10	7	11.3	304	50.0		43.1	298	16.3		50.8	265	33.4		13.1	295	05.6		02.7	
11	22	13.8	319	49.2	+21	43.7	313	17.0	+22	51.0	280	35.5	+23	13.1	310	07.7	+21	02.7	
12	37	16.2	334	48.5	+21	44.4	328	17.7	+22	51.3	295	37.5	+23	13.1	325	09.9	+21	02.8	
13	52	18.7	349	47.8		45.1	343	18.3		51.5	310	39.5		13.0	340	12.0		02.8	
14	67	21.2	4	47.1		45.7	358	19.0		51.8	325	41.6		13.0	355	14.2		02.8	
15	82	23.6	19	46.3		46.4	13	19.6		52.0	340	43.6		13.0	10	16.4		02.9	
16	97	26.1	34	45.6		47.1	28	20.3		52.3	355	45.7		12.9	25	18.5		02.9	
17	112	28.6	49	44.9	+21	47.7	43	21.0	+22	52.6	10	47.7	+23	12.9	40	20.7	+21	03.0	
18	127	31.0	64	44.1	+21	48.4	58	21.6	+22	52.8	25	49.7	+23	12.9	55	22.8	+21	03.0	
19	142	33.5	79	43.4		49.1	73	22.3		53.1	40	51.8		12.8	70	25.0		03.1	
20	157	36.0	94	42.7		49.7	88	22.9		53.3	55	53.8		12.8	85	27.1		03.1	
21	172	38.4	109	41.9		50.4	103	23.6		53.6	70	55.9		12.8	100	29.3		03.1	
22	187	40.9	124	41.2		51.0	118	24.2		53.8	85	57.9		12.8	115	31.5		03.2	
23	202	43.3	139	40.5		51.7	133	24.9		54.1	100	59.9		12.7	130	33.6		03.2	
24	217	45.8	154	39.7	+21	52.3	148	25.6	+22	54.3	116	02.0	+23	12.7	145	35.8	+21	03.3	
Dif	—		–7			+7	+7			+3	+20			0	+22			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 2			Edad: 17 ^d 2 PHE { 4 ^h : 58'4 12 ^h : 58'1 20 ^h : 57'8 R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	180	41.0	+14 39.0	320	43.6	-22 52.7	60 N	19 55	20 48	22 10	** ** *		5 34	37
1	195	41.1	39.7	335	09.1	-22 58.8	58	45	33	21 43	** ** *		5 53	41
2	210	41.2	40.5	349	34.5	-23 04.8	56	37	21	22	** ** *		6 10	43
3	225	41.3	41.3	4	00.0	-23 10.6	54	29	11	21 06	** ** *		24	45
4	240	41.4	42.0	18	25.4	-23 16.3	52	23	20 02	20 52	23 57	58	36	46
5	255	41.4	+14 42.8	32	50.9	-23 21.8	50	19 17	19 53	20 40	23 45	58	6 47	47
6	270	41.5	+14 43.6	47	16.3	-23 27.2	45	19 04	19 36	20 16	23 21	58	7 09	50
7	285	41.6	44.4	61	41.8	-23 32.4	40	18 53	23	19 58	23 01	58	27	52
8	300	41.7	45.1	76	07.2	-23 37.4	35	44	11	44	22 45	57	43	52
9	315	41.8	45.9	90	32.7	-23 42.3	30	37	19 02	32	31	57	7 56	54
10	330	41.9	46.7	104	58.2	-23 47.1	20	23	18 46	19 13	22 07	57	8 19	55
11	345	41.9	+14 47.4	119	23.6	-23 51.7	10 N	18 11	18 33	18 59	21 46	57	8 39	56
12	0	42.0	+14 48.2	133	49.1	-23 56.1	0	18 01	18 22	18 47	21 27	56	8 57	57
13	15	42.1	48.9	148	14.6	-24 00.4	10 S	17 50	12	37	21 08	56	9 16	58
14	30	42.2	49.7	162	40.1	-24 04.5	20	39	18 01	28	20 47	56	35	60
15	45	42.3	50.5	177	05.6	-24 08.5	30	26	17 51	19	24	55	9 58	61
16	60	42.3	51.2	191	31.2	-24 12.3	35	19	45	15	20 10	55	10 12	61
17	75	42.4	+14 52.0	205	56.7	-24 16.0	40	17 10	17 38	18 10	19 54	54	10 27	62
18	90	42.5	+14 52.8	220	22.3	-24 19.5	45	17 01	17 31	18 06	19 35	53	10 46	63
19	105	42.6	53.5	234	47.9	-24 22.9	50	16 49	23	18 01	12	52	11 09	65
20	120	42.7	54.3	249	13.5	-24 26.1	52	44	19	17 59	19 00	52	20	66
21	135	42.7	55.1	263	39.1	-24 29.2	54	38	15	57	18 47	51	33	66
22	150	42.8	55.8	278	04.8	-24 32.1	56	31	11	55	33	50	11 47	68
23	165	42.9	56.6	292	30.4	-24 34.8	58	24	06	53	18 15	49	12 04	69
24	180	43.0	+14 57.3	306	56.1	-24 37.4	60 S	16 15	17 01	17 50	17 54	47	12 25	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 9 ^h 27 ^m 4		Mag: -3.9 PMG: 13 ^h 42 ^m		Mag: +1.6 PMG: 14 ^h 06 ^m		Mag: -2.1 PMG: 16 ^h 14 ^m		Mag: +0.1 PMG: 14 ^h 16 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	217	45.8	154	39.7	+21 52.3	148 25.6	+22 54.3	116 02.0	+23 12.7	145 35.8	+21 03.3
1	232	48.3	169	39.0	53.0	163 26.2	54.6	131 04.0	12.7	160 37.9	03.3
2	247	50.7	184	38.3	53.7	178 26.9	54.8	146 06.0	12.7	175 40.1	03.3
3	262	53.2	199	37.5	54.3	193 27.5	55.1	161 08.1	12.6	190 42.3	03.4
4	277	55.7	214	36.8	55.0	208 28.2	55.3	176 10.1	12.6	205 44.4	03.4
5	292	58.1	229	36.1	+21 55.6	223 28.8	+22 55.6	191 12.2	+23 12.6	220 46.6	+21 03.5
6	308	00.6	244	35.3	+21 56.3	238 29.5	+22 55.8	206 14.2	+23 12.5	235 48.7	+21 03.5
7	323	03.1	259	34.6	56.9	253 30.2	56.1	221 16.2	12.5	250 50.9	03.5
8	338	05.5	274	33.9	57.6	268 30.8	56.3	236 18.3	12.5	265 53.0	03.6
9	353	08.0	289	33.1	58.2	283 31.5	56.6	251 20.3	12.5	280 55.2	03.6
10	8	10.4	304	32.4	58.8	298 32.1	56.8	266 22.3	12.4	295 57.4	03.7
11	23	12.9	319	31.6	+21 59.5	313 32.8	+22 57.1	281 24.4	+23 12.4	310 59.5	+21 03.7
12	38	15.4	334	30.9	+22 00.1	328 33.4	+22 57.3	296 26.4	+23 12.4	326 01.7	+21 03.8
13	53	17.8	349	30.2	00.8	343 34.1	57.6	311 28.4	12.3	341 03.8	03.8
14	68	20.3	4	29.4	01.4	358 34.8	57.8	326 30.5	12.3	356 06.0	03.8
15	83	22.8	19	28.7	02.1	13 35.4	58.1	341 32.5	12.3	11 08.1	03.9
16	98	25.2	34	27.9	02.7	28 36.1	58.3	356 34.5	12.3	26 10.3	03.9
17	113	27.7	49	27.2	+22 03.3	43 36.7	+22 58.6	11 36.6	+23 12.2	41 12.5	+21 04.0
18	128	30.2	64	26.5	+22 04.0	58 37.4	+22 58.8	26 38.6	+23 12.2	56 14.6	+21 04.0
19	143	32.6	79	25.7	04.6	73 38.0	59.1	41 40.6	12.2	71 16.8	04.0
20	158	35.1	94	25.0	05.2	88 38.7	59.3	56 42.7	12.1	86 18.9	04.1
21	173	37.6	109	24.2	05.9	103 39.4	59.6	71 44.7	12.1	101 21.1	04.1
22	188	40.0	124	23.5	06.5	118 40.0	+22 59.8	86 46.7	12.1	116 23.2	04.2
23	203	42.5	139	22.8	07.1	133 40.7	+23 00.0	101 48.8	12.0	131 25.4	04.2
24	218	44.9	154	22.0	+22 07.8	148 41.3	+23 00.3	116 50.8	+23 12.0	146 27.6	+21 04.2
Dif	—		-7	+6		+7	+2	+20	0		+22

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/9 PMG: 11 ^h 57 ^m 1			Edad: 18 ^d 2 PHE { 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 56/9 PMG: 3 ^h 41 ^m R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	180	43.0	+14	57.3	306	56.1	-24	37.4	25	60 N	1 44	3 06	3 59	1 08 59	6 11 58			
1	195	43.1		58.1	321	21.9	68	39.9	23	58	2 11	20	4 08	0 45 58	34 58			
2	210	43.1		58.9	335	47.6	67	42.2	21	56	31	32	17	26 59	6 53 57			
3	225	43.2	+14	59.6	350	13.4	68	44.3	21	54	2 48	43	24	0 10 59	7 09 57			
4	240	43.3	+15	00.4	4	39.2	68	46.3	20	52	3 02	3 52	31	** ** *	22 57			
5	255	43.4	+15	01.1	19	05.1	69	48.2	19	50	3 14	4 00	4 37	** ** *	7 34 57			
6	270	43.4	+15	01.9	33	31.0	69	49.8	16	45	3 37	4 17	4 50	** ** *	7 59 57			
7	285	43.5		02.6	47	56.9	69	51.4	16	40	3 56	31	5 00	23 59 49	8 19 56			
8	300	43.6		03.4	62	22.8	69	52.8	14	35	4 10	42	09	42 50	35 57			
9	315	43.7		04.2	76	48.8	70	54.0	12	30	22	4 52	17	28 51	8 50 56			
10	330	43.8		04.9	91	14.9	71	55.1	11	20	41	5 08	31	23 04 52	9 14 56			
11	345	43.8	+15	05.7	105	40.9	70	56.1	10	10 N	4 55	5 21	5 43	22 43 53	9 35 55			
12	0	43.9	+15	06.4	120	07.0	71	56.9	8	0	5 07	5 32	5 54	22 23 54	9 54 56			
13	15	44.0		07.2	134	33.2	72	57.5	6	10 S	18	43	6 04	22 04 55	10 14 55			
14	30	44.1		07.9	148	59.4	72	58.0	5	20	27	5 53	16	21 43 56	35 54			
15	45	44.1		08.7	163	25.7	73	58.4	4	30	36	6 04	29	19 57	10 59 54			
16	60	44.2		09.4	177	52.0	73	58.6	2	35	40	10	36	21 05 57	11 13 54			
17	75	44.3	+15	10.2	192	18.3	73	58.7	1	40	5 44	6 16	6 45	20 48 59	11 29 54			
18	90	44.4	+15	11.0	206	44.7	74	58.6	1	45	5 49	6 24	6 54	20 28 60	11 49 53			
19	105	44.4		11.7	221	11.1	74	58.3	3	50	54	32	7 06	20 04 60	12 14 52			
20	120	44.5		12.5	235	37.6	75	58.0	3	52	56	36	12	19 52 61	26 51			
21	135	44.6		13.2	250	04.2	76	57.5	5	54	5 58	40	18	38 62	39 51			
22	150	44.7		14.0	264	30.8	76	56.8	7	56	6 00	44	24	23 63	12 55 50			
23	165	44.7		14.7	278	57.4	76	56.0	8	58	02	49	32	19 04 64	13 13 50			
24	180	44.8	+15	15.5	293	24.2	78	55.1	9	60 S	6 05	6 55	7 40	18 41 66	13 36 48			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 23 ^m 5		Mag: -3.9 PMG: 13 ^h 43 ^m			Mag: +1.6 PMG: 14 ^h 05 ^m			Mag: -2.1 PMG: 16 ^h 10 ^m			Mag: +0.1 PMG: 14 ^h 12 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	218	44.9	154	22.0	+22	07.8	148	41.3	+23	00.3	116	50.8	+23	12.0	146	27.6	+21	04.2
1	233	47.4	169	21.3		08.4	163	42.0		00.5	131	52.8		12.0	161	29.7		04.3
2	248	49.9	184	20.5		09.0	178	42.6		00.8	146	54.9		12.0	176	31.9		04.3
3	263	52.3	199	19.8		09.7	193	43.3		01.0	161	56.9		11.9	191	34.0		04.4
4	278	54.8	214	19.0		10.3	208	44.0		01.3	176	58.9		11.9	206	36.2		04.4
5	293	57.3	229	18.3	+22	10.9	223	44.6	+23	01.5	192	01.0	+23	11.9	221	38.3	+21	04.5
6	308	59.7	244	17.5	+22	11.5	238	45.3	+23	01.8	207	03.0	+23	11.8	236	40.5	+21	04.5
7	324	02.2	259	16.8		12.2	253	45.9		02.0	222	05.0		11.8	251	42.6		04.5
8	339	04.7	274	16.1		12.8	268	46.6		02.2	237	07.1		11.8	266	44.8		04.6
9	354	07.1	289	15.3		13.4	283	47.2		02.5	252	09.1		11.7	281	47.0		04.6
10	9	09.6	304	14.6		14.0	298	47.9		02.7	267	11.1		11.7	296	49.1		04.7
11	24	12.1	319	13.8	+22	14.6	313	48.5	+23	03.0	282	13.2	+23	11.7	311	51.3	+21	04.7
12	39	14.5	334	13.1	+22	15.3	328	49.2	+23	03.2	297	15.2	+23	11.7	326	53.4	+21	04.7
13	54	17.0	349	12.3		15.9	343	49.9		03.4	312	17.2		11.6	341	55.6		04.8
14	69	19.4	4	11.6		16.5	358	50.5		03.7	327	19.2		11.6	356	57.7		04.8
15	84	21.9	19	10.8		17.1	13	51.2		03.9	342	21.3		11.6	11	59.9		04.9
16	99	24.4	34	10.1		17.7	28	51.8		04.2	357	23.3		11.5	27	02.0		04.9
17	114	26.8	49	09.3	+22	18.3	43	52.5	+23	04.4	12	25.3	+23	11.5	42	04.2	+21	04.9
18	129	29.3	64	08.6	+22	18.9	58	53.1	+23	04.6	27	27.4	+23	11.5	57	06.3	+21	05.0
19	144	31.8	79	07.8		19.6	73	53.8		04.9	42	29.4		11.4	72	08.5		05.0
20	159	34.2	94	07.1		20.2	88	54.5		05.1	57	31.4		11.4	87	10.7		05.1
21	174	36.7	109	06.3		20.8	103	55.1		05.3	72	33.5		11.4	102	12.8		05.1
22	189	39.2	124	05.6		21.4	118	55.8		05.6	87	35.5		11.4	117	15.0		05.2
23	204	41.6	139	04.8		22.0	133	56.4		05.8	102	37.5		11.3	132	17.1		05.2
24	219	44.1	154	04.1	+22	22.6	148	57.1	+23	06.1	117	39.5	+23	11.3	147	19.3	+21	05.2
Dif	—		-7		+6	+7		+2	+20		0		+22		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 0			Edad: 19 ^d 2 PHE { 4 ^h : 56/6 12 ^h : 56/3 20 ^h : 56/0 SD: 15°4 PMG: 4 ^h 37 ^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	44.8	+15	15.5	293	24.2	-24	55.1	60 N	20 00	20 54	22 21	2 07 36	7 09 73				
1	195	44.9		16.2	307	50.9	77	54.0	58	19 50	39	21 51	1 43 40	32 70				
2	210	44.9		17.0	322	17.8	79	52.8	56	41	26	29	25 42	7 50 68				
3	225	45.0		17.7	336	44.7	79	51.4	54	33	15	21 11	1 09 43	8 06 66				
4	240	45.1		18.5	351	11.6	79	49.9	52	26	20 05	20 57	0 55 45	19 65				
5	255	45.2	+15	19.2	5	38.6	80	-24 48.3	50	19 20	19 57	20 44	0 43 46	8 31 64				
6	270	45.2	+15	19.9	20	05.7	81	-24 46.5	45	19 06	19 39	20 19	0 19 47	8 56 61				
7	285	45.3		20.7	34	32.8	81	44.6	40	18 55	25	20 01	** ** *	9 15 60				
8	300	45.4		21.4	49	00.0	82	42.6	35	46	13	19 46	** ** *	32 58				
9	315	45.5		22.2	63	27.3	83	40.4	30	38	19 03	34	** ** *	9 46 57				
10	330	45.5		22.9	77	54.6	83	38.1	20	24	18 47	19 14	23 56 46	10 10 55				
11	345	45.6	+15	23.7	92	22.0	84	-24 35.7	10 N	18 12	18 34	18 59	23 36 49	10 30 54				
12	0	45.7	+15	24.4	106	49.5	85	-24 33.1	0	18 00	18 22	18 47	23 17 51	10 50 52				
13	15	45.7		25.2	121	17.0	85	30.4	10 S	17 49	11	36	22 59 53	11 09 51				
14	30	45.8		25.9	135	44.7	87	27.6	20	37	18 00	27	39 55	29 50				
15	45	45.9		26.7	150	12.3	86	24.6	30	30	24	17 49	16 57	11 53 47				
16	60	45.9		27.4	164	40.1	88	21.5	35	17	43	13	22 02 59	12 07 46				
17	75	46.0	+15	28.1	179	07.9	88	-24 18.3	40	17 08	17 36	18 08	21 47 60	12 23 45				
18	90	46.1	+15	28.9	193	35.8	89	-24 15.0	45	16 58	17 29	18 03	21 28 63	12 42 43				
19	105	46.1		29.6	208	03.8	90	11.5	50	46	20	17 58	21 04 66	13 06 40				
20	120	46.2		30.4	222	31.8	90	07.9	52	40	16	56	20 53 68	17 39				
21	135	46.3		31.1	236	59.9	91	04.2	54	34	12	54	40 70	30 37				
22	150	46.4		31.8	251	28.1	92	-24 00.4	56	27	07	51	26 71	13 45 35				
23	165	46.4		32.6	265	56.4	93	-23 56.4	58	19	17 02	49	20 08 75	14 03 32				
24	180	46.5	+15	33.3	280	24.7	93	-23 52.3	60 S	16 10	16 56	17 46	19 47 78	14 24 29				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 9 ^h 19 ^m 5		Mag: -3.9 PMG: 13 ^h 44 ^m			Mag: +1.6 PMG: 14 ^h 04 ^m			Mag: -2.0 PMG: 16 ^h 07 ^m			Mag: +0.1 PMG: 14 ^h 09 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	219	44.1	154	04.1	+22	22.6	148	57.1	+23	06.1	117	39.5	+23	11.3	147	19.3	+21	05.2
1	234	46.6	169	03.3		23.2	163	57.7		06.3	132	41.6		11.3	162	21.4		05.3
2	249	49.0	184	02.5		23.8	178	58.4		06.5	147	43.6		11.2	177	23.6		05.3
3	264	51.5	199	01.8		24.4	193	59.0		06.8	162	45.6		11.2	192	25.7		05.4
4	279	53.9	214	01.0		25.0	208	59.7		07.0	177	47.6		11.2	207	27.9		05.4
5	294	56.4	229	00.3	+22	25.6	224	00.4	+23	07.2	192	49.7	+23	11.1	222	30.0	+21	05.4
6	309	58.9	243	59.5	+22	26.2	239	01.0	+23	07.5	207	51.7	+23	11.1	237	32.2	+21	05.5
7	325	01.3	258	58.8		26.8	254	01.7		07.7	222	53.7		11.1	252	34.4		05.5
8	340	03.8	273	58.0		27.4	269	02.3		07.9	237	55.8		11.0	267	36.5		05.6
9	355	06.3	288	57.3		28.0	284	03.0		08.2	252	57.8		11.0	282	38.7		05.6
10	10	08.7	303	56.5		28.6	299	03.6		08.4	267	59.8		11.0	297	40.8		05.6
11	25	11.2	318	55.7	+22	29.2	314	04.3	+23	08.6	283	01.8	+23	11.0	312	43.0	+21	05.7
12	40	13.7	333	55.0	+22	29.8	329	04.9	+23	08.9	298	03.9	+23	10.9	327	45.1	+21	05.7
13	55	16.1	348	54.2		30.4	344	05.6		09.1	313	05.9		10.9	342	47.3		05.8
14	70	18.6	3	53.5		31.0	359	06.2		09.3	328	07.9		10.9	357	49.4		05.8
15	85	21.1	18	52.7		31.6	14	06.9		09.6	343	09.9		10.8	12	51.6		05.9
16	100	23.5	33	52.0		32.1	29	07.6		09.8	358	12.0		10.8	27	53.7		05.9
17	115	26.0	48	51.2	+22	32.7	44	08.2	+23	10.0	13	14.0	+23	10.8	42	55.9	+21	05.9
18	130	28.4	63	50.4	+22	33.3	59	08.9	+23	10.2	28	16.0	+23	10.7	57	58.0	+21	06.0
19	145	30.9	78	49.7		33.9	74	09.5		10.5	43	18.0		10.7	73	00.2		06.0
20	160	33.4	93	48.9		34.5	89	10.2		10.7	58	20.1		10.7	88	02.3		06.1
21	175	35.8	108	48.2		35.1	104	10.8		10.9	73	22.1		10.6	103	04.5		06.1
22	190	38.3	123	47.4		35.6	119	11.5		11.2	88	24.1		10.6	118	06.6		06.1
23	205	40.8	138	46.6		36.2	134	12.1		11.4	103	26.1		10.6	133	08.8		06.2
24	220	43.2	153	45.9	+22	36.8	149	12.8	+23	11.6	118	28.2	+23	10.6	148	11.0	+21	06.2
Dif	—		-8			+6	+7		+2	+20			0		+22			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 56 ^m 8			Edad: 20 ^d 2 PHE { 4 ^h : 55'8 12 ^h : 55'5 20 ^h : 55'3 SD: 15°2 PMG: 5 ^h 30 ^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	h	m
0	180	46.5	+15	33.3	280	24.7	-23	52.3	60 N	1 32	2 59	3 53	2 43	22	8 22	82		
1	195	46.6		34.1	294	53.1	94	48.1	58	2 02	3 14	4 03		23 26	42 77			
2	210	46.6		34.8	309	21.6	95	43.8	56		25	27 12	2 07	28	8 58	74		
3	225	46.7		35.5	323	50.2	96	39.3	54		42	38 20	1 52	32	9 12	72		
4	240	46.8		36.3	338	18.8	96	34.8	52	2 57	48	27	40	33	24	70		
5	255	46.8	+15	37.0	352	47.5	97	-23	50	3 09	3 56	4 33	1 29	35	9 35	68		
6	270	46.9	+15	37.8	7	16.3	98	-23	45	3 34	4 14	4 47	1 06	38	9 57	64		
7	285	47.0		38.5	21	45.2	99	20.4	40	3 53	29	4 58	0 48	40	10 15	62		
8	300	47.0		39.2	36	14.2	100	15.4	35	4 08	40	5 07		32 43	30 59			
9	315	47.1		40.0	50	43.2	100	10.3	30		20	4 50	0 19	44	10 43	58		
10	330	47.1		40.7	65	12.3	101	-23	20		39	5 07	30	** ** *	11 05	55		
11	345	47.2	+15	41.4	79	41.5	102	-22	10 N	4 55	5 20	5 42	** ** *	**	11 24	52		
12	0	47.3	+15	42.2	94	10.8	103	-22	0	5 07	5 32	5 53	** ** *	**	11 42	49		
13	15	47.3		42.9	108	40.2	104	48.6	10 S		18	43	6 05	23 52	50	12 00	47	
14	30	47.4		43.6	123	09.6	104	43.0	20		27	5 54	17	34 53	19 44			
15	45	47.5		44.4	137	39.1	105	37.2	30		37	6 05	30	13 57	40 42			
16	60	47.5		45.1	152	08.7	106	31.3	35		41	11 38	23 01	59	12 53	39		
17	75	47.6	+15	45.8	166	38.4	107	-22	40	5 46	6 18	6 47	22 47	61	13 08	37		
18	90	47.7	+15	46.6	181	08.1	107	-22	45	5 51	6 26	6 57	22 31	64	13 25	34		
19	105	47.7		47.3	195	38.0	109	13.0	50		56	35 7 09		10 68	46 31			
20	120	47.8		48.0	210	07.9	109	06.7	52	5 59	39	15	22 01	69	13 56	29		
21	135	47.8		48.8	224	37.9	110	-22	54	6 01	43	21	21 50	71	14 07	27		
22	150	47.9		49.5	239	08.0	111	-21	56		03	48 28		37 75	20 25			
23	165	48.0		50.2	253	38.1	111	47.2	58		06	53 36		23 77	35 21			
24	180	48.0	+15	50.9	268	08.4	113	-21	60 S	6 09	6 59	7 45	21 05	82	14 53	17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 15 ^m 6		Mag: -3.9 PMG: 13 ^h 46 ^m		Mag: +1.6 PMG: 14 ^h 03 ^m		Mag: -2.0 PMG: 16 ^h 04 ^m		Mag: +0.1 PMG: 14 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	220	43.2	153	45.9	+22	36.8	149	12.8	+23	11.6	118	28.2	+23	10.6	148	11.0	+21	06.2
1	235	45.7	168	45.1		37.4	164	13.4		11.8	133	30.2		10.5	163	13.1		06.3
2	250	48.2	183	44.4		38.0	179	14.1		12.1	148	32.2		10.5	178	15.3		06.3
3	265	50.6	198	43.6		38.5	194	14.8		12.3	163	34.2		10.5	193	17.4		06.3
4	280	53.1	213	42.8		39.1	209	15.4		12.5	178	36.2		10.4	208	19.6		06.4
5	295	55.5	228	42.1	+22	39.7	224	16.1	+23	12.8	193	38.3	+23	10.4	223	21.7	+21	06.4
6	310	58.0	243	41.3	+22	40.3	239	16.7	+23	13.0	208	40.3	+23	10.4	238	23.9	+21	06.5
7	326	00.5	258	40.5		40.8	254	17.4		13.2	223	42.3		10.3	253	26.0		06.5
8	341	02.9	273	39.8		41.4	269	18.0		13.4	238	44.3		10.3	268	28.2		06.5
9	356	05.4	288	39.0		42.0	284	18.7		13.7	253	46.4		10.3	283	30.3		06.6
10	11	07.9	303	38.2		42.5	299	19.3		13.9	268	48.4		10.2	298	32.5		06.6
11	26	10.3	318	37.5	+22	43.1	314	20.0	+23	14.1	283	50.4	+23	10.2	313	34.6	+21	06.7
12	41	12.8	333	36.7	+22	43.7	329	20.6	+23	14.3	298	52.4	+23	10.2	328	36.8	+21	06.7
13	56	15.3	348	35.9		44.2	344	21.3		14.5	313	54.4		10.1	343	38.9		06.8
14	71	17.7	3	35.2		44.8	359	22.0		14.8	328	56.5		10.1	358	41.1		06.8
15	86	20.2	18	34.4		45.4	14	22.6		15.0	343	58.5		10.1	13	43.2		06.8
16	101	22.7	33	33.6		45.9	29	23.3		15.2	359	00.5		10.0	28	45.4		06.9
17	116	25.1	48	32.9	+22	46.5	44	23.9	+23	15.4	14	02.5	+23	10.0	43	47.5	+21	06.9
18	131	27.6	63	32.1	+22	47.1	59	24.6	+23	15.7	29	04.5	+23	10.0	58	49.7	+21	07.0
19	146	30.0	78	31.3		47.6	74	25.2		15.9	44	06.6		09.9	73	51.8		07.0
20	161	32.5	93	30.6		48.2	89	25.9		16.1	59	08.6		09.9	88	54.0		07.0
21	176	35.0	108	29.8		48.7	104	26.5		16.3	74	10.6		09.9	103	56.1		07.1
22	191	37.4	123	29.0		49.3	119	27.2		16.5	89	12.6		09.9	118	58.3		07.1
23	206	39.9	138	28.3		49.8	134	27.8		16.8	104	14.6		09.8	134	00.4		07.2
24	221	42.4	153	27.5	+22	50.4	149	28.5	+23	17.0	119	16.7	+23	09.8	149	02.6	+21	07.2
Dif	—		-8		+6		+7		+2		+20		0		+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 21 ^d 2 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8											
	PMG: 11 ^h 56 ^m 8			PMG: 6 ^h 20 ^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	180	48.0	+15 50.9	268	08.4	-21 40.5	68	60 N	20 05	21 00	22 33	3 05 13	9 44 82		
1	195	48.1	51.7	282	38.7 ¹¹³	33.7	68	58	19 54	20 44	21 59	2 49 17	9 59 79		
2	210	48.2	52.4	297	09.1 ¹¹⁴	26.8	69	56	45	31	35	35 21	10 12 75		
3	225	48.2	53.1	311	39.6 ¹¹⁵	19.8	70	54	37	19	17	24 23	24 72		
4	240	48.3	53.9	326	10.1 ¹¹⁵	12.7	71	52	29	09	21 01	13 25	34 70		
5	255	48.3	+15 54.6	340	40.8 ¹¹⁷	-21 05.5	72	50	19 23	20 00	20 48	2 04 27	10 43 68		
6	270	48.4	+15 55.3	355	11.5 ¹¹⁷	-20 58.2	73	45	19 09	19 42	20 23	1 44 31	11 01 64		
7	285	48.5	56.0	9	42.3 ¹¹⁸	50.9	73	40	18 57	27	20 03	28 34	17 60		
8	300	48.5	56.8	24	13.2 ¹¹⁹	43.4	75	35	48	15	19 48	15 36	29 59		
9	315	48.6	57.5	38	44.1 ¹¹⁹	35.9	75	30	39	19 05	35	1 03 38	11 41 55		
10	330	48.6	58.2	53	15.2 ¹²¹	28.2	77	20	25	18 48	15	0 42 42	12 00 52		
11	345	48.7	+15 58.9	67	46.3 ¹²¹	-20 20.5	77	10 N	18 12	18 34	19 00	0 25 44	12 16 49		
12	0	48.7	+15 59.7	82	17.5 ¹²²	-20 12.7	78	0	18 00	18 22	18 47	0 08 48	12 31 46		
13	15	48.8	+16 00.4	96	48.7 ¹²²	-20 04.8	79	10 S	17 49	18 10	36	** ** *	12 47 43		
14	30	48.9	01.1	111	20.1 ¹²⁴	-19 56.8	80	20	36	17 59	26	** ** *	13 03 40		
15	45	48.9	01.8	125	51.5 ¹²⁴	48.8	80	30	23	47	16	** ** *	22 36		
16	60	49.0	02.5	140	23.0 ¹²⁵	40.6	82	35	15	41	11	** ** *	32 34		
17	75	49.0	+16 03.3	154	54.6 ¹²⁶	-19 32.4	82	40	17 05	17 34	18 06	23 48 60	13 45 31		
18	90	49.1	+16 04.0	169	26.2 ¹²⁶	-19 24.1	83	45	16 55	17 26	18 01	23 35 63	13 59 28		
19	105	49.1	04.7	183	58.0 ¹²⁸	15.7	84	50	42	17	17 55	18 68	14 17 24		
20	120	49.2	05.4	198	29.8 ¹²⁸	-19 07.3	84	52	36	13	53	10 70	25 22		
21	135	49.3	06.1	213	01.6 ¹²⁸	-18 58.7	86	54	30	08	50	23 01 72	34 20		
22	150	49.3	06.9	227	33.6 ¹³⁰	50.1	86	56	23	17 03	48	22 52 74	45 17		
23	165	49.4	07.6	242	05.6 ¹³⁰	41.4	87	58	14	16 58	45	40 78	14 56 15		
24	180	49.4	+16 08.3	256	37.7 ¹³¹	-18 32.6	88	60 S	16 05	16 51	17 42	22 27 82	15 10 11		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 9 ^h 11 ^m 7		Mag: -3.9 PMG: 13 ^h 47 ^m			Mag: +1.6 PMG: 14 ^h 01 ^m			Mag: -2.0 PMG: 16 ^h 01 ^m			Mag: +0.1 PMG: 14 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	221	42.4	153 27.5	+22 50.4	149 28.5	+23 17.0	119 16.7	+23 09.8	149 02.6	+21 07.2					
1	236	44.8	168 26.7	50.9	164 29.1	17.2	134 18.7	09.8	164 04.7	07.2					
2	251	47.3	183 25.9	51.5	179 29.8	17.4	149 20.7	09.7	179 06.9	07.3					
3	266	49.8	198 25.2	52.0	194 30.4	17.6	164 22.7	09.7	194 09.0	07.3					
4	281	52.2	213 24.4	52.6	209 31.1	17.9	179 24.7	09.7	209 11.2	07.4					
5	296	54.7	228 23.6	+22 53.1	224 31.8	+23 18.1	194 26.7	+23 09.6	224 13.3	+21 07.4					
6	311	57.2	243 22.9	+22 53.7	239 32.4	+23 18.3	209 28.8	+23 09.6	239 15.5	+21 07.4					
7	326	59.6	258 22.1	54.2	254 33.1	18.5	224 30.8	09.6	254 17.6	07.5					
8	342	02.1	273 21.3	54.8	269 33.7	18.7	239 32.8	09.5	269 19.8	07.5					
9	357	04.5	288 20.5	55.3	284 34.4	18.9	254 34.8	09.5	284 21.9	07.6					
10	12	07.0	303 19.8	55.9	299 35.0	19.2	269 36.8	09.5	299 24.1	07.6					
11	27	09.5	318 19.0	+22 56.4	314 35.7	+23 19.4	284 38.9	+23 09.4	314 26.2	+21 07.7					
12	42	11.9	333 18.2	+22 56.9	329 36.3	+23 19.6	299 40.9	+23 09.4	329 28.4	+21 07.7					
13	57	14.4	348 17.4	57.5	344 37.0	19.8	314 42.9	09.4	344 30.5	07.7					
14	72	16.9	3 16.7	58.0	359 37.6	20.0	329 44.9	09.3	359 32.7	07.8					
15	87	19.3	18 15.9	58.6	14 38.3	20.2	344 46.9	09.3	14 34.8	07.8					
16	102	21.8	33 15.1	59.1	29 38.9	20.4	359 48.9	09.3	29 37.0	07.9					
17	117	24.3	48 14.3	+22 59.6	44 39.6	+23 20.7	14 51.0	+23 09.2	44 39.1	+21 07.9					
18	132	26.7	63 13.6	+23 00.2	59 40.2	+23 20.9	29 53.0	+23 09.2	59 41.3	+21 07.9					
19	147	29.2	78 12.8	00.7	74 40.9	21.1	44 55.0	09.2	74 43.4	08.0					
20	162	31.6	93 12.0	01.2	89 41.5	21.3	59 57.0	09.1	89 45.6	08.0					
21	177	34.1	108 11.2	01.8	104 42.2	21.5	74 59.0	09.1	104 47.7	08.1					
22	192	36.6	123 10.4	02.3	119 42.9	21.7	90 01.0	09.1	119 49.9	08.1					
23	207	39.0	138 09.7	02.8	134 43.5	21.9	105 03.0	09.0	134 52.0	08.1					
24	222	41.5	153 08.9	+23 03.3	149 44.2	+23 22.1	120 05.1	+23 09.0	149 54.2	+21 08.2					
Dif	—		-8 +5		+7 +2		+20 0		+21						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 7			Edad: 22 ^d 2 SD: 14'9 PMG: 7 ^h 07 ^m	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°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	49.4	+16 08.3	256	37.7	-18 32.6	60 N	1 20	2 52	3 48	3 18	9	11 06	81	
1	195	49.5	09.0	271	09.9 ¹³²	23.8 ⁸⁸	58	1 54	3 09	3 59	3 06	12	18 77		
2	210	49.5	09.7	285	42.1 ¹³²	14.8 ⁹⁰	56	2 18	22	4 08	2 56	15	27 75		
3	225	49.6	10.4	300	14.4 ¹³³	-18 05.9 ⁸⁹	54	36	34	16	47	17	36 72		
4	240	49.6	11.2	314	46.8 ¹³⁴	-17 56.8 ⁹¹	52	2 52	44	23	38	20	44 69		
5	255	49.7	+16 11.9	329	19.3 ¹³⁵	-17 47.6 ⁹²	50	3 05	3 53	4 30	2 31	22	11 51	67	
6	270	49.8	+16 12.6	343	51.8 ¹³⁵	-17 38.4 ⁹²	45	3 30	4 11	4 44	2 15	26	12 05	63	
7	285	49.8	13.3	358	24.4 ¹³⁶	29.2 ⁹²	40	3 50	26	4 56	2 02	29	17 60		
8	300	49.9	14.0	12	57.0 ¹³⁶	19.8 ⁹⁴	35	4 05	38	5 05	1 51	31	28 56		
9	315	49.9	14.7	27	29.8 ¹³⁸	10.4 ⁹⁴	30	18	4 48	14	41	34	36 55		
10	330	50.0	15.5	42	02.5 ¹³⁷	-17 00.9 ⁹⁵	20	38	5 05	29	24	38	12 52	50	
11	345	50.0	+16 16.2	56	35.4 ¹³⁹	-16 51.4 ⁹⁵	10 N	4 54	5 19	5 41	1 09	42	13 05	47	
12	0	50.1	+16 16.9	71	08.3 ¹³⁹	-16 41.7 ⁹⁷	0	5 07	5 32	5 53	0 56	44	13 17	44	
13	15	50.1	17.6	85	41.3 ¹⁴⁰	32.1 ⁹⁶	10 S	18	43	6 05	42	47	30 40		
14	30	50.2	18.3	100	14.4 ¹⁴¹	22.3 ⁹⁸	20	28	5 54	17	27	51	43 36		
15	45	50.2	19.0	114	47.5 ¹⁴¹	12.5 ⁹⁸	30	38	6 06	31	10	55	13 58	32	
16	60	50.3	19.7	129	20.7 ¹⁴²	-16 02.6 ⁹⁹	35	43	13	39	0 00	57	14 06	30	
17	75	50.3	+16 20.4	143	53.9 ¹⁴²	-15 52.7 ⁹⁹	40	5 48	6 20	6 49	** * *	**	14 16	27	
18	90	50.4	+16 21.1	158	27.2 ¹⁴³	-15 42.7 ¹⁰⁰	45	5 53	6 28	6 59	** * *	**	14 27	24	
19	105	50.4	21.8	173	00.6 ¹⁴⁴	32.7 ¹⁰⁰	50	5 59	38	7 12	** * *	**	41 20		
20	120	50.5	22.6	187	34.0 ¹⁴⁴	22.5 ¹⁰²	52	6 01	42	18	** * *	**	47 18		
21	135	50.5	23.3	202	07.5 ¹⁴⁵	12.4 ¹⁰¹	54	04	46	25	** * *	**	14 54	16	
22	150	50.6	24.0	216	41.0 ¹⁴⁵	-15 02.1 ¹⁰³	56	07	51	32	** * *	**	15 02	14	
23	165	50.6	24.7	231	14.6 ¹⁴⁶	-14 51.9 ¹⁰²	58	10	6 57	40	23 58	77	11 11		
24	180	50.7	+16 25.4	245	48.3 ¹⁴⁷	-14 41.5 ¹⁰⁴	60 S	6 13	7 03	7 50	23 49	80	15 21	7	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 07 ^m 7			Mag: -3.9 PMG: 13 ^h 48 ^m			Mag: +1.6 PMG: 14 ^h 00 ^m			Mag: -2.0 PMG: 15 ^h 58 ^m			Mag: +0.1 PMG: 13 ^h 58 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	222	41.5	153 08.9	+23 03.3	149 44.2	+23 22.1	120 05.1	+23 09.0	149 54.2	+21 08.2					
1	237	44.0	168 08.1	03.9	164 44.8	22.4	135 07.1	09.0	164 56.3	08.2					
2	252	46.4	183 07.3	04.4	179 45.5	22.6	150 09.1	08.9	179 58.5	08.3					
3	267	48.9	198 06.5	04.9	194 46.1	22.8	165 11.1	08.9	195 00.6	08.3					
4	282	51.4	213 05.8	05.4	209 46.8	23.0	180 13.1	08.9	210 02.8	08.3					
5	297	53.8	228 05.0	+23 06.0	224 47.4	+23 23.2	195 15.1	+23 08.8	225 04.9	+21 08.4					
6	312	56.3	243 04.2	+23 06.5	239 48.1	+23 23.4	210 17.1	+23 08.8	240 07.1	+21 08.4					
7	327	58.8	258 03.4	07.0	254 48.7	23.6	225 19.2	08.8	255 09.2	08.5					
8	343	01.2	273 02.6	07.5	269 49.4	23.8	240 21.2	08.7	270 11.4	08.5					
9	358	03.7	288 01.9	08.0	284 50.0	24.0	255 23.2	08.7	285 13.5	08.5					
10	13	06.1	303 01.1	08.5	299 50.7	24.2	270 25.2	08.7	300 15.7	08.6					
11	28	08.6	318 00.3	+23 09.1	314 51.3	+23 24.4	285 27.2	+23 08.6	315 17.8	+21 08.6					
12	43	11.1	332 59.5	+23 09.6	329 52.0	+23 24.7	300 29.2	+23 08.6	330 20.0	+21 08.7					
13	58	13.5	347 58.7	10.1	344 52.6	24.9	315 31.2	08.6	345 22.1	08.7					
14	73	16.0	2 57.9	10.6	359 53.3	25.1	330 33.2	08.5	0 24.2	08.8					
15	88	18.5	17 57.2	11.1	14 53.9	25.3	345 35.3	08.5	15 26.4	08.8					
16	103	20.9	32 56.4	11.6	29 54.6	25.5	0 37.3	08.5	30 28.5	08.8					
17	118	23.4	47 55.6	+23 12.1	44 55.2	+23 25.7	15 39.3	+23 08.4	45 30.7	+21 08.9					
18	133	25.9	62 54.8	+23 12.6	59 55.9	+23 25.9	30 41.3	+23 08.4	60 32.8	+21 08.9					
19	148	28.3	77 54.0	13.1	74 56.6	26.1	45 43.3	08.4	75 35.0	09.0					
20	163	30.8	92 53.2	13.6	89 57.2	26.3	60 45.3	08.3	90 37.1	09.0					
21	178	33.3	107 52.4	14.1	104 57.9	26.5	75 47.3	08.3	105 39.3	09.0					
22	193	35.7	122 51.7	14.7	119 58.5	26.7	90 49.3	08.3	120 41.4	09.1					
23	208	38.2	137 50.9	15.2	134 59.2	26.9	105 51.3	08.2	135 43.6	09.1					
24	223	40.6	152 50.1	+23 15.7	149 59.8	+23 27.1	120 53.3	+23 08.2	150 45.7	+21 09.2					
Dif	—		-8	+5	+7	+2	+20	0	+21	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 6			Edad: 23 ^d 2 PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/1 SD: 14°8 PMG: 7 ^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
0	180	50.7	+16	25.4	245	48.3	-14	41.5	60 N	20 10	21 06	22 46	3 27	6	12 27	80
1	195	50.7		26.1	260	22.0 ¹⁴⁷		31.1 ¹⁰⁴	58	19 59	20 50	22 08	18	10	35	76
2	210	50.8		26.8	274	55.8 ¹⁴⁸		20.7 ¹⁰⁴	56	49	35	21 42	11	12	42	73
3	225	50.8		27.5	289	29.6 ¹⁴⁸	-14	10.2 ¹⁰⁵	54	40	23	22	3 04	14	48	70
4	240	50.9		28.2	304	03.5 ¹⁴⁹	-13	59.6 ¹⁰⁶	52	33	13	21 06	2 58	16	53	69
5	255	50.9	+16	28.9	318	37.4 ¹⁴⁹	-13	49.0 ¹⁰⁶	50	19 26	20 04	20 52	2 53	18	12 58	66
6	270	51.0	+16	29.6	333	11.4 ¹⁵⁰	-13	38.3 ¹⁰⁷	45	19 11	19 44	20 26	2 41	22	13 08	63
7	285	51.0		30.3	347	45.4 ¹⁵⁰		27.6 ¹⁰⁷	40	18 59	29	20 06	31	25	17	59
8	300	51.1		31.0	2	19.5 ¹⁵¹		16.9 ¹⁰⁷	35	49	17	19 50	22	29	24	56
9	315	51.1		31.7	16	53.7 ¹⁵²	-13	06.1 ¹⁰⁸	30	40	19 06	37	15	31	31	53
10	330	51.2		32.4	31	27.9 ¹⁵²	-12	55.2 ¹⁰⁹	20	25	18 49	16	2 02	35	42	49
11	345	51.2	+16	33.1	46	02.1 ¹⁵²	-12	44.3 ¹⁰⁹	10 N	18 12	18 34	19 00	1 51	38	13 52	45
12	0	51.3	+16	33.8	60	36.4 ¹⁵³	-12	33.3 ¹¹⁰	0	18 00	18 22	18 47	1 40	42	14 01	41
13	15	51.3		34.5	75	10.7 ¹⁵³		22.3 ¹¹⁰	10 S	17 48	18 10	35	29	46	10	37
14	30	51.3		35.2	89	45.1 ¹⁵⁴		11.3 ¹¹⁰	20	35	17 58	25	18	49	19	34
15	45	51.4		35.9	104	19.5 ¹⁵⁴	-12	00.2 ¹¹¹	30	21	46	14	1 05	53	30	30
16	60	51.4		36.6	118	54.0 ¹⁵⁵	-11	49.1 ¹¹¹	35	13	39	09	0 57	56	36	27
17	75	51.5	+16	37.3	133	28.5 ¹⁵⁵	-11	37.9 ¹¹²	40	17 03	17 32	18 04	0 48	59	14 43	24
18	90	51.5	+16	38.0	148	03.1 ¹⁵⁶	-11	26.7 ¹¹²	45	16 52	17 23	17 58	0 38	63	14 51	21
19	105	51.6		38.7	162	37.6 ¹⁵⁵		15.4 ¹¹³	50	39	14	52	26	67	15 01	17
20	120	51.6		39.4	177	12.3 ¹⁵⁷	-11	04.1 ¹¹³	52	33	09	50	20	69	05	16
21	135	51.7		40.1	191	47.0 ¹⁵⁷	-10	52.8 ¹¹³	54	26	17 04	47	14	71	10	13
22	150	51.7		40.8	206	21.7 ¹⁵⁷		41.4 ¹¹⁴	56	18	16 59	44	0 06	74	16	11
23	165	51.8		41.5	220	56.4 ¹⁵⁷		30.0 ¹¹⁴	58	10	53	41	** ** *	**	22	8
24	180	51.8	+16	42.2	235	31.2 ¹⁵⁸	-10	18.5 ¹¹⁵	60 S	16 00	16 47	17 37	** ** *	**	15 28	6
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 9 ^h 03 ^m 8		Mag: -3.9 PMG: 13 ^h 49 ^m			Mag: +1.6 PMG: 13 ^h 59 ^m			Mag: -2.0 PMG: 15 ^h 54 ^m			Mag: +0.1 PMG: 13 ^h 55 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	223	40.6	152	50.1	+23 15.7	149 59.8	+23 27.1	120 53.3	+23 08.2	150 45.7	+21 09.2					
1	238	43.1	167	49.3	16.2	165 00.5	27.3	135 55.4	08.2	165 47.9	09.2					
2	253	45.6	182	48.5	16.6	180 01.1	27.5	150 57.4	08.1	180 50.0	09.2					
3	268	48.0	197	47.7	17.1	195 01.8	27.7	165 59.4	08.1	195 52.2	09.3					
4	283	50.5	212	46.9	17.6	210 02.4	27.9	181 01.4	08.1	210 54.3	09.3					
5	298	53.0	227	46.2	+23 18.1	225 03.1	+23 28.1	196 03.4	+23 08.0	225 56.5	+21 09.4					
6	313	55.4	242	45.4	+23 18.6	240 03.7	+23 28.3	211 05.4	+23 08.0	240 58.6	+21 09.4					
7	328	57.9	257	44.6	19.1	255 04.4	28.5	226 07.4	08.0	256 00.7	09.4					
8	344	00.4	272	43.8	19.6	270 05.0	28.7	241 09.4	07.9	271 02.9	09.5					
9	359	02.8	287	43.0	20.1	285 05.7	28.9	256 11.4	07.9	286 05.0	09.5					
10	14	05.3	302	42.2	20.6	300 06.3	29.1	271 13.4	07.9	301 07.2	09.6					
11	29	07.7	317	41.4	+23 21.1	315 07.0	+23 29.3	286 15.4	+23 07.8	316 09.3	+21 09.6					
12	44	10.2	332	40.6	+23 21.6	330 07.6	+23 29.5	301 17.5	+23 07.8	331 11.5	+21 09.6					
13	59	12.7	347	39.8	22.1	345 08.3	29.7	316 19.5	07.8	346 13.6	09.7					
14	74	15.1	2	39.0	22.5	0 08.9	29.9	331 21.5	07.7	1 15.8	09.7					
15	89	17.6	17	38.2	23.0	15 09.6	30.1	346 23.5	07.7	16 17.9	09.8					
16	104	20.1	32	37.5	23.5	30 10.2	30.3	1 25.5	07.7	31 20.1	09.8					
17	119	22.5	47	36.7	+23 24.0	45 10.9	+23 30.5	16 27.5	+23 07.6	46 22.2	+21 09.8					
18	134	25.0	62	35.9	+23 24.5	60 11.5	+23 30.7	31 29.5	+23 07.6	61 24.4	+21 09.9					
19	149	27.5	77	35.1	24.9	75 12.2	30.9	46 31.5	07.6	76 26.5	09.9					
20	164	29.9	92	34.3	25.4	90 12.8	31.1	61 33.5	07.5	91 28.6	10.0					
21	179	32.4	107	33.5	25.9	105 13.5	31.3	76 35.5	07.5	106 30.8	10.0					
22	194	34.9	122	32.7	26.4	120 14.1	31.5	91 37.5	07.4	121 32.9	10.1					
23	209	37.3	137	31.9	26.8	135 14.8	31.7	106 39.5	07.4	136 35.1	10.1					
24	224	39.8	152	31.1	+23 27.3	150 15.4	+23 31.9	121 41.5	+23 07.4	151 37.2	+21 10.1					
Dif	—		-8	+5		+7	+2	+20	0		+21	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: 24 ^d 2 PHE { SD: 14'7 PMG: 8 ^h 32 ^m R°: 41 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	51.8	+16	42.2	235	31.2	-10	18.5	60 N	1 06	2 46	3 43	3 33	5	13	47	77
1	195	51.8		42.9	250	06.1 ¹⁵⁹	-10	07.0 ¹¹⁵	58	1 45	3 03	3 54	28	7		51	75
2	210	51.9		43.6	264	40.9 ¹⁵⁸	-9	55.4 ¹¹⁶	56	2 11	17	4 04	23	10		55	72
3	225	51.9		44.3	279	15.8 ¹⁵⁹		43.9 ¹¹⁵	54	30	29	12	18	13	13	58	70
4	240	52.0		45.0	293	50.7 ¹⁵⁹		32.3 ¹¹⁶	52	2 46	40	20	14	15	14	02	67
5	255	52.0	+16	45.7	308	25.7 ¹⁶⁰	-9	20.6 ¹¹⁷	50	3 00	3 49	4 27	3 11	16	14	04	66
6	270	52.0	+16	46.4	323	00.7 ¹⁶⁰	-9	08.9 ¹¹⁷	45	3 27	4 08	4 41	3 03	20	14	11	61
7	285	52.1		47.1	337	35.7 ¹⁶⁰	-8	57.2 ¹¹⁷	40	3 47	23	4 53	2 56	24		16	58
8	300	52.1		47.7	352	10.8 ¹⁶¹		45.5 ¹¹⁷	35	4 03	36	5 03	51	26		20	55
9	315	52.2		48.4	6	45.9 ¹⁶¹		33.7 ¹¹⁸	30	16	4 47	12	46	29		24	53
10	330	52.2		49.1	21	21.0 ¹⁶¹		21.9 ¹¹⁸	20	37	5 04	28	37	33		31	48
11	345	52.3	+16	49.8	35	56.2 ¹⁶²	-8	10.0 ¹¹⁹	10 N	4 53	5 19	5 41	2 29	38	14	37	44
12	0	52.3	+16	50.5	50	31.3 ¹⁶¹	-7	58.2 ¹¹⁸	0	5 06	5 31	5 53	2 22	41	14	42	40
13	15	52.3		51.2	65	06.5 ¹⁶²		46.2 ¹²⁰	10 S	18	43	6 05	15	44		47	37
14	30	52.4		51.9	79	41.8 ¹⁶³		34.3 ¹¹⁹	20	29	5 55	18	2 07	49	14	53	33
15	45	52.4		52.6	94	17.0 ¹⁶²		22.3 ¹²⁰	30	39	6 08	33	1 58	53	15	00	28
16	60	52.5		53.3	108	52.3 ¹⁶³	-7	10.4 ¹¹⁹	35	44	14	41	53	56		03	26
17	75	52.5	+16	53.9	123	27.6 ¹⁶³	-6	58.3 ¹²¹	40	5 50	6 22	6 50	1 47	59	15	07	23
18	90	52.5	+16	54.6	138	02.9 ¹⁶³	-6	46.3 ¹²⁰	45	5 55	6 30	7 02	1 41	61	15	12	20
19	105	52.6		55.3	152	38.2 ¹⁶³		34.2 ¹²¹	50	6 01	40	15	33	66		18	16
20	120	52.6		56.0	167	13.6 ¹⁶⁴		22.1 ¹²¹	52	04	45	21	29	68		21	14
21	135	52.6		56.7	181	49.0 ¹⁶⁴	-6	10.0 ¹²¹	54	07	50	28	25	70		23	12
22	150	52.7		57.4	196	24.4 ¹⁶⁴	-5	57.9 ¹²¹	56	10	6 55	36	20	72		27	9
23	165	52.7		58.1	210	59.8 ¹⁶⁴		45.7 ¹²²	58	13	7 01	45	15	75		30	7
24	180	52.8	+16	58.7	225	35.2 ¹⁶⁴	-5	33.5 ¹²²	60 S	6 17	7 07	7 55	1 09	78	15	34	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 59 ^m 9		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: +1.6 PMG: 13 ^h 58 ^m		Mag: -2.0 PMG: 15 ^h 51 ^m		Mag: +0.1 PMG: 13 ^h 52 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	224	39.8	152	31.1	+23	27.3	150	15.4	+23	31.9
1	239	42.2	167	30.3		27.8	165	16.1		32.1
2	254	44.7	182	29.5		28.3	180	16.7		32.3
3	269	47.2	197	28.7		28.7	195	17.4		32.4
4	284	49.6	212	27.9		29.2	210	18.0		32.6
5	299	52.1	227	27.1	+23	29.7	225	18.7	+23	32.8
6	314	54.6	242	26.3	+23	30.1	240	19.3	+23	33.0
7	329	57.0	257	25.5		30.6	255	20.0		33.2
8	344	59.5	272	24.7		31.1	270	20.6		33.4
9	0	02.0	287	23.9		31.5	285	21.3		33.6
10	15	04.4	302	23.1		32.0	300	21.9		33.8
11	30	06.9	317	22.3	+23	32.4	315	22.6	+23	34.0
12	45	09.4	332	21.6	+23	32.9	330	23.2	+23	34.2
13	60	11.8	347	20.8		33.4	345	23.9		34.4
14	75	14.3	2	20.0		33.8	0	24.5		34.5
15	90	16.7	17	19.2		34.3	15	25.2		34.7
16	105	19.2	32	18.4		34.7	30	25.8		34.9
17	120	21.7	47	17.6	+23	35.2	45	26.5	+23	35.1
18	135	24.1	62	16.8	+23	35.6	60	27.2	+23	35.3
19	150	26.6	77	16.0		36.1	75	27.8		35.5
20	165	29.1	92	15.2		36.5	90	28.5		35.7
21	180	31.5	107	14.4		37.0	105	29.1		35.9
22	195	34.0	122	13.6		37.4	120	29.8		36.0
23	210	36.5	137	12.8		37.9	135	30.4		36.2
24	225	38.9	152	12.0	+23	38.3	150	31.1	+23	36.4
Dif	—		-8		+5		+7		+2	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 5		Edad: 25 ^d 2 PHE { SD: 14'7 PMG: 9 ^h 13 ^m 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 R°: 40 ^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	52.8	+16	58.7	225	35.2	-5 33.5	60 N	20 15	21 13	23 03	3 38 4	15 04 79	
1	195	52.8	+16	59.4	240	10.6 ¹⁶⁴	21.3 ¹²²	58	20 03	20 55	22 17	35 7	06 75	
2	210	52.8	+17	00.1	254	46.1 ¹⁶⁵	-5 09.0 ¹²³	56	19 53	40	21 49	33 9	07 73	
3	225	52.9		00.8	269	21.6 ¹⁶⁵	-4 56.8 ¹²²	54	44	28	28	31 11	08 70	
4	240	52.9		01.5	283	57.1 ¹⁶⁵	44.5 ¹²³	52	36	17	21 11	29 14	09 68	
5	255	52.9	+17	02.2	298	32.6 ¹⁶⁵	-4 32.2 ¹²³	50	19 29	20 07	20 57	3 27 16	15 10 66	
6	270	53.0	+17	02.8	313	08.1 ¹⁶⁵	-4 19.9 ¹²³	45	19 14	19 47	20 29	3 23 20	15 12 62	
7	285	53.0		03.5	327	43.6 ¹⁶⁵	-4 07.6 ¹²³	40	19 01	31	20 08	20 23	14 58	
8	300	53.1		04.2	342	19.1 ¹⁶⁵	-3 55.2 ¹²⁴	35	18 51	18	19 52	17 26	15 56	
9	315	53.1		04.9	356	54.6 ¹⁶⁵	42.8 ¹²⁴	30	42	19 07	38	15 28	17 52	
10	330	53.1		05.6	11	30.2 ¹⁶⁶	30.4 ¹²⁴	20	26	18 49	17	10 33	19 48	
11	345	53.2	+17	06.2	26	05.7 ¹⁶⁵	-3 18.0 ¹²⁴	10 N	18 12	18 35	19 00	3 07 36	15 21 44	
12	0	53.2	+17	06.9	40	41.3 ¹⁶⁶	-3 05.6 ¹²⁴	0	18 00	18 22	18 47	3 03 40	15 22 41	
13	15	53.2		07.6	55	16.8 ¹⁶⁵	-2 53.2 ¹²⁴	10 S	17 47	18 09	35	2 59 44	24 37	
14	30	53.3		08.3	69	52.4 ¹⁶⁶	40.8 ¹²⁴	20	34	17 57	24	56 48	26 33	
15	45	53.3		08.9	84	27.9 ¹⁶⁵	28.3 ¹²⁵	30	19	44	13	51 53	28 28	
16	60	53.3		09.6	99	03.5 ¹⁶⁶	15.8 ¹²⁵	35	11	37	08	49 55	29 26	
17	75	53.4	+17	10.3	113	39.1 ¹⁶⁶	-2 03.3 ¹²⁵	40	17 01	17 30	18 02	2 46 58	15 30 23	
18	90	53.4	+17	11.0	128	14.6 ¹⁶⁵	-1 50.9 ¹²⁴	45	16 50	17 21	17 56	2 42 62	15 32 19	
19	105	53.4		11.6	142	50.2 ¹⁶⁶	38.3 ¹²⁶	50	36	11	50	39 65	34 15	
20	120	53.5		12.3	157	25.7 ¹⁶⁵	25.8 ¹²⁵	52	29	06	47	37 67	35 13	
21	135	53.5		13.0	172	01.3 ¹⁶⁶	13.3 ¹²⁵	54	22	17 01	44	35 70	35 12	
22	150	53.5		13.7	186	36.8 ¹⁶⁵	-1 00.8 ¹²⁵	56	14	16 56	41	32 73	36 10	
23	165	53.6		14.3	201	12.4 ¹⁶⁶	-0 48.2 ¹²⁶	58	16 05	49	37	30 75	37 8	
24	180	53.6	+17	15.0	215	47.9 ¹⁶⁵	-0 35.7 ¹²⁵	60 S	15 55	16 43	17 33	2 27 78	15 39 4	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 55 ^m 9		Mag: -3.9 PMG: 13 ^h 52 ^m		Mag: +1.7 PMG: 13 ^h 57 ^m		Mag: -2.0 PMG: 15 ^h 48 ^m		Mag: +0.1 PMG: 13 ^h 48 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	hG ♎	Dec	hG ♏	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	225	38.9	152 12.0	+23 38.3	150 31.1	+23 36.4	122 29.6	+23 06.5	152 28.7	+21 11.1				
1	240	41.4	167 11.1	38.8	165 31.7	36.6	137 31.6	06.5	167 30.8	11.1				
2	255	43.8	182 10.3	39.2	180 32.4	36.8	152 33.6	06.5	182 33.0	11.2				
3	270	46.3	197 09.5	39.6	195 33.0	37.0	167 35.6	06.4	197 35.1	11.2				
4	285	48.8	212 08.7	40.1	210 33.7	37.2	182 37.6	06.4	212 37.3	11.3				
5	300	51.2	227 07.9	+23 40.5	225 34.3	+23 37.3	197 39.6	+23 06.4	227 39.4	+21 11.3				
6	315	53.7	242 07.1	+23 41.0	240 35.0	+23 37.5	212 41.6	+23 06.3	242 41.5	+21 11.3				
7	330	56.2	257 06.3	41.4	255 35.6	37.7	227 43.6	06.3	257 43.7	11.4				
8	345	58.6	272 05.5	41.8	270 36.3	37.9	242 45.6	06.2	272 45.8	11.4				
9	1	01.1	287 04.7	42.3	285 36.9	38.1	257 47.6	06.2	287 48.0	11.5				
10	16	03.6	302 03.9	42.7	300 37.6	38.3	272 49.6	06.2	302 50.1	11.5				
11	31	06.0	317 03.1	+23 43.1	315 38.2	+23 38.4	287 51.6	+23 06.1	317 52.3	+21 11.5				
12	46	08.5	332 02.3	+23 43.6	330 38.9	+23 38.6	302 53.6	+23 06.1	332 54.4	+21 11.6				
13	61	11.0	347 01.5	44.0	345 39.5	38.8	317 55.6	06.1	347 56.5	11.6				
14	76	13.4	2 00.7	44.4	0 40.2	39.0	332 57.6	06.0	2 58.7	11.7				
15	91	15.9	16 59.9	44.9	15 40.8	39.2	347 59.6	06.0	18 00.8	11.7				
16	106	18.3	31 59.1	45.3	30 41.5	39.3	3 01.6	06.0	33 03.0	11.7				
17	121	20.8	46 58.3	+23 45.7	45 42.1	+23 39.5	18 03.6	+23 05.9	48 05.1	+21 11.8				
18	136	23.3	61 57.5	+23 46.1	60 42.7	+23 39.7	33 05.6	+23 05.9	63 07.3	+21 11.8				
19	151	25.7	76 56.7	46.6	75 43.4	39.9	48 07.6	05.8	78 09.4	11.9				
20	166	28.2	91 55.9	47.0	90 44.0	40.1	63 09.6	05.8	93 11.5	11.9				
21	181	30.7	106 55.1	47.4	105 44.7	40.2	78 11.6	05.8	108 13.7	11.9				
22	196	33.1	121 54.2	47.8	120 45.3	40.4	93 13.6	05.7	123 15.8	12.0				
23	211	35.6	136 53.4	48.2	135 46.0	40.6	108 15.6	05.7	138 18.0	12.0				
24	226	38.1	151 52.6	+23 48.7	150 46.6	+23 40.8	123 17.6	+23 05.7	153 20.1	+21 12.1				
Dif	—		-8	+4	+6	+2	+20	0	+21	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 4				Edad: 26 ^d 2 PHE { SD: 14/8 PMG: 9 ^h 53 ^m R°: 41 ^m 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/3													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	53.6	+17	15.0	215	47.9	-0	35.7	60 N	0 49	2 39	3 38	3 42	5	16	23	79	
1	195	53.6		15.7	230	23.5 ¹⁶⁶		23.1 ¹²⁶	58	1 35	2 57	49	42	8		21	76	
2	210	53.6		16.3	244	59.0 ¹⁶⁵	-0	10.6 ¹²⁵	56	2 03	3 12	3 59	42	10		20	73	
3	225	53.7		17.0	259	34.5 ¹⁶⁵	+0	02.0 ¹²⁶	54	24	25	4 08	42	12		18	72	
4	240	53.7		17.7	274	10.0 ¹⁶⁵		14.5 ¹²⁵	52	41	36	16	43	13		17	69	
5	255	53.7	+17	18.4	288	45.5 ¹⁶⁵	+0	27.1 ¹²⁶	50	2 56	3 45	4 23	3 43	15	16	16	67	
6	270	53.8	+17	19.0	303	21.0 ¹⁶⁵	+0	39.7 ¹²⁶	45	3 23	4 05	4 39	3 43	19	16	14	63	
7	285	53.8		19.7	317	56.5 ¹⁶⁵	+0	52.3 ¹²⁶	40	3 44	21	4 51	43	23		12	60	
8	300	53.8		20.4	332	32.0 ¹⁶⁵	+1	04.8 ¹²⁵	35	4 01	34	5 02	43	26		11	56	
9	315	53.9		21.0	347	07.4 ¹⁶⁴		17.4 ¹²⁶	30	14	4 45	11	43	28		09	54	
10	330	53.9		21.7	1	42.8 ¹⁶⁴		30.0 ¹²⁶	20	36	5 03	27	43	33		07	49	
11	345	53.9	+17	22.4	16	18.2 ¹⁶⁴	+1	42.6 ¹²⁶	10 N	4 52	5 18	5 40	3 43	37	16	05	45	
12	0	53.9	+17	23.0	30	53.7 ¹⁶⁵	+1	55.2 ¹²⁶	0	5 06	5 31	5 53	3 43	41	16	03	41	
13	15	54.0		23.7	45	29.0 ¹⁶³	+2	07.7 ¹²⁵	10 S	18	44	6 05	43	45	16	01	37	
14	30	54.0		24.4	60	04.4 ¹⁶⁴		20.3 ¹²⁶	20	29	5 56	19	44	48	15	59	33	
15	45	54.0		25.0	74	39.7 ¹⁶³		32.9 ¹²⁶	30	40	6 09	34	44	53		56	29	
16	60	54.0		25.7	89	15.1 ¹⁶⁴		45.5 ¹²⁶	35	46	16	43	44	56		55	26	
17	75	54.1	+17	26.3	103	50.4 ¹⁶³	+2	58.0 ¹²⁵	40	5 51	6 24	6 52	3 44	59	15	53	24	
18	90	54.1	+17	27.0	118	25.7 ¹⁶³	+3	10.6 ¹²⁶	45	5 57	6 33	7 04	3 44	62	15	51	20	
19	105	54.1		27.7	133	00.9 ¹⁶²		23.1 ¹²⁵	50	6 04	43	18	44	67		49	16	
20	120	54.2		28.3	147	36.1 ¹⁶²		35.7 ¹²⁶	52	07	48	24	44	69		48	14	
21	135	54.2		29.0	162	11.4 ¹⁶³	+3	48.2 ¹²⁵	54	10	53	32	45	70		47	12	
22	150	54.2		29.7	176	46.5 ¹⁶¹	+4	00.7 ¹²⁵	56	13	6 58	40	45	73		46	10	
23	165	54.2		30.3	191	21.7 ¹⁶²		13.2 ¹²⁵	58	17	7 04	49	45	76		45	7	
24	180	54.3	+17	31.0	205	56.8 ¹⁶¹	+4	25.8 ¹²⁶	60 S	6 20	7 11	7 59	3 45	79	15	43	5	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 52 ^m 0		Mag: -3.9 PMG: 13 ^h 53 ^m		Mag: +1.7 PMG: 13 ^h 56 ^m		Mag: -2.0 PMG: 15 ^h 45 ^m		Mag: +0.1 PMG: 13 ^h 45 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	226	38.1	151	52.6	+23	48.7	150	46.6	+23	40.8
1	241	40.5	166	51.8		49.1	165	47.3		41.0
2	256	43.0	181	51.0		49.5	180	47.9		41.1
3	271	45.4	196	50.2		49.9	195	48.6		41.3
4	286	47.9	211	49.4		50.3	210	49.2		41.5
5	301	50.4	226	48.6	+23	50.7	225	49.9	+23	41.7
6	316	52.8	241	47.8	+23	51.1	240	50.5	+23	41.8
7	331	55.3	256	47.0		51.6	255	51.2		42.0
8	346	57.8	271	46.2		52.0	270	51.8		42.2
9	2	00.2	286	45.3		52.4	285	52.5		42.4
10	17	02.7	301	44.5		52.8	300	53.1		42.5
11	32	05.2	316	43.7	+23	53.2	315	53.8	+23	42.7
12	47	07.6	331	42.9	+23	53.6	330	54.4	+23	42.9
13	62	10.1	346	42.1		54.0	345	55.1		43.0
14	77	12.6	1	41.3		54.4	0	55.7		43.2
15	92	15.0	16	40.5		54.8	15	56.4		43.4
16	107	17.5	31	39.7		55.2	30	57.0		43.6
17	122	19.9	46	38.8	+23	55.6	45	57.7	+23	43.7
18	137	22.4	61	38.0	+23	56.0	60	58.3	+23	43.9
19	152	24.9	76	37.2		56.4	75	59.0		44.1
20	167	27.3	91	36.4		56.8	90	59.6		44.2
21	182	29.8	106	35.6		57.2	106	00.3		44.4
22	197	32.3	121	34.8		57.6	121	00.9		44.6
23	212	34.7	136	34.0		57.9	136	01.6		44.8
24	227	37.2	151	33.2	+23	58.3	151	02.2	+23	44.9
Dif	—		-8		+4		+6		+2	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8				Edad: 27 ^d 2 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6 R°: 42 ^m														
	PMG: 11 ^h 56 ^m 4				SD: 14 ^h 8 PMG: 10 ^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	54.3	+17	31.0	205	56.8	+4	25.8	60 N	20 19	21 19	23 27	3 47 5		17 42 82				
1	195	54.3		31.6	220	31.9 ¹⁶¹		38.3 ¹²⁵	58	20 07	21 00	22 27	50 8		37 79				
2	210	54.3		32.3	235	07.0 ¹⁶¹	+4	50.7 ¹²⁴	56	19 57	20 45	21 56	52 11		33 76				
3	225	54.3		32.9	249	42.0 ¹⁶⁰	+5	03.2 ¹²⁵	54	47	32	34	54 13		30 73				
4	240	54.4		33.6	264	17.1 ¹⁶¹		15.7 ¹²⁵	52	39	20	16	56 15		26 71				
5	255	54.4	+17	34.3	278	52.0 ¹⁵⁹	+5	28.1 ¹²⁴	50	19 32	20 10	21 01	3 58 17		17 23 69				
6	270	54.4	+17	34.9	293	27.0 ¹⁶⁰	+5	40.6 ¹²⁵	45	19 16	19 50	20 32	4 02 21		17 17 64				
7	285	54.4		35.6	308	01.9 ¹⁵⁹	+5	53.0 ¹²⁴	40	19 03	34	20 11	06 24		12 60				
8	300	54.4		36.2	322	36.8 ¹⁵⁹	+6	05.4 ¹²⁴	35	18 52	20	19 54	09 27		07 58				
9	315	54.5		36.9	337	11.6 ¹⁵⁸		17.8 ¹²⁴	30	43	19 09	40	11 30		17 03 55				
10	330	54.5		37.5	351	46.4 ¹⁵⁸		30.1 ¹²³	20	27	18 50	18	16 34		16 56 50				
11	345	54.5	+17	38.2	6	21.2 ¹⁵⁸	+6	42.5 ¹²⁴	10 N	18 13	18 35	19 01	4 20 38		16 50 46				
12	0	54.5	+17	38.8	20	55.9 ¹⁵⁷	+6	54.8 ¹²³	0	18 00	18 22	18 47	4 24 42		16 44 43				
13	15	54.6		39.5	35	30.6 ¹⁵⁷	+7	07.1 ¹²³	10 S	17 47	18 09	34	28 46		38 39				
14	30	54.6		40.2	50	05.3 ¹⁵⁷		19.4 ¹²³	20	33	17 56	23	32 50		32 35				
15	45	54.6		40.8	64	39.9 ¹⁵⁶		31.7 ¹²³	30	18	43	12	37 54		25 31				
16	60	54.6		41.5	79	14.4 ¹⁵⁵		43.9 ¹²²	35	17 09	36	06	40 57		21 29				
17	75	54.6	+17	42.1	93	49.0 ¹⁵⁶	+7	56.2 ¹²³	40	16 59	17 28	18 00	4 43 60		16 17 25				
18	90	54.7	+17	42.8	108	23.5 ¹⁵⁵	+8	08.3 ¹²¹	45	16 47	17 19	17 54	4 46 64		16 11 22				
19	105	54.7		43.4	122	57.9 ¹⁵⁴		20.5 ¹²²	50	33	08	47	51 68		05 18				
20	120	54.7		44.1	137	32.3 ¹⁵⁴		32.7 ¹²²	52	26	17 03	44	53 70		16 02 16				
21	135	54.7		44.7	152	06.6 ¹⁵³		44.8 ¹²¹	54	19	16 58	41	55 73		15 59 14				
22	150	54.7		45.4	166	41.0 ¹⁵⁴	+8	56.9 ¹²¹	56	11	52	37	4 58 75		56 11				
23	165	54.8		46.0	181	15.2 ¹⁵²	+9	08.9 ¹²⁰	58	16 01	46	34	5 01 77		52 9				
24	180	54.8	+17	46.6	195	49.4 ¹⁵²	+9	21.0 ¹²¹	60 S	15 51	16 38	17 30	5 04 80		15 48 6				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 8 ^h 48 ^m 1		Mag: -3.9 PMG: 13 ^h 55 ^m				Mag: +1.7 PMG: 13 ^h 55 ^m				Mag: -2.0 PMG: 15 ^h 42 ^m				Mag: +0.1 PMG: 13 ^h 41 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	227	37.2	151	33.2	+23	58.3	151	02.2	+23	44.9	124	05.5	+23	04.8	154	11.5	+21	13.0	
1	242	39.7	166	32.3		58.7	166	02.9		45.1	139	07.5		04.7	169	13.6		13.1	
2	257	42.1	181	31.5		59.1	181	03.5		45.3	154	09.5		04.7	184	15.8		13.1	
3	272	44.6	196	30.7		59.5	196	04.2		45.4	169	11.5		04.7	199	17.9		13.1	
4	287	47.1	211	29.9	+23	59.9	211	04.8		45.6	184	13.5		04.6	214	20.1		13.2	
5	302	49.5	226	29.1	+24	00.3	226	05.5	+23	45.8	199	15.5	+23	04.6	229	22.2	+21	13.2	
6	317	52.0	241	28.3	+24	00.6	241	06.1	+23	45.9	214	17.5	+23	04.5	244	24.3	+21	13.3	
7	332	54.4	256	27.4		01.0	256	06.8		46.1	229	19.4		04.5	259	26.5		13.3	
8	347	56.9	271	26.6		01.4	271	07.4		46.3	244	21.4		04.5	274	28.6		13.3	
9	2	59.4	286	25.8		01.8	286	08.1		46.4	259	23.4		04.4	289	30.8		13.4	
10	18	01.8	301	25.0		02.2	301	08.7		46.6	274	25.4		04.4	304	32.9		13.4	
11	33	04.3	316	24.2	+24	02.5	316	09.4	+23	46.8	289	27.4	+23	04.4	319	35.0	+21	13.5	
12	48	06.8	331	23.4	+24	02.9	331	10.0	+23	46.9	304	29.4	+23	04.3	334	37.2	+21	13.5	
13	63	09.2	346	22.5		03.3	346	10.7		47.1	319	31.4		04.3	349	39.3		13.5	
14	78	11.7	1	21.7		03.7	1	11.3		47.3	334	33.4		04.2	4	41.5		13.6	
15	93	14.2	16	20.9		04.0	16	12.0		47.4	349	35.4		04.2	19	43.6		13.6	
16	108	16.6	31	20.1		04.4	31	12.6		47.6	4	37.4		04.2	34	45.7		13.7	
17	123	19.1	46	19.3	+24	04.8	46	13.3	+23	47.7	19	39.4	+23	04.1	49	47.9	+21	13.7	
18	138	21.5	61	18.5	+24	05.1	61	13.9	+23	47.9	34	41.3	+23	04.1	64	50.0	+21	13.7	
19	153	24.0	76	17.6		05.5	76	14.6		48.1	49	43.3		04.1	79	52.1		13.8	
20	168	26.5	91	16.8		05.9	91	15.2		48.2	64	45.3		04.0	94	54.3		13.8	
21	183	28.9	106	16.0		06.2	106	15.9		48.4	79	47.3		04.0	109	56.4		13.9	
22	198	31.4	121	15.2		06.6	121	16.5		48.6	94	49.3		03.9	124	58.6		13.9	
23	213	33.9	136	14.4		07.0	136	17.1		48.7	109	51.3		03.9	140	00.7		13.9	
24	228	36.3	151	13.5	+24	07.3	151	17.8	+23	48.9	124	53.3	+23	03.9	155	02.8	+21	14.0	
Dif	—		-8		+4		+6		+2		+20		0		+21				

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: 28 ^d 2 PHE { SD: 14 ^h 9 PMG: 11 ^h 16 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	54.8	+17 46.6	195	49.4	+9 21.0		60 N	0 25	2 33	3 33	3 52	7	19 04	85
1	195	54.8	47.3	210	23.6 ¹⁵²	33.0 ¹²⁰		58	1 25	2 52	45	3 58	10	18 56	81
2	210	54.8	47.9	224	57.7 ¹⁵¹	45.0 ¹²⁰		56	1 56	3 07	3 55	4 03	13	49	78
3	225	54.8	48.6	239	31.8 ¹⁵¹	+9 56.9 ¹¹⁹		54	2 19	20	4 05	07	16	43	75
4	240	54.9	49.2	254	05.8 ¹⁵⁰	+10 08.8 ¹¹⁹		52	36	32	13	11	18	37	73
5	255	54.9	+17 49.9	268	39.7 ¹⁴⁹	+10 20.7 ¹¹⁹		50	2 51	3 42	4 20	4 15	20	18 32	71
6	270	54.9	+17 50.5	283	13.6 ¹⁴⁹	+10 32.5 ¹¹⁸		45	3 20	4 02	4 36	4 23	24	18 21	66
7	285	54.9	51.2	297	47.5 ¹⁴⁹	44.3 ¹¹⁸		40	42	19	4 49	30	27	12	63
8	300	54.9	51.8	312	21.3 ¹⁴⁸	+10 56.1 ¹¹⁸		35	3 59	32	5 00	36	30	18 05	59
9	315	54.9	52.4	326	55.0 ¹⁴⁷	+11 07.8 ¹¹⁷		30	4 12	4 44	09	41	33	17 58	57
10	330	55.0	53.1	341	28.7 ¹⁴⁷	19.5 ¹¹⁷		20	35	5 02	26	50	37	46	53
11	345	55.0	+17 53.7	356	02.3 ¹⁴⁶	+11 31.2 ¹¹⁷		10 N	4 52	5 18	5 40	4 58	41	17 36	49
12	0	55.0	+17 54.4	10	35.9 ¹⁴⁶	+11 42.8 ¹¹⁶		0	5 06	5 31	5 53	5 06	44	17 27	45
13	15	55.0	55.0	25	09.4 ¹⁴⁵	+11 54.4 ¹¹⁶		10 S	18	44	6 06	14	47	17	43
14	30	55.0	55.7	39	42.9 ¹⁴⁵	+12 05.9 ¹¹⁵		20	30	5 56	20	22	51	17 07	39
15	45	55.0	56.3	54	16.2 ¹⁴³	17.4 ¹¹⁵		30	41	6 10	35	31	56	16 56	34
16	60	55.1	56.9	68	49.6 ¹⁴⁴	28.8 ¹¹⁴		35	47	17	44	37	58	50	31
17	75	55.1	+17 57.6	83	22.9 ¹⁴³	+12 40.2 ¹¹⁴		40	5 53	6 25	6 54	5 43	62	16 42	29
18	90	55.1	+17 58.2	97	56.1 ¹⁴²	+12 51.6 ¹¹⁴		45	5 59	6 35	7 06	5 50	66	16 33	26
19	105	55.1	58.8	112	29.2 ¹⁴¹	+13 02.9 ¹¹³		50	6 06	46	21	5 59	70	23	21
20	120	55.1	+17 59.5	127	02.3 ¹⁴¹	14.2 ¹¹³		52	09	50	28	6 03	72	18	20
21	135	55.1	+18 00.1	141	35.3 ¹⁴⁰	25.4 ¹¹²		54	13	6 56	35	08	74	13	17
22	150	55.1	00.8	156	08.3 ¹⁴⁰	36.5 ¹¹¹		56	16	7 02	43	13	77	07	15
23	165	55.2	01.4	170	41.2 ¹³⁹	47.7 ¹¹²		58	20	08	7 53	18	80	16 01	11
24	180	55.2	+18 02.0	185	14.0 ¹³⁸	+13 58.7 ¹¹⁰		60 S	6 24	7 15	8 04	6 24	84	15 54	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 44 ^m 1		Mag: -3.9 PMG: 13 ^h 56 ^m		Mag: +1.7 PMG: 13 ^h 54 ^m		Mag: -2.0 PMG: 15 ^h 38 ^m		Mag: +0.1 PMG: 13 ^h 38 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	228	36.3	151	13.5	+24 07.3	151	17.8	+23 48.9	124	53.3
1	243	38.8	166	12.7	07.7	166	18.4	49.0	139	55.3
2	258	41.3	181	11.9	08.0	181	19.1	49.2	154	57.3
3	273	43.7	196	11.1	08.4	196	19.7	49.4	169	59.3
4	288	46.2	211	10.3	08.8	211	20.4	49.5	185	01.2
5	303	48.7	226	09.4	+24 09.1	226	21.0	+23 49.7	200	03.2
6	318	51.1	241	08.6	+24 09.5	241	21.7	+23 49.8	215	05.2
7	333	53.6	256	07.8	09.8	256	22.3	50.0	230	07.2
8	348	56.0	271	07.0	10.2	271	23.0	50.1	245	09.2
9	3	58.5	286	06.1	10.5	286	23.6	50.3	260	11.2
10	19	01.0	301	05.3	10.9	301	24.3	50.5	275	13.2
11	34	03.4	316	04.5	+24 11.2	316	24.9	+23 50.6	290	15.2
12	49	05.9	331	03.7	+24 11.6	331	25.6	+23 50.8	305	17.1
13	64	08.4	346	02.9	11.9	346	26.2	50.9	320	19.1
14	79	10.8	1	02.0	12.3	1	26.9	51.1	335	21.1
15	94	13.3	16	01.2	12.6	16	27.5	51.2	350	23.1
16	109	15.8	31	00.4	12.9	31	28.2	51.4	5	25.1
17	124	18.2	45	59.6	+24 13.3	46	28.8	+23 51.5	20	27.1
18	139	20.7	60	58.7	+24 13.6	61	29.5	+23 51.7	35	29.1
19	154	23.1	75	57.9	14.0	76	30.1	51.9	50	31.1
20	169	25.6	90	57.1	14.3	91	30.8	52.0	65	33.0
21	184	28.1	105	56.3	14.6	106	31.4	52.2	80	35.0
22	199	30.5	120	55.4	15.0	121	32.1	52.3	95	37.0
23	214	33.0	135	54.6	15.3	136	32.7	52.5	110	39.0
24	229	35.5	150	53.8	+24 15.6	151	33.4	+23 52.6	125	41.0
Dif	—		-8	+3		+6	+2		+20	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 3			Edad: 29 ^d 2 PHE { 4 ^h : 55°/2 12 ^h : 55°/3 20 ^h : 55°/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	
0	180	55.2	+18 02.0	185	14.0	+13 58.7		60 N	20 24	21 26	** **	3 59 10		20 29 86	
1	195	55.2		199	46.8 ¹³⁸	+14 09.7 ¹¹⁰		58	12	21 06	22 38	4 08 14		17 82	
2	210	55.2		214	19.5 ¹³⁷	20.7 ¹¹⁰		56	20 01	20 49	22 03	16 16		20 07 78	
3	225	55.2		228	52.1 ¹³⁶	31.6 ¹⁰⁹		54	19 51	36	21 39	23 19		19 58 76	
4	240	55.2		243	24.6 ¹³⁵	42.4 ¹⁰⁸		52	42	24	21	29 22		50 73	
5	255	55.2	+18 05.2	257	57.1 ¹³⁵	+14 53.2 ¹⁰⁸		50	19 35	20 14	21 05	4 35 23		19 43 71	
6	270	55.2	+18 05.8	272	29.5 ¹³⁴	+15 03.9 ¹⁰⁷		45	19 19	19 52	20 35	4 47 28		19 27 68	
7	285	55.3	06.5	287	01.9 ¹³⁴	14.6 ¹⁰⁷		40	19 05	36	20 13	4 57 31		15 64	
8	300	55.3	07.1	301	34.2 ¹³³	25.2 ¹⁰⁶		35	18 54	22	19 56	5 06 34		19 04 61	
9	315	55.3	07.7	316	06.4 ¹³²	35.7 ¹⁰⁵		30	44	19 10	42	14 36		18 55 59	
10	330	55.3	08.3	330	38.5 ¹³¹	46.2 ¹⁰⁵		20	28	18 51	19	27 40		39 55	
11	345	55.3	+18 09.0	345	10.6 ¹³¹	+15 56.6 ¹⁰⁴		10 N	18 13	18 35	19 01	5 39 44		18 25 52	
12	0	55.3	+18 09.6	359	42.6 ¹³⁰	+16 07.0 ¹⁰⁴		0	18 00	18 22	18 47	5 50 47		18 12 49	
13	15	55.3	10.2	14	14.5 ¹²⁹	17.3 ¹⁰³		10 S	17 47	18 09	34	6 01 51		18 00 45	
14	30	55.3	10.9	28	46.3 ¹²⁸	27.5 ¹⁰²		20	33	17 56	22	13 54		17 46 42	
15	45	55.3	11.5	43	18.1 ¹²⁸	37.7 ¹⁰²		30	17	42	11	27 58		30 39	
16	60	55.3	12.1	57	49.8 ¹²⁷	47.8 ¹⁰¹		35	17 07	34	18 05	35 61		21 36	
17	75	55.4	+18 12.7	72	21.4 ¹²⁶	+16 57.8 ¹⁰⁰		40	16 57	17 26	17 58	6 45 63		17 11 34	
18	90	55.4	+18 13.4	86	53.0 ¹²⁶	+17 07.7 ⁹⁹		45	16 45	17 16	17 52	6 56 66		16 59 30	
19	105	55.4	14.0	101	24.5 ¹²⁵	17.6 ⁹⁹		50	30	05	44	7 09 71		44 27	
20	120	55.4	14.6	115	55.9 ¹²⁴	27.4 ⁹⁸		52	23	17 00	41	15 73		38 24	
21	135	55.4	15.2	130	27.2 ¹²³	37.2 ⁹⁸		54	15	16 55	38	22 76		30 22	
22	150	55.4	15.9	144	58.4 ¹²²	46.8 ⁹⁶		56	16 07	49	34	30 78		22 19	
23	165	55.4	16.5	159	29.6 ¹²²	+17 56.4 ⁹⁶		58	15 57	42	30	38 82		12 16	
24	180	55.4	+18 17.1	174	00.7 ¹²¹	+18 05.9 ⁹⁵		60 S	15 46	16 34	17 26	7 48 86		16 02 12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 40 ^m 2		Mag: -3.9 PMG: 13 ^h 57 ^m			Mag: +1.7 PMG: 13 ^h 53 ^m			Mag: -2.0 PMG: 15 ^h 35 ^m			Mag: +0.1 PMG: 13 ^h 34 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	229	35.5	150 53.8	+24 15.6		151 33.4	+23 52.6		125 41.0	+23 02.9		155 54.2	+21 14.9		
1	244	37.9	165 53.0	16.0		166 34.0	52.8		140 43.0	02.9		170 56.3	15.0		
2	259	40.4	180 52.1	16.3		181 34.7	52.9		155 45.0	02.9		185 58.4	15.0		
3	274	42.9	195 51.3	16.6		196 35.3	53.1		170 46.9	02.8		201 00.6	15.0		
4	289	45.3	210 50.5	17.0		211 36.0	53.2		185 48.9	02.8		216 02.7	15.1		
5	304	47.8	225 49.7	+24 17.3		226 36.6	+23 53.4		200 50.9	+23 02.7		231 04.8	+21 15.1		
6	319	50.3	240 48.8	+24 17.6		241 37.2	+23 53.5		215 52.9	+23 02.7		246 07.0	+21 15.2		
7	334	52.7	255 48.0	17.9		256 37.9	53.7		230 54.9	02.7		261 09.1	15.2		
8	349	55.2	270 47.2	18.3		271 38.5	53.8		245 56.9	02.6		276 11.3	15.2		
9	4	57.6	285 46.4	18.6		286 39.2	54.0		260 58.8	02.6		291 13.4	15.3		
10	20	00.1	300 45.5	18.9		301 39.8	54.1		276 00.8	02.5		306 15.5	15.3		
11	35	02.6	315 44.7	+24 19.2		316 40.5	+23 54.3		291 02.8	+23 02.5		321 17.7	+21 15.4		
12	50	05.0	330 43.9	+24 19.5		331 41.1	+23 54.4		306 04.8	+23 02.5		336 19.8	+21 15.4		
13	65	07.5	345 43.1	19.9		346 41.8	54.6		321 06.8	02.4		351 21.9	15.4		
14	80	10.0	0 42.2	20.2		1 42.4	54.7		336 08.8	02.4		6 24.1	15.5		
15	95	12.4	15 41.4	20.5		16 43.1	54.8		351 10.7	02.3		21 26.2	15.5		
16	110	14.9	30 40.6	20.8		31 43.7	55.0		6 12.7	02.3		36 28.3	15.6		
17	125	17.4	45 39.7	+24 21.1		46 44.4	+23 55.1		21 14.7	+23 02.3		51 30.5	+21 15.6		
18	140	19.8	60 38.9	+24 21.4		61 45.0	+23 55.3		36 16.7	+23 02.2		66 32.6	+21 15.6		
19	155	22.3	75 38.1	21.7		76 45.7	55.4		51 18.7	02.2		81 34.8	15.7		
20	170	24.8	90 37.3	22.0		91 46.3	55.6		66 20.7	02.1		96 36.9	15.7		
21	185	27.2	105 36.4	22.3		106 47.0	55.7		81 22.6	02.1		111 39.0	15.8		
22	200	29.7	120 35.6	22.7		121 47.6	55.9		96 24.6	02.1		126 41.2	15.8		
23	215	32.1	135 34.8	23.0		136 48.3	56.0		111 26.6	02.0		141 43.3	15.8		
24	230	34.6	150 33.9	+24 23.3		151 48.9	+23 56.2		126 28.6	+23 02.0		156 45.4	+21 15.9		
Dif	—		-8	+3		+6	+1		+20	0		+21			

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: 0 ^d 6 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 55 ^m 9 Rº: 51 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora Rº		Hora Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	55.4	+18	17.1	174	00.7	+18	05.9	60 N	**	**	2	26	3	28	4	09	
1	195	55.4		17.7	188	31.7 ¹²⁰		15.3 ⁹⁴	58	1	14	2	46		40	22	19	
2	210	55.4		18.3	203	02.6 ¹¹⁹		24.7 ⁹²	56	1	49	3	03	3	51	32	23	
3	225	55.4		19.0	217	33.5 ¹¹⁹		33.9 ⁹⁴	54	2	13		16	4	01	42	26	
4	240	55.4		19.6	232	04.3 ¹¹⁸		43.1 ⁹²	52		32		28		10	51	28	
5	255	55.4	+18	20.2	246	35.0 ¹¹⁷	+18	52.2 ⁹¹	50	2	47	3	38	4	17	4	58	
6	270	55.4	+18	20.8	261	05.6 ¹¹⁶	+19	01.2 ⁹⁰	45	3	17	4	00	4	34	5	15	
7	285	55.5		21.4	275	36.1 ¹¹⁵		10.2 ⁹⁰	40		39		17		47	28	37	
8	300	55.5		22.1	290	06.6 ¹¹⁵		19.0 ⁸⁸	35	3	56		30	4	58	40	39	
9	315	55.5		22.7	304	37.0 ¹¹⁴		27.8 ⁸⁸	30	4	11	4	42	5	08	5	50	
10	330	55.5		23.3	319	07.3 ¹¹³		36.5 ⁸⁷	20		33		01		25	6	07	
11	345	55.5	+18	23.9	333	37.5 ¹¹²	+19	45.0 ⁸⁵	10 N	4	51	5	17	5	39	6	23	
12	0	55.5	+18	24.5	348	07.7 ¹¹²	+19	53.5 ⁸⁵	0	5	06	5	31	5	53	6	37	
13	15	55.5		25.1	2	37.7 ¹¹⁰	+20	01.9 ⁸⁴	10 S		19		44	6	06	6	52	
14	30	55.5		25.8	17	07.7 ¹¹⁰		10.2 ⁸³	20		30		57		20	7	07	
15	45	55.5		26.4	31	37.6 ¹⁰⁹		18.4 ⁸²	30		42	6	11		36	25	60	
16	60	55.5		27.0	46	07.5 ¹⁰⁹		26.6 ⁸²	35		48		19		46	36	62	
17	75	55.5	+18	27.6	60	37.2 ¹⁰⁷	+20	34.6 ⁸⁰	40	5	55	6	27	6	56	7	48	
18	90	55.5	+18	28.2	75	06.9 ¹⁰⁷	+20	42.5 ⁷⁹	45	6	01	6	37	7	09	8	02	
19	105	55.5		28.8	89	36.5 ¹⁰⁶		50.3 ⁷⁸	50		09		48	24	20	71	11	
20	120	55.5		29.4	104	06.0 ¹⁰⁵	+20	58.1 ⁷⁸	52		12		53		31	28	73	
21	135	55.5		30.0	118	35.4 ¹⁰⁴	+21	05.7 ⁷⁶	54		16	6	59		38	38	75	
22	150	55.5		30.7	133	04.8 ¹⁰⁴		13.2 ⁷⁵	56		19	7	05		47	8	48	
23	165	55.5		31.3	147	34.1 ¹⁰³		20.7 ⁷⁵	58		23		12	7	57	9	00	
24	180	55.5	+18	31.9	162	03.3 ¹⁰²	+21	28.0 ⁷³	60 S	6	28	7	19	8	08	9	14	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 36 ^m 3		Mag: -3.9 PMG: 13 ^h 59 ^m				Mag: +1.7 PMG: 13 ^h 52 ^m				Mag: -2.0 PMG: 15 ^h 32 ^m				Mag: +0.1 PMG: 13 ^h 31 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	230	34.6	150	33.9	+24	23.3	151	48.9	+23	56.2	126	28.6	+23	02.0	156	45.4	+21	15.9
1	245	37.1	165	33.1		23.6	166	49.6		56.3	141	30.6		01.9	171	47.6		15.9
2	260	39.5	180	32.3		23.9	181	50.2		56.4	156	32.5		01.9	186	49.7		16.0
3	275	42.0	195	31.5		24.2	196	50.9		56.6	171	34.5		01.9	201	51.8		16.0
4	290	44.5	210	30.6		24.5	211	51.5		56.7	186	36.5		01.8	216	54.0		16.0
5	305	46.9	225	29.8	+24	24.8	226	52.1	+23	56.9	201	38.5	+23	01.8	231	56.1	+21	16.1
6	320	49.4	240	29.0	+24	25.1	241	52.8	+23	57.0	216	40.5	+23	01.7	246	58.2	+21	16.1
7	335	51.9	255	28.1		25.4	256	53.4		57.1	231	42.5		01.7	262	00.4		16.1
8	350	54.3	270	27.3		25.6	271	54.1		57.3	246	44.4		01.7	277	02.5		16.2
9	5	56.8	285	26.5		25.9	286	54.7		57.4	261	46.4		01.6	292	04.7		16.2
10	20	59.3	300	25.6		26.2	301	55.4		57.6	276	48.4		01.6	307	06.8		16.3
11	36	01.7	315	24.8	+24	26.5	316	56.0	+23	57.7	291	50.4	+23	01.5	322	08.9	+21	16.3
12	51	04.2	330	24.0	+24	26.8	331	56.7	+23	57.8	306	52.4	+23	01.5	337	11.1	+21	16.3
13	66	06.6	345	23.1		27.1	346	57.3		58.0	321	54.3		01.4	352	13.2		16.4
14	81	09.1	0	22.3		27.4	1	58.0		58.1	336	56.3		01.4	7	15.3		16.4
15	96	11.6	15	21.5		27.7	16	58.6		58.3	351	58.3		01.4	22	17.5		16.5
16	111	14.0	30	20.6		28.0	31	59.3		58.4	7	00.3		01.3	37	19.6		16.5
17	126	16.5	45	19.8	+24	28.2	46	59.9	+23	58.5	22	02.2	+23	01.3	52	21.7	+21	16.5
18	141	19.0	60	19.0	+24	28.5	62	00.6	+23	58.7	37	04.2	+23	01.2	67	23.9	+21	16.6
19	156	21.4	75	18.2		28.8	77	01.2		58.8	52	06.2		01.2	82	26.0		16.6
20	171	23.9	90	17.3		29.1	92	01.9		58.9	67	08.2		01.2	97	28.1		16.7
21	186	26.4	105	16.5		29.4	107	02.5		59.1	82	10.2		01.1	112	30.3		16.7
22	201	28.8	120	15.7		29.6	122	03.2		59.2	97	12.1		01.1	127	32.4		16.7
23	216	31.3	135	14.8		29.9	137	03.8		59.4	112	14.1		01.0	142	34.5		16.8
24	231	33.7	150	14.0	+24	30.2	152	04.5	+23	59.5	127	16.1	+23	01.0	157	36.7	+21	16.8
Dif	—		-8		+3		+6		+1		+20		0		+21			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 56 ^m 3			Edad: 1 ^d 6 PHE { 4 ^h : 56/1 12 ^h : 56/2 20 ^h : 56/4 R°: 55 ^m SD: 15°2 PMG: 13 ^h 40 ^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	180	55.5	+18	31.9	162	03.3	+21	28.0	60 N	20 29	21 32	** **	4 25 26	23 18 72	
1	195	55.5		32.5	176	32.4	101	35.2	58	16	21 11	22 50	41 30	22 58 69	
2	210	55.5		33.1	191	01.4	100	42.3	56	20 04	20 54	22 11	4 55 34	41 67	
3	225	55.5		33.7	205	30.4	100	49.3	54	19 54	40	21 45	5 08 35	27 66	
4	240	55.5		34.3	219	59.3	99	+21 56.2	52	46	28	25	19 37	14 65	
5	255	55.5	+18	34.9	234	28.1	98	+22 03.0	50	19 38	20 17	21 09	5 28 39	22 03 64	
6	270	55.5	+18	35.5	248	56.8	97	+22 09.7	45	19 21	19 55	20 38	5 49 41	21 41 62	
7	285	55.5		36.1	263	25.5	97	16.2	40	19 07	38	20 16	6 05 44	22 61	
8	300	55.5		36.7	277	54.1	96	22.7	35	18 56	24	19 58	19 46	21 07 60	
9	315	55.5		37.3	292	22.6	95	29.0	30	46	19 12	43	31 48	20 54 59	
10	330	55.5		37.9	306	51.0	94	35.2	20	28	18 52	20	6 52 50	31 57	
11	345	55.5	+18	38.5	321	19.4	94	+22 41.3	10 N	18 14	18 36	19 02	7 11 51	20 11 56	
12	0	55.5	+18	39.1	335	47.7	93	+22 47.3	0	18 00	18 22	18 47	7 28 53	19 53 55	
13	15	55.5		39.7	350	15.9	92	53.2	10 S	17 46	18 08	34	7 45 55	35 53	
14	30	55.5		40.3	4	44.1	92	+22 59.0	20	32	17 55	22	8 04 57	19 15 53	
15	45	55.5		40.9	19	12.1	90	+23 04.6	30	15	41	10	25 60	18 53 50	
16	60	55.5		41.5	33	40.1	90	10.1	35	17 06	33	18 03	38 61	40 49	
17	75	55.5	+18	42.1	48	08.1	90	+23 15.5	40	16 55	17 24	17 57	8 52 63	18 25 48	
18	90	55.5	+18	42.7	62	35.9	88	+23 20.8	45	16 42	17 14	17 50	9 09 65	18 07 46	
19	105	55.5		43.3	77	03.7	88	25.9	50	27	17 03	42	31 67	17 44 44	
20	120	55.5		43.9	91	31.5	88	31.0	52	20	16 57	39	41 69	34 43	
21	135	55.5		44.5	105	59.1	86	35.9	54	12	52	35	9 53 71	22 41	
22	150	55.5		45.1	120	26.7	86	40.6	56	16 03	45	31	10 06 73	17 08 39	
23	165	55.5		45.7	134	54.2	85	45.3	58	15 53	38	27	22 75	16 52 37	
24	180	55.5	+18	46.3	149	21.7	85	+23 49.8	60 S	15 41	16 31	17 22	10 41 79	16 33 33	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 32 ^m 3		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +1.7 PMG: 13 ^h 51 ^m		Mag: -2.0 PMG: 15 ^h 29 ^m		Mag: +0.1 PMG: 13 ^h 28 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	231	33.7	150	14.0	152	04.5	127	16.1	157	36.7					
1	246	36.2	165	13.2	167	05.1	142	18.1	172	38.8					
2	261	38.7	180	12.3	182	05.8	157	20.1	187	40.9					
3	276	41.1	195	11.5	197	06.4	172	22.0	202	43.1					
4	291	43.6	210	10.7	212	07.0	187	24.0	217	45.2					
5	306	46.1	225	09.8	227	07.7	202	26.0	232	47.3					
6	321	48.5	240	09.0	242	08.3	217	28.0	247	49.5					
7	336	51.0	255	08.2	257	09.0	232	29.9	262	51.6					
8	351	53.5	270	07.3	272	09.6	247	31.9	277	53.7					
9	6	55.9	285	06.5	287	10.3	262	33.9	292	55.9					
10	21	58.4	300	05.6	302	10.9	277	35.9	307	58.0					
11	37	00.9	315	04.8	317	11.6	292	37.8	323	00.2					
12	52	03.3	330	04.0	332	12.2	307	39.8	338	02.3					
13	67	05.8	345	03.1	347	12.9	322	41.8	353	04.4					
14	82	08.2	0	02.3	2	13.5	337	43.8	8	06.6					
15	97	10.7	15	01.5	17	14.2	352	45.7	23	08.7					
16	112	13.2	30	00.6	32	14.8	7	47.7	38	10.8					
17	127	15.6	44	59.8	47	15.5	22	49.7	53	13.0					
18	142	18.1	59	59.0	62	16.1	37	51.7	68	15.1					
19	157	20.6	74	58.1	77	16.8	52	53.6	83	17.2					
20	172	23.0	89	57.3	92	17.4	67	55.6	98	19.4					
21	187	25.5	104	56.5	107	18.1	82	57.6	113	21.5					
22	202	28.0	119	55.6	122	18.7	97	59.6	128	23.6					
23	217	30.4	134	54.8	137	19.4	113	01.5	143	25.8					
24	232	32.9	149	53.9	152	20.0	128	03.5	158	27.9					
Dif	—		-8		+3		+20		+21						
							0		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: 2 ^d 6 SD: 15 ^h 4 PMG: 14 ^h 35 ^m	PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 7 20 ^h : 56 ^m 9 Rº: 56 ^m	Náutico	Civil		Hora	Rº		Hora	Rº				
	hG ☉	Dec	hG ☾	Dif														
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	55.5	+18	46.3	149	21.7	+23	49.8	60 N	**	**	2	20	3	23	4	51	
1	195	55.5		46.9	163	49.1 84		54.2 44	58	1	02	41	36	5	11	46	**	
2	210	55.5		47.5	178	16.4 83	+23	58.5 43	56	1	41	2	58	48	29	47	23 48 54	
3	225	55.5		48.1	192	43.7 83	+24	02.6 41	54	2	07	3	12	3	58	43	49	
4	240	55.4		48.7	207	10.9 82		06.6 40	52	27	24	4	06	4	06	5	56	
5	255	55.4	+18	49.3	221	38.1 82	+24	10.5 39	50	2	43	3	35	4	14	6	07	
6	270	55.4	+18	49.9	236	05.2 81	+24	14.2 37	45	3	14	3	57	4	31	6	30	
7	285	55.4		50.5	250	32.2 80		17.8 36	40	37	4	14	45	6	49	53	23	
8	300	55.4		51.1	264	59.2 80		21.3 35	35	3	55	29	4	57	7	05		
9	315	55.4		51.7	279	26.1 79		24.6 33	30	4	09	4	41	5	07	19	53	
10	330	55.4		52.3	293	53.0 79		27.8 32	20	32	5	00	24	7	42	55	28	
11	345	55.4	+18	52.9	308	19.8 78	+24	30.8 30	10 N	4	51	5	17	5	39	8	02	
12	0	55.4	+18	53.4	322	46.6 78	+24	33.8 30	0	5	06	5	31	5	53	8	21	
13	15	55.4		54.0	337	13.3 77		36.5 27	10 S	19	44	6	07	8	40	57	28	
14	30	55.4		54.6	351	40.0 77		39.2 27	20	31	5	58	21	9	01	57	20	
15	45	55.4		55.2	6	06.6 76		41.7 25	30	43	6	12	38	25	57	19	43	
16	60	55.4		55.8	20	33.1 75		44.1 24	35	50	20	47		39	58	29	57	
17	75	55.4	+18	56.4	34	59.7 76	+24	46.3 22	40	5	56	6	29	6	58	9	55	
18	90	55.3	+18	57.0	49	26.1 74	+24	48.4 21	45	6	03	6	39	7	11	10	14	
19	105	55.3		57.6	63	52.6 75		50.3 19	50	11	51	26		38	60	28	57	
20	120	55.3		58.1	78	19.0 74		52.1 18	52	15	6	56	34	10	50	60	17	
21	135	55.3		58.7	92	45.3 73		53.7 16	54	18	7	02	42	11	04	60	18	
22	150	55.3		59.3	107	11.6 73		55.3 16	56	22	08	7	51	19	61	17	47	
23	165	55.3	+18	59.9	121	37.9 73		56.6 13	58	27	15	8	01	11	37	62	29	
24	180	55.3	+19	00.5	136	04.1 72	+24	57.8 12	60 S	6	31	7	23	8	13	12	00	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 28 ^m 4		Mag: -3.9 PMG: 14 ^h 01 ^m				Mag: +1.7 PMG: 13 ^h 50 ^m				Mag: -2.0 PMG: 15 ^h 26 ^m				Mag: +0.1 PMG: 13 ^h 24 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	232	32.9	149	53.9	+24	36.4	152	20.0	+24	02.6	128	03.5	+23	00.0	158	27.9		
1	247	35.4	164	53.1		36.7	167	20.6		02.7	143	05.5	+23	00.0	173	30.0		
2	262	37.8	179	52.3		36.9	182	21.3		02.9	158	07.5	+22	59.9	188	32.2		
3	277	40.3	194	51.4		37.1	197	21.9		03.0	173	09.4		59.9	203	34.3		
4	292	42.7	209	50.6		37.4	212	22.6		03.1	188	11.4		59.8	218	36.4		
5	307	45.2	224	49.8	+24	37.6	227	23.2	+24	03.2	203	13.4	+22	59.8	233	38.6		
6	322	47.7	239	48.9	+24	37.9	242	23.9	+24	03.4	218	15.4	+22	59.7	248	40.7		
7	337	50.1	254	48.1		38.1	257	24.5		03.5	233	17.3		59.7	263	42.8		
8	352	52.6	269	47.3		38.3	272	25.2		03.6	248	19.3		59.7	278	45.0		
9	7	55.1	284	46.4		38.6	287	25.8		03.7	263	21.3		59.6	293	47.1		
10	22	57.5	299	45.6		38.8	302	26.5		03.9	278	23.3		59.6	308	49.2		
11	38	00.0	314	44.7	+24	39.0	317	27.1	+24	04.0	293	25.2	+22	59.5	323	51.3		
12	53	02.5	329	43.9	+24	39.3	332	27.8	+24	04.1	308	27.2	+22	59.5	338	53.5		
13	68	04.9	344	43.1		39.5	347	28.4		04.2	323	29.2		59.4	353	55.6		
14	83	07.4	359	42.2		39.7	2	29.1		04.3	338	31.1		59.4	8	57.7		
15	98	09.9	14	41.4		40.0	17	29.7		04.5	353	33.1		59.4	23	59.9		
16	113	12.3	29	40.6		40.2	32	30.4		04.6	8	35.1		59.3	39	02.0		
17	128	14.8	44	39.7	+24	40.4	47	31.0	+24	04.7	23	37.1	+22	59.3	54	04.1		
18	143	17.2	59	38.9	+24	40.6	62	31.7	+24	04.8	38	39.0	+22	59.2	69	06.3		
19	158	19.7	74	38.0		40.9	77	32.3		04.9	53	41.0		59.2	84	08.4		
20	173	22.2	89	37.2		41.1	92	33.0		05.1	68	43.0		59.1	99	10.5		
21	188	24.6	104	36.4		41.3	107	33.6		05.2	83	44.9		59.1	114	12.7		
22	203	27.1	119	35.5		41.5	122	34.2		05.3	98	46.9		59.1	129	14.8		
23	218	29.6	134	34.7		41.7	137	34.9		05.4	113	48.9		59.0	144	16.9		
24	233	32.0	149	33.8	+24	42.0	152	35.5	+24	05.5	128	50.9	+22	59.0	159	19.1		
Dif	—		-8 +2		+6 +1		+20 0		+21 0									

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 3 ^d 6	PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 3 20 ^h : 57 ^m 4 R°: 57 ^m									
	PMG: 11 ^h 56 ^m 3					SD: 15 ^h 5			PMG: 15 ^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	
0	180	55.3	+19 00.5	136	04.1	+24 57.8	60 N	20 34	21 39	** **	5 34 66		0 30 52	
1	195	55.3	01.1	150	30.3	72 58.9	58	20	21 17	23 04	5 57 65		0 07 53	
2	210	55.3	01.6	164	56.5	72 +24 59.8	56	20 08	20 59	22 19	6 16 64	** ** *	** ** *	
3	225	55.3	02.2	179	22.6	71 +25 00.6	54	19 58	44	21 51	32 63	** ** *	** ** *	
4	240	55.2	02.8	193	48.7	71 01.3	52	49	31	30	45 63	** ** *	** ** *	
5	255	55.2	+19 03.4	208	14.8	71 +25 01.7	50	19 40	20 20	21 13	6 57 62	** ** *	** ** *	
6	270	55.2	+19 04.0	222	40.8	70 +25 02.1	45	19 23	19 58	20 41	7 22 61		23 38 47	
7	285	55.2	04.5	237	06.8	70 02.3	40	19 09	40	18	42 60		19 49	
8	300	55.2	05.1	251	32.8	70 02.3	35	18 57	25	20 00	7 58 60		23 03 50	
9	315	55.2	05.7	265	58.7	69 02.2	30	47	19 13	19 45	8 12 60		22 49 51	
10	330	55.2	06.3	280	24.7	70 02.0	20	29	18 53	21	37 58		25 53	
11	345	55.2	+19 06.8	294	50.6	69 +25 01.6	10 N	18 14	18 36	19 03	8 58 57		22 04 55	
12	0	55.1	+19 07.4	309	16.5	69 +25 01.0	0	18 00	18 22	18 47	9 17 57		21 45 56	
13	15	55.1	08.0	323	42.4	69 +25 00.3	10 S	17 46	18 08	34	37 56		25 58	
14	30	55.1	08.6	338	08.2	68 +24 59.5	20	31	17 54	21	9 58 55		21 04 60	
15	45	55.1	09.1	352	34.1	69 58.5	30	14	40	09	10 22 55		20 40 61	
16	60	55.1	09.7	6	59.9	68 57.3	35	17 04	31	18 02	37 53		26 62	
17	75	55.1	+19 10.3	21	25.7	68 +24 56.0	40	16 53	17 22	17 55	10 53 53		20 09 64	
18	90	55.1	+19 10.9	35	51.5	68 +24 54.6	45	16 40	17 12	17 48	11 13 52		19 49 66	
19	105	55.0	11.4	50	17.3	68 53.0	50	24	17 00	40	38 50		25 67	
20	120	55.0	12.0	64	43.1	68 51.2	52	17	16 55	36	11 50 49		19 13 68	
21	135	55.0	12.6	79	08.9	68 49.3	54	09	49	32	12 04 48		18 59 70	
22	150	55.0	13.1	93	34.6	67 47.3	56	16 00	42	28	20 46		43 71	
23	165	55.0	13.7	108	00.4	68 45.1	58	15 49	35	24	12 39 45		24 74	
24	180	55.0	+19 14.3	122	26.2	68 +24 42.7	60 S	15 37	16 27	17 19	13 03 41		18 00 77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 8 ^h 24 ^m 5		Mag: -3.9 PMG: 14 ^h 03 ^m		Mag: +1.7 PMG: 13 ^h 49 ^m		Mag: -2.0 PMG: 15 ^h 23 ^m		Mag: +0.1 PMG: 13 ^h 21 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'
0	233	32.0	149 33.8	+24 42.0	152 35.5	+24 05.5	128 50.9	+22 59.0	159 19.1	+21 18.7	
1	248	34.5	164 33.0	42.2	167 36.2	05.7	143 52.8	58.9	174 21.2	18.7	
2	263	37.0	179 32.2	42.4	182 36.8	05.8	158 54.8	58.9	189 23.3	18.8	
3	278	39.4	194 31.3	42.6	197 37.5	05.9	173 56.8	58.8	204 25.5	18.8	
4	293	41.9	209 30.5	42.8	212 38.1	06.0	188 58.7	58.8	219 27.6	18.8	
5	308	44.4	224 29.6	+24 43.0	227 38.8	+24 06.1	204 00.7	+22 58.8	234 29.7	+21 18.9	
6	323	46.8	239 28.8	+24 43.2	242 39.4	+24 06.2	219 02.7	+22 58.7	249 31.9	+21 18.9	
7	338	49.3	254 28.0	43.4	257 40.1	06.4	234 04.6	58.7	264 34.0	19.0	
8	353	51.7	269 27.1	43.6	272 40.7	06.5	249 06.6	58.6	279 36.1	19.0	
9	8	54.2	284 26.3	43.8	287 41.4	06.6	264 08.6	58.6	294 38.3	19.0	
10	23	56.7	299 25.5	44.0	302 42.0	06.7	279 10.6	58.5	309 40.4	19.1	
11	38	59.1	314 24.6	+24 44.2	317 42.7	+24 06.8	294 12.5	+22 58.5	324 42.5	+21 19.1	
12	54	01.6	329 23.8	+24 44.5	332 43.3	+24 06.9	309 14.5	+22 58.5	339 44.6	+21 19.1	
13	69	04.1	344 22.9	44.7	347 44.0	07.0	324 16.5	58.4	354 46.8	19.2	
14	84	06.5	359 22.1	44.9	2	44.6	339 18.4	58.4	9	48.9	19.2
15	99	09.0	14 21.3	45.0	17 45.3	07.3	354 20.4	58.3	24 51.0	19.3	
16	114	11.5	29 20.4	45.2	32 45.9	07.4	9	22.4	39 53.2	19.3	
17	129	13.9	44 19.6	+24 45.4	47 46.6	+24 07.5	24 24.3	+22 58.2	54 55.3	+21 19.3	
18	144	16.4	59 18.7	+24 45.6	62 47.2	+24 07.6	39 26.3	+22 58.2	69 57.4	+21 19.4	
19	159	18.8	74 17.9	45.8	77 47.8	07.7	54 28.3	58.1	84 59.6	19.4	
20	174	21.3	89 17.0	46.0	92 48.5	07.8	69 30.2	58.1	100 01.7	19.5	
21	189	23.8	104 16.2	46.2	107 49.1	07.9	84 32.2	58.1	115 03.8	19.5	
22	204	26.2	119 15.4	46.4	122 49.8	08.0	99 34.2	58.0	130 06.0	19.5	
23	219	28.7	134 14.5	46.6	137 50.4	08.2	114 36.1	58.0	145 08.1	19.6	
24	234	31.2	149 13.7	+24 46.8	152 51.1	+24 08.3	129 38.1	+22 57.9	160 10.2	+21 19.6	
Dif	—		-8	+2	+6		+1	+20	0	+21	

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: 4 ^d 6 PHE { 4 ^h : 57/6 12 ^h : 57/8 20 ^h : 58/0 PMG: 16 ^h 28 ^m R°: 56 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	55.0	+19	14.3	122	26.2	+24	42.7	60 N	** **	2 13	3 18	6 40	85	1 22	33	
1	195	54.9		14.9	136	51.9	67	40.2	58	0 48	36	32	7 02	81	1 00	37	
2	210	54.9		15.4	151	17.7	68	37.6	56	1 33	2 53	44	20 78		0 42	40	
3	225	54.9		16.0	165	43.5	68	34.8	54	2 01	3 08	3 54	35 75		27	4	
4	240	54.9		16.6	180	09.2	67	31.8	52	22	21	4 04	48 74		14	43	
5	255	54.9	+19	17.1	194	35.0	68	+24 28.7	50	2 39	3 32	4 12	7 59	72	0 02	45	
6	270	54.9	+19	17.7	209	00.8	68	+24 25.4	45	3 11	3 55	4 29	8 23	69	** **	**	
7	285	54.8		18.3	223	26.6	68	22.0	40	34	4 12	43	42 67		** **	**	
8	300	54.8		18.8	237	52.4	68	18.5	35	3 53	27	4 55	8 58	65	23 53	45	
9	315	54.8		19.4	252	18.2	68	14.8	30	4 08	4 39	5 06	9 12	63	40	47	
10	330	54.8		19.9	266	44.0	68	10.9	20	32	5 00	23	35 61		23 18	50	
11	345	54.8	+19	20.5	281	09.8	68	+24 06.9	10 N	4 50	5 16	5 39	9 55	59	22 59	53	
12	0	54.8	+19	21.1	295	35.7	69	+24 02.8	0	5 05	5 31	5 53	10 14	57	22 41	56	
13	15	54.7		21.6	310	01.5	68	+23 58.5	10 S	19	45	6 07	33 54		23	59	
14	30	54.7		22.2	324	27.4	69	54.1	20	32	5 59	22	10 53	52	22 04	61	
15	45	54.7		22.8	338	53.3	69	49.5	30	44	6 13	39	11 17	49	21 41	65	
16	60	54.7		23.3	353	19.2	69	44.7	35	51	22	6 49	30 48		28	67	
17	75	54.7	+19	23.9	7	45.1	69	+23 39.9	40	5 58	6 31	7 00	11 46	45	21 13	69	
18	90	54.6	+19	24.4	22	11.0	69	+23 34.8	45	6 05	6 41	7 13	12 05	43	20 55	72	
19	105	54.6		25.0	36	37.0	70	29.7	50	13	53	29	28 40		32	76	
20	120	54.6		25.6	51	03.0	70	24.3	52	17	6 59	37	39 38		21	78	
21	135	54.6		26.1	65	29.0	70	18.9	54	21	7 05	45	12 52	35	20 09	80	
22	150	54.5		26.7	79	55.1	71	13.3	56	25	11	7 54	13 06	33	19 54	83	
23	165	54.5		27.2	94	21.1	70	07.5	58	30	19	8 05	24 29		38	86	
24	180	54.5	+19	27.8	108	47.2	71	+23 01.6	60 S	6 35	7 27	8 17	13 44	25	19 17	92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 20 ^m 6		Mag: -3.9 PMG: 14 ^h 04 ^m		Mag: +1.7 PMG: 13 ^h 48 ^m		Mag: -2.0 PMG: 15 ^h 19 ^m		Mag: +0.1 PMG: 13 ^h 17 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	234	31.2	149	13.7	+24	46.8	152	51.1	+24	08.3
1	249	33.6	164	12.8		47.0	167	51.7		08.4
2	264	36.1	179	12.0		47.1	182	52.4		08.5
3	279	38.6	194	11.2		47.3	197	53.0		08.6
4	294	41.0	209	10.3		47.5	212	53.7		08.7
5	309	43.5	224	09.5	+24	47.7	227	54.3	+24	08.8
6	324	46.0	239	08.6	+24	47.9	242	55.0	+24	08.9
7	339	48.4	254	07.8		48.0	257	55.6		09.0
8	354	50.9	269	07.0		48.2	272	56.3		09.1
9	9	53.3	284	06.1		48.4	287	56.9		09.2
10	24	55.8	299	05.3		48.6	302	57.6		09.3
11	39	58.3	314	04.4	+24	48.8	317	58.2	+24	09.4
12	55	00.7	329	03.6	+24	48.9	332	58.9	+24	09.5
13	70	03.2	344	02.8		49.1	347	59.5		09.6
14	85	05.7	359	01.9		49.3	3	00.2		09.8
15	100	08.1	14	01.1		49.4	18	00.8		09.9
16	115	10.6	29	00.2		49.6	33	01.5		10.0
17	130	13.1	43	59.4	+24	49.8	48	02.1	+24	10.1
18	145	15.5	58	58.5	+24	49.9	63	02.7	+24	10.2
19	160	18.0	73	57.7		50.1	78	03.4		10.3
20	175	20.5	88	56.9		50.3	93	04.0		10.4
21	190	22.9	103	56.0		50.4	108	04.7		10.5
22	205	25.4	118	55.2		50.6	123	05.3		10.6
23	220	27.8	133	54.3		50.7	138	06.0		10.7
24	235	30.3	148	53.5	+24	50.9	153	06.6	+24	10.8
Dif	—		-8 +2		+6 +1		+20 0		+21 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: 5 ^d 6 PHE { 4 ^h : 58'1 12 ^h : 58'3 20 ^h : 58'5 R°: 54 ^m SD: 15'8 PMG: 17 ^h 24 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	54.5	+19	27.8	108	47.2	+23	01.6	60 N	20 38	21 45	** **	8 05 95	1 55 19			
1	195	54.5		28.3	123	13.3	+22	55.6	58	24	22	23 22	23 90	37 24			
2	210	54.5		28.9	137	39.5		49.4	56	12	21 03	22 27	38 86	22 27			
3	225	54.4		29.4	152	05.7		43.1	54	20 01	20 48	21 57	8 50 84	1 08 3			
4	240	54.4		30.0	166	31.9		36.6	52	19 52	35	35	9 02 80	0 57 33			
5	255	54.4	+19	30.5	180	58.1	+22	30.0	50	19 43	20 23	21 18	9 11 79	0 47 35			
6	270	54.4	+19	31.1	195	24.4	+22	23.3	45	19 25	20 00	20 44	9 32 74	0 25 39			
7	285	54.3		31.6	209	50.7		16.4	40	19 11	19 42	20	9 49 70	0 08 42			
8	300	54.3		32.2	224	17.1		09.4	35	18 59	27	20 02	10 03 68	** ** *			
9	315	54.3		32.8	238	43.5	+22	02.2	30	48	19 14	19 46	15 65	** ** *			
10	330	54.3		33.3	253	09.9	+21	54.9	20	30	18 54	22	36 61	** ** *			
11	345	54.3	+19	33.8	267	36.3	+21	47.5	10 N	18 14	18 37	19 03	10 54 58	23 52 50			
12	0	54.2	+19	34.4	282	02.8	+21	39.9	0	18 00	18 22	18 47	11 11 54	23 37 54			
13	15	54.2		34.9	296	29.4		32.2	10 S	17 46	18 08	34	27 52	22 57			
14	30	54.2		35.5	310	55.9		24.4	20	30	17 54	21	11 45 48	23 05 61			
15	45	54.2		36.0	325	22.5		16.4	30	13	39	08	12 06 44	22 46 66			
16	60	54.1		36.6	339	49.2		08.4	35	17 03	30	18 01	18 42	35 68			
17	75	54.1	+19	37.1	354	15.9	+21	00.1	40	16 52	17 21	17 54	12 31 39	22 22 71			
18	90	54.1	+19	37.7	8	42.6	+20	51.8	45	16 38	17 10	17 46	12 48 35	22 07 75			
19	105	54.0		38.2	23	09.4		43.3	50	22	16 58	38	13 08 31	21 48 80			
20	120	54.0		38.8	37	36.2		34.7	52	14	52	34	17 29	39 82			
21	135	54.0		39.3	52	03.0		25.9	54	16 06	46	30	27 27	29 85			
22	150	54.0		39.9	66	29.9		17.1	56	15 56	39	26	39 24	17 89			
23	165	53.9		40.4	80	56.9	+20	08.1	58	45	32	21	13 53 20	21 04 93			
24	180	53.9	+19	40.9	95	23.9	+19	59.0	60 S	15 33	16 23	17 16	14 09 15	20 49 97			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 16 ^m 6		Mag: -3.9 PMG: 14 ^h 05 ^m		Mag: +1.7 PMG: 13 ^h 47 ^m		Mag: -2.0 PMG: 15 ^h 16 ^m		Mag: +0.1 PMG: 13 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	235	30.3	148	53.5	+24	50.9	153	06.6	+24	10.8
1	250	32.8	163	52.6		51.0	168	07.3		10.9
2	265	35.2	178	51.8		51.2	183	07.9		11.0
3	280	37.7	193	51.0		51.4	198	08.6		11.1
4	295	40.2	208	50.1		51.5	213	09.2		11.2
5	310	42.6	223	49.3	+24	51.7	228	09.9	+24	11.3
6	325	45.1	238	48.4	+24	51.8	243	10.5	+24	11.4
7	340	47.6	253	47.6		52.0	258	11.2		11.5
8	355	50.0	268	46.8		52.1	273	11.8		11.6
9	10	52.5	283	45.9		52.3	288	12.5		11.7
10	25	55.0	298	45.1		52.4	303	13.1		11.8
11	40	57.4	313	44.2	+24	52.5	318	13.8	+24	11.9
12	55	59.9	328	43.4	+24	52.7	333	14.4	+24	12.0
13	71	02.3	343	42.5		52.8	348	15.1		12.1
14	86	04.8	358	41.7		53.0	3	15.7		12.1
15	101	07.3	13	40.9		53.1	18	16.4		12.2
16	116	09.7	28	40.0		53.2	33	17.0		12.3
17	131	12.2	43	39.2	+24	53.4	48	17.7	+24	12.4
18	146	14.7	58	38.3	+24	53.5	63	18.3	+24	12.5
19	161	17.1	73	37.5		53.6	78	19.0		12.6
20	176	19.6	88	36.6		53.8	93	19.6		12.7
21	191	22.1	103	35.8		53.9	108	20.2		12.8
22	206	24.5	118	35.0		54.0	123	20.9		12.9
23	221	27.0	133	34.1		54.2	138	21.5		13.0
24	236	29.5	148	33.3	+24	54.3	153	22.2	+24	13.1
Dif	—		-8 +1		+6 +1		+20 0		+21 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 .4			Edad: 6 ^d 6 SD: 15'9 PMG: 18 ^h 18 ^m	PHE { 4 ^h : 58'6 12 ^h : 58'8 20 ^h : 59'0 R°: 53 ^m										
	hG ☉	Dec				hG ☾		Dif			Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	53.9	+19	40.9	95	23.9	+19	59.0	60 N	**	**	2 07	3 14	9 40	98
1	195	53.9		41.5	109	50.9	80	49.7	93	58	0 30	30	28	9 53	93
2	210	53.9		42.0	124	18.0	81	40.3	94	56	1 25	2 49	40	10 04	89
3	225	53.8		42.6	138	45.1	81	30.9	94	54	1 55	3 04	3 51	14 86	39
4	240	53.8		43.1	153	12.3	82	21.2	97	52	2 17	18	4 01	22 84	30
5	255	53.8	+19	43.6	167	39.5	82	+19	11.5	97	50	2 35	3 29	4 09	10 30
6	270	53.7	+19	44.2	182	06.7	82	+19	01.7	98	45	3 08	3 52	4 27	10 46
7	285	53.7		44.7	196	34.0	83	+18	51.7	100	40	32	4 11	42	10 59
8	300	53.7		45.2	211	01.4	84		41.6	101	35	3 51	25	4 54	11 11
9	315	53.7		45.8	225	28.8	84		31.4	102	30	4 06	38	5 04	20 66
10	330	53.6		46.3	239	56.2	84		21.1	103	20	31	4 59	23	37 61
11	345	53.6	+19	46.9	254	23.7	85	+18	10.7	104	10 N	4 50	5 16	5 38	11 52
12	0	53.6	+19	47.4	268	51.2	85	+18	00.2	105	0	5 05	5 31	5 53	12 05
13	15	53.5		47.9	283	18.8	86	+17	49.5	107	10 S	19	45	6 07	19 49
14	30	53.5		48.5	297	46.4	86		38.7	108	20	32	5 59	23	33 45
15	45	53.5		49.0	312	14.1	87		27.9	108	30	45	6 15	40	12 50
16	60	53.4		49.5	326	41.8	87		16.9	110	35	52	23	6 50	13 00
17	75	53.4	+19	50.1	341	09.6	88	+17	05.8	111	40	5 59	6 32	7 02	13 10
18	90	53.4	+19	50.6	355	37.4	88	+16	54.6	112	45	6 07	6 43	7 15	13 23
19	105	53.4		51.1	10	05.2	88		43.3	113	50	16	6 56	32	39 25
20	120	53.3		51.6	24	33.1	89		31.9	114	52	19	7 01	39	46 23
21	135	53.3		52.2	39	01.1	90		20.4	115	54	24	07	48	13 54
22	150	53.3		52.7	53	29.1	90	+16	08.8	116	56	28	14	7 58	14 03
23	165	53.2		53.2	67	57.1	90	+15	57.1	117	58	33	22	8 09	13 14
24	180	53.2	+19	53.8	82	25.2	91	+15	45.3	118	60 S	6 38	7 31	8 21	14 24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 12 ^m 7		Mag: -3.9 PMG: 14 ^h 07 ^m		Mag: +1.7 PMG: 13 ^h 46 ^m		Mag: -2.0 PMG: 15 ^h 13 ^m		Mag: +0.1 PMG: 13 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	236	29.5	148	33.3	+24	54.3	153	22.2	+24	13.1
1	251	31.9	163	32.4		54.4	168	22.8		13.2
2	266	34.4	178	31.6		54.6	183	23.5		13.3
3	281	36.8	193	30.8		54.7	198	24.1		13.4
4	296	39.3	208	29.9		54.8	213	24.8		13.5
5	311	41.8	223	29.1	+24	54.9	228	25.4	+24	13.5
6	326	44.2	238	28.2	+24	55.0	243	26.1	+24	13.6
7	341	46.7	253	27.4		55.2	258	26.7		13.7
8	356	49.2	268	26.5		55.3	273	27.4		13.8
9	11	51.6	283	25.7		55.4	288	28.0		13.9
10	26	54.1	298	24.9		55.5	303	28.7		14.0
11	41	56.6	313	24.0	+24	55.6	318	29.3	+24	14.1
12	56	59.0	328	23.2	+24	55.7	333	30.0	+24	14.2
13	72	01.5	343	22.3		55.8	348	30.6		14.3
14	87	03.9	358	21.5		56.0	3	31.3		14.3
15	102	06.4	13	20.6		56.1	18	31.9		14.4
16	117	08.9	28	19.8		56.2	33	32.6		14.5
17	132	11.3	43	19.0	+24	56.3	48	33.2	+24	14.6
18	147	13.8	58	18.1	+24	56.4	63	33.9	+24	14.7
19	162	16.3	73	17.3		56.5	78	34.5		14.8
20	177	18.7	88	16.4		56.6	93	35.2		14.9
21	192	21.2	103	15.6		56.7	108	35.8		14.9
22	207	23.7	118	14.7		56.8	123	36.5		15.0
23	222	26.1	133	13.9		56.9	138	37.1		15.1
24	237	28.6	148	13.1	+24	57.0	153	37.8	+24	15.2
Dif	—		-8		+1		+6		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 7 ^d 6	PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 3 20 ^h : 59 ^m 4	Civil			Náutico		Hora		R°		
	PMG: 11 ^h 56 ^m 5														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	53.2	+19 53.8	82	25.2	+15 45.3		60 N	20 43	21 52	** **	11 18 98	2 27 9		
1	195	53.2	54.3	96	53.3	91 33.4	119	58	28	27	** **	26 94	18 12		
2	210	53.1	54.8	111	21.4	91 21.4	120	56	15	21 08	22 36	33 91	10 15		
3	225	53.1	55.3	125	49.6	+15 09.3	121	54	20 04	20 52	22 03	40 87	2 02 19		
4	240	53.1	55.9	140	17.9	+14 57.2	121	52	19 55	38	21 40	46 84	1 56 21		
5	255	53.0	+19 56.4	154	46.2	+14 44.9	123	50	19 46	20 26	21 22	11 51 82	1 50 23		
6	270	53.0	+19 56.9	169	14.5	+14 32.5	124	45	19 28	20 03	20 47	12 02 77	1 37 28		
7	285	53.0	57.4	183	42.9	94 20.1	124	40	13	19 44	23	11 73	26 32		
8	300	52.9	58.0	198	11.3	+14 07.5	126	35	19 00	29	20 03	19 69	17 36		
9	315	52.9	58.5	212	39.8	+13 54.9	126	30	18 49	19 16	19 48	26 66	1 09 38		
10	330	52.9	59.0	227	08.3	95 42.1	128	20	31	18 55	23	38 61	0 55 43		
11	345	52.8	+19 59.5	241	36.8	+13 29.3	128	10 N	18 15	18 37	19 04	12 49 55	0 42 48		
12	0	52.8	+20 00.0	256	05.4	+13 16.4	129	0	18 00	18 22	18 48	12 58 52	0 31 52		
13	15	52.7	+20 00.6	270	34.0	+13 03.5	129	10 S	17 45	18 08	33	13 08 47	19 56		
14	30	52.7	01.1	285	02.6	+12 50.4	131	20	30	17 53	20	18 43	0 06 61		
15	45	52.7	01.6	299	31.3	97 37.3	131	30	12	38	07	30 37	** ** *		
16	60	52.6	02.1	314	00.0	97 24.1	132	35	17 02	29	18 00	37 34	** ** *		
17	75	52.6	+20 02.6	328	28.8	+12 10.8	133	40	16 50	17 19	17 53	13 44 31	** ** *		
18	90	52.6	+20 03.1	342	57.6	+11 57.4	134	45	16 36	17 09	17 45	13 53 27	** ** *		
19	105	52.5	03.7	357	26.4	98 43.9	135	50	20	16 56	36	14 04 22	** ** *		
20	120	52.5	04.2	11	55.3	99 30.4	135	52	12	50	32	09 19	** ** *		
21	135	52.5	04.7	26	24.2	99 16.8	136	54	16 03	44	28	14 17	** ** *		
22	150	52.4	05.2	40	53.1	+11 03.2	136	56	15 53	37	23	20 14	** ** *		
23	165	52.4	05.7	55	22.1	+10 49.4	138	58	42	29	18	27 11	** ** *		
24	180	52.3	+20 06.2	69	51.1	+10 35.6	138	60 S	15 29	16 20	17 13	14 34 8	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: -3.9		Mag: +1.7		Mag: -2.0		Mag: +0.1						
	8 ^h 08 ^m 8		PMG: 14 ^h 08 ^m		PMG: 13 ^h 45 ^m		PMG: 15 ^h 10 ^m		PMG: 13 ^h 07 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	237	28.6	148	13.1	+24 57.0	153	37.8	+24 15.2	131	59.4					
1	252	31.1	163	12.2	57.1	168	38.4	15.3	147	01.3					
2	267	33.5	178	11.4	57.2	183	39.1	15.4	162	03.3					
3	282	36.0	193	10.5	57.3	198	39.7	15.4	177	05.2					
4	297	38.4	208	09.7	57.4	213	40.4	15.5	192	07.2					
5	312	40.9	223	08.9	+24 57.5	228	41.0	+24 15.6	207	09.2					
6	327	43.4	238	08.0	+24 57.6	243	41.7	+24 15.7	222	11.1					
7	342	45.8	253	07.2	57.6	258	42.3	15.8	237	13.1					
8	357	48.3	268	06.3	57.7	273	42.9	15.8	252	15.0					
9	12	50.8	283	05.5	57.8	288	43.6	15.9	267	17.0					
10	27	53.2	298	04.6	57.9	303	44.2	16.0	282	18.9					
11	42	55.7	313	03.8	+24 58.0	318	44.9	+24 16.1	297	20.9					
12	57	58.2	328	03.0	+24 58.1	333	45.5	+24 16.2	312	22.8					
13	73	00.6	343	02.1	58.2	348	46.2	16.2	327	24.8					
14	88	03.1	358	01.3	58.2	3	46.8	16.3	342	26.8					
15	103	05.6	13	00.4	58.3	18	47.5	16.4	357	28.7					
16	118	08.0	27	59.6	58.4	33	48.1	16.5	12	30.7					
17	133	10.5	42	58.7	+24 58.5	48	48.8	+24 16.6	27	32.6					
18	148	12.9	57	57.9	+24 58.5	63	49.4	+24 16.6	42	34.6					
19	163	15.4	72	57.1	58.6	78	50.1	16.7	57	36.5					
20	178	17.9	87	56.2	58.7	93	50.7	16.8	72	38.5					
21	193	20.3	102	55.4	58.8	108	51.4	16.9	87	40.4					
22	208	22.8	117	54.5	58.8	123	52.0	16.9	102	42.4					
23	223	25.3	132	53.7	58.9	138	52.7	17.0	117	44.3					
24	238	27.7	147	52.9	+24 59.0	153	53.3	+24 17.1	132	46.3					
Dif	—		-8	+1		+6	+1		+20	0		+21	0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5				Edad: 8 ^d 6 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 7 20 ^h : 59 ^m 8 PMG: 20 ^h 02 ^m R ^o : 50 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	52.3	+20	06.2	69	51.1	+10	35.6	60 N	** **	2 00	3 10	12 56	97	2 36	7	
1	195	52.3		06.7	84	20.1 ¹⁰⁰		21.8 ¹³⁸	58	** **	25	24	13 00	93	30	10	
2	210	52.3		07.3	98	49.2 ¹⁰¹	+10	07.8 ¹⁴⁰	56	1 17	2 45	37	04 90		25	14	
3	225	52.2		07.8	113	18.2 ¹⁰⁰	+9	53.8 ¹⁴⁰	54	1 49	3 01	48	07 87		21	16	
4	240	52.2		08.3	127	47.4 ¹⁰²		39.8 ¹⁴⁰	52	2 13	14	3 58	10 85		17	18	
5	255	52.1	+20	08.8	142	16.5 ¹⁰¹	+9	25.7 ¹⁴¹	50	2 31	3 26	4 07	13 13	82	2 13	21	
6	270	52.1	+20	09.3	156	45.7 ¹⁰²	+9	11.5 ¹⁴²	45	3 05	3 50	4 25	13 19	77	2 05	26	
7	285	52.1		09.8	171	14.9 ¹⁰²	+8	57.2 ¹⁴³	40	30	4 09	40	24 73		1 58	30	
8	300	52.0		10.3	185	44.1 ¹⁰²		42.9 ¹⁴³	35	3 49	24	4 52	28 69		53	33	
9	315	52.0		10.8	200	13.3 ¹⁰²		28.6 ¹⁴³	30	4 05	37	5 03	32 66		47	37	
10	330	51.9		11.3	214	42.6 ¹⁰³	+8	14.2 ¹⁴⁴	20	30	4 58	22	39 60		38	42	
11	345	51.9	+20	11.8	229	11.9 ¹⁰³	+7	59.7 ¹⁴⁵	10 N	4 49	5 16	5 38	13 44	55	1 30	47	
12	0	51.9	+20	12.3	243	41.2 ¹⁰³	+7	45.2 ¹⁴⁵	0	5 05	5 31	5 53	13 50	50	1 23	51	
13	15	51.8		12.9	258	10.5 ¹⁰³		30.6 ¹⁴⁶	10 S	20	5 45	6 08	13 55	46	15	55	
14	30	51.8		13.4	272	39.9 ¹⁰⁴		16.0 ¹⁴⁶	20	33	6 00	23	14 01	41	1 07	60	
15	45	51.7		13.9	287	09.2 ¹⁰³	+7	01.3 ¹⁴⁷	30	46	16	41	07 36		0 58	65	
16	60	51.7		14.4	301	38.6 ¹⁰⁴	+6	46.6 ¹⁴⁷	35	5 53	24	6 52	11 32		52	69	
17	75	51.7	+20	14.9	316	08.0 ¹⁰⁴	+6	31.9 ¹⁴⁷	40	6 01	6 34	7 03	14 15	29	0 46	72	
18	90	51.6	+20	15.4	330	37.4 ¹⁰⁴	+6	17.1 ¹⁴⁸	45	6 09	6 45	7 17	14 20	25	0 39	76	
19	105	51.6		15.9	345	06.9 ¹⁰⁵	+6	02.2 ¹⁴⁹	50	18	6 58	34	26 20		30	82	
20	120	51.5		16.4	359	36.3 ¹⁰⁴	+5	47.4 ¹⁴⁸	52	22	7 04	42	28 18		26	84	
21	135	51.5		16.9	14	05.8 ¹⁰⁵		32.4 ¹⁵⁰	54	26	10	7 51	31 16		21	87	
22	150	51.4		17.4	28	35.2 ¹⁰⁴		17.5 ¹⁴⁹	56	31	17	8 01	34 13		16	90	
23	165	51.4		17.9	43	04.7 ¹⁰⁵	+5	02.5 ¹⁵⁰	58	36	25	12	38 10		10	94	
24	180	51.4	+20	18.4	57	34.2 ¹⁰⁵	+4	47.5 ¹⁵⁰	60 S	6 41	7 34	8 26	14 42	6	0 04	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 04 ^m 8		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: +1.7 PMG: 13 ^h 44 ^m		Mag: -2.0 PMG: 15 ^h 07 ^m		Mag: +0.1 PMG: 13 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	238	27.7	147	52.9	+24	59.0	153	53.3	+24	17.1	132	46.3	+22	53.5	163	34.6	+21	23.2
1	253	30.2	162	52.0		59.0	168	54.0		17.2	147	48.3		53.5	178	36.7		23.3
2	268	32.7	177	51.2		59.1	183	54.6		17.2	162	50.2		53.4	193	38.8		23.3
3	283	35.1	192	50.3		59.2	198	55.3		17.3	177	52.2		53.4	208	40.9		23.4
4	298	37.6	207	49.5		59.2	213	55.9		17.4	192	54.1		53.3	223	43.1		23.4
5	313	40.0	222	48.7	+24	59.3	228	56.6	+24	17.5	207	56.1	+22	53.3	238	45.2	+21	23.4
6	328	42.5	237	47.8	+24	59.4	243	57.2	+24	17.5	222	58.0	+22	53.2	253	47.3	+21	23.5
7	343	45.0	252	47.0		59.4	258	57.9		17.6	238	00.0		53.2	268	49.4		23.5
8	358	47.4	267	46.1		59.5	273	58.5		17.7	253	01.9		53.1	283	51.6		23.5
9	13	49.9	282	45.3		59.5	288	59.2		17.8	268	03.9		53.1	298	53.7		23.6
10	28	52.4	297	44.4		59.6	303	59.8		17.8	283	05.8		53.0	313	55.8		23.6
11	43	54.8	312	43.6	+24	59.6	319	00.5	+24	17.9	298	07.8	+22	53.0	328	57.9	+21	23.7
12	58	57.3	327	42.8	+24	59.7	334	01.1	+24	18.0	313	09.7	+22	52.9	344	00.1	+21	23.7
13	73	59.8	342	41.9		59.7	349	01.8		18.0	328	11.7		52.9	359	02.2		23.7
14	89	02.2	357	41.1		59.8	4	02.4		18.1	343	13.6		52.8	14	04.3		23.8
15	104	04.7	12	40.2		59.8	19	03.1		18.2	358	15.6		52.8	29	06.4		23.8
16	119	07.2	27	39.4		59.9	34	03.7		18.2	13	17.5		52.7	44	08.6		23.8
17	134	09.6	42	38.6	+24	59.9	49	04.4	+24	18.3	28	19.5	+22	52.7	59	10.7	+21	23.9
18	149	12.1	57	37.7	+25	00.0	64	05.0	+24	18.4	43	21.4	+22	52.7	74	12.8	+21	23.9
19	164	14.5	72	36.9	+25	00.0	79	05.7		18.4	58	23.4		52.6	89	15.0		24.0
20	179	17.0	87	36.0	+25	00.1	94	06.3		18.5	73	25.4		52.6	104	17.1		24.0
21	194	19.5	102	35.2		00.1	109	07.0		18.6	88	27.3		52.5	119	19.2		24.0
22	209	21.9	117	34.4		00.2	124	07.6		18.7	103	29.3		52.5	134	21.3		24.1
23	224	24.4	132	33.5		00.2	139	08.3		18.7	118	31.2		52.4	149	23.5		24.1
24	239	26.9	147	32.7	+25	00.2	154	08.9	+24	18.8	133	33.2	+22	52.4	164	25.6	+21	24.1
Dif	—		-8		+1		+6		+1		+20		0		+21		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: 9 ^d 6 PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'0 PMG: 20 ^h 52 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	51.4	+20	18.4	57	34.2	+4	47.5	60 N	20 47	21 59	** **	14 33 98		2 43 6			
1	195	51.3		18.9	72	03.7 ¹⁰⁵		32.4 ¹⁵¹	58	32	32	** **	33 95		40 10			
2	210	51.3		19.4	86	33.2 ¹⁰⁵		17.3 ¹⁵¹	56	19	21 12	22 45	34 91		39 12			
3	225	51.2		19.9	101	02.8 ¹⁰⁶	+4	02.2 ¹⁵¹	54	20 07	20 56	22 09	34 88		37 15			
4	240	51.2		20.4	115	32.3 ¹⁰⁵	+3	47.0 ¹⁵²	52	19 57	42	21 45	35 85		35 18			
5	255	51.1	+20	20.9	130	01.8 ¹⁰⁵	+3	31.9 ¹⁵¹	50	19 49	20 29	21 26	14 35 83		2 34 20			
6	270	51.1	+20	21.3	144	31.3 ¹⁰⁵	+3	16.7 ¹⁵²	45	19 30	20 05	20 50	14 36 78		2 31 24			
7	285	51.0		21.8	159	00.9 ¹⁰⁶	+3	01.4 ¹⁵³	40	15	19 46	25	37 73		28 29			
8	300	51.0		22.3	173	30.4 ¹⁰⁵	+2	46.2 ¹⁵²	35	19 02	30	20 05	37 70		26 32			
9	315	51.0		22.8	188	00.0 ¹⁰⁶		30.9 ¹⁵³	30	18 51	19 17	19 49	38 66		24 35			
10	330	50.9		23.3	202	29.5 ¹⁰⁵		15.6 ¹⁵³	20	32	18 56	24	39 60		20 41			
11	345	50.9	+20	23.8	216	59.1 ¹⁰⁶	+2	00.3 ¹⁵³	10 N	18 15	18 38	19 04	14 39 56		2 17 46			
12	0	50.8	+20	24.3	231	28.6 ¹⁰⁵	+1	45.0 ¹⁵³	0	18 00	18 22	18 48	14 40 51		2 14 50			
13	15	50.8		24.8	245	58.1 ¹⁰⁵		29.6 ¹⁵⁴	10 S	17 45	18 08	33	41 46		10 56			
14	30	50.7		25.3	260	27.7 ¹⁰⁶	+1	14.3 ¹⁵³	20	29	17 53	20	42 41		07 60			
15	45	50.7		25.8	274	57.2 ¹⁰⁵	+0	58.9 ¹⁵⁴	30	11	37	18 06	43 35		03 66			
16	60	50.6		26.3	289	26.7 ¹⁰⁵		43.5 ¹⁵⁴	35	17 01	28	17 59	43 33		2 01 69			
17	75	50.6	+20	26.8	303	56.2 ¹⁰⁵	+0	28.2 ¹⁵³	40	16 49	17 18	17 51	14 44 29		1 58 73			
18	90	50.5	+20	27.2	318	25.8 ¹⁰⁶	+0	12.8 ¹⁵⁴	45	16 34	17 07	17 43	14 45 25		1 55 78			
19	105	50.5		27.7	332	55.3 ¹⁰⁵	-0	02.6 ¹⁵⁴	50	17	16 54	34	46 20		52 82			
20	120	50.4		28.2	347	24.7 ¹⁰⁴		18.0 ¹⁵⁴	52	09	48	30	46 18		50 85			
21	135	50.4		28.7	1	54.2 ¹⁰⁵		33.4 ¹⁵⁴	54	16 00	41	25	47 15		48 88			
22	150	50.3		29.2	16	23.7 ¹⁰⁵	-0	48.8 ¹⁵⁴	56	15 50	34	21	47 13		46 91			
23	165	50.3		29.7	30	53.2 ¹⁰⁵	-1	04.3 ¹⁵⁵	58	38	26	16	48 9		44 94			
24	180	50.2	+20	30.2	45	22.6 ¹⁰⁴	-1	19.7 ¹⁵⁴	60 S	15 25	16 17	17 10	14 48 7		1 41 98			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 00 ^m 9			Mag: -3.9 PMG: 14 ^h 11 ^m			Mag: +1.7 PMG: 13 ^h 43 ^m			Mag: -1.9 PMG: 15 ^h 04 ^m			Mag: +0.1 PMG: 13 ^h 00 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	239	26.9	147	32.7	+25	00.2	154	08.9	+24	18.8	133	33.2	+22	52.4	164	25.6	+21	24.1
1	254	29.3	162	31.8		00.3	169	09.6		18.9	148	35.1		52.3	179	27.7		24.2
2	269	31.8	177	31.0		00.3	184	10.2		18.9	163	37.1		52.3	194	29.8		24.2
3	284	34.3	192	30.2		00.3	199	10.9		19.0	178	39.0		52.2	209	32.0		24.2
4	299	36.7	207	29.3		00.4	214	11.5		19.0	193	41.0		52.2	224	34.1		24.3
5	314	39.2	222	28.5	+25	00.4	229	12.2	+24	19.1	208	42.9	+22	52.1	239	36.2	+21	24.3
6	329	41.7	237	27.6	+25	00.4	244	12.8	+24	19.2	223	44.9	+22	52.1	254	38.3	+21	24.4
7	344	44.1	252	26.8		00.5	259	13.5		19.2	238	46.8		52.0	269	40.5		24.4
8	359	46.6	267	26.0		00.5	274	14.1		19.3	253	48.8		52.0	284	42.6		24.4
9	14	49.0	282	25.1		00.5	289	14.8		19.4	268	50.7		51.9	299	44.7		24.5
10	29	51.5	297	24.3		00.6	304	15.4		19.4	283	52.7		51.9	314	46.8		24.5
11	44	54.0	312	23.5	+25	00.6	319	16.1	+24	19.5	298	54.6	+22	51.8	329	49.0	+21	24.5
12	59	56.4	327	22.6	+25	00.6	334	16.7	+24	19.6	313	56.6	+22	51.8	344	51.1	+21	24.6
13	74	58.9	342	21.8		00.6	349	17.4		19.6	328	58.5		51.7	359	53.2		24.6
14	90	01.4	357	20.9		00.6	4	18.0		19.7	344	00.5		51.7	14	55.3		24.7
15	105	03.8	12	20.1		00.7	19	18.7		19.7	359	02.4		51.6	29	57.5		24.7
16	120	06.3	27	19.3		00.7	34	19.3		19.8	14	04.4		51.6	44	59.6		24.7
17	135	08.8	42	18.4	+25	00.7	49	20.0	+24	19.9	29	06.3	+22	51.5	60	01.7	+21	24.8
18	150	11.2	57	17.6	+25	00.7	64	20.6	+24	19.9	44	08.2	+22	51.5	75	03.8	+21	24.8
19	165	13.7	72	16.7		00.7	79	21.3		20.0	59	10.2		51.4	90	06.0		24.8
20	180	16.1	87	15.9		00.7	94	21.9		20.0	74	12.1		51.4	105	08.1		24.9
21	195	18.6	102	15.1		00.8	109	22.6		20.1	89	14.1		51.3	120	10.2		24.9
22	210	21.1	117	14.2		00.8	124	23.2		20.2	104	16.0		51.3	135	12.3		24.9
23	225	23.5	132	13.4		00.8	139	23.9		20.2	119	18.0		51.2	150	14.5		25.0
24	240	26.0	147	12.6	+25	00.8	154	24.5	+24	20.3	134	19.9	+22	51.2	165	16.6	+21	25.0
Dif	—		-8		0		+7		+1		+19		0		+21		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 10 ^d 6 PHE	4 ^h : 60 ^l 1 12 ^h : 60 ^l 1 20 ^h : 60 ^l 1 Rº: 53 ^m									
	PMG: 11 ^h 56 ^m 7					SD: 16 ^h 4		SD: 21 ^h 43 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	180	50.2	+20 30.2	45	22.6	-1 19.7	154	60 N	1 54	3 05	16 11	100	2 49	6
1	195	50.2	30.6	59	52.0 ¹⁰⁴	35.1	154	58	2 20	21	08 96		50	10
2	210	50.1	31.1	74	21.4 ¹⁰⁴	-1 50.5	154	56	1 08	41	05 92		51	13
3	225	50.1	31.6	88	50.8 ¹⁰⁴	-2 05.9	154	54	1 44	2 57	02 90		52	16
4	240	50.0	32.1	103	20.2 ¹⁰⁴	21.2	153	52	2 08	3 11	16 00	87	53	18
5	255	50.0	+20 32.6	117	49.6 ¹⁰⁴	-2 36.6	154	50	2 27	3 23	15 58	84	2 54	20
6	270	49.9	+20 33.0	132	18.9 ¹⁰³	-2 52.0	154	45	3 03	3 48	15 54	78	2 55	26
7	285	49.9	33.5	146	48.2 ¹⁰³	-3 07.3	153	40	28	4 07	50 74		57	29
8	300	49.8	34.0	161	17.5 ¹⁰³	22.6	153	35	3 48	23	4 51	47 70	58	33
9	315	49.8	34.5	175	46.8 ¹⁰³	38.0	154	30	4 04	36	5 02	44 67	2 59	36
10	330	49.7	35.0	190	16.0 ¹⁰²	-3 53.3	153	20	29	4 58	39 61		3 01	42
11	345	49.7	+20 35.4	204	45.3 ¹⁰³	-4 08.5	152	10 N	4 49	5 15	15 35	56	3 03	46
12	0	49.6	+20 35.9	219	14.5 ¹⁰²	-4 23.8	153	0	5 05	5 31	15 31	52	3 04	51
13	15	49.6	36.4	233	43.7 ¹⁰²	39.0	152	10 S	20	5 46	27 48		06	56
14	30	49.5	36.9	248	12.8 ¹⁰¹	-4 54.2	152	20	34	6 01	23 43		07	61
15	45	49.5	37.3	262	41.9 ¹⁰¹	-5 09.4	152	30	48	17	18 38		09	67
16	60	49.4	37.8	277	11.0 ¹⁰¹	24.6	152	35	5 55	26	16 34		10	70
17	75	49.4	+20 38.3	291	40.1 ¹⁰¹	-5 39.7	151	40	6 02	6 36	15 13	30	3 11	74
18	90	49.3	+20 38.8	306	09.1 ¹⁰⁰	-5 54.8	151	45	6 11	6 47	15 10	26	3 13	78
19	105	49.3	39.2	320	38.1 ¹⁰⁰	-6 09.9	151	50	20	7 00	06 21		14	84
20	120	49.2	39.7	335	07.1 ¹⁰⁰	24.9	150	52	24	06	04 19		15	86
21	135	49.2	40.2	349	36.0 ⁹⁹	39.9	150	54	28	13	02 16		16	88
22	150	49.1	40.6	4	04.9 ⁹⁹	-6 54.8	149	56	33	20	15 00	13	17	91
23	165	49.1	41.1	18	33.8 ⁹⁹	-7 09.7	149	58	38	28	14 57	11	18	95
24	180	49.0	+20 41.6	33	02.6 ⁹⁸	-7 24.6	149	60 S	6 44	7 38	14 55	7	3 19	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 57 ^m 0		Mag: -3.9 PMG: 14 ^h 12 ^m		Mag: +1.7 PMG: 13 ^h 42 ^m		Mag: -1.9 PMG: 15 ^h 01 ^m		Mag: +0.1 PMG: 12 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	240	26.0	147 12.6	+25 00.8	154 24.5	+24 20.3	134 19.9	+22 51.2	165 16.6	+21 25.0
1	255	28.5	162 11.7	00.8	169 25.2	20.3	149 21.9	51.1	180 18.7	25.1
2	270	30.9	177 10.9	00.8	184 25.8	20.4	164 23.8	51.1	195 20.8	25.1
3	285	33.4	192 10.0	00.8	199 26.5	20.4	179 25.8	51.0	210 23.0	25.1
4	300	35.9	207 09.2	00.8	214 27.1	20.5	194 27.7	51.0	225 25.1	25.2
5	315	38.3	222 08.4	+25 00.8	229 27.8	+24 20.6	209 29.7	+22 50.9	240 27.2	+21 25.2
6	330	40.8	237 07.5	+25 00.8	244 28.4	+24 20.6	224 31.6	+22 50.9	255 29.3	+21 25.2
7	345	43.3	252 06.7	00.8	259 29.1	20.7	239 33.6	50.8	270 31.5	25.3
8	0	45.7	267 05.9	00.8	274 29.7	20.7	254 35.5	50.8	285 33.6	25.3
9	15	48.2	282 05.0	00.8	289 30.4	20.8	269 37.5	50.7	300 35.7	25.4
10	30	50.6	297 04.2	00.8	304 31.0	20.8	284 39.4	50.7	315 37.8	25.4
11	45	53.1	312 03.4	+25 00.8	319 31.7	+24 20.9	299 41.4	+22 50.6	330 40.0	+21 25.4
12	60	55.6	327 02.5	+25 00.8	334 32.3	+24 20.9	314 43.3	+22 50.6	345 42.1	+21 25.5
13	75	58.0	342 01.7	00.8	349 33.0	21.0	329 45.2	50.5	0 44.2	25.5
14	91	00.5	357 00.8	00.8	4 33.6	21.0	344 47.2	50.5	15 46.3	25.5
15	106	03.0	12 00.0	00.8	19 34.3	21.1	359 49.1	50.4	30 48.4	25.6
16	121	05.4	26 59.2	00.8	34 35.0	21.2	14 51.1	50.4	45 50.6	25.6
17	136	07.9	41 58.3	+25 00.7	49 35.6	+24 21.2	29 53.0	+22 50.3	60 52.7	+21 25.6
18	151	10.4	56 57.5	+25 00.7	64 36.3	+24 21.3	44 55.0	+22 50.3	75 54.8	+21 25.7
19	166	12.8	71 56.7	00.7	79 36.9	21.3	59 56.9	50.2	90 56.9	25.7
20	181	15.3	86 55.8	00.7	94 37.6	21.4	74 58.9	50.2	105 59.1	25.8
21	196	17.7	101 55.0	00.7	109 38.2	21.4	90 00.8	50.1	121 01.2	25.8
22	211	20.2	116 54.2	00.7	124 38.9	21.5	105 02.8	50.1	136 03.3	25.8
23	226	22.7	131 53.3	00.6	139 39.5	21.5	120 04.7	50.0	151 05.4	25.9
24	241	25.1	146 52.5	+25 00.6	154 40.2	+24 21.6	135 06.7	+22 50.0	166 07.6	+21 25.9
Dif	—		-8	0	+7	+1	+19	-1	+21	0

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8			Edad: 11 ^d 6 PHE	4 ^h : 60 ^l 1 12 ^h : 60 ^l 0 20 ^h : 59 ^l 9		R°: 54 ^m	Civil			Náutico			Hora R°					
	PMG: 11 ^h 56 ^m 8																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif												
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m	h m m	h m m	h m m	
0	180	49.0	+20 41.6	33	02.6	-7 24.6		60 N	20 52	22 05	** **		17 51 101		2 55	8			
1	195	49.0		47	31.4	98 39.5	149	58	36	21 38	** **		44 96		3 00	12			
2	210	48.9		62	00.1	97 -7 54.2	147	56	22	21 16	22 54		37 93		04	15			
3	225	48.8		76	28.8	97 -8 09.0	148	54	10	20 59	22 15		32 89		08	17			
4	240	48.8		90	57.5	97 23.7	147	52	20 00	45	21 49		27 86		11	20			
5	255	48.7	+20 43.9	105	26.2	97 -8 38.3	146	50	19 51	20 32	21 29		17 22 84		3 14	23			
6	270	48.7	+20 44.4	119	54.8	96 -8 52.9	146	45	19 32	20 07	20 53		17 12 79		3 21	27			
7	285	48.6		134	23.3	95 -9 07.5	146	40	16	19 48	27		17 04 74		26	32			
8	300	48.6		148	51.8	95 21.9	144	35	19 03	32	20 07		16 57 71		31	35			
9	315	48.5		163	20.3	95 36.4	145	30	18 52	19 19	19 51		51 68		35	39			
10	330	48.5		177	48.7	94 -9 50.8	144	20	32	18 57	25		40 63		43	44			
11	345	48.4	+20 46.7	192	17.1	94 -10 05.1	143	10 N	18 16	18 38	19 05		16 31 59		3 49	49			
12	0	48.3	+20 47.2	206	45.5	94 -10 19.3	142	0	18 00	18 22	18 48		16 23 54		3 55	53			
13	15	48.3		221	13.7	92 33.5	142	10 S	17 45	18 07	33		15 49		4 02	57			
14	30	48.2		235	42.0	93 -10 47.6	141	20	29	17 52	19		16 06 45		08	62			
15	45	48.2		250	10.2	92 -11 01.7	141	30	10	36	18 05		15 56 40		16	67			
16	60	48.1		264	38.4	92 15.7	140	35	17 00	27	17 58		50 37		20	71			
17	75	48.1	+20 49.5	279	06.5	91 -11 29.6	139	40	16 47	17 17	17 50		15 43 34		4 25	74			
18	90	48.0	+20 49.9	293	34.5	90 -11 43.5	139	45	16 33	17 05	17 42		15 36 30		4 31	78			
19	105	47.9		308	02.5	90 -11 57.3	138	50	15	16 52	32		27 25		38	84			
20	120	47.9		322	30.5	90 -12 11.0	137	52	16 07	46	28		23 22		41	87			
21	135	47.8		336	58.4	89 24.6	136	54	15 58	39	23		18 20		44	90			
22	150	47.8		351	26.3	89 38.2	136	56	47	31	19		13 17		48	93			
23	165	47.7		5	54.1	88 -12 51.6	134	58	35	23	13		08 14		53	96			
24	180	47.6	+20 52.7	20	21.9	88 -13 05.0	134	60 S	15 21	16 14	17 07		15 02 9		4 58	100			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 7 ^h 53 ^m 0		Mag: -3.9 PMG: 14 ^h 13 ^m			Mag: +1.7 PMG: 13 ^h 41 ^m			Mag: -1.9 PMG: 14 ^h 58 ^m			Mag: +0.1 PMG: 12 ^h 54 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	241	25.1	146 52.5	+25 00.6	154 40.2	+24 21.6	135 06.7	+22 50.0	166 07.6	+21 25.9									
1	256	27.6	161 51.7	00.6	169 40.8	21.6	150 08.6	49.9	181 09.7	25.9									
2	271	30.1	176 50.8	00.6	184 41.5	21.7	165 10.5	49.9	196 11.8	26.0									
3	286	32.5	191 50.0	00.5	199 42.1	21.7	180 12.5	49.8	211 13.9	26.0									
4	301	35.0	206 49.2	00.5	214 42.8	21.8	195 14.4	49.8	226 16.1	26.0									
5	316	37.5	221 48.3	+25 00.5	229 43.4	+24 21.8	210 16.4	+22 49.7	241 18.2	+21 26.1									
6	331	39.9	236 47.5	+25 00.5	244 44.1	+24 21.8	225 18.3	+22 49.7	256 20.3	+21 26.1									
7	346	42.4	251 46.7	00.4	259 44.7	21.9	240 20.3	49.6	271 22.4	26.2									
8	1	44.9	266 45.8	00.4	274 45.4	21.9	255 22.2	49.6	286 24.6	26.2									
9	16	47.3	281 45.0	00.4	289 46.0	22.0	270 24.1	49.5	301 26.7	26.2									
10	31	49.8	296 44.2	00.3	304 46.7	22.0	285 26.1	49.5	316 28.8	26.3									
11	46	52.2	311 43.3	+25 00.3	319 47.3	+24 22.1	300 28.0	+22 49.4	331 30.9	+21 26.3									
12	61	54.7	326 42.5	+25 00.3	334 48.0	+24 22.1	315 30.0	+22 49.4	346 33.0	+21 26.3									
13	76	57.2	341 41.7	00.2	349 48.6	22.2	330 31.9	49.3	1 35.2	26.4									
14	91	59.6	356 40.8	00.2	4 49.3	22.2	345 33.9	49.3	16 37.3	26.4									
15	107	02.1	11 40.0	00.2	19 49.9	22.3	0 35.8	49.2	31 39.4	26.4									
16	122	04.6	26 39.2	00.1	34 50.6	22.3	15 37.8	49.1	46 41.5	26.5									
17	137	07.0	41 38.3	+25 00.1	49 51.2	+24 22.3	30 39.7	+22 49.1	61 43.7	+21 26.5									
18	152	09.5	56 37.5	+25 00.0	64 51.9	+24 22.4	45 41.6	+22 49.0	76 45.8	+21 26.6									
19	167	12.0	71 36.7	+25 00.0	79 52.5	22.4	60 43.6	49.0	91 47.9	26.6									
20	182	14.4	86 35.8	+24 59.9	94 53.2	22.5	75 45.5	48.9	106 50.0	26.6									
21	197	16.9	101 35.0	59.9	109 53.9	22.5	90 47.5	48.9	121 52.2	26.7									
22	212	19.4	116 34.2	59.8	124 54.5	22.6	105 49.4	48.8	136 54.3	26.7									
23	227	21.8	131 33.3	59.8	139 55.2	22.6	120 51.3	48.8	151 56.4	26.7									
24	242	24.3	146 32.5	+24 59.7	154 55.8	+24 22.6	135 53.3	+22 48.7	166 58.5	+21 26.8									
Dif	—		-8		0	+7		0	+19		-1	+21		0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 12 ^d 6	PHE {	4 ^h : 59 ^m 8 12 ^h : 59 ^m 7 20 ^h : 59 ^m 6	SD: 16 ^d 3	PMG: 23 ^h 30 ^m		R°: 57 ^m							
	PMG: 11 ^h 56 ^m 9																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	h	m	m	h	m	
0	180	47.6	+20 52.7	20	21.9	-13 05.0		60 N	** **	1 48	3 02	19 32	100	3 03	12		
1	195	47.6	53.1	34	49.6	87 18.4	134	58	** **	2 16	18	20 95		12 15			
2	210	47.5	53.6	49	17.2	86 31.6	132	56		0 59	37 31	10 91		19 19			
3	225	47.5	54.0	63	44.9	87 44.7	131	54		1 38	2 54 43	19 01	87	25 23			
4	240	47.4	54.5	78	12.4	85 -13 57.8	131	52		2 04	3 08 3 53	18 53	85	31 25			
5	255	47.3	+20 54.9	92	39.9	85 -14 10.8	130	50		2 24	3 21 4 02	18 46	82	3 37 27			
6	270	47.3	+20 55.4	107	07.4	85 -14 23.7	129	45		3 00	3 46 4 22	18 31	77	3 48 33			
7	285	47.2	55.8	121	34.8	84 36.5	128	40		26 4 06	37	18 74		3 58 36			
8	300	47.2	56.3	136	02.1	83 -14 49.2	127	35		3 46 21	4 50	18 08	70	4 06 40			
9	315	47.1	56.7	150	29.4	83 -15 01.8	126	30		4 03 35	5 02	17 59	68	14 42			
10	330	47.0	57.2	164	56.7	83 14.3	125	20		29 4 57	21	43 64		27 47			
11	345	47.0	+20 57.6	179	23.9	82 -15 26.7	124	10 N		4 49 5 15	5 38	17 30	59	4 38 51			
12	0	46.9	+20 58.1	193	51.0	81 -15 39.0	123	0		5 05 5 31	5 53	17 17	56	4 48 55			
13	15	46.9	58.5	208	18.1	81 -15 51.2	122	10 S		20 5 46	6 09	17 04	53	4 59 59			
14	30	46.8	59.0	222	45.2	81 -16 03.3	121	20		34 6 01	25	16 51	49	5 10 63			
15	45	46.7	59.4	237	12.1	79 15.3	120	30		49 18	44	36 44		23 68			
16	60	46.7	+20 59.8	251	39.1	80 27.2	119	35		5 56 27	6 54	27 42		31 71			
17	75	46.6	+21 00.3	266	05.9	78 -16 39.0	118	40		6 04 6 37	7 07	16 17	39	5 39 75			
18	90	46.5	+21 00.7	280	32.8	79 -16 50.7	117	45		6 12 6 49	7 21	16 06	35	5 49 79			
19	105	46.5	01.2	294	59.5	77 -17 02.3	116	50		22 7 02	39	15 52	30	6 02 83			
20	120	46.4	01.6	309	26.3	78 13.7	114	52		26 09	48	45 29		08 85			
21	135	46.4	02.1	323	52.9	76 25.1	114	54		31 15	7 57	38 26		14 89			
22	150	46.3	02.5	338	19.6	77 36.3	112	56		36 23	8 07	30 23		21 92			
23	165	46.2	02.9	352	46.1	75 47.5	112	58		41 31	20	22 18		29 96			
24	180	46.2	+21 03.4	7	12.6	75 -17 58.5	110	60 S		6 47 7 41	8 34	15 11	15	6 38 101			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 7 ^h 49 ^m 1		Mag: -3.9 PMG: 14 ^h 15 ^m		Mag: +1.7 PMG: 13 ^h 40 ^m		Mag: -1.9 PMG: 14 ^h 55 ^m		Mag: +0.1 PMG: 12 ^h 50 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	242	24.3	146 32.5	+24 59.7	154 55.8	+24 22.6	135 53.3	+22 48.7	166 58.5	+21 26.8		
1	257	26.7	161 31.7	59.7	169 56.5	22.7	150 55.2	48.7	182 00.6	26.8		
2	272	29.2	176 30.8	59.6	184 57.1	22.7	165 57.2	48.6	197 02.8	26.8		
3	287	31.7	191 30.0	59.6	199 57.8	22.8	180 59.1	48.6	212 04.9	26.9		
4	302	34.1	206 29.2	59.5	214 58.4	22.8	196 01.1	48.5	227 07.0	26.9		
5	317	36.6	221 28.4	+24 59.5	229 59.1	+24 22.8	211 03.0	+22 48.5	242 09.1	+21 27.0		
6	332	39.1	236 27.5	+24 59.4	244 59.7	+24 22.9	226 04.9	+22 48.4	257 11.3	+21 27.0		
7	347	41.5	251 26.7	59.3	260 00.4	22.9	241 06.9	48.4	272 13.4	27.0		
8	2	44.0	266 25.9	59.3	275 01.0	23.0	256 08.8	48.3	287 15.5	27.1		
9	17	46.5	281 25.0	59.2	290 01.7	23.0	271 10.8	48.3	302 17.6	27.1		
10	32	48.9	296 24.2	59.2	305 02.3	23.0	286 12.7	48.2	317 19.8	27.1		
11	47	51.4	311 23.4	+24 59.1	320 03.0	+24 23.1	301 14.6	+22 48.2	332 21.9	+21 27.2		
12	62	53.8	326 22.6	+24 59.0	335 03.6	+24 23.1	316 16.6	+22 48.1	347 24.0	+21 27.2		
13	77	56.3	341 21.7	59.0	350 04.3	23.1	331 18.5	48.1	2	26.1	27.2	
14	92	58.8	356 20.9	58.9	5	04.9	346 20.5	48.0	17	28.2	27.3	
15	108	01.2	11 20.1	58.8	20	05.6	1	22.4	32	30.4	27.3	
16	123	03.7	26 19.2	58.8	35	06.3	16	24.3	47	32.5	27.3	
17	138	06.2	41 18.4	+24 58.7	50	06.9	+24 23.3	31 26.3	+22 47.8	62 34.6	+21 27.4	
18	153	08.6	56 17.6	+24 58.6	65	07.6	+24 23.3	46 28.2	+22 47.8	77 36.7	+21 27.4	
19	168	11.1	71 16.8	58.5	80	08.2	23.3	61 30.2	47.7	92 38.9	27.5	
20	183	13.6	86 15.9	58.5	95	08.9	23.4	76 32.1	47.7	107 41.0	27.5	
21	198	16.0	101 15.1	58.4	110	09.5	23.4	91 34.0	47.6	122 43.1	27.5	
22	213	18.5	116 14.3	58.3	125	10.2	23.4	106 36.0	47.6	137 45.2	27.6	
23	228	21.0	131 13.4	58.2	140	10.8	23.5	121 37.9	47.5	152 47.3	27.6	
24	243	23.4	146 12.6	+24 58.1	155	11.5	+24 23.5	136 39.9	+22 47.5	167 49.5	+21 27.6	
Dif	—		-8	-1	+7		0	+19	-1	+21		0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:8 PMG: 11 ^h 57 ^m 0			Edad: 13 ^d 6 PHE { 4 ^h : 59/4 12 ^h : 59/2 20 ^h : 59/0 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	46.2	+21 03.4	7	12.6	-17 58.5	75	60 N	20 56	22 12	** **	21 12 91	3 15 17		
1	195	46.1	03.8	21	39.1	-18 09.4	109	58	39	21 43	** **	20 55 86	27 23		
2	210	46.0	04.3	36	05.5	20.1	107	56	25	21	23 05	41 83	38 26		
3	225	46.0	04.7	50	31.9	30.8	107	54	13	21 03	22 21	28 81	48 29		
4	240	45.9	05.1	64	58.2	41.3	105	52	20 03	20 48	21 54	18 78	3 56 32		
5	255	45.8	+21 05.6	79	24.5	-18 51.7	104	50	19 53	20 35	21 33	20 08 76	4 04 34		
6	270	45.8	+21 06.0	93	50.7	-19 02.0	103	45	19 34	20 10	20 56	19 48 73	4 21 38		
7	285	45.7	06.4	108	16.9	12.2	102	40	18	19 50	29	32 70	34 42		
8	300	45.6	06.9	122	43.0	22.2	100	35	19 05	33	20 09	18 68	46 44		
9	315	45.6	07.3	137	09.1	32.1	99	30	18 53	19 20	19 52	19 07 65	4 56 47		
10	330	45.5	07.7	151	35.1	41.9	98	20	33	18 57	26	18 47 62	5 14 50		
11	345	45.4	+21 08.2	166	01.1	-19 51.5	96	10 N	18 16	18 39	19 06	18 29 60	5 29 54		
12	0	45.4	+21 08.6	180	27.0	-20 01.1	96	0	18 01	18 23	18 49	18 13 58	5 43 57		
13	15	45.3	09.0	194	52.9	10.4	93	10 S	17 45	18 07	33	17 57 55	5 58 60		
14	30	45.2	09.5	209	18.8	19.7	93	20	28	17 52	19	40 52	6 13 64		
15	45	45.2	09.9	223	44.6	28.8	91	30	17 10	35	18 05	20 50	31 67		
16	60	45.1	10.3	238	10.4	37.8	90	35	16 59	26	17 57	17 09 48	42 69		
17	75	45.0	+21 10.7	252	36.1	-20 46.6	88	40	16 46	17 16	17 49	16 56 45	6 54 72		
18	90	45.0	+21 11.2	267	01.8	-20 55.3	87	45	16 31	17 04	17 40	16 41 42	7 08 75		
19	105	44.9	11.6	281	27.4	-21 03.9	86	50	13	16 50	31	22 39	25 80		
20	120	44.8	12.0	295	53.0	12.3	84	52	16 05	44	26	14 36	33 82		
21	135	44.8	12.5	310	18.6	20.6	83	54	15 55	37	22	16 04 34	43 84		
22	150	44.7	12.9	324	44.2	28.8	82	56	45	29	17	15 53 31	7 53 87		
23	165	44.6	13.3	339	09.7	36.8	80	58	32	21	11	40 28	8 05 91		
24	180	44.6	+21 13.7	353	35.1	-21 44.6	78	60 S	15 18	16 11	17 05	15 26 23	8 19 96		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 45 ^m 2		Mag: -3.9 PMG: 14 ^h 16 ^m			Mag: +1.7 PMG: 13 ^h 39 ^m			Mag: -1.9 PMG: 14 ^h 51 ^m			Mag: +0.1 PMG: 12 ^h 47 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	243	23.4	146	12.6	+24 58.1	155	11.5	+24 23.5	136	39.9	+22 47.5	167	49.5	+21 27.6	
1	258	25.9	161	11.8	58.1	170	12.1	23.5	151	41.8	47.4	182	51.6	27.7	
2	273	28.3	176	11.0	58.0	185	12.8	23.6	166	43.7	47.4	197	53.7	27.7	
3	288	30.8	191	10.1	57.9	200	13.4	23.6	181	45.7	47.3	212	55.8	27.7	
4	303	33.3	206	09.3	57.8	215	14.1	23.6	196	47.6	47.3	227	58.0	27.8	
5	318	35.7	221	08.5	+24 57.7	230	14.7	+24 23.7	211	49.6	+22 47.2	243	00.1	+21 27.8	
6	333	38.2	236	07.7	+24 57.6	245	15.4	+24 23.7	226	51.5	+22 47.2	258	02.2	+21 27.8	
7	348	40.7	251	06.8	57.5	260	16.1	23.7	241	53.4	47.1	273	04.3	27.9	
8	3	43.1	266	06.0	57.5	275	16.7	23.8	256	55.4	47.1	288	06.4	27.9	
9	18	45.6	281	05.2	57.4	290	17.4	23.8	271	57.3	47.0	303	08.6	28.0	
10	33	48.1	296	04.4	57.3	305	18.0	23.8	286	59.3	46.9	318	10.7	28.0	
11	48	50.5	311	03.5	+24 57.2	320	18.7	+24 23.8	302	01.2	+22 46.9	333	12.8	+21 28.0	
12	63	53.0	326	02.7	+24 57.1	335	19.3	+24 23.9	317	03.1	+22 46.8	348	14.9	+21 28.1	
13	78	55.5	341	01.9	57.0	350	20.0	23.9	332	05.1	46.8	3	17.0	28.1	
14	93	57.9	356	01.1	56.9	5	20.6	23.9	347	07.0	46.7	18	19.2	28.1	
15	109	00.4	11	00.2	56.8	20	21.3	24.0	2	08.9	46.7	33	21.3	28.2	
16	124	02.8	25	59.4	56.7	35	21.9	24.0	17	10.9	46.6	48	23.4	28.2	
17	139	05.3	40	58.6	+24 56.6	50	22.6	+24 24.0	32	12.8	+22 46.6	63	25.5	+21 28.2	
18	154	07.8	55	57.8	+24 56.5	65	23.2	+24 24.0	47	14.8	+22 46.5	78	27.7	+21 28.3	
19	169	10.2	70	56.9	56.4	80	23.9	24.1	62	16.7	46.5	93	29.8	28.3	
20	184	12.7	85	56.1	56.3	95	24.6	24.1	77	18.6	46.4	108	31.9	28.3	
21	199	15.2	100	55.3	56.2	110	25.2	24.1	92	20.6	46.4	123	34.0	28.4	
22	214	17.6	115	54.5	56.1	125	25.9	24.1	107	22.5	46.3	138	36.1	28.4	
23	229	20.1	130	53.7	56.0	140	26.5	24.2	122	24.4	46.3	153	38.3	28.5	
24	244	22.6	145	52.8	+24 55.8	155	27.2	+24 24.2	137	26.4	+22 46.2	168	40.4	+21 28.5	
Dif	—		-8		-1	+7		0	+19		-1	+21			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 14 ^d 6 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 6 20 ^h : 58 ^m 4												
	PMG: 11 ^h 57 ^m 1			SD: 16 ^d 1 PMG: 0 ^h 27 ^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	m	h m	m
0	180	44.6	+21 13.7	353	35.1	-21 44.6		60 N	** **	1 42	2 58	22 43	72		3 32	30
1	195	44.5	14.2	8	00.6	52.3	77	58	** **	2 11	3 14	21	70		3 50	34
2	210	44.4	14.6	22	26.0	64	-21 59.9	56	0 48	33	28	22 04	68		4 04	37
3	225	44.3	15.0	36	51.4	64	-22 07.3	54	1 33	2 51	40	21 49	67		17	40
4	240	44.3	15.4	51	16.7	63	14.6	52	2 00	3 06	3 51	36	66		28	42
5	255	44.2	+21 15.8	65	42.0	63	-22 21.7	50	2 21	3 18	4 00	21 24	66		4 38	43
6	270	44.1	+21 16.3	80	07.3	63	-22 28.7	45	2 58	3 44	4 20	21 01	64		4 59	46
7	285	44.1	16.7	94	32.6	63	35.5	40	3 24	4 04	36	20 42	63		5 16	49
8	300	44.0	17.1	108	57.9	63	42.2	35	3 45	20	4 49	26	62		30	51
9	315	43.9	17.5	123	23.1	62	48.7	30	4 02	34	5 01	20 12	62		5 43	52
10	330	43.8	17.9	137	48.3	62	-22 55.1	20	28	4 57	21	19 49	60		6 04	55
11	345	43.8	+21 18.4	152	13.5	62	-23 01.4	10 N	4 48	5 15	5 38	19 29	59		6 23	56
12	0	43.7	+21 18.8	166	38.6	61	-23 07.4	0	5 05	5 31	5 53	19 11	58		6 40	59
13	15	43.6	19.2	181	03.8	62	13.4	10 S	21	5 47	6 09	18 52	57		6 58	60
14	30	43.6	19.6	195	28.9	61	19.1	20	35	6 02	26	32	56		7 17	61
15	45	43.5	20.0	209	54.0	61	24.8	30	50	19	45	18 10	54		38	64
16	60	43.4	20.4	224	19.2	62	30.2	35	5 57	28	6 56	17 57	53		7 51	65
17	75	43.3	+21 20.8	238	44.3	61	-23 35.5	40	6 05	6 39	7 08	17 41	52		8 06	67
18	90	43.3	+21 21.3	253	09.3	60	-23 40.7	45	6 14	6 50	7 23	17 23	51		8 23	69
19	105	43.2	21.7	267	34.4	61	45.7	50	24	7 04	41	17 01	48		45	71
20	120	43.1	22.1	281	59.5	61	50.5	52	28	11	7 50	16 50	47		8 55	73
21	135	43.1	22.5	296	24.6	61	55.2	54	33	18	8 00	38	46		9 07	74
22	150	43.0	22.9	310	49.6	60	-23 59.8	56	38	26	10	24	44		20	77
23	165	42.9	23.3	325	14.7	61	-24 04.1	58	44	34	23	16 08	42		36	79
24	180	42.8	+21 23.7	339	39.8	61	-24 08.4	60 S	6 50	7 44	8 37	15 49	38		9 55	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 41 ^m 2		Mag: -3.9 PMG: 14 ^h 17 ^m		Mag: +1.7 PMG: 13 ^h 38 ^m		Mag: -1.9 PMG: 14 ^h 48 ^m		Mag: 0.0 PMG: 12 ^h 44 ^m					
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	244	22.6	145	52.8	+24 55.8	155	27.2	+24 24.2	137	26.4	+22 46.2	168	40.4	+21 28.5
1	259	25.0	160	52.0	55.7	170	27.8	24.2	152	28.3	46.1	183	42.5	28.5
2	274	27.5	175	51.2	55.6	185	28.5	24.2	167	30.2	46.1	198	44.6	28.6
3	289	30.0	190	50.4	55.5	200	29.1	24.3	182	32.2	46.0	213	46.8	28.6
4	304	32.4	205	49.6	55.4	215	29.8	24.3	197	34.1	46.0	228	48.9	28.6
5	319	34.9	220	48.7	+24 55.3	230	30.4	+24 24.3	212	36.1	+22 45.9	243	51.0	+21 28.7
6	334	37.3	235	47.9	+24 55.2	245	31.1	+24 24.3	227	38.0	+22 45.9	258	53.1	+21 28.7
7	349	39.8	250	47.1	55.0	260	31.7	24.3	242	39.9	45.8	273	55.2	28.7
8	4	42.3	265	46.3	54.9	275	32.4	24.4	257	41.9	45.8	288	57.4	28.8
9	19	44.7	280	45.5	54.8	290	33.1	24.4	272	43.8	45.7	303	59.5	28.8
10	34	47.2	295	44.6	54.7	305	33.7	24.4	287	45.7	45.7	319	01.6	28.8
11	49	49.7	310	43.8	+24 54.6	320	34.4	+24 24.4	302	47.7	+22 45.6	334	03.7	+21 28.9
12	64	52.1	325	43.0	+24 54.4	335	35.0	+24 24.4	317	49.6	+22 45.5	349	05.8	+21 28.9
13	79	54.6	340	42.2	54.3	350	35.7	24.5	332	51.5	45.5	4	08.0	29.0
14	94	57.1	355	41.4	54.2	5	36.3	24.5	347	53.5	45.4	19	10.1	29.0
15	109	59.5	10	40.5	54.0	20	37.0	24.5	2	55.4	45.4	34	12.2	29.0
16	125	02.0	25	39.7	53.9	35	37.6	24.5	17	57.3	45.3	49	14.3	29.1
17	140	04.5	40	38.9	+24 53.8	50	38.3	+24 24.5	32	59.3	+22 45.3	64	16.4	+21 29.1
18	155	06.9	55	38.1	+24 53.7	65	39.0	+24 24.6	48	01.2	+22 45.2	79	18.6	+21 29.1
19	170	09.4	70	37.3	53.5	80	39.6	24.6	63	03.1	45.2	94	20.7	29.2
20	185	11.8	85	36.4	53.4	95	40.3	24.6	78	05.1	45.1	109	22.8	29.2
21	200	14.3	100	35.6	53.2	110	40.9	24.6	93	07.0	45.1	124	24.9	29.2
22	215	16.8	115	34.8	53.1	125	41.6	24.6	108	08.9	45.0	139	27.1	29.3
23	230	19.2	130	34.0	53.0	140	42.2	24.6	123	10.9	45.0	154	29.2	29.3
24	245	21.7	145	33.2	+24 52.8	155	42.9	+24 24.7	138	12.8	+22 44.9	169	31.3	+21 29.3
Dif	—		-8 -1		+7 0		0		+19 -1		+21 0		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 57 ^m 2			Edad: 15 ^d 6 PHE { 4 ^h : 58/1 12 ^h : 57/8 20 ^h : 57/6 SD: 15/9 PMG: 1 ^h 25 ^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	180	42.8	+21 23.7	339	39.8	-24 08.4	40	60 N	21 00	22 19	** **	23 55 47		4 02 48
1	195	42.8	24.1	354	04.8	12.4	40	58	20 43	21 47	** **	31 49		24 50
2	210	42.7	24.5	8	29.9	16.3	39	56	28	25	23 18	23 12 50		41 52
3	225	42.6	24.9	22	55.0	20.1	38	54	16	21 06	22 27	22 56 51		4 57 52
4	240	42.5	25.3	37	20.1	23.7	36	52	20 05	20 51	21 58	42 52		5 10 53
5	255	42.5	+21 25.7	51	45.1	-24 27.1	34	50	19 56	20 38	21 37	22 30 52		5 21 54
6	270	42.4	+21 26.2	66	10.2	-24 30.4	33	45	19 36	20 12	20 58	22 05 53		5 45 55
7	285	42.3	26.6	80	35.4	33.5	31	40	20	19 51	31	21 45 54		6 05 55
8	300	42.2	27.0	95	00.5	36.5	30	35	19 06	35	20 10	28 55		21 56
9	315	42.2	27.4	109	25.6	39.3	28	30	18 54	19 21	19 54	21 14 55		35 56
10	330	42.1	27.8	123	50.8	42.0	27	20	34	18 58	27	20 49 56		6 59 56
11	345	42.0	+21 28.2	138	16.0	-24 44.5	25	10 N	18 17	18 40	19 06	20 28 56		7 19 57
12	0	41.9	+21 28.6	152	41.2	-24 46.8	23	0	18 01	18 23	18 49	20 09 56		7 39 57
13	15	41.8	29.0	167	06.4	49.0	22	10 S	17 45	18 07	33	19 49 57		7 58 58
14	30	41.8	29.4	181	31.6	51.0	20	20	28	17 52	19	28 57		8 18 59
15	45	41.7	29.8	195	56.9	52.9	19	30	17 09	35	18 04	19 04 57		42 59
16	60	41.6	30.2	210	22.2	54.6	17	35	16 58	25	17 57	18 50 57		8 56 59
17	75	41.5	+21 30.6	224	47.5	-24 56.2	16	40	16 45	17 15	17 48	18 33 58		9 13 58
18	90	41.5	+21 31.0	239	12.8	-24 57.6	14	45	16 30	17 03	17 39	18 14 58		9 32 59
19	105	41.4	31.4	253	38.2	-24 58.9	13	50	11	16 49	29	17 49 58		9 56 60
20	120	41.3	31.8	268	03.6	-25 00.0	11	52	16 03	42	25	37 59		10 08 60
21	135	41.2	32.1	282	29.1	-25 00.9	9	54	15 53	35	20	24 58		21 60
22	150	41.1	32.5	296	54.6	01.7	8	56	42	27	15	17 08 59		37 60
23	165	41.1	32.9	311	20.1	02.3	6	58	29	18	09	16 50 58		10 55 60
24	180	41.0	+21 33.3	325	45.7	-25 02.8	5	60 S	15 15	16 08	17 03	16 27 59		11 18 60
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 37 ^m 3		Mag: -3.9 PMG: 14 ^h 19 ^m		Mag: +1.7 PMG: 13 ^h 37 ^m		Mag: -1.9 PMG: 14 ^h 45 ^m		Mag: 0.0 PMG: 12 ^h 40 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	'	°	'				
0	245	21.7	145 33.2	+24 52.8	155 42.9	+24 24.7	138 12.8	+22 44.9	169 31.3	+21 29.3				
1	260	24.2	160 32.4	52.7	170 43.5	24.7	153 14.7	44.8	184 33.4	29.4				
2	275	26.6	175 31.6	52.5	185 44.2	24.7	168 16.7	44.8	199 35.5	29.4				
3	290	29.1	190 30.7	52.4	200 44.8	24.7	183 18.6	44.7	214 37.7	29.4				
4	305	31.6	205 29.9	52.3	215 45.5	24.7	198 20.5	44.7	229 39.8	29.5				
5	320	34.0	220 29.1	+24 52.1	230 46.2	+24 24.7	213 22.5	+22 44.6	244 41.9	+21 29.5				
6	335	36.5	235 28.3	+24 52.0	245 46.8	+24 24.7	228 24.4	+22 44.6	259 44.0	+21 29.6				
7	350	39.0	250 27.5	51.8	260 47.5	24.8	243 26.3	44.5	274 46.1	29.6				
8	5	41.4	265 26.7	51.7	275 48.1	24.8	258 28.3	44.5	289 48.3	29.6				
9	20	43.9	280 25.8	51.5	290 48.8	24.8	273 30.2	44.4	304 50.4	29.7				
10	35	46.3	295 25.0	51.4	305 49.4	24.8	288 32.1	44.3	319 52.5	29.7				
11	50	48.8	310 24.2	+24 51.2	320 50.1	+24 24.8	303 34.1	+22 44.3	334 54.6	+21 29.7				
12	65	51.3	325 23.4	+24 51.1	335 50.7	+24 24.8	318 36.0	+22 44.2	349 56.7	+21 29.8				
13	80	53.7	340 22.6	50.9	350 51.4	24.8	333 37.9	44.2	4 58.9	29.8				
14	95	56.2	355 21.8	50.8	5 52.1	24.8	348 39.9	44.1	20 01.0	29.8				
15	110	58.7	10 21.0	50.6	20 52.7	24.8	3 41.8	44.1	35 03.1	29.9				
16	126	01.1	25 20.2	50.4	35 53.4	24.9	18 43.7	44.0	50 05.2	29.9				
17	141	03.6	40 19.3	+24 50.3	50 54.0	+24 24.9	33 45.7	+22 44.0	65 07.3	+21 29.9				
18	156	06.1	55 18.5	+24 50.1	65 54.7	+24 24.9	48 47.6	+22 43.9	80 09.5	+21 30.0				
19	171	08.5	70 17.7	49.9	80 55.3	24.9	63 49.5	43.8	95 11.6	30.0				
20	186	11.0	85 16.9	49.8	95 56.0	24.9	78 51.5	43.8	110 13.7	30.0				
21	201	13.4	100 16.1	49.6	110 56.7	24.9	93 53.4	43.7	125 15.8	30.1				
22	216	15.9	115 15.3	49.5	125 57.3	24.9	108 55.3	43.7	140 17.9	30.1				
23	231	18.4	130 14.5	49.3	140 58.0	24.9	123 57.3	43.6	155 20.1	30.1				
24	246	20.8	145 13.7	+24 49.1	155 58.6	+24 24.9	138 59.2	+22 43.6	170 22.2	+21 30.2				
Dif	—		-8	-2	+7	0	+19	-1	+21					

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: 16 ^d 6 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 0 20 ^h : 56 ^m 8 PMG: 2 ^h 22 ^m R°: 56 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	41.0	+21	33.3	325	45.7	-25	02.8	60 N	** **	1 36	2 54	** **	**	4 50	69		
1	195	40.9		33.7	340	11.3		03.2	58	** **	2 07	3 11	** **	**	5 14	66		
2	210	40.8		34.1	354	36.9		03.3	56	0 36	30	26	** **	**	33	65		
3	225	40.7		34.5	9	02.6		03.4	54	1 27	2 48	38	23	47	37	5 49		
4	240	40.7		34.9	23	28.4		03.3	52	1 56	3 03	49		34 39	6 03	63		
5	255	40.6	+21	35.3	37	54.1		-25 03.0	50	2 17	3 16	3 58	23	22	41	6 15		
6	270	40.5	+21	35.7	52	20.0		-25 02.6	45	2 56	3 43	4 19	22	58	43	6 40		
7	285	40.4		36.1	66	45.9		02.0	40	3 23	4 03	35		39 45	7 00	60		
8	300	40.3		36.5	81	11.8		01.3	35	3 44	19	4 48		23 47	17	59		
9	315	40.3		36.8	95	37.8		-25 00.4	30	4 01	33	5 00	22	09	48	31		
10	330	40.2		37.2	110	03.8		-24 59.4	20	27	4 56	20	21	45	50	7 55		
11	345	40.1	+21	37.6	124	29.9		-24 58.3	10 N	4 48	5 15	5 38	21	24	52	8 16		
12	0	40.0	+21	38.0	138	56.1		-24 57.0	0	5 06	5 31	5 54	21	05	54	8 36		
13	15	39.9		38.4	153	22.3		55.5	10 S	21	5 47	6 10	20	46	55	8 56		
14	30	39.9		38.8	167	48.6		53.9	20	36	6 03	27		25 57	9 17	53		
15	45	39.8		39.2	182	14.9		52.2	30	50	20	46	20	01	59	41		
16	60	39.7		39.5	196	41.3		50.3	35	5 58	29	6 57	19	47	60	9 55		
17	75	39.6	+21	39.9	211	07.8		-24 48.3	40	6 07	6 40	7 10	19	31	61	10 11		
18	90	39.5	+21	40.3	225	34.3		-24 46.1	45	6 16	6 52	7 25	19	12	63	10 31		
19	105	39.4		40.7	240	00.9		43.8	50	26	7 06	44	18	47	66	10 56		
20	120	39.4		41.1	254	27.5		41.4	52	30	13	7 52		36 66	11 08	45		
21	135	39.3		41.4	268	54.3		38.8	54	35	20	8 02		22 68	21	44		
22	150	39.2		41.8	283	21.1		36.1	56	40	28	13	18	07	70	37		
23	165	39.1		42.2	297	47.9		33.3	58	46	37	26	17	48	73	11 55		
24	180	39.0	+21	42.6	312	14.9		-24 30.3	60 S	6 53	7 47	8 41	17	26	75	12 18		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 33 ^m 4		Mag: -3.9 PMG: 14 ^h 20 ^m				Mag: +1.7 PMG: 13 ^h 35 ^m				Mag: -1.9 PMG: 14 ^h 42 ^m				Mag: 0.0 PMG: 12 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	246	20.8	145	13.7	+24	49.1	155	58.6	+24	24.9	138	59.2	+22	43.6	170	22.2	+21	30.2
1	261	23.3	160	12.9		48.9	170	59.3		24.9	154	01.1		43.5	185	24.3		30.2
2	276	25.8	175	12.0		48.8	185	59.9		24.9	169	03.0		43.5	200	26.4		30.3
3	291	28.2	190	11.2		48.6	201	00.6		24.9	184	05.0		43.4	215	28.5		30.3
4	306	30.7	205	10.4		48.4	216	01.2		24.9	199	06.9		43.3	230	30.7		30.3
5	321	33.2	220	09.6	+24	48.3	231	01.9	+24	25.0	214	08.8	+22	43.3	245	32.8	+21	30.4
6	336	35.6	235	08.8	+24	48.1	246	02.6	+24	25.0	229	10.8	+22	43.2	260	34.9	+21	30.4
7	351	38.1	250	08.0		47.9	261	03.2		25.0	244	12.7		43.2	275	37.0		30.4
8	6	40.6	265	07.2		47.7	276	03.9		25.0	259	14.6		43.1	290	39.1		30.5
9	21	43.0	280	06.4		47.5	291	04.5		25.0	274	16.6		43.1	305	41.3		30.5
10	36	45.5	295	05.6		47.4	306	05.2		25.0	289	18.5		43.0	320	43.4		30.5
11	51	47.9	310	04.8	+24	47.2	321	05.8	+24	25.0	304	20.4	+22	43.0	335	45.5	+21	30.6
12	66	50.4	325	04.0	+24	47.0	336	06.5	+24	25.0	319	22.4	+22	42.9	350	47.6	+21	30.6
13	81	52.9	340	03.2		46.8	351	07.2		25.0	334	24.3		42.8	5	49.7		30.6
14	96	55.3	355	02.4		46.6	6	07.8		25.0	349	26.2		42.8	20	51.9		30.7
15	111	57.8	10	01.5		46.4	21	08.5		25.0	4	28.1		42.7	35	54.0		30.7
16	127	00.3	25	00.7		46.3	36	09.1		25.0	19	30.1		42.7	50	56.1		30.7
17	142	02.7	39	59.9	+24	46.1	51	09.8	+24	25.0	34	32.0	+22	42.6	65	58.2	+21	30.8
18	157	05.2	54	59.1	+24	45.9	66	10.4	+24	25.0	49	33.9	+22	42.6	81	00.3	+21	30.8
19	172	07.7	69	58.3		45.7	81	11.1		25.0	64	35.9		42.5	96	02.5		30.8
20	187	10.1	84	57.5		45.5	96	11.8		25.0	79	37.8		42.4	111	04.6		30.9
21	202	12.6	99	56.7		45.3	111	12.4		25.0	94	39.7		42.4	126	06.7		30.9
22	217	15.1	114	55.9		45.1	126	13.1		25.0	109	41.6		42.3	141	08.8		30.9
23	232	17.5	129	55.1		44.9	141	13.7		25.0	124	43.6		42.3	156	10.9		31.0
24	247	20.0	144	54.3	+24	44.7	156	14.4	+24	25.0	139	45.5	+22	42.2	171	13.1	+21	31.0
Dif	—		-8		-2		+7		0		+19		-1		+21		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 5			Edad: 17 ^d 6 PHE { SD: 15/4 PMG: 3 ^h 18 ^m 4 ^h : 56/5 12 ^h : 56/3 20 ^h : 56/0 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	h m m
0	180	39.0	+21 42.6	312	14.9	-24 30.3	31	60 N	21 04	22 25	** **	0 42 28	5 59 81	
1	195	38.9	43.0	326	41.9	27.2	80	58	20 46	21 52	** **	20 32	6 20 77	
2	210	38.9	43.3	341	09.0	23.9	81	56	31	28	23 35	0 02 35	38 74	
3	225	38.8	43.7	355	36.1	20.5	81	54	19	21 10	22 33	** ** *	6 53 71	
4	240	38.7	44.1	10	03.3	17.0	82	52	20 08	20 54	22 03	** ** *	7 06 69	
5	255	38.6	+21 44.5	24	30.7	-24 13.4	84	50	19 58	20 41	21 40	** ** *	7 17 68	
6	270	38.5	+21 44.8	38	58.0	-24 09.6	83	45	19 38	20 14	21 01	23 41 35	7 41 65	
7	285	38.4	45.2	53	25.5	05.7	85	40	21	19 53	20 33	24 37	8 00 62	
8	300	38.4	45.6	67	53.0	-24 01.7	85	35	19 07	36	20 12	23 10 39	16 60	
9	315	38.3	45.9	82	20.7	-23 57.5	87	30	18 55	19 22	19 55	22 57 41	29 59	
10	330	38.2	46.3	96	48.4	53.2	87	20	35	18 59	28	35 45	8 53 56	
11	345	38.1	+21 46.7	111	16.1	-23 48.8	87	10 N	18 17	18 40	19 07	22 16 48	9 13 54	
12	0	38.0	+21 47.1	125	44.0	-23 44.3	89	0	18 01	18 23	18 49	21 59 50	9 31 52	
13	15	37.9	47.4	140	11.9	39.6	89	10 S	17 45	18 08	34	41 52	9 50 50	
14	30	37.8	47.8	154	40.0	34.8	91	20	28	17 52	19	22 55	10 10 47	
15	45	37.7	48.2	169	08.1	29.9	91	30	17 08	34	18 04	21 00 58	32 45	
16	60	37.7	48.5	183	36.2	24.9	91	35	16 57	25	17 56	20 47 60	10 46 43	
17	75	37.6	+21 48.9	198	04.5	-23 19.8	93	40	16 44	17 14	17 48	20 32 63	11 01 41	
18	90	37.5	+21 49.3	212	32.9	-23 14.5	94	45	16 29	17 02	17 38	20 15 65	11 19 39	
19	105	37.4	49.6	227	01.3	09.2	94	50	10	16 47	28	19 53 68	42 35	
20	120	37.3	50.0	241	29.8	-23 03.7	95	52	16 01	41	23	42 71	11 53 34	
21	135	37.2	50.4	255	58.5	-22 58.1	97	54	15 51	33	18	30 73	12 05 32	
22	150	37.1	50.7	270	27.1	52.4	96	56	40	25	13	17 75	19 29	
23	165	37.0	51.1	284	55.9	46.6	98	58	27	16	07	19 01 78	35 27	
24	180	37.0	+21 51.4	299	24.8	-22 40.6	99	60 S	15 12	16 06	17 01	18 41 83	12 55 22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: +1.7		Mag: -1.9		Mag: 0.0	
	7 ^h 29 ^m 4		PMG: 14 ^h 21 ^m		PMG: 13 ^h 34 ^m		PMG: 14 ^h 39 ^m		PMG: 12 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	247	20.0	144	54.3	156	14.4	139	45.5	171	13.1
1	262	22.4	159	53.5	171	15.0	154	47.4	186	15.2
2	277	24.9	174	52.7	186	15.7	169	49.4	201	17.3
3	292	27.4	189	51.9	201	16.4	184	51.3	216	19.4
4	307	29.8	204	51.1	216	17.0	199	53.2	231	21.5
5	322	32.3	219	50.3	231	17.7	214	55.1	246	23.7
6	337	34.8	234	49.5	246	18.3	229	57.1	261	25.8
7	352	37.2	249	48.7	261	19.0	244	59.0	276	27.9
8	7	39.7	264	47.9	276	19.7	260	00.9	291	30.0
9	22	42.2	279	47.1	291	20.3	275	02.9	306	32.1
10	37	44.6	294	46.3	306	21.0	290	04.8	321	34.3
11	52	47.1	309	45.5	321	21.6	305	06.7	336	36.4
12	67	49.6	324	44.7	336	22.3	320	08.6	351	38.5
13	82	52.0	339	43.9	351	22.9	335	10.6	6	40.6
14	97	54.5	354	43.1	6	23.6	350	12.5	21	42.7
15	112	56.9	9	42.3	21	24.3	5	14.4	36	44.8
16	127	59.4	24	41.5	36	24.9	20	16.3	51	47.0
17	143	01.9	39	40.7	51	25.6	35	18.3	66	49.1
18	158	04.3	54	39.9	66	26.2	50	20.2	81	51.2
19	173	06.8	69	39.1	81	26.9	65	22.1	96	53.3
20	188	09.3	84	38.3	96	27.6	80	24.0	111	55.4
21	203	11.7	99	37.5	111	28.2	95	26.0	126	57.6
22	218	14.2	114	36.7	126	28.9	110	27.9	141	59.7
23	233	16.7	129	35.9	141	29.5	125	29.8	157	01.8
24	248	19.1	144	35.1	156	30.2	140	31.8	172	03.9
Dif	—		-8	-2	+7	0	+19	-1	+21	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: 18 ^d 6 PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 6 20 ^h : 55 ^m 4 PMG: 4 ^h 11 ^m R°: 49 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	37.0	+21	51.4	299	24.8	-22	40.6	60 N	** **	1 30	2 51	1 10	17	7 20	84	
1	195	36.9		51.8	313	53.8 ¹⁰⁰		34.6	58	** **	2 03	3 09	0 52	21	37	80	
2	210	36.8		52.2	328	22.8 ¹⁰⁰		28.4	56	0 20	26	23	37	24	7 52	76	
3	225	36.7		52.5	342	51.9 ¹⁰¹		22.2	54	1 22	2 45	36	24	27	8 04	74	
4	240	36.6		52.9	357	21.1 ¹⁰²		15.8	52	1 52	3 01	47	13	29	15	72	
5	255	36.5	+21	53.2	11	50.4 ¹⁰³	-22	09.3	50	2 14	3 14	3 57	0 03	30	8 25	70	
6	270	36.4	+21	53.6	26	19.8 ¹⁰⁴	-22	02.7	45	2 54	3 41	4 17	** ** *	**	8 46	65	
7	285	36.3		54.0	40	49.3 ¹⁰⁵	-21	56.1	40	3 22	4 02	34	** ** *	**	9 02	62	
8	300	36.2		54.3	55	18.9 ¹⁰⁶		49.3	35	3 43	19	4 48	23	49	34	16	60
9	315	36.2		54.7	69	48.5 ¹⁰⁶		42.4	30	4 00	33	5 00	38	36	28	58	
10	330	36.1		55.0	84	18.3 ¹⁰⁸		35.4	20	27	4 56	20	20	40	9 49	54	
11	345	36.0	+21	55.4	98	48.1 ¹⁰⁸	-21	28.3	10 N	4 48	5 15	5 38	23	04	43	10 07	51
12	0	35.9	+21	55.7	113	18.0 ¹⁰⁹	-21	21.2	0	5 06	5 32	5 54	22	49	46	10 23	48
13	15	35.8		56.1	127	48.0 ¹¹⁰		13.9	10 S	22	5 48	6 10	33	50	40	45	
14	30	35.7		56.4	142	18.1 ¹¹¹	-21	06.5	20	36	6 04	27	22	17	53	10 57	42
15	45	35.6		56.8	156	48.3 ¹¹²	-20	59.0	30	51	21	47	21	58	57	11 17	39
16	60	35.5		57.1	171	18.5 ¹¹²		51.5	35	5 59	31	6 58	47	59	29	37	
17	75	35.4	+21	57.5	185	48.9 ¹¹⁴	-20	43.8	40	6 08	6 41	7 11	21	35	61	11 42	34
18	90	35.3	+21	57.8	200	19.3 ¹¹⁴	-20	36.1	45	6 17	6 54	7 27	21	20	65	11 58	31
19	105	35.2		58.2	214	49.8 ¹¹⁵		28.3	50	28	7 08	46	21	01	69	12 17	28
20	120	35.2		58.5	229	20.4 ¹¹⁶		20.3	52	32	15	7 55	20	53	71	27	25
21	135	35.1		58.9	243	51.1 ¹¹⁷		12.3	54	37	22	8 05	43	73	37	23	
22	150	35.0		59.2	258	21.9 ¹¹⁸	-20	04.2	56	43	31	16	32	76	12 48	21	
23	165	34.9		59.6	272	52.8 ¹¹⁹	-19	56.0	58	49	40	29	19	80	13 02	17	
24	180	34.8	+21	59.9	287	23.7 ¹¹⁹	-19	47.8	60 S	6 55	7 50	8 44	20	04	84	13 17	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 25 ^m 5		Mag: -3.9 PMG: 14 ^h 22 ^m		Mag: +1.7 PMG: 13 ^h 33 ^m		Mag: -1.9 PMG: 14 ^h 36 ^m		Mag: 0.0 PMG: 12 ^h 30 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	248	19.1	144	35.1	+24	39.6	156	30.2	+22	40.8
1	263	21.6	159	34.3		39.4	171	30.8		40.8
2	278	24.1	174	33.5		39.1	186	31.5		40.7
3	293	26.5	189	32.7		38.9	201	32.2		40.7
4	308	29.0	204	31.9		38.7	216	32.8		40.6
5	323	31.4	219	31.1	+24	38.4	231	33.5	+24	40.6
6	338	33.9	234	30.3	+24	38.2	246	34.1	+24	40.5
7	353	36.4	249	29.6		38.0	261	34.8		40.4
8	8	38.8	264	28.8		37.7	276	35.5		40.4
9	23	41.3	279	28.0		37.5	291	36.1		40.3
10	38	43.8	294	27.2		37.3	306	36.8		40.3
11	53	46.2	309	26.4	+24	37.0	321	37.4	+24	40.2
12	68	48.7	324	25.6	+24	36.8	336	38.1	+24	40.1
13	83	51.2	339	24.8		36.5	351	38.8		40.1
14	98	53.6	354	24.0		36.3	6	39.4		40.0
15	113	56.1	9	23.2		36.0	21	40.1		40.0
16	128	58.6	24	22.4		35.8	36	40.7		39.9
17	144	01.0	39	21.6	+24	35.5	51	41.4	+24	39.9
18	159	03.5	54	20.8	+24	35.3	66	42.1	+24	39.8
19	174	05.9	69	20.1		35.0	81	42.7		39.7
20	189	08.4	84	19.3		34.8	96	43.4		39.7
21	204	10.9	99	18.5		34.5	111	44.0		39.6
22	219	13.3	114	17.7		34.3	126	44.7		39.6
23	234	15.8	129	16.9		34.0	141	45.4		39.5
24	249	18.3	144	16.1	+24	33.8	156	46.0	+24	39.4
Dif	—		-8		-2		+7		0	
							+19		-1	
									+21	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 19 ^d 6 PHE	SD: 15 ^h 1				R°: 46 ^m							
	PMG: 11 ^h 57 ^m 8				PMG: 5 ^h 00 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	34.8	+21 59.9	287	23.7	-19 47.8	84	60 N	21 07	22 32	** **	1 27	10	8 44	83	
1	195	34.7	+22 00.3	301	54.7 ¹²⁰	39.4	84	58	20 49	21 57	** **	13 14		8 57	79	
2	210	34.6	00.6	316	25.9 ¹²²	31.0	84	56	34	32	** **	1 01	17	9 08	76	
3	225	34.5	01.0	330	57.1 ¹²²	22.5	85	54	21	21 13	22 39	0 51	20	18 73		
4	240	34.4	01.3	345	28.3 ¹²²	13.9	86	52	10	20 57	22 07	42 22		27 71		
5	255	34.3	+22 01.7	359	59.7 ¹²⁴	-19 05.2	87	50	20 00	20 43	21 44	0 33	24	9 35	68	
6	270	34.2	+22 02.0	14	31.1 ¹²⁴	-18 56.4	88	45	19 39	20 16	21 03	0 16	28	9 51	65	
7	285	34.1	02.3	29	02.7 ¹²⁶	47.6	88	40	23	19 55	20 35	0 01	32	10 04	62	
8	300	34.0	02.7	43	34.3 ¹²⁶	38.7	89	35	19 08	38	20 14	** **	**	16 58		
9	315	33.9	03.0	58	06.0 ¹²⁷	29.7	90	30	18 56	23	19 56	** **	**	26 56		
10	330	33.8	03.4	72	37.7 ¹²⁷	20.6	91	20	36	19 00	29	** **	**	43 52		
11	345	33.7	+22 03.7	87	09.6 ¹²⁹	-18 11.5	91	10 N	18 18	18 41	19 08	23 47	40	10 58	48	
12	0	33.7	+22 04.0	101	41.5 ¹²⁹	-18 02.3	92	0	18 01	18 24	18 50	23 35	43	11 11	45	
13	15	33.6	04.4	116	13.5 ¹³⁰	-17 53.0	93	10 S	17 45	18 08	34	23 47		25 42		
14	30	33.5	04.7	130	45.6 ¹³¹	43.6	94	20	28	17 51	19	23 10	50	39 39		
15	45	33.4	05.0	145	17.8 ¹³²	34.2	94	30	17 08	34	18 03	22 55	55	11 56	34	
16	60	33.3	05.4	159	50.0 ¹³²	24.7	95	35	16 56	24	17 55	46 58		12 06	31	
17	75	33.2	+22 05.7	174	22.3 ¹³³	-17 15.2	95	40	16 43	17 13	17 47	22 36	61	12 16	29	
18	90	33.1	+22 06.1	188	54.7 ¹³⁴	-17 05.5	97	45	16 28	17 01	17 37	22 25	63	12 29	26	
19	105	33.0	06.4	203	27.2 ¹³⁵	-16 55.8	97	50	16 08	16 46	27	10 68		45 21		
20	120	32.9	06.7	217	59.7 ¹³⁵	46.1	97	52	15 59	39	22	22 04	70	12 52	19	
21	135	32.8	07.0	232	32.3 ¹³⁶	36.2	99	54	49	32	17	21 56	73	13 00	17	
22	150	32.7	07.4	247	05.0 ¹³⁷	26.3	99	56	38	23	11	48 75		09 15		
23	165	32.6	07.7	261	37.7 ¹³⁷	16.4	99	58	25	14	17 05	39 78		19 12		
24	180	32.5	+22 08.0	276	10.6 ¹³⁹	-16 06.4 ¹⁰⁰		60 S	15 09	16 04	16 59	21 28	82	13 30	9	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 21 ^m 6			Mag: -3.9 PMG: 14 ^h 24 ^m			Mag: +1.7 PMG: 13 ^h 32 ^m			Mag: -1.9 PMG: 14 ^h 33 ^m			Mag: 0.0 PMG: 12 ^h 27 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	h	m	°	'	°	'	°	'
0	249	18.3	144 16.1	+24 33.8	156 46.0	+24 24.5		141 17.9	+22 39.4		172 54.8	+21 32.7				
1	264	20.7	159 15.3	33.5	171 46.7	24.5		156 19.9	39.4		187 56.9	32.7				
2	279	23.2	174 14.5	33.3	186 47.3	24.5		171 21.8	39.3		202 59.0	32.7				
3	294	25.7	189 13.7	33.0	201 48.0	24.5		186 23.7	39.3		218 01.1	32.8				
4	309	28.1	204 13.0	32.7	216 48.7	24.4		201 25.6	39.2		233 03.2	32.8				
5	324	30.6	219 12.2	+24 32.5	231 49.3	+24 24.4		216 27.6	+22 39.2		248 05.4	+21 32.8				
6	339	33.0	234 11.4	+24 32.2	246 50.0	+24 24.4		231 29.5	+22 39.1		263 07.5	+21 32.9				
7	354	35.5	249 10.6	32.0	261 50.6	24.4		246 31.4	39.0		278 09.6	32.9				
8	9	38.0	264 09.8	31.7	276 51.3	24.4		261 33.3	39.0		293 11.7	32.9				
9	24	40.4	279 09.0	31.4	291 52.0	24.3		276 35.3	38.9		308 13.8	33.0				
10	39	42.9	294 08.2	31.2	306 52.6	24.3		291 37.2	38.9		323 16.0	33.0				
11	54	45.4	309 07.5	+24 30.9	321 53.3	+24 24.3		306 39.1	+22 38.8		338 18.1	+21 33.0				
12	69	47.8	324 06.7	+24 30.6	336 53.9	+24 24.3		321 41.0	+22 38.7		353 20.2	+21 33.1				
13	84	50.3	339 05.9	30.3	351 54.6	24.2		336 42.9	38.7		8 22.3	33.1				
14	99	52.8	354 05.1	30.1	6 55.3	24.2		351 44.9	38.6		23 24.4	33.1				
15	114	55.2	9 04.3	29.8	21 55.9	24.2		6 46.8	38.6		38 26.5	33.2				
16	129	57.7	24 03.5	29.5	36 56.6	24.2		21 48.7	38.5		53 28.7	33.2				
17	145	00.2	39 02.8	+24 29.3	51 57.2	+24 24.2		36 50.6	+22 38.4		68 30.8	+21 33.2				
18	160	02.6	54 02.0	+24 29.0	66 57.9	+24 24.1		51 52.6	+22 38.4		83 32.9	+21 33.3				
19	175	05.1	69 01.2	28.7	81 58.6	24.1		66 54.5	38.3		98 35.0	33.3				
20	190	07.5	84 00.4	28.4	96 59.2	24.1		81 56.4	38.3		113 37.1	33.3				
21	205	10.0	98 59.6	28.1	111 59.9	24.1		96 58.3	38.2		128 39.3	33.4				
22	220	12.5	113 58.9	27.9	127 00.6	24.0		112 00.2	38.1		143 41.4	33.4				
23	235	14.9	128 58.1	27.6	142 01.2	24.0		127 02.2	38.1		158 43.5	33.4				
24	250	17.4	143 57.3	+24 27.3	157 01.9	+24 24.0		142 04.1	+22 38.0		173 45.6	+21 33.5				
Dif	—		-8	-3	+7	0		+19	-1		+21	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 9			Edad: 20 ^d 6 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 PMG: 5 ^h 46 ^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	32.5	+22	08.0	276	10.6	-16	06.4	60 N	** ** *	1 24	2 48	1 37	7	10 07	81		
1	195	32.4		08.4	290	43.5 ¹³⁹	-15	56.3 ¹⁰¹	58	** ** *	1 59	3 06	27	10	16	77		
2	210	32.3		08.7	305	16.4 ¹³⁹		46.2 ¹⁰¹	56	** ** *	2 23	21	18	13	24	74		
3	225	32.2		09.0	319	49.5 ¹⁴¹		36.0 ¹⁰²	54	1 16	43	34	11	15	31	72		
4	240	32.1		09.4	334	22.6 ¹⁴¹		25.7 ¹⁰³	52	1 49	2 59	45	1 04	17	38	69		
5	255	32.0	+22	09.7	348	55.7 ¹⁴¹	-15	15.4 ¹⁰³	50	2 12	3 12	3 55	0 57	20	10 43	68		
6	270	31.9	+22	10.0	3	29.0 ¹⁴³	-15	05.0 ¹⁰⁴	45	2 52	3 40	4 16	0 44	23	10 56	63		
7	285	31.8		10.3	18	02.3 ¹⁴³	-14	54.6 ¹⁰⁴	40	3 20	4 01	33	33	27	11 06	59		
8	300	31.7		10.7	32	35.6 ¹⁴³		44.1 ¹⁰⁵	35	42	18	47	23	30	14	57		
9	315	31.6		11.0	47	09.1 ¹⁴⁵		33.6 ¹⁰⁵	30	3 59	32	4 59	14	33	22	54		
10	330	31.5		11.3	61	42.6 ¹⁴⁵		23.0 ¹⁰⁶	20	4 27	4 56	5 20	0 00	36	35	49		
11	345	31.4	+22	11.6	76	16.1 ¹⁴⁵	-14	12.4 ¹⁰⁶	10 N	4 48	5 15	5 38	** ** *	**	11 46	46		
12	0	31.3	+22	12.0	90	49.7 ¹⁴⁶	-14	01.7 ¹⁰⁷	0	5 06	5 32	5 54	** ** *	**	11 56	43		
13	15	31.2		12.3	105	23.4 ¹⁴⁷	-13	50.9 ¹⁰⁸	10 S	22	5 48	6 11	** ** *	**	12 07	38		
14	30	31.1		12.6	119	57.1 ¹⁴⁷		40.2 ¹⁰⁷	20	37	6 04	28	** ** *	**	18	35		
15	45	31.0		12.9	134	30.9 ¹⁴⁸		29.3 ¹⁰⁹	30	5 52	22	6 48	23	50	53	30		
16	60	30.9		13.2	149	04.8 ¹⁴⁹		18.4 ¹⁰⁹	35	6 00	32	7 00	44	56	37	29		
17	75	30.8	+22	13.6	163	38.7 ¹⁴⁹	-13	07.5 ¹⁰⁹	40	6 09	6 43	7 13	23	37	58	12		
18	90	30.7	+22	13.9	178	12.7 ¹⁵⁰	-12	56.5 ¹¹⁰	45	6 19	6 55	7 29	23	28	63	12		
19	105	30.6		14.2	192	46.7 ¹⁵⁰		45.5 ¹¹⁰	50	29	7 10	48	18	67	13	06		
20	120	30.5		14.5	207	20.8 ¹⁵¹		34.4 ¹¹¹	52	34	17	7 57	14	68	11	17		
21	135	30.4		14.8	221	54.9 ¹⁵¹		23.3 ¹¹¹	54	39	24	8 07	09	71	17	14		
22	150	30.3		15.1	236	29.1 ¹⁵²		12.1 ¹¹²	56	45	33	19	23	03	73	24		
23	165	30.2		15.5	251	03.3 ¹⁵²	-12	00.9 ¹¹²	58	51	42	32	22	57	76	31		
24	180	30.1	+22	15.8	265	37.6 ¹⁵³	-11	49.7 ¹¹²	60 S	6 57	7 53	8 48	22	50	79	13		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 7 ^h 17 ^m 6			Mag: -3.9 PMG: 14 ^h 25 ^m			Mag: +1.7 PMG: 13 ^h 31 ^m			Mag: -1.9 PMG: 14 ^h 30 ^m			Mag: 0.0 PMG: 12 ^h 23 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	250	17.4	143	57.3	+24	27.3	157	01.9	+24	24.0	142	04.1	+22	38.0	173	45.6	+21	33.5
1	265	19.9	158	56.5		27.0	172	02.5		24.0	157	06.0		38.0	188	47.7		33.5
2	280	22.3	173	55.7		26.7	187	03.2		23.9	172	07.9		37.9	203	49.8		33.5
3	295	24.8	188	55.0		26.4	202	03.9		23.9	187	09.8		37.8	218	52.0		33.6
4	310	27.3	203	54.2		26.1	217	04.5		23.9	202	11.8		37.8	233	54.1		33.6
5	325	29.7	218	53.4	+24	25.8	232	05.2	+24	23.8	217	13.7	+22	37.7	248	56.2	+21	33.6
6	340	32.2	233	52.6	+24	25.6	247	05.8	+24	23.8	232	15.6	+22	37.7	263	58.3	+21	33.7
7	355	34.7	248	51.9		25.3	262	06.5		23.8	247	17.5		37.6	279	00.4		33.7
8	10	37.1	263	51.1		25.0	277	07.2		23.8	262	19.4		37.5	294	02.5		33.7
9	25	39.6	278	50.3		24.7	292	07.8		23.7	277	21.4		37.5	309	04.7		33.8
10	40	42.0	293	49.5		24.4	307	08.5		23.7	292	23.3		37.4	324	06.8		33.8
11	55	44.5	308	48.7	+24	24.1	322	09.2	+24	23.7	307	25.2	+22	37.4	339	08.9	+21	33.8
12	70	47.0	323	48.0	+24	23.8	337	09.8	+24	23.6	322	27.1	+22	37.3	354	11.0	+21	33.9
13	85	49.4	338	47.2		23.5	352	10.5		23.6	337	29.0		37.2	9	13.1		33.9
14	100	51.9	353	46.4		23.2	7	11.1		23.6	352	31.0		37.2	24	15.3		33.9
15	115	54.4	8	45.6		22.9	22	11.8		23.5	7	32.9		37.1	39	17.4		34.0
16	130	56.8	23	44.9		22.6	37	12.5		23.5	22	34.8		37.1	54	19.5		34.0
17	145	59.3	38	44.1	+24	22.3	52	13.1	+24	23.5	37	36.7	+22	37.0	69	21.6	+21	34.0
18	161	01.8	53	43.3	+24	22.0	67	13.8	+24	23.4	52	38.6	+22	36.9	84	23.7	+21	34.1
19	176	04.2	68	42.6		21.7	82	14.5		23.4	67	40.6		36.9	99	25.8		34.1
20	191	06.7	83	41.8		21.4	97	15.1		23.4	82	42.5		36.8	114	28.0		34.1
21	206	09.1	98	41.0		21.0	112	15.8		23.3	97	44.4		36.8	129	30.1		34.2
22	221	11.6	113	40.2		20.7	127	16.4		23.3	112	46.3		36.7	144	32.2		34.2
23	236	14.1	128	39.5		20.4	142	17.1		23.3	127	48.2		36.6	159	34.3		34.2
24	251	16.5	143	38.7	+24	20.1	157	17.8	+24	23.2	142	50.2	+22	36.6	174	36.4	+21	34.3
Dif	—			-8 -3			+7 0			+19 -1			+21					

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 1				Edad: 21 ^d 6 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 PMG: 6 ^h 29 ^m R°: 41 ^m														
	hG ☉		Dec		hG ☾		Dif				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	30.1	+22	15.8	265	37.6	-11	49.7	60 N	21 11	22 38	** **	1 44	5		11 28	78		
1	195	30.0		16.1	280	12.0 ¹⁵⁴		38.4 ¹¹³	58	20 52	22 01	** **	37	8		33	76		
2	210	29.9		16.4	294	46.4 ¹⁵⁴		27.0 ¹¹⁴	56	37	21 35	** **	31	11		38	73		
3	225	29.8		16.7	309	20.8 ¹⁵⁴		15.7 ¹¹³	54	24	21 16	22 45	26	13		43	70		
4	240	29.7		17.0	323	55.3 ¹⁵⁵		-11 04.2 ¹¹⁵	52	12	20 59	22 11	21	15		47	68		
5	255	29.6	+22	17.3	338	29.8 ¹⁵⁵		-10 52.8 ¹¹⁴	50	20 02	20 45	21 47	1 17	17		11 51	66		
6	270	29.5	+22	17.6	353	04.4 ¹⁵⁶		-10 41.3 ¹¹⁵	45	19 41	20 18	21 06	1 07	21		11 59	62		
7	285	29.4		17.9	7	39.0 ¹⁵⁶		29.8 ¹¹⁵	40	24	19 56	20 37	1 00	24		12 05	59		
8	300	29.3		18.3	22	13.7 ¹⁵⁷		18.2 ¹¹⁶	35	19 10	39	20 15	0 53	27		11	55		
9	315	29.2		18.6	36	48.4 ¹⁵⁷		-10 06.6 ¹¹⁶	30	18 57	25	19 57	47	29		16	53		
10	330	29.1		18.9	51	23.1 ¹⁵⁷		-9 55.0 ¹¹⁶	20	36	19 01	30	36	34		24	49		
11	345	29.0	+22	19.2	65	57.9 ¹⁵⁸		-9 43.3 ¹¹⁷	10 N	18 18	18 41	19 08	0 27	38		12 32	44		
12	0	28.9	+22	19.5	80	32.7 ¹⁵⁸		-9 31.6 ¹¹⁷	0	18 02	18 24	18 50	0 18	42		12 39	40		
13	15	28.8		19.8	95	07.6 ¹⁵⁹		19.9 ¹¹⁷	10 S	17 45	18 08	34	10	45		45	37		
14	30	28.7		20.1	109	42.5 ¹⁵⁹		-9 08.1 ¹¹⁸	20	28	17 51	19	0 00	49		12 53	33		
15	45	28.6		20.4	124	17.4 ¹⁵⁹		-8 56.3 ¹¹⁸	30	17 07	34	18 03	** **	**		13 01	29		
16	60	28.5		20.7	138	52.4 ¹⁶⁰		44.5 ¹¹⁸	35	16 56	24	17 55	** **	**		06	26		
17	75	28.4	+22	21.0	153	27.4 ¹⁶⁰		-8 32.6 ¹¹⁹	40	16 42	17 13	17 46	** **	**		13 11	23		
18	90	28.3	+22	21.3	168	02.5 ¹⁶¹		-8 20.7 ¹¹⁹	45	16 27	17 00	17 37	** **	**		13 17	20		
19	105	28.2		21.6	182	37.5 ¹⁶⁰		-8 08.8 ¹¹⁹	50	16 07	16 45	26	** **	**		24	16		
20	120	28.1		21.9	197	12.6 ¹⁶¹		-7 56.9 ¹¹⁹	52	15 58	38	21	** **	**		28	14		
21	135	27.9		22.2	211	47.8 ¹⁶²		44.9 ¹²⁰	54	48	30	16	** **	**		31	13		
22	150	27.8		22.5	226	23.0 ¹⁶²		32.9 ¹²⁰	56	36	22	10	** **	**		35	11		
23	165	27.7		22.8	240	58.2 ¹⁶²		20.8 ¹²¹	58	22	13	17 04	** **	**		40	8		
24	180	27.6	+22	23.1	255	33.4 ¹⁶²		-7 08.8 ¹²⁰	60 S	15 07	16 02	16 57	** **	**		13 45	5		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 7 ^h 13 ^m 7		Mag: -3.9 PMG: 14 ^h 26 ^m				Mag: +1.7 PMG: 13 ^h 30 ^m				Mag: -1.9 PMG: 14 ^h 27 ^m				Mag: 0.0 PMG: 12 ^h 20 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	251	16.5	143	38.7	+24	20.1	157	17.8	+24	23.2	142	50.2	+22	36.6	174	36.4	+21	34.3	
1	266	19.0	158	37.9		19.8	172	18.4		23.2	157	52.1		36.5	189	38.5		34.3	
2	281	21.5	173	37.2		19.5	187	19.1		23.2	172	54.0		36.5	204	40.7		34.3	
3	296	23.9	188	36.4		19.2	202	19.8		23.1	187	55.9		36.4	219	42.8		34.4	
4	311	26.4	203	35.6		18.8	217	20.4		23.1	202	57.8		36.3	234	44.9		34.4	
5	326	28.9	218	34.9	+24	18.5	232	21.1	+24	23.1	217	59.8	+22	36.3	249	47.0	+21	34.4	
6	341	31.3	233	34.1	+24	18.2	247	21.8	+24	23.0	233	01.7	+22	36.2	264	49.1	+21	34.5	
7	356	33.8	248	33.3		17.9	262	22.4		23.0	248	03.6		36.2	279	51.3		34.5	
8	11	36.3	263	32.5		17.6	277	23.1		22.9	263	05.5		36.1	294	53.4		34.5	
9	26	38.7	278	31.8		17.2	292	23.7		22.9	278	07.4		36.0	309	55.5		34.6	
10	41	41.2	293	31.0		16.9	307	24.4		22.9	293	09.3		36.0	324	57.6		34.6	
11	56	43.6	308	30.2	+24	16.6	322	25.1	+24	22.8	308	11.3	+22	35.9	339	59.7	+21	34.6	
12	71	46.1	323	29.5	+24	16.3	337	25.7	+24	22.8	323	13.2	+22	35.8	355	01.8	+21	34.7	
13	86	48.6	338	28.7		15.9	352	26.4		22.8	338	15.1		35.8	10	04.0		34.7	
14	101	51.0	353	28.0		15.6	7	27.1		22.7	353	17.0		35.7	25	06.1		34.7	
15	116	53.5	8	27.2		15.3	22	27.7		22.7	8	18.9		35.7	40	08.2		34.8	
16	131	56.0	23	26.4		14.9	37	28.4		22.6	23	20.8		35.6	55	10.3		34.8	
17	146	58.4	38	25.7	+24	14.6	52	29.1	+24	22.6	38	22.8	+22	35.5	70	12.4	+21	34.8	
18	162	00.9	53	24.9	+24	14.3	67	29.7	+24	22.6	53	24.7	+22	35.5	85	14.5	+21	34.9	
19	177	03.4	68	24.1		13.9	82	30.4		22.5	68	26.6		35.4	100	16.7		34.9	
20	192	05.8	83	23.4		13.6	97	31.0		22.5	83	28.5		35.4	115	18.8		34.9	
21	207	08.3	98	22.6		13.3	112	31.7		22.4	98	30.4		35.3	130	20.9		35.0	
22	222	10.8	113	21.8		12.9	127	32.4		22.4	113	32.3		35.2	145	23.0		35.0	
23	237	13.2	128	21.1		12.6	142	33.0		22.3	128	34.3		35.2	160	25.1		35.0	
24	252	15.7	143	20.3	+24	12.3	157	33.7	+24	22.3	143	36.2	+22	35.1	175	27.2	+21	35.1	
Dif	—		-8		-3		+7		0		+19		-1		+21				

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: 22 ^d 6 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 PMG: 7 ^h 10 ^m R°: 40 ^m												
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	27.6	+22	23.1	255	33.4	-7	08.8	60 N	** **	1 18	2 45	1 49	4	12 46	78	
1	195	27.5		23.4	270	08.6 ¹⁶²	-6	56.7 ¹²¹	58	** **	1 55	3 04	45	7	49	75	
2	210	27.4		23.7	284	43.9 ¹⁶³		44.6 ¹²¹	56	** **	2 21	19	42	10	51	72	
3	225	27.3		24.0	299	19.2 ¹⁶³		32.5 ¹²¹	54	1 11	40	32	39	12	53	70	
4	240	27.2		24.3	313	54.6 ¹⁶⁴		20.3 ¹²²	52	1 45	2 57	44	36	14	55	68	
5	255	27.1	+22	24.6	328	29.9 ¹⁶³	-6	08.1 ¹²²	50	2 09	3 11	3 54	1 34	15	12 57	66	
6	270	27.0	+22	24.9	343	05.3 ¹⁶⁴	-5	55.9 ¹²²	45	2 51	3 39	4 15	1 28	20	13 01	61	
7	285	26.9		25.2	357	40.7 ¹⁶⁴		43.7 ¹²²	40	3 19	4 00	32	24	23	04	58	
8	300	26.8		25.5	12	16.1 ¹⁶⁴		31.5 ¹²²	35	41	17	46	20	26	06	55	
9	315	26.7		25.7	26	51.5 ¹⁶⁴		19.2 ¹²³	30	3 59	32	4 59	16	29	09	52	
10	330	26.6		26.0	41	27.0 ¹⁶⁵	-5	06.9 ¹²³	20	4 27	4 55	5 20	10	33	13	47	
11	345	26.5	+22	26.3	56	02.4 ¹⁶⁴	-4	54.6 ¹²³	10 N	4 48	5 15	5 38	1 05	36	13 16	44	
12	0	26.4	+22	26.6	70	37.9 ¹⁶⁵	-4	42.3 ¹²³	0	5 06	5 32	5 55	1 00	40	13 19	40	
13	15	26.2		26.9	85	13.4 ¹⁶⁵		30.0 ¹²³	10 S	22	5 49	6 11	0 55	44	22	37	
14	30	26.1		27.2	99	48.9 ¹⁶⁵		17.6 ¹²⁴	20	38	6 05	29	49	48	26	32	
15	45	26.0		27.5	114	24.5 ¹⁶⁶	-4	05.2 ¹²⁴	30	5 53	23	6 49	43	53	30	28	
16	60	25.9		27.8	129	00.0 ¹⁶⁵	-3	52.9 ¹²³	35	6 01	33	7 01	40	55	32	25	
17	75	25.8	+22	28.1	143	35.5 ¹⁶⁵	-3	40.5 ¹²⁴	40	6 10	6 44	7 14	0 35	59	13 34	23	
18	90	25.7	+22	28.3	158	11.1 ¹⁶⁶	-3	28.0 ¹²⁵	45	6 20	6 57	7 30	0 31	61	13 37	19	
19	105	25.6		28.6	172	46.7 ¹⁶⁶		15.6 ¹²⁴	50	31	7 12	50	25	66	40	16	
20	120	25.5		28.9	187	22.3 ¹⁶⁶	-3	03.2 ¹²⁴	52	36	19	7 59	22	68	42	14	
21	135	25.4		29.2	201	57.8 ¹⁶⁵	-2	50.7 ¹²⁵	54	41	26	8 09	20	70	44	11	
22	150	25.3		29.5	216	33.4 ¹⁶⁶		38.2 ¹²⁵	56	47	35	21	16	73	46	9	
23	165	25.2		29.8	231	09.0 ¹⁶⁶		25.8 ¹²⁴	58	6 53	44	35	13	75	48	7	
24	180	25.1	+22	30.0	245	44.6 ¹⁶⁶	-2	13.3 ¹²⁵	60 S	7 00	7 55	8 51	0 09	78	13 50	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 09 ^m 8		Mag: -3.9 PMG: 14 ^h 27 ^m		Mag: +1.7 PMG: 13 ^h 29 ^m		Mag: -1.9 PMG: 14 ^h 24 ^m		Mag: 0.0 PMG: 12 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	252	15.7	143	20.3	+24	12.3	157	33.7	+24	22.3
1	267	18.1	158	19.6		11.9	172	34.4		22.3
2	282	20.6	173	18.8		11.6	187	35.0		22.2
3	297	23.1	188	18.0		11.2	202	35.7		22.2
4	312	25.5	203	17.3		10.9	217	36.4		22.1
5	327	28.0	218	16.5	+24	10.5	232	37.0	+24	22.1
6	342	30.5	233	15.8	+24	10.2	247	37.7	+24	22.0
7	357	32.9	248	15.0		09.8	262	38.4		22.0
8	12	35.4	263	14.3		09.5	277	39.0		21.9
9	27	37.9	278	13.5		09.1	292	39.7		21.9
10	42	40.3	293	12.7		08.8	307	40.4		21.9
11	57	42.8	308	12.0	+24	08.4	322	41.0	+24	21.8
12	72	45.2	323	11.2	+24	08.1	337	41.7	+24	21.8
13	87	47.7	338	10.5		07.7	352	42.4		21.7
14	102	50.2	353	09.7		07.4	7	43.0		21.7
15	117	52.6	8	09.0		07.0	22	43.7		21.6
16	132	55.1	23	08.2		06.6	37	44.3		21.6
17	147	57.6	38	07.5	+24	06.3	52	45.0	+24	21.5
18	163	00.0	53	06.7	+24	05.9	67	45.7	+24	21.5
19	178	02.5	68	06.0		05.6	82	46.3		21.4
20	193	05.0	83	05.2		05.2	97	47.0		21.4
21	208	07.4	98	04.4		04.8	112	47.7		21.3
22	223	09.9	113	03.7		04.5	127	48.3		21.3
23	238	12.4	128	02.9		04.1	142	49.0		21.2
24	253	14.8	143	02.2	+24	03.7	157	49.7	+24	21.2
Dif	—		-8		-4		+7		0	
									+19	
									-1	
									+21	
									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: 23 ^d 6 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 40 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	25.1	+22 30.0	245	44.6	-2 13.3	60 N	21 14	22 44	** **	1 53 5	14 04	79		
1	195	24.9		260	20.2 ¹⁶⁶	-2 00.8 ¹²⁵	58	20 55	22 05	** **	52 7	04	76		
2	210	24.8		274	55.8 ¹⁶⁶	-1 48.3 ¹²⁵	56	39	21 39	** **	52 9	04	73		
3	225	24.7		289	31.4 ¹⁶⁶	35.7 ¹²⁶	54	26	18	22 50	51 11	03	77		
4	240	24.6		304	07.0 ¹⁶⁶	23.2 ¹²⁵	52	14	21 02	22 14	50 14	03	68		
5	255	24.5	+22 31.4	318	42.6 ¹⁶⁶	-1 10.7 ¹²⁵	50	20 04	20 47	21 50	1 49 16	14 03	66		
6	270	24.4	+22 31.7	333	18.2 ¹⁶⁶	-0 58.1 ¹²⁶	45	19 42	20 19	21 08	1 48 19	14 02	62		
7	285	24.3		347	53.8 ¹⁶⁶	45.6 ¹²⁵	40	25	19 58	20 39	47 22	02	58		
8	300	24.2		2	29.4 ¹⁶⁶	33.0 ¹²⁶	35	19 11	40	20 16	46 25	01	56		
9	315	24.1		17	05.0 ¹⁶⁶	20.5 ¹²⁵	30	18 58	26	19 59	45 28	01	53		
10	330	24.0		31	40.6 ¹⁶⁶	-0 07.9 ¹²⁶	20	37	19 02	31	43 32	00	49		
11	345	23.8	+22 33.1	46	16.2 ¹⁶⁶	+0 04.7 ¹²⁶	10 N	18 19	18 42	19 09	1 41 37	14 00	44		
12	0	23.7	+22 33.4	60	51.7 ¹⁶⁵	+0 17.3 ¹²⁶	0	18 02	18 24	18 51	1 40 40	13 59	41		
13	15	23.6		75	27.3 ¹⁶⁶	29.8 ¹²⁵	10 S	17 45	18 08	34	39 44	59	37		
14	30	23.5		90	02.8 ¹⁶⁵	42.4 ¹²⁶	20	28	17 51	19	37 48	58	33		
15	45	23.4		104	38.4 ¹⁶⁶	+0 55.0 ¹²⁶	30	17 07	33	18 03	36 52	58	28		
16	60	23.3		119	13.9 ¹⁶⁵	+1 07.6 ¹²⁶	35	16 55	23	17 55	35 55	57	26		
17	75	23.2	+22 34.7	133	49.4 ¹⁶⁵	+1 20.2 ¹²⁶	40	16 42	17 12	17 46	1 34 58	13 57	23		
18	90	23.1	+22 35.0	148	24.9 ¹⁶⁵	+1 32.7 ¹²⁵	45	16 26	16 59	17 36	1 32 62	13 56	20		
19	105	23.0		163	00.4 ¹⁶⁵	45.3 ¹²⁶	50	16 06	44	25	31 66	56	15		
20	120	22.8		177	35.8 ¹⁶⁴	+1 57.9 ¹²⁶	52	15 57	37	20	30 68	56	13		
21	135	22.7		192	11.3 ¹⁶⁵	+2 10.5 ¹²⁶	54	46	29	15	30 70	55	12		
22	150	22.6		206	46.7 ¹⁶⁴	23.0 ¹²⁵	56	34	21	09	29 72	55	9		
23	165	22.5		221	22.1 ¹⁶⁴	35.6 ¹²⁶	58	21	11	17 03	28 75	55	7		
24	180	22.4	+22 36.6	235	57.5 ¹⁶⁴	+2 48.2 ¹²⁶	60 S	15 04	16 00	16 56	1 27 78	13 54	5		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 05 ^m 8		Mag: -3.9 PMG: 14 ^h 29 ^m			Mag: +1.7 PMG: 13 ^h 28 ^m			Mag: -1.9 PMG: 14 ^h 21 ^m			Mag: 0.0 PMG: 12 ^h 13 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	253	14.8	143	02.2	+24 03.7	157	49.7	+24 21.2	144	22.2	+22 33.6	176	18.1	+21 35.8
1	268	17.3	158	01.4	03.4	172	50.3	21.1	159	24.1	33.5	191	20.2	35.9
2	283	19.7	173	00.7	03.0	187	51.0	21.1	174	26.0	33.5	206	22.3	35.9
3	298	22.2	187	59.9	02.6	202	51.7	21.0	189	27.9	33.4	221	24.4	35.9
4	313	24.7	202	59.2	02.2	217	52.3	21.0	204	29.8	33.4	236	26.5	36.0
5	328	27.1	217	58.4	+24 01.9	232	53.0	+24 20.9	219	31.7	+22 33.3	251	28.6	+21 36.0
6	343	29.6	232	57.7	+24 01.5	247	53.7	+24 20.8	234	33.6	+22 33.2	266	30.8	+21 36.0
7	358	32.1	247	57.0	01.1	262	54.3	20.8	249	35.5	33.2	281	32.9	36.1
8	13	34.5	262	56.2	00.7	277	55.0	20.7	264	37.5	33.1	296	35.0	36.1
9	28	37.0	277	55.5	+24 00.4	292	55.7	20.7	279	39.4	33.0	311	37.1	36.1
10	43	39.5	292	54.7	+24 00.0	307	56.3	20.6	294	41.3	33.0	326	39.2	36.2
11	58	41.9	307	54.0	+23 59.6	322	57.0	+24 20.6	309	43.2	+22 32.9	341	41.3	+21 36.2
12	73	44.4	322	53.2	+23 59.2	337	57.7	+24 20.5	324	45.1	+22 32.9	356	43.5	+21 36.2
13	88	46.8	337	52.5	58.8	352	58.3	20.5	339	47.0	32.8	11	45.6	36.3
14	103	49.3	352	51.7	58.4	7	59.0	20.4	354	48.9	32.7	26	47.7	36.3
15	118	51.8	7	51.0	58.1	22	59.7	20.4	9	50.9	32.7	41	49.8	36.3
16	133	54.2	22	50.2	57.7	38	00.3	20.3	24	52.8	32.6	56	51.9	36.4
17	148	56.7	37	49.5	+23 57.3	53	01.0	+24 20.2	39	54.7	+22 32.5	71	54.0	+21 36.4
18	163	59.2	52	48.8	+23 56.9	68	01.7	+24 20.2	54	56.6	+22 32.5	86	56.2	+21 36.4
19	179	01.6	67	48.0	56.5	83	02.3	20.1	69	58.5	32.4	101	58.3	36.5
20	194	04.1	82	47.3	56.1	98	03.0	20.1	85	00.4	32.3	117	00.4	36.5
21	209	06.6	97	46.5	55.7	113	03.7	20.0	100	02.3	32.3	132	02.5	36.5
22	224	09.0	112	45.8	55.3	128	04.3	19.9	115	04.2	32.2	147	04.6	36.6
23	239	11.5	127	45.0	54.9	143	05.0	19.9	130	06.2	32.2	162	06.7	36.6
24	254	14.0	142	44.3	+23 54.5	158	05.7	+24 19.8	145	08.1	+22 32.1	177	08.9	+21 36.6
Dif	—		-7 -4			+7 -1			+19 -1			+21 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: 24 ^d 6 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6 PMG: 8 ^h 30 ^m R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	22.4	+22	36.6	235	57.5	+2	48.2	60 N	** **	1 13	2 43	1 58	5	15 23 81
1	195	22.3		36.9	250	32.9 ¹⁶⁴	+3	00.7 ¹²⁵	58	** **	1 52	3 02	1 59	8	20 77
2	210	22.2		37.1	265	08.2 ¹⁶³		13.3 ¹²⁶	56	** **	2 18	18	2 01	10	17 74
3	225	22.1		37.4	279	43.5 ¹⁶³		25.8 ¹²⁵	54	1 06	38	31	02	13	14 72
4	240	21.9		37.6	294	18.8 ¹⁶³		38.4 ¹²⁶	52	1 42	2 55	43	04	14	11 71
5	255	21.8	+22	37.9	308	54.1 ¹⁶³	+3	50.9 ¹²⁵	50	2 07	3 09	3 53	2 05	16	15 09 68
6	270	21.7	+22	38.2	323	29.3 ¹⁶²	+4	03.4 ¹²⁵	45	2 49	3 38	4 14	2 07	20	15 04 64
7	285	21.6		38.4	338	04.6 ¹⁶³		16.0 ¹²⁶	40	3 18	3 59	32	09	24	15 00 61
8	300	21.5		38.7	352	39.7 ¹⁶¹		28.5 ¹²⁵	35	40	4 17	46	11	27	14 57 57
9	315	21.4		38.9	7	14.9 ¹⁶²		41.0 ¹²⁵	30	3 58	31	4 59	13	29	54 54
10	330	21.3		39.2	21	50.0 ¹⁶¹	+4	53.4 ¹²⁴	20	4 26	4 55	5 20	15	34	49 50
11	345	21.1	+22	39.5	36	25.1 ¹⁶¹	+5	05.9 ¹²⁵	10 N	4 48	5 15	5 38	2 18	38	14 44 46
12	0	21.0	+22	39.7	51	00.2 ¹⁶¹	+5	18.4 ¹²⁵	0	5 06	5 33	5 55	2 20	42	14 40 42
13	15	20.9		40.0	65	35.2 ¹⁶⁰		30.8 ¹²⁴	10 S	23	5 49	6 12	23	45	36 38
14	30	20.8		40.2	80	10.2 ¹⁶⁰		43.3 ¹²⁵	20	38	6 06	30	25	49	31 35
15	45	20.7		40.5	94	45.2 ¹⁶⁰	+5	55.7 ¹²⁴	30	5 54	24	6 50	28	54	26 30
16	60	20.6		40.7	109	20.1 ¹⁵⁹	+6	08.1 ¹²⁴	35	6 02	34	7 02	30	56	23 28
17	75	20.5	+22	41.0	123	55.0 ¹⁵⁹	+6	20.5 ¹²⁴	40	6 11	6 45	7 15	2 32	59	14 20 24
18	90	20.3	+22	41.2	138	29.9 ¹⁵⁹	+6	32.8 ¹²³	45	6 21	6 58	7 32	2 34	63	14 16 21
19	105	20.2		41.5	153	04.7 ¹⁵⁸		45.2 ¹²⁴	50	32	7 13	7 51	37	67	11 17
20	120	20.1		41.8	167	39.5 ¹⁵⁸	+6	57.5 ¹²³	52	37	20	8 01	38	70	09 15
21	135	20.0		42.0	182	14.2 ¹⁵⁷	+7	09.8 ¹²³	54	43	28	11	40	71	07 13
22	150	19.9		42.3	196	48.9 ¹⁵⁷		22.1 ¹²³	56	48	37	23	41	74	04 11
23	165	19.8		42.5	211	23.5 ¹⁵⁶		34.4 ¹²³	58	6 55	47	37	43	77	14 02 8
24	180	19.6	+22	42.7	225	58.1 ¹⁵⁶	+7	46.6 ¹²²	60 S	7 02	7 58	8 53	2 45	80	13 59 5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 01 ^m 9		Mag: -3.9 PMG: 14 ^h 30 ^m		Mag: +1.7 PMG: 13 ^h 27 ^m		Mag: -1.9 PMG: 14 ^h 18 ^m		Mag: 0.0 PMG: 12 ^h 10 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	254	14.0	142	44.3	+23	54.5	158	05.7	+24	19.8	145	08.1	+22	32.1	177	08.9	+21	36.6
1	269	16.4	157	43.6		54.1	173	06.4		19.8	160	10.0		32.0	192	11.0		36.7
2	284	18.9	172	42.8		53.7	188	07.0		19.7	175	11.9		32.0	207	13.1		36.7
3	299	21.3	187	42.1		53.3	203	07.7		19.6	190	13.8		31.9	222	15.2		36.7
4	314	23.8	202	41.4		52.9	218	08.4		19.6	205	15.7		31.8	237	17.3		36.8
5	329	26.3	217	40.6	+23	52.5	233	09.0	+24	19.5	220	17.6	+22	31.8	252	19.4	+21	36.8
6	344	28.7	232	39.9	+23	52.1	248	09.7	+24	19.5	235	19.5	+22	31.7	267	21.6	+21	36.8
7	359	31.2	247	39.1		51.7	263	10.4		19.4	250	21.4		31.6	282	23.7		36.8
8	14	33.7	262	38.4		51.3	278	11.0		19.3	265	23.4		31.6	297	25.8		36.9
9	29	36.1	277	37.7		50.9	293	11.7		19.3	280	25.3		31.5	312	27.9		36.9
10	44	38.6	292	36.9		50.5	308	12.4		19.2	295	27.2		31.4	327	30.0		36.9
11	59	41.1	307	36.2	+23	50.1	323	13.0	+24	19.1	310	29.1	+22	31.4	342	32.1	+21	37.0
12	74	43.5	322	35.5	+23	49.7	338	13.7	+24	19.1	325	31.0	+22	31.3	357	34.3	+21	37.0
13	89	46.0	337	34.7		49.3	353	14.4		19.0	340	32.9		31.3	12	36.4		37.0
14	104	48.5	352	34.0		48.9	8	15.0		19.0	355	34.8		31.2	27	38.5		37.1
15	119	50.9	7	33.3		48.5	23	15.7		18.9	10	36.7		31.1	42	40.6		37.1
16	134	53.4	22	32.5		48.0	38	16.4		18.8	25	38.6		31.1	57	42.7		37.1
17	149	55.8	37	31.8	+23	47.6	53	17.0	+24	18.8	40	40.6	+22	31.0	72	44.8	+21	37.2
18	164	58.3	52	31.1	+23	47.2	68	17.7	+24	18.7	55	42.5	+22	30.9	87	47.0	+21	37.2
19	180	00.8	67	30.3		46.8	83	18.4		18.6	70	44.4		30.9	102	49.1		37.2
20	195	03.2	82	29.6		46.4	98	19.1		18.6	85	46.3		30.8	117	51.2		37.3
21	210	05.7	97	28.9		46.0	113	19.7		18.5	100	48.2		30.7	132	53.3		37.3
22	225	08.2	112	28.1		45.5	128	20.4		18.4	115	50.1		30.7	147	55.4		37.3
23	240	10.6	127	27.4		45.1	143	21.1		18.4	130	52.0		30.6	162	57.5		37.4
24	255	13.1	142	26.7	+23	44.7	158	21.7	+24	18.3	145	53.9	+22	30.5	177	59.7	+21	37.4
Dif	—		-7		-4		+7		-1		+19		-1		+21		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 25 ^d 6	PHE {	4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0			Civil		Náutico		Hora R°		
	PMG: 11 ^h 58 ^m 8	hG ☉	Dec						hG ☾	Dif	Dec	Dif	h m	h m	h m
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	19.6	+22 42.7	225	58.1	+7 46.6		60 N	21 17	22 50	** **	2 03 6	16 44 84		
1	195	19.5		240	32.7 ¹⁵⁶	+7 58.9 ¹²³		58	20 57	22 09	** **	07 9	37 81		
2	210	19.4		255	07.2 ¹⁵⁵	+8 11.1 ¹²²		56	41	21 42	** **	11 12	31 78		
3	225	19.3		269	41.7 ¹⁵⁵		23.2 ¹²¹	54	28	21	22 56	15 14	26 75		
4	240	19.2		284	16.1 ¹⁵⁴		35.4 ¹²²	52	16	21 04	22 18	18 16	22 72		
5	255	19.1	+22 44.0	298	50.5 ¹⁵⁴	+8 47.5 ¹²¹		50	20 06	20 49	21 53	2 21 18	16 17 70		
6	270	18.9	+22 44.2	313	24.8 ¹⁵³	+8 59.6 ¹²¹		45	19 44	20 21	21 10	2 27 23	16 08 66		
7	285	18.8		327	59.0 ¹⁵²	+9 11.7 ¹²¹		40	26	19 59	20 40	33 26	16 01 62		
8	300	18.7		342	33.3 ¹⁵³		23.7 ¹²⁰	35	19 12	41	18	38 28	15 54 59		
9	315	18.6		357	07.4 ¹⁵¹		35.8 ¹²¹	30	18 59	27	20 00	42 31	48 57		
10	330	18.5		11	41.5 ¹⁵¹		47.8 ¹²⁰	20	38	19 02	19 31	49 36	39 52		
11	345	18.4	+22 45.4	26	15.6 ¹⁵¹	+9 59.7 ¹¹⁹		10 N	18 20	18 42	19 09	2 56 39	15 30 48		
12	0	18.2	+22 45.7	40	49.6 ¹⁵⁰	+10 11.6 ¹¹⁹		0	18 02	18 25	18 51	3 02 43	15 22 45		
13	15	18.1		55	23.6 ¹⁵⁰		23.5 ¹¹⁹	10 S	17 46	18 08	34	08 47	14 41		
14	30	18.0		69	57.5 ¹⁴⁹		35.4 ¹¹⁹	20	28	17 51	19	14 51	15 06 37		
15	45	17.9		84	31.3 ¹⁴⁸		47.2 ¹¹⁸	30	17 07	33	18 03	22 55	14 56 33		
16	60	17.8		99	05.1 ¹⁴⁸	+10 59.0 ¹¹⁸		35	16 55	23	17 55	26 59	51 30		
17	75	17.7	+22 46.9	113	38.8 ¹⁴⁷	+11 10.7 ¹¹⁷		40	16 41	17 12	17 46	3 31 62	14 44 28		
18	90	17.5	+22 47.1	128	12.4 ¹⁴⁶	+11 22.5 ¹¹⁸		45	16 25	16 59	17 36	3 37 65	14 37 24		
19	105	17.4		142	46.0 ¹⁴⁶		34.1 ¹¹⁶	50	16 05	43	24	44 70	28 20		
20	120	17.3		157	19.6 ¹⁴⁶		45.8 ¹¹⁷	52	15 56	36	19	48 71	24 18		
21	135	17.2		171	53.0 ¹⁴⁴	+11 57.4 ¹¹⁶		54	45	28	14	51 74	20 15		
22	150	17.1		186	26.4 ¹⁴⁴	+12 08.9 ¹¹⁵		56	33	20	08	3 55 76	15 13		
23	165	16.9		200	59.8 ¹⁴⁴		20.4 ¹¹⁵	58	19	16 10	17 02	4 00 79	10 10		
24	180	16.8	+22 48.5	215	33.1 ¹⁴³	+12 31.9 ¹¹⁵		60 S	15 03	15 59	16 55	4 05 82	14 04 7		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 58 ^m 0	Mag: -3.9 PMG: 14 ^h 31 ^m	Mag: +1.7 PMG: 13 ^h 26 ^m	Mag: -1.9 PMG: 14 ^h 15 ^m	Mag: 0.0 PMG: 12 ^h 06 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	'	°	'	°	'	°	'						
0	255	13.1	142 26.7	+23 44.7	158 21.7	+24 18.3	145 53.9	+22 30.5	177 59.7	+21 37.4					
1	270	15.6	157 26.0	44.3	173 22.4	18.2	160 55.8	30.5	193 01.8	37.4					
2	285	18.0	172 25.2	43.8	188 23.1	18.2	175 57.8	30.4	208 03.9	37.5					
3	300	20.5	187 24.5	43.4	203 23.7	18.1	190 59.7	30.4	223 06.0	37.5					
4	315	22.9	202 23.8	43.0	218 24.4	18.0	206 01.6	30.3	238 08.1	37.5					
5	330	25.4	217 23.1	+23 42.6	233 25.1	+24 17.9	221 03.5	+22 30.2	253 10.2	+21 37.5					
6	345	27.9	232 22.3	+23 42.1	248 25.8	+24 17.9	236 05.4	+22 30.2	268 12.3	+21 37.6					
7	0	30.3	247 21.6	41.7	263 26.4	17.8	251 07.3	30.1	283 14.5	37.6					
8	15	32.8	262 20.9	41.3	278 27.1	17.7	266 09.2	30.0	298 16.6	37.6					
9	30	35.3	277 20.2	40.8	293 27.8	17.7	281 11.1	30.0	313 18.7	37.7					
10	45	37.7	292 19.4	40.4	308 28.4	17.6	296 13.0	29.9	328 20.8	37.7					
11	60	40.2	307 18.7	+23 40.0	323 29.1	+24 17.5	311 14.9	+22 29.8	343 22.9	+21 37.7					
12	75	42.7	322 18.0	+23 39.5	338 29.8	+24 17.5	326 16.8	+22 29.8	358 25.0	+21 37.8					
13	90	45.1	337 17.3	39.1	353 30.4	17.4	341 18.8	29.7	13 27.2	37.8					
14	105	47.6	352 16.5	38.6	8 31.1	17.3	356 20.7	29.6	28 29.3	37.8					
15	120	50.1	7 15.8	38.2	23 31.8	17.2	11 22.6	29.6	43 31.4	37.9					
16	135	52.5	22 15.1	37.8	38 32.5	17.2	26 24.5	29.5	58 33.5	37.9					
17	150	55.0	37 14.4	+23 37.3	53 33.1	+24 17.1	41 26.4	+22 29.4	73 35.6	+21 37.9					
18	165	57.4	52 13.7	+23 36.9	68 33.8	+24 17.0	56 28.3	+22 29.4	88 37.7	+21 38.0					
19	180	59.9	67 12.9	36.4	83 34.5	16.9	71 30.2	29.3	103 39.9	38.0					
20	196	02.4	82 12.2	36.0	98 35.1	16.9	86 32.1	29.2	118 42.0	38.0					
21	211	04.8	97 11.5	35.5	113 35.8	16.8	101 34.0	29.2	133 44.1	38.1					
22	226	07.3	112 10.8	35.1	128 36.5	16.7	116 35.9	29.1	148 46.2	38.1					
23	241	09.8	127 10.1	34.6	143 37.2	16.6	131 37.8	29.0	163 48.3	38.1					
24	256	12.2	142 09.3	+23 34.2	158 37.8	+24 16.6	146 39.7	+22 29.0	178 50.4	+21 38.1					
Dif	—	—	-7	-4	+7	-1	+19	-1	+21	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 0			Edad: 26 ^d 6 PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 3 20 ^h : 55 ^m 5 SD: 15 ^h 0 PMG: 9 ^h 56 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	16.8	+22 48.5	215	33.1	+12 31.9	60 N	** **	1 08	2 41	2 09	8	18 08	87	
1	195	16.7	48.7	230	06.3 ¹⁴²	43.3 ¹¹⁴	58	** **	1 49	3 00	16 12		17 58	82	
2	210	16.6	49.0	244	39.4 ¹⁴¹	+12 54.7 ¹¹⁴	56	** **	2 16	16	23 15		49 79		
3	225	16.5	49.2	259	12.5 ¹⁴¹	+13 06.1 ¹¹⁴	54	1 02	37	30	29 17		41 76		
4	240	16.3	49.4	273	45.5 ¹⁴⁰	17.4 ¹¹³	52	1 40	2 54	42	34 20		34 74		
5	255	16.2	+22 49.7	288	18.5 ¹⁴⁰	+13 28.6 ¹¹²	50	2 05	3 08	3 52	2 39 22		17 27 72		
6	270	16.1	+22 49.9	302	51.3 ¹³⁸	+13 39.8 ¹¹²	45	2 48	3 37	4 14	2 50 26		17 14 67		
7	285	16.0	50.1	317	24.1 ¹³⁸	+13 51.0 ¹¹²	40	3 17	3 59	31	2 59 29		17 03 64		
8	300	15.9	50.3	331	56.8 ¹³⁷	+14 02.1 ¹¹¹	35	40	4 16	46	3 06 33		16 53 61		
9	315	15.7	50.6	346	29.5 ¹³⁷	13.1 ¹¹⁰	30	3 58	31	4 58	13 35		45 59		
10	330	15.6	50.8	1	02.1 ¹³⁶	24.1 ¹¹⁰	20	4 26	4 55	5 20	25 39		31 54		
11	345	15.5	+22 51.0	15	34.6 ¹³⁵	+14 35.0 ¹⁰⁹	10 N	4 48	5 15	5 38	3 35 43		16 18 51		
12	0	15.4	+22 51.2	30	07.0 ¹³⁴	+14 45.9 ¹⁰⁹	0	5 07	5 33	5 55	3 45 46		16 07 47		
13	15	15.3	51.5	44	39.4 ¹³⁴	+14 56.7 ¹⁰⁸	10 S	23	5 50	6 12	3 55 49		15 55 45		
14	30	15.1	51.7	59	11.7 ¹³³	+15 07.5 ¹⁰⁸	20	39	6 06	30	4 05 54		43 41		
15	45	15.0	51.9	73	43.9 ¹³²	18.2 ¹⁰⁷	30	5 55	25	6 51	17 58		29 37		
16	60	14.9	52.1	88	16.0 ¹³¹	28.9 ¹⁰⁷	35	6 03	35	7 03	25 60		21 34		
17	75	14.8	+22 52.3	102	48.1 ¹³¹	+15 39.5 ¹⁰⁶	40	6 12	6 46	7 17	4 33 63		15 12 31		
18	90	14.7	+22 52.6	117	20.0 ¹²⁹	+15 50.0 ¹⁰⁵	45	6 22	6 59	7 33	4 42 67		15 01 28		
19	105	14.5	52.8	131	51.9 ¹²⁹	+16 00.5 ¹⁰⁵	50	34	7 15	7 53	54 71		14 48 24		
20	120	14.4	53.0	146	23.8 ¹²⁹	10.9 ¹⁰⁴	52	39	22	8 03	4 59 73		42 22		
21	135	14.3	53.2	160	55.5 ¹²⁷	21.2 ¹⁰³	54	44	30	13	5 05 76		35 20		
22	150	14.2	53.4	175	27.1 ¹²⁶	31.5 ¹⁰³	56	50	39	25	11 79		28 17		
23	165	14.0	53.6	189	58.7 ¹²⁶	41.7 ¹⁰²	58	6 56	7 48	39	19 82		20 14		
24	180	13.9	+22 53.9	204	30.2 ¹²⁵	+16 51.8 ¹⁰¹	60 S	7 04	8 00	8 56	5 27 86		14 11 10		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 6 ^h 54 ^m 1			Mag: -4.0 PMG: 14 ^h 32 ^m			Mag: +1.7 PMG: 13 ^h 25 ^m			Mag: -1.9 PMG: 14 ^h 12 ^m			Mag: 0.0 PMG: 12 ^h 03 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	256	12.2	142	09.3	+23 34.2	158	37.8	+24 16.6	146	39.7	+22 29.0	178	50.4	+21 38.1	
1	271	14.7	157	08.6	33.7	173	38.5	16.5	161	41.7	28.9	193	52.6	38.2	
2	286	17.2	172	07.9	33.3	188	39.2	16.4	176	43.6	28.8	208	54.7	38.2	
3	301	19.6	187	07.2	32.8	203	39.8	16.3	191	45.5	28.8	223	56.8	38.2	
4	316	22.1	202	06.5	32.4	218	40.5	16.3	206	47.4	28.7	238	58.9	38.3	
5	331	24.6	217	05.8	+23 31.9	233	41.2	+24 16.2	221	49.3	+22 28.6	254	01.0	+21 38.3	
6	346	27.0	232	05.1	+23 31.5	248	41.9	+24 16.1	236	51.2	+22 28.6	269	03.1	+21 38.3	
7	1	29.5	247	04.3	31.0	263	42.5	16.0	251	53.1	28.5	284	05.3	38.4	
8	16	31.9	262	03.6	30.5	278	43.2	15.9	266	55.0	28.4	299	07.4	38.4	
9	31	34.4	277	02.9	30.1	293	43.9	15.9	281	56.9	28.4	314	09.5	38.4	
10	46	36.9	292	02.2	29.6	308	44.5	15.8	296	58.8	28.3	329	11.6	38.5	
11	61	39.3	307	01.5	+23 29.2	323	45.2	+24 15.7	312	00.7	+22 28.2	344	13.7	+21 38.5	
12	76	41.8	322	00.8	+23 28.7	338	45.9	+24 15.6	327	02.6	+22 28.2	359	15.8	+21 38.5	
13	91	44.3	337	00.1	28.2	353	46.6	15.5	342	04.5	28.1	14	18.0	38.6	
14	106	46.7	351	59.4	27.8	8	47.2	15.5	357	06.5	28.0	29	20.1	38.6	
15	121	49.2	6	58.7	27.3	23	47.9	15.4	12	08.4	28.0	44	22.2	38.6	
16	136	51.7	21	57.9	26.8	38	48.6	15.3	27	10.3	27.9	59	24.3	38.6	
17	151	54.1	36	57.2	+23 26.4	53	49.3	+24 15.2	42	12.2	+22 27.8	74	26.4	+21 38.7	
18	166	56.6	51	56.5	+23 25.9	68	49.9	+24 15.1	57	14.1	+22 27.8	89	28.5	+21 38.7	
19	181	59.0	66	55.8	25.4	83	50.6	15.1	72	16.0	27.7	104	30.6	38.7	
20	197	01.5	81	55.1	25.0	98	51.3	15.0	87	17.9	27.6	119	32.8	38.8	
21	212	04.0	96	54.4	24.5	113	51.9	14.9	102	19.8	27.6	134	34.9	38.8	
22	227	06.4	111	53.7	24.0	128	52.6	14.8	117	21.7	27.5	149	37.0	38.8	
23	242	08.9	126	53.0	23.5	143	53.3	14.7	132	23.6	27.4	164	39.1	38.9	
24	257	11.4	141	52.3	+23 23.1	158	54.0	+24 14.6	147	25.5	+22 27.4	179	41.2	+21 38.9	
Dif	—			-7 -5			+7 -1			+19 -1			+21 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 59 ^m 2			Edad: 27 ^d 6 PHE { SD: 15/1 PMG: 10 ^h 43 ^m 4 ^h : 55/7 12 ^h : 55/9 20 ^h : 56/1 R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m	h m	h m	h m	h m
0	180	13.9	+22 53.9	204	30.2	+16 51.8	60 N	21 19	22 55	** **	2 17 13		19 35 86		
1	195	13.8		219	01.6 ¹²⁴	+17 01.9 ¹⁰¹	58	21 00	22 12	** **	28 17		20 82		
2	210	13.7		233	33.0 ¹²⁴	11.9 ¹⁰⁰	56	20 43	21 44	** **	38 20		19 08 78		
3	225	13.6		248	04.2 ¹²²	21.9 ¹⁰⁰	54	30	23	23 01	46 24		18 57 76		
4	240	13.4		262	35.4 ¹²²	31.7 ⁹⁸	52	18	21 06	22 21	2 54 25		48 73		
5	255	13.3	+22 54.9	277	06.5 ¹²¹	+17 41.5 ⁹⁸	50	20 07	20 51	21 55	3 01 27		18 39 72		
6	270	13.2	+22 55.1	291	37.5 ¹²⁰	+17 51.2 ⁹⁷	45	19 45	20 22	21 11	3 16 31		18 21 68		
7	285	13.1		306	08.4 ¹¹⁹	+18 00.8 ⁹⁶	40	28	20 00	20 42	28 35		18 07 64		
8	300	12.9		320	39.2 ¹¹⁸	10.4 ⁹⁶	35	13	19 42	19	39 37		17 54 63		
9	315	12.8		335	09.9 ¹¹⁷	19.9 ⁹⁵	30	19 00	28	20 01	3 48 39		44 60		
10	330	12.7		349	40.6 ¹¹⁷	29.3 ⁹⁴	20	18 39	19 03	19 32	4 04 43		25 57		
11	345	12.6	+22 56.2	4	11.2 ¹¹⁶	+18 38.6 ⁹³	10 N	18 20	18 43	19 10	4 18 47		17 09 54		
12	0	12.5	+22 56.4	18	41.6 ¹¹⁴	+18 47.8 ⁹²	0	18 03	18 25	18 51	4 31 50		16 54 52		
13	15	12.3		33	12.0 ¹¹⁴	+18 57.0 ⁹²	10 S	17 46	18 09	35	44 53		40 48		
14	30	12.2		47	42.4 ¹¹⁴	+19 06.1 ⁹¹	20	28	17 52	19	4 59 56		24 46		
15	45	12.1		62	12.6 ¹¹²	15.1 ⁹⁰	30	17 07	33	18 03	5 15 60		16 06 42		
16	60	12.0		76	42.7 ¹¹¹	24.0 ⁸⁹	35	16 55	23	17 54	25 62		15 55 41		
17	75	11.8	+22 57.4	91	12.8 ¹¹¹	+19 32.8 ⁸⁸	40	16 41	17 11	17 45	5 36 65		15 43 38		
18	90	11.7	+22 57.6	105	42.7 ¹⁰⁹	+19 41.5 ⁸⁷	45	16 25	16 58	17 35	5 49 68		15 29 35		
19	105	11.6		120	12.6 ¹⁰⁹	50.1 ⁸⁶	50	16 04	43	24	6 05 72		12 31		
20	120	11.5		134	42.4 ¹⁰⁸	+19 58.7 ⁸⁶	52	15 55	35	19	12 75		15 04 29		
21	135	11.3		149	12.1 ¹⁰⁷	+20 07.1 ⁸⁴	54	44	27	13	21 76		14 55 27		
22	150	11.2		163	41.7 ¹⁰⁶	15.5 ⁸⁴	56	32	19	07	30 80		45 24		
23	165	11.1		178	11.2 ¹⁰⁵	23.7 ⁸²	58	18	16 09	17 01	41 83		34 20		
24	180	11.0	+22 58.8	192	40.7 ¹⁰⁵	+20 31.9 ⁸²	60 S	15 01	15 57	16 54	6 53 88		14 21 16		
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO				
	PMG: 6 ^h 50 ^m 1		Mag: -4.0 PMG: 14 ^h 33 ^m			Mag: +1.7 PMG: 13 ^h 24 ^m			Mag: -1.9 PMG: 14 ^h 09 ^m		Mag: 0.0 PMG: 12 ^h 00 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	257	11.4	141	52.3	+23 23.1	158	54.0	+24 14.6	147	25.5	+22 27.4	179	41.2	+21 38.9	
1	272	13.8	156	51.6	22.6	173	54.6	14.6	162	27.4	27.3	194	43.3	38.9	
2	287	16.3	171	50.9	22.1	188	55.3	14.5	177	29.3	27.2	209	45.5	39.0	
3	302	18.8	186	50.2	21.6	203	56.0	14.4	192	31.2	27.2	224	47.6	39.0	
4	317	21.2	201	49.5	21.1	218	56.7	14.3	207	33.1	27.1	239	49.7	39.0	
5	332	23.7	216	48.8	+23 20.6	233	57.3	+24 14.2	222	35.0	+22 27.0	254	51.8	+21 39.0	
6	347	26.2	231	48.1	+23 20.2	248	58.0	+24 14.1	237	37.0	+22 27.0	269	53.9	+21 39.1	
7	2	28.6	246	47.4	19.7	263	58.7	14.0	252	38.9	26.9	284	56.0	39.1	
8	17	31.1	261	46.7	19.2	278	59.4	13.9	267	40.8	26.8	299	58.2	39.1	
9	32	33.5	276	46.0	18.7	294	00.0	13.9	282	42.7	26.8	315	00.3	39.2	
10	47	36.0	291	45.3	18.2	309	00.7	13.8	297	44.6	26.7	330	02.4	39.2	
11	62	38.5	306	44.6	+23 17.7	324	01.4	+24 13.7	312	46.5	+22 26.6	345	04.5	+21 39.2	
12	77	40.9	321	43.9	+23 17.2	339	02.1	+24 13.6	327	48.4	+22 26.6	0	06.6	+21 39.3	
13	92	43.4	336	43.2	16.8	354	02.7	13.5	342	50.3	26.5	15	08.7	39.3	
14	107	45.9	351	42.5	16.3	9	03.4	13.4	357	52.2	26.4	30	10.9	39.3	
15	122	48.3	6	41.8	15.8	24	04.1	13.3	12	54.1	26.4	45	13.0	39.4	
16	137	50.8	21	41.1	15.3	39	04.8	13.2	27	56.0	26.3	60	15.1	39.4	
17	152	53.3	36	40.4	+23 14.8	54	05.4	+24 13.2	42	57.9	+22 26.2	75	17.2	+21 39.4	
18	167	55.7	51	39.7	+23 14.3	69	06.1	+24 13.1	57	59.8	+22 26.2	90	19.3	+21 39.4	
19	182	58.2	66	39.0	13.8	84	06.8	13.0	73	01.7	26.1	105	21.4	39.5	
20	198	00.7	81	38.3	13.3	99	07.5	12.9	88	03.6	26.0	120	23.6	39.5	
21	213	03.1	96	37.6	12.8	114	08.1	12.8	103	05.5	26.0	135	25.7	39.5	
22	228	05.6	111	36.9	12.3	129	08.8	12.7	118	07.4	25.9	150	27.8	39.6	
23	243	08.0	126	36.2	11.8	144	09.5	12.6	133	09.3	25.8	165	29.9	39.6	
24	258	10.5	141	35.5	+23 11.3	159	10.2	+24 12.5	148	11.2	+22 25.8	180	32.0	+21 39.6	
Dif	—		-7	-5	-5	+7	-1	-1	+19	-1		+21			

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 4				Edad: 28 ^d 6 PHE { SD: 15 ^h 3 PMG: 11 ^h 33 ^m R°: 54 ^m 4 ^h : 56 ^m 2 12 ^h : 56 ^m 4 20 ^h : 56 ^m 6													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	11.0	+22	58.8	192	40.7	+20	31.9	60 N	** **	1 03	2 39	2 30	22	21 01	78		
1	195	10.8		59.0	207	10.0 ¹⁰³		40.0	58	** **	1 46	2 59	45	26	20 42	75		
2	210	10.7		59.2	221	39.3 ¹⁰³		47.9	56	** **	2 14	3 15	2 58	30	26	77		
3	225	10.6		59.4	236	08.5 ¹⁰²	+20	55.8	54	0 57	35	29	3 10	31	13	70		
4	240	10.5		59.6	250	37.6 ¹⁰¹	+21	03.6	52	1 37	2 53	41	19	34	20 01	69		
5	255	10.3	+22	59.8	265	06.6 ¹⁰⁰	+21	11.2	50	2 03	3 07	3 51	3 28	36	19 51	67		
6	270	10.2	+23	00.0	279	35.5 ⁹⁹	+21	18.8	45	2 47	3 36	4 13	3 47	40	19 29	65		
7	285	10.1	+23	00.2	294	04.3 ⁹⁸		26.2	40	3 17	3 58	31	4 03	42	19 11	64		
8	300	10.0		00.4	308	33.1 ⁹⁸		33.6	35	40	4 16	46	16	44	18 57	61		
9	315	09.8		00.6	323	01.7 ⁹⁶		40.8	30	3 58	31	4 58	27	46	44	60		
10	330	09.7		00.8	337	30.3 ⁹⁶		48.0	20	4 26	4 55	5 20	4 47	49	22	59		
11	345	09.6	+23	00.9	351	58.8 ⁹⁵	+21	55.0	10 N	4 48	5 15	5 38	5 05	51	18 03	57		
12	0	09.5	+23	01.1	6	27.2 ⁹⁴	+22	01.9	0	5 07	5 33	5 56	5 21	53	17 46	55		
13	15	09.3		01.3	20	55.5 ⁹³		08.7	10 S	24	5 50	6 13	37	56	28	54		
14	30	09.2		01.5	35	23.7 ⁹²		15.4	20	40	6 07	31	5 55	58	17 10	51		
15	45	09.1		01.7	49	51.9 ⁹²		22.0	30	5 56	25	6 52	6 15	61	16 48	49		
16	60	09.0		01.9	64	20.0 ⁹¹		28.4	35	6 04	36	7 04	27	62	36	47		
17	75	08.8	+23	02.1	78	47.9 ⁸⁹	+22	34.8	40	6 13	6 47	7 18	6 41	64	16 21	46		
18	90	08.7	+23	02.3	93	15.8 ⁸⁹	+22	41.0	45	6 23	7 01	7 34	6 57	67	16 04	44		
19	105	08.6		02.4	107	43.7 ⁸⁹		47.1	50	35	16	7 54	7 17	70	15 43	41		
20	120	08.5		02.6	122	11.4 ⁸⁷		53.1	52	40	23	8 04	27	72	33	39		
21	135	08.3		02.8	136	39.1 ⁸⁷	+22	59.0	54	45	31	15	37	75	22	37		
22	150	08.2		03.0	151	06.7 ⁸⁶	+23	04.7	56	51	40	27	7 50	76	15 09	35		
23	165	08.1		03.2	165	34.2 ⁸⁵		10.3	58	6 58	7 50	41	8 04	80	14 54	32		
24	180	07.9	+23	03.4	180	01.6 ⁸⁴	+23	15.8	60 S	7 05	8 02	8 58	8 21	84	14 37	28		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 46 ^m 2		Mag: -4.0 PMG: 14 ^h 34 ^m				Mag: +1.7 PMG: 13 ^h 23 ^m				Mag: -1.9 PMG: 14 ^h 05 ^m				Mag: 0.0 PMG: 11 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	258	10.5	141	35.5	+23	11.3	159	10.2	+24	12.5	148	11.2	+22	25.8	180	32.0	+21	39.6
1	273	13.0	156	34.8		10.8	174	10.8		12.4	163	13.1		25.7	195	34.1		39.7
2	288	15.4	171	34.1		10.3	189	11.5		12.3	178	15.0		25.6	210	36.2		39.7
3	303	17.9	186	33.5		09.8	204	12.2		12.2	193	16.9		25.6	225	38.4		39.7
4	318	20.4	201	32.8		09.3	219	12.9		12.1	208	18.9		25.5	240	40.5		39.8
5	333	22.8	216	32.1	+23	08.7	234	13.5	+24	12.0	223	20.8	+22	25.4	255	42.6	+21	39.8
6	348	25.3	231	31.4	+23	08.2	249	14.2	+24	12.0	238	22.7	+22	25.4	270	44.7	+21	39.8
7	3	27.8	246	30.7		07.7	264	14.9		11.9	253	24.6		25.3	285	46.8		39.8
8	18	30.2	261	30.0		07.2	279	15.6		11.8	268	26.5		25.2	300	48.9		39.9
9	33	32.7	276	29.3		06.7	294	16.2		11.7	283	28.4		25.2	315	51.1		39.9
10	48	35.2	291	28.6		06.2	309	16.9		11.6	298	30.3		25.1	330	53.2		39.9
11	63	37.6	306	27.9	+23	05.7	324	17.6	+24	11.5	313	32.2	+22	25.0	345	55.3	+21	40.0
12	78	40.1	321	27.3	+23	05.2	339	18.3	+24	11.4	328	34.1	+22	24.9	0	57.4	+21	40.0
13	93	42.5	336	26.6		04.6	354	18.9		11.3	343	36.0		24.9	15	59.5		40.0
14	108	45.0	351	25.9		04.1	9	19.6		11.2	358	37.9		24.8	31	01.6		40.1
15	123	47.5	6	25.2		03.6	24	20.3		11.1	13	39.8		24.7	46	03.8		40.1
16	138	49.9	21	24.5		03.1	39	21.0		11.0	28	41.7		24.7	61	05.9		40.1
17	153	52.4	36	23.8	+23	02.6	54	21.7	+24	10.9	43	43.6	+22	24.6	76	08.0	+21	40.2
18	168	54.9	51	23.2	+23	02.0	69	22.3	+24	10.8	58	45.5	+22	24.5	91	10.1	+21	40.2
19	183	57.3	66	22.5		01.5	84	23.0		10.7	73	47.4		24.5	106	12.2		40.2
20	198	59.8	81	21.8		01.0	99	23.7		10.6	88	49.3		24.4	121	14.3		40.2
21	214	02.3	96	21.1	+23	00.5	114	24.4		10.5	103	51.2		24.3	136	16.5		40.3
22	229	04.7	111	20.4	+22	59.9	129	25.0		10.4	118	53.1		24.3	151	18.6		40.3
23	244	07.2	126	19.8		59.4	144	25.7		10.3	133	55.0		24.2	166	20.7		40.3
24	259	09.7	141	19.1	+22	58.9	159	26.4	+24	10.2	148	56.9	+22	24.1	181	22.8	+21	40.4
Dif	—		-7		-5		+7		-1		+19		-1		+21		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 29 ^d 6 PHE { 4 ^h : 56 ^m 8 12 ^h : 57 ^m 0 20 ^h : 57 ^m 2										
	PMG: 11 ^h 59 ^m 6			SD: 15 ^h 4 PMG: 12 ^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	h m m
0	180	07.9	+23 03.4	180	01.6	+23 15.8		60 N	21 21	23 01	** **	2 52 37	22 19 61	
1	195	07.8	03.5	194	28.9	83 21.2	54	58	21 02	22 15	** **	3 11 41	21 57 60	
2	210	07.7	03.7	208	56.2	83 26.5	53	56	20 45	21 47	** **	28 42	39 60	
3	225	07.6	03.9	223	23.4	82 31.6	51	54	31	25	23 06	41 45	23 60	
4	240	07.4	04.1	237	50.5	81 36.6	50	52	19	21 08	22 24	3 53 46	21 10 60	
5	255	07.3	+23 04.3	252	17.6	81 +23 41.4	48	50	20 09	20 53	21 57	4 04 47	20 58 60	
6	270	07.2	+23 04.4	266	44.6	80 +23 46.2	48	45	19 46	20 24	21 13	4 27 48	20 34 59	
7	285	07.1	04.6	281	11.5	79 50.8	46	40	29	20 01	20 43	4 45 50	20 15 59	
8	300	06.9	04.8	295	38.3	78 55.2	44	35	14	19 43	20	5 00 51	19 58 59	
9	315	06.8	05.0	310	05.1	78 +23 59.6	44	30	19 01	28	20 02	13 53	44 59	
10	330	06.7	05.1	324	31.8	77 +24 03.8	42	20	18 39	19 04	19 33	36 54	21 58	
11	345	06.5	+23 05.3	338	58.4	76 +24 07.8	40	10 N	18 21	18 44	19 11	5 56 55	19 00 58	
12	0	06.4	+23 05.5	353	25.0	76 +24 11.7	39	0	18 03	18 26	18 52	6 14 56	18 41 57	
13	15	06.3	05.7	7	51.5	75 15.5	38	10 S	17 46	18 09	35	33 57	22 56	
14	30	06.2	05.8	22	17.9	74 19.2	37	20	28	17 52	19	6 53 58	18 01 56	
15	45	06.0	06.0	36	44.3	74 22.7	35	30	17 07	33	18 03	7 16 59	17 37 56	
16	60	05.9	06.2	51	10.6	73 26.1	34	35	16 55	23	17 54	29 61	23 55	
17	75	05.8	+23 06.3	65	36.9	73 +24 29.3	32	40	16 41	17 11	17 45	7 45 62	17 07 55	
18	90	05.6	+23 06.5	80	03.1	72 +24 32.4	31	45	16 24	16 58	17 35	8 04 62	16 48 54	
19	105	05.5	06.7	94	29.2	71 35.3	29	50	16 04	42	24	27 65	24 53	
20	120	05.4	06.8	108	55.3	71 38.1	28	52	15 54	35	18	39 65	16 12 53	
21	135	05.3	07.0	123	21.3	70 40.8	27	54	43	27	13	8 52 65	15 59 52	
22	150	05.1	07.2	137	47.3	70 43.3	25	56	31	18	07	9 06 68	44 51	
23	165	05.0	07.3	152	13.2	69 45.7	24	58	17	16 08	17 00	24 69	26 49	
24	180	04.9	+23 07.5	166	39.1	69 +24 47.9	22	60 S	15 00	15 57	16 53	9 45 72	15 05 47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 42 ^m 3		Mag: -4.0 PMG: 14 ^h 35 ^m		Mag: +1.7 PMG: 13 ^h 22 ^m		Mag: -1.9 PMG: 14 ^h 02 ^m		Mag: 0.0 PMG: 11 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	259	09.7	141 19.1	+22 58.9	159 26.4	+24 10.2	148 56.9	+22 24.1	181 22.8	+21 40.4
1	274	12.1	156 18.4	58.3	174 27.1	10.1	163 58.8	24.1	196 24.9	40.4
2	289	14.6	171 17.7	57.8	189 27.7	10.0	179 00.7	24.0	211 27.0	40.4
3	304	17.0	186 17.0	57.3	204 28.4	09.9	194 02.6	23.9	226 29.1	40.5
4	319	19.5	201 16.4	56.7	219 29.1	09.8	209 04.5	23.8	241 31.3	40.5
5	334	22.0	216 15.7	+22 56.2	234 29.8	+24 09.7	224 06.4	+22 23.8	256 33.4	+21 40.5
6	349	24.4	231 15.0	+22 55.7	249 30.5	+24 09.6	239 08.3	+22 23.7	271 35.5	+21 40.5
7	4	26.9	246 14.3	55.1	264 31.1	09.5	254 10.2	23.6	286 37.6	40.6
8	19	29.4	261 13.7	54.6	279 31.8	09.4	269 12.1	23.6	301 39.7	40.6
9	34	31.8	276 13.0	54.1	294 32.5	09.3	284 14.0	23.5	316 41.8	40.6
10	49	34.3	291 12.3	53.5	309 33.2	09.2	299 15.9	23.4	331 44.0	40.7
11	64	36.8	306 11.6	+22 53.0	324 33.9	+24 09.1	314 17.8	+22 23.4	346 46.1	+21 40.7
12	79	39.2	321 11.0	+22 52.4	339 34.5	+24 09.0	329 19.7	+22 23.3	1 48.2	+21 40.7
13	94	41.7	336 10.3	51.9	354 35.2	08.9	344 21.6	23.2	16 50.3	40.8
14	109	44.1	351 09.6	51.4	9 35.9	08.8	359 23.5	23.2	31 52.4	40.8
15	124	46.6	6 09.0	50.8	24 36.6	08.6	14 25.4	23.1	46 54.5	40.8
16	139	49.1	21 08.3	50.3	39 37.2	08.5	29 27.3	23.0	61 56.7	40.8
17	154	51.5	36 07.6	+22 49.7	54 37.9	+24 08.4	44 29.2	+22 22.9	76 58.8	+21 40.9
18	169	54.0	51 06.9	+22 49.2	69 38.6	+24 08.3	59 31.1	+22 22.9	92 00.9	+21 40.9
19	184	56.5	66 06.3	48.6	84 39.3	08.2	74 33.0	22.8	107 03.0	40.9
20	199	58.9	81 05.6	48.1	99 40.0	08.1	89 34.9	22.7	122 05.1	41.0
21	215	01.4	96 04.9	47.5	114 40.6	08.0	104 36.8	22.7	137 07.2	41.0
22	230	03.9	111 04.3	47.0	129 41.3	07.9	119 38.7	22.6	152 09.4	41.0
23	245	06.3	126 03.6	46.4	144 42.0	07.8	134 40.6	22.5	167 11.5	41.1
24	260	08.8	141 02.9	+22 45.9	159 42.7	+24 07.7	149 42.5	+22 22.5	182 13.6	+21 41.1
Dif	—		-7	-5	+7	-1	+19	-1	+21	0

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 1 ^d 0	PHE { 4 ^h : 57 ^m /4 12 ^h : 57 ^m /5 20 ^h : 57 ^m /7	SD: 15 ^h 6	PMG: 13 ^h 24 ^m	R°: 58 ^m								
	PMG: 11 ^h 59 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	04.9	+23	07.5	166	39.1	+24	47.9	60 N	** *	0 59	2 38	3 29	60	23 20	39
1	195	04.7		07.7	181	04.9	68	50.0	58	** *	1 44	2 58	3 52	59	22 57	43
2	210	04.6		07.8	195	30.7	68	51.9	56	** *	2 13	3 14	4 10	60	39	44
3	225	04.5		08.0	209	56.4	67	53.7	54	0 54	34	28	26	59	23	46
4	240	04.4		08.2	224	22.1	67	55.3	52	1 35	2 52	40	39	59	22 10	47
5	255	04.2	+23	08.3	238	47.8	67	+24	50	2 02	3 06	3 51	4 51	59	21 58	49
6	270	04.1	+23	08.5	253	13.4	66	+24	45	2 46	3 36	4 13	5 15	60	21 33	51
7	285	04.0		08.6	267	38.9	65	+24	40	3 16	3 58	31	35	59	21 14	52
8	300	03.8		08.8	282	04.5	66	+25	35	39	4 16	45	5 51	59	20 57	53
9	315	03.7		09.0	296	30.0	65	01.2	30	3 58	31	4 58	6 06	58	43	54
10	330	03.6		09.1	310	55.4	64	02.0	20	4 26	4 56	5 20	30	58	20 19	55
11	345	03.4	+23	09.3	325	20.8	64	+25	10 N	4 49	5 16	5 39	6 51	58	19 58	57
12	0	03.3	+23	09.4	339	46.2	64	+25	0	5 07	5 34	5 56	7 10	58	19 38	58
13	15	03.2		09.6	354	11.6	64	03.2	10 S	24	5 51	6 13	30	58	19 18	59
14	30	03.1		09.7	8	36.9	63	03.3	20	40	6 08	32	7 51	57	18 57	60
15	45	02.9		09.9	23	02.3	64	03.3	30	5 56	26	6 53	8 15	57	33	61
16	60	02.8		10.0	37	27.5	62	03.1	35	6 05	37	7 05	30	56	18	62
17	75	02.7	+23	10.2	51	52.8	63	+25	40	6 14	6 48	7 19	8 47	55	18 02	62
18	90	02.5	+23	10.3	66	18.1	63	+25	45	6 24	7 02	7 35	9 06	56	17 42	64
19	105	02.4		10.5	80	43.3	62	01.6	50	36	17	7 56	32	54	17	65
20	120	02.3		10.6	95	08.5	62	+25	52	41	25	8 05	44	53	17 05	65
21	135	02.1		10.8	109	33.7	62	+24	54	47	33	16	9 57	54	16 51	66
22	150	02.0		10.9	123	58.9	62	58.7	56	53	42	29	10 14	52	35	67
23	165	01.9		11.1	138	24.0	61	57.4	58	6 59	7 52	8 43	33	51	16 15	70
24	180	01.7	+23	11.2	152	49.2	62	+24	60 S	7 07	8 03	9 00	10 57	49	15 52	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 38 ^m 3		Mag: -4.0 PMG: 14 ^h 36 ^m		Mag: +1.7 PMG: 13 ^h 21 ^m		Mag: -1.9 PMG: 13 ^h 59 ^m		Mag: 0.0 PMG: 11 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	260	08.8	141	02.9	159	42.7	149	42.5	182	13.6
1	275	11.3	156	02.3	174	43.4	164	44.4	197	15.7
2	290	13.7	171	01.6	189	44.0	179	46.3	212	17.8
3	305	16.2	186	01.0	204	44.7	194	48.2	227	19.9
4	320	18.6	201	00.3	219	45.4	209	50.1	242	22.0
5	335	21.1	215	59.6	234	46.1	224	52.0	257	24.2
6	350	23.6	230	59.0	249	46.8	239	53.9	272	26.3
7	5	26.0	245	58.3	264	47.4	254	55.8	287	28.4
8	20	28.5	260	57.6	279	48.1	269	57.7	302	30.5
9	35	31.0	275	57.0	294	48.8	284	59.6	317	32.6
10	50	33.4	290	56.3	309	49.5	300	01.5	332	34.7
11	65	35.9	305	55.7	324	50.2	315	03.4	347	36.9
12	80	38.4	320	55.0	339	50.8	330	05.3	2	39.0
13	95	40.8	335	54.3	354	51.5	345	07.2	17	41.1
14	110	43.3	350	53.7	9	52.2	0	09.1	32	43.2
15	125	45.8	5	53.0	24	52.9	15	11.0	47	45.3
16	140	48.2	20	52.4	39	53.6	30	12.9	62	47.4
17	155	50.7	35	51.7	54	54.3	45	14.8	77	49.6
18	170	53.1	50	51.1	69	54.9	60	16.7	92	51.7
19	185	55.6	65	50.4	84	55.6	75	18.6	107	53.8
20	200	58.1	80	49.8	99	56.3	90	20.5	122	55.9
21	216	00.5	95	49.1	114	57.0	105	22.4	137	58.0
22	231	03.0	110	48.4	129	57.7	120	24.3	153	00.1
23	246	05.5	125	47.8	144	58.3	135	26.2	168	02.3
24	261	07.9	140	47.1	159	59.0	150	28.1	183	04.4
Dif	—		-7	-6	+7	-1	+19	-1	+21	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 0			Edad: 2 ^d 0 PHE { 4 ^h : 57 ^m 9 12 ^h : 58 ^m 0 20 ^h : 58 ^m 2 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	h m	
0	180	01.7	+23	11.2	152	49.2	+24	56.0	60 N	21 23	23 05	** **	4 29	81	23 59	23
1	195	01.6		11.4	167	14.4		54.4	58	21 03	22 18	** **	4 51	78	40	28
2	210	01.5		11.5	181	39.5		52.6	56	20 47	21 49	** **	5 10	75	23	32
3	225	01.4		11.7	196	04.6		50.7	54	33	27	23 10	25 73		23 09	35
4	240	01.2		11.8	210	29.8		48.7	52	21	21 09	22 26	38 72		22 57	37
5	255	01.1	+23	12.0	224	54.9	+24	46.5	50	20 10	20 54	21 59	5 50	71	22 47	38
6	270	01.0	+23	12.1	239	20.0	+24	44.1	45	19 47	20 25	21 14	6 15	67	22 24	42
7	285	00.8		12.3	253	45.2		41.6	40	30	20 02	20 44	34 66		22 06	45
8	300	00.7		12.4	268	10.3		38.9	35	15	19 44	21	6 50	65	21 50	47
9	315	00.6		12.5	282	35.5		36.0	30	19 02	29	20 02	7 04	64	37	49
10	330	00.4		12.7	297	00.6		33.1	20	18 40	19 04	19 34	28 61		21 14	52
11	345	00.3	+23	12.8	311	25.8	+24	29.9	10 N	18 21	18 44	19 11	7 49	59	20 55	54
12	0	00.2	+23	13.0	325	50.9	+24	26.6	0	18 04	18 26	18 52	8 08	58	20 36	57
13	15	00.0		13.1	340	16.1		23.2	10 S	17 46	18 09	35	28 55		20 17	60
14	29	59.9		13.2	354	41.3		19.5	20	28	17 52	19	8 48	54	19 57	62
15	44	59.8		13.4	9	06.5		15.8	30	17 07	33	18 03	9 12	52	34	65
16	59	59.6		13.5	23	31.7		11.9	35	16 55	23	17 54	26 50		20	67
17	74	59.5	+23	13.6	37	57.0	+24	07.8	40	16 41	17 11	17 45	9 42	49	19 04	69
18	89	59.4	+23	13.8	52	22.2	+24	03.6	45	16 24	16 58	17 35	10 02	46	18 46	71
19	104	59.3		13.9	66	47.5	+23	59.2	50	16 04	42	23	26 43		22	75
20	119	59.1		14.0	81	12.8		54.7	52	15 54	35	18	37 42		18 10	77
21	134	59.0		14.2	95	38.2		50.0	54	43	26	13	10 51	39	17 57	79
22	149	58.9		14.3	110	03.5		45.2	56	30	17	06	11 06	37	42	82
23	164	58.7		14.4	124	28.9		40.2	58	15 16	16 07	17 00	24 34		25	84
24	179	58.6	+23	14.6	138	54.3	+23	35.1	60 S	14 59	15 56	16 52	11 46	30	17 03	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 34 ^m 4		Mag: -4.0 PMG: 14 ^h 37 ^m		Mag: +1.7 PMG: 13 ^h 19 ^m		Mag: -1.9 PMG: 13 ^h 56 ^m		Mag: 0.0 PMG: 11 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	261	07.9	140	47.1	159	59.0	150	28.1	183	04.4
1	276	10.4	155	46.5	174	59.7	165	30.0	198	06.5
2	291	12.9	170	45.8	190	00.4	180	31.9	213	08.6
3	306	15.3	185	45.2	205	01.1	195	33.8	228	10.7
4	321	17.8	200	44.5	220	01.8	210	35.7	243	12.8
5	336	20.3	215	43.9	235	02.4	225	37.6	258	14.9
6	351	22.7	230	43.2	250	03.1	240	39.5	273	17.1
7	6	25.2	245	42.6	265	03.8	255	41.4	288	19.2
8	21	27.6	260	42.0	280	04.5	270	43.3	303	21.3
9	36	30.1	275	41.3	295	05.2	285	45.2	318	23.4
10	51	32.6	290	40.7	310	05.9	300	47.1	333	25.5
11	66	35.0	305	40.0	325	06.5	315	49.0	348	27.6
12	81	37.5	320	39.4	340	07.2	330	50.9	3	29.8
13	96	40.0	335	38.7	355	07.9	345	52.8	18	31.9
14	111	42.4	350	38.1	10	08.6	0	54.7	33	34.0
15	126	44.9	5	37.4	25	09.3	15	56.6	48	36.1
16	141	47.4	20	36.8	40	10.0	30	58.5	63	38.2
17	156	49.8	35	36.2	55	10.6	46	00.4	78	40.3
18	171	52.3	50	35.5	70	11.3	61	02.3	93	42.5
19	186	54.8	65	34.9	85	12.0	76	04.2	108	44.6
20	201	57.2	80	34.2	100	12.7	91	06.1	123	46.7
21	216	59.7	95	33.6	115	13.4	106	08.0	138	48.8
22	232	02.1	110	33.0	130	14.1	121	09.9	153	50.9
23	247	04.6	125	32.3	145	14.7	136	11.8	168	53.0
24	262	07.1	140	31.7	160	15.4	151	13.7	183	55.2
Dif	—		-6	-6	+7	-1	+19	-1	+21	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 2			Edad: 3 ^d 0 PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 4 20 ^h : 58 ^h 5 PMG: 15 ^h 19 ^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
0	179	58.6	+23	14.6	138	54.3	+23	35.1	60 N	** **	0 55	2 37	5 50	94	** ** *
1	194	58.5			153	19.8	65	29.8	58	** **	1 42	2 57	6 09	89	** ** *
2	209	58.3			167	45.2	64	24.4	56	** **	2 11	3 13	25	85	23 55 22
3	224	58.2			182	10.7	65	18.8	54	0 50	33	27	38	83	44 25
4	239	58.1			196	36.3	66	13.1	52	1 34	2 51	40	6 50	80	34 28
5	254	57.9	+23	15.2	211	01.8	65	+23 07.2	50	2 01	3 06	3 50	7 01	77	23 25 30
6	269	57.8	+23	15.3	225	27.4	66	+23 01.2	45	2 46	3 35	4 13	7 22	74	23 06 35
7	284	57.7		15.5	239	53.1	67	+22 55.0	40	3 16	3 58	30	40	70	22 51 38
8	299	57.5		15.6	254	18.8	67	48.7	35	39	4 16	45	7 55	68	37 42
9	314	57.4		15.7	268	44.5	67	42.3	30	3 58	31	4 58	8 08	65	26 44
10	329	57.3		15.8	283	10.3	68	35.7	20	4 27	4 56	5 20	29	62	22 06 48
11	344	57.1	+23	16.0	297	36.1	68	+22 29.0	10 N	4 49	5 16	5 39	8 48	59	21 49 51
12	359	57.0	+23	16.1	312	01.9	68	+22 22.1	0	5 08	5 34	5 57	9 06	56	21 33 55
13	14	56.9		16.2	326	27.8	69	15.1	10 S	25	5 51	6 14	23	53	21 17 58
14	29	56.7		16.3	340	53.7	69	07.9	20	41	6 08	32	9 42	50	20 59 62
15	44	56.6		16.4	355	19.7	70	+22 00.6	30	5 57	27	6 53	10 04	46	39 66
16	59	56.5		16.6	9	45.7	70	+21 53.2	35	6 06	37	7 06	16	44	27 68
17	74	56.3	+23	16.7	24	11.8	71	+21 45.7	40	6 15	6 49	7 20	10 31	41	20 13 72
18	89	56.2	+23	16.8	38	37.9	71	+21 38.0	45	6 25	7 03	7 36	10 48	38	19 57 75
19	104	56.1		16.9	53	04.1	72	30.1	50	37	19	7 57	11 09	34	37 79
20	119	55.9		17.0	67	30.3	72	22.1	52	42	26	8 07	19	32	27 82
21	134	55.8		17.1	81	56.6	73	14.0	54	48	34	18	30	30	16 85
22	149	55.7		17.3	96	22.9	73	+21 05.8	56	6 54	43	30	43	26	19 04 88
23	164	55.5		17.4	110	49.3	74	+20 57.4	58	7 01	7 53	8 45	11 58	23	18 49 92
24	179	55.4	+23	17.5	125	15.8	75	+20 49.0	60 S	7 08	8 05	9 02	12 16	17	18 32 97
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 30 ^m 5		Mag: -4.0 PMG: 14 ^h 39 ^m			Mag: +1.7 PMG: 13 ^h 18 ^m			Mag: -1.9 PMG: 13 ^h 53 ^m			Mag: 0.0 PMG: 11 ^h 43 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	262	07.1	140	31.7	+22	18.0	160	15.4	+24	02.1	151	13.7	+22	19.0	
1	277	09.5	155	31.0		17.4	175	16.1		02.0	166	15.6		19.0	
2	292	12.0	170	30.4		16.8	190	16.8		01.8	181	17.5		18.9	
3	307	14.5	185	29.8		16.2	205	17.5		01.7	196	19.4		18.8	
4	322	16.9	200	29.1		15.6	220	18.2		01.6	211	21.3		18.8	
5	337	19.4	215	28.5	+22	15.0	235	18.8	+24	01.5	226	23.2	+22	18.7	
6	352	21.9	230	27.9	+22	14.4	250	19.5	+24	01.3	241	25.1	+22	18.6	
7	7	24.3	245	27.2		13.7	265	20.2		01.2	256	27.0		18.5	
8	22	26.8	260	26.6		13.1	280	20.9		01.1	271	28.9		18.5	
9	37	29.3	275	26.0		12.5	295	21.6		00.9	286	30.8		18.4	
10	52	31.7	290	25.3		11.9	310	22.3		00.8	301	32.7		18.3	
11	67	34.2	305	24.7	+22	11.3	325	23.0	+24	00.7	316	34.6	+22	18.3	
12	82	36.6	320	24.1	+22	10.7	340	23.6	+24	00.6	331	36.5	+22	18.2	
13	97	39.1	335	23.4		10.1	355	24.3		00.4	346	38.3		18.1	
14	112	41.6	350	22.8		09.4	10	25.0		00.3	1	40.2		18.0	
15	127	44.0	5	22.2		08.8	25	25.7	+24	00.2	16	42.1		18.0	
16	142	46.5	20	21.6		08.2	40	26.4	+24	00.0	31	44.0		17.9	
17	157	49.0	35	20.9	+22	07.6	55	27.1	+23	59.9	46	45.9	+22	17.8	
18	172	51.4	50	20.3	+22	07.0	70	27.8	+23	59.8	61	47.8	+22	17.7	
19	187	53.9	65	19.7		06.3	85	28.5		59.7	76	49.7		17.7	
20	202	56.4	80	19.1		05.7	100	29.1		59.5	91	51.6		17.6	
21	217	58.8	95	18.4		05.1	115	29.8		59.4	106	53.5		17.5	
22	233	01.3	110	17.8		04.5	130	30.5		59.3	121	55.4		17.5	
23	248	03.8	125	17.2		03.8	145	31.2		59.1	136	57.3		17.4	
24	263	06.2	140	16.6	+22	03.2	160	31.9	+23	59.0	151	59.2	+22	17.3	
Dif	—		-6		-6		+7		-1		+19		-1		+21
															0

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 4 ^d 0	PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 8 20 ^h : 58 ^m 9	SD: 16 ^h 0				R°: 53 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 00 ^m 4						PMG: 16 ^h 15 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	55.4	+23	17.5	125	15.8	+20	49.0	60 N	21	25	23	09	**	**		7	24	15
1	194	55.3		17.6	139	42.2	74	40.3	58	21	05	22	20	**	**		38	93	18
2	209	55.1		17.7	154	08.8	76	31.6	56	20	48	21	50	**	**		7	50	89
3	224	55.0		17.8	168	35.4	76	22.7	54	34		28	23	13			8	01	85
4	239	54.9		17.9	183	02.0	76	13.7	52	22	10	22	28				10	83	
5	254	54.7	+23	18.0	197	28.7	77	+20	50	20	11	20	55	22	01		8	18	81
6	269	54.6	+23	18.1	211	55.5	78	+19	45	19	48	20	26	21	15		8	36	76
7	284	54.5		18.3	226	22.3	78	45.9	40	30	20	03	20	45			8	50	72
8	299	54.3		18.4	240	49.2	79	36.4	35	15	19	45	22				9	03	68
9	314	54.2		18.5	255	16.1	79	26.8	30	19	02	30	20	03			13	66	36
10	329	54.1		18.6	269	43.1	80	17.1	20	18	41	19	05	19	34		31	62	44
11	344	53.9	+23	18.7	284	10.1	80	+19	10 N	18	22	18	45	19	12		9	47	49
12	359	53.8	+23	18.8	298	37.2	81	+18	0	18	04	18	27	18	53		10	02	53
13	14	53.7		18.9	313	04.4	82	47.2	10 S	17	47	18	10	36			16	50	56
14	29	53.5		19.0	327	31.6	82	37.0	20	28	17	52	20				32	46	60
15	44	53.4		19.1	341	58.8	82	26.7	30	17	07	33	18	03			10	50	41
16	59	53.3		19.2	356	26.2	84	16.3	35	16	55	23	17	55			11	00	39
17	74	53.1	+23	19.3	10	53.6	84	+18	40	16	41	17	11	17	45		11	12	35
18	89	53.0	+23	19.4	25	21.0	84	+17	45	16	24	16	58	17	35		11	26	32
19	104	52.8		19.5	39	48.5	85	44.3	50	16	03	42	23				43	27	82
20	119	52.7		19.6	54	16.1	86	33.5	52	15	53	34	18				11	51	24
21	134	52.6		19.7	68	43.7	86	22.5	54	42	26	12					12	00	21
22	149	52.4		19.8	83	11.4	87	11.5	56	30	17	06					09	19	86
23	164	52.3		19.9	97	39.1	87	+17	58	15	15	16	07	17	00		21	15	94
24	179	52.2	+23	20.0	112	06.9	88	+16	60 S	14	58	15	55	16	52		12	33	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 26 ^m 5		Mag: -4.0 PMG: 14 ^h 39 ^m		Mag: +1.7 PMG: 13 ^h 17 ^m		Mag: -1.9 PMG: 13 ^h 50 ^m		Mag: 0.0 PMG: 11 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	263	06.2	140	16.6	+22	03.2	160	31.9	+23	59.0
1	278	08.7	155	15.9		02.6	175	32.6		58.9
2	293	11.1	170	15.3		01.9	190	33.3		58.7
3	308	13.6	185	14.7		01.3	205	33.9		58.6
4	323	16.1	200	14.1	+22	00.7	220	34.6		58.5
5	338	18.5	215	13.5	+22	00.0	235	35.3	+23	58.3
6	353	21.0	230	12.8	+21	59.4	250	36.0	+23	58.2
7	8	23.5	245	12.2		58.8	265	36.7		58.1
8	23	25.9	260	11.6		58.1	280	37.4		57.9
9	38	28.4	275	11.0		57.5	295	38.1		57.8
10	53	30.9	290	10.4		56.9	310	38.8		57.7
11	68	33.3	305	09.8	+21	56.2	325	39.4	+23	57.5
12	83	35.8	320	09.1	+21	55.6	340	40.1	+23	57.4
13	98	38.2	335	08.5		54.9	355	40.8		57.2
14	113	40.7	350	07.9		54.3	10	41.5		57.1
15	128	43.2	5	07.3		53.6	25	42.2		57.0
16	143	45.6	20	06.7		53.0	40	42.9		56.8
17	158	48.1	35	06.1	+21	52.4	55	43.6	+23	56.7
18	173	50.6	50	05.5	+21	51.7	70	44.3	+23	56.6
19	188	53.0	65	04.9		51.1	85	45.0		56.4
20	203	55.5	80	04.2		50.4	100	45.6		56.3
21	218	58.0	95	03.6		49.8	115	46.3		56.1
22	234	00.4	110	03.0		49.1	130	47.0		56.0
23	249	02.9	125	02.4		48.5	145	47.7		55.9
24	264	05.4	140	01.8	+21	47.8	160	48.4	+23	55.7
Dif	—		-6		-6		+7		-1	
									+19	
									-1	
									+21	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 5 ^d 0	PHE {	4 ^h : 59 ^m 0 12 ^h : 59 ^m 0 20 ^h : 59 ^m 1		Rº: 51 ^m	Náutico		Civil	Hora	Rº	Hora	Rº
	PMG: 12 ^h 00 ^m 6	hG ☉	Dec												
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	179	52.2	+23 20.0	112	06.9	+16 49.0	114	60 N	0 52	2 36	9 01	97	0 37	9	
1	194	52.0	20.1	126	34.8	89	37.6	58	1 41	2 56	11 93		26	14	
2	209	51.9	20.2	141	02.7	89	26.2	56	2 11	3 13	19 89		17	17	
3	224	51.8	20.3	155	30.7	90	14.6	54	0 48	33	26 87		09	19	
4	239	51.6	20.4	169	58.7	90	+16 02.9	52	1 33	2 51	33 84		0 02	22	
5	254	51.5	+23 20.5	184	26.8	91	+15 51.2	50	2 00	3 06	3 50	9 39	81	*** ** *	
6	269	51.4	+23 20.5	198	54.9	91	+15 39.3	45	2 46	3 35	4 13	9 52	76	*** ** *	
7	284	51.2	20.6	213	23.1	92	27.4	40	3 16	3 58	31	10 02	72	*** ** *	
8	299	51.1	20.7	227	51.4	93	15.3	35	39	4 16	46	11 69		23 55 33	
9	314	51.0	20.8	242	19.7	93	+15 03.2	30	3 58	31	4 59	19 65		49 36	
10	329	50.8	20.9	256	48.0	93	+14 51.0	20	4 27	4 56	5 21	33 60		38 42	
11	344	50.7	+23 21.0	271	16.5	95	+14 38.7	10 N	4 49	5 16	5 39	10 44	56	23 29 46	
12	359	50.6	+23 21.1	285	44.9	94	+14 26.3	0	5 08	5 34	5 57	10 55	52	23 20 50	
13	14	50.4	21.2	300	13.5	96	13.8	10 S	25	5 52	6 14	11 06	47	11 55	
14	29	50.3	21.3	314	42.0	95	+14 01.3	20	41	6 09	33	18 43		23 01 60	
15	44	50.2	21.3	329	10.7	97	+13 48.7	30	5 58	28	6 54	31 38		22 50 65	
16	59	50.0	21.4	343	39.4	97	35.9	35	6 06	38	7 06	39 34		44 68	
17	74	49.9	+23 21.5	358	08.1	97	+13 23.1	40	6 16	6 50	7 20	11 47	32	22 37 71	
18	89	49.7	+23 21.6	12	36.9	98	+13 10.3	45	6 26	7 03	7 37	11 58	27	22 28 76	
19	104	49.6	21.7	27	05.7	98	+12 57.3	50	38	19	7 58	12 10	22	18 81	
20	119	49.5	21.8	41	34.6	99	44.3	52	43	27	8 08	15 20		13 83	
21	134	49.3	21.8	56	03.6	100	31.2	54	49	35	19	21 18		07 86	
22	149	49.2	21.9	70	32.5	99	18.0	56	6 55	44	31	28 15		22 01 89	
23	164	49.1	22.0	85	01.6	101	+12 04.8	58	7 02	7 54	8 46	36 12		21 55 92	
24	179	48.9	+23 22.1	99	30.6	100	+11 51.5	60 S	7 09	8 06	9 03	12 45	8	21 47 96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag: -4.0		Mag: +1.7		Mag: -1.9		Mag: 0.0					
	6 ^h 22 ^m 6		PMG: 14 ^h 40 ^m		PMG: 13 ^h 16 ^m		PMG: 13 ^h 47 ^m		PMG: 11 ^h 36 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	264	05.4	140	01.8	+21 47.8	160	48.4	+23 55.7	152	44.7	+22 15.5	185	36.7	+21 43.9
1	279	07.8	155	01.2	47.2	175	49.1	55.6	167	46.6	15.5	200	38.9	43.9
2	294	10.3	170	00.6	46.5	190	49.8	55.4	182	48.5	15.4	215	41.0	43.9
3	309	12.7	185	00.0	45.8	205	50.5	55.3	197	50.4	15.3	230	43.1	44.0
4	324	15.2	199	59.4	45.2	220	51.2	55.2	212	52.3	15.2	245	45.2	44.0
5	339	17.7	214	58.8	+21 44.5	235	51.9	+23 55.0	227	54.2	+22 15.2	260	47.3	+21 44.0
6	354	20.1	229	58.2	+21 43.9	250	52.5	+23 54.9	242	56.0	+22 15.1	275	49.4	+21 44.1
7	9	22.6	244	57.6	43.2	265	53.2	54.7	257	57.9	15.0	290	51.6	44.1
8	24	25.1	259	57.0	42.6	280	53.9	54.6	272	59.8	15.0	305	53.7	44.1
9	39	27.5	274	56.4	41.9	295	54.6	54.4	288	01.7	14.9	320	55.8	44.1
10	54	30.0	289	55.8	41.2	310	55.3	54.3	303	03.6	14.8	335	57.9	44.2
11	69	32.5	304	55.2	+21 40.6	325	56.0	+23 54.2	318	05.5	+22 14.7	351	00.0	+21 44.2
12	84	34.9	319	54.6	+21 39.9	340	56.7	+23 54.0	333	07.4	+22 14.7	6	02.1	+21 44.2
13	99	37.4	334	54.0	39.2	355	57.4	53.9	348	09.3	14.6	21	04.3	44.2
14	114	39.9	349	53.4	38.6	10	58.1	53.7	3	11.2	14.5	36	06.4	44.3
15	129	42.3	4	52.8	37.9	25	58.8	53.6	18	13.1	14.4	51	08.5	44.3
16	144	44.8	19	52.2	37.2	40	59.5	53.4	33	15.0	14.4	66	10.6	44.3
17	159	47.2	34	51.6	+21 36.6	56	00.1	+23 53.3	48	16.9	+22 14.3	81	12.7	+21 44.4
18	174	49.7	49	51.0	+21 35.9	71	00.8	+23 53.1	63	18.8	+22 14.2	96	14.8	+21 44.4
19	189	52.2	64	50.4	35.2	86	01.5	53.0	78	20.7	14.1	111	17.0	44.4
20	204	54.6	79	49.8	34.5	101	02.2	52.8	93	22.6	14.1	126	19.1	44.4
21	219	57.1	94	49.2	33.9	116	02.9	52.7	108	24.4	14.0	141	21.2	44.5
22	234	59.6	109	48.6	33.2	131	03.6	52.6	123	26.3	13.9	156	23.3	44.5
23	250	02.0	124	48.0	32.5	146	04.3	52.4	138	28.2	13.8	171	25.4	44.5
24	265	04.5	139	47.4	+21 31.9	161	05.0	+23 52.3	153	30.1	+22 13.8	186	27.5	+21 44.6
Dif	—		-6	-7		+7	-1		+19	-1		+21		0

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7		Edad: 6 ^d 0	PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/3	SD: 16 ^h 1				Rº: 49 ^m						
	PMG: 12 ^h 00 ^m 8				PMG: 17 ^h 59 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	179	48.9	+23	22.1	99	30.6	+11 51.5	60 N	21 26	23 12	** **	10 38 96	0 46 7		
1	194	48.8		22.2	113	59.8 ¹⁰²	38.1 ¹³⁴	58	21 06	22 21	** **	44 92	40 10		
2	209	48.7		22.2	128	28.9 ¹⁰¹	24.6 ¹³⁵	56	20 49	21 52	** **	48 89	34 13		
3	224	48.5		22.3	142	58.2 ¹⁰³	+11 11.1 ¹³⁵	54	35	29	23 16	53 85	28 17		
4	239	48.4		22.4	157	27.4 ¹⁰²	+10 57.5 ¹³⁶	52	23	21 11	22 30	10 57 83	24 18		
5	254	48.3	+23	22.5	171	56.7 ¹⁰³	+10 43.9 ¹³⁶	50	20 12	20 56	22 02	11 00 81	0 19 21		
6	269	48.1	+23	22.5	186	26.1 ¹⁰⁴	+10 30.2 ¹³⁷	45	19 49	20 27	21 16	11 08 75	0 10 25		
7	284	48.0		22.6	200	55.5 ¹⁰⁴	16.4 ¹³⁸	40	31	20 04	20 46	14 71	0 02 30		
8	299	47.9		22.7	215	24.9 ¹⁰⁴	+10 02.6 ¹³⁸	35	16	19 46	23	20 67	** ** *	**	
9	314	47.7		22.8	229	54.4 ¹⁰⁵	+9 48.7 ¹³⁹	30	19 03	31	20 04	24 65	** ** *	**	
10	329	47.6		22.8	244	23.9 ¹⁰⁵	34.8 ¹³⁹	20	18 41	19 06	19 35	33 59	** ** *	**	
11	344	47.4	+23	22.9	258	53.4 ¹⁰⁵	+9 20.8 ¹⁴⁰	10 N	18 22	18 45	19 12	11 40 54	** ** *	**	
12	359	47.3	+23	23.0	273	23.0 ¹⁰⁶	+9 06.8 ¹⁴⁰	0	18 05	18 27	18 53	11 47 49	** ** *	**	
13	14	47.2		23.0	287	52.6 ¹⁰⁶	+8 52.7 ¹⁴¹	10 S	17 47	18 10	36	11 53 46	** ** *	**	
14	29	47.0		23.1	302	22.3 ¹⁰⁷	38.5 ¹⁴²	20	29	17 53	20	12 01 40	** ** *	**	
15	44	46.9		23.2	316	52.0 ¹⁰⁷	24.3 ¹⁴²	30	17 07	34	18 04	09 35	23 55 65		
16	59	46.8		23.2	331	21.7 ¹⁰⁷	+8 10.1 ¹⁴²	35	16 55	23	17 55	13 32	52 67		
17	74	46.6	+23	23.3	345	51.5 ¹⁰⁸	+7 55.8 ¹⁴³	40	16 41	17 11	17 45	12 19 28	23 48 71		
18	89	46.5	+23	23.4	0	21.3 ¹⁰⁸	+7 41.5 ¹⁴³	45	16 24	16 58	17 35	12 25 24	23 44 75		
19	104	46.4		23.4	14	51.1 ¹⁰⁸	27.1 ¹⁴⁴	50	16 03	42	23	32 20	39 80		
20	119	46.2		23.5	29	20.9 ¹⁰⁸	+7 12.7 ¹⁴⁴	52	15 53	34	18	35 18	36 83		
21	134	46.1		23.6	43	50.8 ¹⁰⁹	+6 58.2 ¹⁴⁵	54	42	26	12	39 15	33 86		
22	149	46.0		23.6	58	20.7 ¹⁰⁹	43.7 ¹⁴⁵	56	30	17	06	43 13	30 89		
23	164	45.8		23.7	72	50.7 ¹¹⁰	29.2 ¹⁴⁵	58	15 15	16 07	17 00	48 9	27 92		
24	179	45.7	+23	23.8	87	20.6 ¹⁰⁹	+6 14.6 ¹⁴⁶	60 S	14 58	15 55	16 52	12 53 6	23 23 96		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 18 ^m 7		Mag: -4.0 PMG: 14 ^h 41 ^m		Mag: +1.7 PMG: 13 ^h 15 ^m		Mag: -1.9 PMG: 13 ^h 44 ^m		Mag: 0.0 PMG: 11 ^h 33 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	265	04.5	139 47.4	+21 31.9	161 05.0	+23 52.3	153 30.1	+22 13.8	186 27.5	+21 44.6
1	280	07.0	154 46.8	31.2	176 05.7	52.1	168 32.0	13.7	201 29.7	44.6
2	295	09.4	169 46.2	30.5	191 06.4	52.0	183 33.9	13.6	216 31.8	44.6
3	310	11.9	184 45.6	29.8	206 07.1	51.8	198 35.8	13.5	231 33.9	44.6
4	325	14.3	199 45.0	29.1	221 07.8	51.7	213 37.7	13.5	246 36.0	44.7
5	340	16.8	214 44.5	+21 28.5	236 08.4	+23 51.5	228 39.6	+22 13.4	261 38.1	+21 44.7
6	355	19.3	229 43.9	+21 27.8	251 09.1	+23 51.4	243 41.5	+22 13.3	276 40.2	+21 44.7
7	10	21.7	244 43.3	27.1	266 09.8	51.2	258 43.4	13.2	291 42.4	44.8
8	25	24.2	259 42.7	26.4	281 10.5	51.1	273 45.3	13.2	306 44.5	44.8
9	40	26.7	274 42.1	25.7	296 11.2	50.9	288 47.2	13.1	321 46.6	44.8
10	55	29.1	289 41.5	25.0	311 11.9	50.8	303 49.1	13.0	336 48.7	44.8
11	70	31.6	304 40.9	+21 24.3	326 12.6	+23 50.6	318 50.9	+22 12.9	351 50.8	+21 44.9
12	85	34.1	319 40.3	+21 23.7	341 13.3	+23 50.5	333 52.8	+22 12.9	6 52.9	+21 44.9
13	100	36.5	334 39.8	23.0	356 14.0	50.3	348 54.7	12.8	21 55.1	44.9
14	115	39.0	349 39.2	22.3	11 14.7	50.1	3 56.6	12.7	36 57.2	44.9
15	130	41.5	4 38.6	21.6	26 15.4	50.0	18 58.5	12.6	51 59.3	45.0
16	145	43.9	19 38.0	20.9	41 16.1	49.8	34 00.4	12.6	67 01.4	45.0
17	160	46.4	34 37.4	+21 20.2	56 16.8	+23 49.7	49 02.3	+22 12.5	82 03.5	+21 45.0
18	175	48.8	49 36.9	+21 19.5	71 17.5	+23 49.5	64 04.2	+22 12.4	97 05.6	+21 45.1
19	190	51.3	64 36.3	18.8	86 18.2	49.4	79 06.1	12.3	112 07.8	45.1
20	205	53.8	79 35.7	18.1	101 18.9	49.2	94 08.0	12.3	127 09.9	45.1
21	220	56.2	94 35.1	17.4	116 19.5	49.1	109 09.9	12.2	142 12.0	45.1
22	235	58.7	109 34.5	16.7	131 20.2	48.9	124 11.8	12.1	157 14.1	45.2
23	251	01.2	124 34.0	16.0	146 20.9	48.8	139 13.6	12.0	172 16.2	45.2
24	266	03.6	139 33.4	+21 15.3	161 21.6	+23 48.6	154 15.5	+22 11.9	187 18.4	+21 45.2
Dif	—	—	-6	-7	+7	-2	+19	-1	+21	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 7 ^d 0	PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 3 20 ^h : 59 ^m 4										
	PMG: 12 ^h 01 ^m 1					SD: 16 ^d 1		PMG: 18 ^h 48 ^m	R ^o : 49 ^m		Náutico	Civil	Hora	R ^o	Hora
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	45.7	+23 23.8	87	20.6	+6 14.6		60 N	** **	0 50	2 36	12 14	95	0 53	6
1	194	45.5	23.8	101	50.6 ¹¹⁰	+6 00.0 ¹⁴⁶		58	** **	1 40	2 56	16 91		50	9
2	209	45.4	23.9	116	20.6 ¹¹⁰	+5 45.3 ¹⁴⁷		56	** **	2 10	3 13	17 89		47	12
3	224	45.3	23.9	130	50.6 ¹¹⁰	30.6 ¹⁴⁷		54	0 46	32	27	18 86		45	14
4	239	45.1	24.0	145	20.7 ¹¹¹	15.9 ¹⁴⁷		52	1 32	2 50	39	20 83		42	18
5	254	45.0	+23 24.1	159	50.8 ¹¹¹	+5 01.2 ¹⁴⁷		50	2 00	3 06	3 50	12 21	80	0 40	20
6	269	44.9	+23 24.1	174	20.9 ¹¹¹	+4 46.4 ¹⁴⁸		45	2 46	3 35	4 13	12 23	76	0 35	25
7	284	44.7	24.2	188	51.0 ¹¹¹	31.6 ¹⁴⁸		40	3 16	3 58	31	25 72		32	28
8	299	44.6	24.2	203	21.1 ¹¹¹	16.8 ¹⁴⁸		35	39	4 16	46	27 68		28	32
9	314	44.5	24.3	217	51.3 ¹¹²	+4 02.0 ¹⁴⁸		30	3 58	31	4 59	29 64		25	35
10	329	44.3	24.3	232	21.4 ¹¹¹	+3 47.1 ¹⁴⁹		20	4 27	4 56	5 21	32 58		20	40
11	344	44.2	+23 24.4	246	51.6 ¹¹²	+3 32.2 ¹⁴⁹		10 N	4 50	5 17	5 40	12 34	54	0 15	45
12	359	44.1	+23 24.4	261	21.8 ¹¹²	+3 17.3 ¹⁴⁹		0	5 09	5 35	5 57	12 36	50	0 10	50
13	14	43.9	24.5	275	52.0 ¹¹²	+3 02.4 ¹⁴⁹		10 S	26	5 52	6 15	39 44		06	54
14	29	43.8	24.5	290	22.2 ¹¹²	+2 47.4 ¹⁵⁰		20	42	6 09	33	41 40		0 01	59
15	44	43.6	24.6	304	52.4 ¹¹²	32.4 ¹⁵⁰		30	5 58	28	6 55	44 34		** ** *	**
16	59	43.5	24.6	319	22.7 ¹¹³	17.5 ¹⁴⁹		35	6 07	39	7 07	45 32		** ** *	**
17	74	43.4	+23 24.7	333	52.9 ¹¹²	+2 02.5 ¹⁵⁰		40	6 16	6 51	7 21	12 47	28	** ** *	**
18	89	43.2	+23 24.7	348	23.2 ¹¹³	+1 47.5 ¹⁵⁰		45	6 27	7 04	7 38	12 49	24	** ** *	**
19	104	43.1	24.8	2	53.4 ¹¹²	32.4 ¹⁵¹		50	39	20	7 59	52 19		** ** *	**
20	119	43.0	24.8	17	23.7 ¹¹³	17.4 ¹⁵⁰		52	44	28	8 09	53 17		** ** *	**
21	134	42.8	24.9	31	53.9 ¹¹²	+1 02.4 ¹⁵⁰		54	50	36	20	54 15		** ** *	**
22	149	42.7	24.9	46	24.2 ¹¹³	+0 47.3 ¹⁵¹		56	6 56	45	32	56 12		** ** *	**
23	164	42.6	25.0	60	54.5 ¹¹³	32.3 ¹⁵⁰		58	7 03	7 55	8 47	57 9		** ** *	**
24	179	42.4	+23 25.0	75	24.7 ¹¹²	+0 17.2 ¹⁵¹		60 S	7 10	8 07	9 05	12 59	6	** ** *	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 6 ^h 14 ^m 7		Mag: -4.0 PMG: 14 ^h 42 ^m			Mag: +1.7 PMG: 13 ^h 14 ^m			Mag: -1.9 PMG: 13 ^h 41 ^m			Mag: 0.0 PMG: 11 ^h 29 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	266	03.6	139 33.4	+21 15.3		161 21.6	+23 48.6		154 15.5	+22 11.9		187 18.4	+21 45.2		
1	281	06.1	154 32.8	14.6		176 22.3	48.4		169 17.4	11.9		202 20.5	45.2		
2	296	08.6	169 32.2	13.9		191 23.0	48.3		184 19.3	11.8		217 22.6	45.3		
3	311	11.0	184 31.7	13.2		206 23.7	48.1		199 21.2	11.7		232 24.7	45.3		
4	326	13.5	199 31.1	12.5		221 24.4	48.0		214 23.1	11.6		247 26.8	45.3		
5	341	16.0	214 30.5	+21 11.8		236 25.1	+23 47.8		229 25.0	+22 11.6		262 28.9	+21 45.4		
6	356	18.4	229 29.9	+21 11.1		251 25.8	+23 47.7		244 26.9	+22 11.5		277 31.1	+21 45.4		
7	11	20.9	244 29.4	10.4		266 26.5	47.5		259 28.8	11.4		292 33.2	45.4		
8	26	23.3	259 28.8	09.7		281 27.2	47.3		274 30.7	11.3		307 35.3	45.4		
9	41	25.8	274 28.2	09.0		296 27.9	47.2		289 32.6	11.3		322 37.4	45.5		
10	56	28.3	289 27.7	08.3		311 28.6	47.0		304 34.4	11.2		337 39.5	45.5		
11	71	30.7	304 27.1	+21 07.6		326 29.3	+23 46.9		319 36.3	+22 11.1		352 41.6	+21 45.5		
12	86	33.2	319 26.5	+21 06.9		341 30.0	+23 46.7		334 38.2	+22 11.0		7 43.8	+21 45.5		
13	101	35.7	334 25.9	06.2		356 30.7	46.5		349 40.1	11.0		22 45.9	45.6		
14	116	38.1	349 25.4	05.5		11 31.4	46.4		4 42.0	10.9		37 48.0	45.6		
15	131	40.6	4 24.8	04.7		26 32.1	46.2		19 43.9	10.8		52 50.1	45.6		
16	146	43.1	19 24.2	04.0		41 32.8	46.1		34 45.8	10.7		67 52.2	45.7		
17	161	45.5	34 23.7	+21 03.3		56 33.5	+23 45.9		49 47.7	+22 10.7		82 54.3	+21 45.7		
18	176	48.0	49 23.1	+21 02.6		71 34.2	+23 45.7		64 49.6	+22 10.6		97 56.5	+21 45.7		
19	191	50.4	64 22.5	01.9		86 34.9	45.6		79 51.5	10.5		112 58.6	45.7		
20	206	52.9	79 22.0	01.2		101 35.6	45.4		94 53.4	10.4		128 00.7	45.8		
21	221	55.4	94 21.4	+21 00.4		116 36.3	45.2		109 55.2	10.3		143 02.8	45.8		
22	236	57.8	109 20.9	+20 59.7		131 36.9	45.1		124 57.1	10.3		158 04.9	45.8		
23	252	00.3	124 20.3	59.0		146 37.6	44.9		139 59.0	10.2		173 07.1	45.8		
24	267	02.8	139 19.7	+20 58.3		161 38.3	+23 44.8		155 00.9	+22 10.1		188 09.2	+21 45.9		
Dif	—		-6	-7		+7	-2		+19	-1		+21		0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 01 ^m 3				Edad: 8 ^d 0 PHE { SD: 16'2 PMG: 19 ^h 37 ^m 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'4 R°: 51 ^m															
	hG ☉	Dec			hG ☾	Dif					Civil			Náutico			Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	179	42.4	+23	25.0	75	24.7	+0	17.2	60 N	21 27	23 14	** **	** **	13 49	96	0 59	6			
1	194	42.3		25.1	89	55.0 ¹¹³	+0	02.2 ¹⁵⁰	58	21 07	22 23	** **	** **	47 93		59	10			
2	209	42.1		25.1	104	25.3 ¹¹³	-0	12.9 ¹⁵¹	56	20 50	21 53	** **	** **	46 89		59	13			
3	224	42.0		25.1	118	55.5 ¹¹²		27.9 ¹⁵⁰	54	36	30	23 18		44 86		0 59	15			
4	239	41.9		25.2	133	25.8 ¹¹³		43.0 ¹⁵¹	52	23	21 12	22 31		43 83		1 00	17			
5	254	41.7	+23	25.2	147	56.0 ¹¹²	-0	58.0 ¹⁵⁰	50	20 12	20 57	22 03		13 41	82	1 00	19			
6	269	41.6	+23	25.3	162	26.3 ¹¹³	-1	13.1 ¹⁵¹	45	19 50	20 27	21 17		13 39	76	1 00	24			
7	284	41.5		25.3	176	56.5 ¹¹²		28.1 ¹⁵⁰	40	32	20 05	20 46		37 71		00	28			
8	299	41.3		25.3	191	26.7 ¹¹²		43.2 ¹⁵¹	35	17	19 46	23		35 68		00	31			
9	314	41.2		25.4	205	57.0 ¹¹³	-1	58.2 ¹⁵⁰	30	19 04	31	20 05		33 65		00	34			
10	329	41.1		25.4	220	27.2 ¹¹²	-2	13.2 ¹⁵⁰	20	18 42	19 06	19 35		30 60		00	40			
11	344	40.9	+23	25.5	234	57.4 ¹¹²	-2	28.2 ¹⁵⁰	10 N	18 23	18 46	19 13		13 28	54	1 00	45			
12	359	40.8	+23	25.5	249	27.5 ¹¹¹	-2	43.2 ¹⁵⁰	0	18 05	18 28	18 54		13 26	50	1 00	49			
13	14	40.7		25.5	263	57.7 ¹¹²	-2	58.2 ¹⁵⁰	10 S	17 48	18 10	37		23 46		00	54			
14	29	40.5		25.6	278	27.9 ¹¹²	-3	13.1 ¹⁴⁹	20	29	17 53	20		21 41		00	58			
15	44	40.4		25.6	292	58.0 ¹¹¹		28.1 ¹⁵⁰	30	17 08	34	18 04		18 36		1 00	64			
16	59	40.2		25.6	307	28.1 ¹¹¹		43.0 ¹⁴⁹	35	16 55	23	17 55		17 32		0 59	68			
17	74	40.1	+23	25.7	321	58.2 ¹¹¹	-3	57.9 ¹⁴⁹	40	16 41	17 12	17 46		13 15	29	0 59	72			
18	89	40.0	+23	25.7	336	28.3 ¹¹¹	-4	12.8 ¹⁴⁹	45	16 24	16 58	17 35		13 13	25	0 59	76			
19	104	39.8		25.7	350	58.4 ¹¹¹		27.6 ¹⁴⁸	50	16 03	42	24		11 20		59	81			
20	119	39.7		25.8	5	28.4 ¹¹⁰		42.5 ¹⁴⁹	52	15 54	35	18		10 18		59	83			
21	134	39.6		25.8	19	58.4 ¹¹⁰	-4	57.3 ¹⁴⁸	54	42	26	13		09 15		59	86			
22	149	39.4		25.8	34	28.4 ¹¹⁰	-5	12.1 ¹⁴⁸	56	30	17	06		08 12		59	89			
23	164	39.3		25.8	48	58.4 ¹¹⁰		26.8 ¹⁴⁷	58	15 15	16 07	17 00		06 10		59	92			
24	179	39.2	+23	25.9	63	28.3 ¹⁰⁹	-5	41.6 ¹⁴⁸	60 S	14 57	15 55	16 52		13 05	6	0 59	95			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 6 ^h 10 ^m 8		Mag: -4.0 PMG: 14 ^h 43 ^m			Mag: +1.7 PMG: 13 ^h 13 ^m			Mag: -1.9 PMG: 13 ^h 38 ^m			Mag: 0.0 PMG: 11 ^h 26 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	267	02.8	139	19.7	+20	58.3	161	38.3	+23	44.8	155	00.9	+22	10.1	188	09.2	+21	45.9		
1	282	05.2	154	19.2		57.6	176	39.0		44.6	170	02.8		10.0	203	11.3		45.9		
2	297	07.7	169	18.6		56.8	191	39.7		44.4	185	04.7		10.0	218	13.4		45.9		
3	312	10.2	184	18.1		56.1	206	40.4		44.3	200	06.6		09.9	233	15.5		46.0		
4	327	12.6	199	17.5		55.4	221	41.1		44.1	215	08.5		09.8	248	17.6		46.0		
5	342	15.1	214	16.9	+20	54.7	236	41.8	+23	43.9	230	10.4	+22	09.7	263	19.8	+21	46.0		
6	357	17.6	229	16.4	+20	53.9	251	42.5	+23	43.8	245	12.3	+22	09.6	278	21.9	+21	46.0		
7	12	20.0	244	15.8		53.2	266	43.2		43.6	260	14.1		09.6	293	24.0		46.1		
8	27	22.5	259	15.3		52.5	281	43.9		43.4	275	16.0		09.5	308	26.1		46.1		
9	42	24.9	274	14.7		51.7	296	44.6		43.3	290	17.9		09.4	323	28.2		46.1		
10	57	27.4	289	14.2		51.0	311	45.3		43.1	305	19.8		09.3	338	30.3		46.1		
11	72	29.9	304	13.6	+20	50.3	326	46.0	+23	42.9	320	21.7	+22	09.3	353	32.5	+21	46.2		
12	87	32.3	319	13.1	+20	49.5	341	46.7	+23	42.8	335	23.6	+22	09.2	8	34.6	+21	46.2		
13	102	34.8	334	12.5		48.8	356	47.4		42.6	350	25.5		09.1	23	36.7		46.2		
14	117	37.3	349	12.0		48.1	11	48.1		42.4	5	27.4		09.0	38	38.8		46.3		
15	132	39.7	4	11.4		47.3	26	48.8		42.3	20	29.3		09.0	53	40.9		46.3		
16	147	42.2	19	10.8		46.6	41	49.5		42.1	35	31.2		08.9	68	43.1		46.3		
17	162	44.7	34	10.3	+20	45.9	56	50.2	+23	41.9	50	33.0	+22	08.8	83	45.2	+21	46.3		
18	177	47.1	49	09.8	+20	45.1	71	50.9	+23	41.8	65	34.9	+22	08.7	98	47.3	+21	46.4		
19	192	49.6	64	09.2		44.4	86	51.6		41.6	80	36.8		08.6	113	49.4		46.4		
20	207	52.1	79	08.7		43.6	101	52.3		41.4	95	38.7		08.6	128	51.5		46.4		
21	222	54.5	94	08.1		42.9	116	53.0		41.2	110	40.6		08.5	143	53.6		46.4		
22	237	57.0	109	07.6		42.2	131	53.7		41.1	125	42.5		08.4	158	55.8		46.5		
23	252	59.4	124	07.0		41.4	146	54.4		40.9	140	44.4		08.3	173	57.9		46.5		
24	268	01.9	139	06.5	+20	40.7	161	55.1	+23	40.7	155	46.3	+22	08.3	189	00.0	+21	46.5		
Dif	—		-6			-7	+7			-2		+19		-1		+21			0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 01 ^m 5			Edad: 9 ^d 0 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 PMG: 20 ^h 28 ^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	179	39.2	+23	25.9	63	28.3	-5 41.6	60 N	** *	0 49	2 35	15	25 98	1 05	7
1	194	39.0		25.9	77	58.3 ¹¹⁰	-5 56.3 ¹⁴⁷	58	** *	1 40	2 56	20	93	09	10
2	209	38.9		25.9	92	28.1 ¹⁰⁸	-6 10.9 ¹⁴⁶	56	** *	2 10	3 13	15	90	12	13
3	224	38.7		25.9	106	58.0 ¹⁰⁹	25.6 ¹⁴⁷	54	0 45	33	27	10	87	14	17
4	239	38.6		26.0	121	27.8 ¹⁰⁸	40.2 ¹⁴⁶	52	1 32	2 51	39	06	84	17	18
5	254	38.5	+23	26.0	135	57.6 ¹⁰⁸	-6 54.7 ¹⁴⁵	50	2 00	3 06	3 50	15	03 81	1 19	21
6	269	38.3	+23	26.0	150	27.4 ¹⁰⁸	-7 09.2 ¹⁴⁵	45	2 46	3 36	4 13	14	55 76	1 24	26
7	284	38.2		26.0	164	57.2 ¹⁰⁸	23.7 ¹⁴⁵	40	3 16	3 58	31	48	73	28	30
8	299	38.1		26.1	179	26.9 ¹⁰⁷	38.2 ¹⁴⁵	35	40	4 16	46	43	68	31	34
9	314	37.9		26.1	193	56.5 ¹⁰⁶	-7 52.6 ¹⁴⁴	30	3 58	32	4 59	38	66	34	37
10	329	37.8		26.1	208	26.2 ¹⁰⁷	-8 06.9 ¹⁴³	20	4 27	4 57	5 21	30	60	40	41
11	344	37.7	+23	26.1	222	55.8 ¹⁰⁶	-8 21.2 ¹⁴³	10 N	4 50	5 17	5 40	14	22 56	1 45	46
12	359	37.5	+23	26.1	237	25.3 ¹⁰⁵	-8 35.5 ¹⁴³	0	5 09	5 35	5 58	14	16 51	1 49	51
13	14	37.4		26.2	251	54.9 ¹⁰⁶	-8 49.7 ¹⁴²	10 S	26	5 52	6 15	09	47	54	55
14	29	37.3		26.2	266	24.4 ¹⁰⁵	-9 03.9 ¹⁴²	20	42	6 10	34	14	02 43	1 58	60
15	44	37.1		26.2	280	53.8 ¹⁰⁴	18.0 ¹⁴¹	30	5 59	29	6 55	13	54 38	2 04	65
16	59	37.0		26.2	295	23.2 ¹⁰⁴	32.0 ¹⁴⁰	35	6 08	39	7 07	49	35	07	68
17	74	36.8	+23	26.2	309	52.6 ¹⁰⁴	-9 46.0 ¹⁴⁰	40	6 17	6 51	7 22	13	44 31	2 11	72
18	89	36.7	+23	26.2	324	21.9 ¹⁰³	-10 00.0 ¹⁴⁰	45	6 27	7 05	7 39	13	38 28	2 15	76
19	104	36.6		26.2	338	51.2 ¹⁰³	-10 13.9 ¹³⁹	50	39	21	7 59	31	23	20	81
20	119	36.4		26.3	353	20.4 ¹⁰²	27.7 ¹³⁸	52	44	28	8 09	28	20	22	84
21	134	36.3		26.3	7	49.6 ¹⁰²	41.5 ¹³⁸	54	50	36	20	24	18	25	86
22	149	36.2		26.3	22	18.8 ¹⁰²	-10 55.2 ¹³⁷	56	6 56	46	33	20	15	28	89
23	164	36.0		26.3	36	47.9 ¹⁰¹	-11 08.9 ¹³⁷	58	7 03	7 56	8 48	16	12	31	93
24	179	35.9	+23	26.3	51	16.9 ¹⁰⁰	-11 22.5 ¹³⁶	60 S	7 11	8 08	9 05	13	11 8	2 34	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 06 ^m 9		Mag: -4.0 PMG: 14 ^h 44 ^m		Mag: +1.7 PMG: 13 ^h 12 ^m		Mag: -1.9 PMG: 13 ^h 35 ^m		Mag: 0.0 PMG: 11 ^h 22 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	268	01.9	139	06.5	+20	161	55.1	+23	155	46.3	+21	189	00.0	+21	46.5
1	283	04.4	154	05.9		176	55.8		170	48.2		204	02.1		46.5
2	298	06.8	169	05.4		191	56.5		185	50.0		219	04.2		46.6
3	313	09.3	184	04.8		206	57.2		200	51.9		234	06.4		46.6
4	328	11.8	199	04.3		221	57.9		215	53.8		249	08.5		46.6
5	343	14.2	214	03.8	+20	236	58.6	+23	230	55.7	+22	264	10.6	+21	46.7
6	358	16.7	229	03.2	+20	251	59.3	+23	245	57.6	+22	279	12.7	+21	46.7
7	13	19.2	244	02.7		267	00.0		260	59.5		294	14.8		46.7
8	28	21.6	259	02.1		282	00.7		276	01.4		309	16.9		46.7
9	43	24.1	274	01.6		297	01.4		291	03.3		324	19.1		46.8
10	58	26.5	289	01.1		312	02.1		306	05.2		339	21.2		46.8
11	73	29.0	304	00.5	+20	327	02.8	+23	321	07.0	+22	354	23.3	+21	46.8
12	88	31.5	319	00.0	+20	342	03.5	+23	336	08.9	+22	9	25.4	+21	46.8
13	103	33.9	333	59.4		357	04.2		351	10.8		24	27.5		46.9
14	118	36.4	348	58.9		12	04.9		6	12.7		39	29.7		46.9
15	133	38.9	3	58.4		27	05.6		21	14.6		54	31.8		46.9
16	148	41.3	18	57.8		42	06.4		36	16.5		69	33.9		46.9
17	163	43.8	33	57.3	+20	57	07.1	+23	51	18.4	+22	84	36.0	+21	47.0
18	178	46.3	48	56.8	+20	72	07.8	+23	66	20.3	+22	99	38.1	+21	47.0
19	193	48.7	63	56.2		87	08.5		81	22.1		114	40.2		47.0
20	208	51.2	78	55.7		102	09.2		96	24.0		129	42.4		47.0
21	223	53.7	93	55.2		117	09.9		111	25.9		144	44.5		47.1
22	238	56.1	108	54.7		132	10.6		126	27.8		159	46.6		47.1
23	253	58.6	123	54.1		147	11.3		141	29.7		174	48.7		47.1
24	269	01.0	138	53.6	+20	162	12.0	+23	156	31.6	+22	189	50.8	+21	47.2
Dif	—		-5	-8		+7	-2		+19	-1		+21			

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 0	PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /1 20 ^h : 59 ^m /0 R°: 54 ^m											
	PMG: 12 ^h 01 ^m 7					SD: 16 ^h 1				PMG: 21 ^h 20 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	35.9	+23 26.3	51	16.9	-11 22.5		60 N	21 28	23 15	** **	17 03 98		1 12 10		
1	194	35.8	26.3	65	46.0 ¹⁰¹	36.0 ¹³⁵		58	21 07	22 23	** **	16 53 94		19 13		
2	209	35.6	26.3	80	14.9 ⁹⁹	-11 49.4 ¹³⁴		56	20 50	21 53	** **	45 89		25 17		
3	224	35.5	26.3	94	43.8 ⁹⁹	-12 02.8 ¹³⁴		54	36	31	23 19	37 87		31 17		
4	239	35.4	26.3	109	12.7 ⁹⁹	16.2 ¹³⁴		52	24	21 13	22 31	30 84		35 23		
5	254	35.2	+23 26.3	123	41.5 ⁹⁸	-12 29.4 ¹³²		50	20 13	20 58	22 03	16 24 81		1 40 24		
6	269	35.1	+23 26.3	138	10.3 ⁹⁸	-12 42.6 ¹³²		45	19 50	20 28	21 18	16 11 76		1 50 29		
7	284	34.9	26.4	152	39.0 ⁹⁷	-12 55.7 ¹³¹		40	32	20 05	20 47	16 01 72		1 58 33		
8	299	34.8	26.4	167	07.7 ⁹⁷	-13 08.7 ¹³⁰		35	17	19 47	24	15 51 70		2 05 36		
9	314	34.7	26.4	181	36.3 ⁹⁶	21.7 ¹³⁰		30	19 04	32	20 05	44 66		11 39		
10	329	34.5	26.4	196	04.9 ⁹⁶	34.5 ¹²⁸		20	18 42	19 07	19 36	30 61		21 45		
11	344	34.4	+23 26.4	210	33.4 ⁹⁵	-13 47.3 ¹²⁸		10 N	18 23	18 46	19 13	15 18 58		2 31 49		
12	359	34.3	+23 26.4	225	01.8 ⁹⁴	-14 00.0 ¹²⁷		0	18 05	18 28	18 54	15 07 54		2 40 52		
13	14	34.1	26.4	239	30.2 ⁹⁴	-14 12.7 ¹²⁷		10 S	17 48	18 11	37	14 56 50		49 56		
14	29	34.0	26.4	253	58.6 ⁹⁴	25.2 ¹²⁵		20	29	17 53	21	45 46		2 58 61		
15	44	33.9	26.4	268	26.9 ⁹³	37.7 ¹²⁵		30	17 08	34	18 04	32 41		3 09 66		
16	59	33.7	26.4	282	55.1 ⁹²	-14 50.0 ¹²³		35	16 56	24	17 56	24 39		15 69		
17	74	33.6	+23 26.4	297	23.3 ⁹²	-15 02.3 ¹²³		40	16 41	17 12	17 46	14 15 36		3 23 72		
18	89	33.5	+23 26.4	311	51.4 ⁹¹	-15 14.5 ¹²²		45	16 25	16 59	17 36	14 06 31		3 31 77		
19	104	33.3	26.4	326	19.5 ⁹¹	26.6 ¹²¹		50	16 04	42	24	13 54 27		41 82		
20	119	33.2	26.4	340	47.5 ⁹⁰	38.6 ¹²⁰		52	15 54	35	19	48 25		46 84		
21	134	33.1	26.3	355	15.5 ⁹⁰	-15 50.5 ¹¹⁹		54	43	27	13	42 22		51 87		
22	149	32.9	26.3	9	43.4 ⁸⁹	-16 02.3 ¹¹⁸		56	30	18	07	35 20		3 57 90		
23	164	32.8	26.3	24	11.3 ⁸⁹	14.1 ¹¹⁸		58	15 15	16 07	17 00	28 16		4 04 93		
24	179	32.6	+23 26.3	38	39.1 ⁸⁸	-16 25.7 ¹¹⁶		60 S	14 58	15 56	16 52	13 19 12		4 11 98		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 02 ^m 9		Mag: -4.0 PMG: 14 ^h 45 ^m			Mag: +1.8 PMG: 13 ^h 11 ^m			Mag: -1.9 PMG: 13 ^h 32 ^m			Mag: 0.0 PMG: 11 ^h 19 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'		
0	269	01.0	138	53.6	+20 22.6	162	12.0	+23 36.5	156	31.6	+22 06.4	189	50.8	+21 47.2		
1	284	03.5	153	53.1	21.8	177	12.7	36.3	171	33.5	06.3	204	53.0	47.2		
2	299	06.0	168	52.5	21.0	192	13.4	36.2	186	35.4	06.2	219	55.1	47.2		
3	314	08.4	183	52.0	20.3	207	14.1	36.0	201	37.3	06.1	234	57.2	47.2		
4	329	10.9	198	51.5	19.5	222	14.8	35.8	216	39.1	06.1	249	59.3	47.3		
5	344	13.4	213	51.0	+20 18.7	237	15.5	+23 35.6	231	41.0	+22 06.0	265	01.4	+21 47.3		
6	359	15.8	228	50.4	+20 17.9	252	16.2	+23 35.4	246	42.9	+22 05.9	280	03.5	+21 47.3		
7	14	18.3	243	49.9	17.2	267	16.9	35.3	261	44.8	05.8	295	05.7	47.3		
8	29	20.8	258	49.4	16.4	282	17.6	35.1	276	46.7	05.7	310	07.8	47.4		
9	44	23.2	273	48.9	15.6	297	18.3	34.9	291	48.6	05.7	325	09.9	47.4		
10	59	25.7	288	48.3	14.9	312	19.0	34.7	306	50.5	05.6	340	12.0	47.4		
11	74	28.2	303	47.8	+20 14.1	327	19.7	+23 34.5	321	52.4	+22 05.5	355	14.1	+21 47.4		
12	89	30.6	318	47.3	+20 13.3	342	20.4	+23 34.3	336	54.2	+22 05.4	10	16.3	+21 47.5		
13	104	33.1	333	46.8	12.5	357	21.1	34.2	351	56.1	05.3	25	18.4	47.5		
14	119	35.5	348	46.3	11.8	12	21.8	34.0	6	58.0	05.3	40	20.5	47.5		
15	134	38.0	3	45.7	11.0	27	22.5	33.8	21	59.9	05.2	55	22.6	47.5		
16	149	40.5	18	45.2	10.2	42	23.2	33.6	37	01.8	05.1	70	24.7	47.6		
17	164	42.9	33	44.7	+20 09.4	57	24.0	+23 33.4	52	03.7	+22 05.0	85	26.9	+21 47.6		
18	179	45.4	48	44.2	+20 08.6	72	24.7	+23 33.2	67	05.6	+22 04.9	100	29.0	+21 47.6		
19	194	47.9	63	43.7	07.8	87	25.4	33.1	82	07.4	04.9	115	31.1	47.6		
20	209	50.3	78	43.2	07.1	102	26.1	32.9	97	09.3	04.8	130	33.2	47.7		
21	224	52.8	93	42.6	06.3	117	26.8	32.7	112	11.2	04.7	145	35.3	47.7		
22	239	55.3	108	42.1	05.5	132	27.5	32.5	127	13.1	04.6	160	37.5	47.7		
23	254	57.7	123	41.6	04.7	147	28.2	32.3	142	15.0	04.5	175	39.6	47.8		
24	270	00.2	138	41.1	+20 03.9	162	28.9	+23 32.1	157	16.9	+22 04.5	190	41.7	+21 47.8		
Dif	—		-5	-8		+7	-2		+19	-1		+21		0		

UT	SOL			O LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 9			Edad: 11 ^d 0 SD: 16 ^h 1 PMG: 22 ^h 14 ^m	PHE { 4 ^h : 58 ⁹ / 12 ^h : 58 ⁸ / 20 ^h : 58 ⁷ / R°: 57 ^m	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
	hG ☉	Dec	hG ☾															
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	32.6	+23	26.3	38	39.1	-16	25.7	60 N	** *	0 49	2 36	18 41	95	1 22	14		
1	194	32.5		26.3	53	06.8	87	37.2	58	** *	1 40	2 56		27 89	32	19		
2	209	32.4		26.3	67	34.5	87	-16 48.7	56	** *	2 11	3 13		14 86	42	22		
3	224	32.2		26.3	82	02.1	86	-17 00.0	54	0 45	33	28	18 04	82	50	25		
4	239	32.1		26.3	96	29.7	86	-17 11.2	52	1 32	2 51	40	17 54	80	1 58	27		
5	254	32.0	+23	26.3	110	57.2	85	-17 22.3	50	2 00	3 06	3 51	17 45	78	2 04	30		
6	269	31.8	+23	26.3	125	24.7	85	-17 33.3	45	2 46	3 36	4 13	17 27	74	2 19	35		
7	284	31.7		26.3	139	52.1	84	44.2	40	3 17	3 59	31	13 70		31	38		
8	299	31.6		26.2	154	19.4	83	-17 55.0	35	40	4 17	4 47	17 01	67	41	41		
9	314	31.4		26.2	168	46.7	83	-18 05.7	30	3 59	32	5 00	16 50	66	2 50	44		
10	329	31.3		26.2	183	13.9	82	16.3	20	4 28	4 57	22	31 63		3 06	48		
11	344	31.2	+23	26.2	197	41.1	82	-18 26.8	10 N	4 50	5 18	5 41	16 16	59	3 20	51		
12	359	31.0	+23	26.2	212	08.2	81	-18 37.1	0	5 09	5 36	5 58	16 01	56	3 32	55		
13	14	30.9		26.2	226	35.3	81	47.3	10 S	27	5 53	6 16	15 46	53	45	59		
14	29	30.8		26.1	241	02.3	80	-18 57.5	20	43	6 10	34	31 50		3 59	62		
15	44	30.6		26.1	255	29.2	79	-19 07.5	30	5 59	29	6 56	13 46		4 15	66		
16	59	30.5		26.1	269	56.1	79	17.3	35	6 08	40	7 08	15 03	44	24	69		
17	74	30.4	+23	26.1	284	23.0	79	-19 27.1	40	6 17	6 52	7 22	14 51	41	4 35	72		
18	89	30.2	+23	26.1	298	49.8	78	-19 36.7	45	6 28	7 05	7 39	14 37	38	4 48	75		
19	104	30.1		26.1	313	16.5	77	46.3	50	40	21	8 00	21 34		5 03	80		
20	119	29.9		26.0	327	43.2	77	-19 55.7	52	45	29	10	13 32		10	82		
21	134	29.8		26.0	342	09.8	76	-20 04.9	54	51	37	21	14 04	30	18	85		
22	149	29.7		26.0	356	36.4	76	14.1	56	6 57	46	34	13 55	26	27	88		
23	164	29.5		26.0	11	03.0	76	23.1	58	7 04	7 56	8 48	44 22		37	92		
24	179	29.4	+23	25.9	25	29.4	74	-20 32.0	60 S	7 11	8 08	9 06	13 31	18	5 49	97		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 59 ^m 0			Mag: -4.0 PMG: 14 ^h 46 ^m			Mag: +1.8 PMG: 13 ^h 09 ^m			Mag: -1.9 PMG: 13 ^h 29 ^m			Mag: 0.0 PMG: 11 ^h 16 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	270	00.2	138	41.1	+20	03.9	162	28.9	+23	32.1	157	16.9	+22	04.5	190	41.7	+21	47.8
1	285	02.6	153	40.6		03.1	177	29.6		31.9	172	18.8		04.4	205	43.8		47.8
2	300	05.1	168	40.1		02.4	192	30.3		31.7	187	20.7		04.3	220	45.9		47.8
3	315	07.6	183	39.6		01.6	207	31.0		31.6	202	22.5		04.2	235	48.0		47.9
4	330	10.0	198	39.1	+20	00.8	222	31.7		31.4	217	24.4		04.1	250	50.2		47.9
5	345	12.5	213	38.6	+20	00.0	237	32.4	+23	31.2	232	26.3	+22	04.1	265	52.3	+21	47.9
6	0	15.0	228	38.0	+19	59.2	252	33.1	+23	31.0	247	28.2	+22	04.0	280	54.4	+21	47.9
7	15	17.4	243	37.5		58.4	267	33.8		30.8	262	30.1		03.9	295	56.5		48.0
8	30	19.9	258	37.0		57.6	282	34.6		30.6	277	32.0		03.8	310	58.6		48.0
9	45	22.4	273	36.5		56.8	297	35.3		30.4	292	33.9		03.7	326	00.8		48.0
10	60	24.8	288	36.0		56.0	312	36.0		30.2	307	35.7		03.7	341	02.9		48.0
11	75	27.3	303	35.5	+19	55.2	327	36.7	+23	30.0	322	37.6	+22	03.6	356	05.0	+21	48.1
12	90	29.8	318	35.0	+19	54.4	342	37.4	+23	29.9	337	39.5	+22	03.5	11	07.1	+21	48.1
13	105	32.2	333	34.5		53.6	357	38.1		29.7	352	41.4		03.4	26	09.2		48.1
14	120	34.7	348	34.0		52.8	12	38.8		29.5	7	43.3		03.3	41	11.4		48.1
15	135	37.1	3	33.5		52.0	27	39.5		29.3	22	45.2		03.3	56	13.5		48.2
16	150	39.6	18	33.0		51.2	42	40.2		29.1	37	47.1		03.2	71	15.6		48.2
17	165	42.1	33	32.5	+19	50.4	57	40.9	+23	28.9	52	48.9	+22	03.1	86	17.7	+21	48.2
18	180	44.5	48	32.0	+19	49.6	72	41.6	+23	28.7	67	50.8	+22	03.0	101	19.8	+21	48.2
19	195	47.0	63	31.5		48.8	87	42.3		28.5	82	52.7		02.9	116	22.0		48.3
20	210	49.5	78	31.0		48.0	102	43.1		28.3	97	54.6		02.9	131	24.1		48.3
21	225	51.9	93	30.5		47.2	117	43.8		28.1	112	56.5		02.8	146	26.2		48.3
22	240	54.4	108	30.0		46.4	132	44.5		27.9	127	58.4		02.7	161	28.3		48.3
23	255	56.9	123	29.5		45.6	147	45.2		27.7	143	00.3		02.6	176	30.4		48.4
24	270	59.3	138	29.0	+19	44.8	162	45.9	+23	27.5	158	02.1	+22	02.5	191	32.6	+21	48.4
Dif	—		-5		-8		+7		-2		+19		-1		+21			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 12 ^d 0	PHE {	4 ^h : 58 ^h /6 12 ^h : 58 ^h /4 20 ^h : 58 ^h /2 R°: 57 ^m										
	PMG: 12 ^h 02 ^m 1															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	29.4	+23	25.9	25	29.4	-20	32.0	60 N	21 28	23 14	** **	20 16	81	1 36	23
1	194	29.3		25.9	39	55.9	75	40.8	58	21 07	22 23	** **	19 56	78	1 51	28
2	209	29.1		25.9	54	22.3	74	49.4	56	20 51	21 53	** **	40	75	2 04	31
3	224	29.0		25.9	68	48.6	73	-20 57.9	54	36	31	23 18	26	73	15	34
4	239	28.9		25.8	83	14.9	73	-21 06.3	52	24	21 13	22 31	14	71	25	37
5	254	28.7	+23	25.8	97	41.1	72	-21 14.5	50	20 13	20 58	22 03	19 03	70	2 34	39
6	269	28.6	+23	25.8	112	07.3	72	-21 22.6	45	19 51	20 28	21 18	18 41	68	2 54	42
7	284	28.5		25.7	126	33.5	72	30.6	40	33	20 05	20 47	23	66	3 09	45
8	299	28.3		25.7	140	59.6	71	38.4	35	18	19 47	24	18 08	65	22	47
9	314	28.2		25.7	155	25.6	70	46.1	30	19 04	32	20 05	17 56	63	34	49
10	329	28.1		25.6	169	51.7	71	-21 53.7	20	18 42	19 07	19 36	34	60	3 54	52
11	344	27.9	+23	25.6	184	17.6	69	-22 01.1	10 N	18 23	18 46	19 14	17 15	59	4 11	55
12	359	27.8	+23	25.6	198	43.6	70	-22 08.4	0	18 06	18 28	18 55	16 57	57	4 27	57
13	14	27.7		25.6	213	09.5	69	15.5	10 S	17 48	18 11	38	39	56	4 44	59
14	29	27.5		25.5	227	35.3	68	22.5	20	30	17 54	21	16 21	54	5 01	62
15	44	27.4		25.5	242	01.2	69	29.4	30	17 09	35	18 05	15 59	52	21	65
16	59	27.3		25.4	256	27.0	68	36.1	35	16 56	24	17 56	47	50	33	67
17	74	27.1	+23	25.4	270	52.7	67	-22 42.6	40	16 42	17 13	17 47	15 32	49	5 47	68
18	89	27.0	+23	25.4	285	18.4	67	-22 49.1	45	16 25	16 59	17 36	15 15	47	6 03	71
19	104	26.9		25.3	299	44.1	67	-22 55.4	50	16 04	43	24	14 55	43	23	74
20	119	26.7		25.3	314	09.8	67	-23 01.5	52	15 54	35	19	45	41	32	77
21	134	26.6		25.3	328	35.4	66	07.5	54	43	27	14	34	39	43	78
22	149	26.5		25.2	343	01.0	66	13.3	56	31	18	07	21	38	6 55	81
23	164	26.3		25.2	357	26.6	66	19.0	58	15 16	16 08	17 01	14 06	35	7 09	84
24	179	26.2	+23	25.1	11	52.2	66	-23 24.6	60 S	14 58	15 56	16 53	13 49	31	7 26	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 55 ^m 1		Mag: -4.0 PMG: 14 ^h 47 ^m		Mag: +1.8 PMG: 13 ^h 08 ^m		Mag: -1.8 PMG: 13 ^h 26 ^m		Mag: +0.1 PMG: 11 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	270	59.3	138	29.0	+19	44.8	162	45.9	+23	27.5
1	286	01.8	153	28.5		44.0	177	46.6		27.4
2	301	04.3	168	28.0		43.2	192	47.3		27.2
3	316	06.7	183	27.5		42.4	207	48.0		27.0
4	331	09.2	198	27.0		41.6	222	48.7		26.8
5	346	11.6	213	26.5	+19	40.7	237	49.4	+23	26.6
6	1	14.1	228	26.1	+19	39.9	252	50.1	+23	26.4
7	16	16.6	243	25.6		39.1	267	50.9		26.2
8	31	19.0	258	25.1		38.3	282	51.6		26.0
9	46	21.5	273	24.6		37.5	297	52.3		25.8
10	61	24.0	288	24.1		36.7	312	53.0		25.6
11	76	26.4	303	23.6	+19	35.9	327	53.7	+23	25.4
12	91	28.9	318	23.1	+19	35.0	342	54.4	+23	25.2
13	106	31.4	333	22.6		34.2	357	55.1		25.0
14	121	33.8	348	22.1		33.4	12	55.8		24.8
15	136	36.3	3	21.7		32.6	27	56.5		24.6
16	151	38.8	18	21.2		31.8	42	57.3		24.4
17	166	41.2	33	20.7	+19	30.9	57	58.0	+23	24.2
18	181	43.7	48	20.2	+19	30.1	72	58.7	+23	24.0
19	196	46.1	63	19.7		29.3	87	59.4		23.8
20	211	48.6	78	19.2		28.5	103	00.1		23.6
21	226	51.1	93	18.8		27.6	118	00.8		23.4
22	241	53.5	108	18.3		26.8	133	01.5		23.2
23	256	56.0	123	17.8		26.0	148	02.2		23.0
24	271	58.5	138	17.3	+19	25.2	163	03.0	+23	22.8
Dif	—		-5		-8		+7		-2	
									+19	-1
										+21

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 02 ^m 4			Edad: 13 ^d 0 PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'7 R°: ***												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	26.2	+23	25.1	11	52.2	-23	24.6	60 N	0 50	2 37	21 37	58	1 59	38	
1	194	26.1		25.1	26	17.7	65	30.0	58	1 41	2 57	21 14	58	2 19	42	
2	209	25.9		25.0	40	43.2	65	35.2	56	2 11	3 14	20 55	58	3 5	45	
3	224	25.8		25.0	55	08.7	65	40.3	54	34	28	39	59	2 49	47	
4	239	25.7		25.0	69	34.1	64	45.3	52	2 52	40	25	59	3 02	47	
5	254	25.5	+23	24.9	83	59.6	65	-23	50.1	3 07	3 51	20 13	59	3 13	48	
6	269	25.4	+23	24.9	98	25.0	64	-23	54.7	3 36	4 14	19 49	58	3 36	50	
7	284	25.3		24.8	112	50.4	64	-23	59.2	3 59	32	29	58	3 54	52	
8	299	25.1		24.8	127	15.8	64	-24	03.5	4 17	4 47	19 13	58	4 09	54	
9	314	25.0		24.7	141	41.2	64	07.7	42	3 59	33	5 00	58	23	54	
10	329	24.9		24.7	156	06.6	64	11.8	41	4 28	4 58	34	58	4 46	55	
11	344	24.7	+23	24.6	170	32.0	64	-24	15.7	5 18	5 41	18 14	57	5 06	56	
12	359	24.6	+23	24.6	184	57.3	63	-24	19.4	5 36	5 59	17 54	58	5 24	58	
13	14	24.5		24.5	199	22.7	64	23.0	36	5 53	6 16	35	57	5 43	59	
14	29	24.3		24.5	213	48.0	63	26.4	34	6 11	35	17 15	56	6 03	60	
15	44	24.2		24.4	228	13.4	64	29.7	33	30	6 56	16 51	56	26	61	
16	59	24.1		24.4	242	38.7	63	32.8	31	40	7 08	37	56	40	61	
17	74	23.9	+23	24.3	257	04.1	64	-24	35.8	6 52	7 22	16 21	55	6 55	63	
18	89	23.8	+23	24.3	271	29.4	63	-24	38.6	7 05	7 39	16 02	54	7 14	63	
19	104	23.7		24.2	285	54.8	64	41.2	26	22	8 00	15 38	54	37	65	
20	119	23.5		24.1	300	20.1	63	43.7	25	29	10	26	54	7 49	65	
21	134	23.4		24.1	314	45.5	64	46.1	24	37	21	15 13	53	8 01	67	
22	149	23.3		24.0	329	10.9	64	48.3	22	46	34	14 59	51	16	67	
23	164	23.1		24.0	343	36.3	64	50.3	20	7 57	8 48	41	51	33	69	
24	179	23.0	+23	23.9	358	01.7	64	-24	52.2	8 08	9 06	14 20	49	8 55	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 51 ^m 1		Mag: -4.0 PMG: 14 ^h 47 ^m		Mag: +1.8 PMG: 13 ^h 07 ^m		Mag: -1.8 PMG: 13 ^h 23 ^m		Mag: +0.1 PMG: 11 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	271	58.5	138	17.3	+19	25.2	163	03.0	+23	22.8	158	47.4	+22	00.6	192	23.4	+21	49.0
1	287	00.9	153	16.8		24.3	178	03.7		22.6	173	49.3		00.5	207	25.6		49.0
2	302	03.4	168	16.4		23.5	193	04.4		22.4	188	51.2		00.4	222	27.7		49.0
3	317	05.9	183	15.9		22.7	208	05.1		22.2	203	53.0		00.3	237	29.8		49.1
4	332	08.3	198	15.4		21.8	223	05.8		22.0	218	54.9		00.2	252	31.9		49.1
5	347	10.8	213	14.9	+19	21.0	238	06.5	+23	21.8	233	56.8	+22	00.2	267	34.0	+21	49.1
6	2	13.3	228	14.5	+19	20.2	253	07.2	+23	21.6	248	58.7	+22	00.1	282	36.2	+21	49.1
7	17	15.7	243	14.0		19.4	268	07.9		21.4	264	00.6	+22	00.0	297	38.3		49.2
8	32	18.2	258	13.5		18.5	283	08.7		21.2	279	02.5	+21	59.9	312	40.4		49.2
9	47	20.6	273	13.0		17.7	298	09.4		21.0	294	04.3		59.8	327	42.5		49.2
10	62	23.1	288	12.6		16.8	313	10.1		20.7	309	06.2		59.8	342	44.6		49.2
11	77	25.6	303	12.1	+19	16.0	328	10.8	+23	20.5	324	08.1	+21	59.7	357	46.8	+21	49.3
12	92	28.0	318	11.6	+19	15.2	343	11.5	+23	20.3	339	10.0	+21	59.6	12	48.9	+21	49.3
13	107	30.5	333	11.2		14.3	358	12.2		20.1	354	11.9		59.5	27	51.0		49.3
14	122	33.0	348	10.7		13.5	13	12.9		19.9	9	13.8		59.4	42	53.1		49.3
15	137	35.4	3	10.2		12.7	28	13.7		19.7	24	15.7		59.3	57	55.2		49.4
16	152	37.9	18	09.7		11.8	43	14.4		19.5	39	17.5		59.3	72	57.4		49.4
17	167	40.4	33	09.3	+19	11.0	58	15.1	+23	19.3	54	19.4	+21	59.2	87	59.5	+21	49.4
18	182	42.8	48	08.8	+19	10.1	73	15.8	+23	19.1	69	21.3	+21	59.1	103	01.6	+21	49.4
19	197	45.3	63	08.3		09.3	88	16.5		18.9	84	23.2		59.0	118	03.7		49.5
20	212	47.8	78	07.9		08.4	103	17.2		18.7	99	25.1		58.9	133	05.8		49.5
21	227	50.2	93	07.4		07.6	118	17.9		18.5	114	27.0		58.8	148	08.0		49.5
22	242	52.7	108	07.0		06.8	133	18.7		18.3	129	28.8		58.8	163	10.1		49.5
23	257	55.1	123	06.5		05.9	148	19.4		18.1	144	30.7		58.7	178	12.2		49.6
24	272	57.6	138	06.0	+19	05.1	163	20.1	+23	17.8	159	32.6	+21	58.6	193	14.3	+21	49.6
Dif	—		-5	-8			+7	-2			+19	-1			+21			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 14 ^d 0	PHE { 4 ^h : 57 ^m 5 12 ^h : 57 ^m 3 20 ^h : 57 ^m 1									
	PMG: 12 ^h 02 ^m 6					SD: 15 ^h 7			PMG: 0 ^h 08 ^m		R°: 57 ^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	179	23.0	+23 23.9	358	01.7	-24 52.2	17	60 N	21 28	23 13	** **	22 35 36	2 37 60	
1	194	22.9	23.9	12	27.1	64 53.9	17	58	21 07	22 23	** **	22 12 40	3 01 59	
2	209	22.7	23.8	26	52.5	64 55.5	16	56	20 51	21 53	** **	21 53 42	20 59	
3	224	22.6	23.7	41	18.0	65 56.9	14	54	36	31	23 17	38 43	36 59	
4	239	22.5	23.7	55	43.5	65 58.2	13	52	24 13	21 13	22 31	24 45	3 49 59	
5	254	22.3	+23 23.6	70	09.0	65 -24 59.3	11	50	20 13	20 58	22 03	21 12 46	4 01 59	
6	269	22.2	+23 23.5	84	34.5	65 -25 00.3	10	45	19 51	20 28	21 18	20 47 48	4 26 59	
7	284	22.1	23.5	99	00.0	65 01.1	8	40	33	20 06	20 47	27 50	4 46 58	
8	299	21.9	23.4	113	25.6	66 01.7	6	35	18	19 47	24	20 11 50	5 03 58	
9	314	21.8	23.4	127	51.2	66 02.2	5	30	19 05	32	20 06	19 57 51	17 58	
10	329	21.7	23.3	142	16.8	66 02.6	4	20	18 43	19 07	19 37	32 53	5 41 58	
11	344	21.5	+23 23.2	156	42.5	67 -25 02.8	2	10 N	18 24	18 47	19 14	19 11 54	6 02 57	
12	359	21.4	+23 23.2	171	08.2	67 -25 02.8	0	0	18 06	18 29	18 55	18 52 55	6 22 57	
13	14	21.3	23.1	185	33.9	67 02.7	1	10 S	17 49	18 12	38	32 56	6 42 56	
14	29	21.1	23.0	199	59.7	68 02.5	2	20	30	17 54	22	18 11 58	7 03 55	
15	44	21.0	22.9	214	25.5	68 02.1	4	30	17 09	35	18 05	17 47 59	27 55	
16	59	20.9	22.9	228	51.3	68 01.5	6	35	16 57	25	17 57	33 59	41 55	
17	74	20.8	+23 22.8	243	17.2	69 -25 00.8	7	40	16 43	17 13	17 47	17 16 60	7 58 54	
18	89	20.6	+23 22.7	257	43.1	69 -25 00.0	8	45	16 26	17 00	17 37	16 56 62	8 17 54	
19	104	20.5	22.7	272	09.1	70 -24 59.0	10	50	16 05	16 44	25	32 63	42 52	
20	119	20.4	22.6	286	35.1	70 57.8	12	52	15 55	36	20	20 63	8 54 52	
21	134	20.2	22.5	301	01.2	71 56.5	13	54	44	28	14	16 06 65	9 08 51	
22	149	20.1	22.4	315	27.3	71 55.1	14	56	31	19	08	15 50 66	23 51	
23	164	20.0	22.4	329	53.4	71 53.5	16	58	15 17	16 09	17 01	32 67	9 42 49	
24	179	19.8	+23 22.3	344	19.6	72 -24 51.8	17	60 S	14 59	15 57	16 54	15 09 69	10 05 47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 47 ^m 2		Mag: -4.0 PMG: 14 ^h 48 ^m		Mag: +1.8 PMG: 13 ^h 06 ^m		Mag: -1.8 PMG: 13 ^h 20 ^m		Mag: +0.1 PMG: 11 ^h 05 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	272	57.6	138 06.0	+19 05.1	163 20.1	+23 17.8	159 32.6	+21 58.6	193 14.3	
1	288	00.1	153 05.6	04.2	178 20.8	17.6	174 34.5	58.5	208 16.4	
2	303	02.5	168 05.1	03.4	193 21.5	17.4	189 36.4	58.4	223 18.6	
3	318	05.0	183 04.6	02.5	208 22.2	17.2	204 38.3	58.3	238 20.7	
4	333	07.5	198 04.2	01.7	223 23.0	17.0	219 40.1	58.3	253 22.8	
5	348	09.9	213 03.7	+19 00.8	238 23.7	+23 16.8	234 42.0	+21 58.2	268 24.9	
6	3	12.4	228 03.3	+19 00.0	253 24.4	+23 16.6	249 43.9	+21 58.1	283 27.0	
7	18	14.9	243 02.8	+18 59.1	268 25.1	16.4	264 45.8	58.0	298 29.2	
8	33	17.3	258 02.3	58.3	283 25.8	16.2	279 47.7	57.9	313 31.3	
9	48	19.8	273 01.9	57.4	298 26.5	15.9	294 49.6	57.8	328 33.4	
10	63	22.2	288 01.4	56.5	313 27.3	15.7	309 51.4	57.8	343 35.5	
11	78	24.7	303 01.0	+18 55.7	328 28.0	+23 15.5	324 53.3	+21 57.7	358 37.7	
12	93	27.2	318 00.5	+18 54.8	343 28.7	+23 15.3	339 55.2	+21 57.6	13 39.8	
13	108	29.6	333 00.1	54.0	358 29.4	15.1	354 57.1	57.5	28 41.9	
14	123	32.1	347 59.6	53.1	13 30.1	14.9	9 59.0	57.4	43 44.0	
15	138	34.6	2 59.2	52.3	28 30.8	14.7	25 00.9	57.3	58 46.1	
16	153	37.0	17 58.7	51.4	43 31.6	14.5	40 02.7	57.3	73 48.3	
17	168	39.5	32 58.3	+18 50.5	58 32.3	+23 14.2	55 04.6	+21 57.2	88 50.4	
18	183	42.0	47 57.8	+18 49.7	73 33.0	+23 14.0	70 06.5	+21 57.1	103 52.5	
19	198	44.4	62 57.4	48.8	88 33.7	13.8	85 08.4	57.0	118 54.6	
20	213	46.9	77 56.9	48.0	103 34.4	13.6	100 10.3	56.9	133 56.7	
21	228	49.4	92 56.5	47.1	118 35.1	13.4	115 12.2	56.8	148 58.9	
22	243	51.8	107 56.0	46.2	133 35.9	13.2	130 14.0	56.8	164 01.0	
23	258	54.3	122 55.6	45.4	148 36.6	12.9	145 15.9	56.7	179 03.1	
24	273	56.7	137 55.1	+18 44.5	163 37.3	+23 12.7	160 17.8	+21 56.6	194 05.2	
Dif	—	—	-5	-9	+7	-2	+19	-1	+21	

0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 8			Edad: 15 ^d 0 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 6 20 ^h : 56 ^m 4 PMG: 1 ^h 05 ^m R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	19.8	+23	22.3	344	19.6	-24	51.8	60 N	** *	0 53	2 38	23 11	21	3 37 78	
1	194	19.7		22.2	358	45.9		49.9	58	** *	1 43	2 58	22 52	25	4 00 74	
2	209	19.6		22.1	13	12.2		47.9	20	** *	2 12	3 15		35 29	19 7	
3	224	19.4		22.1	27	38.6		45.8	54	0 48	35	29		21 31	35 69	
4	239	19.3		22.0	42	05.0		43.5	52	1 34	2 52	41	22 09	33	4 48 68	
5	254	19.2	+23	21.9	56	31.5	-24	41.0	50	2 02	3 08	3 52	21 58	35	5 00 66	
6	269	19.0	+23	21.8	70	58.1	-24	38.4	45	2 48	3 37	4 15	21 35	39	5 25 64	
7	284	18.9		21.7	85	24.7		35.7	27	3 18	4 00	33		17 41	5 44 62	
8	299	18.8		21.7	99	51.4		32.9	28	3 41	18	4 48	21 01	43	6 01 60	
9	314	18.7		21.6	114	18.1		29.9	30	4 00	33	5 01	20 48	45	15 59	
10	329	18.5		21.5	128	44.9		26.7	32	29	4 58	23		25 48	39 57	
11	344	18.4	+23	21.4	143	11.8	-24	23.5	32	10 N	4 51	5 18	5 42	20 05	50	6 59 56
12	359	18.3	+23	21.3	157	38.7	-24	20.1	34	0	5 10	5 37	5 59	19 47	52	7 19 53
13	14	18.1		21.2	172	05.7		16.5	36	10 S	27	5 54	6 17		28 55	38 52
14	29	18.0		21.1	186	32.8		12.9	36	20	5 44	6 11	35	19 09	56	7 58 51
15	44	17.9		21.1	200	59.9		09.1	38	30	6 00	30	6 56	18 46	59	8 22 48
16	59	17.7		21.0	215	27.1		05.1	40	35	09	40	7 09		32 61	36 47
17	74	17.6	+23	20.9	229	54.4	-24	01.1	40	40	6 18	6 52	7 23	18 16	63	8 52 45
18	89	17.5	+23	20.8	244	21.8	-23	56.9	42	45	6 28	7 06	7 39	17 58	65	9 11 43
19	104	17.3		20.7	258	49.2		52.5	44	50	40	22	8 00		35 68	34 41
20	119	17.2		20.6	273	16.7		48.1	44	52	45	29	10		23 70	46 39
21	134	17.1		20.5	287	44.3		43.5	46	54	51	37	21	17 11	72	9 59 37
22	149	17.0		20.4	302	12.0		38.8	47	56	6 57	46	34	16 56	74	10 14 35
23	164	16.8		20.3	316	39.7		34.0	48	58	7 04	7 57	8 48		39 77	31 32
24	179	16.7	+23	20.2	331	07.5	-23	29.0	50	60 S	7 11	8 08	9 06	16 18	81	10 52 28
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 43 ^m 3			Mag: -4.0 PMG: 14 ^h 49 ^m			Mag: +1.8 PMG: 13 ^h 05 ^m			Mag: -1.8 PMG: 13 ^h 17 ^m			Mag: +0.1 PMG: 11 ^h 02 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	273	56.7		137	55.1	+18	44.5	163	37.3	+23	12.7	160	17.8	+21	56.6	
1	288	59.2		152	54.7		43.6	178	38.0		12.5	175	19.7		56.5	
2	304	01.7		167	54.2		42.8	193	38.7		12.3	190	21.6		56.4	
3	319	04.1		182	53.8		41.9	208	39.5		12.1	205	23.5		56.3	
4	334	06.6		197	53.4		41.0	223	40.2		11.9	220	25.3		56.3	
5	349	09.1		212	52.9	+18	40.2	238	40.9	+23	11.6	235	27.2	+21	56.2	
6	4	11.5		227	52.5	+18	39.3	253	41.6	+23	11.4	250	29.1	+21	56.1	
7	19	14.0		242	52.0		38.4	268	42.3		11.2	265	31.0		56.0	
8	34	16.5		257	51.6		37.5	283	43.1		11.0	280	32.9		55.9	
9	49	18.9		272	51.1		36.7	298	43.8		10.8	295	34.7		55.8	
10	64	21.4		287	50.7		35.8	313	44.5		10.5	310	36.6		55.8	
11	79	23.9		302	50.3	+18	34.9	328	45.2	+23	10.3	325	38.5	+21	55.7	
12	94	26.3		317	49.8	+18	34.0	343	45.9	+23	10.1	340	40.4	+21	55.6	
13	109	28.8		332	49.4		33.2	358	46.7		09.9	355	42.3		55.5	
14	124	31.2		347	49.0		32.3	13	47.4		09.7	10	44.2		55.4	
15	139	33.7		2	48.5		31.4	28	48.1		09.4	25	46.0		55.3	
16	154	36.2		17	48.1		30.5	43	48.8		09.2	40	47.9		55.2	
17	169	38.6		32	47.7	+18	29.6	58	49.5	+23	09.0	55	49.8	+21	55.2	
18	184	41.1		47	47.2	+18	28.8	73	50.3	+23	08.8	70	51.7	+21	55.1	
19	199	43.6		62	46.8		27.9	88	51.0		08.6	85	53.6		55.0	
20	214	46.0		77	46.4		27.0	103	51.7		08.3	100	55.5		54.9	
21	229	48.5		92	45.9		26.1	118	52.4		08.1	115	57.3		54.8	
22	244	51.0		107	45.5		25.2	133	53.1		07.9	130	59.2		54.7	
23	259	53.4		122	45.1		24.4	148	53.9		07.7	146	01.1		54.7	
24	274	55.9		137	44.6	+18	23.5	163	54.6	+23	07.4	161	03.0	+21	54.6	
Dif	—			-4		-9		+7		-2		+19		-1		
															+21	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 0			Edad: 16 ^d 0 PHE { 4 ^h : 56 ^m 2 12 ^h : 56 ^m 0 20 ^h : 55 ^m 8 PMG: 2 ^h 00 ^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	179	16.7	+23	20.2	331	07.5	-23	29.0	60 N	21 27	23 10	** **	23 32 13	4 55 84				
1	194	16.6		20.2	345	35.4 89		24.0 50	58	21 07	22 22	** **	17 16	5 14 80				
2	209	16.4		20.1	0	03.4 90		18.8 52	56	20 50	21 52	** **	23 04 20	30 77				
3	224	16.3		20.0	14	31.4 90		13.5 53	54	36	30	23 15	22 52 23	44 74				
4	239	16.2		19.9	28	59.6 92		08.0 55	52	24	21 13	22 30	42 25	5 56 72				
5	254	16.0	+23	19.8	43	27.8 92	-23	02.5 55	50	20 13	20 58	22 03	22 33 27	6 06 70				
6	269	15.9	+23	19.7	57	56.1 93	-22	56.8 57	45	19 51	20 28	21 18	22 14 30	6 29 66				
7	284	15.8		19.6	72	24.5 94		51.0 58	40	33	20 06	20 47	21 58 34	6 46 64				
8	299	15.7		19.5	86	52.9 94		45.1 59	35	18	19 48	24	44 37	7 01 61				
9	314	15.5		19.4	101	21.5 96		39.1 60	30	19 05	32	20 06	33 39	14 59				
10	329	15.4		19.3	115	50.1 96		33.0 61	20	18 43	19 08	19 37	21 13 42	36 56				
11	344	15.3	+23	19.2	130	18.8 97	-22	26.7 63	10 N	18 24	18 47	19 14	20 55 46	7 55 53				
12	359	15.1	+23	19.1	144	47.6 98	-22	20.4 65	0	18 07	18 29	18 55	20 39 49	8 12 51				
13	14	15.0		19.0	159	16.5 99		13.9 65	10 S	17 49	18 12	38	23 51	30 48				
14	29	14.9		18.9	173	45.5 100		07.4 65	20	31	17 55	22	20 05 55	8 49 45				
15	44	14.8		18.8	188	14.5 100	-22	00.7 67	30	17 10	36	18 06	19 45 58	9 10 42				
16	59	14.6		18.7	202	43.7 102	-21	53.9 68	35	16 57	26	17 57	33 60	23 39				
17	74	14.5	+23	18.6	217	12.9 102	-21	47.0 69	40	16 43	17 14	17 48	19 19 63	9 37 37				
18	89	14.4	+23	18.5	231	42.2 103	-21	40.1 69	45	16 27	17 00	17 38	19 03 66	9 54 34				
19	104	14.2		18.3	246	11.6 104		33.0 71	50	16 06	16 44	26	18 43 70	10 15 31				
20	119	14.1		18.2	260	41.1 105		25.8 72	52	15 56	37	21	33 73	25 29				
21	134	14.0		18.1	275	10.7 106		18.5 73	54	45	29	15	23 74	36 27				
22	149	13.9		18.0	289	40.4 107		11.1 74	56	33	20	09	18 10 78	10 49 24				
23	164	13.7		17.9	304	10.1 107	-21	03.6 75	58	18	16 10	17 02	17 56 81	11 03 21				
24	179	13.6	+23	17.8	318	39.9 108	-20	56.0 76	60 S	15 01	15 58	16 55	17 39 85	11 20 17				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 5 ^h 39 ^m 3		Mag: -4.0 PMG: 14 ^h 49 ^m			Mag: +1.8 PMG: 13 ^h 04 ^m			Mag: -1.8 PMG: 13 ^h 14 ^m			Mag: +0.1 PMG: 10 ^h 59 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	274	55.9	137	44.6	+18	23.5	163	54.6	+23	07.4	161	03.0	+21	54.6	194	56.2	+21	50.7
1	289	58.4	152	44.2		22.6	178	55.3		07.2	176	04.9		54.5	209	58.3		50.8
2	305	00.8	167	43.8		21.7	193	56.0		07.0	191	06.7		54.4	225	00.4		50.8
3	320	03.3	182	43.3		20.8	208	56.8		06.8	206	08.6		54.3	240	02.5		50.8
4	335	05.7	197	42.9		19.9	223	57.5		06.5	221	10.5		54.2	255	04.6		50.8
5	350	08.2	212	42.5	+18	19.0	238	58.2	+23	06.3	236	12.4	+21	54.1	270	06.8	+21	50.9
6	5	10.7	227	42.1	+18	18.1	253	58.9	+23	06.1	251	14.3	+21	54.1	285	08.9	+21	50.9
7	20	13.1	242	41.6		17.3	268	59.6		05.9	266	16.1		54.0	300	11.0		50.9
8	35	15.6	257	41.2		16.4	284	00.4		05.6	281	18.0		53.9	315	13.1		50.9
9	50	18.1	272	40.8		15.5	299	01.1		05.4	296	19.9		53.8	330	15.3		51.0
10	65	20.5	287	40.4		14.6	314	01.8		05.2	311	21.8		53.7	345	17.4		51.0
11	80	23.0	302	40.0	+18	13.7	329	02.5	+23	05.0	326	23.7	+21	53.6	0	19.5	+21	51.0
12	95	25.5	317	39.5	+18	12.8	344	03.3	+23	04.7	341	25.6	+21	53.6	15	21.6	+21	51.0
13	110	27.9	332	39.1		11.9	359	04.0		04.5	356	27.4		53.5	30	23.7		51.1
14	125	30.4	347	38.7		11.0	14	04.7		04.3	11	29.3		53.4	45	25.9		51.1
15	140	32.9	2	38.3		10.1	29	05.4		04.0	26	31.2		53.3	60	28.0		51.1
16	155	35.3	17	37.9		09.2	44	06.2		03.8	41	33.1		53.2	75	30.1		51.1
17	170	37.8	32	37.4	+18	08.3	59	06.9	+23	03.6	56	35.0	+21	53.1	90	32.2	+21	51.1
18	185	40.2	47	37.0	+18	07.4	74	07.6	+23	03.3	71	36.8	+21	53.0	105	34.4	+21	51.2
19	200	42.7	62	36.6		06.5	89	08.3		03.1	86	38.7		53.0	120	36.5		51.2
20	215	45.2	77	36.2		05.6	104	09.1		02.9	101	40.6		52.9	135	38.6		51.2
21	230	47.6	92	35.8		04.7	119	09.8		02.7	116	42.5		52.8	150	40.7		51.2
22	245	50.1	107	35.4		03.8	134	10.5		02.4	131	44.4		52.7	165	42.9		51.3
23	260	52.6	122	34.9		02.9	149	11.2		02.2	146	46.3		52.6	180	45.0		51.3
24	275	55.0	137	34.5	+18	02.0	164	12.0	+23	02.0	161	48.1	+21	52.5	195	47.1	+21	51.3
Dif	—		-4		-9		+7		-2		+19		-1		+21		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 2			Edad: 17 ^d 0 PHE SD: 15/2 PMG: 2 ^h 51 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	13.6	+23	17.8	318	39.9	-20	56.0	77	60 N	** **	0 56	2 39	23 45	8 6 19 86
1	194	13.5		17.7	333	09.9 ¹¹⁰		48.3	77	58	** **	1 44	2 59	33 12	34 81
2	209	13.3		17.6	347	39.9 ¹¹⁰		40.6	79	56	** **	2 14	3 16	24 14	47 77
3	224	13.2		17.5	2	10.0 ¹¹¹		32.7	80	54	0 52	36	30	15 17	6 58 75
4	239	13.1		17.4	16	40.1 ¹¹¹		24.7	80	52	1 36	2 54	42	07 19	7 08 72
5	254	13.0	+23	17.2	31	10.4 ¹¹³	-20	16.7	80	50	2 03	3 09	3 53	23 00	21 7 16 71
6	269	12.8	+23	17.1	45	40.7 ¹¹³	-20	08.5	82	45	2 49	3 38	4 15	22 44	26 7 35 66
7	284	12.7		17.0	60	11.2 ¹¹⁵	-20	00.3	82	40	3 19	4 01	33	32 29	7 50 62
8	299	12.6		16.9	74	41.7 ¹¹⁵	-19	52.0	83	35	3 42	19	4 48	21 32	8 02 60
9	314	12.5		16.8	89	12.3 ¹¹⁶		43.6	84	30	4 01	34	5 01	22 12	34 13 57
10	329	12.3		16.7	103	43.0 ¹¹⁷		35.1	85	20	29	4 59	23	21 55	39 32 53
11	344	12.2	+23	16.5	118	13.8 ¹¹⁸	-19	26.5	86	10 N	4 52	5 19	5 42	21 41	42 8 48 50
12	359	12.1	+23	16.4	132	44.7 ¹¹⁹	-19	17.8	87	0	5 11	5 37	6 00	21 28	45 9 03 47
13	14	11.9		16.3	147	15.6 ¹¹⁹		09.1	87	10 S	28	5 54	17	14 49	18 43
14	29	11.8		16.2	161	46.6 ¹²⁰	-19	00.2	89	20	5 44	6 11	35	21 00	52 34 40
15	44	11.7		16.1	176	17.8 ¹²²	-18	51.3	89	30	6 00	30	6 56	20 43	56 9 52 36
16	59	11.6		15.9	190	49.0 ¹²²		42.4	89	35	09	41	7 09	33 59	10 02 34
17	74	11.4	+23	15.8	205	20.3 ¹²³	-18	33.3	91	40	6 18	6 52	7 23	20 22	62 10 14 32
18	89	11.3	+23	15.7	219	51.6 ¹²³	-18	24.1	92	45	6 28	7 06	7 39	20 09	65 10 28 29
19	104	11.2		15.6	234	23.1 ¹²⁵		14.9	92	50	40	22	8 00	19 53	69 46 24
20	119	11.1		15.5	248	54.6 ¹²⁵	-18	05.6	93	52	45	29	10	46 71	10 54 22
21	134	10.9		15.3	263	26.2 ¹²⁶	-17	56.3	93	54	51	37	21	37 74	11 03 19
22	149	10.8		15.2	277	57.9 ¹²⁷		46.8	95	56	6 57	46	33	28 76	13 17
23	164	10.7		15.1	292	29.7 ¹²⁸		37.3	95	58	7 04	7 56	8 48	17 80	24 14
24	179	10.5	+23	14.9	307	01.5 ¹²⁸	-17	27.7	96	60 S	7 11	8 08	9 05	19 04	84 11 37 10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 35 ^m 4		Mag: -4.0 PMG: 14 ^h 50 ^m		Mag: +1.8 PMG: 13 ^h 03 ^m		Mag: -1.8 PMG: 13 ^h 11 ^m		Mag: +0.1 PMG: 10 ^h 55 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	275	55.0	137	34.5	+18	02.0	164	12.0	+23	02.0
1	290	57.5	152	34.1		01.1	179	12.7		01.7
2	306	00.0	167	33.7	+18	00.2	194	13.4		01.5
3	321	02.4	182	33.3	+17	59.3	209	14.1		01.3
4	336	04.9	197	32.9		58.4	224	14.9		01.0
5	351	07.3	212	32.5	+17	57.5	239	15.6	+23	00.8
6	6	09.8	227	32.1	+17	56.6	254	16.3	+23	00.6
7	21	12.3	242	31.7		55.7	269	17.0		00.3
8	36	14.7	257	31.3		54.8	284	17.8	+23	00.1
9	51	17.2	272	30.9		53.8	299	18.5	+22	59.9
10	66	19.7	287	30.4		52.9	314	19.2		59.6
11	81	22.1	302	30.0	+17	52.0	329	19.9	+22	59.4
12	96	24.6	317	29.6	+17	51.1	344	20.7	+22	59.2
13	111	27.1	332	29.2		50.2	359	21.4		58.9
14	126	29.5	347	28.8		49.3	14	22.1		58.7
15	141	32.0	2	28.4		48.4	29	22.8		58.5
16	156	34.5	17	28.0		47.5	44	23.6		58.2
17	171	36.9	32	27.6	+17	46.5	59	24.3	+22	58.0
18	186	39.4	47	27.2	+17	45.6	74	25.0	+22	57.7
19	201	41.8	62	26.8		44.7	89	25.7		57.5
20	216	44.3	77	26.4		43.8	104	26.5		57.3
21	231	46.8	92	26.0		42.9	119	27.2		57.0
22	246	49.2	107	25.6		41.9	134	27.9		56.8
23	261	51.7	122	25.2		41.0	149	28.7		56.6
24	276	54.2	137	24.8	+17	40.1	164	29.4	+22	56.3
Dif	—		-4	-9			+7	-2		
									+19	-1
										+21
										0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 18 ^d 0	PHE { 4 ^h : 55 ^h 0 12 ^h : 54 ^h 9 20 ^h : 54 ^h 8													
	PMG: 12 ^h 03 ^m 4					SD: 15 ^h 0			PMG: 3 ^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	h m	m			
0	179	10.5	+23	14.9	307	01.5	-17	27.7	60 N	21 26	23 07	** **	23 53	6	7 45	82		
1	194	10.4		14.8	321	33.5 ¹³⁰		18.1 ⁹⁶	58	21 06	22 20	** **	45	9	7 55	79		
2	209	10.3		14.7	336	05.5 ¹³⁰	-17	08.4 ⁹⁷	56	20 50	21 52	** **	38	12	8 04	76		
3	224	10.2		14.6	350	37.6 ¹³¹	-16	58.6 ⁹⁸	54	36	30	23 12	32	14	13	73		
4	239	10.0		14.4	5	09.7 ¹³¹		48.7 ⁹⁹	52	24	21 12	22 29	26	16	20	71		
5	254	09.9	+23	14.3	19	42.0 ¹³³	-16	38.8 ⁹⁹	50	20 13	20 57	22 02	23 21	18	8 27	68		
6	269	09.8	+23	14.2	34	14.3 ¹³³	-16	28.8 ¹⁰⁰	45	19 51	20 28	21 17	23 10	22	8 41	64		
7	284	09.7		14.0	48	46.7 ¹³⁴		18.8 ¹⁰⁰	40	33	20 06	20 47	23 01	25	8 52	61		
8	299	09.5		13.9	63	19.2 ¹³⁵	-16	08.6 ¹⁰²	35	18	19 48	24	22 53	28	9 02	58		
9	314	09.4		13.8	77	51.7 ¹³⁵	-15	58.5 ¹⁰¹	30	19 05	33	20 06	46	30	10	56		
10	329	09.3		13.6	92	24.4 ¹³⁷		48.2 ¹⁰³	20	18 43	19 08	19 37	34	35	25	51		
11	344	09.2	+23	13.5	106	57.0 ¹³⁶	-15	37.9 ¹⁰³	10 N	18 24	18 48	19 15	22 23	39	9 38	47		
12	359	09.0	+23	13.4	121	29.8 ¹³⁸	-15	27.6 ¹⁰³	0	18 07	18 30	18 56	22 13	42	9 50	43		
13	14	08.9		13.2	136	02.7 ¹³⁹		17.2 ¹⁰⁴	10 S	17 50	18 13	39	22 03	46	10 01	41		
14	29	08.8		13.1	150	35.6 ¹³⁹	-15	06.7 ¹⁰⁵	20	31	17 55	23	21 52	50	14	37		
15	44	08.7		13.0	165	08.5 ¹³⁹	-14	56.2 ¹⁰⁵	30	17 10	37	18 07	39	55	28	33		
16	59	08.5		12.8	179	41.6 ¹⁴¹		45.6 ¹⁰⁶	35	16 58	26	17 58	32	57	36	30		
17	74	08.4	+23	12.7	194	14.7 ¹⁴¹	-14	34.9 ¹⁰⁷	40	16 44	17 15	17 49	21 24	60	10 46	27		
18	89	08.3	+23	12.5	208	47.9 ¹⁴²	-14	24.2 ¹⁰⁷	45	16 27	17 01	17 38	21 14	64	10 57	23		
19	104	08.2		12.4	223	21.1 ¹⁴²		13.5 ¹⁰⁷	50	16 07	16 45	27	21 02	68	11 10	19		
20	119	08.0		12.3	237	54.5 ¹⁴⁴	-14	02.7 ¹⁰⁸	52	15 57	38	22	20 57	70	16	17		
21	134	07.9		12.1	252	27.8 ¹⁴³	-13	51.9 ¹⁰⁸	54	46	30	16	51	72	22	16		
22	149	07.8		12.0	267	01.3 ¹⁴⁵		41.0 ¹⁰⁹	56	34	21	10	44	75	30	13		
23	164	07.7		11.8	281	34.8 ¹⁴⁵		30.0 ¹¹⁰	58	19	16 11	17 03	37	77	38	10		
24	179	07.5	+23	11.7	296	08.4 ¹⁴⁶	-13	19.0 ¹¹⁰	60 S	15 02	15 59	16 56	20 28	81	11 47	8		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 31 ^m 5		Mag: -4.0 PMG: 14 ^h 51 ^m		Mag: +1.8 PMG: 13 ^h 01 ^m		Mag: -1.8 PMG: 13 ^h 08 ^m		Mag: +0.1 PMG: 10 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♅	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	276	54.2	137	24.8	+17	40.1	164	29.4	+22	56.3	162	33.3	+21	50.5	196	38.1	+21	51.9
1	291	56.6	152	24.4		39.2	179	30.1		56.1	177	35.1		50.4	211	40.2		51.9
2	306	59.1	167	24.0		38.3	194	30.8		55.8	192	37.0		50.3	226	42.3		51.9
3	322	01.6	182	23.7		37.3	209	31.6		55.6	207	38.9		50.2	241	44.4		51.9
4	337	04.0	197	23.3		36.4	224	32.3		55.4	222	40.8		50.1	256	46.6		52.0
5	352	06.5	212	22.9	+17	35.5	239	33.0	+22	55.1	237	42.7	+21	50.0	271	48.7	+21	52.0
6	7	09.0	227	22.5	+17	34.6	254	33.8	+22	54.9	252	44.5	+21	49.9	286	50.8	+21	52.0
7	22	11.4	242	22.1		33.6	269	34.5		54.6	267	46.4		49.8	301	52.9		52.0
8	37	13.9	257	21.7		32.7	284	35.2		54.4	282	48.3		49.8	316	55.1		52.1
9	52	16.3	272	21.3		31.8	299	35.9		54.2	297	50.2		49.7	331	57.2		52.1
10	67	18.8	287	20.9		30.9	314	36.7		53.9	312	52.1		49.6	346	59.3		52.1
11	82	21.3	302	20.5	+17	29.9	329	37.4	+22	53.7	327	53.9	+21	49.5	2	01.4	+21	52.1
12	97	23.7	317	20.1	+17	29.0	344	38.1	+22	53.4	342	55.8	+21	49.4	17	03.6	+21	52.1
13	112	26.2	332	19.8		28.1	359	38.9		53.2	357	57.7		49.3	32	05.7		52.2
14	127	28.7	347	19.4		27.1	14	39.6		52.9	12	59.6		49.2	47	07.8		52.2
15	142	31.1	2	19.0		26.2	29	40.3		52.7	28	01.5		49.2	62	09.9		52.2
16	157	33.6	17	18.6		25.3	44	41.1		52.5	43	03.3		49.1	77	12.0		52.2
17	172	36.1	32	18.2	+17	24.3	59	41.8	+22	52.2	58	05.2	+21	49.0	92	14.2	+21	52.3
18	187	38.5	47	17.8	+17	23.4	74	42.5	+22	52.0	73	07.1	+21	48.9	107	16.3	+21	52.3
19	202	41.0	62	17.4		22.5	89	43.2		51.7	88	09.0		48.8	122	18.4		52.3
20	217	43.5	77	17.1		21.5	104	44.0		51.5	103	10.9		48.7	137	20.5		52.3
21	232	45.9	92	16.7		20.6	119	44.7		51.2	118	12.7		48.6	152	22.7		52.3
22	247	48.4	107	16.3		19.7	134	45.4		51.0	133	14.6		48.5	167	24.8		52.4
23	262	50.8	122	15.9		18.7	149	46.2		50.7	148	16.5		48.5	182	26.9		52.4
24	277	53.3	137	15.5	+17	17.8	164	46.9	+22	50.5	163	18.4	+21	48.4	197	29.0	+21	52.4
Dif	—		-4		-9		+7		-2		+19		-1		+21		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 6			Edad: 19 ^d 0 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 4 ^h 23 ^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	179	07.5	+23	11.7	296	08.4	-13	19.0	60 N	** **	1 00	2 41	23 59	5	9 07 80
1	194	07.4		11.5	310	42.0 ¹⁴⁶	-13	08.0 ¹¹⁰	58	** *	1 47	3 01	54	8	14 77
2	209	07.3		11.4	325	15.7 ¹⁴⁷	-12	56.9 ¹¹¹	56	** *	2 16	17	50	10	20 74
3	224	07.2		11.2	339	49.5 ¹⁴⁸		45.8 ¹¹¹	54	0 55	37	31	46	12	26 77
4	239	07.0		11.1	354	23.3 ¹⁴⁸		34.6 ¹¹²	52	1 38	2 55	43	42	14	31 69
5	254	06.9	+23	11.0	8	57.2 ¹⁴⁹	-12	23.4 ¹¹²	50	2 05	3 10	3 54	23 39	16	9 35 67
6	269	06.8	+23	10.8	23	31.1 ¹⁴⁹	-12	12.1 ¹¹³	45	2 50	3 39	4 16	23 32	20	9 45 63
7	284	06.7		10.7	38	05.1 ¹⁵⁰	-12	00.8 ¹¹³	40	3 20	4 01	34	26	23	9 53 59
8	299	06.6		10.5	52	39.2 ¹⁵¹	-11	49.5 ¹¹³	35	3 43	19	4 49	21	26	10 00 56
9	314	06.4		10.4	67	13.3 ¹⁵¹		38.1 ¹¹⁴	30	4 01	35	5 02	16	29	06 53
10	329	06.3		10.2	81	47.4 ¹⁵¹		26.6 ¹¹⁵	20	30	4 59	24	09	33	16 49
11	344	06.2	+23	10.1	96	21.6 ¹⁵²	-11	15.2 ¹¹⁴	10 N	4 52	5 20	5 43	23 02	37	10 25 45
12	359	06.1	+23	09.9	110	55.9 ¹⁵³	-11	03.7 ¹¹⁵	0	5 11	5 37	6 00	22 55	41	10 33 42
13	14	05.9		09.7	125	30.2 ¹⁵³	-10	52.1 ¹¹⁶	10 S	28	5 54	17	49	44	42 38
14	29	05.8		09.6	140	04.6 ¹⁵⁴		40.5 ¹¹⁶	20	5 44	6 12	36	42	48	10 51 34
15	44	05.7		09.4	154	39.0 ¹⁵⁴		28.9 ¹¹⁶	30	6 00	30	6 56	34	53	11 01 29
16	59	05.6		09.3	169	13.5 ¹⁵⁵		17.3 ¹¹⁶	35	09	41	7 09	29	56	06 27
17	74	05.4	+23	09.1	183	48.0 ¹⁵⁵	-10	05.6 ¹¹⁷	40	6 18	6 52	7 23	22 24	58	11 13 24
18	89	05.3	+23	09.0	198	22.6 ¹⁵⁶	-9	53.9 ¹¹⁷	45	6 28	7 06	7 39	22 18	62	11 20 21
19	104	05.2		08.8	212	57.2 ¹⁵⁶		42.1 ¹¹⁸	50	40	21	8 00	10	67	29 17
20	119	05.1		08.7	227	31.8 ¹⁵⁶		30.3 ¹¹⁸	52	45	29	09	07	68	33 15
21	134	05.0		08.5	242	06.5 ¹⁵⁷		18.5 ¹¹⁸	54	51	37	20	22 03	71	38 13
22	149	04.8		08.3	256	41.3 ¹⁵⁸	-9	06.7 ¹¹⁸	56	6 57	46	33	21 59	73	43 11
23	164	04.7		08.2	271	16.0 ¹⁵⁷	-8	54.8 ¹¹⁹	58	7 03	7 56	8 47	54	76	48 9
24	179	04.6	+23	08.0	285	50.9 ¹⁵⁹	-8	42.9 ¹¹⁹	60 S	7 11	8 07	9 04	21 49	79	11 55 5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 27 ^m 5		Mag: -4.0 PMG: 14 ^h 51 ^m		Mag: +1.8 PMG: 13 ^h 00 ^m		Mag: -1.8 PMG: 13 ^h 05 ^m		Mag: +0.1 PMG: 10 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	277	53.3	137	15.5	+17	17.8	164	46.9	+22	50.5
1	292	55.8	152	15.2		16.8	179	47.6		50.3
2	307	58.2	167	14.8		15.9	194	48.4		50.0
3	323	00.7	182	14.4		15.0	209	49.1		49.8
4	338	03.2	197	14.0		14.0	224	49.8		49.5
5	353	05.6	212	13.7	+17	13.1	239	50.6	+22	49.3
6	8	08.1	227	13.3	+17	12.1	254	51.3	+22	49.0
7	23	10.6	242	12.9		11.2	269	52.0		48.8
8	38	13.0	257	12.5		10.3	284	52.8		48.5
9	53	15.5	272	12.2		09.3	299	53.5		48.3
10	68	17.9	287	11.8		08.4	314	54.2		48.0
11	83	20.4	302	11.4	+17	07.4	329	55.0	+22	47.8
12	98	22.9	317	11.0	+17	06.5	344	55.7	+22	47.5
13	113	25.3	332	10.7		05.5	359	56.4		47.3
14	128	27.8	347	10.3		04.6	14	57.2		47.0
15	143	30.3	2	09.9		03.6	29	57.9		46.8
16	158	32.7	17	09.6		02.7	44	58.6		46.5
17	173	35.2	32	09.2	+17	01.7	59	59.4	+22	46.3
18	188	37.7	47	08.8	+17	00.8	75	00.1	+22	46.0
19	203	40.1	62	08.5	+16	59.8	90	00.8		45.8
20	218	42.6	77	08.1		58.9	105	01.6		45.5
21	233	45.1	92	07.7		57.9	120	02.3		45.3
22	248	47.5	107	07.4		57.0	135	03.0		45.0
23	263	50.0	122	07.0		56.0	150	03.8		44.8
24	278	52.4	137	06.6	+16	55.1	165	04.5	+22	44.5
Dif	—		-4		-9		+7		-2	
									+19	
									-1	
									+21	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 20 ^d 0 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 03 ^m 8			SD: 14'8 PMG: 5 ^h 05 ^m R°: 41 ^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	179	04.6	+23 08.0	285	50.9	-8 42.9		60 N	21 25	23 03	** ** *	** ** *	** ** *	10 27	78	
1	194	04.5	07.9	300	25.7 ¹⁵⁸	30.9 ¹²⁰		58	21 05	22 18	** ** *	** ** *	** ** *	31	75	
2	209	04.3	07.7	315	00.6 ¹⁵⁹	19.0 ¹¹⁹		56	20 49	21 50	** ** *	** ** *	** ** *	34	73	
3	224	04.2	07.5	329	35.6 ¹⁶⁰	-8 07.0 ¹²⁰		54	35	29	23 08	23 58	12	37	70	
4	239	04.1	07.4	344	10.5 ¹⁵⁹	-7 55.0 ¹²⁰		52	23	21 11	22 27	56	14	40	68	
5	254	04.0	+23 07.2	358	45.6 ¹⁶¹	-7 42.9 ¹²¹		50	20 13	20 57	22 01	23 55	15	10	42	66
6	269	03.9	+23 07.0	13	20.6 ¹⁶⁰	-7 30.9 ¹²⁰		45	19 50	20 28	21 17	23 52	19	10	48	61
7	284	03.7	06.9	27	55.7 ¹⁶¹	18.8 ¹²¹		40	33	20 05	20 47	49	23	52	58	
8	299	03.6	06.7	42	30.8 ¹⁶¹	-7 06.7 ¹²¹		35	18	19 48	24	47	26	56	55	
9	314	03.5	06.5	57	06.0 ¹⁶²	-6 54.5 ¹²²		30	19 05	32	20 06	45	28	10	59	53
10	329	03.4	06.4	71	41.1 ¹⁶¹	42.4 ¹²¹		20	18 43	19 08	19 37	42	32	11	05	48
11	344	03.3	+23 06.2	86	16.4 ¹⁶³	-6 30.2 ¹²²		10 N	18 25	18 48	19 15	23 39	36	11	10	44
12	359	03.1	+23 06.0	100	51.6 ¹⁶²	-6 18.0 ¹²²		0	18 07	18 30	18 56	23 36	40	11	15	40
13	14	03.0	05.9	115	26.9 ¹⁶³	-6 05.7 ¹²³		10 S	17 50	18 13	39	33	44	20	36	
14	29	02.9	05.7	130	02.2 ¹⁶³	-5 53.5 ¹²²		20	32	17 56	23	30	48	25	32	
15	44	02.8	05.5	144	37.5 ¹⁶³	41.2 ¹²³		30	17 11	37	18 07	27	52	30	28	
16	59	02.7	05.3	159	12.8 ¹⁶³	28.9 ¹²³		35	16 59	27	17 59	25	55	33	26	
17	74	02.5	+23 05.2	173	48.2 ¹⁶⁴	-5 16.6 ¹²³		40	16 45	17 16	17 49	23 22	58	11	37	23
18	89	02.4	+23 05.0	188	23.6 ¹⁶⁴	-5 04.3 ¹²³		45	16 29	17 02	17 39	23 20	61	11	41	20
19	104	02.3	04.8	202	59.0 ¹⁶⁴	-4 52.0 ¹²³		50	16 08	16 46	28	17	65	46	16	
20	119	02.2	04.6	217	34.4 ¹⁶⁴	39.6 ¹²⁴		52	15 59	39	23	15	68	48	14	
21	134	02.1	04.5	232	09.9 ¹⁶⁵	27.3 ¹²³		54	48	31	17	14	69	51	12	
22	149	01.9	04.3	246	45.4 ¹⁶⁵	14.9 ¹²⁴		56	35	22	11	12	72	54	9	
23	164	01.8	04.1	261	20.9 ¹⁶⁵	-4 02.5 ¹²⁴		58	21	12	17 05	10	75	11	57	7
24	179	01.7	+23 03.9	275	56.4 ¹⁶⁵	-3 50.1 ¹²⁴		60 S	15 04	16 01	16 57	23 08	77	12	00	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 5 ^h 23 ^m 6		Mag: -4.1 PMG: 14 ^h 52 ^m			Mag: +1.8 PMG: 12 ^h 59 ^m			Mag: -1.8 PMG: 13 ^h 02 ^m			Mag: +0.1 PMG: 10 ^h 45 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	278	52.4	137 06.6	+16 55.1		165 04.5	+22 44.5		164 03.5	+21 46.2		198 20.0	+21 52.9			
1	293	54.9	152 06.3	54.1		180 05.2	44.3		179 05.4	46.2		213 22.2	53.0			
2	308	57.4	167 05.9	53.1		195 06.0	44.0		194 07.2	46.1		228 24.3	53.0			
3	323	59.8	182 05.6	52.2		210 06.7	43.8		209 09.1	46.0		243 26.4	53.0			
4	339	02.3	197 05.2	51.2		225 07.4	43.5		224 11.0	45.9		258 28.6	53.0			
5	354	04.8	212 04.8	+16 50.3		240 08.2	+22 43.2		239 12.9	+21 45.8		273 30.7	+21 53.1			
6	9	07.2	227 04.5	+16 49.3		255 08.9	+22 43.0		254 14.8	+21 45.7		288 32.8	+21 53.1			
7	24	09.7	242 04.1	48.4		270 09.6	42.7		269 16.6	45.6		303 34.9	53.1			
8	39	12.2	257 03.8	47.4		285 10.4	42.5		284 18.5	45.5		318 37.1	53.1			
9	54	14.6	272 03.4	46.4		300 11.1	42.2		299 20.4	45.4		333 39.2	53.1			
10	69	17.1	287 03.0	45.5		315 11.9	42.0		314 22.3	45.4		348 41.3	53.2			
11	84	19.6	302 02.7	+16 44.5		330 12.6	+22 41.7		329 24.1	+21 45.3		3 43.4	+21 53.2			
12	99	22.0	317 02.3	+16 43.5		345 13.3	+22 41.5		344 26.0	+21 45.2		18 45.6	+21 53.2			
13	114	24.5	332 02.0	42.6		0 14.1	41.2		359 27.9	45.1		33 47.7	53.2			
14	129	26.9	347 01.6	41.6		15 14.8	40.9		14 29.8	45.0		48 49.8	53.3			
15	144	29.4	2 01.3	40.7		30 15.5	40.7		29 31.7	44.9		63 51.9	53.3			
16	159	31.9	17 00.9	39.7		45 16.3	40.4		44 33.5	44.8		78 54.1	53.3			
17	174	34.3	32 00.6	+16 38.7		60 17.0	+22 40.2		59 35.4	+21 44.7		93 56.2	+21 53.3			
18	189	36.8	47 00.2	+16 37.8		75 17.7	+22 39.9		74 37.3	+21 44.6		108 58.3	+21 53.3			
19	204	39.3	61 59.9	36.8		90 18.5	39.6		89 39.2	44.6		124 00.4	53.4			
20	219	41.7	76 59.5	35.8		105 19.2	39.4		104 41.1	44.5		139 02.6	53.4			
21	234	44.2	91 59.2	34.8		120 20.0	39.1		119 42.9	44.4		154 04.7	53.4			
22	249	46.7	106 58.8	33.9		135 20.7	38.9		134 44.8	44.3		169 06.8	53.4			
23	264	49.1	121 58.5	32.9		150 21.4	38.6		149 46.7	44.2		184 08.9	53.5			
24	279	51.6	136 58.1	+16 31.9		165 22.2	+22 38.4		164 48.6	+21 44.1		199 11.1	+21 53.5			
Dif	—		-4	-10		+7	-3		+19	-1		+21	0			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 04 ^m 0				Edad: 21 ^d 0 PHE { SD: 14'8 PMG: 5 ^h 46 ^m R°: 40 ^m 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3													
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	01.7	+23	03.9	275	56.4	-3	50.1	60 N	** **	1 05	2 43	0 04	4	11 45	78		
1	194	01.6		03.8	290	31.9 ¹⁶⁵		37.7 ¹²⁴	58	** **	1 50	3 03	02	7	46	75		
2	209	01.5		03.6	305	07.4 ¹⁶⁵		25.2 ¹²⁵	56	** **	2 18	19	0 00	9	47	72		
3	224	01.3		03.4	319	43.0 ¹⁶⁶		12.8 ¹²⁴	54	1 00	39	33	** **	**	47	70		
4	239	01.2		03.2	334	18.6 ¹⁶⁶	-3	00.3 ¹²⁵	52	1 41	2 57	45	** **	**	48	68		
5	254	01.1	+23	03.0	348	54.1 ¹⁶⁵	-2	47.9 ¹²⁴	50	2 07	3 11	3 55	** **	**	11 48	66		
6	269	01.0	+23	02.9	3	29.7 ¹⁶⁶	-2	35.4 ¹²⁵	45	2 51	3 40	4 17	** **	**	11 49	62		
7	284	00.9		02.7	18	05.3 ¹⁶⁶		22.9 ¹²⁵	40	3 21	4 02	35	** **	**	50	59		
8	299	00.7		02.5	32	41.0 ¹⁶⁷	-2	10.4 ¹²⁵	35	3 44	20	4 50	** **	**	51	55		
9	314	00.6		02.3	47	16.6 ¹⁶⁶	-1	57.9 ¹²⁵	30	4 02	4 35	5 03	** **	**	52	52		
10	329	00.5		02.1	61	52.2 ¹⁶⁶		45.4 ¹²⁵	20	31	5 00	24	** **	**	53	48		
11	344	00.4	+23	01.9	76	27.8 ¹⁶⁶	-1	32.9 ¹²⁵	10 N	4 53	5 20	5 43	** **	**	11 54	44		
12	359	00.3	+23	01.8	91	03.5 ¹⁶⁷	-1	20.4 ¹²⁵	0	5 12	5 38	6 00	** **	**	11 55	40		
13	14	00.2		01.6	105	39.1 ¹⁶⁶	-1	07.9 ¹²⁵	10 S	28	5 55	17	** **	**	56	37		
14	29	00.0		01.4	120	14.7 ¹⁶⁶	-0	55.3 ¹²⁶	20	5 44	6 12	36	** **	**	57	33		
15	43	59.9		01.2	134	50.4 ¹⁶⁷		42.8 ¹²⁵	30	6 00	30	6 57	** **	**	58	28		
16	58	59.8		01.0	149	26.0 ¹⁶⁶		30.3 ¹²⁵	35	09	41	7 09	** **	**	11 59	26		
17	73	59.7	+23	00.8	164	01.7 ¹⁶⁷	-0	17.7 ¹²⁶	40	6 18	6 52	7 23	** **	**	12 00	22		
18	88	59.6	+23	00.6	178	37.3 ¹⁶⁶	-0	05.2 ¹²⁵	45	6 28	7 05	7 39	** **	**	12 01	19		
19	103	59.4		00.4	193	12.9 ¹⁶⁶	+0	07.4 ¹²⁶	50	40	21	7 59	** **	**	02	15		
20	118	59.3	+23	00.2	207	48.6 ¹⁶⁷		19.9 ¹²⁵	52	45	28	8 09	** **	**	02	14		
21	133	59.2	+23	00.0	222	24.2 ¹⁶⁶		32.5 ¹²⁶	54	50	36	20	** **	**	03	11		
22	148	59.1	+22	59.9	236	59.8 ¹⁶⁶		45.0 ¹²⁵	56	6 56	45	32	** **	**	03	9		
23	163	59.0		59.7	251	35.4 ¹⁶⁶	+0	57.6 ¹²⁶	58	7 03	7 55	8 46	** **	**	04	7		
24	178	58.9	+22	59.5	266	11.0 ¹⁶⁶	+1	10.1 ¹²⁵	60 S	7 10	8 06	9 03	** **	**	12 04	5		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 19 ^m 7		Mag: -4.1 PMG: 14 ^h 52 ^m				Mag: +1.8 PMG: 12 ^h 58 ^m				Mag: -1.8 PMG: 12 ^h 59 ^m				Mag: +0.1 PMG: 10 ^h 42 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	279	51.6	136	58.1	+16	31.9	165	22.2	+22	38.4	164	48.6	+21	44.1	199	11.1	+21	53.5
1	294	54.0	151	57.8		31.0	180	22.9		38.1	179	50.4		44.0	214	13.2		53.5
2	309	56.5	166	57.4		30.0	195	23.6		37.8	194	52.3		43.9	229	15.3		53.5
3	324	59.0	181	57.1		29.0	210	24.4		37.6	209	54.2		43.8	244	17.5		53.5
4	340	01.4	196	56.8		28.0	225	25.1		37.3	224	56.1		43.8	259	19.6		53.6
5	355	03.9	211	56.4	+16	27.1	240	25.9	+22	37.0	239	58.0	+21	43.7	274	21.7	+21	53.6
6	10	06.4	226	56.1	+16	26.1	255	26.6	+22	36.8	254	59.8	+21	43.6	289	23.8	+21	53.6
7	25	08.8	241	55.7		25.1	270	27.3		36.5	270	01.7		43.5	304	26.0		53.6
8	40	11.3	256	55.4		24.1	285	28.1		36.3	285	03.6		43.4	319	28.1		53.6
9	55	13.8	271	55.0		23.2	300	28.8		36.0	300	05.5		43.3	334	30.2		53.7
10	70	16.2	286	54.7		22.2	315	29.6		35.7	315	07.3		43.2	349	32.3		53.7
11	85	18.7	301	54.4	+16	21.2	330	30.3	+22	35.5	330	09.2	+21	43.1	4	34.5	+21	53.7
12	100	21.2	316	54.0	+16	20.2	345	31.0	+22	35.2	345	11.1	+21	43.0	19	36.6	+21	53.7
13	115	23.6	331	53.7		19.2	0	31.8		34.9	0	13.0		42.9	34	38.7		53.8
14	130	26.1	346	53.4		18.3	15	32.5		34.7	15	14.9		42.9	49	40.9		53.8
15	145	28.5	1	53.0		17.3	30	33.3		34.4	30	16.7		42.8	64	43.0		53.8
16	160	31.0	16	52.7		16.3	45	34.0		34.1	45	18.6		42.7	79	45.1		53.8
17	175	33.5	31	52.3	+16	15.3	60	34.7	+22	33.9	60	20.5	+21	42.6	94	47.2	+21	53.8
18	190	35.9	46	52.0	+16	14.3	75	35.5	+22	33.6	75	22.4	+21	42.5	109	49.4	+21	53.9
19	205	38.4	61	51.7		13.4	90	36.2		33.4	90	24.3		42.4	124	51.5		53.9
20	220	40.9	76	51.3		12.4	105	37.0		33.1	105	26.1		42.3	139	53.6		53.9
21	235	43.3	91	51.0		11.4	120	37.7		32.8	120	28.0		42.2	154	55.7		53.9
22	250	45.8	106	50.7		10.4	135	38.4		32.6	135	29.9		42.1	169	57.9		53.9
23	265	48.3	121	50.3		9.4	150	39.2		32.3	150	31.8		42.0	185	00.0		54.0
24	280	50.7	136	50.0	+16	08.4	165	39.9	+22	32.0	165	33.6	+21	42.0	200	02.1	+21	54.0
Dif	—		-3		-10		+7		-3		+19		-1		+21		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 22 ^d 0 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /4 20 ^h : 54 ^h /4											
	PMG: 12 ^h 04 ^m 2			SD: 14'8 PMG: 6 ^h 26 ^m R°: 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
0	178	58.9	+22 59.5	266	11.0	+1 10.1		60 N	21 23	22 58	** **	0 08	4	13 03	79
1	193	58.7		280	46.6 ¹⁶⁶	22.6 ¹²⁵		58	21 04	22 16	** **	09	7	13 01	76
2	208	58.6	59.1	295	22.2 ¹⁶⁶	35.2 ¹²⁶		56	20 48	21 49	** **	09	10	12 59	73
3	223	58.5	58.9	309	57.8 ¹⁶⁶	+1 47.7 ¹²⁵		54	34	27	23 04	10	11	57	71
4	238	58.4	58.7	324	33.4 ¹⁶⁶	+2 00.3 ¹²⁶		52	22	21 10	22 25	10	14	56	68
5	253	58.3	+22 58.5	339	08.9 ¹⁶⁵	+2 12.8 ¹²⁵		50	20 12	20 56	21 59	0 10	16	12 54	67
6	268	58.2	+22 58.3	353	44.4 ¹⁶⁵	+2 25.3 ¹²⁵		45	19 50	20 27	21 16	0 11	20	12 51	63
7	283	58.0	58.1	8	20.0 ¹⁶⁶	37.8 ¹²⁵		40	32	20 05	20 46	12	23	49	59
8	298	57.9	57.9	22	55.5 ¹⁶⁵	+2 50.3 ¹²⁵		35	18	19 47	24	13	25	46	56
9	313	57.8	57.7	37	30.9 ¹⁶⁴	+3 02.9 ¹²⁶		30	19 05	32	20 06	13	29	44	54
10	328	57.7	57.5	52	06.4 ¹⁶⁵	15.3 ¹²⁴		20	18 44	19 08	19 37	14	33	41	49
11	343	57.6	+22 57.3	66	41.9 ¹⁶⁵	+3 27.8 ¹²⁵		10 N	18 25	18 48	19 15	0 15	37	12 38	45
12	358	57.5	+22 57.1	81	17.3 ¹⁶⁴	+3 40.3 ¹²⁵		0	18 08	18 30	18 56	0 16	41	12 35	42
13	13	57.4	56.9	95	52.7 ¹⁶⁴	+3 52.8 ¹²⁵		10 S	17 51	18 14	40	17	44	33	37
14	28	57.2	56.7	110	28.1 ¹⁶⁴	+4 05.3 ¹²⁵		20	33	17 57	24	18	48	30	33
15	43	57.1	56.5	125	03.4 ¹⁶³	17.7 ¹²⁴		30	12	38	18 08	19	53	26	29
16	58	57.0	56.3	139	38.8 ¹⁶⁴	30.1 ¹²⁴		35	17 00	28	17 59	20	55	25	26
17	73	56.9	+22 56.1	154	14.1 ¹⁶³	+4 42.6 ¹²⁵		40	16 46	17 16	17 50	0 20	59	12 22	24
18	88	56.8	+22 55.8	168	49.4 ¹⁶³	+4 55.0 ¹²⁴		45	16 30	17 03	17 40	0 21	62	12 20	20
19	103	56.7	55.6	183	24.6 ¹⁶²	+5 07.4 ¹²⁴		50	10	16 48	29	22	67	17	16
20	118	56.6	55.4	197	59.8 ¹⁶²	19.8 ¹²⁴		52	16 00	40	24	23	68	16	14
21	133	56.4	55.2	212	35.0 ¹⁶²	32.2 ¹²⁴		54	15 49	33	18	23	71	14	12
22	148	56.3	55.0	227	10.2 ¹⁶²	44.5 ¹²³		56	37	24	13	24	73	12	10
23	163	56.2	54.8	241	45.3 ¹⁶¹	+5 56.9 ¹²⁴		58	23	14	17 06	25	75	11	7
24	178	56.1	+22 54.6	256	20.4 ¹⁶¹	+6 09.2 ¹²³		60 S	15 06	16 03	16 59	0 25	79	12 09	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 15 ^m 8		Mag: -4.1 PMG: 14 ^h 53 ^m			Mag: +1.8 PMG: 12 ^h 57 ^m			Mag: -1.8 PMG: 12 ^h 56 ^m			Mag: +0.1 PMG: 10 ^h 38 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	280	50.7	136	50.0	+16 08.4	165	39.9	+22 32.0	165	33.6	+21 42.0	200	02.1	+21 54.0	
1	295	53.2	151	49.7	07.4	180	40.7	31.8	180	35.5	41.9	215	04.3	54.0	
2	310	55.6	166	49.4	06.5	195	41.4	31.5	195	37.4	41.8	230	06.4	54.0	
3	325	58.1	181	49.0	05.5	210	42.1	31.2	210	39.3	41.7	245	08.5	54.0	
4	341	00.6	196	48.7	04.5	225	42.9	30.9	225	41.1	41.6	260	10.6	54.1	
5	356	03.0	211	48.4	+16 03.5	240	43.6	+22 30.7	240	43.0	+21 41.5	275	12.8	+21 54.1	
6	11	05.5	226	48.1	+16 02.5	255	44.4	+22 30.4	255	44.9	+21 41.4	290	14.9	+21 54.1	
7	26	08.0	241	47.7	01.5	270	45.1	30.1	270	46.8	41.3	305	17.0	54.1	
8	41	10.4	256	47.4	+16 00.5	285	45.9	29.9	285	48.7	41.2	320	19.1	54.2	
9	56	12.9	271	47.1	+15 59.5	300	46.6	29.6	300	50.5	41.1	335	21.3	54.2	
10	71	15.4	286	46.8	58.5	315	47.3	29.3	315	52.4	41.0	350	23.4	54.2	
11	86	17.8	301	46.4	+15 57.5	330	48.1	+22 29.1	330	54.3	+21 41.0	5	25.5	+21 54.2	
12	101	20.3	316	46.1	+15 56.5	345	48.8	+22 28.8	345	56.2	+21 40.9	20	27.7	+21 54.2	
13	116	22.8	331	45.8	55.5	0	49.6	28.5	0	58.0	40.8	35	29.8	54.3	
14	131	25.2	346	45.5	54.5	15	50.3	28.2	15	59.9	40.7	50	31.9	54.3	
15	146	27.7	1	45.1	53.5	30	51.1	28.0	31	01.8	40.6	65	34.0	54.3	
16	161	30.1	16	44.8	52.5	45	51.8	27.7	46	03.7	40.5	80	36.2	54.3	
17	176	32.6	31	44.5	+15 51.5	60	52.5	+22 27.4	61	05.6	+21 40.4	95	38.3	+21 54.3	
18	191	35.1	46	44.2	+15 50.6	75	53.3	+22 27.2	76	07.4	+21 40.3	110	40.4	+21 54.4	
19	206	37.5	61	43.9	49.6	90	54.0	26.9	91	09.3	40.2	125	42.6	54.4	
20	221	40.0	76	43.6	48.6	105	54.8	26.6	106	11.2	40.1	140	44.7	54.4	
21	236	42.5	91	43.2	47.6	120	55.5	26.3	121	13.1	40.0	155	46.8	54.4	
22	251	44.9	106	42.9	46.5	135	56.3	26.1	136	14.9	40.0	170	48.9	54.4	
23	266	47.4	121	42.6	45.5	150	57.0	25.8	151	16.8	39.9	185	51.1	54.5	
24	281	49.9	136	42.3	+15 44.5	165	57.7	+22 25.5	166	18.7	+21 39.8	200	53.2	+21 54.5	
Dif	—		-3	-10		+7	-3		+19		-1		+21		

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 4				Edad: 23 ^d 0 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8 PMG: 7 ^h 07 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	56.1	+22	54.6	256	20.4	+6	09.2	60 N	** **	1 10	2 45	0 12	6	14	22	82	
1	193	56.0		54.4	270	55.5 ¹⁶¹		21.5 ¹²³	58	** **	1 53	3 05	16	8		17	79	
2	208	55.9		54.2	285	30.5 ¹⁶⁰		33.8 ¹²³	56	** **	2 20	21	19	11		12	76	
3	223	55.8		53.9	300	05.5 ¹⁶⁰		46.0 ¹²²	54	1 05	41	34	21	13		08	73	
4	238	55.6		53.7	314	40.5 ¹⁶⁰	+6	58.3 ¹²³	52	1 44	2 58	46	24	15		04	71	
5	253	55.5	+22	53.5	329	15.4 ¹⁵⁹	+7	10.5 ¹²²	50	2 09	3 13	3 57	0 26	17	14	01	69	
6	268	55.4	+22	53.3	343	50.3 ¹⁵⁹	+7	22.7 ¹²²	45	2 53	3 42	4 19	0 31	21	13	54	64	
7	283	55.3		53.1	358	25.1 ¹⁵⁸		34.9 ¹²²	40	3 22	4 04	36	35	24		48	60	
8	298	55.2		52.9	12	59.9 ¹⁵⁸		47.1 ¹²²	35	3 45	21	4 51	38	28		42	58	
9	313	55.1		52.7	27	34.6 ¹⁵⁷	+7	59.2 ¹²¹	30	4 03	4 36	5 04	42	30		38	55	
10	328	55.0		52.4	42	09.3 ¹⁵⁷	+8	11.4 ¹²²	20	32	5 01	25	47	35		30	51	
11	343	54.9	+22	52.2	56	44.0 ¹⁵⁷	+8	23.4 ¹²⁰	10 N	4 54	5 21	5 44	0 52	38	13	23	47	
12	358	54.7	+22	52.0	71	18.6 ¹⁵⁶	+8	35.5 ¹²¹	0	5 12	5 38	6 01	0 57	42	13	17	43	
13	13	54.6		51.8	85	53.2 ¹⁵⁶		47.6 ¹²¹	10 S	29	5 55	18	1 01	46		10	40	
14	28	54.5		51.6	100	27.7 ¹⁵⁵	+8	59.6 ¹²⁰	20	5 44	6 12	36	06	50		13	03	36
15	43	54.4		51.3	115	02.2 ¹⁵⁵	+9	11.6 ¹²⁰	30	6 00	30	6 56	12	54		12	55	32
16	58	54.3		51.1	129	36.6 ¹⁵⁴		23.5 ¹¹⁹	35	09	40	7 08	15	57		51	29	
17	73	54.2	+22	50.9	144	11.0 ¹⁵⁴	+9	35.5 ¹²⁰	40	6 18	6 52	7 22	1 19	60		12	46	26
18	88	54.1	+22	50.7	158	45.3 ¹⁵³	+9	47.4 ¹¹⁹	45	6 28	7 05	7 39	1 23	64		12	40	22
19	103	54.0		50.4	173	19.6 ¹⁵³	+9	59.2 ¹¹⁸	50	39	21	7 59	29	68		33	18	
20	118	53.8		50.2	187	53.8 ¹⁵²	+10	11.1 ¹¹⁹	52	44	28	8 08	31	70		30	16	
21	133	53.7		50.0	202	28.0 ¹⁵²		22.9 ¹¹⁸	54	50	36	19	34	72		26	14	
22	148	53.6		49.8	217	02.1 ¹⁵¹		34.6 ¹¹⁷	56	6 56	44	31	37	74		22	12	
23	163	53.5		49.5	231	36.1 ¹⁵⁰		46.4 ¹¹⁸	58	7 02	7 54	8 45	40	78		18	9	
24	178	53.4	+22	49.3	246	10.1 ¹⁵⁰	+10	58.1 ¹¹⁷	60 S	7 09	8 05	9 02	1 44	81		12	13	6

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 11 ^m 8		Mag: -4.1 PMG: 14 ^h 53 ^m				Mag: +1.8 PMG: 12 ^h 56 ^m				Mag: -1.8 PMG: 12 ^h 53 ^m				Mag: +0.1 PMG: 10 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	281	49.9	136	42.3	+15	44.5	165	57.7	+22	25.5	166	18.7	+21	39.8	200	53.2	+21	54.5
1	296	52.3	151	42.0		43.5	180	58.5		25.2	181	20.6		39.7	215	55.3		54.5
2	311	54.8	166	41.7		42.5	195	59.2		25.0	196	22.5		39.6	230	57.5		54.5
3	326	57.3	181	41.4		41.5	211	00.0		24.7	211	24.3		39.5	245	59.6		54.6
4	341	59.7	196	41.1		40.5	226	00.7		24.4	226	26.2		39.4	261	01.7		54.6
5	357	02.2	211	40.7	+15	39.5	241	01.5	+22	24.1	241	28.1	+21	39.3	276	03.8	+21	54.6
6	12	04.6	226	40.4	+15	38.5	256	02.2	+22	23.9	256	30.0	+21	39.2	291	06.0	+21	54.6
7	27	07.1	241	40.1		37.5	271	03.0		23.6	271	31.8		39.1	306	08.1		54.6
8	42	09.6	256	39.8		36.5	286	03.7		23.3	286	33.7		39.0	321	10.2		54.7
9	57	12.0	271	39.5		35.5	301	04.5		23.0	301	35.6		38.9	336	12.4		54.7
10	72	14.5	286	39.2		34.5	316	05.2		22.8	316	37.5		38.9	351	14.5		54.7
11	87	17.0	301	38.9	+15	33.5	331	05.9	+22	22.5	331	39.3	+21	38.8	6	16.6	+21	54.7
12	102	19.4	316	38.6	+15	32.5	346	06.7	+22	22.2	346	41.2	+21	38.7	21	18.7	+21	54.7
13	117	21.9	331	38.3		31.5	1	07.4		21.9	1	43.1		38.6	36	20.9		54.8
14	132	24.4	346	38.0		30.4	16	08.2		21.7	16	45.0		38.5	51	23.0		54.8
15	147	26.8	1	37.7		29.4	31	08.9		21.4	31	46.9		38.4	66	25.1		54.8
16	162	29.3	16	37.4		28.4	46	09.7		21.1	46	48.7		38.3	81	27.3		54.8
17	177	31.7	31	37.1	+15	27.4	61	10.4	+22	20.8	61	50.6	+21	38.2	96	29.4	+21	54.8
18	192	34.2	46	36.8	+15	26.4	76	11.2	+22	20.5	76	52.5	+21	38.1	111	31.5	+21	54.9
19	207	36.7	61	36.5		25.4	91	11.9		20.3	91	54.4		38.0	126	33.7		54.9
20	222	39.1	76	36.2		24.4	106	12.7		20.0	106	56.2		37.9	141	35.8		54.9
21	237	41.6	91	35.9		23.4	121	13.4		19.7	121	58.1		37.8	156	37.9		54.9
22	252	44.1	106	35.6		22.3	136	14.2		19.4	137	00.0		37.7	171	40.0		54.9
23	267	46.5	121	35.3		21.3	151	14.9		19.1	152	01.9		37.7	186	42.2		55.0
24	282	49.0	136	35.0	+15	20.3	166	15.7	+22	18.9	167	03.7	+21	37.6	201	44.3	+21	55.0
Dif	—		-3		-10		+7		-3		+19		-1		+21		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 24 ^d 0	PHE { 4 ^h : 54/9 12 ^h : 55/1 20 ^h : 55/3									
	PMG: 12 ^h 04 ^m 5					SD: 14'9			PMG: 7 ^h 49 ^m		R°: 45 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m
0	178	53.4	+22 49.3	246	10.1	+10 58.1	150	60 N	21 22	22 54	** **	0 18	7	15 44
1	193	53.3	49.1	260	44.1	+11 09.8	117	58	21 02	22 13	** **	24	11	36 81
2	208	53.2	48.9	275	17.9	21.4	116	56	20 47	21 47	** **	30	13	28 78
3	223	53.1	48.6	289	51.7	33.0	116	54	33	26	23 00	34	16	21 76
4	238	53.0	48.4	304	25.5	44.6	116	52	21	21 09	22 23	39	18	15 73
5	253	52.9	+22 48.2	318	59.2	+11 56.1	115	50	20 11	20 55	21 57	0 43	20	15 10
6	268	52.7	+22 47.9	333	32.8	+12 07.5	114	45	19 49	20 26	21 15	0 52	24	14 58
7	283	52.6	47.7	348	06.4	19.0	115	40	32	20 05	20 46	0 59	28	48 63
8	298	52.5	47.5	2	39.9	30.4	114	35	17	19 47	23	1 06	30	40 60
9	313	52.4	47.2	17	13.3	41.7	113	30	19 05	32	20 05	12	33	33 57
10	328	52.3	47.0	31	46.7	+12 53.0	113	20	18 44	19 08	19 37	22	37	21 53
11	343	52.2	+22 46.8	46	20.0	+13 04.3	113	10 N	18 25	18 48	19 15	1 30	41	14 10
12	358	52.1	+22 46.5	60	53.2	+13 15.5	112	0	18 08	18 31	18 57	1 39	44	14 00
13	13	52.0	46.3	75	26.4	26.7	112	10 S	17 51	18 14	40	47	48	13 50
14	28	51.9	46.0	89	59.4	37.8	111	20	33	17 57	25	1 56	52	39 39
15	43	51.8	45.8	104	32.5	48.9	111	30	13	39	09	2 06	56	27 34
16	58	51.7	45.6	119	05.4	+13 59.9	110	35	17 01	29	18 00	12	59	20 32
17	73	51.5	+22 45.3	133	38.3	+14 10.9	110	40	16 47	17 17	17 51	2 19	62	13 12
18	88	51.4	+22 45.1	148	11.1	+14 21.8	109	45	16 31	17 04	17 41	2 27	65	13 02
19	103	51.3	44.8	162	43.8	32.7	109	50	11	16 49	30	37	69	12 51
20	118	51.2	44.6	177	16.4	43.5	108	52	16 02	42	25	41	72	46 20
21	133	51.1	44.4	191	49.0	+14 54.3	108	54	15 51	34	20	46	74	40 18
22	148	51.0	44.1	206	21.5	+15 05.0	107	56	39	25	14	51	78	34 15
23	163	50.9	43.9	220	53.9	15.7	107	58	25	16	08	2 58	80	27 12
24	178	50.8	+22 43.6	235	26.3	+15 26.3	106	60 S	15 08	16 05	17 01	3 05	84	12 19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 07 ^m 9		Mag: -4.1 PMG: 14 ^h 54 ^m		Mag: +1.8 PMG: 12 ^h 54 ^m		Mag: -1.8 PMG: 12 ^h 50 ^m		Mag: +0.1 PMG: 10 ^h 32 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	282	49.0	136	35.0	+15 20.3	166	15.7	+22 18.9	167	03.7	+21 37.6	201	44.3	+21 55.0	
1	297	51.5	151	34.7	19.3	181	16.4	18.6	182	05.6	37.5	216	46.4	55.0	
2	312	53.9	166	34.4	18.3	196	17.2	18.3	197	07.5	37.4	231	48.6	55.0	
3	327	56.4	181	34.1	17.2	211	17.9	18.0	212	09.4	37.3	246	50.7	55.0	
4	342	58.9	196	33.8	16.2	226	18.7	17.7	227	11.2	37.2	261	52.8	55.1	
5	358	01.3	211	33.5	+15 15.2	241	19.4	+22 17.4	242	13.1	+21 37.1	276	54.9	+21 55.1	
6	13	03.8	226	33.2	+15 14.2	256	20.2	+22 17.2	257	15.0	+21 37.0	291	57.1	+21 55.1	
7	28	06.2	241	32.9	13.2	271	20.9	16.9	272	16.9	36.9	306	59.2	55.1	
8	43	08.7	256	32.6	12.1	286	21.6	16.6	287	18.8	36.8	322	01.3	55.1	
9	58	11.2	271	32.3	11.1	301	22.4	16.3	302	20.6	36.7	337	03.5	55.2	
10	73	13.6	286	32.0	10.1	316	23.1	16.0	317	22.5	36.6	352	05.6	55.2	
11	88	16.1	301	31.7	+15 09.1	331	23.9	+22 15.7	332	24.4	+21 36.5	7	07.7	+21 55.2	
12	103	18.6	316	31.4	+15 08.0	346	24.6	+22 15.5	347	26.3	+21 36.5	22	09.9	+21 55.2	
13	118	21.0	331	31.2	07.0	1	25.4	15.2	2	28.1	36.4	37	12.0	55.2	
14	133	23.5	346	30.9	06.0	16	26.1	14.9	17	30.0	36.3	52	14.1	55.3	
15	148	26.0	1	30.6	05.0	31	26.9	14.6	32	31.9	36.2	67	16.3	55.3	
16	163	28.4	16	30.3	03.9	46	27.6	14.3	47	33.8	36.1	82	18.4	55.3	
17	178	30.9	31	30.0	+15 02.9	61	28.4	+22 14.0	62	35.6	+21 36.0	97	20.5	+21 55.3	
18	193	33.4	46	29.7	+15 01.9	76	29.1	+22 13.7	77	37.5	+21 35.9	112	22.6	+21 55.3	
19	208	35.8	61	29.4	+15 00.9	91	29.9	13.5	92	39.4	35.8	127	24.8	55.4	
20	223	38.3	76	29.2	+14 59.8	106	30.6	13.2	107	41.3	35.7	142	26.9	55.4	
21	238	40.7	91	28.9	58.8	121	31.4	12.9	122	43.1	35.6	157	29.0	55.4	
22	253	43.2	106	28.6	57.8	136	32.2	12.6	137	45.0	35.5	172	31.2	55.4	
23	268	45.7	121	28.3	56.7	151	32.9	12.3	152	46.9	35.4	187	33.3	55.4	
24	283	48.1	136	28.0	+14 55.7	166	33.7	+22 12.0	167	48.8	+21 35.3	202	35.4	+21 55.5	
Dif	—		-3	-10		+7	-3		+19		-1		+21		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 ^m PMG: 12 ^h 04 ^m 7			Edad: 25 ^d 0 PHE { SD: 15 ^h 1 ^m PMG: 8 ^h 34 ^m R°: 49 ^m 4 ^h : 55 ^s 5 12 ^h : 55 ^s 7 20 ^h : 55 ^s 9														
	hG ☉	Dec	Dif	hG ☾	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°				
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	m
0	178	50.8	+22 43.6	235	26.3	+15 26.3	60 N	** **	1 16	2 48	0 25	11	17 09	87				
1	193	50.7	43.4	249	58.5 ¹³²	36.8 ¹⁰⁵	58	** **	1 56	3 07	35 14	16 57	82					
2	208	50.6	43.1	264	30.7 ¹³²	47.3 ¹⁰⁵	56	** **	2 23	23	43 18	46 79						
3	223	50.5	42.9	279	02.8 ¹³¹	+15 57.7 ¹⁰⁴	54	1 10	2 44	36	50 21	37 76						
4	238	50.4	42.7	293	34.8 ¹³⁰	+16 08.1 ¹⁰⁴	52	1 47	3 00	48	0 57 23	28 74						
5	253	50.3	+22 42.4	308	06.7 ¹²⁹	+16 18.4 ¹⁰³	50	2 12	3 15	3 58	1 03 25	16 21 71						
6	268	50.2	+22 42.2	322	38.6 ¹²⁹	+16 28.6 ¹⁰²	45	2 55	3 43	4 20	1 16 29	16 04 68						
7	283	50.0	41.9	337	10.4 ¹²⁸	38.8 ¹⁰²	40	3 24	4 05	37	27 32	15 51 65						
8	298	49.9	41.7	351	42.0 ¹²⁶	48.9 ¹⁰¹	35	3 46	22	4 52	36 35	40 62						
9	313	49.8	41.4	6	13.6 ¹²⁶	+16 58.9 ¹⁰⁰	30	4 04	4 37	5 04	45 37	30 60						
10	328	49.7	41.2	20	45.1 ¹²⁵	+17 08.9 ¹⁰⁰	20	32	5 01	26	1 59 41	15 14 56						
11	343	49.6	+22 40.9	35	16.6 ¹²⁵	+17 18.8 ⁹⁹	10 N	4 54	5 21	5 44	2 11 45	14 59 53						
12	358	49.5	+22 40.6	49	47.9 ¹²³	+17 28.6 ⁹⁸	0	5 13	5 39	6 01	2 23 48	14 46 49						
13	13	49.4	40.4	64	19.1 ¹²²	38.4 ⁹⁸	10 S	29	5 55	18	35 51	32 47						
14	28	49.3	40.1	78	50.3 ¹²²	48.1 ⁹⁷	20	5 45	6 12	36	2 48 54	18 43						
15	43	49.2	39.9	93	21.4 ¹²¹	+17 57.7 ⁹⁶	30	6 00	30	6 56	3 02 59	14 01 40						
16	58	49.1	39.6	107	52.4 ¹²⁰	+18 07.3 ⁹⁶	35	09	40	7 08	11 61	13 52 38						
17	73	49.0	+22 39.4	122	23.3 ¹¹⁹	+18 16.7 ⁹⁴	40	6 18	6 52	7 22	3 21 64	13 41 35						
18	88	48.9	+22 39.1	136	54.1 ¹¹⁸	+18 26.1 ⁹⁴	45	6 28	7 04	7 38	3 32 68	13 28 32						
19	103	48.8	38.9	151	24.8 ¹¹⁷	35.4 ⁹³	50	39	20	7 58	46 72	13 28						
20	118	48.7	38.6	165	55.4 ¹¹⁶	44.6 ⁹²	52	44	27	8 07	3 53 74	13 06 26						
21	133	48.6	38.3	180	25.9 ¹¹⁵	+18 53.8 ⁹²	54	49	35	18	4 00 77	12 58 23						
22	148	48.5	38.1	194	56.4 ¹¹⁵	+19 02.9 ⁹¹	56	6 55	43	30	09 79	49 21						
23	163	48.4	37.8	209	26.7 ¹¹³	11.8 ⁸⁹	58	7 01	7 53	8 44	18 83	39 17						
24	178	48.3	+22 37.6	223	57.0 ¹¹³	+19 20.7 ⁸⁹	60 S	7 08	8 04	9 00	4 29 87	12 28 13						

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 04 ^m 0		Mag: -4.1 PMG: 14 ^h 54 ^m		Mag: +1.8 PMG: 12 ^h 53 ^m		Mag: -1.8 PMG: 12 ^h 47 ^m		Mag: +0.1 PMG: 10 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	283	48.1	136	28.0	+14	55.7	166	33.7	+22	12.0
1	298	50.6	151	27.7		54.7	181	34.4		11.7
2	313	53.1	166	27.5		53.6	196	35.2		11.4
3	328	55.5	181	27.2		52.6	211	35.9		11.2
4	343	58.0	196	26.9		51.6	226	36.7		10.9
5	359	00.5	211	26.6	+14	50.5	241	37.4	+22	10.6
6	14	02.9	226	26.3	+14	49.5	256	38.2	+22	10.3
7	29	05.4	241	26.1		48.5	271	38.9		10.0
8	44	07.8	256	25.8		47.4	286	39.7		09.7
9	59	10.3	271	25.5		46.4	301	40.4		09.4
10	74	12.8	286	25.2		45.4	316	41.2		09.1
11	89	15.2	301	25.0	+14	44.3	331	41.9	+22	08.8
12	104	17.7	316	24.7	+14	43.3	346	42.7	+22	08.5
13	119	20.2	331	24.4		42.2	1	43.4		08.3
14	134	22.6	346	24.1		41.2	16	44.2		08.0
15	149	25.1	1	23.9		40.2	31	44.9		07.7
16	164	27.6	16	23.6		39.1	46	45.7		07.4
17	179	30.0	31	23.3	+14	38.1	61	46.4	+22	07.1
18	194	32.5	46	23.1	+14	37.0	76	47.2	+22	06.8
19	209	35.0	61	22.8		36.0	91	48.0		06.5
20	224	37.4	76	22.5		35.0	106	48.7		06.2
21	239	39.9	91	22.3		33.9	121	49.5		05.9
22	254	42.3	106	22.0		32.9	136	50.2		05.6
23	269	44.8	121	21.7		31.8	151	51.0		05.3
24	284	47.3	136	21.5	+14	30.8	166	51.7	+22	05.0
Dif	—		-3		-10		+8		-3	
							+19		-1	
									+21	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 9			Edad: 26 ^d 0 PHE { 4 ^h : 56 ^h 1 12 ^h : 56 ^h 3 20 ^h : 56 ^h 6 SD: 15 ^h 2 PMG: 9 ^h 23 ^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	178	48.3	+22 37.6	223	57.0	+19 20.7	89	60 N	21 19	22 48	** **	0 36 17	18 36 84		
1	193	48.2	37.3	238	27.1 ¹¹¹	29.6	89	58	21 01	22 10	** **	0 49 22	19 80		
2	208	48.1	37.0	252	57.2 ¹¹¹	38.3	87	56	20 45	21 44	** **	1 01 25	18 05 76		
3	223	48.0	36.8	267	27.2 ¹¹⁰	46.9	86	54	32	24	22 55	11 27	17 53 73		
4	238	47.8	36.5	281	57.1 ¹⁰⁹	+19 55.5	86	52	20	21 07	22 20	20 30	42 72		
5	253	47.7	+22 36.3	296	26.9 ¹⁰⁸	+20 04.0	85	50	20 10	20 53	21 55	1 28 32	17 32 70		
6	268	47.6	+22 36.0	310	56.5 ¹⁰⁶	+20 12.3	83	45	19 49	20 25	21 14	1 45 36	17 12 67		
7	283	47.5	35.7	325	26.1 ¹⁰⁶	20.6	82	40	31	20 04	20 45	1 59 39	16 56 64		
8	298	47.4	35.5	339	55.7 ¹⁰⁶	28.8	82	35	17	19 46	23	2 11 41	42 63		
9	313	47.3	35.2	354	25.1 ¹⁰⁴	36.9	81	30	19 05	32	20 05	22 43	30 61		
10	328	47.2	34.9	8	54.4 ¹⁰³	44.9	80	20	18 44	19 08	19 37	40 46	16 10 58		
11	343	47.1	+22 34.7	23	23.6 ¹⁰²	+20 52.8	79	10 N	18 25	18 48	19 15	2 56 49	15 52 56		
12	358	47.0	+22 34.4	37	52.7 ¹⁰¹	+21 00.6	78	0	18 09	18 31	18 57	3 11 52	15 35 54		
13	13	46.9	34.1	52	21.8 ¹⁰¹	08.3	77	10 S	17 52	18 14	41	26 55	19 52		
14	28	46.8	33.8	66	50.7 ⁹⁹	15.8	75	20	34	17 58	25	3 42 58	15 01 50		
15	43	46.7	33.6	81	19.5 ⁹⁸	23.3	75	30	14	40	10	4 01 61	14 41 47		
16	58	46.6	33.3	95	48.3 ⁹⁸	30.7	74	35	17 02	30	18 01	12 63	30 44		
17	73	46.5	+22 33.0	110	17.0 ⁹⁷	+21 38.0	73	40	16 48	17 19	17 52	4 25 65	14 16 43		
18	88	46.4	+22 32.8	124	45.5 ⁹⁵	+21 45.2	72	45	16 32	17 06	17 43	4 40 68	14 00 40		
19	103	46.3	32.5	139	14.0 ⁹⁵	52.3	71	50	13	16 51	32	4 58 72	13 41 36		
20	118	46.2	32.2	153	42.4 ⁹⁴	+21 59.2	69	52	16 03	44	27	5 07 74	32 34		
21	133	46.1	31.9	168	10.6 ⁹²	+22 06.1	69	54	15 53	36	21	17 76	21 33		
22	148	46.0	31.7	182	38.8 ⁹²	12.8	67	56	41	27	16	28 79	13 10 30		
23	163	45.9	31.4	197	06.9 ⁹¹	19.4	66	58	27	18	09	41 82	12 56 27		
24	178	45.8	+22 31.1	211	34.9 ⁹⁰	+22 25.9	65	60 S	15 11	16 07	17 02	5 56 87	12 41 22		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 00 ^m 0		Mag: -4.1 PMG: 14 ^h 55 ^m			Mag: +1.8 PMG: 12 ^h 52 ^m			Mag: -1.8 PMG: 12 ^h 44 ^m			Mag: +0.1 PMG: 10 ^h 25 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'		
0	284	47.3	136 21.5	+14 30.8	166 51.7	+22 05.0	168 33.8	+21 33.1	203 26.6	+21 55.9					
1	299	49.7	151 21.2	29.7	181 52.5	04.7	183 35.7	33.0	218 28.7	56.0					
2	314	52.2	166 20.9	28.7	196 53.2	04.4	198 37.6	32.9	233 30.8	56.0					
3	329	54.7	181 20.7	27.6	211 54.0	04.1	213 39.4	32.8	248 33.0	56.0					
4	344	57.1	196 20.4	26.6	226 54.7	03.8	228 41.3	32.7	263 35.1	56.0					
5	359	59.6	211 20.1	+14 25.5	241 55.5	+22 03.5	243 43.2	+21 32.6	278 37.2	+21 56.0					
6	15	02.1	226 19.9	+14 24.5	256 56.3	+22 03.3	258 45.1	+21 32.5	293 39.4	+21 56.1					
7	30	04.5	241 19.6	23.4	271 57.0	03.0	273 46.9	32.4	308 41.5	56.1					
8	45	07.0	256 19.4	22.4	286 57.8	02.7	288 48.8	32.3	323 43.6	56.1					
9	60	09.5	271 19.1	21.3	301 58.5	02.4	303 50.7	32.2	338 45.8	56.1					
10	75	11.9	286 18.8	20.3	316 59.3	02.1	318 52.6	32.1	353 47.9	56.1					
11	90	14.4	301 18.6	+14 19.2	332 00.0	+22 01.8	333 54.4	+21 32.0	8 50.0	+21 56.2					
12	105	16.8	316 18.3	+14 18.2	347 00.8	+22 01.5	348 56.3	+21 32.0	23 52.2	+21 56.2					
13	120	19.3	331 18.1	17.1	2 01.6	01.2	3 58.2	31.9	38 54.3	56.2					
14	135	21.8	346 17.8	16.1	17 02.3	00.9	19 00.1	31.8	53 56.4	56.2					
15	150	24.2	1 17.6	15.0	32 03.1	00.6	34 01.9	31.7	68 58.6	56.2					
16	165	26.7	16 17.3	14.0	47 03.8	+22 00.3	49 03.8	31.6	84 00.7	56.2					
17	180	29.2	31 17.0	+14 12.9	62 04.6	+22 00.0	64 05.7	+21 31.5	99 02.8	+21 56.3					
18	195	31.6	46 16.8	+14 11.9	77 05.3	+21 59.7	79 07.6	+21 31.4	114 05.0	+21 56.3					
19	210	34.1	61 16.5	10.8	92 06.1	59.4	94 09.4	31.3	129 07.1	56.3					
20	225	36.6	76 16.3	09.7	107 06.9	59.1	109 11.3	31.2	144 09.2	56.3					
21	240	39.0	91 16.0	08.7	122 07.6	58.8	124 13.2	31.1	159 11.4	56.3					
22	255	41.5	106 15.8	07.6	137 08.4	58.5	139 15.1	31.0	174 13.5	56.4					
23	270	44.0	121 15.5	06.6	152 09.1	58.2	154 16.9	30.9	189 15.6	56.4					
24	285	46.4	136 15.3	+14 05.5	167 09.9	+21 57.9	169 18.8	+21 30.8	204 17.8	+21 56.4					
Dif	—		-3		-11		+8		-3		+19		-1		
											+21				

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: 27 ^d 0 PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'3 Rº: 56 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	45.8	+22	31.1	211	34.9	+22	25.9	60 N	** **	1 22	2 51	0 53	30	20 00	70	
1	193	45.7		30.8	226	02.8	89	32.3	58	** **	2 00	3 10	1 11	34	19 39	67	
2	208	45.6		30.5	240	30.7	89	38.6	56	** **	26	25	26	36	21	67	
3	223	45.5		30.3	254	58.4	87	44.8	54	1 15	2 46	38	38	39	19 06	66	
4	238	45.4		30.0	269	26.0	86	50.8	52	1 50	3 03	3 50	1 50	40	18 54	64	
5	253	45.3	+22	29.7	283	53.6	86	+22 56.7	50	2 15	3 17	4 00	2 00	42	18 42	64	
6	268	45.2	+22	29.4	298	21.0	84	+23 02.5	45	2 57	3 45	4 21	2 21	45	18 19	63	
7	283	45.1		29.1	312	48.4	84	08.2	40	3 25	4 06	39	38	47	18 00	62	
8	298	45.0		28.9	327	15.7	83	13.8	35	3 47	24	4 53	2 52	49	17 45	60	
9	313	44.9		28.6	341	42.9	82	19.2	30	4 05	4 38	5 05	3 05	50	31	60	
10	328	44.8		28.3	356	10.0	81	24.5	20	33	5 02	26	26	53	17 08	59	
11	343	44.7	+22	28.0	10	37.0	80	+23 29.7	10 N	4 55	5 22	5 45	3 45	54	16 48	58	
12	358	44.6	+22	27.7	25	04.0	80	+23 34.7	0	5 13	5 39	6 01	4 03	56	16 29	57	
13	13	44.5		27.4	39	30.8	78	39.7	10 S	29	5 55	18	21	57	16 11	56	
14	28	44.4		27.2	53	57.6	78	44.4	20	5 45	6 12	36	4 40	59	15 51	54	
15	43	44.3		26.9	68	24.3	77	49.1	30	6 00	30	6 56	5 02	61	28	53	
16	58	44.2		26.6	82	50.9	76	53.6	35	08	40	7 08	15	62	15 14	53	
17	73	44.1	+22	26.3	97	17.4	75	+23 58.0	40	6 17	6 51	7 21	5 30	63	14 59	51	
18	88	44.1	+22	26.0	111	43.9	75	+24 02.3	45	6 27	7 04	7 37	5 48	65	14 40	50	
19	103	44.0		25.7	126	10.3	74	06.4	50	38	19	7 57	6 10	68	17	48	
20	118	43.9		25.4	140	36.6	73	10.4	52	43	26	8 06	21	69	14 06	47	
21	133	43.8		25.1	155	02.8	72	14.2	54	48	34	16	33	70	13 54	46	
22	148	43.7		24.8	169	28.9	71	17.9	56	6 54	42	28	6 47	72	40	44	
23	163	43.6		24.5	183	55.0	71	21.5	58	7 00	7 52	42	7 03	75	23	42	
24	178	43.5	+22	24.2	198	21.0	70	+24 24.9	60 S	7 07	8 02	8 58	7 23	78	13 03	38	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 4 ^h 56 ^m 1		Mag: -4.1 PMG: 14 ^h 55 ^m		Mag: +1.8 PMG: 12 ^h 51 ^m		Mag: -1.8 PMG: 12 ^h 41 ^m		Mag: +0.1 PMG: 10 ^h 21 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	285	46.4	136	15.3	+14 05.5	167	09.9	+21 57.9	169	18.8	+21 30.8	204	17.8	+21 56.4	
1	300	48.9	151	15.0	04.5	182	10.6	57.6	184	20.7	30.7	219	19.9	56.4	
2	315	51.3	166	14.8	03.4	197	11.4	57.3	199	22.6	30.6	234	22.0	56.4	
3	330	53.8	181	14.5	02.3	212	12.2	57.0	214	24.4	30.5	249	24.2	56.5	
4	345	56.3	196	14.3	01.3	227	12.9	56.7	229	26.3	30.4	264	26.3	56.5	
5	0	58.7	211	14.0	+14 00.2	242	13.7	+21 56.4	244	28.2	+21 30.3	279	28.4	+21 56.5	
6	16	01.2	226	13.8	+13 59.1	257	14.4	+21 56.1	259	30.1	+21 30.2	294	30.6	+21 56.5	
7	31	03.7	241	13.6	58.1	272	15.2	55.7	274	31.9	30.1	309	32.7	56.5	
8	46	06.1	256	13.3	57.0	287	16.0	55.4	289	33.8	30.1	324	34.8	56.6	
9	61	08.6	271	13.1	56.0	302	16.7	55.1	304	35.7	30.0	339	37.0	56.6	
10	76	11.1	286	12.8	54.9	317	17.5	54.8	319	37.6	29.9	354	39.1	56.6	
11	91	13.5	301	12.6	+13 53.8	332	18.2	+21 54.5	334	39.5	+21 29.8	9	41.2	+21 56.6	
12	106	16.0	316	12.3	+13 52.8	347	19.0	+21 54.2	349	41.3	+21 29.7	24	43.4	+21 56.6	
13	121	18.5	331	12.1	51.7	2	19.8	53.9	4	43.2	29.6	39	45.5	56.6	
14	136	20.9	346	11.9	50.6	17	20.5	53.6	19	45.1	29.5	54	47.6	56.7	
15	151	23.4	1	11.6	49.6	32	21.3	53.3	34	47.0	29.4	69	49.8	56.7	
16	166	25.8	16	11.4	48.5	47	22.0	53.0	49	48.8	29.3	84	51.9	56.7	
17	181	28.3	31	11.1	+13 47.4	62	22.8	+21 52.7	64	50.7	+21 29.2	99	54.0	+21 56.7	
18	196	30.8	46	10.9	+13 46.4	77	23.6	+21 52.4	79	52.6	+21 29.1	114	56.2	+21 56.7	
19	211	33.2	61	10.7	45.3	92	24.3	52.1	94	54.5	29.0	129	58.3	56.8	
20	226	35.7	76	10.4	44.2	107	25.1	51.8	109	56.3	28.9	145	00.4	56.8	
21	241	38.2	91	10.2	43.2	122	25.8	51.5	124	58.2	28.8	160	02.6	56.8	
22	256	40.6	106	09.9	42.1	137	26.6	51.2	140	00.1	28.7	175	04.7	56.8	
23	271	43.1	121	09.7	41.0	152	27.4	50.9	155	02.0	28.6	190	06.8	56.8	
24	286	45.6	136	09.5	+13 39.9	167	28.1	+21 50.5	170	03.8	+21 28.5	205	09.0	+21 56.9	
Dif	—		-2		-11	+8		-3	+19		-1	+21		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 2			Edad: 28 ^d 0 PHE { 4 ^h : 57 ^m 5 12 ^h : 57 ^m 7 20 ^h : 58 ^m 0 R°: 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m
0	178	43.5	+22	24.2	198	21.0	+24	24.9	60 N	21 17	22 43	** **	1 23 51	21 10 48
1	193	43.4		24.0	212	46.9	69	28.2	58	20 58	22 07	** **	1 45 52	20 46 51
2	208	43.3		23.7	227	12.8	69	31.3	56	43	21 42	** **	2 02 54	28 51
3	223	43.2		23.4	241	38.5	67	34.3	54	30	22	22 50	17 54	20 12 53
4	238	43.1		23.1	256	04.3	68	37.1	52	19	21 06	22 17	30 55	19 58 54
5	253	43.0	+22	22.8	270	29.9	66	+24 39.8	50	20 09	20 52	21 53	2 42 55	19 46 55
6	268	42.9	+22	22.5	284	55.5	66	+24 42.4	45	19 48	20 24	21 12	3 06 56	19 22 55
7	283	42.8		22.2	299	21.0	65	44.8	40	31	20 03	20 44	25 56	19 02 56
8	298	42.7		21.9	313	46.5	65	47.0	35	17	19 46	22	41 57	18 45 57
9	313	42.6		21.6	328	11.9	64	49.2	30	19 04	31	20 04	3 55 57	31 57
10	328	42.5		21.3	342	37.3	64	51.1	20	18 43	19 08	19 37	4 19 57	18 07 58
11	343	42.4	+22	21.0	357	02.6	63	+24 52.9	10 N	18 25	18 48	19 15	4 39 58	17 46 58
12	358	42.3	+22	20.7	11	27.8	62	+24 54.6	0	18 09	18 31	18 57	4 59 58	17 26 59
13	13	42.2		20.4	25	53.0	62	56.1	10 S	17 52	18 15	41	5 18 58	17 07 59
14	28	42.2		20.1	40	18.1	61	57.4	20	35	17 59	26	5 39 58	16 45 60
15	43	42.1		19.8	54	43.2	61	58.6	30	15	41	10	6 03 59	21 60
16	58	42.0		19.5	69	08.2	60	+24 59.6	35	17 03	31	18 02	17 59	16 07 60
17	73	41.9	+22	19.2	83	33.2	60	+25 00.5	40	16 50	17 20	17 54	6 33 60	15 50 61
18	88	41.8	+22	18.9	97	58.1	59	+25 01.2	45	16 34	17 07	17 44	6 53 59	15 30 61
19	103	41.7		18.6	112	23.0	59	01.8	50	14	16 52	33	7 18 59	15 05 62
20	118	41.6		18.2	126	47.9	59	02.2	52	16 05	45	28	30 59	14 53 62
21	133	41.5		17.9	141	12.7	58	02.5	54	15 55	38	23	43 60	40 61
22	148	41.4		17.6	155	37.5	58	02.5	56	43	29	17	7 59 60	24 62
23	163	41.3		17.3	170	02.2	57	02.5	58	30	20	11	8 18 60	14 05 62
24	178	41.2	+22	17.0	184	26.9	57	+25 02.3	60 S	15 14	16 09	17 05	8 41 60	13 41 63
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 52 ^m 2		Mag: -4.1 PMG: 14 ^h 56 ^m		Mag: +1.8 PMG: 12 ^h 49 ^m		Mag: -1.8 PMG: 12 ^h 38 ^m		Mag: +0.1 PMG: 10 ^h 18 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	286	45.6	136	09.5	+13	39.9	167	28.1	+21	50.5				
1	301	48.0	151	09.2		38.9	182	28.9		50.2				
2	316	50.5	166	09.0		37.8	197	29.7		49.9				
3	331	53.0	181	08.8		36.7	212	30.4		49.6				
4	346	55.4	196	08.5		35.6	227	31.2		49.3				
5	1	57.9	211	08.3	+13	34.6	242	31.9	+21	49.0				
6	17	00.3	226	08.1	+13	33.5	257	32.7	+21	48.7				
7	32	02.8	241	07.9		32.4	272	33.5		48.4				
8	47	05.3	256	07.6		31.3	287	34.2		48.1				
9	62	07.7	271	07.4		30.3	302	35.0		47.8				
10	77	10.2	286	07.2		29.2	317	35.8		47.4				
11	92	12.7	301	06.9	+13	28.1	332	36.5	+21	47.1				
12	107	15.1	316	06.7	+13	27.0	347	37.3	+21	46.8				
13	122	17.6	331	06.5		26.0	2	38.0		46.5				
14	137	20.1	346	06.3		24.9	17	38.8		46.2				
15	152	22.5	1	06.0		23.8	32	39.6		45.9				
16	167	25.0	16	05.8		22.7	47	40.3		45.6				
17	182	27.4	31	05.6	+13	21.6	62	41.1	+21	45.3				
18	197	29.9	46	05.4	+13	20.6	77	41.9	+21	44.9				
19	212	32.4	61	05.2		19.5	92	42.6		44.6				
20	227	34.8	76	04.9		18.4	107	43.4		44.3				
21	242	37.3	91	04.7		17.3	122	44.2		44.0				
22	257	39.8	106	04.5		16.2	137	44.9		43.7				
23	272	42.2	121	04.3		15.1	152	45.7		43.4				
24	287	44.7	136	04.0	+13	14.1	167	46.5	+21	43.1				
Dif	—		-2		-11		+8		-3					
							+19		-1					
									+21					
									0					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 3				Edad: 29 ^d 0 PHE { 4 ^h : 58 ^m 2 12 ^h : 58 ^m 4 20 ^h : 58 ^m 6 R°: 59 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	41.2	+22	17.0	184	26.9	+25	02.3	60 N	** **	1 28	2 54	2 14	75	21 58	29		
1	193	41.1		16.7	198	51.6		01.9	58	** **	2 04	3 12		37 73		37 33		
2	208	41.0		16.4	213	16.3		01.3	56	** **	29	28	2 56	71	19	37		
3	223	41.0		16.1	227	40.9	+25	00.6	54	1 21	2 49	41	3 11	70	21 05	39		
4	238	40.9		15.8	242	05.5	+24	59.7	52	1 54	3 05	3 52		25 69	20 52	41		
5	253	40.8	+22	15.5	256	30.1	+24	58.7	50	2 18	3 19	4 02	3 37	68	20 41	43		
6	268	40.7	+22	15.1	270	54.6	+24	57.5	45	2 59	3 47	4 23	4 02	66	20 17	46		
7	283	40.6		14.8	285	19.1		56.2	40	3 27	4 08	40		21 65	19 58	49		
8	298	40.5		14.5	299	43.6		54.7	35	3 49	25	4 54		38 64		42 51		
9	313	40.4		14.2	314	08.1		53.0	30	4 06	4 39	5 06	4 52	63	28	53		
10	328	40.3		13.9	328	32.6		51.2	20	34	5 03	27	5 16	62	19 05	55		
11	343	40.2	+22	13.6	342	57.0	+24	49.2	10 N	4 55	5 22	5 45	5 37	61	18 44	57		
12	358	40.1	+22	13.2	357	21.5	+24	47.0	0	5 13	5 39	6 02	5 57	59	18 25	59		
13	13	40.1		12.9	11	45.9		44.7	10 S	29	5 56	18	6 16	58	18 06	61		
14	28	40.0		12.6	26	10.4		42.2	20	5 45	6 12	36	6 37	57	17 45	63		
15	43	39.9		12.3	40	34.8		39.6	30	6 00	30	6 56	7 02	55		21 66		
16	58	39.8		12.0	54	59.2		36.7	35	08	39	7 07		16 54	17 07	67		
17	73	39.7	+22	11.6	69	23.6	+24	33.8	40	6 17	6 50	7 21	7 33	52	16 51	68		
18	88	39.6	+22	11.3	83	48.1	+24	30.6	45	6 26	7 03	7 36	7 52	51	16 31	71		
19	103	39.5		11.0	98	12.5		27.4	50	37	18	7 56	8 17	49	16 07	73		
20	118	39.4		10.7	112	36.9		23.9	52	42	25	8 05		29 48	15 55	75		
21	133	39.3		10.4	127	01.3		20.3	54	47	32	15		43 46		41 77		
22	148	39.3		10.0	141	25.8		16.5	56	53	41	27		8 59 44		26 79		
23	163	39.2		09.7	155	50.2		12.6	58	6 59	7 50	40		9 18 41		15 07 82		
24	178	39.1	+22	09.4	170	14.7	+24	08.5	60 S	7 05	8 01	8 56		9 41 37		14 44 86		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 48 ^m 2		Mag: -4.1 PMG: 14 ^h 56 ^m				Mag: +1.8 PMG: 12 ^h 48 ^m				Mag: -1.8 PMG: 12 ^h 35 ^m				Mag: +0.1 PMG: 10 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	287	44.7	136	04.0	+13	14.1	167	46.5	+21	43.1	170	48.8	+21	26.2	206	00.2	+21	57.3
1	302	47.2	151	03.8		13.0	182	47.2		42.7	185	50.7		26.1	221	02.4		57.3
2	317	49.6	166	03.6		11.9	197	48.0		42.4	200	52.6		26.0	236	04.5		57.3
3	332	52.1	181	03.4		10.8	212	48.8		42.1	215	54.5		25.9	251	06.6		57.4
4	347	54.6	196	03.2		09.7	227	49.5		41.8	230	56.3		25.8	266	08.8		57.4
5	2	57.0	211	03.0	+13	08.6	242	50.3	+21	41.5	245	58.2	+21	25.7	281	10.9	+21	57.4
6	17	59.5	226	02.8	+13	07.5	257	51.1	+21	41.2	261	00.1	+21	25.6	296	13.0	+21	57.4
7	33	01.9	241	02.5		06.5	272	51.8		40.9	276	02.0		25.5	311	15.2		57.4
8	48	04.4	256	02.3		05.4	287	52.6		40.5	291	03.8		25.4	326	17.3		57.4
9	63	06.9	271	02.1		04.3	302	53.4		40.2	306	05.7		25.3	341	19.5		57.5
10	78	09.3	286	01.9		03.2	317	54.1		39.9	321	07.6		25.2	356	21.6		57.5
11	93	11.8	301	01.7	+13	02.1	332	54.9	+21	39.6	336	09.5	+21	25.1	11	23.7	+21	57.5
12	108	14.3	316	01.5	+13	01.0	347	55.7	+21	39.3	351	11.3	+21	25.0	26	25.9	+21	57.5
13	123	16.7	331	01.3	+12	59.9	2	56.4		38.9	6	13.2		24.9	41	28.0		57.5
14	138	19.2	346	01.1		58.8	17	57.2		38.6	21	15.1		24.9	56	30.1		57.6
15	153	21.7	1	00.8		57.7	32	58.0		38.3	36	17.0		24.8	71	32.3		57.6
16	168	24.1	16	00.6		56.6	47	58.7		38.0	51	18.8		24.7	86	34.4		57.6
17	183	26.6	31	00.4	+12	55.6	62	59.5	+21	37.7	66	20.7	+21	24.6	101	36.6	+21	57.6
18	198	29.1	46	00.2	+12	54.5	78	00.3	+21	37.4	81	22.6	+21	24.5	116	38.7	+21	57.6
19	213	31.5	61	00.0		53.4	93	01.0		37.0	96	24.5		24.4	131	40.8		57.6
20	228	34.0	75	59.8		52.3	108	01.8		36.7	111	26.3		24.3	146	43.0		57.7
21	243	36.4	90	59.6		51.2	123	02.6		36.4	126	28.2		24.2	161	45.1		57.7
22	258	38.9	105	59.4		50.1	138	03.3		36.1	141	30.1		24.1	176	47.2		57.7
23	273	41.4	120	59.2		49.0	153	04.1		35.7	156	32.0		24.0	191	49.4		57.7
24	288	43.8	135	59.0	+12	47.9	168	04.9	+21	35.4	171	33.8	+21	23.9	206	51.5	+21	57.7
Dif	—		-2		-11		+8		-3		+19		-1		+21			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 30 ^d 0	PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 9 20 ^h : 59 ^m 1										
	PMG: 12 ^h 05 ^m 5					SD: 16 ^h 0			PMG: 13 ^h 10 ^m		R°: 58 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	39.1	+22 09.4	170	14.7	+24 08.5	43	60 N	21 14	22 37	** ** *	3 29	93	22 27	17
1	193	39.0	09.1	184	39.2	+24 04.2	55	58	20 56	22 03	** ** *	3 50	88	22 10	22
2	208	38.9	08.7	199	03.7	+23 59.8	44	56	41	21 39	** ** *	4 07	84	21 56	26
3	223	38.8	08.4	213	28.2	55.2	46	54	28	20	22 45	21 82		44	29
4	238	38.7	08.1	227	52.7	50.5	47	52	17	21 04	22 13	34 79		33	32
5	253	38.7	+22 07.8	242	17.3	+23 45.6	49	50	20 07	20 50	21 50	4 45	77	21 24	33
6	268	38.6	+22 07.4	256	41.8	+23 40.5	51	45	19 47	20 23	21 10	5 08	73	21 03	38
7	283	38.5	07.1	271	06.4	35.3	52	40	30	20 02	20 42	26 71		20 47	41
8	298	38.4	06.8	285	31.0	30.0	53	35	16	19 45	21	42 68		33	44
9	313	38.3	06.4	299	55.7	24.4	56	30	19 04	31	20 04	5 55	67	21	46
10	328	38.2	06.1	314	20.4	18.8	56	20	18 43	19 08	19 36	6 18	63	20 00	50
11	343	38.1	+22 05.8	328	45.1	+23 12.9	59	10 N	18 26	18 48	19 15	6 38	60	19 41	54
12	358	38.1	+22 05.4	343	09.8	+23 06.9	60	0	18 09	18 31	18 57	6 56	58	19 24	57
13	13	38.0	05.1	357	34.6	+23 00.8	61	10 S	17 53	18 15	41	7 14	56	19 07	60
14	28	37.9	04.8	11	59.4	+22 54.5	63	20	35	17 59	26	34 53		18 48	64
15	43	37.8	04.4	26	24.2	48.1	64	30	16	42	11	7 57	49	27	67
16	58	37.7	04.1	40	49.1	41.5	66	35	17 04	32	18 03	8 10	47	18 14	70
17	73	37.6	+22 03.8	55	14.0	+22 34.7	68	40	16 51	17 21	17 55	8 25	45	17 59	73
18	88	37.6	+22 03.4	69	39.0	+22 27.8	69	45	16 35	17 09	17 45	8 43	42	17 42	76
19	103	37.5	03.1	84	04.0	20.8	70	50	16	16 54	35	9 06	38	20	81
20	118	37.4	02.7	98	29.0	13.6	72	52	16 07	47	30	17 35		17 10	82
21	133	37.3	02.4	112	54.1	+22 06.3	73	54	15 57	40	25	29 33		16 58	85
22	148	37.2	02.1	127	19.2	+21 58.8	75	56	46	31	19	43 30		45	88
23	163	37.1	01.7	141	44.4	51.1	77	58	32	22	13	9 59	26	29	92
24	178	37.1	+22 01.4	156	09.6	+21 43.4	77	60 S	15 17	16 12	17 07	10 18	22	16 10	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 44 ^m 3		Mag: -4.1 PMG: 14 ^h 56 ^m		Mag: +1.8 PMG: 12 ^h 47 ^m		Mag: -1.8 PMG: 12 ^h 32 ^m		Mag: +0.1 PMG: 10 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	288	43.8	135	59.0	168	04.9	171	33.8	206	51.5
1	303	46.3	150	58.8	183	05.6	186	35.7	221	53.7
2	318	48.8	165	58.6	198	06.4	201	37.6	236	55.8
3	333	51.2	180	58.4	213	07.2	216	39.5	251	57.9
4	348	53.7	195	58.2	228	07.9	231	41.3	267	00.1
5	3	56.2	210	58.0	243	08.7	246	43.2	282	02.2
6	18	58.6	225	57.8	258	09.5	261	45.1	297	04.3
7	34	01.1	240	57.6	273	10.3	276	47.0	312	06.5
8	49	03.6	255	57.4	288	11.0	291	48.8	327	08.6
9	64	06.0	270	57.2	303	11.8	306	50.7	342	10.8
10	79	08.5	285	57.0	318	12.6	321	52.6	357	12.9
11	94	10.9	300	56.8	333	13.3	336	54.5	12	15.0
12	109	13.4	315	56.6	348	14.1	351	56.3	27	17.2
13	124	15.9	330	56.4	3	14.9	6	58.2	42	19.3
14	139	18.3	345	56.2	18	15.6	22	00.1	57	21.4
15	154	20.8	0	56.0	33	16.4	37	02.0	72	23.6
16	169	23.3	15	55.8	48	17.2	52	03.8	87	25.7
17	184	25.7	30	55.6	63	18.0	67	05.7	102	27.9
18	199	28.2	45	55.4	78	18.7	82	07.6	117	30.0
19	214	30.7	60	55.2	93	19.5	97	09.5	132	32.1
20	229	33.1	75	55.1	108	20.3	112	11.3	147	34.3
21	244	35.6	90	54.9	123	21.1	127	13.2	162	36.4
22	259	38.1	105	54.7	138	21.8	142	15.1	177	38.6
23	274	40.5	120	54.5	153	22.6	157	17.0	192	40.7
24	289	43.0	135	54.3	168	23.4	172	18.8	207	42.8
Dif	—		-2	-11	+8	-3	+19	-1	+21	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 6				Edad: 1 ^d 6 PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /3 20 ^h : 59 ^m /4 R°: 55 ^m															
	hG ☉		Dec		hG ☾		Dif													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	37.1	+22	01.4	156	09.6	+21	43.4	60 N	** **	1 34	2 58	5 02	99	22 44	11				
1	193	37.0		01.0	170	34.9	63	35.5	58	** **	2 08	3 15	18 94		32 15					
2	208	36.9		00.7	185	00.2	63	27.4	56	** **	33	30	31 91		22 19					
3	223	36.8	+22	00.4	199	25.6	64	19.2	54	1 27	2 52	43	43 87		13 21					
4	238	36.7	+22	00.0	213	51.0	64	10.9	52	1 58	3 08	3 54	5 53 85	22 05 24						
5	253	36.6	+21	59.7	228	16.5	65	+21 02.4	50	2 21	3 21	4 04	6 02 82	21 57 27						
6	268	36.6	+21	59.3	242	42.1	66	+20 53.8	45	3 01	3 48	4 25	6 21 78	21 41 32						
7	283	36.5		59.0	257	07.6	65	45.0	40	29	4 09	41	37 74	28 36						
8	298	36.4		58.6	271	33.3	67	36.1	35	3 50	26	4 55	6 50 71	17 39						
9	313	36.3		58.3	285	59.0	67	27.1	30	4 08	4 40	5 07	7 02 68	21 07 42						
10	328	36.2		57.9	300	24.8	68	18.0	20	35	5 04	28	21 64	20 50 46						
11	343	36.2	+21	57.6	314	50.6	68	+20 08.7	10 N	4 56	5 23	5 46	7 38 60	20 35 51						
12	358	36.1	+21	57.2	329	16.4	68	+19 59.3	0	5 14	5 40	6 02	7 54 56	20 21 55						
13	13	36.0		56.9	343	42.4	70	49.7	10 S	30	5 56	18	8 10 52	20 07 58						
14	28	35.9		56.5	358	08.4	70	40.1	20	5 45	6 12	36	27 48	19 52 62						
15	43	35.8		56.2	12	34.4	70	30.3	30	6 00	29	6 55	46 44	34 68						
16	58	35.8		55.8	27	00.5	71	20.4	35	08	39	7 07	8 57 42	24 70						
17	73	35.7	+21	55.5	41	26.7	72	+19 10.3	40	6 16	6 50	7 20	9 10 38	19 12 74						
18	88	35.6	+21	55.1	55	53.0	73	+19 00.2	45	6 25	7 02	7 35	9 25 35	18 58 78						
19	103	35.5		54.8	70	19.3	73	+18 49.9	50	36	17	7 54	44 29	41 83						
20	118	35.5		54.4	84	45.6	73	39.5	52	41	24	8 03	9 52 28	32 86						
21	133	35.4		54.1	99	12.1	75	29.0	54	46	31	13	10 02 25	23 89						
22	148	35.3		53.7	113	38.5	74	18.3	56	51	39	25	13 21	13 92						
23	163	35.2		53.4	128	05.1	76	+18 07.6	58	6 57	48	38	25 18	18 01 96						
24	178	35.1	+21	53.0	142	31.7	76	+17 56.7	60 S	7 04	7 59	8 53	10 40 13	17 48 100						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 40 ^m 4				Mag: -4.1 PMG: 14 ^h 57 ^m				Mag: +1.8 PMG: 12 ^h 46 ^m				Mag: -1.8 PMG: 12 ^h 29 ^m				Mag: +0.1 PMG: 10 ^h 08 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	289	43.0			135	54.3	+12	21.4	168	23.4	+21	27.6	172	18.8	+21	21.5	207	42.8	+21	58.2
1	304	45.4			150	54.1		20.3	183	24.1		27.3	187	20.7		21.4	222	45.0		58.2
2	319	47.9			165	53.9		19.2	198	24.9		27.0	202	22.6		21.3	237	47.1		58.2
3	334	50.4			180	53.7		18.1	213	25.7		26.6	217	24.5		21.2	252	49.2		58.2
4	349	52.8			195	53.6		17.0	228	26.5		26.3	232	26.3		21.1	267	51.4		58.2
5	4	55.3			210	53.4	+12	15.9	243	27.2	+21	26.0	247	28.2	+21	21.0	282	53.5	+21	58.2
6	19	57.8			225	53.2	+12	14.8	258	28.0	+21	25.7	262	30.1	+21	20.9	297	55.7	+21	58.3
7	35	00.2			240	53.0		13.7	273	28.8		25.3	277	32.0		20.8	312	57.8		58.3
8	50	02.7			255	52.8		12.6	288	29.6		25.0	292	33.8		20.7	327	59.9		58.3
9	65	05.2			270	52.6		11.5	303	30.3		24.7	307	35.7		20.6	343	02.1		58.3
10	80	07.6			285	52.5		10.3	318	31.1		24.3	322	37.6		20.5	358	04.2		58.3
11	95	10.1			300	52.3	+12	09.2	333	31.9	+21	24.0	337	39.5	+21	20.4	13	06.4	+21	58.4
12	110	12.6			315	52.1	+12	08.1	348	32.7	+21	23.7	352	41.3	+21	20.3	28	08.5	+21	58.4
13	125	15.0			330	51.9		07.0	3	33.4		23.3	7	43.2		20.2	43	10.6		58.4
14	140	17.5			345	51.7		05.9	18	34.2		23.0	22	45.1		20.1	58	12.8		58.4
15	155	19.9			0	51.6		04.8	33	35.0		22.7	37	47.0		20.0	73	14.9		58.4
16	170	22.4			15	51.4		03.7	48	35.8		22.4	52	48.8		19.9	88	17.1		58.4
17	185	24.9			30	51.2	+12	02.5	63	36.5	+21	22.0	67	50.7	+21	19.8	103	19.2	+21	58.5
18	200	27.3			45	51.0	+12	01.4	78	37.3	+21	21.7	82	52.6	+21	19.7	118	21.3	+21	58.5
19	215	29.8			60	50.8	+12	00.3	93	38.1		21.4	97	54.5		19.6	133	23.5		58.5
20	230	32.3			75	50.7	+11	59.2	108	38.9		21.0	112	56.3		19.5	148	25.6		58.5
21	245	34.7			90	50.5		58.1	123	39.6		20.7	127	58.2		19.4	163	27.8		58.5
22	260	37.2			105	50.3		57.0	138	40.4		20.4	143	00.1		19.3	178	29.9		58.5
23	275	39.7			120	50.2		55.8	153	41.2		20.0	158	02.0		19.2	193	32.0		58.6
24	290	42.1			135	50.0	+11	54.7	168	42.0	+21	19.7	173	03.8	+21	19.1	208	34.2	+21	58.6
Dif	—				-2 -11				+8 -3				+19 -1				+21 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 2 ^d 6	PHE { 4 ^h : 59/5 12 ^h : 59/5 20 ^h : 59/6 R°: 52 ^m									
	PMG: 12 ^h 05 ^m 7	PMG: 15 ^h 03 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	35.1	+21 53.0	142	31.7	+17 56.7	77	60 N	21 11	22 31	** **	6 41 100	22 55 8	
1	193	35.1	52.6	156	58.4	45.7	110	58	20 53	21 59	** **	6 52 95	47 12	
2	208	35.0	52.3	171	25.2	34.6	111	56	39	36	23 36	7 02 91	41 14	
3	223	34.9	51.9	185	52.0	23.4	112	54	26	17	22 39	10 88	34 18	
4	238	34.8	51.6	200	18.9	12.1	113	52	15	21 01	22 10	18 85	29 20	
5	253	34.8	+21 51.2	214	45.8	+17 00.7	114	50	20 06	20 48	21 48	7 24 83	22 24 22	
6	268	34.7	+21 50.8	229	12.8	+16 49.2	115	45	19 45	20 22	21 09	7 39 78	22 13 27	
7	283	34.6	50.5	243	39.9	37.6	116	40	29	20 01	20 41	7 51 73	22 04 31	
8	298	34.5	50.1	258	07.0	25.8	118	35	15	19 44	20	8 01 70	21 56 34	
9	313	34.5	49.8	272	34.2	14.0	118	30	19 03	30	20 03	10 66	49 37	
10	328	34.4	49.4	287	01.5	+16 02.1	119	20	18 43	19 07	19 36	25 61	36 43	
11	343	34.3	+21 49.0	301	28.8	+15 50.1	120	10 N	18 26	18 48	19 15	8 38 57	21 26 47	
12	358	34.2	+21 48.7	315	56.2	+15 37.9	122	0	18 09	18 32	18 57	8 50 53	21 16 51	
13	13	34.2	48.3	330	23.7	25.7	122	10 S	17 53	16	42	9 02 49	21 05 57	
14	28	34.1	47.9	344	51.2	13.4	123	20	36	18 00	27	15 45	20 54 61	
15	43	34.0	47.6	359	18.8	+15 01.0	124	30	17	17 43	12	30 39	42 66	
16	58	33.9	47.2	13	46.4	+14 48.5	125	35	17 05	33	18 04	39 36	34 70	
17	73	33.9	+21 46.8	28	14.2	+14 35.9	126	40	16 52	17 22	17 56	9 48 33	20 26 73	
18	88	33.8	+21 46.5	42	41.9	+14 23.3	126	45	16 37	17 10	17 47	10 00 29	20 16 77	
19	103	33.7	46.1	57	09.8	+14 10.5	128	50	18	16 56	36	13 24	20 04 82	
20	118	33.6	45.7	71	37.7	+13 57.7	128	52	16 09	49	32	20 21	19 58 85	
21	133	33.6	45.4	86	05.6	44.8	129	54	15 59	42	27	27 19	52 88	
22	148	33.5	45.0	100	33.7	31.8	130	56	48	34	21	34 17	45 91	
23	163	33.4	44.6	115	01.8	18.7	131	58	35	25	16	43 13	37 95	
24	178	33.3	+21 44.2	129	29.9	+13 05.6	131	60 S	15 20	16 14	17 09	10 53 9	19 28 99	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 36 ^m 4	Mag: -4.1 PMG: 14 ^h 57 ^m	Mag: +1.8 PMG: 12 ^h 45 ^m	Mag: -1.8 PMG: 12 ^h 26 ^m	Mag: +0.1 PMG: 10 ^h 04 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	290	42.1	135	50.0	+11 54.7	168	42.0	+21 19.7	173	03.8	+21 19.1	208	34.2	+21 58.6
1	305	44.6	150	49.8	53.6	183	42.7	19.4	188	05.7	19.0	223	36.3	58.6
2	320	47.0	165	49.6	52.5	198	43.5	19.0	203	07.6	18.9	238	38.5	58.6
3	335	49.5	180	49.5	51.4	213	44.3	18.7	218	09.5	18.9	253	40.6	58.6
4	350	52.0	195	49.3	50.2	228	45.1	18.3	233	11.3	18.8	268	42.7	58.6
5	5	54.4	210	49.1	+11 49.1	243	45.8	+21 18.0	248	13.2	+21 18.7	283	44.9	+21 58.7
6	20	56.9	225	49.0	+11 48.0	258	46.6	+21 17.7	263	15.1	+21 18.6	298	47.0	+21 58.7
7	35	59.4	240	48.8	46.9	273	47.4	17.3	278	17.0	18.5	313	49.2	58.7
8	51	01.8	255	48.6	45.8	288	48.2	17.0	293	18.8	18.4	328	51.3	58.7
9	66	04.3	270	48.5	44.6	303	49.0	16.7	308	20.7	18.3	343	53.4	58.7
10	81	06.8	285	48.3	43.5	318	49.7	16.3	323	22.6	18.2	358	55.6	58.7
11	96	09.2	300	48.1	+11 42.4	333	50.5	+21 16.0	338	24.5	+21 18.1	13	57.7	+21 58.8
12	111	11.7	315	48.0	+11 41.3	348	51.3	+21 15.7	353	26.3	+21 18.0	28	59.9	+21 58.8
13	126	14.2	330	47.8	40.1	3	52.1	15.3	8	28.2	17.9	44	02.0	58.8
14	141	16.6	345	47.6	39.0	18	52.8	15.0	23	30.1	17.8	59	04.2	58.8
15	156	19.1	0	47.5	37.9	33	53.6	14.6	38	32.0	17.7	74	06.3	58.8
16	171	21.5	15	47.3	36.8	48	54.4	14.3	53	33.8	17.6	89	08.4	58.8
17	186	24.0	30	47.1	+11 35.6	63	55.2	+21 14.0	68	35.7	+21 17.5	104	10.6	+21 58.9
18	201	26.5	45	47.0	+11 34.5	78	56.0	+21 13.6	83	37.6	+21 17.4	119	12.7	+21 58.9
19	216	28.9	60	46.8	33.4	93	56.7	13.3	98	39.5	17.3	134	14.9	58.9
20	231	31.4	75	46.7	32.3	108	57.5	12.9	113	41.3	17.2	149	17.0	58.9
21	246	33.9	90	46.5	31.1	123	58.3	12.6	128	43.2	17.1	164	19.1	58.9
22	261	36.3	105	46.3	30.0	138	59.1	12.3	143	45.1	17.0	179	21.3	58.9
23	276	38.8	120	46.2	28.9	153	59.9	11.9	158	47.0	16.9	194	23.4	59.0
24	291	41.3	135	46.0	+11 27.8	169	00.6	+21 11.6	173	48.8	+21 16.8	209	25.6	+21 59.0
Dif	—		-2	-11		+8	-3		+19	-1		+21		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 3 ^d 6	PHE { 4 ^h : 59 ^m /6 12 ^h : 59 ^m /6 20 ^h : 59 ^m /6											
	PMG: 12 ^h 05 ^m 8					SD: 16 ^h 2		PMG: 15 ^h 55 ^m			Rº: 51 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	33.3	+21	129	29.9	+13	05.6	60 N	** *	1 41	3 01	8 21	97	23 03	6	
1	193	33.3		143	58.1	+12	52.3 ¹³³	58	** *	2 13	18	27 94		22 59	10	
2	208	33.2		158	26.4		39.0 ¹³³	56	0 36	36	33	33 90		55 13		
3	223	33.1		172	54.7		25.6 ¹³⁴	54	1 32	2 55	45	38 88		52 15		
4	238	33.1		187	23.1	+12	12.2 ¹³⁴	52	2 02	3 10	3 56	43 85		49 17		
5	253	33.0	+21	201	51.5	+11	58.7 ¹³⁵	50	2 24	3 24	4 06	8 47	82	22 46	20	
6	268	32.9	+21	216	20.0	+11	45.1 ¹³⁶	45	3 03	3 50	4 26	8 57	76	22 40	25	
7	283	32.8		230	48.6		31.4 ¹³⁷	40	31	4 11	43	9 04	73	35	28	
8	298	32.8		245	17.2		17.7 ¹³⁷	35	3 52	27	4 56	11 69		30 33		
9	313	32.7		259	45.9	+11	03.9 ¹³⁸	30	4 09	4 41	5 08	16 66		26 36		
10	328	32.6		274	14.6	+10	50.1 ¹³⁸	20	36	5 04	29	26 60		19 41		
11	343	32.6	+21	288	43.3	+10	36.2 ¹³⁹	10 N	4 57	5 23	5 46	9 35	55	22 13	46	
12	358	32.5	+21	303	12.2	+10	22.2 ¹⁴⁰	0	5 14	5 40	6 02	9 43	51	22 07	50	
13	13	32.4		317	41.0	+10	08.2 ¹⁴⁰	10 S	30	5 56	18	9 51	46	22 02	54	
14	28	32.4		332	10.0 ¹⁰⁰	+9	54.1 ¹⁴¹	20	44	6 12	35	10 00	41	21 55	60	
15	43	32.3		346	39.0 ¹⁰⁰		40.0 ¹⁴¹	30	5 59	29	6 55	09 37		48 65		
16	58	32.2		1	08.0 ¹⁰⁰		25.8 ¹⁴²	35	6 07	38	7 06	15 33		44 68		
17	73	32.2	+21	15	37.1 ¹⁰¹	+9	11.5 ¹⁴³	40	6 15	6 49	7 19	10 21	30	21 39	72	
18	88	32.1	+21	30	06.2 ¹⁰¹	+8	57.3 ¹⁴²	45	6 24	7 01	7 34	10 29	25	21 33	77	
19	103	32.0		44	35.4 ¹⁰²		42.9 ¹⁴⁴	50	35	15	7 53	37 21		26 82		
20	118	32.0		59	04.6 ¹⁰²		28.5 ¹⁴⁴	52	39	22	8 01	41 19		23 84		
21	133	31.9		73	33.8 ¹⁰²	+8	14.1 ¹⁴⁴	54	44	29	11	46 16		20 86		
22	148	31.8		88	03.1 ¹⁰³	+7	59.6 ¹⁴⁵	56	50	37	22	51 13		16 90		
23	163	31.7		102	32.5 ¹⁰⁴		45.1 ¹⁴⁵	58	6 55	46	35	10 56	10	12 93		
24	178	31.7	+21	117	01.9 ¹⁰⁴	+7	30.6 ¹⁴⁵	60 S	7 02	7 56	8 50	11 02	7	21 07	96	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -4.1			Mag: +1.8			Mag: -1.8			Mag: +0.1		
	4 ^h 32 ^m 5		PMG: 14 ^h 57 ^m			PMG: 12 ^h 43 ^m			PMG: 12 ^h 23 ^m			PMG: 10 ^h 01 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	291	41.3	135	46.0	+11	169	00.6	+21	173	48.8	+21	209	25.6	+21
1	306	43.7	150	45.9		184	01.4		188	50.7		224	27.7	
2	321	46.2	165	45.7		199	02.2		203	52.6		239	29.9	
3	336	48.7	180	45.5		214	03.0		218	54.5		254	32.0	
4	351	51.1	195	45.4		229	03.8		233	56.3		269	34.1	
5	6	53.6	210	45.2	+11	244	04.5	+21	248	58.2	+21	284	36.3	+21
6	21	56.0	225	45.1	+11	259	05.3	+21	264	00.1	+21	299	38.4	+21
7	36	58.5	240	44.9		274	06.1		279	02.0		314	40.6	
8	52	01.0	255	44.8		289	06.9		294	03.8		329	42.7	
9	67	03.4	270	44.6		304	07.7		309	05.7		344	44.9	
10	82	05.9	285	44.5		319	08.4		324	07.6		359	47.0	
11	97	08.4	300	44.3	+11	334	09.2	+21	339	09.5	+21	14	49.1	+21
12	112	10.8	315	44.2	+11	349	10.0	+21	354	11.3	+21	29	51.3	+21
13	127	13.3	330	44.0		4	10.8		9	13.2		44	53.4	
14	142	15.8	345	43.9		19	11.6		24	15.1		59	55.6	
15	157	18.2	0	43.7		34	12.4		39	17.0		74	57.7	
16	172	20.7	15	43.6		49	13.1		54	18.8		89	59.9	
17	187	23.1	30	43.4	+11	64	13.9	+21	69	20.7	+21	105	02.0	+21
18	202	25.6	45	43.3	+11	79	14.7	+21	84	22.6	+21	120	04.1	+21
19	217	28.1	60	43.1		94	15.5		99	24.5		135	06.3	
20	232	30.5	75	43.0		109	16.3		114	26.3		150	08.4	
21	247	33.0	90	42.8		124	17.1		129	28.2		165	10.6	
22	262	35.5	105	42.7		139	17.8		144	30.1		180	12.7	
23	277	37.9	120	42.6		154	18.6		159	32.0		195	14.9	
24	292	40.4	135	42.4	+11	169	19.4	+21	174	33.8	+21	210	17.0	+21
Dif	—		-2	-11		+8	-3		+19	-1		+21		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 4 ^d 6	PHE { 4 ^h : 59 ^m /6 12 ^h : 59 ^m /6 20 ^h : 59 ^m /5											
	PMG: 12 ^h 05 ^m 9					SD: 16 ^h 2			PMG: 16 ^h 46 ^m		Rº: 49 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	31.7	+21	35.1	117	01.9	+7	30.6	60 N	21 07	22 25	** **	9 58	96	23 09	6
1	193	31.6		34.7	131	31.3 ¹⁰⁴		16.0 ¹⁴⁶	58	20 51	21 55	** **	10 01	92	09	9
2	208	31.5		34.3	146	00.8 ¹⁰⁵	+7	01.3 ¹⁴⁷	56	36	32	23 22	03 89		08 12	
3	223	31.5		33.9	160	30.3 ¹⁰⁵	+6	46.7 ¹⁴⁶	54	24	21 14	22 34	06 86		07 15	
4	238	31.4		33.6	174	59.9 ¹⁰⁶		32.0 ¹⁴⁷	52	14	20 59	22 06	08 83		06 17	
5	253	31.4	+21	33.2	189	29.5 ¹⁰⁶	+6	17.2 ¹⁴⁸	50	20 04	20 46	21 45	10 09	81	23 06	19
6	268	31.3	+21	32.8	203	59.1 ¹⁰⁶	+6	02.5 ¹⁴⁷	45	19 44	20 20	21 07	10 13	76	23 05	24
7	283	31.2		32.4	218	28.8 ¹⁰⁷	+5	47.7 ¹⁴⁸	40	28	20 00	20 40	17 71		03 28	
8	298	31.2		32.0	232	58.5 ¹⁰⁷		32.8 ¹⁴⁹	35	14	19 43	19	20 67		03 31	
9	313	31.1		31.6	247	28.2 ¹⁰⁷		18.0 ¹⁴⁸	30	19 03	30	20 02	22 65		02 34	
10	328	31.0		31.2	261	58.0 ¹⁰⁸	+5	03.1 ¹⁴⁹	20	18 43	19 07	19 35	26 59		23 00	40
11	343	31.0	+21	30.8	276	27.8 ¹⁰⁸	+4	48.2 ¹⁴⁹	10 N	18 26	18 48	19 15	10 30	54	22 59	45
12	358	30.9	+21	30.4	290	57.6 ¹⁰⁸	+4	33.3 ¹⁴⁹	0	18 10	18 32	18 58	10 34	49	22 57	50
13	13	30.8		30.0	305	27.5 ¹⁰⁹		18.3 ¹⁵⁰	10 S	17 54	16	42	37 45		56 54	
14	28	30.8		29.6	319	57.4 ¹⁰⁹	+4	03.4 ¹⁴⁹	20	37	18 01	28	41 40		55 58	
15	43	30.7		29.2	334	27.3 ¹⁰⁹	+3	48.4 ¹⁵⁰	30	18	17 44	13	46 34		53 64	
16	58	30.6		28.8	348	57.2 ¹⁰⁹		33.4 ¹⁵⁰	35	17 07	34	18 05	48 32		52 68	
17	73	30.6	+21	28.4	3	27.2 ¹¹⁰	+3	18.4 ¹⁵⁰	40	16 54	17 24	17 57	10 51	28	22 51	71
18	88	30.5	+21	28.0	17	57.2 ¹¹⁰	+3	03.3 ¹⁵¹	45	16 39	17 12	17 48	10 54	24	22 50	75
19	103	30.5		27.6	32	27.2 ¹¹⁰	+2	48.3 ¹⁵⁰	50	20	16 58	38	10 58	19	48 81	
20	118	30.4		27.2	46	57.2 ¹¹⁰		33.2 ¹⁵¹	52	12	51	34	11 00	17	47 83	
21	133	30.3		26.8	61	27.3 ¹¹¹		18.1 ¹⁵¹	54	16 02	44	29	02 15		46 86	
22	148	30.3		26.4	75	57.4 ¹¹¹	+2	03.1 ¹⁵⁰	56	15 51	36	24	04 12		46 88	
23	163	30.2		26.0	90	27.5 ¹¹¹	+1	48.0 ¹⁵¹	58	38	27	18	06 9		45 91	
24	178	30.1	+21	25.6	104	57.6 ¹¹¹	+1	32.9 ¹⁵¹	60 S	15 24	16 17	17 12	11 09	6	22 43	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 28 ^m 6		Mag: -4.1 PMG: 14 ^h 57 ^m		Mag: +1.8 PMG: 12 ^h 42 ^m		Mag: -1.8 PMG: 12 ^h 20 ^m		Mag: +0.1 PMG: 9 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	292	40.4	135	42.4	+11	00.5	169	19.4	+21	03.3
1	307	42.9	150	42.3	+10	59.4	184	20.2		03.0
2	322	45.3	165	42.1		58.3	199	21.0		02.6
3	337	47.8	180	42.0		57.1	214	21.8		02.3
4	352	50.3	195	41.9		56.0	229	22.5		01.9
5	7	52.7	210	41.7	+10	54.8	244	23.3	+21	01.6
6	22	55.2	225	41.6	+10	53.7	259	24.1	+21	01.2
7	37	57.6	240	41.4		52.6	274	24.9		00.9
8	53	00.1	255	41.3		51.4	289	25.7		00.5
9	68	02.6	270	41.2		50.3	304	26.5	+21	00.2
10	83	05.0	285	41.0		49.1	319	27.3	+20	59.8
11	98	07.5	300	40.9	+10	48.0	334	28.0	+20	59.5
12	113	10.0	315	40.7	+10	46.8	349	28.8	+20	59.1
13	128	12.4	330	40.6		45.7	4	29.6		58.8
14	143	14.9	345	40.5		44.6	19	30.4		58.4
15	158	17.4	0	40.3		43.4	34	31.2		58.1
16	173	19.8	15	40.2		42.3	49	32.0		57.7
17	188	22.3	30	40.1	+10	41.1	64	32.8	+20	57.4
18	203	24.7	45	39.9	+10	40.0	79	33.5	+20	57.0
19	218	27.2	60	39.8		38.8	94	34.3		56.7
20	233	29.7	75	39.7		37.7	109	35.1		56.3
21	248	32.1	90	39.6		36.5	124	35.9		56.0
22	263	34.6	105	39.4		35.4	139	36.7		55.6
23	278	37.1	120	39.3		34.2	154	37.5		55.3
24	293	39.5	135	39.2	+10	33.1	169	38.3	+20	54.9
Dif	—		-1	-11		+8	-4	+19		-1

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 0				Edad: 5 ^d 6 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 4 20 ^h : 59 ^m 3 R°: 50 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	30.1	+21	25.6	104	57.6	+1	32.9	60 N	** **	1 47	3 05	11 34	95	23 15	7		
1	193	30.1		25.2	119	27.7 ¹¹¹		17.8 ¹⁵¹	58	** **	2 18	22	33 92		18 10			
2	208	30.0		24.8	133	57.8 ¹¹¹	+1	02.7 ¹⁵¹	56	0 51	40	36	32 89		20 13			
3	223	30.0		24.4	148	28.0 ¹¹²	+0	47.6 ¹⁵¹	54	1 38	2 58	48	32 85		22 15			
4	238	29.9		24.0	162	58.2 ¹¹²		32.5 ¹⁵¹	52	2 07	3 13	3 59	31 83		23 18			
5	253	29.8	+21	23.6	177	28.4 ¹¹²	+0	17.4 ¹⁵¹	50	2 28	3 26	4 08	11 30	81	23 25	20		
6	268	29.8	+21	23.2	191	58.6 ¹¹²	+0	02.3 ¹⁵¹	45	3 06	3 52	4 28	11 29	76	23 29	24		
7	283	29.7		22.8	206	28.8 ¹¹²	-0	12.8 ¹⁵¹	40	33	4 12	44	28 71		31 29			
8	298	29.7		22.4	220	59.0 ¹¹²		27.8 ¹⁵⁰	35	3 53	29	4 58	27 68		34 32			
9	313	29.6		22.0	235	29.2 ¹¹²		42.9 ¹⁵¹	30	4 10	4 43	5 09	27 64		36 36			
10	328	29.5		21.5	249	59.5 ¹¹³	-0	58.0 ¹⁵¹	20	37	5 05	29	25 59		40 41			
11	343	29.5	+21	21.1	264	29.7 ¹¹²	-1	13.0 ¹⁵⁰	10 N	4 57	5 24	5 47	11 24	54	23 44	45		
12	358	29.4	+21	20.7	278	59.9 ¹¹²	-1	28.1 ¹⁵¹	0	5 14	5 40	6 02	11 23	50	23 47	49		
13	13	29.4		20.3	293	30.2 ¹¹³		43.1 ¹⁵⁰	10 S	30	5 56	18	22 45		50 54			
14	28	29.3		19.9	308	00.4 ¹¹²	-1	58.1 ¹⁵⁰	20	44	6 11	35	21 41		53 59			
15	43	29.2		19.5	322	30.7 ¹¹³	-2	13.1 ¹⁵⁰	30	5 59	28	6 54	20 35		23 57 65			
16	58	29.2		19.1	337	00.9 ¹¹²		28.1 ¹⁵⁰	35	6 06	38	7 05	20 31		** ** *	**		
17	73	29.1	+21	18.7	351	31.2 ¹¹³	-2	43.1 ¹⁵⁰	40	6 15	6 48	7 18	11 19	28	** ** *	**		
18	88	29.1	+21	18.3	6	01.4 ¹¹²	-2	58.0 ¹⁴⁹	45	6 23	7 00	7 33	11 18	25	** ** *	**		
19	103	29.0		17.8	20	31.7 ¹¹³	-3	13.0 ¹⁵⁰	50	33	14	7 51	17 20		** ** *	**		
20	118	29.0		17.4	35	01.9 ¹¹²		27.9 ¹⁴⁹	52	38	20	8 00	17 17		** ** *	**		
21	133	28.9		17.0	49	32.1 ¹¹²		42.7 ¹⁴⁸	54	43	27	09	17 14		** ** *	**		
22	148	28.9		16.6	64	02.4 ¹¹³	-3	57.6 ¹⁴⁹	56	48	35	20	16 12		** ** *	**		
23	163	28.8		16.2	78	32.6 ¹¹²	-4	12.4 ¹⁴⁸	58	6 53	44	33	15 10		** ** *	**		
24	178	28.7	+21	15.8	93	02.8 ¹¹²	-4	27.2 ¹⁴⁸	60 S	7 00	7 54	8 47	11 15	6	** ** *	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 24 ^m 6		Mag: -4.1 PMG: 14 ^h 58 ^m				Mag: +1.8 PMG: 12 ^h 41 ^m				Mag: -1.8 PMG: 12 ^h 17 ^m				Mag: +0.1 PMG: 9 ^h 54 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	293	39.5	135	39.2	+10	33.1	169	38.3	+20	54.9	175	18.8	+21	11.9	211	08.5	+21	59.8
1	308	42.0	150	39.0		31.9	184	39.0		54.6	190	20.7		11.8	226	10.6		59.8
2	323	44.5	165	38.9		30.8	199	39.8		54.2	205	22.6		11.7	241	12.8		59.8
3	338	46.9	180	38.8		29.6	214	40.6		53.9	220	24.5		11.6	256	14.9		59.8
4	353	49.4	195	38.7		28.5	229	41.4		53.5	235	26.3		11.5	271	17.0		59.8
5	8	51.9	210	38.5	+10	27.3	244	42.2	+20	53.2	250	28.2	+21	11.4	286	19.2	+21	59.8
6	23	54.3	225	38.4	+10	26.2	259	43.0	+20	52.8	265	30.1	+21	11.3	301	21.3	+21	59.9
7	38	56.8	240	38.3		25.0	274	43.8		52.4	280	32.0		11.2	316	23.5		59.9
8	53	59.2	255	38.2		23.9	289	44.6		52.1	295	33.8		11.1	331	25.6		59.9
9	69	01.7	270	38.0		22.7	304	45.4		51.7	310	35.7		11.0	346	27.8		59.9
10	84	04.2	285	37.9		21.6	319	46.1		51.4	325	37.6		10.9	1	29.9		59.9
11	99	06.6	300	37.8	+10	20.4	334	46.9	+20	51.0	340	39.5	+21	10.8	16	32.1	+21	59.9
12	114	09.1	315	37.7	+10	19.3	349	47.7	+20	50.7	355	41.4	+21	10.7	31	34.2	+21	59.9
13	129	11.6	330	37.6		18.1	4	48.5		50.3	10	43.2		10.6	46	36.4	+22	00.0
14	144	14.0	345	37.4		17.0	19	49.3		50.0	25	45.1		10.5	61	38.5		00.0
15	159	16.5	0	37.3		15.8	34	50.1		49.6	40	47.0		10.4	76	40.7		00.0
16	174	19.0	15	37.2		14.7	49	50.9		49.2	55	48.9		10.3	91	42.8		00.0
17	189	21.4	30	37.1	+10	13.5	64	51.7	+20	48.9	70	50.7	+21	10.2	106	44.9	+22	00.0
18	204	23.9	45	37.0	+10	12.4	79	52.5	+20	48.5	85	52.6	+21	10.1	121	47.1	+22	00.0
19	219	26.4	60	36.9		11.2	94	53.3		48.2	100	54.5		10.0	136	49.2	+22	00.1
20	234	28.8	75	36.7		10.1	109	54.0		47.8	115	56.4		09.9	151	51.4		00.1
21	249	31.3	90	36.6		08.9	124	54.8		47.5	130	58.2		09.8	166	53.5		00.1
22	264	33.7	105	36.5		07.7	139	55.6		47.1	146	00.1		09.7	181	55.7		00.1
23	279	36.2	120	36.4		06.6	154	56.4		46.7	161	02.0		09.6	196	57.8		00.1
24	294	38.7	135	36.3	+10	05.4	169	57.2	+20	46.4	176	03.9	+21	09.5	212	00.0	+22	00.1
Dif	—		-1		-12		+8		-4		+19		-1		+21			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:7			Edad: 6 ^d 6	PHE {	4 ^h : 59:2 12 ^h : 59:1 20 ^h : 59:0									
	PMG: 12 ^h 06 ^m 1														
	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	178	28.7	+21 15.8	93	02.8	-4 27.2		60 N	21 04	22 19	** **	13 09 96	23 22 8		
1	193	28.7	15.3	107	33.0 ¹¹²	42.0 ¹⁴⁸		58	20 48	21 50	** **	05 91	28 12		
2	208	28.6	14.9	122	03.2 ¹¹²	-4 56.7 ¹⁴⁷		56	34	29	23 10	13 01 88	33 15		
3	223	28.6	14.5	136	33.4 ¹¹²	-5 11.5 ¹⁴⁸		54	22	21 11	22 28	12 57 85	37 18		
4	238	28.5	14.1	151	03.5 ¹¹¹	26.1 ¹⁴⁶		52	11	20 56	22 02	54 83	41 21		
5	253	28.5	+21 13.7	165	33.7 ¹¹²	-5 40.8 ¹⁴⁷		50	20 02	20 44	21 41	12 51 80	23 45 23		
6	268	28.4	+21 13.2	180	03.8 ¹¹¹	-5 55.4 ¹⁴⁶		45	19 43	20 18	21 04	12 45 75	23 53 28		
7	283	28.4	12.8	194	33.9 ¹¹¹	-6 10.0 ¹⁴⁶		40	27	19 58	20 38	39 71	** ** *		
8	298	28.3	12.4	209	04.0 ¹¹¹	24.5 ¹⁴⁵		35	13	42	18	35 67	** ** *		
9	313	28.2	12.0	223	34.1 ¹¹¹	39.0 ¹⁴⁵		30	19 02	29	20 01	31 64	** ** *		
10	328	28.2	11.5	238	04.2 ¹¹¹	-6 53.5 ¹⁴⁵		20	18 42	19 06	19 35	24 59	** ** *		
11	343	28.1	+21 11.1	252	34.2 ¹¹⁰	-7 07.9 ¹⁴⁴		10 N	18 25	18 48	19 15	12 18 55	** ** *		
12	358	28.1	+21 10.7	267	04.3 ¹¹¹	-7 22.2 ¹⁴³		0	18 10	18 32	18 58	12 13 50	** ** *		
13	13	28.0	10.3	281	34.3 ¹¹⁰	36.6 ¹⁴⁴		10 S	17 54	17	43	07 46	** ** *		
14	28	28.0	09.8	296	04.2 ¹⁰⁹	-7 50.8 ¹⁴²		20	38	18 01	28	12 02 41	** ** *		
15	43	27.9	09.4	310	34.2 ¹¹⁰	-8 05.1 ¹⁴³		30	19	17 45	14	11 55 36	** ** *		
16	58	27.9	09.0	325	04.1 ¹⁰⁹	19.2 ¹⁴¹		35	17 08	35	18 06	51 34	0 00 67		
17	73	27.8	+21 08.5	339	34.0 ¹⁰⁹	-8 33.4 ¹⁴²		40	16 55	17 25	17 58	11 47 30	0 02 71		
18	88	27.8	+21 08.1	354	03.9 ¹⁰⁹	-8 47.5 ¹⁴¹		45	16 41	17 13	17 50	11 43 26	0 05 75		
19	103	27.7	07.7	8	33.8 ¹⁰⁹	-9 01.5 ¹⁴⁰		50	23	17 00	40	37 21	09 80		
20	118	27.7	07.3	23	03.6 ¹⁰⁸	15.5 ¹⁴⁰		52	14	16 53	36	34 19	10 83		
21	133	27.6	06.8	37	33.4 ¹⁰⁸	29.4 ¹³⁹		54	16 05	46	31	31 17	12 85		
22	148	27.6	06.4	52	03.2 ¹⁰⁸	43.2 ¹³⁸		56	15 54	39	26	28 14	14 88		
23	163	27.5	06.0	66	32.9 ¹⁰⁷	-9 57.0 ¹³⁸		58	42	30	20	25 11	16 92		
24	178	27.5	+21 05.5	81	02.6 ¹⁰⁷	-10 10.8 ¹³⁸		60 S	15 27	16 20	17 14	11 21 7	0 19 95		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 20 ^m :7		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.8 PMG: 12 ^h 40 ^m		Mag: -1.8 PMG: 12 ^h 14 ^m		Mag: +0.1 PMG: 9 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	294	38.7	135	36.3	+10	05.4	176	03.9	+21	09.5
1	309	41.1	150	36.2		04.3	191	05.7		09.3
2	324	43.6	165	36.1		03.1	206	07.6		09.2
3	339	46.1	180	35.9		02.0	221	09.5		09.1
4	354	48.5	195	35.8	+10	00.8	236	11.4		09.0
5	9	51.0	210	35.7	+9	59.6	251	13.2	+21	08.9
6	24	53.5	225	35.6	+9	58.5	266	15.1	+21	08.8
7	39	55.9	240	35.5		57.3	281	17.0		08.7
8	54	58.4	255	35.4		56.2	296	18.9		08.6
9	70	00.8	270	35.3		55.0	311	20.7		08.5
10	85	03.3	285	35.2		53.8	326	22.6		08.4
11	100	05.8	300	35.1	+9	52.7	341	24.5	+21	08.3
12	115	08.2	315	35.0	+9	51.5	356	26.4	+21	08.2
13	130	10.7	330	34.9		50.4	11	28.2		08.1
14	145	13.2	345	34.8		49.2	26	30.1		08.0
15	160	15.6	0	34.6		48.0	41	32.0		07.9
16	175	18.1	15	34.5		46.9	56	33.9		07.8
17	190	20.6	30	34.4	+9	45.7	71	35.7	+21	07.7
18	205	23.0	45	34.3	+9	44.5	86	37.6	+21	07.6
19	220	25.5	60	34.2		43.4	101	39.5		07.5
20	235	28.0	75	34.1		42.2	116	41.4		07.4
21	250	30.4	90	34.0		41.0	131	43.2		07.3
22	265	32.9	105	33.9		39.9	146	45.1		07.2
23	280	35.3	120	33.8		38.7	161	47.0		07.1
24	295	37.8	135	33.7	+9	37.6	176	48.9	+21	07.0
Dif	—		-1		-12		+8		-4	
							+19		-1	
									+21	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 7 ^d 6	PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7									
	PMG: 12 ^h 06 ^m 2					SD: 16 ^h 1		PMG: 19 ^h 15 ^m			Rº: 53 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	27.5	+21	05.5	81	02.6	-10	10.8	60 N	1 54	3 09	14 45	96	23 30 12
1	193	27.4		05.1	95	32.3 ¹⁰⁷	24.5 ¹³⁷	58	2 23	25		36 92		40 16
2	208	27.4		04.7	110	01.9 ¹⁰⁶	38.1 ¹³⁶	56	1 02	2 44	39	29 88		48 19
3	223	27.3		04.2	124	31.5 ¹⁰⁶	-10	51.6 ¹³⁵	54	1 44	3 02	3 51	22 86	23 55 23
4	238	27.3		03.8	139	01.1 ¹⁰⁶	-11	05.1 ¹³⁵	52	2 11	16	4 01	17 82	** ** *
5	253	27.2	+21	03.4	153	30.6 ¹⁰⁵	-11	18.6 ¹³⁵	50	2 31	3 29	4 11	14 11 80	** ** *
6	268	27.2	+21	02.9	168	00.1 ¹⁰⁵	-11	31.9 ¹³³	45	3 08	3 54	4 30	14 00 75	** ** *
7	283	27.1		02.5	182	29.6 ¹⁰⁵	45.2 ¹³³	40	35	4 14	46	13 50 71		0 00 32
8	298	27.1		02.0	196	59.0 ¹⁰⁴	-11	58.5 ¹³³	35	3 55	30	4 59	42 68	06 35
9	313	27.0		01.6	211	28.4 ¹⁰⁴	-12	11.6 ¹³¹	30	4 12	4 44	5 11	35 65	12 37
10	328	27.0		01.2	225	57.7 ¹⁰³	24.7 ¹³¹	20	38	5 06	30	23 60		21 42
11	343	26.9	+21	00.7	240	27.0 ¹⁰³	-12	37.7 ¹³⁰	10 N	4 58	5 24	5 47	13 13 56	0 29 47
12	358	26.9	+21	00.3	254	56.3 ¹⁰³	-12	50.6 ¹²⁹	0	5 15	5 40	6 03	13 03 52	0 36 52
13	13	26.8	+20	59.8	269	25.5 ¹⁰²	-13	03.5 ¹²⁹	10 S	30	5 56	18	12 53 48	44 55
14	28	26.8		59.4	283	54.7 ¹⁰²	16.3 ¹²⁸	20	44	6 11	35	43 44		0 52 60
15	43	26.7		59.0	298	23.8 ¹⁰¹	29.0 ¹²⁷	30	5 58	27	6 53	31 40		1 02 64
16	58	26.7		58.5	312	52.9 ¹⁰¹	41.6 ¹²⁶	35	6 06	37	7 04	25 36		07 68
17	73	26.7	+20	58.1	327	21.9 ¹⁰⁰	-13	54.2 ¹²⁶	40	6 14	6 47	7 17	12 17 34	1 13 71
18	88	26.6	+20	57.6	341	50.9 ¹⁰⁰	-14	06.6 ¹²⁴	45	6 22	6 59	7 31	12 09 29	1 20 76
19	103	26.6		57.2	356	19.9 ¹⁰⁰	19.0 ¹²⁴	50	32	7 12	49	11 58 25		29 80
20	118	26.5		56.7	10	48.8 ⁹⁹	31.3 ¹²³	52	36	19	7 58	53 23		33 83
21	133	26.5		56.3	25	17.7 ⁹⁹	43.5 ¹²²	54	41	25	8 07	48 20		37 86
22	148	26.4		55.8	39	46.5 ⁹⁸	-14	55.6 ¹²¹	56	46	33	18	42 17	42 89
23	163	26.4		55.4	54	15.2 ⁹⁷	-15	07.7 ¹²¹	58	51	42	30	36 14	48 92
24	178	26.3	+20	55.0	68	44.0 ⁹⁸	-15	19.6 ¹¹⁹	60 S	6 57	7 51	8 44	11 28 10	1 54 96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.2		Mag: +1.8		Mag: -1.8		Mag: +0.1	
	4 ^h 16 ^m 8		PMG: 14 ^h 58 ^m		PMG: 12 ^h 38 ^m		PMG: 12 ^h 11 ^m		PMG: 9 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	295	37.8	135	33.7	170	16.3	176	48.9	212	51.5
1	310	40.3	150	33.6	185	17.0	191	50.8	227	53.7
2	325	42.7	165	33.5	200	17.8	206	52.6	242	55.8
3	340	45.2	180	33.4	215	18.6	221	54.5	257	58.0
4	355	47.7	195	33.3	230	19.4	236	56.4	273	00.1
5	10	50.1	210	33.2	245	20.2	251	58.3	288	02.3
6	25	52.6	225	33.2	260	21.0	267	00.1	303	04.4
7	40	55.1	240	33.1	275	21.8	282	02.0	318	06.6
8	55	57.5	255	33.0	290	22.6	297	03.9	333	08.7
9	71	00.0	270	32.9	305	23.4	312	05.8	348	10.9
10	86	02.5	285	32.8	320	24.2	327	07.6	3	13.0
11	101	04.9	300	32.7	335	25.0	342	09.5	18	15.2
12	116	07.4	315	32.6	350	25.8	357	11.4	33	17.3
13	131	09.8	330	32.5	5	26.6	12	13.3	48	19.5
14	146	12.3	345	32.4	20	27.4	27	15.1	63	21.6
15	161	14.8	0	32.3	35	28.2	42	17.0	78	23.8
16	176	17.2	15	32.2	50	29.0	57	18.9	93	25.9
17	191	19.7	30	32.1	65	29.8	72	20.8	108	28.1
18	206	22.2	45	32.1	80	30.6	87	22.6	123	30.2
19	221	24.6	60	32.0	95	31.4	102	24.5	138	32.4
20	236	27.1	75	31.9	110	32.2	117	26.4	153	34.5
21	251	29.6	90	31.8	125	33.0	132	28.3	168	36.7
22	266	32.0	105	31.7	140	33.8	147	30.1	183	38.8
23	281	34.5	120	31.6	155	34.6	162	32.0	198	41.0
24	296	36.9	135	31.5	170	35.4	177	33.9	213	43.1
Dif	—		-1	-12	+8	-4	+19	-1	+21	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 8 ^d 6	PHE { 4 ^h : 58 ^h /6 12 ^h : 58 ^h /4 20 ^h : 58 ^h /3 R°: 54 ^m									
	PMG: 12 ^h 06 ^m 3													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	26.3	+20 55.0	68	44.0	-15 19.6		60 N	21 00	22 13	** **	16 21 95	23 42 19	
1	193	26.3	54.5	83	12.6	96 31.5	119	58	20 44	21 46	** **	16 08 90	23 56 23	
2	208	26.3	54.1	97	41.3	97 43.2	117	56	31	25	23 00	15 57 86	** **	** **
3	223	26.2	53.6	112	09.9	96 -15 54.9	117	54	19	21 08	22 23	48 82	** **	** **
4	238	26.2	53.2	126	38.4	95 -16 06.5	116	52	09	20 54	21 57	39 80	0 02	25
5	253	26.1	+20 52.7	141	06.9	95 -16 18.0	115	50	20 00	20 41	21 38	15 31 78	0 08	27
6	268	26.1	+20 52.3	155	35.3	94 -16 29.4	114	45	19 41	20 16	21 02	15 15 73	0 21	32
7	283	26.0	51.8	170	03.7	94 40.6	112	40	25	19 57	20 36	15 01 70	32	35
8	298	26.0	51.3	184	32.0	93 -16 51.8	112	35	12	41	16	14 50 67	41	39
9	313	26.0	50.9	199	00.3	93 -17 02.9	111	30	19 01	28	20 00	40 65	0 49	42
10	328	25.9	50.4	213	28.5	92 13.9	110	20	18 42	19 06	19 34	23 61	1 03	46
11	343	25.9	+20 50.0	227	56.7	92 -17 24.8	109	10 N	18 25	18 48	19 14	14 09 57	1 16	49
12	358	25.8	+20 49.5	242	24.8	91 -17 35.6	108	0	18 10	18 32	18 58	13 55 54	1 28	53
13	13	25.8	49.1	256	52.9	91 46.3	107	10 S	17 55	17	43	41 51	39	57
14	28	25.7	48.6	271	21.0	91 -17 56.8	105	20	38	18 02	29	27 48	1 52	60
15	43	25.7	48.2	285	48.9	89 -18 07.3	105	30	20	17 46	15	11 43	2 06	65
16	58	25.7	47.7	300	16.9	90 17.7	104	35	17 09	37	08	13 01 42	15	67
17	73	25.6	+20 47.2	314	44.7	88 -18 27.9	102	40	16 57	17 27	18 00	12 51 38	2 24	71
18	88	25.6	+20 46.8	329	12.6	89 -18 38.0	101	45	16 42	17 15	17 51	12 38 35	2 36	74
19	103	25.5	46.3	343	40.4	88 48.1	101	50	25	17 02	42	23 31	49	79
20	118	25.5	45.9	358	08.1	87 -18 58.0	99	52	17	16 55	38	16 28	2 56	81
21	133	25.5	45.4	12	35.8	87 -19 07.8	98	54	16 07	49	33	12 08 26	3 03	84
22	148	25.4	44.9	27	03.4	86 17.5	97	56	15 57	41	28	11 59 23	11	87
23	163	25.4	44.5	41	31.0	86 27.0	95	58	45	33	23	50 19	20	91
24	178	25.4	+20 44.0	55	58.5	85 -19 36.5	95	60 S	15 31	16 23	17 17	11 38 15	3 30	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 12 ^m 8		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 37 ^m		Mag: -1.8 PMG: 12 ^h 08 ^m		Mag: +0.1 PMG: 9 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	296	36.9	135 31.5	+9 09.5	170 35.4	+20 28.8	177 33.9	+21 04.5	213 43.1	+22 00.8
1	311	39.4	150 31.5	08.3	185 36.2	28.5	192 35.8	04.4	228 45.3	00.9
2	326	41.9	165 31.4	07.1	200 37.0	28.1	207 37.6	04.3	243 47.4	00.9
3	341	44.3	180 31.3	06.0	215 37.8	27.7	222 39.5	04.2	258 49.6	00.9
4	356	46.8	195 31.2	04.8	230 38.6	27.3	237 41.4	04.1	273 51.7	00.9
5	11	49.3	210 31.1	+9 03.6	245 39.4	+20 27.0	252 43.3	+21 04.0	288 53.9	+22 00.9
6	26	51.7	225 31.0	+9 02.4	260 40.2	+20 26.6	267 45.2	+21 03.9	303 56.0	+22 00.9
7	41	54.2	240 31.0	01.3	275 41.0	26.2	282 47.0	03.8	318 58.2	00.9
8	56	56.7	255 30.9	+9 00.1	290 41.8	25.8	297 48.9	03.7	334 00.3	01.0
9	71	59.1	270 30.8	+8 58.9	305 42.6	25.5	312 50.8	03.6	349 02.5	01.0
10	87	01.6	285 30.7	57.7	320 43.4	25.1	327 52.7	03.4	4 04.6	01.0
11	102	04.1	300 30.6	+8 56.5	335 44.2	+20 24.7	342 54.5	+21 03.3	19 06.8	+22 01.0
12	117	06.5	315 30.6	+8 55.4	350 45.0	+20 24.4	357 56.4	+21 03.2	34 08.9	+22 01.0
13	132	09.0	330 30.5	54.2	5 45.8	24.0	12 58.3	03.1	49 11.1	01.0
14	147	11.4	345 30.4	53.0	20 46.6	23.6	28 00.2	03.0	64 13.2	01.0
15	162	13.9	0 30.3	51.8	35 47.4	23.2	43 02.0	02.9	79 15.4	01.1
16	177	16.4	15 30.3	50.7	50 48.2	22.9	58 03.9	02.8	94 17.5	01.1
17	192	18.8	30 30.2	+8 49.5	65 49.0	+20 22.5	73 05.8	+21 02.7	109 19.7	+22 01.1
18	207	21.3	45 30.1	+8 48.3	80 49.8	+20 22.1	88 07.7	+21 02.6	124 21.8	+22 01.1
19	222	23.8	60 30.0	47.1	95 50.6	21.7	103 09.5	02.5	139 24.0	01.1
20	237	26.2	75 30.0	45.9	110 51.4	21.3	118 11.4	02.4	154 26.1	01.1
21	252	28.7	90 29.9	44.8	125 52.2	21.0	133 13.3	02.3	169 28.3	01.1
22	267	31.2	105 29.8	43.6	140 53.0	20.6	148 15.2	02.2	184 30.5	01.2
23	282	33.6	120 29.8	42.4	155 53.8	20.2	163 17.1	02.1	199 32.6	01.2
24	297	36.1	135 29.7	+8 41.2	170 54.6	+20 19.8	178 18.9	+21 02.0	214 34.8	+22 01.2
Dif	—		-1	-12	+8	-4	+19	-1	+22	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 9 ^d 6	PHE {	4 ^h : 58 ^m 1 12 ^h : 58 ^m 0 20 ^h : 57 ^m 8	SD: 15 ^h 9	PMG: 21 ^h 02 ^m		R°: 57 ^m							
	PMG: 12 ^h 06 ^m 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	178	25.4	+20 44.0	55	58.5	-19 36.5	93	60 N	58	2 00	3 13	17 56	85	38 81	0 07	27	
1	193	25.3	43.6	70	26.0	45.8	85	58	58	28	29	16 59	73	16 49	72	0 35	
2	208	25.3	43.1	84	53.4	84	84	56	56	1 13	2 48	16 59	73	16 49	72	0 35	
3	223	25.2	42.6	99	20.8	84	84	54	54	1 50	3 05	16 59	73	16 49	72	0 35	
4	238	25.2	42.2	113	48.1	83	83	52	52	2 16	3 32	16 59	73	16 49	72	0 35	
5	253	25.2	+20 41.7	128	15.4	83	83	50	50	2 35	3 51	16 59	73	16 49	72	0 35	
6	268	25.1	+20 41.2	142	42.6	82	82	45	45	3 11	4 27	16 59	73	16 49	72	0 35	
7	283	25.1	40.8	157	09.8	82	82	40	40	3 37	4 53	16 59	73	16 49	72	0 35	
8	298	25.1	40.3	171	37.0	82	82	35	35	3 57	5 13	16 59	73	16 49	72	0 35	
9	313	25.0	39.8	186	04.1	81	81	30	30	4 13	5 29	16 59	73	16 49	72	0 35	
10	328	25.0	39.4	200	31.1	80	80	20	20	4 38	5 54	16 59	73	16 49	72	0 35	
11	343	24.9	+20 38.9	214	58.1	80	80	10 N	10 N	4 58	6 14	16 59	73	16 49	72	0 35	
12	358	24.9	+20 38.4	229	25.1	80	80	0	0	5 15	6 31	16 59	73	16 49	72	0 35	
13	13	24.9	38.0	243	52.0	79	79	10 S	10 S	5 30	6 46	16 59	73	16 49	72	0 35	
14	28	24.8	37.5	258	18.9	79	79	20	20	5 44	7 00	16 59	73	16 49	72	0 35	
15	43	24.8	37.0	272	45.7	78	78	30	30	5 57	7 13	16 59	73	16 49	72	0 35	
16	58	24.8	36.5	287	12.5	78	78	35	35	6 05	7 21	16 59	73	16 49	72	0 35	
17	73	24.7	+20 36.1	301	39.3	78	78	40	40	6 12	7 28	16 59	73	16 49	72	0 35	
18	88	24.7	+20 35.6	316	06.0	77	77	45	45	6 21	7 37	16 59	73	16 49	72	0 35	
19	103	24.7	35.1	330	32.6	76	76	50	50	6 30	7 46	16 59	73	16 49	72	0 35	
20	118	24.6	34.6	344	59.3	77	77	52	52	6 34	7 50	16 59	73	16 49	72	0 35	
21	133	24.6	34.2	359	25.9	76	76	54	54	6 39	8 05	16 59	73	16 49	72	0 35	
22	148	24.6	33.7	13	52.4	75	75	56	56	6 44	8 10	16 59	73	16 49	72	0 35	
23	163	24.5	33.2	28	18.9	75	75	58	58	6 49	8 15	16 59	73	16 49	72	0 35	
24	178	24.5	+20 32.7	42	45.4	75	75	60 S	60 S	6 55	8 21	16 59	73	16 49	72	0 35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 08 ^m 9		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 36 ^m		Mag: -1.8 PMG: 12 ^h 05 ^m		Mag: +0.1 PMG: 9 ^h 40 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	'	°	'	°	'
0	297	36.1	135	29.7	+8 41.2	170	54.6	+20 19.8	178	18.9	+21 02.0
1	312	38.6	150	29.6	40.0	185	55.4	19.5	193	20.8	01.9
2	327	41.0	165	29.5	38.9	200	56.2	19.1	208	22.7	01.8
3	342	43.5	180	29.5	37.7	215	57.0	18.7	223	24.6	01.7
4	357	45.9	195	29.4	36.5	230	57.8	18.3	238	26.4	01.6
5	12	48.4	210	29.3	+8 35.3	245	58.6	+20 17.9	253	28.3	+21 01.5
6	27	50.9	225	29.3	+8 34.1	260	59.4	+20 17.6	268	30.2	+21 01.4
7	42	53.3	240	29.2	32.9	276	00.2	17.2	283	32.1	01.3
8	57	55.8	255	29.1	31.8	291	01.0	16.8	298	34.0	01.2
9	72	58.3	270	29.1	30.6	306	01.8	16.4	313	35.8	01.0
10	88	00.7	285	29.0	29.4	321	02.6	16.1	328	37.7	00.9
11	103	03.2	300	28.9	+8 28.2	336	03.5	+20 15.7	343	39.6	+21 00.8
12	118	05.7	315	28.9	+8 27.0	351	04.3	+20 15.3	358	41.5	+21 00.7
13	133	08.1	330	28.8	25.8	6	05.1	14.9	13	43.3	00.6
14	148	10.6	345	28.8	24.7	21	05.9	14.5	28	45.2	00.5
15	163	13.1	0	28.7	23.5	36	06.7	14.1	43	47.1	00.4
16	178	15.5	15	28.6	22.3	51	07.5	13.8	58	49.0	00.3
17	193	18.0	30	28.6	+8 21.1	66	08.3	+20 13.4	73	50.9	+21 00.2
18	208	20.4	45	28.5	+8 19.9	81	09.1	+20 13.0	88	52.7	+21 00.1
19	223	22.9	60	28.5	18.7	96	09.9	12.6	103	54.6	+21 00.0
20	238	25.4	75	28.4	17.5	111	10.7	12.2	118	56.5	+20 59.9
21	253	27.8	90	28.3	16.4	126	11.5	11.9	133	58.4	59.8
22	268	30.3	105	28.3	15.2	141	12.3	11.5	149	00.2	59.7
23	283	32.8	120	28.2	14.0	156	13.1	11.1	164	02.1	59.6
24	298	35.2	135	28.2	+8 12.8	171	13.9	+20 10.7	179	04.0	+20 59.5
Dif	—		-1	-12	+8	-4	+19		-1	+22	

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 6	PHE {	4 ^h : 57 ^m 7 12 ^h : 57 ^m 5 20 ^h : 57 ^m 4	R°: 56 ^m									
	PMG: 12 ^h 06 ^m 4							SD: 15 ^h 7			PMG: 21 ^h 59 ^m					
	hG ☉		Dec	hG ☾		Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	24.5	+20	32.7	42	45.4	-22	45.9	60 N	20 56	22 06	** **	19 21	66	0 01	31
1	193	24.5		32.3	57	11.9	75	52.2	58	41	21 41	** **	18 59	65	19	36
2	208	24.4		31.8	71	38.3	74	-22 58.3	56	28	21	22 51	41	64	34	39
3	223	24.4		31.3	86	04.7	74	-23 04.2	54	17	21 04	22 17	25	64	48	40
4	238	24.4		30.8	100	31.0	73	10.1	52	20 07	20 51	21 53	12	63	0 59	43
5	253	24.3	+20	30.3	114	57.3	73	-23 15.7	50	19 58	20 39	21 34	18 01	62	1 10	43
6	268	24.3	+20	29.9	129	23.6	73	-23 21.3	45	19 39	20 14	20 59	17 37	61	1 31	47
7	283	24.3		29.4	143	49.9	73	26.7	40	24	19 55	34	17	61	1 49	48
8	298	24.3		28.9	158	16.2	73	31.9	35	11	40	20 15	17 01	60	2 04	50
9	313	24.2		28.4	172	42.4	72	37.0	30	19 00	27	19 59	16 48	59	17	51
10	328	24.2		27.9	187	08.6	72	42.0	20	18 41	19 05	34	24	58	39	53
11	343	24.2	+20	27.5	201	34.7	71	-23 46.8	10 N	18 25	18 48	19 14	16 04	57	2 58	55
12	358	24.1	+20	27.0	216	00.9	72	-23 51.5	0	18 10	18 32	18 58	15 45	56	3 16	56
13	13	24.1		26.5	230	27.0	71	-23 56.0	10 S	17 55	17	43	26	56	34	57
14	28	24.1		26.0	244	53.1	71	-24 00.4	20	39	18 03	30	15 06	55	3 53	59
15	43	24.1		25.5	259	19.2	71	04.6	30	21	17 47	16	14 43	54	4 15	61
16	58	24.0		25.0	273	45.3	71	08.7	35	17 10	38	09	29	53	28	62
17	73	24.0	+20	24.5	288	11.3	70	-24 12.7	40	16 58	17 28	18 01	14 14	52	4 43	64
18	88	24.0	+20	24.1	302	37.4	71	-24 16.5	45	16 44	17 17	17 53	13 55	51	5 01	65
19	103	23.9		23.6	317	03.4	70	20.1	50	27	17 04	44	32	49	24	67
20	118	23.9		23.1	331	29.4	70	23.6	52	19	16 58	40	21	49	34	69
21	133	23.9		22.6	345	55.5	71	27.0	54	10	51	35	13 09	47	5 46	70
22	148	23.9		22.1	0	21.5	70	30.2	56	16 00	44	31	12 55	45	6 00	72
23	163	23.8		21.6	14	47.5	70	33.2	58	15 48	36	26	38	44	17	73
24	178	23.8	+20	21.1	29	13.5	70	-24 36.1	60 S	15 35	16 27	17 20	12 18	41	6 36	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 05 ^m 0		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 34 ^m		Mag: -1.8 PMG: 12 ^h 02 ^m		Mag: +0.1 PMG: 9 ^h 37 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♎	
h	°	'	°	'	°	'	°	'	°	'
0	298	35.2	135	28.2	+8	12.8	171	13.9	+20	10.7
1	313	37.7	150	28.1		11.6	186	14.7		10.3
2	328	40.2	165	28.1		10.4	201	15.5		09.9
3	343	42.6	180	28.0		09.2	216	16.3		09.6
4	358	45.1	195	27.9		08.0	231	17.2		09.2
5	13	47.6	210	27.9	+8	06.8	246	18.0	+20	08.8
6	28	50.0	225	27.8	+8	05.7	261	18.8	+20	08.4
7	43	52.5	240	27.8		04.5	276	19.6		08.0
8	58	54.9	255	27.7		03.3	291	20.4		07.6
9	73	57.4	270	27.7		02.1	306	21.2		07.2
10	88	59.9	285	27.6	+8	00.9	321	22.0		06.9
11	104	02.3	300	27.6	+7	59.7	336	22.8	+20	06.5
12	119	04.8	315	27.5	+7	58.5	351	23.6	+20	06.1
13	134	07.3	330	27.5		57.3	6	24.4		05.7
14	149	09.7	345	27.4		56.1	21	25.2		05.3
15	164	12.2	0	27.4		54.9	36	26.0		04.9
16	179	14.7	15	27.3		53.7	51	26.9		04.5
17	194	17.1	30	27.3	+7	52.6	66	27.7	+20	04.2
18	209	19.6	45	27.2	+7	51.4	81	28.5	+20	03.8
19	224	22.0	60	27.2		50.2	96	29.3		03.4
20	239	24.5	75	27.2		49.0	111	30.1		03.0
21	254	27.0	90	27.1		47.8	126	30.9		02.6
22	269	29.4	105	27.1		46.6	141	31.7		02.2
23	284	31.9	120	27.0		45.4	156	32.5		01.8
24	299	34.4	135	27.0	+7	44.2	171	33.3	+20	01.4
Dif	—		0		-12		+8		-4	
									+19	
									-1	
									+22	

UT	SOL			O 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: 11 ^d 6 PHE { SD: 15 ^h 6 PMG: 22 ^h 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	23.8	+20 21.1	29	13.5	-24 36.1	60 N	** *	2 07	3 17	20 27	44	0 32	51	
1	193	23.8		43	39.4	38.9	58	** *	33	33	20 04	46	0 55	52	
2	208	23.8		58	05.4	41.5	56	1 22	2 53	46	19 45	47	1 13	53	
3	223	23.7		72	31.4	44.0	54	1 56	3 09	3 57		29 48		28 54	
4	238	23.7		86	57.4	46.3	52	2 20	23	4 07		15 49		42 54	
5	253	23.7	+20 18.7	101	23.4	-24 48.5	50	2 39	3 35	4 15	19 03	50	1 53	55	
6	268	23.7	+20 18.2	115	49.4	-24 50.5	45	3 14	3 59	4 34	18 38	51	2 18	55	
7	283	23.6		130	15.4	52.4	40	39	4 18	4 49		18 52		37 56	
8	298	23.6		144	41.4	54.1	35	3 58	33	5 02	18 01	53	2 54	55	
9	313	23.6		159	07.4	55.6	30	4 14	4 46	13	17 47	53	3 08	55	
10	328	23.6		173	33.4	57.1	20	39	5 08	32		22 54		32 56	
11	343	23.5	+20 15.7	187	59.5	-24 58.3	10 N	4 59	5 25	5 48	17 01	55	3 53	56	
12	358	23.5	+20 15.2	202	25.5	-24 59.5	0	5 15	5 41	6 03	16 41	56	4 12	56	
13	13	23.5		216	51.6	-25 00.4	10 S	30	5 55	18		22 56		31 57	
14	28	23.5		231	17.7	01.3	20	43	6 10	34	16 01	56	4 52	57	
15	43	23.4		245	43.8	01.9	30	5 57	26	6 52	15 37	57	5 16	57	
16	58	23.4		260	09.9	02.5	35	6 04	35	7 02		22 58		30 57	
17	73	23.4	+20 12.7	274	36.0	-25 02.9	40	6 11	6 44	7 14	15 06	58	5 47	56	
18	88	23.4	+20 12.2	289	02.2	-25 03.1	45	6 19	6 55	7 28	14 46	59	6 06	57	
19	103	23.4		303	28.4	03.2	50	28	7 08	45		21 59		31 56	
20	118	23.3		317	54.6	03.1	52	32	14	7 53	14 10	59	43	56	
21	133	23.3		332	20.8	02.9	54	37	21	8 02	13 56	60	6 56	56	
22	148	23.3		346	47.1	02.6	56	41	28	12		40 60		7 12 56	
23	163	23.3		1	13.4	02.1	58	46	36	23	13 22	60	30	56	
24	178	23.2	+20 09.2	15	39.7	-25 01.4	60 S	6 52	7 45	8 37	12 59	61	7 53	55	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 01 ^m 0		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 33 ^m		Mag: -1.8 PMG: 11 ^h 59 ^m		Mag: +0.1 PMG: 9 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	299	34.4	135	27.0	171	33.3	179	49.0	216	18.2
1	314	36.8	150	26.9	186	34.1	194	50.9	231	20.3
2	329	39.3	165	26.9	201	35.0	209	52.8	246	22.5
3	344	41.8	180	26.9	216	35.8	224	54.7	261	24.6
4	359	44.2	195	26.8	231	36.6	239	56.6	276	26.8
5	14	46.7	210	26.8	246	37.4	254	58.4	291	28.9
6	29	49.2	225	26.7	261	38.2	270	00.3	306	31.1
7	44	51.6	240	26.7	276	39.0	285	02.2	321	33.3
8	59	54.1	255	26.7	291	39.8	300	04.1	336	35.4
9	74	56.5	270	26.6	306	40.6	315	05.9	351	37.6
10	89	59.0	285	26.6	321	41.4	330	07.8	6	39.7
11	105	01.5	300	26.5	336	42.3	345	09.7	21	41.9
12	120	03.9	315	26.5	351	43.1	0	11.6	36	44.0
13	135	06.4	330	26.5	6	43.9	15	13.5	51	46.2
14	150	08.9	345	26.4	21	44.7	30	15.3	66	48.4
15	165	11.3	0	26.4	36	45.5	45	17.2	81	50.5
16	180	13.8	15	26.4	51	46.3	60	19.1	96	52.7
17	195	16.3	30	26.3	66	47.1	75	21.0	111	54.8
18	210	18.7	45	26.3	81	47.9	90	22.8	126	57.0
19	225	21.2	60	26.3	96	48.8	105	24.7	141	59.2
20	240	23.7	75	26.2	111	49.6	120	26.6	157	01.3
21	255	26.1	90	26.2	126	50.4	135	28.5	172	03.5
22	270	28.6	105	26.2	141	51.2	150	30.4	187	05.6
23	285	31.0	120	26.2	156	52.0	165	32.2	202	07.8
24	300	33.5	135	26.1	171	52.8	180	34.1	217	09.9
Dif	—		0	-12	+8	-4	+19	-1	+22	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 6 PHE { 4 ^h : 56 ^m /7 12 ^h : 56 ^m /5 20 ^h : 56 ^m /3 R°: 52 ^m										
	PMG: 12 ^h 06 ^m 5			PMG: 23 ^h 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	23.2	+20 09.2	15	39.7	-25 01.4	8	60 N	20 52	22 00	** **	21 11 26	1 23 71	
1	193	23.2	08.6	30	06.1	-25 00.6	8	58	37	21 36	** **	20 50 29	1 47 68	
2	208	23.2	08.1	44	32.5	-24 59.7	9	56	25	17	22 43	32 33	2 06 66	
3	223	23.2	07.6	58	58.9	58.6	11	54	14	21 01	22 11	17 35	22 65	
4	238	23.2	07.1	73	25.4	57.4	12	52	20 04	20 47	21 49	20 04 37	36 64	
5	253	23.2	+20 06.6	87	51.9	-24 56.0	14	50	19 55	20 36	21 30	19 53 38	2 48 63	
6	268	23.1	+20 06.1	102	18.4	-24 54.5	15	45	19 37	20 12	20 57	19 29 42	3 13 61	
7	283	23.1	05.6	116	45.0	52.9	16	40	22	19 54	32	19 10 44	33 60	
8	298	23.1	05.1	131	11.6	51.1	18	35	19 10	38	20 13	18 54 46	3 49 59	
9	313	23.1	04.6	145	38.3	49.1	20	30	18 59	26	19 57	40 47	4 03 59	
10	328	23.1	04.1	160	05.0	47.1	20	20	41	19 05	33	18 16 50	28 57	
11	343	23.0	+20 03.6	174	31.8	-24 44.9	22	10 N	18 25	18 47	19 14	17 56 51	4 49 56	
12	358	23.0	+20 03.0	188	58.6	-24 42.5	24	0	18 10	18 32	18 58	17 37 53	5 08 55	
13	13	23.0	02.5	203	25.5	40.0	25	10 S	17 55	18	43	17 18 55	28 53	
14	28	23.0	02.0	217	52.4	37.4	26	20	40	18 03	30	16 57 57	5 49 52	
15	43	23.0	01.5	232	19.4	34.6	28	30	22	17 48	17	34 59	6 13 50	
16	58	23.0	01.0	246	46.4	31.7	29	35	12	39	10	20 60	27 49	
17	73	22.9	+20 00.5	261	13.5	-24 28.7	30	40	17 00	17 30	18 03	16 04 62	6 43 48	
18	88	22.9	+20 00.0	275	40.6	-24 25.5	32	45	16 46	17 19	17 55	15 45 63	7 03 46	
19	103	22.9	+19 59.4	290	07.8	22.2	33	50	30	06	46	20 67	27 44	
20	118	22.9	58.9	304	35.1	18.7	35	52	22	17 00	42	15 09 68	39 43	
21	133	22.9	58.4	319	02.4	15.2	35	54	13	16 54	38	14 56 69	7 52 42	
22	148	22.9	57.9	333	29.7	11.4	38	56	16 03	47	33	40 72	8 08 40	
23	163	22.9	57.4	347	57.2	07.6	38	58	15 52	39	28	22 74	26 37	
24	178	22.8	+19 56.9	2	24.6	-24 03.6	40	60 S	15 39	16 30	17 23	14 00 78	8 48 34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 57 ^m 1		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 32 ^m		Mag: -1.8 PMG: 11 ^h 56 ^m		Mag: +0.1 PMG: 9 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	300	33.5	135 26.1	+7 15.4	171 52.8	+19 52.0	180 34.1	+20 54.3	217 09.9	+22 02.2
1	315	36.0	150 26.1	14.2	186 53.6	51.6	195 36.0	54.2	232 12.1	02.2
2	330	38.4	165 26.1	13.0	201 54.5	51.2	210 37.9	54.1	247 14.3	02.2
3	345	40.9	180 26.0	11.8	216 55.3	50.8	225 39.7	54.0	262 16.4	02.2
4	0	43.4	195 26.0	10.6	231 56.1	50.4	240 41.6	53.9	277 18.6	02.2
5	15	45.8	210 26.0	+7 09.4	246 56.9	+19 50.0	255 43.5	+20 53.8	292 20.7	+22 02.2
6	30	48.3	225 26.0	+7 08.2	261 57.7	+19 49.7	270 45.4	+20 53.7	307 22.9	+22 02.2
7	45	50.8	240 25.9	07.0	276 58.5	49.3	285 47.3	53.6	322 25.1	02.3
8	60	53.2	255 25.9	05.8	291 59.3	48.9	300 49.1	53.5	337 27.2	02.3
9	75	55.7	270 25.9	04.6	307 00.2	48.5	315 51.0	53.4	352 29.4	02.3
10	90	58.2	285 25.9	03.4	322 01.0	48.1	330 52.9	53.3	7 31.5	02.3
11	106	00.6	300 25.8	+7 02.2	337 01.8	+19 47.7	345 54.8	+20 53.2	22 33.7	+22 02.3
12	121	03.1	315 25.8	+7 01.0	352 02.6	+19 47.3	0 56.6	+20 53.0	37 35.8	+22 02.3
13	136	05.5	330 25.8	+6 59.8	7 03.4	46.9	15 58.5	52.9	52 38.0	02.3
14	151	08.0	345 25.8	58.6	22 04.2	46.5	31 00.4	52.8	67 40.2	02.3
15	166	10.5	0 25.8	57.4	37 05.1	46.1	46 02.3	52.7	82 42.3	02.4
16	181	12.9	15 25.7	56.2	52 05.9	45.7	61 04.2	52.6	97 44.5	02.4
17	196	15.4	30 25.7	+6 55.0	67 06.7	+19 45.3	76 06.0	+20 52.5	112 46.6	+22 02.4
18	211	17.9	45 25.7	+6 53.8	82 07.5	+19 44.9	91 07.9	+20 52.4	127 48.8	+22 02.4
19	226	20.3	60 25.7	52.6	97 08.3	44.5	106 09.8	52.3	142 51.0	02.4
20	241	22.8	75 25.7	51.4	112 09.1	44.1	121 11.7	52.2	157 53.1	02.4
21	256	25.3	90 25.6	50.2	127 10.0	43.7	136 13.5	52.1	172 55.3	02.4
22	271	27.7	105 25.6	49.0	142 10.8	43.3	151 15.4	52.0	187 57.4	02.5
23	286	30.2	120 25.6	47.8	157 11.6	42.9	166 17.3	51.9	202 59.6	02.5
24	301	32.7	135 25.6	+6 46.6	172 12.4	+19 42.5	181 19.2	+20 51.8	218 01.8	+22 02.5
Dif	—		0	-12	+8	-4	+19	-1	+22	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: 13 ^d 6 PHE { SD: 15'3 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	22.8	+19 56.9	2	24.6	-24 03.6	60 N	*** **	2 13	3 22	21 37	15	2 34	83	
1	193	22.8	56.3	16	52.2 86	-23 59.5 41	58	** **	38	36	19 20		2 55	78	
2	208	22.8	55.8	31	19.8 86	55.3 42	56	1 31	2 57	3 49	21 05	23	3 12	76	
3	223	22.8	55.3	45	47.5 87	51.0 43	54	2 02	3 13	4 00	20 52	26	27	73	
4	238	22.8	54.8	60	15.3 88	46.5 45	52	25	26	09	41	28	40	70	
5	253	22.8	+19 54.3	74	43.1 88	-23 41.9 46	50	2 43	3 38	4 18	20 31	30	3 51	69	
6	268	22.8	+19 53.7	89	11.0 89	-23 37.1 48	45	3 17	4 01	4 36	20 11	33	4 14	66	
7	283	22.7	53.2	103	38.9 89	32.3 48	40	3 41	20	4 51	19 54	36	33	63	
8	298	22.7	52.7	118	06.9 90	27.3 50	35	4 00	35	5 03	40 38		4 48	61	
9	313	22.7	52.2	132	35.0 91	22.2 51	30	16	4 48	14	27 41		5 02	59	
10	328	22.7	51.6	147	03.2 92	17.0 52	20	40	5 09	32	19 06	44	25	56	
11	343	22.7	+19 51.1	161	31.4 92	-23 11.6 54	10 N	4 59	5 26	5 48	18 47	48	5 45	53	
12	358	22.7	+19 50.6	175	59.7 93	-23 06.2 56	0	5 15	5 41	6 03	18 30	50	6 03	52	
13	13	22.7	50.1	190	28.1 94	-23 00.6 56	10 S	29	5 55	18	18 13	52	21	50	
14	28	22.7	49.5	204	56.6 95	-22 54.9 57	20	43	6 10	33	17 54	56	6 41	47	
15	43	22.7	49.0	219	25.1 95	49.1 58	30	5 56	25	6 51	33 58		7 03	44	
16	58	22.6	48.5	233	53.7 96	43.1 60	35	6 03	34	7 01	20 61		16	43	
17	73	22.6	+19 47.9	248	22.4 97	-22 37.1 60	40	6 10	6 43	7 12	17 06	63	7 31	41	
18	88	22.6	+19 47.4	262	51.2 98	-22 30.9 62	45	6 18	6 54	7 26	16 48	66	7 49	38	
19	103	22.6	46.9	277	20.0 98	24.7 62	50	27	7 06	43	27 70		8 11	35	
20	118	22.6	46.4	291	48.9 99	18.3 64	52	30	12	50	17 71		22	32	
21	133	22.6	45.8	306	17.9 100	11.8 65	54	34	18	7 59	16 05	74	34	30	
22	148	22.6	45.3	320	47.0 101	-22 05.2 66	56	39	25	8 09	15 52	76	8 48	27	
23	163	22.6	44.8	335	16.1 101	-21 58.5 67	58	44	33	20	36 80		9 03	25	
24	178	22.6	+19 44.2	349	45.3 102	-21 51.7 68	60 S	6 49	7 42	8 33	15 18	84	9 22	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 53 ^m 2		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 30 ^m		Mag: -1.8 PMG: 11 ^h 53 ^m		Mag: +0.1 PMG: 9 ^h 27 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	301	32.7	135	25.6	+6 46.6	172	12.4	+19 42.5	181	19.2	+20 51.8	218	01.8	+22 02.5
1	316	35.1	150	25.6	45.4	187	13.2	42.1	196	21.1	51.6	233	03.9	02.5
2	331	37.6	165	25.6	44.2	202	14.1	41.7	211	22.9	51.5	248	06.1	02.5
3	346	40.0	180	25.5	42.9	217	14.9	41.3	226	24.8	51.4	263	08.2	02.5
4	1	42.5	195	25.5	41.7	232	15.7	40.9	241	26.7	51.3	278	10.4	02.5
5	16	45.0	210	25.5	+6 40.5	247	16.5	+19 40.5	256	28.6	+20 51.2	293	12.6	+22 02.5
6	31	47.4	225	25.5	+6 39.3	262	17.3	+19 40.1	271	30.5	+20 51.1	308	14.7	+22 02.6
7	46	49.9	240	25.5	38.1	277	18.1	39.7	286	32.3	51.0	323	16.9	02.6
8	61	52.4	255	25.5	36.9	292	19.0	39.3	301	34.2	50.9	338	19.0	02.6
9	76	54.8	270	25.5	35.7	307	19.8	38.9	316	36.1	50.8	353	21.2	02.6
10	91	57.3	285	25.5	34.5	322	20.6	38.5	331	38.0	50.7	8	23.4	02.6
11	106	59.8	300	25.5	+6 33.3	337	21.4	+19 38.1	346	39.9	+20 50.6	23	25.5	+22 02.6
12	122	02.2	315	25.4	+6 32.1	352	22.2	+19 37.7	1	41.7	+20 50.5	38	27.7	+22 02.6
13	137	04.7	330	25.4	30.9	7	23.1	37.3	16	43.6	50.4	53	29.9	02.6
14	152	07.2	345	25.4	29.7	22	23.9	36.8	31	45.5	50.2	68	32.0	02.7
15	167	09.6	0	25.4	28.4	37	24.7	36.4	46	47.4	50.1	83	34.2	02.7
16	182	12.1	15	25.4	27.2	52	25.5	36.0	61	49.2	50.0	98	36.3	02.7
17	197	14.5	30	25.4	+6 26.0	67	26.3	+19 35.6	76	51.1	+20 49.9	113	38.5	+22 02.7
18	212	17.0	45	25.4	+6 24.8	82	27.2	+19 35.2	91	53.0	+20 49.8	128	40.7	+22 02.7
19	227	19.5	60	25.4	23.6	97	28.0	34.8	106	54.9	49.7	143	42.8	02.7
20	242	21.9	75	25.4	22.4	112	28.8	34.4	121	56.8	49.6	158	45.0	02.7
21	257	24.4	90	25.4	21.2	127	29.6	34.0	136	58.6	49.5	173	47.2	02.7
22	272	26.9	105	25.4	20.0	142	30.5	33.6	152	00.5	49.4	188	49.3	02.8
23	287	29.3	120	25.4	18.8	157	31.3	33.2	167	02.4	49.3	203	51.5	02.8
24	302	31.8	135	25.4	+6 17.5	172	32.1	+19 32.8	182	04.3	+20 49.2	218	53.6	+22 02.8
Dif	—		0 -12		+8 -4		+19 -1		+19 -1		+22 0			

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5				Edad: 14 ^d 6 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 5 20 ^h : 55 ^m 3 PMG: 0 ^h 42 ^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	h m m	h m m
0	178	22.6	+19	44.2	349	45.3	-21	51.7	60 N	20 47	21 54	** **	21 52 9	3 57	86	
1	193	22.6		43.7	4	14.6 ¹⁰³		44.8 ⁶⁹	58	33	31	23 25	39 13	4 13	82	
2	208	22.6		43.2	18	44.0 ¹⁰⁴		37.7 ⁷¹	56	21	21 12	22 35	28 16	28	77	
3	223	22.6		42.6	33	13.5 ¹⁰⁵		30.6 ⁷¹	54	11	20 57	22 05	18 19	40	75	
4	238	22.5		42.1	47	43.0 ¹⁰⁵		23.4 ⁷²	52	20 01	44	21 44	09 21	4 50	73	
5	253	22.5	+19	41.6	62	12.6 ¹⁰⁶	-21	16.0 ⁷⁴	50	19 53	20 33	21 27	21 01 23	5 00	70	
6	268	22.5	+19	41.0	76	42.3 ¹⁰⁷	-21	08.6 ⁷⁴	45	19 35	20 10	20 54	20 44 28	5 20	66	
7	283	22.5		40.5	91	12.1 ¹⁰⁸	-21	01.1 ⁷⁵	40	21	19 52	30	30 31	36	63	
8	298	22.5		39.9	105	42.0 ¹⁰⁹	-20	53.4 ⁷⁷	35	19 09	37	20 11	18 34	5 49	61	
9	313	22.5		39.4	120	11.9 ¹⁰⁹		45.7 ⁷⁷	30	18 58	24	19 56	20 08 36	6 01	58	
10	328	22.5		38.9	134	42.0 ¹¹¹		37.9 ⁷⁸	20	40	19 04	32	19 50 40	21	55	
11	343	22.5	+19	38.3	149	12.1 ¹¹¹	-20	30.0 ⁷⁹	10 N	18 24	18 47	19 13	19 35 43	6 38	52	
12	358	22.5	+19	37.8	163	42.3 ¹¹²	-20	22.0 ⁸⁰	0	18 10	18 32	18 57	19 20 47	6 55	48	
13	13	22.5		37.2	178	12.5 ¹¹²		13.9 ⁸¹	10 S	17 56	18	44	19 05 50	7 11	45	
14	28	22.5		36.7	192	42.9 ¹¹⁴	-20	05.7 ⁸²	20	41	18 04	31	18 50 53	28	42	
15	43	22.5		36.2	207	13.3 ¹¹⁴	-19	57.4 ⁸³	30	23	17 49	18	31 58	47	39	
16	58	22.5		35.6	221	43.8 ¹¹⁵		49.0 ⁸⁴	35	13	40	11	21 60	7 59	36	
17	73	22.5	+19	35.1	236	14.4 ¹¹⁶	-19	40.5 ⁸⁵	40	17 02	17 31	18 04	18 09 62	8 12	33	
18	88	22.5	+19	34.5	250	45.1 ¹¹⁷	-19	32.0 ⁸⁵	45	16 48	17 21	17 57	17 54 66	8 27	30	
19	103	22.5		34.0	265	15.8 ¹¹⁷		23.3 ⁸⁷	50	32	08	48	37 70	46	26	
20	118	22.5		33.4	279	46.7 ¹¹⁹		14.6 ⁸⁷	52	25	17 03	44	28 73	8 54	25	
21	133	22.5		32.9	294	17.6 ¹¹⁹	-19	05.8 ⁸⁸	54	16	16 56	40	19 75	9 04	22	
22	148	22.5		32.4	308	48.6 ¹²⁰	-18	56.9 ⁸⁹	56	16 06	50	36	17 08 78	15	20	
23	163	22.5		31.8	323	19.6 ¹²⁰		48.0 ⁸⁹	58	15 56	42	31	16 56 81	28	16	
24	178	22.5	+19	31.3	337	50.8 ¹²²	-18	38.9 ⁹¹	60 S	15 43	16 34	17 26	16 42 85	9 43	12	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 3 ^h 49 ^m 3		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 29 ^m		Mag: -1.8 PMG: 11 ^h 50 ^m		Mag: +0.1 PMG: 9 ^h 23 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	302	31.8	135	25.4	+6	17.5	182	04.3	+20	49.2						
1	317	34.3	150	25.4		16.3	197	06.2		49.0						
2	332	36.7	165	25.4		15.1	212	08.0		48.9						
3	347	39.2	180	25.4		13.9	227	09.9		48.8						
4	2	41.6	195	25.4		12.7	242	11.8		48.7						
5	17	44.1	210	25.4	+6	11.5	257	13.7	+20	48.6						
6	32	46.6	225	25.4	+6	10.3	272	15.6	+20	48.5						
7	47	49.0	240	25.4		09.1	287	17.4		48.4						
8	62	51.5	255	25.4		07.9	302	19.3		48.3						
9	77	54.0	270	25.4		06.6	317	21.2		48.2						
10	92	56.4	285	25.4		05.4	332	23.1		48.1						
11	107	58.9	300	25.4	+6	04.2	347	24.9	+20	48.0						
12	123	01.4	315	25.4	+6	03.0	2	26.8	+20	47.9						
13	138	03.8	330	25.4		01.8	17	28.7		47.7						
14	153	06.3	345	25.4	+6	00.6	32	30.6		47.6						
15	168	08.8	0	25.4	+5	59.4	47	32.5		47.5						
16	183	11.2	15	25.4		58.1	62	34.3		47.4						
17	198	13.7	30	25.4	+5	56.9	77	36.2	+20	47.3						
18	213	16.1	45	25.4	+5	55.7	92	38.1	+20	47.2						
19	228	18.6	60	25.4		54.5	107	40.0		47.1						
20	243	21.1	75	25.4		53.3	122	41.9		47.0						
21	258	23.5	90	25.4		52.1	137	43.7		46.9						
22	273	26.0	105	25.5		50.8	152	45.6		46.8						
23	288	28.5	120	25.5		49.6	167	47.5		46.7						
24	303	30.9	135	25.5	+5	48.4	182	49.4	+20	46.5						
Dif	—		0		-12		+8		-4							
							+19		-1							
									+22							
									0							

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^d 7 PMG: 12 ^h 06 ^m 5				Edad: 15 ^d 6 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /0 20 ^h : 54 ^m /9 PMG: 1 ^h 32 ^m R°: 45 ^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	22.5	+19	31.3	337	50.8	-18	38.9	91	58	60 N	** **	2 20	3 26	22 01	7	5 23	84				
1	193	22.5		30.7	352	22.0	122	29.8	91	58		0 48	2 43	40	21 52	10	35	80				
2	208	22.5		30.2	6	53.3	123	20.6	92	56		1 39	3 01	3 52	44 13		45	77				
3	223	22.5		29.6	21	24.7	124	11.3	93	54		2 08	16	4 03	37 15		5 55	74				
4	238	22.5		29.1	35	56.2	125	-18	01.9	94	52		30	29	12	30 18		6 03	72			
5	253	22.5	+19	28.5	50	27.7	125	-17	52.5	94	50		2 47	3 41	4 21	21 24	20	6 10	70			
6	268	22.5	+19	28.0	64	59.4	127	-17	42.9	96	45		3 20	4 04	4 38	21 12	23	6 26	65			
7	283	22.5		27.4	79	31.1	127	33.4	95	40		3 43	22	4 53	21 01	27	39	62				
8	298	22.5		26.9	94	02.8	127	23.7	97	35		4 02	36	5 05	20 52	30	50	59				
9	313	22.5		26.3	108	34.7	129	14.0	97	30		17	4 49	15	44 32		6 59	57				
10	328	22.5		25.8	123	06.6	129	-17	04.2	98	20		4 41	5 09	33	30 37		7 16	52			
11	343	22.5	+19	25.2	137	38.6	130	-16	54.3	99	10 N		5 00	5 26	5 49	20 18	40	7 30	48			
12	358	22.5	+19	24.7	152	10.7	131	-16	44.4	99	0		5 16	5 41	6 03	20 07	43	7 43	45			
13	13	22.5		24.1	166	42.9	132	34.3	101	10 S		29	5 55	17	19 55	47	7 56	42				
14	28	22.5		23.6	181	15.1	132	24.3	100	20		42	6 09	32	43 51		8 10	38				
15	43	22.5		23.0	195	47.4	133	14.1	102	30		5 55	24	49	29 55		26	34				
16	58	22.5		22.4	210	19.8	134	-16	03.9	102	35		6 02	32	6 59	21 58		35	31			
17	73	22.5	+19	21.9	224	52.2	134	-15	53.7	102	40		6 08	6 41	7 11	19 11	61	8 45	29			
18	88	22.5	+19	21.3	239	24.8	136	-15	43.3	104	45		6 16	6 52	7 24	19 00	65	8 57	26			
19	103	22.5		20.8	253	57.3	135	33.0	103	50		24	7 04	40	18 47	69	9 12	21				
20	118	22.5		20.2	268	30.0	137	22.5	105	52		28	10	48	41 70		19	19				
21	133	22.5		19.7	283	02.7	137	12.0	105	54		32	16	7 56	34 73		26	17				
22	148	22.5		19.1	297	35.5	138	-15	01.4	106	56		36	22	8 05	26 76		35	14			
23	163	22.5		18.5	312	08.4	139	-14	50.8	106	58		41	30	16	17 79		44	12			
24	178	22.5	+19	18.0	326	41.4	140	-14	40.1	107	60 S		6 46	7 38	8 28	18 07	82	9 55	8			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 45 ^m 3		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 28 ^m		Mag: -1.8 PMG: 11 ^h 47 ^m		Mag: +0.1 PMG: 9 ^h 20 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	303	30.9	135	25.5	+5	48.4	172	51.9	+19	23.0
1	318	33.4	150	25.5		47.2	187	52.7		22.6
2	333	35.9	165	25.5		46.0	202	53.5		22.2
3	348	38.3	180	25.5		44.8	217	54.3		21.7
4	3	40.8	195	25.5		43.6	232	55.2		21.3
5	18	43.3	210	25.5	+5	42.3	247	56.0	+19	20.9
6	33	45.7	225	25.5	+5	41.1	262	56.8	+19	20.5
7	48	48.2	240	25.6		39.9	277	57.6		20.1
8	63	50.6	255	25.6		38.7	292	58.5		19.7
9	78	53.1	270	25.6		37.5	307	59.3		19.3
10	93	55.6	285	25.6		36.2	323	00.1		18.9
11	108	58.0	300	25.6	+5	35.0	338	01.0	+19	18.4
12	124	00.5	315	25.6	+5	33.8	353	01.8	+19	18.0
13	139	03.0	330	25.7		32.6	8	02.6		17.6
14	154	05.4	345	25.7		31.4	23	03.4		17.2
15	169	07.9	0	25.7		30.2	38	04.3		16.8
16	184	10.4	15	25.7		28.9	53	05.1		16.4
17	199	12.8	30	25.7	+5	27.7	68	05.9	+19	15.9
18	214	15.3	45	25.7	+5	26.5	83	06.7	+19	15.5
19	229	17.7	60	25.8		25.3	98	07.6		15.1
20	244	20.2	75	25.8		24.1	113	08.4		14.7
21	259	22.7	90	25.8		22.8	128	09.2		14.3
22	274	25.1	105	25.8		21.6	143	10.1		13.9
23	289	27.6	120	25.9		20.4	158	10.9		13.5
24	304	30.1	135	25.9	+5	19.2	173	11.7	+19	13.0
Dif	—		0		-12		+8		-4	
							+19		-1	
									+22	
									0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 16 ^d 6 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5														
	PMG: 12 ^h 06 ^m 5				SD: 14 ^h 9 PMG: 2 ^h 17 ^m R°: 43 ^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	22.5	+19	18.0	326	41.4	-14	40.1	60 N	20 43	21 47	** **	22 08 5	6 47 81					
1	193	22.5		17.4	341	14.4 ¹⁴⁰		29.4 ¹⁰⁷	58	29	25	23 09	22 02 8	6 55 78					
2	208	22.5		16.9	355	47.4 ¹⁴⁰		18.6 ¹⁰⁸	56	18	21 08	22 27	21 57 10	7 02 75					
3	223	22.5		16.3	10	20.6 ¹⁴²	-14	07.8 ¹⁰⁸	54	20 07	20 53	22 00	52 13	09 72					
4	238	22.5		15.7	24	53.8 ¹⁴²	-13	56.9 ¹⁰⁹	52	19 58	41	21 39	48 14	15 70					
5	253	22.5	+19	15.2	39	27.1 ¹⁴³	-13	45.9 ¹¹⁰	50	19 50	20 30	21 23	21 44 16	7 20 68					
6	268	22.5	+19	14.6	54	00.4 ¹⁴³	-13	35.0 ¹⁰⁹	45	19 33	20 07	20 51	21 35 21	7 31 64					
7	283	22.5		14.1	68	33.8 ¹⁴⁴		23.9 ¹¹¹	40	19	19 50	28	28 24	41 60					
8	298	22.5		13.5	83	07.3 ¹⁴⁵		12.8 ¹¹¹	35	19 07	35	20 09	22 27	49 57					
9	313	22.5		12.9	97	40.8 ¹⁴⁵	-13	01.7 ¹¹¹	30	18 57	23	19 55	16 30	7 56 54					
10	328	22.5		12.4	112	14.4 ¹⁴⁶	-12	50.5 ¹¹²	20	39	19 03	31	21 07 33	8 08 50					
11	343	22.6	+19	11.8	126	48.0 ¹⁴⁶	-12	39.3 ¹¹²	10 N	18 24	18 46	19 13	20 58 38	8 18 46					
12	358	22.6	+19	11.2	141	21.7 ¹⁴⁷	-12	28.0 ¹¹³	0	18 10	18 32	18 57	20 50 42	8 28 42					
13	13	22.6		10.7	155	55.5 ¹⁴⁸		16.7 ¹¹³	10 S	17 56	18	44	42 46	38 39					
14	28	22.6		10.1	170	29.3 ¹⁴⁸	-12	05.3 ¹¹⁴	20	41	18 05	31	34 49	8 48 35					
15	43	22.6		09.5	185	03.2 ¹⁴⁹	-11	53.9 ¹¹⁴	30	24	17 50	19	24 54	9 00 30					
16	58	22.6		09.0	199	37.1 ¹⁴⁹		42.4 ¹¹⁵	35	15	42	12	19 56	06 28					
17	73	22.6	+19	08.4	214	11.1 ¹⁵⁰	-11	31.0 ¹¹⁴	40	17 04	17 33	18 06	20 12 59	9 14 25					
18	88	22.6	+19	07.8	228	45.2 ¹⁵¹	-11	19.4 ¹¹⁶	45	16 51	17 23	17 58	20 05 62	9 23 21					
19	103	22.6		07.2	243	19.3 ¹⁵¹	-11	07.9 ¹¹⁵	50	35	11	50	19 56 67	33 18					
20	118	22.6		06.7	257	53.5 ¹⁵²	-10	56.2 ¹¹⁷	52	27	17 05	47	51 70	38 16					
21	133	22.6		06.1	272	27.7 ¹⁵²		44.6 ¹¹⁶	54	19	16 59	43	47 71	43 14					
22	148	22.6		05.5	287	01.9 ¹⁵²		32.9 ¹¹⁷	56	16 10	53	39	42 74	49 12					
23	163	22.7		05.0	301	36.2 ¹⁵³		21.2 ¹¹⁷	58	15 59	45	34	36 77	9 56 9					
24	178	22.7	+19	04.4	316	10.6 ¹⁵⁴	-10	09.5 ¹¹⁷	60 S	15 47	16 37	17 29	19 29 80	10 03 6					
UT	ARIES			VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 41 ^m 4			Mag: -4.2 PMG: 14 ^h 58 ^m				Mag: +1.7 PMG: 12 ^h 27 ^m				Mag: -1.8 PMG: 11 ^h 44 ^m				Mag: +0.1 PMG: 9 ^h 16 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	304	30.1	135	25.9	+5	19.2	173	11.7	+19	13.0	183	34.5	+20	43.9	220	37.5	+22	03.3	
1	319	32.5	150	25.9		18.0	188	12.5		12.6	198	36.4		43.8	235	39.7		03.4	
2	334	35.0	165	25.9		16.7	203	13.4		12.2	213	38.3		43.7	250	41.9		03.4	
3	349	37.5	180	26.0		15.5	218	14.2		11.8	228	40.2		43.6	265	44.0		03.4	
4	4	39.9	195	26.0		14.3	233	15.0		11.4	243	42.0		43.5	280	46.2		03.4	
5	19	42.4	210	26.0	+5	13.1	248	15.9	+19	10.9	258	43.9	+20	43.4	295	48.4	+22	03.4	
6	34	44.9	225	26.0	+5	11.9	263	16.7	+19	10.5	273	45.8	+20	43.3	310	50.5	+22	03.4	
7	49	47.3	240	26.1		10.6	278	17.5		10.1	288	47.7		43.1	325	52.7		03.4	
8	64	49.8	255	26.1		09.4	293	18.4		09.7	303	49.6		43.0	340	54.9		03.4	
9	79	52.2	270	26.1		08.2	308	19.2		09.3	318	51.4		42.9	355	57.0		03.4	
10	94	54.7	285	26.1		07.0	323	20.0		08.8	333	53.3		42.8	10	59.2		03.5	
11	109	57.2	300	26.2	+5	05.7	338	20.9	+19	08.4	348	55.2	+20	42.7	26	01.4	+22	03.5	
12	124	59.6	315	26.2	+5	04.5	353	21.7	+19	08.0	3	57.1	+20	42.6	41	03.5	+22	03.5	
13	140	02.1	330	26.2		03.3	8	22.5		07.6	18	59.0		42.5	56	05.7		03.5	
14	155	04.6	345	26.3		02.1	23	23.3		07.2	34	00.8		42.4	71	07.9		03.5	
15	170	07.0	0	26.3	+5	00.9	38	24.2		06.7	49	02.7		42.3	86	10.0		03.5	
16	185	09.5	15	26.3	+4	59.6	53	25.0		06.3	64	04.6		42.1	101	12.2		03.5	
17	200	12.0	30	26.4	+4	58.4	68	25.8	+19	05.9	79	06.5	+20	42.0	116	14.4	+22	03.5	
18	215	14.4	45	26.4	+4	57.2	83	26.7	+19	05.5	94	08.4	+20	41.9	131	16.5	+22	03.6	
19	230	16.9	60	26.4		56.0	98	27.5		05.1	109	10.2		41.8	146	18.7		03.6	
20	245	19.4	75	26.5		54.7	113	28.3		04.6	124	12.1		41.7	161	20.9		03.6	
21	260	21.8	90	26.5		53.5	128	29.2		04.2	139	14.0		41.6	176	23.1		03.6	
22	275	24.3	105	26.5		52.3	143	30.0		03.8	154	15.9		41.5	191	25.2		03.6	
23	290	26.7	120	26.6		51.1	158	30.8		03.4	169	17.8		41.4	206	27.4		03.6	
24	305	29.2	135	26.6	+4	49.8	173	31.7	+19	03.0	184	19.6	+20	41.3	221	29.6	+22	03.6	
Dif	—			0 -12				+8 -4				+19 -1				+22 0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 6	PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3									
	PMG: 12 ^h 06 ^m 5					SD: 14 ^h 8		PMG: 3 ^h 00 ^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 m		h m m	
0	178	22.7	+19 04.4	316	10.6	-10 09.5	60 N	** **	2 26	3 31	22 13 4		8 08 79	
1	193	22.7	03.8	330	45.0 ¹⁵⁴	-9 57.7 ¹¹⁸	58	1 05	2 48	44	10 7		13 76	
2	208	22.7	03.2	345	19.5 ¹⁵⁵	45.9 ¹¹⁸	56	1 47	3 06	3 56	07 10		17 73	
3	223	22.7	02.7	359	54.0 ¹⁵⁵	34.0 ¹¹⁹	54	2 14	20	4 06	05 11		21 71	
4	238	22.7	02.1	14	28.5 ¹⁵⁵	22.1 ¹¹⁹	52	34	33	15	02 14		25 68	
5	253	22.7	+19 01.5	29	03.1 ¹⁵⁶	-9 10.2 ¹¹⁹	50	2 51	3 44	4 23	22 00 16		8 28 67	
6	268	22.7	+19 00.9	43	37.8 ¹⁵⁷	-8 58.3 ¹¹⁹	45	3 22	4 06	4 40	21 56 19		8 35 62	
7	283	22.7	+19 00.4	58	12.5 ¹⁵⁷	46.3 ¹²⁰	40	3 46	24	4 54	52 23		41 59	
8	298	22.8	+18 59.8	72	47.2 ¹⁵⁷	34.3 ¹²⁰	35	4 04	38	5 06	49 25		46 56	
9	313	22.8	59.2	87	22.0 ¹⁵⁸	22.3 ¹²⁰	30	19	4 50	16	46 28		50 53	
10	328	22.8	58.6	101	56.8 ¹⁵⁸	-8 10.2 ¹²¹	20	4 42	5 10	34	40 33		8 58 48	
11	343	22.8	+18 58.0	116	31.6 ¹⁵⁸	-7 58.2 ¹²⁰	10 N	5 00	5 27	5 49	21 36 37		9 04 45	
12	358	22.8	+18 57.5	131	06.5 ¹⁵⁹	-7 46.1 ¹²¹	0	5 16	5 41	6 03	21 32 40		9 10 41	
13	13	22.8	56.9	145	41.5 ¹⁶⁰	33.9 ¹²²	10 S	29	5 55	17	28 44		17 37	
14	28	22.8	56.3	160	16.4 ¹⁵⁹	21.8 ¹²¹	20	42	6 08	32	23 48		23 33	
15	43	22.9	55.7	174	51.5 ¹⁶¹	-7 09.6 ¹²²	30	5 54	23	48	18 52		30 29	
16	58	22.9	55.1	189	26.5 ¹⁶⁰	-6 57.4 ¹²²	35	6 00	31	6 58	15 55		34 27	
17	73	22.9	+18 54.6	204	01.6 ¹⁶¹	-6 45.2 ¹²²	40	6 07	6 40	7 09	21 11 59		9 39 23	
18	88	22.9	+18 54.0	218	36.7 ¹⁶¹	-6 32.9 ¹²³	45	6 14	6 50	7 22	21 07 62		9 44 20	
19	103	22.9	53.4	233	11.8 ¹⁶¹	20.7 ¹²²	50	22	7 02	37	03 66		51 16	
20	118	22.9	52.8	247	47.0 ¹⁶²	-6 08.4 ¹²³	52	26	07	45	21 01 68		54 14	
21	133	22.9	52.2	262	22.2 ¹⁶²	-5 56.1 ¹²³	54	29	13	7 53	20 58 70		9 57 12	
22	148	23.0	51.6	276	57.5 ¹⁶³	43.8 ¹²³	56	33	19	8 02	56 72		10 01 10	
23	163	23.0	51.1	291	32.7 ¹⁶²	31.4 ¹²⁴	58	38	27	12	53 75		05 7	
24	178	23.0	+18 50.5	306	08.0 ¹⁶³	-5 19.1 ¹²³	60 S	6 43	7 35	8 24	20 49 78		10 09 5	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 37 ^m 5		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 25 ^m		Mag: -1.8 PMG: 11 ^h 41 ^m		Mag: +0.1 PMG: 9 ^h 13 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	305	29.2	135	26.6	+4 49.8	173 31.7	+19 03.0	184 19.6	+20 41.3	221 29.6	+22 03.6			
1	320	31.7	150	26.6	48.6	188 32.5	02.5	199 21.5	41.2	236 31.7	03.6			
2	335	34.1	165	26.7	47.4	203 33.3	02.1	214 23.4	41.0	251 33.9	03.6			
3	350	36.6	180	26.7	46.2	218 34.2	01.7	229 25.3	40.9	266 36.1	03.7			
4	5 39.1	195	26.7	44.9	233 35.0	01.3	244 27.2	40.8	281 38.2	03.7				
5	20 41.5	210	26.8	+4 43.7	248 35.8	+19 00.8	259 29.1	+20 40.7	296 40.4	+22 03.7				
6	35 44.0	225	26.8	+4 42.5	263 36.7	+19 00.4	274 30.9	+20 40.6	311 42.6	+22 03.7				
7	50 46.5	240	26.9	41.3	278 37.5	+19 00.0	289 32.8	40.5	326 44.7	03.7				
8	65 48.9	255	26.9	40.0	293 38.3	+18 59.6	304 34.7	40.4	341 46.9	03.7				
9	80 51.4	270	26.9	38.8	308 39.2	59.1	319 36.6	40.3	356 49.1	03.7				
10	95 53.8	285	27.0	37.6	323 40.0	58.7	334 38.5	40.2	11 51.3	03.7				
11	110 56.3	300	27.0	+4 36.4	338 40.8	+18 58.3	349 40.3	+20 40.0	26 53.4	+22 03.7				
12	125 58.8	315	27.1	+4 35.1	353 41.7	+18 57.9	4 42.2	+20 39.9	41 55.6	+22 03.8				
13	141 01.2	330	27.1	33.9	8 42.5	57.4	19 44.1	39.8	56 57.8	03.8				
14	156 03.7	345	27.1	32.7	23 43.3	57.0	34 46.0	39.7	71 59.9	03.8				
15	171 06.2	0 27.2	31.5	38 44.2	56.6	49 47.9	39.6	87 02.1	03.8					
16	186 08.6	15 27.2	30.2	53 45.0	56.2	64 49.8	39.5	102 04.3	03.8					
17	201 11.1	30 27.3	+4 29.0	68 45.8	+18 55.7	79 51.6	+20 39.4	117 06.4	+22 03.8					
18	216 13.6	45 27.3	+4 27.8	83 46.7	+18 55.3	94 53.5	+20 39.3	132 08.6	+22 03.8					
19	231 16.0	60 27.4	26.5	98 47.5	54.9	109 55.4	39.2	147 10.8	03.8					
20	246 18.5	75 27.4	25.3	113 48.4	54.5	124 57.3	39.0	162 13.0	03.8					
21	261 21.0	90 27.5	24.1	128 49.2	54.0	139 59.2	38.9	177 15.1	03.8					
22	276 23.4	105 27.5	22.9	143 50.0	53.6	155 01.0	38.8	192 17.3	03.9					
23	291 25.9	120 27.6	21.6	158 50.9	53.2	170 02.9	38.7	207 19.5	03.9					
24	306 28.3	135 27.6	+4 20.4	173 51.7	+18 52.7	185 04.8	+20 38.6	222 21.6	+22 03.9					
Dif	—		0		-12		+8		-1		+22		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 5			Edad: 18 ^d 6 PHE { SD: 14'8 PMG: 3 ^h 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	23.0	+18 50.5	306	08.0	-5 19.1	60 N	20 38	21 41	** **	22 17 4	9 27 78		
1	193	23.0	49.9	320	43.3 ¹⁶³	-5 06.7 ¹²⁴	58	25	20	22 56	17 7	29 75		
2	208	23.0	49.3	335	18.7 ¹⁶⁴	-4 54.4 ¹²³	56	14	21 03	22 19	17 9	30 73		
3	223	23.0	48.7	349	54.1 ¹⁶⁴	42.0 ¹²⁴	54	20 04	20 49	21 54	16 12	32 70		
4	238	23.1	48.1	4	29.5 ¹⁶⁴	29.5 ¹²⁵	52	19 55	37	34	16 13	33 68		
5	253	23.1	+18 47.5	19	04.9 ¹⁶⁴	-4 17.1 ¹²⁴	50	19 47	20 26	21 18	22 16 15	9 35 65		
6	268	23.1	+18 46.9	33	40.3 ¹⁶⁴	-4 04.7 ¹²⁴	45	19 31	20 05	20 48	22 15 19	9 37 62		
7	283	23.1	46.4	48	15.8 ¹⁶⁵	-3 52.2 ¹²⁵	40	17	19 48	25	15 22	40 58		
8	298	23.1	45.8	62	51.3 ¹⁶⁵	39.8 ¹²⁴	35	19 06	34	20 08	14 26	42 55		
9	313	23.2	45.2	77	26.8 ¹⁶⁵	27.3 ¹²⁵	30	18 56	22	19 53	14 28	43 53		
10	328	23.2	44.6	92	02.3 ¹⁶⁵	14.8 ¹²⁵	20	38	19 02	30	13 33	46 48		
11	343	23.2	+18 44.0	106	37.8 ¹⁶⁵	-3 02.3 ¹²⁵	10 N	18 24	18 46	19 12	22 13 36	9 49 44		
12	358	23.2	+18 43.4	121	13.4 ¹⁶⁶	-2 49.8 ¹²⁵	0	18 10	18 32	18 57	22 12 40	9 51 40		
13	13	23.2	42.8	135	49.0 ¹⁶⁶	37.3 ¹²⁵	10 S	17 56	18	44	12 43	54 36		
14	28	23.2	42.2	150	24.5 ¹⁶⁵	24.8 ¹²⁵	20	42	18 05	32	11 48	56 32		
15	43	23.3	41.6	165	00.1 ¹⁶⁶	-2 12.3 ¹²⁵	30	26	17 51	20	10 53	9 59 28		
16	58	23.3	41.0	179	35.8 ¹⁶⁷	-1 59.8 ¹²⁵	35	16	43	14	10 55	10 01 25		
17	73	23.3	+18 40.4	194	11.4 ¹⁶⁶	-1 47.3 ¹²⁵	40	17 05	17 34	18 07	22 10 58	10 02 23		
18	88	23.3	+18 39.8	208	47.0 ¹⁶⁶	-1 34.7 ¹²⁶	45	16 53	17 25	18 00	22 09 62	10 04 20		
19	103	23.4	39.2	223	22.7 ¹⁶⁷	22.2 ¹²⁵	50	37	13	17 52	09 66	07 15		
20	118	23.4	38.6	237	58.3 ¹⁶⁶	-1 09.6 ¹²⁶	52	30	08	49	09 67	08 13		
21	133	23.4	38.0	252	34.0 ¹⁶⁷	-0 57.1 ¹²⁵	54	22	17 02	45	08 70	09 12		
22	148	23.4	37.4	267	09.6 ¹⁶⁶	44.5 ¹²⁶	56	13	16 56	42	08 72	11 9		
23	163	23.4	36.8	281	45.3 ¹⁶⁷	32.0 ¹²⁵	58	16 03	49	37	08 75	12 7		
24	178	23.5	+18 36.2	296	21.0 ¹⁶⁷	-0 19.4 ¹²⁶	60 S	15 52	16 41	17 33	22 07 78	10 14 4		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 33 ^m 5		Mag: -4.2 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 24 ^m		Mag: -1.8 PMG: 11 ^h 38 ^m		Mag: +0.1 PMG: 9 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	306	28.3	135 27.6	+4 20.4	173 51.7	+18 52.7	185 04.8	+20 38.6	222 21.6	+22 03.9
1	321	30.8	150 27.7	19.2	188 52.5	52.3	200 06.7	38.5	237 23.8	03.9
2	336	33.3	165 27.7	18.0	203 53.4	51.9	215 08.6	38.4	252 26.0	03.9
3	351	35.7	180 27.7	16.7	218 54.2	51.5	230 10.5	38.3	267 28.2	03.9
4	6	38.2	195 27.8	15.5	233 55.0	51.0	245 12.3	38.2	282 30.3	03.9
5	21	40.7	210 27.9	+4 14.3	248 55.9	+18 50.6	260 14.2	+20 38.0	297 32.5	+22 03.9
6	36	43.1	225 27.9	+4 13.0	263 56.7	+18 50.2	275 16.1	+20 37.9	312 34.7	+22 03.9
7	51	45.6	240 28.0	11.8	278 57.6	49.7	290 18.0	37.8	327 36.8	04.0
8	66	48.1	255 28.0	10.6	293 58.4	49.3	305 19.9	37.7	342 39.0	04.0
9	81	50.5	270 28.1	09.4	308 59.2	48.9	320 21.7	37.6	357 41.2	04.0
10	96	53.0	285 28.1	08.1	324 00.1	48.5	335 23.6	37.5	12 43.4	04.0
11	111	55.4	300 28.2	+4 06.9	339 00.9	+18 48.0	350 25.5	+20 37.4	27 45.5	+22 04.0
12	126	57.9	315 28.2	+4 05.7	354 01.7	+18 47.6	5 27.4	+20 37.3	42 47.7	+22 04.0
13	142	00.4	330 28.3	04.4	9 02.6	47.2	20 29.3	37.2	57 49.9	04.0
14	157	02.8	345 28.3	03.2	24 03.4	46.7	35 31.2	37.0	72 52.0	04.0
15	172	05.3	0 28.4	02.0	39 04.3	46.3	50 33.0	36.9	87 54.2	04.0
16	187	07.8	15 28.4	+4 00.8	54 05.1	45.9	65 34.9	36.8	102 56.4	04.1
17	202	10.2	30 28.5	+3 59.5	69 05.9	+18 45.4	80 36.8	+20 36.7	117 58.6	+22 04.1
18	217	12.7	45 28.6	+3 58.3	84 06.8	+18 45.0	95 38.7	+20 36.6	133 00.7	+22 04.1
19	232	15.2	60 28.6	57.1	99 07.6	44.6	110 40.6	36.5	148 02.9	04.1
20	247	17.6	75 28.7	55.8	114 08.5	44.1	125 42.5	36.4	163 05.1	04.1
21	262	20.1	90 28.7	54.6	129 09.3	43.7	140 44.3	36.3	178 07.3	04.1
22	277	22.6	105 28.8	53.4	144 10.1	43.3	155 46.2	36.1	193 09.4	04.1
23	292	25.0	120 28.8	52.1	159 11.0	42.8	170 48.1	36.0	208 11.6	04.1
24	307	27.5	135 28.9	+3 50.9	174 11.8	+18 42.4	185 50.0	+20 35.9	223 13.8	+22 04.1
Dif	—		+1	-12	+8	-4	+19	-1	+22	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 19 ^d 6	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2											
	PMG: 12 ^h 06 ^m 4					SD: 14 ^h 8		PMG: 4 ^h 22 ^m			R°: 40 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	23.5	+18	36.2	296	21.0	-0	19.4	60 N	** *	2	33	3	35	22 21 5	
1	193	23.5		35.6	310	56.7 ¹⁶⁷	-0	06.9 ¹²⁵	58	1	18	2	53	3	48	24 7
2	208	23.5		35.0	325	32.3 ¹⁶⁶	+0	05.7 ¹²⁶	56	1	55	3	10	4	00	26 10
3	223	23.5		34.4	340	08.0 ¹⁶⁷		18.2 ¹²⁵	54	2	20		24	10		28 12
4	238	23.6		33.8	354	43.7 ¹⁶⁷		30.8 ¹²⁶	52		39		36	18		29 15
5	253	23.6	+18	33.2	9	19.4 ¹⁶⁷	+0	43.3 ¹²⁵	50	2	55	3	47	4	26	22 31 16
6	268	23.6	+18	32.6	23	55.1 ¹⁶⁷	+0	55.8 ¹²⁵	45	3	25	4	09	4	43	22 34 20
7	283	23.6		32.0	38	30.8 ¹⁶⁷	+1	08.4 ¹²⁶	40	3	48		26	4	56	37 24
8	298	23.7		31.4	53	06.4 ¹⁶⁶		20.9 ¹²⁵	35	4	06		40	5	08	40 26
9	313	23.7		30.8	67	42.1 ¹⁶⁷		33.4 ¹²⁵	30		20	4	52	18		42 29
10	328	23.7		30.2	82	17.8 ¹⁶⁷		46.0 ¹²⁶	20	4	43	5	11	35		46 33
11	343	23.7	+18	29.6	96	53.4 ¹⁶⁶	+1	58.5 ¹²⁵	10 N	5	01	5	27	5	49	22 49 37
12	358	23.8	+18	29.0	111	29.1 ¹⁶⁷	+2	11.0 ¹²⁵	0	5	16	5	41	6	03	22 52 41
13	13	23.8		28.4	126	04.7 ¹⁶⁶		23.5 ¹²⁵	10 S		29	5	54	16		55 45
14	28	23.8		27.8	140	40.4 ¹⁶⁷		36.0 ¹²⁵	20		41	6	08	31		22 59 48
15	43	23.8		27.2	155	16.0 ¹⁶⁶	+2	48.5 ¹²⁵	30		53		22	47		23 03 53
16	58	23.9		26.6	169	51.6 ¹⁶⁶	+3	01.0 ¹²⁵	35	5	59		29	6	56	05 56
17	73	23.9	+18	26.0	184	27.2 ¹⁶⁶	+3	13.4 ¹²⁴	40	6	05	6	38	7	07	23 08 59
18	88	23.9	+18	25.4	199	02.8 ¹⁶⁶	+3	25.9 ¹²⁵	45	6	12	6	48	7	20	23 11 62
19	103	23.9		24.8	213	38.3 ¹⁶⁵		38.3 ¹²⁴	50		20	6	59	35		15 66
20	118	24.0		24.2	228	13.9 ¹⁶⁶	+3	50.8 ¹²⁵	52		23	7	04	42		16 69
21	133	24.0		23.5	242	49.4 ¹⁶⁵	+4	03.2 ¹²⁴	54		27		10	50		18 71
22	148	24.0		22.9	257	24.9 ¹⁶⁵		15.6 ¹²⁴	56		31		16	7	58	20 73
23	163	24.1		22.3	272	00.4 ¹⁶⁵		28.0 ¹²⁴	58		35		23	8	08	23 75
24	178	24.1	+18	21.7	286	35.9 ¹⁶⁵	+4	40.4 ¹²⁴	60 S	6	39	7	31	8	20	23 25 79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 29 ^m 6		Mag: -4.3 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 23 ^m		Mag: -1.8 PMG: 11 ^h 35 ^m		Mag: +0.1 PMG: 9 ^h 06 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	307	27.5	135	28.9	+3	50.9	174	11.8	+18	42.4					
1	322	29.9	150	29.0		49.7	189	12.7		42.0					
2	337	32.4	165	29.0		48.4	204	13.5		41.5					
3	352	34.9	180	29.1		47.2	219	14.3		41.1					
4	7	37.3	195	29.2		46.0	234	15.2		40.7					
5	22	39.8	210	29.2	+3	44.8	249	16.0	+18	40.2					
6	37	42.3	225	29.3	+3	43.5	264	16.9	+18	39.8					
7	52	44.7	240	29.3		42.3	279	17.7		39.4					
8	67	47.2	255	29.4		41.1	294	18.5		38.9					
9	82	49.7	270	29.5		39.8	309	19.4		38.5					
10	97	52.1	285	29.5		38.6	324	20.2		38.1					
11	112	54.6	300	29.6	+3	37.4	339	21.1	+18	37.6					
12	127	57.1	315	29.7	+3	36.1	354	21.9	+18	37.2					
13	142	59.5	330	29.7		34.9	9	22.8		36.8					
14	158	02.0	345	29.8		33.7	24	23.6		36.3					
15	173	04.4	0	29.9		32.4	39	24.4		35.9					
16	188	06.9	15	29.9		31.2	54	25.3		35.4					
17	203	09.4	30	30.0	+3	30.0	69	26.1	+18	35.0					
18	218	11.8	45	30.1	+3	28.7	84	27.0	+18	34.6					
19	233	14.3	60	30.1		27.5	99	27.8		34.1					
20	248	16.8	75	30.2		26.3	114	28.7		33.7					
21	263	19.2	90	30.3		25.0	129	29.5		33.3					
22	278	21.7	105	30.4		23.8	144	30.3		32.8					
23	293	24.2	120	30.4		22.6	159	31.2		32.4					
24	308	26.6	135	30.5	+3	21.3	174	32.0	+18	31.9					
Dif	—		+1	-12		+8	-4		+19	-1		+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 4			Edad: 20 ^d 6 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 5 ^h 02 ^m R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m
0	178	24.1	+18	21.7	286	35.9	+4	40.4	60 N	20 33	21 34	** **	22 26	6
1	193	24.1		21.1	301	11.4 ¹⁶⁵	+4	52.8 ¹²⁴	58	21	21 15	22 44	31	10
2	208	24.1		20.5	315	46.8 ¹⁶⁴	+5	05.1 ¹²³	56	10	20 59	22 11	36	12
3	223	24.2		19.9	330	22.2 ¹⁶⁴		17.4 ¹²³	54	20 00	45	21 48	40	14
4	238	24.2		19.3	344	57.6 ¹⁶⁴		29.8 ¹²⁴	52	19 52	33	29	44	16
5	253	24.2	+18	18.6	359	33.0 ¹⁶⁴	+5	42.1 ¹²³	50	19 44	20 23	21 14	22 47	18
6	268	24.3	+18	18.0	14	08.3 ¹⁶³	+5	54.4 ¹²³	45	19 28	20 02	20 45	22 54	23
7	283	24.3		17.4	28	43.6 ¹⁶³	+6	06.6 ¹²²	40	15	19 45	23	23 01	25
8	298	24.3		16.8	43	18.9 ¹⁶³		18.9 ¹²³	35	19 04	32	20 05	06	28
9	313	24.4		16.2	57	54.2 ¹⁶³		31.1 ¹²²	30	18 54	20	19 51	11	31
10	328	24.4		15.6	72	29.4 ¹⁶²		43.3 ¹²²	20	38	19 01	29	19	35
11	343	24.4	+18	15.0	87	04.6 ¹⁶²	+6	55.5 ¹²²	10 N	18 23	18 45	19 11	23 26	39
12	358	24.5	+18	14.3	101	39.7 ¹⁶¹	+7	07.6 ¹²¹	0	18 10	18 32	18 57	23 33	43
13	13	24.5		13.7	116	14.9 ¹⁶²		19.8 ¹²²	10 S	17 57	19	44	40	46
14	28	24.5		13.1	130	50.0 ¹⁶¹		31.9 ¹²¹	20	43	18 06	32	47	51
15	43	24.5		12.5	145	25.0 ¹⁶⁰		44.0 ¹²¹	30	27	17 52	21	23 56	55
16	58	24.6		11.9	160	00.0 ¹⁶⁰	+7	56.1 ¹²¹	35	18	44	15	** ** *	**
17	73	24.6	+18	11.2	174	35.0 ¹⁶⁰	+8	08.1 ¹²⁰	40	17 07	17 36	18 09	** ** *	**
18	88	24.6	+18	10.6	189	10.0 ¹⁶⁰	+8	20.1 ¹²⁰	45	16 55	17 27	18 02	** ** *	**
19	103	24.7		10.0	203	44.9 ¹⁵⁹		32.1 ¹²⁰	50	40	15	17 55	** ** *	**
20	118	24.7		09.4	218	19.8 ¹⁵⁹		44.1 ¹²⁰	52	33	10	51	** ** *	**
21	133	24.7		08.8	232	54.6 ¹⁵⁸	+8	56.0 ¹¹⁹	54	25	17 05	48	** ** *	**
22	148	24.8		08.1	247	29.4 ¹⁵⁸	+9	07.9 ¹¹⁹	56	17	16 59	44	** ** *	**
23	163	24.8		07.5	262	04.1 ¹⁵⁷		19.8 ¹¹⁹	58	16 07	52	40	** ** *	**
24	178	24.9	+18	06.9	276	38.8 ¹⁵⁷	+9	31.6 ¹¹⁸	60 S	15 56	16 45	17 36	** ** *	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 25 ^m 7		Mag: -4.3 PMG: 14 ^h 58 ^m			Mag: +1.7 PMG: 12 ^h 21 ^m			Mag: -1.8 PMG: 11 ^h 32 ^m			Mag: +0.1 PMG: 9 ^h 02 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	26.6	135	30.5	+3	21.3	174	32.0	+18	31.9	186	35.2	+20	33.2
1	323	29.1	150	30.6		20.1	189	32.9		31.5	201	37.1		33.1
2	338	31.5	165	30.7		18.9	204	33.7		31.1	216	39.0		33.0
3	353	34.0	180	30.7		17.6	219	34.6		30.6	231	40.8		32.9
4	8	36.5	195	30.8		16.4	234	35.4		30.2	246	42.7		32.8
5	23	38.9	210	30.9	+3	15.2	249	36.2	+18	29.7	261	44.6	+20	32.7
6	38	41.4	225	30.9	+3	13.9	264	37.1	+18	29.3	276	46.5	+20	32.6
7	53	43.9	240	31.0		12.7	279	37.9		28.9	291	48.4		32.4
8	68	46.3	255	31.1		11.5	294	38.8		28.4	306	50.3		32.3
9	83	48.8	270	31.2		10.2	309	39.6		28.0	321	52.1		32.2
10	98	51.3	285	31.3		09.0	324	40.5		27.5	336	54.0		32.1
11	113	53.7	300	31.3	+3	07.8	339	41.3	+18	27.1	351	55.9	+20	32.0
12	128	56.2	315	31.4	+3	06.5	354	42.2	+18	26.7	6	57.8	+20	31.9
13	143	58.7	330	31.5		05.3	9	43.0		26.2	21	59.7		31.8
14	159	01.1	345	31.6		04.1	24	43.9		25.8	37	01.6		31.7
15	174	03.6	0	31.6		02.8	39	44.7		25.3	52	03.4		31.5
16	189	06.0	15	31.7		01.6	54	45.5		24.9	67	05.3		31.4
17	204	08.5	30	31.8	+3	00.4	69	46.4	+18	24.5	82	07.2	+20	31.3
18	219	11.0	45	31.9	+2	59.1	84	47.2	+18	24.0	97	09.1	+20	31.2
19	234	13.4	60	32.0		57.9	99	48.1		23.6	112	11.0		31.1
20	249	15.9	75	32.1		56.7	114	48.9		23.1	127	12.9		31.0
21	264	18.4	90	32.1		55.4	129	49.8		22.7	142	14.7		30.9
22	279	20.8	105	32.2		54.2	144	50.6		22.2	157	16.6		30.7
23	294	23.3	120	32.3		53.0	159	51.5		21.8	172	18.5		30.6
24	309	25.8	135	32.4	+2	51.7	174	52.3	+18	21.4	187	20.4	+20	30.5
Dif	—		+1		-12		+8		-4		+19		-1	
													+22	

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: 21 ^d 6 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8 PMG: 5 ^h 43 ^m R°: 44 ^m																	
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m					
0	178	24.9	+18	06.9	276	38.8	+9	31.6	60 N	**	**	2	39	22	32	9	13	23				
1	193	24.9		06.3	291	13.4 ¹⁵⁶		43.5 ¹¹⁹	58	1	29	2	59	3	53	41	12	15	80			
2	208	24.9		05.6	305	48.0 ¹⁵⁶	+9	55.2 ¹¹⁷	56	2	02	3	15	4	03	48	15	09	76			
3	223	25.0		05.0	320	22.6 ¹⁵⁶	+10	07.0 ¹¹⁸	54		25		28	13		22	54	18	13	03		
4	238	25.0		04.4	334	57.1 ¹⁵⁵		18.7 ¹¹⁷	52		44		40	21		23	00	20	12	58	71	
5	253	25.0	+18	03.8	349	31.6 ¹⁵⁵	+10	30.4 ¹¹⁷	50	2	59	3	50	4	29	23	05	22	12	54	69	
6	268	25.1	+18	03.1	4	06.0 ¹⁵⁴	+10	42.0 ¹¹⁶	45	3	28	4	11	4	45	23	17	26	12	44	64	
7	283	25.1		02.5	18	40.3 ¹⁵³	+10	53.7 ¹¹⁷	40	3	50		28	4	58	26	30		35	61		
8	298	25.1		01.9	33	14.6 ¹⁵³	+11	05.2 ¹¹⁵	35	4	08		41	5	09	34	33		28	58		
9	313	25.2		01.2	47	48.9 ¹⁵³		16.8 ¹¹⁶	30		22	4	53	19		42	34		22	56		
10	328	25.2	+18	00.6	62	23.1 ¹⁵²		28.3 ¹¹⁵	20	4	44	5	12	35		23	54	39		11	52	
11	343	25.3	+18	00.0	76	57.2 ¹⁵¹	+11	39.7 ¹¹⁴	10 N	5	01	5	27	5	50	**	**	**		12	02	48
12	358	25.3	+17	59.4	91	31.3 ¹⁵¹	+11	51.2 ¹¹⁵	0	5	16	5	41	6	03	**	**	**		11	53	44
13	13	25.3		58.7	106	05.3 ¹⁵⁰	+12	02.5 ¹¹³	10 S		28	5	54	16		**	**	**		45	40	
14	28	25.4		58.1	120	39.3 ¹⁵⁰		13.9 ¹¹⁴	20		40	6	07	30		**	**	**		35	37	
15	43	25.4		57.5	135	13.2 ¹⁴⁹		25.2 ¹¹³	30		52		20	46		**	**	**		25	33	
16	58	25.4		56.8	149	47.1 ¹⁴⁹		36.5 ¹¹³	35	5	57		28	6	55	0	01	57		19	30	
17	73	25.5	+17	56.2	164	20.9 ¹⁴⁸	+12	47.7 ¹¹²	40	6	04	6	36	7	05	0	07	60		11	12	27
18	88	25.5	+17	55.6	178	54.6 ¹⁴⁷	+12	58.8 ¹¹¹	45	6	10	6	46	7	17	0	13	64		11	04	24
19	103	25.6		54.9	193	28.3 ¹⁴⁷	+13	10.0 ¹¹²	50		17	6	56	32		21	68		10	55	19	
20	118	25.6		54.3	208	01.9 ¹⁴⁶		21.0 ¹¹⁰	52		21	7	01	39		25	70		50	18		
21	133	25.6		53.7	222	35.4 ¹⁴⁵		32.1 ¹¹¹	54		24		07	46		29	72		45	16		
22	148	25.7		53.0	237	08.9 ¹⁴⁵		43.1 ¹¹⁰	56		27		13	7	55	33	76		40	13		
23	163	25.7		52.4	251	42.3 ¹⁴⁴	+13	54.0 ¹⁰⁹	58		31	19		8	04	38	79		34	10		
24	178	25.8	+17	51.8	266	15.6 ¹⁴³	+14	04.9 ¹⁰⁹	60 S	6	36	7	27	8	15	0	44	82		10	27	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 21 ^m 7		Mag: -4.3 PMG: 14 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 20 ^m		Mag: -1.8 PMG: 11 ^h 29 ^m		Mag: +0.1 PMG: 8 ^h 59 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	309	25.8	135	32.4	+2	51.7	174	52.3	+18	21.4
1	324	28.2	150	32.5		50.5	189	53.2		20.9
2	339	30.7	165	32.6		49.2	204	54.0		20.5
3	354	33.1	180	32.6		48.0	219	54.9		20.0
4	9	35.6	195	32.7		46.8	234	55.7		19.6
5	24	38.1	210	32.8	+2	45.5	249	56.6	+18	19.1
6	39	40.5	225	32.9	+2	44.3	264	57.4	+18	18.7
7	54	43.0	240	33.0		43.1	279	58.3		18.2
8	69	45.5	255	33.1		41.8	294	59.1		17.8
9	84	47.9	270	33.2		40.6	309	59.9		17.4
10	99	50.4	285	33.3		39.4	325	00.8		16.9
11	114	52.9	300	33.3	+2	38.1	340	01.6	+18	16.5
12	129	55.3	315	33.4	+2	36.9	355	02.5	+18	16.0
13	144	57.8	330	33.5		35.6	10	03.3		15.6
14	160	00.3	345	33.6		34.4	25	04.2		15.1
15	175	02.7	0	33.7		33.2	40	05.0		14.7
16	190	05.2	15	33.8		31.9	55	05.9		14.2
17	205	07.6	30	33.9	+2	30.7	70	06.7	+18	13.8
18	220	10.1	45	34.0	+2	29.5	85	07.6	+18	13.3
19	235	12.6	60	34.1		28.2	100	08.4		12.9
20	250	15.0	75	34.2		27.0	115	09.3		12.4
21	265	17.5	90	34.3		25.8	130	10.1		12.0
22	280	20.0	105	34.4		24.5	145	11.0		11.5
23	295	22.4	120	34.5		23.3	160	11.8		11.1
24	310	24.9	135	34.6	+2	22.0	175	12.7	+18	10.6
Dif	—		+1		-12		+8		-4	
							+19		-1	
									+22	
									0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 22 ^d 6	PHE { 4 ^h : 55 ^h 0 12 ^h : 55 ^h 2 20 ^h : 55 ^h 3									
	PMG: 12 ^h 06 ^m 2					SD: 14 ^h 9			PMG: 6 ^h 27 ^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	25.8	+17 51.8	266	15.6	+14 04.9		60 N	20 28	21 28	23 28	22 41 14	14 46 85	
1	193	25.8	51.1	280	48.9 ¹⁴³	15.7 ¹⁰⁸		58	16	21 09	22 34	22 53 18	35 81	
2	208	25.9	50.5	295	22.1 ¹⁴²	26.5 ¹⁰⁸		56	20 06	20 54	22 04	23 03 21	25 78	
3	223	25.9	49.8	309	55.2 ¹⁴¹	37.3 ¹⁰⁸		54	19 57	41	21 42	12 24	17 75	
4	238	25.9	49.2	324	28.3 ¹⁴¹	47.9 ¹⁰⁶		52	49	30	24	20 26	09 73	
5	253	26.0	+17 48.6	339	01.2 ¹³⁹	+14 58.6 ¹⁰⁷		50	19 41	20 20	21 10	23 27 28	14 03 70	
6	268	26.0	+17 47.9	353	34.2 ¹⁴⁰	+15 09.1 ¹⁰⁵		45	19 26	19 59	20 41	23 43 32	13 48 66	
7	283	26.1	47.3	8	07.0 ¹³⁸	19.7 ¹⁰⁶		40	13	43	20	23 56 35	36 63	
8	298	26.1	46.6	22	39.8 ¹³⁸	30.1 ¹⁰⁴		35	19 02	30	20 03	** ** *	26 61	
9	313	26.1	46.0	37	12.4 ¹³⁶	40.5 ¹⁰⁴		30	18 53	19	19 50	** ** *	18 58	
10	328	26.2	45.4	51	45.1 ¹³⁷	+15 50.9 ¹⁰⁴		20	37	19 00	28	** ** *	13 03 54	
11	343	26.2	+17 44.7	66	17.6 ¹³⁵	+16 01.2 ¹⁰³		10 N	18 23	18 45	19 11	0 05 43	12 50 50	
12	358	26.3	+17 44.1	80	50.1 ¹³⁵	+16 11.4 ¹⁰²		0	18 10	18 31	18 57	0 16 46	12 37 48	
13	13	26.3	43.4	95	22.4 ¹³³	21.6 ¹⁰²		10 S	17 57	19	44	26 49	25 44	
14	28	26.4	42.8	109	54.7 ¹³³	31.7 ¹⁰¹		20	43	18 06	33	38 52	12 12 41	
15	43	26.4	42.1	124	27.0 ¹³³	41.7 ¹⁰⁰		30	28	17 53	22	51 56	11 58 36	
16	58	26.5	41.5	138	59.1 ¹³¹	+16 51.7 ¹⁰⁰		35	19	46	16	0 58 59	49 35	
17	73	26.5	+17 40.9	153	31.2 ¹³¹	+17 01.6 ⁹⁹		40	17 09	17 38	18 10	1 07 62	11 39 32	
18	88	26.6	+17 40.2	168	03.1 ¹²⁹	+17 11.4 ⁹⁸		45	16 57	17 29	18 04	1 17 66	11 28 29	
19	103	26.6	39.6	182	35.0 ¹²⁹	21.2 ⁹⁸		50	43	18	17 57	29 70	14 25	
20	118	26.6	38.9	197	06.8 ¹²⁸	30.9 ⁹⁷		52	36	13	54	35 72	08 22	
21	133	26.7	38.3	211	38.6 ¹²⁸	40.6 ⁹⁷		54	29	08	51	41 75	11 01 20	
22	148	26.7	37.6	226	10.2 ¹²⁶	50.1 ⁹⁵		56	20	17 02	47	49 77	10 53 18	
23	163	26.8	37.0	240	41.8 ¹²⁶	+17 59.6 ⁹⁵		58	11	16 56	44	1 57 80	44 15	
24	178	26.8	+17 36.3	255	13.2 ¹²⁴	+18 09.0 ⁹⁴		60 S	16 00	16 48	17 40	2 06 84	10 34 11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.3		Mag: +1.7		Mag: -1.8		Mag: +0.1	
	3 ^h 17 ^m 8		PMG: 14 ^h 58 ^m		PMG: 12 ^h 18 ^m		PMG: 11 ^h 26 ^m		PMG: 8 ^h 55 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	310	24.9	135 34.6	+2 22.0	175 12.7	+18 10.6	188 05.6	+20 27.8	225 50.5	+22 04.8
1	325	27.4	150 34.7	20.8	190 13.5	10.2	203 07.5	27.7	240 52.7	04.9
2	340	29.8	165 34.7	19.6	205 14.4	09.7	218 09.4	27.6	255 54.9	04.9
3	355	32.3	180 34.8	18.3	220 15.3	09.3	233 11.3	27.5	270 57.1	04.9
4	10	34.8	195 34.9	17.1	235 16.1	08.8	248 13.2	27.3	285 59.2	04.9
5	25	37.2	210 35.0	+2 15.9	250 17.0	+18 08.4	263 15.1	+20 27.2	301 01.4	+22 04.9
6	40	39.7	225 35.1	+2 14.6	265 17.8	+18 07.9	278 17.0	+20 27.1	316 03.6	+22 04.9
7	55	42.1	240 35.2	13.4	280 18.7	07.5	293 18.8	27.0	331 05.8	04.9
8	70	44.6	255 35.3	12.1	295 19.5	07.0	308 20.7	26.9	346 08.0	04.9
9	85	47.1	270 35.4	10.9	310 20.4	06.6	323 22.6	26.8	1 10.2	04.9
10	100	49.5	285 35.5	09.7	325 21.2	06.1	338 24.5	26.7	16 12.3	04.9
11	115	52.0	300 35.6	+2 08.4	340 22.1	+18 05.7	353 26.4	+20 26.5	31 14.5	+22 04.9
12	130	54.5	315 35.7	+2 07.2	355 22.9	+18 05.2	8 28.3	+20 26.4	46 16.7	+22 05.0
13	145	56.9	330 35.8	06.0	10 23.8	04.8	23 30.2	26.3	61 18.9	05.0
14	160	59.4	345 35.9	04.7	25 24.6	04.3	38 32.0	26.2	76 21.1	05.0
15	176	01.9	0 36.1	03.5	40 25.5	03.9	53 33.9	26.1	91 23.2	05.0
16	191	04.3	15 36.2	02.2	55 26.3	03.4	68 35.8	26.0	106 25.4	05.0
17	206	06.8	30 36.3	+2 01.0	70 27.2	+18 03.0	83 37.7	+20 25.9	121 27.6	+22 05.0
18	221	09.3	45 36.4	+1 59.8	85 28.0	+18 02.5	98 39.6	+20 25.7	136 29.8	+22 05.0
19	236	11.7	60 36.5	58.5	100 28.9	02.1	113 41.5	25.6	151 32.0	05.0
20	251	14.2	75 36.6	57.3	115 29.7	01.6	128 43.4	25.5	166 34.2	05.0
21	266	16.6	90 36.7	56.1	130 30.6	01.2	143 45.3	25.4	181 36.3	05.0
22	281	19.1	105 36.8	54.8	145 31.5	00.7	158 47.1	25.3	196 38.5	05.0
23	296	21.6	120 36.9	53.6	160 32.3	+18 00.3	173 49.0	25.2	211 40.7	05.1
24	311	24.0	135 37.0	+1 52.3	175 33.2	+17 59.8	188 50.9	+20 25.1	226 42.9	+22 05.1
Dif	—	+1	-12	+9	-5	+19	-1	+22	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 2			Edad: 23 ^d 6 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0 PMG: 7 ^h 13 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	26.8	+17	36.3	255	13.2	+18	09.0	60 N	0 45	2 46	3 45	22 55	23	16 11	85
1	193	26.9		35.7	269	44.6 ¹²⁴		18.4 ⁹⁴	58	1 39	3 04	3 57	23 11	27	15 56	80
2	208	26.9		35.0	284	15.9 ¹²³		27.7 ⁹³	56	2 09	19	4 07	24 31		43 77	
3	223	27.0		34.4	298	47.1 ¹²²		36.9 ⁹²	54	31	32	16	36 33		32 74	
4	238	27.0		33.7	313	18.2 ¹²¹		46.0 ⁹¹	52	2 48	43	24	46 35		22 72	
5	253	27.1	+17	33.1	327	49.3 ¹²¹	+18	55.0 ⁹⁰	50	3 03	3 53	4 32	23 55	37	15 13	70
6	268	27.1	+17	32.4	342	20.2 ¹¹⁹	+19	04.0 ⁹⁰	45	3 31	4 14	4 47	** ** *		14 54	67
7	283	27.2		31.8	356	51.1 ¹¹⁹		12.9 ⁸⁹	40	3 53	30	5 00	** ** *		39 64	
8	298	27.2		31.1	11	21.8 ¹¹⁷		21.7 ⁸⁸	35	4 09	43	11	0 07	37	27 61	
9	313	27.3		30.5	25	52.5 ¹¹⁷		30.4 ⁸⁷	30	23	4 54	20	16 40		14 16	59
10	328	27.3		29.8	40	23.1 ¹¹⁶		39.1 ⁸⁷	20	4 45	5 13	36	33 43		13 57	56
11	343	27.4	+17	29.2	54	53.6 ¹¹⁵	+19	47.6 ⁸⁵	10 N	5 02	5 28	5 50	0 48	46	13 40	54
12	358	27.4	+17	28.5	69	23.9 ¹¹³	+19	56.1 ⁸⁵	0	5 16	5 41	6 03	1 02	49	13 25	51
13	13	27.5		27.9	83	54.2 ¹¹³	+20	04.5 ⁸⁴	10 S	28	5 53	15	15 53		13 09	49
14	28	27.5		27.2	98	24.5 ¹¹³		12.8 ⁸³	20	39	6 06	29	30 56		12 53	46
15	43	27.6		26.5	112	54.6 ¹¹¹		21.0 ⁸²	30	50	19	44	47 59		34 43	
16	58	27.6		25.9	127	24.6 ¹¹⁰		29.1 ⁸¹	35	5 56	26	6 53	1 57	62	24 40	
17	73	27.7	+17	25.2	141	54.5 ¹⁰⁹	+20	37.1 ⁸⁰	40	6 02	6 34	7 03	2 09	64	12 11	39
18	88	27.7	+17	24.6	156	24.3 ¹⁰⁸	+20	45.0 ⁷⁹	45	6 08	6 43	7 15	2 23	66	11 57	35
19	103	27.8		23.9	170	54.1 ¹⁰⁸	+20	52.9 ⁷⁹	50	15	54	29	39 71		39 31	
20	118	27.8		23.3	185	23.7 ¹⁰⁶	+21	00.6 ⁷⁷	52	18	6 58	35	47 73		30 30	
21	133	27.9		22.6	199	53.3 ¹⁰⁶		08.2 ⁷⁶	54	21	7 04	43	2 56	75	21 28	
22	148	27.9		21.9	214	22.7 ¹⁰⁴		15.8 ⁷⁶	56	24	09	7 51	3 06	78	11 11	24
23	163	28.0		21.3	228	52.1 ¹⁰⁴		23.2 ⁷⁴	58	28	16	8 00	17 82		10 59	21
24	178	28.0	+17	20.6	243	21.3 ¹⁰²	+21	30.6 ⁷⁴	60 S	6 32	7 23	8 10	3 30	87	10 45	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 13 ^m 9		Mag: -4.3 PMG: 14 ^h 57 ^m		Mag: +1.7 PMG: 12 ^h 17 ^m		Mag: -1.8 PMG: 11 ^h 23 ^m		Mag: +0.1 PMG: 8 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	311	24.0	135	37.0	+1	52.3	188	50.9	+20	25.1
1	326	26.5	150	37.1		51.1	203	52.8		24.9
2	341	29.0	165	37.2		49.9	218	54.7		24.8
3	356	31.4	180	37.3		48.6	233	56.6		24.7
4	11	33.9	195	37.4		47.4	248	58.5		24.6
5	26	36.4	210	37.5	+1	46.1	264	00.3	+20	24.5
6	41	38.8	225	37.7	+1	44.9	279	02.2	+20	24.4
7	56	41.3	240	37.8		43.7	294	04.1		24.3
8	71	43.7	255	37.9		42.4	309	06.0		24.1
9	86	46.2	270	38.0		41.2	324	07.9		24.0
10	101	48.7	285	38.1		39.9	339	09.8		23.9
11	116	51.1	300	38.2	+1	38.7	354	11.7	+20	23.8
12	131	53.6	315	38.3	+1	37.5	355	13.6	+20	23.7
13	146	56.1	330	38.4		36.2	10	15.4		23.6
14	161	58.5	345	38.6		35.0	25	17.3		23.5
15	177	01.0	0	38.7		33.8	40	19.2		23.3
16	192	03.5	15	38.8		32.5	55	21.1		23.2
17	207	05.9	30	38.9	+1	31.3	70	23.0	+20	23.1
18	222	08.4	45	39.0	+1	30.0	85	24.9	+20	23.0
19	237	10.9	60	39.1		28.8	100	26.8		22.9
20	252	13.3	75	39.2		27.6	115	28.7		22.8
21	267	15.8	90	39.4		26.3	130	30.5		22.7
22	282	18.2	105	39.5		25.1	145	32.4		22.5
23	297	20.7	120	39.6		23.8	160	34.3		22.4
24	312	23.2	135	39.7	+1	22.6	175	36.2	+20	22.3
Dif	—		+1		-12		+9		-1	
									+22	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 1			Edad: 24 ^d 6 PHE { SD: 15'3 PMG: 8 ^h 03 ^m 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'8 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	178	28.0	+17	20.6	243	21.3	+21	30.6	60 N	20 23	21 21	23 07	23 18 40	17 36 76	
1	193	28.1		20.0	257	50.5 ¹⁰²		37.8	58	12	21 03	22 24	38 43	16 74	
2	208	28.1		19.3	272	19.6 ¹⁰¹		45.0	56	20 02	20 49	21 57	23 55 45	17 00 71	
3	223	28.2		18.6	286	48.5 ⁹⁹		52.0	54	19 53	36	36	** ** *	16 46 69	
4	238	28.3		18.0	301	17.4 ⁹⁹	+21	59.0	52	45	26	19	** ** *	34 68	
5	253	28.3	+17	17.3	315	46.2 ⁹⁸	+22	05.8	50	19 38	20 16	21 05	** ** *	16 23 67	
6	268	28.4	+17	16.6	330	14.9 ⁹⁷	+22	12.5	45	19 23	19 56	20 38	0 15 40	16 01 65	
7	283	28.4		16.0	344	43.5 ⁹⁶		19.1	40	11	41	17	31 42	15 43 63	
8	298	28.5		15.3	359	12.0 ⁹⁵		25.6	35	19 00	28	20 01	44 45	28 62	
9	313	28.5		14.7	13	40.4 ⁹⁴		32.0	30	18 51	19 17	19 48	0 56 46	15 15 60	
10	328	28.6		14.0	28	08.7 ⁹³		38.3	20	36	18 59	26	1 16 49	14 53 58	
11	343	28.6	+17	13.3	42	36.9 ⁹²	+22	44.5	10 N	18 22	18 44	19 10	1 34 51	14 34 57	
12	358	28.7	+17	12.7	57	05.0 ⁹¹	+22	50.5	0	18 10	18 31	18 56	1 51 53	14 16 55	
13	13	28.8		12.0	71	33.1 ⁹¹	+22	56.5	10 S	17 57	19	44	2 08 55	13 58 54	
14	28	28.8		11.3	86	01.0 ⁸⁹	+23	02.3	20	44	18 07	33	26 57	39 52	
15	43	28.9		10.7	100	28.8 ⁸⁸		08.0	30	29	17 54	23	46 61	17 50	
16	58	28.9		10.0	114	56.6 ⁸⁸		13.6	35	20	47	17	2 59 62	13 04 49	
17	73	29.0	+17	09.3	129	24.2 ⁸⁶	+23	19.0	40	17 11	17 39	18 12	3 13 64	12 50 46	
18	88	29.0	+17	08.7	143	51.8 ⁸⁶	+23	24.4	45	16 59	17 31	18 06	3 29 67	12 32 45	
19	103	29.1		08.0	158	19.3 ⁸⁵		29.6	50	46	20	17 59	3 50 70	10 43	
20	118	29.2		07.3	172	46.6 ⁸³		34.7	52	39	16	57	4 00 71	12 00 41	
21	133	29.2		06.6	187	13.9 ⁸³		39.6	54	32	11	54	11 73	11 49 38	
22	148	29.3		06.0	201	41.1 ⁸²		44.5	56	24	17 05	50	24 75	35 37	
23	163	29.3		05.3	216	08.2 ⁸¹		49.2	58	15	16 59	47	39 79	20 34	
24	178	29.4	+17	04.6	230	35.3 ⁸¹	+23	53.8	60 S	16 05	16 52	17 43	4 57 83	11 02 29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 09 ^m 9		Mag: -4.3 PMG: 14 ^h 57 ^m		Mag: +1.7 PMG: 12 ^h 16 ^m		Mag: -1.8 PMG: 11 ^h 20 ^m		Mag: +0.1 PMG: 8 ^h 48 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	312	23.2	135	39.7	+1	22.6	175	53.7	+17	48.9	189	36.2	+20	22.3	227	35.3	+22	05.3
1	327	25.6	150	39.8		21.4	190	54.6		48.4	204	38.1		22.2	242	37.5		05.3
2	342	28.1	165	40.0		20.1	205	55.4		47.9	219	40.0		22.1	257	39.7		05.3
3	357	30.6	180	40.1		18.9	220	56.3		47.5	234	41.9		22.0	272	41.9		05.3
4	12	33.0	195	40.2		17.6	235	57.1		47.0	249	43.8		21.8	287	44.1		05.3
5	27	35.5	210	40.3	+1	16.4	250	58.0	+17	46.6	264	45.6	+20	21.7	302	46.2	+22	05.3
6	42	38.0	225	40.4	+1	15.2	265	58.9	+17	46.1	279	47.5	+20	21.6	317	48.4	+22	05.3
7	57	40.4	240	40.6		13.9	280	59.7		45.6	294	49.4		21.5	332	50.6		05.3
8	72	42.9	255	40.7		12.7	296	00.6		45.2	309	51.3		21.4	347	52.8		05.3
9	87	45.4	270	40.8		11.4	311	01.4		44.7	324	53.2		21.3	2	55.0		05.3
10	102	47.8	285	40.9		10.2	326	02.3		44.3	339	55.1		21.2	17	57.2		05.4
11	117	50.3	300	41.1	+1	09.0	341	03.2	+17	43.8	354	57.0	+20	21.0	32	59.4	+22	05.4
12	132	52.7	315	41.2	+1	07.7	356	04.0	+17	43.3	9	58.9	+20	20.9	48	01.6	+22	05.4
13	147	55.2	330	41.3		06.5	11	04.9		42.9	25	00.7		20.8	63	03.7		05.4
14	162	57.7	345	41.4		05.2	26	05.7		42.4	40	02.6		20.7	78	05.9		05.4
15	178	00.1	0	41.6		04.0	41	06.6		41.9	55	04.5		20.6	93	08.1		05.4
16	193	02.6	15	41.7		02.8	56	07.5		41.5	70	06.4		20.5	108	10.3		05.4
17	208	05.1	30	41.8	+1	01.5	71	08.3	+17	41.0	85	08.3	+20	20.3	123	12.5	+22	05.4
18	223	07.5	45	41.9	+1	00.3	86	09.2	+17	40.6	100	10.2	+20	20.2	138	14.7	+22	05.4
19	238	10.0	60	42.1	+0	59.0	101	10.0		40.1	115	12.1		20.1	153	16.9		05.4
20	253	12.5	75	42.2		57.8	116	10.9		39.6	130	14.0		20.0	168	19.1		05.4
21	268	14.9	90	42.3		56.6	131	11.8		39.2	145	15.9		19.9	183	21.2		05.4
22	283	17.4	105	42.5		55.3	146	12.6		38.7	160	17.7		19.8	198	23.4		05.5
23	298	19.9	120	42.6		54.1	161	13.5		38.2	175	19.6		19.7	213	25.6		05.5
24	313	22.3	135	42.7	+0	52.9	176	14.3	+17	37.8	190	21.5	+20	19.5	228	27.8	+22	05.5
Dif	—		+1	-12		+9	-5		-5		+19		-1		+22			

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 0			Edad: 25 ^d 6 PHE { 4 ^h : 57/1 12 ^h : 57/4 20 ^h : 57/7 PMG: 8 ^h 58 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	29.4	+17	04.6		230	35.3	+23	53.8	60 N	1 05	2 52	3 49	23 58	64
1	193	29.5		04.0		245	02.2	79	+23 58.2	58	1 49	3 09	4 01	*** ** *	30 58
2	208	29.5		03.3		259	29.0	78	+24 02.6	56	2 16		11	*** ** *	18 11 59
3	223	29.6		02.6		273	55.8	78	06.8	54		37	36	20	0 09 46
4	238	29.6		01.9		288	22.5	77	10.8	52	2 53	47	28	21 48	42 59
5	253	29.7	+17	01.3		302	49.1	76	+24 14.7	50	3 07	3 57	4 35	0 32 49	17 30 59
6	268	29.8	+17	00.6		317	15.6	75	+24 18.5	45	3 35	4 16	4 50	0 55 50	17 06 58
7	283	29.8	+16	59.9		331	42.0	74	22.2	40	3 55	32	5 02	1 13 52	16 46 59
8	298	29.9		59.2		346	08.4	74	25.7	35	4 11	45	12	29 53	30 58
9	313	29.9		58.6		0	34.6	72	29.1	30		25	4 55	21	1 42 54
10	328	30.0		57.9		15	00.8	72	32.3	20	4 46	5 13	37	2 05 55	15 51 59
11	343	30.1	+16	57.2		29	26.9	71	+24 35.4	10 N	5 02	5 28	5 50	2 25 57	15 31 58
12	358	30.1	+16	56.5		43	53.0	71	+24 38.3	0	5 16	5 41	6 03	2 44 57	15 11 58
13	13	30.2		55.9		58	18.9	69	41.2	10 S		28	5 53	15	3 03 58
14	28	30.3		55.2		72	44.8	69	43.8	20	38	6 05	28	23 59	31 58
15	43	30.3		54.5		87	10.6	68	46.3	30	49	18	43	3 47 60	14 07 57
16	58	30.4		53.8		101	36.3	67	48.7	35	5 54	25	6 51	4 01 60	13 53 57
17	73	30.4	+16	53.1		116	02.0	67	+24 50.9	40	6 00	6 32	7 01	4 17 61	13 36 57
18	88	30.5	+16	52.5		130	27.6	66	+24 53.0	45	6 06	6 41	7 12	4 36 62	13 17 56
19	103	30.6		51.8		144	53.1	65	54.9	50	12	51	26	5 00 63	12 53 55
20	118	30.6		51.1		159	18.6	65	56.7	52	15	6 55	32	11 64	41 55
21	133	30.7		50.4		173	44.0	64	58.4	54	18	7 00	39	24 65	27 55
22	148	30.8		49.7		188	09.3	63	+24 59.8	56	21	06	47	39 66	12 12 54
23	163	30.8		49.0		202	34.6	63	+25 01.2	58	24	12	7 56	5 58 67	11 54 52
24	178	30.9	+16	48.4		216	59.8	62	+25 02.3	60 S	6 28	7 18	8 06	6 20 68	11 31 51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 06 ^m 0		Mag: -4.3 PMG: 14 ^h 57 ^m		Mag: +1.7 PMG: 12 ^h 14 ^m		Mag: -1.8 PMG: 11 ^h 17 ^m		Mag: +0.1 PMG: 8 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	313	22.3	135	42.7	+0	52.9	176	14.3	+17	37.8
1	328	24.8	150	42.8		51.6	191	15.2		37.3
2	343	27.2	165	43.0		50.4	206	16.1		36.9
3	358	29.7	180	43.1		49.1	221	16.9		36.4
4	13	32.2	195	43.2		47.9	236	17.8		35.9
5	28	34.6	210	43.4	+0	46.7	251	18.7	+17	35.5
6	43	37.1	225	43.5	+0	45.4	266	19.5	+17	35.0
7	58	39.6	240	43.6		44.2	281	20.4		34.5
8	73	42.0	255	43.8		42.9	296	21.2		34.1
9	88	44.5	270	43.9		41.7	311	22.1		33.6
10	103	47.0	285	44.0		40.5	326	23.0		33.1
11	118	49.4	300	44.2	+0	39.2	341	23.8	+17	32.7
12	133	51.9	315	44.3	+0	38.0	356	24.7	+17	32.2
13	148	54.3	330	44.5		36.7	11	25.6		31.7
14	163	56.8	345	44.6		35.5	26	26.4		31.3
15	178	59.3	0	44.7		34.3	41	27.3		30.8
16	194	01.7	15	44.9		33.0	56	28.1		30.3
17	209	04.2	30	45.0	+0	31.8	71	29.0	+17	29.9
18	224	06.7	45	45.1	+0	30.5	86	29.9	+17	29.4
19	239	09.1	60	45.3		29.3	101	30.7		28.9
20	254	11.6	75	45.4		28.1	116	31.6		28.5
21	269	14.1	90	45.6		26.8	131	32.5		28.0
22	284	16.5	105	45.7		25.6	146	33.3		27.5
23	299	19.0	120	45.8		24.3	161	34.2		27.1
24	314	21.5	135	46.0	+0	23.1	176	35.1	+17	26.6
Dif	—		+1	-12		+9	-5	+19		-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 9			Edad: 26 ^d 6 PHE { 4 ^h : 57 ^m 9 12 ^h : 58 ^m 2 20 ^h : 58 ^m 5 SD: 15 ^h 7 PMG: 9 ^h 55 ^m 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	178	30.9	+16 48.4	216	59.8	+25 02.3	10	60 N	20 18	21 14	22 52	** ** *	19 50 37		
1	193	31.0	47.7	231	24.9	61 03.3	9	58	20 07	20 58	22 15	0 21 64	28 41		
2	208	31.0	47.0	245	50.0	61 04.2	9	56	19 58	44	21 50	40 63	19 10 43		
3	223	31.1	46.3	260	15.1	61 04.9	7	54	49	32	30	0 55 63	18 54 45		
4	238	31.2	45.6	274	40.0	59 05.5	6	52	42	22	14	1 09 63	41 47		
5	253	31.2	+16 44.9	289	05.0	60 +25 05.9	4	50	19 35	20 12	21 01	1 21 62	18 29 48		
6	268	31.3	+16 44.3	303	29.8	58 +25 06.1	2	45	19 20	19 53	20 35	1 45 62	18 04 51		
7	283	31.4	43.6	317	54.7	59 06.2	1	40	19 08	38	20 15	2 05 62	17 45 52		
8	298	31.4	42.9	332	19.4	57 06.1	1	35	18 58	26	19 59	22 61	28 54		
9	313	31.5	42.2	346	44.2	58 05.9	2	30	50	19 15	46	2 36 61	17 14 55		
10	328	31.6	41.5	1 08.8	56 05.5	4	20	34	18 58	25	3 00 61	16 50 57			
11	343	31.6	+16 40.8	15 33.5	57 +25 04.9	6	10 N	18 21	18 43	19 09	3 22 59	16 29 58			
12	358	31.7	+16 40.1	29 58.1	56 +25 04.2	7	0	18 09	18 31	18 56	3 41 59	16 09 60			
13	13	31.8	39.4	44 22.7	56 03.3	9	10 S	17 57	19	44	4 01 59	15 50 61			
14	28	31.8	38.7	58 47.2	55 02.2	11	20	45	18 08	34	22 58	29 62			
15	43	31.9	38.1	73 11.7	55 +25 01.0	12	30	30	17 55	24	4 47 57	15 04 64			
16	58	32.0	37.4	87 36.1	54 +24 59.7	13	35	22	49	19	5 01 57	14 50 64			
17	73	32.1	+16 36.7	102 00.5	54 +24 58.1	16	40	17 13	17 41	18 13	5 18 56	14 33 66			
18	88	32.1	+16 36.0	116 24.9	54 +24 56.4	17	45	17 02	17 33	18 08	5 38 55	14 13 67			
19	103	32.2	35.3	130 49.3	54 54.6	18	50	16 48	23	18 02	6 03 54	13 48 69			
20	118	32.3	34.6	145 13.6	53 52.5	21	52	42	19	17 59	15 53	36 70			
21	133	32.3	33.9	159 37.9	53 50.4	21	54	35	14	56	29 52	22 71			
22	148	32.4	33.2	174 02.2	53 48.0	24	56	28	09	53	6 45 51	13 06 72			
23	163	32.5	32.5	188 26.5	53 45.5	25	58	19	17 03	50	7 05 49	12 46 75			
24	178	32.6	+16 31.8	202 50.8	53 +24 42.8	27	60 S	16 09	16 56	17 47	7 28 47	12 22 78			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 02 ^m 1		Mag: -4.3 PMG: 14 ^h 57 ^m		Mag: +1.7 PMG: 12 ^h 13 ^m		Mag: -1.8 PMG: 11 ^h 14 ^m		Mag: +0.1 PMG: 8 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	314	21.5	135 46.0	+0 23.1	176 35.1	+17 26.6	191 06.9	+20 16.8	229 20.4	+22 05.7
1	329	23.9	150 46.1	21.9	191 35.9	26.1	206 08.8	16.6	244 22.6	05.7
2	344	26.4	165 46.3	20.6	206 36.8	25.7	221 10.6	16.5	259 24.7	05.7
3	359	28.8	180 46.4	19.4	221 37.7	25.2	236 12.5	16.4	274 26.9	05.7
4	14	31.3	195 46.6	18.1	236 38.5	24.7	251 14.4	16.3	289 29.1	05.7
5	29	33.8	210 46.7	+0 16.9	251 39.4	+17 24.2	266 16.3	+20 16.2	304 31.3	+22 05.7
6	44	36.2	225 46.8	+0 15.7	266 40.3	+17 23.8	281 18.2	+20 16.1	319 33.5	+22 05.7
7	59	38.7	240 47.0	14.4	281 41.1	23.3	296 20.1	15.9	334 35.7	05.7
8	74	41.2	255 47.1	13.2	296 42.0	22.8	311 22.0	15.8	349 37.9	05.7
9	89	43.6	270 47.3	11.9	311 42.9	22.4	326 23.9	15.7	4 40.1	05.7
10	104	46.1	285 47.4	10.7	326 43.7	21.9	341 25.8	15.6	19 42.3	05.7
11	119	48.6	300 47.6	+0 09.5	341 44.6	+17 21.4	356 27.7	+20 15.5	34 44.5	+22 05.8
12	134	51.0	315 47.7	+0 08.2	356 45.5	+17 21.0	11 29.5	+20 15.4	49 46.7	+22 05.8
13	149	53.5	330 47.9	07.0	11 46.3	20.5	26 31.4	15.3	64 48.9	05.8
14	164	56.0	345 48.0	05.7	26 47.2	20.0	41 33.3	15.1	79 51.0	05.8
15	179	58.4	0 48.2	04.5	41 48.1	19.5	56 35.2	15.0	94 53.2	05.8
16	195	00.9	15 48.3	03.3	56 48.9	19.1	71 37.1	14.9	109 55.4	05.8
17	210	03.3	30 48.5	+0 02.0	71 49.8	+17 18.6	86 39.0	+20 14.8	124 57.6	+22 05.8
18	225	05.8	45 48.6	+0 00.8	86 50.7	+17 18.1	101 40.9	+20 14.7	139 59.8	+22 05.8
19	240	08.3	60 48.8	-0 00.5	101 51.5	17.7	116 42.8	14.6	155 02.0	05.8
20	255	10.7	75 48.9	01.7	116 52.4	17.2	131 44.7	14.4	170 04.2	05.8
21	270	13.2	90 49.1	02.9	131 53.3	16.7	146 46.6	14.3	185 06.4	05.8
22	285	15.7	105 49.2	04.2	146 54.1	16.2	161 48.5	14.2	200 08.6	05.8
23	300	18.1	120 49.4	05.4	161 55.0	15.8	176 50.3	14.1	215 10.8	05.8
24	315	20.6	135 49.5	-0 06.7	176 55.9	+17 15.3	191 52.2	+20 14.0	230 13.0	+22 05.9
Dif	—		+1	-12	+9	-5	+19	-1	+22	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 8				Edad: 27 ^d 6 PHE { 4 ^h : 58'8 12 ^h : 59'0 20 ^h : 59'3 R°: 59 ^m											
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m
0	178	32.6	+16	31.8	202	50.8	+24	42.8	28	60 N	1 21	2 58	3 54	1 02	88	20 27 22
1	193	32.6		31.1	217	15.0		40.0	28	58	1 58	3 15	4 05	25	83	20 09 26
2	208	32.7		30.4	231	39.2		36.9	31	56	2 23	28	15	43	80	19 53 30
3	223	32.8		29.7	246	03.4		33.8	31	54	42	40	23	1 58	78	39 34
4	238	32.8		29.0	260	27.6		30.4	34	52	2 58	3 51	31	2 12	76	28 35
5	253	32.9	+16	28.3	274	51.8	+24	26.9	35	50	3 11	4 00	4 37	2 23	75	19 17 38
6	268	33.0	+16	27.6	289	16.0	+24	23.2	37	45	3 38	4 19	4 52	2 47	72	18 55 42
7	283	33.1		26.9	303	40.1		19.4	38	40	3 57	34	5 04	3 07	69	37 45
8	298	33.1		26.2	318	04.3		15.4	40	35	4 13	46	14	23	68	22 48
9	313	33.2		25.5	332	28.5		11.2	42	30	26	4 57	22	3 37	66	18 09 50
10	328	33.3		24.8	346	52.6		06.9	43	20	4 47	5 14	37	4 01	63	17 47 53
11	343	33.4	+16	24.1	1	16.8	+24	02.4	45	10 N	5 03	5 28	5 50	4 21	62	17 27 56
12	358	33.4	+16	23.4	15	41.0	+23	57.7	47	0	5 16	5 41	6 02	4 40	60	17 09 59
13	13	33.5		22.7	30	05.2		52.9	48	10 S	27	5 52	14	5 00	57	16 51 61
14	28	33.6		22.0	44	29.4		47.9	50	20	38	6 04	27	20	55	31 64
15	43	33.7		21.3	58	53.5		42.8	51	30	48	16	41	44	52	16 08 68
16	58	33.7		20.6	73	17.8		37.4	54	35	53	23	49	5 58	51	15 54 70
17	73	33.8	+16	19.9	87	42.0	+23	32.0	54	40	5 58	6 30	6 59	6 14	49	15 39 72
18	88	33.9	+16	19.2	102	06.2	+23	26.3	57	45	6 03	6 38	7 09	6 33	46	15 20 76
19	103	34.0		18.5	116	30.4		20.5	58	50	09	48	22	6 57	43	14 57 79
20	118	34.0		17.8	130	54.7		14.6	59	52	12	52	29	7 08	41	46 81
21	133	34.1		17.1	145	19.0		08.4	62	54	14	6 57	35	21	39	33 84
22	148	34.2		16.4	159	43.3	+23	02.2	62	56	17	7 02	43	36	36	18 87
23	163	34.3		15.7	174	07.6	+22	55.7	65	58	20	08	7 51	7 54	33	14 01 90
24	178	34.3	+16	15.0	188	32.0	+22	49.1	66	60 S	6 24	7 14	8 01	8 15	28	13 40 95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 58 ^m 1		Mag: -4.3 PMG: 14 ^h 57 ^m		Mag: +1.7 PMG: 12 ^h 12 ^m		Mag: -1.8 PMG: 11 ^h 11 ^m		Mag: +0.1 PMG: 8 ^h 38 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	315	20.6	135	49.5	-0	06.7	176	55.9	+17	15.3
1	330	23.1	150	49.7		07.9	191	56.7		14.8
2	345	25.5	165	49.8		09.1	206	57.6		14.3
3	0	28.0	180	50.0		10.4	221	58.5		13.9
4	15	30.5	195	50.1		11.6	236	59.3		13.4
5	30	32.9	210	50.3	-0	12.9	252	00.2	+17	12.9
6	45	35.4	225	50.4	-0	14.1	267	01.1	+17	12.4
7	60	37.8	240	50.6		15.3	282	01.9		12.0
8	75	40.3	255	50.8		16.6	297	02.8		11.5
9	90	42.8	270	50.9		17.8	312	03.7		11.0
10	105	45.2	285	51.1		19.1	327	04.6		10.5
11	120	47.7	300	51.2	-0	20.3	342	05.4	+17	10.1
12	135	50.2	315	51.4	-0	21.5	357	06.3	+17	09.6
13	150	52.6	330	51.5		22.8	12	07.2		09.1
14	165	55.1	345	51.7		24.0	27	08.0		08.6
15	180	57.6	0	51.9		25.3	42	08.9		08.2
16	196	00.0	15	52.0		26.5	57	09.8		07.7
17	211	02.5	30	52.2	-0	27.7	72	10.6	+17	07.2
18	226	05.0	45	52.3	-0	29.0	87	11.5	+17	06.7
19	241	07.4	60	52.5		30.2	102	12.4		06.3
20	256	09.9	75	52.7		31.4	117	13.3		05.8
21	271	12.3	90	52.8		32.7	132	14.1		05.3
22	286	14.8	105	53.0		33.9	147	15.0		04.8
23	301	17.3	120	53.2		35.2	162	15.9		04.3
24	316	19.7	135	53.3	-0	36.4	177	16.8	+17	03.9
Dif	—		+2		-12		+9		-5	
							+19		-1	
									+22	
									0	

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 6			Edad: 28 ^d 6 PHE { 4 ^h : 59 ^s 5 12 ^h : 59 ^s 7 20 ^h : 59 ^s 9 R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	m
0	178	34.3	+16	15.0	188	32.0	+22	49.1	60 N	20 13	21 08	22 38	2 30 100	20 49	13	
1	193	34.4		14.3	202	56.4	54	42.4	58	20 02	20 52	22 06	2 48 95	35	18	
2	208	34.5		13.6	217	20.8	54	35.5	56	19 53	39	21 43	3 03 91	23	22	
3	223	34.6		12.9	231	45.2	54	28.4	54	45	27	24	16 88	13	24	
4	238	34.7		12.2	246	09.7	55	21.2	52	38	17	21 09	28 85	20	03	28
5	253	34.7	+16	11.5	260	34.2	55	+22 13.8	50	19 31	20 09	20 56	3 38 83	19	55	30
6	268	34.8	+16	10.8	274	58.7	55	+22 06.2	45	19 17	19 50	20 31	3 59 78	19	37	35
7	283	34.9		10.1	289	23.3	56	+21 58.6	40	19 06	36	20 12	4 16 75	22	39	
8	298	35.0		09.4	303	47.9	56	50.7	35	18 56	24	19 56	31 71	19	10	42
9	313	35.1		08.6	318	12.5	56	42.7	30	48	19 13	44	4 43 69	18	59	44
10	328	35.1		07.9	332	37.2	57	34.6	20	33	18 57	24	5 04 65	40	49	
11	343	35.2	+16	07.2	347	01.9	57	+21 26.3	10 N	18 21	18 43	19 08	5 23 61	18	23	54
12	358	35.3	+16	06.5	1	26.7	58	+21 17.9	0	18 09	18 31	18 56	5 40 58	18	08	57
13	13	35.4		05.8	15	51.5	58	09.3	10 S	17 58	19	45	5 57 55	17	52	61
14	28	35.5		05.1	30	16.3	58	+21 00.6	20	45	18 08	34	6 15 52	35	65	
15	43	35.5		04.4	44	41.2	59	+20 51.7	30	31	17 56	25	36 47	16	69	
16	58	35.6		03.7	59	06.1	59	42.7	35	23	50	20	6 49 44	17	04	73
17	73	35.7	+16	02.9	73	31.1	60	+20 33.5	40	17 14	17 43	18 15	7 03 41	16	51	76
18	88	35.8	+16	02.2	87	56.1	60	+20 24.2	45	17 04	17 35	18 10	7 19 38	16	36	79
19	103	35.9		01.5	102	21.2	61	14.8	50	16 51	26	04	40 33	16	85	
20	118	36.0		00.8	116	46.3	61	+20 05.2	52	45	21	18 02	7 49 31	16	07	87
21	133	36.0	+16	00.1	131	11.5	62	+19 55.4	54	39	17	17 59	8 00 29	15	57	90
22	148	36.1	+15	59.4	145	36.7	62	45.6	56	31	12	57	12 26	45	93	
23	163	36.2		58.7	160	02.0	63	35.6	58	23	07	54	27 21	31	98	
24	178	36.3	+15	57.9	174	27.3	63	+19 25.5	60 S	16 14	17 00	17 51	8 43 17	15	15	103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 54 ^m 2		Mag: -4.3 PMG: 14 ^h 56 ^m		Mag: +1.7 PMG: 12 ^h 10 ^m		Mag: -1.8 PMG: 11 ^h 08 ^m		Mag: +0.1 PMG: 8 ^h 34 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	316	19.7	135	53.3	-0	36.4	177	16.8	192	37.6
1	331	22.2	150	53.5		37.6	192	17.6	207	39.5
2	346	24.7	165	53.6		38.9	207	18.5	222	41.4
3	1	27.1	180	53.8		40.1	222	19.4	237	43.3
4	16	29.6	195	54.0		41.4	237	20.2	252	45.2
5	31	32.1	210	54.1	-0	42.6	252	21.1	267	47.1
6	46	34.5	225	54.3	-0	43.8	267	22.0	282	49.0
7	61	37.0	240	54.5		45.1	282	22.9	297	50.9
8	76	39.4	255	54.6		46.3	297	23.7	312	52.8
9	91	41.9	270	54.8		47.5	312	24.6	327	54.7
10	106	44.4	285	55.0		48.8	327	25.5	342	56.6
11	121	46.8	300	55.2	-0	50.0	342	26.4	357	58.5
12	136	49.3	315	55.3	-0	51.3	357	27.2	13	00.4
13	151	51.8	330	55.5		52.5	12	28.1	28	02.2
14	166	54.2	345	55.7		53.7	27	29.0	43	04.1
15	181	56.7	0	55.8		55.0	42	29.8	58	06.0
16	196	59.2	15	56.0		56.2	57	30.7	73	07.9
17	212	01.6	30	56.2	-0	57.5	72	31.6	88	09.8
18	227	04.1	45	56.3	-0	58.7	87	32.5	103	11.7
19	242	06.6	60	56.5	-0	59.9	102	33.3	118	13.6
20	257	09.0	75	56.7	-1	01.2	117	34.2	133	15.5
21	272	11.5	90	56.9		02.4	132	35.1	148	17.4
22	287	13.9	105	57.0		03.6	147	36.0	163	19.3
23	302	16.4	120	57.2		04.9	162	36.8	178	21.2
24	317	18.9	135	57.4	-1	06.1	177	37.7	193	23.1
Dif	—		+2		-12		+9		-5	

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 5			Edad: 0 ^d 2 PHE { 4 ^h : 60 ^o 0 12 ^h : 60 ^o 2 20 ^h : 60 ^o 3 PMG: 12 ^h 52 ^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	178	36.3	+15	57.9	174	27.3	+19	25.5	60 N	1 33	3 04	3 59	4 10	103	21 02	9
1	193	36.4		57.2	188	52.7	64	15.2	58	2 06	20	4 10	23 98	20 53	13	13
2	208	36.5		56.5	203	18.2	65	+19	04.8	29	33	19	34 95	45 16		
3	223	36.5		55.8	217	43.7	65	+18	54.3	2 47	44	27	44 91	37 26		
4	238	36.6		55.1	232	09.2	65	43.7	52	3 02	3 54	34	4 53	88	31 22	
5	253	36.7	+15	54.4	246	34.8	66	+18	32.9	3 15	4 03	4 40	5 01	85	20 25	24
6	268	36.8	+15	53.6	261	00.5	67	+18	22.0	3 41	4 21	4 54	5 17	80	20 12	29
7	283	36.9		52.9	275	26.2	67	+18	11.0	4 00	36	5 06	31 76	20 01	34	
8	298	37.0		52.2	289	52.0	68	+17	59.8	15	48	15	42 73	19 52	37	
9	313	37.1		51.5	304	17.8	68	48.5	30	28	4 58	24	5 52	70	43 41	
10	328	37.1		50.8	318	43.7	69	37.2	20	4 48	5 15	38	6 09	65	29 46	
11	343	37.2	+15	50.0	333	09.7	70	+17	25.6	5 03	5 29	5 51	6 24	60	19 17	50
12	358	37.3	+15	49.3	347	35.7	70	+17	14.0	5 16	5 41	6 02	6 38	56	19 05	54
13	13	37.4		48.6	2	01.7	70	+17	02.3	27	5 52	14	6 52	52	18 53	59
14	28	37.5		47.9	16	27.9	72	+16	50.4	37	6 03	26	7 07	47	40 64	
15	43	37.6		47.1	30	54.1	72	38.5	30	46	14	39	23 43	25 69		
16	58	37.7		46.4	45	20.3	72	26.4	35	51	21	47	33 39	17 72		
17	73	37.8	+15	45.7	59	46.6	73	+16	14.2	5 56	6 28	6 56	7 44	36	18 07	76
18	88	37.8	+15	45.0	74	13.0	74	+16	01.9	6 01	6 36	7 07	7 57	32	17 55	80
19	103	37.9		44.2	88	39.4	74	+15	49.5	06	45	19	8 13	27	41 86	
20	118	38.0		43.5	103	05.9	75	37.0	52	09	49	25	20 25	34 88		
21	133	38.1		42.8	117	32.5	76	24.4	54	11	53	31	29 21	27 91		
22	148	38.2		42.1	131	59.1	76	+15	11.7	14	6 58	38	38 18	18 95		
23	163	38.3		41.3	146	25.8	77	+14	58.9	16	7 04	47	8 48	15	17 09	98
24	178	38.4	+15	40.6	160	52.5	77	+14	46.0	6 19	7 09	7 56	9 00	10	16 58	103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 50 ^m 3		Mag: -4.3 PMG: 14 ^h 56 ^m		Mag: +1.7 PMG: 12 ^h 09 ^m		Mag: -1.8 PMG: 11 ^h 05 ^m		Mag: +0.1 PMG: 8 ^h 31 ^m	
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	317	18.9	135	57.4	-1	06.1	177	37.7	231	58.4
1	332	21.3	150	57.6		07.4	192	38.6	247	00.6
2	347	23.8	165	57.7		08.6	207	39.5	262	02.8
3	2	26.3	180	57.9		09.8	222	40.3	277	05.0
4	17	28.7	195	58.1		11.1	237	41.2	292	07.2
5	32	31.2	210	58.3	-1	12.3	252	42.1	307	09.4
6	47	33.7	225	58.5	-1	13.5	267	43.0	322	11.6
7	62	36.1	240	58.6		14.8	282	43.9	337	13.8
8	77	38.6	255	58.8		16.0	297	44.7	352	16.0
9	92	41.1	270	59.0		17.3	312	45.6	7	18.2
10	107	43.5	285	59.2		18.5	327	46.5	22	20.4
11	122	46.0	300	59.3	-1	19.7	342	47.4	37	22.6
12	137	48.4	315	59.5	-1	21.0	357	48.2	52	24.8
13	152	50.9	330	59.7		22.2	12	49.1	67	27.0
14	167	53.4	345	59.9		23.4	27	50.0	82	29.2
15	182	55.8	1	00.1		24.7	42	50.9	97	31.4
16	197	58.3	16	00.3		25.9	57	51.7	112	33.6
17	213	00.8	31	00.4	-1	27.1	72	52.6	127	35.8
18	228	03.2	46	00.6	-1	28.4	87	53.5	142	38.0
19	243	05.7	61	00.8		29.6	102	54.4	157	40.2
20	258	08.2	76	01.0		30.9	117	55.3	172	42.4
21	273	10.6	91	01.2		32.1	132	56.1	187	44.6
22	288	13.1	106	01.4		33.3	147	57.0	202	46.8
23	303	15.6	121	01.5		34.6	162	57.9	217	49.0
24	318	18.0	136	01.7	-1	35.8	177	58.8	232	51.2
Dif	—		+2		-12		+9		-1	

ALMANAQUE NÁUTICO PERSEUS

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 2				Edad: 2 ^d 2 PHE { 4 ^h : 60 ^h 4 12 ^h : 60 ^h 4 20 ^h : 60 ^h 3 R°: 51 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	40.6	+15	23.0	147	51.8	+9	11.8	60 N	1	45	3	10	4	04	7	35	
1	193	40.7		22.3	162	19.9	91	+8	57.0	58	2	14	25	14		39	95	
2	208	40.8		21.6	176	48.1	92		42.2	56	36	38	23		42	93	15	
3	223	40.9		20.8	191	16.4	93		27.4	54	2	53	49	30		46	89	
4	238	41.0		20.1	205	44.7	93	+8	12.5	52	3	07	3	58	37		49	86
5	253	41.1	+15	19.3	220	13.0	93	+7	57.5	50	3	19	4	06	4	43	7	51
6	268	41.2	+15	18.6	234	41.4	94	+7	42.5	45	3	44	4	24	4	57	7	57
7	283	41.3		17.9	249	09.9	95		27.4	40	4	02	38	5	07	8	02	74
8	298	41.4		17.1	263	38.3	94	+7	12.4	35	17	50	17		06	71	03	32
9	313	41.5		16.4	278	06.9	96	+6	57.2	30	29	4	59	25		10	67	21
10	328	41.6		15.6	292	35.4	95		42.1	20	4	48	5	16	39		16	61
11	343	41.7	+15	14.9	307	04.0	96	+6	26.9	10 N	5	03	5	29	5	51	8	22
12	358	41.8	+15	14.2	321	32.7	97	+6	11.6	0	5	15	5	40	6	02	8	27
13	13	41.9		13.4	336	01.4	97	+5	56.4	10 S	26	5	51	13		32	47	49
14	28	42.0		12.7	350	30.1	97		41.1	20	35	6	02	24		38	42	46
15	43	42.1		11.9	4	58.9	98		25.7	30	44	13	38		44	36	42	66
16	58	42.2		11.2	19	27.7	98	+5	10.4	35	49	19	45		48	33	40	70
17	73	42.3	+15	10.4	33	56.5	98	+4	55.0	40	5	53	6	25	6	54	8	52
18	88	42.4	+15	09.7	48	25.4	99	+4	39.6	45	5	58	6	33	7	04	8	56
19	103	42.5		08.9	62	54.3	99		24.2	50	6	03	41	16		9	02	20
20	118	42.6		08.2	77	23.3	100	+4	08.7	52	05	45	21		05	18	30	86
21	133	42.7		07.5	91	52.3	100	+3	53.3	54	08	50	27		07	16	28	89
22	148	42.8		06.7	106	21.3	100		37.8	56	10	54	34		11	12	26	92
23	163	42.9		06.0	120	50.3	100		22.3	58	12	6	59	42		14	10	24
24	178	43.0	+15	05.2	135	19.4	101	+3	06.8	60 S	6	15	7	05	7	50	9	18
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 42 ^m 4		Mag: -4.4 PMG: 14 ^h 55 ^m				Mag: +1.7 PMG: 12 ^h 06 ^m				Mag: -1.8 PMG: 10 ^h 59 ^m				Mag: +0.1 PMG: 8 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	319	17.2	136	06.3	-2	05.4	178	19.9	+16	29.0	194	54.1	+20	02.7	233	44.1	+22	06.5
1	334	19.6	151	06.5		06.7	193	20.8		28.5	209	55.9		02.6	248	46.3		06.5
2	349	22.1	166	06.7		07.9	208	21.7		28.0	224	57.8		02.5	263	48.5		06.5
3	4	24.5	181	06.9		09.1	223	22.6		27.5	239	59.7		02.3	278	50.7		06.5
4	19	27.0	196	07.1		10.4	238	23.4		27.0	255	01.6		02.2	293	52.9		06.6
5	34	29.5	211	07.3	-2	11.6	253	24.3	+16	26.5	270	03.5	+20	02.1	308	55.1	+22	06.6
6	49	31.9	226	07.5	-2	12.8	268	25.2	+16	26.0	285	05.4	+20	02.0	323	57.4	+22	06.6
7	64	34.4	241	07.7		14.1	283	26.1		25.5	300	07.3		01.9	338	59.6		06.6
8	79	36.9	256	07.9		15.3	298	27.0		25.0	315	09.2		01.7	354	01.8		06.6
9	94	39.3	271	08.1		16.5	313	27.9		24.5	330	11.1		01.6	9	04.0		06.6
10	109	41.8	286	08.3		17.8	328	28.7		24.0	345	13.0		01.5	24	06.2		06.6
11	124	44.3	301	08.5	-2	19.0	343	29.6	+16	23.5	0	14.9	+20	01.4	39	08.4	+22	06.6
12	139	46.7	316	08.7	-2	20.2	358	30.5	+16	23.0	15	16.8	+20	01.3	54	10.6	+22	06.6
13	154	49.2	331	08.9		21.5	13	31.4		22.6	30	18.7		01.2	69	12.8		06.6
14	169	51.6	346	09.1		22.7	28	32.3		22.1	45	20.6		01.0	84	15.0		06.6
15	184	54.1	1	09.4		23.9	43	33.2		21.6	60	22.5		00.9	99	17.2		06.6
16	199	56.6	16	09.6		25.2	58	34.1		21.1	75	24.4		00.8	114	19.4		06.6
17	214	59.0	31	09.8	-2	26.4	73	34.9	+16	20.6	90	26.3	+20	00.7	129	21.6	+22	06.6
18	230	01.5	46	10.0	-2	27.6	88	35.8	+16	20.1	105	28.2	+20	00.6	144	23.8	+22	06.6
19	245	04.0	61	10.2		28.9	103	36.7		19.6	120	30.1		00.4	159	26.0		06.6
20	260	06.4	76	10.4		30.1	118	37.6		19.1	135	32.0		00.3	174	28.3		06.7
21	275	08.9	91	10.6		31.3	133	38.5		18.6	150	33.9		00.2	189	30.5		06.7
22	290	11.4	106	10.8		32.5	148	39.4		18.1	165	35.8	+20	00.1	204	32.7		06.7
23	305	13.8	121	11.0		33.8	163	40.2		17.6	180	37.7	+20	00.0	219	34.9		06.7
24	320	16.3	136	11.2	-2	35.0	178	41.1	+16	17.1	195	39.6	+19	59.8	234	37.1	+22	06.7
Dif	—		+2		-12		+9		-5		+19		-1		+22			

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 1			Edad: 3 ^d 2 PHE { 4 ^h : 60/3 12 ^h : 60/2 20 ^h : 60/0 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	
0	178	43.0	+15 05.2	135	19.4	+3 06.8	60 N	20 02	20 55	22 15	9 14 98	21 24 7		
1	193	43.1	04.5	149	48.5 ¹⁰¹	+2 51.3 ¹⁵⁵	58	19 53	41	21 49	14 94	26 9		
2	208	43.2	03.7	164	17.7 ¹⁰²	35.7 ¹⁵⁶	56	44	28	29	15 90	27 13		
3	223	43.3	03.0	178	46.8 ¹⁰¹	20.2 ¹⁵⁵	54	37	18	21 13	15 88	28 15		
4	238	43.4	02.2	193	16.0 ¹⁰²	+2 04.6 ¹⁵⁶	52	30	09	20 59	15 85	29 18		
5	253	43.5	+15 01.5	207	45.2 ¹⁰²	+1 49.1 ¹⁵⁵	50	19 24	20 01	20 47	9 15 83	21 30 20		
6	268	43.6	+15 00.7	222	14.5 ¹⁰³	+1 33.5 ¹⁵⁶	45	19 12	19 44	20 24	9 16 77	21 32 25		
7	283	43.7	+15 00.0	236	43.7 ¹⁰²	18.0 ¹⁵⁵	40	19 01	30	20 06	16 73	34 29		
8	298	43.8	+14 59.2	251	13.0 ¹⁰³	+1 02.4 ¹⁵⁶	35	18 52	19	19 51	17 69	35 33		
9	313	43.9	58.5	265	42.3 ¹⁰³	+0 46.9 ¹⁵⁵	30	44	19 10	40	17 66	36 36		
10	328	44.0	57.7	280	11.6 ¹⁰³	31.3 ¹⁵⁶	20	31	18 54	21	17 61	39 41		
11	343	44.1	+14 57.0	294	41.0 ¹⁰⁴	+0 15.7 ¹⁵⁶	10 N	18 19	18 41	19 07	9 18 55	21 41 46		
12	358	44.2	+14 56.2	309	10.3 ¹⁰³	+0 00.2 ¹⁵⁵	0	18 08	18 30	18 55	9 18 51	21 42 51		
13	13	44.3	55.5	323	39.7 ¹⁰⁴	-0 15.3 ¹⁵⁵	10 S	17 58	19	45	19 46	44 55		
14	28	44.4	54.7	338	09.1 ¹⁰⁴	30.9 ¹⁵⁶	20	47	18 09	35	20 41	46 60		
15	43	44.6	54.0	352	38.5 ¹⁰⁴	-0 46.4 ¹⁵⁵	30	34	17 59	27	20 36	48 66		
16	58	44.7	53.2	7	07.9 ¹⁰⁴	-1 01.9 ¹⁵⁵	35	26	53	23	21 32	50 69		
17	73	44.8	+14 52.4	21	37.4 ¹⁰⁵	-1 17.4 ¹⁵⁵	40	17 18	17 46	18 18	9 21 29	21 51 73		
18	88	44.9	+14 51.7	36	06.8 ¹⁰⁴	-1 32.8 ¹⁵⁴	45	17 08	17 39	18 14	9 22 24	21 53 77		
19	103	45.0	50.9	50	36.3 ¹⁰⁵	-1 48.3 ¹⁵⁵	50	16 57	31	09	22 20	55 82		
20	118	45.1	50.2	65	05.8 ¹⁰⁵	-2 03.7 ¹⁵⁴	52	51	27	07	23 17	56 84		
21	133	45.2	49.4	79	35.2 ¹⁰⁴	19.2 ¹⁵⁵	54	45	23	05	23 15	57 87		
22	148	45.3	48.7	94	04.7 ¹⁰⁵	34.6 ¹⁵⁴	56	39	19	03	23 12	58 90		
23	163	45.4	47.9	108	34.2 ¹⁰⁵	-2 49.9 ¹⁵³	58	31	14	18 01	24 9	21 59 94		
24	178	45.5	+14 47.2	123	03.7 ¹⁰⁵	-3 05.3 ¹⁵⁴	60 S	16 23	17 09	17 58	9 24 6	22 00 98		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 38 ^m 5		Mag: -4.4 PMG: 14 ^h 55 ^m		Mag: +1.7 PMG: 12 ^h 05 ^m		Mag: -1.8 PMG: 10 ^h 56 ^m		Mag: +0.1 PMG: 8 ^h 20 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	'	°	'				
0	320	16.3	136	11.2	-2	35.0	178	41.1	+16	17.1				
1	335	18.8	151	11.4		36.2	193	42.0		16.6				
2	350	21.2	166	11.6		37.5	208	42.9		16.1				
3	5	23.7	181	11.8		38.7	223	43.8		15.6				
4	20	26.1	196	12.1		39.9	238	44.7		15.1				
5	35	28.6	211	12.3	-2	41.2	253	45.6	+16	14.6				
6	50	31.1	226	12.5	-2	42.4	268	46.5	+16	14.1				
7	65	33.5	241	12.7		43.6	283	47.3		13.6				
8	80	36.0	256	12.9		44.9	298	48.2		13.1				
9	95	38.5	271	13.1		46.1	313	49.1		12.6				
10	110	40.9	286	13.3		47.3	328	50.0		12.1				
11	125	43.4	301	13.5	-2	48.5	343	50.9	+16	11.6				
12	140	45.9	316	13.8	-2	49.8	358	51.8	+16	11.1				
13	155	48.3	331	14.0		51.0	13	52.7		10.6				
14	170	50.8	346	14.2		52.2	28	53.6		10.1				
15	185	53.3	1	14.4		53.5	43	54.4		09.6				
16	200	55.7	16	14.6		54.7	58	55.3		09.1				
17	215	58.2	31	14.8	-2	55.9	73	56.2	+16	08.6				
18	231	00.6	46	15.0	-2	57.1	88	57.1	+16	08.1				
19	246	03.1	61	15.3		58.4	103	58.0		07.6				
20	261	05.6	76	15.5	-2	59.6	118	58.9		07.1				
21	276	08.0	91	15.7	-3	00.8	133	59.8		06.6				
22	291	10.5	106	15.9		02.1	149	00.7		06.1				
23	306	13.0	121	16.1		03.3	164	01.5		05.6				
24	321	15.4	136	16.4	-3	04.5	179	02.4	+16	05.1				
Dif	—		+2	-12		+9	-5		+19	-1	+22	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: 4 ^d 2 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 8 20 ^h : 59 ^m 6 R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	45.5	+14	47.2	123	03.7	-3	05.3	60 N	1 55	3 16	4 09	10 52	97	21 31	7		
1	193	45.6		46.4	137	33.2 ¹⁰⁵		20.6 ¹⁵³	58	2 22	30	18	48	94	35	12		
2	208	45.7		45.6	152	02.7 ¹⁰⁵		35.9 ¹⁵³	56	42	42	26	45	91	40	14		
3	223	45.8		44.9	166	32.2 ¹⁰⁵	-3	51.2 ¹⁵³	54	2 58	3 53	34	43	87	43	18		
4	238	46.0		44.1	181	01.7 ¹⁰⁵	-4	06.4 ¹⁵²	52	3 12	4 02	40	40	85	47	20		
5	253	46.1	+14	43.4	195	31.2 ¹⁰⁵	-4	21.6 ¹⁵²	50	3 23	4 10	4 46	10 38	82	21 50	22		
6	268	46.2	+14	42.6	210	00.8 ¹⁰⁶	-4	36.8 ¹⁵²	45	3 47	4 27	4 59	10 33	77	21 57	27		
7	283	46.3		41.8	224	30.3 ¹⁰⁵	-4	51.9 ¹⁵¹	40	4 05	40	5 09	29	73	22 03	31		
8	298	46.4		41.1	238	59.8 ¹⁰⁵	-5	07.0 ¹⁵¹	35	19	4 51	18	26	69	08	34		
9	313	46.5		40.3	253	29.3 ¹⁰⁵		22.0 ¹⁵⁰	30	31	5 01	26	23	65	12	37		
10	328	46.6		39.6	267	58.8 ¹⁰⁵		37.1 ¹⁵¹	20	4 49	16	39	18	60	20	42		
11	343	46.7	+14	38.8	282	28.3 ¹⁰⁵	-5	52.0 ¹⁴⁹	10 N	5 04	5 29	5 51	10 13	55	22 27	47		
12	358	46.8	+14	38.0	296	57.8 ¹⁰⁵	-6	07.0 ¹⁵⁰	0	5 15	5 40	6 01	10 09	51	22 33	51		
13	13	46.9		37.3	311	27.2 ¹⁰⁴		21.9 ¹⁴⁹	10 S	25	5 50	12	05	46	39	56		
14	28	47.1		36.5	325	56.7 ¹⁰⁵		36.7 ¹⁴⁸	20	34	6 00	23	10	01	41	46	60	
15	43	47.2		35.7	340	26.2 ¹⁰⁵	-6	51.5 ¹⁴⁸	30	43	11	36	9	56	36	54	66	
16	58	47.3		35.0	354	55.6 ¹⁰⁴	-7	06.3 ¹⁴⁸	35	47	17	43	53	33	22	59	68	
17	73	47.4	+14	34.2	9	25.1 ¹⁰⁵	-7	21.0 ¹⁴⁷	40	5 51	6 23	6 51	9	50	30	23	04	72
18	88	47.5	+14	33.4	23	54.5 ¹⁰⁴	-7	35.6 ¹⁴⁶	45	5 55	6 30	7 01	9	46	26	23	10	76
19	103	47.6		32.7	38	23.9 ¹⁰⁴	-7	50.2 ¹⁴⁶	50	6 00	38	12	42	21	17	82		
20	118	47.7		31.9	52	53.3 ¹⁰⁴	-8	04.7 ¹⁴⁵	52	02	42	17	40	19	20	84		
21	133	47.8		31.2	67	22.7 ¹⁰⁴		19.2 ¹⁴⁵	54	04	46	23	38	16	24	87		
22	148	48.0		30.4	81	52.1 ¹⁰⁴		33.7 ¹⁴⁵	56	06	50	30	35	14	28	90		
23	163	48.1		29.6	96	21.4 ¹⁰³	-8	48.0 ¹⁴³	58	08	6 55	37	33	10	33	93		
24	178	48.2	+14	28.9	110	50.8 ¹⁰⁴	-9	02.4 ¹⁴⁴	60 S	6 11	7 00	7 45	9	30	7	23	38	97
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 34 ^m 5		Mag: -4.4 PMG: 14 ^h 55 ^m				Mag: +1.7 PMG: 12 ^h 03 ^m				Mag: -1.8 PMG: 10 ^h 53 ^m				Mag: +0.1 PMG: 8 ^h 17 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	321	15.4	136	16.4	-3	04.5	179	02.4	+16	05.1	196	25.2	+19	57.0	235	30.1	+22	06.8
1	336	17.9	151	16.6		05.7	194	03.3		04.6	211	27.1		56.9	250	32.3		06.8
2	351	20.4	166	16.8		07.0	209	04.2		04.1	226	29.0		56.8	265	34.5		06.8
3	6	22.8	181	17.0		08.2	224	05.1		03.6	241	30.9		56.6	280	36.8		06.8
4	21	25.3	196	17.2		09.4	239	06.0		03.1	256	32.8		56.5	295	39.0		06.8
5	36	27.7	211	17.5	-3	10.7	254	06.9	+16	02.6	271	34.7	+19	56.4	310	41.2	+22	06.8
6	51	30.2	226	17.7	-3	11.9	269	07.8	+16	02.1	286	36.6	+19	56.3	325	43.4	+22	06.9
7	66	32.7	241	17.9		13.1	284	08.7		01.6	301	38.5		56.2	340	45.6		06.9
8	81	35.1	256	18.1		14.3	299	09.6		01.1	316	40.4		56.0	355	47.8		06.9
9	96	37.6	271	18.4		15.6	314	10.4		00.6	331	42.3		55.9	10	50.0		06.9
10	111	40.1	286	18.6		16.8	329	11.3	+16	00.1	346	44.2		55.8	25	52.2		06.9
11	126	42.5	301	18.8	-3	18.0	344	12.2	+15	59.6	1	46.1	+19	55.7	40	54.4	+22	06.9
12	141	45.0	316	19.0	-3	19.2	359	13.1	+15	59.1	16	48.0	+19	55.6	55	56.7	+22	06.9
13	156	47.5	331	19.3		20.5	14	14.0		58.6	31	49.9		55.4	70	58.9		06.9
14	171	49.9	346	19.5		21.7	29	14.9		58.1	46	51.8		55.3	86	01.1		06.9
15	186	52.4	1	19.7		22.9	44	15.8		57.6	61	53.7		55.2	101	03.3		06.9
16	201	54.9	16	19.9		24.2	59	16.7		57.1	76	55.6		55.1	116	05.5		06.9
17	216	57.3	31	20.2	-3	25.4	74	17.6	+15	56.6	91	57.5	+19	55.0	131	07.7	+22	06.9
18	231	59.8	46	20.4	-3	26.6	89	18.5	+15	56.1	106	59.4	+19	54.8	146	09.9	+22	06.9
19	247	02.2	61	20.6		27.8	104	19.4		55.6	122	01.3		54.7	161	12.2		06.9
20	262	04.7	76	20.9		29.1	119	20.3		55.1	137	03.2		54.6	176	14.4		06.9
21	277	07.2	91	21.1		30.3	134	21.1		54.6	152	05.1		54.5	191	16.6		06.9
22	292	09.6	106	21.3		31.5	149	22.0		54.1	167	07.0		54.4	206	18.8		06.9
23	307	12.1	121	21.6		32.7	164	22.9		53.6	182	08.9		54.2	221	21.0		06.9
24	322	14.6	136	21.8	-3	34.0	179	23.8	+15	53.1	197	10.8	+19	54.1	236	23.2	+22	07.0
Dif	—		+2		-12		+9		-5		+19		-1		+22			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 7				Edad: 5 ^d 2 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 2 20 ^h : 59 ^m 1 R°: 52 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	48.2	+14	28.9	110	50.8	-9	02.4	60 N	19	57	20	48	22	05	12	29	
1	193	48.3		28.1	125	20.1 ¹⁰³		16.6 ¹⁴²	58	48	35	21	41	22	93	21	38	
2	208	48.4		27.3	139	49.4 ¹⁰³		30.8 ¹⁴²	56	40	23	22		16	89	21	54	
3	223	48.5		26.5	154	18.7 ¹⁰³		44.9 ¹⁴¹	54	33	13	21	07	10	86	22	01	
4	238	48.6		25.8	168	48.0 ¹⁰³		-9 59.0 ¹⁴¹	52	26	20	05	20	05	83	07	23	
5	253	48.8	+14	25.0	183	17.2 ¹⁰²	-10	13.0 ¹⁴⁰	50	19	21	19	57	20	42	12	00	
6	268	48.9	+14	24.2	197	46.4 ¹⁰²	-10	26.9 ¹³⁹	45	19	08	19	40	20	20	11	50	
7	283	49.0		23.5	212	15.6 ¹⁰²		40.8 ¹³⁹	40	18	58	27	20	03	42	71	34	
8	298	49.1		22.7	226	44.8 ¹⁰²	-10	54.6 ¹³⁸	35	50	17	19	49	35	68	42	38	
9	313	49.2		21.9	241	13.9 ¹⁰¹	-11	08.3 ¹³⁷	30	42	19	08	37	28	66	22	49	
10	328	49.3		21.2	255	43.0 ¹⁰¹		22.0 ¹³⁷	20	30	18	52	19	18	60	23	02	
11	343	49.5	+14	20.4	270	12.1 ¹⁰¹	-11	35.5 ¹³⁵	10 N	18	18	18	40	19	06	11	08	
12	358	49.6	+14	19.6	284	41.2 ¹⁰¹	-11	49.0 ¹³⁵	0	18	08	18	29	18	54	11	00	
13	13	49.7		18.8	299	10.3 ¹⁰¹	-12	02.5 ¹³⁵	10 S	17	58	19	45	10	51	48	35	
14	28	49.8		18.1	313	39.3 ¹⁰⁰		15.8 ¹³³	20	47	10	36		42	44	23	46	
15	43	49.9		17.3	328	08.3 ¹⁰⁰		29.1 ¹³³	30	35	18	00	28	32	39	**	**	
16	58	50.0		16.5	342	37.2 ⁹⁹		42.3 ¹³²	35	28	17	54	24	26	36	**	**	
17	73	50.2	+14	15.8	357	06.1 ⁹⁹	-12	55.4 ¹³¹	40	17	20	17	48	18	20	10	20	
18	88	50.3	+14	15.0	11	35.0 ⁹⁹	-13	08.4 ¹³⁰	45	17	11	17	41	18	16	10	12	
19	103	50.4		14.2	26	03.9 ⁹⁹		21.4 ¹³⁰	50	17	00	34	12	10	03	23	**	
20	118	50.5		13.4	40	32.7 ⁹⁸		34.2 ¹²⁸	52	16	55	30	10	9	59	21	**	
21	133	50.6		12.7	55	01.5 ⁹⁸		47.0 ¹²⁸	54	49	26	08		54	19	**	**	
22	148	50.8		11.9	69	30.3 ⁹⁸	-13	59.7 ¹²⁷	56	43	22	06		49	16	**	**	
23	163	50.9		11.1	83	59.0 ⁹⁷	-14	12.3 ¹²⁶	58	36	18	04		43	13	**	**	
24	178	51.0	+14	10.3	98	27.7 ⁹⁷	-14	24.8 ¹²⁵	60 S	16	28	17	13	18	02	9	37	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 30 ^m 6		Mag: -4.4 PMG: 14 ^h 54 ^m				Mag: +1.7 PMG: 12 ^h 02 ^m				Mag: -1.8 PMG: 10 ^h 50 ^m				Mag: +0.1 PMG: 8 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	322	14.6	136	21.8	-3	34.0	179	23.8	+15	53.1	197	10.8	+19	54.1	236	23.2	+22	07.0
1	337	17.0	151	22.0		35.2	194	24.7		52.6	212	12.7		54.0	251	25.4		07.0
2	352	19.5	166	22.3		36.4	209	25.6		52.1	227	14.6		53.9	266	27.7		07.0
3	7	22.0	181	22.5		37.6	224	26.5		51.6	242	16.5		53.8	281	29.9		07.0
4	22	24.4	196	22.7		38.8	239	27.4		51.1	257	18.4		53.6	296	32.1		07.0
5	37	26.9	211	23.0	-3	40.1	254	28.3	+15	50.6	272	20.3	+19	53.5	311	34.3	+22	07.0
6	52	29.3	226	23.2	-3	41.3	269	29.2	+15	50.1	287	22.2	+19	53.4	326	36.5	+22	07.0
7	67	31.8	241	23.4		42.5	284	30.1		49.5	302	24.1		53.3	341	38.7		07.0
8	82	34.3	256	23.7		43.7	299	31.0		49.0	317	26.0		53.2	356	40.9		07.0
9	97	36.7	271	23.9		45.0	314	31.9		48.5	332	27.9		53.0	11	43.2		07.0
10	112	39.2	286	24.1		46.2	329	32.8		48.0	347	29.8		52.9	26	45.4		07.0
11	127	41.7	301	24.4	-3	47.4	344	33.7	+15	47.5	2	31.7	+19	52.8	41	47.6	+22	07.0
12	142	44.1	316	24.6	-3	48.6	359	34.5	+15	47.0	17	33.6	+19	52.7	56	49.8	+22	07.0
13	157	46.6	331	24.8		49.9	14	35.4		46.5	32	35.5		52.6	71	52.0		07.0
14	172	49.1	346	25.1		51.1	29	36.3		46.0	47	37.4		52.4	86	54.2		07.0
15	187	51.5	1	25.3		52.3	44	37.2		45.5	62	39.3		52.3	101	56.5		07.0
16	202	54.0	16	25.6		53.5	59	38.1		45.0	77	41.2		52.2	116	58.7		07.0
17	217	56.5	31	25.8	-3	54.7	74	39.0	+15	44.5	92	43.1	+19	52.1	132	00.9	+22	07.0
18	232	58.9	46	26.0	-3	56.0	89	39.9	+15	44.0	107	45.0	+19	52.0	147	03.1	+22	07.0
19	248	01.4	61	26.3		57.2	104	40.8		43.5	122	46.9		51.9	162	05.3		07.1
20	263	03.8	76	26.5		58.4	119	41.7		43.0	137	48.8		51.7	177	07.5		07.1
21	278	06.3	91	26.8	-3	59.6	134	42.6		42.4	152	50.7		51.6	192	09.8		07.1
22	293	08.8	106	27.0	-4	00.9	149	43.5		41.9	167	52.6		51.5	207	12.0		07.1
23	308	11.2	121	27.2		02.1	164	44.4		41.4	182	54.5		51.4	222	14.2		07.1
24	323	13.7	136	27.5	-4	03.3	179	45.3	+15	40.9	197	56.4	+19	51.3	237	16.4	+22	07.1
Dif	—		+2		-12		+9		-5		+19		-1		+22		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 5				Edad: 6 ^d 2 PHE { 4 ^h : 58 ^m 9 12 ^h : 58 ^m 7 20 ^h : 58 ^m 5 R°: 54 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	51.0	+14	10.3	98	27.7	-14	24.8	60 N	2 05	3 22	4 14	14 07	95	21 49	16	
1	193	51.1		09.5	112	56.4	97	37.2	58	29	35	23	13 55	91	22 01	21	
2	208	51.2		08.8	127	25.0	96	-14 49.5	56	2 48	47	30	45 87		12 24		
3	223	51.4		08.0	141	53.6	96	-15 01.8	54	3 03	3 57	37	36 84		22 27		
4	238	51.5		07.2	156	22.2	96	13.9	52	16	4 05	44	28 81		30 30		
5	253	51.6	+14	06.4	170	50.7	95	-15 26.0	50	3 27	4 13	4 49	13 21	79	22 38	32	
6	268	51.7	+14	05.7	185	19.2	95	-15 37.9	45	3 50	4 29	5 01	13 06	74	22 54	37	
7	283	51.8		04.9	199	47.7	95	-15 49.8	40	4 07	42	11	12 53	71	23 08	39	
8	298	52.0		04.1	214	16.1	94	-16 01.5	35	21	4 53	20	43 67		20 42		
9	313	52.1		03.3	228	44.4	93	13.2	30	32	5 02	27	34 64		30 44		
10	328	52.2		02.5	243	12.8	94	24.7	20	4 50	17	40	18 60		23 47	48	
11	343	52.3	+14	01.8	257	41.1	93	-16 36.2	10 N	5 04	5 29	5 51	12 04	57	** ** *	**	
12	358	52.5	+14	01.0	272	09.4	93	-16 47.5	0	5 15	5 40	6 01	11 52	53	** ** *	**	
13	13	52.6	+14	00.2	286	37.6	92	-16 58.8	10 S	25	50	11	39 50		** ** *	**	
14	28	52.7	+13	59.4	301	05.8	92	-17 09.9	20	33	5 59	22	26 46		** ** *	**	
15	43	52.8		58.6	315	33.9	91	20.9	30	41	6 09	34	11 42		0 00	65	
16	58	52.9		57.8	330	02.0	91	31.9	35	45	15	41	11 02	40	07 68		
17	73	53.1	+13	57.1	344	30.1	91	-17 42.7	40	5 49	6 21	6 49	10 52	37	0 16	71	
18	88	53.2	+13	56.3	358	58.1	90	-17 53.4	45	5 53	6 27	6 58	10 40	34	0 26	75	
19	103	53.3		55.5	13	26.1	90	-18 04.0	50	57	35	7 09	26 29		39 80		
20	118	53.4		54.7	27	54.0	89	14.5	52	5 58	38	14	20 26		44 83		
21	133	53.6		53.9	42	22.0	90	24.9	54	6 00	42	19	13 24		51 85		
22	148	53.7		53.1	56	49.8	88	35.1	56	02	46	25	10 05	21	0 58	88	
23	163	53.8		52.4	71	17.7	89	45.3	58	04	50	32	9 56	17	1 06	92	
24	178	53.9	+13	51.6	85	45.4	87	-18 55.3	60 S	6 06	6 55	7 40	9 46	13	1 15	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 26 ^m 7		Mag: -4.4 PMG: 14 ^h 54 ^m		Mag: +1.7 PMG: 12 ^h 00 ^m		Mag: -1.8 PMG: 10 ^h 47 ^m		Mag: +0.1 PMG: 8 ^h 10 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	323	13.7	136	27.5	-4	03.3	197	56.4	+19	51.3
1	338	16.2	151	27.7		04.5	212	58.3		51.1
2	353	18.6	166	28.0		05.7	228	00.3		51.0
3	8	21.1	181	28.2		07.0	243	02.2		50.9
4	23	23.6	196	28.5		08.2	258	04.1		50.8
5	38	26.0	211	28.7	-4	09.4	273	06.0	+19	50.7
6	53	28.5	226	29.0	-4	10.6	288	07.9	+19	50.5
7	68	31.0	241	29.2		11.8	303	09.8		50.4
8	83	33.4	256	29.5		13.1	318	11.7		50.3
9	98	35.9	271	29.7		14.3	333	13.6		50.2
10	113	38.3	286	30.0		15.5	348	15.5		50.1
11	128	40.8	301	30.2	-4	16.7	3	17.4	+19	49.9
12	143	43.3	316	30.5	-4	17.9	359	56.1	+15	34.8
13	158	45.7	331	30.7		19.2	14	57.0		34.3
14	173	48.2	346	31.0		20.4	29	57.9		33.8
15	188	50.7	1	31.2		21.6	44	58.8		33.3
16	203	53.1	16	31.5		22.8	59	59.6		32.8
17	218	55.6	31	31.7	-4	24.0	75	00.5	+15	32.2
18	233	58.1	46	32.0	-4	25.2	90	01.4	+15	31.7
19	249	00.5	61	32.2		26.5	105	02.3		31.2
20	264	03.0	76	32.5		27.7	120	03.2		30.7
21	279	05.4	91	32.7		28.9	135	04.1		30.2
22	294	07.9	106	33.0		30.1	150	05.0		29.7
23	309	10.4	121	33.2		31.3	165	05.9		29.2
24	324	12.8	136	33.5	-4	32.5	180	06.8	+15	28.7
Dif	—		+2		-12		+9		-5	
									+19	
									-1	
									+22	
									0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 04 ^m 3				Edad: 7 ^d 2 PHE { 4 ^h : 58/2 12 ^h : 58/0 20 ^h : 57/8 R°: 55 ^m SD: 15/9 PMG: 18 ^h 58 ^m												
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m	
0	178	53.9	+13	51.6	85	45.4	-18	55.3	60 N	19 51	20 42	21 55	15 42 89		22 05 26		
1	193	54.1		50.8	100	13.2	88	-19 05.2	58	42	29	33	26 83		22 31		
2	208	54.2		50.0	114	40.9	87	15.0	56	35	18	15	12 80		36 35		
3	223	54.3		49.2	129	08.6	87	24.7	54	28	08	21 01	15 00 77		22 49 37		
4	238	54.4		48.4	143	36.2	86	34.3	52	22	20 00	20 48	14 49 75		23 00 39		
5	253	54.6	+13	47.6	158	03.8	86	-19 43.7	50	19 17	19 53	20 38	14 40 73		23 10 40		
6	268	54.7	+13	46.8	172	31.4	86	-19 53.0	45	19 05	19 37	20 16	14 20 69		23 31 43		
7	283	54.8		46.1	186	58.9	85	-20 02.2	40	18 56	25	20 00	14 04 67		23 47 46		
8	298	55.0		45.3	201	26.4	85	11.3	35	48	14	19 46	13 50 65	** ** *	** ** *		
9	313	55.1		44.5	215	53.8	84	20.3	30	40	19 05	35	38 63	** ** *	** ** *		
10	328	55.2		43.7	230	21.2	84	29.1	20	28	18 51	18	18 60	** ** *	** ** *		
11	343	55.3	+13	42.9	244	48.6	84	-20 37.8	10 N	18 18	18 39	19 04	13 01 58		0 03 51		
12	358	55.5	+13	42.1	259	15.9	83	-20 46.4	0	18 08	18 29	18 54	12 45 55		0 17 54		
13	13	55.6		41.3	273	43.2	83	-20 54.9	10 S	17 58	19	44	29 53		31 58		
14	28	55.7		40.5	288	10.5	83	-21 03.2	20	48	10	36	12 12 50		0 47 60		
15	43	55.9		39.7	302	37.7	82	11.4	30	36	18 01	29	11 53 47		1 05 64		
16	58	56.0		38.9	317	04.9	82	19.5	35	29	17 55	25	42 44		15 66		
17	73	56.1	+13	38.2	331	32.0	81	-21 27.4	40	17 22	17 50	18 22	11 29 42		1 27 69		
18	88	56.2	+13	37.4	345	59.2	82	-21 35.2	45	17 13	17 44	18 18	11 14 39		1 41 72		
19	103	56.4		36.6	0	26.2	80	42.9	50	17 03	36	14	10 55 36		1 59 76		
20	118	56.5		35.8	14	53.3	81	50.5	52	16 58	33	13	46 34		2 07 78		
21	133	56.6		35.0	29	20.3	80	-21 57.9	54	52	30	11	37 31		16 81		
22	148	56.8		34.2	43	47.3	80	-22 05.2	56	46	26	10	26 29		26 84		
23	163	56.9		33.4	58	14.2	79	12.3	58	40	22	08	10 13 26		38 88		
24	178	57.0	+13	32.6	72	41.2	80	-22 19.3	60 S	16 32	17 17	18 06	9 59 21		2 52 92		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 22 ^m 8		Mag: -4.4 PMG: 14 ^h 54 ^m		Mag: +1.7 PMG: 11 ^h 59 ^m		Mag: -1.8 PMG: 10 ^h 44 ^m		Mag: +0.1 PMG: 8 ^h 06 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	324	12.8	136	33.5	-4	32.5	180	06.8	+15	28.7
1	339	15.3	151	33.7		33.8	195	07.7		28.1
2	354	17.8	166	34.0		35.0	210	08.6		27.6
3	9	20.2	181	34.2		36.2	225	09.5		27.1
4	24	22.7	196	34.5		37.4	240	10.4		26.6
5	39	25.2	211	34.8	-4	38.6	255	11.3	+15	26.1
6	54	27.6	226	35.0	-4	39.8	270	12.2	+15	25.6
7	69	30.1	241	35.3		41.1	285	13.1		25.1
8	84	32.6	256	35.5		42.3	300	14.0		24.6
9	99	35.0	271	35.8		43.5	315	14.9		24.0
10	114	37.5	286	36.1		44.7	330	15.8		23.5
11	129	39.9	301	36.3	-4	45.9	345	16.7	+15	23.0
12	144	42.4	316	36.6	-4	47.1	0	17.6	+15	22.5
13	159	44.9	331	36.8		48.3	15	18.5		22.0
14	174	47.3	346	37.1		49.6	30	19.4		21.5
15	189	49.8	1	37.4		50.8	45	20.3		20.9
16	204	52.3	16	37.6		52.0	60	21.3		20.4
17	219	54.7	31	37.9	-4	53.2	75	22.2	+15	19.9
18	234	57.2	46	38.2	-4	54.4	90	23.1	+15	19.4
19	249	59.7	61	38.4		55.6	105	24.0		18.9
20	265	02.1	76	38.7		56.8	120	24.9		18.4
21	280	04.6	91	39.0		58.0	135	25.8		17.9
22	295	07.1	106	39.2	-4	59.3	150	26.7		17.3
23	310	09.5	121	39.5	-5	00.5	165	27.6		16.8
24	325	12.0	136	39.8	-5	01.7	180	28.5	+15	16.3
Dif	—		+3		-12		+9		-5	
							+19		-1	
									+22	
									0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h /8			Edad: 8 ^d 2	PHE {	SD: 15 ^h 7	SD: 19 ^h 53 ^m	4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/2		R°: 56 ^m							
	PMG: 12 ^h 04 ^m 1																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	57.0	+13	32.6	72	41.2	-22	19.3	60 N	2	14	3	28	4	18	17	11
1	193	57.2		31.8	87	08.1	79	26.2	58	36	40	27	16	49	70	22	53
2	208	57.3		31.0	101	34.9	78	33.0	56	2	54	3	51	34	32	67	23
3	223	57.4		30.2	116	01.8	79	39.6	54	3	08	4	01	41	17	66	26
4	238	57.6		29.4	130	28.6	78	46.0	52	21	09	47	16	04	65	39	49
5	253	57.7	+13	28.6	144	55.4	78	-22	50	3	31	4	16	4	52	15	53
6	268	57.8	+13	27.8	159	22.1	77	-22	45	3	53	4	32	5	04	15	29
7	283	58.0		27.0	173	48.9	78	-23	40	4	09	44	13	15	11	61	***
8	298	58.1		26.2	188	15.6	77	10.5	35	23	4	55	21	14	55	60	0
9	313	58.2		25.4	202	42.3	77	16.3	30	34	5	03	28	41	60	14	49
10	328	58.4		24.6	217	08.9	76	22.0	20	4	51	18	40	14	18	59	35
11	343	58.5	+13	23.8	231	35.6	77	-23	10 N	5	04	5	29	5	51	13	59
12	358	58.6	+13	23.0	246	02.2	76	-23	0	5	15	5	39	6	01	13	40
13	13	58.8		22.2	260	28.8	76	38.0	10 S	24	49	10	22	54	29	57	
14	28	58.9		21.4	274	55.4	76	43.1	20	32	5	58	20	13	02	53	1
15	43	59.0		20.6	289	21.9	75	48.0	30	39	6	07	32	12	40	51	2
16	58	59.2		19.8	303	48.5	76	52.8	35	43	12	38	26	51	21	63	
17	73	59.3	+13	19.0	318	15.0	75	-23	40	5	46	6	18	12	11	49	2
18	88	59.4	+13	18.2	332	41.5	75	-24	45	5	50	6	24	11	53	48	2
19	103	59.6		17.4	347	08.0	75	06.3	50	53	31	7	05	31	45	3	15
20	118	59.7		16.6	1	34.5	75	10.6	52	55	34	10	20	44	25	71	
21	133	59.8		15.8	16	01.0	75	14.6	54	56	38	15	11	08	43	37	72
22	149	00.0		15.0	30	27.5	75	18.6	56	58	42	21	10	55	40	3	50
23	164	00.1		14.2	44	54.0	75	22.4	58	5	59	46	27	39	38	4	06
24	179	00.2	+13	13.4	59	20.4	74	-24	60 S	6	01	6	50	10	20	34	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 2 ^h 18 ^m 8		Mag: -4.4 PMG: 14 ^h 53 ^m		Mag: +1.7 PMG: 11 ^h 57 ^m		Mag: -1.8 PMG: 10 ^h 41 ^m		Mag: +0.1 PMG: 8 ^h 03 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	325	12.0	136	39.8	-5	180	28.5	+15	16.3	199	27.9	+19	45.5	239	03.0	+22	07.3
1	340	14.4	151	40.0		195	29.4		15.8	214	29.8		45.4	254	05.2		07.3
2	355	16.9	166	40.3		210	30.3		15.3	229	31.7		45.2	269	07.4		07.3
3	10	19.4	181	40.6		225	31.2		14.7	244	33.6		45.1	284	09.7		07.3
4	25	21.8	196	40.8		240	32.1		14.2	259	35.5		45.0	299	11.9		07.3
5	40	24.3	211	41.1	-5	255	33.0	+15	13.7	274	37.4	+19	44.9	314	14.1	+22	07.3
6	55	26.8	226	41.4	-5	270	33.9	+15	13.2	289	39.3	+19	44.8	329	16.3	+22	07.3
7	70	29.2	241	41.6		285	34.8		12.7	304	41.2		44.6	344	18.6		07.3
8	85	31.7	256	41.9		300	35.7		12.2	319	43.1		44.5	359	20.8		07.3
9	100	34.2	271	42.2		315	36.6		11.6	334	45.0		44.4	14	23.0		07.3
10	115	36.6	286	42.5		330	37.5		11.1	349	47.0		44.3	29	25.2		07.4
11	130	39.1	301	42.7	-5	345	38.4	+15	10.6	4	48.9	+19	44.1	44	27.5	+22	07.4
12	145	41.6	316	43.0	-5	0	39.3	+15	10.1	19	50.8	+19	44.0	59	29.7	+22	07.4
13	160	44.0	331	43.3		15	40.2		09.6	34	52.7		43.9	74	31.9		07.4
14	175	46.5	346	43.5		30	41.1		09.0	49	54.6		43.8	89	34.1		07.4
15	190	48.9	1	43.8		45	42.0		08.5	64	56.5		43.7	104	36.4		07.4
16	205	51.4	16	44.1		60	42.9		08.0	79	58.4		43.5	119	38.6		07.4
17	220	53.9	31	44.4	-5	75	43.8	+15	07.5	95	00.3	+19	43.4	134	40.8	+22	07.4
18	235	56.3	46	44.6	-5	90	44.7	+15	07.0	110	02.2	+19	43.3	149	43.0	+22	07.4
19	250	58.8	61	44.9		105	45.6		06.4	125	04.1		43.2	164	45.3		07.4
20	266	01.3	76	45.2		120	46.6		05.9	140	06.0		43.1	179	47.5		07.4
21	281	03.7	91	45.5		135	47.5		05.4	155	07.9		42.9	194	49.7		07.4
22	296	06.2	106	45.8		150	48.4		04.9	170	09.9		42.8	209	52.0		07.4
23	311	08.7	121	46.0		165	49.3		04.4	185	11.8		42.7	224	54.2		07.4
24	326	11.1	136	46.3	-5	180	50.2	+15	03.8	200	13.7	+19	42.6	239	56.4	+22	07.4
Dif	—		+3		-12	+9		-5		+19		-1		+22			

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: 9 ^d 2 PHE { 4 ^h : 57 ^m 1 12 ^h : 56 ^m 9 20 ^h : 56 ^m 7 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
0	179	00.2	+13	13.4	59	20.4	-24 26.0	60 N	19 45	20 35	21 46	18 23 49	23 15 64			
1	194	00.4		12.6	73	46.9	29.5	58	37	23	25	17 59 50	39 63			
2	209	00.5		11.8	88	13.3	32.8	56	30	13	21 09	39 52	23 58 62			
3	224	00.7		11.0	102	39.8	36.0	54	24	20 04	20 55	23 52	*** ** *			
4	239	00.8		10.2	117	06.2	39.1	52	18	19 56	43	17 09 53	*** ** *			
5	254	00.9	+13	09.4	131	32.6	-24 42.0	50	19 13	19 48	20 33	16 57 53	*** ** *			
6	269	01.1	+13	08.6	145	59.1	-24 44.8	45	19 02	19 34	20 12	16 32 54	0 14 52			
7	284	01.2		07.8	160	25.5	47.4	40	18 53	22	19 56	16 12 54	33 53			
8	299	01.3		07.0	174	52.0	49.9	35	45	12	44	15 55 55	0 49 54			
9	314	01.5		06.2	189	18.4	52.2	30	38	19 03	33	41 54	1 03 54			
10	329	01.6		05.4	203	44.9	54.4	20	27	18 49	16	15 17 54	27 55			
11	344	01.8	+13	04.6	218	11.3	-24 56.4	10 N	18 17	18 38	19 03	14 55 55	1 48 55			
12	359	01.9	+13	03.7	232	37.8	-24 58.3	0	18 07	18 28	18 53	14 36 55	2 07 55			
13	14	02.0		02.9	247	04.3	-25 00.1	10 S	17 58	19	44	14 16 55	26 56			
14	29	02.2		02.1	261	30.7	01.7	20	48	11	37	13 55 56	2 47 56			
15	44	02.3		01.3	275	57.2	03.1	30	37	18 02	30	31 55	3 10 58			
16	59	02.5	+13	00.5	290	23.8	04.4	35	31	17 57	27	17 55	24 58			
17	74	02.6	+12	59.7	304	50.3	-25 05.6	40	17 24	17 52	18 23	13 00 56	3 41 58			
18	89	02.7	+12	58.9	319	16.8	-25 06.6	45	17 15	17 46	18 20	12 41 55	4 00 58			
19	104	02.9		58.1	333	43.4	07.5	50	05	39	17	16 55	24 59			
20	119	03.0		57.3	348	10.0	08.2	52	17 01	36	16	12 04 56	36 59			
21	134	03.2		56.5	2	36.5	08.8	54	16 56	33	14	11 51 55	4 49 60			
22	149	03.3		55.6	17	03.2	09.2	56	50	29	13	35 55	5 05 60			
23	164	03.5		54.8	31	29.8	09.5	58	44	25	12	11 17 55	23 60			
24	179	03.6	+12	54.0	45	56.5	-25 09.7	60 S	16 37	17 21	18 10	10 54 54	5 45 62			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 2 ^h 14 ^m 9		Mag: -4.4 PMG: 14 ^h 53 ^m		Mag: +1.7 PMG: 11 ^h 56 ^m		Mag: -1.8 PMG: 10 ^h 38 ^m		Mag: +0.1 PMG: 7 ^h 59 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	326	11.1	136	46.3	-5	30.7	180	50.2	+15	03.8						
1	341	13.6	151	46.6		31.9	195	51.1		03.3						
2	356	16.0	166	46.9		33.1	210	52.0		02.8						
3	11	18.5	181	47.2		34.3	225	52.9		02.3						
4	26	21.0	196	47.4		35.5	240	53.8		01.8						
5	41	23.4	211	47.7	-5	36.7	255	54.7	+15	01.2						
6	56	25.9	226	48.0	-5	37.9	270	55.6	+15	00.7						
7	71	28.4	241	48.3		39.1	285	56.5	+15	00.2						
8	86	30.8	256	48.6		40.3	300	57.4	+14	59.7						
9	101	33.3	271	48.9		41.5	315	58.3		59.1						
10	116	35.8	286	49.1		42.7	330	59.2		58.6						
11	131	38.2	301	49.4	-5	44.0	346	00.2	+14	58.1						
12	146	40.7	316	49.7	-5	45.2	1	01.1	+14	57.6						
13	161	43.2	331	50.0		46.4	16	02.0		57.1						
14	176	45.6	346	50.3		47.6	31	02.9		56.5						
15	191	48.1	1	50.6		48.8	46	03.8		56.0						
16	206	50.5	16	50.9		50.0	61	04.7		55.5						
17	221	53.0	31	51.1	-5	51.2	76	05.6	+14	55.0						
18	236	55.5	46	51.4	-5	52.4	91	06.5	+14	54.4						
19	251	57.9	61	51.7		53.6	106	07.4		53.9						
20	267	00.4	76	52.0		54.8	121	08.3		53.4						
21	282	02.9	91	52.3		56.0	136	09.2		52.9						
22	297	05.3	106	52.6		57.2	151	10.1		52.3						
23	312	07.8	121	52.9		58.4	166	11.1		51.8						
24	327	10.3	136	53.2	-5	59.6	181	12.0	+14	51.3						
Dif	—		+3		-12		+9		-5							
							+19		-1							
									+22							
									0							

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8			Edad: 10 ^d 2	PHE { 4 ^h : 56'5 12 ^h : 56'3 20 ^h : 56'2	SD: 15'4	PMG: 21 ^h 44 ^m	R°: 53 ^m									
	PMG: 12 ^h 03 ^m 6																
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	179	03.6	+12 54.0	45	56.5	-25 09.7	0		60 N	2 23	3 33	4 23	19 12	30	***	***	
1	194	03.7		60	23.2	09.7	0		58	2 43	45	31	18 49	34	***	***	
2	209	03.9		74	49.9	09.5	2		56	3 00	3 56	38		31 36	***	***	
3	224	04.0		89	16.6	09.3	2		54	13	4 05	44	15	39	0	14	
4	239	04.2		103	43.4	08.8	5		52	25	13	50	18 02	40	28	61	
5	254	04.3	+12 50.0	118	10.2	08.3	5		50	3 35	4 20	4 55	17 50	42	0	41	
6	269	04.4	+12 49.1	132	37.0	07.6	7		45	3 56	4 35	5 06	17 26	44	1	06	
7	284	04.6		147	03.9	06.7	9		40	4 12	46	15	17 06	46	26	58	
8	299	04.7		161	30.8	05.7	10		35	24	4 56	23	16 50	47	43	57	
9	314	04.9		175	57.7	04.6	11		30	35	5 05	30	35	49	1	57	
10	329	05.0		190	24.7	03.3	13		20	4 52	18	41	16 11	51	2	22	
11	344	05.2	+12 45.1	204	51.7	01.9	14		10 N	5 04	5 29	5 51	15 50	52	2	43	
12	359	05.3	+12 44.2	219	18.7	00.4	15		0	5 14	5 39	6 00	15 31	53	3	02	
13	14	05.5		233	45.8	58.7	17		10 S	23	48	09	15 11	55	22	54	
14	29	05.6		248	12.9	56.9	18		20	31	5 57	19	14 51	56	3	43	
15	44	05.7		262	40.1	54.9	20		30	37	6 05	30	26	58	4	08	
16	59	05.9		277	07.3	52.8	21		35	41	10	36	14 12	59	22	51	
17	74	06.0	+12 40.2	291	34.6	50.5	23		40	5 44	6 15	6 43	13 56	60	4	39	
18	89	06.2	+12 39.3	306	01.9	48.2	25		45	5 47	6 21	6 51	13 36	62	4	58	
19	104	06.3		320	29.2	45.7	25		50	50	28	7 01	11 64		5	23	
20	119	06.5		334	56.6	43.0	27		52	51	31	06	13 00	64	35	47	
21	134	06.6		349	24.1	40.2	28		54	52	34	11	12 46	66	5	49	
22	149	06.8		3	51.6	37.3	29		56	54	37	16	30	68	6	05	
23	164	06.9		35.2	18	34.3	30		58	55	41	22	12 12	69	23	42	
24	179	07.1	+12 34.4	32	46.7	31.1	32		60 S	5 56	6 45	7 29	11 48	73	6	47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.4		Mag: +1.7		Mag: -1.8		Mag: +0.1	
	2 ^h 11 ^m 0		PMG: 14 ^h 52 ^m		PMG: 11 ^h 54 ^m		PMG: 10 ^h 35 ^m		PMG: 7 ^h 55 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	327	10.3	136	53.2	-5	59.6	181	12.0	+14	51.3
1	342	12.7	151	53.5	-6	00.8	196	12.9		50.8
2	357	15.2	166	53.8		02.0	211	13.8		50.2
3	12	17.7	181	54.1		03.2	226	14.7		49.7
4	27	20.1	196	54.3		04.4	241	15.6		49.2
5	42	22.6	211	54.6	-6	05.6	256	16.5	+14	48.7
6	57	25.0	226	54.9	-6	06.8	271	17.4	+14	48.1
7	72	27.5	241	55.2		08.0	286	18.3		47.6
8	87	30.0	256	55.5		09.2	301	19.2		47.1
9	102	32.4	271	55.8		10.4	316	20.1		46.6
10	117	34.9	286	56.1		11.6	331	21.1		46.0
11	132	37.4	301	56.4	-6	12.8	346	22.0	+14	45.5
12	147	39.8	316	56.7	-6	14.0	1	22.9	+14	45.0
13	162	42.3	331	57.0		15.2	16	23.8		44.5
14	177	44.8	346	57.3		16.4	31	24.7		43.9
15	192	47.2	1	57.6		17.6	46	25.6		43.4
16	207	49.7	16	57.9		18.8	61	26.5		42.9
17	222	52.2	31	58.2	-6	20.0	76	27.4	+14	42.3
18	237	54.6	46	58.5	-6	21.1	91	28.3	+14	41.8
19	252	57.1	61	58.8		22.3	106	29.3		41.3
20	267	59.5	76	59.1		23.5	121	30.2		40.8
21	283	02.0	91	59.4		24.7	136	31.1		40.2
22	298	04.5	106	59.7		25.9	151	32.0		39.7
23	313	06.9	122	00.0		27.1	166	32.9		39.2
24	328	09.4	137	00.3	-6	28.3	181	33.8	+14	38.7
Dif	—		+3		-12		+9		-5	
							+19		-1	
									+22	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 2 PHE	SD: 15 ^h 3				Civil			Náutico	Hora		R°
	PMG: 12 ^h 03 ^m 4				PMG: 22 ^h 37 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	07.1	+12 34.4	32	46.7	-24 31.1	33	60 N	19 40	20 28	21 37	19 42	17	0 19	80
1	194	07.2	33.6	47	14.4	27.8	33	58	32	17	18	23	22	0 42	75
2	209	07.4	32.8	61	42.1	24.4	34	56	25	20 07	21 02	19 07	26	1 00	72
3	224	07.5	32.0	76	09.9	20.8	36	54	19	19 59	20 49	18 54	28	16	70
4	239	07.7	31.1	90	37.7	17.1	37	52	14	51	38	42	30	29	68
5	254	07.8	+12 30.3	105	05.6	-24 13.3	38	50	19 09	19 44	20 28	18 32	32	1 41	66
6	269	08.0	+12 29.5	119	33.5	-24 09.3	40	45	18 59	19 30	20 08	18 10	35	2 05	63
7	284	08.1	28.7	134	01.5	05.2	41	40	50	19	19 53	17 52	38	24	62
8	299	08.3	27.9	148	29.6	-24 01.0	42	35	43	09	41	37	40	40	60
9	314	08.4	27.0	162	57.7	-23 56.7	43	30	36	19 01	31	24	42	2 54	58
10	329	08.6	26.2	177	25.8	52.2	45	20	25	18 48	15	17 02	45	3 18	56
11	344	08.7	+12 25.4	191	54.1	-23 47.6	46	10 N	18 16	18 37	19 02	16 42	48	3 38	54
12	359	08.9	+12 24.6	206	22.4	-23 42.9	47	0	18 07	18 28	18 52	16 24	51	3 57	52
13	14	09.0	23.7	220	50.8	38.1	48	10 S	17 58	19	44	16 06	53	4 16	50
14	29	09.2	22.9	235	19.2	33.1	50	20	49	11	37	15 47	55	36	48
15	44	09.3	22.1	249	47.7	28.1	50	30	38	18 03	31	24	59	4 59	46
16	59	09.5	21.3	264	16.2	22.9	52	35	32	17 58	28	15 11	60	5 13	44
17	74	09.6	+12 20.4	278	44.9	-23 17.6	53	40	17 26	17 53	18 25	14 56	62	5 29	42
18	89	09.8	+12 19.6	293	13.6	-23 12.2	54	45	17 18	17 48	18 22	14 38	65	5 47	40
19	104	09.9	18.8	307	42.3	06.6	56	50	08	42	20	15	69	6 10	37
20	119	10.1	17.9	322	11.2	-23 01.0	56	52	17 04	39	18	14 04	70	22	34
21	134	10.2	17.1	336	40.1	-22 55.2	58	54	16 59	36	17	13 52	72	34	33
22	149	10.4	16.3	351	09.0	49.3	59	56	54	33	16	38	75	6 49	30
23	164	10.5	15.5	5 38.1	101	43.3	60	58	48	29	15	21	78	7 05	28
24	179	10.7	+12 14.6	20	07.2	-22 37.2	61	60 S	16 42	17 25	18 14	13 01	83	7 26	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 07 ^m 0		Mag: -4.4 PMG: 14 ^h 52 ^m		Mag: +1.7 PMG: 11 ^h 53 ^m		Mag: -1.8 PMG: 10 ^h 32 ^m		Mag: +0.1 PMG: 7 ^h 52 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	328	09.4	137 00.3	-6 28.3	181 33.8	+14 38.7	201 45.4	+19 36.8	241 43.5	+22 07.6
1	343	11.9	152 00.6	29.5	196 34.7	38.1	216 47.3	36.6	256 45.7	07.6
2	358	14.3	167 00.9	30.7	211 35.6	37.6	231 49.2	36.5	271 47.9	07.6
3	13	16.8	182 01.3	31.9	226 36.6	37.1	246 51.1	36.4	286 50.2	07.6
4	28	19.3	197 01.6	33.1	241 37.5	36.5	261 53.0	36.3	301 52.4	07.6
5	43	21.7	212 01.9	-6 34.3	256 38.4	+14 36.0	276 54.9	+19 36.2	316 54.6	+22 07.6
6	58	24.2	227 02.2	-6 35.5	271 39.3	+14 35.5	291 56.8	+19 36.0	331 56.9	+22 07.6
7	73	26.7	242 02.5	36.7	286 40.2	34.9	306 58.8	35.9	346 59.1	07.6
8	88	29.1	257 02.8	37.9	301 41.1	34.4	322 00.7	35.8	2 01.3	07.6
9	103	31.6	272 03.1	39.1	316 42.0	33.9	337 02.6	35.7	17 03.6	07.6
10	118	34.0	287 03.4	40.3	331 43.0	33.4	352 04.5	35.5	32 05.8	07.6
11	133	36.5	302 03.7	-6 41.4	346 43.9	+14 32.8	7 06.4	+19 35.4	47 08.0	+22 07.6
12	148	39.0	317 04.0	-6 42.6	1 44.8	+14 32.3	22 08.3	+19 35.3	62 10.3	+22 07.7
13	163	41.4	332 04.3	43.8	16 45.7	31.8	37 10.2	35.2	77 12.5	07.7
14	178	43.9	347 04.7	45.0	31 46.6	31.2	52 12.2	35.1	92 14.8	07.7
15	193	46.4	2 05.0	46.2	46 47.5	30.7	67 14.1	34.9	107 17.0	07.7
16	208	48.8	17 05.3	47.4	61 48.4	30.2	82 16.0	34.8	122 19.2	07.7
17	223	51.3	32 05.6	-6 48.6	76 49.4	+14 29.6	97 17.9	+19 34.7	137 21.5	+22 07.7
18	238	53.8	47 05.9	-6 49.8	91 50.3	+14 29.1	112 19.8	+19 34.6	152 23.7	+22 07.7
19	253	56.2	62 06.2	51.0	106 51.2	28.6	127 21.7	34.4	167 25.9	07.7
20	268	58.7	77 06.5	52.2	121 52.1	28.0	142 23.6	34.3	182 28.2	07.7
21	284	01.1	92 06.9	53.3	136 53.0	27.5	157 25.6	34.2	197 30.4	07.7
22	299	03.6	107 07.2	54.5	151 53.9	27.0	172 27.5	34.1	212 32.6	07.7
23	314	06.1	122 07.5	55.7	166 54.8	26.5	187 29.4	34.0	227 34.9	07.7
24	329	08.5	137 07.8	-6 56.9	181 55.8	+14 25.9	202 31.3	+19 33.8	242 37.1	+22 07.7
Dif	—	+3	-12	+9	-5	+19	-1	+22	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 2			Edad: 12 ^d 2 PHE { 4 ^h : 55 ^h 5 12 ^h : 55 ^h 4 20 ^h : 55 ^h 2 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	10.7	+12	14.6	20	07.2	-22	37.2	60 N	2 31	3 39	4 28	19 59	11	1 39	85
1	194	10.8		13.8	34	36.4 ¹⁰²		31.0 ⁶²	58	2 50	3 50	36	45 15		1 57	81
2	209	11.0		13.0	49	05.6 ¹⁰²		24.6 ⁶⁴	56	3 05	4 00	42	33 17		2 12	77
3	224	11.1		12.1	63	34.9 ¹⁰³		18.2 ⁶⁴	54		18 09	48	22 20		26	74
4	239	11.3		11.3	78	04.3 ¹⁰⁴		11.6 ⁶⁶	52		29 16	53	12 23		37	72
5	254	11.4	+12	10.5	92	33.8 ¹⁰⁵	-22	05.0 ⁶⁶	50	3 39	4 23	4 58	19 04	24	2 47	70
6	269	11.6	+12	09.7	107	03.4 ¹⁰⁶	-21	58.2 ⁶⁸	45	3 59	4 37	5 08	18 45	29	3 08	66
7	284	11.7		08.8	121	33.0 ¹⁰⁶		51.4 ⁶⁸	40	4 14		48 17	30 32		26	62
8	299	11.9		08.0	136	02.7 ¹⁰⁷		44.4 ⁷⁰	35		26 4 58	24	17 35		40	60
9	314	12.0		07.2	150	32.4 ¹⁰⁷		37.3 ⁷¹	30		36 5 06	31	18 06	37	3 52	59
10	329	12.2		06.3	165	02.2 ¹⁰⁸		30.1 ⁷²	20	4 52		19 42	17 47	41	4 14	54
11	344	12.4	+12	05.5	179	32.2 ¹¹⁰	-21	22.8 ⁷³	10 N	5 04	5 30	5 51	17 30	45	4 32	52
12	359	12.5	+12	04.7	194	02.1 ¹⁰⁹	-21	15.5 ⁷³	0	5 14	5 39	6 00	17 15	47	4 49	49
13	14	12.7		03.8	208	32.2 ¹¹¹		08.0 ⁷⁵	10 S		22 47	08	16 59	50	5 06	46
14	29	12.8		03.0	223	02.3 ¹¹¹	-21	00.4 ⁷⁶	20		29 5 55	18	42 54		24	43
15	44	13.0		02.2	237	32.5 ¹¹²	-20	52.7 ⁷⁷	30	35	6 03	28	23 57		45	39
16	59	13.1		01.3	252	02.8 ¹¹³		45.0 ⁷⁷	35	38		08 34	16 11	60	5 57	37
17	74	13.3	+12	00.5	266	33.2 ¹¹⁴	-20	37.1 ⁷⁹	40	5 41	6 13	6 40	15 58	63	6 11	35
18	89	13.4	+11	59.7	281	03.6 ¹¹⁴	-20	29.1 ⁸⁰	45	5 44	6 18	6 48	15 43	65	6 27	32
19	104	13.6		58.8	295	34.1 ¹¹⁵		21.1 ⁸⁰	50	46	24	6 57	24 70		47	28
20	119	13.8		58.0	310	04.7 ¹¹⁶		12.9 ⁸²	52	47	27	7 01	14 72		6 56	27
21	134	13.9		57.2	324	35.3 ¹¹⁶	-20	04.7 ⁸²	54	48	30	06	15 04	75	7 07	24
22	149	14.1		56.3	339	06.1 ¹¹⁸	-19	56.4 ⁸³	56	49	33	11	14 53	77	19	21
23	164	14.2		55.5	353	36.9 ¹¹⁸		47.9 ⁸⁵	58	50	36	17	39 81		33	18
24	179	14.4	+11	54.7	8	07.8 ¹¹⁹	-19	39.4 ⁸⁵	60 S	5 51	6 40	7 23	14 24	85	7 49	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 03 ^m 1		Mag: -4.5 PMG: 14 ^h 51 ^m		Mag: +1.8 PMG: 11 ^h 52 ^m		Mag: -1.8 PMG: 10 ^h 29 ^m		Mag: +0.1 PMG: 7 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	329	08.5	137	07.8	-6	56.9	181	55.8	+14	25.9
1	344	11.0	152	08.1		58.1	196	56.7		25.4
2	359	13.5	167	08.4	-6	59.3	211	57.6		24.9
3	14	15.9	182	08.8	-7	00.5	226	58.5		24.3
4	29	18.4	197	09.1		01.7	241	59.4		23.8
5	44	20.9	212	09.4	-7	02.8	257	00.3	+14	23.3
6	59	23.3	227	09.7	-7	04.0	272	01.3	+14	22.7
7	74	25.8	242	10.0		05.2	287	02.2		22.2
8	89	28.3	257	10.4		06.4	302	03.1		21.7
9	104	30.7	272	10.7		07.6	317	04.0		21.1
10	119	33.2	287	11.0		08.8	332	04.9		20.6
11	134	35.6	302	11.3	-7	10.0	347	05.8	+14	20.1
12	149	38.1	317	11.7	-7	11.1	2	06.8	+14	19.5
13	164	40.6	332	12.0		12.3	17	07.7		19.0
14	179	43.0	347	12.3		13.5	32	08.6		18.4
15	194	45.5	2	12.6		14.7	47	09.5		17.9
16	209	48.0	17	13.0		15.9	62	10.4		17.4
17	224	50.4	32	13.3	-7	17.1	77	11.3	+14	16.8
18	239	52.9	47	13.6	-7	18.2	92	12.3	+14	16.3
19	254	55.4	62	13.9		19.4	107	13.2		15.8
20	269	57.8	77	14.3		20.6	122	14.1		15.2
21	285	00.3	92	14.6		21.8	137	15.0		14.7
22	300	02.8	107	14.9		23.0	152	15.9		14.2
23	315	05.2	122	15.2		24.2	167	16.8		13.6
24	330	07.7	137	15.6	-7	25.3	182	17.8	+14	13.1
Dif	—		+3		-12		+9		-5	
							+19		-1	
									+22	
									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 9			Edad: 13 ^d 2 PHE { 4 ^h : 55/1 12 ^h : 55/0 20 ^h : 54/8 PMG: *** **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	179	14.4	+11 54.7	8	07.8	-19 39.4		60 N	19 34	20 22	21 28	20 10 7	3 04 85					
1	194	14.5	53.8	22	38.7 ¹¹⁹	30.8 ⁸⁶		58	27	11	21 10	20 00 10	18 80					
2	209	14.7	53.0	37	09.8 ¹²¹	22.2 ⁸⁶		56	20	20 02	20 56	19 50 14	29 78					
3	224	14.9	52.1	51	40.9 ¹²¹	13.4 ⁸⁸		54	15	19 54	43	42 16	40 74					
4	239	15.0	51.3	66	12.0 ¹²¹	-19 04.6 ⁸⁸		52	10	46	33	35 18	49 72					
5	254	15.2	+11 50.5	80	43.3 ¹²³	-18 55.6 ⁹⁰		50	19 05	19 40	20 23	19 28 21	3 57 70					
6	269	15.3	+11 49.6	95	14.6 ¹²³	-18 46.6 ⁹⁰		45	18 55	19 26	20 04	19 14 25	4 14 66					
7	284	15.5	48.8	109	46.0 ¹²⁴	37.5 ⁹¹		40	47	16	19 50	19 02 28	28 62					
8	299	15.6	47.9	124	17.5 ¹²⁵	28.3 ⁹²		35	40	19 07	38	18 52 31	40 60					
9	314	15.8	47.1	138	49.0 ¹²⁵	19.1 ⁹²		30	34	18 59	28	43 34	4 51 56					
10	329	16.0	46.3	153	20.7 ¹²⁷	09.8 ⁹³		20	24	46	13	28 37	5 08 53					
11	344	16.1	+11 45.4	167	52.3 ¹²⁶	-18 00.4 ⁹⁴		10 N	18 15	18 36	19 01	18 15 41	5 24 49					
12	359	16.3	+11 44.6	182	24.1 ¹²⁸	-17 50.9 ⁹⁵		0	18 06	18 27	18 52	18 02 45	5 38 46					
13	14	16.4	43.7	196	55.9 ¹²⁸	41.3 ⁹⁶		10 S	17 58	19	44	17 49 48	5 52 43					
14	29	16.6	42.9	211	27.9 ¹³⁰	31.7 ⁹⁶		20	49	12	38	36 51	6 07 39					
15	44	16.8	42.1	225	59.8 ¹²⁹	22.0 ⁹⁷		30	39	04	32	20 56	24 35					
16	59	16.9	41.2	240	31.9 ¹³¹	12.2 ⁹⁸		35	34	18 00	29	11 59	34 33					
17	74	17.1	+11 40.4	255	04.0 ¹³¹	-17 02.4 ⁹⁸		40	17 27	17 55	18 27	17 01 61	6 46 30					
18	89	17.2	+11 39.5	269	36.2 ¹³²	-16 52.4 ¹⁰⁰		45	17 20	17 50	18 24	16 48 65	6 59 27					
19	104	17.4	38.7	284	08.5 ¹³³	42.4 ¹⁰⁰		50	11	45	22	34 69	7 15 23					
20	119	17.6	37.9	298	40.8 ¹³³	32.4 ¹⁰⁰		52	07	42	21	26 72	23 20					
21	134	17.7	37.0	313	13.2 ¹³⁴	22.3 ¹⁰¹		54	17 03	39	21	19 73	31 18					
22	149	17.9	36.2	327	45.7 ¹³⁵	12.1 ¹⁰²		56	16 58	36	20	10 76	40 16					
23	164	18.0	35.3	342	18.2 ¹³⁵	-16 01.8 ¹⁰³		58	52	33	19	16 00 80	7 51 13					
24	179	18.2	+11 34.5	356	50.8 ¹³⁶	-15 51.5 ¹⁰³		60 S	16 46	17 30	18 18	15 49 83	8 03 9					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 59 ^m 2		Mag: -4.5 PMG: 14 ^h 51 ^m			Mag: +1.8 PMG: 11 ^h 50 ^m			Mag: -1.8 PMG: 10 ^h 26 ^m			Mag: +0.1 PMG: 7 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	330	07.7	137	15.6	-7	25.3	182	17.8	+14	13.1	203	17.3	+19	30.9	243	30.8	+22	07.8
1	345	10.1	152	15.9		26.5	197	18.7		12.6	218	19.2		30.8	258	33.1		07.8
2	0	12.6	167	16.2		27.7	212	19.6		12.0	233	21.1		30.7	273	35.3		07.8
3	15	15.1	182	16.6		28.9	227	20.5		11.5	248	23.0		30.6	288	37.6		07.8
4	30	17.5	197	16.9		30.1	242	21.4		10.9	263	24.9		30.4	303	39.8		07.8
5	45	20.0	212	17.2	-7	31.2	257	22.4	+14	10.4	278	26.8	+19	30.3	318	42.1	+22	07.8
6	60	22.5	227	17.6	-7	32.4	272	23.3	+14	09.9	293	28.8	+19	30.2	333	44.3	+22	07.8
7	75	24.9	242	17.9		33.6	287	24.2		09.3	308	30.7		30.1	348	46.5		07.8
8	90	27.4	257	18.2		34.8	302	25.1		08.8	323	32.6		29.9	3	48.8		07.8
9	105	29.9	272	18.6		36.0	317	26.0		08.3	338	34.5		29.8	18	51.0		07.8
10	120	32.3	287	18.9		37.1	332	27.0		07.7	353	36.4		29.7	33	53.3		07.8
11	135	34.8	302	19.2	-7	38.3	347	27.9	+14	07.2	8	38.3	+19	29.6	48	55.5	+22	07.8
12	150	37.2	317	19.6	-7	39.5	2	28.8	+14	06.7	23	40.3	+19	29.5	63	57.7	+22	07.8
13	165	39.7	332	19.9		40.7	17	29.7		06.1	38	42.2		29.3	79	00.0		07.8
14	180	42.2	347	20.3		41.8	32	30.6		05.6	53	44.1		29.2	94	02.2		07.8
15	195	44.6	2	20.6		43.0	47	31.6		05.0	68	46.0		29.1	109	04.5		07.8
16	210	47.1	17	20.9		44.2	62	32.5		04.5	83	47.9		29.0	124	06.7		07.8
17	225	49.6	32	21.3	-7	45.4	77	33.4	+14	04.0	98	49.9	+19	28.8	139	09.0	+22	07.8
18	240	52.0	47	21.6	-7	46.5	92	34.3	+14	03.4	113	51.8	+19	28.7	154	11.2	+22	07.8
19	255	54.5	62	22.0		47.7	107	35.2		02.9	128	53.7		28.6	169	13.4		07.8
20	270	57.0	77	22.3		48.9	122	36.2		02.3	143	55.6		28.5	184	15.7		07.8
21	285	59.4	92	22.6		50.1	137	37.1		01.8	158	57.5		28.4	199	17.9		07.8
22	301	01.9	107	23.0		51.2	152	38.0		01.3	173	59.4		28.2	214	20.2		07.8
23	316	04.4	122	23.3		52.4	167	38.9		00.7	189	01.4		28.1	229	22.4		07.9
24	331	06.8	137	23.7	-7	53.6	182	39.9	+14	00.2	204	03.3	+19	28.0	244	24.7	+22	07.9
Dif	—		+3 -12				+9 -5		-5		+19		-1		+22		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna															
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 7				Edad: 14 ^d 2 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 PMG: 0 ^h 13 ^m R°: 44 ^m																											
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m													
0	179	18.2	+11	34.5	356	50.8	-15	51.5	104	58	60 N	2 38	3 45	4 33	20 17	6	4 29	82														
1	194	18.4		33.6	11	23.5 ¹³⁷		41.1 ¹⁰⁴	104	58	58	2 56	3 55	40	10	8	38	79														
2	209	18.5		32.8	25	56.2 ¹³⁷		30.7 ¹⁰⁴	104	56	56	3 11	4 05	46	20 04	11	47	75														
3	224	18.7		31.9	40	29.0 ¹³⁸		20.2 ¹⁰⁵	105	54	54	23	13	52	19 58	13	4 54	73														
4	239	18.9		31.1	55	01.9 ¹³⁹	-15	09.6 ¹⁰⁶	106	52	52	34	20	4 57	53	15	5 01	71														
5	254	19.0	+11	30.3	69	34.8 ¹³⁹	-14	59.0 ¹⁰⁶	106	50	50	3 43	4 26	5 01	19 49	17	5 07	69														
6	269	19.2	+11	29.4	84	07.8 ¹⁴⁰	-14	48.3 ¹⁰⁷	107	45	45	4 02	4 40	5 11	19 39	21	5 20	64														
7	284	19.3		28.6	98	40.9 ¹⁴¹		37.6 ¹⁰⁷	107	40	40	16	50	19	30	25	30	61														
8	299	19.5		27.7	113	14.0 ¹⁴¹		26.8 ¹⁰⁸	108	35	35	28	4 59	26	23	27	40	57														
9	314	19.7		26.9	127	47.2 ¹⁴²		16.0 ¹⁰⁸	108	30	30	38	5 07	32	17	30	5 47	56														
10	329	19.8		26.0	142	20.4 ¹⁴²	-14	05.1 ¹⁰⁹	109	20	20	4 53	19	42	19 05	35	6 01	51														
11	344	20.0	+11	25.2	156	53.8 ¹⁴⁴	-13	54.1 ¹¹⁰	110	10 N	10 N	5 05	5 30	5 51	18 56	38	6 13	47														
12	359	20.2	+11	24.3	171	27.1 ¹⁴³	-13	43.1 ¹¹⁰	110	0	0	5 14	5 38	5 59	18 47	42	6 24	43														
13	14	20.3		23.5	186	00.6 ¹⁴⁵		32.1 ¹¹⁰	110	10 S	10 S	21	46	6 07	37	46	35	39														
14	29	20.5		22.6	200	34.1 ¹⁴⁵		20.9 ¹¹²	112	20	20	28	5 54	16	27	50	46	36														
15	44	20.7		21.8	215	07.6 ¹⁴⁵	-13	09.8 ¹¹¹	111	30	30	33	6 01	26	16	54	6 59	32														
16	59	20.8		20.9	229	41.2 ¹⁴⁶	-12	58.6 ¹¹²	112	35	35	36	05	31	10	56	7 07	29														
17	74	21.0	+11	20.1	244	14.9 ¹⁴⁷	-12	47.3 ¹¹³	113	40	40	5 38	6 10	6 37	18 02	60	7 16	26														
18	89	21.2	+11	19.2	258	48.6 ¹⁴⁷	-12	36.0 ¹¹³	113	45	45	5 41	6 15	6 45	17 53	64	7 26	22														
19	104	21.3		18.4	273	22.4 ¹⁴⁸		24.7 ¹¹³	113	50	50	43	20	53	43	68	38	18														
20	119	21.5		17.5	287	56.2 ¹⁴⁸		13.3 ¹¹⁴	114	52	52	43	23	6 57	38	70	43	17														
21	134	21.7		16.7	302	30.1 ¹⁴⁹	-12	01.8 ¹¹⁵	115	54	54	44	25	7 02	32	73	49	15														
22	149	21.8		15.8	317	04.1 ¹⁵⁰	-11	50.4 ¹¹⁴	114	56	56	45	28	06	26	75	7 56	12														
23	164	22.0		15.0	331	38.1 ¹⁵⁰		38.8 ¹¹⁶	116	58	58	46	31	12	20	77	8 04	9														
24	179	22.2	+11	14.1	346	12.1 ¹⁵⁰	-11	27.3 ¹¹⁵	115	60 S	60 S	5 46	6 35	7 18	17 12	81	8 12	6														
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 1 ^h 55 ^m 2				Mag: -4.5 PMG: 14 ^h 50 ^m				Mag: +1.8 PMG: 11 ^h 49 ^m				Mag: -1.8 PMG: 10 ^h 22 ^m				Mag: +0.1 PMG: 7 ^h 41 ^m															
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	331	06.8	137	23.7	-7	53.6	182	39.9	+14	00.2	204	03.3	+19	28.0	244	24.7	+22	07.9														
1	346	09.3	152	24.0		54.8	197	40.8	+13	59.6	219	05.2		27.9	259	26.9		07.9														
2	1	11.7	167	24.4		55.9	212	41.7		59.1	234	07.1		27.7	274	29.1		07.9														
3	16	14.2	182	24.7		57.1	227	42.6		58.6	249	09.0		27.6	289	31.4		07.9														
4	31	16.7	197	25.1		58.3	242	43.5		58.0	264	11.0		27.5	304	33.6		07.9														
5	46	19.1	212	25.4	-7	59.5	257	44.5	+13	57.5	279	12.9	+19	27.4	319	35.9	+22	07.9														
6	61	21.6	227	25.7	-8	00.6	272	45.4	+13	56.9	294	14.8	+19	27.3	334	38.1	+22	07.9														
7	76	24.1	242	26.1		01.8	287	46.3		56.4	309	16.7		27.1	349	40.4		07.9														
8	91	26.5	257	26.4		03.0	302	47.2		55.9	324	18.6		27.0	4	42.6		07.9														
9	106	29.0	272	26.8		04.1	317	48.1		55.3	339	20.5		26.9	19	44.9		07.9														
10	121	31.5	287	27.1		05.3	332	49.1		54.8	354	22.5		26.8	34	47.1		07.9														
11	136	33.9	302	27.5	-8	06.5	347	50.0	+13	54.2	9	24.4	+19	26.6	49	49.4	+22	07.9														
12	151	36.4	317	27.8	-8	07.7	2	50.9	+13	53.7	24	26.3	+19	26.5	64	51.6	+22	07.9														
13	166	38.9	332	28.2		08.8	17	51.8		53.2	39	28.2		26.4	79	53.8		07.9														
14	181	41.3	347	28.5		10.0	32	52.8		52.6	54	30.1		26.3	94	56.1		07.9														
15	196	43.8	2	28.9		11.2	47	53.7		52.1	69	32.1		26.2	109	58.3		07.9														
16	211	46.2	17	29.3		12.3	62	54.6		51.5	84	34.0		26.0	125	00.6		07.9														
17	226	48.7	32	29.6	-8	13.5	77	55.5	+13	51.0	99	35.9	+19	25.9	140	02.8	+22	07.9														
18	241	51.2	47	30.0	-8	14.7	92	56.5	+13	50.4	114	37.8	+19	25.8	155	05.1	+22	07.9														
19	256	53.6	62	30.3		15.8	107	57.4		49.9	129	39.7		25.7	170	07.3		07.9														
20	271	56.1	77	30.7		17.0	122	58.3		49.4	144	41.7		25.5	185	09.6		07.9														
21	286	58.6	92	31.0		18.2	137	59.2		48.8	159	43.6		25.4	200	11.8		07.9														
22	302	01.0	107	31.4		19.3	153	00.2		48.3	174	45.5		25.3	215	14.1		07.9														
23	317	03.5	122	31.7		20.5	168	01.1		47.7	189	47.4		25.2	230	16.3		07.9														
24	332	06.0	137	32.1	-8	21.7	183	02.0	+13	47.2	204	49.3	+19	25.1	245	18.6	+22	07.9														
Dif	—				+4				-12				+9				-5				+19				-1				+22			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna								
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 4				Edad: 15 ^d 2 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3 PMG: 0 ^h 57 ^m R°: 42 ^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	179	22.2	+11	14.1	346	12.1	-11	27.3	60 N	19 28	20 15	21 19	20 23 4	5 51 80									
1	194	22.3		13.3	0	46.2 ¹⁵¹		15.7 ¹¹⁶	58	21	20 05	21 03	18 7	5 57 77									
2	209	22.5		12.4	15	20.4 ¹⁵²	-11	04.0 ¹¹⁷	56	15	19 56	20 49	15 9	6 02 74									
3	224	22.7		11.6	29	54.6 ¹⁵²	-10	52.3 ¹¹⁷	54	10	49	37	11 12	07 72									
4	239	22.8		10.7	44	28.9 ¹⁵³		40.6 ¹¹⁷	52	05	42	27	08 14	12 69									
5	254	23.0	+11	09.9	59	03.2 ¹⁵³	-10	28.9 ¹¹⁷	50	19 01	19 36	20 18	20 06 15	6 16 67									
6	269	23.2	+11	09.0	73	37.5 ¹⁵³	-10	17.1 ¹¹⁸	45	18 52	19 23	20 00	20 00 19	6 24 63									
7	284	23.3		08.2	88	11.9 ¹⁵⁴	-10	05.2 ¹¹⁹	40	44	12	19 46	19 55 23	31 60									
8	299	23.5		07.3	102	46.4 ¹⁵⁵	-9	53.4 ¹¹⁸	35	38	19 04	35	50 26	37 57									
9	314	23.7		06.4	117	20.9 ¹⁵⁵		41.5 ¹¹⁹	30	32	18 57	26	47 28	43 53									
10	329	23.8		05.6	131	55.4 ¹⁵⁵		29.6 ¹¹⁹	20	22	45	11	40 33	6 52 49									
11	344	24.0	+11	04.7	146	30.0 ¹⁵⁶	-9	17.6 ¹²⁰	10 N	18 14	18 35	19 00	19 34 37	7 00 45									
12	359	24.2	+11	03.9	161	04.6 ¹⁵⁶	-9	05.6 ¹²⁰	0	18 06	18 27	18 51	19 29 40	7 07 41									
13	14	24.3		03.0	175	39.3 ¹⁵⁷	-8	53.6 ¹²⁰	10 S	17 58	19	44	23 44	14 38									
14	29	24.5		02.2	190	14.0 ¹⁵⁷		41.5 ¹²¹	20	50	12	38	17 49	22 34									
15	44	24.7		01.3	204	48.8 ¹⁵⁸		29.4 ¹²¹	30	41	05	33	10 53	31 29									
16	59	24.8	+11	00.5	219	23.6 ¹⁵⁸		17.3 ¹²¹	35	35	18 01	31	06 56	36 27									
17	74	25.0	+10	59.6	233	58.4 ¹⁵⁸	-8	05.2 ¹²¹	40	17 29	17 57	18 28	19 02 59	7 42 23									
18	89	25.2	+10	58.7	248	33.3 ¹⁵⁹	-7	53.0 ¹²²	45	17 22	17 52	18 27	18 57 62	7 48 21									
19	104	25.3		57.9	263	08.2 ¹⁵⁹		40.8 ¹²²	50	14	47	25	51 66	7 56 17									
20	119	25.5		57.0	277	43.1 ¹⁵⁹		28.6 ¹²²	52	10	45	24	48 68	8 00 14									
21	134	25.7		56.2	292	18.1 ¹⁶⁰		16.4 ¹²²	54	06	43	24	45 70	04 12									
22	149	25.9		55.3	306	53.1 ¹⁶⁰	-7	04.1 ¹²³	56	17 02	40	23	41 73	08 10									
23	164	26.0		54.5	321	28.2 ¹⁶¹	-6	51.8 ¹²³	58	16 57	37	23	37 76	13 8									
24	179	26.2	+10	53.6	336	03.3 ¹⁶¹	-6	39.5 ¹²³	60 S	16 51	17 34	18 22	18 33 79	8 18 5									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 1 ^h 51 ^m 3			Mag: -4.5 PMG: 14 ^h 50 ^m			Mag: +1.8 PMG: 11 ^h 47 ^m			Mag: -1.9 PMG: 10 ^h 19 ^m			Mag: +0.1 PMG: 7 ^h 38 ^m										
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	332	06.0	137	32.1	-8	21.7	183	02.0	+13	47.2	204	49.3	+19	25.1	245	18.6	+22	07.9					
1	347	08.4	152	32.5		22.8	198	02.9		46.6	219	51.3		24.9	260	20.8		07.9					
2	2	10.9	167	32.8		24.0	213	03.9		46.1	234	53.2		24.8	275	23.1		07.9					
3	17	13.3	182	33.2		25.2	228	04.8		45.6	249	55.1		24.7	290	25.3		07.9					
4	32	15.8	197	33.5		26.3	243	05.7		45.0	264	57.0		24.6	305	27.5		07.9					
5	47	18.3	212	33.9	-8	27.5	258	06.6	+13	44.5	279	59.0	+19	24.4	320	29.8	+22	07.9					
6	62	20.7	227	34.3	-8	28.7	273	07.6	+13	43.9	295	00.9	+19	24.3	335	32.0	+22	07.9					
7	77	23.2	242	34.6		29.8	288	08.5		43.4	310	02.8		24.2	350	34.3		07.9					
8	92	25.7	257	35.0		31.0	303	09.4		42.8	325	04.7		24.1	5	36.5		07.9					
9	107	28.1	272	35.3		32.1	318	10.3		42.3	340	06.6		24.0	20	38.8		07.9					
10	122	30.6	287	35.7		33.3	333	11.3		41.7	355	08.6		23.8	35	41.0		08.0					
11	137	33.1	302	36.1	-8	34.5	348	12.2	+13	41.2	10	10.5	+19	23.7	50	43.3	+22	08.0					
12	152	35.5	317	36.4	-8	35.6	3	13.1	+13	40.7	25	12.4	+19	23.6	65	45.5	+22	08.0					
13	167	38.0	332	36.8		36.8	18	14.0		40.1	40	14.3		23.5	80	47.8		08.0					
14	182	40.5	347	37.2		38.0	33	15.0		39.6	55	16.2		23.3	95	50.0		08.0					
15	197	42.9	2	37.5		39.1	48	15.9		39.0	70	18.2		23.2	110	52.3		08.0					
16	212	45.4	17	37.9		40.3	63	16.8		38.5	85	20.1		23.1	125	54.5		08.0					
17	227	47.8	32	38.3	-8	41.4	78	17.7	+13	37.9	100	22.0	+19	23.0	140	56.8	+22	08.0					
18	242	50.3	47	38.6	-8	42.6	93	18.7	+13	37.4	115	23.9	+19	22.9	155	59.0	+22	08.0					
19	257	52.8	62	39.0		43.8	108	19.6		36.8	130	25.9		22.7	171	01.3		08.0					
20	272	55.2	77	39.4		44.9	123	20.5		36.3	145	27.8		22.6	186	03.5		08.0					
21	287	57.7	92	39.7		46.1	138	21.4		35.7	160	29.7		22.5	201	05.8		08.0					
22	303	00.2	107	40.1		47.2	153	22.4		35.2	175	31.6		22.4	216	08.0		08.0					
23	318	02.6	122	40.5		48.4	168	23.3		34.6	190	33.5		22.2	231	10.3		08.0					
24	333	05.1	137	40.9	-8	49.5	183	24.2	+13	34.1	205	35.5	+19	22.1	246	12.5	+22	08.0					
Dif	—			+4			-12			+9			-5			+19			-1			+22	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 1			Edad: 16 ^d 2 PHE { SD: 14'8 PMG: 1 ^h 39 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	26.2	+10	53.6	336	03.3	-6 39.5	60 N	2 46	3 50	4 38	20 27	4	7 11	78
1	194	26.4		52.7	350	38.4 ¹⁶¹	27.2 ¹²³	58	3 03	4 00	44	25	7	14	75
2	209	26.5		51.9	5	13.5 ¹⁶¹	14.8 ¹²⁴	56	16	09	50	24	9	16	73
3	224	26.7		51.0	19	48.7 ¹⁶²	-6 02.5 ¹²³	54	28	17	4 55	23	11	19	70
4	239	26.9		50.2	34	23.9 ¹⁶²	-5 50.1 ¹²⁴	52	38	23	5 00	22	13	21	68
5	254	27.1	+10	49.3	48	59.2 ¹⁶³	-5 37.7 ¹²⁴	50	3 47	4 30	5 04	20 21	15	7 23	66
6	269	27.2	+10	48.4	63	34.5 ¹⁶³	-5 25.2 ¹²⁵	45	4 05	4 42	5 13	20 19	19	7 27	62
7	284	27.4		47.6	78	09.8 ¹⁶³	12.8 ¹²⁴	40	19	4 53	21	18	22	31	58
8	299	27.6		46.7	92	45.1 ¹⁶³	-5 00.3 ¹²⁵	35	30	5 01	27	16	26	34	55
9	314	27.7		45.9	107	20.4 ¹⁶³	-4 47.9 ¹²⁴	30	39	08	33	15	28	36	53
10	329	27.9		45.0	121	55.8 ¹⁶⁴	35.4 ¹²⁵	20	4 54	20	43	13	32	41	48
11	344	28.1	+10	44.1	136	31.2 ¹⁶⁴	-4 22.9 ¹²⁵	10 N	5 05	5 30	5 51	20 11	36	7 45	44
12	359	28.3	+10	43.3	151	06.6 ¹⁶⁴	-4 10.4 ¹²⁵	0	5 13	5 38	5 59	20 09	40	7 48	41
13	14	28.4		42.4	165	42.1 ¹⁶⁵	-3 57.9 ¹²⁵	10 S	20	45	6 06	07	44	52	36
14	29	28.6		41.5	180	17.6 ¹⁶⁵	45.3 ¹²⁶	20	26	52	14	06	47	7 56	32
15	44	28.8		40.7	194	53.0 ¹⁶⁴	32.8 ¹²⁵	30	31	5 59	24	03	53	8 00	28
16	59	29.0		39.8	209	28.6 ¹⁶⁶	20.2 ¹²⁶	35	34	6 03	29	02	55	03	25
17	74	29.1	+10	38.9	224	04.1 ¹⁶⁵	-3 07.7 ¹²⁵	40	5 36	6 07	6 35	20 01	58	8 05	23
18	89	29.3	+10	38.1	238	39.6 ¹⁶⁵	-2 55.1 ¹²⁶	45	5 37	6 11	6 41	19 59	62	8 09	19
19	104	29.5		37.2	253	15.2 ¹⁶⁶	42.5 ¹²⁶	50	39	16	49	57	66	13	15
20	119	29.6		36.4	267	50.8 ¹⁶⁶	29.9 ¹²⁶	52	39	19	53	56	68	14	14
21	134	29.8		35.5	282	26.4 ¹⁶⁶	17.3 ¹²⁶	54	40	21	6 57	55	70	16	12
22	149	30.0		34.6	297	02.0 ¹⁶⁶	-2 04.7 ¹²⁶	56	40	23	7 02	54	72	18	9
23	164	30.2		33.8	311	37.6 ¹⁶⁶	-1 52.1 ¹²⁶	58	41	26	07	53	75	21	6
24	179	30.3	+10	32.9	326	13.2 ¹⁶⁶	-1 39.5 ¹²⁶	60 S	5 41	6 29	7 12	19 52	77	8 23	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 1 ^h 47 ^m 4		Mag: -4.5 PMG: 14 ^h 49 ^m		Mag: +1.8 PMG: 11 ^h 46 ^m		Mag: -1.9 PMG: 10 ^h 16 ^m		Mag: +0.1 PMG: 7 ^h 34 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	333	05.1	137	40.9	-8 49.5	183	24.2	+13 34.1	205	35.5	+19 22.1	246	12.5	+22 08.0
1	348	07.6	152	41.2	50.7	198	25.2	33.6	220	37.4	22.0	261	14.8	08.0
2	3	10.0	167	41.6	51.9	213	26.1	33.0	235	39.3	21.9	276	17.0	08.0
3	18	12.5	182	42.0	53.0	228	27.0	32.5	250	41.2	21.8	291	19.3	08.0
4	33	14.9	197	42.3	54.2	243	27.9	31.9	265	43.2	21.6	306	21.5	08.0
5	48	17.4	212	42.7	-8 55.3	258	28.9	+13 31.4	280	45.1	+19 21.5	321	23.8	+22 08.0
6	63	19.9	227	43.1	-8 56.5	273	29.8	+13 30.8	295	47.0	+19 21.4	336	26.1	+22 08.0
7	78	22.3	242	43.5	57.6	288	30.7	30.3	310	48.9	21.3	351	28.3	08.0
8	93	24.8	257	43.8	-8 58.8	303	31.7	29.7	325	50.9	21.1	6	30.6	08.0
9	108	27.3	272	44.2	-9 00.0	318	32.6	29.2	340	52.8	21.0	21	32.8	08.0
10	123	29.7	287	44.6	-9 01.1	333	33.5	28.6	355	54.7	20.9	36	35.1	08.0
11	138	32.2	302	45.0	-9 02.3	348	34.4	+13 28.1	10	56.6	+19 20.8	51	37.3	+22 08.0
12	153	34.7	317	45.4	-9 03.4	3	35.4	+13 27.5	25	58.5	+19 20.6	66	39.6	+22 08.0
13	168	37.1	332	45.7	04.6	18	36.3	27.0	41	00.5	20.5	81	41.8	08.0
14	183	39.6	347	46.1	05.7	33	37.2	26.4	56	02.4	20.4	96	44.1	08.0
15	198	42.1	2	46.5	06.9	48	38.2	25.9	71	04.3	20.3	111	46.3	08.0
16	213	44.5	17	46.9	08.0	63	39.1	25.3	86	06.2	20.2	126	48.6	08.0
17	228	47.0	32	47.3	-9 09.2	78	40.0	+13 24.8	101	08.2	+19 20.0	141	50.8	+22 08.0
18	243	49.4	47	47.6	-9 10.3	93	40.9	+13 24.2	116	10.1	+19 19.9	156	53.1	+22 08.0
19	258	51.9	62	48.0	11.5	108	41.9	23.7	131	12.0	19.8	171	55.3	08.0
20	273	54.4	77	48.4	12.6	123	42.8	23.1	146	13.9	19.7	186	57.6	08.0
21	288	56.8	92	48.8	13.8	138	43.7	22.6	161	15.9	19.5	201	59.8	08.0
22	303	59.3	107	49.2	14.9	153	44.7	22.0	176	17.8	19.4	217	02.1	08.0
23	319	01.8	122	49.6	16.1	168	45.6	21.5	191	19.7	19.3	232	04.4	08.0
24	334	04.2	137	50.0	-9 17.2	183	46.5	+13 20.9	206	21.6	+19 19.2	247	06.6	+22 08.0
Dif	—		+4	-12		+9	-5		+19	-1		+23		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 17 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0											
	PMG: 12 ^h 01 ^m 8			SD: 14 ^h 7 PMG: 2 ^h 19 ^m R°: 40 ^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	179	30.3	+10 32.9	326	13.2	-1 39.5	60 N	19 22	20 09	21 11	20 31	4	8 29	78	
1	194	30.5	32.0	340	48.9 ¹⁶⁷	26.9 ¹²⁶	58	16	19 59	20 56	32	7	29	75	
2	209	30.7	31.2	355	24.6 ¹⁶⁷	14.3 ¹²⁶	56	10	51	43	33	10	29	72	
3	224	30.9	30.3	10	00.2 ¹⁶⁶	-1 01.7 ¹²⁶	54	05	44	32	34	12	29	70	
4	239	31.0	29.4	24	35.9 ¹⁶⁷	-0 49.0 ¹²⁷	52	19 01	37	22	35	14	29	68	
5	254	31.2	+10 28.6	39	11.6 ¹⁶⁷	-0 36.4 ¹²⁶	50	18 57	19 31	20 14	20 36	16	8 29	66	
6	269	31.4	+10 27.7	53	47.3 ¹⁶⁷	-0 23.8 ¹²⁶	45	18 48	19 19	19 56	20 38	20	8 29	61	
7	284	31.6	26.8	68	23.0 ¹⁶⁷	-0 11.2 ¹²⁶	40	41	09	43	40	23	29	58	
8	299	31.8	26.0	82	58.7 ¹⁶⁷	+0 01.4 ¹²⁶	35	35	19 01	32	42	25	29	55	
9	314	31.9	25.1	97	34.4 ¹⁶⁷	14.1 ¹²⁷	30	30	18 54	23	43	28	29	52	
10	329	32.1	24.2	112	10.1 ¹⁶⁷	26.7 ¹²⁶	20	21	43	19 09	45	33	29	47	
11	344	32.3	+10 23.3	126	45.8 ¹⁶⁷	+0 39.3 ¹²⁶	10 N	18 13	18 34	18 59	20 47	37	8 29	43	
12	359	32.5	+10 22.5	141	21.5 ¹⁶⁷	+0 51.9 ¹²⁶	0	18 05	18 26	18 51	20 49	41	8 29	40	
13	14	32.6	21.6	155	57.2 ¹⁶⁷	+1 04.5 ¹²⁶	10 S	17 58	19	44	51	44	28	37	
14	29	32.8	20.7	170	33.0 ¹⁶⁸	17.1 ¹²⁶	20	50	13	38	53	48	28	33	
15	44	33.0	19.9	185	08.7 ¹⁶⁷	29.7 ¹²⁶	30	42	06	34	56	52	28	28	
16	59	33.2	19.0	199	44.4 ¹⁶⁷	42.3 ¹²⁶	35	37	18 02	32	57	55	28	25	
17	74	33.3	+10 18.1	214	20.1 ¹⁶⁷	+1 54.8 ¹²⁵	40	17 31	17 59	18 30	20 59	58	8 28	22	
18	89	33.5	+10 17.3	228	55.8 ¹⁶⁷	+2 07.4 ¹²⁶	45	17 25	17 55	18 29	21 01	61	8 28	19	
19	104	33.7	16.4	243	31.5 ¹⁶⁷	20.0 ¹²⁶	50	17	50	28	03	66	28	15	
20	119	33.9	15.5	258	07.2 ¹⁶⁷	32.5 ¹²⁵	52	14	48	27	04	68	28	13	
21	134	34.1	14.6	272	42.9 ¹⁶⁷	45.1 ¹²⁶	54	10	46	27	05	70	28	11	
22	149	34.2	13.8	287	18.6 ¹⁶⁷	+2 57.6 ¹²⁵	56	06	44	27	06	73	27	10	
23	164	34.4	12.9	301	54.2 ¹⁶⁶	+3 10.1 ¹²⁵	58	17 01	41	27	08	75	27	7	
24	179	34.6	+10 12.0	316	29.9 ¹⁶⁷	+3 22.6 ¹²⁵	60 S	16 55	17 38	18 27	21 09	79	8 27	4	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 43 ^m 4		Mag: -4.5 PMG: 14 ^h 48 ^m		Mag: +1.8 PMG: 11 ^h 44 ^m		Mag: -1.9 PMG: 10 ^h 13 ^m		Mag: +0.1 PMG: 7 ^h 30 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	334	04.2	137	50.0	-9	17.2	183	46.5	+13	20.9					
1	349	06.7	152	50.3		18.4	198	47.5		20.4					
2	4	09.2	167	50.7		19.5	213	48.4		19.8					
3	19	11.6	182	51.1		20.7	228	49.3		19.3					
4	34	14.1	197	51.5		21.8	243	50.2		18.7					
5	49	16.5	212	51.9	-9	23.0	258	51.2	+13	18.2					
6	64	19.0	227	52.3	-9	24.1	273	52.1	+13	17.6					
7	79	21.5	242	52.7		25.3	288	53.0		17.1					
8	94	23.9	257	53.1		26.4	303	54.0		16.5					
9	109	26.4	272	53.5		27.6	318	54.9		16.0					
10	124	28.9	287	53.8		28.7	333	55.8		15.4					
11	139	31.3	302	54.2	-9	29.8	348	56.8	+13	14.9					
12	154	33.8	317	54.6	-9	31.0	3	57.7	+13	14.3					
13	169	36.3	332	55.0		32.1	18	58.6		13.8					
14	184	38.7	347	55.4		33.3	33	59.6		13.2					
15	199	41.2	2	55.8		34.4	49	00.5		12.7					
16	214	43.7	17	56.2		35.6	64	01.4		12.1					
17	229	46.1	32	56.6	-9	36.7	79	02.4	+13	11.6					
18	244	48.6	47	57.0	-9	37.8	94	03.3	+13	11.0					
19	259	51.0	62	57.4		39.0	109	04.2		10.5					
20	274	53.5	77	57.8		40.1	124	05.1		09.9					
21	289	56.0	92	58.2		41.3	139	06.1		09.3					
22	304	58.4	107	58.6		42.4	154	07.0		08.8					
23	320	00.9	122	59.0		43.6	169	07.9		08.2					
24	335	03.4	137	59.4	-9	44.7	184	08.9	+13	07.7					
Dif	—		+4		-11		+9		-6						
							+19		-1						
									+23						
									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 5			Edad: 18 ^d 2 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 1 SD: 14 ^h 7 PMG: 2 ^h 59 ^m R°: 40 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	179	34.6	+10	12.0	316	29.9	+3	22.6	60 N	2 53	3 56	4 42	20 35	5	9 47	79			
1	194	34.8		11.1	331	05.6 ¹⁶⁷		35.1 ¹²⁵	58	3 09	4 05	48	39	8	44	76			
2	209	35.0		10.3	345	41.2 ¹⁶⁶	+3	47.6 ¹²⁵	56	22	13	54	43	10	41	73			
3	224	35.1		09.4	0	16.8 ¹⁶⁶	+4	00.1 ¹²⁵	54	33	21	4 59	46	13	39	70			
4	239	35.3		08.5	14	52.4 ¹⁶⁶		12.6 ¹²⁵	52	42	27	5 03	49	15	37	68			
5	254	35.5	+10	07.6	29	28.0 ¹⁶⁶	+4	25.0 ¹²⁴	50	3 50	4 33	5 07	20 52	17	9 35	66			
6	269	35.7	+10	06.8	44	03.6 ¹⁶⁶	+4	37.4 ¹²⁴	45	4 08	4 45	5 16	20 58	21	9 30	63			
7	284	35.9		05.9	58	39.2 ¹⁶⁶	+4	49.8 ¹²⁴	40	21	4 55	23	21 03	24	27	58			
8	299	36.0		05.0	73	14.7 ¹⁶⁵	+5	02.2 ¹²⁴	35	32	5 03	29	07	27	24	55			
9	314	36.2		04.1	87	50.3 ¹⁶⁶		14.6 ¹²⁴	30	40	09	34	11	30	21	53			
10	329	36.4		03.3	102	25.8 ¹⁶⁵		27.0 ¹²⁴	20	4 54	21	43	18	34	16	49			
11	344	36.6	+10	02.4	117	01.3 ¹⁶⁵	+5	39.3 ¹²³	10 N	5 05	5 30	5 51	21 24	38	9 12	45			
12	359	36.8	+10	01.5	131	36.8 ¹⁶⁵	+5	51.6 ¹²³	0	5 13	5 37	5 58	21 30	41	9 09	40			
13	14	36.9	+10	00.6	146	12.2 ¹⁶⁴	+6	03.9 ¹²³	10 S	19	44	6 05	35	45	05	37			
14	29	37.1	+9	59.8	160	47.7 ¹⁶⁵		16.2 ¹²³	20	25	51	13	41	49	9 01	33			
15	44	37.3		58.9	175	23.1 ¹⁶⁴		28.4 ¹²²	30	29	5 57	21	48	54	8 56	29			
16	59	37.5		58.0	189	58.4 ¹⁶³		40.7 ¹²³	35	31	6 01	26	52	57	53	27			
17	74	37.7	+9	57.1	204	33.8 ¹⁶⁴	+6	52.9 ¹²²	40	5 33	6 04	6 32	21 57	59	8 50	24			
18	89	37.8	+9	56.3	219	09.1 ¹⁶³	+7	05.1 ¹²²	45	5 34	6 08	6 38	22 02	63	8 47	20			
19	104	38.0		55.4	233	44.4 ¹⁶³		17.2 ¹²¹	50	35	12	45	09	67	43	16			
20	119	38.2		54.5	248	19.7 ¹⁶³		29.4 ¹²²	52	35	14	49	12	69	41	14			
21	134	38.4		53.6	262	55.0 ¹⁶³		41.5 ¹²¹	54	36	16	52	15	72	39	12			
22	149	38.6		52.7	277	30.2 ¹⁶²	+7	53.6 ¹²¹	56	36	19	6 57	19	74	37	9			
23	164	38.8		51.9	292	05.4 ¹⁶²	+8	05.6 ¹²⁰	58	36	21	7 01	23	77	34	7			
24	179	38.9	+9	51.0	306	40.5 ¹⁶¹	+8	17.6 ¹²⁰	60 S	5 36	6 24	7 06	22 28	80	8 31	5			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 39 ^m 5			Mag: -4.5 PMG: 14 ^h 48 ^m			Mag: +1.8 PMG: 11 ^h 43 ^m			Mag: -1.9 PMG: 10 ^h 10 ^m			Mag: +0.1 PMG: 7 ^h 27 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	335	03.4	137	59.4	-9	44.7	184	08.9	+13	07.7	207	07.9	+19	16.2	248	00.8	+22	08.1	
1	350	05.8	152	59.8		45.8	199	09.8		07.1	222	09.8		16.1	263	03.0		08.1	
2	5	08.3	168	00.2		47.0	214	10.7		06.6	237	11.7		16.0	278	05.3		08.1	
3	20	10.8	183	00.6		48.1	229	11.7		06.0	252	13.6		15.9	293	07.5		08.1	
4	35	13.2	198	01.0		49.2	244	12.6		05.5	267	15.6		15.7	308	09.8		08.1	
5	50	15.7	213	01.4	-9	50.4	259	13.5	+13	04.9	282	17.5	+19	15.6	323	12.1	+22	08.1	
6	65	18.2	228	01.8	-9	51.5	274	14.5	+13	04.4	297	19.4	+19	15.5	338	14.3	+22	08.1	
7	80	20.6	243	02.2		52.7	289	15.4		03.8	312	21.4		15.4	353	16.6		08.1	
8	95	23.1	258	02.6		53.8	304	16.3		03.3	327	23.3		15.3	8	18.8		08.1	
9	110	25.5	273	03.0		54.9	319	17.3		02.7	342	25.2		15.1	23	21.1		08.1	
10	125	28.0	288	03.4		56.1	334	18.2		02.1	357	27.1		15.0	38	23.4		08.1	
11	140	30.5	303	03.9	-9	57.2	349	19.1	+13	01.6	12	29.1	+19	14.9	53	25.6	+22	08.1	
12	155	32.9	318	04.3	-9	58.3	4	20.1	+13	01.0	27	31.0	+19	14.8	68	27.9	+22	08.1	
13	170	35.4	333	04.7	-9	59.5	19	21.0	+13	00.5	42	32.9		14.6	83	30.1		08.1	
14	185	37.9	348	05.1	-10	00.6	34	22.0	+12	59.9	57	34.9		14.5	98	32.4		08.1	
15	200	40.3	3	05.5		01.7	49	22.9		59.4	72	36.8		14.4	113	34.7		08.1	
16	215	42.8	18	05.9		02.9	64	23.8		58.8	87	38.7		14.3	128	36.9		08.1	
17	230	45.3	33	06.3	-10	04.0	79	24.8	+12	58.3	102	40.6	+19	14.1	143	39.2	+22	08.1	
18	245	47.7	48	06.7	-10	05.1	94	25.7	+12	57.7	117	42.6	+19	14.0	158	41.4	+22	08.1	
19	260	50.2	63	07.1		06.3	109	26.6		57.1	132	44.5		13.9	173	43.7		08.1	
20	275	52.6	78	07.6		07.4	124	27.6		56.6	147	46.4		13.8	188	46.0		08.1	
21	290	55.1	93	08.0		08.5	139	28.5		56.0	162	48.4		13.7	203	48.2		08.1	
22	305	57.6	108	08.4		09.7	154	29.4		55.5	177	50.3		13.5	218	50.5		08.1	
23	321	00.0	123	08.8		10.8	169	30.4		54.9	192	52.2		13.4	233	52.7		08.1	
24	336	02.5	138	09.2	-10	11.9	184	31.3	+12	54.4	207	54.1	+19	13.3	248	55.0	+22	08.1	
Dif	—			+4	-11		+9			-6	+19			-1		+23			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 19 ^d 2	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /3 20 ^h : 54 ^m /4	SD: 14 ^h 7			PMG: 3 ^h 39 ^m	R°: 42 ^m						
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	38.9	+9 51.0	306	40.5	+8 17.6		60 N	19 16	20 02	21 03	20 40 7	11 06 81			
1	194	39.1		321	15.6 ¹⁶¹	29.6 ¹²⁰		58	10	19 53	20 48	47 11	11 00 77			
2	209	39.3	49.2	335	50.7 ¹⁶¹	41.6 ¹²⁰		56	05	45	36	53 14	10 54 75			
3	224	39.5	48.3	350	25.8 ¹⁶¹	+8 53.6 ¹²⁰		54	19 01	39	26	20 59 16	49 72			
4	239	39.7	47.5	5	00.8 ¹⁶⁰	+9 05.5 ¹¹⁹		52	18 57	32	17	21 04 18	45 70			
5	254	39.9	+9 46.6	19	35.8 ¹⁶⁰	+9 17.3 ¹¹⁸		50	18 53	19 27	20 09	21 09 20	10 41 68			
6	269	40.0	+9 45.7	34	10.7 ¹⁵⁹	+9 29.2 ¹¹⁹		45	18 45	19 15	19 52	21 19 24	10 33 63			
7	284	40.2	44.8	48	45.6 ¹⁵⁹	41.0 ¹¹⁸		40	38	19 06	40	27 28	25 60			
8	299	40.4	43.9	63	20.5 ¹⁵⁹	+9 52.8 ¹¹⁸		35	32	18 58	29	34 31	19 57			
9	314	40.6	43.1	77	55.3 ¹⁵⁸	+10 04.5 ¹¹⁷		30	27	52	21	41 32	14 54			
10	329	40.8	42.2	92	30.1 ¹⁵⁸	16.2 ¹¹⁷		20	19	41	19 08	21 52 37	10 05 50			
11	344	41.0	+9 41.3	107	04.8 ¹⁵⁷	+10 27.9 ¹¹⁷		10 N	18 11	18 33	18 58	22 02 40	9 57 46			
12	359	41.1	+9 40.4	121	39.5 ¹⁵⁷	+10 39.6 ¹¹⁷		0	18 05	18 26	18 50	22 11 44	9 49 43			
13	14	41.3	39.5	136	14.2 ¹⁵⁷	+10 51.2 ¹¹⁶		10 S	17 58	19	44	20 48	42 39			
14	29	41.5	38.6	150	48.8 ¹⁵⁶	+11 02.7 ¹¹⁵		20	51	13	39	30 51	34 35			
15	44	41.7	37.8	165	23.3 ¹⁵⁵	14.3 ¹¹⁶		30	43	07	35	42 55	25 31			
16	59	41.9	36.9	179	57.8 ¹⁵⁵	25.7 ¹¹⁴		35	38	04	33	49 57	20 28			
17	74	42.1	+9 36.0	194	32.3 ¹⁵⁵	+11 37.2 ¹¹⁵		40	17 33	18 00	18 32	22 56 61	9 14 25			
18	89	42.2	+9 35.1	209	06.7 ¹⁵⁴	+11 48.6 ¹¹⁴		45	17 27	17 57	18 31	23 05 64	9 07 22			
19	104	42.4	34.2	223	41.1 ¹⁵⁴	+12 00.0 ¹¹⁴		50	20	53	30	16 69	8 59 18			
20	119	42.6	33.3	238	15.4 ¹⁵³	+12 11.3 ¹¹³		52	17	51	30	21 71	55 16			
21	134	42.8	32.5	252	49.7 ¹⁵³	22.6 ¹¹³		54	13	49	30	27 73	51 14			
22	149	43.0	31.6	267	23.9 ¹⁵²	33.8 ¹¹²		56	09	47	30	33 76	46 12			
23	164	43.2	30.7	281	58.1 ¹⁵²	45.0 ¹¹²		58	05	45	31	40 79	41 9			
24	179	43.4	+9 29.8	296	32.2 ¹⁵¹	+12 56.1 ¹¹¹		60 S	17 00	17 43	18 31	23 48 82	8 36 6			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 35 ^m 6		Mag: -4.5 PMG: 14 ^h 47 ^m		Mag: +1.8 PMG: 11 ^h 41 ^m		Mag: -1.9 PMG: 10 ^h 07 ^m		Mag: +0.1 PMG: 7 ^h 23 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	336	02.5	138	09.2	-10	11.9	184	31.3	+12	54.4	207	54.1	+19	13.3	248	55.0	+22	08.1
1	351	05.0	153	09.6		13.1	199	32.2		53.8	222	56.1		13.2	263	57.3		08.1
2	6	07.4	168	10.1		14.2	214	33.2		53.2	237	58.0		13.0	278	59.5		08.2
3	21	09.9	183	10.5		15.3	229	34.1		52.7	252	59.9		12.9	294	01.8		08.2
4	36	12.4	198	10.9		16.5	244	35.0		52.1	268	01.9		12.8	309	04.1		08.2
5	51	14.8	213	11.3	-10	17.6	259	36.0	+12	51.6	283	03.8	+19	12.7	324	06.3	+22	08.2
6	66	17.3	228	11.7	-10	18.7	274	36.9	+12	51.0	298	05.7	+19	12.6	339	08.6	+22	08.2
7	81	19.8	243	12.1		19.8	289	37.9		50.5	313	07.7		12.4	354	10.8		08.2
8	96	22.2	258	12.6		21.0	304	38.8		49.9	328	09.6		12.3	9	13.1		08.2
9	111	24.7	273	13.0		22.1	319	39.7		49.3	343	11.5		12.2	24	15.4		08.2
10	126	27.1	288	13.4		23.2	334	40.7		48.8	358	13.4		12.1	39	17.6		08.2
11	141	29.6	303	13.8	-10	24.3	349	41.6	+12	48.2	13	15.4	+19	11.9	54	19.9	+22	08.2
12	156	32.1	318	14.3	-10	25.5	4	42.5	+12	47.7	28	17.3	+19	11.8	69	22.2	+22	08.2
13	171	34.5	333	14.7		26.6	19	43.5		47.1	43	19.2		11.7	84	24.4		08.2
14	186	37.0	348	15.1		27.7	34	44.4		46.5	58	21.2		11.6	99	26.7		08.2
15	201	39.5	3	15.5		28.8	49	45.4		46.0	73	23.1		11.4	114	29.0		08.2
16	216	41.9	18	16.0		30.0	64	46.3		45.4	88	25.0		11.3	129	31.2		08.2
17	231	44.4	33	16.4	-10	31.1	79	47.2	+12	44.9	103	27.0	+19	11.2	144	33.5	+22	08.2
18	246	46.9	48	16.8	-10	32.2	94	48.2	+12	44.3	118	28.9	+19	11.1	159	35.8	+22	08.2
19	261	49.3	63	17.2		33.3	109	49.1		43.7	133	30.8		11.0	174	38.0		08.2
20	276	51.8	78	17.7		34.5	124	50.0		43.2	148	32.8		10.8	189	40.3		08.2
21	291	54.2	93	18.1		35.6	139	51.0		42.6	163	34.7		10.7	204	42.5		08.2
22	306	56.7	108	18.5		36.7	154	51.9		42.1	178	36.6		10.6	219	44.8		08.2
23	321	59.2	123	19.0		37.8	169	52.9		41.5	193	38.5		10.5	234	47.1		08.2
24	337	01.6	138	19.4	-10	38.9	184	53.8	+12	40.9	208	40.5	+19	10.3	249	49.3	+22	08.2
Dif	—		+4	-11		+9	-6			-6	+19			-1	+23			0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15/8		Edad: 21 ^d 2		PHE { 4 ^h : 54/9 12 ^h : 55/1 20 ^h : 55/3										
	PMG: 12 ^h 00 ^m 7		SD: 14/9			PMG: 5 ^h 06 ^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	179	47.9	+9 08.4	285	52.5	+17 08.0	60 N	19 10	19 56	20 55	20 58 18		13 50 85		
1	194	48.1		300	25.0 ¹³⁵	17.8 ⁹⁸	58	05	47	41	21 12 22		37 80		
2	209	48.3	06.7	314	57.4 ¹³⁴	27.4 ⁹⁶	56	19 00	40	30	24 26		25 76		
3	224	48.4	05.8	329	29.8 ¹³⁴	37.0 ⁹⁶	54	18 56	33	20	35 28		15 73		
4	239	48.6	04.9	344	02.0 ¹³²	46.6 ⁹⁶	52	52	28	12	45 30		13 06 71		
5	254	48.8	+9 04.0	358	34.2 ¹³²	+17 56.1 ⁹⁵	50	18 49	19 23	20 04	21 53 32		12 58 69		
6	269	49.0	+9 03.1	13	06.3 ¹³¹	+18 05.5 ⁹⁴	45	18 41	19 12	19 48	22 12 35		12 41 65		
7	284	49.2	02.2	27	38.4 ¹³¹	14.8 ⁹³	40	35	19 03	36	26 39		27 62		
8	299	49.4	01.3	42	10.4 ¹³⁰	24.1 ⁹³	35	30	18 56	26	39 41		15 60		
9	314	49.6	+9 00.4	56	42.2 ¹²⁸	33.2 ⁹¹	30	25	50	18	22 50 43		12 04 58		
10	329	49.8	+8 59.5	71	14.0 ¹²⁸	42.4 ⁹²	20	17	40	19 06	23 09 46		11 47 54		
11	344	50.0	+8 58.6	85	45.8 ¹²⁸	+18 51.4 ⁹⁰	10 N	18 10	18 32	18 56	23 26 48		11 31 52		
12	359	50.2	+8 57.7	100	17.4 ¹²⁶	+19 00.3 ⁸⁹	0	18 04	18 25	18 49	23 42 50		11 17 49		
13	14	50.4	56.8	114	49.0 ¹²⁶	09.2 ⁸⁹	10 S	17 58	19	43	23 58 53		11 03 46		
14	29	50.5	55.9	129	20.5 ¹²⁵	18.0 ⁸⁸	20	51	13	39	*** ** *		10 48 42		
15	44	50.7	55.0	143	51.8 ¹²³	26.7 ⁸⁷	30	44	08	36	*** ** *		30 39		
16	59	50.9	54.1	158	23.2 ¹²⁴	35.4 ⁸⁷	35	40	05	35	*** ** *		20 37		
17	74	51.1	+8 53.2	172	54.4 ¹²²	+19 43.9 ⁸⁵	40	17 35	18 02	18 34	*** ** *		10 09 34		
18	89	51.3	+8 52.3	187	25.5 ¹²¹	+19 52.4 ⁸⁵	45	17 29	17 59	18 33	0 09 66		9 55 32		
19	104	51.5	51.4	201	56.6 ¹²¹	+20 00.8 ⁸⁴	50	23	56	33	25 69		39 27		
20	119	51.7	50.5	216	27.6 ¹²⁰	09.1 ⁸³	52	20	54	33	32 71		31 26		
21	134	51.9	49.7	230	58.5 ¹¹⁹	17.3 ⁸²	54	17	53	34	40 74		23 23		
22	149	52.1	48.8	245	29.3 ¹¹⁸	25.5 ⁸²	56	13	51	34	49 77		13 21		
23	164	52.3	47.9	260	00.0 ¹¹⁷	33.5 ⁸⁰	58	09	49	35	0 59 80		9 02 18		
24	179	52.5	+8 47.0	274	30.7 ¹¹⁷	+20 41.5 ⁸⁰	60 S	17 05	17 47	18 35	1 10 85		8 50 13		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG		Mag: -4.6			Mag: +1.8			Mag: -1.9			Mag: +0.1			
	1 ^h 27 ^m 7		PMG: 14 ^h 46 ^m			PMG: 11 ^h 38 ^m			PMG: 10 ^h 01 ^m			PMG: 7 ^h 16 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	338	00.8	138	30.0	-11 05.7	185	16.3	+12 27.5	209	26.9	+19 07.4	250	43.8	+22 08.2	
1	353	03.2	153	30.4	06.8	200	17.3	26.9	224	28.8	07.3	265	46.0	08.2	
2	8	05.7	168	30.9	07.9	215	18.2	26.3	239	30.7	07.1	280	48.3	08.2	
3	23	08.2	183	31.3	09.0	230	19.2	25.8	254	32.7	07.0	295	50.6	08.2	
4	38	10.6	198	31.8	10.1	245	20.1	25.2	269	34.6	06.9	310	52.8	08.2	
5	53	13.1	213	32.2	-11 11.3	260	21.1	+12 24.6	284	36.5	+19 06.8	325	55.1	+22 08.2	
6	68	15.6	228	32.7	-11 12.4	275	22.0	+12 24.1	299	38.5	+19 06.7	340	57.4	+22 08.2	
7	83	18.0	243	33.1	13.5	290	22.9	23.5	314	40.4	06.5	355	59.7	08.2	
8	98	20.5	258	33.6	14.6	305	23.9	22.9	329	42.3	06.4	11	01.9	08.2	
9	113	23.0	273	34.0	15.7	320	24.8	22.4	344	44.3	06.3	26	04.2	08.2	
10	128	25.4	288	34.5	16.8	335	25.8	21.8	359	46.2	06.2	41	06.5	08.2	
11	143	27.9	303	35.0	-11 17.9	350	26.7	+12 21.3	14	48.2	+19 06.0	56	08.7	+22 08.2	
12	158	30.3	318	35.4	-11 19.0	5	27.6	+12 20.7	29	50.1	+19 05.9	71	11.0	+22 08.2	
13	173	32.8	333	35.9	20.1	20	28.6	20.1	44	52.0	05.8	86	13.3	08.2	
14	188	35.3	348	36.3	21.2	35	29.5	19.6	59	54.0	05.7	101	15.6	08.2	
15	203	37.7	3	36.8	22.3	50	30.5	19.0	74	55.9	05.5	116	17.8	08.2	
16	218	40.2	18	37.2	23.4	65	31.4	18.4	89	57.8	05.4	131	20.1	08.2	
17	233	42.7	33	37.7	-11 24.5	80	32.4	+12 17.9	104	59.8	+19 05.3	146	22.4	+22 08.3	
18	248	45.1	48	38.2	-11 25.6	95	33.3	+12 17.3	120	01.7	+19 05.2	161	24.6	+22 08.3	
19	263	47.6	63	38.6	26.7	110	34.2	16.7	135	03.6	05.1	176	26.9	08.3	
20	278	50.1	78	39.1	27.8	125	35.2	16.2	150	05.6	04.9	191	29.2	08.3	
21	293	52.5	93	39.6	28.9	140	36.1	15.6	165	07.5	04.8	206	31.5	08.3	
22	308	55.0	108	40.0	30.0	155	37.1	15.0	180	09.4	04.7	221	33.7	08.3	
23	323	57.5	123	40.5	31.1	170	38.0	14.5	195	11.4	04.6	236	36.0	08.3	
24	338	59.9	138	41.0	-11 32.2	185	39.0	+12 13.9	210	13.3	+19 04.4	251	38.3	+22 08.3	
Dif	—		+5 -11			+9 -6			+19 -1			+23 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 3			Edad: 22 ^d 2 PHE { 4 ^h : 55 ^h 5 12 ^h : 55 ^h 7 20 ^h : 56 ^h 0 PMG: 5 ^h 54 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	52.5	+8	47.0	274	30.7	+20	41.5	60 N	3 07	4 06	4 52	21 16	30	15 15	80		
1	194	52.7		46.1	289	01.2 ¹¹⁵		49.4 ⁷⁹	58	20	15	4 57	34 34		14 57	75		
2	209	52.9		45.2	303	31.7 ¹¹⁵	+20	57.1 ⁷⁷	56	32	22	5 02	21 50	37	41	73		
3	224	53.1		44.3	318	02.1 ¹¹⁴	+21	04.8 ⁷⁶	54	42	28	06	22 03	39	28	71		
4	239	53.2		43.4	332	32.4 ¹¹³		12.4 ⁷⁶	52	50	34	10	15	40	17	69		
5	254	53.4	+8	42.5	347	02.6 ¹¹²	+21	19.9 ⁷⁵	50	3 58	4 39	5 13	22 25	42	14 07	67		
6	269	53.6	+8	41.6	1	32.7 ¹¹¹	+21	27.3 ⁷⁴	45	4 13	4 50	5 20	22 47	45	13 46	64		
7	284	53.8		40.7	16	02.7 ¹¹⁰		34.6 ⁷³	40	25	4 59	26	23 05	46	29	62		
8	299	54.0		39.8	30	32.6 ¹⁰⁹		41.8 ⁷²	35	35	5 06	32	20	48	15	60		
9	314	54.2		38.9	45	02.5 ¹⁰⁹		48.9 ⁷¹	30	43	12	36	33	49	13 02	59		
10	329	54.4		38.0	59	32.3 ¹⁰⁸	+21	55.9 ⁷⁰	20	4 55	22	44	23 55	51	12 41	56		
11	344	54.6	+8	37.1	74	01.9 ¹⁰⁶	+22	02.8 ⁶⁹	10 N	5 05	5 30	5 51	** ** *	**	12 23	54		
12	359	54.8	+8	36.2	88	31.5 ¹⁰⁶	+22	09.7 ⁶⁹	0	5 12	5 36	5 57	** ** *	**	12 06	52		
13	14	55.0		35.3	103	01.0 ¹⁰⁵		16.4 ⁶⁷	10 S	17	42	6 03	** ** *	**	11 49	50		
14	29	55.2		34.4	117	30.4 ¹⁰⁴		23.0 ⁶⁶	20	22	47	10	0 15	55	30	48		
15	44	55.4		33.5	131	59.8 ¹⁰⁴		29.5 ⁶⁵	30	25	53	17	34	59	11 09	46		
16	59	55.6		32.5	146	29.0 ¹⁰²		35.9 ⁶⁴	35	26	55	21	46	60	10 57	44		
17	74	55.8	+8	31.6	160	58.1 ¹⁰¹	+22	42.1 ⁶²	40	5 27	5 58	6 25	0 59	63	10 43	42		
18	89	56.0	+8	30.7	175	27.2 ¹⁰¹	+22	48.3 ⁶²	45	5 27	6 01	6 31	1 15	65	10 27	39		
19	104	56.2		29.8	189	56.2 ¹⁰⁰	+22	54.4 ⁶¹	50	27	04	37	34	69	10 06	37		
20	119	56.4		28.9	204	25.0 ⁹⁸	+23	00.3 ⁵⁹	52	27	06	40	43	71	9 57	34		
21	134	56.6		28.0	218	53.8 ⁹⁸		06.2 ⁵⁹	54	27	07	43	1 54	73	46	33		
22	149	56.7		27.1	233	22.5 ⁹⁷		11.9 ⁵⁷	56	26	09	47	2 06	75	34	30		
23	164	56.9		26.2	247	51.1 ⁹⁶		17.5 ⁵⁶	58	25	11	50	19	79	20	26		
24	179	57.1	+8	25.3	262	19.7 ⁹⁶	+23	23.0 ⁵⁵	60 S	5 25	6 13	6 55	2 35	84	9 03	22		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 23 ^m 8		Mag: -4.6 PMG: 14 ^h 45 ^m				Mag: +1.8 PMG: 11 ^h 37 ^m				Mag: -1.9 PMG: 9 ^h 58 ^m				Mag: +0.1 PMG: 7 ^h 12 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	338	59.9	138	41.0	-11	32.2	185	39.0	+12	13.9	210	13.3	+19	04.4	251	38.3	+22	08.3
1	354	02.4	153	41.4		33.3	200	39.9		13.3	225	15.3		04.3	266	40.6		08.3
2	9	04.8	168	41.9		34.4	215	40.8		12.8	240	17.2		04.2	281	42.8		08.3
3	24	07.3	183	42.4		35.5	230	41.8		12.2	255	19.1		04.1	296	45.1		08.3
4	39	09.8	198	42.8		36.6	245	42.7		11.6	270	21.1		03.9	311	47.4		08.3
5	54	12.2	213	43.3	-11	37.7	260	43.7	+12	11.1	285	23.0	+19	03.8	326	49.6	+22	08.3
6	69	14.7	228	43.8	-11	38.8	275	44.6	+12	10.5	300	24.9	+19	03.7	341	51.9	+22	08.3
7	84	17.2	243	44.2		39.9	290	45.6		09.9	315	26.9		03.6	356	54.2		08.3
8	99	19.6	258	44.7		41.0	305	46.5		09.4	330	28.8		03.5	11	56.5		08.3
9	114	22.1	273	45.2		42.1	320	47.5		08.8	345	30.8		03.3	26	58.7		08.3
10	129	24.6	288	45.6		43.2	335	48.4		08.2	0	32.7		03.2	42	01.0		08.3
11	144	27.0	303	46.1	-11	44.3	350	49.3	+12	07.7	15	34.6	+19	03.1	57	03.3	+22	08.3
12	159	29.5	318	46.6	-11	45.4	5	50.3	+12	07.1	30	36.6	+19	03.0	72	05.6	+22	08.3
13	174	32.0	333	47.1		46.5	20	51.2		06.5	45	38.5		02.8	87	07.8		08.3
14	189	34.4	348	47.5		47.6	35	52.2		05.9	60	40.4		02.7	102	10.1		08.3
15	204	36.9	3	48.0		48.7	50	53.1		05.4	75	42.4		02.6	117	12.4		08.3
16	219	39.3	18	48.5		49.8	65	54.1		04.8	90	44.3		02.5	132	14.7		08.3
17	234	41.8	33	49.0	-11	50.9	80	55.0	+12	04.2	105	46.3	+19	02.3	147	16.9	+22	08.3
18	249	44.3	48	49.5	-11	51.9	95	56.0	+12	03.7	120	48.2	+19	02.2	162	19.2	+22	08.3
19	264	46.7	63	49.9		53.0	110	56.9		03.1	135	50.1		02.1	177	21.5		08.3
20	279	49.2	78	50.4		54.1	125	57.9		02.5	150	52.1		02.0	192	23.8		08.3
21	294	51.7	93	50.9		55.2	140	58.8		02.0	165	54.0		01.9	207	26.1		08.3
22	309	54.1	108	51.4		56.3	155	59.7		01.4	180	56.0		01.7	222	28.3		08.3
23	324	56.6	123	51.9		57.4	171	00.7		00.8	195	57.9		01.6	237	30.6		08.3
24	339	59.1	138	52.3	-11	58.5	186	01.6	+12	00.3	210	59.8	+19	01.5	252	32.9	+22	08.3
Dif	—		+5		-11		+9		-6		+19		-1		+23			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 23 ^d 2 PHE { 4 ^h : 56 ^m /2 12 ^h : 56 ^m /5 20 ^h : 56 ^m /8					Civil			Hora		Hora	
	PMG: 12 ^h 00 ^m 0			PMG: 6 ^h 45 ^m R°: 55 ^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	57.1	+8 25.3	262	19.7	+23 23.0	54	60 N	19 04	19 49	20 47	21 46 52	16 35 65		
1	194	57.3		276	48.1	28.4	54	58	18 59	41	34	22 08 53	16 12 65		
2	209	57.5		291	16.5	33.7	53	56	55	34	24	27 53	15 54 63		
3	224	57.7		305	44.7	38.8	51	54	51	28	14	42 54	39 62		
4	239	57.9		320	12.9	43.9	51	52	48	23	20 06	22 55 55	26 62		
5	254	58.1	+8 20.8	334	41.0	+23 48.8	49	50	18 45	19 18	19 59	23 07 55	15 14 62		
6	269	58.3	+8 19.9	349	09.0	+23 53.6	48	45	18 38	19 08	19 44	23 32 55	14 50 60		
7	284	58.5		3	36.9	+23 58.2	46	40	32	19 00	33	23 51 56	31 59		
8	299	58.7		18	04.8	+24 02.8	46	35	27	18 53	23	** ** *	15 59		
9	314	58.9		32	32.5	07.2	44	30	23	47	16	** ** *	14 01 58		
10	329	59.1		47	00.2	11.5	43	20	15	38	19 04	** ** *	13 37 58		
11	344	59.3	+8 15.4	61	27.8	+24 15.7	42	10 N	18 09	18 30	18 55	0 14 53	13 17 56		
12	359	59.5	+8 14.5	75	55.3	+24 19.7	40	0	18 03	18 24	18 48	0 32 54	12 58 56		
13	14	59.7		90	22.7	23.6	39	10 S	17 58	19	43	0 51 55	39 55		
14	29	59.9		104	50.1	27.4	38	20	52	14	39	1 10 57	12 18 54		
15	45	00.1		119	17.3	31.1	37	30	45	09	37	33 59	11 55 53		
16	60	00.3		133	44.5	34.6	35	35	41	07	36	1 46 60	41 52		
17	75	00.5	+8 09.9	148	11.6	+24 38.0	34	40	17 37	18 04	18 35	2 02 61	11 25 51		
18	90	00.7	+8 09.0	162	38.7	+24 41.2	32	45	17 32	18 01	18 35	2 20 63	11 06 50		
19	105	00.9		177	05.6	44.3	31	50	26	17 58	36	43 65	10 43 48		
20	120	01.1		191	32.5	47.3	30	52	23	57	36	2 54 66	31 47		
21	135	01.3		205	59.3	50.2	29	54	20	56	37	3 07 67	19 45		
22	150	01.5		220	26.0	52.9	27	56	17	55	38	21 69	10 04 44		
23	165	01.7		234	52.6	55.4	25	58	13	53	38	38 72	9 46 43		
24	180	01.9	+8 03.6	249	19.2	+24 57.9	25	60 S	17 09	17 51	18 40	3 59 75	9 25 39		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 19 ^m 8		Mag: -4.6 PMG: 14 ^h 44 ^m		Mag: +1.8 PMG: 11 ^h 35 ^m		Mag: -1.9 PMG: 9 ^h 55 ^m		Mag: +0.1 PMG: 7 ^h 09 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	339	59.1	138	52.3	-11	58.5	186	01.6	+12	00.3	210	59.8	+19	01.5	252	32.9	+22	08.3
1	355	01.5	153	52.8	-11	59.6	201	02.6	+11	59.7	226	01.8		01.4	267	35.2		08.3
2	10	04.0	168	53.3	-12	00.7	216	03.5		59.1	241	03.7		01.2	282	37.4		08.3
3	25	06.5	183	53.8		01.7	231	04.5		58.5	256	05.6		01.1	297	39.7		08.3
4	40	08.9	198	54.3		02.8	246	05.4		58.0	271	07.6		01.0	312	42.0		08.3
5	55	11.4	213	54.8	-12	03.9	261	06.4	+11	57.4	286	09.5	+19	00.9	327	44.3	+22	08.3
6	70	13.8	228	55.3	-12	05.0	276	07.3	+11	56.8	301	11.5	+19	00.7	342	46.6	+22	08.3
7	85	16.3	243	55.7		06.1	291	08.3		56.3	316	13.4		00.6	357	48.8		08.3
8	100	18.8	258	56.2		07.2	306	09.2		55.7	331	15.3		00.5	12	51.1		08.3
9	115	21.2	273	56.7		08.3	321	10.2		55.1	346	17.3		00.4	27	53.4		08.3
10	130	23.7	288	57.2		09.3	336	11.1		54.5	1	19.2		00.3	42	55.7		08.3
11	145	26.2	303	57.7	-12	10.4	351	12.0	+11	54.0	16	21.2	+19	00.1	57	57.9	+22	08.3
12	160	28.6	318	58.2	-12	11.5	6	13.0	+11	53.4	31	23.1	+19	00.0	73	00.2	+22	08.3
13	175	31.1	333	58.7		12.6	21	13.9		52.8	46	25.0	+18	59.9	88	02.5		08.3
14	190	33.6	348	59.2		13.7	36	14.9		52.3	61	27.0		59.8	103	04.8		08.3
15	205	36.0	3	59.7		14.8	51	15.8		51.7	76	28.9		59.6	118	07.1		08.3
16	220	38.5	19	00.2		15.8	66	16.8		51.1	91	30.9		59.5	133	09.3		08.3
17	235	40.9	34	00.7	-12	16.9	81	17.7	+11	50.5	106	32.8	+18	59.4	148	11.6	+22	08.3
18	250	43.4	49	01.2	-12	18.0	96	18.7	+11	50.0	121	34.8	+18	59.3	163	13.9	+22	08.3
19	265	45.9	64	01.7		19.1	111	19.6		49.4	136	36.7		59.1	178	16.2		08.3
20	280	48.3	79	02.2		20.2	126	20.6		48.8	151	38.6		59.0	193	18.5		08.3
21	295	50.8	94	02.7		21.2	141	21.5		48.3	166	40.6		58.9	208	20.7		08.3
22	310	53.3	109	03.2		22.3	156	22.5		47.7	181	42.5		58.8	223	23.0		08.3
23	325	55.7	124	03.7		23.4	171	23.4		47.1	196	44.5		58.7	238	25.3		08.3
24	340	58.2	139	04.2	-12	24.5	186	24.4	+11	46.5	211	46.4	+18	58.5	253	27.6	+22	08.3
Dif	—		+5		-11		+9		-6		+19		-1		+23			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 24 ^d 2	PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 4 20 ^h : 57 ^m 7											
	PMG: 11 ^h 59 ^m 7					SD: 15 ^h 5		PMG: 7 ^h 40 ^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	180	01.9	+8	03.6	249	19.2	+24	57.9	3	14	4	12	4	57	22	38
1	195	02.1		02.6	263	45.7	+25	00.1	26	19	5	01	23	01	74	17
2	210	02.3		01.7	278	12.1		02.3	37	26		06	20	72	16	57
3	225	02.5	+8	00.8	292	38.5		04.3	46	32		09	36	71	41	51
4	240	02.7	+7	59.9	307	04.8		06.2	3	54	38	13	23	50	70	28
5	255	02.9	+7	59.0	321	31.0	+25	07.9	4	01	4	42	5	16	**	**
6	270	03.1	+7	58.1	335	57.2	+25	09.4	4	16	4	52	5	23	**	**
7	285	03.3		57.2	350	23.3		10.9	28	5	01	28	**	**	**	
8	300	03.5		56.3	4	49.3		12.2	37	07		33	0	08	56	15
9	315	03.7		55.4	19	15.3		13.3	44	13		37	22	56	14	59
10	330	03.9		54.4	33	41.2		14.3	4	56	22	45	0	46	57	35
11	345	04.1	+7	53.5	48	07.0	+25	15.1	5	05	5	29	5	51	1	07
12	0	04.3	+7	52.6	62	32.8	+25	15.8	5	11	5	36	5	56	1	26
13	15	04.5		51.7	76	58.5		16.3	16	41	6	02	1	46	57	34
14	30	04.7		50.8	91	24.2		16.7	20	46	08		2	07	58	13
15	45	04.9		49.9	105	49.8		16.9	23	50	14		32	57	12	48
16	60	05.1		49.0	120	15.4		17.0	23	53	18		2	46	58	33
17	75	05.3	+7	48.1	134	40.9	+25	16.9	5	24	5	55	6	22	3	03
18	90	05.5	+7	47.1	149	06.3	+25	16.7	5	24	5	58	6	27	3	23
19	105	05.7		46.2	163	31.7		16.3	23	6	00	33	3	48	57	31
20	120	05.9		45.3	177	57.1		15.8	23	02	35		4	00	57	18
21	135	06.1		44.4	192	22.4		15.1	22	03	38		14	57	11	04
22	150	06.3		43.5	206	47.7		14.2	21	04	41		30	57	10	48
23	165	06.5		42.6	221	12.9		13.2	20	05	45		4	50	56	29
24	180	06.7	+7	41.6	235	38.1	+25	12.1	5	19	6	07	6	49	5	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 15 ^m 9		Mag: -4.6 PMG: 14 ^h 43 ^m		Mag: +1.8 PMG: 11 ^h 34 ^m		Mag: -1.9 PMG: 9 ^h 52 ^m		Mag: +0.1 PMG: 7 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	340	58.2	139	04.2	-12	24.5	186	24.4	+11	46.5
1	356	00.7	154	04.7		25.5	201	25.3		46.0
2	11	03.1	169	05.2		26.6	216	26.3		45.4
3	26	05.6	184	05.7		27.7	231	27.2		44.8
4	41	08.1	199	06.2		28.8	246	28.2		44.2
5	56	10.5	214	06.7	-12	29.8	261	29.1	+11	43.7
6	71	13.0	229	07.2	-12	30.9	276	30.1	+11	43.1
7	86	15.4	244	07.7		32.0	291	31.0		42.5
8	101	17.9	259	08.2		33.1	306	32.0		42.0
9	116	20.4	274	08.7		34.1	321	32.9		41.4
10	131	22.8	289	09.2		35.2	336	33.9		40.8
11	146	25.3	304	09.7	-12	36.3	351	34.8	+11	40.2
12	161	27.8	319	10.2	-12	37.4	6	35.8	+11	39.7
13	176	30.2	334	10.7		38.4	21	36.7		39.1
14	191	32.7	349	11.3		39.5	36	37.7		38.5
15	206	35.2	4	11.8		40.6	51	38.6		37.9
16	221	37.6	19	12.3		41.6	66	39.6		37.4
17	236	40.1	34	12.8	-12	42.7	81	40.5	+11	36.8
18	251	42.6	49	13.3	-12	43.8	96	41.5	+11	36.2
19	266	45.0	64	13.8		44.8	111	42.4		35.6
20	281	47.5	79	14.4		45.9	126	43.4		35.1
21	296	49.9	94	14.9		47.0	141	44.3		34.5
22	311	52.4	109	15.4		48.0	156	45.3		33.9
23	326	54.9	124	15.9		49.1	171	46.2		33.3
24	341	57.3	139	16.4	-12	50.2	186	47.2	+11	32.8
Dif	—		+5		-11		+9		-6	
							+19		-1	
									+23	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 4		Edad: 25 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 58'4 20 ^h : 58'7 SD: 15'8 PMG: 8 ^h 38 ^m R°: 58 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m		
0	180	06.7	+7 41.6	235 38.1	+25 12.1	14	60 N	18 58	19 43	20 40	23 54 96	18 25 27				
1	195	06.9		250 03.2		15	58	54	35	28	** ** *	18 04 32				
2	210	07.1	39.8	264 28.3	09.2	16	56	50	29	17	** ** *	17 47 35				
3	225	07.3	38.9	278 53.4	07.6	17	54	46	23	09	** ** *	32 38				
4	240	07.5	38.0	293 18.4	05.8	18	52	43	18	20 01	** ** *	19 40				
5	255	07.7	+7 37.1	307 43.4	+25 03.8	20	50	18 40	19 14	19 54	0 02 69	17 08 42				
6	270	07.9	+7 36.2	322 08.4	+25 01.7	21	45	18 34	19 04	19 40	0 27 67	16 44 45				
7	285	08.1	35.2	336 33.3	+24 59.4	23	40	29	18 56	29	0 47 65	25 48				
8	300	08.3	34.3	350 58.2	57.0	24	35	24	50	20	1 04 64	16 09 50				
9	315	08.5	33.4	5 23.1	54.4	26	30	20	45	13	18 63	15 55 52				
10	330	08.7	32.5	19 47.9	51.6	28	20	14	36	19 02	1 43 61	31 55				
11	345	08.9	+7 31.6	34 12.7	+24 48.7	29	10 N	18 08	18 29	18 54	2 04 60	15 11 57				
12	0	09.1	+7 30.7	48 37.5	+24 45.6	31	0	18 03	18 24	18 48	2 24 58	14 52 58				
13	15	09.3	29.7	63 02.3	42.4	32	10 S	17 57	19	43	2 43 58	32 61				
14	30	09.5	28.8	77 27.0	39.0	34	20	52	14	40	3 05 55	14 12 63				
15	45	09.7	27.9	91 51.8	35.4	36	30	46	10	38	29 54	13 47 66				
16	60	09.9	27.0	106 16.5	31.6	38	35	42	08	37	3 44 52	33 67				
17	75	10.1	+7 26.1	120 41.2	+24 27.7	39	40	17 39	18 06	18 37	4 00 52	13 17 69				
18	90	10.3	+7 25.1	135 05.9	+24 23.7	40	45	17 34	18 04	18 38	4 20 50	12 57 71				
19	105	10.5	24.2	149 30.6	19.5	42	50	29	01	39	45 47	32 75				
20	120	10.8	23.3	163 55.2	15.1	44	52	26	18 00	39	4 57 46	20 76				
21	135	11.0	22.4	178 19.9	10.5	46	54	24	17 59	40	5 11 44	12 07 78				
22	150	11.2	21.5	192 44.5	05.8	47	56	21	58	41	27 42	11 51 80				
23	165	11.4	20.5	207 09.2	+24 00.9	49	58	18	57	43	5 46 39	32 83				
24	180	11.6	+7 19.6	221 33.8	+23 55.9	50	60 S	17 14	17 56	18 44	6 10 35	11 09 87				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 12 ^m 0		Mag: -4.6 PMG: 14 ^h 42 ^m			Mag: +1.8 PMG: 11 ^h 32 ^m			Mag: -1.9 PMG: 9 ^h 49 ^m			Mag: +0.1 PMG: 7 ^h 01 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	341	57.3	139 16.4	-12 50.2	186 47.2	+11 32.8	212 33.0	+18 55.6	254 22.4	+22 08.3						
1	356	59.8	154 16.9	51.2	201 48.1	32.2	227 35.0	55.5	269 24.7	08.3						
2	12	02.3	169 17.5	52.3	216 49.1	31.6	242 36.9	55.3	284 27.0	08.3						
3	27	04.7	184 18.0	53.4	231 50.0	31.0	257 38.9	55.2	299 29.2	08.3						
4	42	07.2	199 18.5	54.4	246 51.0	30.5	272 40.8	55.1	314 31.5	08.3						
5	57	09.7	214 19.0	-12 55.5	261 51.9	+11 29.9	287 42.8	+18 55.0	329 33.8	+22 08.3						
6	72	12.1	229 19.6	-12 56.5	276 52.9	+11 29.3	302 44.7	+18 54.8	344 36.1	+22 08.3						
7	87	14.6	244 20.1	57.6	291 53.8	28.7	317 46.6	54.7	359 38.4	08.3						
8	102	17.1	259 20.6	58.7	306 54.8	28.1	332 48.6	54.6	14 40.7	08.3						
9	117	19.5	274 21.1	-12 59.7	321 55.7	27.6	347 50.5	54.5	29 43.0	08.3						
10	132	22.0	289 21.7	-13 00.8	336 56.7	27.0	2 52.5	54.4	44 45.2	08.3						
11	147	24.4	304 22.2	-13 01.8	351 57.6	+11 26.4	17 54.4	+18 54.2	59 47.5	+22 08.3						
12	162	26.9	319 22.7	-13 02.9	6 58.6	+11 25.8	32 56.4	+18 54.1	74 49.8	+22 08.3						
13	177	29.4	334 23.3	04.0	21 59.5	25.3	47 58.3	54.0	89 52.1	08.3						
14	192	31.8	349 23.8	05.0	37 00.5	24.7	63 00.3	53.9	104 54.4	08.3						
15	207	34.3	4 24.3	06.1	52 01.4	24.1	78 02.2	53.7	119 56.7	08.3						
16	222	36.8	19 24.9	07.1	67 02.4	23.5	93 04.2	53.6	134 59.0	08.3						
17	237	39.2	34 25.4	-13 08.2	82 03.3	+11 23.0	108 06.1	+18 53.5	150 01.3	+22 08.3						
18	252	41.7	49 25.9	-13 09.2	97 04.3	+11 22.4	123 08.0	+18 53.4	165 03.5	+22 08.3						
19	267	44.2	64 26.5	10.3	112 05.3	21.8	138 10.0	53.2	180 05.8	08.3						
20	282	46.6	79 27.0	11.4	127 06.2	21.2	153 11.9	53.1	195 08.1	08.3						
21	297	49.1	94 27.5	12.4	142 07.2	20.6	168 13.9	53.0	210 10.4	08.3						
22	312	51.5	109 28.1	13.5	157 08.1	20.1	183 15.8	52.9	225 12.7	08.3						
23	327	54.0	124 28.6	14.5	172 09.1	19.5	198 17.8	52.8	240 15.0	08.3						
24	342	56.5	139 29.2	-13 15.6	187 10.0	+11 18.9	213 19.7	+18 52.6	255 17.3	+22 08.3						
Dif	—		+5		-11		+10		-6		+19		-1		+23	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 1			Edad: 26 ^d 2 PHE { 4 ^h : 59'0 12 ^h : 59'3 20 ^h : 59'6 SD: 16'0 PMG: 9 ^h 36 ^m R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	11.6	+7	19.6	221	33.8	+23	55.9	52	60 N	3 20	4 17	5 01	** ** *	18 52	16
1	195	11.8			235	58.5		50.7	52	58	32	24	06	0 15	91	36 21
2	210	12.0			250	23.1		45.4	53	56	42	31	10	32 87		22 25
3	225	12.2			264	47.7		39.8	56	54	51	36	13	0 47	84	18 10 28
4	240	12.4			279	12.4		34.2	56	52	3 58	41	16	1 00	81	17 59 31
5	255	12.6	+7	15.0	293	37.0	+23	28.3	59	50	4 05	4 46	5 19	1 11	79	17 50 33
6	270	12.8	+7	14.1	308	01.7	+23	22.3	60	45	4 19	4 55	5 25	1 34	75	17 29 38
7	285	13.0		13.2	322	26.3		16.2	61	40	30	5 03	30	1 52	72	17 13 41
8	300	13.2		12.3	336	51.0		09.8	64	35	38	09	35	2 08	70	16 59 44
9	315	13.4		11.3	351	15.7	+23	03.4	64	30	46	14	38	21	68	47 47
10	330	13.6		10.4	5	40.4	+22	56.7	67	20	4 57	23	45	2 44	64	26 51
11	345	13.8	+7	09.5	20	05.0	+22	49.9	68	10 N	5 05	5 29	5 51	3 04	61	16 08 54
12	0	14.0	+7	08.6	34	29.8	+22	43.0	69	0	5 11	5 35	5 56	3 22	59	15 50 58
13	15	14.2		07.6	48	54.5		35.9	71	10 S	15	40	6 01	3 41	56	33 61
14	30	14.4		06.7	63	19.2		28.6	73	20	18	44	06	4 00	53	15 15 64
15	45	14.6		05.8	77	44.0		21.2	74	30	20	48	12	23	49	14 53 69
16	60	14.9		04.9	92	08.8		13.6	76	35	21	50	15	36	48	40 72
17	75	15.1	+7	03.9	106	33.6	+22	05.8	78	40	5 21	5 52	6 19	4 52	44	14 26 74
18	90	15.3	+7	03.0	120	58.4	+21	58.0	78	45	5 20	5 54	6 24	5 10	41	14 08 78
19	105	15.5		02.1	135	23.2		49.9	81	50	19	56	29	32	37	13 47 82
20	120	15.7		01.2	149	48.1		41.7	82	52	18	57	31	43	35	36 85
21	135	15.9	+7	00.2	164	13.0		33.4	83	54	17	58	34	5 55	33	25 87
22	150	16.1	+6	59.3	178	37.9		24.9	85	56	16	5 59	36	6 09	29	13 11 91
23	165	16.3		58.4	193	02.9		16.2	87	58	15	6 00	40	25	26	12 55 96
24	180	16.5	+6	57.5	207	27.8	+21	07.4	88	60 S	5 13	6 01	6 43	6 45	20	12 36 101

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 08 ^m 0		Mag: -4.6 PMG: 14 ^h 42 ^m		Mag: +1.8 PMG: 11 ^h 31 ^m		Mag: -1.9 PMG: 9 ^h 45 ^m		Mag: +0.1 PMG: 6 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	342	56.5	139	29.2	-13	15.6	187	10.0	+11	18.9
1	357	58.9	154	29.7		16.6	202	11.0		18.3
2	13	01.4	169	30.2		17.7	217	11.9		17.7
3	28	03.9	184	30.8		18.7	232	12.9		17.2
4	43	06.3	199	31.3		19.8	247	13.8		16.6
5	58	08.8	214	31.9	-13	20.8	262	14.8	+11	16.0
6	73	11.3	229	32.4	-13	21.9	277	15.7	+11	15.4
7	88	13.7	244	33.0		22.9	292	16.7		14.9
8	103	16.2	259	33.5		24.0	307	17.6		14.3
9	118	18.7	274	34.1		25.0	322	18.6		13.7
10	133	21.1	289	34.6		26.1	337	19.6		13.1
11	148	23.6	304	35.2	-13	27.1	352	20.5	+11	12.5
12	163	26.0	319	35.7	-13	28.2	7	21.5	+11	12.0
13	178	28.5	334	36.3		29.2	22	22.4		11.4
14	193	31.0	349	36.8		30.3	37	23.4		10.8
15	208	33.4	4	37.4		31.3	52	24.3		10.2
16	223	35.9	19	37.9		32.3	67	25.3		09.6
17	238	38.4	34	38.5	-13	33.4	82	26.2	+11	09.0
18	253	40.8	49	39.0	-13	34.4	97	27.2	+11	08.5
19	268	43.3	64	39.6		35.5	112	28.1		07.9
20	283	45.8	79	40.1		36.5	127	29.1		07.3
21	298	48.2	94	40.7		37.6	142	30.1		06.7
22	313	50.7	109	41.3		38.6	157	31.0		06.1
23	328	53.2	124	41.8		39.6	172	32.0		05.6
24	343	55.6	139	42.4	-13	40.7	187	32.9	+11	05.0
Dif	—		+6	-10	+10	-6	+19	-1	+23	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 7			Edad: 27 ^d 2 PHE { 4 ^h : 59/8 12 ^h : 60/1 20 ^h : 60/3 PMG: 10 ^h 35 ^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	180	16.5	+6 57.5	207	27.8	+21 07.4	61	60 N	18 52	19 36	20 32	1 30 103	19 08 11					
1	195	16.7	56.5	221	52.9	+20 58.5	89	58	48	29	21	46 98	18 57 15					
2	210	16.9	55.6	236	17.9	49.4	91	56	45	23	11	1 59 94	47 18					
3	225	17.1	54.7	250	43.0	40.2	92	54	41	18	20 03	2 11 90	38 21					
4	240	17.3	53.8	265	08.1	30.8	94	52	39	13	19 56	21 87	30 24					
5	255	17.5	+6 52.8	279	33.2	+20 21.2	96	50	18 36	19 09	19 49	2 30 85	18 23 26					
6	270	17.7	+6 51.9	293	58.4	+20 11.6	96	45	18 30	19 00	19 36	2 49 80	18 07 32					
7	285	18.0	51.0	308	23.6	+20 01.8	98	40	26	18 53	26	3 04 76	17 54 36					
8	300	18.2	50.1	322	48.8	+19 51.8	100	35	22	47	17	18 72	43 40					
9	315	18.4	49.1	337	14.1	41.7	101	30	18	42	11	29 70	34 42					
10	330	18.6	48.2	351	39.4	31.5	102	20	12	34	19 00	3 48 65	17 47					
11	345	18.8	+6 47.3	6	04.8	+19 21.1	104	10 N	18 07	18 28	18 53	4 05 61	17 02 52					
12	0	19.0	+6 46.4	20	30.2	+19 10.6	105	0	18 02	18 23	18 47	4 21 57	16 48 57					
13	15	19.2	45.4	34	55.6	+18 59.9	107	10 S	17 57	18	43	37 53	34 61					
14	30	19.4	44.5	49	21.1	49.2	107	20	52	15	40	4 53 50	19 65					
15	45	19.6	43.6	63	46.6	38.2	110	30	47	11	39	5 12 45	16 02 70					
16	60	19.8	42.6	78	12.1	27.2	110	35	44	09	39	24 41	15 52 73					
17	75	20.0	+6 41.7	92	37.7	+18 16.0	112	40	17 40	18 08	18 39	5 36 39	15 40 77					
18	90	20.2	+6 40.8	107	03.4	+18 04.7	113	45	17 37	18 06	18 40	5 51 35	15 26 82					
19	105	20.4	39.9	121	29.1	+17 53.3	114	50	32	04	42	6 09 30	09 87					
20	120	20.7	38.9	135	54.8	41.7	116	52	30	03	43	18 27	15 01 90					
21	135	20.9	38.0	150	20.6	30.0	117	54	27	03	44	28 24	14 52 93					
22	150	21.1	37.1	164	46.4	18.2	118	56	25	02	45	38 21	42 96					
23	165	21.3	36.1	179	12.3	+17 06.3	119	58	22	01	47	6 51 17	31 100					
24	180	21.5	+6 35.2	193	38.2	+16 54.3	120	60 S	17 19	18 00	18 49	7 05 12	14 17 105					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 04 ^m 1		Mag: -4.6 PMG: 14 ^h 41 ^m		Mag: +1.8 PMG: 11 ^h 29 ^m		Mag: -1.9 PMG: 9 ^h 42 ^m		Mag: +0.1 PMG: 6 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	343	55.6	139	42.4	-13 40.7	187	32.9	+11 05.0	214	06.5	+18 49.7	256	12.3	+22 08.4				
1	358	58.1	154	42.9	41.7	202	33.9	04.4	229	08.4	49.6	271	14.6	08.4				
2	14	00.5	169	43.5	42.8	217	34.8	03.8	244	10.4	49.4	286	16.9	08.4				
3	29	03.0	184	44.1	43.8	232	35.8	03.2	259	12.3	49.3	301	19.1	08.4				
4	44	05.5	199	44.6	44.8	247	36.7	02.7	274	14.3	49.2	316	21.4	08.4				
5	59	07.9	214	45.2	-13 45.9	262	37.7	+11 02.1	289	16.2	+18 49.1	331	23.7	+22 08.4				
6	74	10.4	229	45.8	-13 46.9	277	38.7	+11 01.5	304	18.2	+18 48.9	346	26.0	+22 08.4				
7	89	12.9	244	46.3	47.9	292	39.6	00.9	319	20.1	48.8	1	28.3	08.4				
8	104	15.3	259	46.9	49.0	307	40.6	+11 00.3	334	22.1	48.7	16	30.6	08.4				
9	119	17.8	274	47.5	50.0	322	41.5	+10 59.7	349	24.0	48.6	31	32.9	08.4				
10	134	20.3	289	48.0	51.0	337	42.5	59.2	4	26.0	48.5	46	35.2	08.4				
11	149	22.7	304	48.6	-13 52.1	352	43.4	+10 58.6	19	27.9	+18 48.3	61	37.5	+22 08.4				
12	164	25.2	319	49.2	-13 53.1	7	44.4	+10 58.0	34	29.9	+18 48.2	76	39.8	+22 08.4				
13	179	27.7	334	49.8	54.1	22	45.4	57.4	49	31.9	48.1	91	42.1	08.4				
14	194	30.1	349	50.3	55.2	37	46.3	56.8	64	33.8	48.0	106	44.4	08.4				
15	209	32.6	4	50.9	56.2	52	47.3	56.2	79	35.8	47.8	121	46.7	08.4				
16	224	35.0	19	51.5	57.2	67	48.2	55.7	94	37.7	47.7	136	49.0	08.4				
17	239	37.5	34	52.1	-13 58.3	82	49.2	+10 55.1	109	39.7	+18 47.6	151	51.3	+22 08.4				
18	254	40.0	49	52.6	-13 59.3	97	50.1	+10 54.5	124	41.6	+18 47.5	166	53.6	+22 08.4				
19	269	42.4	64	53.2	-14 00.3	112	51.1	53.9	139	43.6	47.4	181	55.9	08.4				
20	284	44.9	79	53.8	01.4	127	52.1	53.3	154	45.5	47.2	196	58.2	08.4				
21	299	47.4	94	54.4	02.4	142	53.0	52.7	169	47.5	47.1	212	00.5	08.4				
22	314	49.8	109	55.0	03.4	157	54.0	52.2	184	49.4	47.0	227	02.8	08.4				
23	329	52.3	124	55.5	04.4	172	54.9	51.6	199	51.4	46.9	242	05.1	08.4				
24	344	54.8	139	56.1	-14 05.5	187	55.9	+10 51.0	214	53.3	+18 46.7	257	07.4	+22 08.4				
Dif	—		+6		-10		+10		-6		+20		-1		+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 58 ^m 4			Edad: 28 ^d 2 SD: 16 ^h 5 PMG: 11 ^h 31 ^m	PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 7 20 ^h : 60 ^s 9 R°: 55 ^m	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
	hG ☉	Dec	hG ☾														
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	21.5	+6	35.2	193	38.2	+16	54.3	60 N	3 26	4 22	5 06	3 13	105	19 19	7	
1	195	21.7		34.3	208	04.1	69	42.1	58	37	29	10	24	100	12	11	
2	210	21.9		33.3	222	30.1	70	29.8	56	47	35	13	33	96	19 05	15	
3	225	22.1		32.4	236	56.2	71	17.4	54	3 55	40	17	41	93	18 59	18	
4	240	22.3		31.5	251	22.3	71	+16 04.9	52	4 02	45	19	48	90	54	20	
5	255	22.5	+6	30.6	265	48.4	71	+15 52.3	50	4 08	4 49	5 22	3 55	87	18 49	23	
6	270	22.7	+6	29.6	280	14.6	72	+15 39.5	45	4 22	4 58	5 28	4 09	82	18 39	28	
7	285	23.0		28.7	294	40.8	72	26.7	40	32	5 05	32	20	78	30	32	
8	300	23.2		27.8	309	07.1	73	13.7	35	40	10	36	30	74	23	35	
9	315	23.4		26.8	323	33.4	73	+15 00.6	30	47	15	40	39	70	16	39	
10	330	23.6		25.9	337	59.8	74	+14 47.5	20	4 57	23	45	4 53	65	18 04	45	
11	345	23.8	+6	25.0	352	26.2	74	+14 34.2	10 N	5 05	5 29	5 50	5 06	60	17 54	50	
12	0	24.0	+6	24.0	6	52.7	75	+14 20.8	0	5 10	5 34	5 55	5 18	55	17 45	54	
13	15	24.2		23.1	21	19.2	75	+14 07.3	10 S	14	39	6 00	30	51	35	59	
14	30	24.4		22.2	35	45.8	76	+13 53.7	20	17	42	04	43	46	24	64	
15	45	24.6		21.2	50	12.4	76	40.1	30	18	46	10	5 57	41	12	70	
16	60	24.8		20.3	64	39.1	77	26.3	35	18	47	13	6 05	38	17 05	73	
17	75	25.1	+6	19.4	79	05.8	77	+13 12.4	40	5 18	5 49	6 16	6 15	33	16 57	77	
18	90	25.3	+6	18.4	93	32.5	77	+12 58.5	45	5 17	5 50	6 20	6 26	29	16 48	81	
19	105	25.5		17.5	107	59.3	78	44.4	50	15	52	24	39	24	36	88	
20	120	25.7		16.6	122	26.1	78	30.3	52	14	53	26	45	22	31	90	
21	135	25.9		15.6	136	53.0	79	16.1	54	13	53	29	52	19	25	93	
22	150	26.1		14.7	151	20.0	80	+12 01.8	56	11	54	31	6 59	16	18	97	
23	165	26.3		13.8	165	46.9	79	+11 47.4	58	09	55	34	7 08	12	11	100	
24	180	26.5	+6	12.8	180	14.0	81	+11 32.9	60 S	5 07	5 55	6 37	7 17	9	16 02	105	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 00 ^m 2		Mag: -4.6 PMG: 14 ^h 40 ^m		Mag: +1.8 PMG: 11 ^h 28 ^m		Mag: -1.9 PMG: 9 ^h 39 ^m		Mag: +0.1 PMG: 6 ^h 50 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	344	54.8	139	56.1	-14	05.5	187	55.9	+10	51.0	214	53.3	+18	46.7	257	07.4	+22	08.4
1	359	57.2	154	56.7		06.5	202	56.8		50.4	229	55.3		46.6	272	09.6		08.4
2	14	59.7	169	57.3		07.5	217	57.8		49.8	244	57.2		46.5	287	11.9		08.4
3	30	02.1	184	57.9		08.5	232	58.8		49.2	259	59.2		46.4	302	14.2		08.4
4	45	04.6	199	58.5		09.6	247	59.7		48.7	275	01.1		46.3	317	16.5		08.4
5	60	07.1	214	59.0	-14	10.6	263	00.7	+10	48.1	290	03.1	+18	46.1	332	18.8	+22	08.4
6	75	09.5	229	59.6	-14	11.6	278	01.6	+10	47.5	305	05.0	+18	46.0	347	21.1	+22	08.4
7	90	12.0	245	00.2		12.6	293	02.6		46.9	320	07.0		45.9	2	23.4		08.4
8	105	14.5	260	00.8		13.7	308	03.6		46.3	335	08.9		45.8	17	25.7		08.4
9	120	16.9	275	01.4		14.7	323	04.5		45.7	350	10.9		45.6	32	28.0		08.4
10	135	19.4	290	02.0		15.7	338	05.5		45.1	5	12.9		45.5	47	30.3		08.4
11	150	21.9	305	02.6	-14	16.7	353	06.4	+10	44.6	20	14.8	+18	45.4	62	32.6	+22	08.4
12	165	24.3	320	03.2	-14	17.7	8	07.4	+10	44.0	35	16.8	+18	45.3	77	34.9	+22	08.4
13	180	26.8	335	03.8		18.8	23	08.3		43.4	50	18.7		45.1	92	37.2		08.4
14	195	29.3	350	04.4		19.8	38	09.3		42.8	65	20.7		45.0	107	39.5		08.4
15	210	31.7	5	05.0		20.8	53	10.3		42.2	80	22.6		44.9	122	41.8		08.4
16	225	34.2	20	05.6		21.8	68	11.2		41.6	95	24.6		44.8	137	44.1		08.4
17	240	36.6	35	06.2	-14	22.8	83	12.2	+10	41.0	110	26.5	+18	44.7	152	46.4	+22	08.4
18	255	39.1	50	06.8	-14	23.8	98	13.1	+10	40.5	125	28.5	+18	44.5	167	48.7	+22	08.4
19	270	41.6	65	07.4		24.9	113	14.1		39.9	140	30.4		44.4	182	51.0		08.4
20	285	44.0	80	08.0		25.9	128	15.1		39.3	155	32.4		44.3	197	53.3		08.4
21	300	46.5	95	08.6		26.9	143	16.0		38.7	170	34.4		44.2	212	55.6		08.4
22	315	49.0	110	09.2		27.9	158	17.0		38.1	185	36.3		44.0	227	57.9		08.4
23	330	51.4	125	09.8		28.9	173	17.9		37.5	200	38.3		43.9	243	00.2		08.4
24	345	53.9	140	10.4	-14	29.9	188	18.9	+10	36.9	215	40.2	+18	43.8	258	02.5	+22	08.4
Dif	—		+6		-10		+10		-6		+20		-1		+23		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9			Edad: 29 ^d 2 PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'1 R°: 53 ^m												
	PMG: 11 ^h 58 ^m 1			SD: 16'6 PMG: 12 ^h 26 ^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	26.5	+6 12.8	180	14.0	+11 32.9	80	60 N	18 46	19 30	20 25	4 58 103	19 26 7			
1	195	26.7	11.9	194	41.0	18.4	145	58	43	23	14	5 04 99	23 9			
2	210	27.0	11.0	209	08.1	+11 03.8	146	56	39	18	20 05	09 96	20 12			
3	225	27.2	10.0	223	35.3	+10 49.1	147	54	37	13	19 57	14 93	17 15			
4	240	27.4	09.1	238	02.5	34.3	148	52	34	09	51	18 90	14 18			
5	255	27.6	+6 08.2	252	29.7	+10 19.5	148	50	18 32	19 05	19 45	5 22 87	19 12 20			
6	270	27.8	+6 07.2	266	57.0	+10 04.6	149	45	18 27	18 56	19 32	5 31 81	19 07 25			
7	285	28.0	06.3	281	24.3	+9 49.6	150	40	22	50	22	38 77	19 02 30			
8	300	28.2	05.4	295	51.7	34.5	151	35	19	44	14	44 73	18 58 34			
9	315	28.4	04.4	310	19.1	19.4	151	30	16	40	19 08	49 69	55 37			
10	330	28.7	03.5	324	46.5	+9 04.2	152	20	10	32	18 58	5 58 64	49 43			
11	345	28.9	+6 02.5	339	14.0	+8 49.0	152	10 N	18 06	18 27	18 51	6 06 58	18 44 48			
12	0	29.1	+6 01.6	353	41.5	+8 33.7	153	0	18 01	18 22	18 46	6 13 54	18 39 53			
13	15	29.3	+6 00.7	8	09.1	18.4	153	10 S	17 57	18	43	21 48	34 58			
14	30	29.5	+5 59.7	22	36.7	+8 03.0	154	20	53	15	41	29 43	28 63			
15	45	29.7	58.8	37	04.3	+7 47.5	155	30	48	12	40	38 37	22 69			
16	60	29.9	57.9	51	32.0	32.0	155	35	45	11	40	43 34	18 73			
17	75	30.1	+5 56.9	65	59.7	+7 16.4	156	40	17 42	18 09	18 41	6 48 31	18 14 77			
18	90	30.4	+5 56.0	80	27.4	+7 00.8	156	45	17 39	18 08	18 42	6 55 27	18 09 82			
19	105	30.6	55.1	94	55.2	+6 45.2	156	50	35	07	44	7 03 21	04 86			
20	120	30.8	54.1	109	23.0	29.5	157	52	33	07	46	07 19	18 01 89			
21	135	31.0	53.2	123	50.8	+6 13.8	157	54	31	06	47	11 16	17 58 92			
22	150	31.2	52.2	138	18.7	+5 58.0	158	56	29	06	49	15 14	55 95			
23	165	31.4	51.3	152	46.6	42.2	158	58	26	05	51	20 10	51 99			
24	180	31.6	+5 50.4	167	14.5	+5 26.3	159	60 S	17 23	18 05	18 53	7 26 6	17 47 102			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 56 ^m 3		Mag: -4.6 PMG: 14 ^h 39 ^m			Mag: +1.8 PMG: 11 ^h 26 ^m			Mag: -1.9 PMG: 9 ^h 36 ^m			Mag: +0.1 PMG: 6 ^h 47 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	345	53.9	140	10.4	-14 29.9	188	18.9	+10 36.9	215	40.2	+18 43.8	258	02.5	+22 08.4		
1	0	56.4	155	11.0	30.9	203	19.9	36.4	230	42.2	43.7	273	04.8	08.4		
2	15	58.8	170	11.6	32.0	218	20.8	35.8	245	44.1	43.6	288	07.1	08.4		
3	31	01.3	185	12.2	33.0	233	21.8	35.2	260	46.1	43.4	303	09.4	08.4		
4	46	03.7	200	12.8	34.0	248	22.7	34.6	275	48.0	43.3	318	11.7	08.4		
5	61	06.2	215	13.4	-14 35.0	263	23.7	+10 34.0	290	50.0	+18 43.2	333	14.1	+22 08.4		
6	76	08.7	230	14.0	-14 36.0	278	24.7	+10 33.4	305	52.0	+18 43.1	348	16.4	+22 08.4		
7	91	11.1	245	14.6	37.0	293	25.6	32.8	320	53.9	42.9	3	18.7	08.4		
8	106	13.6	260	15.3	38.0	308	26.6	32.2	335	55.9	42.8	18	21.0	08.4		
9	121	16.1	275	15.9	39.0	323	27.5	31.7	350	57.8	42.7	33	23.3	08.4		
10	136	18.5	290	16.5	40.0	338	28.5	31.1	5	59.8	42.6	48	25.6	08.4		
11	151	21.0	305	17.1	-14 41.0	353	29.5	+10 30.5	21	01.7	+18 42.5	63	27.9	+22 08.4		
12	166	23.5	320	17.7	-14 42.0	8	30.4	+10 29.9	36	03.7	+18 42.3	78	30.2	+22 08.4		
13	181	25.9	335	18.3	43.0	23	31.4	29.3	51	05.7	42.2	93	32.5	08.4		
14	196	28.4	350	19.0	44.0	38	32.4	28.7	66	07.6	42.1	108	34.8	08.4		
15	211	30.9	5	19.6	45.0	53	33.3	28.1	81	09.6	42.0	123	37.1	08.4		
16	226	33.3	20	20.2	46.0	68	34.3	27.5	96	11.5	41.8	138	39.4	08.4		
17	241	35.8	35	20.8	-14 47.1	83	35.2	+10 26.9	111	13.5	+18 41.7	153	41.7	+22 08.4		
18	256	38.2	50	21.4	-14 48.1	98	36.2	+10 26.4	126	15.4	+18 41.6	168	44.0	+22 08.4		
19	271	40.7	65	22.1	49.1	113	37.2	25.8	141	17.4	41.5	183	46.3	08.4		
20	286	43.2	80	22.7	50.1	128	38.1	25.2	156	19.4	41.4	198	48.6	08.4		
21	301	45.6	95	23.3	51.1	143	39.1	24.6	171	21.3	41.2	213	50.9	08.4		
22	316	48.1	110	24.0	52.1	158	40.1	24.0	186	23.3	41.1	228	53.2	08.4		
23	331	50.6	125	24.6	53.1	173	41.0	23.4	201	25.2	41.0	243	55.5	08.4		
24	346	53.0	140	25.2	-14 54.1	188	42.0	+10 22.8	216	27.2	+18 40.9	258	57.8	+22 08.4		
Dif	—		+6		-10	+10		-6	+20		-1	+23		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 7			Edad: 0 ^d 9 PHE { 4 ^h : 61'1 12 ^h : 61'1 20 ^h : 61'0 R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	31.6	+5	50.4	167	14.5	+5 26.3	60 N	3 32	4 27	5 11	6 41	102	19 33	6
1	195	31.8		49.4	181	42.5	+5 10.5 ¹⁵⁸	58	43	33	14	43	98	32	10
2	210	32.1		48.5	196	10.5	+4 54.6 ¹⁵⁹	56	51	39	17	45	95	32	13
3	225	32.3		47.5	210	38.5	38.6 ¹⁶⁰	54	3 59	44	20	47	91	32	16
4	240	32.5		46.6	225	06.5	22.6 ¹⁶⁰	52	4 06	48	23	48	89	32	18
5	255	32.7	+5	45.7	239	34.6	+4 06.7 ¹⁵⁹	50	4 12	4 52	5 25	6 49	87	19 32	21
6	270	32.9	+5	44.7	254	02.7	+3 50.6 ¹⁶¹	45	4 24	5 00	5 30	6 52	81	19 32	26
7	285	33.1		43.8	268	30.8	34.6 ¹⁶⁰	40	34	07	34	55	76	32	30
8	300	33.3		42.8	282	58.9	18.5 ¹⁶¹	35	42	12	38	57	72	32	34
9	315	33.6		41.9	297	27.1	+3 02.5 ¹⁶⁰	30	48	16	41	6 58	69	32	37
10	330	33.8		41.0	311	55.3	+2 46.4 ¹⁶¹	20	4 58	24	46	7 02	62	32	42
11	345	34.0	+5	40.0	326	23.5	+2 30.3 ¹⁶¹	10 N	5 05	5 29	5 50	7 04	58	19 32	47
12	0	34.2	+5	39.1	340	51.7	+2 14.1 ¹⁶²	0	5 10	5 34	5 54	7 07	52	19 32	52
13	15	34.4		38.1	355	20.0	+1 58.0 ¹⁶¹	10 S	13	37	5 58	09	48	32	57
14	30	34.6		37.2	9	48.2	41.9 ¹⁶¹	20	15	41	6 03	12	43	31	63
15	45	34.8		36.3	24	16.5	25.7 ¹⁶²	30	16	43	07	15	37	31	69
16	60	35.1		35.3	38	44.8	+1 09.6 ¹⁶¹	35	15	45	10	17	34	31	72
17	75	35.3	+5	34.4	53	13.1	+0 53.4 ¹⁶²	40	5 14	5 46	6 13	7 19	30	19 31	76
18	90	35.5	+5	33.4	67	41.5	+0 37.3 ¹⁶¹	45	5 13	5 47	6 16	7 22	25	19 31	80
19	105	35.7		32.5	82	09.8	21.1 ¹⁶²	50	11	48	20	24	21	30	86
20	120	35.9		31.6	96	38.2	+0 04.9 ¹⁶²	52	09	48	22	26	18	30	89
21	135	36.1		30.6	111	06.6	-0 11.2 ¹⁶¹	54	08	49	24	27	15	30	91
22	150	36.3		29.7	125	34.9	27.3 ¹⁶¹	56	06	49	26	29	12	30	94
23	165	36.6		28.7	140	03.3	43.5 ¹⁶²	58	04	49	28	30	10	30	98
24	180	36.8	+5	27.8	154	31.7	-0 59.6 ¹⁶¹	60 S	5 02	5 50	6 31	7 32	6	19 29	102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 52 ^m 3		Mag: -4.6 PMG: 14 ^h 38 ^m		Mag: +1.8 PMG: 11 ^h 24 ^m		Mag: -1.9 PMG: 9 ^h 33 ^m		Mag: +0.1 PMG: 6 ^h 43 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	346	53.0	140	25.2	-14	54.1	188	42.0	+10	22.8	216	27.2	+18	40.9	258	57.8	+22	08.4
1	1	55.5	155	25.8		55.0	203	42.9		22.2	231	29.2		40.7	274	00.1		08.4
2	16	58.0	170	26.5		56.0	218	43.9		21.6	246	31.1		40.6	289	02.4		08.4
3	32	00.4	185	27.1		57.0	233	44.9		21.1	261	33.1		40.5	304	04.7		08.4
4	47	02.9	200	27.7		58.0	248	45.8		20.5	276	35.0		40.4	319	07.1		08.4
5	62	05.4	215	28.4	-14	59.0	263	46.8	+10	19.9	291	37.0	+18	40.3	334	09.4	+22	08.4
6	77	07.8	230	29.0	-15	00.0	278	47.8	+10	19.3	306	38.9	+18	40.1	349	11.7	+22	08.4
7	92	10.3	245	29.6	-15	01.0	293	48.7		18.7	321	40.9		40.0	4	14.0		08.4
8	107	12.7	260	30.3		02.0	308	49.7		18.1	336	42.9		39.9	19	16.3		08.4
9	122	15.2	275	30.9		03.0	323	50.6		17.5	351	44.8		39.8	34	18.6		08.4
10	137	17.7	290	31.6		04.0	338	51.6		16.9	6	46.8		39.6	49	20.9		08.4
11	152	20.1	305	32.2	-15	05.0	353	52.6	+10	16.3	21	48.7	+18	39.5	64	23.2	+22	08.4
12	167	22.6	320	32.8	-15	06.0	8	53.5	+10	15.7	36	50.7	+18	39.4	79	25.5	+22	08.4
13	182	25.1	335	33.5		07.0	23	54.5		15.2	51	52.7		39.3	94	27.8		08.4
14	197	27.5	350	34.1		08.0	38	55.5		14.6	66	54.6		39.2	109	30.1		08.4
15	212	30.0	5	34.8		09.0	53	56.4		14.0	81	56.6		39.0	124	32.4		08.4
16	227	32.5	20	35.4		09.9	68	57.4		13.4	96	58.5		38.9	139	34.7		08.4
17	242	34.9	35	36.1	-15	10.9	83	58.4	+10	12.8	112	00.5	+18	38.8	154	37.1	+22	08.4
18	257	37.4	50	36.7	-15	11.9	98	59.3	+10	12.2	127	02.5	+18	38.7	169	39.4	+22	08.4
19	272	39.8	65	37.4		12.9	114	00.3		11.6	142	04.4		38.5	184	41.7		08.4
20	287	42.3	80	38.0		13.9	129	01.2		11.0	157	06.4		38.4	199	44.0		08.4
21	302	44.8	95	38.7		14.9	144	02.2		10.4	172	08.3		38.3	214	46.3		08.4
22	317	47.2	110	39.3		15.9	159	03.2		09.8	187	10.3		38.2	229	48.6		08.4
23	332	49.7	125	40.0		16.8	174	04.1		09.2	202	12.3		38.1	244	50.9		08.4
24	347	52.2	140	40.6	-15	17.8	189	05.1	+10	08.6	217	14.2	+18	37.9	259	53.2	+22	08.4
Dif	—		+6		-10		+10		-6		+20		-1		+23		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 4		Edad: 1 ^d 9 PHE { SD: 16'6 PMG: 14 ^h 12 ^m		4 ^h : 61'0 12 ^h : 60'8 20 ^h : 60'7 R°: 52 ^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	m
0	180	36.8	+5	27.8	154	31.7	-0 59.6	60 N	18 40	19 23	20 17	8 23 102	19 39 6	
1	195	37.0		26.8	169	00.1	-1 15.7 ¹⁶¹	58	37	17	20 07	21 98	42 10	
2	210	37.2		25.9	183	28.6	31.8 ¹⁶¹	56	34	12	19 59	20 94	45 14	
3	225	37.4		25.0	197	57.0	-1 47.9 ¹⁶¹	54	32	08	52	18 91	48 16	
4	240	37.6		24.0	212	25.4	-2 03.9 ¹⁶⁰	52	29	04	45	17 88	50 20	
5	255	37.8	+5	23.1	226	53.9	-2 20.0 ¹⁶¹	50	18 27	19 00	19 40	8 16 85	19 53 21	
6	270	38.1	+5	22.1	241	22.3	-2 36.0 ¹⁶⁰	45	18 23	18 53	19 28	8 13 80	19 58 26	
7	285	38.3		21.2	255	50.7	-2 52.0 ¹⁶⁰	40	19	46	19	11 75	20 02 31	
8	300	38.5		20.2	270	19.2	-3 08.0 ¹⁶⁰	35	16	41	11	09 71	06 34	
9	315	38.7		19.3	284	47.6	23.9 ¹⁵⁹	30	13	37	19 05	07 68	09 38	
10	330	38.9		18.4	299	16.1	39.9 ¹⁶⁰	20	08	31	18 56	04 62	14 44	
11	345	39.1	+5	17.4	313	44.5	-3 55.7 ¹⁵⁸	10 N	18 04	18 25	18 50	8 02 57	20 19 49	
12	0	39.4	+5	16.5	328	13.0	-4 11.6 ¹⁵⁹	0	18 01	18 21	18 45	7 59 53	20 24 53	
13	15	39.6		15.5	342	41.4	27.4 ¹⁵⁸	10 S	17 57	18	42	57 48	29 57	
14	30	39.8		14.6	357	09.9	43.2 ¹⁵⁸	20	53	15	41	55 42	34 62	
15	45	40.0		13.6	11	38.3	-4 59.0 ¹⁵⁸	30	49	13	41	52 37	40 68	
16	60	40.2		12.7	26	06.7	-5 14.7 ¹⁵⁷	35	47	12	41	51 33	43 71	
17	75	40.4	+5	11.7	40	35.1	-5 30.3 ¹⁵⁶	40	17 44	18 11	18 43	7 49 30	20 47 75	
18	90	40.7	+5	10.8	55	03.6	-5 46.0 ¹⁵⁷	45	17 41	18 11	18 45	7 47 26	20 51 80	
19	105	40.9		09.9	69	32.0	-6 01.6 ¹⁵⁶	50	38	10	47	45 20	56 85	
20	120	41.1		08.9	84	00.4	17.1 ¹⁵⁵	52	36	10	49	44 18	20 59 87	
21	135	41.3		08.0	98	28.8	32.6 ¹⁵⁵	54	34	10	51	42 16	21 01 91	
22	150	41.5		07.0	112	57.2	-6 48.0 ¹⁵⁴	56	32	10	53	41 13	04 94	
23	165	41.7		06.1	127	25.5	-7 03.4 ¹⁵⁴	58	30	09	55	40 10	08 97	
24	180	42.0	+5	05.1	141	53.9	-7 18.8 ¹⁵⁴	60 S	17 28	18 09	18 58	7 38 7	21 11 102	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 0 ^h 48 ^m 4		Mag: -4.7 PMG: 14 ^h 37 ^m		Mag: +1.8 PMG: 11 ^h 23 ^m		Mag: -1.9 PMG: 9 ^h 30 ^m			Mag: +0.1 PMG: 6 ^h 39 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	347	52.2	140	40.6	-15	17.8	189	05.1	+10	08.6	217	14.2	+18	37.9	259	53.2	+22	08.4
1	2	54.6	155	41.3		18.8	204	06.1		08.1	232	16.2		37.8	274	55.5		08.4
2	17	57.1	170	41.9		19.8	219	07.0		07.5	247	18.2		37.7	289	57.8		08.4
3	32	59.6	185	42.6		20.8	234	08.0		06.9	262	20.1		37.6	305	00.2		08.4
4	48	02.0	200	43.3		21.8	249	09.0		06.3	277	22.1		37.4	320	02.5		08.4
5	63	04.5	215	43.9	-15	22.7	264	09.9	+10	05.7	292	24.0	+18	37.3	335	04.8	+22	08.4
6	78	07.0	230	44.6	-15	23.7	279	10.9	+10	05.1	307	26.0	+18	37.2	350	07.1	+22	08.4
7	93	09.4	245	45.2		24.7	294	11.9		04.5	322	28.0		37.1	5	09.4		08.4
8	108	11.9	260	45.9		25.7	309	12.8		03.9	337	29.9		37.0	20	11.7		08.4
9	123	14.3	275	46.6		26.6	324	13.8		03.3	352	31.9		36.8	35	14.0		08.4
10	138	16.8	290	47.2		27.6	339	14.8		02.7	7	33.9		36.7	50	16.3		08.4
11	153	19.3	305	47.9	-15	28.6	354	15.7	+10	02.1	22	35.8	+18	36.6	65	18.6	+22	08.4
12	168	21.7	320	48.6	-15	29.6	9	16.7	+10	01.5	37	37.8	+18	36.5	80	21.0	+22	08.4
13	183	24.2	335	49.2		30.6	24	17.6		00.9	52	39.7		36.3	95	23.3		08.4
14	198	26.7	350	49.9		31.5	39	18.6	+10	00.4	67	41.7		36.2	110	25.6		08.4
15	213	29.1	5	50.6		32.5	54	19.6	+9	59.8	82	43.7		36.1	125	27.9		08.4
16	228	31.6	20	51.3		33.5	69	20.5		59.2	97	45.6		36.0	140	30.2		08.4
17	243	34.1	35	51.9	-15	34.4	84	21.5	+9	58.6	112	47.6	+18	35.9	155	32.5	+22	08.4
18	258	36.5	50	52.6	-15	35.4	99	22.5	+9	58.0	127	49.6	+18	35.7	170	34.8	+22	08.4
19	273	39.0	65	53.3		36.4	114	23.4		57.4	142	51.5		35.6	185	37.1		08.4
20	288	41.4	80	54.0		37.4	129	24.4		56.8	157	53.5		35.5	200	39.5		08.4
21	303	43.9	95	54.6		38.3	144	25.4		56.2	172	55.5		35.4	215	41.8		08.4
22	318	46.4	110	55.3		39.3	159	26.3		55.6	187	57.4		35.2	230	44.1		08.4
23	333	48.8	125	56.0		40.3	174	27.3		55.0	202	59.4		35.1	245	46.4		08.4
24	348	51.3	140	56.7	-15	41.2	189	28.3	+9	54.4	218	01.3	+18	35.0	260	48.7	+22	08.4
Dif	—		+7	-10		+10	-6		+20	-1					+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 57 ^m 0			Edad: 2 ^d 9 SD: 16 ^h 5 PMG: 15 ^h 04 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	42.0	+5	05.1	141	53.9	-7 18.8	60 N	3 38	4 32	5 15	10 05	101	19 45	9
1	195	42.2		04.2	156	22.2	93 34.0 ¹⁵²	58	48	38	19	9 59	97	52	14
2	210	42.4		03.2	170	50.6	94 -7 49.3 ¹⁵³	56	3 56	43	21	54	93	19 59	17
3	225	42.6		02.3	185	18.9	93 -8 04.4 ¹⁵¹	54	4 03	48	24	49	90	20 04	20
4	240	42.8		01.3	199	47.2	93 19.5 ¹⁵¹	52	10	51	26	45	87	10	22
5	255	43.0	+5	00.4	214	15.5	93 -8 34.6 ¹⁵¹	50	4 15	4 55	5 28	9 41	85	20 14	25
6	270	43.3	+4	59.4	228	43.8	93 -8 49.6 ¹⁵⁰	45	4 27	5 03	5 32	9 33	79	20 24	30
7	285	43.5		58.5	243	12.0	92 -9 04.5 ¹⁴⁹	40	36	09	36	26	75	33	34
8	300	43.7		57.6	257	40.3	93 19.4 ¹⁴⁹	35	43	13	39	20	71	40	37
9	315	43.9		56.6	272	08.5	92 34.2 ¹⁴⁸	30	49	18	42	15	68	47	40
10	330	44.1		55.7	286	36.7	92 -9 48.9 ¹⁴⁷	20	4 58	24	46	9 06	63	20 58	45
11	345	44.3	+4	54.7	301	04.9	92 -10 03.5 ¹⁴⁶	10 N	5 05	5 29	5 50	8 59	57	21 08	49
12	0	44.6	+4	53.8	315	33.0	91 -10 18.1 ¹⁴⁶	0	5 09	5 33	5 54	8 52	53	21 17	54
13	15	44.8		52.8	330	01.2	92 32.6 ¹⁴⁵	10 S	12	36	5 57	45	49	26	58
14	30	45.0		51.9	344	29.3	91 -10 47.0 ¹⁴⁴	20	13	39	6 01	37	45	36	63
15	45	45.2		50.9	358	57.4	91 -11 01.4 ¹⁴⁴	30	13	41	05	29	39	48	67
16	60	45.4		50.0	13	25.5	91 15.7 ¹⁴³	35	13	42	07	24	36	21 54	71
17	75	45.6	+4	49.0	27	53.5	90 -11 29.9 ¹⁴²	40	5 11	5 43	6 10	8 19	32	22 02	74
18	90	45.9	+4	48.1	42	21.6	91 -11 44.0 ¹⁴¹	45	5 09	5 43	6 12	8 13	28	22 11	78
19	105	46.1		47.1	56	49.6	90 -11 58.0 ¹⁴⁰	50	06	44	16	05	23	21	84
20	120	46.3		46.2	71	17.5	89 -12 12.0 ¹⁴⁰	52	05	44	17	8 02	21	26	86
21	135	46.5		45.2	85	45.5	90 25.8 ¹³⁸	54	03	44	19	7 58	18	32	89
22	150	46.7		44.3	100	13.4	89 39.6 ¹³⁸	56	5 01	44	21	54	15	38	92
23	165	47.0		43.3	114	41.3	89 -12 53.3 ¹³⁷	58	4 58	44	23	50	11	45	96
24	180	47.2	+4	42.4	129	09.2	89 -13 06.9 ¹³⁶	60 S	4 56	5 44	6 25	7 45	7	22 53	101
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 0 ^h 44 ^m 5		Mag: -4.7 PMG: 14 ^h 36 ^m			Mag: +1.8 PMG: 11 ^h 21 ^m			Mag: -1.9 PMG: 9 ^h 27 ^m			Mag: +0.1 PMG: 6 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	348	51.3	140	56.7	-15 41.2	189	28.3	+9 54.4	218	01.3	+18 35.0	260	48.7	+22 08.4	
1	3	53.8	155	57.4	42.2	204	29.2	53.8	233	03.3	34.9	275	51.0	08.4	
2	18	56.2	170	58.0	43.2	219	30.2	53.2	248	05.3	34.8	290	53.3	08.4	
3	33	58.7	185	58.7	44.1	234	31.2	52.6	263	07.2	34.6	305	55.7	08.4	
4	49	01.2	200	59.4	45.1	249	32.1	52.0	278	09.2	34.5	320	58.0	08.4	
5	64	03.6	216	00.1	-15 46.1	264	33.1	+9 51.4	293	11.2	+18 34.4	336	00.3	+22 08.4	
6	79	06.1	231	00.8	-15 47.0	279	34.1	+9 50.8	308	13.1	+18 34.3	351	02.6	+22 08.4	
7	94	08.6	246	01.5	48.0	294	35.0	50.2	323	15.1	34.2	6	04.9	08.4	
8	109	11.0	261	02.2	49.0	309	36.0	49.7	338	17.1	34.0	21	07.2	08.4	
9	124	13.5	276	02.8	49.9	324	37.0	49.1	353	19.0	33.9	36	09.5	08.4	
10	139	15.9	291	03.5	50.9	339	38.0	48.5	8	21.0	33.8	51	11.9	08.4	
11	154	18.4	306	04.2	-15 51.8	354	38.9	+9 47.9	23	23.0	+18 33.7	66	14.2	+22 08.4	
12	169	20.9	321	04.9	-15 52.8	9	39.9	+9 47.3	38	24.9	+18 33.5	81	16.5	+22 08.4	
13	184	23.3	336	05.6	53.8	24	40.9	46.7	53	26.9	33.4	96	18.8	08.4	
14	199	25.8	351	06.3	54.7	39	41.8	46.1	68	28.9	33.3	111	21.1	08.3	
15	214	28.3	6	07.0	55.7	54	42.8	45.5	83	30.8	33.2	126	23.4	08.3	
16	229	30.7	21	07.7	56.6	69	43.8	44.9	98	32.8	33.1	141	25.8	08.3	
17	244	33.2	36	08.4	-15 57.6	84	44.7	+9 44.3	113	34.8	+18 32.9	156	28.1	+22 08.3	
18	259	35.7	51	09.1	-15 58.5	99	45.7	+9 43.7	128	36.7	+18 32.8	171	30.4	+22 08.3	
19	274	38.1	66	09.8	-15 59.5	114	46.7	43.1	143	38.7	32.7	186	32.7	08.3	
20	289	40.6	81	10.5	-16 00.5	129	47.6	42.5	158	40.7	32.6	201	35.0	08.3	
21	304	43.0	96	11.2	01.4	144	48.6	41.9	173	42.6	32.4	216	37.4	08.3	
22	319	45.5	111	11.9	02.4	159	49.6	41.3	188	44.6	32.3	231	39.7	08.3	
23	334	48.0	126	12.7	03.3	174	50.5	40.7	203	46.6	32.2	246	42.0	08.3	
24	349	50.4	141	13.4	-16 04.3	189	51.5	+9 40.1	218	48.5	+18 32.1	261	44.3	+22 08.3	
Dif	—		+7	-10		+10	-6		+20	-1		+23	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: 3 ^d 9 PHE { 4 ^h : 59'9 12 ^h : 59'6 20 ^h : 59'4 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		
0	180	47.2	+4	42.4	129	09.2	-13 06.9	60 N	18 34	19 17	20 10	11 46 100	19 54 14		
1	195	47.4		41.4	143	37.0 88	20.4 ¹³⁵	58	31	11	20 01	36 95	20 06 18		
2	210	47.6		40.5	158	04.8 88	33.8 ¹³⁴	56	29	07	19 53	27 91	16 22		
3	225	47.8		39.5	172	32.6 88	-13 47.2 ¹³⁴	54	27	19 03	46	19 88	24 22		
4	240	48.1		38.6	187	00.4 88	-14 00.4 ¹³²	52	25	18 59	40	12 85	32 28		
5	255	48.3	+4	37.6	201	28.1 87	-14 13.5 ¹³¹	50	18 23	18 56	19 35	11 06 82	20 39 30		
6	270	48.5	+4	36.7	215	55.8 87	-14 26.6 ¹³¹	45	18 19	18 49	19 24	10 52 77	20 54 35		
7	285	48.7		35.7	230	23.5 87	39.5 ¹²⁹	40	16	43	15	41 73	21 07 38		
8	300	48.9		34.8	244	51.1 86	-14 52.4 ¹²⁹	35	13	39	08	31 70	17 42		
9	315	49.1		33.8	259	18.7 86	-15 05.1 ¹²⁷	30	11	35	19 03	23 67	27 44		
10	330	49.4		32.9	273	46.3 86	17.7 ¹²⁶	20	07	29	18 54	10 09 62	43 48		
11	345	49.6	+4	31.9	288	13.8 85	-15 30.3 ¹²⁶	10 N	18 03	18 24	18 49	9 56 59	21 57 52		
12	0	49.8	+4	31.0	302	41.4 86	-15 42.7 ¹²⁴	0	18 00	18 21	18 45	9 45 55	22 11 55		
13	15	50.0		30.0	317	08.8 84	-15 55.0 ¹²³	10 S	17 57	18	42	34 50	24 59		
14	30	50.2		29.1	331	36.3 85	-16 07.2 ¹²²	20	54	16	41	22 46	39 62		
15	45	50.5		28.1	346	03.7 84	19.3 ¹²¹	30	50	14	42	08 42	22 55 66		
16	60	50.7		27.2	0	31.1 84	31.3 ¹²⁰	35	48	14	43	9 00 39	23 05 69		
17	75	50.9	+4	26.2	14	58.4 83	-16 43.2 ¹¹⁹	40	17 46	18 13	18 44	8 51 36	23 16 72		
18	90	51.1	+4	25.3	29	25.8 84	-16 55.0 ¹¹⁸	45	17 44	18 13	18 47	8 41 32	23 29 75		
19	105	51.3		24.3	43	53.1 83	-17 06.6 ¹¹⁶	50	41	13	50	28 28	45 80		
20	120	51.6		23.4	58	20.3 82	18.2 ¹¹⁶	52	39	13	52	23 25	23 52 83		
21	135	51.8		22.4	72	47.5 82	29.6 ¹¹⁴	54	38	13	54	16 23	** ** *		
22	150	52.0		21.5	87	14.7 82	40.9 ¹¹³	56	36	13	57	09 19	** ** *		
23	165	52.2		20.5	101	41.9 82	-17 52.1 ¹¹²	58	34	14	18 59	8 01 16	** ** *		
24	180	52.4	+4	19.5	116	09.0 81	-18 03.2 ¹¹¹	60 S	17 32	18 14	19 02	7 52 12	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 40 ^m 5		Mag: -4.7 PMG: 14 ^h 34 ^m			Mag: +1.8 PMG: 11 ^h 20 ^m			Mag: -1.9 PMG: 9 ^h 24 ^m			Mag: +0.1 PMG: 6 ^h 32 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	°	'	°	'	°	'		
0	349	50.4	141	13.4	-16	04.3	189 51.5	+9	40.1	218 48.5	+18	32.1	261 44.3	+22	08.3
1	4	52.9	156	14.1		05.2	204 52.5		39.5	233 50.5		32.0	276 46.6		08.3
2	19	55.4	171	14.8		06.2	219 53.4		38.9	248 52.5		31.8	291 48.9		08.3
3	34	57.8	186	15.5		07.1	234 54.4		38.3	263 54.4		31.7	306 51.3		08.3
4	50	00.3	201	16.2		08.1	249 55.4		37.7	278 56.4		31.6	321 53.6		08.3
5	65	02.8	216	16.9	-16	09.0	264 56.4	+9	37.1	293 58.4	+18	31.5	336 55.9	+22	08.3
6	80	05.2	231	17.6	-16	10.0	279 57.3	+9	36.5	309 00.3	+18	31.4	351 58.2	+22	08.3
7	95	07.7	246	18.4		10.9	294 58.3		35.9	324 02.3		31.2	7 00.5		08.3
8	110	10.2	261	19.1		11.9	309 59.3		35.3	339 04.3		31.1	22 02.9		08.3
9	125	12.6	276	19.8		12.8	325 00.2		34.7	354 06.3		31.0	37 05.2		08.3
10	140	15.1	291	20.5		13.8	340 01.2		34.1	9 08.2		30.9	52 07.5		08.3
11	155	17.5	306	21.2	-16	14.7	355 02.2	+9	33.5	24 10.2	+18	30.7	67 09.8	+22	08.3
12	170	20.0	321	22.0	-16	15.6	10 03.1	+9	32.9	39 12.2	+18	30.6	82 12.1	+22	08.3
13	185	22.5	336	22.7		16.6	25 04.1		32.3	54 14.1		30.5	97 14.5		08.3
14	200	24.9	351	23.4		17.5	40 05.1		31.8	69 16.1		30.4	112 16.8		08.3
15	215	27.4	6	24.1		18.5	55 06.1		31.2	84 18.1		30.3	127 19.1		08.3
16	230	29.9	21	24.9		19.4	70 07.0		30.6	99 20.0		30.1	142 21.4		08.3
17	245	32.3	36	25.6	-16	20.4	85 08.0	+9	30.0	114 22.0	+18	30.0	157 23.8	+22	08.3
18	260	34.8	51	26.3	-16	21.3	100 09.0	+9	29.4	129 24.0	+18	29.9	172 26.1	+22	08.3
19	275	37.3	66	27.1		22.2	115 09.9		28.8	144 26.0		29.8	187 28.4		08.3
20	290	39.7	81	27.8		23.2	130 10.9		28.2	159 27.9		29.7	202 30.7		08.3
21	305	42.2	96	28.5		24.1	145 11.9		27.6	174 29.9		29.5	217 33.0		08.3
22	320	44.7	111	29.3		25.0	160 12.8		27.0	189 31.9		29.4	232 35.4		08.3
23	335	47.1	126	30.0		26.0	175 13.8		26.4	204 33.8		29.3	247 37.7		08.3
24	350	49.6	141	30.7	-16	26.9	190 14.8	+9	25.8	219 35.8	+18	29.2	262 40.0	+22	08.3
Dif	—		+7	-9			+10	-6		+20	-1		+23		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 4 ^d 9	PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 9 20 ^h : 58 ^m 6	SD: 16 ^h 1		Rº: 56 ^m	Rº		Rº					
	PMG: 11 ^h 56 ^m 3															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m		h	m	m
0	180	52.4	+4 19.5	116	09.0	-18 03.2		60 N	3 44	4 37	5 20	13 26	94	20 08	23	
1	195	52.7		130	36.1	14.1	109	58	3 53	43	23	13 11	89	24 28		
2	210	52.9		145	03.2	81	25.0	56	4 01	47	25	12 58	85	38 31		
3	225	53.1		159	30.2	80	35.7	54	08	51	27	47 81		20 50	33	
4	240	53.3		173	57.2	80	46.2	52	14	55	29	37 79		21 00	36	
5	255	53.5	+4 14.8	188	24.2	80	-18 56.7	50	4 19	4 58	5 31	12 28	77	21 09	38	
6	270	53.8	+4 13.8	202	51.1	79	-19 07.1	45	4 30	5 05	5 35	12 09	73	21 29	42	
7	285	54.0		217	18.0	79	17.3	40	38	10	38	11 54	70	45 45		
8	300	54.2		231	44.9	79	27.4	35	45	15	40	41 67		21 59	47	
9	315	54.4		246	11.7	78	37.3	30	51	19	43	30 65		22 11	48	
10	330	54.6		260	38.5	78	47.1	20	4 59	25	47	11 11	62	31 52		
11	345	54.9	+4 09.1	275	05.3	78	-19 56.8	10 N	5 04	5 29	5 50	10 55	58	22 49	54	
12	0	55.1	+4 08.1	289	32.0	77	-20 06.4	0	5 08	5 32	5 53	10 40	55	23 06	56	
13	15	55.3		303	58.7	77	15.9	10 S	11	35	56	24 53		23 58		
14	30	55.5		318	25.4	77	25.2	20	11	37	5 59	10 08	50	23 41	61	
15	45	55.7		332	52.1	77	34.3	30	11	38	6 02	9 50	46	*** ** *		
16	60	56.0		347	18.7	76	43.4	35	10	39	04	39 44		*** ** *		
17	75	56.2	+4 03.3	1	45.3	76	-20 52.3	40	5 08	5 39	6 06	9 27	42	*** ** *		
18	90	56.4	+4 02.4	16	11.9	76	-21 01.1	45	5 05	5 39	6 09	9 13	38	*** ** *		
19	105	56.6		30	38.5	76	09.7	50	02	39	11	8 56	34	*** ** *		
20	120	56.8	+4 00.5	45	05.0	75	18.2	52	5 00	39	13	48 31		*** ** *		
21	135	57.1	+3 59.5	59	31.5	75	26.6	54	4 58	39	14	39 29		0 01	85	
22	150	57.3		73	58.0	75	34.8	56	56	39	16	28 27		10 89		
23	165	57.5		88	24.4	74	42.9	58	53	38	17	17 22		21 92		
24	180	57.7	+3 56.6	102	50.8	74	-21 50.8	60 S	4 49	5 38	6 19	8 04	17	0 34	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 36 ^m 6		Mag: -4.7 PMG: 14 ^h 33 ^m		Mag: +1.8 PMG: 11 ^h 18 ^m		Mag: -1.9 PMG: 9 ^h 20 ^m		Mag: +0.1 PMG: 6 ^h 28 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	350	49.6	141	30.7	-16 26.9		219	35.8	+18 29.2	262	40.0
1	5	52.0	156	31.5	27.9	+9 25.8	234	37.8	29.0	277	42.3
2	20	54.5	171	32.2	28.8	25.2	249	39.7	28.9	292	44.7
3	35	57.0	186	33.0	29.7	24.6	264	41.7	28.8	307	47.0
4	50	59.4	201	33.7	30.7	24.0	279	43.7	28.7	322	49.3
5	66	01.9	216	34.5	-16 31.6	23.4	294	45.7	+18 28.6	337	51.6
6	81	04.4	231	35.2	-16 32.5	22.8	299	47.6	+18 28.4	352	54.0
7	96	06.8	246	35.9	33.4	+9 22.2	309	49.6	28.3	7	56.3
8	111	09.3	261	36.7	34.4	21.6	324	51.6	28.2	22	58.6
9	126	11.8	276	37.4	35.3	21.0	339	53.6	28.1	38	00.9
10	141	14.2	291	38.2	36.2	20.4	354	55.6	28.0	53	03.2
11	156	16.7	306	39.0	-16 37.2	19.8	9	55.5	+18 27.8	53	03.2
12	171	19.1	321	39.7	-16 38.1	+9 19.2	24	57.5	+18 27.8	68	05.6
13	186	21.6	336	40.5	39.0	+9 18.6	39	59.5	+18 27.7	83	07.9
14	201	24.1	351	41.2	39.9	18.0	55	01.4	27.6	98	10.2
15	216	26.5	6	42.0	40.9	17.4	70	03.4	27.5	113	12.6
16	231	29.0	21	42.7	41.8	16.8	85	05.4	27.4	128	14.9
17	246	31.5	36	43.5	-16 42.7	16.2	100	07.4	27.2	143	17.2
18	261	33.9	51	44.3	-16 43.6	+9 15.6	115	09.3	+18 27.1	158	19.5
19	276	36.4	66	45.0	44.6	+9 15.0	130	11.3	+18 27.0	173	21.9
20	291	38.9	81	45.8	45.5	14.4	145	13.3	26.9	188	24.2
21	306	41.3	96	46.5	46.4	13.8	160	15.3	26.7	203	26.5
22	321	43.8	111	47.3	47.3	13.2	175	17.2	26.6	218	28.8
23	336	46.3	126	48.1	48.2	12.6	190	19.2	26.5	233	31.2
24	351	48.7	141	48.9	-16 49.2	12.0	205	21.2	26.4	248	33.5
						+9 11.4	220	23.1	+18 26.3	263	35.8
Dif	—		+8	-9	+10	-6	+20	-1		+23	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 5 ^d 9	PHE { 4 ^h : 58 ^h /3 12 ^h : 58 ^h /0 20 ^h : 57 ^h /8 R°: 56 ^m										
	PMG: 11 ^h 56 ^m 0					SD: 15 ^h 9			PMG: 17 ^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	180	57.7	+3 56.6	102	50.8	-21 50.8	78	60 N	18 28	19 10	20 03	15 00	79	20 31	38
1	195	57.9		117	17.2	-21 58.6	78	58	26	06	19 54	14 40	75	20 52	41
2	210	58.2		131	43.6	-22 06.3	77	56	24	19 01	47	23 73		21 09	44
3	225	58.4		146	10.0		74	54	22	18 58	41	14 08	71	23	46
4	240	58.6		160	36.3		73	52	20	54	35	13 56	69	36	47
5	255	58.8	+3 51.9	175	02.6	-22 28.4	72	50	18 19	18 51	19 30	13 45	68	21 47	48
6	270	59.1	+3 50.9	189	28.9	-22 35.5	71	45	18 15	18 45	19 20	13 22	66	22 11	50
7	285	59.3		203	55.2		70	40	13	40	12	13 04	64	30	51
8	300	59.5		218	21.5		68	35	10	36	05	12 48	63	46	52
9	315	59.7		232	47.7	-22 56.0	67	30	08	32	19 00	35 62		22 59	53
10	330	59.9		247	13.9	-23 02.5	65	20	05	27	18 53	12 13	59	23 23	54
11	346	00.2	+3 46.1	261	40.1	-23 08.9	64	10 N	18 02	18 23	18 47	11 53	58	23 43	55
12	1	00.4	+3 45.2	276	06.3	-23 15.1	62	0	17 59	18 20	18 44	11 35	57	***	***
13	16	00.6		290	32.5		61	10 S	57	18	42	11 17	55	***	***
14	31	00.8		304	58.7		59	20	54	16	42	10 58	53	***	***
15	46	01.0		319	24.9		58	30	51	15	43	36 51		0 01	64
16	61	01.3		333	51.0		57	35	50	15	44	23 50		14 65	
17	76	01.5	+3 40.4	348	17.2	-23 44.1	55	40	17 48	18 15	18 46	10 09	47	0 28	67
18	91	01.7	+3 39.4	2	43.3	-23 49.4	53	45	17 46	18 15	18 49	9 51	46	0 44	70
19	106	01.9		38.5	17 09.4		52	50	44	16	53	30 42		1 05	73
20	121	02.2		37.5	31 35.5	-23 59.7	51	52	43	16	55	19 42		15 75	
21	136	02.4		36.5	46 01.7	-24 04.6	49	54	41	17	18 58	9 08	39	26 77	
22	151	02.6		35.6	60 27.8		47	56	40	17	19 00	8 55	37	39 79	
23	166	02.8		34.6	74 53.9		46	58	39	18	04	39 35		1 53	83
24	181	03.0	+3 33.7	89	20.0	-24 18.4	45	60 S	17 37	18 19	19 07	8 21	30	2 11	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 0 ^h 32 ^m 7		Mag: -4.7 PMG: 14 ^h 32 ^m		Mag: +1.8 PMG: 11 ^h 17 ^m		Mag: -1.9 PMG: 9 ^h 17 ^m		Mag: +0.1 PMG: 6 ^h 25 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	351	48.7	141	48.9	-16 49.2	190	38.1	+9 11.4	220	23.1	+18 26.3	263	35.8	+22 08.3	
1	6	51.2	156	49.6	50.1	205	39.1	10.8	235	25.1	26.1	278	38.1	08.3	
2	21	53.6	171	50.4	51.0	220	40.1	10.2	250	27.1	26.0	293	40.5	08.3	
3	36	56.1	186	51.2	51.9	235	41.0	09.6	265	29.1	25.9	308	42.8	08.3	
4	51	58.6	201	51.9	52.8	250	42.0	09.0	280	31.0	25.8	323	45.1	08.3	
5	67	01.0	216	52.7	-16 53.7	265	43.0	+9 08.4	295	33.0	+18 25.7	338	47.5	+22 08.3	
6	82	03.5	231	53.5	-16 54.7	280	44.0	+9 07.7	310	35.0	+18 25.5	353	49.8	+22 08.3	
7	97	06.0	246	54.3	55.6	295	44.9	07.1	325	37.0	25.4	8	52.1	08.3	
8	112	08.4	261	55.1	56.5	310	45.9	06.5	340	38.9	25.3	23	54.4	08.3	
9	127	10.9	276	55.8	57.4	325	46.9	05.9	355	40.9	25.2	38	56.8	08.3	
10	142	13.4	291	56.6	58.3	340	47.9	05.3	10	42.9	25.1	53	59.1	08.3	
11	157	15.8	306	57.4	-16 59.2	355	48.8	+9 04.7	25	44.9	+18 24.9	69	01.4	+22 08.3	
12	172	18.3	321	58.2	-17 00.1	10	49.8	+9 04.1	40	46.9	+18 24.8	84	03.8	+22 08.3	
13	187	20.8	336	59.0	01.0	25	50.8	03.5	55	48.8	24.7	99	06.1	08.3	
14	202	23.2	351	59.8	01.9	40	51.8	02.9	70	50.8	24.6	114	08.4	08.3	
15	217	25.7	7	00.6	02.9	55	52.7	02.3	85	52.8	24.4	129	10.7	08.3	
16	232	28.1	22	01.3	03.8	70	53.7	01.7	100	54.8	24.3	144	13.1	08.3	
17	247	30.6	37	02.1	-17 04.7	85	54.7	+9 01.1	115	56.7	+18 24.2	159	15.4	+22 08.3	
18	262	33.1	52	02.9	-17 05.6	100	55.6	+9 00.5	130	58.7	+18 24.1	174	17.7	+22 08.3	
19	277	35.5	67	03.7	06.5	115	56.6	+8 59.9	146	00.7	24.0	189	20.1	08.3	
20	292	38.0	82	04.5	07.4	130	57.6	59.3	161	02.7	23.8	204	22.4	08.3	
21	307	40.5	97	05.3	08.3	145	58.6	58.7	176	04.6	23.7	219	24.7	08.3	
22	322	42.9	112	06.1	09.2	160	59.5	58.1	191	06.6	23.6	234	27.1	08.3	
23	337	45.4	127	06.9	10.1	176	00.5	57.5	206	08.6	23.5	249	29.4	08.3	
24	352	47.9	142	07.7	-17 11.0	191	01.5	+8 56.9	221	10.6	+18 23.4	264	31.7	+22 08.3	
Dif	—		+8		-9	+10		-6	+20		-1	+23			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/9 PMG: 11 ^h 55 ^m 6			Edad: 6 ^d 9 PHE { 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 57/0 PMG: 18 ^h 45 ^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	181	03.0	+3 33.7	89	20.0	-24 18.4	43	60 N	3	50	4	42	5	25	16	19
1	196	03.3		103	46.1	22.7	43	58	3	58	47	27	15	55	56	33
2	211	03.5		118	12.2	26.9	40	56	4	05	51	29	36	56	21	53
3	226	03.7		132	38.3	30.9	42	54	12	55	31	19	57	22	09	58
4	241	03.9		147	04.4	34.7	38	52	17	4	58	32	15	05	57	23
5	256	04.1	+3 28.9	161	30.5	-24 38.4	37	50	4	22	5	01	5	34	14	53
6	271	04.4	+3 27.9	175	56.7	-24 42.0	36	45	4	32	5	07	5	37	14	28
7	286	04.6		190	22.8	45.4	34	40	40	12	40	14	08	56	21	57
8	301	04.8		204	48.9	48.7	33	35	47	16	42	13	51	56	38	56
9	316	05.0		219	15.1	51.8	31	30	52	20	44	37	56	23	52	57
10	331	05.3		233	41.2	54.7	29	20	4	59	25	47	13	12	56	***
11	346	05.5	+3 23.1	248	07.4	-24 57.6	29	10 N	5	04	5	29	5	50	12	51
12	1	05.7	+3 22.2	262	33.6	-25 00.2	26	0	5	08	5	32	5	52	12	32
13	16	05.9		276	59.8	02.7	25	10 S	09	34	55	12	12	55	21	57
14	31	06.1		291	26.0	05.1	24	20	10	35	5	57	11	51	55	0
15	46	06.4		305	52.2	07.3	22	30	08	36	6	00	27	54	1	05
16	61	06.6		320	18.4	09.4	21	35	07	36	01	11	13	54	19	60
17	76	06.8	+3 17.4	334	44.7	-25 11.3	19	40	5	05	5	36	6	03	10	56
18	91	07.0	+3 16.4	349	11.0	-25 13.1	18	45	5	02	5	36	6	05	10	37
19	106	07.3		3	37.3	14.7	16	50	4	57	35	07	12	53	2	18
20	121	07.5		18	03.6	16.1	14	52	55	35	08	10	01	52	30	63
21	136	07.7		32	29.9	17.5	14	54	53	34	09	9	47	52	43	64
22	151	07.9		46	56.3	18.6	11	56	50	33	10	32	51	2	58	65
23	166	08.2		61	22.7	19.7	11	58	47	33	12	9	14	49	3	16
24	181	08.4	+3 10.6	75	49.1	-25 20.6	9	60 S	4	43	5	32	6	13	8	51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 28 ^m 7		Mag: -4.7 PMG: 14 ^h 31 ^m		Mag: +1.8 PMG: 11 ^h 15 ^m		Mag: -1.9 PMG: 9 ^h 14 ^m		Mag: +0.1 PMG: 6 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	352	47.9	142	07.7	-17	11.0	191	01.5	+8	56.9	221	10.6	+18	23.4	264	31.7	+22	08.3
1	7	50.3	157	08.5		11.9	206	02.5		56.3	236	12.5		23.2	279	34.1		08.3
2	22	52.8	172	09.3		12.8	221	03.4		55.7	251	14.5		23.1	294	36.4		08.3
3	37	55.3	187	10.1		13.7	236	04.4		55.1	266	16.5		23.0	309	38.7		08.3
4	52	57.7	202	10.9		14.6	251	05.4		54.5	281	18.5		22.9	324	41.1		08.3
5	68	00.2	217	11.8	-17	15.5	266	06.4	+8	53.9	296	20.5	+18	22.8	339	43.4	+22	08.3
6	83	02.6	232	12.6	-17	16.4	281	07.3	+8	53.3	311	22.4	+18	22.6	354	45.7	+22	08.3
7	98	05.1	247	13.4		17.3	296	08.3		52.7	326	24.4		22.5	9	48.1		08.3
8	113	07.6	262	14.2		18.2	311	09.3		52.1	341	26.4		22.4	24	50.4		08.3
9	128	10.0	277	15.0		19.1	326	10.3		51.5	356	28.4		22.3	39	52.7		08.3
10	143	12.5	292	15.8		20.0	341	11.3		50.9	11	30.4		22.2	54	55.1		08.3
11	158	15.0	307	16.6	-17	20.9	356	12.2	+8	50.3	26	32.3	+18	22.0	69	57.4	+22	08.3
12	173	17.4	322	17.5	-17	21.7	11	13.2	+8	49.6	41	34.3	+18	21.9	84	59.7	+22	08.3
13	188	19.9	337	18.3		22.6	26	14.2		49.0	56	36.3		21.8	100	02.1		08.3
14	203	22.4	352	19.1		23.5	41	15.2		48.4	71	38.3		21.7	115	04.4		08.3
15	218	24.8	7	19.9		24.4	56	16.1		47.8	86	40.3		21.6	130	06.7		08.3
16	233	27.3	22	20.8		25.3	71	17.1		47.2	101	42.2		21.4	145	09.1		08.3
17	248	29.7	37	21.6	-17	26.2	86	18.1	+8	46.6	116	44.2	+18	21.3	160	11.4	+22	08.3
18	263	32.2	52	22.4	-17	27.1	101	19.1	+8	46.0	131	46.2	+18	21.2	175	13.7	+22	08.3
19	278	34.7	67	23.2		28.0	116	20.0		45.4	146	48.2		21.1	190	16.1		08.3
20	293	37.1	82	24.1		28.9	131	21.0		44.8	161	50.2		21.0	205	18.4		08.3
21	308	39.6	97	24.9		29.7	146	22.0		44.2	176	52.1		20.8	220	20.7		08.3
22	323	42.1	112	25.7		30.6	161	23.0		43.6	191	54.1		20.7	235	23.1		08.3
23	338	44.5	127	26.6		31.5	176	23.9		43.0	206	56.1		20.6	250	25.4		08.3
24	353	47.0	142	27.4	-17	32.4	191	24.9	+8	42.4	221	58.1	+18	20.5	265	27.7	+22	08.3
Dif	—		+8		-9		+10		-6		+20		-1		+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 3		Edad: 7 ^d 9 PHE { 4 ^h : 56/8 12 ^h : 56/5 20 ^h : 56/3 SD: 15/5 PMG: 19 ^h 40 ^m R°: 53 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	181	08.4	+3	10.6	75	49.1	-25	20.6	7	60 N	18 22	19 04	19 56	17 15 34	22 08 76			
1	196	08.6		09.7	90	15.6	75	21.3	6	58	20	19 00	48	16 51 38	32 72			
2	211	08.8		08.7	104	42.1	75	21.9	4	56	18	18 56	41	32 40	22 51 70			
3	226	09.0		07.8	119	08.6	75	22.3	6	54	17	52	35	16 42	23 07 68			
4	241	09.3		06.8	133	35.1	75	22.6	3	52	15	49	30	16 02 43	21 66			
5	256	09.5	+3	05.8	148	01.7	76	-25	22.8	2	50	18 14	18 47	19 25	15 50 44			
6	271	09.7	+3	04.9	162	28.3	76	-25	22.8	0	45	18 11	18 41	19 16	15 24 47			
7	286	09.9		03.9	176	55.0	77	22.6	2	40	09	36	08	15 04 48	*** ** *			
8	301	10.2		02.9	191	21.7	77	22.3	3	35	07	33	19 02	14 47 49	*** ** *			
9	316	10.4		02.0	205	48.4	77	21.9	4	30	06	30	18 58	33 50	*** ** *			
10	331	10.6		01.0	220	15.2	78	21.3	6	20	03	25	51	14 08 52	0 17 56			
11	346	10.8	+3	00.1	234	42.0	78	-25	20.6	7	10 N	18 01	18 22	18 46	13 47 53			
12	1	11.0	+2	59.1	249	08.8	78	-25	19.8	8	0	17 59	18 19	18 43	13 27 54			
13	16	11.3		58.1	263	35.7	79	18.8	10	10 S	57	18	42	13 07 55	1 18 55			
14	31	11.5		57.2	278	02.7	80	17.6	12	20	55	17	42	12 46 56	1 40 54			
15	46	11.7		56.2	292	29.6	79	16.3	13	30	52	16	44	21 58	2 04 53			
16	61	11.9		55.3	306	56.7	81	14.9	14	35	51	16	46	12 07 58	19 53			
17	76	12.2	+2	54.3	321	23.7	80	-25	13.4	15	40	17 50	18 17	18 48	11 50 59			
18	91	12.4	+2	53.3	335	50.9	82	-25	11.7	17	45	17 48	18 18	18 52	11 30 60			
19	106	12.6		52.4	350	18.0	81	09.8	19	50	47	19	56	11 05 61	3 21 50			
20	121	12.8		51.4	4	45.3	83	07.8	20	52	46	19	58 59	10 53 62	33 50			
21	136	13.1		50.4	19	12.5	82	05.7	21	54	45	20	19 01	39 63	3 47 49			
22	151	13.3		49.5	33	39.9	84	03.5	22	56	44	21	04	23 64	4 03 48			
23	166	13.5		48.5	48	07.2	83	-25	01.1	24	58	43	22	08	10 03 66			
24	181	13.7	+2	47.5	62	34.7	85	-24	58.6	25	60 S	17 42	18 23	19 12	9 39 69			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 24 ^m 8		Mag: -4.7 PMG: 14 ^h 29 ^m			Mag: +1.8 PMG: 11 ^h 14 ^m			Mag: -1.9 PMG: 9 ^h 11 ^m			Mag: +0.1 PMG: 6 ^h 17 ^m						
h	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
0	353	47.0	142	27.4	-17	32.4	191	24.9	+8	42.4	221	58.1	+18	20.5	265	27.7	+22	08.3
1	8	49.5	157	28.2		33.3	206	25.9		41.8	237	00.1		20.3	280	30.1		08.3
2	23	51.9	172	29.1		34.1	221	26.9		41.2	252	02.0		20.2	295	32.4		08.3
3	38	54.4	187	29.9		35.0	236	27.9		40.6	267	04.0		20.1	310	34.8		08.3
4	53	56.9	202	30.8		35.9	251	28.8		40.0	282	06.0		20.0	325	37.1		08.3
5	68	59.3	217	31.6	-17	36.8	266	29.8	+8	39.4	297	08.0	+18	19.9	340	39.4	+22	08.3
6	84	01.8	232	32.5	-17	37.7	281	30.8	+8	38.8	312	10.0	+18	19.7	355	41.8	+22	08.3
7	99	04.2	247	33.3		38.5	296	31.8		38.1	327	11.9		19.6	10	44.1		08.3
8	114	06.7	262	34.1		39.4	311	32.7		37.5	342	13.9		19.5	25	46.4		08.3
9	129	09.2	277	35.0		40.3	326	33.7		36.9	357	15.9		19.4	40	48.8		08.3
10	144	11.6	292	35.8		41.2	341	34.7		36.3	12	17.9		19.3	55	51.1		08.3
11	159	14.1	307	36.7	-17	42.0	356	35.7	+8	35.7	27	19.9	+18	19.1	70	53.5	+22	08.3
12	174	16.6	322	37.6	-17	42.9	11	36.6	+8	35.1	42	21.9	+18	19.0	85	55.8	+22	08.3
13	189	19.0	337	38.4		43.8	26	37.6		34.5	57	23.8		18.9	100	58.1		08.3
14	204	21.5	352	39.3		44.7	41	38.6		33.9	72	25.8		18.8	116	00.5		08.3
15	219	24.0	7	40.1		45.5	56	39.6		33.3	87	27.8		18.7	131	02.8		08.3
16	234	26.4	22	41.0		46.4	71	40.6		32.7	102	29.8		18.5	146	05.2		08.3
17	249	28.9	37	41.9	-17	47.3	86	41.5	+8	32.1	117	31.8	+18	18.4	161	07.5	+22	08.2
18	264	31.4	52	42.7	-17	48.1	101	42.5	+8	31.5	132	33.8	+18	18.3	176	09.8	+22	08.2
19	279	33.8	67	43.6		49.0	116	43.5		30.9	147	35.7		18.2	191	12.2		08.2
20	294	36.3	82	44.4		49.9	131	44.5		30.3	162	37.7		18.1	206	14.5		08.2
21	309	38.7	97	45.3		50.7	146	45.5		29.7	177	39.7		17.9	221	16.8		08.2
22	324	41.2	112	46.2		51.6	161	46.4		29.0	192	41.7		17.8	236	19.2		08.2
23	339	43.7	127	47.1		52.5	176	47.4		28.4	207	43.7		17.7	251	21.5		08.2
24	354	46.1	142	47.9	-17	53.3	191	48.4	+8	27.8	222	45.7	+18	17.6	266	23.9	+22	08.2
Dif	—		+9		-9		+10		-6		+20		-1		+23		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 54 ^m 9			Edad: 8 ^d 9 SD: 15'3 PMG: 20 ^h 33 ^m PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7 R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	181	13.7	+2	47.5	62	34.7	-24	58.6	27	60 N	3 55	4 47	5 30	17 49	20	23 24	84	
1	196	13.9		46.6	77	02.2	85	55.9	27	58	4 03	52	31	29 24		23 44	79	
2	211	14.2		45.6	91	29.7	85	53.1	28	56	10	55	33	17 12	27	** ** *	**	
3	226	14.4		44.7	105	57.3	86	50.2	29	54	16	4 59	34	16 58	30	** ** *	**	
4	241	14.6		43.7	120	25.0	87	47.2	30	52	21	5 02	36	45 32		** ** *	**	
5	256	14.8	+2	42.7	134	52.7	87	-24	44.0	32	50	4 26	5 04	5 37	16 34	34	** ** *	**
6	271	15.1	+2	41.8	149	20.5	88	-24	40.7	33	45	4 35	5 10	5 39	16 11	37	** ** *	**
7	286	15.3		40.8	163	48.3	88	37.2	35	40	42	14	42	15 52	40	0 18	60	
8	301	15.5		39.8	178	16.2	89	33.6	36	35	48	18	43	36 42		34 59		
9	316	15.7		38.9	192	44.2	90	29.9	37	30	4 53	21	45	23 44		0 49	57	
10	331	16.0		37.9	207	12.2	90	26.1	38	20	5 00	25	48	15 00	46	1 13	56	
11	346	16.2	+2	36.9	221	40.3	91	-24	22.1	40	10 N	5 04	5 29	5 50	14 40	48	1 34	54
12	1	16.4	+2	36.0	236	08.5	92	-24	18.1	40	0	5 07	5 31	5 52	14 21	51	1 53	53
13	16	16.6		35.0	250	36.7	92	13.8	43	10 S	08	33	54	14 02	53	2 13	51	
14	31	16.9		34.1	265	05.0	93	09.5	43	20	08	33	55	13 42	55	34 49		
15	46	17.1		33.1	279	33.3	93	05.1	44	30	06	34	57	19 58		2 57	47	
16	61	17.3		32.1	294	01.7	94	-24	00.5	46	35	04	33	5 58	13 05	60	3 12	45
17	76	17.5	+2	31.2	308	30.2	95	-23	55.8	47	40	5 01	5 33	6 00	12 49	62	3 28	44
18	91	17.7	+2	30.2	322	58.8	96	-23	51.0	48	45	4 58	5 32	6 01	12 30	64	3 47	42
19	106	18.0		29.2	337	27.4	96	46.0	50	50	53	31	03	12 06	68	4 11	39	
20	121	18.2		28.3	351	56.1	97	41.0	50	52	51	30	03	11 55	69	23 37		
21	136	18.4		27.3	6	24.8	97	35.8	52	54	48	29	04	42 71		36 36		
22	151	18.6		26.3	20	53.7	99	30.5	53	56	45	28	05	27 73		4 51	34	
23	166	18.9		25.4	35	22.6	99	25.1	54	58	41	27	06	11 09	77	5 09	31	
24	181	19.1	+2	24.4	49	51.5	99	-23	19.5	56	60 S	4 37	5 26	6 07	10 48	80	5 31	27
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 20 ^m 9		Mag: -4.7 PMG: 14 ^h 28 ^m			Mag: +1.8 PMG: 11 ^h 12 ^m			Mag: -1.9 PMG: 9 ^h 08 ^m			Mag: +0.1 PMG: 6 ^h 13 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	354	46.1	142	47.9	-17	53.3	191	48.4	+8	27.8	222	45.7	+18	17.6	266	23.9	+22	08.2
1	9	48.6	157	48.8		54.2	206	49.4		27.2	237	47.6		17.5	281	26.2		08.2
2	24	51.1	172	49.7		55.1	221	50.3		26.6	252	49.6		17.3	296	28.6		08.2
3	39	53.5	187	50.6		55.9	236	51.3		26.0	267	51.6		17.2	311	30.9		08.2
4	54	56.0	202	51.4		56.8	251	52.3		25.4	282	53.6		17.1	326	33.2		08.2
5	69	58.5	217	52.3	-17	57.6	266	53.3	+8	24.8	297	55.6	+18	17.0	341	35.6	+22	08.2
6	85	00.9	232	53.2	-17	58.5	281	54.3	+8	24.2	312	57.6	+18	16.9	356	37.9	+22	08.2
7	100	03.4	247	54.1	-17	59.4	296	55.2		23.6	327	59.6		16.8	11	40.3		08.2
8	115	05.9	262	55.0	-18	00.2	311	56.2		23.0	343	01.5		16.6	26	42.6		08.2
9	130	08.3	277	55.8		01.1	326	57.2		22.4	358	03.5		16.5	41	44.9		08.2
10	145	10.8	292	56.7		01.9	341	58.2		21.7	13	05.5		16.4	56	47.3		08.2
11	160	13.2	307	57.6	-18	02.8	356	59.2	+8	21.1	28	07.5	+18	16.3	71	49.6	+22	08.2
12	175	15.7	322	58.5	-18	03.6	12	00.1	+8	20.5	43	09.5	+18	16.2	86	52.0	+22	08.2
13	190	18.2	337	59.4		04.5	27	01.1		19.9	58	11.5		16.0	101	54.3		08.2
14	205	20.6	353	00.3		05.3	42	02.1		19.3	73	13.5		15.9	116	56.7		08.2
15	220	23.1	8	01.2		06.2	57	03.1		18.7	88	15.4		15.8	131	59.0		08.2
16	235	25.6	23	02.1		07.0	72	04.1		18.1	103	17.4		15.7	147	01.3		08.2
17	250	28.0	38	03.0	-18	07.9	87	05.0	+8	17.5	118	19.4	+18	15.6	162	03.7	+22	08.2
18	265	30.5	53	03.9	-18	08.7	102	06.0	+8	16.9	133	21.4	+18	15.4	177	06.0	+22	08.2
19	280	33.0	68	04.8		09.6	117	07.0		16.3	148	23.4		15.3	192	08.4		08.2
20	295	35.4	83	05.7		10.4	132	08.0		15.7	163	25.4		15.2	207	10.7		08.2
21	310	37.9	98	06.6		11.3	147	09.0		15.0	178	27.4		15.1	222	13.1		08.2
22	325	40.3	113	07.5		12.1	162	09.9		14.4	193	29.3		15.0	237	15.4		08.2
23	340	42.8	128	08.4		13.0	177	10.9		13.8	208	31.3		14.8	252	17.8		08.2
24	355	45.3	143	09.3	-18	13.8	192	11.9	+8	13.2	223	33.3	+18	14.7	267	20.1	+22	08.2
Dif	—		+9		-9		+10		-6		+20		-1		+23			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 54 ^m 6			Edad: 9 ^d 9 PHE { SD: 15°1 PMG: 21 ^h 24 ^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	19.1	+2 24.4	49	51.5	-23 19.5		60 N	18 16	18 58	19 49	18 09 11	** ** *	** ** *
1	196	19.3		64	20.6 ¹⁰¹		13.9 56	58	14	54	42	17 53 16	** ** *	** ** *
2	211	19.5	22.5	78	49.7 ¹⁰¹		08.1 58	56	13	50	35	39 19	0 01 75	
3	226	19.8	21.5	93	18.9 ¹⁰²	-23 02.3	58	54	12	47	30	28 21	15 73	
4	241	20.0	20.5	107	48.1 ¹⁰²	-22 56.3	60	52	11	45	25	17 24	27 71	
5	256	20.2	+2 19.6	122	17.5 ¹⁰⁴	-22 50.2	61	50	18 10	18 42	19 21	17 08 26	0 38 69	
6	271	20.4	+2 18.6	136	46.9 ¹⁰⁴	-22 44.0	62	45	18 08	18 37	19 12	16 48 30	1 00 65	
7	286	20.7	17.6	151	16.3 ¹⁰⁴	37.7	63	40	06	33	19 05	32 33	18 63	
8	301	20.9	16.7	165	45.9 ¹⁰⁶	31.3	64	35	04	30	18 59	18 36	33 60	
9	316	21.1	15.7	180	15.5 ¹⁰⁶	24.8	65	30	03	27	55	16 07 38	1 46 58	
10	331	21.3	14.8	194	45.2 ¹⁰⁷	18.1	67	20	18 01	23	49	15 46 42	2 09 54	
11	346	21.5	+2 13.8	209	15.0 ¹⁰⁸	-22 11.4	67	10 N	17 59	18 20	18 45	15 28 45	2 28 52	
12	1	21.8	+2 12.8	223	44.8 ¹⁰⁸	-22 04.5	69	0	17 58	18 18	18 42	15 12 48	2 46 49	
13	16	22.0	11.9	238	14.8 ¹¹⁰	-21 57.6	69	10 S	56	17	42	14 55 51	3 04 47	
14	31	22.2	10.9	252	44.8 ¹¹⁰	50.6	70	20	55	17	42	37 54	23 44	
15	46	22.4	09.9	267	14.8 ¹¹⁰	43.4	72	30	53	17	45	17 57	44 41	
16	61	22.7	09.0	281	45.0 ¹¹²	36.2	72	35	53	18	47	14 05 59	3 57 39	
17	76	22.9	+2 08.0	296	15.2 ¹¹²	-21 28.8	74	40	17 52	18 19	18 50	13 51 62	4 12 36	
18	91	23.1	+2 07.0	310	45.5 ¹¹³	-21 21.4	74	45	17 51	18 20	18 54	13 34 65	4 29 34	
19	106	23.3	06.1	325	15.9 ¹¹⁴	13.8	76	50	50	22	18 59	14 69	4 50 30	
20	121	23.6	05.1	339	46.3 ¹¹⁴	-21 06.2	76	52	49	23	19 02	13 04 71	5 00 28	
21	136	23.8	04.1	354	16.8 ¹¹⁵	-20 58.4	78	54	48	24	05	12 53 74	12 26	
22	151	24.0	03.2	8	47.4 ¹¹⁶	50.6	78	56	48	25	09	40 77	25 23	
23	166	24.2	02.2	23	18.1 ¹¹⁷	42.7	79	58	47	26	12	26 80	40 20	
24	181	24.5	+2 01.2	37	48.8 ¹¹⁷	-20 34.7	80	60 S	17 46	18 28	19 17	12 08 85	5 58 15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 16 ^m 9		Mag: -4.7 PMG: 14 ^h 26 ^m		Mag: +1.8 PMG: 11 ^h 10 ^m		Mag: -1.9 PMG: 9 ^h 05 ^m		Mag: +0.1 PMG: 6 ^h 10 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	355	45.3	143 09.3	-18 13.8	192 11.9	+8 13.2	223 33.3	+18 14.7	267 20.1	+22 08.2
1	10	47.7	158 10.3	14.7	207 12.9	12.6	238 35.3	14.6	282 22.4	08.2
2	25	50.2	173 11.2	15.5	222 13.9	12.0	253 37.3	14.5	297 24.8	08.2
3	40	52.7	188 12.1	16.4	237 14.8	11.4	268 39.3	14.4	312 27.1	08.2
4	55	55.1	203 13.0	17.2	252 15.8	10.8	283 41.3	14.2	327 29.5	08.2
5	70	57.6	218 13.9	-18 18.0	267 16.8	+8 10.2	298 43.3	+18 14.1	342 31.8	+22 08.2
6	86	00.1	233 14.8	-18 18.9	282 17.8	+8 09.6	313 45.3	+18 14.0	357 34.2	+22 08.2
7	101	02.5	248 15.8	19.7	297 18.8	08.9	328 47.2	13.9	12 36.5	08.2
8	116	05.0	263 16.7	20.5	312 19.7	08.3	343 49.2	13.8	27 38.9	08.2
9	131	07.5	278 17.6	21.4	327 20.7	07.7	358 51.2	13.6	42 41.2	08.2
10	146	09.9	293 18.5	22.2	342 21.7	07.1	13 53.2	13.5	57 43.6	08.2
11	161	12.4	308 19.5	-18 23.1	357 22.7	+8 06.5	28 55.2	+18 13.4	72 45.9	+22 08.2
12	176	14.8	323 20.4	-18 23.9	12 23.7	+8 05.9	43 57.2	+18 13.3	87 48.3	+22 08.2
13	191	17.3	338 21.3	24.7	27 24.7	05.3	58 59.2	13.2	102 50.6	08.2
14	206	19.8	353 22.3	25.6	42 25.6	04.7	74 01.2	13.0	117 53.0	08.2
15	221	22.2	8 23.2	26.4	57 26.6	04.1	89 03.2	12.9	132 55.3	08.2
16	236	24.7	23 24.1	27.2	72 27.6	03.5	104 05.1	12.8	147 57.7	08.2
17	251	27.2	38 25.1	-18 28.0	87 28.6	+8 02.8	119 07.1	+18 12.7	163 00.0	+22 08.2
18	266	29.6	53 26.0	-18 28.9	102 29.6	+8 02.2	134 09.1	+18 12.6	178 02.4	+22 08.2
19	281	32.1	68 27.0	29.7	117 30.5	01.6	149 11.1	12.5	193 04.7	08.2
20	296	34.6	83 27.9	30.5	132 31.5	01.0	164 13.1	12.3	208 07.0	08.2
21	311	37.0	98 28.8	31.4	147 32.5	+8 00.4	179 15.1	12.2	223 09.4	08.2
22	326	39.5	113 29.8	32.2	162 33.5	+7 59.8	194 17.1	12.1	238 11.7	08.2
23	341	42.0	128 30.7	33.0	177 34.5	59.2	209 19.1	12.0	253 14.1	08.2
24	356	44.4	143 31.7	-18 33.8	192 35.5	+7 58.6	224 21.1	+18 11.9	268 16.4	+22 08.2
Dif	—		+9	-8	+10	-6	+20	-1	+23	0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15°9			Edad: 11 ^d 9 PHE	SD: 14°9				Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 53 ^m 8				PMG: 22 ^h 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m			
0	181	29.8	+1 38.0	26	28.6	-16 57.0		60 N	18 10	18 51	19 42	18 28 5		2 13 83				
1	196	30.0		41	01.1 ¹³⁵	47.0 ¹⁰⁰		58	09	48	35	20 8		24 79				
2	211	30.3	36.1	55	33.7 ¹³⁶	36.9 ¹⁰¹		56	08	45	30	13 11		34 76				
3	226	30.5	35.1	70	06.4 ¹³⁷	26.8 ¹⁰¹		54	07	42	24	06 14		42 73				
4	241	30.7	34.1	84	39.1 ¹³⁷	16.5 ¹⁰³		52	06	40	20	18 00 16		50 71				
5	256	30.9	+1 33.1	99	11.9 ¹³⁸	-16 06.3 ¹⁰²		50	18 05	18 38	19 16	17 55 18		2 56 69				
6	271	31.2	+1 32.2	113	44.8 ¹³⁹	-15 55.9 ¹⁰⁴		45	18 04	18 33	19 08	17 44 21		3 11 64				
7	286	31.4	31.2	128	17.7 ¹³⁹	45.5 ¹⁰⁴		40	03	30	19 01	34 25		23 61				
8	301	31.6	30.2	142	50.7 ¹⁴⁰	35.0 ¹⁰⁵		35	02	27	18 56	26 28		33 58				
9	316	31.8	29.3	157	23.8 ¹⁴¹	24.5 ¹⁰⁵		30	18 01	25	52	19 30		41 56				
10	331	32.1	28.3	171	56.9 ¹⁴¹	13.9 ¹⁰⁶		20	17 59	21	47	17 06 35		3 56 51				
11	346	32.3	+1 27.3	186	30.1 ¹⁴²	-15 03.3 ¹⁰⁶		10 N	17 58	18 19	18 43	16 55 39		4 09 48				
12	1	32.5	+1 26.4	201	03.3 ¹⁴²	-14 52.6 ¹⁰⁷		0	17 57	18 18	18 42	16 45 42		4 22 43				
13	16	32.7	25.4	215	36.6 ¹⁴³	41.8 ¹⁰⁸		10 S	56	17	42	34 46		34 40				
14	31	32.9	24.4	230	10.0 ¹⁴⁴	31.0 ¹⁰⁸		20	55	17	43	23 50		4 47 36				
15	46	33.2	23.5	244	43.4 ¹⁴⁴	20.1 ¹⁰⁹		30	54	18	46	10 55		5 01 32				
16	61	33.4	22.5	259	16.9 ¹⁴⁵	-14 09.2 ¹⁰⁹		35	54	19	49	16 03 57		10 29				
17	76	33.6	+1 21.5	273	50.4 ¹⁴⁵	-13 58.2 ¹¹⁰		40	17 54	18 21	18 52	15 54 60		5 19 27				
18	91	33.8	+1 20.5	288	24.0 ¹⁴⁶	-13 47.1 ¹¹¹		45	17 53	18 22	18 57	15 44 64		5 30 24				
19	106	34.1	19.6	302	57.7 ¹⁴⁷	36.0 ¹¹¹		50	53	25	19 03	32 68		44 19				
20	121	34.3	18.6	317	31.4 ¹⁴⁷	24.9 ¹¹¹		52	52	26	06	27 70		50 17				
21	136	34.5	17.6	332	05.2 ¹⁴⁸	13.7 ¹¹²		54	52	27	09	20 73		5 57 15				
22	151	34.7	16.7	346	39.0 ¹⁴⁸	-13 02.5 ¹¹²		56	52	29	13	13 76		6 04 13				
23	166	35.0	15.7	1	12.9 ¹⁴⁹	-12 51.2 ¹¹³		58	51	31	17	15 06 78		13 10				
24	181	35.2	+1 14.7	15	46.8 ¹⁴⁹	-12 39.8 ¹¹⁴		60 S	17 51	18 33	19 22	14 57 81		6 23 6				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 09 ^m 1		Mag: -4.7 PMG: 14 ^h 23 ^m			Mag: +1.8 PMG: 11 ^h 07 ^m			Mag: -1.9 PMG: 8 ^h 58 ^m			Mag: 0.0 PMG: 6 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	357	43.6	143	55.0	-18 53.4		192	59.0	+7 43.9		225	08.9	+18 09.0		269	12.9	+22 08.2	
1	12	46.0	158	56.0	54.2		208	00.0	43.2		240	10.9	08.9		284	15.3	08.2	
2	27	48.5	173	57.0	55.0		223	01.0	42.6		255	12.9	08.8		299	17.6	08.1	
3	42	50.9	188	58.0	55.8		238	02.0	42.0		270	14.9	08.7		314	20.0	08.1	
4	57	53.4	203	59.0	56.6		253	03.0	41.4		285	16.9	08.5		329	22.3	08.1	
5	72	55.9	219	00.0	-18 57.4		268	04.0	+7 40.8		300	18.9	+18 08.4		344	24.7	+22 08.1	
6	87	58.3	234	01.0	-18 58.2		283	04.9	+7 40.2		315	20.9	+18 08.3		359	27.0	+22 08.1	
7	103	00.8	249	02.0	59.0		298	05.9	39.6		330	22.9	08.2		14	29.4	08.1	
8	118	03.3	264	03.0	-18 59.7		313	06.9	39.0		345	24.9	08.1		29	31.7	08.1	
9	133	05.7	279	04.0	-19 00.5		328	07.9	38.3		0	26.9	07.9		44	34.1	08.1	
10	148	08.2	294	05.0	01.3		343	08.9	37.7		15	28.9	07.8		59	36.5	08.1	
11	163	10.7	309	06.0	-19 02.1		358	09.9	+7 37.1		30	30.9	+18 07.7		74	38.8	+22 08.1	
12	178	13.1	324	07.1	-19 02.9		13	10.9	+7 36.5		45	32.9	+18 07.6		89	41.2	+22 08.1	
13	193	15.6	339	08.1	03.7		28	11.8	35.9		60	34.9	07.5		104	43.5	08.1	
14	208	18.1	354	09.1	04.5		43	12.8	35.3		75	36.9	07.4		119	45.9	08.1	
15	223	20.5	9	10.1	05.3		58	13.8	34.7		90	38.9	07.2		134	48.2	08.1	
16	238	23.0	24	11.1	06.1		73	14.8	34.0		105	40.8	07.1		149	50.6	08.1	
17	253	25.4	39	12.2	-19 06.9		88	15.8	+7 33.4		120	42.8	+18 07.0		164	53.0	+22 08.1	
18	268	27.9	54	13.2	-19 07.7		103	16.8	+7 32.8		135	44.8	+18 06.9		179	55.3	+22 08.1	
19	283	30.4	69	14.2	08.4		118	17.7	32.2		150	46.8	06.8		194	57.7	08.1	
20	298	32.8	84	15.2	09.2		133	18.7	31.6		165	48.8	06.6		210	00.0	08.1	
21	313	35.3	99	16.3	10.0		148	19.7	31.0		180	50.8	06.5		225	02.4	08.1	
22	328	37.8	114	17.3	10.8		163	20.7	30.3		195	52.8	06.4		240	04.7	08.1	
23	343	40.2	129	18.3	11.6		178	21.7	29.7		210	54.8	06.3		255	07.1	08.1	
24	358	42.7	144	19.4	-19 12.4		193	22.7	+7 29.1		225	56.8	+18 06.2		270	09.5	+22 08.1	
Dif	—		+10			-8	+10			-6	+20			-1	+24			0

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 53 ^m 5			Edad: 12 ^d 9 PHE { SD: 14'8 PMG: 23 ^h 37 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	181	35.2	+1	14.7	15	46.8	-12	39.8	60 N	4	06	4	57	5	39	18	33
1	196	35.4		13.8	30	20.8 ¹⁵⁰		28.4 ¹¹⁴	58	13	5	00		40	28	7	
2	211	35.6		12.8	44	54.8 ¹⁵⁰		17.0 ¹¹⁴	56	19		03		41	24	9	
3	226	35.8		11.8	59	28.9 ¹⁵¹	-12	05.5 ¹¹⁵	54	24		06		42	20	11	
4	241	36.1		10.8	74	03.0 ¹⁵¹	-11	54.0 ¹¹⁵	52	28		08		42	16	14	
5	256	36.3	+1	09.9	88	37.2 ¹⁵²	-11	42.5 ¹¹⁵	50	4	32	5	11	5	43	18	13
6	271	36.5	+1	08.9	103	11.4 ¹⁵²	-11	30.8 ¹¹⁷	45	4	40	5	15	5	44	18	05
7	286	36.7		07.9	117	45.7 ¹⁵³		19.2 ¹¹⁶	40	46		18		45	17	59	
8	301	37.0		07.0	132	20.1 ¹⁵⁴	-11	07.5 ¹¹⁷	35	51		21		46	54	26	
9	316	37.2		06.0	146	54.4 ¹⁵³	-10	55.8 ¹¹⁷	30	4	55	23		47	49	29	
10	331	37.4		05.0	161	28.9 ¹⁵⁵		44.0 ¹¹⁸	20	5	01	26		48	41	33	
11	346	37.6	+1	04.1	176	03.3 ¹⁵⁴	-10	32.2 ¹¹⁸	10 N	5	04	5	28	5	49	17	34
12	1	37.9	+1	03.1	190	37.8 ¹⁵⁵	-10	20.4 ¹¹⁸	0	5	06	5	30	5	50	17	27
13	16	38.1		02.1	205	12.4 ¹⁵⁶	-10	08.5 ¹¹⁹	10 S		06	30		51	20	45	
14	31	38.3		01.1	219	47.0 ¹⁵⁶	-9	56.6 ¹¹⁹	20		04	30		52	13	49	
15	46	38.5	+1	00.2	234	21.7 ¹⁵⁷		44.6 ¹²⁰	30	5	01	29		52	05	53	
16	61	38.7	+0	59.2	248	56.3 ¹⁵⁶		32.6 ¹²⁰	35	4	58	28		53	17	00	
17	76	39.0	+0	58.2	263	31.1 ¹⁵⁸	-9	20.6 ¹²⁰	40	4	55	5	26	5	53	16	54
18	91	39.2	+0	57.3	278	05.8 ¹⁵⁷	-9	08.5 ¹²¹	45	4	50	5	24	5	53	16	48
19	106	39.4		56.3	292	40.7 ¹⁵⁹	-8	56.5 ¹²⁰	50		44	22		54	40	67	
20	121	39.6		55.3	307	15.5 ¹⁵⁸		44.3 ¹²²	52		41	20		54	37	69	
21	136	39.9		54.3	321	50.4 ¹⁵⁹		32.2 ¹²¹	54		38	19		54	33	71	
22	151	40.1		53.4	336	25.3 ¹⁵⁹		20.0 ¹²²	56		34	17		54	29	73	
23	166	40.3		52.4	351	00.3 ¹⁶⁰	-8	07.8 ¹²²	58		29	16		55	24	76	
24	181	40.5	+0	51.4	5	35.3 ¹⁶⁰	-7	55.6 ¹²²	60 S	4	24	5	13	5	55	16	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 05 ^m 1		Mag: -4.8 PMG: 14 ^h 22 ^m		Mag: +1.8 PMG: 11 ^h 06 ^m		Mag: -1.9 PMG: 8 ^h 55 ^m		Mag: 0.0 PMG: 5 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	358	42.7	144	19.4	193	22.7	225	56.8	270	09.5
1	13	45.2	159	20.4	208	23.7	240	58.8	285	11.8
2	28	47.6	174	21.5	223	24.6	256	00.8	300	14.2
3	43	50.1	189	22.5	238	25.6	271	02.8	315	16.5
4	58	52.5	204	23.5	253	26.6	286	04.8	330	18.9
5	73	55.0	219	24.6	268	27.6	301	06.8	345	21.3
6	88	57.5	234	25.6	283	28.6	316	08.8	0	23.6
7	103	59.9	249	26.7	298	29.6	331	10.8	15	26.0
8	119	02.4	264	27.7	313	30.6	346	12.8	30	28.3
9	134	04.9	279	28.8	328	31.5	1	14.8	45	30.7
10	149	07.3	294	29.8	343	32.5	16	16.8	60	33.1
11	164	09.8	309	30.9	358	33.5	31	18.8	75	35.4
12	179	12.3	324	32.0	13	34.5	46	20.8	90	37.8
13	194	14.7	339	33.0	28	35.5	61	22.8	105	40.1
14	209	17.2	354	34.1	43	36.5	76	24.8	120	42.5
15	224	19.7	9	35.1	58	37.5	91	26.8	135	44.9
16	239	22.1	24	36.2	73	38.4	106	28.8	150	47.2
17	254	24.6	39	37.3	88	39.4	121	30.8	165	49.6
18	269	27.0	54	38.3	103	40.4	136	32.8	180	52.0
19	284	29.5	69	39.4	118	41.4	151	34.8	195	54.3
20	299	32.0	84	40.5	133	42.4	166	36.8	210	56.7
21	314	34.4	99	41.6	148	43.4	181	38.8	225	59.0
22	329	36.9	114	42.6	163	44.4	196	40.8	241	01.4
23	344	39.4	129	43.7	178	45.4	211	42.8	256	03.8
24	359	41.8	144	44.8	193	46.3	226	44.8	271	06.1
Dif	—		+11	-8	+10	-6	+20	-1	+24	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 53 ^m 1			Edad: 13 ^d 9 PHE { SD: 14'8 PMG: *** **m R°: ***													
	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	181	40.5	+0	51.4	5	35.3	-7 55.6	60 N	18 04	18 45	19 35	18 37	4	4 57	78		
1	196	40.7		50.5	20	10.3 ¹⁶⁰	43.3 ¹²³	58	03	42	29	35	6	5 01	75		
2	211	41.0		49.5	34	45.4 ¹⁶¹	31.0 ¹²³	56	02	39	24	33	9	04	73		
3	226	41.2		48.5	49	20.5 ¹⁶¹	18.7 ¹²³	54	02	37	19	31	11	07	71		
4	241	41.4		47.6	63	55.6 ¹⁶¹	-7 06.4 ¹²³	52	01	35	15	30	13	10	69		
5	256	41.6	+0	46.6	78	30.7 ¹⁶¹	-6 54.0 ¹²⁴	50	18 01	18 33	19 11	18 28	15	5 13	66		
6	271	41.9	+0	45.6	93	05.9 ¹⁶²	-6 41.7 ¹²³	45	18 00	18 29	19 04	18 25	19	5 18	63		
7	286	42.1		44.6	107	41.2 ¹⁶³	29.3 ¹²⁴	40	17 59	26	18 58	22	22	23	59		
8	301	42.3		43.7	122	16.4 ¹⁶²	16.8 ¹²⁵	35	59	24	53	20	25	27	56		
9	316	42.5		42.7	136	51.7 ¹⁶³	-6 04.4 ¹²⁴	30	58	22	50	18	27	31	52		
10	331	42.7		41.7	151	27.0 ¹⁶³	-5 51.9 ¹²⁵	20	57	19	45	14	32	37	48		
11	346	43.0	+0	40.8	166	02.3 ¹⁶³	-5 39.4 ¹²⁵	10 N	17 57	18 18	18 42	18 11	36	5 42	44		
12	1	43.2	+0	39.8	180	37.7 ¹⁶⁴	-5 26.9 ¹²⁵	0	17 56	18 17	18 41	18 08	40	5 47	40		
13	16	43.4		38.8	195	13.1 ¹⁶⁴	14.4 ¹²⁵	10 S	56	17	41	05	44	52	36		
14	31	43.6		37.8	209	48.5 ¹⁶⁴	-5 01.9 ¹²⁵	20	56	18	43	18	02	47	57	33	
15	46	43.9		36.9	224	23.9 ¹⁶⁴	-4 49.3 ¹²⁶	30	56	19	47	17	58	52	6	03	28
16	61	44.1		35.9	238	59.4 ¹⁶⁵	36.7 ¹²⁶	35	56	21	50	56	55	06	26		
17	76	44.3	+0	34.9	253	34.8 ¹⁶⁴	-4 24.2 ¹²⁵	40	17 55	18 23	18 54	17	53	59	6	10	22
18	91	44.5	+0	33.9	268	10.3 ¹⁶⁵	-4 11.6 ¹²⁶	45	17 55	18 25	18 59	17	51	61	6	14	19
19	106	44.7		33.0	282	45.8 ¹⁶⁵	-3 58.9 ¹²⁷	50	56	28	19 06	47	66	19	16		
20	121	45.0		32.0	297	21.4 ¹⁶⁶	46.3 ¹²⁶	52	56	29	09	46	68	22	13		
21	136	45.2		31.0	311	56.9 ¹⁶⁵	33.7 ¹²⁶	54	56	31	13	44	70	24	12		
22	151	45.4		30.1	326	32.5 ¹⁶⁶	21.0 ¹²⁷	56	56	33	17	42	73	27	9		
23	166	45.6		29.1	341	08.1 ¹⁶⁶	-3 08.4 ¹²⁶	58	56	35	22	40	75	30	7		
24	181	45.8	+0	28.1	355	43.7 ¹⁶⁶	-2 55.7 ¹²⁷	60 S	17 56	18 37	19 27	17 38	78	6 34	4		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 01 ^m 2		Mag: -4.8 PMG: 14 ^h 20 ^m			Mag: +1.8 PMG: 11 ^h 04 ^m			Mag: -1.9 PMG: 8 ^h 52 ^m			Mag: 0.0 PMG: 5 ^h 55 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	'	°	'	'	°	'	'	°	'	'			
0	359	41.8	144	44.8	-19 30.8	193	46.3	+7 14.3	226	44.8	+18 03.3	271	06.1	+22 08.1			
1	14	44.3	159	45.9	31.6	208	47.3	13.7	241	46.8	03.2	286	08.5	08.1			
2	29	46.8	174	47.0	32.4	223	48.3	13.1	256	48.8	03.1	301	10.9	08.1			
3	44	49.2	189	48.1	33.1	238	49.3	12.5	271	50.9	03.0	316	13.2	08.1			
4	59	51.7	204	49.2	33.9	253	50.3	11.9	286	52.9	02.9	331	15.6	08.1			
5	74	54.1	219	50.3	-19 34.6	268	51.3	+7 11.2	301	54.9	+18 02.8	346	18.0	+22 08.1			
6	89	56.6	234	51.3	-19 35.4	283	52.3	+7 10.6	316	56.9	+18 02.6	1	20.3	+22 08.1			
7	104	59.1	249	52.4	36.1	298	53.3	10.0	331	58.9	02.5	16	22.7	08.1			
8	120	01.5	264	53.5	36.9	313	54.2	09.4	347	00.9	02.4	31	25.0	08.1			
9	135	04.0	279	54.6	37.6	328	55.2	08.8	2	02.9	02.3	46	27.4	08.1			
10	150	06.5	294	55.7	38.4	343	56.2	08.2	17	04.9	02.2	61	29.8	08.1			
11	165	08.9	309	56.8	-19 39.1	358	57.2	+7 07.5	32	06.9	+18 02.1	76	32.1	+22 08.1			
12	180	11.4	324	57.9	-19 39.9	13	58.2	+7 06.9	47	08.9	+18 01.9	91	34.5	+22 08.1			
13	195	13.9	339	59.1	40.6	28	59.2	06.3	62	10.9	01.8	106	36.9	08.1			
14	210	16.3	355	00.2	41.4	44	00.2	05.7	77	12.9	01.7	121	39.2	08.1			
15	225	18.8	10	01.3	42.1	59	01.2	05.1	92	14.9	01.6	136	41.6	08.1			
16	240	21.3	25	02.4	42.9	74	02.1	04.5	107	16.9	01.5	151	44.0	08.1			
17	255	23.7	40	03.5	-19 43.6	89	03.1	+7 03.8	122	18.9	+18 01.4	166	46.3	+22 08.1			
18	270	26.2	55	04.6	-19 44.4	104	04.1	+7 03.2	137	20.9	+18 01.2	181	48.7	+22 08.1			
19	285	28.6	70	05.7	45.1	119	05.1	02.6	152	22.9	01.1	196	51.1	08.1			
20	300	31.1	85	06.9	45.8	134	06.1	02.0	167	24.9	01.0	211	53.4	08.1			
21	315	33.6	100	08.0	46.6	149	07.1	01.4	182	26.9	00.9	226	55.8	08.0			
22	330	36.0	115	09.1	47.3	164	08.1	00.7	197	28.9	00.8	241	58.2	08.0			
23	345	38.5	130	10.2	48.1	179	09.1	+7 00.1	212	30.9	00.7	257	00.5	08.0			
24	0	41.0	145	11.4	-19 48.8	194	10.0	+6 59.5	227	32.9	+18 00.5	272	02.9	+22 08.0			
Dif	—		+11	-7		+10	-6		+20	-1		+24	0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 8			Edad: 14 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 0 ^h 18 ^m R°: 40 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	181	45.8	+0	28.1	355	43.7	-2 55.7	60 N	4 12	5 02	5 44	18 41	4	6 15 79
1	196	46.1		27.1	10	19.3 ¹⁶⁶	43.0 ¹²⁷	58	18	05	44	41	7	16 76
2	211	46.3		26.2	24	54.9 ¹⁶⁶	30.3 ¹²⁷	56	23	07	45	42	9	17 73
3	226	46.5		25.2	39	30.6 ¹⁶⁷	17.6 ¹²⁷	54	28	10	45	42	11	18 70
4	241	46.7		24.2	54	06.3 ¹⁶⁷	-2 04.9 ¹²⁷	52	32	12	46	43	13	19 68
5	256	47.0	+0	23.3	68	41.9 ¹⁶⁶	-1 52.2 ¹²⁷	50	4 35	5 14	5 46	18 43	15	6 19 66
6	271	47.2	+0	22.3	83	17.6 ¹⁶⁷	-1 39.5 ¹²⁷	45	4 43	5 17	5 47	18 44	19	6 21 61
7	286	47.4		21.3	97	53.3 ¹⁶⁷	26.8 ¹²⁷	40	49	20	47	44	23	22 58
8	301	47.6		20.3	112	29.0 ¹⁶⁷	14.1 ¹²⁷	35	53	22	48	45	25	23 55
9	316	47.8		19.4	127	04.7 ¹⁶⁷	-1 01.4 ¹²⁷	30	4 56	24	48	45	28	23 53
10	331	48.1		18.4	141	40.4 ¹⁶⁷	-0 48.6 ¹²⁸	20	5 01	27	49	46	33	25 48
11	346	48.3	+0	17.4	156	16.1 ¹⁶⁷	-0 35.9 ¹²⁷	10 N	5 04	5 28	5 49	18 47	36	6 26 44
12	1	48.5	+0	16.5	170	51.9 ¹⁶⁸	-0 23.2 ¹²⁷	0	5 05	5 29	5 50	18 48	40	6 27 40
13	16	48.7		15.5	185	27.6 ¹⁶⁷	-0 10.5 ¹²⁷	10 S	04	29	50	49	43	28 36
14	31	48.9		14.5	200	03.3 ¹⁶⁷	+0 02.3 ¹²⁸	20	5 02	28	50	49	48	30 32
15	46	49.2		13.5	214	39.1 ¹⁶⁸	15.0 ¹²⁷	30	4 58	26	50	50	53	31 27
16	61	49.4		12.6	229	14.8 ¹⁶⁷	27.7 ¹²⁷	35	55	25	50	51	55	32 25
17	76	49.6	+0	11.6	243	50.6 ¹⁶⁸	+0 40.4 ¹²⁷	40	4 51	5 23	5 50	18 52	58	6 32 23
18	91	49.8	+0	10.6	258	26.3 ¹⁶⁷	+0 53.2 ¹²⁸	45	4 46	5 20	5 50	18 52	62	6 33 19
19	106	50.0		09.6	273	02.0 ¹⁶⁷	+1 05.9 ¹²⁷	50	39	17	49	53	66	35 14
20	121	50.3		08.7	287	37.8 ¹⁶⁸	18.6 ¹²⁷	52	36	16	49	54	68	35 13
21	136	50.5		07.7	302	13.5 ¹⁶⁷	31.3 ¹²⁷	54	32	14	49	54	70	36 11
22	151	50.7		06.7	316	49.3 ¹⁶⁸	44.0 ¹²⁷	56	28	12	49	55	72	36 9
23	166	50.9		05.8	331	25.0 ¹⁶⁷	+1 56.7 ¹²⁷	58	23	10	49	55	76	37 6
24	181	51.2	+0	04.8	346	00.7 ¹⁶⁷	+2 09.4 ¹²⁷	60 S	4 18	5 07	5 49	18 56	78	6 38 3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 53 ^m 3		Mag: -4.8 PMG: 14 ^h 18 ^m		Mag: +1.8 PMG: 11 ^h 03 ^m		Mag: -1.9 PMG: 8 ^h 49 ^m		Mag: 0.0 PMG: 5 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	0	41.0	145	11.4	-19	48.8	194	10.0	+6	59.5
1	15	43.4	160	12.5		49.5	209	11.0		58.9
2	30	45.9	175	13.6		50.3	224	12.0		58.3
3	45	48.4	190	14.8		51.0	239	13.0		57.6
4	60	50.8	205	15.9		51.7	254	14.0		57.0
5	75	53.3	220	17.1	-19	52.5	269	15.0	+6	56.4
6	90	55.7	235	18.2	-19	53.2	284	16.0	+6	55.8
7	105	58.2	250	19.3		53.9	299	17.0		55.2
8	121	00.7	265	20.5		54.6	314	18.0		54.6
9	136	03.1	280	21.6		55.4	329	18.9		53.9
10	151	05.6	295	22.8		56.1	344	19.9		53.3
11	166	08.1	310	23.9	-19	56.8	359	20.9	+6	52.7
12	181	10.5	325	25.1	-19	57.5	14	21.9	+6	52.1
13	196	13.0	340	26.3		58.3	29	22.9		51.5
14	211	15.5	355	27.4		59.0	44	23.9		50.8
15	226	17.9	10	28.6	-19	59.7	59	24.9		50.2
16	241	20.4	25	29.7	-20	00.4	74	25.9		49.6
17	256	22.9	40	30.9	-20	01.2	89	26.9	+6	49.0
18	271	25.3	55	32.1	-20	01.9	104	27.8	+6	48.4
19	286	27.8	70	33.3		02.6	119	28.8		47.7
20	301	30.2	85	34.4		03.3	134	29.8		47.1
21	316	32.7	100	35.6		04.0	149	30.8		46.5
22	331	35.2	115	36.8		04.7	164	31.8		45.9
23	346	37.6	130	38.0		05.5	179	32.8		45.3
24	1	40.1	145	39.1	-20	06.2	194	33.8	+6	44.6
Dif	—		+12		-7		+10		-6	
								+20		-1
									+24	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 15 ^d 9	PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰										
	PMG: 11 ^h 52 ^m 4					SD: 14 ^h 7			PMG: 0 ^h 58 ^m			R°: 40 ^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	181	51.2	+0 04.8	346	00.7	+2 09.4	60 N	17 58	18 39	19 29	18 45	4	7 34	78	
1	196	51.4	03.8	0	36.4 ¹⁶⁷	22.0 ¹²⁶	58	57	36	23	48	7	32	75	
2	211	51.6	02.8	15	12.2 ¹⁶⁸	34.7 ¹²⁷	56	57	34	18	51	10	30	73	
3	226	51.8	01.9	29	47.9 ¹⁶⁷	+2 47.4 ¹²⁷	54	57	32	14	53	12	28	71	
4	241	52.0	+0 00.9	44	23.6 ¹⁶⁷	+3 00.0 ¹²⁶	52	57	30	10	56	14	27	68	
5	256	52.3	-0 00.1	58	59.3 ¹⁶⁷	+3 12.7 ¹²⁷	50	17 57	18 29	19 07	18 58	16	7 25	67	
6	271	52.5	-0 01.1	73	34.9 ¹⁶⁶	+3 25.3 ¹²⁶	45	17 56	18 25	19 00	19 03	20	7 22	62	
7	286	52.7	02.0	88	10.6 ¹⁶⁷	37.9 ¹²⁶	40	56	23	18 55	07	23	20	58	
8	301	52.9	03.0	102	46.3 ¹⁶⁷	+3 50.5 ¹²⁶	35	56	21	50	10	27	18	55	
9	316	53.1	04.0	117	21.9 ¹⁶⁶	+4 03.1 ¹²⁶	30	56	20	47	13	29	16	53	
10	331	53.4	04.9	131	57.6 ¹⁶⁷	15.6 ¹²⁵	20	56	18	43	19	33	13	48	
11	346	53.6	-0 05.9	146	33.2 ¹⁶⁶	+4 28.2 ¹²⁶	10 N	17 56	18 17	18 41	19 23	38	7 10	44	
12	1	53.8	-0 06.9	161	08.8 ¹⁶⁶	+4 40.7 ¹²⁵	0	17 56	18 16	18 40	19 28	41	7 07	41	
13	16	54.0	07.9	175	44.4 ¹⁶⁶	+4 53.3 ¹²⁶	10 S	56	17	41	32	45	04	37	
14	31	54.2	08.8	190	19.9 ¹⁶⁵	+5 05.8 ¹²⁵	20	56	18	44	37	49	7 02	32	
15	46	54.5	09.8	204	55.5 ¹⁶⁶	18.2 ¹²⁴	30	57	21	48	43	53	6 58	29	
16	61	54.7	10.8	219	31.0 ¹⁶⁵	30.7 ¹²⁵	35	57	22	52	46	56	57	25	
17	76	54.9	-0 11.8	234	06.6 ¹⁶⁶	+5 43.2 ¹²⁵	40	17 57	18 24	18 56	19 50	59	6 55	22	
18	91	55.1	-0 12.7	248	42.1 ¹⁶⁵	+5 55.6 ¹²⁴	45	17 58	18 27	19 02	19 54	63	6 52	19	
19	106	55.3	13.7	263	17.5 ¹⁶⁴	+6 08.0 ¹²⁴	50	59	31	09	19 59	67	49	16	
20	121	55.5	14.7	277	53.0 ¹⁶⁵	20.4 ¹²⁴	52	59	33	13	20 02	69	48	13	
21	136	55.8	15.7	292	28.4 ¹⁶⁴	32.7 ¹²³	54	17 59	35	17	04	72	47	11	
22	151	56.0	16.6	307	03.8 ¹⁶⁴	45.1 ¹²⁴	56	18 00	37	21	07	74	45	9	
23	166	56.2	17.6	321	39.2 ¹⁶⁴	+6 57.4 ¹²³	58	00	39	26	11	76	43	7	
24	181	56.4	-0 18.6	336	14.6 ¹⁶⁴	+7 09.7 ¹²³	60 S	18 00	18 42	19 32	20 14	80	6 41	4	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 49 ^m 4		Mag: -4.8 PMG: 14 ^h 16 ^m			Mag: +1.8 PMG: 11 ^h 01 ^m			Mag: -1.9 PMG: 8 ^h 45 ^m			Mag: 0.0 PMG: 5 ^h 47 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	1	40.1	145	39.1	-20 06.2	194	33.8	+6 44.6	228	21.1	+17 57.7	272	59.8	+22 08.0	
1	16	42.6	160	40.3	06.9	209	34.8	44.0	243	23.1	57.6	288	02.2	08.0	
2	31	45.0	175	41.5	07.6	224	35.8	43.4	258	25.2	57.5	303	04.6	08.0	
3	46	47.5	190	42.7	08.3	239	36.7	42.8	273	27.2	57.4	318	06.9	08.0	
4	61	50.0	205	43.9	09.0	254	37.7	42.2	288	29.2	57.3	333	09.3	08.0	
5	76	52.4	220	45.1	-20 09.7	269	38.7	+6 41.5	303	31.2	+17 57.2	348	11.7	+22 08.0	
6	91	54.9	235	46.3	-20 10.4	284	39.7	+6 40.9	318	33.2	+17 57.0	3	14.1	+22 08.0	
7	106	57.3	250	47.5	11.1	299	40.7	40.3	333	35.2	56.9	18	16.4	08.0	
8	121	59.8	265	48.7	11.8	314	41.7	39.7	348	37.2	56.8	33	18.8	08.0	
9	137	02.3	280	49.9	12.5	329	42.7	39.0	3	39.2	56.7	48	21.2	08.0	
10	152	04.7	295	51.1	13.2	344	43.7	38.4	18	41.2	56.6	63	23.6	08.0	
11	167	07.2	310	52.3	-20 13.9	359	44.7	+6 37.8	33	43.2	+17 56.5	78	25.9	+22 08.0	
12	182	09.7	325	53.5	-20 14.6	14	45.7	+6 37.2	48	45.3	+17 56.3	93	28.3	+22 08.0	
13	197	12.1	340	54.7	15.3	29	46.6	36.6	63	47.3	56.2	108	30.7	08.0	
14	212	14.6	355	55.9	16.0	44	47.6	35.9	78	49.3	56.1	123	33.1	08.0	
15	227	17.1	10	57.1	16.7	59	48.6	35.3	93	51.3	56.0	138	35.4	08.0	
16	242	19.5	25	58.3	17.4	74	49.6	34.7	108	53.3	55.9	153	37.8	08.0	
17	257	22.0	40	59.5	-20 18.1	89	50.6	+6 34.1	123	55.3	+17 55.8	168	40.2	+22 08.0	
18	272	24.5	56	00.8	-20 18.8	104	51.6	+6 33.5	138	57.3	+17 55.7	183	42.6	+22 08.0	
19	287	26.9	71	02.0	19.5	119	52.6	32.8	153	59.3	55.5	198	44.9	08.0	
20	302	29.4	86	03.2	20.2	134	53.6	32.2	169	01.4	55.4	213	47.3	08.0	
21	317	31.8	101	04.4	20.9	149	54.6	31.6	184	03.4	55.3	228	49.7	08.0	
22	332	34.3	116	05.7	21.6	164	55.6	31.0	199	05.4	55.2	243	52.1	08.0	
23	347	36.8	131	06.9	22.3	179	56.6	30.3	214	07.4	55.1	258	54.4	08.0	
24	2	39.2	146	08.1	-20 23.0	194	57.5	+6 29.7	229	09.4	+17 55.0	273	56.8	+22 08.0	
Dif	—		+12 -7			+10 -6			+20 -1			+24 0			

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 52 ^m 1			Edad: 16 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1 SD: 14'7 PMG: 1 ^h 38 ^m R°: 41 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	181	56.4	-0	18.6	336	14.6	+7	09.7	60 N	4	17	5	07	5	48	18	49
1	196	56.6		19.5	350	49.9 ¹⁶³		21.9 ¹²²	58	22	09		48	18	55	9	47
2	211	56.9		20.5	5	25.2 ¹⁶³		34.2 ¹²³	56	27	11		49	19	01	11	43
3	226	57.1		21.5	20	00.5 ¹⁶³		46.4 ¹²²	54	32	13		49	05	15	39	74
4	241	57.3		22.5	34	35.8 ¹⁶³		+7 58.6 ¹²²	52	35	15		49	10	16	35	69
5	256	57.5	-0	23.4	49	11.0 ¹⁶²		+8 10.7 ¹²¹	50	4	39	5	17	5	49	19	14
6	271	57.7	-0	24.4	63	46.2 ¹⁶²		+8 22.9 ¹²²	45	4	45	5	20	5	49	19	23
7	286	58.0		25.4	78	21.3 ¹⁶¹		35.0 ¹²¹	40	51	22		49	30	26	18	60
8	301	58.2		26.4	92	56.5 ¹⁶²		47.0 ¹²⁰	35	54	24		49	37	28	13	56
9	316	58.4		27.3	107	31.6 ¹⁶¹		+8 59.1 ¹²¹	30	4	58	25	49	42	31	09	53
10	331	58.6		28.3	122	06.6 ¹⁶⁰		+9 11.1 ¹²⁰	20	5	02	27	49	19	52	36	8
11	346	58.8	-0	29.3	136	41.7 ¹⁶¹		+9 23.0 ¹¹⁹	10 N	5	04	5	28	5	49	20	01
12	1	59.0	-0	30.3	151	16.6 ¹⁵⁹		+9 35.0 ¹²⁰	0	5	04	5	28	5	49	20	09
13	16	59.3		31.2	165	51.6 ¹⁶⁰		46.9 ¹¹⁹	10 S	03	28		48	17	46	41	38
14	31	59.5		32.2	180	26.5 ¹⁵⁹		+9 58.7 ¹¹⁸	20	5	00	26	48	26	50	34	35
15	46	59.7		33.2	195	01.4 ¹⁵⁹		+10 10.6 ¹¹⁹	30	4	56	24	47	36	55	27	30
16	61	59.9		34.1	209	36.3 ¹⁵⁹		22.4 ¹¹⁸	35	52	22		47	42	57	22	28
17	77	00.1	-0	35.1	224	11.1 ¹⁵⁸		+10 34.1 ¹¹⁷	40	4	48	5	19	5	46	20	49
18	92	00.4	-0	36.1	238	45.8 ¹⁵⁷		+10 45.9 ¹¹⁸	45	4	42	5	17	5	46	20	57
19	107	00.6		37.1	253	20.6 ¹⁵⁸		+10 57.5 ¹¹⁶	50	35	13		45	21	06	68	05
20	122	00.8		38.0	267	55.2 ¹⁵⁶		+11 09.2 ¹¹⁷	52	31	11		45	11	70	7	01
21	137	01.0		39.0	282	29.9 ¹⁵⁷		20.8 ¹¹⁶	54	27	09		44	16	72	6	58
22	152	01.2		40.0	297	04.5 ¹⁵⁶		32.4 ¹¹⁶	56	22	07		44	21	75	54	11
23	167	01.4		41.0	311	39.1 ¹⁵⁶		43.9 ¹¹⁵	58	17	04		43	27	78	50	8
24	182	01.7	-0	41.9	326	13.6 ¹⁵⁵		+11 55.4 ¹¹⁵	60 S	4	11	5	01	5	43	21	34
																	5
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 45 ^m 5		Mag: -4.8 PMG: 14 ^h 14 ^m			Mag: +1.8 PMG: 10 ^h 59 ^m			Mag: -2.0 PMG: 8 ^h 42 ^m			Mag: 0.0 PMG: 5 ^h 43 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	2	39.2	146	08.1	-20	23.0	194	57.5	+6	29.7	229	09.4	+17	55.0	273	56.8	
1	17	41.7	161	09.4		23.7	209	58.5		29.1	244	11.4		54.8	288	59.2	
2	32	44.2	176	10.6		24.3	224	59.5		28.5	259	13.4		54.7	304	01.6	
3	47	46.6	191	11.8		25.0	240	00.5		27.9	274	15.5		54.6	319	04.0	
4	62	49.1	206	13.1		25.7	255	01.5		27.2	289	17.5		54.5	334	06.3	
5	77	51.6	221	14.3	-20	26.4	270	02.5	+6	26.6	304	19.5	+17	54.4	349	08.7	
6	92	54.0	236	15.6	-20	27.1	285	03.5	+6	26.0	319	21.5	+17	54.3	4	11.1	
7	107	56.5	251	16.8		27.8	300	04.5		25.4	334	23.5		54.2	19	13.5	
8	122	59.0	266	18.1		28.4	315	05.5		24.8	349	25.5		54.0	34	15.8	
9	138	01.4	281	19.3		29.1	330	06.5		24.1	4	27.5		53.9	49	18.2	
10	153	03.9	296	20.6		29.8	345	07.5		23.5	19	29.6		53.8	64	20.6	
11	168	06.3	311	21.8	-20	30.5	0	08.4	+6	22.9	34	31.6	+17	53.7	79	23.0	
12	183	08.8	326	23.1	-20	31.1	15	09.4	+6	22.3	49	33.6	+17	53.6	94	25.4	
13	198	11.3	341	24.4		31.8	30	10.4		21.6	64	35.6		53.5	109	27.7	
14	213	13.7	356	25.6		32.5	45	11.4		21.0	79	37.6		53.3	124	30.1	
15	228	16.2	11	26.9		33.2	60	12.4		20.4	94	39.6		53.2	139	32.5	
16	243	18.7	26	28.2		33.8	75	13.4		19.8	109	41.7		53.1	154	34.9	
17	258	21.1	41	29.4	-20	34.5	90	14.4	+6	19.1	124	43.7	+17	53.0	169	37.3	
18	273	23.6	56	30.7	-20	35.2	105	15.4	+6	18.5	139	45.7	+17	52.9	184	39.7	
19	288	26.1	71	32.0		35.8	120	16.4		17.9	154	47.7		52.8	199	42.0	
20	303	28.5	86	33.3		36.5	135	17.4		17.3	169	49.7		52.7	214	44.4	
21	318	31.0	101	34.6		37.2	150	18.4		16.7	184	51.7		52.5	229	46.8	
22	333	33.4	116	35.8		37.8	165	19.4		16.0	199	53.8		52.4	244	49.2	
23	348	35.9	131	37.1		38.5	180	20.3		15.4	214	55.8		52.3	259	51.6	
24	3	38.4	146	38.4	-20	39.2	195	21.3	+6	14.8	229	57.8	+17	52.2	274	53.9	
Dif	—		+13	-7			+10	-6			+20	-1			+24		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 15 ^h 9			Edad: 17 ^d 9	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /3 20 ^h : 54 ^m /3	SD: 14 ^h 7			PMG: 2 ^h 19 ^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							
0	182	01.7	-0	41.9	326	13.6	+11	55.4	60 N	17 51	18 33	19 22	18 55	8	10 13	82								
1	197	01.9		42.9	340	48.0 ¹⁵⁴	+12	06.8 ¹¹⁴	58	52	31	17	19 04	12	10 04	79								
2	212	02.1		43.9	355	22.4 ¹⁵⁴		18.2 ¹¹⁴	56	52	29	13	12 16		9 57	75								
3	227	02.3		44.9	9	56.8 ¹⁵⁴		29.5 ¹¹³	54	52	27	09	20 18		50 7	75								
4	242	02.5		45.8	24	31.1 ¹⁵³		40.8 ¹¹³	52	52	26	05	26 21		44 71									
5	257	02.7	-0	46.8	39	05.4 ¹⁵³	+12	52.1 ¹¹³	50	17 52	18 24	19 02	19 32	23	9 39	68								
6	272	03.0	-0	47.8	53	39.7 ¹⁵³	+13	03.3 ¹¹²	45	17 52	18 22	18 56	19 45	27	9 27	64								
7	287	03.2		48.7	68	13.8 ¹⁵¹		14.5 ¹¹²	40	53	20	51	19 56	30	18	60								
8	302	03.4		49.7	82	48.0 ¹⁵²		25.6 ¹¹¹	35	53	18	48	20 05	33	09	58								
9	317	03.6		50.7	97	22.0 ¹⁵⁰		36.6 ¹¹⁰	30	53	17	45	13 35		9 02	55								
10	332	03.8		51.7	111	56.1 ¹⁵¹		47.7 ¹¹¹	20	54	16	41	28 38		8 50	51								
11	347	04.0	-0	52.6	126	30.0 ¹⁴⁹	+13	58.6 ¹⁰⁹	10 N	17 54	18 15	18 40	20 40	42	8 39	48								
12	2	04.3	-0	53.6	141	03.9 ¹⁴⁹	+14	09.5 ¹⁰⁹	0	17 55	18 16	18 40	20 52	45	8 29	44								
13	17	04.5		54.6	155	37.8 ¹⁴⁹		20.4 ¹⁰⁹	10 S	56	17	41	21 03	49	19	41								
14	32	04.7		55.6	170	11.6 ¹⁴⁸		31.2 ¹⁰⁸	20	57	19	44	16 52		8 09	37								
15	47	04.9		56.5	184	45.4 ¹⁴⁸		41.9 ¹⁰⁷	30	58	22	50	31 56		7 57	32								
16	62	05.1		57.5	199	19.1 ¹⁴⁷	+14	52.6 ¹⁰⁷	35	58	24	53	39 58		50	30								
17	77	05.3	-0	58.5	213	52.7 ¹⁴⁶	+15	03.3 ¹⁰⁷	40	17 59	18 26	18 58	21 49	61	7 42	27								
18	92	05.6	-0	59.5	228	26.3 ¹⁴⁶	+15	13.8 ¹⁰⁵	45	18 00	18 30	19 04	22 00	65	7 33	24								
19	107	05.8	-1	00.4	242	59.8 ¹⁴⁵		24.4 ¹⁰⁶	50	02	34	12	14 69		22	20								
20	122	06.0		01.4	257	33.3 ¹⁴⁵		34.8 ¹⁰⁴	52	02	36	16	21 71		17	17								
21	137	06.2		02.4	272	06.7 ¹⁴⁴		45.2 ¹⁰⁴	54	03	38	20	28 73		11	16								
22	152	06.4		03.3	286	40.0 ¹⁴³	+15	55.6 ¹⁰⁴	56	03	41	25	36 76		7 05	13								
23	167	06.6		04.3	301	13.3 ¹⁴³	+16	05.9 ¹⁰³	58	04	44	31	45 80		6 58	10								
24	182	06.9	-1	05.3	315	46.5 ¹⁴²	+16	16.1 ¹⁰²	60 S	18 05	18 47	19 38	22 56	84	6 50	7								
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO												
	PMG 23 ^h 41 ^m 5		Mag: -4.8 PMG: 14 ^h 12 ^m			Mag: +1.8 PMG: 10 ^h 58 ^m			Mag: -2.0 PMG: 8 ^h 39 ^m			Mag: 0.0 PMG: 5 ^h 40 ^m												
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	3	38.4	146	38.4	-20	39.2	195	21.3	+6	14.8	229	57.8	+17	52.2	274	53.9	+22	07.9						
1	18	40.8	161	39.7		39.8	210	22.3		14.2	244	59.8		52.1	289	56.3		07.9						
2	33	43.3	176	41.0		40.5	225	23.3		13.5	260	01.8		52.0	304	58.7		07.9						
3	48	45.8	191	42.3		41.1	240	24.3		12.9	275	03.8		51.8	320	01.1		07.9						
4	63	48.2	206	43.6		41.8	255	25.3		12.3	290	05.9		51.7	335	03.5		07.9						
5	78	50.7	221	44.9	-20	42.5	270	26.3	+6	11.7	305	07.9	+17	51.6	350	05.9	+22	07.9						
6	93	53.2	236	46.2	-20	43.1	285	27.3	+6	11.0	320	09.9	+17	51.5	5	08.2	+22	07.9						
7	108	55.6	251	47.5		43.8	300	28.3		10.4	335	11.9		51.4	20	10.6		07.9						
8	123	58.1	266	48.8		44.4	315	29.3		09.8	350	13.9		51.3	35	13.0		07.9						
9	139	00.6	281	50.1		45.1	330	30.3		09.2	5	16.0		51.2	50	15.4		07.9						
10	154	03.0	296	51.4		45.7	345	31.3		08.5	20	18.0		51.0	65	17.8		07.9						
11	169	05.5	311	52.8	-20	46.4	0	32.3	+6	07.9	35	20.0	+17	50.9	80	20.2	+22	07.9						
12	184	07.9	326	54.1	-20	47.0	15	33.2	+6	07.3	50	22.0	+17	50.8	95	22.5	+22	07.9						
13	199	10.4	341	55.4		47.7	30	34.2		06.7	65	24.0		50.7	110	24.9		07.9						
14	214	12.9	356	56.7		48.3	45	35.2		06.0	80	26.0		50.6	125	27.3		07.9						
15	229	15.3	11	58.0		49.0	60	36.2		05.4	95	28.1		50.5	140	29.7		07.9						
16	244	17.8	26	59.4		49.6	75	37.2		04.8	110	30.1		50.4	155	32.1		07.9						
17	259	20.3	42	00.7	-20	50.3	90	38.2	+6	04.2	125	32.1	+17	50.2	170	34.5	+22	07.9						
18	274	22.7	57	02.0	-20	50.9	105	39.2	+6	03.6	140	34.1	+17	50.1	185	36.9	+22	07.9						
19	289	25.2	72	03.4		51.6	120	40.2		02.9	155	36.2		50.0	200	39.2		07.9						
20	304	27.7	87	04.7		52.2	135	41.2		02.3	170	38.2		49.9	215	41.6		07.9						
21	319	30.1	102	06.0		52.8	150	42.2		01.7	185	40.2		49.8	230	44.0		07.9						
22	334	32.6	117	07.4		53.5	165	43.2		01.1	200	42.2		49.7	245	46.4		07.9						
23	349	35.0	132	08.7		54.1	180	44.2	+6	00.4	215	44.2		49.6	260	48.8		07.9						
24	4	37.5	147	10.1	-20	54.7	195	45.2	+5	59.8	230	46.3	+17	49.4	275	51.2	+22	07.9						
Dif	—		+13			-6	+10			-6			+20			-1			+24			0		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 19 ^d 9 PHE	SD: 14'9				Civil			Hora	R°	Hora	R°
	PMG: 11 ^h 51 ^m 0				PMG: 3 ^h 48 ^m				Náutico						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	182	12.0	-1 28.7	304	43.7	+20 00.7	84	60 N	17 45	18 27	19 16	19 17 24	12 59 82		
1	197	12.2	29.6	319	15.2 ¹²⁵	09.1	84	58	46	25	11	34 28	43 76		
2	212	12.4	30.6	333	46.6 ¹²⁴	17.4	83	56	46	23	07	19 49 31	28 74		
3	227	12.6	31.6	348	18.0 ¹²⁴	25.6	82	54	47	22	03	20 02 33	16 71		
4	242	12.9	32.6	2	49.2 ¹²²	33.7	81	52	47	21	19 00	13 35	12 05 69		
5	257	13.1	-1 33.5	17	20.4 ¹²²	+20 41.8	81	50	17 48	18 20	18 58	20 23 37	11 56 67		
6	272	13.3	-1 34.5	31	51.6 ¹²²	+20 49.7	79	45	17 49	18 18	18 52	20 44 40	11 36 64		
7	287	13.5	35.5	46	22.6 ¹²⁰	+20 57.6	79	40	49	16	48	21 01 42	20 61		
8	302	13.7	36.4	60	53.6 ¹²⁰	+21 05.4	78	35	50	15	45	15 44	11 06 59		
9	317	13.9	37.4	75	24.5 ¹¹⁹	13.1	77	30	51	15	42	28 45	10 54 58		
10	332	14.1	38.4	89	55.3 ¹¹⁸	20.7	76	20	52	14	39	21 49 48	34 54		
11	347	14.3	-1 39.4	104	26.0 ¹¹⁷	+21 28.2	75	10 N	17 53	18 14	18 38	22 08 50	10 16 52		
12	2	14.6	-1 40.3	118	56.7 ¹¹⁷	+21 35.6	74	0	17 54	18 15	18 39	22 25 52	10 00 50		
13	17	14.8	41.3	133	27.2 ¹¹⁵	42.9	73	10 S	56	17	41	22 43 53	9 44 47		
14	32	15.0	42.3	147	57.7 ¹¹⁵	50.1	72	20	57	19	45	23 02 55	26 45		
15	47	15.2	43.3	162	28.2 ¹¹⁵	+21 57.2	71	30	17 59	23	51	24 58	9 06 42		
16	62	15.4	44.2	176	58.5 ¹¹³	+22 04.2	70	35	18 00	25	18 55	37 59	8 55 40		
17	77	15.6	-1 45.2	191	28.8 ¹¹³	+22 11.2	70	40	18 01	18 28	19 00	23 52 60	8 41 39		
18	92	15.8	-1 46.2	205	59.0 ¹¹²	+22 18.0	68	45	18 03	18 32	19 07	*** ** *	8 26 35		
19	107	16.0	47.1	220	29.1 ¹¹¹	24.7	67	50	05	37	16	*** ** *	8 06 32		
20	122	16.3	48.1	234	59.1 ¹¹⁰	31.3	66	52	05	39	20	*** ** *	7 57 30		
21	137	16.5	49.1	249	29.1 ¹¹⁰	37.8	65	54	06	42	24	*** ** *	47 28		
22	152	16.7	50.1	263	59.0 ¹⁰⁹	44.2	64	56	07	45	30	*** ** *	36 25		
23	167	16.9	51.0	278	28.8 ¹⁰⁸	50.5	63	58	09	48	36	0 05 79	22 22		
24	182	17.1	-1 52.0	292	58.5 ¹⁰⁷	+22 56.7	62	60 S	18 10	18 52	19 43	0 20 84	7 07 17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 33 ^m 7		Mag: -4.8 PMG: 14 ^h 08 ^m		Mag: +1.8 PMG: 10 ^h 55 ^m		Mag: -2.0 PMG: 8 ^h 33 ^m		Mag: 0.0 PMG: 5 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	5	36.7	147	43.1	-21	09.7	196	09.0	+5	44.8
1	20	39.1	162	44.5		10.3	211	10.0		44.2
2	35	41.6	177	46.0		10.9	226	11.0		43.5
3	50	44.0	192	47.4		11.5	241	12.0		42.9
4	65	46.5	207	48.8		12.1	256	13.0		42.3
5	80	49.0	222	50.2	-21	12.7	271	14.0	+5	41.7
6	95	51.4	237	51.6	-21	13.3	286	15.0	+5	41.0
7	110	53.9	252	53.0		13.9	301	16.0		40.4
8	125	56.4	267	54.5		14.5	316	17.0		39.8
9	140	58.8	282	55.9		15.1	331	18.0		39.1
10	156	01.3	297	57.3		15.7	346	19.0		38.5
11	171	03.8	312	58.8	-21	16.3	1	20.0	+5	37.9
12	186	06.2	328	00.2	-21	16.9	16	20.9	+5	37.3
13	201	08.7	343	01.7		17.5	31	21.9		36.6
14	216	11.1	358	03.1		18.1	46	22.9		36.0
15	231	13.6	13	04.5		18.7	61	23.9		35.4
16	246	16.1	28	06.0		19.3	76	24.9		34.8
17	261	18.5	43	07.4	-21	19.9	91	25.9	+5	34.1
18	276	21.0	58	08.9	-21	20.4	106	26.9	+5	33.5
19	291	23.5	73	10.3		21.0	121	27.9		32.9
20	306	25.9	88	11.8		21.6	136	28.9		32.3
21	321	28.4	103	13.3		22.2	151	29.9		31.6
22	336	30.9	118	14.7		22.8	166	30.9		31.0
23	351	33.3	133	16.2		23.4	181	31.9		30.4
24	6	35.8	148	17.7	-21	24.0	196	32.9	+5	29.7
Dif	—		+14	-6		+10	-6	+20		-1
										+24
										0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 11 ^h 50 ^m 7			Edad: 20 ^d 9 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 6 20 ^h : 55 ^h 9 PMG: 4 ^h 38 ^m 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	17.1	-1	52.0	292	58.5	+22	56.7	60 N	4 27	5 16	5 58	19 41	40	14 21 71
1	197	17.3		53.0	307	28.2	+23	02.8	58	32	18	57	20 02	44	13 59 69
2	212	17.5		54.0	321	57.7		08.8	56	36	19	56	20 45		42 66
3	227	17.7		54.9	336	27.2		14.7	54	39	21	56	35 47		27 65
4	242	17.9		55.9	350	56.6		20.5	52	42	22	55	20 48	48	14 64
5	257	18.2	-1	56.9	5	26.0	+23	26.1	50	4 45	5 23	5 55	21 00	48	13 03 63
6	272	18.4	-1	57.9	19	55.3	+23	31.7	45	4 50	5 25	5 54	21 24	49	12 40 60
7	287	18.6		58.8	34	24.4		37.1	40	55	26	53	43 51		21 59
8	302	18.8	-1	59.8	48	53.6		42.4	35	4 58	27	52	21 59	52	12 05 58
9	317	19.0	-2	00.8	63	22.6		47.6	30	5 00	28	51	22 13	52	11 52 57
10	332	19.2		01.7	77	51.6		52.7	20	03	28	50	37 53		28 56
11	347	19.4	-2	02.7	92	20.4	+23	57.7	10 N	5 03	5 28	5 49	22 58	53	11 08 55
12	2	19.6	-2	03.7	106	49.3	+24	02.5	0	5 03	5 27	5 47	23 17	55	10 50 53
13	17	19.8		04.7	121	18.0		07.3	10 S	5 01	25	46	36 56		31 52
14	32	20.0		05.6	135	46.7		11.9	20	4 57	22	44	23 57	56	10 11 51
15	47	20.3		06.6	150	15.2		16.4	30	51	18	42	*** ** *		9 48 49
16	62	20.5		07.6	164	43.8		20.8	35	46	16	41	*** ** *		35 47
17	77	20.7	-2	08.6	179	12.2	+24	25.0	40	4 41	5 13	5 40	*** ** *		9 20 46
18	92	20.9	-2	09.5	193	40.6	+24	29.2	45	4 34	5 09	5 38	0 09	63	9 01 44
19	107	21.1		10.5	208	08.9		33.2	50	25	04	36	32 65		8 38 42
20	122	21.3		11.5	222	37.1		37.0	52	21	5 01	35	42 67		27 41
21	137	21.5		12.4	237	05.3		40.8	54	16	4 59	34	0 54	69	15 39
22	152	21.7		13.4	251	33.4		44.4	56	11	56	33	1 08	71	8 01 37
23	167	21.9		14.4	266	01.4		47.9	58	4 05	52	32	24 74		7 44 35
24	182	22.1	-2	15.4	280	29.3	+24	51.3	60 S	3 58	4 49	5 31	1 44	78	7 24 31
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 29 ^m 8		Mag: -4.8 PMG: 14 ^h 05 ^m			Mag: +1.8 PMG: 10 ^h 53 ^m			Mag: -2.0 PMG: 8 ^h 29 ^m			Mag: 0.0 PMG: 5 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	6	35.8	148	17.7	-21	24.0	196	32.9	+5	29.7	232	23.5	+17	44.0	277
1	21	38.3	163	19.1		24.5	211	33.9		29.1	247	25.5		43.9	292
2	36	40.7	178	20.6		25.1	226	34.9		28.5	262	27.5		43.8	307
3	51	43.2	193	22.1		25.7	241	35.9		27.9	277	29.6		43.6	322
4	66	45.6	208	23.6		26.3	256	36.9		27.2	292	31.6		43.5	337
5	81	48.1	223	25.1	-21	26.8	271	37.9	+5	26.6	307	33.6	+17	43.4	352
6	96	50.6	238	26.5	-21	27.4	286	38.9	+5	26.0	322	35.7	+17	43.3	8
7	111	53.0	253	28.0		28.0	301	39.9		25.3	337	37.7		43.2	23
8	126	55.5	268	29.5		28.6	316	40.8		24.7	352	39.7		43.1	38
9	141	58.0	283	31.0		29.1	331	41.8		24.1	7	41.8		43.0	53
10	157	00.4	298	32.5		29.7	346	42.8		23.5	22	43.8		42.9	68
11	172	02.9	313	34.0	-21	30.3	1	43.8	+5	22.8	37	45.8	+17	42.7	83
12	187	05.4	328	35.5	-21	30.8	16	44.8	+5	22.2	52	47.9	+17	42.6	98
13	202	07.8	343	37.0		31.4	31	45.8		21.6	67	49.9		42.5	113
14	217	10.3	358	38.5		32.0	46	46.8		20.9	82	51.9		42.4	128
15	232	12.8	373	40.0		32.5	61	47.8		20.3	97	53.9		42.3	143
16	247	15.2	388	41.5		33.1	76	48.8		19.7	112	56.0		42.2	158
17	262	17.7	403	43.1	-21	33.6	91	49.8	+5	19.1	127	58.0	+17	42.1	173
18	277	20.1	418	44.6	-21	34.2	106	50.8	+5	18.4	143	00.0	+17	42.0	188
19	292	22.6	433	46.1		34.8	121	51.8		17.8	158	02.1		41.8	203
20	307	25.1	448	47.6		35.3	136	52.8		17.2	173	04.1		41.7	218
21	322	27.5	463	49.2		35.9	151	53.8		16.5	188	06.1		41.6	233
22	337	30.0	478	50.7		36.4	166	54.8		15.9	203	08.2		41.5	248
23	352	32.5	493	52.2		37.0	181	55.8		15.3	218	10.2		41.4	263
24	7	34.9	508	53.7	-21	37.5	196	56.8	+5	14.7	233	12.2	+17	41.3	278
Dif	—		+15		-6		+10		-6		+20		-1		+24

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 21 ^d 9 PHE { 4 ^h : 56'1 12 ^h : 56'4 20 ^h : 56'6											
	PMG: 11 ^h 50 ^m 4			SD: 15°2 PMG: 5 ^h 30 ^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		
0	182	22.1	-2	15.4	280	29.3	+24 51.3	60 N	17 39	18 21	19 09	20 21 65	15 32 52		
1	197	22.3		16.3	294	57.2	89 54.6	58	40	19 05	20 46 63	15 08 53			
2	212	22.6		17.3	309	25.1	89 +24 57.7	56	41	18 19 01	21 05 63	14 48 54			
3	227	22.8		18.3	323	52.8	87 +25 00.7	54	42	17 18 58	22 61	32 54			
4	242	23.0		19.2	338	20.5	87 03.5	52	43	16 55	36 61	18 54			
5	257	23.2	-2	20.2	352	48.1	86 +25 06.3	50	17 43	18 15	18 53	21 48 61	14 06 54		
6	272	23.4	-2	21.2	7	15.7	86 +25 08.9	45	17 45	18 14	18 48	22 13 61	13 40 55		
7	287	23.6		22.2	21	43.2	85 11.3	40	46	13 44	34 59	20 55			
8	302	23.8		23.1	36	10.6	84 13.6	35	47	12 42	22 51 59	13 03 56			
9	317	24.0		24.1	50	38.0	84 15.8	30	48	12 40	23 05 59	12 49 55			
10	332	24.2		25.1	65	05.3	83 17.9	20	50	12 38	30 58	24 56			
11	347	24.4	-2	26.1	79	32.5	82 +25 19.8	10 N	17 52	18 13	18 37	23 51 58	12 03 55		
12	2	24.6	-2	27.0	93	59.7	82 +25 21.6	0	17 54	18 14	18 38	*** ** *	11 43 55		
13	17	24.8		28.0	108	26.8	81 23.2	10 S	55	16 41	*** ** *	23 55			
14	32	25.0		29.0	122	53.9	81 24.7	20	17 58	20 45	*** ** *	11 02 55			
15	47	25.3		29.9	137	20.9	80 26.1	30	18 00	24 52	0 22 56	10 37 55			
16	62	25.5		30.9	151	47.9	80 27.3	35	01	27 18 57	36 57	22 56			
17	77	25.7	-2	31.9	166	14.8	79 +25 28.4	40	18 03	18 30	19 02	0 52 58	10 06 55		
18	92	25.9	-2	32.9	180	41.7	79 +25 29.3	45	18 05	18 35	19 10	1 12 58	9 45 55		
19	107	26.1		33.8	195	08.5	78 30.1	50	08 40	19 37 59	20 55				
20	122	26.3		34.8	209	35.2	77 30.8	52	09 43	23 1 49 60	9 08 54				
21	137	26.5		35.8	224	01.9	77 31.3	54	10 46	29 2 03 60	8 54 54				
22	152	26.7		36.7	238	28.6	77 31.6	56	11 49	34 19 61	38 53				
23	167	26.9		37.7	252	55.2	76 31.9	58	13 53	41 2 38 62	8 19 52				
24	182	27.1	-2	38.7	267	21.8	76 +25 31.9	60 S	18 15	18 57	19 49	3 02 63	7 55 51		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 23 ^h 25 ^m 8		Mag: -4.8 PMG: 14 ^h 03 ^m		Mag: +1.8 PMG: 10 ^h 51 ^m		Mag: -2.0 PMG: 8 ^h 26 ^m		Mag: 0.0 PMG: 5 ^h 24 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	7	34.9	148	53.7	196	56.8	+5 14.7	233	12.2	+17 41.3	278	43.6	+22 07.7		
1	22	37.4	163	55.3	211	57.8	14.0	248	14.3	41.2	293	46.0	07.7		
2	37	39.9	178	56.8	226	58.8	13.4	263	16.3	41.1	308	48.4	07.7		
3	52	42.3	193	58.4	241	59.8	12.8	278	18.3	41.0	323	50.8	07.7		
4	67	44.8	208	59.9	257	00.8	12.1	293	20.4	40.8	338	53.2	07.7		
5	82	47.3	224	01.5	272	01.8	+5 11.5	308	22.4	+17 40.7	353	55.6	+22 07.7		
6	97	49.7	239	03.0	287	02.8	+5 10.9	323	24.5	+17 40.6	8	58.0	+22 07.7		
7	112	52.2	254	04.6	302	03.8	10.3	338	26.5	40.5	24	00.4	07.7		
8	127	54.6	269	06.1	317	04.8	09.6	353	28.5	40.4	39	02.8	07.7		
9	142	57.1	284	07.7	332	05.7	09.0	8	30.6	40.3	54	05.2	07.7		
10	157	59.6	299	09.3	347	06.7	08.4	23	32.6	40.2	69	07.6	07.7		
11	173	02.0	314	10.8	2	07.7	+5 07.7	38	34.6	+17 40.1	84	10.0	+22 07.7		
12	188	04.5	329	12.4	-21	44.1	17 08.7	+5 07.1	53	36.7	+17 39.9	99	12.4	+22 07.7	
13	203	07.0	344	14.0	44.6	32 09.7	06.5	68	38.7	39.8	114	14.8	07.7		
14	218	09.4	359	15.5	45.1	47 10.7	05.9	83	40.7	39.7	129	17.2	07.7		
15	233	11.9	14	17.1	45.7	62 11.7	05.2	98	42.8	39.6	144	19.6	07.7		
16	248	14.4	29	18.7	46.2	77 12.7	04.6	113	44.8	39.5	159	22.0	07.7		
17	263	16.8	44	20.3	-21	46.7	92 13.7	+5 04.0	128	46.8	+17 39.4	174	24.4	+22 07.7	
18	278	19.3	59	21.9	-21	47.3	107 14.7	+5 03.3	143	48.9	+17 39.3	189	26.8	+22 07.7	
19	293	21.7	74	23.4	47.8	122 15.7	02.7	158	50.9	39.2	204	29.3	07.7		
20	308	24.2	89	25.0	48.3	137 16.7	02.1	173	53.0	39.1	219	31.7	07.7		
21	323	26.7	104	26.6	48.8	152 17.7	01.4	188	55.0	38.9	234	34.1	07.7		
22	338	29.1	119	28.2	49.4	167 18.7	00.8	203	57.0	38.8	249	36.5	07.7		
23	353	31.6	134	29.8	49.9	182 19.7	+5 00.2	218	59.1	38.7	264	38.9	07.7		
24	8	34.1	149	31.4	-21	50.4	197 20.7	+4 59.6	234	01.1	+17 38.6	279	41.3	+22 07.7	
Dif	—		+16	-5	+10	-6		+20	-1		+24		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 0			Edad: 22 ^d 9 PHE { 4 ^h : 56'9 12 ^h : 57'2 20 ^h : 57'5 SD: 15'5 PMG: 6 ^h 25 ^m 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	182	27.1	-2	38.7	267	21.8	+25	31.9	0	60 N	4	32	5	21	6	02
1	197	27.3		39.7	281	48.3		31.9	0	58	36	22	01	21	26	86
2	212	27.5		40.6	296	14.8		31.7	2	56	40	23	00	21	49	82
3	227	27.7		41.6	310	41.2		31.3	4	54	43	24	6	00	23	77
4	242	27.9		42.6	325	07.6		30.8	5	52	46	25	5	59	37	74
5	257	28.1	-2	43.5	339	33.9	+25	30.1	7	50	4	48	5	58	22	49
6	272	28.3	-2	44.5	354	00.2	+25	29.3	8	45	4	53	5	56	23	14
7	287	28.5		45.5	8	26.5		28.4	9	40	57	28	55	33	67	14
8	302	28.7		46.5	22	52.7		27.2	12	35	4	59	28	54	23	50
9	317	29.0		47.4	37	18.9		26.0	12	30	5	01	29	53	**	**
10	332	29.2		48.4	51	45.1		24.6	14	20	03	29	51	**	**	**
11	347	29.4	-2	49.4	66	11.2	+25	23.0	16	10 N	5	03	5	49	**	**
12	2	29.6	-2	50.3	80	37.3	+25	21.3	17	0	5	02	5	47	0	12
13	17	29.8		51.3	95	03.4		19.4	19	10 S	4	59	24	45	32	55
14	32	30.0		52.3	109	29.4		17.4	20	20	55	21	43	0	53	55
15	47	30.2		53.2	123	55.4		15.3	21	30	48	16	40	1	18	54
16	62	30.4		54.2	138	21.4		13.0	23	35	43	13	38	33	53	18
17	77	30.6	-2	55.2	152	47.4	+25	10.5	25	40	4	38	5	37	1	50
18	92	30.8	-2	56.2	167	13.3	+25	07.9	26	45	4	30	5	34	2	10
19	107	31.0		57.1	181	39.2		05.1	28	50	21	4	59	32	36	50
20	122	31.2		58.1	196	05.1	+25	02.2	29	52	16	57	31	2	49	49
21	137	31.4	-2	59.1	210	31.0	+24	59.1	31	54	11	54	29	3	03	48
22	152	31.6	-3	00.0	224	56.8		55.8	33	56	4	05	50	28	20	46
23	167	31.8	-3	01.0	239	22.6		52.4	34	58	3	58	47	26	3	40
24	182	32.0	-3	02.0	253	48.4	+24	48.9	35	60 S	3	51	4	42	4	05

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 21 ^m 9		Mag: -4.8 PMG: 14 ^h 00 ^m		Mag: +1.8 PMG: 10 ^h 50 ^m		Mag: -2.0 PMG: 8 ^h 23 ^m		Mag: 0.0 PMG: 5 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	8	34.1	149	31.4	-21	50.4	234	01.1	+17	38.6
1	23	36.5	164	33.0		50.9	249	03.1		38.5
2	38	39.0	179	34.6		51.4	264	05.2		38.4
3	53	41.5	194	36.3		52.0	279	07.2		38.3
4	68	43.9	209	37.9		52.5	294	09.3		38.2
5	83	46.4	224	39.5	-21	53.0	309	11.3	+17	38.1
6	98	48.9	239	41.1	-21	53.5	324	13.3	+17	37.9
7	113	51.3	254	42.7		54.0	339	15.4		37.8
8	128	53.8	269	44.4		54.5	354	17.4		37.7
9	143	56.2	284	46.0		55.0	9	19.5		37.6
10	158	58.7	299	47.6		55.6	24	21.5		37.5
11	174	01.2	314	49.3	-21	56.1	39	23.5	+17	37.4
12	189	03.6	329	50.9	-21	56.6	54	25.6	+17	37.3
13	204	06.1	344	52.5		57.1	69	27.6		37.2
14	219	08.6	359	54.2		57.6	84	29.7		37.1
15	234	11.0	14	55.8		58.1	99	31.7		36.9
16	249	13.5	29	57.5		58.6	114	33.7		36.8
17	264	16.0	44	59.1	-21	59.1	129	35.8	+17	36.7
18	279	18.4	60	00.8	-21	59.6	144	37.8	+17	36.6
19	294	20.9	75	02.4	-22	00.1	159	39.9		36.5
20	309	23.4	90	04.1		00.6	174	41.9		36.4
21	324	25.8	105	05.8		01.1	189	43.9		36.3
22	339	28.3	120	07.4		01.6	204	46.0		36.2
23	354	30.7	135	09.1		02.0	219	48.0		36.1
24	9	33.2	150	10.8	-22	02.5	234	50.1	+17	35.9
Dif	—		+16	-5		+10	-6	+20	-1	
										+24
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 23 ^d 9 PHE { 4 ^h : 57/8 12 ^h : 58/1 20 ^h : 58/5										
	PMG: 11 ^h 49 ^m 7			SD: 15°7 PMG: 7 ^h 22 ^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	182	32.0	-3 02.0	253	48.4	+24 48.9	68	60 N	17 33	18 15	19 03	22 52 99	16 56 19	
1	197	32.2	03.0	268	14.2	45.2	39	58	35	14	18 59	23 11 93	37 24	
2	212	32.4	03.9	282	40.0	41.3	37	56	36	13	56	26 90	21 28	
3	227	32.6	04.9	297	05.8	37.3	40	54	37	12	53	40 86	16 07 31	
4	242	32.8	05.9	311	31.6	33.2	41	52	38	12	51	23 51 84	15 55 34	
5	257	33.0	-3 06.8	325	57.3	+24 28.9	43	50	17 39	18 11	18 49	** ** *	15 45 35	
6	272	33.2	-3 07.8	340	23.1	+24 24.4	45	45	17 41	18 10	18 44	** ** *	15 22 40	
7	287	33.4	08.8	354	48.8	19.8	46	40	43	10	41	** ** *	15 04 43	
8	302	33.6	09.7	9	14.5	15.0	48	35	44	10	39	** ** *	14 49 46	
9	317	33.8	10.7	23	40.2	10.1	49	30	46	10	37	0 04 64	36 48	
10	332	34.0	11.7	38	05.9	+24 05.0	51	20	48	10	36	28 61	14 13 51	
11	347	34.2	-3 12.7	52	31.7	+23 59.7	53	10 N	17 51	18 12	18 36	0 49 59	13 54 54	
12	2	34.4	-3 13.6	66	57.4	+23 54.3	54	0	17 53	18 14	18 38	1 08 57	13 35 57	
13	17	34.6	14.6	81	23.1	48.8	55	10 S	55	16	41	27 55	13 17 59	
14	32	34.8	15.6	95	48.8	43.1	57	20	17 58	20	46	1 48 53	12 57 62	
15	47	35.0	16.5	110	14.5	37.2	59	30	18 01	25	53	2 12 50	34 65	
16	62	35.2	17.5	124	40.2	31.2	60	35	03	28	18 58	26 48	20 68	
17	77	35.4	-3 18.5	139	06.0	+23 25.1	61	40	18 05	18 32	19 04	2 42 46	12 04 70	
18	92	35.6	-3 19.4	153	31.7	+23 18.8	63	45	18 08	18 37	19 12	3 02 43	11 45 74	
19	107	35.8	20.4	167	57.4	12.3	65	50	11	43	22	26 40	22 77	
20	122	36.0	21.4	182	23.2	+23 05.7	66	52	12	46	27	38 38	11 10 80	
21	137	36.2	22.3	196	48.9	+22 58.9	68	54	14	50	33	3 51 36	10 57 82	
22	152	36.4	23.3	211	14.7	52.0	69	56	15	53	39	4 06 33	42 85	
23	167	36.6	24.3	225	40.4	44.9	71	58	17	18 57	46	24 29	25 88	
24	182	36.8	-3 25.3	240	06.2	+22 37.7	72	60 S	18 19	19 02	19 54	4 46 24	10 03 94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 18 ^m 0		Mag: -4.8 PMG: 13 ^h 58 ^m			Mag: +1.8 PMG: 10 ^h 48 ^m			Mag: -2.0 PMG: 8 ^h 20 ^m			Mag: 0.0 PMG: 5 ^h 17 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	9	33.2	150 10.8	-22 02.5	197 44.6	+4 44.4	234 50.1	+17 35.9	280 39.1	+22 07.6				
1	24	35.7	165 12.5	03.0	212 45.6	43.8	249 52.1	35.8	295 41.5	07.6				
2	39	38.1	180 14.1	03.5	227 46.6	43.2	264 54.2	35.7	310 43.9	07.6				
3	54	40.6	195 15.8	04.0	242 47.6	42.5	279 56.2	35.6	325 46.3	07.6				
4	69	43.1	210 17.5	04.5	257 48.6	41.9	294 58.2	35.5	340 48.7	07.6				
5	84	45.5	225 19.2	-22 05.0	272 49.6	+4 41.3	310 00.3	+17 35.4	355 51.2	+22 07.6				
6	99	48.0	240 20.9	-22 05.5	287 50.6	+4 40.6	325 02.3	+17 35.3	10 53.6	+22 07.6				
7	114	50.5	255 22.6	05.9	302 51.6	40.0	340 04.4	35.2	25 56.0	07.6				
8	129	52.9	270 24.3	06.4	317 52.6	39.4	355 06.4	35.1	40 58.4	07.6				
9	144	55.4	285 26.0	06.9	332 53.6	38.7	10 08.5	35.0	56 00.8	07.6				
10	159	57.9	300 27.7	07.4	347 54.6	38.1	25 10.5	34.8	71 03.2	07.6				
11	175	00.3	315 29.4	-22 07.8	2 55.6	+4 37.5	40 12.6	+17 34.7	86 05.6	+22 07.6				
12	190	02.8	330 31.1	-22 08.3	17 56.6	+4 36.8	55 14.6	+17 34.6	101 08.1	+22 07.6				
13	205	05.2	345 32.8	08.8	32 57.6	36.2	70 16.6	34.5	116 10.5	07.6				
14	220	07.7	0 34.5	09.3	47 58.6	35.6	85 18.7	34.4	131 12.9	07.6				
15	235	10.2	15 36.2	09.7	62 59.6	34.9	100 20.7	34.3	146 15.3	07.6				
16	250	12.6	30 38.0	10.2	78 00.6	34.3	115 22.8	34.2	161 17.7	07.6				
17	265	15.1	45 39.7	-22 10.7	93 01.6	+4 33.7	130 24.8	+17 34.1	176 20.1	+22 07.6				
18	280	17.6	60 41.4	-22 11.1	108 02.6	+4 33.0	145 26.9	+17 34.0	191 22.5	+22 07.6				
19	295	20.0	75 43.2	11.6	123 03.6	32.4	160 28.9	33.9	206 25.0	07.6				
20	310	22.5	90 44.9	12.1	138 04.6	31.8	175 31.0	33.7	221 27.4	07.6				
21	325	25.0	105 46.6	12.5	153 05.6	31.1	190 33.0	33.6	236 29.8	07.6				
22	340	27.4	120 48.4	13.0	168 06.6	30.5	205 35.1	33.5	251 32.2	07.6				
23	355	29.9	135 50.1	13.4	183 07.6	29.9	220 37.1	33.4	266 34.6	07.6				
24	10	32.3	150 51.9	-22 13.9	198 08.6	+4 29.3	235 39.1	+17 33.3	281 37.0	+22 07.6				
Dif	—		+17	-5	+10	-6	+20	-1	+24	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 4			Edad: 24 ^d 9 PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'4 PMG: 8 ^h 18 ^m R°: 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	36.8	-3	25.3		240	06.2	+22	37.7	60 N	4	37	5	26	6	07
1	197	37.0		26.2	68	254	32.0		30.4	58	41	27	06	**	**	**
2	212	37.2		27.2	68	268	57.8		22.8	56	44	27	04	**	**	**
3	227	37.4		28.2	69	283	23.7		15.2	54	47	28	03	**	**	**
4	242	37.6		29.1	68	297	49.5	+22	07.4	52	49	28	02	**	**	**
5	257	37.8	-3	30.1	68	312	15.3	+21	59.4	50	4	51	5	29	6	01
6	272	38.0	-3	31.1	69	326	41.2	+21	51.3	45	4	55	5	30	5	59
7	287	38.2		32.0	69	341	07.1		43.0	40	4	59	30	57	40	73
8	302	38.4		33.0	69	355	33.0		34.6	35	5	01	30	55	0	55
9	317	38.6		34.0	69	9	58.9		26.1	30	02	30	54	1	08	67
10	332	38.8		34.9	70	24	24.9		17.4	20	03	29	51	29	63	15
11	347	39.0	-3	35.9	70	38	50.9	+21	08.6	10 N	5	03	5	28	5	49
12	2	39.2	-3	36.9	70	53	16.9	+20	59.6	0	5	01	5	25	5	46
13	17	39.4		37.8	70	67	42.9		50.5	10 S	4	58	23	44	22	53
14	32	39.6		38.8	70	82	08.9		41.2	20	53	19	41	2	41	49
15	47	39.8		39.8	71	96	35.0		31.8	30	45	14	37	3	02	45
16	62	40.0		40.8	71	111	01.1		22.3	35	40	10	36	14	43	28
17	77	40.2	-3	41.7	71	125	27.2	+20	12.6	40	4	34	5	06	3	28
18	92	40.4	-3	42.7	71	139	53.3	+20	02.8	45	4	26	5	01	3	45
19	107	40.6		43.7	72	154	19.5	+19	52.8	50	16	4	55	27	4	06
20	122	40.8		44.6	72	168	45.7		42.8	52	11	52	26	16	29	30
21	137	41.0		45.6	72	183	11.9		32.5	54	4	06	49	24	27	26
22	152	41.2		46.6	73	197	38.2		22.2	56	3	59	45	23	39	23
23	167	41.4		47.5	72	212	04.4		11.7	58	52	41	21	4	53	20
24	182	41.6	-3	48.5	73	226	30.7	+19	01.1	60 S	3	44	4	36	5	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 14 ^m 0		Mag: -4.8 PMG: 13 ^h 55 ^m		Mag: +1.8 PMG: 10 ^h 47 ^m		Mag: -2.0 PMG: 8 ^h 16 ^m		Mag: 0.0 PMG: 5 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	10	32.3	150	51.9	-22	13.9	198	08.6	+4	29.3
1	25	34.8	165	53.6		14.4	213	09.6		28.6
2	40	37.3	180	55.4		14.8	228	10.6		28.0
3	55	39.7	195	57.1		15.3	243	11.6		27.4
4	70	42.2	210	58.9		15.7	258	12.6		26.7
5	85	44.7	226	00.6	-22	16.2	273	13.6	+4	26.1
6	100	47.1	241	02.4	-22	16.6	288	14.6	+4	25.5
7	115	49.6	256	04.2		17.1	303	15.6		24.8
8	130	52.1	271	05.9		17.5	318	16.6		24.2
9	145	54.5	286	07.7		18.0	333	17.6		23.6
10	160	57.0	301	09.5		18.4	348	18.6		22.9
11	175	59.5	316	11.3	-22	18.8	3	19.6	+4	22.3
12	191	01.9	331	13.1	-22	19.3	18	20.6	+4	21.7
13	206	04.4	346	14.9		19.7	33	21.6		21.0
14	221	06.8	1	16.6		20.2	48	22.6		20.4
15	236	09.3	16	18.4		20.6	63	23.6		19.8
16	251	11.8	31	20.2		21.0	78	24.6		19.1
17	266	14.2	46	22.0	-22	21.5	93	25.6	+4	18.5
18	281	16.7	61	23.8	-22	21.9	108	26.6	+4	17.9
19	296	19.2	76	25.7		22.3	123	27.6		17.2
20	311	21.6	91	27.5		22.8	138	28.6		16.6
21	326	24.1	106	29.3		23.2	153	29.6		16.0
22	341	26.6	121	31.1		23.6	168	30.6		15.3
23	356	29.0	136	32.9		24.0	183	31.6		14.7
24	11	31.5	151	34.7	-22	24.5	198	32.6	+4	14.1
Dif	—		+18	-4			+10	-6		

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UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 1			Edad: 25 ^d 9 PHE { 4 ^h : 59'7 12 ^h : 60'0 20 ^h : 60'3 PMG: 9 ^h 15 ^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	182	41.6	-3 48.5	226	30.7	+19 01.1	74	60 N	17 27	18 09	18 57	0 31 103	17 27 8	
1	197	41.8	49.5	240	57.1	+18 50.3	108	58	29	08	54	44 99	17 12	
2	212	42.0	50.4	255	23.4	39.4	109	56	31	08	51	0 56 94	09 15	
3	227	42.2	51.4	269	49.8	28.4	110	54	32	07	48	1 06 91	17 02 18	
4	242	42.4	52.4	284	16.3	17.3	111	52	33	07	46	15 88	16 55 21	
5	257	42.6	-3 53.3	298	42.7	+18 06.0	113	50	17 35	18 07	18 44	1 23 85	16 49 23	
6	272	42.8	-3 54.3	313	09.2	+17 54.6	114	45	17 37	18 07	18 41	1 39 80	16 36 28	
7	287	43.0	55.3	327	35.7	43.1	115	40	40	07	38	1 53 76	25 33	
8	302	43.2	56.2	342	02.3	31.4	117	35	42	07	36	2 05 72	15 37	
9	317	43.4	57.2	356	28.9	19.6	118	30	43	07	35	15 69	16 07 40	
10	332	43.5	58.2	10 55.5	76	+17 07.7	119	20	47	09	34	32 64	15 52 46	
11	347	43.7	-3 59.1	25 22.1	76	+16 55.7	120	10 N	17 49	18 11	18 35	2 47 60	15 40 50	
12	2 43.9	-4 00.1	39 48.8	77	+16 43.6	121		0	17 52	18 13	18 37	3 01 56	15 28 54	
13	17 44.1	01.1	54 15.5	77	31.3	123		10 S	55	16	41	15 51	16 59	
14	32 44.3	02.0	68 42.3	78	19.0	123		20	17 59	21	46	30 47	15 03 63	
15	47 44.5	03.0	83 09.0	77	+16 06.5	125		30	18 02	26	18 55	47 42	14 48 69	
16	62 44.7	04.0	97 35.8	78	+15 53.9	126		35	05	30	19 00	3 57 39	39 72	
17	77 44.9	-4 04.9	112 02.7	79	+15 41.2	127		40	18 07	18 34	19 07	4 08 35	14 29 76	
18	92 45.1	-4 05.9	126 29.6	79	+15 28.4	128		45	18 10	18 40	19 15	4 22 30	14 17 81	
19	107 45.3	06.9	140 56.5	79	15.4	130		50	14	47	26	38 25	14 03 86	
20	122 45.5	07.8	155 23.4	79	+15 02.4	130		52	16	50	31	45 23	13 56 89	
21	137 45.7	08.8	169 50.4	80	+14 49.3	131		54	17	53	37	4 53 21	48 92	
22	152 45.9	09.8	184 17.4	80	36.0	133		56	19	18 57	44	5 02 18	40 95	
23	167 46.1	10.7	198 44.4	80	22.7	133		58	22	19 02	19 51	13 14	30 99	
24	182 46.3	-4 11.7	213 11.5	81	+14 09.2	135		60 S	18 24	19 07	20 00	5 25 9	13 19 104	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 10 ^m 1		Mag: -4.8 PMG: 13 ^h 52 ^m			Mag: +1.8 PMG: 10 ^h 45 ^m			Mag: -2.0 PMG: 8 ^h 13 ^m			Mag: 0.0 PMG: 5 ^h 09 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°
0	11 31.5	151 34.7	-22 24.5	198 32.6	+4 14.1	236 28.3	+17 30.7	282 35.1	+22 07.5					
1	26 34.0	166 36.6	24.9	213 33.6	13.4	251 30.4	30.6	297 37.5	07.5					
2	41 36.4	181 38.4	25.3	228 34.6	12.8	266 32.4	30.5	312 39.9	07.5					
3	56 38.9	196 40.2	25.7	243 35.6	12.2	281 34.5	30.4	327 42.4	07.5					
4	71 41.3	211 42.1	26.1	258 36.6	11.5	296 36.5	30.3	342 44.8	07.5					
5	86 43.8	226 43.9	-22 26.6	273 37.6	+4 10.9	311 38.6	+17 30.1	357 47.2	+22 07.5					
6	101 46.3	241 45.7	-22 27.0	288 38.6	+4 10.3	326 40.6	+17 30.0	12 49.6	+22 07.5					
7	116 48.7	256 47.6	27.4	303 39.6	09.6	341 42.7	29.9	27 52.0	07.5					
8	131 51.2	271 49.4	27.8	318 40.6	09.0	356 44.7	29.8	42 54.5	07.5					
9	146 53.7	286 51.3	28.2	333 41.6	08.4	11 46.8	29.7	57 56.9	07.5					
10	161 56.1	301 53.1	28.6	348 42.6	07.7	26 48.8	29.6	72 59.3	07.5					
11	176 58.6	316 55.0	-22 29.0	3 43.6	+4 07.1	41 50.9	+17 29.5	88 01.7	+22 07.5					
12	192 01.1	331 56.9	-22 29.4	18 44.6	+4 06.5	56 52.9	+17 29.4	103 04.2	+22 07.5					
13	207 03.5	346 58.7	29.8	33 45.6	05.8	71 55.0	29.3	118 06.6	07.5					
14	222 06.0	2 00.6	30.2	48 46.6	05.2	86 57.1	29.2	133 09.0	07.5					
15	237 08.4	17 02.5	30.6	63 47.6	04.6	101 59.1	29.1	148 11.4	07.5					
16	252 10.9	32 04.3	31.0	78 48.6	03.9	117 01.2	29.0	163 13.9	07.5					
17	267 13.4	47 06.2	-22 31.4	93 49.6	+4 03.3	132 03.2	+17 28.8	178 16.3	+22 07.5					
18	282 15.8	62 08.1	-22 31.8	108 50.6	+4 02.7	147 05.3	+17 28.7	193 18.7	+22 07.5					
19	297 18.3	77 10.0	32.2	123 51.6	02.0	162 07.3	28.6	208 21.1	07.5					
20	312 20.8	92 11.9	32.6	138 52.6	01.4	177 09.4	28.5	223 23.6	07.5					
21	327 23.2	107 13.8	33.0	153 53.6	00.8	192 11.4	28.4	238 26.0	07.5					
22	342 25.7	122 15.7	33.4	168 54.6	+4 00.1	207 13.5	28.3	253 28.4	07.5					
23	357 28.2	137 17.6	33.8	183 55.6	+3 59.5	222 15.5	28.2	268 30.8	07.5					
24	12 30.6	152 19.5	-22 34.2	198 56.6	+3 58.8	237 17.6	+17 28.1	283 33.3	+22 07.5					
Dif	—	+19	-4	+10	-6	+21	-1	+24	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 8			Edad: 26 ^d 9 PHE { SD: 16:4 PMG: 10 ^h 09 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	182	46.3	-4	11.7	213	11.5	+14 09.2	60 N	4 42	5 31	6 12	2 14	104	17 35 6
1	197	46.4		12.7	227	38.6	81 +13 55.6 ¹³⁶	58	45	31	10	23	99	29 10
2	212	46.6		13.6	242	05.7	81 42.0 ¹³⁶	56	48	31	08	30	96	24 13
3	227	46.8		14.6	256	32.8	81 28.2 ¹³⁸	54	50	32	07	37	92	20 16
4	242	47.0		15.5	271	00.0	82 14.4 ¹³⁸	52	53	32	05	43	89	16 19
5	257	47.2	-4	16.5	285	27.2	82 +13 00.4 ¹⁴⁰	50	4 54	5 32	6 04	2 48	87	17 12 21
6	272	47.4	-4	17.5	299	54.5	83 +12 46.4 ¹⁴⁰	45	4 58	5 32	6 01	2 59	82	17 04 27
7	287	47.6		18.4	314	21.8	83 32.2 ¹⁴²	40	5 00	32	5 59	3 09	77	16 58 30
8	302	47.8		19.4	328	49.1	83 18.0 ¹⁴²	35	02	32	57	17	73	52 34
9	317	48.0		20.4	343	16.4	83 +12 03.7 ¹⁴³	30	03	31	55	24	69	47 37
10	332	48.2		21.3	357	43.8	84 +11 49.3 ¹⁴⁴	20	04	30	52	36	64	38 43
11	347	48.4	-4	22.3	12	11.2	84 +11 34.8 ¹⁴⁵	10 N	5 03	5 27	5 48	3 47	58	16 30 48
12	2	48.6	-4	23.3	26	38.6	84 +11 20.2 ¹⁴⁶	0	5 01	5 25	5 45	3 57	53	16 22 54
13	17	48.7		24.2	41	06.0	84 +11 05.5 ¹⁴⁷	10 S	4 57	21	42	4 06	50	15 58
14	32	48.9		25.2	55	33.5	85 +10 50.8 ¹⁴⁷	20	51	17	39	17	44	16 06 64
15	47	49.1		26.2	70	01.0	85 36.0 ¹⁴⁸	30	43	11	35	29	38	15 57 69
16	62	49.3		27.1	84	28.5	85 21.1 ¹⁴⁹	35	37	07	33	36	35	51 73
17	77	49.5	-4	28.1	98	56.1	86 +10 06.1 ¹⁵⁰	40	4 31	5 03	5 30	4 43	32	15 45 77
18	92	49.7	-4	29.0	113	23.7	86 +9 51.1 ¹⁵⁰	45	4 22	4 57	5 27	4 52	28	15 38 81
19	107	49.9		30.0	127	51.3	86 35.9 ¹⁵²	50	11	50	23	5 03	22	29 87
20	122	50.1		31.0	142	18.9	86 20.7 ¹⁵²	52	06	47	21	08	20	25 90
21	137	50.3		31.9	156	46.5	86 +9 05.5 ¹⁵²	54	4 00	44	19	14	17	20 93
22	152	50.5		32.9	171	14.2	87 +8 50.2 ¹⁵³	56	3 53	39	17	20	14	15 96
23	167	50.6		33.9	185	41.9	87 34.8 ¹⁵⁴	58	46	35	15	27	10	09 100
24	182	50.8	-4	34.8	200	09.6	87 +8 19.3 ¹⁵⁵	60 S	3 37	4 30	5 12	5 34	7	15 03 104
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 06 ^m 2		Mag: -4.8 PMG: 13 ^h 49 ^m			Mag: +1.8 PMG: 10 ^h 44 ^m			Mag: -2.0 PMG: 8 ^h 10 ^m			Mag: 0.0 PMG: 5 ^h 05 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	12	30.6	152	19.5	-22 34.2	198	56.6	+3 58.8	237	17.6	+17 28.1	283	33.3	+22 07.5
1	27	33.1	167	21.4	34.6	213	57.6	58.2	252	19.7	28.0	298	35.7	07.5
2	42	35.6	182	23.3	35.0	228	58.6	57.6	267	21.7	27.9	313	38.1	07.5
3	57	38.0	197	25.2	35.4	243	59.6	56.9	282	23.8	27.8	328	40.5	07.5
4	72	40.5	212	27.1	35.7	259	00.6	56.3	297	25.8	27.7	343	43.0	07.5
5	87	42.9	227	29.0	-22 36.1	274	01.6	+3 55.7	312	27.9	+17 27.6	358	45.4	+22 07.5
6	102	45.4	242	30.9	-22 36.5	289	02.6	+3 55.0	327	29.9	+17 27.4	13	47.8	+22 07.5
7	117	47.9	257	32.9	36.9	304	03.6	54.4	342	32.0	27.3	28	50.3	07.5
8	132	50.3	272	34.8	37.3	319	04.6	53.8	357	34.1	27.2	43	52.7	07.5
9	147	52.8	287	36.7	37.6	334	05.6	53.1	12	36.1	27.1	58	55.1	07.5
10	162	55.3	302	38.7	38.0	349	06.6	52.5	27	38.2	27.0	73	57.5	07.5
11	177	57.7	317	40.6	-22 38.4	4	07.6	+3 51.9	42	40.2	+17 26.9	89	00.0	+22 07.5
12	193	00.2	332	42.6	-22 38.7	19	08.6	+3 51.2	57	42.3	+17 26.8	104	02.4	+22 07.5
13	208	02.7	347	44.5	39.1	34	09.6	50.6	72	44.3	26.7	119	04.8	07.4
14	223	05.1	2	46.4	39.5	49	10.6	50.0	87	46.4	26.6	134	07.3	07.4
15	238	07.6	17	48.4	39.8	64	11.6	49.3	102	48.5	26.5	149	09.7	07.4
16	253	10.1	32	50.4	40.2	79	12.6	48.7	117	50.5	26.4	164	12.1	07.4
17	268	12.5	47	52.3	-22 40.6	94	13.6	+3 48.1	132	52.6	+17 26.3	179	14.5	+22 07.4
18	283	15.0	62	54.3	-22 40.9	109	14.6	+3 47.4	147	54.6	+17 26.2	194	17.0	+22 07.4
19	298	17.4	77	56.2	41.3	124	15.6	46.8	162	56.7	26.1	209	19.4	07.4
20	313	19.9	92	58.2	41.7	139	16.6	46.2	177	58.8	25.9	224	21.8	07.4
21	328	22.4	108	00.2	42.0	154	17.6	45.5	193	00.8	25.8	239	24.3	07.4
22	343	24.8	123	02.2	42.4	169	18.6	44.9	208	02.9	25.7	254	26.7	07.4
23	358	27.3	138	04.1	42.7	184	19.6	44.2	223	04.9	25.6	269	29.1	07.4
24	13	29.8	153	06.1	-22 43.1	199	20.6	+3 43.6	238	07.0	+17 25.5	284	31.6	+22 07.4
Dif	—		+19	-4		+10	-6		+21	-1		+24	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 5			Edad: 27 ^d 9 PHE { 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'3 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	h m m
0	182	50.8	-4 34.8	200	09.6	+8 19.3	87	60 N	17 21	18 03	18 51	3 58 104	17 41 6	
1	197	51.0		214	37.3	+8 03.8	155	58	23	03	48	4 02 100	39 9	
2	212	51.2	36.8	229	05.1	+7 48.2	156	56	25	02	45	06 96	37 13	
3	227	51.4	37.7	243	32.8		156	54	27	02	43	09 93	36 15	
4	242	51.6	38.7	258	00.6	16.9	157	52	29	02	41	12 90	35 17	
5	257	51.8	-4 39.6	272	28.4	+7 01.1	158	50	17 30	18 03	18 40	4 15 87	17 33 20	
6	272	52.0	-4 40.6	286	56.3	+6 45.3	158	45	17 34	18 03	18 37	4 21 82	17 31 25	
7	287	52.2	41.6	301	24.1	29.5	158	40	36	03	35	26 77	28 30	
8	302	52.3	42.5	315	52.0	+6 13.6	159	35	39	04	33	30 73	26 34	
9	317	52.5	43.5	330	19.8	+5 57.6	160	30	41	05	33	33 70	24 37	
10	332	52.7	44.5	344	47.7	41.6	160	20	45	07	32	40 63	21 43	
11	347	52.9	-4 45.4	359	15.6	+5 25.6	160	10 N	17 48	18 09	18 34	4 45 58	17 18 49	
12	2	53.1	-4 46.4	13	43.5	+5 09.5	161	0	17 52	18 12	18 37	4 50 54	17 16 53	
13	17	53.3	47.3	28	11.4	+4 53.4	161	10 S	55	16	41	4 56 48	13 58	
14	32	53.5	48.3	42	39.4	37.2	162	20	17 59	21	47	5 01 43	10 63	
15	47	53.7	49.3	57	07.3	21.0	162	30	18 04	28	18 56	07 38	06 70	
16	62	53.8	50.2	71	35.3	+4 04.8	162	35	06	32	19 02	11 34	04 74	
17	77	54.0	-4 51.2	86	03.2	+3 48.5	163	40	18 09	18 37	19 09	5 15 30	17 02 77	
18	92	54.2	-4 52.2	100	31.2	+3 32.2	163	45	18 13	18 42	19 18	5 20 25	16 59 83	
19	107	54.4	53.1	114	59.2	+3 15.9	163	50	17	50	29	25 21	56 88	
20	122	54.6	54.1	129	27.1	+2 59.6	163	52	19	53	35	28 18	55 90	
21	137	54.8	55.0	143	55.1	43.2	164	54	21	18 57	41	31 15	53 93	
22	152	55.0	56.0	158	23.1	26.8	164	56	23	19 02	48	34 12	51 97	
23	167	55.1	57.0	172	51.1	+2 10.4	164	58	26	07	19 57	37 9	49 100	
24	182	55.3	-4 57.9	187	19.1	+1 54.0	164	60 S	18 29	19 12	20 06	5 41 6	16 47 104	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 23 ^h 02 ^m 2		Mag: -4.8 PMG: 13 ^h 46 ^m		Mag: +1.8 PMG: 10 ^h 42 ^m		Mag: -2.0 PMG: 8 ^h 06 ^m			Mag: 0.0 PMG: 5 ^h 01 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	13	29.8	153 06.1	-22 43.1	199 20.6	+3 43.6	238 07.0	+17 25.5	284 31.6	+22 07.4		
1	28	32.2	168 08.1	43.4	214 21.6	43.0	253 09.1	25.4	299 34.0	07.4		
2	43	34.7	183 10.1	43.8	229 22.6	42.3	268 11.1	25.3	314 36.4	07.4		
3	58	37.2	198 12.1	44.1	244 23.6	41.7	283 13.2	25.2	329 38.8	07.4		
4	73	39.6	213 14.1	44.5	259 24.6	41.1	298 15.2	25.1	344 41.3	07.4		
5	88	42.1	228 16.1	-22 44.8	274 25.6	+3 40.4	313 17.3	+17 25.0	359 43.7	+22 07.4		
6	103	44.5	243 18.1	-22 45.1	289 26.6	+3 39.8	328 19.4	+17 24.9	14 46.1	+22 07.4		
7	118	47.0	258 20.1	45.5	304 27.6	39.2	343 21.4	24.8	29 48.6	07.4		
8	133	49.5	273 22.1	45.8	319 28.6	38.5	358 23.5	24.7	44 51.0	07.4		
9	148	51.9	288 24.1	46.2	334 29.6	37.9	13 25.5	24.6	59 53.4	07.4		
10	163	54.4	303 26.1	46.5	349 30.6	37.3	28 27.6	24.5	74 55.9	07.4		
11	178	56.9	318 28.2	-22 46.8	4 31.6	+3 36.6	43 29.7	+17 24.4	89 58.3	+22 07.4		
12	193	59.3	333 30.2	-22 47.2	19 32.6	+3 36.0	58 31.7	+17 24.2	105 00.7	+22 07.4		
13	209	01.8	348 32.2	47.5	34 33.6	35.4	73 33.8	24.1	120 03.2	07.4		
14	224	04.3	3 34.3	47.8	49 34.6	34.7	88 35.9	24.0	135 05.6	07.4		
15	239	06.7	18 36.3	48.2	64 35.6	34.1	103 37.9	23.9	150 08.0	07.4		
16	254	09.2	33 38.3	48.5	79 36.6	33.4	118 40.0	23.8	165 10.5	07.4		
17	269	11.7	48 40.4	-22 48.8	94 37.6	+3 32.8	133 42.1	+17 23.7	180 12.9	+22 07.4		
18	284	14.1	63 42.4	-22 49.1	109 38.6	+3 32.2	148 44.1	+17 23.6	195 15.4	+22 07.4		
19	299	16.6	78 44.5	49.5	124 39.6	31.5	163 46.2	23.5	210 17.8	07.4		
20	314	19.0	93 46.5	49.8	139 40.6	30.9	178 48.2	23.4	225 20.2	07.4		
21	329	21.5	108 48.6	50.1	154 41.6	30.3	193 50.3	23.3	240 22.7	07.4		
22	344	24.0	123 50.6	50.4	169 42.6	29.6	208 52.4	23.2	255 25.1	07.4		
23	359	26.4	138 52.7	50.7	184 43.6	29.0	223 54.4	23.1	270 27.5	07.4		
24	14	28.9	153 54.8	-22 51.0	199 44.6	+3 28.4	238 56.5	+17 23.0	285 30.0	+22 07.4		
Dif	—		+20	-3	+10	-6	+21	-1	+24	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 2			Edad: 28 ^d 9 PHE { SD: 16'7 PMG: 11 ^h 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	182	55.3	-4	187	19.1	+1	54.0	60 N	4 47	5 35	6 17	5 42	104	17 47	6			
1	197	55.5		201	47.1		37.5	58	50	35	14	42	100	48	10			
2	212	55.7	-4	216	15.1		21.1	56	52	35	12	42	97	50	13			
3	227	55.9	-5	230	43.1	+1	04.6	54	54	35	11	42	94	51	16			
4	242	56.1		245	11.1	+0	48.1	52	56	35	09	42	91	52	19			
5	257	56.2	-5	259	39.1	+0	31.6	50	4 58	5 35	6 07	5 42	88	17 53	21			
6	272	56.4	-5	274	07.1	+0	15.1	45	5 00	5 34	6 04	5 43	82	17 56	26			
7	287	56.6		288	35.1	-0	01.4	40	02	34	6 01	43	77	17 58	31			
8	302	56.8		303	03.0		17.9	35	04	33	5 58	43	73	18 00	34			
9	317	57.0		317	31.0		34.4	30	04	32	56	43	70	01	38			
10	332	57.2		331	59.0	-0	50.9	20	04	30	52	43	64	04	44			
11	347	57.3	-5	346	27.0	-1	07.4	10 N	5 03	5 27	5 48	5 43	59	18 07	48			
12	2	57.5	-5	0	54.9	-1	23.9	0	5 00	5 24	5 45	5 44	53	18 09	54			
13	17	57.7		15	22.9		40.3	10 S	4 56	20	41	44	48	11	59			
14	32	57.9		29	50.8	-1	56.8	20	49	15	37	44	43	13	64			
15	47	58.1		44	18.7	-2	13.3	30	40	09	33	45	37	16	70			
16	62	58.3		58	46.6		29.7	35	34	04	30	45	34	18	73			
17	77	58.4	-5	73	14.5	-2	46.2	40	4 27	5 00	5 27	5 45	30	18 19	78			
18	92	58.6	-5	87	42.4	-3	02.6	45	4 18	4 53	5 23	5 45	26	18 22	82			
19	107	58.8		102	10.3		19.0	50	06	46	19	46	20	24	88			
20	122	59.0		116	38.2		35.4	52	4 01	42	17	46	18	25	91			
21	137	59.2		131	06.0	-3	51.7	54	3 55	38	15	46	15	26	94			
22	152	59.4		145	33.9	-4	08.0	56	47	34	12	46	13	28	97			
23	167	59.5		160	01.7		24.3	58	39	29	09	46	10	29	101			
24	182	59.7	-5	174	29.5	-4	40.6	60 S	3 29	4 23	5 06	5 47	5	18 31	105			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 58 ^m 3		Mag: -4.8 PMG: 13 ^h 42 ^m			Mag: +1.8 PMG: 10 ^h 40 ^m			Mag: -2.0 PMG: 8 ^h 03 ^m			Mag: 0.0 PMG: 4 ^h 57 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	14	28.9	153	54.8	-22	51.0	199	44.6	+3	28.4	238	56.5	+17	23.0	285	30.0	+22	07.4
1	29	31.4	168	56.8		51.4	214	45.6		27.7	253	58.6		22.9	300	32.4		07.4
2	44	33.8	183	58.9		51.7	229	46.6		27.1	269	00.6		22.8	315	34.8		07.4
3	59	36.3	199	01.0		52.0	244	47.6		26.5	284	02.7		22.7	330	37.3		07.4
4	74	38.8	214	03.1		52.3	259	48.6		25.8	299	04.8		22.6	345	39.7		07.4
5	89	41.2	229	05.2	-22	52.6	274	49.6	+3	25.2	314	06.8	+17	22.4	0	42.2	+22	07.4
6	104	43.7	244	07.2	-22	52.9	289	50.6	+3	24.5	329	08.9	+17	22.3	15	44.6	+22	07.4
7	119	46.1	259	09.3		53.2	304	51.6		23.9	344	11.0		22.2	30	47.0		07.4
8	134	48.6	274	11.4		53.5	319	52.6		23.3	359	13.0		22.1	45	49.5		07.4
9	149	51.1	289	13.5		53.8	334	53.6		22.6	14	15.1		22.0	60	51.9		07.4
10	164	53.5	304	15.6		54.1	349	54.6		22.0	29	17.2		21.9	75	54.3		07.3
11	179	56.0	319	17.7	-22	54.4	4	55.6	+3	21.4	44	19.2	+17	21.8	90	56.8	+22	07.3
12	194	58.5	334	19.9	-22	54.7	19	56.6	+3	20.7	59	21.3	+17	21.7	105	59.2	+22	07.3
13	210	00.9	349	22.0		55.0	34	57.6		20.1	74	23.4		21.6	121	01.7		07.3
14	225	03.4	4	24.1		55.3	49	58.6		19.5	89	25.4		21.5	136	04.1		07.3
15	240	05.9	19	26.2		55.6	64	59.6		18.8	104	27.5		21.4	151	06.5		07.3
16	255	08.3	34	28.3		55.8	80	00.6		18.2	119	29.6		21.3	166	09.0		07.3
17	270	10.8	49	30.5	-22	56.1	95	01.6	+3	17.5	134	31.6	+17	21.2	181	11.4	+22	07.3
18	285	13.3	64	32.6	-22	56.4	110	02.6	+3	16.9	149	33.7	+17	21.1	196	13.9	+22	07.3
19	300	15.7	79	34.7		56.7	125	03.6		16.3	164	35.8		21.0	211	16.3		07.3
20	315	18.2	94	36.9		57.0	140	04.6		15.6	179	37.8		20.9	226	18.7		07.3
21	330	20.6	109	39.0		57.3	155	05.6		15.0	194	39.9		20.8	241	21.2		07.3
22	345	23.1	124	41.2		57.5	170	06.6		14.4	209	42.0		20.7	256	23.6		07.3
23	0	25.6	139	43.3		57.8	185	07.6		13.7	224	44.1		20.6	271	26.1		07.3
24	15	28.0	154	45.5	-22	58.1	200	08.6	+3	13.1	239	46.1	+17	20.4	286	28.5	+22	07.3
Dif	—		+21		-3		+10		-6		+21		-1		+24		0	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 11 ^h 47 ^m 9			Edad: 29 ^d 9 PHE { 4 ^h : 61'4 12 ^h : 61'3 20 ^h : 61'2 PMG: 12 ^h 50 ^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	m	
0	182	59.7	-5 20.9	174	29.5	-4 40.6	87	60 N	17 15	17 57	18 45	7 26 106	17 53 7			
1	197	59.9		188	57.2	-4 56.8	162	58	18	57	42	22 101	17 58 11			
2	213	00.1		203	25.0	-5 13.0	162	56	20	57	40	19 97	18 03 15			
3	228	00.3		217	52.7	29.2	162	54	22	58	38	16 93	07 18			
4	243	00.4		232	20.5	-5 45.3	161	52	24	58	37	13 91	11 21			
5	258	00.6	-5 25.7	246	48.1	-6 01.4	161	50	17 26	17 58	18 36	7 10 88	18 14 24			
6	273	00.8	-5 26.7	261	15.8	-6 17.5	161	45	17 30	17 59	18 33	7 05 82	18 22 29			
7	288	01.0		275	43.5	33.5	160	40	33	18 00	32	7 00 78	29 33			
8	303	01.2		290	11.1	-6 49.4	159	35	36	01	31	6 56 74	34 37			
9	318	01.3		304	38.7	-7 05.4	160	30	39	03	30	53 70	39 40			
10	333	01.5		319	06.3	21.2	158	20	43	05	31	47 64	48 45			
11	348	01.7	-5 31.5	333	33.8	-7 37.0	158	10 N	17 47	18 08	18 33	6 42 59	18 55 51			
12	3 01.9	-5 32.4		348	01.3	-7 52.8	158	0	17 51	18 12	18 36	6 37 54	19 03 55			
13	18 02.1	33.4		2 28.8	85	-8 08.5	157	10 S	17 55	16	41	32 50	10 59			
14	33 02.2	34.4		16 56.3	85	24.1	156	20	18 00	22	48	27 45	17 65			
15	48 02.4	35.3		31 23.7	84	39.7	156	30	05	29	18 57	22 38	26 70			
16	63 02.6	36.3		45 51.1	84	-8 55.2	155	35	08	33	19 04	19 35	31 74			
17	78 02.8	-5 37.2		60 18.5	84	-9 10.7	155	40	18 11	18 39	19 11	6 15 32	19 37 78			
18	93 02.9	-5 38.2		74 45.8	83	-9 26.1	154	45	18 15	18 45	19 21	6 11 27	19 44 82			
19	108 03.1	39.1		89 13.1	83	41.4	153	50	20	53	33	06 22	52 88			
20	123 03.3	40.1		103 40.4	83	-9 56.7	153	52	22	18 57	39	04 19	19 56 90			
21	138 03.5	41.0		118 07.7	83	-10 11.9	152	54	25	19 01	46	6 01 17	20 00 93			
22	153 03.7	42.0		132 34.9	82	27.0	151	56	28	06	19 53	5 59 13	05 96			
23	168 03.8	43.0		147 02.1	82	42.1	151	58	31	11	20 02	56 10	10 100			
24	183 04.0	-5 43.9		161 29.2	81	-10 57.0	149	60 S	18 34	19 18	20 12	5 52 7	20 16 105			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 54 ^m 4		Mag: -4.8 PMG: 13 ^h 39 ^m			Mag: +1.8 PMG: 10 ^h 39 ^m			Mag: -2.0 PMG: 8 ^h 00 ^m			Mag: 0.0 PMG: 4 ^h 53 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	15	28.0	154	45.5	-22 58.1	200	08.6	+3 13.1	239	46.1	+17 20.4	286	28.5	+22 07.3		
1	30	30.5	169	47.6	58.4	215	09.6	12.5	254	48.2	20.3	301	30.9	07.3		
2	45	33.0	184	49.8	58.6	230	10.6	11.8	269	50.3	20.2	316	33.4	07.3		
3	60	35.4	199	51.9	58.9	245	11.6	11.2	284	52.3	20.1	331	35.8	07.3		
4	75	37.9	214	54.1	59.2	260	12.6	10.5	299	54.4	20.0	346	38.3	07.3		
5	90	40.4	229	56.3	-22 59.4	275	13.6	+3 09.9	314	56.5	+17 19.9	1	40.7	+22 07.3		
6	105	42.8	244	58.5	-22 59.7	290	14.6	+3 09.3	329	58.5	+17 19.8	16	43.2	+22 07.3		
7	120	45.3	260	00.6	-23 00.0	305	15.6	08.6	345	00.6	19.7	31	45.6	07.3		
8	135	47.7	275	02.8	-23 00.2	320	16.6	08.0	0	02.7	19.6	46	48.0	07.3		
9	150	50.2	290	05.0	00.5	335	17.6	07.4	15	04.8	19.5	61	50.5	07.3		
10	165	52.7	305	07.2	00.7	350	18.6	06.7	30	06.8	19.4	76	52.9	07.3		
11	180	55.1	320	09.4	-23 01.0	5	19.6	+3 06.1	45	08.9	+17 19.3	91	55.4	+22 07.3		
12	195	57.6	335	11.6	-23 01.2	20	20.6	+3 05.4	60	11.0	+17 19.2	106	57.8	+22 07.3		
13	211	00.1	350	13.8	01.5	35	21.6	04.8	75	13.0	19.1	122	00.3	07.3		
14	226	02.5	5	16.0	01.7	50	22.6	04.2	90	15.1	19.0	137	02.7	07.3		
15	241	05.0	20	18.2	02.0	65	23.7	03.5	105	17.2	18.9	152	05.1	07.3		
16	256	07.5	35	20.4	02.2	80	24.7	02.9	120	19.3	18.8	167	07.6	07.3		
17	271	09.9	50	22.6	-23 02.5	95	25.7	+3 02.3	135	21.3	+17 18.7	182	10.0	+22 07.3		
18	286	12.4	65	24.8	-23 02.7	110	26.7	+3 01.6	150	23.4	+17 18.6	197	12.5	+22 07.3		
19	301	14.9	80	27.1	03.0	125	27.7	01.0	165	25.5	18.5	212	14.9	07.3		
20	316	17.3	95	29.3	03.2	140	28.7	+3 00.3	180	27.6	18.4	227	17.4	07.3		
21	331	19.8	110	31.5	03.4	155	29.7	+2 59.7	195	29.6	18.3	242	19.8	07.3		
22	346	22.2	125	33.8	03.7	170	30.7	59.1	210	31.7	18.2	257	22.3	07.3		
23	1 24.7	140	36.0	03.9	03.9	185	31.7	58.4	225	33.8	18.1	272	24.7	07.3		
24	16 27.2	155	38.2	-23 04.1	04.1	200	32.7	+2 57.8	240	35.9	+17 17.9	287	27.2	+22 07.3		
Dif	—		+22		-3	+10		-6	+21		-1	+24		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 6			Edad: 1 ^d 5 PHE { SD: 16'6 PMG: 13 ^h 44 ^m				Náutico	Civil		Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec				Dif				
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	183	04.0	-5 43.9	161	29.2	-10 57.0	60 N	4 52	5 40	6 22	9 12	105	18 00	11
1	198	04.2	44.9	175	56.3	81 -11 11.9	58	54	40	19	9 03	101	09	16
2	213	04.4	45.8	190	23.4	81 26.7	56	56	39	16	8 56	96	18	20
3	228	04.5	46.8	204	50.4	80 41.5	54	58	39	14	49	93	25	23
4	243	04.7	47.7	219	17.4	80 -11 56.1	52	4 59	38	12	44	89	32	26
5	258	04.9	-5 48.7	233	44.4	80 -12 10.7	50	5 01	5 38	6 10	8 38	87	18 38	28
6	273	05.1	-5 49.6	248	11.3	79 -12 25.1	45	5 03	5 37	6 06	8 27	82	18 51	33
7	288	05.2	50.6	262	38.2	79 39.5	40	04	36	03	18	77	19 02	37
8	303	05.4	51.5	277	05.1	79 -12 53.8	35	05	35	6 00	10	73	11	41
9	318	05.6	52.5	291	31.9	78 -13 08.0	30	06	33	5 57	8 03	70	19	44
10	333	05.8	53.5	305	58.7	78 22.1	20	05	31	53	7 51	65	33	49
11	348	05.9	-5 54.4	320	25.4	77 -13 36.2	10 N	5 03	5 27	5 48	7 41	60	19 46	53
12	3	06.1	-5 55.4	334	52.1	77 -13 50.1	0	4 59	5 24	5 44	7 31	56	19 58	56
13	18	06.3	56.3	349	18.8	77 -14 03.9	10 S	54	19	40	22	51	20 09	61
14	33	06.5	57.3	3	45.4	76 17.6	20	48	13	36	12	47	22	65
15	48	06.6	58.2	18	12.0	76 31.2	30	38	06	30	7 00	42	36	70
16	63	06.8	-5 59.2	32	38.5	75 44.8	35	32	5 02	27	6 54	39	45	73
17	78	07.0	-6 00.1	47	05.0	75 -14 58.2	40	4 24	4 56	5 24	6 47	35	20 55	76
18	93	07.2	-6 01.1	61	31.5	75 -15 11.5	45	4 14	4 50	5 20	6 38	31	21 06	80
19	108	07.3	02.0	75	57.9	74 24.7	50	4 02	42	15	28	26	20	85
20	123	07.5	03.0	90	24.3	74 37.8	52	3 56	38	12	23	24	26	88
21	138	07.7	03.9	104	50.6	73 -15 50.7	54	49	33	10	18	21	33	91
22	153	07.9	04.9	119	16.9	73 -16 03.6	56	41	29	07	12	18	41	95
23	168	08.0	05.8	133	43.2	73 16.3	58	32	23	04	6 06	14	21 50	99
24	183	08.2	-6 06.8	148	09.4	72 -16 29.0	60 S	3 22	4 17	5 00	5 59	9	22 01	104

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 50 ^m 4		Mag: -4.7 PMG: 13 ^h 35 ^m		Mag: +1.8 PMG: 10 ^h 37 ^m		Mag: -2.0 PMG: 7 ^h 57 ^m		Mag: 0.0 PMG: 4 ^h 49 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	16	27.2	155	38.2	-23 04.1	200 32.7	+2 57.8	240 35.9	+17 17.9	287 27.2	+22 07.3			
1	31	29.6	170	40.5	04.4	215 33.7	57.2	255 37.9	17.8	302 29.6	07.3			
2	46	32.1	185	42.7	04.6	230 34.7	56.5	270 40.0	17.7	317 32.0	07.3			
3	61	34.6	200	45.0	04.8	245 35.7	55.9	285 42.1	17.6	332 34.5	07.3			
4	76	37.0	215	47.3	05.1	260 36.7	55.2	300 44.2	17.5	347 36.9	07.3			
5	91	39.5	230	49.5	-23 05.3	275 37.7	+2 54.6	315 46.2	+17 17.4	2	39.4	+22 07.3		
6	106	42.0	245	51.8	-23 05.5	290 38.7	+2 54.0	330 48.3	+17 17.3	17	41.8	+22 07.2		
7	121	44.4	260	54.1	05.7	305 39.7	53.3	345 50.4	17.2	32	44.3	07.2		
8	136	46.9	275	56.3	05.9	320 40.7	52.7	0	52.5	47	46.7	07.2		
9	151	49.4	290	58.6	06.2	335 41.7	52.1	15	54.5	62	49.2	07.2		
10	166	51.8	306	00.9	06.4	350 42.7	51.4	30	56.6	77	51.6	07.2		
11	181	54.3	321	03.2	-23 06.6	5	43.7	+2 50.8	45	58.7	+17 16.8	92	54.1	+22 07.2
12	196	56.7	336	05.5	-23 06.8	20	44.7	+2 50.1	61	00.8	+17 16.7	107	56.5	+22 07.2
13	211	59.2	351	07.7	07.0	35	45.7	49.5	76	02.8	16.6	122	59.0	07.2
14	227	01.7	6	10.0	07.2	50	46.7	48.9	91	04.9	16.5	138	01.4	07.2
15	242	04.1	21	12.3	07.4	65	47.7	48.2	106	07.0	16.4	153	03.9	07.2
16	257	06.6	36	14.6	07.6	80	48.7	47.6	121	09.1	16.3	168	06.3	07.2
17	272	09.1	51	16.9	-23 07.8	95	49.7	+2 47.0	136	11.2	+17 16.2	183	08.8	+22 07.2
18	287	11.5	66	19.3	-23 08.0	110	50.7	+2 46.3	151	13.2	+17 16.1	198	11.2	+22 07.2
19	302	14.0	81	21.6	08.2	125	51.7	45.7	166	15.3	16.0	213	13.7	07.2
20	317	16.5	96	23.9	08.4	140	52.7	45.0	181	17.4	15.9	228	16.1	07.2
21	332	18.9	111	26.2	08.6	155	53.7	44.4	196	19.5	15.8	243	18.6	07.2
22	347	21.4	126	28.5	08.8	170	54.7	43.8	211	21.6	15.7	258	21.0	07.2
23	2	23.8	141	30.9	09.0	185	55.7	43.1	226	23.6	15.6	273	23.5	07.2
24	17	26.3	156	33.2	-23 09.2	200	56.7	+2 42.5	241	25.7	+17 15.5	288	25.9	+22 07.2
Dif	—		+23	-2		+10	-6		+21	-1		+24	0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 47 ^m 3			Edad: 2 ^d 5 PHE { SD: 16'5 PMG: 14 ^h 41 ^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	183	08.2	-6	06.8	148	09.4	-16 29.0	60 N	17 09	17 51	18 39	10 57 102	18 11 18					
1	198	08.4		07.7	162	35.6	41.5 ¹²⁵	58	12	52	37	44 96	25 24					
2	213	08.5		08.7	177	01.8	-16 53.9 ¹²⁴	56	15	52	35	32 92	38 27					
3	228	08.7		09.7	191	27.9	-17 06.2 ¹²³	54	18	53	34	22 89	48 31					
4	243	08.9		10.6	205	53.9	18.3 ¹²¹	52	20	54	32	13 86	18 58 33					
5	258	09.1	-6	11.6	220	20.0	-17 30.4 ¹²¹	50	17 22	17 54	18 31	10 05 84	19 06 36					
6	273	09.2	-6	12.5	234	45.9	-17 42.3 ¹¹⁹	45	17 26	17 56	18 30	9 49 78	19 24 41					
7	288	09.4		13.5	249	11.9	-17 54.0 ¹¹⁷	40	30	57	28	35 74	39 44					
8	303	09.6		14.4	263	37.8	-18 05.7 ¹¹⁷	35	33	17 59	28	23 72	19 52 46					
9	318	09.7		15.4	278	03.7	17.2 ¹¹⁵	30	36	18 00	28	9 13 69	20 03 48					
10	333	09.9		16.3	292	29.5	28.6 ¹¹⁴	20	41	04	29	8 56 65	22 52					
11	348	10.1	-6	17.3	306	55.3	-18 39.9 ¹¹³	10 N	17 46	18 07	18 32	8 41 61	20 39 55					
12	3	10.3	-6	18.2	321	21.1	-18 51.0 ¹¹¹	0	17 51	18 11	18 36	8 27 58	20 54 58					
13	18	10.4		19.2	335	46.8	-19 02.0 ¹¹⁰	10 S	17 55	16	41	8 13 54	21 10 61					
14	33	10.6		20.1	350	12.5	12.9 ¹⁰⁹	20	18 00	22	48	7 59 50	27 64					
15	48	10.8		21.1	4	38.1	23.6 ¹⁰⁷	30	06	30	18 59	42 46	46 68					
16	63	10.9		22.0	19	03.7	34.2 ¹⁰⁶	35	09	35	19 05	33 43	21 58 69					
17	78	11.1	-6	23.0	33	29.3	-19 44.7 ¹⁰⁵	40	18 13	18 41	19 13	7 22 40	22 11 72					
18	93	11.3	-6	23.9	47	54.9	-19 55.0 ¹⁰³	45	18 18	18 48	19 24	7 09 37	22 26 76					
19	108	11.4		24.9	62	20.4	-20 05.2 ¹⁰²	50	23	18 56	37	6 54 31	45 80					
20	123	11.6		25.8	76	45.9	15.2 ¹⁰⁰	52	26	19 01	43	47 29	22 54 82					
21	138	11.8		26.8	91	11.3	25.1 ⁹⁹	54	29	05	50	39 26	23 04 85					
22	153	11.9		27.7	105	36.7	34.9 ⁹⁸	56	32	10	19 58	30 23	16 87					
23	168	12.1		28.7	120	02.1	44.5 ⁹⁶	58	35	16	20 08	20 19	29 92					
24	183	12.3	-6	29.6	134	27.5	-20 54.0 ⁹⁵	60 S	18 39	19 23	20 19	6 08 15	23 45 97					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 46 ^m 5		Mag: -4.7 PMG: 13 ^h 32 ^m			Mag: +1.8 PMG: 10 ^h 36 ^m			Mag: -2.0 PMG: 7 ^h 53 ^m			Mag: 0.0 PMG: 4 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	17	26.3	156	33.2	-23	09.2	200	56.7	+2	42.5	241	25.7	+17	15.5				
1	32	28.8	171	35.5		09.4	215	57.7		41.9	256	27.8		15.4				
2	47	31.2	186	37.9		09.6	230	58.7		41.2	271	29.9		15.3				
3	62	33.7	201	40.2		09.8	245	59.7		40.6	286	32.0		15.2				
4	77	36.2	216	42.6		09.9	261	00.7		39.9	301	34.0		15.1				
5	92	38.6	231	44.9	-23	10.1	276	01.7	+2	39.3	316	36.1	+17	15.0				
6	107	41.1	246	47.3	-23	10.3	291	02.7	+2	38.7	331	38.2	+17	14.9				
7	122	43.6	261	49.6		10.5	306	03.7		38.0	346	40.3		14.8				
8	137	46.0	276	52.0		10.6	321	04.7		37.4	1	42.4		14.7				
9	152	48.5	291	54.4		10.8	336	05.8		36.7	16	44.4		14.6				
10	167	51.0	306	56.7		11.0	351	06.8		36.1	31	46.5		14.5				
11	182	53.4	321	59.1	-23	11.2	6	07.8	+2	35.5	46	48.6	+17	14.4				
12	197	55.9	337	01.5	-23	11.3	21	08.8	+2	34.8	61	50.7	+17	14.2				
13	212	58.3	352	03.9		11.5	36	09.8		34.2	76	52.8		14.1				
14	228	00.8	7	06.3		11.7	51	10.8		33.6	91	54.8		14.0				
15	243	03.3	22	08.7		11.8	66	11.8		32.9	106	56.9		13.9				
16	258	05.7	37	11.1		12.0	81	12.8		32.3	121	59.0		13.8				
17	273	08.2	52	13.5	-23	12.1	96	13.8	+2	31.6	137	01.1	+17	13.7				
18	288	10.7	67	15.9	-23	12.3	111	14.8	+2	31.0	152	03.2	+17	13.6				
19	303	13.1	82	18.3		12.5	126	15.8		30.4	167	05.3		13.5				
20	318	15.6	97	20.7		12.6	141	16.8		29.7	182	07.3		13.4				
21	333	18.1	112	23.1		12.8	156	17.8		29.1	197	09.4		13.3				
22	348	20.5	127	25.5		12.9	171	18.8		28.4	212	11.5		13.2				
23	3	23.0	142	27.9		13.0	186	19.8		27.8	227	13.6		13.1				
24	18	25.5	157	30.4	-23	13.2	201	20.8	+2	27.2	242	15.7	+17	13.0				
Dif	—		+24		-2		+10		-6		+21		-1		+25		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: 3 ^d 5 PHE { 4 ^h : 59'5 12 ^h : 59'2 20 ^h : 58'9 R°: 58 ^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	12.3	-6	29.6	134	27.5	-20	54.0	60 N	4	57	5	45	6	26	12	39	90
1	198	12.4		30.6	148	52.8	63	-21	03.3	58	4	59		44	23	20	85	18 49 36
2	213	12.6		31.5	163	18.1	63		12.5	56	5	00		43	21	12	04	82
3	228	12.8		32.4	177	43.4	63		21.5	54		02		42	18	11	51	78
4	243	12.9		33.4	192	08.6	62		30.4	52		03		42	16	39	77	31 44
5	258	13.1	-6	34.3	206	33.9	63	-21	39.1	50	5	04	5	41	6	14	11	29
6	273	13.3	-6	35.3	220	59.1	62	-21	47.7	45	5	05	5	39	6	09	11	07
7	288	13.4		36.2	235	24.2	61	-21	56.1	40		06		38	05	10	49	69
8	303	13.6		37.2	249	49.4	62	-22	04.4	35		07		36	6	02	35	67
9	318	13.8		38.1	264	14.5	61		12.6	30		07		35	5	59	22	66
10	333	13.9		39.1	278	39.6	61		20.5	20		05		31	53	10	01	62
11	348	14.1	-6	40.0	293	04.7	61	-22	28.3	10 N	5	03		5	27	5	42	60
12	3	14.3	-6	41.0	307	29.8	61	-22	36.0	0	4	59		5	23	5	44	58
13	18	14.4		41.9	321	54.8	60		43.5	10 S		53		18	39	9	07	57
14	33	14.6		42.9	336	19.9	61		50.9	20		46		12	34	8	49	54
15	48	14.8		43.8	350	44.9	60	-22	58.1	30		35	5	04	28	28	51	22
16	63	14.9		44.8	5	09.9	60	-23	05.1	35		29	4	59	24	16	49	23
17	78	15.1	-6	45.7	19	34.9	60	-23	12.0	40	4	20	4	53	5	8	02	47
18	93	15.3	-6	46.7	33	59.9	60	-23	18.8	45	4	10	4	46	5	7	46	44
19	108	15.4		47.6	48	24.9	60		25.3	50	3	57		37	10	25	41	** ** *
20	123	15.6		48.5	62	49.8	59		31.8	52		51		33	08	16	38	** ** *
21	138	15.8		49.5	77	14.8	60		38.0	54		43		28	05	7	05	36
22	153	15.9		50.4	91	39.7	59		44.1	56		35		23	5	6	53	33
23	168	16.1		51.4	106	04.7	60		50.1	58		26		17	4	5	58	39
24	183	16.2	-6	52.3	120	29.6	59	-23	55.8	60 S	3	15	4	10	4	6	23	24
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 42 ^m 6		Mag: -4.7 PMG: 13 ^h 28 ^m				Mag: +1.8 PMG: 10 ^h 34 ^m				Mag: -2.0 PMG: 7 ^h 50 ^m				Mag: 0.0 PMG: 4 ^h 42 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	18	25.5	157	30.4	-23	13.2	201	20.8	+2	27.2	242	15.7	+17	13.0	289	24.8	+22	07.1
1	33	27.9	172	32.8		13.3	216	21.8		26.5	257	17.8		12.9	304	27.3		07.1
2	48	30.4	187	35.2		13.5	231	22.8		25.9	272	19.9		12.8	319	29.7		07.1
3	63	32.8	202	37.7		13.6	246	23.8		25.3	287	21.9		12.7	334	32.2		07.1
4	78	35.3	217	40.1		13.8	261	24.8		24.6	302	24.0		12.6	349	34.6		07.1
5	93	37.8	232	42.6	-23	13.9	276	25.8	+2	24.0	317	26.1	+17	12.5	4	37.1	+22	07.1
6	108	40.2	247	45.0	-23	14.0	291	26.8	+2	23.3	332	28.2	+17	12.4	19	39.6	+22	07.1
7	123	42.7	262	47.5		14.2	306	27.8		22.7	347	30.3		12.3	34	42.0		07.1
8	138	45.2	277	49.9		14.3	321	28.8		22.1	2	32.4		12.2	49	44.5		07.1
9	153	47.6	292	52.4		14.4	336	29.8		21.4	17	34.5		12.1	64	46.9		07.1
10	168	50.1	307	54.8		14.5	351	30.8		20.8	32	36.5		12.0	79	49.4		07.1
11	183	52.6	322	57.3	-23	14.7	6	31.8	+2	20.1	47	38.6	+17	11.9	94	51.9	+22	07.1
12	198	55.0	337	59.8	-23	14.8	21	32.8	+2	19.5	62	40.7	+17	11.8	109	54.3	+22	07.1
13	213	57.5	353	02.3		14.9	36	33.8		18.9	77	42.8		11.7	124	56.8		07.1
14	228	59.9	8	04.7		15.0	51	34.8		18.2	92	44.9		11.6	139	59.2		07.1
15	244	02.4	23	07.2		15.1	66	35.8		17.6	107	47.0		11.5	155	01.7		07.1
16	259	04.9	38	09.7		15.3	81	36.8		17.0	122	49.1		11.4	170	04.2		07.1
17	274	07.3	53	12.2	-23	15.4	96	37.9	+2	16.3	137	51.1	+17	11.3	185	06.6	+22	07.1
18	289	09.8	68	14.7	-23	15.5	111	38.9	+2	15.7	152	53.2	+17	11.2	200	09.1	+22	07.1
19	304	12.3	83	17.2		15.6	126	39.9		15.0	167	55.3		11.1	215	11.5		07.1
20	319	14.7	98	19.7		15.7	141	40.9		14.4	182	57.4		11.0	230	14.0		07.1
21	334	17.2	113	22.2		15.8	156	41.9		13.8	197	59.5		10.9	245	16.5		07.1
22	349	19.7	128	24.7		15.9	171	42.9		13.1	213	01.6		10.8	260	18.9		07.1
23	4	22.1	143	27.3		16.0	186	43.9		12.5	228	03.7		10.7	275	21.4		07.1
24	19	24.6	158	29.8	-23	16.1	201	44.9	+2	11.8	243	05.8	+17	10.6	290	23.8	+22	07.1
Dif	—		+25		-1		+10		-6		+21		-1		+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 4 ^d 5	PHE {	4 ^h : 58'6 12 ^h : 58'3 20 ^h : 58'0									
	PMG: 11 ^h 46 ^m 8								SD: 16'0	PMG: 16 ^h 37 ^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	h m m		
0	183	16.2	-6 52.3	120	29.6	-23 55.8	60	60 N	17 03	17 45	18 33	14 09 66	19 01 53		
1	198	16.4		53.3	134	54.6	60	58	07	46	32	13 45 65	25 54		
2	213	16.6		54.2	149	19.5	59	56	10	47	30	26 64	19 45 54		
3	228	16.7		55.2	163	44.4	59	54	13	48	29	13 09 64	20 01 55		
4	243	16.9		56.1	178	09.4	60	52	15	49	28	12 56 63	15 56		
5	258	17.1	-6 57.0	192	34.3	-24 22.3	49	50	17 18	17 50	18 27	12 43 63	20 27 56		
6	273	17.2	-6 58.0	206	59.3	-24 27.2	49	45	17 23	17 52	18 26	12 18 62	20 53 56		
7	288	17.4		58.9	221	24.2	59	40	27	54	25	11 58 62	21 13 56		
8	303	17.5	-6 59.9	235	49.2		60	35	31	56	25	42 60	30 56		
9	318	17.7	-7 00.8	250	14.2		60	30	34	17 58	26	28 60	21 44 57		
10	333	17.9		01.8	264	39.1	59	20	40	18 02	28	11 03 59	22 09 57		
11	348	18.0	-7 02.7	279	04.1	-24 48.8	40	10 N	17 45	18 06	18 31	10 42 59	22 31 57		
12	3	18.2	-7 03.6	293	29.1	-24 52.7	39	0	17 50	18 11	18 35	10 23 58	22 51 57		
13	18	18.4		04.6	307	54.2	61	10 S	17 55	16	41	10 04 56	23 11 57		
14	33	18.5		05.5	322	19.2	60	20	18 01	23	18 49	9 43 56	32 57		
15	48	18.7		06.5	336	44.2	60	30	07	32	19 00	19 55	23 57 57		
16	63	18.8		07.4	351	09.3	61	35	11	37	07	9 05 54	*** ** **		
17	78	19.0	-7 08.4	5	34.4	-25 09.6	61	40	18 15	18 43	19 16	8 49 53	*** ** **		
18	93	19.2	-7 09.3	19	59.5	-25 12.5	59	45	18 20	18 51	19 27	8 30 52	*** ** **		
19	108	19.3		10.2	34	24.7	62	50	26	19 00	40	8 06 50	0 05 69		
20	123	19.5		11.2	48	49.8	61	52	29	04	47	7 54 50	16 70		
21	138	19.6		12.1	63	15.0	62	54	32	09	19 55	41 49	29 72		
22	153	19.8		13.1	77	40.2	62	56	36	15	20 03	26 47	0 43 74		
23	168	19.9		14.0	92	05.5	63	58	40	21	13	7 09 45	1 01 76		
24	183	20.1	-7 14.9	106	30.8	-25 26.4	19	60 S	18 44	19 28	20 25	6 47 42	1 22 79		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 38 ^m 6		Mag: -4.7 PMG: 13 ^h 24 ^m		Mag: +1.8 PMG: 10 ^h 32 ^m		Mag: -2.0 PMG: 7 ^h 47 ^m		Mag: -0.1 PMG: 4 ^h 38 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	24.6	158	29.8	-23	16.1	201	44.9	+2	11.8
1	34	27.1	173	32.3		16.2	216	45.9		11.2
2	49	29.5	188	34.8		16.3	231	46.9		10.6
3	64	32.0	203	37.4		16.4	246	47.9		09.9
4	79	34.4	218	39.9		16.5	261	48.9		09.3
5	94	36.9	233	42.4	-23	16.6	276	49.9	+2	08.6
6	109	39.4	248	45.0	-23	16.6	291	50.9	+2	08.0
7	124	41.8	263	47.5		16.7	306	51.9		07.4
8	139	44.3	278	50.1		16.8	321	52.9		06.7
9	154	46.8	293	52.6		16.9	336	53.9		06.1
10	169	49.2	308	55.2		17.0	351	54.9		05.5
11	184	51.7	323	57.8	-23	17.0	6	55.9	+2	04.8
12	199	54.2	339	00.3	-23	17.1	21	56.9	+2	04.2
13	214	56.6	354	02.9		17.2	36	57.9		03.5
14	229	59.1	9	05.5		17.3	51	58.9		02.9
15	245	01.6	24	08.1		17.3	66	59.9		02.3
16	260	04.0	39	10.7		17.4	82	00.9		01.6
17	275	06.5	54	13.2	-23	17.5	97	01.9	+2	01.0
18	290	08.9	69	15.8	-23	17.5	112	02.9	+2	00.3
19	305	11.4	84	18.4		17.6	127	03.9	+1	59.7
20	320	13.9	99	21.0		17.6	142	04.9		59.1
21	335	16.3	114	23.6		17.7	157	05.9		58.4
22	350	18.8	129	26.2		17.7	172	07.0		57.8
23	5	21.3	144	28.9		17.8	187	08.0		57.1
24	20	23.7	159	31.5	-23	17.9	202	09.0	+1	56.5
Dif	—		+26		-1		+10		-6	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG: 11 ^h 46 ^m 5			Edad: 5 ^d 5	PHE { 4 ^h : 57'6 12 ^h : 57'3 20 ^h : 57'1 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	183	20.1	-7	14.9	106	30.8	-25	26.4	18	50 N	5 01	5 49	6 31	15 15	41	19	54	73	
1	198	20.3			120	56.1	63	28.2	18	58	03	48	28	14 50	44	20	19	71	
2	213	20.4			135	21.4	63	29.8	16	56	04	47	25		30	46		39 69	
3	228	20.6			149	46.8	64	31.3	15	54	05	46	22	14 13	47	20	56	67	
4	243	20.7			164	12.2	64	32.6	13	52	06	45	19	13 59	48	21	11	65	
5	258	20.9	-7	19.6	178	37.7	65	-25	33.7	11	50	5 07	5 44	6 17	13 46	49	21	23	64
6	273	21.1	-7	20.6	193	03.2	65	-25	34.7	10	45	5 08	5 42	6 11	13 20	51	21	49	62
7	288	21.2			207	28.7	65	35.6	9	40	08	40	07	13 00	51	22	09	61	
8	303	21.4			221	54.3	66	36.2	6	35	08	38	03	12 42	53		26	60	
9	318	21.5			236	19.9	66	36.8	6	30	08	36	6 00		28 53	22	41	59	
10	333	21.7			250	45.5	66	37.1	3	20	06	32	5 54	12 02	55	23	06	57	
11	348	21.8	-7	25.3	265	11.3	68	-25	37.4	3	10 N	5 03	5 27	5 48	11 41	55	23	28	55
12	3	22.0	-7	26.2	279	37.0	67	-25	37.4	0	0	4 58	5 22	5 43	11 21	55	23	48	54
13	18	22.1			294	02.8	68	37.3	1	10 S	52	17	38	11 00	57	***	***	***	
14	33	22.3			308	28.7	69	37.1	2	20	44	10	32	10 39	57	***	***	***	
15	48	22.5			322	54.6	69	36.7	4	30	33	5 01	26	10 14	58	***	***	***	
16	63	22.6			337	20.5	69	36.2	5	35	26	4 56	22	9 59	58		0 11	57	
17	78	22.8	-7	30.9	351	46.6	71	-25	35.5	7	40	4 17	4 50	5 17	9 42	59		0 28	57
18	93	22.9	-7	31.9	6	12.6	70	-25	34.6	9	45	4 06	4 42	5 12	9 22	59		0 49	56
19	108	23.1			20	38.8	72	33.6	10	50	3 52	33	06	8 56	60		1 14	56	
20	123	23.2			35	04.9	71	32.5	11	52	45	28	03		44 60		26	56	
21	138	23.4			49	31.2	73	31.2	13	54	38	23	5 00		30 61		41	55	
22	153	23.5			63	57.5	73	29.8	14	56	29	18	4 57		8 13 62		1 57	55	
23	168	23.7			78	23.9	74	28.2	16	58	19	11	53		7 54 62		2 17	54	
24	183	23.8	-7	37.5	92	50.3	74	-25	26.5	17	60 S	3 07	4 04	4 48	7 29	64		2 41	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 22 ^h 34 ^m 7		Mag: -4.7 PMG: 13 ^h 20 ^m		Mag: +1.8 PMG: 10 ^h 31 ^m		Mag: -2.0 PMG: 7 ^h 43 ^m		Mag: -0.1 PMG: 4 ^h 34 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	20	23.7	159	31.5	-23	17.9	202	09.0	+1	56.5	243	56.0	+17	08.2	291	23.0	+22	07.0	
1	35	26.2	174	34.1		17.9	217	10.0		55.9	258	58.1		08.1	306	25.4		07.0	
2	50	28.7	189	36.7		17.9	232	11.0		55.2	274	00.2		08.0	321	27.9		07.0	
3	65	31.1	204	39.4		18.0	247	12.0		54.6	289	02.3		07.9	336	30.4		07.0	
4	80	33.6	219	42.0		18.0	262	13.0		53.9	304	04.4		07.8	351	32.8		07.0	
5	95	36.1	234	44.6	-23	18.1	277	14.0	+1	53.3	319	06.5	+17	07.7	6	35.3	+22	07.0	
6	110	38.5	249	47.3	-23	18.1	292	15.0	+1	52.7	334	08.6	+17	07.6	21	37.8	+22	07.0	
7	125	41.0	264	49.9		18.1	307	16.0		52.0	349	10.7		07.5	36	40.2		07.0	
8	140	43.4	279	52.6		18.2	322	17.0		51.4	4	12.7		07.4	51	42.7		07.0	
9	155	45.9	294	55.2		18.2	337	18.0		50.7	19	14.8		07.3	66	45.2		07.0	
10	170	48.4	309	57.9		18.2	352	19.0		50.1	34	16.9		07.2	81	47.6		07.0	
11	185	50.8	325	00.5	-23	18.3	7	20.0	+1	49.5	49	19.0	+17	07.1	96	50.1	+22	07.0	
12	200	53.3	340	03.2	-23	18.3	22	21.0	+1	48.8	64	21.1	+17	07.0	111	52.6	+22	07.0	
13	215	55.8	355	05.9		18.3	37	22.0		48.2	79	23.2		06.9	126	55.1		07.0	
14	230	58.2	10	08.5		18.3	52	23.0		47.5	94	25.3		06.8	141	57.5		07.0	
15	246	00.7	25	11.2		18.4	67	24.0		46.9	109	27.4		06.7	157	00.0		07.0	
16	261	03.2	40	13.9		18.4	82	25.0		46.3	124	29.5		06.6	172	02.5		07.0	
17	276	05.6	55	16.6	-23	18.4	97	26.0	+1	45.6	139	31.6	+17	06.5	187	04.9	+22	07.0	
18	291	08.1	70	19.3	-23	18.4	112	27.0	+1	45.0	154	33.7	+17	06.4	202	07.4	+22	07.0	
19	306	10.6	85	22.0		18.4	127	28.0		44.3	169	35.8		06.4	217	09.9		07.0	
20	321	13.0	100	24.7		18.4	142	29.0		43.7	184	37.9		06.3	232	12.3		07.0	
21	336	15.5	115	27.4		18.4	157	30.0		43.1	199	40.0		06.2	247	14.8		07.0	
22	351	17.9	130	30.1		18.4	172	31.0		42.4	214	42.1		06.1	262	17.3		07.0	
23	6	20.4	145	32.8		18.4	187	32.0		41.8	229	44.2		06.0	277	19.8		07.0	
24	21	22.9	160	35.5	-23	18.4	202	33.1	+1	41.2	244	46.3	+17	05.9	292	22.2	+22	07.0	
Dif	—		+27		0		+10		-6		+21		-1		+25				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0			Edad: 6 ^d 5	PHE { 4 ^h : 56'8 12 ^h : 56'5 20 ^h : 56'2												
	PMG: 11 ^h 46 ^m 3					SD: 15'5			PMG: 18 ^h 29 ^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	183	23.8	-7 37.5	92	50.3	-25 26.5	19	60 N	16 58	17 40	18 27	15 56 23	21 07 85				
1	198	24.0		38.4	107 16.8	75 24.6	19	58	17 01	41	26	34 27	30 79				
2	213	24.1		39.3	121 43.3	75 22.6	20	56	05	42	25	16 30	21 48 75				
3	228	24.3		40.3	136 10.0	77 20.4	22	54	08	44	24	15 00 34	22 03 73				
4	243	24.5		41.2	150 36.6	76 18.1	23	52	11	45	24	14 47 35	16 70				
5	258	24.6	-7 42.2	165 03.4	78 -25 15.7	24	24	50	17 13	17 46	18 23	14 35 37	22 27 69				
6	273	24.8	-7 43.1	179 30.2	78 -25 13.1	26	26	45	17 19	17 49	18 23	14 11 40	22 51 65				
7	288	24.9		44.0	193 57.1	79 10.4	27	40	24	51	22	13 51 43	23 10 63				
8	303	25.1		45.0	208 24.1	80 07.6	28	35	28	53	23	35 44	26 61				
9	318	25.2		45.9	222 51.1	80 04.6	30	30	32	17 56	24	13 21 46	23 40 59				
10	333	25.4		46.8	237 18.2	81 -25 01.4	32	20	38	18 00	26	12 57 48	** ** *				
11	348	25.5	-7 47.8	251 45.4	82 -24 58.2	32	32	10 N	17 44	18 05	18 30	12 36 50	** ** *				
12	3	25.7	-7 48.7	266 12.6	82 -24 54.8	34	35	0	17 50	18 10	18 35	12 16 53	** ** *				
13	18	25.8		49.6	280 40.0	84 51.3	35	10 S	17 55	16	41	11 57 54	0 08 53				
14	33	26.0		50.6	295 07.4	84 47.6	37	20	18 01	24	18 50	36 56	29 51				
15	48	26.1		51.5	309 34.8	84 43.8	38	30	09	33	19 02	11 12 58	0 54 49				
16	63	26.3		52.4	324 02.4	86 39.9	39	35	13	39	09	10 57 61	1 08 49				
17	78	26.4	-7 53.4	338 30.0	86 -24 35.8	41	41	40	18 17	18 45	19 18	10 41 62	1 25 47				
18	93	26.6	-7 54.3	352 57.7	87 -24 31.7	41	41	45	18 23	18 53	19 30	10 21 64	1 45 45				
19	108	26.7		55.2	7 25.5	88 27.3	44	50	30	19 03	44	9 56 67	2 10 43				
20	123	26.9		56.2	21 53.4	89 22.9	44	52	33	08	51	44 69	22 42				
21	138	27.0		57.1	36 21.3	89 18.3	46	54	36	13	19 59	31 70	36 40				
22	153	27.2		58.0	50 49.3	90 13.7	46	56	40	19	20 09	9 15 72	2 52 38				
23	168	27.3		59.0	65 17.4	91 08.9	48	58	44	26	19	8 56 75	3 11 36				
24	183	27.5	-7 59.9	79 45.6	92 -24 03.9	50	50	60 S	18 49	19 34	20 32	8 33 79	3 35 31				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 22 ^h 30 ^m 8		Mag: -4.7 PMG: 13 ^h 15 ^m		Mag: +1.8 PMG: 10 ^h 29 ^m		Mag: -2.0 PMG: 7 ^h 40 ^m		Mag: -0.1 PMG: 4 ^h 30 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	21	22.9	160	35.5	-23 18.4	202 33.1	+1 41.2	244 46.3	+17 05.9	292 22.2	+22 07.0
1	36	25.3	175	38.2	18.4	217 34.1	40.5	259 48.4	05.8	307 24.7	07.0
2	51	27.8	190	40.9	18.4	232 35.1	39.9	274 50.5	05.7	322 27.2	07.0
3	66	30.3	205	43.6	18.4	247 36.1	39.2	289 52.6	05.6	337 29.6	07.0
4	81	32.7	220	46.4	18.4	262 37.1	38.6	304 54.7	05.5	352 32.1	07.0
5	96	35.2	235	49.1	-23 18.4	277 38.1	+1 38.0	319 56.8	+17 05.4	7 34.6	+22 07.0
6	111	37.7	250	51.8	-23 18.4	292 39.1	+1 37.3	334 58.9	+17 05.3	22 37.1	+22 07.0
7	126	40.1	265	54.6	18.4	307 40.1	36.7	350 01.0	05.2	37 39.5	07.0
8	141	42.6	280	57.3	18.3	322 41.1	36.0	5 03.1	05.1	52 42.0	07.0
9	156	45.0	296	00.1	18.3	337 42.1	35.4	20 05.2	05.0	67 44.5	07.0
10	171	47.5	311	02.8	18.3	352 43.1	34.8	35 07.3	04.9	82 47.0	07.0
11	186	50.0	326	05.6	-23 18.3	7 44.1	+1 34.1	50 09.4	+17 04.8	97 49.4	+22 07.0
12	201	52.4	341	08.4	-23 18.3	22 45.1	+1 33.5	65 11.5	+17 04.7	112 51.9	+22 07.0
13	216	54.9	356	11.1	18.2	37 46.1	32.8	80 13.6	04.6	127 54.4	07.0
14	231	57.4	11 13.9	18.2	52 47.1	32.2	95 15.7	04.5	142 56.8	07.0	
15	246	59.8	26 16.7	18.2	67 48.1	31.6	110 17.8	04.4	157 59.3	06.9	
16	262	02.3	41 19.4	18.1	82 49.1	30.9	125 19.9	04.3	173 01.8	06.9	
17	277	04.8	56 22.2	-23 18.1	97 50.1	+1 30.3	140 22.0	+17 04.2	188 04.3	+22 06.9	
18	292	07.2	71 25.0	-23 18.1	112 51.1	+1 29.6	155 24.2	+17 04.1	203 06.7	+22 06.9	
19	307	09.7	86 27.8	18.0	127 52.1	29.0	170 26.3	04.0	218 09.2	06.9	
20	322	12.2	101 30.6	18.0	142 53.1	28.4	185 28.4	03.9	233 11.7	06.9	
21	337	14.6	116 33.4	17.9	157 54.1	27.7	200 30.5	03.8	248 14.2	06.9	
22	352	17.1	131 36.2	17.9	172 55.1	27.1	215 32.6	03.7	263 16.6	06.9	
23	7	19.5	146 39.0	17.8	187 56.1	26.4	230 34.7	03.6	278 19.1	06.9	
24	22	22.0	161 41.8	-23 17.8	202 57.1	+1 25.8	245 36.8	+17 03.5	293 21.6	+22 06.9	
Dif	—		+28	0	+10	-6	+21	-1		+25	

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: 7 ^d 5 PHE { 4 ^h : 56'0 12 ^h : 55'8 20 ^h : 55'5 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	183	27.5	-7	59.9	79	45.6	-24	03.9	50	60 N	5	06	5	54	6	36
1	198	27.6	-8	00.8	94	13.9	93	-23	58.9	50	07	53	32	16	01	18
2	213	27.8		01.8	108	42.2	93		53.7	52	08	51	29	15	46	21
3	228	27.9		02.7	123	10.7	95		48.4	53	09	50	25	34	23	16
4	243	28.0		03.6	137	39.2	95		43.0	54	09	48	23	22	26	26
5	258	28.2	-8	04.5	152	07.8	96	-23	37.5	55	5	10	5	47	6	20
6	273	28.3	-8	05.5	166	36.4	96	-23	31.8	57	5	10	5	44	6	14
7	288	28.5		06.4	181	05.2	98		26.0	58	10	42	09	34	35	**
8	303	28.6		07.3	195	34.0	98		20.2	58	10	39	05	19	38	**
9	318	28.8		08.3	210	03.0	100		14.2	60	09	37	6	01	14	07
10	333	28.9		09.2	224	32.0	100		08.1	61	07	32	5	54	13	45
11	348	29.1	-8	10.1	239	01.1	101	-23	01.9	62	5	03	5	27	5	48
12	3	29.2	-8	11.1	253	30.3	102	-22	55.5	64	4	58	5	22	5	43
13	18	29.4		12.0	267	59.5	102		49.1	64	51	16	37	12	51	52
14	33	29.5		12.9	282	28.9	104		42.6	65	42	5	08	31	32	55
15	48	29.6		13.8	296	58.3	104		35.9	67	30	4	59	23	12	10
16	63	29.8		14.8	311	27.8	105		29.2	67	23	53	19	11	58	60
17	78	29.9	-8	15.7	325	57.4	106	-22	22.3	69	4	14	4	47	5	14
18	93	30.1	-8	16.6	340	27.1	107	-22	15.3	70	4	02	4	38	5	09
19	108	30.2		17.6	354	56.9	108		08.3	70	3	47	28	5	02	11
20	123	30.4		18.5	9	26.8	109	-22	01.1	72	40	23	4	59	10	53
21	138	30.5		19.4	23	56.7	109	-21	53.8	73	32	18	55	41	74	16
22	153	30.7		20.3	38	26.7	110		46.5	73	23	12	51	27	77	30
23	168	30.8		21.3	52	56.8	111		39.0	75	3	12	4	05	10	11
24	183	30.9	-8	22.2	67	27.0	112	-21	31.4	76	2	59	3	58	4	42
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 26 ^m 8		Mag: -4.6 PMG: 13 ^h 11 ^m			Mag: +1.8 PMG: 10 ^h 27 ^m			Mag: -2.0 PMG: 7 ^h 36 ^m			Mag: -0.1 PMG: 4 ^h 26 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	22	22.0	161	41.8	-23	17.8	202	57.1	+1	25.8	245	36.8	+17	03.5	293	21.6
1	37	24.5	176	44.6		17.7	217	58.2		25.2	260	38.9		03.4	308	24.1
2	52	26.9	191	47.4		17.7	232	59.2		24.5	275	41.0		03.3	323	26.6
3	67	29.4	206	50.3		17.6	248	00.2		23.9	290	43.1		03.2	338	29.0
4	82	31.9	221	53.1		17.5	263	01.2		23.2	305	45.2		03.1	353	31.5
5	97	34.3	236	55.9	-23	17.5	278	02.2	+1	22.6	320	47.3	+17	03.1	8	34.0
6	112	36.8	251	58.8	-23	17.4	293	03.2	+1	22.0	335	49.4	+17	03.0	23	36.5
7	127	39.3	267	01.6		17.3	308	04.2		21.3	350	51.5		02.9	38	38.9
8	142	41.7	282	04.4		17.3	323	05.2		20.7	5	53.6		02.8	53	41.4
9	157	44.2	297	07.3		17.2	338	06.2		20.0	20	55.7		02.7	68	43.9
10	172	46.7	312	10.1		17.1	353	07.2		19.4	35	57.8		02.6	83	46.4
11	187	49.1	327	13.0	-23	17.1	8	08.2	+1	18.8	50	59.9	+17	02.5	98	48.9
12	202	51.6	342	15.8	-23	17.0	23	09.2	+1	18.1	66	02.1	+17	02.4	113	51.3
13	217	54.0	357	18.7		16.9	38	10.2		17.5	81	04.2		02.3	128	53.8
14	232	56.5	12	21.6		16.8	53	11.2		16.8	96	06.3		02.2	143	56.3
15	247	59.0	27	24.4		16.7	68	12.2		16.2	111	08.4		02.1	158	58.8
16	263	01.4	42	27.3		16.6	83	13.2		15.6	126	10.5		02.0	174	01.3
17	278	03.9	57	30.2	-23	16.5	98	14.2	+1	14.9	141	12.6	+17	01.9	189	03.7
18	293	06.4	72	33.1	-23	16.5	113	15.2	+1	14.3	156	14.7	+17	01.8	204	06.2
19	308	08.8	87	36.0		16.4	128	16.2		13.6	171	16.8		01.7	219	08.7
20	323	11.3	102	38.8		16.3	143	17.2		13.0	186	18.9		01.6	234	11.2
21	338	13.8	117	41.7		16.2	158	18.2		12.4	201	21.0		01.5	249	13.7
22	353	16.2	132	44.6		16.1	173	19.2		11.7	216	23.1		01.4	264	16.1
23	8	18.7	147	47.5		16.0	188	20.2		11.1	231	25.3		01.3	279	18.6
24	23	21.2	162	50.4	-23	15.9	203	21.2	+1	10.4	246	27.4	+17	01.2	294	21.1
Dif	—		+29		+1		+10		-6		+21		-1		+25	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 45 ^m 8			Edad: 8 ^d 5 SD: 15:1 PMG: 20 ^h 09 ^m	PHE { 4 ^h : 55/3 12 ^h : 55/1 20 ^h : 55/0 Rº: 45 ^m									
	hG ☉	Dec	Dif			Civil			Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	183	30.9	-8 22.2	67	27.0	-21 31.4	60 N	16 52	17 34	18 22	16 32 8	23 58 84		
1	198	31.1	23.1	81	57.3 ¹¹³	23.8	58	16 56	36	21	19 12	*** ** *		
2	213	31.2	24.0	96	27.7 ¹¹⁴	16.0	56	17 00	37	20	16 07 15	*** ** *		
3	228	31.4	25.0	110	58.1 ¹¹⁴	08.1	54	03	39	20	15 57 18	*** ** *		
4	243	31.5	25.9	125	28.6 ¹¹⁵	-21 00.2	52	07	41	20	48 20	*** ** *		
5	258	31.6	-8 26.8	139	59.3 ¹¹⁷	-20 52.2	50	17 09	17 42	18 19	15 40 22	*** ** *		
6	273	31.8	-8 27.8	154	30.0 ¹¹⁷	-20 44.0	45	17 16	17 45	18 19	15 23 26	*** ** *		
7	288	31.9	28.7	169	00.7 ¹¹⁷	35.8	40	21	48	20	15 09 30	0 13 62		
8	303	32.1	29.6	183	31.6 ¹¹⁹	27.5	35	25	51	20	14 57 32	27 59		
9	318	32.2	30.5	198	02.5 ¹¹⁹	19.1	30	30	54	21	47 34	39 57		
10	333	32.4	31.5	212	33.6 ¹²¹	10.6	20	37	17 59	25	28 39	0 59 54		
11	348	32.5	-8 32.4	227	04.7 ¹²¹	-20 02.0	10 N	17 43	18 04	18 29	14 13 42	1 16 51		
12	3	32.6	-8 33.3	241	35.9 ¹²²	-19 53.4	0	17 49	18 10	18 34	13 58 45	1 33 47		
13	18	32.8	34.2	256	07.1 ¹²²	44.6	10 S	17 55	17	41	43 49	1 49 44		
14	33	32.9	35.1	270	38.5 ¹²⁴	35.8	20	18 02	24	18 51	27 52	2 06 41		
15	48	33.0	36.1	285	09.9 ¹²⁴	26.9	30	10	34	19 03	13 09 56	26 38		
16	63	33.2	37.0	299	41.4 ¹²⁵	17.9	35	14	40	11	12 58 59	38 35		
17	78	33.3	-8 37.9	314	13.0 ¹²⁶	-19 08.8	40	18 20	18 47	19 21	12 45 62	2 51 32		
18	93	33.5	-8 38.8	328	44.7 ¹²⁷	-18 59.7	45	18 26	18 56	19 33	12 31 65	3 07 29		
19	108	33.6	39.8	343	16.4 ¹²⁷	50.5	50	33	19 07	48	13 69	26 25		
20	123	33.7	40.7	357	48.2 ¹²⁸	41.2	52	36	12	19 56	12 04 72	35 22		
21	138	33.9	41.6	12	20.1 ¹²⁹	31.8	54	40	18	20 04	11 55 74	45 20		
22	153	34.0	42.5	26	52.1 ¹³⁰	22.3	56	44	24	14	44 77	3 56 18		
23	168	34.2	43.5	41	24.2 ¹³¹	12.8	58	49	31	25	32 80	4 09 14		
24	183	34.3	-8 44.4	55	56.3 ¹³¹	-18 03.2	60 S	18 54	19 39	20 39	11 17 85	4 24 10		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 22 ^m 9		Mag: -4.6 PMG: 13 ^h 06 ^m		Mag: +1.8 PMG: 10 ^h 26 ^m		Mag: -2.1 PMG: 7 ^h 33 ^m		Mag: -0.1 PMG: 4 ^h 22 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	23	21.2	162	50.4	203	21.2	246	27.4	294	21.1				
1	38	23.6	177	53.4	218	22.2	261	29.5	309	23.6				
2	53	26.1	192	56.3	233	23.3	276	31.6	324	26.1				
3	68	28.5	207	59.2	248	24.3	291	33.7	339	28.5				
4	83	31.0	223	02.1	263	25.3	306	35.8	354	31.0				
5	98	33.5	238	05.0	278	26.3	321	37.9	9	33.5				
6	113	35.9	253	08.0	293	27.3	336	40.0	24	36.0				
7	128	38.4	268	10.9	308	28.3	351	42.1	39	38.5				
8	143	40.9	283	13.8	323	29.3	6	44.3	54	41.0				
9	158	43.3	298	16.8	338	30.3	21	46.4	69	43.4				
10	173	45.8	313	19.7	353	31.3	36	48.5	84	45.9				
11	188	48.3	328	22.7	8	32.3	51	50.6	99	48.4				
12	203	50.7	343	25.6	23	33.3	66	52.7	114	50.9				
13	218	53.2	358	28.6	38	34.3	81	54.8	129	53.4				
14	233	55.6	13	31.6	53	35.3	96	56.9	144	55.9				
15	248	58.1	28	34.5	68	36.3	111	59.0	159	58.3				
16	264	00.6	43	37.5	83	37.3	127	01.2	175	00.8				
17	279	03.0	58	40.5	98	38.3	142	03.3	190	03.3				
18	294	05.5	73	43.4	113	39.3	157	05.4	205	05.8				
19	309	08.0	88	46.4	128	40.3	172	07.5	220	08.3				
20	324	10.4	103	49.4	143	41.3	187	09.6	235	10.8				
21	339	12.9	118	52.4	158	42.3	202	11.7	250	13.3				
22	354	15.4	133	55.4	173	43.3	217	13.8	265	15.7				
23	9	17.8	148	58.4	188	44.3	232	16.0	280	18.2				
24	24	20.3	164	01.4	203	45.3	247	18.1	295	20.7				
Dif	—		+30		+10		+21		-1		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 45 ^m 6			Edad: 9 ^d 5 PHE { SD: 14'9 PMG: 20 ^h 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	34.3	-8	44.4	55	56.3	-18 03.2	60 N	5 11	5 59	6 41	16 40	5	**	**	**
1	198	34.4		45.3	70	28.5 ¹³²	-17 53.5 ⁹⁷	58	11	57	37	31	8	0	10	80
2	213	34.6		46.2	85	00.8 ¹³³	43.8 ⁹⁹	56	12	55	33	22	12	21	77	
3	228	34.7		47.1	99	33.1 ¹³³	33.9 ⁹⁹	54	12	53	29	15	14	30	74	
4	243	34.8		48.1	114	05.5 ¹³⁴	24.0 ⁹⁹	52	13	52	26	08	16	39	71	
5	258	35.0	-8	49.0	128	38.0 ¹³⁵	-17 14.1 ⁹⁹	50	5 13	5 50	6 23	16 02	18	0	46	70
6	273	35.1	-8	49.9	143	10.6 ¹³⁶	-17 04.1 ¹⁰⁰	45	5 13	5 47	6 17	15 49	23	1	02	65
7	288	35.2		50.8	157	43.3 ¹³⁷	-16 54.0 ¹⁰¹	40	12	44	11	39	25	15	62	
8	303	35.4		51.7	172	16.0 ¹³⁷	43.8 ¹⁰²	35	12	41	07	29	29	26	59	
9	318	35.5		52.7	186	48.7 ¹³⁷	33.6 ¹⁰²	30	10	38	6 02	21	32	36	56	
10	333	35.6		53.6	201	21.6 ¹³⁹	23.3 ¹⁰³	20	07	33	5 55	15 07	36	1	53	51
11	348	35.8	-8	54.5	215	54.5 ¹³⁹	-16 12.9 ¹⁰⁴	10 N	5 03	5 27	5 49	14 55	39	2	07	48
12	3	35.9	-8	55.4	230	27.5 ¹⁴⁰	-16 02.5 ¹⁰⁴	0	4 57	5 21	5 42	14 43	43	2	20	44
13	18	36.0		56.3	245	00.5 ¹⁴⁰	-15 52.0 ¹⁰⁵	10 S	50	15	36	32	46	33	41	
14	33	36.2		57.3	259	33.7 ¹⁴²	41.5 ¹⁰⁵	20	41	5 07	29	19	51	2	47	38
15	48	36.3		58.2	274	06.9 ¹⁴²	30.9 ¹⁰⁶	30	28	4 57	21	14 05	55	3	04	32
16	63	36.4	-8	59.1	288	40.1 ¹⁴²	20.2 ¹⁰⁷	35	20	51	17	13 57	57	13	30	
17	78	36.6	-9	00.0	303	13.4 ¹⁴³	-15 09.5 ¹⁰⁷	40	4 10	4 43	5 11	13 47	61	3	23	28
18	93	36.7	-9	00.9	317	46.8 ¹⁴⁴	-14 58.8 ¹⁰⁷	45	3 58	4 35	5 05	13 36	64	3	36	24
19	108	36.8		01.9	332	20.2 ¹⁴⁴	47.9 ¹⁰⁹	50	43	24	4 58	22	69	51	20	
20	123	37.0		02.8	346	53.7 ¹⁴⁵	37.0 ¹⁰⁹	52	35	19	54	16	71	3	57	18
21	138	37.1		03.7	1	27.3 ¹⁴⁶	26.1 ¹⁰⁹	54	26	13	50	09	73	4	05	16
22	153	37.2		04.6	16	00.9 ¹⁴⁶	15.1 ¹¹⁰	56	17	4 07	46	13 01	76	14	13	
23	168	37.4		05.5	30	34.6 ¹⁴⁷	-14 04.1 ¹¹⁰	58	3 05	3 59	42	12 52	79	23	11	
24	183	37.5	-9	06.4	45	08.4 ¹⁴⁸	-13 53.0 ¹¹¹	60 S	2 52	3 51	4 36	12 42	82	4	34	7
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 19 ^m 0		Mag: -4.6 PMG: 13 ^h 01 ^m			Mag: +1.8 PMG: 10 ^h 24 ^m			Mag: -2.1 PMG: 7 ^h 30 ^m			Mag: -0.1 PMG: 4 ^h 18 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	24	20.3	164	01.4	-23	12.6	203	45.3	+0	55.1	247	18.1	+16	59.0	295	20.7
1	39	22.8	179	04.4		12.5	218	46.3		54.4	262	20.2		58.9	310	23.2
2	54	25.2	194	07.4		12.3	233	47.4		53.8	277	22.3		58.8	325	25.7
3	69	27.7	209	10.4		12.1	248	48.4		53.1	292	24.4		58.7	340	28.2
4	84	30.1	224	13.4		12.0	263	49.4		52.5	307	26.5		58.6	355	30.7
5	99	32.6	239	16.5	-23	11.8	278	50.4	+0	51.9	322	28.7	+16	58.5	10	33.1
6	114	35.1	254	19.5	-23	11.6	293	51.4	+0	51.2	337	30.8	+16	58.4	25	35.6
7	129	37.5	269	22.5		11.4	308	52.4		50.6	352	32.9		58.3	40	38.1
8	144	40.0	284	25.5		11.3	323	53.4		49.9	7	35.0		58.2	55	40.6
9	159	42.5	299	28.6		11.1	338	54.4		49.3	22	37.1		58.1	70	43.1
10	174	44.9	314	31.6		10.9	353	55.4		48.7	37	39.2		58.0	85	45.6
11	189	47.4	329	34.7	-23	10.7	8	56.4	+0	48.0	52	41.4	+16	57.9	100	48.1
12	204	49.9	344	37.7	-23	10.5	23	57.4	+0	47.4	67	43.5	+16	57.8	115	50.6
13	219	52.3	359	40.8		10.3	38	58.4		46.7	82	45.6		57.8	130	53.1
14	234	54.8	14	43.8		10.1	53	59.4		46.1	97	47.7		57.7	145	55.5
15	249	57.2	29	46.9		09.9	69	00.4		45.5	112	49.8		57.6	160	58.0
16	264	59.7	44	49.9		09.7	84	01.4		44.8	127	52.0		57.5	176	00.5
17	280	02.2	59	53.0	-23	09.5	99	02.4	+0	44.2	142	54.1	+16	57.4	191	03.0
18	295	04.6	74	56.1	-23	09.3	114	03.4	+0	43.5	157	56.2	+16	57.3	206	05.5
19	310	07.1	89	59.2		09.1	129	04.4		42.9	172	58.3		57.2	221	08.0
20	325	09.6	105	02.2		08.9	144	05.4		42.3	188	00.4		57.1	236	10.5
21	340	12.0	120	05.3		08.7	159	06.4		41.6	203	02.6		57.0	251	13.0
22	355	14.5	135	08.4		08.5	174	07.4		41.0	218	04.7		56.9	266	15.5
23	10	17.0	150	11.5		08.3	189	08.4		40.3	233	06.8		56.8	281	18.0
24	25	19.4	165	14.6	-23	08.1	204	09.4	+0	39.7	248	08.9	+16	56.7	296	20.4
Dif	—		+31	+2		+10	-6			+21	-1			+25		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 10 ^d 5	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2	SD: 14'8	PMG: 21 ^h 36 ^m			R°: 41 ^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	37.5	-9	06.4	45	08.4	-13 53.0	60 N	16 46	17 28	18 16	16 45 4	1 22 81					
1	198	37.6		07.4	59	42.2 ¹⁴⁸	41.8 ¹¹²	58	51	31	16	39 7	30 78					
2	213	37.8		08.3	74	16.0 ¹⁴⁸	30.6 ¹¹²	56	55	33	16	34 9	38 74					
3	228	37.9		09.2	88	50.0 ¹⁵⁰	19.4 ¹¹²	54	16 59	35	15	29 12	44 72					
4	243	38.0		10.1	103	23.9 ¹⁴⁹	-13 08.1 ¹¹³	52	17 02	36	15	24 14	50 70					
5	258	38.2	-9	11.0	117	58.0 ¹⁵¹	-12 56.7 ¹¹⁴	50	17 05	17 38	18 15	16 20 16	1 56 67					
6	273	38.3	-9	11.9	132	32.1 ¹⁵¹	-12 45.4 ¹¹³	45	17 12	17 42	18 16	16 12 20	2 07 63					
7	288	38.4		12.8	147	06.2 ¹⁵¹	33.9 ¹¹⁵	40	18	45	17	16 04 24	17 59					
8	303	38.5		13.8	161	40.4 ¹⁵²	22.4 ¹¹⁵	35	23	48	18	15 58 26	25 56					
9	318	38.7		14.7	176	14.6 ¹⁵²	-12 10.9 ¹¹⁵	30	27	52	19	53 28	32 54					
10	333	38.8		15.6	190	48.9 ¹⁵³	-11 59.3 ¹¹⁶	20	35	17 57	23	43 33	44 49					
11	348	38.9	-9	16.5	205	23.3 ¹⁵⁴	-11 47.7 ¹¹⁶	10 N	17 42	18 03	18 28	15 34 38	2 55 45					
12	3	39.1	-9	17.4	219	57.7 ¹⁵⁴	-11 36.1 ¹¹⁶	0	17 49	18 10	18 34	15 26 41	3 04 42					
13	18	39.2		18.3	234	32.1 ¹⁵⁴	24.4 ¹¹⁷	10 S	17 55	17	42	18 45	14 38					
14	33	39.3		19.2	249	06.6 ¹⁵⁵	12.6 ¹¹⁸	20	18 03	25	18 51	10 49	25 34					
15	48	39.4		20.2	263	41.1 ¹⁵⁵	-11 00.9 ¹¹⁷	30	11	36	19 05	15 00 53	36 30					
16	63	39.6		21.1	278	15.7 ¹⁵⁶	-10 49.0 ¹¹⁹	35	16	42	13	14 54 56	43 28					
17	78	39.7	-9	22.0	292	50.4 ¹⁵⁷	-10 37.2 ¹¹⁸	40	18 22	18 50	19 23	14 48 59	3 51 24					
18	93	39.8	-9	22.9	307	25.0 ¹⁵⁶	-10 25.3 ¹¹⁹	45	18 28	18 59	19 36	14 40 63	4 00 21					
19	108	39.9		23.8	321	59.8 ¹⁵⁸	13.4 ¹¹⁹	50	36	19 10	19 52	31 67	11 16					
20	123	40.1		24.7	336	34.5 ¹⁵⁷	-10 01.4 ¹²⁰	52	40	16	20 00	27 69	15 15					
21	138	40.2		25.6	351	09.3 ¹⁵⁸	-9 49.4 ¹²⁰	54	44	22	09	22 71	21 13					
22	153	40.3		26.5	5	44.2 ¹⁵⁹	37.4 ¹²⁰	56	48	28	19	17 74	27 10					
23	168	40.4		27.5	20	19.1 ¹⁵⁹	25.3 ¹²¹	58	53	36	32	11 77	34 7					
24	183	40.6	-9	28.4	34	54.0 ¹⁵⁹	-9 13.2 ¹²¹	60 S	18 59	19 45	20 46	14 04 80	4 41 5					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 22 ^h 15 ^m 0		Mag: -4.5 PMG: 12 ^h 56 ^m		Mag: +1.8 PMG: 10 ^h 23 ^m		Mag: -2.1 PMG: 7 ^h 26 ^m		Mag: -0.1 PMG: 4 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	25	19.4	165	14.6	-23	08.1	204	09.4	+0	39.7	248	08.9	+16	56.7	296	20.4	+22	06.8
1	40	21.9	180	17.7		07.9	219	10.4		39.1	263	11.0		56.6	311	22.9		06.8
2	55	24.4	195	20.8		07.6	234	11.5		38.4	278	13.2		56.6	326	25.4		06.8
3	70	26.8	210	23.9		07.4	249	12.5		37.8	293	15.3		56.5	341	27.9		06.8
4	85	29.3	225	27.0		07.2	264	13.5		37.1	308	17.4		56.4	356	30.4		06.8
5	100	31.7	240	30.1	-23	07.0	279	14.5	+0	36.5	323	19.5	+16	56.3	11	32.9	+22	06.8
6	115	34.2	255	33.2	-23	06.7	294	15.5	+0	35.9	338	21.7	+16	56.2	26	35.4	+22	06.7
7	130	36.7	270	36.4		06.5	309	16.5		35.2	353	23.8		56.1	41	37.9		06.7
8	145	39.1	285	39.5		06.3	324	17.5		34.6	8	25.9		56.0	56	40.4		06.7
9	160	41.6	300	42.6		06.0	339	18.5		33.9	23	28.0		55.9	71	42.9		06.7
10	175	44.1	315	45.8		05.8	354	19.5		33.3	38	30.1		55.8	86	45.4		06.7
11	190	46.5	330	48.9	-23	05.5	9	20.5	+0	32.7	53	32.3	+16	55.7	101	47.9	+22	06.7
12	205	49.0	345	52.0	-23	05.3	24	21.5	+0	32.0	68	34.4	+16	55.6	116	50.4	+22	06.7
13	220	51.5	0	55.2		05.0	39	22.5		31.4	83	36.5		55.5	131	52.8		06.7
14	235	53.9	15	58.3		04.8	54	23.5		30.7	98	38.6		55.4	146	55.3		06.7
15	250	56.4	31	01.5		04.5	69	24.5		30.1	113	40.8		55.4	161	57.8		06.7
16	265	58.9	46	04.6		04.3	84	25.5		29.5	128	42.9		55.3	177	00.3		06.7
17	281	01.3	61	07.8	-23	04.0	99	26.5	+0	28.8	143	45.0	+16	55.2	192	02.8	+22	06.7
18	296	03.8	76	11.0	-23	03.8	114	27.5	+0	28.2	158	47.1	+16	55.1	207	05.3	+22	06.7
19	311	06.2	91	14.1		03.5	129	28.5		27.5	173	49.3		55.0	222	07.8		06.7
20	326	08.7	106	17.3		03.2	144	29.5		26.9	188	51.4		54.9	237	10.3		06.7
21	341	11.2	121	20.5		03.0	159	30.5		26.3	203	53.5		54.8	252	12.8		06.7
22	356	13.6	136	23.6		02.7	174	31.5		25.6	218	55.6		54.7	267	15.3		06.7
23	11	16.1	151	26.8		02.4	189	32.5		25.0	233	57.8		54.6	282	17.8		06.7
24	26	18.6	166	30.0	-23	02.2	204	33.5	+0	24.3	248	59.9	+16	54.5	297	20.3	+22	06.7
Dif	—		+31	+2		+10	-6		+21	-1		+25		0				

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 45 ^m 2			Edad: 11 ^d 5 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'0 Rº: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	40.6	-9 28.4	34	54.0	-9 13.2	60 N	5 15	6 04	6 46	16 49	3	2 43	79		
1	198	40.7	29.3	49	29.0 ¹⁶⁰	-9 01.1 ¹²¹	58	16	6 01	41	46	6	48	76		
2	213	40.8	30.2	64	04.0 ¹⁶⁰	-8 48.9 ¹²²	56	16	5 59	37	43	9	52	74		
3	228	40.9	31.1	78	39.0 ¹⁶⁰	36.7 ¹²²	54	16	57	33	41	10	2 56	71		
4	243	41.1	32.0	93	14.1 ¹⁶¹	24.5 ¹²²	52	16	55	29	38	13	3 00	69		
5	258	41.2	-9 32.9	107	49.2 ¹⁶¹	-8 12.2 ¹²³	50	5 16	5 53	6 26	16 36	15	3 03	67		
6	273	41.3	-9 33.8	122	24.3 ¹⁶¹	-8 00.0 ¹²²	45	5 15	5 49	6 19	16 32	18	3 10	63		
7	288	41.4	34.7	136	59.5 ¹⁶²	-7 47.7 ¹²³	40	14	46	13	28	22	16	59		
8	303	41.6	35.6	151	34.7 ¹⁶²	35.3 ¹²⁴	35	13	43	08	24	25	21	56		
9	318	41.7	36.6	166	10.0 ¹⁶³	23.0 ¹²³	30	12	39	6 04	21	28	26	53		
10	333	41.8	37.5	180	45.2 ¹⁶²	-7 10.6 ¹²⁴	20	08	33	5 56	16	32	33	49		
11	348	41.9	-9 38.4	195	20.5 ¹⁶³	-6 58.2 ¹²⁴	10 N	5 03	5 27	5 49	16 12	36	3 40	44		
12	3	42.0	-9 39.3	209	55.9 ¹⁶⁴	-6 45.7 ¹²⁵	0	4 57	5 21	5 42	16 07	40	3 46	41		
13	18	42.2	40.2	224	31.2 ¹⁶³	33.3 ¹²⁴	10 S	49	14	35	16 03	44	52	37		
14	33	42.3	41.1	239	06.6 ¹⁶⁴	20.8 ¹²⁵	20	39	5 05	28	15 59	47	3 59	33		
15	48	42.4	42.0	253	42.0 ¹⁶⁴	-6 08.3 ¹²⁵	30	26	4 55	19	53	53	4 06	28		
16	63	42.5	42.9	268	17.5 ¹⁶⁵	-5 55.8 ¹²⁵	35	17	48	14	50	55	11	25		
17	78	42.7	-9 43.8	282	53.0 ¹⁶⁵	-5 43.2 ¹²⁶	40	4 07	4 40	5 08	15 47	58	4 15	23		
18	93	42.8	-9 44.7	297	28.4 ¹⁶⁴	-5 30.7 ¹²⁵	45	3 54	4 31	5 02	15 43	62	4 21	19		
19	108	42.9	45.6	312	04.0 ¹⁶⁶	18.1 ¹²⁶	50	38	20	4 54	38	66	27	15		
20	123	43.0	46.5	326	39.5 ¹⁶⁵	-5 05.5 ¹²⁶	52	30	14	50	36	68	30	14		
21	138	43.1	47.4	341	15.0 ¹⁶⁵	-4 52.9 ¹²⁶	54	21	08	46	33	71	34	11		
22	153	43.2	48.3	355	50.6 ¹⁶⁶	40.2 ¹²⁷	56	3 10	4 01	41	31	72	37	9		
23	168	43.4	49.2	10	26.2 ¹⁶⁶	27.6 ¹²⁶	58	2 58	3 53	36	28	75	41	7		
24	183	43.5	-9 50.2	25	01.8 ¹⁶⁶	-4 14.9 ¹²⁷	60 S	2 44	3 45	4 30	15 24	79	4 46	3		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 11 ^m 1		Mag: -4.5 PMG: 12 ^h 51 ^m			Mag: +1.8 PMG: 10 ^h 21 ^m			Mag: -2.1 PMG: 7 ^h 23 ^m			Mag: -0.1 PMG: 4 ^h 10 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	26	18.6	166	30.0	-23	02.2	204	33.5	+0	24.3	248	59.9	+16	54.5	297	20.3
1	41	21.0	181	33.2		01.9	219	34.5		23.7	264	02.0		54.4	312	22.8
2	56	23.5	196	36.4		01.6	234	35.5		23.1	279	04.1		54.4	327	25.3
3	71	26.0	211	39.6		01.3	249	36.6		22.4	294	06.3		54.3	342	27.8
4	86	28.4	226	42.8		01.0	264	37.6		21.8	309	08.4		54.2	357	30.3
5	101	30.9	241	46.0	-23	00.7	279	38.6	+0	21.1	324	10.5	+16	54.1	12	32.8
6	116	33.3	256	49.2	-23	00.5	294	39.6	+0	20.5	339	12.7	+16	54.0	27	35.3
7	131	35.8	271	52.4	-23	00.2	309	40.6		19.9	354	14.8		53.9	42	37.8
8	146	38.3	286	55.6	-22	59.9	324	41.6		19.2	9	16.9		53.8	57	40.3
9	161	40.7	301	58.9		59.6	339	42.6		18.6	24	19.0		53.7	72	42.8
10	176	43.2	317	02.1		59.3	354	43.6		17.9	39	21.2		53.6	87	45.3
11	191	45.7	332	05.3	-22	59.0	9	44.6	+0	17.3	54	23.3	+16	53.5	102	47.8
12	206	48.1	347	08.5	-22	58.7	24	45.6	+0	16.6	69	25.4	+16	53.4	117	50.3
13	221	50.6	2	11.8		58.4	39	46.6		16.0	84	27.6		53.4	132	52.8
14	236	53.1	17	15.0		58.1	54	47.6		15.4	99	29.7		53.3	147	55.3
15	251	55.5	32	18.3		57.8	69	48.6		14.7	114	31.8		53.2	162	57.8
16	266	58.0	47	21.5		57.4	84	49.6		14.1	129	33.9		53.1	178	00.3
17	282	00.5	62	24.7	-22	57.1	99	50.6	+0	13.4	144	36.1	+16	53.0	193	02.8
18	297	02.9	77	28.0	-22	56.8	114	51.6	+0	12.8	159	38.2	+16	52.9	208	05.3
19	312	05.4	92	31.3		56.5	129	52.6		12.2	174	40.3		52.8	223	07.8
20	327	07.8	107	34.5		56.2	144	53.6		11.5	189	42.5		52.7	238	10.3
21	342	10.3	122	37.8		55.8	159	54.6		10.9	204	44.6		52.6	253	12.8
22	357	12.8	137	41.0		55.5	174	55.6		10.2	219	46.7		52.5	268	15.3
23	12	15.2	152	44.3		55.2	189	56.6		09.6	234	48.9		52.5	283	17.8
24	27	17.7	167	47.6	-22	54.8	204	57.6	+0	09.0	249	51.0	+16	52.4	298	20.3
Dif	—		+32	+3		+10	-6			+21		-1		+25		

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 12 ^d 5 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0														
	PMG: 11 ^h 45 ^m 0			SD: 14 ^h 7 PMG: 22 ^h 57 ^m R°: 40 ^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	43.5	-9 50.2	25	01.8	-4 14.9		60 N	16 40	17 23	18 11	16 52	4	4 02	78			
1	198	43.6	51.1	39	37.5 ¹⁶⁷	-4 02.3 ¹²⁶		58	45	26	11	52	6	04	75			
2	213	43.7	52.0	54	13.1 ¹⁶⁶	-3 49.6 ¹²⁷		56	50	28	11	52	8	06	72			
3	228	43.8	52.9	68	48.8 ¹⁶⁷	36.9 ¹²⁷		54	54	30	11	51	11	07	71			
4	243	44.0	53.8	83	24.5 ¹⁶⁷	24.1 ¹²⁸		52	16 58	32	11	51	13	09	68			
5	258	44.1	-9 54.7	98	00.2 ¹⁶⁷	-3 11.4 ¹²⁷		50	17 01	17 34	18 12	16 51	14	4 10	66			
6	273	44.2	-9 55.6	112	35.9 ¹⁶⁷	-2 58.7 ¹²⁷		45	17 09	17 39	18 13	16 50	19	4 13	62			
7	288	44.3	56.5	127	11.6 ¹⁶⁷	45.9 ¹²⁸		40	15	42	14	50	22	15	58			
8	303	44.4	57.4	141	47.3 ¹⁶⁷	33.2 ¹²⁷		35	20	46	16	49	25	17	55			
9	318	44.5	58.3	156	23.1 ¹⁶⁸	20.4 ¹²⁸		30	25	49	17	49	28	19	52			
10	333	44.7	-9 59.2	170	58.8 ¹⁶⁷	-2 07.6 ¹²⁸		20	34	17 56	22	48	32	22	47			
11	348	44.8	-10 00.1	185	34.6 ¹⁶⁸	-1 54.9 ¹²⁷		10 N	17 41	18 02	18 27	16 48	36	4 24	44			
12	3	44.9	-10 01.0	200	10.3 ¹⁶⁷	-1 42.1 ¹²⁸		0	17 48	18 09	18 34	16 47	40	4 27	40			
13	18	45.0	01.9	214	46.1 ¹⁶⁸	29.3 ¹²⁸		10 S	17 56	17	42	47	44	29	36			
14	33	45.1	02.8	229	21.9 ¹⁶⁸	16.5 ¹²⁸		20	18 03	26	18 52	46	48	32	32			
15	48	45.2	03.7	243	57.7 ¹⁶⁸	-1 03.7 ¹²⁸		30	13	37	19 06	46	52	34	28			
16	63	45.3	04.6	258	33.5 ¹⁶⁸	-0 50.9 ¹²⁸		35	18	44	15	45	56	36	25			
17	78	45.5	-10 05.5	273	09.3 ¹⁶⁸	-0 38.1 ¹²⁸		40	18 24	18 52	19 26	16 45	58	4 38	22			
18	93	45.6	-10 06.4	287	45.1 ¹⁶⁸	-0 25.2 ¹²⁹		45	18 31	19 02	19 39	16 45	62	4 40	19			
19	108	45.7	07.3	302	20.9 ¹⁶⁸	-0 12.4 ¹²⁸		50	39	14	19 56	44	66	42	15			
20	123	45.8	08.2	316	56.7 ¹⁶⁸	+0 00.4 ¹²⁸		52	43	20	20 04	44	68	44	12			
21	138	45.9	09.1	331	32.5 ¹⁶⁸	13.2 ¹²⁸		54	48	26	14	44	70	45	10			
22	153	46.0	10.0	346	08.3 ¹⁶⁸	26.0 ¹²⁸		56	53	33	25	43	73	46	9			
23	168	46.1	10.9	0	44.1 ¹⁶⁸	38.8 ¹²⁸		58	18 58	41	38	43	76	48	6			
24	183	46.3	-10 11.8	15	19.9 ¹⁶⁸	+0 51.6 ¹²⁸		60 S	19 04	19 51	20 53	16 43	78	4 49	4			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 22 ^h 07 ^m 2		Mag: -4.5 PMG: 12 ^h 46 ^m			Mag: +1.8 PMG: 10 ^h 19 ^m			Mag: -2.1 PMG: 7 ^h 20 ^m			Mag: -0.1 PMG: 4 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	27	17.7	167	47.6	-22	54.8	204	57.6	+0	09.0	249	51.0	+16	52.4	298	20.3	+22	06.7
1	42	20.2	182	50.9		54.5	219	58.6		08.3	264	53.1		52.3	313	22.8		06.7
2	57	22.6	197	54.1		54.2	234	59.6		07.7	279	55.3		52.2	328	25.3		06.6
3	72	25.1	212	57.4		53.8	250	00.6		07.0	294	57.4		52.1	343	27.8		06.6
4	87	27.6	228	00.7		53.5	265	01.6		06.4	309	59.5		52.0	358	30.3		06.6
5	102	30.0	243	04.0	-22	53.1	280	02.6	+0	05.8	325	01.7	+16	51.9	13	32.8	+22	06.6
6	117	32.5	258	07.3	-22	52.8	295	03.7	+0	05.1	340	03.8	+16	51.8	28	35.3	+22	06.6
7	132	34.9	273	10.6		52.4	310	04.7		04.5	355	05.9		51.7	43	37.8		06.6
8	147	37.4	288	13.9		52.1	325	05.7		03.8	10	08.1		51.7	58	40.3		06.6
9	162	39.9	303	17.2		51.7	340	06.7		03.2	25	10.2		51.6	73	42.8		06.6
10	177	42.3	318	20.5		51.4	355	07.7		02.6	40	12.3		51.5	88	45.3		06.6
11	192	44.8	333	23.8	-22	51.0	10	08.7	+0	01.9	55	14.5	+16	51.4	103	47.8	+22	06.6
12	207	47.3	348	27.2	-22	50.7	25	09.7	+0	01.3	70	16.6	+16	51.3	118	50.3	+22	06.6
13	222	49.7	3	30.5		50.3	40	10.7	+0	00.6	85	18.7		51.2	133	52.8		06.6
14	237	52.2	18	33.8		49.9	55	11.7	+0	00.0	100	20.9		51.1	148	55.3		06.6
15	252	54.7	33	37.1		49.6	70	12.7	-0	00.6	115	23.0		51.0	163	57.8		06.6
16	267	57.1	48	40.5		49.2	85	13.7		01.3	130	25.1		50.9	179	00.3		06.6
17	282	59.6	63	43.8	-22	48.8	100	14.7	-0	01.9	145	27.3	+16	50.9	194	02.8	+22	06.6
18	298	02.1	78	47.1	-22	48.4	115	15.7	-0	02.6	160	29.4	+16	50.8	209	05.3	+22	06.6
19	313	04.5	93	50.5		48.1	130	16.7		03.2	175	31.6		50.7	224	07.8		06.6
20	328	07.0	108	53.8		47.7	145	17.7		03.8	190	33.7		50.6	239	10.3		06.6
21	343	09.4	123	57.2		47.3	160	18.7		04.5	205	35.8		50.5	254	12.8		06.6
22	358	11.9	139	00.5		46.9	175	19.7		05.1	220	38.0		50.4	269	15.3		06.6
23	13	14.4	154	03.9		46.5	190	20.7		05.8	235	40.1		50.3	284	17.9		06.6
24	28	16.8	169	07.2	-22	46.1	205	21.7	-0	06.4	250	42.2	+16	50.2	299	20.4	+22	06.6
Dif	—		+33		+4		+10		-6		+21		-1		+25		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 8			Edad: 13 ^d 5 PHE { SD: 14'7 PMG: 23 ^h 37 ^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	46.3	-10	11.8	15	19.9	+0	51.6	60 N	5	20	6	08	6	51	16	56	3
1	198	46.4		12.7	29	55.7 ¹⁶⁸	+1	04.5 ¹²⁹	58		20	06		46	16	58	7	
2	213	46.5		13.6	44	31.5 ¹⁶⁸		17.3 ¹²⁸	56		20	03		41	17	00	9	
3	228	46.6		14.5	59	07.3 ¹⁶⁸		30.1 ¹²⁸	54		20	6	01	37		02	11	
4	243	46.7		15.4	73	43.0 ¹⁶⁷		42.9 ¹²⁸	52		19	5	59	33		04	13	
5	258	46.8	-10	16.3	88	18.8 ¹⁶⁸	+1	55.7 ¹²⁸	50		5	19	5	57	6	29	17	05
6	273	46.9	-10	17.2	102	54.6 ¹⁶⁸	+2	08.4 ¹²⁷	45		5	18	5	52	6	22	17	09
7	288	47.0		18.1	117	30.3 ¹⁶⁷		21.2 ¹²⁸	40		16	48		15		12	23	
8	303	47.1		19.0	132	06.1 ¹⁶⁸		34.0 ¹²⁸	35		15	44		10		14	26	
9	318	47.2		19.9	146	41.8 ¹⁶⁷		46.8 ¹²⁸	30		13	41	6	05		17	28	
10	333	47.4		20.8	161	17.5 ¹⁶⁷	+2	59.5 ¹²⁷	20		08	34		5	56	20	33	
11	348	47.5	-10	21.7	175	53.2 ¹⁶⁷	+3	12.3 ¹²⁸	10 N		5	03	5	27	5	49	17	24
12	3	47.6	-10	22.6	190	29.0 ¹⁶⁸	+3	25.0 ¹²⁷	0		4	56	5	20	5	41	17	27
13	18	47.7		23.5	205	04.6 ¹⁶⁶		37.7 ¹²⁷	10 S		48	13		34		31	44	
14	33	47.8		24.4	219	40.3 ¹⁶⁷	+3	50.4 ¹²⁷	20		37	5	04	26		34	49	
15	48	47.9		25.2	234	16.0 ¹⁶⁷	+4	03.1 ¹²⁷	30		23	4	52	17		38	53	
16	63	48.0		26.1	248	51.6 ¹⁶⁶		15.8 ¹²⁷	35		14	45		12		41	55	
17	78	48.1	-10	27.0	263	27.2 ¹⁶⁶	+4	28.5 ¹²⁷	40		4	04	4	37	5	05	17	43
18	93	48.2	-10	27.9	278	02.8 ¹⁶⁶	+4	41.1 ¹²⁶	45		3	50	4	27	4	58	17	47
19	108	48.3		28.8	292	38.4 ¹⁶⁶	+4	53.8 ¹²⁷	50		33	15		50		50	67	
20	123	48.4		29.7	307	14.0 ¹⁶⁶	+5	06.4 ¹²⁶	52		25	10		46		52	69	
21	138	48.5		30.6	321	49.6 ¹⁶⁶		19.0 ¹²⁶	54		15	4	03	41		54	71	
22	153	48.6		31.5	336	25.1 ¹⁶⁵		31.6 ¹²⁶	56		3	04	3	56	36		56	74
23	168	48.8		32.4	351	00.6 ¹⁶⁵		44.2 ¹²⁶	58		2	51	48	31		17	59	
24	183	48.9	-10	33.3	5	36.1 ¹⁶⁵	+5	56.7 ¹²⁵	60 S		2	36	3	38	4	25	18	01

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 03 ^m 3		Mag: -4.4 PMG: 12 ^h 41 ^m		Mag: +1.8 PMG: 10 ^h 18 ^m		Mag: -2.1 PMG: 7 ^h 16 ^m		Mag: -0.1 PMG: 4 ^h 02 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	16.8	169	07.2	205	21.7	250	42.2	299	20.4
1	43	19.3	184	10.6	220	22.7	265	44.4	314	22.9
2	58	21.8	199	14.0	235	23.7	280	46.5	329	25.4
3	73	24.2	214	17.3	250	24.7	295	48.7	344	27.9
4	88	26.7	229	20.7	265	25.7	310	50.8	359	30.4
5	103	29.2	244	24.1	280	26.7	325	52.9	14	32.9
6	118	31.6	259	27.4	295	27.7	340	55.1	29	35.4
7	133	34.1	274	30.8	310	28.7	355	57.2	44	37.9
8	148	36.5	289	34.2	325	29.7	10	59.3	59	40.4
9	163	39.0	304	37.6	340	30.7	26	01.5	74	42.9
10	178	41.5	319	41.0	355	31.8	41	03.6	89	45.4
11	193	43.9	334	44.4	10	32.8	56	05.8	104	47.9
12	208	46.4	349	47.8	25	33.8	71	07.9	119	50.4
13	223	48.9	4	51.2	40	34.8	86	10.0	134	53.0
14	238	51.3	19	54.6	55	35.8	101	12.2	149	55.5
15	253	53.8	34	58.0	70	36.8	116	14.3	164	58.0
16	268	56.3	50	01.4	85	37.8	131	16.5	180	00.5
17	283	58.7	65	04.8	100	38.8	146	18.6	195	03.0
18	299	01.2	80	08.2	115	39.8	161	20.8	210	05.5
19	314	03.7	95	11.7	130	40.8	176	22.9	225	08.0
20	329	06.1	110	15.1	145	41.8	191	25.0	240	10.5
21	344	08.6	125	18.5	160	42.8	206	27.2	255	13.0
22	359	11.0	140	22.0	175	43.8	221	29.3	270	15.5
23	14	13.5	155	25.4	190	44.8	236	31.5	285	18.1
24	29	16.0	170	28.8	205	45.8	251	33.6	300	20.6
Dif	—		+34	+4	+10	-6	+21	-1	+25	0

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 7			Edad: 14 ^d 5 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ¹ R°: ***m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	48.9	-10	33.3	5	36.1	+5	56.7	60 N	16 35	17 18	18 06	16 59 5	6 39 81				
1	198	49.0		34.2	20	11.5 ¹⁶⁴	+6	09.2 ¹²⁵	58	40	21	06	17 05 8	35 77				
2	213	49.1		35.1	34	47.0 ¹⁶⁵		21.7 ¹²⁵	56	45	23	06	09 11	31 75				
3	228	49.2		36.0	49	22.4 ¹⁶⁴		34.2 ¹²⁵	54	50	26	07	13 14	28 7				
4	243	49.3		36.9	63	57.8 ¹⁶⁴		46.7 ¹²⁵	52	54	28	07	17 16	25 70				
5	258	49.4	-10	37.7	78	33.1 ¹⁶³	+6	59.1 ¹²⁴	50	16 57	17 30	18 08	17 21 17	6 22 68				
6	273	49.5	-10	38.6	93	08.4 ¹⁶³	+7	11.6 ¹²⁵	45	17 05	17 35	18 09	17 28 22	6 17 63				
7	288	49.6		39.5	107	43.7 ¹⁶³		24.0 ¹²⁴	40	12	40	11	35 25	12 59				
8	303	49.7		40.4	122	19.0 ¹⁶³		36.3 ¹²³	35	18	44	13	40 28	08 56				
9	318	49.8		41.3	136	54.3 ¹⁶³	+7	48.7 ¹²⁴	30	23	48	15	45 30	6 04 53				
10	333	49.9		42.2	151	29.5 ¹⁶²	+8	01.0 ¹²³	20	32	17 55	20	17 53 35	5 58 49				
11	348	50.0	-10	43.1	166	04.6 ¹⁶¹	+8	13.3 ¹²³	10 N	17 40	18 02	18 26	18 01 38	5 52 45				
12	3	50.1	-10	44.0	180	39.8 ¹⁶²	+8	25.5 ¹²²	0	17 48	18 09	18 34	18 08 42	5 47 41				
13	18	50.2		44.9	195	14.9 ¹⁶¹		37.8 ¹²³	10 S	17 56	17	42	15 46	42 37				
14	33	50.3		45.8	209	50.0 ¹⁶¹	+8	50.0 ¹²²	20	18 04	27	18 53	23 49	36 34				
15	48	50.4		46.6	224	25.0 ¹⁶⁰	+9	02.1 ¹²¹	30	14	39	19 08	31 55	30 29				
16	63	50.5		47.5	239	00.0 ¹⁶⁰		14.3 ¹²²	35	20	46	17	36 57	26 27				
17	78	50.6	-10	48.4	253	35.0 ¹⁶⁰	+9	26.4 ¹²¹	40	18 26	18 54	19 28	18 42 60	5 22 24				
18	93	50.7	-10	49.3	268	09.9 ¹⁵⁹	+9	38.5 ¹²¹	45	18 34	19 05	19 42	18 49 64	5 17 21				
19	108	50.8		50.2	282	44.8 ¹⁵⁹	+9	50.5 ¹²⁰	50	43	17	20 00	18 57 68	12 16				
20	123	50.9		51.1	297	19.7 ¹⁵⁹	+10	02.5 ¹²⁰	52	47	23	09	19 01 70	09 14				
21	138	51.0		52.0	311	54.5 ¹⁵⁸		14.5 ¹²⁰	54	52	30	19	05 73	06 12				
22	153	51.1		52.9	326	29.3 ¹⁵⁸		26.4 ¹¹⁹	56	18 57	38	31	10 75	03 10				
23	168	51.2		53.7	341	04.0 ¹⁵⁷		38.3 ¹¹⁹	58	19 03	47	20 44	15 78	5 00 7				
24	183	51.3	-10	54.6	355	38.7 ¹⁵⁷	+10	50.2 ¹¹⁹	60 S	19 09	19 57	21 01	19 21 82	4 56 4				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 59 ^m 3		Mag: -4.4 PMG: 12 ^h 35 ^m			Mag: +1.8 PMG: 10 ^h 16 ^m			Mag: -2.1 PMG: 7 ^h 13 ^m			Mag: -0.1 PMG: 3 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	29	16.0	170	28.8	-22	36.0	205	45.8	-0	21.8	251	33.6	+16	48.1	300	20.6	+22	06.5
1	44	18.4	185	32.3		35.5	220	46.8		22.4	266	35.8		48.1	315	23.1		06.5
2	59	20.9	200	35.7		35.1	235	47.8		23.0	281	37.9		48.0	330	25.6		06.5
3	74	23.4	215	39.2		34.6	250	48.8		23.7	296	40.0		47.9	345	28.1		06.5
4	89	25.8	230	42.6		34.2	265	49.8		24.3	311	42.2		47.8	0	30.6		06.5
5	104	28.3	245	46.1	-22	33.7	280	50.8	-0	25.0	326	44.3	+16	47.7	15	33.1	+22	06.5
6	119	30.8	260	49.5	-22	33.2	295	51.8	-0	25.6	341	46.5	+16	47.6	30	35.6	+22	06.5
7	134	33.2	275	53.0		32.8	310	52.8		26.2	356	48.6		47.5	45	38.1		06.5
8	149	35.7	290	56.4		32.3	325	53.8		26.9	11	50.8		47.5	60	40.7		06.5
9	164	38.2	305	59.9		31.8	340	54.8		27.5	26	52.9		47.4	75	43.2		06.5
10	179	40.6	321	03.4		31.4	355	55.8		28.2	41	55.1		47.3	90	45.7		06.5
11	194	43.1	336	06.8	-22	30.9	10	56.8	-0	28.8	56	57.2	+16	47.2	105	48.2	+22	06.5
12	209	45.5	351	10.3	-22	30.4	25	57.8	-0	29.4	71	59.3	+16	47.1	120	50.7	+22	06.5
13	224	48.0	6	13.8		29.9	40	58.8		30.1	87	01.5		47.0	135	53.2		06.5
14	239	50.5	21	17.3		29.4	55	59.8		30.7	102	03.6		46.9	150	55.7		06.5
15	254	52.9	36	20.8		28.9	71	00.8		31.4	117	05.8		46.9	165	58.3		06.5
16	269	55.4	51	24.2		28.4	86	01.8		32.0	132	07.9		46.8	181	00.8		06.5
17	284	57.9	66	27.7	-22	28.0	101	02.8	-0	32.6	147	10.1	+16	46.7	196	03.3	+22	06.5
18	300	00.3	81	31.2	-22	27.5	116	03.8	-0	33.3	162	12.2	+16	46.6	211	05.8	+22	06.5
19	315	02.8	96	34.7		27.0	131	04.9		33.9	177	14.4		46.5	226	08.3		06.5
20	330	05.3	111	38.2		26.5	146	05.9		34.6	192	16.5		46.4	241	10.8		06.5
21	345	07.7	126	41.7		26.0	161	06.9		35.2	207	18.7		46.3	256	13.3		06.5
22	0	10.2	141	45.2		25.5	176	07.9		35.8	222	20.8		46.3	271	15.9		06.5
23	15	12.6	156	48.7		25.0	191	08.9		36.5	237	23.0		46.2	286	18.4		06.5
24	30	15.1	171	52.3	-22	24.4	206	09.9	-0	37.1	252	25.1	+16	46.1	301	20.9	+22	06.5
Dif	—		+35		+5		+10		-6		+21		-1		+25		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 5			Edad: 15 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 SD: 14'7 PMG: 0 ^h 18 ^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	183	51.3	-10	54.6	355	38.7	+10	50.2	60 N	5 25	6 13	6 56	17 04	7	8 00	82		
1	198	51.4		55.5	10	13.4 ¹⁵⁷	+11	02.0 ¹¹⁸	58	24	10	50	13	10	7 52	79		
2	213	51.5		56.4	24	48.0 ¹⁵⁶		13.8 ¹¹⁸	56	24	07	45	20	14	46	75		
3	228	51.6		57.3	39	22.6 ¹⁵⁶		25.5 ¹¹⁷	54	23	04	41	27	16	40	73		
4	243	51.7		58.2	53	57.1 ¹⁵⁵		37.2 ¹¹⁷	52	23	02	37	33	18	35	70		
5	258	51.8	-10	59.1	68	31.6 ¹⁵⁵	+11	48.9 ¹¹⁷	50	5 22	6 00	6 33	17 38	21	7 30	68		
6	273	51.9	-10	59.9	83	06.0 ¹⁵⁴	+12	00.5 ¹¹⁶	45	5 20	5 55	6 25	17 50	25	7 20	64		
7	288	52.0	-11	00.8	97	40.4 ¹⁵⁴		12.0 ¹¹⁵	40	18	50	18	18 00	28	11	61		
8	303	52.1		01.7	112	14.7 ¹⁵³		23.6 ¹¹⁶	35	16	46	12	08	31	7 04	57		
9	318	52.2		02.6	126	49.0 ¹⁵³		35.0 ¹¹⁴	30	14	42	6 06	15	34	6 57	55		
10	333	52.3		03.5	141	23.2 ¹⁵²		46.5 ¹¹⁵	20	09	35	5 57	28	38	47	50		
11	348	52.4	-11	04.4	155	57.4 ¹⁵²	+12	57.9 ¹¹⁴	10 N	5 03	5 28	5 49	18 39	42	6 37	47		
12	3	52.5	-11	05.2	170	31.6 ¹⁵²	+13	09.2 ¹¹³	0	4 56	5 20	5 41	18 50	45	6 28	43		
13	18	52.6		06.1	185	05.6 ¹⁵⁰		20.5 ¹¹³	10 S	47	12	33	19 01	48	19	40		
14	33	52.7		07.0	199	39.7 ¹⁵¹		31.7 ¹¹²	20	36	5 02	25	12	52	6 10	36		
15	48	52.7		07.9	214	13.7 ¹⁵⁰		42.9 ¹¹²	30	21	4 50	15	26	55	5 59	32		
16	63	52.8		08.8	228	47.6 ¹⁴⁹	+13	54.1 ¹¹²	35	12	43	09	33	59	53	29		
17	78	52.9	-11	09.6	243	21.5 ¹⁴⁹	+14	05.2 ¹¹¹	40	4 00	4 34	5 03	19 42	61	5 46	26		
18	93	53.0	-11	10.5	257	55.3 ¹⁴⁸	+14	16.2 ¹¹⁰	45	3 46	4 24	4 55	19 53	64	5 38	23		
19	108	53.1		11.4	272	29.1 ¹⁴⁸		27.2 ¹¹⁰	50	28	11	46	20 05	69	28	19		
20	123	53.2		12.3	287	02.8 ¹⁴⁷		38.1 ¹⁰⁹	52	19	4 05	41	11	71	23	17		
21	138	53.3		13.2	301	36.4 ¹⁴⁶		49.0 ¹⁰⁹	54	3 09	3 58	37	18	73	18	15		
22	153	53.4		14.0	316	10.0 ¹⁴⁶	+14	59.8 ¹⁰⁸	56	2 58	50	31	25	77	13	12		
23	168	53.5		14.9	330	43.6 ¹⁴⁶	+15	10.6 ¹⁰⁸	58	44	42	25	33	80	07	9		
24	183	53.6	-11	15.8	345	17.1 ¹⁴⁵	+15	21.3 ¹⁰⁷	60 S	2 27	3 32	4 19	20 43	84	5 00	6		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 55 ^m 4		Mag: -4.3 PMG: 12 ^h 30 ^m				Mag: +1.8 PMG: 10 ^h 15 ^m				Mag: -2.1 PMG: 7 ^h 09 ^m				Mag: -0.1 PMG: 3 ^h 54 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	30	15.1	171	52.3	-22	24.4	206	09.9	-0	37.1	252	25.1	+16	46.1	301	20.9	+22	06.5
1	45	17.6	186	55.8		23.9	221	10.9		37.8	267	27.3		46.0	316	23.4		06.5
2	60	20.0	201	59.3		23.4	236	11.9		38.4	282	29.4		45.9	331	25.9		06.5
3	75	22.5	217	02.8		22.9	251	12.9		39.0	297	31.6		45.8	346	28.4		06.5
4	90	25.0	232	06.3		22.4	266	13.9		39.7	312	33.7		45.7	1	31.0		06.5
5	105	27.4	247	09.9	-22	21.9	281	14.9	-0	40.3	327	35.9	+16	45.7	16	33.5	+22	06.5
6	120	29.9	262	13.4	-22	21.3	296	15.9	-0	41.0	342	38.0	+16	45.6	31	36.0	+22	06.5
7	135	32.4	277	16.9		20.8	311	16.9		41.6	357	40.2		45.5	46	38.5		06.5
8	150	34.8	292	20.4		20.3	326	17.9		42.2	12	42.3		45.4	61	41.0		06.5
9	165	37.3	307	24.0		19.7	341	18.9		42.9	27	44.5		45.3	76	43.5		06.5
10	180	39.8	322	27.5		19.2	356	19.9		43.5	42	46.6		45.2	91	46.1		06.5
11	195	42.2	337	31.1	-22	18.7	11	20.9	-0	44.2	57	48.8	+16	45.2	106	48.6	+22	06.5
12	210	44.7	352	34.6	-22	18.1	26	21.9	-0	44.8	72	50.9	+16	45.1	121	51.1	+22	06.5
13	225	47.1	7	38.2		17.6	41	22.9		45.4	87	53.1		45.0	136	53.6		06.5
14	240	49.6	22	41.7		17.1	56	23.9		46.1	102	55.2		44.9	151	56.1		06.5
15	255	52.1	37	45.3		16.5	71	24.9		46.7	117	57.4		44.8	166	58.7		06.5
16	270	54.5	52	48.8		16.0	86	25.9		47.4	132	59.5		44.7	182	01.2		06.5
17	285	57.0	67	52.4	-22	15.4	101	26.9	-0	48.0	148	01.7	+16	44.6	197	03.7	+22	06.5
18	300	59.5	82	55.9	-22	14.9	116	27.9	-0	48.6	163	03.8	+16	44.6	212	06.2	+22	06.4
19	316	01.9	97	59.5		14.3	131	28.9		49.3	178	06.0		44.5	227	08.7		06.4
20	331	04.4	113	03.1		13.7	146	29.9		49.9	193	08.2		44.4	242	11.2		06.4
21	346	06.9	128	06.6		13.2	161	30.9		50.6	208	10.3		44.3	257	13.8		06.4
22	1	09.3	143	10.2		12.6	176	31.9		51.2	223	12.5		44.2	272	16.3		06.4
23	16	11.8	158	13.8		12.1	191	32.9		51.8	238	14.6		44.1	287	18.8		06.4
24	31	14.2	173	17.4	-22	11.5	206	33.9	-0	52.5	253	16.8	+16	44.1	302	21.3	+22	06.4
Dif	—		+35		+5		+10		-6		+22		-1		+25			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 44 ^m 4			Edad: 16 ^d 5 PHE { 4 ^h : 54 ³ 12 ^h : 54 ⁴ 20 ^h : 54 ⁵ Rº: 45 ^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	53.6	-11 15.8	345	17.1	+15 21.3	60 N	16 29	17 12	18 01	17 11 12	9 22 85						
1	198	53.7		359	50.5 ¹⁴⁴	31.9 ¹⁰⁶	58	35	16	01	23 16	11 80						
2	213	53.8		14	23.8 ¹⁴³	42.5 ¹⁰⁶	56	40	19	02	34 19	9 01 77						
3	228	53.9		28	57.2 ¹⁴⁴	+15 53.0 ¹⁰⁵	54	45	22	03	43 22	8 53 74						
4	243	53.9		43	30.4 ¹⁴²	+16 03.5 ¹⁰⁵	52	50	24	04	51 24	45 71						
5	258	54.0	-11 20.2	58	03.6 ¹⁴²	+16 13.9 ¹⁰⁴	50	16 54	17 27	18 04	17 59 26	8 38 69						
6	273	54.1	-11 21.1	72	36.7 ¹⁴¹	+16 24.2 ¹⁰³	45	17 02	17 32	18 06	18 15 29	8 24 64						
7	288	54.2		87	09.8 ¹⁴¹	34.5 ¹⁰³	40	09	37	09	28 33	12 61						
8	303	54.3		101	42.8 ¹⁴⁰	44.7 ¹⁰²	35	16	41	11	39 35	8 01 59						
9	318	54.4		116	15.7 ¹³⁹	+16 54.8 ¹⁰¹	30	21	46	14	18 49 37	7 52 57						
10	333	54.5		130	48.6 ¹³⁹	+17 04.9 ¹⁰¹	20	31	17 53	19	19 06 41	37 52						
11	348	54.6	-11 25.5	145	21.4 ¹³⁸	+17 14.9 ¹⁰⁰	10 N	17 40	18 01	18 26	19 21 44	7 24 49						
12	3	54.7	-11 26.3	159	54.2 ¹³⁸	+17 24.8 ⁹⁹	0	17 48	18 09	18 33	19 35 47	7 11 46						
13	18	54.7		174	26.8 ¹³⁶	34.7 ⁹⁹	10 S	17 56	18	43	19 49 50	6 59 43						
14	33	54.8		188	59.5 ¹³⁷	44.5 ⁹⁸	20	18 05	28	18 54	20 04 53	46 39						
15	48	54.9		203	32.0 ¹³⁵	+17 54.2 ⁹⁷	30	15	40	19 09	21 57	31 35						
16	63	55.0		218	04.5 ¹³⁵	+18 03.9 ⁹⁷	35	21	48	19	32 59	22 33						
17	78	55.1	-11 30.7	232	36.9 ¹³⁴	+18 13.5 ⁹⁶	40	18 28	18 57	19 31	20 43 62	6 12 30						
18	93	55.2	-11 31.6	247	09.3 ¹³⁴	+18 23.0 ⁹⁵	45	18 36	19 08	19 46	20 57 65	6 01 27						
19	108	55.3		261	41.6 ¹³³	32.4 ⁹⁴	50	46	21	20 04	21 14 69	5 47 22						
20	123	55.3		276	13.8 ¹³²	41.7 ⁹³	52	51	27	14	22 72	40 21						
21	138	55.4		290	45.9 ¹³¹	+18 51.0 ⁹³	54	18 56	35	24	31 74	33 18						
22	153	55.5		305	18.0 ¹³¹	+19 00.2 ⁹²	56	19 01	43	37	42 76	25 16						
23	168	55.6		319	50.0 ¹³⁰	09.3 ⁹¹	58	07	19 52	20 51	21 53 80	16 12						
24	183	55.7	-11 36.8	334	22.0 ¹³⁰	+19 18.4 ⁹¹	60 S	19 15	20 03	21 09	22 07 85	5 06 8						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 51 ^m 5		Mag: -4.3 PMG: 12 ^h 24 ^m			Mag: +1.8 PMG: 10 ^h 13 ^m			Mag: -2.1 PMG: 7 ^h 06 ^m			Mag: -0.1 PMG: 3 ^h 50 ^m						
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	°	'	°	'	°	'	°				
0	31	14.2	173	17.4	-22	11.5	206	33.9	-0	52.5	253	16.8	+16	44.1	302	21.3	+22	06.4
1	46	16.7	188	21.0		10.9	221	34.9		53.1	268	18.9		44.0	317	23.9		06.4
2	61	19.2	203	24.5		10.3	236	35.9		53.8	283	21.1		43.9	332	26.4		06.4
3	76	21.6	218	28.1		09.8	251	36.9		54.4	298	23.2		43.8	347	28.9		06.4
4	91	24.1	233	31.7		09.2	266	37.9		55.0	313	25.4		43.7	2	31.4		06.4
5	106	26.6	248	35.3	-22	08.6	281	38.9	-0	55.7	328	27.5	+16	43.6	17	33.9	+22	06.4
6	121	29.0	263	38.9	-22	08.0	296	39.9	-0	56.3	343	29.7	+16	43.6	32	36.5	+22	06.4
7	136	31.5	278	42.5		07.4	311	40.9		57.0	358	31.9		43.5	47	39.0		06.4
8	151	34.0	293	46.1		06.9	326	41.9		57.6	13	34.0		43.4	62	41.5		06.4
9	166	36.4	308	49.7		06.3	341	42.9		58.2	28	36.2		43.3	77	44.0		06.4
10	181	38.9	323	53.3		05.7	356	43.9		58.9	43	38.3		43.2	92	46.5		06.4
11	196	41.4	338	56.9	-22	05.1	11	44.9	-0	59.5	58	40.5	+16	43.1	107	49.1	+22	06.4
12	211	43.8	354	00.5	-22	04.5	26	45.9	-1	00.2	73	42.6	+16	43.1	122	51.6	+22	06.4
13	226	46.3	9	04.1		03.9	41	46.9		00.8	88	44.8		43.0	137	54.1		06.4
14	241	48.7	24	07.7		03.3	56	47.9		01.4	103	47.0		42.9	152	56.6		06.4
15	256	51.2	39	11.4		02.7	71	48.9		02.1	118	49.1		42.8	167	59.2		06.4
16	271	53.7	54	15.0		02.1	86	50.0		02.7	133	51.3		42.7	183	01.7		06.4
17	286	56.1	69	18.6	-22	01.5	101	51.0	-1	03.4	148	53.4	+16	42.6	198	04.2	+22	06.4
18	301	58.6	84	22.2	-22	00.9	116	52.0	-1	04.0	163	55.6	+16	42.6	213	06.7	+22	06.4
19	317	01.1	99	25.9	-22	00.3	131	53.0		04.6	178	57.8		42.5	228	09.3		06.4
20	332	03.5	114	29.5	-21	59.6	146	54.0		05.3	193	59.9		42.4	243	11.8		06.4
21	347	06.0	129	33.1		59.0	161	55.0		05.9	209	02.1		42.3	258	14.3		06.4
22	2	08.5	144	36.7		58.4	176	56.0		06.5	224	04.2		42.2	273	16.8		06.4
23	17	10.9	159	40.4		57.8	191	57.0		07.2	239	06.4		42.2	288	19.4		06.4
24	32	13.4	174	44.0	-21	57.2	206	58.0	-1	07.8	254	08.6	+16	42.1	303	21.9	+22	06.4
Dif	—		+36		+6		+10		-6		+22		-1		+25			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 44 ^m 2			Edad: 17 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 PMG: 1 ^h 46 ^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	183	55.7	-11	36.8	334	22.0	+19	18.4	89	60 N	5	29	6	18	7	01	17	23	19	10 47 83	
1	198	55.8		37.7	348	53.9		27.3	89	58		28	14	6	55		39	23		31 79	
2	213	55.9		38.6	3	25.7		36.2	88	56		28	11		49		17	53	26	18 75	
3	228	55.9		39.4	17	57.4		45.0	89	54		27	08		45		18	05	29	10 07 72	
4	243	56.0		40.3	32	29.1		53.7	87	52		26	05		40		15	32		9 56 71	
5	258	56.1	-11	41.2	47	00.7		02.4	87	50		5	25	6	03	6	36	18	25	33	9 47 69
6	273	56.2	-11	42.0	61	32.2		10.9	85	45		5	23	5	57	6	27	18	44	37	9 28 65
7	288	56.3		42.9	76	03.7		19.4	85	40		20	52		20		19	01	39		13 62
8	303	56.3		43.8	90	35.1		27.7	83	35		18	48		13		14	42		9 00 59	
9	318	56.4		44.6	105	06.4		36.0	83	30		15	43	6	08		26	44		8 49 57	
10	333	56.5		45.5	119	37.6		44.2	82	20		10	35	5	58		19	47	46		29 55
11	348	56.6	-11	46.4	134	08.8		52.3	81	10 N		5	03	5	28	5	49	20	05	48	8 13 51
12	3	56.7	-11	47.2	148	39.9		00.3	80	0		4	55	5	20	5	41	20	22	50	7 57 49
13	18	56.7		48.1	163	11.0		08.2	79	10 S		46	11		32		39	53		42 46	
14	33	56.8		49.0	177	41.9		16.1	79	20		34	5	01	23		20	57	55	25 44	
15	48	56.9		49.9	192	12.8		23.8	77	30		19	4	48	13		21	18	58	7 06 40	
16	63	57.0		50.7	206	43.6		31.4	76	35		4	09	40	07		31	59		6 55 38	
17	78	57.1	-11	51.6	221	14.4		39.0	76	40		3	57	4	31	5	00	21	45	61	6 42 36
18	93	57.1	-11	52.4	235	45.1		46.4	74	45		3	42	4	20	4	52	22	02	64	6 28 32
19	108	57.2		53.3	250	15.7		53.8	74	50		24	07		42		23	67		09 29	
20	123	57.3		54.2	264	46.2		01.0	72	52		14	4	00	37		34	68		6 01 27	
21	138	57.4		55.0	279	16.7		08.2	72	54		3	04	3	53	32		45	70	5 51 25	
22	153	57.5		55.9	293	47.1		15.2	70	56		2	51	45	26		22	58	73	41 22	
23	168	57.5		56.8	308	17.4		22.2	70	58		37	36		20		23	13	77	28 19	
24	183	57.6	-11	57.6	322	47.7		29.0	68	60 S		2	19	3	25	4	13	23	32	81	5 14 14

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 47 ^m 5		Mag: -4.2 PMG: 12 ^h 18 ^m			Mag: +1.8 PMG: 10 ^h 11 ^m			Mag: -2.1 PMG: 7 ^h 02 ^m			Mag: -0.1 PMG: 3 ^h 46 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	32	13.4	174	44.0	-21	57.2	206	58.0	-1	07.8	254	08.6	+16	42.1	303	21.9	+22	06.4
1	47	15.9	189	47.7		56.5	221	59.0		08.5	269	10.7		42.0	318	24.4		06.4
2	62	18.3	204	51.3		55.9	237	00.0		09.1	284	12.9		41.9	333	26.9		06.4
3	77	20.8	219	55.0		55.3	252	01.0		09.7	299	15.0		41.8	348	29.5		06.4
4	92	23.2	234	58.6		54.6	267	02.0		10.4	314	17.2		41.7	3	32.0		06.4
5	107	25.7	250	02.3	-21	54.0	282	03.0	-1	11.0	329	19.4	+16	41.7	18	34.5	+22	06.4
6	122	28.2	265	05.9	-21	53.4	297	04.0	-1	11.7	344	21.5	+16	41.6	33	37.0	+22	06.4
7	137	30.6	280	09.6		52.7	312	05.0		12.3	359	23.7		41.5	48	39.6		06.4
8	152	33.1	295	13.2		52.1	327	06.0		12.9	14	25.9		41.4	63	42.1		06.4
9	167	35.6	310	16.9		51.4	342	07.0		13.6	29	28.0		41.3	78	44.6		06.4
10	182	38.0	325	20.5		50.8	357	08.0		14.2	44	30.2		41.3	93	47.2		06.4
11	197	40.5	340	24.2	-21	50.1	12	09.0	-1	14.9	59	32.3	+16	41.2	108	49.7	+22	06.4
12	212	43.0	355	27.9	-21	49.5	27	10.0	-1	15.5	74	34.5	+16	41.1	123	52.2	+22	06.4
13	227	45.4	10	31.5		48.8	42	11.0		16.1	89	36.7		41.0	138	54.7		06.4
14	242	47.9	25	35.2		48.2	57	12.0		16.8	104	38.8		40.9	153	57.3		06.3
15	257	50.4	40	38.9		47.5	72	13.0		17.4	119	41.0		40.9	168	59.8		06.3
16	272	52.8	55	42.6		46.8	87	14.0		18.1	134	43.2		40.8	184	02.3		06.3
17	287	55.3	70	46.2	-21	46.2	102	15.0	-1	18.7	149	45.3	+16	40.7	199	04.9	+22	06.3
18	302	57.7	85	49.9	-21	45.5	117	16.0	-1	19.3	164	47.5	+16	40.6	214	07.4	+22	06.3
19	318	00.2	100	53.6		44.8	132	17.0		20.0	179	49.7		40.5	229	09.9		06.3
20	333	02.7	115	57.3		44.2	147	18.0		20.6	194	51.8		40.4	244	12.4		06.3
21	348	05.1	131	01.0		43.5	162	19.0		21.3	209	54.0		40.4	259	15.0		06.3
22	3	07.6	146	04.6		42.8	177	20.0		21.9	224	56.2		40.3	274	17.5		06.3
23	18	10.1	161	08.3		42.1	192	21.0		22.5	239	58.3		40.2	289	20.0		06.3
24	33	12.5	176	12.0	-21	41.5	207	22.0	-1	23.2	255	00.5	+16	40.1	304	22.6	+22	06.3
Dif	—		+37 +7			+10 -6			+22 -1			-1			+25			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 18 ^d 5	PHE {	4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/3			Civil			Hora	R°	Hora	R°
	PMG: 11 ^h 44 ^m 1								R°: 51 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	183	57.6	-11 57.6	322	47.7	+22 29.0		60 N	16 23	17 07	17 56	17 42	33	12 10	76
1	198	57.7		337	17.8 ¹¹¹	35.8 ⁶⁸		58	30	11	57	18 02	37	11 50	72
2	213	57.8	-11 59.4	351	47.9 ¹¹¹	42.4 ⁶⁶		56	36	14	58	19 40		33 69	
3	228	57.8	-12 00.2	6	18.0 ¹¹¹	48.9 ⁶⁵		54	41	17	17 59	34 41		19 6	
4	243	57.9	01.1	20	48.0 ¹¹⁰	+22 55.4 ⁶⁵		52	46	20	18 00	47 42		11 07	65
5	258	58.0	-12 02.0	35	17.9 ¹⁰⁹	+23 01.7 ⁶³		50	16 50	17 23	18 01	18 58	43	10 56	64
6	273	58.1	-12 02.8	49	47.7 ¹⁰⁸	+23 07.9 ⁶²		45	16 59	17 29	18 03	19 21	46	10 33	61
7	288	58.1	03.7	64	17.5 ¹⁰⁸	14.0 ⁶¹		40	17 07	34	06	40 47		10 15	59
8	303	58.2	04.5	78	47.2 ¹⁰⁷	20.0 ⁶⁰		35	13	39	09	19 56	48	9 59	59
9	318	58.3	05.4	93	16.8 ¹⁰⁶	25.9 ⁵⁹		30	19	44	12	20 10	49	46	57
10	333	58.4	06.3	107	46.3 ¹⁰⁵	31.7 ⁵⁸		20	30	17 52	18	33 51		24 55	
11	348	58.4	-12 07.1	122	15.8 ¹⁰⁵	+23 37.4 ⁵⁷		10 N	17 39	18 00	18 25	20 53	52	9 04	53
12	3	58.5	-12 08.0	136	45.3 ¹⁰⁵	+23 42.9 ⁵⁵		0	17 47	18 09	18 33	21 12	53	8 46	52
13	18	58.6	08.9	151	14.6 ¹⁰³	48.4 ⁵⁵		10 S	17 56	18	43	32 54		28 50	
14	33	58.7	09.7	165	43.9 ¹⁰³	53.7 ⁵³		20	18 06	29	18 55	21 52	55	8 09	48
15	48	58.7	10.6	180	13.1 ¹⁰²	+23 58.9 ⁵²		30	17	42	19 11	22 16	56	7 46	46
16	63	58.8	11.4	194	42.3 ¹⁰²	+24 04.0 ⁵¹		35	23	50	21	30 57		33 45	
17	78	58.9	-12 12.3	209	11.4 ¹⁰¹	+24 09.0 ⁵⁰		40	18 31	18 59	19 34	22 46	58	7 18	43
18	93	58.9	-12 13.1	223	40.4 ¹⁰⁰	+24 13.8 ⁴⁸		45	18 39	19 10	19 49	23 06	59	7 00	41
19	108	59.0	14.0	238	09.4 ¹⁰⁰	18.6 ⁴⁸		50	49	25	20 09	30 61		6 38	38
20	123	59.1	14.9	252	38.3 ⁹⁹	23.2 ⁴⁶		52	18 54	31	18	42 62		28 36	
21	138	59.1	15.7	267	07.1 ⁹⁸	27.7 ⁴⁵		54	19 00	39	30	23 55	63	16 35	
22	153	59.2	16.6	281	35.9 ⁹⁸	32.1 ⁴⁴		56	06	48	43	** ** *		6 03	32
23	168	59.3	17.4	296	04.6 ⁹⁷	36.3 ⁴²		58	12	19 57	20 58	** ** *		5 47	29
24	183	59.4	-12 18.3	310	33.2 ⁹⁶	+24 40.5 ⁴²		60 S	19 20	20 09	21 17	** ** *		5 28	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 43 ^m 6		Mag: -4.2 PMG: 12 ^h 12 ^m		Mag: +1.8 PMG: 10 ^h 10 ^m		Mag: -2.1 PMG: 6 ^h 59 ^m		Mag: -0.1 PMG: 3 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	33	12.5	176	12.0	-21	41.5	207	22.0	-1	23.2
1	48	15.0	191	15.7		40.8	222	23.0		23.8
2	63	17.5	206	19.4		40.1	237	24.0		24.4
3	78	19.9	221	23.1		39.4	252	25.0		25.1
4	93	22.4	236	26.8		38.7	267	26.0		25.7
5	108	24.8	251	30.5	-21	38.0	282	27.0	-1	26.4
6	123	27.3	266	34.2	-21	37.3	297	28.0	-1	27.0
7	138	29.8	281	37.9		36.6	312	29.0		27.6
8	153	32.2	296	41.6		35.9	327	30.0		28.3
9	168	34.7	311	45.3		35.2	342	31.0		28.9
10	183	37.2	326	49.0		34.5	357	32.0		29.6
11	198	39.6	341	52.8	-21	33.8	12	33.0	-1	30.2
12	213	42.1	356	56.5	-21	33.1	27	34.0	-1	30.8
13	228	44.6	12	00.2		32.4	42	35.0		31.5
14	243	47.0	27	03.9		31.7	57	36.0		32.1
15	258	49.5	42	07.6		31.0	72	37.0		32.7
16	273	52.0	57	11.3		30.3	87	38.0		33.4
17	288	54.4	72	15.1	-21	29.6	102	39.0	-1	34.0
18	303	56.9	87	18.8	-21	28.8	117	40.0	-1	34.7
19	318	59.3	102	22.5		28.1	132	41.0		35.3
20	334	01.8	117	26.2		27.4	147	42.0		35.9
21	349	04.3	132	30.0		26.7	162	43.0		36.6
22	4	06.7	147	33.7		25.9	177	44.0		37.2
23	19	09.2	162	37.4		25.2	192	45.0		37.9
24	34	11.7	177	41.2	-21	24.5	207	46.0	-1	38.5
Dif	—		+37		+7		+10		-6	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1			Edad: 19 ^d 5 PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 55'9																	
	PMG: 11 ^h 44 ^m 0			SD: 15'1 PMG: 3 ^h 25 ^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	183	59.4	-12	18.3	310	33.2	+24	40.5	60 N	5	34	6	22	7	06	18	15	54	13	26	58
1	198	59.4		19.1	325	01.8	96	44.5	58		32		18	7	00		39	55	13	02	57
2	213	59.5		20.0	339	30.4	96	48.4	56		31		15	6	54	18	59	55	12	42	57
3	228	59.6		20.9	353	58.8	94	52.1	54		30		12	48		19	15	55	26	5	
4	243	59.6		21.7	8	27.2	94	55.8	52		29		09	44		29	55		12	57	
5	258	59.7	-12	22.6	22	55.6	94	+24	50	5	28	6	06	6	39	19	41	56	12	00	56
6	273	59.8	-12	23.4	37	23.9	93	+25	45	5	25	6	00	6	30	20	07	55	11	34	57
7	288	59.8		24.3	51	52.1	92	05.9	40		23	5	54	22		27	55		11	14	56
8	303	59.9		25.1	66	20.3	92	09.1	32		20		49	15		44	55		10	58	55
9	319	00.0		26.0	80	48.5	92	12.1	30		17		45	6	09	20	59	55	43	55	
10	334	00.0		26.8	95	16.5	90	14.9	28		10		36	5	59	21	24	55	10	19	54
11	349	00.1	-12	27.7	109	44.6	91	+25	10 N	5	03	5	28	5	49	21	45	55	9	57	55
12	4	00.2	-12	28.5	124	12.5	89	+25	0	4	55	5	19	5	41	22	05	55	9	38	54
13	19	00.2		29.4	138	40.5	90	22.8	10 S		45	5	10	32		26	54		9	18	53
14	34	00.3		30.3	153	08.3	88	25.1	20		33	4	59	22		22	47	54	8	57	53
15	49	00.4		31.1	167	36.1	88	27.3	22		17		46	11		23	12	54	32	52	
16	64	00.4		32.0	182	03.9	88	29.4	21		35	4	06	38	5	04	27	54	18	51	
17	79	00.5	-12	32.8	196	31.6	87	+25	40	3	54	4	28	4	57	23	44	54	8	01	51
18	94	00.5	-12	33.7	210	59.3	87	+25	45	3	39	4	17	4	48	**	**	**	7	41	51
19	109	00.6		34.5	225	27.0	87	34.8	50		19	4	03	38		**	**	**	16	49	
20	124	00.7		35.4	239	54.5	85	36.3	52		3	09	3	56	33	**	**	**	7	04	49
21	139	00.7		36.2	254	22.1	86	37.7	54		2	58	48	28		**	**	**	6	51	47
22	154	00.8		37.1	268	49.6	85	39.0	56		45		40	22		0	11	64	35	46	
23	169	00.9		37.9	283	17.1	85	40.1	58		29		30	15		30	66		6	16	45
24	184	00.9	-12	38.8	297	44.5	84	+25	60 S	2	10	3	18	4	07	0	53	68	5	52	43

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 39 ^m 7		Mag: -4.2 PMG: 12 ^h 06 ^m			Mag: +1.8 PMG: 10 ^h 08 ^m			Mag: -2.1 PMG: 6 ^h 55 ^m			Mag: -0.1 PMG: 3 ^h 38 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	34	11.7	177	41.2	-21	24.5	207	46.0	-1	38.5	255	52.6	+16	38.2	305	23.4	+22	06.3
1	49	14.1	192	44.9		23.7	222	47.0		39.1	270	54.7		38.1	320	25.9		06.3
2	64	16.6	207	48.6		23.0	237	48.0		39.8	285	56.9		38.1	335	28.4		06.3
3	79	19.1	222	52.4		22.3	252	49.0		40.4	300	59.1		38.0	350	31.0		06.3
4	94	21.5	237	56.1		21.5	267	50.0		41.1	316	01.3		37.9	5	33.5		06.3
5	109	24.0	252	59.9	-21	20.8	282	51.0	-1	41.7	331	03.4	+16	37.8	20	36.0	+22	06.3
6	124	26.5	268	03.6	-21	20.0	297	52.0	-1	42.3	346	05.6	+16	37.7	35	38.6	+22	06.3
7	139	28.9	283	07.4		19.3	312	53.0		43.0	1	07.8		37.7	50	41.1		06.3
8	154	31.4	298	11.1		18.5	327	54.0		43.6	16	10.0		37.6	65	43.6		06.3
9	169	33.8	313	14.9		17.8	342	55.0		44.2	31	12.1		37.5	80	46.2		06.3
10	184	36.3	328	18.6		17.0	357	56.0		44.9	46	14.3		37.4	95	48.7		06.3
11	199	38.8	343	22.4	-21	16.3	12	57.0	-1	45.5	61	16.5	+16	37.4	110	51.3	+22	06.2
12	214	41.2	358	26.1	-21	15.5	27	58.0	-1	46.2	76	18.7	+16	37.3	125	53.8	+22	06.2
13	229	43.7	13	29.9		14.8	42	59.0		46.8	91	20.8		37.2	140	56.3		06.2
14	244	46.2	28	33.6		14.0	58	00.0		47.4	106	23.0		37.1	155	58.9		06.2
15	259	48.6	43	37.4		13.2	73	01.0		48.1	121	25.2		37.0	171	01.4		06.2
16	274	51.1	58	41.1		12.5	88	02.0		48.7	136	27.4		37.0	186	03.9		06.2
17	289	53.6	73	44.9	-21	11.7	103	03.0	-1	49.3	151	29.5	+16	36.9	201	06.5	+22	06.2
18	304	56.0	88	48.7	-21	10.9	118	04.0	-1	50.0	166	31.7	+16	36.8	216	09.0	+22	06.2
19	319	58.5	103	52.4		10.2	133	05.0		50.6	181	33.9		36.7	231	11.6		06.2
20	335	01.0	118	56.2		09.4	148	06.0		51.3	196	36.1		36.7	246	14.1		06.2
21	350	03.4	134	00.0		08.6	163	07.0		51.9	211	38.2		36.6	261	16.6		06.2
22	5	05.9	149	03.7		07.8	178	08.0		52.5	226	40.4		36.5	276	19.2		06.2
23	20	08.3	164	07.5		07.0	193	09.0		53.2	241	42.6		36.4	291	21.7		06.2
24	35	10.8	179	11.3	-21	06.3	208	10.0	-1	53.8	256	44.8	+16	36.4	306	24.3	+22	06.2
Dif	—		+38	+8			+10	-6			+22	-1			+25	0		

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: 20 ^d 5 PHE { 4 ^h : 56°1 12 ^h : 56°3 20 ^h : 56°6 SD: 15°3 PMG: 4 ^h 18 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m
0	184	00.9	-12 38.8	297	44.5	+25 41.1	9	60 N	16 18	17 02	17 51	19 09 78	14 24 37	
1	199	01.0	39.6	312	11.9	42.0	7	58	25	06	52	34 74	13 59 41	
2	214	01.0	40.5	326	39.2	42.7	5	56	31	10	53	19 54 71	39 43	
3	229	01.1	41.3	341	06.5	43.2	5	54	37	13	55	20 10 70	23 45	
4	244	01.2	42.1	355	33.8	43.7	5	52	42	17	56	24 68	13 09 46	
5	259	01.2	-12 43.0	10	01.0	+25 44.0	3	50	16 46	17 20	17 57	20 37 67	12 56 47	
6	274	01.3	-12 43.8	24	28.2	+25 44.1	1	45	16 56	17 26	18 01	21 02 65	12 31 48	
7	289	01.3	44.7	38	55.4	44.1	0	40	17 04	32	04	22 63	12 10 50	
8	304	01.4	45.5	53	22.5	44.0	0	35	11	37	07	39 62	11 53 51	
9	319	01.5	46.4	67	49.6	43.7	3	30	17	42	10	21 54 60	38 52	
10	334	01.5	47.2	82	16.7	43.3	4	20	28	17 51	17	22 19 58	11 13 54	
11	349	01.6	-12 48.1	96	43.7	+25 42.7	6	10 N	17 38	18 00	18 24	22 40 57	10 52 54	
12	4	01.6	-12 48.9	111	10.8	+25 42.0	7	0	17 47	18 08	18 33	23 00 55	10 32 55	
13	19	01.7	49.8	125	37.8	41.1	9	10 S	17 57	18	43	20 54	10 11 56	
14	34	01.7	50.6	140	04.7	40.1	10	20	18 07	29	18 56	23 41 52	9 50 56	
15	49	01.8	51.4	154	31.7	39.0	11	30	18	43	19 13	*** ** *	24 58	
16	64	01.9	52.3	168	58.6	37.7	13	35	25	18 52	23	*** ** *	9 09 59	
17	79	01.9	-12 53.1	183	25.5	+25 36.3	14	40	18 33	19 02	19 36	*** ** *	8 52 59	
18	94	02.0	-12 54.0	197	52.4	+25 34.7	16	45	18 42	19 13	19 52	0 05 53	8 32 60	
19	109	02.0	54.8	212	19.3	33.0	17	50	53	28	20 13	31 52	8 05 62	
20	124	02.1	55.7	226	46.1	31.1	19	52	18 58	35	23	44 51	7 53 62	
21	139	02.1	56.5	241	12.9	29.1	20	54	19 04	43	35	0 58 51	38 63	
22	154	02.2	57.3	255	39.8	27.0	21	56	10	19 52	20 49	1 15 50	21 64	
23	169	02.2	58.2	270	06.6	24.7	23	58	17	20 03	21 05	1 36 49	7 01 65	
24	184	02.3	-12 59.0	284	33.3	+25 22.2	25	60 S	19 25	20 15	21 26	2 01 48	6 35 67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 35 ^m 7		Mag: -4.2 PMG: 12 ^h 00 ^m		Mag: +1.8 PMG: 10 ^h 07 ^m		Mag: -2.1 PMG: 6 ^h 52 ^m		Mag: -0.2 PMG: 3 ^h 34 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	35	10.8	179	11.3	-21 06.3	208	10.0	-1 53.8	256	44.8	+16 36.4	306	24.3	+22 06.2
1	50	13.3	194	15.0	05.5	223	11.0	54.5	271	47.0	36.3	321	26.8	06.2
2	65	15.7	209	18.8	04.7	238	12.0	55.1	286	49.1	36.2	336	29.3	06.2
3	80	18.2	224	22.6	03.9	253	13.0	55.7	301	51.3	36.1	351	31.9	06.2
4	95	20.7	239	26.4	03.1	268	14.0	56.4	316	53.5	36.0	6	34.4	06.2
5	110	23.1	254	30.1	-21 02.3	283	15.0	-1 57.0	331	55.7	+16 36.0	21	37.0	+22 06.2
6	125	25.6	269	33.9	-21 01.5	298	16.0	-1 57.6	346	57.9	+16 35.9	36	39.5	+22 06.2
7	140	28.1	284	37.7	-21 00.7	313	17.0	58.3	2	00.0	35.8	51	42.0	06.2
8	155	30.5	299	41.5	-20 59.9	328	18.0	58.9	17	02.2	35.7	66	44.6	06.2
9	170	33.0	314	45.3	59.1	343	19.0	-1 59.6	32	04.4	35.7	81	47.1	06.2
10	185	35.4	329	49.0	58.3	358	20.0	-2 00.2	47	06.6	35.6	96	49.7	06.2
11	200	37.9	344	52.8	-20 57.5	13	21.0	-2 00.8	62	08.8	+16 35.5	111	52.2	+22 06.2
12	215	40.4	359	56.6	-20 56.7	28	22.0	-2 01.5	77	10.9	+16 35.4	126	54.8	+22 06.2
13	230	42.8	15	00.4	55.9	43	23.0	02.1	92	13.1	35.4	141	57.3	06.2
14	245	45.3	30	04.2	55.1	58	24.0	02.7	107	15.3	35.3	156	59.8	06.2
15	260	47.8	45	08.0	54.3	73	25.0	03.4	122	17.5	35.2	172	02.4	06.2
16	275	50.2	60	11.8	53.5	88	26.0	04.0	137	19.7	35.1	187	04.9	06.2
17	290	52.7	75	15.5	-20 52.6	103	27.0	-2 04.7	152	21.9	+16 35.1	202	07.5	+22 06.2
18	305	55.2	90	19.3	-20 51.8	118	28.0	-2 05.3	167	24.0	+16 35.0	217	10.0	+22 06.2
19	320	57.6	105	23.1	51.0	133	29.0	05.9	182	26.2	34.9	232	12.6	06.2
20	336	00.1	120	26.9	50.2	148	30.0	06.6	197	28.4	34.8	247	15.1	06.2
21	351	02.6	135	30.7	49.4	163	31.0	07.2	212	30.6	34.8	262	17.6	06.2
22	6	05.0	150	34.5	48.5	178	32.0	07.8	227	32.8	34.7	277	20.2	06.2
23	21	07.5	165	38.3	47.7	193	33.0	08.5	242	35.0	34.6	292	22.7	06.2
24	36	09.9	180	42.1	-20 46.9	208	34.0	-2 09.1	257	37.1	+16 34.5	307	25.3	+22 06.2
Dif	—		+38 +8		+10 -6		-6		+22		-1		+25 0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1			Edad: 21 ^d 5	PHE { 4 ^h : 56'8 12 ^h : 57'1 20 ^h : 57'3	R ^o : 56 ^m		Náutico			Civil		Hora R°		Hora R°		
	PMG: 11 ^h 43 ^m 8																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	184	02.3	-12	284	33.3	+25	22.2	60 N	5 38	6 27	7 11	20 27 92	15 01 22				
1	199	02.3	-12	299	00.1		19.6	58	37	23	7 04	20 48 87	14 40 27				
2	214	02.4	-13	313	26.9		16.9	56	35	19	6 58	21 05 83	22 31				
3	229	02.5		327	53.6		14.0	54	34	15	52	20 80	14 08 33				
4	244	02.5		342	20.4		11.0	52	32	12	47	32 78	13 55 35				
5	259	02.6	-13	356	47.1	+25	07.8	50	5 31	6 09	6 43	21 44 75	13 43 38				
6	274	02.6	-13	11	13.9	+25	04.5	45	5 28	6 02	6 33	22 07 71	13 19 41				
7	289	02.7		25	40.6	+25	01.0	40	25	5 56	24	25 69	13 00 44				
8	304	02.7		40	07.3	+24	57.4	35	21	51	17	41 66	12 44 46				
9	319	02.8		54	34.1		53.6	30	18	46	11	22 54 64	30 48				
10	334	02.8		69	00.8		49.7	20	11	37	6 00	23 17 61	12 07 50				
11	349	02.9	-13	83	27.5	+24	45.7	10 N	5 03	5 28	5 50	23 37 57	11 46 53				
12	4	02.9	-13	97	54.2	+24	41.5	0	4 55	5 19	5 40	23 55 55	11 27 55				
13	19	03.0		112	20.9		37.1	10 S	44	5 09	31	*** ** *	11 07 57				
14	34	03.0		126	47.7		32.7	20	31	4 58	21	*** ** *	10 46 60				
15	49	03.1		141	14.4		28.0	30	14	44	09	0 06 50	22 62				
16	64	03.1		155	41.1		23.2	35	4 04	36	5 02	21 48	10 08 64				
17	79	03.2	-13	170	07.9	+24	18.3	40	3 51	4 26	4 54	0 38 47	9 51 66				
18	94	03.2	-13	184	34.6	+24	13.3	45	3 35	4 14	4 45	0 58 45	9 32 68				
19	109	03.2		199	01.4		08.0	50	14	3 59	34	1 23 42	9 07 71				
20	124	03.3		213	28.1	+24	02.7	52	3 04	52	29	35 41	8 55 73				
21	139	03.3		227	54.9	+23	57.2	54	2 52	44	23	1 49 39	41 75				
22	154	03.4		242	21.7		51.5	56	38	34	17	2 05 37	25 78				
23	169	03.4		256	48.5		45.7	58	21	24	10	25 33	8 06 81				
24	184	03.5	-13	271	15.3	+23	39.8	60 S	2 01	3 12	4 02	2 49 28	7 42 86				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 31 ^m 8		Mag: -4.3 PMG: 11 ^h 54 ^m		Mag: +1.8 PMG: 10 ^h 05 ^m		Mag: -2.1 PMG: 6 ^h 49 ^m		Mag: -0.2 PMG: 3 ^h 30 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	36	09.9	180	42.1	-20	46.9	208	34.0	-2	09.1	257	37.1	+16	34.5	307	25.3	+22	06.2
1	51	12.4	195	45.9		46.0	223	35.0		09.8	272	39.3		34.5	322	27.8		06.2
2	66	14.9	210	49.7		45.2	238	36.0		10.4	287	41.5		34.4	337	30.4		06.2
3	81	17.3	225	53.5		44.4	253	37.0		11.0	302	43.7		34.3	352	32.9		06.2
4	96	19.8	240	57.3		43.5	268	38.0		11.7	317	45.9		34.2	7	35.5		06.2
5	111	22.3	256	01.1	-20	42.7	283	39.0	-2	12.3	332	48.1	+16	34.2	22	38.0	+22	06.2
6	126	24.7	271	04.9	-20	41.8	298	40.0	-2	12.9	347	50.3	+16	34.1	37	40.5	+22	06.2
7	141	27.2	286	08.7		41.0	313	41.0		13.6	2	52.4		34.0	52	43.1		06.2
8	156	29.7	301	12.5		40.2	328	42.0		14.2	17	54.6		33.9	67	45.6		06.2
9	171	32.1	316	16.3		39.3	343	43.0		14.9	32	56.8		33.9	82	48.2		06.1
10	186	34.6	331	20.1		38.5	358	44.0		15.5	47	59.0		33.8	97	50.7		06.1
11	201	37.1	346	23.9	-20	37.6	13	45.0	-2	16.1	63	01.2	+16	33.7	112	53.3	+22	06.1
12	216	39.5	1	27.7	-20	36.8	28	46.0	-2	16.8	78	03.4	+16	33.6	127	55.8	+22	06.1
13	231	42.0	16	31.5		35.9	43	47.0		17.4	93	05.6		33.6	142	58.4		06.1
14	246	44.4	31	35.3		35.0	58	48.0		18.0	108	07.8		33.5	158	00.9		06.1
15	261	46.9	46	39.1		34.2	73	49.0		18.7	123	09.9		33.4	173	03.5		06.1
16	276	49.4	61	42.9		33.3	88	49.9		19.3	138	12.1		33.3	188	06.0		06.1
17	291	51.8	76	46.7	-20	32.5	103	50.9	-2	20.0	153	14.3	+16	33.3	203	08.6	+22	06.1
18	306	54.3	91	50.6	-20	31.6	118	51.9	-2	20.6	168	16.5	+16	33.2	218	11.1	+22	06.1
19	321	56.8	106	54.4		30.7	133	52.9		21.2	183	18.7		33.1	233	13.7		06.1
20	336	59.2	121	58.2		29.9	148	53.9		21.9	198	20.9		33.0	248	16.2		06.1
21	352	01.7	137	02.0		29.0	163	54.9		22.5	213	23.1		33.0	263	18.8		06.1
22	7	04.2	152	05.8		28.1	178	55.9		23.1	228	25.3		32.9	278	21.3		06.1
23	22	06.6	167	09.6		27.3	193	56.9		23.8	243	27.5		32.8	293	23.9		06.1
24	37	09.1	182	13.4	-20	26.4	208	57.9	-2	24.4	258	29.7	+16	32.7	308	26.4	+22	06.1
Dif	—		+38		+9		+10		-6		+22		-1		+25			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'1				Edad: 22 ^d 5 PHE { 4 ^h : 57'6 12 ^h : 57'9 20 ^h : 58'1						Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 43 ^m 7				SD: 15'6 PMG: 6 ^h 09 ^m R°: 54 ^m						Final del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	184	03.5	-13	19.1	271	15.3	+23	39.8	60 N	16 13	16 57	17 46	21 59	99	15 23	13		
1	199	03.5		19.9	285	42.1	78	33.7	58	20	17 02	48	22 15	94	15 07	18		
2	214	03.6		20.8	300	08.9	78	27.5	56	27	06	49	28 90		14 53	22		
3	229	03.6		21.6	314	35.8	79	21.1	54	32	09	51	40 86		41 25			
4	244	03.7		22.4	329	02.6	78	14.6	52	38	13	53	50 83		30 28			
5	259	03.7	-13	23.3	343	29.5	79	+23 08.0	50	16 43	17 16	17 54	22 59	81	14 21	29		
6	274	03.7	-13	24.1	357	56.4	79	+23 01.2	45	16 53	17 23	17 58	23 18	76	14 00	35		
7	289	03.8		24.9	12	23.3	79	+22 54.3	40	17 02	30	18 01	34 72		13 44	38		
8	304	03.8		25.7	26	50.3	80	47.2	35	09	35	05	47 69		30 41			
9	319	03.9		26.6	41	17.2	79	40.0	30	16	40	08	23 58	66	13 18	43		
10	334	03.9		27.4	55	44.2	80	32.7	20	27	50	16	** ** *	**	12 57	47		
11	349	04.0	-13	28.2	70	11.2	80	+22 25.2	10 N	17 37	17 59	18 24	** ** *	**	12 39	51		
12	4	04.0	-13	29.1	84	38.2	80	+22 17.6	0	17 47	18 08	18 33	** ** *	**	12 22	54		
13	19	04.0		29.9	99	05.2	80	09.8	10 S	17 57	19	44	0 14	52	12 04	58		
14	34	04.1		30.7	113	32.3	81	+22 01.9	20	18 08	30	18 57	33 49		11 46	61		
15	49	04.1		31.5	127	59.4	81	+21 53.9	30	20	45	19 15	0 56	46	24 66			
16	64	04.2		32.4	142	26.5	81	45.7	35	27	18 54	26	1 09	44	11 12	67		
17	79	04.2	-13	33.2	156	53.6	81	+21 37.4	40	18 35	19 04	19 39	1 25	40	10 57	71		
18	94	04.2	-13	34.0	171	20.8	82	+21 29.0	45	18 45	19 16	19 56	1 43	37	10 40	74		
19	109	04.3		34.8	185	48.0	82	20.4	50	18 56	32	20 17	2 05	33	18 79			
20	124	04.3		35.7	200	15.2	82	11.7	52	19 02	40	28	16 31		10 08	81		
21	139	04.4		36.5	214	42.4	82	+21 02.9	54	08	48	40	28 28		9 56	84		
22	154	04.4		37.3	229	09.7	83	+20 53.9	56	14	19 57	20 55	42 25		43 87			
23	169	04.4		38.1	243	37.0	83	44.8	58	22	20 08	21 13	2 58	21	27 91			
24	184	04.5	-13	39.0	258	04.3	83	+20 35.6	60 S	19 30	20 21	21 35	3 17	17	9 08	97		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 27 ^m 9		Mag: -4.3 PMG: 11 ^h 48 ^m				Mag: +1.8 PMG: 10 ^h 03 ^m				Mag: -2.1 PMG: 6 ^h 45 ^m				Mag: -0.2 PMG: 3 ^h 26 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	37	09.1	182	13.4	-20	26.4	208	57.9	-2	24.4	258	29.7	+16	32.7	308	26.4	+22	06.1
1	52	11.6	197	17.2		25.5	223	58.9		25.0	273	31.9		32.7	323	29.0		06.1
2	67	14.0	212	21.0		24.6	238	59.9		25.7	288	34.0		32.6	338	31.5		06.1
3	82	16.5	227	24.9		23.8	254	00.9		26.3	303	36.2		32.5	353	34.1		06.1
4	97	18.9	242	28.7		22.9	269	01.9		27.0	318	38.4		32.4	8	36.6		06.1
5	112	21.4	257	32.5	-20	22.0	284	02.9	-2	27.6	333	40.6	+16	32.4	23	39.2	+22	06.1
6	127	23.9	272	36.3	-20	21.1	299	03.9	-2	28.2	348	42.8	+16	32.3	38	41.7	+22	06.1
7	142	26.3	287	40.1		20.2	314	04.9		28.9	3	45.0		32.2	53	44.3		06.1
8	157	28.8	302	43.9		19.3	329	05.9		29.5	18	47.2		32.2	68	46.8		06.1
9	172	31.3	317	47.7		18.5	344	06.9		30.1	33	49.4		32.1	83	49.4		06.1
10	187	33.7	332	51.6		17.6	359	07.9		30.8	48	51.6		32.0	98	51.9		06.1
11	202	36.2	347	55.4	-20	16.7	14	08.9	-2	31.4	63	53.8	+16	31.9	113	54.5	+22	06.1
12	217	38.7	2	59.2	-20	15.8	29	09.9	-2	32.1	78	56.0	+16	31.9	128	57.0	+22	06.1
13	232	41.1	18	03.0		14.9	44	10.9		32.7	93	58.2		31.8	143	59.6		06.1
14	247	43.6	33	06.8		14.0	59	11.9		33.3	109	00.4		31.7	159	02.1		06.1
15	262	46.0	48	10.6		13.1	74	12.9		34.0	124	02.6		31.6	174	04.7		06.1
16	277	48.5	63	14.5		12.2	89	13.9		34.6	139	04.8		31.6	189	07.2		06.1
17	292	51.0	78	18.3	-20	11.3	104	14.9	-2	35.2	154	06.9	+16	31.5	204	09.8	+22	06.1
18	307	53.4	93	22.1	-20	10.4	119	15.9	-2	35.9	169	09.1	+16	31.4	219	12.3	+22	06.1
19	322	55.9	108	25.9		09.5	134	16.9		36.5	184	11.3		31.4	234	14.9		06.1
20	337	58.4	123	29.7		08.6	149	17.9		37.1	199	13.5		31.3	249	17.4		06.1
21	353	00.8	138	33.5		07.7	164	18.9		37.8	214	15.7		31.2	264	20.0		06.1
22	8	03.3	153	37.4		06.8	179	19.9		38.4	229	17.9		31.1	279	22.5		06.1
23	23	05.8	168	41.2		05.9	194	20.9		39.1	244	20.1		31.1	294	25.1		06.1
24	38	08.2	183	45.0	-20	04.9	209	21.9	-2	39.7	259	22.3	+16	31.0	309	27.7	+22	06.1
Dif	—		+38		+9		+10		-6		+22		-1		+26		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 7			Edad: 23 ^d 5 PHE { 4 ^h : 58'4 12 ^h : 58'7 20 ^h : 59'0 PMG: 7 ^h 03 ^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	184	04.5	-13 39.0	258	04.3	+20 35.6	94	60 N	5 43	6 32	7 16	23 38	100	15 36	9	
1	199	04.5	39.8	272	31.6	83	26.2	58	41	27	09	49	96	25	12	
2	214	04.5	40.6	286	59.0	84	16.7	56	39	23	02	23	58	92	15	16
3	229	04.6	41.4	301	26.4	84	+20 07.1	54	37	19	6 56	** ** *	** ** *	15	06	19
4	244	04.6	42.2	315	53.8	84	+19 57.3	52	36	15	51	** ** *	** ** *	14	58	21
5	259	04.6	-13 43.1	330	21.3	85	+19 47.5	50	5 34	6 12	6 46	** ** *	** ** *	14	50	25
6	274	04.7	-13 43.9	344	48.8	85	+19 37.5	45	5 30	6 05	6 35	** ** *	** ** *	14	35	29
7	289	04.7	44.7	359	16.3	85	27.4	40	27	5 58	26	** ** *	** ** *	22	33	
8	304	04.7	45.5	13	43.8	85	17.1	35	23	53	19	** ** *	** ** *	11	36	
9	319	04.8	46.4	28	11.4	86	+19 06.7	30	19	48	12	** ** *	** ** *	14	01	40
10	334	04.8	47.2	42	39.0	86	+18 56.2	20	12	38	6 00	0 18	61	13	44	45
11	349	04.9	-13 48.0	57	06.6	86	+18 45.6	10 N	5 04	5 29	5 50	0 34	58	13	30	49
12	4	04.9	-13 48.8	71	34.3	87	+18 34.9	0	4 54	5 19	5 40	0 50	54	13	16	53
13	19	04.9	49.6	86	02.0	87	24.0	10 S	43	5 09	30	1 06	50	13	02	57
14	34	04.9	50.4	100	29.7	87	13.1	20	30	4 57	20	22	46	12	47	61
15	49	05.0	51.3	114	57.5	88	+18 02.0	30	12	42	07	42	41	30	66	
16	64	05.0	52.1	129	25.3	88	+17 50.8	35	4 01	33	5 00	1 53	38	19	70	
17	79	05.0	-13 52.9	143	53.1	88	+17 39.4	40	3 48	4 23	4 52	2 05	36	12	08	73
18	94	05.1	-13 53.7	158	20.9	88	+17 28.0	45	3 31	4 10	4 42	2 20	32	11	54	77
19	109	05.1	54.5	172	48.8	89	16.4	50	3 09	3 55	30	38	27	37	82	
20	124	05.1	55.3	187	16.7	89	+17 04.8	52	2 59	47	25	47	24	29	85	
21	139	05.2	56.2	201	44.6	89	+16 53.0	54	46	39	19	2 56	22	20	88	
22	154	05.2	57.0	216	12.6	90	41.1	56	32	29	12	3 07	19	11	10	91
23	169	05.2	57.8	230	40.6	90	29.1	58	2 14	18	4 05	19	15	10	58	96
24	184	05.3	-13 58.6	245	08.6	90	+16 17.0	60 S	1 51	3 05	3 56	3 34	10	10	45	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 21 ^h 23 ^m 9		Mag: -4.3 PMG: 11 ^h 42 ^m		Mag: +1.8 PMG: 10 ^h 02 ^m		Mag: -2.1 PMG: 6 ^h 42 ^m		Mag: -0.2 PMG: 3 ^h 22 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	38	08.2	183	45.0	-20 04.9	209	21.9	-2 39.7	259	22.3						
1	53	10.7	198	48.8	04.0	224	22.9	40.3	274	24.5						
2	68	13.2	213	52.6	03.1	239	23.9	41.0	289	26.7						
3	83	15.6	228	56.5	02.2	254	24.9	41.6	304	28.9						
4	98	18.1	244	00.3	01.3	269	25.8	42.2	319	31.1						
5	113	20.5	259	04.1	-20 00.4	284	26.8	-2 42.9	334	33.3						
6	128	23.0	274	07.9	-19 59.4	299	27.8	-2 43.5	349	35.5						
7	143	25.5	289	11.7	58.5	314	28.8	44.1	4	37.7						
8	158	27.9	304	15.5	57.6	329	29.8	44.8	19	39.9						
9	173	30.4	319	19.4	56.7	344	30.8	45.4	34	42.1						
10	188	32.9	334	23.2	55.7	359	31.8	46.0	49	44.3						
11	203	35.3	349	27.0	-19 54.8	14	32.8	-2 46.7	64	46.5						
12	218	37.8	4	30.8	-19 53.9	29	33.8	-2 47.3	79	48.7						
13	233	40.3	19	34.6	52.9	44	34.8	48.0	94	50.9						
14	248	42.7	34	38.4	52.0	59	35.8	48.6	109	53.1						
15	263	45.2	49	42.3	51.1	74	36.8	49.2	124	55.3						
16	278	47.7	64	46.1	50.1	89	37.8	49.9	139	57.5						
17	293	50.1	79	49.9	-19 49.2	104	38.8	-2 50.5	154	59.7						
18	308	52.6	94	53.7	-19 48.3	119	39.8	-2 51.1	170	01.9						
19	323	55.0	109	57.5	47.3	134	40.8	51.8	185	04.1						
20	338	57.5	125	01.3	46.4	149	41.8	52.4	200	06.3						
21	354	00.0	140	05.2	45.4	164	42.8	53.0	215	08.5						
22	9	02.4	155	09.0	44.5	179	43.8	53.7	230	10.7						
23	24	04.9	170	12.8	43.6	194	44.8	54.3	245	12.9						
24	39	07.4	185	16.6	-19 42.6	209	45.8	-2 54.9	260	15.1						
Dif	—		+38		+9	+10		-6	+22		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 24 ^d 5 PHE { SD: 16'1 PMG: 7 ^h 56 ^m 4 ^h : 59'3 12 ^h : 59'5 20 ^h : 59'8 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	184	05.3	-13 58.6	245	08.6	+16 17.0	122	60 N	16 07	16 52	17 41	** ** *	15 45	6	
1	199	05.3	-13 59.4	259	36.7	+16 04.8	122	58	15	16 57	43	** ** *	37	10	
2	214	05.3	-14 00.2	274	04.7	+15 52.4	124	56	22	17 02	45	** ** *	31	13	
3	229	05.3	01.0	288	32.8	91	40.0	54	28	06	47	0 06	89	25	
4	244	05.4	01.9	303	01.0	92	27.5	52	34	09	49	13	87	19	
5	259	05.4	-14 02.7	317	29.1	91	+15 14.8	50	16 39	17 13	17 51	0 20	84	15	
6	274	05.4	-14 03.5	331	57.3	92	+15 02.1	45	16 50	17 20	17 55	0 34	78	15	
7	289	05.4	04.3	346	25.5	92	+14 49.2	40	16 59	27	17 59	46	73	14	
8	304	05.5	05.1	0	53.8	93	36.3	35	17 07	33	18 03	0 56	70	47	
9	319	05.5	05.9	15	22.1	93	23.3	30	14	39	07	1 04	67	41	
10	334	05.5	06.7	29	50.3	92	+14 10.1	20	26	49	15	19	61	29	
11	349	05.5	-14 07.5	44	18.7	94	+13 56.9	10 N	17 37	17 58	18 23	1 32	57	14	
12	4	05.6	-14 08.3	58	47.0	93	+13 43.5	0	17 47	18 08	18 33	1 44	52	14	
13	19	05.6	09.2	73	15.4	94	30.1	10 S	17 57	19	45	1 56	48	13	
14	34	05.6	10.0	87	43.8	94	16.6	20	18 08	31	18 58	2 08	44	48	
15	49	05.6	10.8	102	12.2	94	+13 03.0	30	21	47	19 16	23	38	36	
16	64	05.7	11.6	116	40.6	94	+12 49.3	35	29	18 56	28	31	35	29	
17	79	05.7	-14 12.4	131	09.1	95	+12 35.5	40	18 37	19 06	19 42	2 41	31	13	
18	94	05.7	-14 13.2	145	37.6	95	+12 21.6	45	18 47	19 19	19 59	2 52	27	13	
19	109	05.7	14.0	160	06.1	95	+12 07.7	50	19 00	36	20 22	3 05	22	12	
20	124	05.8	14.8	174	34.6	95	+11 53.6	52	05	44	33	11	20	54	
21	139	05.8	15.6	189	03.1	95	39.5	54	12	19 52	20 46	18	17	48	
22	154	05.8	16.4	203	31.7	96	25.3	56	19	20 02	21 02	26	14	41	
23	169	05.8	17.2	218	00.3	96	+11 11.0	58	27	14	21	34	11	34	
24	184	05.8	-14 18.0	232	28.9	96	+10 56.6	60 S	19 36	20 28	21 45	3 44	7	12	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 21 ^h 20 ^m 0		Mag: -4.3 PMG: 11 ^h 36 ^m		Mag: +1.8 PMG: 10 ^h 00 ^m		Mag: -2.1 PMG: 6 ^h 38 ^m			Mag: -0.2 PMG: 3 ^h 18 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	39	07.4	185	16.6	-19 42.6	209	45.8	-2 54.9	260	15.1	+16 29.3	310	29.0	
1	54	09.8	200	20.4	41.7	224	46.8	55.6	275	17.3	29.2	325	31.6	
2	69	12.3	215	24.2	40.7	239	47.8	56.2	290	19.6	29.2	340	34.1	
3	84	14.8	230	28.0	39.8	254	48.8	56.9	305	21.8	29.1	355	36.7	
4	99	17.2	245	31.9	38.8	269	49.8	57.5	320	24.0	29.0	10	39.3	
5	114	19.7	260	35.7	-19 37.9	284	50.8	-2 58.1	335	26.2	+16 29.0	25	41.8	
6	129	22.2	275	39.5	-19 36.9	299	51.7	-2 58.8	350	28.4	+16 28.9	40	44.4	
7	144	24.6	290	43.3	35.9	314	52.7	-2 59.4	5	30.6	28.8	55	46.9	
8	159	27.1	305	47.1	35.0	329	53.7	-3 00.0	20	32.8	28.7	70	49.5	
9	174	29.5	320	50.9	34.0	344	54.7	-3 00.7	35	35.0	28.7	85	52.1	
10	189	32.0	335	54.7	33.1	359	55.7	01.3	50	37.2	28.6	100	54.6	
11	204	34.5	350	58.5	-19 32.1	14	56.7	-3 01.9	65	39.4	+16 28.5	115	57.2	
12	219	36.9	6	02.3	-19 31.2	29	57.7	-3 02.6	80	41.6	+16 28.5	130	59.7	
13	234	39.4	21	06.2	30.2	44	58.7	03.2	95	43.8	28.4	146	02.3	
14	249	41.9	36	10.0	29.2	59	59.7	03.8	110	46.0	28.3	161	04.9	
15	264	44.3	51	13.8	28.3	75	00.7	04.5	125	48.2	28.3	176	07.4	
16	279	46.8	66	17.6	27.3	90	01.7	05.1	140	50.4	28.2	191	10.0	
17	294	49.3	81	21.4	-19 26.3	105	02.7	-3 05.7	155	52.6	+16 28.1	206	12.5	
18	309	51.7	96	25.2	-19 25.4	120	03.7	-3 06.4	170	54.9	+16 28.1	221	15.1	
19	324	54.2	111	29.0	24.4	135	04.7	07.0	185	57.1	28.0	236	17.7	
20	339	56.6	126	32.8	23.4	150	05.7	07.6	200	59.3	27.9	251	20.2	
21	354	59.1	141	36.6	22.4	165	06.7	08.3	216	01.5	27.9	266	22.8	
22	10	01.6	156	40.4	21.5	180	07.7	08.9	231	03.7	27.8	281	25.4	
23	25	04.0	171	44.2	20.5	195	08.7	09.5	246	05.9	27.7	296	27.9	
24	40	06.5	186	48.0	-19 19.5	210	09.7	-3 10.2	261	08.1	+16 27.7	311	30.5	
Dif	—		+38		+10	+10		-6	+22		-1	+26		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 6			Edad: 25 ^d 5 PHE { SD: 16'3 PMG: 8 ^h 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	05.8	-14	18.0	232	28.9	+10	56.6	60 N	5 47	6 36	7 22	1 18	101	15 51	5
1	199	05.9		18.8	246	57.5		42.1 ¹⁴⁵	58	45	31	14	25	97	47	9
2	214	05.9		19.6	261	26.1		27.6 ¹⁴⁵	56	43	27	06	30	94	44	11
3	229	05.9		20.4	275	54.8	+10	13.0 ¹⁴⁶	54	41	23	7 00	35	90	41	14
4	244	05.9		21.3	290	23.4	+9	58.3 ¹⁴⁷	52	39	19	6 54	40	87	38	17
5	259	05.9	-14	22.1	304	52.1	+9	43.6 ¹⁴⁷	50	5 37	6 15	6 49	1 44	84	15 35	20
6	274	06.0	-14	22.9	319	20.8	+9	28.7 ¹⁴⁹	45	5 33	6 07	6 38	1 52	80	15 30	25
7	289	06.0		23.7	333	49.5	+9	13.8 ¹⁴⁹	40	29	6 01	29	1 59	75	25	29
8	304	06.0		24.5	348	18.2	+8	58.9 ¹⁴⁹	35	25	5 55	21	2 06	71	21	33
9	319	06.0		25.3	2	47.0		43.9 ¹⁵⁰	30	21	49	14	11	68	18	36
10	334	06.0		26.1	17	15.7		28.8 ¹⁵¹	20	13	39	6 01	20	62	12	41
11	349	06.0	-14	26.9	31	44.4	+8	13.6 ¹⁵²	10 N	5 04	5 29	5 50	2 29	56	15 06	47
12	4	06.1	-14	27.7	46	13.2	+7	58.4 ¹⁵²	0	4 54	5 19	5 40	2 36	52	15 01	51
13	19	06.1		28.5	60	42.0		43.1 ¹⁵³	10 S	43	5 08	30	44	47	14 55	57
14	34	06.1		29.3	75	10.7		27.8 ¹⁵³	20	29	4 56	19	2 52	42	50	62
15	49	06.1		30.1	89	39.5	+7	12.4 ¹⁵⁴	30	4 10	40	5 06	3 01	36	43	68
16	64	06.1		30.9	104	08.3	+6	56.9 ¹⁵⁵	35	3 59	31	4 58	06	33	39	72
17	79	06.1	-14	31.7	118	37.1	+6	41.4 ¹⁵⁵	40	3 45	4 20	4 49	3 12	30	14 35	75
18	94	06.1	-14	32.5	133	05.9	+6	25.8 ¹⁵⁶	45	3 28	4 07	4 39	3 19	25	14 30	80
19	109	06.2		33.3	147	34.7	+6	10.2 ¹⁵⁶	50	3 05	3 51	27	27	20	24	85
20	124	06.2		34.1	162	03.5	+5	54.6 ¹⁵⁶	52	2 54	43	21	31	18	21	88
21	139	06.2		34.8	176	32.3		38.8 ¹⁵⁸	54	40	34	15	35	15	18	91
22	154	06.2		35.6	191	01.1		23.1 ¹⁵⁷	56	25	24	08	40	12	14	94
23	169	06.2		36.4	205	29.9	+5	07.3 ¹⁵⁸	58	2 06	3 12	4 00	45	9	10	98
24	184	06.2	-14	37.2	219	58.7	+4	51.4 ¹⁵⁹	60 S	1 41	2 59	3 51	3 51	5	14 06	101

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 16 ^m 1		Mag: -4.3 PMG: 11 ^h 30 ^m		Mag: +1.8 PMG: 9 ^h 59 ^m		Mag: -2.2 PMG: 6 ^h 34 ^m		Mag: -0.2 PMG: 3 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	40	06.5	186	48.0	-19	19.5	210	09.7	-3	10.2	261	08.1	+16	27.7	311	30.5	+22	06.0
1	55	09.0	201	51.8		18.6	225	10.7		10.8	276	10.3		27.6	326	33.0		06.0
2	70	11.4	216	55.6		17.6	240	11.6		11.5	291	12.5		27.5	341	35.6		06.0
3	85	13.9	231	59.4		16.6	255	12.6		12.1	306	14.7		27.4	356	38.2		06.0
4	100	16.4	247	03.2		15.6	270	13.6		12.7	321	17.0		27.4	11	40.7		06.0
5	115	18.8	262	07.0	-19	14.6	285	14.6	-3	13.4	336	19.2	+16	27.3	26	43.3	+22	06.0
6	130	21.3	277	10.8	-19	13.7	300	15.6	-3	14.0	351	21.4	+16	27.2	41	45.9	+22	05.9
7	145	23.8	292	14.6		12.7	315	16.6		14.6	6	23.6		27.2	56	48.4		05.9
8	160	26.2	307	18.4		11.7	330	17.6		15.3	21	25.8		27.1	71	51.0		05.9
9	175	28.7	322	22.2		10.7	345	18.6		15.9	36	28.0		27.0	86	53.6		05.9
10	190	31.1	337	26.0		09.7	0	19.6		16.5	51	30.2		27.0	101	56.1		05.9
11	205	33.6	352	29.8	-19	08.7	15	20.6	-3	17.2	66	32.4	+16	26.9	116	58.7	+22	05.9
12	220	36.1	7	33.6	-19	07.7	30	21.6	-3	17.8	81	34.7	+16	26.8	132	01.3	+22	05.9
13	235	38.5	22	37.3		06.8	45	22.6		18.4	96	36.9		26.8	147	03.8		05.9
14	250	41.0	37	41.1		05.8	60	23.6		19.1	111	39.1		26.7	162	06.4		05.9
15	265	43.5	52	44.9		04.8	75	24.6		19.7	126	41.3		26.6	177	09.0		05.9
16	280	45.9	67	48.7		03.8	90	25.6		20.3	141	43.5		26.6	192	11.5		05.9
17	295	48.4	82	52.5	-19	02.8	105	26.6	-3	21.0	156	45.7	+16	26.5	207	14.1	+22	05.9
18	310	50.9	97	56.3	-19	01.8	120	27.6	-3	21.6	171	47.9	+16	26.4	222	16.7	+22	05.9
19	325	53.3	113	00.1	-19	00.8	135	28.5		22.2	186	50.2		26.4	237	19.2		05.9
20	340	55.8	128	03.8	-18	59.8	150	29.5		22.9	201	52.4		26.3	252	21.8		05.9
21	355	58.2	143	07.6		58.8	165	30.5		23.5	216	54.6		26.2	267	24.4		05.9
22	11	00.7	158	11.4		57.8	180	31.5		24.1	231	56.8		26.2	282	26.9		05.9
23	26	03.2	173	15.2		56.8	195	32.5		24.8	246	59.0		26.1	297	29.5		05.9
24	41	05.6	188	19.0	-18	55.8	210	33.5	-3	25.4	262	01.2	+16	26.0	312	32.1	+22	05.9
Dif	—		+38		+10		+10		-6		+22		-1		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 26 ^d 5 PHE { 4 ^h : 60:7 12 ^h : 60:9 20 ^h : 61:0 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	184	06.2	-14	37.2	219	58.7	+4 51.4	60 N	16 02	16 47	17 37	2 59 103	15 56 5					
1	199	06.2		38.0	234	27.5	98 35.5	58	10	53	39	3 02 98	56 8					
2	214	06.2		38.8	248	56.3	98 19.6	56	18	16 58	42	04 94	55 12					
3	229	06.3		39.6	263	25.0	97 +4 03.6	54	24	17 02	44	05 92	55 15					
4	244	06.3		40.4	277	53.8	98 +3 47.6	52	30	06	46	07 89	55 17					
5	259	06.3	-14	41.2	292	22.6	98 +3 31.6	50	16 36	17 10	17 48	3 08 87	15 55 20					
6	274	06.3	-14	42.0	306	51.4	98 +3 15.5	45	16 47	17 18	17 53	3 12 80	15 55 24					
7	289	06.3		42.8	321	20.1	97 +2 59.4	40	16 57	25	17 57	14 76	54 30					
8	304	06.3		43.6	335	48.9	98 43.3	35	17 05	31	18 01	17 71	54 33					
9	319	06.3		44.4	350	17.6	97 27.1	30	12	37	05	19 68	54 36					
10	334	06.3		45.2	4	46.3	97 +2 10.9	20	25	48	14	22 62	53 43					
11	349	06.3	-14	46.0	19	15.1	98 +1 54.7	10 N	17 36	17 58	18 23	3 25 57	15 53 47					
12	4	06.3	-14	46.7	33	43.8	97 +1 38.5	0	17 47	18 08	18 33	3 28 52	15 52 53					
13	19	06.3		47.5	48	12.5	97 22.2	10 S	17 58	20	18 45	31 47	52 58					
14	34	06.4		48.3	62	41.1	96 +1 06.0	20	18 09	32	19 00	34 42	52 62					
15	49	06.4		49.1	77	09.8	97 +0 49.7	30	23	48	18	37 37	51 69					
16	64	06.4		49.9	91	38.4	96 33.4	35	31	18 58	30	39 33	51 72					
17	79	06.4	-14	50.7	106	07.0	96 +0 17.0	40	18 40	19 09	19 45	3 42 29	15 50 77					
18	94	06.4	-14	51.5	120	35.7	97 +0 00.7	45	18 50	19 23	20 03	3 44 25	15 50 81					
19	109	06.4		52.3	135	04.2	95 -0 15.6	50	19 03	40	26	47 20	49 87					
20	124	06.4		53.1	149	32.8	96 32.0	52	09	48	38	49 17	49 89					
21	139	06.4		53.8	164	01.3	95 -0 48.3	54	16	19 57	20 52	50 15	49 92					
22	154	06.4		54.6	178	29.9	96 -1 04.7	56	23	20 07	21 08	52 12	48 96					
23	169	06.4		55.4	192	58.3	94 21.1	58	31	20	29	54 9	48 99					
24	184	06.4	-14	56.2	207	26.8	95 -1 37.4	60 S	19 41	20 34	21 56	3 56 5	15 47 103					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 12 ^m 1		Mag: -4.3 PMG: 11 ^h 24 ^m			Mag: +1.8 PMG: 9 ^h 57 ^m			Mag: -2.2 PMG: 6 ^h 31 ^m			Mag: -0.2 PMG: 3 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	41	05.6	188	19.0	-18	55.8	210	33.5	-3	25.4	262	01.2	+16	26.0	312	32.1	+22	05.9
1	56	08.1	203	22.7		54.8	225	34.5		26.0	277	03.5		26.0	327	34.6		05.9
2	71	10.6	218	26.5		53.8	240	35.5		26.7	292	05.7		25.9	342	37.2		05.9
3	86	13.0	233	30.3		52.8	255	36.5		27.3	307	07.9		25.8	357	39.8		05.9
4	101	15.5	248	34.1		51.8	270	37.5		27.9	322	10.1		25.8	12	42.3		05.9
5	116	18.0	263	37.8	-18	50.8	285	38.5	-3	28.6	337	12.3	+16	25.7	27	44.9	+22	05.9
6	131	20.4	278	41.6	-18	49.8	300	39.5	-3	29.2	352	14.6	+16	25.6	42	47.5	+22	05.9
7	146	22.9	293	45.4		48.8	315	40.5		29.8	7	16.8		25.6	57	50.0		05.9
8	161	25.4	308	49.2		47.8	330	41.5		30.5	22	19.0		25.5	72	52.6		05.9
9	176	27.8	323	52.9		46.8	345	42.5		31.1	37	21.2		25.5	87	55.2		05.9
10	191	30.3	338	56.7		45.8	0	43.4		31.7	52	23.4		25.4	102	57.8		05.9
11	206	32.7	354	00.5	-18	44.8	15	44.4	-3	32.4	67	25.6	+16	25.3	118	00.3	+22	05.9
12	221	35.2	9	04.2	-18	43.8	30	45.4	-3	33.0	82	27.9	+16	25.3	133	02.9	+22	05.9
13	236	37.7	24	08.0		42.8	45	46.4		33.6	97	30.1		25.2	148	05.5		05.9
14	251	40.1	39	11.7		41.7	60	47.4		34.3	112	32.3		25.1	163	08.0		05.9
15	266	42.6	54	15.5		40.7	75	48.4		34.9	127	34.5		25.1	178	10.6		05.9
16	281	45.1	69	19.3		39.7	90	49.4		35.5	142	36.8		25.0	193	13.2		05.9
17	296	47.5	84	23.0	-18	38.7	105	50.4	-3	36.2	157	39.0	+16	24.9	208	15.7	+22	05.9
18	311	50.0	99	26.8	-18	37.7	120	51.4	-3	36.8	172	41.2	+16	24.9	223	18.3	+22	05.9
19	326	52.5	114	30.5		36.7	135	52.4		37.4	187	43.4		24.8	238	20.9		05.9
20	341	54.9	129	34.3		35.7	150	53.4		38.1	202	45.6		24.7	253	23.5		05.9
21	356	57.4	144	38.0		34.7	165	54.4		38.7	217	47.9		24.7	268	26.0		05.9
22	11	59.8	159	41.8		33.6	180	55.4		39.3	232	50.1		24.6	283	28.6		05.9
23	27	02.3	174	45.5		32.6	195	56.4		40.0	247	52.3		24.5	298	31.2		05.9
24	42	04.8	189	49.3	-18	31.6	210	57.3	-3	40.6	262	54.5	+16	24.5	313	33.8	+22	05.9
Dif	—		+38		+10		+10		-6		+22		-1		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 27 ^d 5	PHE {	4 ^h : 61 ^h 1 12 ^h : 61 ^h 2 20 ^h : 61 ^h 2										
	PMG: 11 ^h 43 ^m 6							SD: 16 ^h 6			PMG: 10 ^h 32 ^m		R ^o : 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	184	06.4	-14	56.2	207	26.8	-1	37.4	60 N	5 51	6 41	7 27	4 42	104	16 01	6
1	199	06.4		57.0	221	55.3	95	-1	53.8	58	49	36	18	40	100	04 10
2	214	06.4		57.8	236	23.7	94	-2	10.2	56	46	31	11	38	97	07 14
3	229	06.4		58.6	250	52.1	94		26.5	54	44	26	7	37	93	10 16
4	244	06.4	-14	59.3	265	20.4	93		42.9	52	42	22	6	36	90	12 19
5	259	06.4	-15	00.1	279	48.8	94	-2	59.2	50	5 40	6 18	6 53	4 35	87	16 15 21
6	274	06.4	-15	00.9	294	17.0	92	-3	15.5	45	5 35	6 10	6 41	4 32	82	16 19 27
7	289	06.4		01.7	308	45.3	93		31.9	40	31	6 03	31	30	77	24 31
8	304	06.4		02.5	323	13.5	92	-3	48.2	35	26	5 56	23	28	74	27 35
9	319	06.4		03.2	337	41.7	92	-4	04.4	30	22	50	15	27	70	30 39
10	334	06.4		04.0	352	09.9	92		20.7	20	13	40	6 02	24	64	36 44
11	349	06.4	-15	04.8	6	38.0	91	-4	37.0	10 N	5 04	5 29	5 51	4 22	58	16 40 50
12	4	06.4	-15	05.6	21	06.1	91	-4	53.2	0	4 54	5 19	5 40	4 20	53	16 45 54
13	19	06.4		06.4	35	34.2	91	-5	09.4	10 S	42	5 07	29	18	48	50 59
14	34	06.4		07.2	50	02.2	90		25.6	20	27	4 54	17	16	43	16 54 65
15	49	06.4		07.9	64	30.2	90		41.7	30	4 08	39	5 04	14	37	17 00 70
16	64	06.4		08.7	78	58.1	89	-5	57.8	35	3 57	29	4 56	12	34	03 74
17	79	06.4	-15	09.5	93	26.0	89	-6	13.9	40	3 42	4 18	4 47	4 11	30	17 07 78
18	94	06.4	-15	10.3	107	53.9	89	-6	29.9	45	3 24	4 04	4 36	4 09	26	17 11 82
19	109	06.4		11.0	122	21.7	88	-6	46.0	50	3 00	3 47	23	07	20	16 88
20	124	06.4		11.8	136	49.5	88	-7	01.9	52	2 48	39	17	06	18	18 91
21	139	06.4		12.6	151	17.2	87		17.9	54	35	29	11	05	15	21 94
22	154	06.4		13.4	165	44.9	87		33.7	56	2 18	19	4	04	12	24 97
23	169	06.4		14.1	180	12.5	86	-7	49.6	58	1 58	3 07	3 55	03	9	27 101
24	184	06.4	-15	14.9	194	40.1	86	-8	05.4	60 S	1 31	2 52	3 45	4 01	6	17 30 106

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 08 ^m 2		Mag: -4.3 PMG: 11 ^h 18 ^m		Mag: +1.8 PMG: 9 ^h 56 ^m		Mag: -2.2 PMG: 6 ^h 27 ^m		Mag: -0.2 PMG: 3 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	42	04.8	189	49.3	-18	31.6	210	57.3	-3	40.6
1	57	07.2	204	53.0		30.6	225	58.3		41.2
2	72	09.7	219	56.8		29.6	240	59.3		41.9
3	87	12.2	235	00.5		28.6	256	00.3		42.5
4	102	14.6	250	04.2		27.5	271	01.3		43.1
5	117	17.1	265	08.0	-18	26.5	286	02.3	-3	43.8
6	132	19.6	280	11.7	-18	25.5	301	03.3	-3	44.4
7	147	22.0	295	15.4		24.5	316	04.3		45.0
8	162	24.5	310	19.2		23.5	331	05.3		45.7
9	177	27.0	325	22.9		22.4	346	06.3		46.3
10	192	29.4	340	26.6		21.4	1	07.3		46.9
11	207	31.9	355	30.4	-18	20.4	16	08.3	-3	47.5
12	222	34.3	10	34.1	-18	19.4	31	09.3	-3	48.2
13	237	36.8	25	37.8		18.3	46	10.2		48.8
14	252	39.3	40	41.5		17.3	61	11.2		49.4
15	267	41.7	55	45.3		16.3	76	12.2		50.1
16	282	44.2	70	49.0		15.3	91	13.2		50.7
17	297	46.7	85	52.7	-18	14.2	106	14.2	-3	51.3
18	312	49.1	100	56.4	-18	13.2	121	15.2	-3	52.0
19	327	51.6	116	00.1		12.2	136	16.2		52.6
20	342	54.1	131	03.9		11.2	151	17.2		53.2
21	357	56.5	146	07.6		10.1	166	18.2		53.9
22	12	59.0	161	11.3		09.1	181	19.2		54.5
23	28	01.5	176	15.0		08.1	196	20.2		55.1
24	43	03.9	191	18.7	-18	07.1	211	21.2	-3	55.8
Dif	—		+37		+10		+10		-6	
									+22	
									-1	
									+26	
									0	

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 6			Edad: 28 ^d 5 PHE { 4 ^h : 61 ^h 2 12 ^h : 61 ^h 2 20 ^h : 61 ^h 1 R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	m	h m	m
0	184	06.4	-15	14.9	194	40.1	-8	05.4	60 N	15 57	16 43	17 33	6 26 107	16 07 9
1	199	06.4		15.7	209	07.7	86	21.1	58	16 06		48 35	20 103	14 13
2	214	06.4		16.5	223	35.2	85	36.8	56	14	54	38	15 98	21 16
3	229	06.4		17.2	238	02.6	84	-8 52.5	54	20	16 58	40	10 95	26 20
4	244	06.4		18.0	252	30.0	84	-9 08.1	52	27	17 03	43	06 92	31 23
5	259	06.4	-15	18.8	266	57.4	84	-9 23.6	50	16 32	17 07	17 45	6 02 89	16 36 26
6	274	06.3	-15	19.6	281	24.7	83	-9 39.1	45	16 44	17 15	17 50	5 54 83	16 46 31
7	289	06.3		20.3	295	51.9	82	-9 54.5	40	16 55	23	17 55	47 79	16 55 35
8	304	06.3		21.1	310	19.1	82	-10 09.9	35	17 03	30	18 00	42 74	17 02 39
9	319	06.3		21.9	324	46.3	82	25.2	30	11	36	04	37 71	09 42
10	334	06.3		22.7	339	13.4	81	40.4	20	24	47	13	28 65	20 48
11	349	06.3	-15	23.4	353	40.4	80	-10 55.5	10 N	17 36	17 58	18 23	5 20 61	17 30 52
12	4	06.3	-15	24.2	8	07.4	80	-11 10.6	0	17 47	18 08	18 33	5 13 56	17 39 57
13	19	06.3		25.0	22	34.3	79	25.6	10 S	17 58	20	18 46	5 06 51	49 61
14	34	06.3		25.7	37	01.2	79	40.6	20	18 10	34	19 01	4 59 46	17 59 66
15	49	06.3		26.5	51	28.0	78	-11 55.4	30	24	18 50	20	51 40	18 10 72
16	64	06.3		27.3	65	54.8	78	-12 10.2	35	33	19 00	33	46 37	17 75
17	79	06.2	-15	28.0	80	21.5	77	-12 24.9	40	18 42	19 11	19 47	4 41 33	18 25 78
18	94	06.2	-15	28.8	94	48.1	76	-12 39.5	45	18 53	19 26	20 06	4 35 28	18 33 83
19	109	06.2		29.6	109	14.7	76	-12 54.1	50	19 06	43	31	27 24	44 89
20	124	06.2		30.3	123	41.3	76	-13 08.5	52	13	19 52	43	24 21	49 92
21	139	06.2		31.1	138	07.8	75	22.9	54	20	20 02	20 58	20 18	18 55 94
22	154	06.2		31.9	152	34.2	74	37.2	56	28	13	21 15	16 15	19 01 98
23	169	06.2		32.6	167	00.5	73	-13 51.3	58	36	25	21 37	12 11	08 102
24	184	06.2	-15	33.4	181	26.8	73	-14 05.4	60 S	19 46	20 41	22 07	4 07 7	19 16 107
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 04 ^m 3		Mag: -4.3 PMG: 11 ^h 12 ^m		Mag: +1.8 PMG: 9 ^h 54 ^m		Mag: -2.2 PMG: 6 ^h 24 ^m		Mag: -0.2 PMG: 3 ^h 01 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	43	03.9	191	18.7	211	21.2	263	48.0	314	35.6				
1	58	06.4	206	22.4	226	22.1	278	50.2	329	38.1				
2	73	08.8	221	26.1	241	23.1	293	52.4	344	40.7				
3	88	11.3	236	29.8	256	24.1	308	54.7	359	43.3				
4	103	13.8	251	33.5	271	25.1	323	56.9	14	45.9				
5	118	16.2	266	37.2	286	26.1	338	59.1	29	48.4				
6	133	18.7	281	40.9	301	27.1	354	01.4	44	51.0				
7	148	21.2	296	44.6	316	28.1	9	03.6	59	53.6				
8	163	23.6	311	48.3	331	29.1	24	05.8	74	56.2				
9	178	26.1	326	52.0	346	30.1	39	08.1	89	58.8				
10	193	28.6	341	55.6	1	31.1	54	10.3	105	01.3				
11	208	31.0	356	59.3	16	32.1	69	12.5	120	03.9				
12	223	33.5	12	03.0	31	33.0	84	14.8	135	06.5				
13	238	35.9	27	06.7	46	34.0	99	17.0	150	09.1				
14	253	38.4	42	10.4	61	35.0	114	19.2	165	11.6				
15	268	40.9	57	14.0	76	36.0	129	21.5	180	14.2				
16	283	43.3	72	17.7	91	37.0	144	23.7	195	16.8				
17	298	45.8	87	21.4	106	38.0	159	25.9	210	19.4				
18	313	48.3	102	25.1	121	39.0	174	28.2	225	22.0				
19	328	50.7	117	28.7	136	40.0	189	30.4	240	24.6				
20	343	53.2	132	32.4	151	41.0	204	32.6	255	27.1				
21	358	55.7	147	36.1	166	42.0	219	34.9	270	29.7				
22	13	58.1	162	39.7	181	42.9	234	37.1	285	32.3				
23	29	00.6	177	43.4	196	43.9	249	39.4	300	34.9				
24	44	03.1	192	47.0	211	44.9	264	41.6	315	37.5				
Dif	—		+37	+10	+10	-6	+22	-1	+26	0				

UT	SOL			● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 0 ^d 1	PHE	4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'7 R°: 59 ^m										
	PMG: 11 ^h 43 ^m 6															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	06.2	-15	33.4	181	26.8	-14	05.4	60 N	5 56	6 46	7 32	8 13	108	16 16	13
1	199	06.1		34.2	195	53.1	73	19.4	58	53	40	23	8 03	101	27	19
2	214	06.1		34.9	210	19.3	72	33.3	56	50	35	15	7 53	98	37	24
3	229	06.1		35.7	224	45.4	71	-14 47.1	54	48	30	08	45	94	46	27
4	244	06.1		36.5	239	11.5	71	-15 00.8	52	45	26	7 02	38	90	16	34
5	259	06.1	-15	37.2	253	37.5	70	-15 14.4	50	5 43	6 22	6 56	7 31	88	17	02
6	274	06.1	-15	38.0	268	03.5	70	-15 27.9	45	5 38	6 13	6 44	7 17	83	17	17
7	289	06.0		38.7	282	29.3	68	41.2	40	33	6 05	33	7 06	78	30	41
8	304	06.0		39.5	296	55.2	69	-15 54.5	35	28	5 58	25	6 56	75	41	45
9	319	06.0		40.3	311	21.0	68	-16 07.7	30	23	52	17	48	71	17	51
10	334	06.0		41.0	325	46.7	67	20.7	20	14	40	6 03	33	66	18	08
11	349	06.0	-15	41.8	340	12.3	66	-16 33.6	10 N	5 04	5 30	5 51	6 21	61	18	22
12	4	06.0	-15	42.5	354	37.9	66	-16 46.4	0	4 54	5 19	5 40	6 09	58	18	36
13	19	05.9		43.3	9	03.5	66	-16 59.1	10 S	41	5 07	29	5 57	54	18	50
14	34	05.9		44.1	23	29.0	65	-17 11.7	20	26	4 53	17	45	49	19	05
15	49	05.9		44.8	37	54.4	64	24.2	30	4 07	37	5 02	31	45	22	71
16	64	05.9		45.6	52	19.8	64	36.5	35	3 54	27	4 54	23	42	32	73
17	79	05.9	-15	46.3	66	45.1	63	-17 48.7	40	3 39	4 15	4 45	5 14	38	19	43
18	94	05.8	-15	47.1	81	10.3	62	-18 00.8	45	3 21	4 01	4 34	5 03	34	19	56
19	109	05.8		47.8	95	35.5	62	12.8	50	2 56	3 43	20	4 51	28	20	13
20	124	05.8		48.6	110	00.7	62	24.6	52	43	35	14	45	26	21	88
21	139	05.8		49.4	124	25.8	61	36.3	54	29	25	4 07	38	24	29	92
22	154	05.8		50.1	138	50.8	60	47.8	56	2 11	14	3 59	31	20	39	95
23	169	05.7		50.9	153	15.8	60	-18 59.3	58	1 49	3 01	50	23	16	20	50
24	184	05.7	-15	51.6	167	40.7	59	-19 10.6	60 S	1 19	2 46	3 40	4 14	11	21	03

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 00 ^m 3		Mag: -4.2 PMG: 11 ^h 06 ^m		Mag: +1.8 PMG: 9 ^h 52 ^m		Mag: -2.2 PMG: 6 ^h 20 ^m		Mag: -0.2 PMG: 2 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	44	03.1	192	47.0	211	44.9	264	41.6	315	37.5
1	59	05.5	207	50.7	226	45.9	279	43.8	330	40.0
2	74	08.0	222	54.3	241	46.9	294	46.1	345	42.6
3	89	10.4	237	58.0	256	47.9	309	48.3	0	45.2
4	104	12.9	253	01.6	271	48.9	324	50.5	15	47.8
5	119	15.4	268	05.3	286	49.9	339	52.8	30	50.4
6	134	17.8	283	08.9	301	50.9	354	55.0	45	52.9
7	149	20.3	298	12.6	316	51.9	9	57.3	60	55.5
8	164	22.8	313	16.2	331	52.8	24	59.5	75	58.1
9	179	25.2	328	19.9	346	53.8	40	01.7	91	00.7
10	194	27.7	343	23.5	1	54.8	55	04.0	106	03.3
11	209	30.2	358	27.1	16	55.8	70	06.2	121	05.9
12	224	32.6	13	30.7	31	56.8	85	08.5	136	08.4
13	239	35.1	28	34.4	46	57.8	100	10.7	151	11.0
14	254	37.6	43	38.0	61	58.8	115	12.9	166	13.6
15	269	40.0	58	41.6	76	59.8	130	15.2	181	16.2
16	284	42.5	73	45.2	92	00.8	145	17.4	196	18.8
17	299	44.9	88	48.9	107	01.8	160	19.7	211	21.4
18	314	47.4	103	52.5	122	02.7	175	21.9	226	24.0
19	329	49.9	118	56.1	137	03.7	190	24.1	241	26.5
20	344	52.3	133	59.7	152	04.7	205	26.4	256	29.1
21	359	54.8	149	03.3	167	05.7	220	28.6	271	31.7
22	14	57.3	164	06.9	182	06.7	235	30.9	286	34.3
23	29	59.7	179	10.5	197	07.7	250	33.1	301	36.9
24	45	02.2	194	14.1	212	08.7	265	35.4	316	39.5
Dif	—		+36	+10	+10	-6	+22	-1	+26	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 1 ^d 1 PHE { 4 ^h : 60'5 12 ^h : 60'3 20 ^h : 60'0 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	184	05.7	-15	51.6	167	40.7	-19 10.6	60 N	15 52	16 38	17 28	10 01 101	16 29 25		
1	199	05.7		52.4	182	05.6	59 21.7	58	16 01		44 32	9 44 96	16 46 30		
2	214	05.7		53.1	196	30.4	58 32.7	56	09	50	34	31 91	17 01 34		
3	229	05.6		53.9	210	55.2	58 43.6	54	17	55	37	19 87	13 37		
4	244	05.6		54.6	225	19.9	57 -19 54.4	52	23	16 59	40	9 08 85	24 40		
5	259	05.6	-15	55.4	239	44.6	57 -20 05.0	50	16 29	17 04	17 42	8 59 83	17 34 42		
6	274	05.6	-15	56.1	254	09.2	56 -20 15.4	45	16 42	17 13	17 48	8 40 78	17 55 45		
7	289	05.5		56.9	268	33.7	55 25.7	40	16 52	21	53	24 75	18 11 49		
8	304	05.5		57.6	282	58.3	56 35.9	35	17 01	28	17 58	8 11 72	26 50		
9	319	05.5		58.4	297	22.8	55 45.9	30	09	34	18 03	7 59 70	38 52		
10	334	05.5		59.1	311	47.2	54 -20 55.8	20	23	46	12	39 66	18 59 56		
11	349	05.4	-15	59.9	326	11.6	54 -21 05.5	10 N	17 36	17 57	18 23	7 22 63	19 18 58		
12	4	05.4	-16	00.6	340	35.9	53 -21 15.0	0	17 47	18 09	18 34	7 07 60	19 35 60		
13	19	05.4		01.4	355	00.2	53 24.4	10 S	17 59	21	18 46	6 51 57	19 52 63		
14	34	05.4		02.1	9	24.5	53 33.7	20	18 11	35	19 02	34 54	20 11 65		
15	49	05.3		02.9	23	48.7	52 42.8	30	26	18 52	22	16 49	33 67		
16	64	05.3		03.6	38	12.9	52 -21 51.7	35	35	19 02	35	6 05 47	20 45 70		
17	79	05.3	-16	04.4	52	37.1	52 -22 00.5	40	18 44	19 14	19 50	5 52 45	21 00 71		
18	94	05.3	-16	05.1	67	01.2	51 -22 09.2	45	18 56	19 29	20 10	5 37 41	21 17 74		
19	109	05.2		05.9	81	25.2	50 17.6	50	19 10	47	35	19 37	39 77		
20	124	05.2		06.6	95	49.3	51 25.9	52	16	19 56	20 48	11 34	21 49 79		
21	139	05.2		07.3	110	13.3	50 34.1	54	24	20 06	21 04	5 02 31	22 01 81		
22	154	05.1		08.1	124	37.3	50 42.1	56	32	18	22	4 51 28	14 84		
23	169	05.1		08.8	139	01.2	49 49.9	58	41	31	21 46	39 24	30 88		
24	184	05.1	-16	09.6	153	25.2	50 -22 57.6	60 S	19 52	20 47	22 20	4 25 19	22 48 93		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 20 ^h 56 ^m 4		Mag: -4.2 PMG: 11 ^h 00 ^m		Mag: +1.8 PMG: 9 ^h 51 ^m		Mag: -2.2 PMG: 6 ^h 17 ^m			Mag: -0.2 PMG: 2 ^h 53 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	45	02.2	194	14.1	212	08.7	265	35.4	316	39.5	222	05.7
1	60	04.7	209	17.7		16.4	280	37.6		20.0	331	42.1
2	75	07.1	224	21.3		15.4	295	39.9		20.0	346	44.6
3	90	09.6	239	24.9		14.3	310	42.1		19.9	1	47.2
4	105	12.0	254	28.5		13.3	325	44.3		19.8	16	49.8
5	120	14.5	269	32.1	-17	12.2	340	46.6	+16	19.8	31	52.4
6	135	17.0	284	35.7	-17	11.2	355	48.8	+16	19.7	46	55.0
7	150	19.4	299	39.3		10.2	10	51.1		19.7	61	57.6
8	165	21.9	314	42.8		09.1	25	53.3		19.6	77	00.2
9	180	24.4	329	46.4		08.1	40	55.6		19.6	92	02.7
10	195	26.8	344	50.0		07.1	55	57.8		19.5	107	05.3
11	210	29.3	359	53.6	-17	06.0	71	00.1	+16	19.4	122	07.9
12	225	31.8	14	57.1	-17	05.0	86	02.3	+16	19.4	137	10.5
13	240	34.2	30	00.7		04.0	101	04.6		19.3	152	13.1
14	255	36.7	45	04.3		02.9	116	06.8		19.3	167	15.7
15	270	39.2	60	07.8		01.9	131	09.1		19.2	182	18.3
16	285	41.6	75	11.4	-17	00.9	146	11.3		19.2	197	20.9
17	300	44.1	90	14.9	-16	59.8	161	13.6	+16	19.1	212	23.5
18	315	46.5	105	18.5	-16	58.8	176	15.8	+16	19.0	227	26.0
19	330	49.0	120	22.0		57.8	191	18.1		19.0	242	28.6
20	345	51.5	135	25.6		56.8	206	20.3		18.9	257	31.2
21	0	53.9	150	29.1		55.7	221	22.6		18.9	272	33.8
22	15	56.4	165	32.7		54.7	236	24.8		18.8	287	36.4
23	30	58.9	180	36.2		53.7	251	27.1		18.8	302	39.0
24	46	01.3	195	39.8	-16	52.6	266	29.3	+16	18.7	317	41.6
Dif	—		+36		+10		+22			-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 2 ^d 1 PHE { SD: 16'3 PMG: 14 ^h 21 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	05.1	-16	09.6	153	25.2	-22	57.6	60 N	6 00	6 50	7 37	11 42	82	16 54	43
1	199	05.0		10.3	167	49.1	49	-23	05.1	58	5 57	44	28	20	78	17 16
2	214	05.0		11.1	182	13.0	49		12.4	73	54	39	19	11 02	75	35
3	229	05.0		11.8	196	36.8	48		19.6	72	51	34	12	10 46	74	17 50
4	244	04.9		12.5	211	00.6	48		26.6	70	52	48	29	7 05	33	73
5	259	04.9	-16	13.3	225	24.5	49	-23	33.4	68	50	5 46	6 25	6 59	10 22	71
6	274	04.9	-16	14.0	239	48.3	48	-23	40.1	67	45	5 40	6 15	6 46	9 58	69
7	289	04.8		14.8	254	12.0	47		46.6	65	40	35	07	36	39	67
8	304	04.8		15.5	268	35.8	48		52.9	63	35	30	6 00	26	23	66
9	319	04.8		16.2	282	59.6	48	-23	59.1	62	30	25	5 53	18	9 09	65
10	334	04.7		17.0	297	23.3	47	-24	05.0	59	20	15	41	6 04	8 45	64
11	349	04.7	-16	17.7	311	47.0	47	-24	10.9	59	10 N	5 05	5 30	5 52	8 25	62
12	4	04.7	-16	18.4	326	10.8	48	-24	16.5	56	0	4 54	5 19	5 40	8 07	60
13	19	04.6		19.2	340	34.5	47		22.0	55	10 S	41	5 06	28	7 48	59
14	34	04.6		19.9	354	58.2	47		27.3	53	20	25	4 52	16	28	57
15	49	04.6		20.7	9	21.9	47		32.4	51	30	4 05	35	5 01	7 05	55
16	64	04.5		21.4	23	45.6	47		37.4	50	35	3 52	25	4 52	6 52	54
17	79	04.5	-16	22.1	38	09.3	47	-24	42.2	48	40	3 37	4 13	4 42	6 37	52
18	94	04.5	-16	22.9	52	33.1	48	-24	46.8	46	45	3 17	3 58	4 31	6 18	50
19	109	04.4		23.6	66	56.8	47		51.3	45	50	2 51	39	17	5 56	47
20	124	04.4		24.3	81	20.5	47		55.5	42	52	38	31	10	45	46
21	139	04.3		25.1	95	44.3	48	-24	59.7	42	54	23	20	4 03	33	44
22	154	04.3		25.8	110	08.0	47	-25	03.6	39	56	2 04	3 09	3 55	19	42
23	169	04.3		26.5	124	31.8	48		07.3	37	58	1 40	2 55	45	5 03	38
24	184	04.2	-16	27.3	138	55.6	48	-25	10.9	36	60 S	1 07	2 39	3 35	4 44	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 52 ^m 5		Mag: -4.2 PMG: 10 ^h 55 ^m		Mag: +1.8 PMG: 9 ^h 49 ^m		Mag: -2.2 PMG: 6 ^h 13 ^m		Mag: -0.2 PMG: 2 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	46	01.3	195	39.8	212	32.4	266	29.3	317	41.6
1	61	03.8	210	43.3	227	33.4	281	31.6	332	44.2
2	76	06.3	225	46.8	242	34.4	296	33.8	347	46.8
3	91	08.7	240	50.4	257	35.4	311	36.1	2	49.3
4	106	11.2	255	53.9	272	36.3	326	38.3	17	51.9
5	121	13.7	270	57.4	287	37.3	341	40.6	32	54.5
6	136	16.1	286	00.9	302	38.3	356	42.8	47	57.1
7	151	18.6	301	04.4	317	39.3	11	45.1	62	59.7
8	166	21.0	316	08.0	332	40.3	26	47.3	78	02.3
9	181	23.5	331	11.5	347	41.3	41	49.6	93	04.9
10	196	26.0	346	15.0	2	42.3	56	51.8	108	07.5
11	211	28.4	1	18.5	17	43.3	71	54.1	123	10.1
12	226	30.9	16	22.0	32	44.2	86	56.3	138	12.7
13	241	33.4	31	25.5	47	45.2	101	58.6	153	15.3
14	256	35.8	46	29.0	62	46.2	117	00.8	168	17.9
15	271	38.3	61	32.5	77	47.2	132	03.1	183	20.5
16	286	40.8	76	36.0	92	48.2	147	05.4	198	23.0
17	301	43.2	91	39.5	107	49.2	162	07.6	213	25.6
18	316	45.7	106	43.0	122	50.2	177	09.9	228	28.2
19	331	48.2	121	46.4	137	51.1	192	12.1	243	30.8
20	346	50.6	136	49.9	152	52.1	207	14.4	258	33.4
21	1	53.1	151	53.4	167	53.1	222	16.6	273	36.0
22	16	55.5	166	56.9	182	54.1	237	18.9	288	38.6
23	31	58.0	182	00.3	197	55.1	252	21.1	303	41.2
24	47	00.5	197	03.8	212	56.1	267	23.4	318	43.8
Dif	—		+35		+10		+23		+26	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 3 ^d 1 PHE { 4 ^h : 58'9 12 ^h : 58'5 20 ^h : 58'2 Rº: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	184	04.2	-16 27.3	138	55.6	-25 10.9		60 N	15 47	16 34	17 24	13 04 53		17 37 68	
1	199	04.2	28.0	153	19.4	48 14.3	34	58	15 57	40	28	12 38 55		18 03 67	
2	214	04.1	28.7	167	43.2	48 17.6	33	56	16 05	46	31	17 56		24 65	
3	229	04.1	29.4	182	07.0	48 20.7	31	54	13	51	34	12 00 57		41 64	
4	244	04.1	30.2	196	30.9	49 23.6	29	52	20	16 56	37	11 46 56		18 56 63	
5	259	04.0	-16 30.9	210	54.8	49 -25 26.3	27	50	16 26	17 01	17 39	11 33 57		19 08 64	
6	274	04.0	-16 31.6	225	18.7	49 -25 28.8	25	45	16 39	17 10	17 45	11 07 57		19 35 62	
7	289	03.9	32.4	239	42.7	50 31.2	24	40	16 50	19	51	10 46 58		19 55 62	
8	304	03.9	33.1	254	06.6	49 33.4	22	35	17 00	26	17 56	29 58		20 13 60	
9	319	03.8	33.8	268	30.6	50 35.5	21	30	08	33	18 02	10 14 58		28 60	
10	334	03.8	34.5	282	54.7	51 37.4	19	20	22	45	12	9 49 58		20 53 59	
11	349	03.8	-16 35.3	297	18.7	50 -25 39.1	17	10 N	17 35	17 57	18 22	9 27 59		21 15 58	
12	4	03.7	-16 36.0	311	42.9	52 -25 40.6	15	0	17 47	18 09	18 34	9 07 59		21 35 58	
13	19	03.7	36.7	326	07.0	51 42.0	14	10 S	17 59	21	18 47	8 47 59		21 56 56	
14	34	03.6	37.4	340	31.2	52 43.2	12	20	18 13	36	19 03	25 59		22 17 56	
15	49	03.6	38.2	354	55.5	53 44.2	10	30	28	18 53	24	8 00 59		43 54	
16	64	03.5	38.9	9	19.7	52 45.1	9	35	37	19 04	37	7 46 58		22 57 54	
17	79	03.5	-16 39.6	23	44.1	54 -25 45.8	7	40	18 47	19 17	19 53	7 29 58		23 15 52	
18	94	03.4	-16 40.3	38	08.5	54 -25 46.3	5	45	18 59	19 32	20 13	7 08 59		23 35 52	
19	109	03.4	41.1	52	32.9	54 46.6	3	50	19 13	19 51	40	6 43 58		** * * *	
20	124	03.4	41.8	66	57.4	55 46.8	2	52	20	20 00	20 54	31 58		** * * *	
21	139	03.3	42.5	81	21.9	55 46.9	1	54	28	11	21 10	17 58		** * * *	
22	154	03.3	43.2	95	46.5	56 46.8	1	56	36	23	30	6 01 57		** * * *	
23	169	03.2	43.9	110	11.2	57 46.5	3	58	46	37	21 55	5 41 57		** * * *	
24	184	03.2	-16 44.7	124	35.9	57 -25 46.0	5	60 S	19 57	20 54	22 35	5 17 56		0 21 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 48 ^m 5		Mag: -4.2 PMG: 10 ^h 49 ^m			Mag: +1.8 PMG: 9 ^h 48 ^m			Mag: -2.2 PMG: 6 ^h 10 ^m			Mag: -0.2 PMG: 2 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	47	00.5	197	03.8	-16 28.0	212	56.1	-4 56.2	267	23.4	+16 17.4	318	43.8	+22 05.6	
1	62	02.9	212	07.3	27.0	227	57.1	56.8	282	25.7	17.3	333	46.4	05.6	
2	77	05.4	227	10.7	26.0	242	58.1	57.4	297	27.9	17.3	348	49.0	05.6	
3	92	07.9	242	14.2	25.0	257	59.0	58.0	312	30.2	17.2	3	51.6	05.6	
4	107	10.3	257	17.7	24.0	273	00.0	58.7	327	32.4	17.2	18	54.2	05.6	
5	122	12.8	272	21.1	-16 22.9	288	01.0	-4 59.3	342	34.7	+16 17.1	33	56.8	+22 05.6	
6	137	15.3	287	24.6	-16 21.9	303	02.0	-4 59.9	357	37.0	+16 17.1	48	59.4	+22 05.6	
7	152	17.7	302	28.0	20.9	318	03.0	-5 00.5	12	39.2	17.0	64	02.0	05.6	
8	167	20.2	317	31.4	19.9	333	04.0	01.2	27	41.5	17.0	79	04.6	05.6	
9	182	22.7	332	34.9	18.9	348	05.0	01.8	42	43.7	16.9	94	07.2	05.6	
10	197	25.1	347	38.3	17.9	3	05.9	02.4	57	46.0	16.8	109	09.7	05.6	
11	212	27.6	2	41.8	-16 16.9	18	06.9	-5 03.1	72	48.3	+16 16.8	124	12.3	+22 05.6	
12	227	30.0	17	45.2	-16 15.8	33	07.9	-5 03.7	87	50.5	+16 16.7	139	14.9	+22 05.6	
13	242	32.5	32	48.6	14.8	48	08.9	04.3	102	52.8	16.7	154	17.5	05.6	
14	257	35.0	47	52.0	13.8	63	09.9	04.9	117	55.0	16.6	169	20.1	05.6	
15	272	37.4	62	55.5	12.8	78	10.9	05.6	132	57.3	16.6	184	22.7	05.6	
16	287	39.9	77	58.9	11.8	93	11.9	06.2	147	59.6	16.5	199	25.3	05.6	
17	302	42.4	93	02.3	-16 10.8	108	12.8	-5 06.8	163	01.8	+16 16.5	214	27.9	+22 05.6	
18	317	44.8	108	05.7	-16 09.8	123	13.8	-5 07.4	178	04.1	+16 16.4	229	30.5	+22 05.6	
19	332	47.3	123	09.1	08.8	138	14.8	08.1	193	06.4	16.4	244	33.1	05.6	
20	347	49.8	138	12.5	07.8	153	15.8	08.7	208	08.6	16.3	259	35.7	05.6	
21	2	52.2	153	15.9	06.8	168	16.8	09.3	223	10.9	16.3	274	38.3	05.5	
22	17	54.7	168	19.3	05.8	183	17.8	09.9	238	13.2	16.2	289	40.9	05.5	
23	32	57.2	183	22.7	04.8	198	18.7	10.6	253	15.4	16.2	304	43.5	05.5	
24	47	59.6	198	26.1	-16 03.8	213	19.7	-5 11.2	268	17.7	+16 16.1	319	46.1	+22 05.5	
Dif	—		+34		+10	+10		-6	+23		-1	+26		0	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 4 ^d 1	PHE {	SD: 15 ^h 8	R ^o : 55 ^m													
	PMG: 11 ^h 43 ^m 8																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o					
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	184	03.2	-16	44.7		124	35.9	-25	46.0	6	55	7	42	13	57	29	18	45	85	
1	199	03.1		45.4		139	00.7		45.4	8	48		32		33	34	19	10	79	
2	214	03.1		46.1		153	25.5		44.6	9	42		23		13	13	37		29	76
3	229	03.0		46.8		167	50.4		43.7	10	37		16		12	57	39		45	74
4	244	03.0		47.5		182	15.4		42.6	11	32		09			42	42	19	59	72
5	259	02.9	-16	48.3		196	40.4	-25	41.3	13	28	7	03	12	30	43	20	12	69	
6	274	02.9	-16	49.0		211	05.5	-25	39.9	14	18	6	49	12	04	46	20	37	66	
7	289	02.8		49.7		225	30.7		38.4	15	09		38	11	44	48	20	57	64	
8	304	02.8		50.4		239	55.9		36.7	17	02	6	28		27	49	21	13	63	
9	319	02.7		51.1		254	21.2		34.8	19	55	5	20	11	12	51	28	61		
10	334	02.7		51.8		268	46.6		32.8	20	42	6	05	10	47	53	21	52	58	
11	349	02.6	-16	52.5		283	12.1	-25	30.6	22	31	5	52	10	26	54	22	13	56	
12	4	02.6	-16	53.3		297	37.6	-25	28.3	23	19	5	40	10	06	55	22	33	54	
13	19	02.5		54.0		312	03.2		25.8	25	06		28		9	46	57	22	52	52
14	34	02.4		54.7		326	28.9		23.1	27	52	4	15		9	24	59	23	13	50
15	49	02.4		55.4		340	54.7		20.4	27	34	5	00		8	59	61		37	47
16	64	02.3		56.1		355	20.6		17.4	30	23	4	51		44	62	23	51	45	
17	79	02.3	-16	56.8		9	46.5	-25	14.4	30	11	4	40	8	27	63	***	***	***	
18	94	02.2	-16	57.5		24	12.5	-25	11.2	32	55	4	28	8	07	64	***	***	***	
19	109	02.2		58.2		38	38.6		07.8	34	36	14	14	7	41	67	0	01	50	
20	124	02.1		58.9		53	04.8		04.3	35	27	4	07		29	68		13	49	
21	139	02.1	-16	59.7		67	31.1	-25	00.7	36	16	3	59	7	15	69		28	48	
22	154	02.0	-17	00.4		81	57.5	-24	56.9	38	04	50		6	58	71		0	45	46
23	169	02.0		01.1		96	23.9		53.0	39	50	41			38	73		1	05	44
24	184	01.9	-17	01.8		110	50.5	-24	48.9	41	33	3	30	6	13	77		1	30	40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 44 ^m 6		Mag: -4.3 PMG: 10 ^h 44 ^m		Mag: +1.8 PMG: 9 ^h 46 ^m		Mag: -2.2 PMG: 6 ^h 06 ^m		Mag: -0.2 PMG: 2 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	47	59.6	198	26.1	-16	03.8	213	19.7	-5	11.2	268	17.7	+16	16.1	319	46.1	+22	05.5
1	63	02.1	213	29.5		02.7	228	20.7		11.8	283	19.9		16.1	334	48.7		05.5
2	78	04.5	228	32.9		01.7	243	21.7		12.4	298	22.2		16.0	349	51.3		05.5
3	93	07.0	243	36.3	-16	00.7	258	22.7		13.1	313	24.5		16.0	4	53.9		05.5
4	108	09.5	258	39.7	-15	59.7	273	23.7		13.7	328	26.7		15.9	19	56.5		05.5
5	123	11.9	273	43.0	-15	58.7	288	24.7	-5	14.3	343	29.0	+16	15.9	34	59.1	+22	05.5
6	138	14.4	288	46.4	-15	57.7	303	25.6	-5	14.9	358	31.3	+16	15.8	50	01.7	+22	05.5
7	153	16.9	303	49.8		56.8	318	26.6		15.6	13	33.5		15.8	65	04.3		05.5
8	168	19.3	318	53.1		55.8	333	27.6		16.2	28	35.8		15.7	80	06.9		05.5
9	183	21.8	333	56.5		54.8	348	28.6		16.8	43	38.1		15.6	95	09.5		05.5
10	198	24.3	348	59.9		53.8	3	29.6		17.4	58	40.3		15.6	110	12.1		05.5
11	213	26.7	4	03.2	-15	52.8	18	30.6	-5	18.1	73	42.6	+16	15.5	125	14.7	+22	05.5
12	228	29.2	19	06.6	-15	51.8	33	31.5	-5	18.7	88	44.9	+16	15.5	140	17.3	+22	05.5
13	243	31.6	34	09.9		50.8	48	32.5		19.3	103	47.1		15.4	155	19.9		05.5
14	258	34.1	49	13.3		49.8	63	33.5		19.9	118	49.4		15.4	170	22.5		05.5
15	273	36.6	64	16.6		48.8	78	34.5		20.6	133	51.7		15.3	185	25.1		05.5
16	288	39.0	79	20.0		47.8	93	35.5		21.2	148	54.0		15.3	200	27.7		05.5
17	303	41.5	94	23.3	-15	46.8	108	36.5	-5	21.8	163	56.2	+16	15.2	215	30.3	+22	05.5
18	318	44.0	109	26.6	-15	45.8	123	37.5	-5	22.4	178	58.5	+16	15.2	230	32.9	+22	05.5
19	333	46.4	124	30.0		44.8	138	38.4		23.1	194	00.8		15.1	245	35.5		05.5
20	348	48.9	139	33.3		43.9	153	39.4		23.7	209	03.0		15.1	260	38.1		05.5
21	3	51.4	154	36.6		42.9	168	40.4		24.3	224	05.3		15.0	275	40.7		05.5
22	18	53.8	169	39.9		41.9	183	41.4		24.9	239	07.6		15.0	290	43.3		05.5
23	33	56.3	184	43.3		40.9	198	42.4		25.5	254	09.9		14.9	305	45.9		05.5
24	48	58.8	199	46.6	-15	39.9	213	43.4	-5	26.2	269	12.1	+16	14.9	320	48.5	+22	05.5
Dif	—		+34 +10		+10 -6		+23 -1		+26 0									

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:1			Edad: 5 ^d 1	PHE {	4 ^h : 57/0 12 ^h : 56/7 20 ^h : 56/4			Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 43 ^m 9								Final del crepúsculo			Salida de Luna		Puesta de Luna			
	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	184	01.9	-17	01.8	110	50.5	-24	48.9	60 N	15 42	16 30	17 21	14 26	16	20 10	88	
1	199	01.8		02.5	125	17.1	76	44.7	58	15 53	37	24	14 07	20	29	83	
2	214	01.8		03.2	139	43.8	77	40.4	56	16 02	43	28	13 50	25	45	79	
3	229	01.7		03.9	154	10.7	79	35.9	54	09	48	31	36 27		20 59	76	
4	244	01.7		04.6	168	37.6	79	31.3	52	17	53	34	24 29	21 11	73		
5	259	01.6	-17	05.3	183	04.6	80	-24 26.6	50	16 23	16 58	17 37	13 13	32	21 21	72	
6	274	01.5	-17	06.0	197	31.7	81	-24 21.7	45	16 37	17 08	17 43	12 50	36	21 43	68	
7	289	01.5		06.7	211	58.9	82	16.7	50	48	17	49	32 38		22 01	64	
8	304	01.4		07.4	226	26.1	82	11.6	51	58	17	55	16 41		16	61	
9	319	01.4		08.1	240	53.5	84	06.4	52	30	17 07	32	18 01	12 03	43	29	59
10	334	01.3		08.8	255	21.0	85	-24 01.0	54	20	22	45	11 40	46	22 50	56	
11	349	01.2	-17	09.5	269	48.6	86	-23 55.5	55	10 N	17 35	17 57	18 22	11 20	49	23 09	53
12	4	01.2	-17	10.2	284	16.2	86	-23 49.9	56	0	17 47	18 09	18 34	11 01	52	23 27	49
13	19	01.1		10.9	298	44.0	88	44.1	58	10 S	18 00	22	18 48	10 43	54	23 44	47
14	34	01.1		11.6	313	11.9	89	38.3	58	20	14	37	19 05	23 57		** ** *	
15	49	01.0		12.3	327	39.8	89	32.3	60	30	29	18 55	26	10 00	60	** ** *	
16	64	00.9		13.0	342	07.9	91	26.2	61	35	39	19 06	40	9 46	62	** ** *	
17	79	00.9	-17	13.7	356	36.0	91	-23 20.0	62	40	18 49	19 19	19 56	9 30	64	0 07	43
18	94	00.8	-17	14.4	11	04.3	93	-23 13.6	64	45	19 02	19 35	20 17	9 11	68	0 27	40
19	109	00.7		15.1	25	32.6	93	07.2	64	50	17	19 55	45	8 48	71	0 51	37
20	124	00.7		15.8	40	01.1	95	-23 00.6	66	52	24	20 05	20 59	37 72		1 02	36
21	139	00.6		16.5	54	29.6	95	-22 54.0	66	54	32	15	21 16	24 75		16	33
22	154	00.6		17.2	68	58.3	97	47.2	68	56	41	28	21 37	8 09 78		31	30
23	169	00.5		17.9	83	27.0	97	40.3	69	58	19 51	20 43	22 05	7 51 82		1 49	27
24	184	00.4	-17	18.6	97	55.9	99	-22 33.3	70	60 S	20 03	21 01	22 53	7 30 87		2 10	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 40 ^m 7		Mag: -4.4 PMG: 10 ^h 39 ^m		Mag: +1.8 PMG: 9 ^h 44 ^m		Mag: -2.2 PMG: 6 ^h 02 ^m		Mag: -0.2 PMG: 2 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	48	58.8	199	46.6	-15	39.9	213	43.4	-5	26.2
1	64	01.2	214	49.9		38.9	228	44.3		26.8
2	79	03.7	229	53.2		38.0	243	45.3		27.4
3	94	06.1	244	56.5		37.0	258	46.3		28.0
4	109	08.6	259	59.8		36.0	273	47.3		28.7
5	124	11.1	275	03.1	-15	35.0	288	48.3	-5	29.3
6	139	13.5	290	06.4	-15	34.0	303	49.3	-5	29.9
7	154	16.0	305	09.7		33.1	318	50.2		30.5
8	169	18.5	320	12.9		32.1	333	51.2		31.2
9	184	20.9	335	16.2		31.1	348	52.2		31.8
10	199	23.4	350	19.5		30.2	3	53.2		32.4
11	214	25.9	5	22.8	-15	29.2	18	54.2	-5	33.0
12	229	28.3	20	26.1	-15	28.2	33	55.1	-5	33.6
13	244	30.8	35	29.3		27.2	48	56.1		34.3
14	259	33.3	50	32.6		26.3	63	57.1		34.9
15	274	35.7	65	35.8		25.3	78	58.1		35.5
16	289	38.2	80	39.1		24.3	93	59.1		36.1
17	304	40.6	95	42.4	-15	23.4	109	00.1	-5	36.8
18	319	43.1	110	45.6	-15	22.4	124	01.0	-5	37.4
19	334	45.6	125	48.9		21.5	139	02.0		38.0
20	349	48.0	140	52.1		20.5	154	03.0		38.6
21	4	50.5	155	55.3		19.5	169	04.0		39.3
22	19	53.0	170	58.6		18.6	184	05.0		39.9
23	34	55.4	186	01.8		17.6	199	06.0		40.5
24	49	57.9	201	05.0	-15	16.7	214	06.9	-5	41.1
Dif	—		+33	+10		+10	-6			+23
										0
										+26

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 6 ^d 1	PHE { 4 ^h : 56'1 12 ^h : 55'8 20 ^h : 55'6										
	PMG: 11 ^h 44 ^m 0					SD: 15'3								PMG: 18 ^h 05 ^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	184	00.4	-17 18.6	97	55.9	-22 33.3	71	60 N	6 08	6 59	7 47	14 42 9		21 38 86	
1	199	00.4	19.3	112	24.8	26.2	99	58	05	53	37	27 14		21 52 82	
2	214	00.3	20.0	126	53.9	18.9	73	56	6 01	46	28	15 16		22 04 79	
3	229	00.2	20.7	141	23.0	11.6	73	54	5 58	41	20	14 03 20		15 76	
4	244	00.2	21.4	155	52.3	-22 04.2	74	52	55	36	12	13 53 22		24 73	
5	259	00.1	-17 22.1	170	21.6	-21 56.7	75	50	5 52	6 31	7 06	13 45 24		22 33 71	
6	274	00.0	-17 22.8	184	51.0	-21 49.0	77	45	5 45	6 20	6 52	13 26 28		22 51 66	
7	289	00.0	23.5	199	20.6	41.3	77	40	39	11	40	13 10 32		23 05 63	
8	303	59.9	24.2	213	50.2	33.5	80	35	33	6 04	30	12 57 35		17 60	
9	318	59.8	24.8	228	19.9	25.5	80	30	28	5 56	22	46 37		28 57	
10	333	59.7	25.5	242	49.8	17.5	80	20	17	43	6 06	26 41		23 46 53	
11	348	59.7	-17 26.2	257	19.7	-21 09.4	81	10 N	5 06	5 31	5 53	12 09 44		*** ** *	
12	3	59.6	-17 26.9	271	49.7	-21 01.2	82	0	4 54	5 19	5 41	11 53 47		*** ** *	
13	18	59.5	27.6	286	19.8	-20 52.9	83	10 S	40	5 06	28	37 51		*** ** *	
14	33	59.5	28.3	300	50.0	44.5	84	20	23	4 51	5 14	20 54		0 03 43	
15	48	59.4	29.0	315	20.3	36.0	85	30	4 02	32	4 58	11 00 58		24 40	
16	63	59.3	29.7	329	50.8	27.4	86	35	3 48	21	49	10 48 60		36 38	
17	78	59.3	-17 30.4	344	21.2	-20 18.7	87	40	3 31	4 08	4 38	10 34 64		0 50 36	
18	93	59.2	-17 31.0	358	51.8	-20 10.0	87	45	3 11	3 53	4 26	10 19 66		1 07 32	
19	108	59.1	31.7	13	22.5	-20 01.2	88	50	2 43	33	11	9 59 71		28 28	
20	123	59.0	32.4	27	53.3	-19 52.2	90	52	28	23	4 03	49 74		38 26	
21	138	59.0	33.1	42	24.2	43.2	90	54	2 11	3 12	3 55	39 76		1 49 23	
22	153	58.9	33.8	56	55.1	34.1	91	56	1 50	2 59	46	27 79		2 01 21	
23	168	58.8	34.5	71	26.2	25.0	91	58	1 22	44	36	9 13 83		16 17	
24	183	58.7	-17 35.1	85	57.4	-19 15.7	93	60 S	0 35	2 26	3 25	8 57 87		2 33 12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 20 ^h 36 ^m 8		Mag: -4.4 PMG: 10 ^h 33 ^m		Mag: +1.8 PMG: 9 ^h 43 ^m		Mag: -2.2 PMG: 5 ^h 59 ^m		Mag: -0.3 PMG: 2 ^h 32 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	49	57.9	201	05.0	-15	16.7	270	06.7	+16	13.7		
1	65	00.4	216	08.3	15.7	41.7	285	09.0	13.7	336	53.6	
2	80	02.8	231	11.5	14.7	42.4	300	11.3	13.6	351	56.2	
3	95	05.3	246	14.7	13.8	43.0	315	13.6	13.6	6	58.9	
4	110	07.8	261	17.9	12.8	43.6	330	15.9	13.5	22	01.5	
5	125	10.2	276	21.1	-15	11.9	345	18.1	+16	13.5	37	04.1
6	140	12.7	291	24.3	-15	10.9	0	20.4	+16	13.4	52	06.7
7	155	15.1	306	27.5	10.0	44.8	15	22.7	13.4	67	09.3	
8	170	17.6	321	30.7	09.0	45.5	30	25.0	13.3	82	11.9	
9	185	20.1	336	33.9	08.1	46.7	45	27.3	13.3	97	14.5	
10	200	22.5	351	37.1	07.2	47.3	60	29.5	13.3	112	17.1	
11	215	25.0	6	40.3	-15	06.2	75	31.8	+16	13.2	127	19.7
12	230	27.5	21	43.5	-15	05.3	90	34.1	+16	13.2	142	22.3
13	245	29.9	36	46.7	04.3	48.6	105	36.4	13.1	157	24.9	
14	260	32.4	51	49.9	03.4	49.8	120	38.7	13.1	172	27.5	
15	275	34.9	66	53.0	02.4	50.4	135	41.0	13.0	187	30.2	
16	290	37.3	81	56.2	01.5	51.1	150	43.2	13.0	202	32.8	
17	305	39.8	96	59.4	-15	00.6	165	45.5	+16	12.9	217	35.4
18	320	42.3	112	02.5	-14	59.6	180	47.8	+16	12.9	232	38.0
19	335	44.7	127	05.7	58.7	52.3	195	50.1	12.8	247	40.6	
20	350	47.2	142	08.8	57.8	53.5	210	52.4	12.8	262	43.2	
21	5	49.6	157	12.0	56.8	54.2	225	54.7	12.7	277	45.8	
22	20	52.1	172	15.1	55.9	54.8	240	57.0	12.7	292	48.4	
23	35	54.6	187	18.3	55.0	55.4	255	59.2	12.7	307	51.0	
24	50	57.0	202	21.4	-14	54.1	271	01.5	+16	12.6	322	53.6

Dif	—	+32	+9	+10	-6	+23	0	+26

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/2				Edad: 7 ^d 1	PHE { 4 ^h : 55/4 12 ^h : 55/2 20 ^h : 55/0	R°: 44 ^m												
	PMG: 11 ^h 44 ^m 1																		
	hG ☉	Dec	hG ☾	Dif				Dec			Dif								
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	58.7	-17	35.1	85	57.4	-19	15.7	60 N	15	38	16	26	17	17	14	51	6	23
1	198	58.7		35.8	100	28.6 ¹²²	-19	06.4 ⁹³	58	48	33	21		41	9			14	
2	213	58.6		36.5	114	59.9 ¹²³	-18	57.0 ⁹⁴	56	15	58	39	25	31	13			23	
3	228	58.5		37.2	129	31.3 ¹²⁴		47.5 ⁹⁵	54	16	06	45	28	23	15			31	
4	243	58.4		37.9	144	02.9 ¹²⁶		37.9 ⁹⁶	52	14	51	31		15	18			37	
5	258	58.4	-17	38.5	158	34.4 ¹²⁵	-18	28.3 ⁹⁶	50	16	20	16	55	17	34	14	09	19	
6	273	58.3	-17	39.2	173	06.1 ¹²⁷	-18	18.6 ⁹⁷	45	16	35	17	06	17	41	13	54	24	
7	288	58.2		39.9	187	37.9 ¹²⁸	-18	08.8 ⁹⁸	40	46	15		48	42	27	**	**	**	
8	303	58.1		40.6	202	09.8 ¹²⁹	-17	58.9 ⁹⁹	35	16	57	23	17	54	32	30	**	**	
9	318	58.1		41.3	216	41.7 ¹²⁹		49.0 ⁹⁹	30	17	06	31	18	00	23	32	**	**	
10	333	58.0		41.9	231	13.7 ¹³⁰		39.0 ¹⁰⁰	20	21	44	11		13	07	37	**	**	
11	348	57.9	-17	42.6	245	45.8 ¹³¹	-17	29.0 ¹⁰⁰	10 N	17	35	17	57	18	22	12	53	41	
12	3	57.8	-17	43.3	260	18.0 ¹³²	-17	18.8 ¹⁰²	0	17	48	18	09	18	35	12	40	45	
13	18	57.7		44.0	274	50.3 ¹³³	-17	08.6 ¹⁰²	10 S	18	01	23	18	49	28	47		31	
14	33	57.7		44.6	289	22.7 ¹³⁴	-16	58.4 ¹⁰²	20	15	38	19	06	12	14	51		0	
15	48	57.6		45.3	303	55.1 ¹³⁴		48.0 ¹⁰⁴	30	31	18	57	28	11	58	56		1	
16	63	57.5		46.0	318	27.6 ¹³⁵		37.6 ¹⁰⁴	35	41	19	08	42	48	59			14	
17	78	57.4	-17	46.7	333	00.2 ¹³⁶	-16	27.2 ¹⁰⁴	40	18	51	19	22	19	59	11	38	61	
18	93	57.3	-17	47.3	347	32.9 ¹³⁷	-16	16.7 ¹⁰⁵	45	19	04	19	38	20	20	11	25	65	
19	108	57.3		48.0	2	05.6 ¹³⁷	-16	06.1 ¹⁰⁶	50	20	19	59	20	49	10	70		1	
20	123	57.2		48.7	16	38.5 ¹³⁹	-15	55.5 ¹⁰⁶	52	28	20	09	21	04	11	03	72	2	
21	138	57.1		49.4	31	11.4 ¹³⁹		44.8 ¹⁰⁷	54	36	20	22		10	55	74		12	
22	153	57.0		50.0	45	44.3 ¹³⁹		34.0 ¹⁰⁸	56	45	33	21	45	46	77			22	
23	168	56.9		50.7	60	17.4 ¹⁴¹		23.2 ¹⁰⁸	58	19	56	20	49	22	16	36	80	33	
24	183	56.9	-17	51.4	74	50.5 ¹⁴¹	-15	12.3 ¹⁰⁹	60 S	20	08	21	08	23	20	10	24	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.5		Mag: +1.8		Mag: -2.2		Mag: -0.3	
	20 ^h 32 ^m 8		PMG: 10 ^h 28 ^m		PMG: 9 ^h 41 ^m		PMG: 5 ^h 55 ^m		PMG: 2 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	50	57.0	202	21.4	214	30.5	271	01.5	322	53.6
1	65	59.5	217	24.6	229	31.5	286	03.8	337	56.3
2	81	02.0	232	27.7	244	32.4	301	06.1	352	58.9
3	96	04.4	247	30.8	259	33.4	316	08.4	8	01.5
4	111	06.9	262	34.0	274	34.4	331	10.7	23	04.1
5	126	09.4	277	37.1	289	35.4	346	13.0	38	06.7
6	141	11.8	292	40.2	304	36.4	1	15.2	53	09.3
7	156	14.3	307	43.3	319	37.3	16	17.5	68	11.9
8	171	16.7	322	46.4	334	38.3	31	19.8	83	14.5
9	186	19.2	337	49.5	349	39.3	46	22.1	98	17.1
10	201	21.7	352	52.6	4	40.3	61	24.4	113	19.8
11	216	24.1	7	55.7	19	41.3	76	26.7	128	22.4
12	231	26.6	22	58.8	34	42.2	91	29.0	143	25.0
13	246	29.1	38	01.9	49	43.2	106	31.3	158	27.6
14	261	31.5	53	05.0	64	44.2	121	33.6	173	30.2
15	276	34.0	68	08.1	79	45.2	136	35.9	188	32.8
16	291	36.5	83	11.2	94	46.2	151	38.1	203	35.4
17	306	38.9	98	14.3	109	47.1	166	40.4	218	38.0
18	321	41.4	113	17.3	124	48.1	181	42.7	233	40.7
19	336	43.9	128	20.4	139	49.1	196	45.0	248	43.3
20	351	46.3	143	23.5	154	50.1	211	47.3	263	45.9
21	6	48.8	158	26.5	169	51.1	226	49.6	278	48.5
22	21	51.2	173	29.6	184	52.0	241	51.9	293	51.1
23	36	53.7	188	32.6	199	53.0	256	54.2	308	53.7
24	51	56.2	203	35.7	214	54.0	271	56.5	323	56.3
Dif	—		+31		+9		+23		+26	
							0		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 3			Edad: 8 ^d 1	PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'5 R°: 41 ^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	56.9	-17	51.4	74	50.5	-15	12.3	60 N	6 13	7 04	7 52	14 57	4	***	***	***	***	
1	198	56.8		52.0	89	23.7 ¹⁴²	-15	01.4 ¹⁰⁹	58	08	6 57	41	50	7	***	***	***	***	
2	213	56.7		52.7	103	57.0 ¹⁴³	-14	50.4 ¹¹⁰	56	05	50	32	44	9	***	***	***	***	
3	228	56.6		53.4	118	30.3 ¹⁴³		39.4 ¹¹⁰	54	6 01	44	23	38	12	***	***	***	***	
4	243	56.5		54.0	133	03.7 ¹⁴⁴		28.3 ¹¹¹	52	5 58	39	16	33	14	***	***	***	***	
5	258	56.4	-17	54.7	147	37.2 ¹⁴⁵	-14	17.2 ¹¹¹	50	5 55	6 34	7 09	14 28	16	***	***	***	***	
6	273	56.4	-17	55.4	162	10.8 ¹⁴⁶	-14	06.0 ¹¹²	45	5 48	6 23	6 55	14 18	20	***	***	***	***	
7	288	56.3		56.0	176	44.4 ¹⁴⁶	-13	54.8 ¹¹²	40	41	14	43	09	24	0 08	60			
8	303	56.2		56.7	191	18.1 ¹⁴⁷		43.5 ¹¹³	35	35	6 05	32	14	02	27	17	58		
9	318	56.1		57.4	205	51.8 ¹⁴⁷		32.2 ¹¹³	30	29	5 58	23	13	55	30	25	55		
10	333	56.0		58.0	220	25.6 ¹⁴⁸		20.8 ¹¹⁴	20	18	44	6 08	44	34	39	50			
11	348	55.9	-17	58.7	234	59.5 ¹⁴⁹	-13	09.4 ¹¹⁴	10 N	5 06	5 32	5 54	13 34	38	0 51	46			
12	3	55.8	-17	59.4	249	33.4 ¹⁴⁹	-12	57.9 ¹¹⁵	0	4 54	5 19	5 41	13 25	41	1 02	43			
13	18	55.7	-18	00.0	264	07.4 ¹⁵⁰		46.4 ¹¹⁵	10 S	39	5 05	28	15	46	13	39			
14	33	55.7	-18	00.7	278	41.5 ¹⁵¹		34.8 ¹¹⁶	20	22	4 50	5 13	13 05	50	25	35			
15	48	55.6		01.4	293	15.6 ¹⁵¹		23.2 ¹¹⁶	30	4 00	31	4 57	12 54	54	38	31			
16	63	55.5		02.0	307	49.8 ¹⁵²	-12	11.6 ¹¹⁶	35	3 46	20	48	47	57	46	28			
17	78	55.4	-18	02.7	322	24.0 ¹⁵²	-11	59.9 ¹¹⁷	40	3 29	4 06	4 37	12 39	60	1 55	25			
18	93	55.3	-18	03.3	336	58.3 ¹⁵³	-11	48.2 ¹¹⁷	45	3 07	3 50	4 24	12 30	64	2 05	22			
19	108	55.2		04.0	351	32.6 ¹⁵³		36.4 ¹¹⁸	50	2 39	29	08	20	67	17	18			
20	123	55.1		04.7	6	07.0 ¹⁵⁴		24.6 ¹¹⁸	52	24	19	4 00	15	69	23	16			
21	138	55.0		05.3	20	41.5 ¹⁵⁵		12.7 ¹¹⁹	54	2 06	3 08	3 52	09	72	29	14			
22	153	54.9		06.0	35	16.0 ¹⁵⁵	-11	00.9 ¹¹⁸	56	1 43	2 54	43	12 03	75	36	11			
23	168	54.9		06.6	49	50.5 ¹⁵⁵	-10	48.9 ¹²⁰	58	1 12	39	32	11 56	78	44	8			
24	183	54.8	-18	07.3	64	25.1 ¹⁵⁶	-10	37.0 ¹¹⁹	60 S	0 07	2 20	3 20	11 48	81	2 53	5			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 28 ^m 9			Mag: -4.5 PMG: 10 ^h 24 ^m			Mag: +1.8 PMG: 9 ^h 40 ^m			Mag: -2.2 PMG: 5 ^h 51 ^m			Mag: -0.3 PMG: 2 ^h 24 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	51	56.2	203	35.7	-14	32.2	214	54.0	-6	10.9	271	56.5	+16	11.5	323	56.3	+22	05.3	
1	66	58.6	218	38.7		31.3	229	55.0		11.5	286	58.8		11.5	338	59.0		05.3	
2	82	01.1	233	41.8		30.4	244	56.0		12.1	302	01.1		11.5	354	01.6		05.3	
3	97	03.6	248	44.8		29.6	259	56.9		12.8	317	03.4		11.4	9	04.2		05.3	
4	112	06.0	263	47.9		28.7	274	57.9		13.4	332	05.7		11.4	24	06.8		05.3	
5	127	08.5	278	50.9	-14	27.8	289	58.9	-6	14.0	347	08.0	+16	11.3	39	09.4	+22	05.3	
6	142	11.0	293	53.9	-14	26.9	304	59.9	-6	14.6	2	10.2	+16	11.3	54	12.0	+22	05.3	
7	157	13.4	308	56.9		26.0	320	00.8		15.2	17	12.5		11.2	69	14.6		05.3	
8	172	15.9	324	00.0		25.1	335	01.8		15.8	32	14.8		11.2	84	17.3		05.3	
9	187	18.4	339	03.0		24.3	350	02.8		16.5	47	17.1		11.2	99	19.9		05.3	
10	202	20.8	354	06.0		23.4	5	03.8		17.1	62	19.4		11.1	114	22.5		05.3	
11	217	23.3	9	09.0	-14	22.5	20	04.8	-6	17.7	77	21.7	+16	11.1	129	25.1	+22	05.3	
12	232	25.7	24	12.0	-14	21.6	35	05.7	-6	18.3	92	24.0	+16	11.0	144	27.7	+22	05.3	
13	247	28.2	39	15.0		20.8	50	06.7		18.9	107	26.3		11.0	159	30.3		05.3	
14	262	30.7	54	18.0		19.9	65	07.7		19.6	122	28.6		11.0	174	33.0		05.3	
15	277	33.1	69	21.0		19.0	80	08.7		20.2	137	30.9		10.9	189	35.6		05.3	
16	292	35.6	84	24.0		18.1	95	09.6		20.8	152	33.2		10.9	204	38.2		05.3	
17	307	38.1	99	27.0	-14	17.3	110	10.6	-6	21.4	167	35.5	+16	10.8	219	40.8	+22	05.3	
18	322	40.5	114	29.9	-14	16.4	125	11.6	-6	22.0	182	37.8	+16	10.8	234	43.4	+22	05.3	
19	337	43.0	129	32.9		15.5	140	12.6		22.6	197	40.1		10.7	249	46.0		05.3	
20	352	45.5	144	35.9		14.7	155	13.6		23.3	212	42.4		10.7	264	48.7		05.3	
21	7	47.9	159	38.9		13.8	170	14.5		23.9	227	44.7		10.7	279	51.3		05.3	
22	22	50.4	174	41.8		13.0	185	15.5		24.5	242	47.0		10.6	294	53.9		05.3	
23	37	52.8	189	44.8		12.1	200	16.5		25.1	257	49.3		10.6	309	56.5		05.3	
24	52	55.3	204	47.7	-14	11.3	215	17.5	-6	25.7	272	51.6	+16	10.5	324	59.1	+22	05.3	
Dif	—			+30			+10			+23			0			+26			0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2		Edad: 9 ^d 1	PHE {	4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2	Civil			Náutico		Hora	Rº	Hora	Rº	
	PMG: 11 ^h 44 ^m 4														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	183	54.8	-18	07.3	64	25.1	-10 37.0	60 N	15 33	16 22	17 13	15 01	4	0 27 80	
1	198	54.7		07.9	78	59.8 ¹⁵⁷	25.0 ¹²⁰	58	44	29	18	14 57	6	33 77	
2	213	54.6		08.6	93	34.5 ¹⁵⁷	13.0 ¹²⁰	56	15 54	36	22	53	9	39 74	
3	228	54.5		09.2	108	09.2 ¹⁵⁷	-10 00.9 ¹²¹	54	16 03	42	25	50	11	44 70	
4	243	54.4		09.9	122	44.0 ¹⁵⁸	-9 48.8 ¹²¹	52	11	48	29	47 13		48 70	
5	258	54.3	-18	10.6	137	18.9 ¹⁵⁹	-9 36.7 ¹²¹	50	16 18	16 53	17 32	14 44	15	0 52 68	
6	273	54.2	-18	11.2	151	53.8 ¹⁵⁹	-9 24.6 ¹²¹	45	16 32	17 04	17 40	14 38	19	1 01 63	
7	288	54.1		11.9	166	28.7 ¹⁵⁹	12.4 ¹²²	40	45	14	46	33	22	08 59	
8	303	54.0		12.5	181	03.7 ¹⁶⁰	-9 00.2 ¹²²	35	16 55	22	53	29	25	15 56	
9	318	53.9		13.2	195	38.7 ¹⁶⁰	-8 47.9 ¹²³	30	17 05	30	17 59	25	27	20 53	
10	333	53.8		13.8	210	13.7 ¹⁶⁰	35.6 ¹²³	20	21	44	18 10	18	32	29 49	
11	348	53.7	-18	14.5	224	48.8 ¹⁶¹	-8 23.3 ¹²³	10 N	17 35	17 57	18 22	14 12	36	1 37 45	
12	3	53.6	-18	15.1	239	24.0 ¹⁶²	-8 11.0 ¹²³	0	17 48	18 10	18 35	14 06	40	1 45 41	
13	18	53.5		15.8	253	59.1 ¹⁶¹	-7 58.7 ¹²³	10 S	18 01	24	18 50	14 01	44	1 52 37	
14	33	53.4		16.4	268	34.4 ¹⁶³	46.3 ¹²⁴	20	16	39	19 07	13 55	48	2 00 33	
15	48	53.3		17.1	283	09.6 ¹⁶²	33.9 ¹²⁴	30	33	18 59	30	48	52	09 29	
16	63	53.2		17.7	297	44.9 ¹⁶³	21.5 ¹²⁴	35	43	19 10	19 44	44	55	14 26	
17	78	53.1	-18	18.4	312	20.2 ¹⁶³	-7 09.0 ¹²⁵	40	18 54	19 24	20 02	13 39	59	2 20 23	
18	93	53.1	-18	19.0	326	55.5 ¹⁶³	-6 56.5 ¹²⁵	45	19 07	19 41	20 24	13 34	62	2 27 20	
19	108	53.0		19.7	341	30.9 ¹⁶⁴	44.0 ¹²⁵	50	23	20 02	20 54	27	67	35 16	
20	123	52.9		20.3	356	06.3 ¹⁶⁴	31.5 ¹²⁵	52	31	13	21 10	24	69	39 13	
21	138	52.8		20.9	10	41.8 ¹⁶⁵	19.0 ¹²⁵	54	40	25	29	21	71	43 11	
22	153	52.7		21.6	25	17.2 ¹⁶⁴	-6 06.4 ¹²⁶	56	19 49	39	21 53	18	73	47 9	
23	168	52.6		22.2	39	52.7 ¹⁶⁵	-5 53.9 ¹²⁵	58	20 01	20 55	22 28	14	76	52 7	
24	183	52.5	-18	22.9	54	28.3 ¹⁶⁶	-5 41.3 ¹²⁶	60 S	20 13	21 15	** **	13 09	79	2 58 4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 20 ^h 25 ^m 0		Mag: -4.5 PMG: 10 ^h 19 ^m		Mag: +1.8 PMG: 9 ^h 38 ^m		Mag: -2.2 PMG: 5 ^h 48 ^m		Mag: -0.3 PMG: 2 ^h 20 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	52	55.3	204	47.7	-14	11.3	215	17.5	-6	25.7	272	51.6	+16	10.5	324	59.1	+22	05.3	
1	67	57.8	219	50.7		10.4	230	18.4		26.3	287	53.9		10.5	340	01.8		05.3	
2	83	00.2	234	53.6		09.5	245	19.4		27.0	302	56.2		10.5	355	04.4		05.3	
3	98	02.7	249	56.6		08.7	260	20.4		27.6	317	58.5		10.4	10	07.0		05.3	
4	113	05.2	264	59.5		07.8	275	21.4		28.2	333	00.8		10.4	25	09.6		05.3	
5	128	07.6	280	02.5	-14	07.0	290	22.4	-6	28.8	348	03.1	+16	10.3	40	12.2	+22	05.3	
6	143	10.1	295	05.4	-14	06.1	305	23.3	-6	29.4	3	05.4	+16	10.3	55	14.8	+22	05.3	
7	158	12.6	310	08.3		05.3	320	24.3		30.0	18	07.7		10.3	70	17.5		05.3	
8	173	15.0	325	11.3		04.5	335	25.3		30.7	33	10.0		10.2	85	20.1		05.3	
9	188	17.5	340	14.2		03.6	350	26.3		31.3	48	12.3		10.2	100	22.7		05.3	
10	203	20.0	355	17.1		02.8	5	27.2		31.9	63	14.6		10.1	115	25.3		05.3	
11	218	22.4	10	20.0	-14	01.9	20	28.2	-6	32.5	78	16.9	+16	10.1	130	27.9	+22	05.3	
12	233	24.9	25	22.9	-14	01.1	35	29.2	-6	33.1	93	19.2	+16	10.1	145	30.6	+22	05.3	
13	248	27.3	40	25.8	-14	00.3	50	30.2		33.7	108	21.6		10.0	160	33.2		05.3	
14	263	29.8	55	28.7	-13	59.4	65	31.1		34.4	123	23.9		10.0	175	35.8		05.3	
15	278	32.3	70	31.6		58.6	80	32.1		35.0	138	26.2		09.9	190	38.4		05.3	
16	293	34.7	85	34.5		57.8	95	33.1		35.6	153	28.5		09.9	205	41.0		05.3	
17	308	37.2	100	37.4	-13	57.0	110	34.1	-6	36.2	168	30.8	+16	09.9	220	43.7	+22	05.3	
18	323	39.7	115	40.3	-13	56.1	125	35.0	-6	36.8	183	33.1	+16	09.8	235	46.3	+22	05.2	
19	338	42.1	130	43.2		55.3	140	36.0		37.4	198	35.4		09.8	250	48.9		05.2	
20	353	44.6	145	46.1		54.5	155	37.0		38.1	213	37.7		09.7	265	51.5		05.2	
21	8	47.1	160	48.9		53.7	170	38.0		38.7	228	40.0		09.7	280	54.2		05.2	
22	23	49.5	175	51.8		52.8	185	38.9		39.3	243	42.3		09.7	295	56.8		05.2	
23	38	52.0	190	54.7		52.0	200	39.9		39.9	258	44.6		09.6	310	59.4		05.2	
24	53	54.4	205	57.5	-13	51.2	215	40.9	-6	40.5	273	46.9	+16	09.6	326	02.0	+22	05.2	
Dif	—		+29		+8		+10		-6		+23		0		+26				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44 ^m 6			Edad: 10 ^d 1 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 Rº: 40 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	52.5	-18	22.9	54	28.3	-5	41.3	60 N	6 17	7 08	7 57	15 05	3	1 47	79		
1	198	52.4		23.5	69	03.8 ¹⁶⁵		28.6 ¹²⁷	58	12	7 01	46	03	6	50	76		
2	213	52.3		24.2	83	39.4 ¹⁶⁶		16.0 ¹²⁶	56	08	6 54	36	02	8	53	73		
3	228	52.2		24.8	98	15.0 ¹⁶⁶		-5 03.4 ¹²⁶	54	04	48	27	01	10	55	71		
4	243	52.1		25.4	112	50.6 ¹⁶⁶		-4 50.7 ¹²⁷	52	6 01	42	19	15 00	12	1 58	68		
5	258	51.9	-18	26.1	127	26.2 ¹⁶⁶		-4 38.0 ¹²⁷	50	5 58	6 37	7 12	14 59	14	2 00	66		
6	273	51.8	-18	26.7	142	01.9 ¹⁶⁷		-4 25.3 ¹²⁷	45	5 50	6 26	6 57	14 57	18	2 04	62		
7	288	51.7		27.4	156	37.6 ¹⁶⁷		-4 12.6 ¹²⁷	40	43	16	45	55	22	07	59		
8	303	51.6		28.0	171	13.3 ¹⁶⁷		-3 59.9 ¹²⁷	35	37	07	34	54	24	11	55		
9	318	51.5		28.6	185	49.0 ¹⁶⁷		47.2 ¹²⁷	30	31	6 00	25	52	28	13	53		
10	333	51.4		29.3	200	24.7 ¹⁶⁷		34.4 ¹²⁸	20	19	5 45	6 09	50	32	18	48		
11	348	51.3	-18	29.9	215	00.5 ¹⁶⁸		-3 21.7 ¹²⁷	10 N	5 07	5 32	5 54	14 48	36	2 22	44		
12	3	51.2	-18	30.6	229	36.2 ¹⁶⁷		-3 08.9 ¹²⁸	0	4 54	5 19	5 41	14 46	40	2 26	40		
13	18	51.1		31.2	244	12.0 ¹⁶⁸		-2 56.1 ¹²⁸	10 S	39	5 05	27	45	43	29	36		
14	33	51.0		31.8	258	47.8 ¹⁶⁸		43.3 ¹²⁸	20	4 21	4 49	5 13	43	47	33	32		
15	48	50.9		32.5	273	23.6 ¹⁶⁸		30.5 ¹²⁸	30	3 59	30	4 56	40	53	38	27		
16	63	50.8		33.1	287	59.4 ¹⁶⁸		17.7 ¹²⁸	35	44	18	46	39	55	40	25		
17	78	50.7	-18	33.7	302	35.3 ¹⁶⁹		-2 04.9 ¹²⁸	40	3 27	4 04	4 35	14 38	58	2 43	22		
18	93	50.6	-18	34.4	317	11.1 ¹⁶⁸		-1 52.1 ¹²⁸	45	3 05	3 47	4 21	14 36	62	2 47	18		
19	108	50.5		35.0	331	46.9 ¹⁶⁸		39.3 ¹²⁸	50	2 34	26	4 05	34	66	51	14		
20	123	50.4		35.6	346	22.8 ¹⁶⁹		26.4 ¹²⁹	52	19	16	3 57	33	68	52	13		
21	138	50.3		36.3	0	58.6 ¹⁶⁸		13.6 ¹²⁸	54	2 00	3 04	49	32	70	54	11		
22	153	50.2		36.9	15	34.5 ¹⁶⁹		-1 00.8 ¹²⁸	56	1 36	2 50	39	31	72	56	9		
23	168	50.1		37.5	30	10.3 ¹⁶⁸		-0 47.9 ¹²⁹	58	1 00	33	28	30	75	2 59	6		
24	183	49.9	-18	38.2	44	46.2 ¹⁶⁹		-0 35.1 ¹²⁸	60 S	** **	2 13	3 15	14 28	78	3 02	3		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 21 ^m 0		Mag: -4.6 PMG: 10 ^h 14 ^m				Mag: +1.8 PMG: 9 ^h 37 ^m				Mag: -2.2 PMG: 5 ^h 44 ^m				Mag: -0.3 PMG: 2 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	53	54.4	205	57.5	-13	51.2	215	40.9	-6	40.5	273	46.9	+16	09.6	326	02.0	+22	05.2
1	68	56.9	221	00.4		50.4	230	41.9		41.1	288	49.2		09.5	341	04.6		05.2
2	83	59.4	236	03.3		49.6	245	42.8		41.7	303	51.5		09.5	356	07.3		05.2
3	99	01.8	251	06.1		48.8	260	43.8		42.4	318	53.8		09.5	11	09.9		05.2
4	114	04.3	266	09.0		48.0	275	44.8		43.0	333	56.2		09.4	26	12.5		05.2
5	129	06.8	281	11.8	-13	47.2	290	45.8	-6	43.6	348	58.5	+16	09.4	41	15.1	+22	05.2
6	144	09.2	296	14.6	-13	46.3	305	46.8	-6	44.2	4	00.8	+16	09.4	56	17.8	+22	05.2
7	159	11.7	311	17.5		45.5	320	47.7		44.8	19	03.1		09.3	71	20.4		05.2
8	174	14.2	326	20.3		44.7	335	48.7		45.4	34	05.4		09.3	86	23.0		05.2
9	189	16.6	341	23.1		43.9	350	49.7		46.0	49	07.7		09.2	101	25.6		05.2
10	204	19.1	356	26.0		43.1	5	50.6		46.7	64	10.0		09.2	116	28.2		05.2
11	219	21.6	11	28.8	-13	42.3	20	51.6	-6	47.3	79	12.3	+16	09.2	131	30.9	+22	05.2
12	234	24.0	26	31.6	-13	41.5	35	52.6	-6	47.9	94	14.6	+16	09.1	146	33.5	+22	05.2
13	249	26.5	41	34.4		40.8	50	53.6		48.5	109	17.0		09.1	161	36.1		05.2
14	264	28.9	56	37.2		40.0	65	54.5		49.1	124	19.3		09.1	176	38.7		05.2
15	279	31.4	71	40.0		39.2	80	55.5		49.7	139	21.6		09.0	191	41.4		05.2
16	294	33.9	86	42.8		38.4	95	56.5		50.3	154	23.9		09.0	206	44.0		05.2
17	309	36.3	101	45.6	-13	37.6	110	57.5	-6	51.0	169	26.2	+16	08.9	221	46.6	+22	05.2
18	324	38.8	116	48.4	-13	36.8	125	58.4	-6	51.6	184	28.5	+16	08.9	236	49.2	+22	05.2
19	339	41.3	131	51.2		36.0	140	59.4		52.2	199	30.8		08.9	251	51.9		05.2
20	354	43.7	146	54.0		35.3	156	00.4		52.8	214	33.1		08.8	266	54.5		05.2
21	9	46.2	161	56.8		34.5	171	01.4		53.4	229	35.5		08.8	281	57.1		05.2
22	24	48.7	176	59.5		33.7	186	02.3		54.0	244	37.8		08.8	296	59.7		05.2
23	39	51.1	192	02.3		32.9	201	03.3		54.6	259	40.1		08.7	312	02.4		05.2
24	54	53.6	207	05.1	-13	32.2	216	04.3	-6	55.3	274	42.4	+16	08.7	327	05.0	+22	05.2
Dif	—		+28		+8		+10		-6		+23		0		+26			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 11 ^d 1 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 R°: 40 ^m											
	PMG: 11 ^h 44 ^m 8		SD: 14:7 PMG: 21 ^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	183	49.9	-18	38.2	44	46.2	-0 35.1	60 N	15 29	16 18	17 10	15 08 3	3 06 78	
1	198	49.8		38.8	59	22.1 ¹⁶⁹	22.2 ¹²⁹	58	41	26	15	09 6	06 75	
2	213	49.7		39.4	73	58.0 ¹⁶⁹	-0 09.4 ¹²⁸	56	15 51	33	19	10 9	06 73	
3	228	49.6		40.0	88	33.8 ¹⁶⁸	+0 03.5 ¹²⁹	54	16 00	40	23	11 11	06 70	
4	243	49.5		40.7	103	09.7 ¹⁶⁹	16.3 ¹²⁸	52	08	45	27	12 13	06 68	
5	258	49.4	-18	41.3	117	45.6 ¹⁶⁹	+0 29.2 ¹²⁹	50	16 15	16 51	17 30	15 13 15	3 06 66	
6	273	49.3	-18	41.9	132	21.4 ¹⁶⁸	+0 42.0 ¹²⁸	45	16 30	17 02	17 38	15 15 19	3 06 62	
7	288	49.2		42.5	146	57.3 ¹⁶⁹	+0 54.9 ¹²⁹	40	43	12	45	17 22	06 58	
8	303	49.1		43.2	161	33.1 ¹⁶⁸	+1 07.7 ¹²⁸	35	16 54	21	52	18 26	06 55	
9	318	48.9		43.8	176	09.0 ¹⁶⁹	20.6 ¹²⁹	30	17 04	29	17 58	20 28	06 52	
10	333	48.8		44.4	190	44.8 ¹⁶⁸	33.4 ¹²⁸	20	20	43	18 10	22 33	06 47	
11	348	48.7	-18	45.0	205	20.7 ¹⁶⁹	+1 46.2 ¹²⁸	10 N	17 35	17 57	18 22	15 24 37	3 06 43	
12	3	48.6	-18	45.7	219	56.5 ¹⁶⁸	+1 59.1 ¹²⁹	0	17 48	18 10	18 36	15 26 40	3 06 39	
13	18	48.5		46.3	234	32.3 ¹⁶⁸	+2 11.9 ¹²⁸	10 S	18 02	24	18 51	28 44	05 37	
14	33	48.4		46.9	249	08.1 ¹⁶⁸	24.7 ¹²⁸	20	17	18 41	19 09	30 48	05 32	
15	48	48.3		47.5	263	43.9 ¹⁶⁸	37.5 ¹²⁸	30	34	19 01	32	33 53	05 28	
16	63	48.2		48.1	278	19.7 ¹⁶⁸	+2 50.3 ¹²⁸	35	45	13	19 47	34 56	05 25	
17	78	48.0	-18	48.8	292	55.5 ¹⁶⁸	+3 03.1 ¹²⁸	40	18 56	19 27	20 05	15 36 58	3 05 22	
18	93	47.9	-18	49.4	307	31.2 ¹⁶⁷	+3 15.9 ¹²⁸	45	19 10	19 44	20 28	15 38 62	3 05 19	
19	108	47.8		50.0	322	07.0 ¹⁶⁸	28.7 ¹²⁸	50	27	20 06	20 59	40 66	05 14	
20	123	47.7		50.6	336	42.7 ¹⁶⁷	41.4 ¹²⁷	52	35	17	21 15	41 69	05 12	
21	138	47.6		51.2	351	18.4 ¹⁶⁷	+3 54.2 ¹²⁸	54	44	29	21 35	42 71	05 10	
22	153	47.5		51.9	5	54.1 ¹⁶⁷	+4 06.9 ¹²⁷	56	19 54	20 44	22 01	43 74	05 8	
23	168	47.3		52.5	20	29.8 ¹⁶⁷	19.6 ¹²⁷	58	20 05	21 01	22 41	45 76	05 6	
24	183	47.2	-18	53.1	35	05.4 ¹⁶⁶	+4 32.4 ¹²⁸	60 S	20 19	21 22	** **	15 46 80	3 05 3	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 17 ^m 1		Mag: -4.6 PMG: 10 ^h 10 ^m		Mag: +1.8 PMG: 9 ^h 35 ^m		Mag: -2.2 PMG: 5 ^h 40 ^m		Mag: -0.3 PMG: 2 ^h 11 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	54	53.6	207	05.1	-13	32.2	216	04.3	-6	55.3				
1	69	56.1	222	07.8		31.4	231	05.3		55.9				
2	84	58.5	237	10.6		30.6	246	06.2		56.5				
3	100	01.0	252	13.3		29.8	261	07.2		57.1				
4	115	03.4	267	16.1		29.1	276	08.2		57.7				
5	130	05.9	282	18.8	-13	28.3	291	09.2	-6	58.3				
6	145	08.4	297	21.6	-13	27.6	306	10.1	-6	58.9				
7	160	10.8	312	24.3		26.8	321	11.1	-6	59.5				
8	175	13.3	327	27.1		26.0	336	12.1	-7	00.2				
9	190	15.8	342	29.8		25.3	351	13.0		00.8				
10	205	18.2	357	32.5		24.5	6	14.0		01.4				
11	220	20.7	12	35.3	-13	23.8	21	15.0	-7	02.0				
12	235	23.2	27	38.0	-13	23.0	36	16.0	-7	02.6				
13	250	25.6	42	40.7		22.3	51	16.9		03.2				
14	265	28.1	57	43.4		21.5	66	17.9		03.8				
15	280	30.5	72	46.1		20.8	81	18.9		04.4				
16	295	33.0	87	48.8		20.0	96	19.9		05.1				
17	310	35.5	102	51.5	-13	19.3	111	20.8	-7	05.7				
18	325	37.9	117	54.2	-13	18.5	126	21.8	-7	06.3				
19	340	40.4	132	56.9		17.8	141	22.8		06.9				
20	355	42.9	147	59.6		17.1	156	23.7		07.5				
21	10	45.3	163	02.3		16.3	171	24.7		08.1				
22	25	47.8	178	05.0		15.6	186	25.7		08.7				
23	40	50.3	193	07.6		14.9	201	26.7		09.3				
24	55	52.7	208	10.3	-13	14.2	216	27.6	-7	10.0				
Dif	—		+27		+8		+10		-6					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 9			Edad: 12 ^d 1 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:1 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	183	47.2	-18	53.1	35	05.4	+4	32.4	60 N	6 21	7 13	8 02	15 11	4	24	80
1	198	47.1		53.7	49	41.1 ¹⁶⁷		45.1 ¹²⁷	58	16	7 05	7 50	15	7	21	77
2	213	47.0		54.3	64	16.7 ¹⁶⁶	+4	57.7 ¹²⁶	56	12	6 58	40	19	10	19	73
3	228	46.9		54.9	78	52.3 ¹⁶⁶	+5	10.4 ¹²⁷	54	08	51	31	22	13	16	77
4	243	46.8		55.5	93	27.8 ¹⁶⁵		23.1 ¹²⁷	52	04	45	23	25	15	14	69
5	258	46.6	-18	56.2	108	03.4 ¹⁶⁶	+5	35.7 ¹²⁶	50	6 00	6 40	7 16	15 28	16	4	12
6	273	46.5	-18	56.8	122	38.9 ¹⁶⁵	+5	48.3 ¹²⁶	45	5 52	6 28	7 00	15 34	21	4	08
7	288	46.4		57.4	137	14.4 ¹⁶⁵	+6	00.9 ¹²⁶	40	45	18	6 47	39	24	04	59
8	303	46.3		58.0	151	49.9 ¹⁶⁵		13.5 ¹²⁶	35	38	09	36	44	27	4	01
9	318	46.2		58.6	166	25.3 ¹⁶⁴		26.0 ¹²⁵	30	32	6 01	26	48	29	3	58
10	333	46.0		59.2	181	00.7 ¹⁶⁴		38.6 ¹²⁶	20	20	5 47	6 10	15 55	34	53	49
11	348	45.9	-18	59.8	195	36.1 ¹⁶⁴	+6	51.1 ¹²⁵	10 N	5 07	5 33	5 55	16 01	38	3	49
12	3	45.8	-19	00.4	210	11.4 ¹⁶³	+7	03.6 ¹²⁵	0	4 54	5 20	5 41	16 06	42	3	45
13	18	45.7		01.0	224	46.7 ¹⁶³		16.1 ¹²⁵	10 S	39	5 05	5 27	12	46	42	37
14	33	45.5		01.7	239	22.0 ¹⁶³		28.5 ¹²⁴	20	4 21	4 49	5 12	18	50	37	33
15	48	45.4		02.3	253	57.3 ¹⁶³		40.9 ¹²⁴	30	3 57	29	4 55	26	54	33	28
16	63	45.3		02.9	268	32.5 ¹⁶²	+7	53.3 ¹²⁴	35	43	17	45	30	56	30	26
17	78	45.2	-19	03.5	283	07.7 ¹⁶²	+8	05.7 ¹²⁴	40	3 25	4 03	4 33	16 34	60	3	27
18	93	45.0	-19	04.1	297	42.8 ¹⁶¹	+8	18.1 ¹²⁴	45	3 02	3 45	4 19	16 40	63	3	24
19	108	44.9		04.7	312	17.9 ¹⁶¹		30.4 ¹²³	50	2 30	23	4 02	46	68	19	16
20	123	44.8		05.3	326	53.0 ¹⁶¹		42.7 ¹²³	52	2 14	12	3 54	50	70	17	14
21	138	44.7		05.9	341	28.1 ¹⁶¹	+8	54.9 ¹²²	54	1 54	3 00	45	53	72	15	12
22	153	44.5		06.5	356	03.1 ¹⁶⁰	+9	07.2 ¹²³	56	1 28	2 45	35	16	57	13	9
23	168	44.4		07.1	10	38.0 ¹⁵⁹		19.4 ¹²²	58	0 48	28	24	17	01	11	6
24	183	44.3	-19	07.7	25	12.9 ¹⁵⁹	+9	31.5 ¹²¹	60 S	** **	2 07	3 10	17 06	81	3	08

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 13 ^m 2		Mag: -4.7 PMG: 10 ^h 06 ^m		Mag: +1.8 PMG: 9 ^h 34 ^m		Mag: -2.3 PMG: 5 ^h 37 ^m		Mag: -0.3 PMG: 2 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	55	52.7	208	10.3	-13	14.2	275	38.1	+16	07.8
1	70	55.2	223	13.0		13.4	290	40.4		07.8
2	85	57.7	238	15.6		12.7	305	42.7		07.8
3	101	00.1	253	18.3		12.0	320	45.0		07.7
4	116	02.6	268	20.9		11.3	335	47.4		07.7
5	131	05.0	283	23.6	-13	10.5	350	49.7	+16	07.7
6	146	07.5	298	26.2	-13	09.8	5	52.0	+16	07.6
7	161	10.0	313	28.9		09.1	20	54.3		07.6
8	176	12.4	328	31.5		08.4	35	56.7		07.6
9	191	14.9	343	34.2		07.7	50	59.0		07.5
10	206	17.4	358	36.8		07.0	66	01.3		07.5
11	221	19.8	13	39.4	-13	06.3	81	03.6	+16	07.5
12	236	22.3	28	42.1	-13	05.6	96	06.0	+16	07.4
13	251	24.8	43	44.7		04.9	111	08.3		07.4
14	266	27.2	58	47.3		04.2	126	10.6		07.4
15	281	29.7	73	49.9		03.5	141	13.0		07.3
16	296	32.1	88	52.5		02.8	156	15.3		07.3
17	311	34.6	103	55.1	-13	02.1	171	17.6	+16	07.3
18	326	37.1	118	57.7	-13	01.4	186	19.9	+16	07.2
19	341	39.5	134	00.3	-13	00.7	201	22.3		07.2
20	356	42.0	149	02.9	-13	00.0	216	24.6		07.2
21	11	44.5	164	05.5	-12	59.3	231	26.9		07.1
22	26	46.9	179	08.1		58.6	246	29.3		07.1
23	41	49.4	194	10.7		57.9	261	31.6		07.1
24	56	51.9	209	13.2	-12	57.2	276	33.9	+16	07.0
Dif	—		+26		+7		+23		0	
									+26	
									0	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°2		Edad: 13 ^d 1 PHE { 4 ^h : 54°2 12 ^h : 54°3 20 ^h : 54°3						Civil		Náutico	Hora	R°	Hora	R°
	PMG: 11 ^h 45 ^m 1	PMG: 22 ^h 58 ^m	R°: 45 ^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	183	44.3	-19 07.7		25 12.9	+9 31.5	60 N	15 25	16 15	17 07	15 15 6	5 44 83			
1	198	44.2	08.3		39 47.8 ¹⁵⁹	43.7 ¹²²	58	37	23	12	22 10	38 79			
2	213	44.0	08.9		54 22.6 ¹⁵⁸	+9 55.8 ¹²¹	56	48	30	16	29 12	32 76			
3	228	43.9	09.5		68 57.4 ¹⁵⁸	+10 07.9 ¹²¹	54	15 57	37	21	35 15	28 73			
4	243	43.8	10.1		83 32.2 ¹⁵⁸	19.9 ¹²⁰	52	16 05	43	24	40 17	23 71			
5	258	43.7	-19 10.7		98 06.9 ¹⁵⁷	+10 31.9 ¹²⁰	50	16 13	16 48	17 28	15 44 20	5 19 69			
6	273	43.5	-19 11.3		112 41.5 ¹⁵⁶	+10 43.9 ¹²⁰	45	16 29	17 01	17 36	15 55 23	5 10 64			
7	288	43.4	11.9		127 16.1 ¹⁵⁶	+10 55.8 ¹¹⁹	40	42	11	44	16 03 27	5 03 61			
8	303	43.3	12.5		141 50.7 ¹⁵⁶	+11 07.7 ¹¹⁹	35	16 53	20	51	11 30	4 57 57			
9	318	43.1	13.1		156 25.2 ¹⁵⁵	19.5 ¹¹⁸	30	17 03	28	17 57	17 33	51 55			
10	333	43.0	13.7		170 59.7 ¹⁵⁵	31.4 ¹¹⁹	20	20	43	18 10	29 36	42 50			
11	348	42.9	-19 14.3		185 34.1 ¹⁵⁴	+11 43.1 ¹¹⁷	10 N	17 35	17 57	18 22	16 39 40	4 34 46			
12	3	42.8	-19 14.9		200 08.5 ¹⁵⁴	+11 54.9 ¹¹⁸	0	17 49	18 11	18 36	16 48 44	4 26 43			
13	18	42.6	15.5		214 42.8 ¹⁵³	+12 06.6 ¹¹⁷	10 S	18 03	25	18 52	16 58 47	19 39			
14	33	42.5	16.1		229 17.0 ¹⁵²	18.2 ¹¹⁶	20	18	18 42	19 10	17 08 51	10 36			
15	48	42.4	16.7		243 51.3 ¹⁵³	29.8 ¹¹⁶	30	36	19 02	34	20 55	4 01 31			
16	63	42.2	17.2		258 25.4 ¹⁵¹	41.4 ¹¹⁶	35	46	15	19 49	26 59	3 56 28			
17	78	42.1	-19 17.8		272 59.5 ¹⁵¹	+12 52.9 ¹¹⁵	40	18 58	19 29	20 08	17 34 61	3 50 25			
18	93	42.0	-19 18.4		287 33.6 ¹⁵¹	+13 04.3 ¹¹⁴	45	19 13	19 47	20 31	17 43 65	3 43 22			
19	108	41.8	19.0		302 07.6 ¹⁵⁰	15.8 ¹¹⁵	50	30	20 10	21 03	17 54 70	35 17			
20	123	41.7	19.6		316 41.5 ¹⁴⁹	27.1 ¹¹³	52	38	21	21	18 00 71	31 16			
21	138	41.6	20.2		331 15.4 ¹⁴⁹	38.5 ¹¹⁴	54	48	34	21 42	05 74	27 13			
22	153	41.4	20.8		345 49.2 ¹⁴⁸	+13 49.7 ¹¹²	56	19 58	20 49	22 10	12 76	22 11			
23	168	41.3	21.4		0 23.0 ¹⁴⁸	+14 01.0 ¹¹³	58	20 10	21 07	22 57	19 80	17 8			
24	183	41.2	-19 22.0		14 56.7 ¹⁴⁷	+14 12.1 ¹¹¹	60 S	20 24	21 29	** **	18 27 84	3 11 5			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 09 ^m 2		Mag: -4.7 PMG: 10 ^h 01 ^m			Mag: +1.8 PMG: 9 ^h 32 ^m			Mag: -2.3 PMG: 5 ^h 33 ^m			Mag: -0.3 PMG: 2 ^h 03 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	56	51.9	209	13.2	-12 57.2		216 50.9	-7 24.6	276 33.9	+16 07.0		329 11.2	+22 05.1		
1	71	54.3	224	15.8	56.6		231 51.9	25.2	291 36.2	07.0		344 13.8	05.1		
2	86	56.8	239	18.4	55.9		246 52.9	25.8	306 38.6	07.0		359 16.4	05.1		
3	101	59.3	254	20.9	55.2		261 53.8	26.4	321 40.9	07.0		14 19.1	05.1		
4	117	01.7	269	23.5	54.5		276 54.8	27.0	336 43.2	06.9		29 21.7	05.1		
5	132	04.2	284	26.1	-12 53.9		291 55.8	-7 27.6	351 45.6	+16 06.9		44 24.3	+22 05.1		
6	147	06.6	299	28.6	-12 53.2		306 56.7	-7 28.3	6 47.9	+16 06.9		59 27.0	+22 05.1		
7	162	09.1	314	31.2	52.5		321 57.7	28.9	21 50.2	06.8		74 29.6	05.1		
8	177	11.6	329	33.7	51.9		336 58.7	29.5	36 52.6	06.8		89 32.2	05.1		
9	192	14.0	344	36.2	51.2		351 59.7	30.1	51 54.9	06.8		104 34.9	05.1		
10	207	16.5	359	38.8	50.5		7 00.6	30.7	66 57.2	06.7		119 37.5	05.1		
11	222	19.0	14	41.3	-12 49.9		22 01.6	-7 31.3	81 59.6	+16 06.7		134 40.1	+22 05.1		
12	237	21.4	29	43.8	-12 49.2		37 02.6	-7 31.9	97 01.9	+16 06.7		149 42.8	+22 05.0		
13	252	23.9	44	46.4	48.6		52 03.5	32.5	112 04.2	06.6		164 45.4	05.0		
14	267	26.4	59	48.9	47.9		67 04.5	33.1	127 06.6	06.6		179 48.0	05.0		
15	282	28.8	74	51.4	47.3		82 05.5	33.7	142 08.9	06.6		194 50.7	05.0		
16	297	31.3	89	53.9	46.6		97 06.4	34.3	157 11.2	06.6		209 53.3	05.0		
17	312	33.8	104	56.4	-12 46.0		112 07.4	-7 34.9	172 13.6	+16 06.5		224 56.0	+22 05.0		
18	327	36.2	119	58.9	-12 45.3		127 08.4	-7 35.6	187 15.9	+16 06.5		239 58.6	+22 05.0		
19	342	38.7	135	01.4	44.7		142 09.3	36.2	202 18.3	06.5		255 01.2	05.0		
20	357	41.1	150	03.9	44.0		157 10.3	36.8	217 20.6	06.4		270 03.9	05.0		
21	12	43.6	165	06.4	43.4		172 11.3	37.4	232 22.9	06.4		285 06.5	05.0		
22	27	46.1	180	08.9	42.7		187 12.2	38.0	247 25.3	06.4		300 09.1	05.0		
23	42	48.5	195	11.4	42.1		202 13.2	38.6	262 27.6	06.3		315 11.8	05.0		
24	57	51.0	210	13.9	-12 41.5		217 14.2	-7 39.2	277 29.9	+16 06.3		330 14.4	+22 05.0		
Dif	—		+25		+7		+10		-6	+23	0	+26		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 4			Edad: 14 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 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	183	41.2	-19	22.0	14	56.7	+14	12.1	60 N	6 24	7 17	8 07	15 21	10	7 07	85								
1	198	41.0		22.5	29	30.3 ¹⁴⁶		23.2 ¹¹¹	58	19	09	7 55	32 13		6 57	81								
2	213	40.9		23.1	44	03.9 ¹⁴⁶		34.3 ¹¹¹	56	15	7 01	44	41 17		48	78								
3	228	40.8		23.7	58	37.5 ¹⁴⁶		45.3 ¹¹⁰	54	11	6 54	35	50 19		41	74								
4	243	40.6		24.3	73	10.9 ¹⁴⁴	+14	56.3 ¹¹⁰	52	07	48	26	15 57 22		34	72								
5	258	40.5	-19	24.9	87	44.3 ¹⁴⁴	+15	07.2 ¹⁰⁹	50	6 03	6 43	7 19	16 04 24		6 28	69								
6	273	40.4	-19	25.5	102	17.7 ¹⁴⁴	+15	18.0 ¹⁰⁸	45	5 55	6 31	7 03	16 18 28		6 14	66								
7	288	40.2		26.1	116	51.0 ¹⁴³		28.8 ¹⁰⁸	40	47	20	6 49	30 32		6 04	61								
8	303	40.1		26.6	131	24.2 ¹⁴²		39.5 ¹⁰⁷	35	40	11	38	41 34		5 54	59								
9	318	39.9		27.2	145	57.3 ¹⁴¹	+15	50.2 ¹⁰⁷	30	34	6 03	28	16 50 36		46	57								
10	333	39.8		27.8	160	30.4 ¹⁴¹	+16	00.8 ¹⁰⁶	20	21	5 48	6 11	17 05 41		32	53								
11	348	39.7	-19	28.4	175	03.4 ¹⁴⁰	+16	11.3 ¹⁰⁵	10 N	5 08	5 34	5 56	17 19 44		5 20	49								
12	3	39.5	-19	29.0	189	36.4 ¹⁴⁰	+16	21.8 ¹⁰⁵	0	4 54	5 20	5 42	17 32 47		5 09	45								
13	18	39.4		29.5	204	09.3 ¹³⁹		32.2 ¹⁰⁴	10 S	39	5 05	27	45 50		4 58	42								
14	33	39.2		30.1	218	42.1 ¹³⁸		42.6 ¹⁰⁴	20	4 20	4 48	5 12	17 59 53		46	38								
15	48	39.1		30.7	233	14.9 ¹³⁸	+16	52.9 ¹⁰³	30	3 56	28	4 54	18 15 57		32	34								
16	63	39.0		31.3	247	47.6 ¹³⁷	+17	03.1 ¹⁰²	35	41	15	44	25 59		24	32								
17	78	38.8	-19	31.9	262	20.2 ¹³⁶	+17	13.2 ¹⁰¹	40	3 23	4 01	4 32	18 35 63		4 15	29								
18	93	38.7	-19	32.4	276	52.8 ¹³⁶	+17	23.3 ¹⁰¹	45	2 59	3 43	4 17	18 48 66		4 05	25								
19	108	38.5		33.0	291	25.2 ¹³⁴		33.3 ¹⁰⁰	50	27	20	4 00	19 04 70		3 52	22								
20	123	38.4		33.6	305	57.7 ¹³⁵		43.3 ¹⁰⁰	52	2 10	3 09	3 52	11 72		47	19								
21	138	38.3		34.2	320	30.0 ¹³³	+17	53.1 ⁹⁸	54	1 48	2 56	42	19 75		40	17								
22	153	38.1		34.7	335	02.3 ¹³³	+18	02.9 ⁹⁸	56	1 20	41	32	28 78		33	14								
23	168	38.0		35.3	349	34.5 ¹³²		12.6 ⁹⁷	58	0 33	23	20	39 81		25	11								
24	183	37.8	-19	35.9	4	06.6 ¹³¹	+18	22.3 ⁹⁷	60 S	** **	2 00	3 06	19 51 86		3 16	7								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 20 ^h 05 ^m 3			Mag: -4.7 PMG: 9 ^h 57 ^m			Mag: +1.8 PMG: 9 ^h 30 ^m			Mag: -2.3 PMG: 5 ^h 29 ^m			Mag: -0.3 PMG: 1 ^h 59 ^m											
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	57	51.0	210	13.9	-12	41.5	217	14.2	-7	39.2	277	29.9	+16	06.3	330	14.4	+22	05.0						
1	72	53.5	225	16.3		40.8	232	15.1		39.8	292	32.3		06.3	345	17.0		05.0						
2	87	55.9	240	18.8		40.2	247	16.1		40.4	307	34.6		06.3	0	19.7		05.0						
3	102	58.4	255	21.3		39.6	262	17.1		41.0	322	37.0		06.2	15	22.3		05.0						
4	118	00.9	270	23.8		39.0	277	18.0		41.6	337	39.3		06.2	30	24.9		05.0						
5	133	03.3	285	26.2	-12	38.3	292	19.0	-7	42.2	352	41.6	+16	06.2	45	27.6	+22	05.0						
6	148	05.8	300	28.7	-12	37.7	307	20.0	-7	42.8	7	44.0	+16	06.1	60	30.2	+22	05.0						
7	163	08.2	315	31.1		37.1	322	21.0		43.5	22	46.3		06.1	75	32.9		05.0						
8	178	10.7	330	33.6		36.5	337	21.9		44.1	37	48.7		06.1	90	35.5		05.0						
9	193	13.2	345	36.0		35.9	352	22.9		44.7	52	51.0		06.1	105	38.1		05.0						
10	208	15.6	0	38.5		35.2	7	23.9		45.3	67	53.3		06.0	120	40.8		05.0						
11	223	18.1	15	40.9	-12	34.6	22	24.8	-7	45.9	82	55.7	+16	06.0	135	43.4	+22	05.0						
12	238	20.6	30	43.3	-12	34.0	37	25.8	-7	46.5	97	58.0	+16	06.0	150	46.0	+22	05.0						
13	253	23.0	45	45.8		33.4	52	26.8		47.1	113	00.4		05.9	165	48.7		05.0						
14	268	25.5	60	48.2		32.8	67	27.7		47.7	128	02.7		05.9	180	51.3		05.0						
15	283	28.0	75	50.6		32.2	82	28.7		48.3	143	05.0		05.9	195	54.0		05.0						
16	298	30.4	90	53.0		31.6	97	29.7		48.9	158	07.4		05.9	210	56.6		05.0						
17	313	32.9	105	55.4	-12	31.0	112	30.6	-7	49.5	173	09.7	+16	05.8	225	59.2	+22	05.0						
18	328	35.4	120	57.8	-12	30.4	127	31.6	-7	50.1	188	12.1	+16	05.8	241	01.9	+22	05.0						
19	343	37.8	136	00.3		29.8	142	32.6		50.7	203	14.4		05.8	256	04.5		05.0						
20	358	40.3	151	02.7		29.2	157	33.5		51.3	218	16.8		05.7	271	07.1		05.0						
21	13	42.7	166	05.1		28.6	172	34.5		51.9	233	19.1		05.7	286	09.8		05.0						
22	28	45.2	181	07.5		28.0	187	35.4		52.5	248	21.5		05.7	301	12.4		05.0						
23	43	47.7	196	09.8		27.4	202	36.4		53.1	263	23.8		05.7	316	15.1		05.0						
24	58	50.1	211	12.2	-12	26.9	217	37.4	-7	53.8	278	26.1	+16	05.6	331	17.7	+22	05.0						
Dif	—			+24			+6			+10			-6			+23			0			+26		

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 45 ^m 6		Edad: 15 ^d 1 PHE { SD: 14/9 PMG: *** **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	37.8	-19	35.9	4	06.6	+18	22.3	60 N	15 21	16 11	17 04	15 31 15	8 32 85				
1	198	37.7		36.4	18	38.7 ¹³¹		31.9 ⁹⁶	58	33	20	09	45 21	18 80				
2	213	37.5		37.0	33	10.7 ¹³⁰		41.4 ⁹⁵	56	44	28	14	15 58 24	8 06 77				
3	228	37.4		37.6	47	42.6 ¹²⁹	+18	50.8 ⁹⁴	54	15 54	35	18	16 09 27	7 55 77				
4	243	37.3		38.2	62	14.5 ¹²⁹	+19	00.1 ⁹³	52	16 03	41	22	19 29	46 71				
5	258	37.1	-19	38.7	76	46.2 ¹²⁷	+19	09.4 ⁹³	50	16 10	16 46	17 26	16 28 31	7 37 70				
6	273	37.0	-19	39.3	91	17.9 ¹²⁷	+19	18.6 ⁹²	45	16 27	16 59	17 35	16 46 35	7 20 65				
7	288	36.8		39.9	105	49.6 ¹²⁷		27.7 ⁹¹	40	40	17 10	43	17 02 37	7 05 63				
8	303	36.7		40.4	120	21.1 ¹²⁵		36.7 ⁹⁰	35	16 52	19	50	15 39	6 53 60				
9	318	36.5		41.0	134	52.6 ¹²⁵		45.6 ⁸⁹	30	17 02	27	17 57	26 42	43 57				
10	333	36.4		41.6	149	24.0 ¹²⁴	+19	54.5 ⁸⁹	20	19	43	18 10	17 46 44	25 54				
11	348	36.2	-19	42.1	163	55.4 ¹²⁴	+20	03.2 ⁸⁷	10 N	17 35	17 57	18 23	18 03 47	6 09 51				
12	3	36.1	-19	42.7	178	26.6 ¹²²	+20	11.9 ⁸⁷	0	17 49	18 11	18 37	18 19 50	5 54 49				
13	18	35.9		43.3	192	57.8 ¹²²		20.5 ⁸⁶	10 S	18 04	26	18 53	35 52	40 45				
14	33	35.8		43.8	207	28.9 ¹²¹		29.0 ⁸⁵	20	20	18 43	19 12	18 52 55	24 43				
15	48	35.6		44.4	222	00.0 ¹²¹		37.4 ⁸⁴	30	38	19 04	36	19 12 59	5 06 39				
16	63	35.5		45.0	236	31.0 ¹²⁰		45.8 ⁸⁴	35	18 48	17	19 51	24 60	4 56 37				
17	78	35.3	-19	45.5	251	01.9 ¹¹⁹	+20	54.0 ⁸²	40	19 01	19 32	20 10	19 38 62	4 44 34				
18	93	35.2	-19	46.1	265	32.7 ¹¹⁸	+21	02.1 ⁸¹	45	19 15	19 50	20 35	19 54 65	4 30 31				
19	108	35.0		46.6	280	03.4 ¹¹⁷		10.2 ⁸¹	50	33	20 14	21 08	20 14 69	14 27				
20	123	34.9		47.2	294	34.1 ¹¹⁷		18.1 ⁷⁹	52	42	25	26	23 71	4 06 25				
21	138	34.7		47.8	309	04.7 ¹¹⁶		26.0 ⁷⁹	54	19 51	38	21 48	34 73	3 57 22				
22	153	34.6		48.3	323	35.2 ¹¹⁵		33.7 ⁷⁷	56	20 02	20 54	22 19	20 46 76	47 20				
23	168	34.4		48.9	338	05.7 ¹¹⁵		41.4 ⁷⁷	58	15	21 13	23 20	21 00 80	36 16				
24	183	34.3	-19	49.4	352	36.1 ¹¹⁴	+21	49.0 ⁷⁶	60 S	20 29	21 37	** **	21 17 85	3 23 12				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 01 ^m 4		Mag: -4.7 PMG: 9 ^h 54 ^m			Mag: +1.7 PMG: 9 ^h 29 ^m			Mag: -2.3 PMG: 5 ^h 25 ^m			Mag: -0.3 PMG: 1 ^h 54 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	58	50.1	211	12.2	-12	26.9	217	37.4	-7	53.8	278	26.1	+16	05.6	331	17.7	+22	05.0
1	73	52.6	226	14.6		26.3	232	38.3		54.4	293	28.5		05.6	346	20.3		05.0
2	88	55.1	241	17.0		25.7	247	39.3		55.0	308	30.8		05.6	1	23.0		05.0
3	103	57.5	256	19.4		25.1	262	40.3		55.6	323	33.2		05.6	16	25.6		05.0
4	119	00.0	271	21.7		24.5	277	41.2		56.2	338	35.5		05.5	31	28.3		05.0
5	134	02.5	286	24.1	-12	24.0	292	42.2	-7	56.8	353	37.9	+16	05.5	46	30.9	+22	05.0
6	149	04.9	301	26.5	-12	23.4	307	43.2	-7	57.4	8	40.2	+16	05.5	61	33.5	+22	05.0
7	164	07.4	316	28.8		22.8	322	44.1		58.0	23	42.6		05.4	76	36.2		05.0
8	179	09.9	331	31.2		22.2	337	45.1		58.6	38	44.9		05.4	91	38.8		04.9
9	194	12.3	346	33.5		21.7	352	46.1		59.2	53	47.3		05.4	106	41.5		04.9
10	209	14.8	1	35.9		21.1	7	47.0	-7	59.8	68	49.6		05.4	121	44.1		04.9
11	224	17.2	16	38.2	-12	20.5	22	48.0	-8	00.4	83	52.0	+16	05.3	136	46.7	+22	04.9
12	239	19.7	31	40.6	-12	20.0	37	49.0	-8	01.0	98	54.3	+16	05.3	151	49.4	+22	04.9
13	254	22.2	46	42.9		19.4	52	49.9		01.6	113	56.7		05.3	166	52.0		04.9
14	269	24.6	61	45.2		18.9	67	50.9		02.2	128	59.0		05.3	181	54.7		04.9
15	284	27.1	76	47.6		18.3	82	51.9		02.8	144	01.4		05.2	196	57.3		04.9
16	299	29.6	91	49.9		17.8	97	52.8		03.4	159	03.7		05.2	211	59.9		04.9
17	314	32.0	106	52.2	-12	17.2	112	53.8	-8	04.0	174	06.1	+16	05.2	227	02.6	+22	04.9
18	329	34.5	121	54.5	-12	16.7	127	54.7	-8	04.6	189	08.4	+16	05.2	242	05.2	+22	04.9
19	344	37.0	136	56.8		16.1	142	55.7		05.2	204	10.8		05.1	257	07.9		04.9
20	359	39.4	151	59.1		15.6	157	56.7		05.8	219	13.1		05.1	272	10.5		04.9
21	14	41.9	167	01.4		15.0	172	57.6		06.4	234	15.5		05.1	287	13.1		04.9
22	29	44.4	182	03.7		14.5	187	58.6		07.0	249	17.8		05.1	302	15.8		04.9
23	44	46.8	197	06.0		13.9	202	59.6		07.7	264	20.2		05.0	317	18.4		04.9
24	59	49.3	212	08.3	-12	13.4	218	00.5	-8	08.3	279	22.5	+16	05.0	332	21.1	+22	04.9
Dif	—		+23		+6		+10		-6		+23		0		+26		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^d 2 PMG: 11 ^h 45 ^m 8			Edad: 16 ^d 1 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 2 20 ^h : 55 ^m 3 PMG: 0 ^h 31 ^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	34.3	-19 49.4	352	36.1	+21 49.0	74	60 N	6 28	7 21	8 12	15 46	28	9 57	80	
1	198	34.1	50.0	7	06.4	+21 56.4	74	58	23	12	7 59	16 06	32	38	76	
2	213	34.0	50.5	21	36.6	+22 03.8	72	56	18	7 05	48	22	35	23	72	
3	228	33.8	51.1	36	06.8	11.0	72	54	14	6 58	38	36	37	9 09	70	
4	243	33.7	51.7	50	36.8	18.2	72	52	10	51	30	48	39	8 57	68	
5	258	33.5	-19 52.2	65	06.9	+22 25.3	71	50	6 06	6 46	7 22	16 59	40	8 47	66	
6	273	33.4	-19 52.8	79	36.8	+22 32.2	69	45	5 57	6 33	7 05	17 21	43	8 25	64	
7	288	33.2	53.3	94	06.7	39.1	69	40	49	22	6 52	39	45	8 08	61	
8	303	33.1	53.9	108	36.5	45.8	67	35	42	13	40	17 54	47	7 53	60	
9	318	32.9	54.4	123	06.2	52.4	66	30	35	6 04	30	18 08	47	40	58	
10	333	32.8	55.0	137	35.9	+22 59.0	66	20	22	5 49	6 12	30	50	19	55	
11	348	32.6	-19 55.5	152	05.4	+23 05.4	64	10 N	5 09	5 35	5 57	18 50	51	7 00	53	
12	3	32.4	-19 56.1	166	35.0	+23 11.7	63	0	4 55	5 20	5 42	19 09	52	6 43	51	
13	18	32.3	56.6	181	04.4	17.9	62	10 S	39	5 05	28	27	55	25	49	
14	33	32.1	57.2	195	33.8	23.9	60	20	4 20	4 48	5 12	19 47	56	6 07	47	
15	48	32.0	57.7	210	03.1	29.9	60	30	3 55	27	4 53	20 11	57	5 45	45	
16	63	31.8	58.3	224	32.3	35.8	59	35	40	4 14	43	24	59	33	43	
17	78	31.7	-19 58.8	239	01.5	+23 41.5	57	40	3 21	3 59	4 30	20 40	60	5 18	41	
18	93	31.5	-19 59.4	253	30.6	+23 47.1	56	45	2 56	3 41	4 16	20 59	61	5 01	39	
19	108	31.3	-19 59.9	267	59.6	52.6	55	50	23	17	3 58	21 23	63	4 41	35	
20	123	31.2	-20 00.5	282	28.6	+23 58.0	54	52	2 05	3 06	49	34	65	31	33	
21	138	31.0	01.0	296	57.5	+24 03.3	53	54	1 43	2 52	40	21 47	66	19	32	
22	153	30.9	01.5	311	26.4	08.5	52	56	1 12	37	29	22 02	68	4 07	28	
23	168	30.7	02.1	325	55.1	13.5	50	58	0 11	2 18	16	20	70	3 52	25	
24	183	30.5	-20 02.6	340	23.9	+24 18.4	49	60 S	** **	1 54	3 02	22 42	74	3 35	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 57 ^m 4		Mag: -4.8 PMG: 9 ^h 50 ^m		Mag: +1.7 PMG: 9 ^h 27 ^m		Mag: -2.3 PMG: 5 ^h 22 ^m		Mag: -0.3 PMG: 1 ^h 50 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	59	49.3	212	08.3	-12	13.4	218	00.5	-8	08.3	279	22.5	+16	05.0	332	21.1	+22	04.9
1	74	51.7	227	10.6		12.9	233	01.5		08.9	294	24.9		05.0	347	23.7		04.9
2	89	54.2	242	12.9		12.3	248	02.5		09.5	309	27.2		05.0	2	26.4		04.9
3	104	56.7	257	15.2		11.8	263	03.4		10.1	324	29.6		04.9	17	29.0		04.9
4	119	59.1	272	17.5		11.3	278	04.4		10.7	339	32.0		04.9	32	31.6		04.9
5	135	01.6	287	19.7	-12	10.8	293	05.3	-8	11.3	354	34.3	+16	04.9	47	34.3	+22	04.9
6	150	04.1	302	22.0	-12	10.2	308	06.3	-8	11.9	9	36.7	+16	04.9	62	36.9	+22	04.9
7	165	06.5	317	24.3		09.7	323	07.3		12.5	24	39.0		04.8	77	39.6		04.9
8	180	09.0	332	26.5		09.2	338	08.2		13.1	39	41.4		04.8	92	42.2		04.9
9	195	11.5	347	28.8		08.7	353	09.2		13.7	54	43.7		04.8	107	44.9		04.9
10	210	13.9	2	31.1		08.2	8	10.2		14.3	69	46.1		04.8	122	47.5		04.9
11	225	16.4	17	33.3	-12	07.6	23	11.1	-8	14.9	84	48.4	+16	04.7	137	50.1	+22	04.9
12	240	18.8	32	35.6	-12	07.1	38	12.1	-8	15.5	99	50.8	+16	04.7	152	52.8	+22	04.9
13	255	21.3	47	37.8		06.6	53	13.1		16.1	114	53.2		04.7	167	55.4		04.9
14	270	23.8	62	40.0		06.1	68	14.0		16.7	129	55.5		04.7	182	58.1		04.9
15	285	26.2	77	42.3		05.6	83	15.0		17.3	144	57.9		04.7	198	00.7		04.9
16	300	28.7	92	44.5		05.1	98	15.9		17.9	160	00.2		04.6	213	03.4		04.9
17	315	31.2	107	46.7	-12	04.6	113	16.9	-8	18.5	175	02.6	+16	04.6	228	06.0	+22	04.9
18	330	33.6	122	49.0	-12	04.1	128	17.9	-8	19.1	190	04.9	+16	04.6	243	08.7	+22	04.9
19	345	36.1	137	51.2		03.6	143	18.8		19.7	205	07.3		04.6	258	11.3		04.9
20	0	38.6	152	53.4		03.1	158	19.8		20.3	220	09.7		04.5	273	13.9		04.9
21	15	41.0	167	55.6		02.6	173	20.7		20.9	235	12.0		04.5	288	16.6		04.9
22	30	43.5	182	57.8		02.1	188	21.7		21.5	250	14.4		04.5	303	19.2		04.9
23	45	46.0	198	00.0		01.6	203	22.7		22.1	265	16.7		04.5	318	21.9		04.9
24	60	48.4	213	02.2	-12	01.1	218	23.6	-8	22.7	280	19.1	+16	04.4	333	24.5	+22	04.9
Dif	—		+22		+5		+10		-6		+24		0		+26			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 46 ^m 1			Edad: 17 ^d 1 PHE { 4 ^h : 55:5 12 ^h : 55:6 20 ^h : 55:8 Rº: 53 ^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	30.5	-20	02.6	340	23.9	+24 18.4	60 N	15 17	16 08	17 01	16 14 48	11 17 65		
1	198	30.4		03.2	354	52.5	96 23.2	58	30	17	07	38 49	10 54 63		
2	213	30.2		03.7	9	21.1	96 27.9	56	42	25	12	16 57 50	35 62		
3	228	30.1		04.3	23	49.6	95 32.4	54	15 51	32	16	17 13 51	19 61		
4	243	29.9		04.8	38	18.1	95 36.8	52	16 00	39	21	27 51	10 05 61		
5	258	29.7	-20	05.3	52	46.5	94 +24 41.1	50	16 08	16 45	17 25	17 39 52	9 53 60		
6	273	29.6	-20	05.9	67	14.9	94 +24 45.3	45	16 25	16 58	17 34	18 04 52	9 29 58		
7	288	29.4		06.4	81	43.2	93 49.4	40	39	17 09	42	24 53	9 09 58		
8	303	29.2		07.0	96	11.4	92 53.3	35	16 51	18	49	41 53	8 53 57		
9	318	29.1		07.5	110	39.6	92 +24 57.1	30	17 01	27	17 56	18 55 54	38 57		
10	333	28.9		08.0	125	07.7	91 +25 00.7	20	19	43	18 10	19 20 54	8 14 56		
11	348	28.8	-20	08.6	139	35.8	91 +25 04.3	10 N	17 35	17 57	18 23	19 41 55	7 53 55		
12	3	28.6	-20	09.1	154	03.8	90 +25 07.7	0	17 50	18 12	18 37	20 01 55	7 34 54		
13	18	28.4		09.6	168	31.8	90 10.9	10 S	18 05	27	18 54	22 54	7 14 53		
14	33	28.3		10.2	182	59.7	89 14.1	20	21	18 45	19 13	20 43 55	6 54 51		
15	48	28.1		10.7	197	27.5	88 17.1	30	39	19 06	38	21 08 55	30 50		
16	63	27.9		11.2	211	55.4	89 20.0	35	18 50	19	19 54	23 55	6 16 49		
17	78	27.8	-20	11.8	226	23.1	87 +25 22.7	40	19 03	19 34	20 13	21 40 55	5 59 49		
18	93	27.6	-20	12.3	240	50.8	87 +25 25.3	45	19 18	19 53	20 38	22 00 56	5 40 47		
19	108	27.4		12.8	255	18.5	87 27.8	50	37	20 17	21 13	26 56	16 45		
20	123	27.3		13.4	269	46.1	86 30.1	52	45	29	31	39 55	5 04 45		
21	138	27.1		13.9	284	13.7	86 32.3	54	19 55	43	21 55	22 53 55	4 51 43		
22	153	26.9		14.4	298	41.3	86 34.4	56	20 06	20 59	22 29	23 10 55	35 42		
23	168	26.8		14.9	313	08.8	85 36.3	58	19	21 19	** **	30 55	4 17 40		
24	183	26.6	-20	15.5	327	36.3	85 +25 38.1	60 S	20 34	21 44	** **	23 56 55	3 55 36		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 53 ^m 5		Mag: -4.8 PMG: 9 ^h 46 ^m		Mag: +1.7 PMG: 9 ^h 26 ^m		Mag: -2.3 PMG: 5 ^h 18 ^m		Mag: -0.3 PMG: 1 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	60	48.4	213	02.2	-12	01.1	218	23.6	-8	22.7
1	75	50.9	228	04.4		00.7	233	24.6		23.3
2	90	53.3	243	06.6	-12	00.2	248	25.6		23.9
3	105	55.8	258	08.8	-11	59.7	263	26.5		24.5
4	120	58.3	273	11.0		59.2	278	27.5		25.1
5	136	00.7	288	13.2	-11	58.7	293	28.4	-8	25.7
6	151	03.2	303	15.4	-11	58.3	308	29.4	-8	26.3
7	166	05.7	318	17.5		57.8	323	30.4		26.9
8	181	08.1	333	19.7		57.3	338	31.3		27.5
9	196	10.6	348	21.9		56.8	353	32.3		28.1
10	211	13.1	3	24.0		56.4	8	33.2		28.7
11	226	15.5	18	26.2	-11	55.9	23	34.2	-8	29.3
12	241	18.0	33	28.4	-11	55.5	38	35.2	-8	29.9
13	256	20.5	48	30.5		55.0	53	36.1		30.5
14	271	22.9	63	32.7		54.5	68	37.1		31.1
15	286	25.4	78	34.8		54.1	83	38.0		31.7
16	301	27.8	93	36.9		53.6	98	39.0		32.3
17	316	30.3	108	39.1	-11	53.2	113	40.0	-8	32.9
18	331	32.8	123	41.2	-11	52.7	128	40.9	-8	33.5
19	346	35.2	138	43.3		52.3	143	41.9		34.1
20	1	37.7	153	45.5		51.8	158	42.8		34.7
21	16	40.2	168	47.6		51.4	173	43.8		35.3
22	31	42.6	183	49.7		50.9	188	44.8		35.9
23	46	45.1	198	51.8		50.5	203	45.7		36.5
24	61	47.6	213	53.9	-11	50.1	218	46.7	-8	37.1
Dif	—		+22		+5		+10		-6	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 46 ^m 4			Edad: 18 ^d 1 PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/3 PMG: 2 ^h 14 ^m R ^o : 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	26.6	-20 15.5	327	36.3	+25 38.1	16	60 N	6 32	7 25	8 17	17 02	71	12 22	44		
1	198	26.4	16.0	342	03.7	39.7	84	58	26	16	8 04	27 68	11 57	46			
2	213	26.3	16.5	356	31.1	41.3	16	56	21	08	7 52	17 47	66	37	47		
3	228	26.1	17.0	10	58.4	42.6	83	54	17	7 01	42	18 04	65	20	49		
4	243	25.9	17.6	25	25.7	43.9	13	52	12	6 54	33	18 64		11 06	49		
5	258	25.8	-20 18.1	39	53.0	45.0	11	50	6 08	6 48	7 25	18 31	63	10 53	50		
6	273	25.6	-20 18.6	54	20.3	45.9	9	45	5 59	6 35	7 08	18 56	62	10 27	51		
7	288	25.4	19.1	68	47.5	46.7	7	40	51	24	6 54	19 17	61	10 07	52		
8	303	25.2	19.7	83	14.7	47.4	7	35	44	15	42	34 60		9 50	52		
9	318	25.1	20.2	97	41.8	47.9	5	30	37	6 06	31	19 49	59	35	53		
10	333	24.9	20.7	112	09.0	48.3	4	20	23	5 50	6 13	20 14	57	9 10	53		
11	348	24.7	-20 21.2	126	36.1	48.6	3	10 N	5 09	5 35	5 58	20 36	56	8 48	54		
12	3	24.5	-20 21.7	141	03.2	48.7	1	0	4 55	5 21	5 43	20 56	55	8 28	54		
13	18	24.4	22.3	155	30.2	48.6	1	10 S	39	5 05	28	21 16	54	8 07	56		
14	33	24.2	22.8	169	57.2	48.5	1	20	4 19	4 48	5 12	21 38	52	7 45	56		
15	48	24.0	23.3	184	24.3	48.1	4	30	3 54	26	4 53	22 03	51	20	56		
16	63	23.9	23.8	198	51.3	47.7	4	35	38	4 13	42	18 50		7 05	57		
17	78	23.7	-20 24.3	213	18.2	47.1	6	40	3 19	3 58	4 29	22 35	49	6 48	57		
18	93	23.5	-20 24.8	227	45.2	46.3	8	45	2 54	3 39	4 14	22 56	47	6 27	58		
19	108	23.3	25.4	242	12.1	45.4	9	50	19	15	3 55	23 22	44	6 01	58		
20	123	23.2	25.9	256	39.1	44.4	10	52	2 01	3 03	47	34 44		5 49	57		
21	138	23.0	26.4	271	06.0	43.2	12	54	1 37	2 49	37	23 48	43	34	58		
22	153	22.8	26.9	285	32.9	41.8	14	56	1 03	33	26	** ** *	**	5 17	59		
23	168	22.6	27.4	299	59.8	40.4	14	58	** ** *	2 13	3 13	** ** *	**	4 57	59		
24	183	22.5	-20 27.9	314	26.7	38.7	17	60 S	** ** *	1 48	2 58	** ** *	**	4 31	59		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 49 ^m 6		Mag: -4.8 PMG: 9 ^h 43 ^m			Mag: +1.7 PMG: 9 ^h 24 ^m			Mag: -2.3 PMG: 5 ^h 14 ^m			Mag: -0.3 PMG: 1 ^h 42 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	
0	61	47.6	213	53.9	-11 50.1	218	46.7	-8 37.1	281	15.9	+16 03.9	334	28.1	+22 04.8			
1	76	50.0	228	56.0	49.6	233	47.6	37.7	296	18.2	03.9	349	30.7	04.8			
2	91	52.5	243	58.1	49.2	248	48.6	38.3	311	20.6	03.9	4	33.3	04.8			
3	106	55.0	259	00.2	48.8	263	49.6	38.9	326	23.0	03.9	19	36.0	04.8			
4	121	57.4	274	02.3	48.3	278	50.5	39.5	341	25.3	03.9	34	38.6	04.8			
5	136	59.9	289	04.4	-11 47.9	293	51.5	-8 40.1	356	27.7	+16 03.8	49	41.3	+22 04.8			
6	152	02.3	304	06.5	-11 47.5	308	52.4	-8 40.7	11	30.1	+16 03.8	64	43.9	+22 04.8			
7	167	04.8	319	08.6	47.1	323	53.4	41.3	26	32.5	03.8	79	46.6	04.8			
8	182	07.3	334	10.7	46.6	338	54.3	41.9	41	34.8	03.8	94	49.2	04.8			
9	197	09.7	349	12.8	46.2	353	55.3	42.5	56	37.2	03.8	109	51.9	04.8			
10	212	12.2	4	14.8	45.8	8	56.3	43.1	71	39.6	03.7	124	54.5	04.8			
11	227	14.7	19	16.9	-11 45.4	23	57.2	-8 43.7	86	41.9	+16 03.7	139	57.2	+22 04.8			
12	242	17.1	34	19.0	-11 45.0	38	58.2	-8 44.3	101	44.3	+16 03.7	154	59.8	+22 04.8			
13	257	19.6	49	21.0	44.6	53	59.1	44.9	116	46.7	03.7	170	02.5	04.8			
14	272	22.1	64	23.1	44.1	69	00.1	45.5	131	49.1	03.7	185	05.1	04.8			
15	287	24.5	79	25.2	43.7	84	01.1	46.1	146	51.4	03.7	200	07.8	04.8			
16	302	27.0	94	27.2	43.3	99	02.0	46.7	161	53.8	03.6	215	10.4	04.8			
17	317	29.5	109	29.3	-11 42.9	114	03.0	-8 47.3	176	56.2	+16 03.6	230	13.1	+22 04.8			
18	332	31.9	124	31.3	-11 42.5	129	03.9	-8 47.9	191	58.6	+16 03.6	245	15.7	+22 04.8			
19	347	34.4	139	33.4	42.1	144	04.9	48.4	207	00.9	03.6	260	18.4	04.8			
20	2	36.8	154	35.4	41.7	159	05.8	49.0	222	03.3	03.6	275	21.0	04.8			
21	17	39.3	169	37.4	41.3	174	06.8	49.6	237	05.7	03.5	290	23.7	04.8			
22	32	41.8	184	39.5	40.9	189	07.8	50.2	252	08.1	03.5	305	26.3	04.8			
23	47	44.2	199	41.5	40.6	204	08.7	50.8	267	10.4	03.5	320	29.0	04.8			
24	62	46.7	214	43.5	-11 40.2	219	09.7	-8 51.4	282	12.8	+16 03.5	335	31.6	+22 04.7			
Dif	—		+21 +4		+10 -6		-6		+24 0		0		+26 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 6			Edad: 19 ^d 1 PHE { 4 ^h : 56/4 12 ^h : 56/6 20 ^h : 56/8 Rº: 55 ^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	22.5	-20	27.9	314	26.7	+25 38.7	60 N	15 13	16 05	16 59	18 13 87	13 06 25		
1	198	22.3		28.4	328	53.6	79 37.0	58	27	15	17 05	35 83	12 43 30		
2	213	22.1		29.0	343	20.4	78 35.1	56	39	23	10	18 53 80	24 34		
3	228	21.9		29.5	357	47.3	79 33.0	54	49	30	15	19 09 76	12 09 36		
4	243	21.7		30.0	12	14.2	79 30.8	52	15 58	37	19	22 74	11 55 38		
5	258	21.6	-20	30.5	26	41.0	78 +25 28.5	50	16 06	16 43	17 23	19 34 72	11 43 40		
6	273	21.4	-20	31.0	41	07.9	79 +25 26.0	45	16 24	16 56	17 32	19 58 69	11 18 43		
7	288	21.2		31.5	55	34.8	79 23.3	40	38	17 08	41	20 18 66	10 59 45		
8	303	21.0		32.0	70	01.6	78 20.5	35	16 50	18	49	34 64	42 47		
9	318	20.8		32.5	84	28.5	79 17.6	30	17 01	26	17 56	20 48 62	28 48		
10	333	20.7		33.0	98	55.4	79 14.6	20	19	43	18 10	21 11 59	10 03 51		
11	348	20.5	-20	33.5	113	22.2	78 +25 11.3	10 N	17 35	17 58	18 23	21 32 56	9 42 53		
12	3	20.3	-20	34.0	127	49.1	79 +25 08.0	0	17 50	18 12	18 38	21 51 54	9 22 55		
13	18	20.1		34.5	142	16.0	79 04.5	10 S	18 06	28	18 55	22 10 52	9 03 56		
14	33	19.9		35.0	156	42.9	79 +25 00.8	20	22	18 46	19 14	30 50	8 41 59		
15	48	19.8		35.5	171	09.8	79 +24 57.0	30	41	19 08	40	22 54 46	16 61		
16	63	19.6		36.0	185	36.7	79 53.1	35	18 52	21	19 56	23 08 44	8 02 62		
17	78	19.4	-20	36.5	200	03.7	80 +24 49.0	40	19 05	19 37	20 16	23 24 42	7 45 63		
18	93	19.2	-20	37.0	214	30.6	79 +24 44.8	45	19 21	19 56	20 42	23 43 39	7 25 65		
19	108	19.0		37.5	228	57.6	80 40.5	50	40	20 21	21 17	** ** *	6 59 68		
20	123	18.8		38.0	243	24.5	79 36.0	52	49	33	21 37	** ** *	46 70		
21	138	18.7		38.5	257	51.5	80 31.3	54	19 59	20 47	22 02	** ** *	32 72		
22	153	18.5		39.0	272	18.6	81 26.5	56	20 10	21 04	22 39	0 05 40	6 16 73		
23	168	18.3		39.5	286	45.6	80 21.6	58	24	25	** ** *	25 38	5 56 76		
24	183	18.1	-20	40.0	301	12.6	80 +24 16.5	60 S	20 39	21 51	** ** *	0 51 33	5 30 81		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 45 ^m 6		Mag: -4.8 PMG: 9 ^h 40 ^m		Mag: +1.7 PMG: 9 ^h 23 ^m		Mag: -2.3 PMG: 5 ^h 10 ^m		Mag: -0.3 PMG: 1 ^h 38 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	62	46.7	214	43.5	219	09.7	282	12.8	335	31.6					
1	77	49.2	229	45.5	234	10.6	297	15.2	350	34.3					
2	92	51.6	244	47.5	249	11.6	312	17.6	5	37.0					
3	107	54.1	259	49.6	264	12.5	327	19.9	20	39.6					
4	122	56.6	274	51.6	279	13.5	342	22.3	35	42.3					
5	137	59.0	289	53.6	294	14.5	357	24.7	50	44.9					
6	153	01.5	304	55.6	309	15.4	12	27.1	65	47.6					
7	168	04.0	319	57.6	324	16.4	27	29.5	80	50.2					
8	183	06.4	334	59.6	339	17.3	42	31.8	95	52.9					
9	198	08.9	350	01.6	354	18.3	57	34.2	110	55.5					
10	213	11.3	5	03.5	9	19.2	72	36.6	125	58.2					
11	228	13.8	20	05.5	24	20.2	87	39.0	141	00.8					
12	243	16.3	35	07.5	39	21.1	102	41.4	156	03.5					
13	258	18.7	50	09.5	54	22.1	117	43.7	171	06.1					
14	273	21.2	65	11.5	69	23.1	132	46.1	186	08.8					
15	288	23.7	80	13.4	84	24.0	147	48.5	201	11.4					
16	303	26.1	95	15.4	99	25.0	162	50.9	216	14.1					
17	318	28.6	110	17.4	114	25.9	177	53.3	231	16.7					
18	333	31.1	125	19.3	129	26.9	192	55.6	246	19.4					
19	348	33.5	140	21.3	144	27.8	207	58.0	261	22.0					
20	3	36.0	155	23.2	159	28.8	223	00.4	276	24.7					
21	18	38.4	170	25.2	174	29.7	238	02.8	291	27.4					
22	33	40.9	185	27.1	189	30.7	253	05.2	306	30.0					
23	48	43.4	200	29.1	204	31.7	268	07.6	321	32.7					
24	63	45.8	215	31.0	219	32.6	283	09.9	336	35.3					
Dif	—		+20		+10		-6		+24		0		+27		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 46 ^m 9			Edad: 20 ^d 1 PHE { 4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'4 SD: 15'5 PMG: 4 ^h 04 ^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		
0	183	18.1	-20	40.0	301	12.6	+24	16.5	60 N	6 36	7 29	8 22	19 40	95	13 31	15		
1	198	17.9		40.5	315	39.7		11.3	58	30	20	8 08	19 58	90	13 13	20		
2	213	17.7		41.0	330	06.8		06.0	56	24	12	7 56	20 13	86	12 58	23		
3	228	17.6		41.5	344	33.9	+24	00.5	54	20	7 04	45	25	83	45	26		
4	243	17.4		42.0	359	01.1	+23	54.8	52	15	6 57	36	36	80	33	29		
5	258	17.2	-20	42.5	13	28.2	+23	49.1	50	6 11	6 51	7 28	20 46	78	12 23	31		
6	273	17.0	-20	43.0	27	55.4	+23	43.2	45	6 02	6 38	7 10	21 07	73	12 01	36		
7	288	16.8		43.5	42	22.6		37.1	40	5 53	26	6 56	24	69	11 44	39		
8	303	16.6		44.0	56	49.9		30.9	35	45	16	44	38	66	29	42		
9	318	16.4		44.4	71	17.1		24.6	30	38	6 07	33	21 50	64	11 16	44		
10	333	16.2		44.9	85	44.4		18.2	20	24	5 51	6 15	22 10	60	10 54	48		
11	348	16.1	-20	45.4	100	11.8	+23	11.6	10 N	5 10	5 36	5 59	22 28	56	10 35	51		
12	3	15.9	-20	45.9	114	39.1	+23	04.9	0	4 55	5 21	5 43	22 45	53	10 17	54		
13	18	15.7		46.4	129	06.5	+22	58.0	10 S	39	5 05	28	23 02	49	9 59	56		
14	33	15.5		46.9	143	34.0		51.0	20	4 19	4 47	5 11	20	45	40	59		
15	48	15.3		47.4	158	01.4		43.9	30	3 53	26	4 52	40	42	17	63		
16	63	15.1		47.9	172	28.9		36.6	35	37	4 12	41	23 52	39	9 04	65		
17	78	14.9	-20	48.3	186	56.4	+22	29.2	40	3 17	3 57	4 28	** ** *	**	8 48	68		
18	93	14.7	-20	48.8	201	24.0	+22	21.7	45	2 52	3 37	4 13	** ** *	**	8 30	71		
19	108	14.5		49.3	215	51.6		14.1	50	2 16	12	3 54	0 06	36	8 07	76		
20	123	14.3		49.8	230	19.2	+22	06.3	52	1 56	3 00	44	18	33	7 56	78		
21	138	14.2		50.3	244	46.9	+21	58.4	54	1 31	2 46	34	31	30	44	80		
22	153	14.0		50.8	259	14.6		50.3	56	0 54	29	23	0 45	28	29	83		
23	168	13.8		51.2	273	42.3		42.1	58	** ** *	2 08	3 09	1 03	24	7 12	87		
24	183	13.6	-20	51.7	288	10.1	+21	33.9	60 S	** ** *	1 42	2 54	1 24	19	6 51	93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 41 ^m 7		Mag: -4.8 PMG: 9 ^h 37 ^m			Mag: +1.7 PMG: 9 ^h 21 ^m			Mag: -2.3 PMG: 5 ^h 07 ^m			Mag: -0.3 PMG: 1 ^h 33 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	63	45.8	215	31.0	-11	31.4	219	32.6	-9	05.7	283	09.9	+16	03.1	336	35.3	+22	04.7
1	78	48.3	230	32.9		31.1	234	33.6		06.3	298	12.3		03.1	351	38.0		04.7
2	93	50.8	245	34.9		30.8	249	34.5		06.9	313	14.7		03.1	6	40.6		04.7
3	108	53.2	260	36.8		30.4	264	35.5		07.5	328	17.1		03.1	21	43.3		04.7
4	123	55.7	275	38.7		30.1	279	36.4		08.1	343	19.5		03.0	36	45.9		04.7
5	138	58.2	290	40.6	-11	29.8	294	37.4	-9	08.7	358	21.9	+16	03.0	51	48.6	+22	04.7
6	154	00.6	305	42.5	-11	29.4	309	38.3	-9	09.3	13	24.3	+16	03.0	66	51.2	+22	04.7
7	169	03.1	320	44.5		29.1	324	39.3		09.9	28	26.6		03.0	81	53.9		04.7
8	184	05.6	335	46.4		28.8	339	40.2		10.5	43	29.0		03.0	96	56.5		04.7
9	199	08.0	350	48.3		28.5	354	41.2		11.1	58	31.4		03.0	111	59.2		04.7
10	214	10.5	5	50.2		28.1	9	42.1		11.6	73	33.8		03.0	127	01.9		04.7
11	229	12.9	20	52.1	-11	27.8	24	43.1	-9	12.2	88	36.2	+16	02.9	142	04.5	+22	04.7
12	244	15.4	35	54.0	-11	27.5	39	44.1	-9	12.8	103	38.6	+16	02.9	157	07.2	+22	04.7
13	259	17.9	50	55.9		27.2	54	45.0		13.4	118	41.0		02.9	172	09.8		04.7
14	274	20.3	65	57.7		26.9	69	46.0		14.0	133	43.4		02.9	187	12.5		04.7
15	289	22.8	80	59.6		26.6	84	46.9		14.6	148	45.7		02.9	202	15.1		04.7
16	304	25.3	96	01.5		26.3	99	47.9		15.2	163	48.1		02.9	217	17.8		04.7
17	319	27.7	111	03.4	-11	26.0	114	48.8	-9	15.8	178	50.5	+16	02.9	232	20.4	+22	04.7
18	334	30.2	126	05.3	-11	25.6	129	49.8	-9	16.4	193	52.9	+16	02.9	247	23.1	+22	04.7
19	349	32.7	141	07.1		25.3	144	50.7		17.0	208	55.3		02.8	262	25.8		04.6
20	4	35.1	156	09.0		25.0	159	51.7		17.6	223	57.7		02.8	277	28.4		04.6
21	19	37.6	171	10.9		24.7	174	52.6		18.2	239	00.1		02.8	292	31.1		04.6
22	34	40.1	186	12.7		24.4	189	53.6		18.7	254	02.5		02.8	307	33.7		04.6
23	49	42.5	201	14.6		24.2	204	54.5		19.3	269	04.9		02.8	322	36.4		04.6
24	64	45.0	216	16.4	-11	23.9	219	55.5	-9	19.9	284	07.3	+16	02.8	337	39.0	+22	04.6
Dif	—		+19		+3		+10		-6		+24		0		+27		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°2 PMG: 11 ^h 47 ^m 2			Edad: 21 ^d 1 PHE { 4 ^h : 57°6 12 ^h : 57°8 20 ^h : 58°0 PMG: 4 ^h 58 ^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	183	13.6	-20	51.7	288	10.1	+21	33.9	60 N	15 10	16 03	16 57	21 15 97	13 46 9				
1	198	13.4		52.2	302	37.9	88	25.4	58	24	12	17 03	28 92	33 13				
2	213	13.2		52.7	317	05.8	89	16.9	56	36	21	08	39 88	21 17				
3	228	13.0		53.2	331	33.7	89	+21 08.2	54	47	28	13	48 85	11 20				
4	243	12.8		53.6	346	01.6	89	+20 59.4	52	15 56	35	18	21 56 83	13 02 23				
5	258	12.6	-20	54.1	0	29.6	90	+20 50.5	50	16 05	16 42	17 22	22 04 80	12 54 25				
6	273	12.4	-20	54.6	14	57.6	90	+20 41.4	45	16 23	16 55	17 32	22 20 75	12 37 30				
7	288	12.2		55.1	29	25.6	90	32.3	40	37	17 07	40	33 71	23 33				
8	303	12.0		55.5	43	53.7	91	23.0	35	16 49	17	48	44 67	11 36				
9	318	11.8		56.0	58	21.8	91	13.6	30	17 00	26	17 55	22 54 64	12 00 40				
10	333	11.6		56.5	72	50.0	92	+20 04.1	20	19	43	18 10	23 10 60	11 42 44				
11	348	11.4	-20	57.0	87	18.2	92	+19 54.4	10 N	17 35	17 58	18 24	23 24 56	11 26 48				
12	3	11.2	-20	57.4	101	46.5	93	+19 44.7	0	17 51	18 13	18 39	23 38 51	11 11 51				
13	18	11.0		57.9	116	14.8	93	34.8	10 S	18 06	29	18 56	23 51 47	10 55 56				
14	33	10.8		58.4	130	43.1	93	24.8	20	23	18 47	19 16	** ** *	39 60				
15	48	10.6		58.8	145	11.5	94	14.7	30	43	19 10	42	** ** *	20 64				
16	63	10.4		59.3	159	39.9	94	+19 04.5	35	18 54	23	19 58	** ** *	10 09 67				
17	78	10.2	-20	59.8	174	08.3	94	+18 54.1	40	19 08	19 39	20 19	0 06 36	9 56 71				
18	93	10.0	-21	00.2	188	36.8	95	+18 43.7	45	19 23	19 59	20 45	0 22 32	9 41 74				
19	108	09.9		00.7	203	05.4	96	33.1	50	43	20 24	21 22	42 27	23 79				
20	123	09.7		01.2	217	33.9	95	22.5	52	19 52	37	21 42	0 51 25	14 81				
21	138	09.5		01.6	232	02.6	97	11.7	54	20 02	20 51	22 08	1 01 23	9 04 84				
22	153	09.3		02.1	246	31.2	96	+18 00.8	56	14	21 09	22 50	13 20	8 52 88				
23	168	09.1		02.6	260	59.9	97	+17 49.8	58	28	30	** ** *	27 16	39 92				
24	183	08.9	-21	03.0	275	28.6	97	+17 38.7	60 S	20 44	21 59	** ** *	1 43 11	8 24 97				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 37 ^m 8		Mag: -4.8 PMG: 9 ^h 34 ^m			Mag: +1.7 PMG: 9 ^h 20 ^m			Mag: -2.3 PMG: 5 ^h 03 ^m			Mag: -0.4 PMG: 1 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	64	45.0	216	16.4	-11	23.9	219	55.5	-9	19.9	284	07.3	+16	02.8	337	39.0	+22	04.6
1	79	47.4	231	18.3		23.6	234	56.4		20.5	299	09.7		02.8	352	41.7		04.6
2	94	49.9	246	20.1		23.3	249	57.4		21.1	314	12.0		02.7	7	44.4		04.6
3	109	52.4	261	22.0		23.0	264	58.3		21.7	329	14.4		02.7	22	47.0		04.6
4	124	54.8	276	23.8		22.7	279	59.3		22.3	344	16.8		02.7	37	49.7		04.6
5	139	57.3	291	25.7	-11	22.4	295	00.2	-9	22.9	359	19.2	+16	02.7	52	52.3	+22	04.6
6	154	59.8	306	27.5	-11	22.1	310	01.2	-9	23.5	14	21.6	+16	02.7	67	55.0	+22	04.6
7	170	02.2	321	29.3		21.9	325	02.2		24.1	29	24.0		02.7	82	57.6		04.6
8	185	04.7	336	31.1		21.6	340	03.1		24.7	44	26.4		02.7	98	00.3		04.6
9	200	07.2	351	33.0		21.3	355	04.1		25.2	59	28.8		02.7	113	03.0		04.6
10	215	09.6	6	34.8		21.0	10	05.0		25.8	74	31.2		02.7	128	05.6		04.6
11	230	12.1	21	36.6	-11	20.8	25	06.0	-9	26.4	89	33.6	+16	02.6	143	08.3	+22	04.6
12	245	14.6	36	38.4	-11	20.5	40	06.9	-9	27.0	104	36.0	+16	02.6	158	10.9	+22	04.6
13	260	17.0	51	40.2		20.2	55	07.9		27.6	119	38.4		02.6	173	13.6		04.6
14	275	19.5	66	42.0		20.0	70	08.8		28.2	134	40.8		02.6	188	16.3		04.6
15	290	21.9	81	43.8		19.7	85	09.8		28.8	149	43.2		02.6	203	18.9		04.6
16	305	24.4	96	45.6		19.4	100	10.7		29.4	164	45.6		02.6	218	21.6		04.6
17	320	26.9	111	47.4	-11	19.2	115	11.7	-9	30.0	179	48.0	+16	02.6	233	24.2	+22	04.6
18	335	29.3	126	49.2	-11	18.9	130	12.6	-9	30.6	194	50.4	+16	02.6	248	26.9	+22	04.6
19	350	31.8	141	51.0		18.7	145	13.6		31.1	209	52.8		02.6	263	29.5		04.6
20	5	34.3	156	52.8		18.4	160	14.5		31.7	224	55.2		02.5	278	32.2		04.6
21	20	36.7	171	54.6		18.2	175	15.5		32.3	239	57.6		02.5	293	34.9		04.6
22	35	39.2	186	56.4		17.9	190	16.4		32.9	255	00.0		02.5	308	37.5		04.6
23	50	41.7	201	58.1		17.7	205	17.4		33.5	270	02.4		02.5	323	40.2		04.6
24	65	44.1	216	59.9	-11	17.4	220	18.3	-9	34.1	285	04.8	+16	02.5	338	42.8	+22	04.6
Dif	—		+18		+3		+10		-6		+24		0		+27		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 47 ^m 6			Edad: 22 ^d 1 PHE { 4 ^h : 58'2 12 ^h : 58'4 20 ^h : 58'6 SD: 15'8 PMG: 5 ^h 50 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	08.9	-21	03.0	275	28.6	+17	38.7	60 N	6	39	7	33	8	26	22	52	
1	198	08.6		03.5	289	57.4	98	27.5	58	33	23	8	12	23	00	93	46	
2	213	08.4		04.0	304	26.2	98	16.2	56	27	15	7	59		07	90	38	
3	228	08.2		04.4	318	55.1	99	+17	54	22	07		49		13	87	31	
4	243	08.0		04.9	333	24.0	99	+16	53	18	7	00	39		19	84	25	
5	258	07.8	-21	05.3	347	52.9	99	+16	50	6	13	6	54	7	31	23	24	
6	273	07.6	-21	05.8	2	21.9	100	+16	45	6	04	6	40	7	13	23	35	
7	288	07.4		06.3	16	50.9	100		40	5	55		28	6	58	44	71	
8	303	07.2		06.7	31	19.9	100	+16	35	47	18		46		51	68	47	
9	318	07.0		07.2	45	49.0	101	+15	30	40	6	09	35		23	58	65	
10	333	06.8		07.6	60	18.1	101		20	25	5	52	6	16	**	**	**	
11	348	06.6	-21	08.1	74	47.3	102	+15	10 N	5	11	5	37	5	59	**	**	**
12	3	06.4	-21	08.5	89	16.5	102	+15	0	4	56	5	22	5	44	**	**	**
13	18	06.2		09.0	103	45.7	102	+15	10 S	39	5	06		28	**	**	**	
14	33	06.0		09.5	118	15.0	103	+14	20	4	19	4	47	5	11	0	05	
15	48	05.8		09.9	132	44.3	103		30	3	53	25	4	52		22	37	
16	63	05.6		10.4	147	13.6	103		35	36	4	11	40		31	35	16	
17	78	05.4	-21	10.8	161	43.0	104	+14	40	3	16	3	55	4	27	0	42	
18	93	05.2	-21	11.3	176	12.4	104	+14	45	2	50	3	36	4	11	0	54	
19	108	05.0		11.7	190	41.8	104	+13	50	2	13	3	10	3	52	1	09	
20	123	04.8		12.2	205	11.2	104		52	1	52	2	58	4	2	16	21	
21	138	04.6		12.6	219	40.7	105		54	1	26		43	3	2	24	18	
22	153	04.4		13.1	234	10.2	105	+13	56	0	44		25	20		33	15	
23	168	04.1		13.5	248	39.8	106	+12	58	**	**	2	04	3	06	43	11	
24	183	03.9	-21	14.0	263	09.4	106	+12	60 S	**	**	1	35	2	50	1	54	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 33 ^m 8		Mag: -4.8 PMG: 9 ^h 31 ^m		Mag: +1.7 PMG: 9 ^h 18 ^m		Mag: -2.3 PMG: 4 ^h 59 ^m		Mag: -0.4 PMG: 1 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	65	44.1	216	59.9	-11	17.4	220	18.3	-9	34.1
1	80	46.6	232	01.7		17.2	235	19.3		34.7
2	95	49.0	247	03.4		16.9	250	20.2		35.3
3	110	51.5	262	05.2		16.7	265	21.2		35.9
4	125	54.0	277	07.0		16.5	280	22.1		36.4
5	140	56.4	292	08.7	-11	16.2	295	23.1	-9	37.0
6	155	58.9	307	10.5	-11	16.0	310	24.0	-9	37.6
7	171	01.4	322	12.2		15.8	325	25.0		38.2
8	186	03.8	337	14.0		15.5	340	25.9		38.8
9	201	06.3	352	15.7		15.3	355	26.9		39.4
10	216	08.8	7	17.5		15.1	10	27.8		40.0
11	231	11.2	22	19.2	-11	14.8	25	28.8	-9	40.6
12	246	13.7	37	20.9	-11	14.6	40	29.7	-9	41.1
13	261	16.2	52	22.6		14.4	55	30.6		41.7
14	276	18.6	67	24.4		14.2	70	31.6		42.3
15	291	21.1	82	26.1		14.0	85	32.5		42.9
16	306	23.5	97	27.8		13.7	100	33.5		43.5
17	321	26.0	112	29.5	-11	13.5	115	34.4	-9	44.1
18	336	28.5	127	31.2	-11	13.3	130	35.4	-9	44.7
19	351	30.9	142	33.0		13.1	145	36.3		45.3
20	6	33.4	157	34.7		12.9	160	37.3		45.8
21	21	35.9	172	36.4		12.7	175	38.2		46.4
22	36	38.3	187	38.1		12.5	190	39.2		47.0
23	51	40.8	202	39.8		12.3	205	40.1		47.6
24	66	43.3	217	41.5	-11	12.1	220	41.1	-9	48.2
Dif	—		+17		+2		+9		-6	
							+24		0	
									+27	
									0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2				Edad: 23 ^d 1 PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'3						Civil		Náutico		Hora R°	
	PMG: 11 ^h 47 ^m 9				SD: 16'0 PMG: 6 ^h 41 ^m R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			h m	h m	h m	h m m	h m m	h m m	h m m	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	03.9	-21	14.0	263	09.4	+12	43.1	60 N	15 07	16 00	16 55	** ** *	14 02	4	
1	198	03.7		14.4	277	39.0 ¹⁰⁶		29.7 ¹³⁴	58	22	10	17 01	** ** *	13 56	9	
2	213	03.5		14.8	292	08.6 ¹⁰⁶		16.2 ¹³⁵	56	34	19	06	** ** *	52	11	
3	228	03.3		15.3	306	38.3 ¹⁰⁷	+12	02.6 ¹³⁶	54	45	27	12	** ** *	48	14	
4	243	03.1		15.7	321	07.9 ¹⁰⁶	+11	48.9 ¹³⁷	52	15 55	34	16	** ** *	44	16	
5	258	02.9	-21	16.2	335	37.7 ¹⁰⁸	+11	35.2 ¹³⁷	50	16 03	16 40	17 21	** ** *	13 40	19	
6	273	02.7	-21	16.6	350	07.4 ¹⁰⁷	+11	21.4 ¹³⁸	45	16 21	16 54	17 31	** ** *	13 33	24	
7	288	02.5		17.1	4	37.1 ¹⁰⁷	+11	07.5 ¹³⁹	40	36	17 06	40	** ** *	26	28	
8	303	02.3		17.5	19	06.9 ¹⁰⁸	+10	53.6 ¹³⁹	35	16 49	17	48	** ** *	21	31	
9	318	02.0		17.9	33	36.7 ¹⁰⁸		39.6 ¹⁴⁰	30	17 00	26	17 55	** ** *	16	35	
10	333	01.8		18.4	48	06.5 ¹⁰⁸		25.5 ¹⁴¹	20	19	43	18 10	0 10	59	07 41	
11	348	01.6	-21	18.8	62	36.4 ¹⁰⁹	+10	11.3 ¹⁴²	10 N	17 36	17 58	18 24	0 20	54	13 00 45	
12	3	01.4	-21	19.3	77	06.2 ¹⁰⁸	+9	57.1 ¹⁴²	0	17 52	18 14	18 40	0 29	50	12 53 49	
13	18	01.2		19.7	91	36.1 ¹⁰⁹		42.8 ¹⁴³	10 S	18 07	30	18 57	38	46	46 54	
14	33	01.0		20.1	106	06.0 ¹⁰⁹		28.5 ¹⁴³	20	25	18 49	19 17	48	41	38 59	
15	48	00.8		20.6	120	35.9 ¹⁰⁹	+9	14.1 ¹⁴⁴	30	44	19 11	19 44	0 59	36	29 65	
16	63	00.6		21.0	135	05.8 ¹⁰⁹	+8	59.6 ¹⁴⁵	35	18 56	25	20 01	1 06	32	24 68	
17	78	00.3	-21	21.5	149	35.8 ¹¹⁰	+8	45.1 ¹⁴⁵	40	19 10	19 41	20 21	1 13	29	12 18 72	
18	93	00.1	-21	21.9	164	05.7 ¹⁰⁹	+8	30.5 ¹⁴⁶	45	19 26	20 02	20 48	1 22	25	12 11 76	
19	107	59.9		22.3	178	35.7 ¹¹⁰		15.8 ¹⁴⁷	50	46	28	21 26	32	20	12 02 82	
20	122	59.7		22.8	193	05.7 ¹¹⁰	+8	01.1 ¹⁴⁷	52	19 55	41	21 47	37	17	11 59 84	
21	137	59.5		23.2	207	35.7 ¹¹⁰	+7	46.3 ¹⁴⁸	54	20 06	20 56	22 15	42	15	54 87	
22	152	59.3		23.6	222	05.7 ¹¹⁰		31.5 ¹⁴⁸	56	18	21 14	23 03	48	12	50 89	
23	167	59.1		24.0	236	35.7 ¹¹⁰		16.7 ¹⁴⁸	58	32	21 36	** ** *	1 54	9	44 94	
24	182	58.8	-21	24.5	251	05.7 ¹¹⁰	+7	01.7 ¹⁵⁰	60 S	20 49	22 06	** ** *	2 01	6	11 38 97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 29 ^m 9		Mag: -4.9 PMG: 9 ^h 28 ^m		Mag: +1.7 PMG: 9 ^h 17 ^m		Mag: -2.3 PMG: 4 ^h 55 ^m		Mag: -0.4 PMG: 1 ^h 21 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	66	43.3	217	41.5	-11	12.1	220	41.1	-9	48.2
1	81	45.7	232	43.1		11.9	235	42.0		48.8
2	96	48.2	247	44.8		11.7	250	43.0		49.4
3	111	50.7	262	46.5		11.5	265	43.9		49.9
4	126	53.1	277	48.2		11.3	280	44.9		50.5
5	141	55.6	292	49.9	-11	11.1	295	45.8	-9	51.1
6	156	58.0	307	51.5	-11	10.9	310	46.8	-9	51.7
7	172	00.5	322	53.2		10.7	325	47.7		52.3
8	187	03.0	337	54.9		10.6	340	48.6		52.9
9	202	05.4	352	56.5		10.4	355	49.6		53.5
10	217	07.9	7	58.2		10.2	10	50.5		54.0
11	232	10.4	22	59.9	-11	10.0	25	51.5	-9	54.6
12	247	12.8	38	01.5	-11	09.8	40	52.4	-9	55.2
13	262	15.3	53	03.2		09.7	55	53.4		55.8
14	277	17.8	68	04.8		09.5	70	54.3		56.4
15	292	20.2	83	06.5		09.3	85	55.3		57.0
16	307	22.7	98	08.1		09.1	100	56.2		57.6
17	322	25.1	113	09.7	-11	09.0	115	57.2	-9	58.1
18	337	27.6	128	11.4	-11	08.8	130	58.1	-9	58.7
19	352	30.1	143	13.0		08.6	145	59.1		59.3
20	7	32.5	158	14.6		08.5	161	00.0	-9	59.9
21	22	35.0	173	16.3		08.3	176	00.9	-10	00.5
22	37	37.5	188	17.9		08.2	191	01.9		01.1
23	52	39.9	203	19.5		08.0	206	02.8		01.6
24	67	42.4	218	21.1	-11	07.8	221	03.8	-10	02.2
Dif	—		+17		+2		+9		-6	
								+24	0	
									+27	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 2			Edad: 24 ^d 1 PHE { 4 ^h : 59'5 12 ^h : 59'6 20 ^h : 59'8 SD: 16'2 PMG: 7 ^h 31 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	58.8	-21	24.5	251	05.7	+7 01.7	60 N	6 42	7 37	8 30	0 29	98	14 06	5
1	197	58.6		24.9	265	35.7 ¹¹⁰	+6 46.8 ¹⁴⁹	58	36	27	16	33	94	05	8
2	212	58.4		25.3	280	05.7 ¹¹⁰	31.7 ¹⁵¹	56	30	18	8 03	37	90	03	1
3	227	58.2		25.8	294	35.8 ¹¹¹	16.7 ¹⁵⁰	54	25	10	7 52	40	87	02	13
4	242	58.0		26.2	309	05.8 ¹¹⁰	+6 01.6 ¹⁵¹	52	20	7 03	42	43	84	14 00	17
5	257	57.8	-21	26.6	323	35.8 ¹¹⁰	+5 46.4 ¹⁵²	50	6 16	6 56	7 34	0 45	82	13 59	19
6	272	57.5	-21	27.0	338	05.9 ¹¹¹	+5 31.2 ¹⁵²	45	6 06	6 42	7 15	0 51	77	13 57	23
7	287	57.3		27.5	352	35.9 ¹¹⁰	16.0 ¹⁵²	40	5 57	30	7 00	55	73	54	28
8	302	57.1		27.9	7	06.0 ¹¹¹	+5 00.7 ¹⁵³	35	49	20	6 48	0 59	69	52	32
9	317	56.9		28.3	21	36.0 ¹¹⁰	+4 45.4 ¹⁵³	30	41	6 10	36	1 03	65	51	34
10	332	56.7		28.7	36	06.0 ¹¹⁰	30.0 ¹⁵⁴	20	26	5 54	17	09	59	48	40
11	347	56.4	-21	29.2	50	36.1 ¹¹¹	+4 14.6 ¹⁵⁴	10 N	5 12	5 38	6 00	1 14	54	13 45	45
12	2	56.2	-21	29.6	65	06.1 ¹¹⁰	+3 59.2 ¹⁵⁴	0	4 57	5 22	5 45	1 19	50	13 42	50
13	17	56.0		30.0	79	36.1 ¹¹⁰	43.7 ¹⁵⁵	10 S	39	5 06	29	24	45	40	55
14	32	55.8		30.4	94	06.1 ¹¹⁰	28.2 ¹⁵⁵	20	4 19	4 47	5 11	29	40	37	60
15	47	55.6		30.9	108	36.1 ¹¹⁰	+3 12.7 ¹⁵⁵	30	3 52	25	4 51	35	34	34	65
16	62	55.3		31.3	123	06.1 ¹¹⁰	+2 57.1 ¹⁵⁶	35	35	4 11	40	38	32	32	69
17	77	55.1	-21	31.7	137	36.1 ¹¹⁰	+2 41.5 ¹⁵⁶	40	3 15	3 54	4 26	1 42	28	13 30	73
18	92	54.9	-21	32.1	152	06.1 ¹¹⁰	+2 25.9 ¹⁵⁶	45	2 48	3 34	4 10	1 47	23	13 27	78
19	107	54.7		32.5	166	36.1 ¹¹⁰	+2 10.3 ¹⁵⁶	50	2 10	3 08	3 50	52	18	24	83
20	122	54.5		32.9	181	06.0 ¹⁰⁹	+1 54.6 ¹⁵⁷	52	1 49	2 55	41	54	17	23	85
21	137	54.2		33.4	195	35.9 ¹⁰⁹	38.9 ¹⁵⁷	54	1 20	40	30	1 57	14	21	88
22	152	54.0		33.8	210	05.9 ¹¹⁰	23.2 ¹⁵⁷	56	0 33	22	18	2 00	11	19	92
23	167	53.8		34.2	224	35.7 ¹⁰⁸	+1 07.5 ¹⁵⁷	58	** **	2 00	3 04	03	8	18	94
24	182	53.6	-21	34.6	239	05.6 ¹⁰⁹	+0 51.7 ¹⁵⁸	60 S	** **	1 29	2 47	2 07	4	13 15	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 26 ^m 0		Mag: -4.9 PMG: 9 ^h 26 ^m		Mag: +1.7 PMG: 9 ^h 15 ^m		Mag: -2.3 PMG: 4 ^h 51 ^m		Mag: -0.4 PMG: 1 ^h 16 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	67	42.4	218	21.1	-11	07.8	287	00.4	+16	02.1
1	82	44.9	233	22.7		07.7	302	02.8		02.1
2	97	47.3	248	24.4		07.5	317	05.2		02.1
3	112	49.8	263	26.0		07.4	332	07.6		02.1
4	127	52.3	278	27.6		07.2	347	10.0		02.1
5	142	54.7	293	29.2	-11	07.1	2	12.5	+16	02.1
6	157	57.2	308	30.8	-11	06.9	17	14.9	+16	02.1
7	172	59.6	323	32.4		06.8	32	17.3		02.1
8	188	02.1	338	34.0		06.7	47	19.7		02.1
9	203	04.6	353	35.5		06.5	62	22.1		02.1
10	218	07.0	8	37.1		06.4	77	24.6		02.1
11	233	09.5	23	38.7	-11	06.2	92	27.0	+16	02.1
12	248	12.0	38	40.3	-11	06.1	107	29.4	+16	02.1
13	263	14.4	53	41.9		06.0	122	31.8		02.1
14	278	16.9	68	43.4		05.8	137	34.2		02.1
15	293	19.4	83	45.0		05.7	152	36.7		02.1
16	308	21.8	98	46.6		05.6	167	39.1		02.1
17	323	24.3	113	48.1	-11	05.5	182	41.5	+16	02.1
18	338	26.8	128	49.7	-11	05.3	197	43.9	+16	02.1
19	353	29.2	143	51.3		05.2	212	46.3		02.1
20	8	31.7	158	52.8		05.1	227	48.8		02.1
21	23	34.1	173	54.4		05.0	242	51.2		02.1
22	38	36.6	188	55.9		04.9	257	53.6		02.1
23	53	39.1	203	57.5		04.8	272	56.0		02.1
24	68	41.5	218	59.0	-11	04.6	287	58.5	+16	02.1
Dif	—		+16		+1		+24		0	
					+9		-6		+27	
									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 6			Edad: 25 ^d 1 PHE { 4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'2 PMG: 8 ^h 20 ^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				
0	182	53.6	-21	34.6	239	05.6	+0	51.7	60 N	15 04	15 58	16 53	2 07 100	14 11 5				
1	197	53.3		35.0	253	35.5 ¹⁰⁹		36.0 ¹⁵⁷	58	19	16 08	16 59	07 96	13 8				
2	212	53.1		35.4	268	05.3 ¹⁰⁸		20.2 ¹⁵⁸	56	32	17	17 05	07 93	14 12				
3	227	52.9		35.8	282	35.1 ¹⁰⁸	+0	04.4 ¹⁵⁸	54	43	25	10	07 89	15 15				
4	242	52.7		36.2	297	04.9 ¹⁰⁸	-0	11.4 ¹⁵⁸	52	15 53	32	15	07 87	17 17				
5	257	52.4	-21	36.7	311	34.7 ¹⁰⁸	-0	27.2 ¹⁵⁸	50	16 02	16 39	17 20	2 07 84	14 18 19				
6	272	52.2	-21	37.1	326	04.5 ¹⁰⁸	-0	43.0 ¹⁵⁸	45	16 20	16 53	17 30	2 08 78	14 20 25				
7	287	52.0		37.5	340	34.2 ¹⁰⁷	-0	58.9 ¹⁵⁹	40	36	17 06	39	08 74	22 29				
8	302	51.8		37.9	355	03.9 ¹⁰⁷	-1	14.7 ¹⁵⁸	35	16 49	16	47	08 70	24 32				
9	317	51.5		38.3	9	33.5 ¹⁰⁶		30.5 ¹⁵⁸	30	17 00	26	17 55	08 66	25 36				
10	332	51.3		38.7	24	03.2 ¹⁰⁷	-1	46.4 ¹⁵⁹	20	19	43	18 10	08 61	28 42				
11	347	51.1	-21	39.1	38	32.8 ¹⁰⁶	-2	02.2 ¹⁵⁸	10 N	17 36	17 59	18 25	2 08 56	14 30 47				
12	2	50.9	-21	39.5	53	02.4 ¹⁰⁶	-2	18.0 ¹⁵⁸	0	17 52	18 15	18 40	2 09 50	14 32 52				
13	17	50.6		39.9	67	31.9 ¹⁰⁵		33.9 ¹⁵⁹	10 S	18 08	31	18 58	09 46	35 56				
14	32	50.4		40.3	82	01.4 ¹⁰⁵	-2	49.7 ¹⁵⁸	20	26	18 50	19 19	09 41	37 61				
15	47	50.2		40.7	96	30.9 ¹⁰⁵	-3	05.5 ¹⁵⁸	30	46	19 13	19 46	09 35	39 68				
16	62	49.9		41.1	111	00.3 ¹⁰⁴		21.3 ¹⁵⁸	35	18 58	27	20 03	10 31	41 71				
17	77	49.7	-21	41.5	125	29.7 ¹⁰⁴	-3	37.1 ¹⁵⁸	40	19 12	19 44	20 24	2 10 28	14 43 74				
18	92	49.5	-21	41.9	139	59.0 ¹⁰³	-3	52.9 ¹⁵⁸	45	19 28	20 04	20 51	2 10 24	14 45 79				
19	107	49.3		42.3	154	28.4 ¹⁰⁴	-4	08.7 ¹⁵⁸	50	48	31	21 30	10 19	47 85				
20	122	49.0		42.7	168	57.6 ¹⁰²		24.5 ¹⁵⁸	52	19 58	20 44	21 52	11 16	48 87				
21	137	48.8		43.1	183	26.9 ¹⁰³		40.2 ¹⁵⁷	54	20 09	21 00	22 22	11 14	49 90				
22	152	48.6		43.5	197	56.1 ¹⁰²	-4	56.0 ¹⁵⁸	56	22	18	23 18	11 11	51 93				
23	167	48.3		43.9	212	25.2 ¹⁰¹	-5	11.7 ¹⁵⁷	58	36	21 42	** ** *	11 8	52 97				
24	182	48.1	-21	44.3	226	54.3 ¹⁰¹	-5	27.4 ¹⁵⁷	60 S	20 53	22 14	** ** *	2 11 5	14 54 101				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 19 ^h 22 ^m 0		Mag: -4.9 PMG: 9 ^h 23 ^m			Mag: +1.7 PMG: 9 ^h 14 ^m			Mag: -2.3 PMG: 4 ^h 47 ^m				Mag: -0.4 PMG: 1 ^h 12 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	68	41.5	218	59.0	-11	04.6	221	26.4	-10	16.2	287	58.5	+16	02.1	341	54.6	+22	04.4
1	83	44.0	234	00.5		04.5	236	27.4		16.8	303	00.9		02.1	356	57.3		04.4
2	98	46.5	249	02.1		04.4	251	28.3		17.3	318	03.3		02.1	11	59.9		04.4
3	113	48.9	264	03.6		04.3	266	29.2		17.9	333	05.7		02.0	27	02.6		04.4
4	128	51.4	279	05.1		04.2	281	30.2		18.5	348	08.2		02.0	42	05.3		04.4
5	143	53.9	294	06.7	-11	04.1	296	31.1	-10	19.1	3	10.6	+16	02.0	57	07.9	+22	04.4
6	158	56.3	309	08.2	-11	04.0	311	32.1	-10	19.7	18	13.0	+16	02.0	72	10.6	+22	04.4
7	173	58.8	324	09.7		03.9	326	33.0		20.2	33	15.4		02.0	87	13.3		04.4
8	189	01.2	339	11.2		03.8	341	34.0		20.8	48	17.9		02.0	102	15.9		04.4
9	204	03.7	354	12.8		03.7	356	34.9		21.4	63	20.3		02.0	117	18.6		04.4
10	219	06.2	9	14.3		03.6	11	35.8		22.0	78	22.7		02.0	132	21.3		04.4
11	234	08.6	24	15.8	-11	03.5	26	36.8	-10	22.6	93	25.1	+16	02.0	147	23.9	+22	04.4
12	249	11.1	39	17.3	-11	03.4	41	37.7	-10	23.1	108	27.6	+16	02.0	162	26.6	+22	04.4
13	264	13.6	54	18.8		03.3	56	38.7		23.7	123	30.0		02.0	177	29.3		04.4
14	279	16.0	69	20.3		03.2	71	39.6		24.3	138	32.4		02.0	192	31.9		04.4
15	294	18.5	84	21.8		03.2	86	40.5		24.9	153	34.9		02.0	207	34.6		04.4
16	309	21.0	99	23.3		03.1	101	41.5		25.5	168	37.3		02.0	222	37.3		04.4
17	324	23.4	114	24.8	-11	03.0	116	42.4	-10	26.0	183	39.7	+16	02.0	237	39.9	+22	04.4
18	339	25.9	129	26.3	-11	02.9	131	43.4	-10	26.6	198	42.2	+16	02.0	252	42.6	+22	04.4
19	354	28.4	144	27.8		02.8	146	44.3		27.2	213	44.6		02.0	267	45.3		04.4
20	9	30.8	159	29.2		02.8	161	45.2		27.8	228	47.0		02.0	282	47.9		04.4
21	24	33.3	174	30.7		02.7	176	46.2		28.4	243	49.4		02.0	297	50.6		04.4
22	39	35.7	189	32.2		02.6	191	47.1		28.9	258	51.9		02.0	312	53.3		04.3
23	54	38.2	204	33.7		02.5	206	48.1		29.5	273	54.3		02.0	327	55.9		04.3
24	69	40.7	219	35.1	-11	02.5	221	49.0	-10	30.1	288	56.7	+16	02.0	342	58.6	+22	04.3
Dif	—		+15		+1		+9		-6		+24		0		+27		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16:2 PMG: 11 ^h 49 ^m 0			Edad: 26 ^d 1 PHE { 4 ^h : 60/4 12 ^h : 60/4 20 ^h : 60/5 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			
0	182	48.1	-21	44.3	226	54.3	-5	27.4	60 N	6 45	7 40	8 35	3 47	103	14 16	7				
1	197	47.9		44.7	241	23.4	101	43.1	58	39	30	19	43	98	21	11				
2	212	47.7		45.1	255	52.4	100	-5 58.7	56	33	21	8 06	40	94	26	14				
3	227	47.4		45.5	270	21.3	99	-6 14.3	54	28	13	7 55	36	92	30	17				
4	242	47.2		45.9	284	50.3	100	29.9	52	23	7 06	45	34	88	34	20				
5	257	47.0	-21	46.3	299	19.1	98	-6 45.5	50	6 18	6 59	7 36	3 31	86	14 37	23				
6	272	46.7	-21	46.7	313	47.9	98	-7 01.0	45	6 08	6 45	7 18	3 26	80	14 45	27				
7	287	46.5		47.1	328	16.7	98	16.5	40	5 59	32	7 02	22	75	51	32				
8	302	46.3		47.5	342	45.4	97	32.0	35	50	22	6 49	18	72	14 56	36				
9	317	46.0		47.8	357	14.0	96	-7 47.4	30	42	6 12	38	14	69	15 01	39				
10	332	45.8		48.2	11	42.6	96	-8 02.8	20	28	5 55	18	09	62	10	44				
11	347	45.6	-21	48.6	26	11.2	96	-8 18.2	10 N	5 13	5 39	6 01	3 04	57	15 17	49				
12	2	45.3	-21	49.0	40	39.7	95	-8 33.5	0	4 57	5 23	5 45	2 59	53	15 24	54				
13	17	45.1		49.4	55	08.1	94	-8 48.7	10 S	40	5 06	29	55	48	31	58				
14	32	44.9		49.8	69	36.4	93	-9 04.0	20	4 19	4 47	5 12	50	43	38	64				
15	47	44.6		50.2	84	04.8	94	19.1	30	3 52	24	4 51	44	38	47	69				
16	62	44.4		50.5	98	33.0	92	34.3	35	35	4 10	39	41	35	52	72				
17	77	44.1	-21	50.9	113	01.2	92	-9 49.3	40	3 13	3 54	4 26	2 38	30	15 57	77				
18	92	43.9	-21	51.3	127	29.3	91	-10 04.3	45	2 46	3 33	4 09	2 34	26	16 04	81				
19	107	43.7		51.7	141	57.4	91	19.3	50	2 07	3 06	3 49	29	21	12	86				
20	122	43.4		52.1	156	25.4	90	34.2	52	1 45	2 53	39	27	19	15	90				
21	137	43.2		52.5	170	53.3	89	-10 49.1	54	1 15	38	28	25	16	19	93				
22	152	43.0		52.8	185	21.2	89	-11 03.8	56	0 19	2 19	16	22	13	24	96				
23	167	42.7		53.2	199	49.0	88	18.6	58	** **	1 56	3 01	19	10	29	100				
24	182	42.5	-21	53.6	214	16.7	87	-11 33.2	60 S	** **	1 23	2 44	2 16	6	16 35	104				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 18 ^m 1			Mag: -4.9 PMG: 9 ^h 21 ^m			Mag: +1.7 PMG: 9 ^h 12 ^m			Mag: -2.3 PMG: 4 ^h 43 ^m			Mag: -0.4 PMG: 1 ^h 08 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	69	40.7	219	35.1	-11	02.5	221	49.0	-10	30.1	288	56.7	+16	02.0	342	58.6	+22	04.3		
1	84	43.1	234	36.6		02.4	236	49.9		30.7	303	59.2		02.0	358	01.3		04.3		
2	99	45.6	249	38.1		02.3	251	50.9		31.2	319	01.6		02.0	13	04.0		04.3		
3	114	48.1	264	39.5		02.3	266	51.8		31.8	334	04.0		02.0	28	06.6		04.3		
4	129	50.5	279	41.0		02.2	281	52.8		32.4	349	06.5		02.0	43	09.3		04.3		
5	144	53.0	294	42.4	-11	02.1	296	53.7	-10	33.0	4	08.9	+16	02.0	58	12.0	+22	04.3		
6	159	55.5	309	43.9	-11	02.1	311	54.6	-10	33.5	19	11.3	+16	02.0	73	14.6	+22	04.3		
7	174	57.9	324	45.4		02.0	326	55.6		34.1	34	13.8		02.0	88	17.3		04.3		
8	190	00.4	339	46.8		02.0	341	56.5		34.7	49	16.2		02.0	103	20.0		04.3		
9	205	02.9	354	48.2		01.9	356	57.5		35.3	64	18.6		02.0	118	22.6		04.3		
10	220	05.3	9	49.7		01.8	11	58.4		35.9	79	21.1		02.0	133	25.3		04.3		
11	235	07.8	24	51.1	-11	01.8	26	59.3	-10	36.4	94	23.5	+16	02.0	148	28.0	+22	04.3		
12	250	10.2	39	52.6	-11	01.7	42	00.3	-10	37.0	109	26.0	+16	02.0	163	30.6	+22	04.3		
13	265	12.7	54	54.0		01.7	57	01.2		37.6	124	28.4		02.0	178	33.3		04.3		
14	280	15.2	69	55.4		01.7	72	02.1		38.2	139	30.8		02.0	193	36.0		04.3		
15	295	17.6	84	56.9		01.6	87	03.1		38.7	154	33.3		02.0	208	38.7		04.3		
16	310	20.1	99	58.3		01.6	102	04.0		39.3	169	35.7		02.0	223	41.3		04.3		
17	325	22.6	114	59.7	-11	01.5	117	05.0	-10	39.9	184	38.1	+16	02.0	238	44.0	+22	04.3		
18	340	25.0	130	01.1	-11	01.5	132	05.9	-10	40.5	199	40.6	+16	02.0	253	46.7	+22	04.3		
19	355	27.5	145	02.5		01.4	147	06.8		41.0	214	43.0		02.0	268	49.3		04.3		
20	10	30.0	160	04.0		01.4	162	07.8		41.6	229	45.5		02.0	283	52.0		04.3		
21	25	32.4	175	05.4		01.4	177	08.7		42.2	244	47.9		02.1	298	54.7		04.3		
22	40	34.9	190	06.8		01.3	192	09.6		42.8	259	50.3		02.1	313	57.3		04.3		
23	55	37.3	205	08.2		01.3	207	10.6		43.3	274	52.8		02.1	329	00.0		04.3		
24	70	39.8	220	09.6	-11	01.3	222	11.5	-10	43.9	289	55.2	+16	02.1	344	02.7	+22	04.3		
Dif	—			+14			+9			-6			+24			+27			0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 49 ^m 4			Edad: 27 ^d 1 PHE { 4 ^h : 60:5 12 ^h : 60:5 20 ^h : 60:5 Rº: 56 ^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	182	42.5	-21 53.6	214	16.7	-11 33.2	87	60 N	15 02	15 56	16 51	5 30 106	14 23 10	
1	197	42.3		228	44.4	-11 47.8	146	58	17	16 07	16 58	21 102	32 15	
2	212	42.0	54.4	243	12.0	-12 02.3	145	56	30	16	17 04	14 97	40 19	
3	227	41.8	54.7	257	39.5		85	54	42	24	09	08 93	47 23	
4	242	41.5	55.1	272	07.0		85	52	15 52	31	14	5 02 91	14 54 25	
5	257	41.3	-21 55.5	286	34.4	-12 45.5	143	50	16 01	16 38	17 19	4 57 88	15 00 28	
6	272	41.1	-21 55.9	301	01.7	-12 59.7	142	45	16 20	16 53	17 30	4 46 82	15 12 34	
7	287	40.8	56.2	315	28.9	-13 13.9	142	40	35	17 05	39	37 77	23 37	
8	302	40.6	56.6	329	56.1		82	35	16 48	16	47	30 73	32 41	
9	317	40.3	57.0	344	23.2		81	30	17 00	26	17 55	23 70	40 44	
10	332	40.1	57.4	358	50.3	-13 55.9	140	20	19	43	18 10	11 65	15 54 49	
11	347	39.9	-21 57.7	13	17.2	-14 09.7	138	10 N	17 37	17 59	18 25	4 01 60	16 06 54	
12	2	39.6	-21 58.1	27	44.1	-14 23.4	137	0	17 53	18 15	18 41	3 52 56	16 18 57	
13	17	39.4	58.5	42	10.9		78	10 S	18 09	32	18 59	43 51	29 62	
14	32	39.1	58.8	56	37.7	-14 50.6	135	20	27	18 51	19 20	33 47	42 65	
15	47	38.9	59.2	71	04.3	-15 04.1	135	30	18 48	19 15	19 47	22 41	16 56 71	
16	62	38.7	59.6	85	30.9		76	35	19 00	29	20 05	16 38	17 04 74	
17	77	38.4	-21 59.9	99	57.5	-15 30.8	133	40	19 14	19 46	20 26	3 08 35	17 14 77	
18	92	38.2	-22 00.3	114	23.9	-15 43.9	131	45	19 30	20 07	20 54	3 00 30	17 25 81	
19	107	37.9	00.7	128	50.3	-15 57.0	131	50	19 51	34	21 34	2 50 25	38 87	
20	122	37.7	01.0	143	16.6	-16 10.0	130	52	20 01	20 47	21 57	46 22	45 90	
21	137	37.4	01.4	157	42.8		72	54	12	21 03	22 29	41 19	17 52 93	
22	152	37.2	01.8	172	09.0		72	56	25	23	** **	35 17	18 00 96	
23	167	37.0	02.1	186	35.0	-16 48.3	126	58	40	21 47	** **	29 13	09 100	
24	182	36.7	-22 02.5	201	01.0	-17 00.9	126	60 S	20 58	22 21	** **	2 22 9	18 19 106	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 14 ^m 2		Mag: -4.9 PMG: 9 ^h 19 ^m			Mag: +1.7 PMG: 9 ^h 11 ^m			Mag: -2.4 PMG: 4 ^h 40 ^m			Mag: -0.4 PMG: 1 ^h 04 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	70	39.8	220 09.6	-11 01.3	222 11.5	-10 43.9			289 55.2	+16 02.1		344 02.7	+22 04.3	
1	85	42.3	235 11.0	01.2	237 12.5	44.5			304 57.7	02.1		359 05.4	04.3	
2	100	44.7	250 12.4	01.2	252 13.4	45.1			320 00.1	02.1		14 08.0	04.3	
3	115	47.2	265 13.8	01.2	267 14.3	45.6			335 02.5	02.1		29 10.7	04.3	
4	130	49.7	280 15.2	01.2	282 15.3	46.2			350 05.0	02.1		44 13.4	04.3	
5	145	52.1	295 16.5	-11 01.1	297 16.2	-10 46.8			5 07.4	+16 02.1		59 16.0	+22 04.3	
6	160	54.6	310 17.9	-11 01.1	312 17.1	-10 47.4			20 09.9	+16 02.1		74 18.7	+22 04.3	
7	175	57.1	325 19.3	01.1	327 18.1	47.9			35 12.3	02.1		89 21.4	04.3	
8	190	59.5	340 20.7	01.1	342 19.0	48.5			50 14.8	02.1		104 24.1	04.3	
9	206	02.0	355 22.1	01.1	357 20.0	49.1			65 17.2	02.1		119 26.7	04.3	
10	221	04.5	10 23.4	01.1	12 20.9	49.7			80 19.6	02.1		134 29.4	04.3	
11	236	06.9	25 24.8	-11 01.0	27 21.8	-10 50.2			95 22.1	+16 02.1		149 32.1	+22 04.3	
12	251	09.4	40 26.2	-11 01.0	42 22.8	-10 50.8			110 24.5	+16 02.1		164 34.7	+22 04.3	
13	266	11.8	55 27.6	01.0	57 23.7	51.4			125 27.0	02.1		179 37.4	04.2	
14	281	14.3	70 28.9	01.0	72 24.6	51.9			140 29.4	02.1		194 40.1	04.2	
15	296	16.8	85 30.3	01.0	87 25.6	52.5			155 31.9	02.1		209 42.8	04.2	
16	311	19.2	100 31.6	01.0	102 26.5	53.1			170 34.3	02.1		224 45.4	04.2	
17	326	21.7	115 33.0	-11 01.0	117 27.4	-10 53.7			185 36.8	+16 02.1		239 48.1	+22 04.2	
18	341	24.2	130 34.3	-11 01.0	132 28.4	-10 54.2			200 39.2	+16 02.1		254 50.8	+22 04.2	
19	356	26.6	145 35.7	01.0	147 29.3	54.8			215 41.7	02.1		269 53.5	04.2	
20	11	29.1	160 37.0	01.0	162 30.2	55.4			230 44.1	02.1		284 56.1	04.2	
21	26	31.6	175 38.4	01.0	177 31.2	56.0			245 46.5	02.1		299 58.8	04.2	
22	41	34.0	190 39.7	01.0	192 32.1	56.5			260 49.0	02.1		315 01.5	04.2	
23	56	36.5	205 41.1	01.0	207 33.0	57.1			275 51.4	02.1		330 04.1	04.2	
24	71	39.0	220 42.4	-11 01.0	222 34.0	-10 57.7			290 53.9	+16 02.2		345 06.8	+22 04.2	
Dif	—		+14	0	+9	-6			+24	0			+27	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 49 ^m 7			Edad: 28 ^d 1 PHE { 4 ^h : 60'4 12 ^h : 60'4 20 ^h : 60'2 R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	36.7	-22	02.5	201	01.0	-17 00.9	60 N	6 49	7 44	8 38	7 16	105	14 33	18
1	197	36.5		02.8	215	27.0	70 13.3 ¹²⁴	58	42	33	23	7 03	99	47	23
2	212	36.2		03.2	229	52.8	68 25.7 ¹²⁴	56	36	24	8 10	6 51	95	14 59	28
3	227	36.0		03.6	244	18.6	68 37.9 ¹²²	54	30	16	7 58	41	92	15 10	31
4	242	35.7		03.9	258	44.3	67 -17 50.0 ¹²¹	52	25	08	48	33	88	19	34
5	257	35.5	-22	04.3	273	09.9	66 -18 02.0 ¹²⁰	50	6 21	7 01	7 39	6 25	86	15 28	36
6	272	35.2	-22	04.6	287	35.5	66 -18 13.8 ¹¹⁸	45	6 10	6 47	7 20	6 08	81	15 46	40
7	287	35.0		05.0	302	01.0	65 25.6 ¹¹⁸	40	6 01	34	7 04	5 54	77	16 00	45
8	302	34.8		05.3	316	26.4	64 37.2 ¹¹⁶	35	5 52	23	6 51	43	74	13	47
9	317	34.5		05.7	330	51.7	63 -18 48.7 ¹¹⁵	30	44	6 14	40	33	71	24	50
10	332	34.3		06.0	345	17.0	63 -19 00.0 ¹¹³	20	29	5 56	20	16	66	16 43	54
11	347	34.0	-22	06.4	359	42.2	62 -19 11.3 ¹¹³	10 N	5 14	5 40	6 02	5 01	63	17 00	56
12	2	33.8	-22	06.8	14	07.3	61 -19 22.4 ¹¹¹	0	4 58	5 24	5 46	4 48	58	17 15	60
13	17	33.5		07.1	28	32.3	60 33.4 ¹¹⁰	10 S	40	5 07	30	34	55	31	63
14	32	33.3		07.5	42	57.3	60 44.2 ¹⁰⁸	20	4 19	4 48	5 12	20	51	17 47	67
15	47	33.0		07.8	57	22.2	59 -19 54.9 ¹⁰⁷	30	3 51	24	4 51	4 03	47	18 07	70
16	62	32.8		08.2	71	47.1	59 -20 05.5 ¹⁰⁶	35	34	4 10	39	3 54	44	18	72
17	77	32.5	-22	08.5	86	11.8	57 -20 15.9 ¹⁰⁴	40	3 13	3 53	4 25	3 43	41	18 31	75
18	92	32.3	-22	08.9	100	36.6	58 -20 26.2 ¹⁰³	45	2 45	3 32	4 08	3 30	37	18 46	79
19	107	32.0		09.2	115	01.2	56 36.4 ¹⁰²	50	2 04	3 05	3 48	15	32	19 05	84
20	122	31.8		09.5	129	25.8	56 46.4 ¹⁰⁰	52	1 42	2 51	38	08	29	15	85
21	137	31.5		09.9	143	50.3	55 -20 56.3 ⁹⁹	54	1 10	35	27	3 00	27	25	88
22	152	31.3		10.2	158	14.7	54 -21 06.0 ⁹⁷	56	** **	2 16	3 14	2 52	23	36	92
23	167	31.0		10.6	172	39.1	54 15.6 ⁹⁶	58	** **	1 52	2 59	42	19	19 49	96
24	182	30.8	-22	10.9	187	03.5	54 -21 25.0 ⁹⁴	60 S	** **	1 18	2 41	2 31	13	20 05	101

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 10 ^m 3		Mag: -4.9 PMG: 9 ^h 16 ^m		Mag: +1.7 PMG: 9 ^h 09 ^m		Mag: -2.4 PMG: 4 ^h 36 ^m		Mag: -0.4 PMG: 0 ^h 59 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	71	39.0	220	42.4	-11	01.0	222	34.0	-10	57.7	290	53.9	+16	02.2	345	06.8	+22	04.2
1	86	41.4	235	43.7		01.0	237	34.9		58.2	305	56.3		02.2	0	09.5		04.2
2	101	43.9	250	45.1		01.1	252	35.8		58.8	320	58.8		02.2	15	12.2		04.2
3	116	46.3	265	46.4		01.1	267	36.8	-10	59.4	336	01.2		02.2	30	14.8		04.2
4	131	48.8	280	47.7		01.1	282	37.7	-11	00.0	351	03.7		02.2	45	17.5		04.2
5	146	51.3	295	49.0	-11	01.1	297	38.7	-11	00.5	6	06.1	+16	02.2	60	20.2	+22	04.2
6	161	53.7	310	50.4	-11	01.1	312	39.6	-11	01.1	21	08.6	+16	02.2	75	22.9	+22	04.2
7	176	56.2	325	51.7		01.1	327	40.5		01.7	36	11.0		02.2	90	25.5		04.2
8	191	58.7	340	53.0		01.2	342	41.5		02.2	51	13.5		02.2	105	28.2		04.2
9	207	01.1	355	54.3		01.2	357	42.4		02.8	66	15.9		02.2	120	30.9		04.2
10	222	03.6	10	55.6		01.2	12	43.3		03.4	81	18.4		02.2	135	33.5		04.2
11	237	06.1	25	56.9	-11	01.2	27	44.3	-11	04.0	96	20.9	+16	02.2	150	36.2	+22	04.2
12	252	08.5	40	58.2	-11	01.3	42	45.2	-11	04.5	111	23.3	+16	02.2	165	38.9	+22	04.2
13	267	11.0	55	59.5		01.3	57	46.1		05.1	126	25.8		02.2	180	41.6		04.2
14	282	13.5	71	00.8		01.3	72	47.1		05.7	141	28.2		02.2	195	44.2		04.2
15	297	15.9	86	02.1		01.3	87	48.0		06.2	156	30.7		02.2	210	46.9		04.2
16	312	18.4	101	03.4		01.4	102	48.9		06.8	171	33.1		02.2	225	49.6		04.2
17	327	20.8	116	04.7	-11	01.4	117	49.9	-11	07.4	186	35.6	+16	02.3	240	52.3	+22	04.2
18	342	23.3	131	06.0	-11	01.5	132	50.8	-11	07.9	201	38.0	+16	02.3	255	54.9	+22	04.2
19	357	25.8	146	07.3		01.5	147	51.7		08.5	216	40.5		02.3	270	57.6		04.2
20	12	28.2	161	08.5		01.5	162	52.6		09.1	231	42.9		02.3	286	00.3		04.2
21	27	30.7	176	09.8		01.6	177	53.6		09.6	246	45.4		02.3	301	03.0		04.2
22	42	33.2	191	11.1		01.6	192	54.5		10.2	261	47.9		02.3	316	05.6		04.2
23	57	35.6	206	12.4		01.7	207	55.4		10.8	276	50.3		02.3	331	08.3		04.2
24	72	38.1	221	13.6	-11	01.7	222	56.4	-11	11.4	291	52.8	+16	02.3	346	11.0	+22	04.2
Dif	—		+13		0		+9		-6		+25		0		+27		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 1				Edad: 29 ^d 1 PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'8 PMG: 12 ^h 01 ^m R°: 61 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	182	30.8	-22	10.9	187	03.5	-21	25.0	60 N	15 00	15 55	16 50	9 01 96	14 51 32				
1	197	30.5		11.3	201	27.7 52		34.3 93	58	15	16 05	16 57	8 42 90	15 10 38				
2	212	30.3		11.6	215	51.9 52		43.4 91	56	29	15	17 03	26 86	27 41				
3	227	30.0		12.0	230	16.1 52		-21 52.4 90	54	40	23	08	13 83	41 43				
4	242	29.8		12.3	244	40.2 51		-22 01.3 89	52	15 51	31	14	8 01 81	15 53 46				
5	257	29.5	-22	12.6	259	04.2 50		-22 09.9 86	50	16 00	16 37	17 18	7 51 78	16 04 47				
6	272	29.3	-22	13.0	273	28.2 50		-22 18.4 85	45	16 19	16 52	17 29	7 29 75	16 26 51				
7	287	29.0		13.3	287	52.2 50		26.8 82	40	35	17 05	39	7 11 73	16 45 53				
8	302	28.8		13.6	302	16.1 49		35.0 84	35	16 48	16	47	6 57 70	17 00 55				
9	317	28.5		14.0	316	39.9 48		43.0 80	30	17 00	26	17 55	44 68	14 55				
10	332	28.3		14.3	331	03.7 48		50.9 79	20	20	17 44	18 11	22 66	37 58				
11	347	28.0	-22	14.7	345	27.4 47		-22 58.6 77	10 N	17 37	18 00	18 26	6 04 63	17 56 60				
12	2	27.8	-22	15.0	359	51.1 47		-23 06.2 76	0	17 54	18 16	18 42	5 46 61	18 15 61				
13	17	27.5		15.3	14	14.8 47		13.6 74	10 S	18 11	33	19 00	29 59	34 63				
14	32	27.2		15.7	28	38.4 46		20.8 72	20	28	18 53	22	5 11 56	18 54 64				
15	47	27.0		16.0	43	02.0 46		27.9 71	30	18 49	19 16	19 49	4 50 53	19 17 66				
16	62	26.7		16.3	57	25.5 45		34.8 69	35	19 02	31	20 07	38 50	30 68				
17	77	26.5	-22	16.7	71	49.0 45		-23 41.5 67	40	19 16	19 48	20 29	4 24 48	19 46 69				
18	92	26.2	-22	17.0	86	12.5 45		-23 48.1 66	45	19 33	20 09	20 57	4 07 46	20 05 71				
19	107	26.0		17.3	100	35.9 44		-23 54.5 64	50	19 54	37	21 38	3 47 42	29 73				
20	122	25.7		17.6	114	59.3 44		-24 00.7 62	52	20 04	20 51	22 02	37 40	40 74				
21	137	25.5		18.0	129	22.7 44		06.7 60	54	15	21 07	22 35	27 37	20 53 75				
22	152	25.2		18.3	143	46.0 43		12.6 59	56	28	27	** **	15 34	21 08 77				
23	167	25.0		18.6	158	09.4 44		18.3 57	58	20 44	21 52	** **	3 01 30	25 80				
24	182	24.7	-22	18.9	172	32.7 43		-24 23.9 56	60 S	21 02	22 28	** **	2 44 25	21 46 84				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 06 ^m 3		Mag: -4.9 PMG: 9 ^h 14 ^m				Mag: +1.7 PMG: 9 ^h 08 ^m				Mag: -2.4 PMG: 4 ^h 32 ^m				Mag: -0.4 PMG: 0 ^h 55 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	72	38.1	221	13.6	-11	01.7	222	56.4	-11	11.4	291	52.8	+16	02.3	346	11.0	+22	
1	87	40.6	236	14.9		01.8	237	57.3		11.9	306	55.2		02.3	1	13.7	04.2	
2	102	43.0	251	16.2		01.8	252	58.2		12.5	321	57.7		02.3	16	16.3	04.2	
3	117	45.5	266	17.4		01.9	267	59.2		13.1	337	00.1		02.3	31	19.0	04.2	
4	132	47.9	281	18.7		01.9	283	00.1		13.6	352	02.6		02.3	46	21.7	04.1	
5	147	50.4	296	20.0	-11	02.0	298	01.0	-11	14.2	7	05.1	+16	02.3	61	24.4	+22	
6	162	52.9	311	21.2	-11	02.0	313	02.0	-11	14.8	22	07.5	+16	02.4	76	27.0	+22	
7	177	55.3	326	22.5		02.1	328	02.9		15.3	37	10.0		02.4	91	29.7	04.1	
8	192	57.8	341	23.7		02.1	343	03.8		15.9	52	12.4		02.4	106	32.4	04.1	
9	208	00.3	356	25.0		02.2	358	04.8		16.5	67	14.9		02.4	121	35.1	04.1	
10	223	02.7	11	26.2		02.2	13	05.7		17.0	82	17.4		02.4	136	37.7	04.1	
11	238	05.2	26	27.5	-11	02.3	28	06.6	-11	17.6	97	19.8	+16	02.4	151	40.4	+22	
12	253	07.7	41	28.7	-11	02.4	43	07.6	-11	18.2	112	22.3	+16	02.4	166	43.1	+22	
13	268	10.1	56	29.9		02.4	58	08.5		18.7	127	24.7		02.4	181	45.8	04.1	
14	283	12.6	71	31.2		02.5	73	09.4		19.3	142	27.2		02.4	196	48.4	04.1	
15	298	15.1	86	32.4		02.6	88	10.3		19.9	157	29.7		02.4	211	51.1	04.1	
16	313	17.5	101	33.6		02.6	103	11.3		20.4	172	32.1		02.4	226	53.8	04.1	
17	328	20.0	116	34.9	-11	02.7	118	12.2	-11	21.0	187	34.6	+16	02.5	241	56.5	+22	
18	343	22.4	131	36.1	-11	02.8	133	13.1	-11	21.6	202	37.0	+16	02.5	256	59.1	+22	
19	358	24.9	146	37.3		02.9	148	14.1		22.1	217	39.5		02.5	272	01.8	04.1	
20	13	27.4	161	38.5		02.9	163	15.0		22.7	232	42.0		02.5	287	04.5	04.1	
21	28	29.8	176	39.7		03.0	178	15.9		23.3	247	44.4		02.5	302	07.2	04.1	
22	43	32.3	191	41.0		03.1	193	16.9		23.8	262	46.9		02.5	317	09.8	04.1	
23	58	34.8	206	42.2		03.2	208	17.8		24.4	277	49.4		02.5	332	12.5	04.1	
24	73	37.2	221	43.4	-11	03.3	223	18.7	-11	25.0	292	51.8	+16	02.5	347	15.2	+22	
Dif	—		+12 -1				+9 -6				+25 0				+27 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 6			Edad: 0 ^d 7 PHE { 4 ^h : 59/5 12 ^h : 59/3 20 ^h : 59/1 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	182	24.7	-22	18.9	172	32.7	-24	23.9	60 N	6 51	7 47	8 42	10 37	70	15 23	57	
1	197	24.4		19.3	186	56.0	43	29.2	58	45	36	26	10 12	69	15 48	58	
2	212	24.2		19.6	201	19.2	42	34.4	56	38	27	13	9 52	68	16 08	59	
3	227	23.9		19.9	215	42.5	43	39.4	54	33	18	8 01		36 67	24	60	
4	242	23.7		20.2	230	05.7	42	44.3	52	28	11	7 51		22 66	39	59	
5	257	23.4	-22	20.6	244	28.9	42	-24 49.0	50	6 23	7 04	7 42	9 09	66	16 51	60	
6	272	23.2	-22	20.9	258	52.1	42	-24 53.5	45	6 12	6 49	7 22	8 44	65	17 17	60	
7	287	22.9		21.2	273	15.3	42	-24 57.8	43	6 02	36	7 06		24 64	38	60	
8	302	22.6		21.5	287	38.5	42	-25 01.9	41	5 54	25	6 53	8 07	64	17 55	60	
9	317	22.4		21.8	302	01.7	42	05.9	40	30	45	6 15	41	7 52	64	18 09	61
10	332	22.1		22.2	316	24.9	42	09.7	38	20	30	5 57	21	28 63	35	60	
11	347	21.9	-22	22.5	330	48.1	42	-25 13.3	36	10 N	5 15	5 41	6 03	7 07	62	18 56	61
12	2	21.6	-22	22.8	345	11.3	42	-25 16.7	34	0	4 58	5 24	5 47	6 47	61	19 16	61
13	17	21.3		23.1	359	34.5	42	20.0	33	10 S	40	5 07	30	28 60		37 60	
14	32	21.1		23.4	13	57.7	42	23.1	31	20	4 19	4 48	5 12	6 07	59	19 58	60
15	47	20.8		23.7	28	21.0	43	26.0	29	30	3 51	24	4 51	5 43	58	20 23	60
16	62	20.6		24.1	42	44.2	42	28.7	27	35	34	4 10	39	28 58	38	60	
17	77	20.3	-22	24.4	57	07.4	42	-25 31.2	25	40	3 12	3 52	4 25	5 12	57	20 55	60
18	92	20.0	-22	24.7	71	30.7	43	-25 33.6	24	45	2 43	3 31	4 08	4 53	55	21 16	59
19	107	19.8		25.0	85	54.0	43	35.8	22	50	2 02	3 04	3 47	29 53	42	58	
20	122	19.5		25.3	100	17.3	43	37.8	20	52	1 39	2 50	37	17 53	21 54	59	
21	137	19.3		25.6	114	40.6	43	39.7	19	54	1 05	33	25	4 04	51	22 08	58
22	152	19.0		25.9	129	04.0	44	41.4	17	56	** **	2 14	3 12	3 49	49	25 58	
23	167	18.7		26.2	143	27.4	44	42.8	14	58	** **	1 48	2 57	31 47	22 45	57	
24	182	18.5	-22	26.5	157	50.8	44	-25 44.2	14	60 S	** **	1 12	2 38	3 09	44	23 10	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 02 ^m 4		Mag: -4.9 PMG: 9 ^h 12 ^m		Mag: +1.7 PMG: 9 ^h 06 ^m		Mag: -2.4 PMG: 4 ^h 28 ^m		Mag: -0.4 PMG: 0 ^h 51 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	73	37.2	221	43.4	-11	03.3	223	18.7	-11	25.0	292	51.8	+16	02.5	347	15.2	+22	04.1
1	88	39.7	236	44.6		03.3	238	19.6		25.5	307	54.3		02.5	2	17.9		04.1
2	103	42.2	251	45.8		03.4	253	20.6		26.1	322	56.8		02.5	17	20.6		04.1
3	118	44.6	266	47.0		03.5	268	21.5		26.7	337	59.2		02.6	32	23.2		04.1
4	133	47.1	281	48.2		03.6	283	22.4		27.2	353	01.7		02.6	47	25.9		04.1
5	148	49.6	296	49.4	-11	03.7	298	23.4	-11	27.8	8	04.2	+16	02.6	62	28.6	+22	04.1
6	163	52.0	311	50.6	-11	03.8	313	24.3	-11	28.4	23	06.6	+16	02.6	77	31.3	+22	04.1
7	178	54.5	326	51.8		03.9	328	25.2		28.9	38	09.1		02.6	92	33.9		04.1
8	193	56.9	341	53.0		04.0	343	26.1		29.5	53	11.6		02.6	107	36.6		04.1
9	208	59.4	356	54.2		04.1	358	27.1		30.0	68	14.0		02.6	122	39.3		04.1
10	224	01.9	11	55.3		04.2	13	28.0		30.6	83	16.5		02.6	137	42.0		04.1
11	239	04.3	26	56.5	-11	04.3	28	28.9	-11	31.2	98	19.0	+16	02.6	152	44.6	+22	04.1
12	254	06.8	41	57.7	-11	04.4	43	29.9	-11	31.7	113	21.4	+16	02.7	167	47.3	+22	04.1
13	269	09.3	56	58.9		04.5	58	30.8		32.3	128	23.9		02.7	182	50.0		04.1
14	284	11.7	72	00.1		04.6	73	31.7		32.9	143	26.4		02.7	197	52.7		04.1
15	299	14.2	87	01.2		04.7	88	32.6		33.4	158	28.8		02.7	212	55.4		04.1
16	314	16.7	102	02.4		04.8	103	33.6		34.0	173	31.3		02.7	227	58.0		04.1
17	329	19.1	117	03.6	-11	04.9	118	34.5	-11	34.6	188	33.8	+16	02.7	243	00.7	+22	04.1
18	344	21.6	132	04.7	-11	05.0	133	35.4	-11	35.1	203	36.3	+16	02.7	258	03.4	+22	04.0
19	359	24.1	147	05.9		05.1	148	36.3		35.7	218	38.7		02.7	273	06.1		04.0
20	14	26.5	162	07.0		05.2	163	37.3		36.2	233	41.2		02.7	288	08.7		04.0
21	29	29.0	177	08.2		05.3	178	38.2		36.8	248	43.7		02.8	303	11.4		04.0
22	44	31.4	192	09.4		05.4	193	39.1		37.4	263	46.1		02.8	318	14.1		04.0
23	59	33.9	207	10.5		05.5	208	40.1		37.9	278	48.6		02.8	333	16.8		04.0
24	74	36.4	222	11.7	-11	05.7	223	41.0	-11	38.5	293	51.1	+16	02.8	348	19.4	+22	04.0
Dif	—		+12		-1		+9		-6		+25		0		+27		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°2 PMG: 11 ^h 51 ^m 0			Edad: 1 ^d 7 PHE { 4 ^h : 58/8 12 ^h : 58/5 20 ^h : 58/2 SD: 16°0 PMG: 14 ^h 03 ^m R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	182	18.5	-22	26.5	157	50.8	-25	44.2	60 N	14 58	15 53	16 49	11 47 40	16 20 80				
1	197	18.2		26.8	172	14.2 44		45.3 10	58	15 14	16 04	16 56	21 44	16 46 76				
2	212	17.9		27.2	186	37.7 45		46.3 8	56	27	14	17 02	11 00 47	17 07 73				
3	227	17.7		27.5	201	01.2 45		47.1 6	54	39	22	08	10 43 48	24 71				
4	242	17.4		27.8	215	24.8 46		47.7 5	52	50	30	13	28 50	38 70				
5	257	17.2	-22	28.1	229	48.4 46	-25	48.2 2	50	15 59	16 37	17 18	10 15 51	17 51 69				
6	272	16.9	-22	28.4	244	12.0 46	-25	48.4 0	45	16 19	16 52	17 29	9 49 53	18 17 67				
7	287	16.6		28.7	258	35.7 47		48.5 1	40	35	17 05	39	28 54	38 65				
8	302	16.4		29.0	272	59.5 48		48.5 0	35	16 48	16	47	9 11 55	18 55 64				
9	317	16.1		29.3	287	23.2 47		48.2 3	30	17 00	26	17 56	8 56 56	19 10 62				
10	332	15.8		29.6	301	47.1 49		47.8 4	20	20	17 44	18 11	31 57	35 60				
11	347	15.6	-22	29.9	316	11.0 49	-25	47.2 6	10 N	17 38	18 01	18 27	8 09 58	19 57 58				
12	2	15.3	-22	30.2	330	34.9 49	-25	46.5 9	0	17 55	18 17	18 43	7 48 59	20 17 57				
13	17	15.0		30.5	344	58.9 50		45.6 11	10 S	18 12	34	19 01	28 60	37 56				
14	32	14.8		30.8	359	23.0 51		44.5 12	20	30	18 54	23	7 06 61	20 58 54				
15	47	14.5		31.1	13	47.1 51		43.3 14	30	18 51	19 18	19 51	6 41 61	21 23 52				
16	62	14.2		31.4	28	11.3 52		41.9 16	35	19 03	33	20 09	26 62	38 50				
17	77	14.0	-22	31.6	42	35.6 53	-25	40.3 18	40	19 18	19 50	20 31	6 09 63	21 55 49				
18	92	13.7	-22	31.9	56	59.9 53	-25	38.5 19	45	19 35	20 12	21 00	5 48 64	22 15 47				
19	107	13.5		32.2	71	24.3 54		36.6 20	50	19 56	40	21 42	22 65	40 44				
20	122	13.2		32.5	85	48.7 54		34.6 22	52	20 06	20 54	22 06	5 10 65	22 53 42				
21	137	12.9		32.8	100	13.3 56		32.4 24	54	18	21 10	22 42	4 55 66	23 06 41				
22	152	12.7		33.1	114	37.9 56		30.0 26	56	31	31	** **	38 67	23 38				
23	167	12.4		33.4	129	02.6 57		27.4 27	58	20 47	21 57	** **	4 18 68	23 42 35				
24	182	12.1	-22	33.7	143	27.3 57	-25	24.7	60 S	21 06	22 35	** **	3 53 69	** ** *				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 58 ^m 5		Mag: -4.9 PMG: 9 ^h 11 ^m			Mag: +1.7 PMG: 9 ^h 05 ^m			Mag: -2.4 PMG: 4 ^h 24 ^m			Mag: -0.4 PMG: 0 ^h 47 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	74	36.4	222	11.7	-11	05.7	223	41.0	-11	38.5	293	51.1	+16	02.8	348	19.4	+22	04.0
1	89	38.8	237	12.8		05.8	238	41.9		39.1	308	53.6		02.8	3	22.1		04.0
2	104	41.3	252	14.0		05.9	253	42.8		39.6	323	56.0		02.8	18	24.8		04.0
3	119	43.8	267	15.1		06.0	268	43.8		40.2	338	58.5		02.8	33	27.5		04.0
4	134	46.2	282	16.2		06.1	283	44.7		40.7	354	01.0		02.8	48	30.2		04.0
5	149	48.7	297	17.4	-11	06.3	298	45.6	-11	41.3	9	03.5	+16	02.9	63	32.8	+22	04.0
6	164	51.2	312	18.5	-11	06.4	313	46.5	-11	41.9	24	05.9	+16	02.9	78	35.5	+22	04.0
7	179	53.6	327	19.6		06.5	328	47.5		42.4	39	08.4		02.9	93	38.2		04.0
8	194	56.1	342	20.8		06.6	343	48.4		43.0	54	10.9		02.9	108	40.9		04.0
9	209	58.6	357	21.9		06.8	358	49.3		43.6	69	13.4		02.9	123	43.6		04.0
10	225	01.0	12	23.0		06.9	13	50.2		44.1	84	15.8		02.9	138	46.2		04.0
11	240	03.5	27	24.2	-11	07.0	28	51.2	-11	44.7	99	18.3	+16	02.9	153	48.9	+22	04.0
12	255	05.9	42	25.3	-11	07.2	43	52.1	-11	45.2	114	20.8	+16	03.0	168	51.6	+22	04.0
13	270	08.4	57	26.4		07.3	58	53.0		45.8	129	23.3		03.0	183	54.3		04.0
14	285	10.9	72	27.5		07.4	73	53.9		46.4	144	25.8		03.0	198	56.9		04.0
15	300	13.3	87	28.6		07.6	88	54.9		46.9	159	28.2		03.0	213	59.6		04.0
16	315	15.8	102	29.7		07.7	103	55.8		47.5	174	30.7		03.0	229	02.3		04.0
17	330	18.3	117	30.8	-11	07.8	118	56.7	-11	48.0	189	33.2	+16	03.0	244	05.0	+22	04.0
18	345	20.7	132	31.9	-11	08.0	133	57.6	-11	48.6	204	35.7	+16	03.0	259	07.7	+22	04.0
19	0	23.2	147	33.0		08.1	148	58.6		49.2	219	38.1		03.1	274	10.3		04.0
20	15	25.7	162	34.2		08.3	163	59.5		49.7	234	40.6		03.1	289	13.0		04.0
21	30	28.1	177	35.3		08.4	179	00.4		50.3	249	43.1		03.1	304	15.7		04.0
22	45	30.6	192	36.3		08.6	194	01.3		50.8	264	45.6		03.1	319	18.4		04.0
23	60	33.1	207	37.4		08.7	209	02.3		51.4	279	48.1		03.1	334	21.1		04.0
24	75	35.5	222	38.5	-11	08.9	224	03.2	-11	52.0	294	50.6	+16	03.1	349	23.7	+22	04.0
Dif	—		+11		-1		+9		-6		+25		0		+27		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 51 ^m 4				Edad: 2 ^d 7 PHE { 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'4 R°: 54 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	182	12.1	-22	33.7	143	27.3	-25	24.7	28	60 N	6 54	7 50	8 46	12 27	22	17 40	91		
1	197	11.8		34.0	157	52.2	59	21.9	28	58	47	39	29	12 05	27	18 02	85		
2	212	11.6		34.3	172	17.1	59	18.9	30	56	41	29	16	11 47	30	20	81		
3	227	11.3		34.6	186	42.1	60	15.7	32	54	35	21	8 04	31	34	35	78		
4	242	11.0		34.8	201	07.2	61	12.4	33	52	30	13	7 53	18	36	18 48	76		
5	257	10.8	-22	35.1	215	32.3	61	-25	08.9	35	50	6 25	7 06	7 44	11 06	38	19 00	73	
6	272	10.5	-22	35.4	229	57.6	63	-25	05.3	36	45	6 14	6 51	7 24	10 42	41	19 24	69	
7	287	10.2		35.7	244	22.9	63	-25	01.5	38	40	6 04	38	7 08	22	44	43	66	
8	302	10.0		36.0	258	48.4	65	-24	57.6	39	35	5 55	27	6 54	10 06	46	19 59	63	
9	317	09.7		36.3	273	13.9	65	53.6	40	30	47	6 16	43	9 52	47	20 12	62		
10	332	09.4		36.5	287	39.5	66	49.4	42	20	31	5 58	22	28	50	35	59		
11	347	09.2	-22	36.8	302	05.2	67	-24	45.0	44	10 N	5 16	5 42	6 04	9 07	53	20 55	56	
12	2	08.9	-22	37.1	316	31.0	68	-24	40.5	45	0	4 59	5 25	5 48	8 47	55	21 14	53	
13	17	08.6		37.4	330	56.9	69	35.9	46	10 S	41	5 08	31	28	57	33	50		
14	32	08.4		37.7	345	22.9	70	31.1	48	20	4 19	4 48	5 13	8 07	59	21 52	48		
15	47	08.1		37.9	359	49.0	71	26.2	49	30	3 51	24	4 51	7 42	63	22 15	44		
16	62	07.8		38.2	14	15.2	72	21.1	51	35	33	4 10	39	28	64	28	43		
17	77	07.5	-22	38.5	28	41.5	73	-24	15.9	52	40	3 11	3 52	4 25	7 12	65	22 44	39	
18	92	07.3	-22	38.8	43	07.8	73	-24	10.6	53	45	2 42	3 31	4 07	6 52	68	23 02	36	
19	107	07.0		39.0	57	34.3	75	-24	05.1	55	50	2 00	3 02	3 46	27	71	24	33	
20	122	06.7		39.3	72	00.9	76	-23	59.5	56	52	1 36	2 48	36	15	73	35	31	
21	137	06.5		39.6	86	27.6	77	53.8	57	54	1 00	32	24	6 01	75	23 47	28		
22	152	06.2		39.9	100	54.4	78	48.0	58	56	** ** *	2 11	3 11	5 45	78	** ** *	**		
23	167	05.9		40.1	115	21.2	78	42.0	60	58	** ** *	1 45	2 55	26	81	** ** *	**		
24	182	05.6	-22	40.4	129	48.2	80	-23	35.9	61	60 S	** ** *	1 07	2 36	5 02	87	0 06	30	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 54 ^m 5		Mag: -4.9 PMG: 9 ^h 09 ^m		Mag: +1.7 PMG: 9 ^h 03 ^m		Mag: -2.4 PMG: 4 ^h 20 ^m		Mag: -0.4 PMG: 0 ^h 42 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	75	35.5	222	38.5	-11	08.9	224	03.2	-11	52.0
1	90	38.0	237	39.6		09.0	239	04.1		52.5
2	105	40.4	252	40.7		09.2	254	05.0		53.1
3	120	42.9	267	41.8		09.3	269	06.0		53.6
4	135	45.4	282	42.9		09.5	284	06.9		54.2
5	150	47.8	297	44.0	-11	09.6	299	07.8	-11	54.7
6	165	50.3	312	45.0	-11	09.8	314	08.7	-11	55.3
7	180	52.8	327	46.1		09.9	329	09.7		55.9
8	195	55.2	342	47.2		10.1	344	10.6		56.4
9	210	57.7	357	48.3		10.3	359	11.5		57.0
10	226	00.2	12	49.3		10.4	14	12.4		57.5
11	241	02.6	27	50.4	-11	10.6	29	13.3	-11	58.1
12	256	05.1	42	51.5	-11	10.7	44	14.3	-11	58.6
13	271	07.6	57	52.5		10.9	59	15.2		59.2
14	286	10.0	72	53.6		11.1	74	16.1	-11	59.8
15	301	12.5	87	54.6		11.3	89	17.0	-12	00.3
16	316	14.9	102	55.7		11.4	104	18.0		00.9
17	331	17.4	117	56.7	-11	11.6	119	18.9	-12	01.4
18	346	19.9	132	57.8	-11	11.8	134	19.8	-12	02.0
19	1	22.3	147	58.8		11.9	149	20.7		02.5
20	16	24.8	162	59.9		12.1	164	21.6		03.1
21	31	27.3	178	00.9		12.3	179	22.6		03.7
22	46	29.7	193	02.0		12.5	194	23.5		04.2
23	61	32.2	208	03.0		12.6	209	24.4		04.8
24	76	34.7	223	04.0	-11	12.8	224	25.3	-12	05.3
Dif	—		+11		-2		+9		-6	
							+25		0	
									+27	
									0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 51 ^m 8				Edad: 3 ^d 7 PHE { 4 ^h : 57:1 12 ^h : 56:8 20 ^h : 56:5 R°: 49 ^m														
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	182	05.6	-22	40.4	129	48.2	-23	35.9	60 N	14	56	15	52	16	48		12	49	12
1	197	05.4		40.7	144	15.3	81	29.6	58	15	12	16	03	16	55		32	16	
2	212	05.1		40.9	158	42.5	82	23.3	56	26		13	17	01		17	20		41
3	227	04.8		41.2	173	09.8	83	16.8	54	38		22	07		12	05	23	19	53
4	242	04.5		41.5	187	37.2	84	10.2	52	49		29	13		11	54	25	20	04
5	257	04.3	-22	41.7	202	04.7	85	-23 03.5	50	15	58	16	36	17	18	11	44	28	20
6	272	04.0	-22	42.0	216	32.4	87	-22 56.6	45	16	18	16	52	17	29	11	23	32	20
7	287	03.7		42.3	231	00.1	87	49.7	40	35		17	05	39		11	06	36	20
8	302	03.5		42.5	245	27.9	88	42.6	35	16	48	16		48		10	52	38	21
9	317	03.2		42.8	259	55.8	89	35.4	30	17	00	26	17	56		39	41		14
10	332	02.9		43.1	274	23.9	91	28.1	20	21		17	45	18	12	18	45		34
11	347	02.6	-22	43.3	288	52.0	91	-22 20.7	10 N	17	39	18	01	18	28	10	00	47	21
12	2	02.4	-22	43.6	303	20.3	93	-22 13.2	0	17	56	18	18	18	44	9	42	51	22
13	17	02.1		43.8	317	48.6	93	-22 05.5	10 S	18	13	36	19	03		25	54		23
14	32	01.8		44.1	332	17.1	95	-21 57.8	20	31		18	55	24		9	06	57	40
15	47	01.5		44.4	346	45.7	96	49.9	30	18	52	19	20	19	53	8	45	60	22
16	62	01.3		44.6	1	14.4	97	42.0	35	19	05	34	20	11		32	63	23	11
17	77	01.0	-22	44.9	15	43.2	98	-21 33.9	40	19	19	19	52	20	33	8	17	66	23
18	92	00.7	-22	45.1	30	12.1	99	-21 25.8	45	19	37	20	14	21	02	8	00	69	23
19	107	00.4		45.4	44	41.1	100	17.5	50	19	59	42	21	45		7	38	74	23
20	122	00.1		45.7	59	10.2	101	09.2	52	20	09	20	57	22	11	28	76		**
21	136	59.9		45.9	73	39.4	102	-21 00.7	54	21		21	14	22	48	16	79		**
22	151	59.6		46.2	88	08.7	103	-20 52.2	56	34		21	34	**	**	7	03	81	0
23	166	59.3		46.4	102	38.1	104	43.5	58	20	50	22	01	**	**	6	47	85	17
24	181	59.0	-22	46.7	117	07.6	105	-20 34.8	60 S	21	09	22	42	**	**	6	29	90	0

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 18 ^h 50 ^m 6		Mag: -4.9 PMG: 9 ^h 07 ^m		Mag: +1.7 PMG: 9 ^h 02 ^m		Mag: -2.4 PMG: 4 ^h 16 ^m			Mag: -0.4 PMG: 0 ^h 38 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃			hG ♄		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	76	34.7	223	04.0	-11	12.8	224	25.3	-12	05.3	295	50.2
1	91	37.1	238	05.1		13.0	239	26.3		05.9	310	52.7
2	106	39.6	253	06.1		13.2	254	27.2		06.4	325	55.2
3	121	42.1	268	07.1		13.4	269	28.1		07.0	340	57.7
4	136	44.5	283	08.2		13.6	284	29.0		07.5	356	00.2
5	151	47.0	298	09.2	-11	13.8	299	29.9	-12	08.1	11	02.7
6	166	49.4	313	10.2	-11	13.9	314	30.9	-12	08.7	26	05.1
7	181	51.9	328	11.2		14.1	329	31.8		09.2	41	07.6
8	196	54.4	343	12.3		14.3	344	32.7		09.8	56	10.1
9	211	56.8	358	13.3		14.5	359	33.6		10.3	71	12.6
10	226	59.3	13	14.3		14.7	14	34.5		10.9	86	15.1
11	242	01.8	28	15.3	-11	14.9	29	35.5	-12	11.4	101	17.6
12	257	04.2	43	16.3	-11	15.1	44	36.4	-12	12.0	116	20.1
13	272	06.7	58	17.3		15.3	59	37.3		12.5	131	22.6
14	287	09.2	73	18.3		15.5	74	38.2		13.1	146	25.1
15	302	11.6	88	19.3		15.7	89	39.1		13.6	161	27.6
16	317	14.1	103	20.3		15.9	104	40.1		14.2	176	30.1
17	332	16.5	118	21.3	-11	16.1	119	41.0	-12	14.7	191	32.6
18	347	19.0	133	22.3	-11	16.3	134	41.9	-12	15.3	206	35.1
19	2	21.5	148	23.3		16.5	149	42.8		15.9	221	37.6
20	17	23.9	163	24.3		16.7	164	43.7		16.4	236	40.1
21	32	26.4	178	25.3		16.9	179	44.7		17.0	251	42.6
22	47	28.9	193	26.3		17.1	194	45.6		17.5	266	45.1
23	62	31.3	208	27.3		17.3	209	46.5		18.1	281	47.6
24	77	33.8	223	28.2	-11	17.5	224	47.4	-12	18.6	296	50.1
Dif	—		+10		-2		+9		-6		+25	

0			1			2			3			4			5			6			7			8			9			10			11			12			13			14			15			16			17			18			19			20			21			22			23			24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 52 ^m 3			Edad: 4 ^d 7 PHE { 4 ^h : 56'2 12 ^h : 56'0 20 ^h : 55'7 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	181	59.0	-22 46.7	117	07.6	-20 34.8	60 N	6 57	7 53	8 49	13 01	7	20 41	86
1	196	58.8	46.9	131	37.3 ¹⁰⁷	25.9 ⁸⁹	58	49	42	32	12 48	11	20 52	83
2	211	58.5	47.2	146	07.0 ¹⁰⁷	17.0 ⁸⁹	56	43	32	18	37 15		21 03	78
3	226	58.2	47.4	160	36.9 ¹⁰⁹	-20 08.0 ⁹⁰	54	37	23	8 06	28 17		11 76	
4	241	57.9	47.7	175	06.8 ¹⁰⁹	-19 58.9 ⁹¹	52	32	15	7 56	19 20		19 74	
5	256	57.7	-22 47.9	189	36.9 ¹¹¹	-19 49.7 ⁹²	50	6 27	7 08	7 46	12 12	21	21 27	71
6	271	57.4	-22 48.2	204	07.0 ¹¹¹	-19 40.4 ⁹³	45	6 15	6 53	7 26	11 55	26	21 42	66
7	286	57.1	48.4	218	37.3 ¹¹³	31.1 ⁹³	40	6 06	39	7 10	42 29		21 54	63
8	301	56.8	48.7	233	07.6 ¹¹³	21.6 ⁹⁵	35	5 57	28	6 56	30 32		22 05	59
9	316	56.5	48.9	247	38.1 ¹¹⁵	12.1 ⁹⁵	30	48	18	44	20 35		14 57	
10	331	56.3	49.1	262	08.6 ¹¹⁵	-19 02.5 ⁹⁶	20	32	6 00	24	11 03	39	29 53	
11	346	56.0	-22 49.4	276	39.3 ¹¹⁷	-18 52.8 ⁹⁷	10 N	5 17	5 43	6 06	10 47	43	22 43	49
12	1	55.7	-22 49.6	291	10.0 ¹¹⁷	-18 43.1 ⁹⁷	0	5 00	5 26	5 49	10 33	46	22 56	45
13	16	55.4	49.9	305	40.9 ¹¹⁹	33.2 ⁹⁹	10 S	4 42	5 09	31	19 50		23 08	42
14	31	55.1	50.1	320	11.8 ¹¹⁹	23.3 ⁹⁹	20	4 20	4 49	5 13	10 03	54	22 37	
15	46	54.9	50.4	334	42.9 ¹²¹	13.3 ¹⁰⁰	30	3 51	24	4 52	9 45	59	37 33	
16	61	54.6	50.6	349	14.0 ¹²¹	-18 03.3 ¹⁰⁰	35	33	4 10	39	35 61		46 30	
17	76	54.3	-22 50.8	3	45.3 ¹²³	-17 53.1 ¹⁰²	40	3 11	3 52	4 24	9 23	64	23 56	27
18	91	54.0	-22 51.1	18	16.6 ¹²³	-17 42.9 ¹⁰²	45	2 42	3 30	4 07	9 09	68	*** **	**
19	106	53.7	51.3	32	48.1 ¹²⁵	32.6 ¹⁰³	50	1 59	3 02	3 45	8 52	72	*** **	**
20	121	53.5	51.5	47	19.6 ¹²⁵	22.3 ¹⁰³	52	1 33	2 47	35	44 74		0 06	22
21	136	53.2	51.8	61	51.2 ¹²⁶	11.9 ¹⁰⁴	54	0 56	30	23	35 76		15 20	
22	151	52.9	52.0	76	22.9 ¹²⁷	-17 01.4 ¹⁰⁵	56	*** **	2 10	3 10	24 80		26 17	
23	166	52.6	52.2	90	54.7 ¹²⁸	-16 50.9 ¹⁰⁵	58	*** **	1 43	2 54	8 12	84	38 14	
24	181	52.3	-22 52.5	105	26.6 ¹²⁹	-16 40.3 ¹⁰⁶	60 S	*** **	1 02	2 35	7 59	87	0 53	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 46 ^m 7		Mag: -4.9 PMG: 9 ^h 06 ^m		Mag: +1.7 PMG: 9 ^h 00 ^m		Mag: -2.4 PMG: 4 ^h 12 ^m		Mag: -0.4 PMG: 0 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	77	33.8	223 28.2	-11 17.5	224 47.4	-12 18.6	296 50.1	+16 04.0	351 32.4	+22 03.8
1	92	36.3	238 29.2	17.7	239 48.3	19.2	311 52.6	04.0	6 35.1	03.8
2	107	38.7	253 30.2	18.0	254 49.2	19.7	326 55.1	04.0	21 37.8	03.8
3	122	41.2	268 31.2	18.2	269 50.2	20.3	341 57.6	04.1	36 40.5	03.8
4	137	43.7	283 32.2	18.4	284 51.1	20.8	357 00.0	04.1	51 43.1	03.8
5	152	46.1	298 33.1	-11 18.6	299 52.0	-12 21.4	12 02.5	+16 04.1	66 45.8	+22 03.8
6	167	48.6	313 34.1	-11 18.8	314 52.9	-12 21.9	27 05.0	+16 04.1	81 48.5	+22 03.8
7	182	51.0	328 35.1	19.0	329 53.8	22.5	42 07.5	04.1	96 51.2	03.8
8	197	53.5	343 36.0	19.3	344 54.8	23.0	57 10.0	04.2	111 53.9	03.8
9	212	56.0	358 37.0	19.5	359 55.7	23.6	72 12.6	04.2	126 56.5	03.8
10	227	58.4	13 37.9	19.7	14 56.6	24.1	87 15.1	04.2	141 59.2	03.8
11	243	00.9	28 38.9	-11 19.9	29 57.5	-12 24.7	102 17.6	+16 04.2	157 01.9	+22 03.8
12	258	03.4	43 39.9	-11 20.2	44 58.4	-12 25.2	117 20.1	+16 04.3	172 04.6	+22 03.8
13	273	05.8	58 40.8	20.4	59 59.3	25.8	132 22.6	04.3	187 07.3	03.8
14	288	08.3	73 41.8	20.6	75 00.3	26.3	147 25.1	04.3	202 10.0	03.8
15	303	10.8	88 42.7	20.8	90 01.2	26.9	162 27.6	04.3	217 12.6	03.8
16	318	13.2	103 43.7	21.1	105 02.1	27.4	177 30.1	04.3	232 15.3	03.8
17	333	15.7	118 44.6	-11 21.3	120 03.0	-12 28.0	192 32.6	+16 04.4	247 18.0	+22 03.8
18	348	18.2	133 45.6	-11 21.5	135 03.9	-12 28.5	207 35.1	+16 04.4	262 20.7	+22 03.8
19	3	20.6	148 46.5	21.8	150 04.8	29.1	222 37.6	04.4	277 23.4	03.8
20	18	23.1	163 47.4	22.0	165 05.8	29.6	237 40.1	04.4	292 26.0	03.8
21	33	25.5	178 48.4	22.2	180 06.7	30.2	252 42.6	04.5	307 28.7	03.8
22	48	28.0	193 49.3	22.5	195 07.6	30.7	267 45.1	04.5	322 31.4	03.8
23	63	30.5	208 50.2	22.7	210 08.5	31.3	282 47.6	04.5	337 34.1	03.8
24	78	32.9	223 51.2	-11 22.9	225 09.4	-12 31.8	297 50.1	+16 04.5	352 36.8	+22 03.8
Dif	—	+10	-2	+9	-6	+25	0	+27	0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 5 ^d 7 PHE { 4 ^h : 55:5 12 ^h : 55:3 20 ^h : 55:1												
	PMG: 11 ^h 52 ^m 7				PMG: 17 ^h 30 ^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	52.3	-22 52.5	105	26.6	-16 40.3		60 N	14 55	15 51	16 47	13 08	4	22 07	82	
1	196	52.1	52.7	119	58.6 ¹³⁰	29.6 ¹⁰⁷		58	15 11	16 02	16 55	12 59	8	15	78	
2	211	51.8	52.9	134	30.7 ¹³¹	18.9 ¹⁰⁷		56	26	12	17 01	52	10	21	76	
3	226	51.5	53.2	149	02.8 ¹³¹	-16 08.1 ¹⁰⁸		54	38	21	07	45	13	27	73	
4	241	51.2	53.4	163	35.1 ¹³³	-15 57.2 ¹⁰⁹		52	49	29	13	39	15	33	70	
5	256	50.9	-22 53.6	178	07.4 ¹³³	-15 46.3 ¹⁰⁹		50	15 58	16 36	17 18	12 33	18	22 38	68	
6	271	50.6	-22 53.9	192	39.8 ¹³⁴	-15 35.3 ¹¹⁰		45	16 18	16 52	17 29	12 21	22	22 48	64	
7	286	50.4	54.1	207	12.3 ¹³⁵	24.3 ¹¹⁰		40	35	17 05	39	11	25	22 57	60	
8	301	50.1	54.3	221	44.9 ¹³⁶	13.2 ¹¹¹		35	16 48	17	48	12 02	29	23 04	57	
9	316	49.8	54.5	236	17.6 ¹³⁷	-15 02.1 ¹¹¹		30	17 01	27	17 57	11 55	31	11	54	
10	331	49.5	54.8	250	50.3 ¹³⁷	-14 50.9 ¹¹²		20	21	17 45	18 13	42	35	22	50	
11	346	49.2	-22 55.0	265	23.2 ¹³⁹	-14 39.7 ¹¹²		10 N	17 39	18 02	18 28	11 30	40	23 32	45	
12	1	48.9	-22 55.2	279	56.1 ¹³⁹	-14 28.4 ¹¹³		0	17 56	18 19	18 45	11 19	44	23 41	42	
13	16	48.7	55.4	294	29.1 ¹⁴⁰	17.0 ¹¹⁴		10 S	18 14	37	19 04	11 09	47	50	38	
14	31	48.4	55.7	309	02.1 ¹⁴⁰	-14 05.6 ¹¹⁴		20	32	18 57	26	10 57	51	23 59	34	
15	46	48.1	55.9	323	35.3 ¹⁴²	-13 54.2 ¹¹⁴		30	18 54	19 21	19 54	44	55	***	***	
16	61	47.8	56.1	338	08.5 ¹⁴²	42.7 ¹¹⁵		35	19 06	36	20 12	36	58	***	***	
17	76	47.5	-22 56.3	352	41.8 ¹⁴³	-13 31.2 ¹¹⁵		40	19 21	19 54	20 35	10 27	61	***	***	
18	91	47.2	-22 56.5	7	15.2 ¹⁴⁴	-13 19.6 ¹¹⁶		45	19 39	20 16	21 05	10 17	65	0 07	24	
19	106	47.0	56.8	21	48.6 ¹⁴⁴	-13 08.0 ¹¹⁶		50	20 01	45	21 48	10 04	69	21	20	
20	121	46.7	57.0	36	22.1 ¹⁴⁵	-12 56.3 ¹¹⁷		52	11	20 59	22 14	9 58	72	28	17	
21	136	46.4	57.2	50	55.7 ¹⁴⁶	44.6 ¹¹⁷		54	23	21 17	22 54	51	75	35	15	
22	151	46.1	57.4	65	29.3 ¹⁴⁶	32.8 ¹¹⁸		56	37	21 38	***	44	77	43	13	
23	166	45.8	57.6	80	03.1 ¹⁴⁸	21.0 ¹¹⁸		58	20 53	22 05	***	36	80	0 52	10	
24	181	45.5	-22 57.8	94	36.9 ¹⁴⁸	-12 09.2 ¹¹⁸		60 S	21 13	22 49	***	9 26	84	1 02	6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 42 ^m 7		Mag: -4.9 PMG: 9 ^h 04 ^m		Mag: +1.7 PMG: 8 ^h 59 ^m		Mag: -2.4 PMG: 4 ^h 08 ^m		Mag: -0.4 PMG: 0 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	78	32.9	223	51.2	-11	22.9	225	09.4	-12	31.8
1	93	35.4	238	52.1		23.2	240	10.3		32.4
2	108	37.9	253	53.0		23.4	255	11.3		32.9
3	123	40.3	268	54.0		23.7	270	12.2		33.5
4	138	42.8	283	54.9		23.9	285	13.1		34.0
5	153	45.3	298	55.8	-11	24.2	300	14.0	-12	34.6
6	168	47.7	313	56.7	-11	24.4	315	14.9	-12	35.1
7	183	50.2	328	57.6		24.6	330	15.8		35.7
8	198	52.7	343	58.5		24.9	345	16.7		36.2
9	213	55.1	358	59.5		25.1	0	17.7		36.7
10	228	57.6	14	00.4		25.4	15	18.6		37.3
11	244	00.0	29	01.3	-11	25.6	30	19.5	-12	37.8
12	259	02.5	44	02.2	-11	25.9	45	20.4	-12	38.4
13	274	05.0	59	03.1		26.1	60	21.3		38.9
14	289	07.4	74	04.0		26.4	75	22.2		39.5
15	304	09.9	89	04.9		26.7	90	23.1		40.0
16	319	12.4	104	05.8		26.9	105	24.1		40.6
17	334	14.8	119	06.7	-11	27.2	120	25.0	-12	41.1
18	349	17.3	134	07.6	-11	27.4	135	25.9	-12	41.7
19	4	19.8	149	08.5		27.7	150	26.8		42.2
20	19	22.2	164	09.3		28.0	165	27.7		42.8
21	34	24.7	179	10.2		28.2	180	28.6		43.3
22	49	27.1	194	11.1		28.5	195	29.5		43.8
23	64	29.6	209	12.0		28.7	210	30.5		44.4
24	79	32.1	224	12.9	-11	29.0	225	31.4	-12	44.9
Dif	—		+9		-3		+9		-5	
							+25		0	
									+27	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 53 ^m 2			Edad: 6 ^d 7 PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'6 R°: 40 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	181	45.5	-22	57.8	94	36.9	-12	09.2	60 N	6 59	7 55	8 52	13 12	4	23 29	79		
1	196	45.2		58.1	109	10.7 ¹⁴⁸	-11	57.3 ¹¹⁹	58	52	44	35	07	6	33	76		
2	211	45.0		58.3	123	44.6 ¹⁴⁹		45.4 ¹¹⁹	56	45	34	21	13 02	9	37	73		
3	226	44.7		58.5	138	18.6 ¹⁵⁰		33.4 ¹²⁰	54	39	25	8 09	12 58	11	40	7		
4	241	44.4		58.7	152	52.7 ¹⁵¹		21.5 ¹¹⁹	52	34	17	7 58	54	14	43	69		
5	256	44.1	-22	58.9	167	26.8 ¹⁵¹	-11	09.4 ¹²¹	50	6 29	7 10	7 48	12 51	15	23 46	67		
6	271	43.8	-22	59.1	182	00.9 ¹⁵¹	-10	57.4 ¹²⁰	45	6 17	6 54	7 28	12 43	19	23 52	63		
7	286	43.5		59.3	196	35.2 ¹⁵³		45.3 ¹²¹	40	6 07	41	7 11	36	23	23 57	59		
8	301	43.2		59.5	211	09.5 ¹⁵³		33.2 ¹²¹	35	5 58	30	6 58	31	26	*** ** *			
9	316	42.9		59.7	225	43.8 ¹⁵³		21.0 ¹²²	30	49	19	46	26	28	*** ** *			
10	331	42.7	-22	59.9	240	18.2 ¹⁵⁴	-10	08.8 ¹²²	20	33	6 01	25	17	33	*** ** *			
11	346	42.4	-23	00.1	254	52.7 ¹⁵⁵	-9	56.6 ¹²²	10 N	5 18	5 44	6 07	12 10	37	*** ** *			
12	1	42.1	-23	00.4	269	27.2 ¹⁵⁵	-9	44.4 ¹²²	0	5 01	5 27	5 49	12 03	41	*** ** *			
13	16	41.8		00.6	284	01.8 ¹⁵⁶		32.1 ¹²³	10 S	4 42	5 09	32	11 56	44	*** ** *			
14	31	41.5		00.8	298	36.4 ¹⁵⁶		19.8 ¹²³	20	4 20	4 49	5 14	48	49	*** ** *			
15	46	41.2		01.0	313	11.1 ¹⁵⁷	-9	07.4 ¹²⁴	30	3 52	25	4 52	39	54	0 10	30		
16	61	40.9		01.2	327	45.8 ¹⁵⁷	-8	55.1 ¹²³	35	33	4 10	39	34	56	16	27		
17	76	40.6	-23	01.4	342	20.6 ¹⁵⁸	-8	42.7 ¹²⁴	40	3 11	3 52	4 25	11 28	60	0 23	24		
18	91	40.4	-23	01.6	356	55.4 ¹⁵⁸	-8	30.3 ¹²⁴	45	2 41	3 30	4 07	11 22	63	0 31	21		
19	106	40.1		01.8	11	30.3 ¹⁵⁹		17.8 ¹²⁵	50	1 57	3 01	3 45	13	68	41	16		
20	121	39.8		02.0	26	05.2 ¹⁵⁹	-8	05.4 ¹²⁴	52	1 31	2 46	34	10	69	45	15		
21	136	39.5		02.2	40	40.1 ¹⁵⁹	-7	52.9 ¹²⁵	54	0 52	29	23	06	71	50	13		
22	151	39.2		02.4	55	15.1 ¹⁶⁰		40.4 ¹²⁵	56	*** ** *	2 08	3 09	11 01	74	0 56	10		
23	166	38.9		02.6	69	50.2 ¹⁶¹		27.8 ¹²⁶	58	*** ** *	1 40	2 53	10 56	77	1 02	7		
24	181	38.6	-23	02.8	84	25.3 ¹⁶¹	-7	15.3 ¹²⁵	60 S	*** ** *	0 57	2 33	10 50	80	1 08	5		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 38 ^m 8		Mag: -4.9 PMG: 9 ^h 03 ^m			Mag: +1.7 PMG: 8 ^h 57 ^m			Mag: -2.4 PMG: 4 ^h 04 ^m			Mag: -0.4 PMG: 0 ^h 25 ^m						
h	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
0	79	32.1	224	12.9	-11	29.0	225	31.4	-12	44.9	298	50.3	+16	05.1	353	41.2	+22	03.7
1	94	34.5	239	13.8		29.3	240	32.3		45.5	313	52.9		05.1	8	43.9		03.7
2	109	37.0	254	14.6		29.5	255	33.2		46.0	328	55.4		05.2	23	46.5		03.7
3	124	39.5	269	15.5		29.8	270	34.1		46.6	343	57.9		05.2	38	49.2		03.7
4	139	41.9	284	16.4		30.1	285	35.0		47.1	359	00.4		05.2	53	51.9		03.7
5	154	44.4	299	17.2	-11	30.4	300	35.9	-12	47.7	14	02.9	+16	05.2	68	54.6	+22	03.7
6	169	46.9	314	18.1	-11	30.6	315	36.8	-12	48.2	29	05.4	+16	05.3	83	57.3	+22	03.7
7	184	49.3	329	19.0		30.9	330	37.8		48.7	44	08.0		05.3	99	00.0		03.7
8	199	51.8	344	19.8		31.2	345	38.7		49.3	59	10.5		05.3	114	02.7		03.7
9	214	54.3	359	20.7		31.5	0	39.6		49.8	74	13.0		05.3	129	05.3		03.7
10	229	56.7	14	21.6		31.7	15	40.5		50.4	89	15.5		05.4	144	08.0		03.7
11	244	59.2	29	22.4	-11	32.0	30	41.4	-12	50.9	104	18.0	+16	05.4	159	10.7	+22	03.7
12	260	01.6	44	23.3	-11	32.3	45	42.3	-12	51.5	119	20.5	+16	05.4	174	13.4	+22	03.7
13	275	04.1	59	24.1		32.6	60	43.2		52.0	134	23.1		05.4	189	16.1		03.7
14	290	06.6	74	25.0		32.8	75	44.1		52.5	149	25.6		05.5	204	18.8		03.7
15	305	09.0	89	25.8		33.1	90	45.0		53.1	164	28.1		05.5	219	21.4		03.7
16	320	11.5	104	26.7		33.4	105	46.0		53.6	179	30.6		05.5	234	24.1		03.7
17	335	14.0	119	27.5	-11	33.7	120	46.9	-12	54.2	194	33.1	+16	05.6	249	26.8	+22	03.7
18	350	16.4	134	28.4	-11	34.0	135	47.8	-12	54.7	209	35.7	+16	05.6	264	29.5	+22	03.7
19	5	18.9	149	29.2		34.3	150	48.7		55.3	224	38.2		05.6	279	32.2		03.7
20	20	21.4	164	30.1		34.6	165	49.6		55.8	239	40.7		05.6	294	34.9		03.7
21	35	23.8	179	30.9		34.8	180	50.5		56.3	254	43.2		05.7	309	37.5		03.7
22	50	26.3	194	31.7		35.1	195	51.4		56.9	269	45.7		05.7	324	40.2		03.7
23	65	28.8	209	32.6		35.4	210	52.3		57.4	284	48.3		05.7	339	42.9		03.7
24	80	31.2	224	33.4	-11	35.7	225	53.2	-12	58.0	299	50.8	+16	05.8	354	45.6	+22	03.6
Dif	—		+9			-3	+9			-5	+25			0	+27			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°2			Edad: 7 ^d 7 PHE { 4 ^h : 54/5 12 ^h : 54/4 20 ^h : 54/3 R°: 40 ^m												
	PMG: 11 ^h 53 ^m 7				PMG: 18 ^h 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	181	38.6	-23 02.8	84	25.3	-7 15.3		60 N	14 54	15 51	16 47	13 16 3		** ** *	** ** *	
1	196	38.3	02.9	99	00.4 ¹⁶¹	-7 02.7 ¹²⁶		58	15 11	16 02	16 54	13 6		** ** *	** ** *	
2	211	38.0	03.1	113	35.6 ¹⁶²	-6 50.1 ¹²⁶		56	25	12	17 01	11 9		** ** *	** ** *	
3	226	37.8	03.3	128	10.8 ¹⁶²	37.5 ¹²⁶		54	37	21	07	09 11		** ** *	** ** *	
4	241	37.5	03.5	142	46.0 ¹⁶²	24.9 ¹²⁶		52	48	29	13	08 12		** ** *	** ** *	
5	256	37.2	-23 03.7	157	21.3 ¹⁶³	-6 12.2 ¹²⁷		50	15 58	16 36	17 18	13 06 14		** ** *	** ** *	
6	271	36.9	-23 03.9	171	56.6 ¹⁶³	-5 59.6 ¹²⁶		45	16 18	16 52	17 29	13 02 19		** ** *	** ** *	
7	286	36.6	04.1	186	31.9 ¹⁶³	46.9 ¹²⁷		40	35	17 05	39	12 59 22		** ** *	** ** *	
8	301	36.3	04.3	201	07.3 ¹⁶⁴	34.2 ¹²⁷		35	16 49	17	49	57 25	0 01 56			
9	316	36.0	04.5	215	42.7 ¹⁶⁴	21.5 ¹²⁷		30	17 01	27	17 57	54 28	05 53			
10	331	35.7	04.7	230	18.2 ¹⁶⁵	-5 08.8 ¹²⁷		20	22	17 46	18 13	50 32	12 48			
11	346	35.4	-23 04.8	244	53.7 ¹⁶⁵	-4 56.0 ¹²⁸		10 N	17 40	18 03	18 29	12 47 36	0 17 44			
12	1	35.1	-23 05.0	259	29.2 ¹⁶⁵	-4 43.3 ¹²⁷		0	17 57	18 20	18 46	12 44 39	0 23 40			
13	16	34.8	05.2	274	04.7 ¹⁶⁵	30.5 ¹²⁸		10 S	18 15	38	19 05	40 44	28 36			
14	31	34.6	05.4	288	40.2 ¹⁶⁵	17.7 ¹²⁸		20	33	18 58	27	37 48	33 33			
15	46	34.3	05.6	303	15.8 ¹⁶⁶	-4 05.0 ¹²⁷		30	18 55	19 23	19 56	33 52	40 27			
16	61	34.0	05.8	317	51.4 ¹⁶⁶	-3 52.2 ¹²⁸		35	19 08	38	20 14	30 56	43 25			
17	76	33.7	-23 06.0	332	27.0 ¹⁶⁶	-3 39.4 ¹²⁸		40	19 23	19 56	20 37	12 28 58	0 47 22			
18	91	33.4	-23 06.1	347	02.7 ¹⁶⁷	-3 26.5 ¹²⁹		45	19 41	20 18	21 07	12 25 62	0 52 19			
19	106	33.1	06.3	1	38.4 ¹⁶⁷	13.7 ¹²⁸		50	20 03	20 47	21 51	21 66	0 57 15			
20	121	32.8	06.5	16	14.0 ¹⁶⁶	-3 00.9 ¹²⁸		52	13	21 02	22 18	19 69	1 00 13			
21	136	32.5	06.7	30	49.8 ¹⁶⁸	-2 48.1 ¹²⁸		54	25	19	23 00	17 71	03 10			
22	151	32.2	06.8	45	25.5 ¹⁶⁷	35.2 ¹²⁹		56	39	21 41	** ** *	15 73	06 8			
23	166	31.9	07.0	60	01.2 ¹⁶⁷	22.4 ¹²⁸		58	20 56	22 09	** ** *	13 76	09 6			
24	181	31.6	-23 07.2	74	37.0 ¹⁶⁸	-2 09.5 ¹²⁹		60 S	21 16	22 55	** ** *	12 10 79	1 13 3			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 34 ^m 9		Mag: -4.8 PMG: 9 ^h 01 ^m			Mag: +1.7 PMG: 8 ^h 56 ^m			Mag: -2.4 PMG: 4 ^h 00 ^m			Mag: -0.5 PMG: 0 ^h 21 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	
0	80	31.2	224	33.4	-11 35.7	225	53.2	-12 58.0	299	50.8	+16 05.8	354	45.6	+22 03.6		
1	95	33.7	239	34.2	36.0	240	54.2	58.5	314	53.3	05.8	9	48.3	03.6		
2	110	36.1	254	35.0	36.3	255	55.1	59.0	329	55.8	05.8	24	51.0	03.6		
3	125	38.6	269	35.9	36.6	270	56.0	-12 59.6	344	58.3	05.8	39	53.7	03.6		
4	140	41.1	284	36.7	36.9	285	56.9	-13 00.1	0	00.9	05.9	54	56.3	03.6		
5	155	43.5	299	37.5	-11 37.2	300	57.8	-13 00.7	15	03.4	+16 05.9	69	59.0	+22 03.6		
6	170	46.0	314	38.3	-11 37.5	315	58.7	-13 01.2	30	05.9	+16 05.9	85	01.7	+22 03.6		
7	185	48.5	329	39.2	37.8	330	59.6	01.8	45	08.4	05.9	100	04.4	03.6		
8	200	50.9	344	40.0	38.1	346	00.5	02.3	60	11.0	06.0	115	07.1	03.6		
9	215	53.4	359	40.8	38.4	1	01.4	02.8	75	13.5	06.0	130	09.8	03.6		
10	230	55.9	14	41.6	38.7	16	02.3	03.4	90	16.0	06.0	145	12.4	03.6		
11	245	58.3	29	42.4	-11 39.0	31	03.2	-13 03.9	105	18.5	+16 06.1	160	15.1	+22 03.6		
12	261	00.8	44	43.2	-11 39.3	46	04.2	-13 04.5	120	21.1	+16 06.1	175	17.8	+22 03.6		
13	276	03.2	59	44.0	39.6	61	05.1	05.0	135	23.6	06.1	190	20.5	03.6		
14	291	05.7	74	44.8	39.9	76	06.0	05.5	150	26.1	06.2	205	23.2	03.6		
15	306	08.2	89	45.6	40.2	91	06.9	06.1	165	28.7	06.2	220	25.9	03.6		
16	321	10.6	104	46.4	40.5	106	07.8	06.6	180	31.2	06.2	235	28.6	03.6		
17	336	13.1	119	47.2	-11 40.8	121	08.7	-13 07.1	195	33.7	+16 06.2	250	31.2	+22 03.6		
18	351	15.6	134	48.0	-11 41.1	136	09.6	-13 07.7	210	36.2	+16 06.3	265	33.9	+22 03.6		
19	6	18.0	149	48.8	41.4	151	10.5	08.2	225	38.8	06.3	280	36.6	03.6		
20	21	20.5	164	49.6	41.8	166	11.4	08.8	240	41.3	06.3	295	39.3	03.6		
21	36	23.0	179	50.4	42.1	181	12.3	09.3	255	43.8	06.4	310	42.0	03.6		
22	51	25.4	194	51.2	42.4	196	13.2	09.8	270	46.4	06.4	325	44.7	03.6		
23	66	27.9	209	52.0	42.7	211	14.1	10.4	285	48.9	06.4	340	47.4	03.6		
24	81	30.4	224	52.8	-11 43.0	226	15.1	-13 10.9	300	51.4	+16 06.5	355	50.0	+22 03.6		
Dif	—		+8 -3			+9 -5			+25 0			+27 0			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 1				Edad: 8 ^d 7 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 R°: 40 ^m																	
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	181	31.6	-23	07.2	74	37.0	-2	09.5	60 N	7	01	7	57	8	55	13	19	3				
1	196	31.3		07.4	89	12.7 ¹⁶⁷	-1	56.7 ¹²⁸	58	6	54	46	38		19	6	49	76				
2	211	31.0		07.6	103	48.5 ¹⁶⁸		43.8 ¹²⁹	56		47	36	23		20	8	50	73				
3	226	30.8		07.7	118	24.3 ¹⁶⁸		30.9 ¹²⁹	54		41	27	11		20	10	51	71				
4	241	30.5		07.9	133	00.1 ¹⁶⁸		18.1 ¹²⁸	52		35	19	8	00	20	13	52	68				
5	256	30.2	-23	08.1	147	35.9 ¹⁶⁸	-1	05.2 ¹²⁹	50	6	30	7	12	7	50	13	20	15				
6	271	29.9	-23	08.2	162	11.8 ¹⁶⁹	-0	52.3 ¹²⁹	45	6	19	6	56	7	30	13	21	18				
7	286	29.6		08.4	176	47.6 ¹⁶⁸		39.4 ¹²⁹	40	6	09	43	7	13		21	22	56	58			
8	301	29.3		08.6	191	23.4 ¹⁶⁸		26.6 ¹²⁸	35	5	59	31	6	59		22	24	57	55			
9	316	29.0		08.8	205	59.3 ¹⁶⁹		13.7 ¹²⁹	30		51	21	47		22	27	0	58	53			
10	331	28.7		08.9	220	35.1 ¹⁶⁸	-0	00.8 ¹²⁹	20		34	6	02	26		22	32	1	00	48		
11	346	28.4	-23	09.1	235	11.0 ¹⁶⁹	+0	12.0 ¹²⁸	10 N	5	19	5	45	6	08	13	23	36	1	01	44	
12	1	28.1	-23	09.3	249	46.9 ¹⁶⁹	+0	24.9 ¹²⁹	0	5	02	5	28	5	50	13	23	40	1	03	40	
13	16	27.8		09.4	264	22.7 ¹⁶⁸		37.8 ¹²⁹	10 S	4	43	5	10	33		24	44	04	36			
14	31	27.5		09.6	278	58.6 ¹⁶⁹	+0	50.6 ¹²⁸	20	4	21	4	50	5	14	25	47	06	32			
15	46	27.2		09.8	293	34.4 ¹⁶⁸	+1	03.5 ¹²⁹	30	3	52	25	4	53		25	53	07	28			
16	61	26.9		09.9	308	10.3 ¹⁶⁹		16.4 ¹²⁹	35		34	4	10	40		26	55	08	25			
17	76	26.6	-23	10.1	322	46.1 ¹⁶⁸	+1	29.2 ¹²⁸	40	3	11	3	52	4	25	13	26	58	1	09	22	
18	91	26.3	-23	10.2	337	22.0 ¹⁶⁹	+1	42.0 ¹²⁸	45	2	41	3	30	4	07	13	27	61	1	11	18	
19	106	26.0		10.4	351	57.8 ¹⁶⁸	+1	54.9 ¹²⁹	50	1	56	3	01	3	45		27	66	12	14		
20	121	25.7		10.6	6	33.7 ¹⁶⁹	+2	07.7 ¹²⁸	52	1	30	2	46	34		28	68	13	12			
21	136	25.4		10.7	21	09.5 ¹⁶⁸		20.5 ¹²⁸	54	0	48	28	22		28	70		13	11			
22	151	25.2		10.9	35	45.3 ¹⁶⁸		33.3 ¹²⁸	56	** *	2	07	3	08		28	73		14	8		
23	166	24.9		11.0	50	21.1 ¹⁶⁸		46.1 ¹²⁸	58	** *	1	38	2	52		29	75		15	6		
24	181	24.6	-23	11.2	64	56.9 ¹⁶⁸	+2	58.9 ¹²⁸	60 S	** *	0	53	2	32		13	29	79		1	16	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 30 ^m 9		Mag: -4.8 PMG: 9 ^h 00 ^m		Mag: +1.6 PMG: 8 ^h 54 ^m		Mag: -2.4 PMG: 3 ^h 56 ^m		Mag: -0.5 PMG: 0 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	30.4	224	52.8	-11	43.0	226	15.1	-13	10.9
1	96	32.8	239	53.5		43.3	241	16.0		11.4
2	111	35.3	254	54.3		43.6	256	16.9		12.0
3	126	37.7	269	55.1		44.0	271	17.8		12.5
4	141	40.2	284	55.9		44.3	286	18.7		13.1
5	156	42.7	299	56.7	-11	44.6	301	19.6	-13	13.6
6	171	45.1	314	57.4	-11	44.9	316	20.5	-13	14.1
7	186	47.6	329	58.2		45.2	331	21.4		14.7
8	201	50.1	344	59.0		45.6	346	22.3		15.2
9	216	52.5	359	59.7		45.9	1	23.2		15.7
10	231	55.0	15	00.5		46.2	16	24.1		16.3
11	246	57.5	30	01.3	-11	46.5	31	25.0	-13	16.8
12	261	59.9	45	02.0	-11	46.9	46	25.9	-13	17.3
13	277	02.4	60	02.8		47.2	61	26.8		17.9
14	292	04.8	75	03.5		47.5	76	27.7		18.4
15	307	07.3	90	04.3		47.9	91	28.6		19.0
16	322	09.8	105	05.0		48.2	106	29.6		19.5
17	337	12.2	120	05.8	-11	48.5	121	30.5	-13	20.0
18	352	14.7	135	06.6	-11	48.9	136	31.4	-13	20.6
19	7	17.2	150	07.3		49.2	151	32.3		21.1
20	22	19.6	165	08.0		49.5	166	33.2		21.6
21	37	22.1	180	08.8		49.9	181	34.1		22.2
22	52	24.6	195	09.5		50.2	196	35.0		22.7
23	67	27.0	210	10.3		50.5	211	35.9		23.2
24	82	29.5	225	11.0	-11	50.9	226	36.8	-13	23.8
Dif	—		+8 -3		+9 -5		+25 0		+27 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 6			Edad: 9 ^d 7 PHE { SD: 14/7 PMG: 20 ^h 13 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	181	24.6	-23	11.2	64	56.9	+2	58.9	60 N	14 53	15 50	16 47	13 22	4	2 07	79		
1	196	24.3		11.4	79	32.7 ¹⁶⁸	+3	11.7 ¹²⁸	58	15 10	16 02	16 54	25	7	05	76		
2	211	24.0		11.5	94	08.5 ¹⁶⁸		24.5 ¹²⁸	56	25	12	17 01	28	9	03	73		
3	226	23.7		11.7	108	44.3 ¹⁶⁸		37.2 ¹²⁷	54	37	21	07	30	12	02	70		
4	241	23.4		11.8	123	20.0 ¹⁶⁷	+3	50.0 ¹²⁸	52	48	29	13	33	13	2 00	69		
5	256	23.1	-23	12.0	137	55.8 ¹⁶⁸	+4	02.7 ¹²⁷	50	15 58	16 37	17 18	13 35	15	1 59	67		
6	271	22.8	-23	12.1	152	31.5 ¹⁶⁷	+4	15.4 ¹²⁷	45	16 19	16 52	17 30	13 39	20	1 56	63		
7	286	22.5		12.3	167	07.2 ¹⁶⁷		28.1 ¹²⁷	40	35	17 06	40	43	23	54	59		
8	301	22.2		12.4	181	42.9 ¹⁶⁷		40.8 ¹²⁷	35	16 49	17	49	46	26	52	56		
9	316	21.9		12.6	196	18.5 ¹⁶⁶	+4	53.5 ¹²⁷	30	17 02	28	17 58	49	29	51	52		
10	331	21.6		12.7	210	54.2 ¹⁶⁷	+5	06.2 ¹²⁷	20	23	17 47	18 14	54	34	48	48		
11	346	21.3	-23	12.9	225	29.8 ¹⁶⁶	+5	18.8 ¹²⁶	10 N	17 41	18 04	18 30	13 59	37	1 45	44		
12	1	21.0	-23	13.0	240	05.4 ¹⁶⁶	+5	31.4 ¹²⁶	0	17 58	18 21	18 47	14 03	41	1 43	40		
13	16	20.7		13.2	254	41.0 ¹⁶⁶		44.0 ¹²⁶	10 S	18 16	39	19 06	08	44	40	37		
14	31	20.4		13.3	269	16.5 ¹⁶⁵	+5	56.6 ¹²⁶	20	35	18 59	28	12	49	38	32		
15	46	20.1		13.5	283	52.1 ¹⁶⁶	+6	09.2 ¹²⁶	30	18 56	19 24	19 57	18	53	35	28		
16	61	19.8		13.6	298	27.6 ¹⁶⁵		21.7 ¹²⁵	35	19 09	39	20 16	21	56	33	25		
17	76	19.5	-23	13.7	313	03.0 ¹⁶⁴	+6	34.3 ¹²⁶	40	19 24	19 57	20 39	14 24	60	1 31	22		
18	91	19.2	-23	13.9	327	38.5 ¹⁶⁵	+6	46.8 ¹²⁵	45	19 42	20 19	21 09	14 28	63	1 29	19		
19	106	18.9		14.0	342	13.9 ¹⁶⁴	+6	59.3 ¹²⁵	50	20 04	20 49	21 54	33	68	26	15		
20	121	18.6		14.2	356	49.3 ¹⁶⁴	+7	11.7 ¹²⁴	52	15	21 04	22 21	36	69	25	13		
21	136	18.3		14.3	11	24.6 ¹⁶³		24.2 ¹²⁵	54	27	22	23 05	38	72	24	11		
22	151	18.0		14.4	25	59.9 ¹⁶³		36.6 ¹²⁴	56	41	21 43	** **	41	74	22	9		
23	166	17.7		14.6	40	35.2 ¹⁶³	+7	49.0 ¹²⁴	58	20 58	22 12	** **	44	77	21	6		
24	181	17.4	-23	14.7	55	10.5 ¹⁶³	+8	01.3 ¹²³	60 S	21 18	23 00	** **	14 48	80	1 19	3		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 27 ^m 0		Mag: -4.8 PMG: 8 ^h 59 ^m			Mag: +1.6 PMG: 8 ^h 53 ^m			Mag: -2.4 PMG: 3 ^h 52 ^m			Mag: -0.5 PMG: 0 ^h 12 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	82	29.5	225	11.0	-11	50.9	226	36.8	-13	23.8	301	52.2	+16	07.2	356	54.5		
1	97	32.0	240	11.7		51.2	241	37.7		24.3	316	54.8		07.3	11	57.2		
2	112	34.4	255	12.5		51.6	256	38.6		24.8	331	57.3		07.3	26	59.9		
3	127	36.9	270	13.2		51.9	271	39.5		25.4	346	59.9		07.3	42	02.5		
4	142	39.3	285	13.9		52.2	286	40.4		25.9	2	02.4		07.4	57	05.2		
5	157	41.8	300	14.7	-11	52.6	301	41.3	-13	26.4	17	04.9	+16	07.4	72	07.9		
6	172	44.3	315	15.4	-11	52.9	316	42.2	-13	27.0	32	07.5	+16	07.4	87	10.6		
7	187	46.7	330	16.1		53.3	331	43.1		27.5	47	10.0		07.5	102	13.3		
8	202	49.2	345	16.9		53.6	346	44.0		28.0	62	12.6		07.5	117	16.0		
9	217	51.7	0	17.6		54.0	1	44.9		28.6	77	15.1		07.5	132	18.7		
10	232	54.1	15	18.3		54.3	16	45.8		29.1	92	17.6		07.6	147	21.3		
11	247	56.6	30	19.0	-11	54.7	31	46.7	-13	29.6	107	20.2	+16	07.6	162	24.0		
12	262	59.1	45	19.7	-11	55.0	46	47.6	-13	30.2	122	22.7	+16	07.6	177	26.7		
13	278	01.5	60	20.4		55.4	61	48.5		30.7	137	25.3		07.7	192	29.4		
14	293	04.0	75	21.2		55.7	76	49.4		31.2	152	27.8		07.7	207	32.1		
15	308	06.5	90	21.9		56.1	91	50.3		31.7	167	30.4		07.7	222	34.8		
16	323	08.9	105	22.6		56.4	106	51.2		32.3	182	32.9		07.8	237	37.5		
17	338	11.4	120	23.3	-11	56.8	121	52.1	-13	32.8	197	35.4	+16	07.8	252	40.1		
18	353	13.8	135	24.0	-11	57.1	136	53.1	-13	33.3	212	38.0	+16	07.8	267	42.8		
19	8	16.3	150	24.7		57.5	151	54.0		33.9	227	40.5		07.9	282	45.5		
20	23	18.8	165	25.4		57.8	166	54.9		34.4	242	43.1		07.9	297	48.2		
21	38	21.2	180	26.1		58.2	181	55.8		34.9	257	45.6		07.9	312	50.9		
22	53	23.7	195	26.8		58.6	196	56.7		35.5	272	48.2		08.0	327	53.6		
23	68	26.2	210	27.5		58.9	211	57.6		36.0	287	50.7		08.0	342	56.3		
24	83	28.6	225	28.2	-11	59.3	226	58.5	-13	36.5	302	53.3	+16	08.0	357	58.9		
Dif	—		+7			-3	+9			-5	+25			0	+27			0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 55 ^m 1			Edad: 10 ^d 7 PHE { SD: 14'8 PMG: 20 ^h 54 ^m 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 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	181	17.4	-23	14.7	55	10.5	+8	01.3	60 N	7 03	8 00	8 57	13 26	5		3 26	81	
1	196	17.1		14.9	69	45.7 ¹⁶²		13.7 ¹²⁴	58	6 55	7 48	40	32	8		21	78	
2	211	16.8		15.0	84	20.9 ¹⁶²		26.0 ¹²³	56	49	38	25	37	11		16	75	
3	226	16.5		15.1	98	56.0 ¹⁶¹		38.3 ¹²³	54	43	29	13	42	14		12	73	
4	241	16.2		15.3	113	31.1 ¹⁶¹	+8	50.5 ¹²²	52	37	21	8 02	46	16		09	70	
5	256	15.9	-23	15.4	128	06.2 ¹⁶¹	+9	02.7 ¹²²	50	6 32	7 13	7 52	13 50	18		3 06	68	
6	271	15.6	-23	15.5	142	41.2 ¹⁶⁰	+9	14.9 ¹²²	45	6 20	6 57	7 31	13 59	22		2 59	63	
7	286	15.3		15.7	157	16.2 ¹⁶⁰		27.1 ¹²²	40	10	44	15	14 06	26		53	60	
8	301	15.0		15.8	171	51.2 ¹⁶⁰		39.2 ¹²¹	35	6 01	32	7 00	12	29		48	57	
9	316	14.7		15.9	186	26.1 ¹⁵⁹	+9	51.3 ¹²¹	30	5 52	22	6 48	18	31		43	54	
10	331	14.4		16.1	201	00.9 ¹⁵⁸	+10	03.4 ¹²¹	20	36	6 03	27	28	35		36	49	
11	346	14.1	-23	16.2	215	35.7 ¹⁵⁸	+10	15.4 ¹²⁰	10 N	5 20	5 46	6 09	14 36	40		2 29	46	
12	1	13.8	-23	16.3	230	10.5 ¹⁵⁸	+10	27.4 ¹²⁰	0	5 03	5 29	5 51	14 44	43		2 23	42	
13	16	13.5		16.4	244	45.2 ¹⁵⁷		39.4 ¹²⁰	10 S	4 44	5 11	34	14 52	47		17	38	
14	31	13.2		16.6	259	19.9 ¹⁵⁷	+10	51.3 ¹¹⁹	20	4 21	4 50	5 15	15 01	51		10	34	
15	46	12.9		16.7	273	54.5 ¹⁵⁶	+11	03.2 ¹¹⁹	30	3 52	26	4 53	11	55		2 03	29	
16	61	12.6		16.8	288	29.1 ¹⁵⁶		15.1 ¹¹⁹	35	34	4 11	40	17	58		1 58	27	
17	76	12.3	-23	16.9	303	03.6 ¹⁵⁵	+11	26.9 ¹¹⁸	40	3 11	3 53	4 25	15 24	60		1 53	25	
18	91	12.0	-23	17.1	317	38.1 ¹⁵⁵	+11	38.6 ¹¹⁷	45	2 41	3 30	4 07	15 31	65		1 48	21	
19	106	11.7		17.2	332	12.5 ¹⁵⁴	+11	50.4 ¹¹⁸	50	1 56	3 01	3 45	41	68		41	17	
20	121	11.4		17.3	346	46.9 ¹⁵⁴	+12	02.1 ¹¹⁷	52	1 29	2 46	34	45	71		38	15	
21	136	11.1		17.4	1	21.2 ¹⁵³		13.7 ¹¹⁶	54	0 45	28	22	50	73		35	12	
22	151	10.8		17.6	15	55.5 ¹⁵³		25.3 ¹¹⁶	56	** **	2 06	3 08	15 55	76		31	10	
23	166	10.5		17.7	30	29.7 ¹⁵²		36.9 ¹¹⁶	58	** **	1 37	2 52	16 01	79		27	7	
24	181	10.2	-23	17.8	45	03.8 ¹⁵¹	+12	48.4 ¹¹⁵	60 S	** **	0 50	2 31	16 08	83		1 22	4	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 23 ^m 1		Mag: -4.8 PMG: 8 ^h 58 ^m			Mag: +1.6 PMG: 8 ^h 52 ^m			Mag: -2.4 PMG: 3 ^h 48 ^m			Mag: -0.5 PMG: 0 ^h 08 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	83	28.6	225	28.2	-11	59.3	226	58.5	-13	36.5	302	53.3	+16	08.0	357	58.9	+22	03.5
1	98	31.1	240	28.9	-11	59.6	241	59.4		37.1	317	55.8		08.1	13	01.6		03.4
2	113	33.6	255	29.6	-12	00.0	257	00.3		37.6	332	58.3		08.1	28	04.3		03.4
3	128	36.0	270	30.3	-12	00.4	272	01.2		38.1	348	00.9		08.1	43	07.0		03.4
4	143	38.5	285	30.9		00.7	287	02.1		38.6	3	03.4		08.2	58	09.7		03.4
5	158	40.9	300	31.6	-12	01.1	302	03.0	-13	39.2	18	06.0	+16	08.2	73	12.4	+22	03.4
6	173	43.4	315	32.3	-12	01.5	317	03.9	-13	39.7	33	08.5	+16	08.3	88	15.1	+22	03.4
7	188	45.9	330	33.0		01.8	332	04.8		40.2	48	11.1		08.3	103	17.8		03.4
8	203	48.3	345	33.7		02.2	347	05.7		40.8	63	13.6		08.3	118	20.4		03.4
9	218	50.8	0	34.4		02.6	2	06.6		41.3	78	16.2		08.4	133	23.1		03.4
10	233	53.3	15	35.0		02.9	17	07.5		41.8	93	18.7		08.4	148	25.8		03.4
11	248	55.7	30	35.7	-12	03.3	32	08.4	-13	42.3	108	21.3	+16	08.4	163	28.5	+22	03.4
12	263	58.2	45	36.4	-12	03.7	47	09.3	-13	42.9	123	23.8	+16	08.5	178	31.2	+22	03.4
13	279	00.7	60	37.1		04.0	62	10.2		43.4	138	26.4		08.5	193	33.9		03.4
14	294	03.1	75	37.7		04.4	77	11.1		43.9	153	28.9		08.5	208	36.6		03.4
15	309	05.6	90	38.4		04.8	92	12.0		44.4	168	31.5		08.6	223	39.2		03.4
16	324	08.1	105	39.1		05.2	107	12.9		45.0	183	34.0		08.6	238	41.9		03.4
17	339	10.5	120	39.7	-12	05.5	122	13.8	-13	45.5	198	36.6	+16	08.7	253	44.6	+22	03.4
18	354	13.0	135	40.4	-12	05.9	137	14.7	-13	46.0	213	39.1	+16	08.7	268	47.3	+22	03.4
19	9	15.4	150	41.0		06.3	152	15.6		46.6	228	41.7		08.7	283	50.0		03.4
20	24	17.9	165	41.7		06.7	167	16.5		47.1	243	44.3		08.8	298	52.7		03.4
21	39	20.4	180	42.4		07.0	182	17.4		47.6	258	46.8		08.8	313	55.4		03.4
22	54	22.8	195	43.0		07.4	197	18.3		48.1	273	49.4		08.8	328	58.0		03.4
23	69	25.3	210	43.7		07.8	212	19.2		48.7	288	51.9		08.9	344	00.7		03.4
24	84	27.8	225	44.3	-12	08.2	227	20.1	-13	49.2	303	54.5	+16	08.9	359	03.4	+22	03.4
Dif	—		+7			-4	+9			-5	+26		0		+27			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 11 ^h 55 ^m 6				Edad: 11 ^d 7 PHE { SD: 14:8 PMG: 21 ^h 38 ^m 4 ^h : 54:4 12 ^h : 54:5 20 ^h : 54:7 R°: 47 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	10.2	-23	17.8	45	03.8	+12	48.4	60 N	14 53	15 51	16 47	13 31	8	4	47 84
1	196	09.9		17.9	59	37.9 ¹⁵¹	+12	59.9 ¹¹⁵	58	15 10	16 02	16 55	40	12	39	80
2	211	09.6		18.0	74	11.9 ¹⁵⁰	+13	11.3 ¹¹⁴	56	25	12	17 01	48	15	31	77
3	226	09.3		18.1	88	45.9 ¹⁵⁰		22.7 ¹¹⁴	54	38	21	08	13	56	17	25 77
4	241	09.0		18.3	103	19.8 ¹⁴⁹		34.0 ¹¹³	52	49	30	13	14	02	20	19 72
5	256	08.7	-23	18.4	117	53.7 ¹⁴⁹	+13	45.3 ¹¹³	50	15 58	16 37	17 18	14	08	22	4 14 69
6	271	08.4	-23	18.5	132	27.5 ¹⁴⁸	+13	56.6 ¹¹³	45	16 19	16 53	17 30	14	21	27	4 02 65
7	286	08.1		18.6	147	01.2 ¹⁴⁷	+14	07.8 ¹¹²	40	36	17 06	40	32	30	3	53 61
8	301	07.8		18.7	161	34.9 ¹⁴⁷		18.9 ¹¹¹	35	16 50	18	50	41	33	45	58
9	316	07.5		18.8	176	08.5 ¹⁴⁶		30.0 ¹¹¹	30	17 02	29	17 59	14	49	35	37 56
10	331	07.2		18.9	190	42.0 ¹⁴⁵		41.0 ¹¹⁰	20	23	17 47	18 15	15	03	39	25 52
11	346	06.9	-23	19.0	205	15.5 ¹⁴⁵	+14	52.0 ¹¹⁰	10 N	17 42	18 05	18 31	15	16	42	3 15 47
12	1	06.6	-23	19.1	219	48.9 ¹⁴⁴	+15	02.9 ¹⁰⁹	0	17 59	18 22	18 48	15	27	46	3 05 44
13	16	06.3		19.3	234	22.3 ¹⁴⁴		13.8 ¹⁰⁹	10 S	18 17	18 40	19 07	39	49	2	55 41
14	31	06.0		19.4	248	55.6 ¹⁴³		24.6 ¹⁰⁸	20	36	19 00	30	15	52	52	44 37
15	46	05.7		19.5	263	28.8 ¹⁴²		35.4 ¹⁰⁸	30	18 58	25	19 59	16	06	57	32 33
16	61	05.4		19.6	278	01.9 ¹⁴¹		46.1 ¹⁰⁷	35	19 11	40	20 17	15	59	25	31
17	76	05.1	-23	19.7	292	35.0 ¹⁴¹	+15	56.7 ¹⁰⁶	40	19 26	19 59	20 40	16	24	62	2 18 27
18	91	04.8	-23	19.8	307	08.0 ¹⁴⁰	+16	07.3 ¹⁰⁶	45	19 44	20 21	21 11	16	36	65	2 09 24
19	106	04.5		19.9	321	41.0 ¹⁴⁰		17.8 ¹⁰⁵	50	20 06	20 51	21 56	49	71	1	58 19
20	121	04.2		20.0	336	13.8 ¹³⁸		28.2 ¹⁰⁴	52	17	21 06	22 23	16	56	72	53 17
21	136	03.9		20.1	350	46.6 ¹³⁸		38.6 ¹⁰⁴	54	29	24	23 09	17	03	75	47 15
22	151	03.6		20.2	5	19.3 ¹³⁷		49.0 ¹⁰⁴	56	20 43	21 46	** **	11	78	41	13
23	166	03.3		20.3	19	52.0 ¹³⁷	+16	59.2 ¹⁰²	58	21 00	22 15	** **	20	82	34	10
24	181	02.9	-23	20.4	34	24.6 ¹³⁶	+17	09.4 ¹⁰²	60 S	21 20	23 04	** **	17	31	86	1 26 7
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 19 ^m 1		Mag: -4.8 PMG: 8 ^h 57 ^m		Mag: +1.6 PMG: 8 ^h 50 ^m		Mag: -2.4 PMG: 3 ^h 44 ^m		Mag: -0.5 PMG: 0 ^h 04 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	27.8	225	44.3	-12	08.2	227	20.1	-13	49.2	303	54.5	+16	08.9	359	03.4
1	99	30.2	240	45.0		08.6	242	21.0		49.7	318	57.0		09.0	14	06.1
2	114	32.7	255	45.6		08.9	257	21.9		50.2	333	59.6		09.0	29	08.8
3	129	35.2	270	46.3		09.3	272	22.8		50.8	349	02.1		09.0	44	11.5
4	144	37.6	285	46.9		09.7	287	23.7		51.3	4	04.7		09.1	59	14.2
5	159	40.1	300	47.5	-12	10.1	302	24.5	-13	51.8	19	07.2	+16	09.1	74	16.9
6	174	42.6	315	48.2	-12	10.5	317	25.4	-13	52.3	34	09.8	+16	09.2	89	19.5
7	189	45.0	330	48.8		10.9	332	26.3		52.9	49	12.4		09.2	104	22.2
8	204	47.5	345	49.5		11.2	347	27.2		53.4	64	14.9		09.2	119	24.9
9	219	49.9	0	50.1		11.6	2	28.1		53.9	79	17.5		09.3	134	27.6
10	234	52.4	15	50.7		12.0	17	29.0		54.4	94	20.0		09.3	149	30.3
11	249	54.9	30	51.4	-12	12.4	32	29.9	-13	55.0	109	22.6	+16	09.3	164	33.0
12	264	57.3	45	52.0	-12	12.8	47	30.8	-13	55.5	124	25.1	+16	09.4	179	35.7
13	279	59.8	60	52.6		13.2	62	31.7		56.0	139	27.7		09.4	194	38.3
14	295	02.3	75	53.3		13.6	77	32.6		56.5	154	30.3		09.5	209	41.0
15	310	04.7	90	53.9		14.0	92	33.5		57.1	169	32.8		09.5	224	43.7
16	325	07.2	105	54.5		14.4	107	34.4		57.6	184	35.4		09.5	239	46.4
17	340	09.7	120	55.1	-12	14.8	122	35.3	-13	58.1	199	37.9	+16	09.6	254	49.1
18	355	12.1	135	55.7	-12	15.2	137	36.2	-13	58.6	214	40.5	+16	09.6	269	51.8
19	10	14.6	150	56.4		15.5	152	37.1		59.1	229	43.1		09.7	284	54.5
20	25	17.0	165	57.0		15.9	167	38.0	-13	59.7	244	45.6		09.7	299	57.1
21	40	19.5	180	57.6		16.3	182	38.9	-14	00.2	259	48.2		09.7	314	59.8
22	55	22.0	195	58.2		16.7	197	39.8		00.7	274	50.7		09.8	330	02.5
23	70	24.4	210	58.8		17.1	212	40.7		01.2	289	53.3		09.8	345	05.2
24	85	26.9	225	59.4	-12	17.5	227	41.6	-14	01.8	304	55.9	+16	09.9	0	07.9
Dif	—		+6		-4		+9		-5		+26		0		-8973	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 56 ^m 0			Edad: 12 ^d 7 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'0 R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	02.9	-23	20.4	34	24.6	+17	09.4	60 N	7 05	8 01	8 59	13 39	13	6 11	87
1	196	02.6		20.5	48	57.1 ¹³⁵		19.5 ¹⁰¹	58	6 57	7 50	42	13 52	18	5 59	82
2	211	02.3		20.6	63	29.5 ¹³⁴		29.6 ¹⁰¹	56		39	27	14 03	21	48	78
3	226	02.0		20.7	78	01.9 ¹³⁴		39.6 ¹⁰⁰	54	44	30	14	13	24	39	75
4	241	01.7		20.8	92	34.1 ¹³²		49.5 ⁹⁹	52	39	22	8 03	22	27	31	72
5	256	01.4	-23	20.9	107	06.3 ¹³²	+17	59.4 ⁹⁹	50	6 33	7 15	7 53	14 30	29	5 23	70
6	271	01.1	-23	21.0	121	38.5 ¹³²	+18	09.1 ⁹⁷	45	6 22	6 59	7 33	14 48	32	5 07	66
7	286	00.8		21.1	136	10.5 ¹³⁰		18.9 ⁹⁸	40	11	45	16	15 02	35	4 54	63
8	301	00.5		21.2	150	42.5 ¹³⁰		28.5 ⁹⁶	35	6 02	34	7 02	14	37	43	60
9	316	00.2		21.2	165	14.4 ¹²⁹		38.0 ⁹⁵	30	5 53	23	6 49	24	40	33	58
10	330	59.9		21.3	179	46.2 ¹²⁸		47.5 ⁹⁵	20	37	6 04	28	42	44	17	54
11	345	59.6	-23	21.4	194	18.0 ¹²⁸	+18	56.9 ⁹⁴	10 N	5 21	5 47	6 10	15 58	47	4 02	51
12	0	59.3	-23	21.5	208	49.6 ¹²⁶	+19	06.2 ⁹³	0	5 04	5 30	5 52	16 13	49	3 49	47
13	15	59.0		21.6	223	21.2 ¹²⁶		15.5 ⁹³	10 S	4 45	5 12	35	28	52	36	44
14	30	58.7		21.7	237	52.7 ¹²⁵		24.6 ⁹¹	20	4 22	4 51	5 16	16 44	55	21	41
15	45	58.4		21.8	252	24.1 ¹²⁴		33.7 ⁹¹	30	3 53	26	4 54	17 03	58	3 05	37
16	60	58.1		21.9	266	55.5 ¹²⁴		42.7 ⁹⁰	35	34	4 11	41	14	60	2 56	35
17	75	57.8	-23	21.9	281	26.7 ¹²²	+19	51.6 ⁸⁹	40	3 11	3 53	4 26	17 26	63	2 45	32
18	90	57.5	-23	22.0	295	57.9 ¹²²	+20	00.5 ⁸⁹	45	2 41	3 31	4 08	17 41	66	2 33	28
19	105	57.2		22.1	310	29.0 ¹²¹		09.2 ⁸⁷	50	1 56	3 01	3 45	18 00	70	17	25
20	120	56.9		22.2	325	00.1 ¹²¹		17.9 ⁸⁷	52	1 28	2 46	35	08	73	10	23
21	135	56.6		22.3	339	31.0 ¹¹⁹		26.5 ⁸⁶	54	0 43	28	22	18	75	2 02	21
22	150	56.2		22.4	354	01.9 ¹¹⁹		34.9 ⁸⁴	56	** ** *	2 06	3 08	29	78	1 54	17
23	165	55.9		22.4	8	32.7 ¹¹⁸		43.3 ⁸⁴	58	** ** *	1 36	2 51	42	81	44	14
24	180	55.6	-23	22.5	23	03.4 ¹¹⁷	+20	51.6 ⁸³	60 S	** ** *	0 47	2 31	18 57	86	1 33	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 18 ^h 15 ^m 2		Mag: -4.8 PMG: 8 ^h 56 ^m		Mag: +1.6 PMG: 8 ^h 49 ^m		Mag: -2.4 PMG: 3 ^h 40 ^m		Mag: -0.5 PMG: 23 ^h 55 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	85	26.9	225	59.4	-12	17.5	227	41.6	-14	01.8	304	55.9	+16	09.9	0	07.9	+22	03.3
1	100	29.4	241	00.0		17.9	242	42.5		02.3	319	58.4		09.9	15	10.6		03.3
2	115	31.8	256	00.6		18.3	257	43.4		02.8	335	01.0		09.9	30	13.3		03.3
3	130	34.3	271	01.2		18.7	272	44.3		03.3	350	03.6		10.0	45	16.0		03.3
4	145	36.8	286	01.9		19.1	287	45.2		03.8	5	06.1		10.0	60	18.6		03.3
5	160	39.2	301	02.5	-12	19.5	302	46.1	-14	04.4	20	08.7	+16	10.1	75	21.3	+22	03.3
6	175	41.7	316	03.1	-12	20.0	317	47.0	-14	04.9	35	11.2	+16	10.1	90	24.0	+22	03.3
7	190	44.2	331	03.7		20.4	332	47.8		05.4	50	13.8		10.1	105	26.7		03.3
8	205	46.6	346	04.2		20.8	347	48.7		05.9	65	16.4		10.2	120	29.4		03.3
9	220	49.1	1	04.8		21.2	2	49.6		06.4	80	18.9		10.2	135	32.1		03.3
10	235	51.5	16	05.4		21.6	17	50.5		07.0	95	21.5		10.3	150	34.8		03.3
11	250	54.0	31	06.0	-12	22.0	32	51.4	-14	07.5	110	24.1	+16	10.3	165	37.4	+22	03.3
12	265	56.5	46	06.6	-12	22.4	47	52.3	-14	08.0	125	26.6	+16	10.4	180	40.1	+22	03.3
13	280	58.9	61	07.2		22.8	62	53.2		08.5	140	29.2		10.4	195	42.8		03.3
14	296	01.4	76	07.8		23.2	77	54.1		09.0	155	31.8		10.4	210	45.5		03.3
15	311	03.9	91	08.4		23.6	92	55.0		09.6	170	34.3		10.5	225	48.2		03.3
16	326	06.3	106	09.0		24.0	107	55.9		10.1	185	36.9		10.5	240	50.9		03.3
17	341	08.8	121	09.5	-12	24.4	122	56.8	-14	10.6	200	39.5	+16	10.6	255	53.6	+22	03.3
18	356	11.3	136	10.1	-12	24.9	137	57.7	-14	11.1	215	42.0	+16	10.6	270	56.2	+22	03.3
19	11	13.7	151	10.7		25.3	152	58.6		11.6	230	44.6		10.6	285	58.9		03.3
20	26	16.2	166	11.3		25.7	167	59.5		12.2	245	47.2		10.7	301	01.6		03.3
21	41	18.7	181	11.8		26.1	183	00.4		12.7	260	49.7		10.7	316	04.3		03.3
22	56	21.1	196	12.4		26.5	198	01.2		13.2	275	52.3		10.8	331	07.0		03.3
23	71	23.6	211	13.0		26.9	213	02.1		13.7	290	54.9		10.8	346	09.7		03.3
24	86	26.0	226	13.6	-12	27.3	228	03.0	-14	14.2	305	57.5	+16	10.9	1	12.4	+22	03.3
Dif	—		+6		-4		+9		-5		+26		0		+27		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 5			Edad: 13 ^d 7 PHE { 4 ^h : 55/2 12 ^h : 55/3 20 ^h : 55/5 SD: 15:0 PMG: 23 ^h 15 ^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	55.6	-23	22.5	23	03.4	+20	51.6	60 N	14 53	15 51	16 48	13 52 23	7 38 84			
1	195	55.3		22.6	37	34.0 ¹¹⁶	+20	59.8	82 58	15 11	16 03	16 55	14 10 27	21 79			
2	210	55.0		22.7	52	04.5 ¹¹⁵	+21	08.0	80 56	25	13	17 02	24 31	7 06 76			
3	225	54.7		22.8	66	35.0 ¹¹⁵		16.0	82 54	38	22	08	37 34	6 54 73			
4	240	54.4		22.8	81	05.4 ¹¹⁴		23.9	79 52	49	30	14	49 35	43 71			
5	255	54.1	-23	22.9	95	35.6 ¹¹²	+21	31.7	78 50	15 59	16 38	17 19	14 59 37	6 33 69			
6	270	53.8	-23	23.0	110	05.9 ¹¹³	+21	39.5	78 45	16 20	16 54	17 31	15 20 40	6 13 65			
7	285	53.5		23.1	124	36.0 ¹¹¹		47.1	76 40	37	17 07	41	37 43	5 57 62			
8	300	53.2		23.1	139	06.0 ¹¹⁰	+21	54.6	75 35	16 51	19	51	15 51 45	43 60			
9	315	52.9		23.2	153	36.0 ¹¹⁰	+22	02.1	75 30	17 03	29	17 59	16 04 46	31 59			
10	330	52.6		23.3	168	05.9 ¹⁰⁹		09.4	73 20	24	17 48	18 16	26 48	5 11 55			
11	345	52.3	-23	23.3	182	35.7 ¹⁰⁸	+22	16.6	72 10 N	17 43	18 06	18 32	16 45 50	4 53 53			
12	0	52.0	-23	23.4	197	05.5 ¹⁰⁸	+22	23.8	72 0	18 00	18 23	18 49	17 02 53	4 36 51			
13	15	51.7		23.5	211	35.1 ¹⁰⁶		30.8	70 10 S	18	18 41	19 08	20 54	20 48			
14	30	51.4		23.5	226	04.7 ¹⁰⁶		37.7	69 20	37	19 01	19 31	17 39 57	4 02 46			
15	45	51.0		23.6	240	34.2 ¹⁰⁵		44.5	68 30	18 59	26	20 00	18 01 59	3 42 43			
16	60	50.7		23.7	255	03.6 ¹⁰⁴		51.2	67 35	19 12	19 42	18	14 61	31 41			
17	75	50.4	-23	23.7	269	32.9 ¹⁰³	+22	57.8	66 40	19 27	20 00	20 42	18 29 62	3 17 39			
18	90	50.1	-23	23.8	284	02.2 ¹⁰³	+23	04.3	65 45	19 45	20 22	21 12	18 47 64	3 01 36			
19	105	49.8		23.9	298	31.3 ¹⁰¹		10.6	63 50	20 08	20 52	21 58	19 10 67	2 42 32			
20	120	49.5		23.9	313	00.4 ¹⁰¹		16.9	63 52	18	21 07	22 26	21 68	33 30			
21	135	49.2		24.0	327	29.5 ¹⁰¹		23.0	61 54	31	25	23 12	33 70	23 27			
22	150	48.9		24.1	341	58.4 ⁹⁹		29.1	61 56	20 45	21 48	** **	19 47 73	2 11 25			
23	165	48.6		24.1	356	27.3 ⁹⁹		35.0	59 58	21 02	22 17	** **	20 03 76	1 58 21			
24	180	48.3	-23	24.2	10	56.1 ⁹⁸	+23	40.8	58 60 S	21 22	23 08	** **	20 23 81	1 42 17			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 18 ^h 11 ^m 3		Mag: -4.8 PMG: 8 ^h 55 ^m			Mag: +1.6 PMG: 8 ^h 47 ^m			Mag: -2.4 PMG: 3 ^h 36 ^m			Mag: -0.5 PMG: 23 ^h 51 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	86	26.0	226	13.6	-12	27.3	228	03.0	-14	14.2	305	57.5	+16	10.9			
1	101	28.5	241	14.1		27.8	243	03.9		14.8	321	00.0		10.9			
2	116	31.0	256	14.7		28.2	258	04.8		15.3	336	02.6		10.9			
3	131	33.4	271	15.3		28.6	273	05.7		15.8	351	05.2		11.0			
4	146	35.9	286	15.8		29.0	288	06.6		16.3	6	07.7		11.0			
5	161	38.4	301	16.4	-12	29.4	303	07.5	-14	16.8	21	10.3	+16	11.1			
6	176	40.8	316	16.9	-12	29.9	318	08.4	-14	17.3	36	12.9	+16	11.1			
7	191	43.3	331	17.5		30.3	333	09.3		17.9	51	15.5		11.2			
8	206	45.8	346	18.1		30.7	348	10.2		18.4	66	18.0		11.2			
9	221	48.2	1	18.6		31.1	3	11.1		18.9	81	20.6		11.3			
10	236	50.7	16	19.2		31.6	18	11.9		19.4	96	23.2		11.3			
11	251	53.2	31	19.7	-12	32.0	33	12.8	-14	19.9	111	25.8	+16	11.3			
12	266	55.6	46	20.3	-12	32.4	48	13.7	-14	20.4	126	28.3	+16	11.4			
13	281	58.1	61	20.8		32.8	63	14.6		21.0	141	30.9		11.4			
14	297	00.5	76	21.4		33.3	78	15.5		21.5	156	33.5		11.5			
15	312	03.0	91	21.9		33.7	93	16.4		22.0	171	36.0		11.5			
16	327	05.5	106	22.4		34.1	108	17.3		22.5	186	38.6		11.6			
17	342	07.9	121	23.0	-12	34.5	123	18.2	-14	23.0	201	41.2	+16	11.6			
18	357	10.4	136	23.5	-12	35.0	138	19.1	-14	23.5	216	43.8	+16	11.6			
19	12	12.9	151	24.1		35.4	153	20.0		24.0	231	46.4		11.7			
20	27	15.3	166	24.6		35.8	168	20.9		24.6	246	48.9		11.7			
21	42	17.8	181	25.1		36.3	183	21.7		25.1	261	51.5		11.8			
22	57	20.3	196	25.7		36.7	198	22.6		25.6	276	54.1		11.8			
23	72	22.7	211	26.2		37.1	213	23.5		26.1	291	56.7		11.9			
24	87	25.2	226	26.7	-12	37.6	228	24.4	-14	26.6	306	59.2	+16	11.9			
Dif	—		+5			-4	+9			-5	+26			0	+27		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 14 ^d 7 PHE { 4 ^h : 55'7 12 ^h : 55'8 20 ^h : 56'0													
	PMG: 11 ^h 57 ^m 0			SD: 15'1 PMG: ***h ***m R°: ***m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	180	48.3	-23	24.2	10	56.1	+23	40.8	57	60 N	7 06	8 03	9 01	14 15	40	9 02	72
1	195	48.0		24.2	25	24.8	97	46.5	57	58	6 58	7 51	8 43	37	44	8 40	69
2	210	47.7		24.3	39	53.5	97	52.0	55	56	52	41	28	14	55	46	22
3	225	47.4		24.4	54	22.0	95	+23	57.5	55	54	46	32	16	15	11	46
4	240	47.1		24.4	68	50.5	95	+24	02.8	53	52	40	24	8 05	24	48	7
5	255	46.7	-23	24.5	83	19.0	95	+24	08.0	52	50	6 35	7 16	7 55	15	36	48
6	270	46.4	-23	24.5	97	47.3	93	+24	13.1	51	45	6 23	7 00	7 34	16	00	50
7	285	46.1		24.6	112	15.6	93		18.0	49	40	12	6 46	17	20	51	6
8	300	45.8		24.6	126	43.8	92		22.8	48	35	6 03	35	7 03	36	52	43
9	315	45.5		24.7	141	12.0	92		27.6	48	30	5 54	24	6 50	16	50	53
10	330	45.2		24.7	155	40.0	90		32.1	45	20	38	6 05	29	17	14	54
11	345	44.9	-23	24.8	170	08.1	91	+24	36.6	45	10 N	5 22	5 48	6 11	17	35	54
12	0	44.6	-23	24.8	184	36.0	89	+24	40.9	43	0	5 05	5 31	5 53	17	55	55
13	15	44.3		24.9	199	03.9	89		45.1	42	10 S	4 46	5 13	36	18	14	56
14	30	44.0		24.9	213	31.7	88		49.2	41	20	4 23	4 52	5 17	18	36	56
15	45	43.7		25.0	227	59.5	88		53.1	39	30	3 54	27	4 55	19	00	57
16	60	43.4		25.0	242	27.2	87	+24	56.9	38	35	35	4 12	42	15	57	4
17	75	43.1	-23	25.1	256	54.8	86	+25	00.6	37	40	3 12	3 54	4 27	19	31	58
18	90	42.7	-23	25.1	271	22.4	86	+25	04.1	35	45	2 41	3 31	4 09	19	51	59
19	105	42.4		25.2	285	49.9	85		07.5	34	50	1 56	3 01	3 46	20	17	59
20	120	42.1		25.2	300	17.3	84		10.8	33	52	1 28	2 46	35	29	60	3
21	135	41.8		25.3	314	44.7	84		13.9	31	54	0 41	28	23	20	43	61
22	150	41.5		25.3	329	12.1	84		16.9	30	56	*** **	2 06	3 09	21	00	61
23	165	41.2		25.3	343	39.3	82		19.8	29	58	*** **	1 36	2 52	19	62	2
24	180	40.9	-23	25.4	358	06.6	83	+25	22.5	27	60 S	*** **	0 46	2 31	21	44	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 07 ^m 3		Mag: -4.8 PMG: 8 ^h 54 ^m		Mag: +1.6 PMG: 8 ^h 46 ^m		Mag: -2.5 PMG: 3 ^h 31 ^m		Mag: -0.5 PMG: 23 ^h 47 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	87	25.2	226	26.7	-12	37.6	228	24.4	-14	26.6
1	102	27.7	241	27.3		38.0	243	25.3		27.1
2	117	30.1	256	27.8		38.4	258	26.2		27.6
3	132	32.6	271	28.3		38.9	273	27.1		28.2
4	147	35.0	286	28.8		39.3	288	28.0		28.7
5	162	37.5	301	29.4	-12	39.7	303	28.9	-14	29.2
6	177	40.0	316	29.9	-12	40.2	318	29.7	-14	29.7
7	192	42.4	331	30.4		40.6	333	30.6		30.2
8	207	44.9	346	30.9		41.1	348	31.5		30.7
9	222	47.4	1	31.4		41.5	3	32.4		31.2
10	237	49.8	16	31.9		41.9	18	33.3		31.7
11	252	52.3	31	32.5	-12	42.4	33	34.2	-14	32.3
12	267	54.8	46	33.0	-12	42.8	48	35.1	-14	32.8
13	282	57.2	61	33.5		43.3	63	36.0		33.3
14	297	59.7	76	34.0		43.7	78	36.8		33.8
15	313	02.2	91	34.5		44.1	93	37.7		34.3
16	328	04.6	106	35.0		44.6	108	38.6		34.8
17	343	07.1	121	35.5	-12	45.0	123	39.5	-14	35.3
18	358	09.5	136	36.0	-12	45.5	138	40.4	-14	35.8
19	13	12.0	151	36.5		45.9	153	41.3		36.3
20	28	14.5	166	37.0		46.4	168	42.2		36.9
21	43	16.9	181	37.5		46.8	183	43.1		37.4
22	58	19.4	196	38.0		47.3	198	43.9		37.9
23	73	21.9	211	38.5		47.7	213	44.8		38.4
24	88	24.3	226	39.0	-12	48.2	228	45.7	-14	38.9
Dif	—		+5		-4		+9		-5	
							+26		0	
									+27	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3				Edad: 15 ^d 7 PHE { 4 ^h : 56/2 12 ^h : 56/3 20 ^h : 56/5												
	PMG: 11 ^h 57 ^m 5				SD: 15:3 PMG: 0 ^h 08 ^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	180	40.9	-23	25.4	358	06.6	+25	22.5	60 N	14 54	15 52	16 48	14 55 65		10 14 52		
1	195	40.6		25.4	12	33.8	82	25.1	58	15 11	16 03	16 56	15 21 63		9 49 53		
2	210	40.3		25.5	27	00.9	81	27.6	56		26	13	17 03	41 62	29 54		
3	225	40.0		25.5	41	28.0	81	29.9	54		39	23	09	15 57 62	9 12 54		
4	240	39.7		25.5	55	55.0	80	32.0	52	15 50		31	15	16 12 61	8 58 54		
5	255	39.4	-23	25.6	70	22.0	80	+25 34.1	50	16 00	16 38	17 20	16 24 61		8 46 54		
6	270	39.0	-23	25.6	84	48.9	79	+25 35.9	45	16 21	16 54	17 32	16 50 60		8 20 55		
7	285	38.7		25.6	99	15.8	79	37.7	40		37	17 08	42	17 11 59	7 59 56		
8	300	38.4		25.7	113	42.7	79	39.3	35	16 52		20	17 51	28 58	42 56		
9	315	38.1		25.7	128	09.5	78	40.8	30	17 04		30	18 00	17 43 58	28 55		
10	330	37.8		25.7	142	36.3	78	42.1	20		25	17 49	17	18 08 57	7 03 55		
11	345	37.5	-23	25.8	157	03.0	77	+25 43.2	10 N	17 44	18 07	18 33	18 29 57		6 41 56		
12	0	37.2	-23	25.8	171	29.7	77	+25 44.3	0	18 01	18 24	18 50	18 50 56		6 21 56		
13	15	36.9		25.8	185	56.4	77	45.1	10 S		19	18 42	19 09	19 10 55	6 01 55		
14	30	36.6		25.9	200	23.0	76	45.9	20	18 38	19 02	19 32	32 54		5 39 56		
15	45	36.3		25.9	214	49.6	76	46.5	30	19 00		27	20 01	19 57 54	14 56		
16	60	36.0		25.9	229	16.2	76	46.9	35		13	19 43	20	20 12 53	5 00 55		
17	75	35.6	-23	25.9	243	42.7	75	+25 47.2	40	19 28	20 01	20 43	20 29 52		4 43 55		
18	90	35.3	-23	26.0	258	09.3	76	+25 47.4	45	19 46	20 24	21 13	20 50 51		4 22 55		
19	105	35.0		26.0	272	35.7	74	47.4	50	20 09	20 53	21 59	21 16 49		3 56 55		
20	120	34.7		26.0	287	02.2	75	47.2	52		20	21 09	22 27	29 48	44 54		
21	135	34.4		26.0	301	28.6	74	46.9	54		32	27	23 14	21 44 47	30 54		
22	150	34.1		26.1	315	55.1	75	46.5	56	20 46	21 49	** **	22 01 45		3 13 54		
23	165	33.8		26.1	330	21.5	74	45.9	58	21 03	22 19	** **	21 44		2 53 53		
24	180	33.5	-23	26.1	344	47.8	73	+25 45.1	60 S	21 24	23 10	** **	22 47 40		2 29 52		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 18 ^h 03 ^m 4		Mag: -4.8 PMG: 8 ^h 53 ^m		Mag: +1.6 PMG: 8 ^h 44 ^m		Mag: -2.5 PMG: 3 ^h 27 ^m		Mag: -0.5 PMG: 23 ^h 42 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	88	24.3	226	39.0	-12	48.2	228	45.7	308	01.2							
1	103	26.8	241	39.5		48.6	243	46.6	323	03.8							
2	118	29.3	256	40.0		49.1	258	47.5	338	06.4							
3	133	31.7	271	40.4		49.5	273	48.4	353	09.0							
4	148	34.2	286	40.9		50.0	288	49.3	8	11.6							
5	163	36.6	301	41.4	-12	50.4	303	50.1	23	14.1							
6	178	39.1	316	41.9	-12	50.9	318	51.0	38	16.7							
7	193	41.6	331	42.4		51.3	333	51.9	53	19.3							
8	208	44.0	346	42.9		51.8	348	52.8	68	21.9							
9	223	46.5	1	43.3		52.2	3	53.7	83	24.5							
10	238	49.0	16	43.8		52.7	18	54.6	98	27.1							
11	253	51.4	31	44.3	-12	53.1	33	55.4	113	29.7							
12	268	53.9	46	44.8	-12	53.6	48	56.3	128	32.3							
13	283	56.4	61	45.2		54.0	63	57.2	143	34.9							
14	298	58.8	76	45.7		54.5	78	58.1	158	37.4							
15	314	01.3	91	46.2		55.0	93	59.0	173	40.0							
16	329	03.8	106	46.6		55.4	108	59.9	188	42.6							
17	344	06.2	121	47.1	-12	55.9	124	00.8	203	45.2							
18	359	08.7	136	47.6	-12	56.3	139	01.6	218	47.8							
19	14	11.1	151	48.0		56.8	154	02.5	233	50.4							
20	29	13.6	166	48.5		57.3	169	03.4	248	53.0							
21	44	16.1	181	48.9		57.7	184	04.3	263	55.6							
22	59	18.5	196	49.4		58.2	199	05.2	278	58.2							
23	74	21.0	211	49.9		58.6	214	06.1	294	00.8							
24	89	23.5	226	50.3	-12	59.1	229	06.9	309	03.4							
Dif	—		+5		-5		+9		-5								

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 58 ^m 0			Edad: 16 ^d 7 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 8 20 ^h : 57 ^m 0 SD: 15:4 PMG: 1 ^h 03 ^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	180	33.5	-23	26.1	344	47.8	+25	45.1	8	60 N	7 07	8 04	9 02	16 00	85	11 06	31	
1	195	33.2		26.1	359	14.2	74	44.3	8	58	7 00	7 52	8 44	24	80	10 42	35	
2	210	32.9		26.2	13	40.5	73	43.2	11	56	6 53	42	30	43	77	23	38	
3	225	32.6		26.2	28	06.9	74	42.0	12	54	47	33	17	16 59	75	10 06	41	
4	240	32.2		26.2	42	33.2	73	40.7	13	52	41	25	8 06	17 13	72	9 52	43	
5	255	31.9	-23	26.2	56	59.5	73	+25	39.2	15	50	6 36	7 17	7 56	17 25	71	9 40	44
6	270	31.6	-23	26.2	71	25.8	73	+25	37.6	16	45	6 24	7 01	7 35	17 50	68	9 15	46
7	285	31.3		26.2	85	52.1	73	35.8	18	40	13	6 48	18	18 10	65	8 55	48	
8	300	31.0		26.3	100	18.4	73	33.8	20	35	6 04	36	7 04	26	64	38	49	
9	315	30.7		26.3	114	44.7	73	31.8	20	30	5 55	25	6 52	18 41	62	8 23	51	
10	330	30.4		26.3	129	11.0	73	29.5	23	20	39	6 06	30	19 05	60	7 58	53	
11	345	30.1	-23	26.3	143	37.2	72	+25	27.1	24	10 N	5 23	5 49	6 12	19 26	58	7 37	54
12	0	29.8	-23	26.3	158	03.5	73	+25	24.6	25	0	5 05	5 32	5 54	19 46	55	7 17	55
13	15	29.5		26.3	172	29.8	73	21.9	27	10 S	4 46	5 14	37	20 05	54	6 56	58	
14	30	29.1		26.3	186	56.1	73	19.1	28	20	4 24	4 53	5 18	26	51	35	59	
15	45	28.8		26.3	201	22.4	73	16.1	30	30	3 55	28	4 56	20 51	48	6 10	60	
16	60	28.5		26.3	215	48.7	73	13.0	31	35	36	4 13	43	21 05	46	5 55	61	
17	75	28.2	-23	26.3	230	15.0	73	+25	09.7	33	40	3 13	3 55	4 27	21 21	45	5 38	62
18	90	27.9	-23	26.3	244	41.3	73	+25	06.3	34	45	2 42	3 32	4 09	21 41	42	5 17	64
19	105	27.6		26.4	259	07.6	73	+25	02.7	36	50	1 56	3 02	3 47	22 05	39	4 51	66
20	120	27.3		26.4	273	34.0	74	+24	59.0	37	52	1 28	2 47	36	17	37	38	68
21	135	27.0		26.4	288	00.3	73	55.1	39	54	0 41	29	24	31	34	24	68	
22	150	26.7		26.4	302	26.7	74	51.1	40	56	** **	2 07	3 09	22	46	32	4 07	70
23	165	26.4		26.4	316	53.1	74	46.9	42	58	** **	1 36	2 52	23	05	28	3 46	73
24	180	26.0	-23	26.4	331	19.5	74	+24	42.6	43	60 S	** **	0 45	2 32	23 27	23	3 21	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 59 ^m 5		Mag: -4.8 PMG: 8 ^h 52 ^m		Mag: +1.6 PMG: 8 ^h 43 ^m		Mag: -2.5 PMG: 3 ^h 23 ^m		Mag: -0.5 PMG: 23 ^h 38 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	89	23.5	226	50.3	-12	59.1	229	06.9	-14	51.1	309	03.4	+16	14.2	4	25.8	+22	03.1
1	104	25.9	241	50.8	-12	59.6	244	07.8		51.6	324	06.0		14.2	19	28.5		03.1
2	119	28.4	256	51.2	-13	00.0	259	08.7		52.1	339	08.6		14.3	34	31.2		03.0
3	134	30.9	271	51.7	-13	00.5	274	09.6		52.6	354	11.1		14.3	49	33.8		03.0
4	149	33.3	286	52.1		01.0	289	10.5		53.1	9	13.7		14.4	64	36.5		03.0
5	164	35.8	301	52.6	-13	01.4	304	11.3	-14	53.6	24	16.3	+16	14.4	79	39.2	+22	03.0
6	179	38.3	316	53.0	-13	01.9	319	12.2	-14	54.1	39	18.9	+16	14.5	94	41.9	+22	03.0
7	194	40.7	331	53.4		02.4	334	13.1		54.6	54	21.5		14.5	109	44.6		03.0
8	209	43.2	346	53.9		02.8	349	14.0		55.1	69	24.1		14.6	124	47.3		03.0
9	224	45.6	1	54.3		03.3	4	14.9		55.6	84	26.7		14.6	139	50.0		03.0
10	239	48.1	16	54.8		03.8	19	15.8		56.1	99	29.3		14.7	154	52.6		03.0
11	254	50.6	31	55.2	-13	04.2	34	16.6	-14	56.6	114	31.9	+16	14.8	169	55.3	+22	03.0
12	269	53.0	46	55.6	-13	04.7	49	17.5	-14	57.1	129	34.5	+16	14.8	184	58.0	+22	03.0
13	284	55.5	61	56.1		05.2	64	18.4		57.6	144	37.1		14.9	200	00.7		03.0
14	299	58.0	76	56.5		05.6	79	19.3		58.1	159	39.7		14.9	215	03.4		03.0
15	315	00.4	91	56.9		06.1	94	20.2		58.6	174	42.3		15.0	230	06.1		03.0
16	330	02.9	106	57.4		06.6	109	21.0		59.1	189	44.9		15.0	245	08.8		03.0
17	345	05.4	121	57.8	-13	07.1	124	21.9	-14	59.6	204	47.5	+16	15.1	260	11.4	+22	03.0
18	0	07.8	136	58.2	-13	07.5	139	22.8	-15	00.1	219	50.1	+16	15.1	275	14.1	+22	03.0
19	15	10.3	151	58.7		08.0	154	23.7		00.6	234	52.7		15.2	290	16.8		03.0
20	30	12.8	166	59.1		08.5	169	24.6		01.1	249	55.3		15.2	305	19.5		03.0
21	45	15.2	181	59.5		09.0	184	25.4		01.6	264	57.9		15.3	320	22.2		03.0
22	60	17.7	196	59.9		09.4	199	26.3		02.1	280	00.5		15.3	335	24.9		03.0
23	75	20.1	212	00.3		09.9	214	27.2		02.6	295	03.1		15.4	350	27.5		03.0
24	90	22.6	227	00.8	-13	10.4	229	28.1	-15	03.1	310	05.7	+16	15.4	5	30.2	+22	03.0
Dif	—		+4		-5		+9		-5		+26		+1		+27			

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 11 ^h 59 ^m 0			Edad: 18 ^d 7 PHE { 4 ^h : 57/6 12 ^h : 57/7 20 ^h : 57/9 SD: 15/7 PMG: 2 ^h 54 ^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	180	18.6	-23	26.2	318	01.9	+22	16.2	78	58	7 08	8 05	9 03	19 00	96	11 54	11	
1	195	18.3		26.1	332	29.2		08.4	78	58	7 01	7 53	8 45		13 92	40	15	
2	210	18.0		26.1	346	56.5	+22	00.5	79	56	6 54	43	31	25	88	27	19	
3	225	17.7		26.1	1	23.8	+21	52.4	81	54	48	34	18	36	85	16	22	
4	240	17.4		26.1	15	51.2		44.2	82	52	42	26	8 07	45	82	11 07	24	
5	255	17.1	-23	26.1	30	18.6	+21	35.9	83	50	6 37	7 18	7 57	19 53	80	10 58	27	
6	270	16.7	-23	26.0	44	46.1	+21	27.4	85	45	6 25	7 02	7 36	20 10	75	10 39	32	
7	285	16.4		26.0	59	13.6		18.9	85	40	14	6 49	19	25	70	24	35	
8	300	16.1		26.0	73	41.2		10.2	87	35	6 05	37	7 05	37	67	11	38	
9	315	15.8		26.0	88	08.8	+21	01.3	89	30	5 56	26	6 53	20 47	64	10 00	41	
10	330	15.5		25.9	102	36.5	+20	52.4	89	20	40	6 07	31	21 05	59	9 40	45	
11	345	15.2	-23	25.9	117	04.2	+20	43.3	91	10 N	5 24	5 50	6 13	21 20	56	9 23	49	
12	0	14.9	-23	25.9	131	32.0	+20	34.1	92	0	5 06	5 33	5 55	21 35	51	9 07	53	
13	15	14.6		25.8	145	59.8		24.8	93	10 S	4 47	5 15	38	21 49	48	8 51	56	
14	30	14.3		25.8	160	27.7		15.4	94	20	4 25	4 54	5 19	22 05	43	34	59	
15	45	13.9		25.8	174	55.6	+20	05.8	96	30	3 56	29	4 57	22	39	13	65	
16	60	13.6		25.8	189	23.6	+19	56.1	97	35	37	4 14	44	32	36	8 02	67	
17	75	13.3	-23	25.7	203	51.6	+19	46.4	97	40	3 14	3 56	4 28	22 44	33	7 48	70	
18	90	13.0	-23	25.7	218	19.7	+19	36.5	99	45	2 43	3 33	4 10	22 57	29	7 32	74	
19	105	12.7		25.7	232	47.9		26.4	101	50	1 57	3 03	3 48	23 14	24	12	79	
20	120	12.4		25.6	247	16.0		16.3	101	52	1 29	2 48	37	22	21	7 02	82	
21	135	12.1		25.6	261	44.3	+19	06.1	102	54	0 42	30	25	30	19	6 52	84	
22	150	11.8		25.6	276	12.6	+18	55.7	104	56	** ** *	2 08	3 10	40	16	39	88	
23	165	11.5		25.5	290	40.9		45.3	104	58	** ** *	1 37	2 53	23	51	12	25	92
24	180	11.2	-23	25.5	305	09.3	+18	34.7	106	60 S	** ** *	0 46	2 33	** ** *		6 08	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 51 ^m 6		Mag: -4.8 PMG: 8 ^h 51 ^m		Mag: +1.6 PMG: 8 ^h 40 ^m		Mag: -2.5 PMG: 3 ^h 15 ^m		Mag: -0.5 PMG: 23 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	91	21.8	227	10.4	-13	21.9	229	49.2	+16	16.7
1	106	24.2	242	10.7		22.4	244	50.0		16.8
2	121	26.7	257	11.1		22.9	259	50.9		16.8
3	136	29.1	272	11.5		23.4	274	51.8		16.9
4	151	31.6	287	11.9		23.9	289	52.7		16.9
5	166	34.1	302	12.3	-13	24.4	304	53.5	+16	17.0
6	181	36.5	317	12.6	-13	24.9	319	54.4	+16	17.0
7	196	39.0	332	13.0		25.4	334	55.3		17.1
8	211	41.5	347	13.4		25.9	349	56.2		17.1
9	226	43.9	2	13.8		26.3	4	57.0		17.2
10	241	46.4	17	14.1		26.8	19	57.9		17.3
11	256	48.9	32	14.5	-13	27.3	34	58.8	+16	17.3
12	271	51.3	47	14.9	-13	27.8	49	59.7	+16	17.4
13	286	53.8	62	15.2		28.3	65	00.5		17.4
14	301	56.2	77	15.6		28.8	80	01.4		17.5
15	316	58.7	92	15.9		29.3	95	02.3		17.5
16	332	01.2	107	16.3		29.8	110	03.2		17.6
17	347	03.6	122	16.7	-13	30.3	125	04.0	+16	17.6
18	2	06.1	137	17.0	-13	30.8	140	04.9	+16	17.7
19	17	08.6	152	17.4		31.3	155	05.8		17.8
20	32	11.0	167	17.7		31.8	170	06.7		17.8
21	47	13.5	182	18.1		32.3	185	07.5		17.9
22	62	16.0	197	18.4		32.8	200	08.4		17.9
23	77	18.4	212	18.8		33.3	215	09.3		18.0
24	92	20.9	227	19.1	-13	33.8	230	10.1	+16	18.0
Dif	—		+4		-5		+9		+1	
									+27	
									0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 59 ^m 5				Edad: 19 ^d 7 PHE { SD: 15:8 PMG: 3 ^h 47 ^m R°: 51 ^m 4 ^h : 58/0 12 ^h : 58/2 20 ^h : 58/3														
	hG ☉	Dec			hG ☾	Dif					Civil			Náutico			Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	180	11.2	-23	25.5	305	09.3	+18	34.7	60 N	14	56	15	54	16	51	20	36	96	12
1	195	10.8		25.4	319	37.8 ⁹⁵		24.0 ¹⁰⁷	58	15	13	16	05	16	58	45	92	11	55
2	210	10.5		25.4	334	06.3 ⁹⁵		13.2 ¹⁰⁸	56	28		16		17	05	20	53	89	46
3	225	10.2		25.4	348	34.9 ⁹⁶	+18	02.4 ¹⁰⁸	54	41	25		11			21	01	85	38
4	240	09.9		25.3	3	03.5 ⁹⁶	+17	51.4 ¹¹⁰	52	15	52	33		17		07	82	31	20
5	255	09.6	-23	25.3	17	32.1 ⁹⁶	+17	40.3 ¹¹¹	50	16	02	16	40	17	22	21	13	80	11
6	270	09.3	-23	25.2	32	00.8 ⁹⁷	+17	29.1 ¹¹²	45	16	23	16	56	17	34	21	25	75	11
7	285	09.0		25.2	46	29.6 ⁹⁸		17.8 ¹¹³	40	39	17	10		44		35	71	10	59
8	300	08.7		25.1	60	58.4 ⁹⁸	+17	06.4 ¹¹⁴	35	16	54	22		54		44	67	49	34
9	315	08.4		25.1	75	27.3 ⁹⁹	+16	54.9 ¹¹⁵	30	17	06	32		18	02	21	51	64	41
10	330	08.1		25.1	89	56.2 ⁹⁹		43.3 ¹¹⁶	20	27	17	51		19		22	04	59	25
11	345	07.7	-23	25.0	104	25.2 ¹⁰⁰	+16	31.6 ¹¹⁷	10 N	17	46	18	09		18	22	16	54	10
12	0	07.4	-23	25.0	118	54.2 ¹⁰⁰	+16	19.8 ¹¹⁸	0	18	03	18	26		18	22	26	50	10
13	15	07.1		24.9	133	23.3 ¹⁰¹	+16	07.9 ¹¹⁹	10 S	21		18	44		19	37	45		9
14	30	06.8		24.9	147	52.4 ¹⁰¹	+15	56.0 ¹¹⁹	20	18	40	19	04		19	22	48	41	33
15	45	06.5		24.8	162	21.6 ¹⁰²		43.9 ¹²¹	30	19	02		29		20	23	01	35	18
16	60	06.2		24.8	176	50.8 ¹⁰²		31.8 ¹²¹	35	15		19	45		21	08	33		9
17	75	05.9	-23	24.7	191	20.1 ¹⁰³	+15	19.5 ¹²³	40	19	30	20	03		20	23	17	29	8
18	90	05.6	-23	24.7	205	49.4 ¹⁰³	+15	07.2 ¹²³	45	19	48	20	25		21	23	26	25	8
19	105	05.3		24.6	220	18.8 ¹⁰⁴	+14	54.8 ¹²⁴	50	20	11	20	55		22	38	20		31
20	120	05.0		24.6	234	48.2 ¹⁰⁴		42.3 ¹²⁵	52	21		21	10		22	43	18		24
21	135	04.6		24.5	249	17.7 ¹⁰⁵		29.7 ¹²⁶	54	34		28			23	49	16		16
22	150	04.3		24.4	263	47.2 ¹⁰⁵		17.0 ¹²⁷	56	20	48	21	51		** ** *	23	56	12	8
23	165	04.0		24.4	278	16.8 ¹⁰⁶	+14	04.3 ¹²⁷	58	21	05	22	20		** ** *	** ** *	** ** *		7
24	180	03.7	-23	24.3	292	46.4 ¹⁰⁶	+13	51.4 ¹²⁹	60 S	21	25	23	11		** ** *	0	03	8	7
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 17 ^h 47 ^m 7		Mag: -4.7 PMG: 8 ^h 51 ^m				Mag: +1.6 PMG: 8 ^h 39 ^m				Mag: -2.5 PMG: 3 ^h 11 ^m				Mag: -0.4 PMG: 23 ^h 25 ^m				
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	92	20.9	227	19.1	-13	33.8	230	10.1	-15	27.0	312	10.9	+16	18.0	7	39.1	+22	02.9	
1	107	23.4	242	19.5		34.3	245	11.0		27.5	327	13.6		18.1	22	41.8		02.9	
2	122	25.8	257	19.8		34.8	260	11.9		28.0	342	16.2		18.1	37	44.5		02.9	
3	137	28.3	272	20.2		35.3	275	12.8		28.5	357	18.8		18.2	52	47.2		02.9	
4	152	30.7	287	20.5		35.8	290	13.6		29.0	12	21.4		18.3	67	49.8		02.9	
5	167	33.2	302	20.9	-13	36.3	305	14.5	-15	29.4	27	24.0	+16	18.3	82	52.5	+22	02.9	
6	182	35.7	317	21.2	-13	36.8	320	15.4	-15	29.9	42	26.6	+16	18.4	97	55.2	+22	02.8	
7	197	38.1	332	21.5		37.3	335	16.3		30.4	57	29.3		18.4	112	57.9		02.8	
8	212	40.6	347	21.9		37.8	350	17.1		30.9	72	31.9		18.5	128	00.6		02.8	
9	227	43.1	2	22.2		38.3	5	18.0		31.4	87	34.5		18.5	143	03.3		02.8	
10	242	45.5	17	22.5		38.8	20	18.9		31.9	102	37.1		18.6	158	05.9		02.8	
11	257	48.0	32	22.9	-13	39.3	35	19.7	-15	32.4	117	39.7	+16	18.7	173	08.6	+22	02.8	
12	272	50.5	47	23.2	-13	39.8	50	20.6	-15	32.9	132	42.4	+16	18.7	188	11.3	+22	02.8	
13	287	52.9	62	23.5		40.3	65	21.5		33.4	147	45.0		18.8	203	14.0		02.8	
14	302	55.4	77	23.9		40.8	80	22.4		33.9	162	47.6		18.8	218	16.7		02.8	
15	317	57.9	92	24.2		41.3	95	23.2		34.3	177	50.2		18.9	233	19.4		02.8	
16	333	00.3	107	24.5		41.8	110	24.1		34.8	192	52.8		19.0	248	22.0		02.8	
17	348	02.8	122	24.9	-13	42.3	125	25.0	-15	35.3	207	55.5	+16	19.0	263	24.7	+22	02.8	
18	3	05.2	137	25.2	-13	42.8	140	25.8	-15	35.8	222	58.1	+16	19.1	278	27.4	+22	02.8	
19	18	07.7	152	25.5		43.3	155	26.7		36.3	238	00.7		19.1	293	30.1		02.8	
20	33	10.2	167	25.8		43.8	170	27.6		36.8	253	03.3		19.2	308	32.8		02.8	
21	48	12.6	182	26.1		44.3	185	28.5		37.3	268	06.0		19.2	323	35.5		02.8	
22	63	15.1	197	26.5		44.8	200	29.3		37.8	283	08.6		19.3	338	38.1		02.8	
23	78	17.6	212	26.8		45.3	215	30.2		38.3	298	11.2		19.4	353	40.8		02.8	
24	93	20.0	227	27.1	-13	45.8	230	31.1	-15	38.7	313	13.8	+16	19.4	8	43.5	+22	02.8	
Dif	—		+3 -5				+9 -5				+26 +1				+27 0				

ALMANAQUE NÁUTICO PERSEIS

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 00 ^m 5				Edad: 21 ^d 7 PHE { 4 ^h : 58/8 12 ^h : 58/9 20 ^h : 59/0 SD: 16:0 PMG: 5 ^h 27 ^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	179	56.3	-23	22.7	280	48.5	+8	22.6	60 N	14 58	15 55	16 52	23 47 96	12 17 4				
1	194	56.0		22.6	295	19.0 ¹¹⁵	+8	08.1 ¹⁴⁵	58	15 15	16 07	16 59	49 92	14 8				
2	209	55.7		22.5	309	49.5 ¹¹⁵	+7	53.6 ¹⁴⁵	56	30	17	17 06	50 88	12 10				
3	224	55.3		22.5	324	20.0 ¹¹⁵		39.1 ¹⁴⁵	54	42	26	12	51 86	09 14				
4	239	55.0		22.4	338	50.6 ¹¹⁶		24.5 ¹⁴⁶	52	15 53	34	18	52 83	07 16				
5	254	54.7	-23	22.3	353	21.2 ¹¹⁶	+7	09.9 ¹⁴⁶	50	16 03	16 42	17 23	23 53 80	12 05 18				
6	269	54.4	-23	22.2	7	51.7 ¹¹⁵	+6	55.2 ¹⁴⁷	45	16 24	16 58	17 35	23 55 75	12 01 23				
7	284	54.1		22.1	22	22.4 ¹¹⁷		40.5 ¹⁴⁷	40	41	17 11	45	56 71	11 58 27				
8	299	53.8		22.1	36	53.0 ¹¹⁶		25.7 ¹⁴⁸	35	16 55	23	17 55	58 67	55 30				
9	314	53.5		22.0	51	23.6 ¹¹⁶	+6	10.9 ¹⁴⁸	30	17 07	34	18 03	23 59 64	52 34				
10	329	53.2		21.9	65	54.3 ¹¹⁷	+5	56.1 ¹⁴⁸	20	28	17 52	20	** ** *	47 39				
11	344	52.9	-23	21.8	80	25.0 ¹¹⁷	+5	41.2 ¹⁴⁹	10 N	17 47	18 10	18 36	** ** *	11 43 44				
12	359	52.6	-23	21.7	94	55.7 ¹¹⁷	+5	26.3 ¹⁴⁹	0	18 04	18 27	18 53	** ** *	11 39 48				
13	14	52.3		21.6	109	26.4 ¹¹⁷	+5	11.4 ¹⁴⁹	10 S	22	18 45	19 12	** ** *	35 53				
14	29	52.0		21.5	123	57.1 ¹¹⁷	+4	56.4 ¹⁵⁰	20	18 41	19 05	19 34	** ** *	31 58				
15	44	51.6		21.5	138	27.8 ¹¹⁷		41.4 ¹⁵⁰	30	19 03	30	20 04	** ** *	26 63				
16	59	51.3		21.4	152	58.5 ¹¹⁷		26.4 ¹⁵⁰	35	16	19 45	22	** ** *	23 67				
17	74	51.0	-23	21.3	167	29.3 ¹¹⁸	+4	11.3 ¹⁵¹	40	19 31	20 04	20 45	** ** *	11 19 71				
18	89	50.7	-23	21.2	182	00.0 ¹¹⁷	+3	56.2 ¹⁵¹	45	19 49	20 26	21 16	** ** *	11 15 75				
19	104	50.4		21.1	196	30.8 ¹¹⁸		41.1 ¹⁵¹	50	20 11	20 56	22 01	** ** *	11 80				
20	119	50.1		21.0	211	01.5 ¹¹⁷		25.9 ¹⁵²	52	22	21 11	22 29	0 01 16	09 82				
21	134	49.8		20.9	225	32.3 ¹¹⁸	+3	10.8 ¹⁵¹	54	34	29	23 14	05 13	06 85				
22	149	49.5		20.8	240	03.0 ¹¹⁷	+2	55.6 ¹⁵²	56	20 48	21 51	** ** *	08 11	04 88				
23	164	49.2		20.7	254	33.8 ¹¹⁸		40.3 ¹⁵³	58	21 05	22 20	** ** *	12 8	11 01 91				
24	179	48.9	-23	20.6	269	04.6 ¹¹⁸	+2	25.1 ¹⁵²	60 S	21 25	23 10	** ** *	0 17 5	10 57 95				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 39 ^m 8		Mag: -4.7 PMG: 8 ^h 50 ^m				Mag: +1.6 PMG: 8 ^h 36 ^m				Mag: -2.5 PMG: 3 ^h 02 ^m				Mag: -0.4 PMG: 23 ^h 17 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec	hG ♁	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	94	19.2	227	34.3	-13	58.1	230	51.9	-15	50.4	314	16.9	+16	20.9	9	47.9		
1	109	21.6	242	34.5		58.6	245	52.8		50.9	329	19.5		20.9	24	50.6		
2	124	24.1	257	34.8		59.1	260	53.6		51.4	344	22.2		21.0	39	53.3		
3	139	26.6	272	35.1	-13	59.7	275	54.5		51.8	359	24.8		21.0	54	55.9		
4	154	29.0	287	35.4	-14	00.2	290	55.4		52.3	14	27.4		21.1	69	58.6		
5	169	31.5	302	35.6	-14	00.7	305	56.2	-15	52.8	29	30.1	+16	21.2	85	01.3		
6	184	34.0	317	35.9	-14	01.2	320	57.1	-15	53.3	44	32.7	+16	21.2	100	04.0		
7	199	36.4	332	36.2		01.7	335	58.0		53.8	59	35.3		21.3	115	06.7		
8	214	38.9	347	36.5		02.2	350	58.8		54.3	74	38.0		21.4	130	09.4		
9	229	41.3	2	36.7		02.8	5	59.7		54.7	89	40.6		21.4	145	12.0		
10	244	43.8	17	37.0		03.3	21	00.6		55.2	104	43.2		21.5	160	14.7		
11	259	46.3	32	37.3	-14	03.8	36	01.4	-15	55.7	119	45.9	+16	21.5	175	17.4		
12	274	48.7	47	37.5	-14	04.3	51	02.3	-15	56.2	134	48.5	+16	21.6	190	20.1		
13	289	51.2	62	37.8		04.8	66	03.2		56.7	149	51.1		21.7	205	22.8		
14	304	53.7	77	38.1		05.4	81	04.0		57.1	164	53.8		21.7	220	25.4		
15	319	56.1	92	38.3		05.9	96	04.9		57.6	179	56.4		21.8	235	28.1		
16	334	58.6	107	38.6		06.4	111	05.7		58.1	194	59.0		21.9	250	30.8		
17	350	01.1	122	38.9	-14	06.9	126	06.6	-15	58.6	210	01.7	+16	21.9	265	33.5		
18	5	03.5	137	39.1	-14	07.4	141	07.5	-15	59.1	225	04.3	+16	22.0	280	36.2		
19	20	06.0	152	39.4		08.0	156	08.3	-15	59.5	240	07.0		22.0	295	38.8		
20	35	08.5	167	39.6		08.5	171	09.2	-16	00.0	255	09.6		22.1	310	41.5		
21	50	10.9	182	39.9		09.0	186	10.1	-16	00.5	270	12.2		22.2	325	44.2		
22	65	13.4	197	40.1		09.5	201	10.9		01.0	285	14.9		22.2	340	46.9		
23	80	15.8	212	40.4		10.0	216	11.8		01.5	300	17.5		22.3	355	49.6		
24	95	18.3	227	40.6	-14	10.6	231	12.7	-16	01.9	315	20.1	+16	22.4	10	52.3		
Dif	—		+3 -5				+9 -5				+26 +1				+27 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 0			Edad: 22 ^d 7 PHE { SD: 16'1 PMG: 6 ^h 16 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	48.9	-23	20.6	269	04.6	+2 25.1	60 N	7 09	8 06	9 04	** ** *		12 21	5
1	194	48.6		20.5	283	35.3 ¹¹⁷	+2 09.9 ¹⁵²	58	7 02	7 54	8 46	** ** *		22	8
2	209	48.2		20.4	298	06.1 ¹¹⁸	+1 54.6 ¹⁵³	56	6 55	44	32	** ** *		22	11
3	224	47.9		20.3	312	36.8 ¹¹⁷	39.3 ¹⁵³	54	49	35	19	** ** *		23	13
4	239	47.6		20.2	327	07.6 ¹¹⁸	24.0 ¹⁵³	52	43	27	8 08	** ** *		23	16
5	254	47.3	-23	20.1	341	38.3 ¹¹⁷	+1 08.7 ¹⁵³	50	6 38	7 20	7 58	** ** *		12 23	19
6	269	47.0	-23	20.0	356	09.0 ¹¹⁷	+0 53.4 ¹⁵³	45	6 26	7 04	7 37	** ** *		12 24	23
7	284	46.7		19.9	10	39.8 ¹¹⁸	38.0 ¹⁵⁴	40	16	6 50	21	** ** *		25	27
8	299	46.4		19.8	25	10.5 ¹¹⁷	22.7 ¹⁵³	35	6 07	38	7 07	** ** *		25	31
9	314	46.1		19.7	39	41.2 ¹¹⁷	+0 07.3 ¹⁵⁴	30	5 58	28	6 54	** ** *		26	34
10	329	45.8		19.6	54	11.9 ¹¹⁷	-0 08.0 ¹⁵³	20	42	6 09	33	0 01	58	26	40
11	344	45.5	-23	19.5	68	42.5 ¹¹⁶	-0 23.4 ¹⁵⁴	10 N	5 25	5 52	6 15	0 03	53	12 27	44
12	359	45.2	-23	19.4	83	13.2 ¹¹⁷	-0 38.8 ¹⁵⁴	0	5 08	5 35	5 57	0 04	49	12 27	49
13	14	44.9		19.3	97	43.8 ¹¹⁶	-0 54.2 ¹⁵⁴	10 S	4 50	5 17	40	06	44	28	54
14	29	44.6		19.2	112	14.5 ¹¹⁷	-1 09.5 ¹⁵³	20	4 27	4 56	5 21	08	39	29	58
15	44	44.2		19.1	126	45.1 ¹¹⁶	24.9 ¹⁵⁴	30	3 58	31	4 59	10	34	29	65
16	59	43.9		19.0	141	15.7 ¹¹⁶	40.3 ¹⁵⁴	35	39	4 16	46	11	31	30	67
17	74	43.6	-23	18.8	155	46.2 ¹¹⁵	-1 55.7 ¹⁵⁴	40	3 16	3 58	4 31	0 13	27	12 30	71
18	89	43.3	-23	18.7	170	16.8 ¹¹⁶	-2 11.0 ¹⁵³	45	2 46	3 35	4 13	0 14	23	12 30	76
19	104	43.0		18.6	184	47.3 ¹¹⁵	26.4 ¹⁵⁴	50	2 01	3 06	3 50	16	18	31	81
20	119	42.7		18.5	199	17.8 ¹¹⁵	41.7 ¹⁵³	52	1 33	2 51	40	17	16	31	84
21	134	42.4		18.4	213	48.3 ¹¹⁵	-2 57.1 ¹⁵⁴	54	0 48	33	27	18	14	31	87
22	149	42.1		18.3	228	18.7 ¹¹⁴	-3 12.4 ¹⁵³	56	** ** *	2 11	3 13	19	11	32	89
23	164	41.8		18.2	242	49.2 ¹¹⁵	27.8 ¹⁵⁴	58	** ** *	1 41	2 56	20	8	32	93
24	179	41.5	-23	18.1	257	19.6 ¹¹⁴	-3 43.1 ¹⁵³	60 S	** ** *	0 52	2 36	0 22	4	12 32	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 35 ^m 9		Mag: -4.7 PMG: 8 ^h 49 ^m		Mag: +1.6 PMG: 8 ^h 35 ^m		Mag: -2.5 PMG: 2 ^h 58 ^m		Mag: -0.4 PMG: 23 ^h 12 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	95	18.3	227	40.6	-14	10.6	231	12.7	-16	01.9	315	20.1	+16	22.4	10	52.3	+22	02.7
1	110	20.8	242	40.9		11.1	246	13.5		02.4	330	22.8		22.4	25	54.9		02.7
2	125	23.2	257	41.1		11.6	261	14.4		02.9	345	25.4		22.5	40	57.6		02.7
3	140	25.7	272	41.4		12.1	276	15.2		03.4	0	28.1		22.5	56	00.3		02.7
4	155	28.2	287	41.6		12.7	291	16.1		03.8	15	30.7		22.6	71	03.0		02.7
5	170	30.6	302	41.9	-14	13.2	306	17.0	-16	04.3	30	33.3	+16	22.7	86	05.7	+22	02.7
6	185	33.1	317	42.1	-14	13.7	321	17.8	-16	04.8	45	36.0	+16	22.7	101	08.3	+22	02.7
7	200	35.6	332	42.4		14.2	336	18.7		05.3	60	38.6		22.8	116	11.0		02.7
8	215	38.0	347	42.6		14.8	351	19.6		05.8	75	41.3		22.9	131	13.7		02.7
9	230	40.5	2	42.8		15.3	6	20.4		06.2	90	43.9		22.9	146	16.4		02.7
10	245	42.9	17	43.1		15.8	21	21.3		06.7	105	46.6		23.0	161	19.1		02.7
11	260	45.4	32	43.3	-14	16.3	36	22.1	-16	07.2	120	49.2	+16	23.1	176	21.7	+22	02.7
12	275	47.9	47	43.6	-14	16.9	51	23.0	-16	07.7	135	51.8	+16	23.1	191	24.4	+22	02.6
13	290	50.3	62	43.8		17.4	66	23.9		08.1	150	54.5		23.2	206	27.1		02.6
14	305	52.8	77	44.0		17.9	81	24.7		08.6	165	57.1		23.2	221	29.8		02.6
15	320	55.3	92	44.3		18.4	96	25.6		09.1	180	59.8		23.3	236	32.5		02.6
16	335	57.7	107	44.5		19.0	111	26.5		09.6	196	02.4		23.4	251	35.1		02.6
17	351	00.2	122	44.7	-14	19.5	126	27.3	-16	10.0	211	05.1	+16	23.4	266	37.8	+22	02.6
18	6	02.7	137	44.9	-14	20.0	141	28.2	-16	10.5	226	07.7	+16	23.5	281	40.5	+22	02.6
19	21	05.1	152	45.2		20.5	156	29.0		11.0	241	10.3		23.6	296	43.2		02.6
20	36	07.6	167	45.4		21.1	171	29.9		11.5	256	13.0		23.6	311	45.9		02.6
21	51	10.1	182	45.6		21.6	186	30.8		11.9	271	15.6		23.7	326	48.5		02.6
22	66	12.5	197	45.8		22.1	201	31.6		12.4	286	18.3		23.8	341	51.2		02.6
23	81	15.0	212	46.1		22.7	216	32.5		12.9	301	20.9		23.8	356	53.9		02.6
24	96	17.4	227	46.3	-14	23.2	231	33.3	-16	13.4	316	23.6	+16	23.9	11	56.6	+22	02.6
Dif	—		+2 -5		-5		+9 -5		-5		+26 +1		+1		+27		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 23 ^d 7 PHE	SD: 16°2				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 01 ^m 5				PMG: 7 ^h 05 ^m				Civil		Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	m
0	179	41.5	-23 18.1	257	19.6	-3 43.1	60 N	15 00	15 57	16 54	1 23 98		12 26	6
1	194	41.2	17.9	271	49.9 ¹¹³	-3 58.4 ¹⁵³	58	17	16 09	17 01	21 94		30	9
2	209	40.9	17.8	286	20.2 ¹¹³	-4 13.7 ¹⁵³	56	31	19	08	18 91		33	13
3	224	40.6	17.7	300	50.5 ¹¹³	28.9 ¹⁵²	54	44	28	14	17 87		36	16
4	239	40.2	17.6	315	20.8 ¹¹³	44.2 ¹⁵³	52	15 55	36	19	15 84		39	18
5	254	39.9	-23 17.5	329	51.0 ¹¹²	-4 59.4 ¹⁵²	50	16 05	16 43	17 25	1 13 82		12 42	20
6	269	39.6	-23 17.3	344	21.2 ¹¹²	-5 14.6 ¹⁵²	45	16 25	16 59	17 36	1 10 77		12 47	26
7	284	39.3	17.2	358	51.4 ¹¹²	29.8 ¹⁵²	40	42	17 13	47	07 72		52	29
8	299	39.0	17.1	13	21.5 ¹¹¹	-5 45.0 ¹⁵²	35	16 56	24	17 56	05 68		12 56	33
9	314	38.7	17.0	27	51.6 ¹¹¹	-6 00.1 ¹⁵¹	30	17 08	35	18 05	1 03 65		13 00	36
10	329	38.4	16.8	42	21.6 ¹¹⁰	15.2 ¹⁵¹	20	29	17 53	21	0 59 60		06	42
11	344	38.1	-23 16.7	56	51.6 ¹¹⁰	-6 30.3 ¹⁵¹	10 N	17 48	18 11	18 37	0 56 55		13 11	47
12	359	37.8	-23 16.6	71	21.6 ¹¹⁰	-6 45.4 ¹⁵¹	0	18 05	18 28	18 54	0 53 50		13 16	51
13	14	37.5	16.5	85	51.5 ¹⁰⁹	-7 00.4 ¹⁵⁰	10 S	23	18 46	19 13	50 46		22	55
14	29	37.2	16.3	100	21.3 ¹⁰⁸	15.4 ¹⁵⁰	20	18 42	19 06	19 35	47 41		27	61
15	44	36.9	16.2	114	51.2 ¹⁰⁹	30.3 ¹⁴⁹	30	19 03	31	20 04	44 35		34	66
16	59	36.6	16.1	129	20.9 ¹⁰⁷	-7 45.2 ¹⁴⁹	35	16	19 46	23	42 32		37	70
17	74	36.3	-23 16.0	143	50.7 ¹⁰⁸	-8 00.1 ¹⁴⁹	40	19 31	20 04	20 46	0 40 28		13 41	73
18	89	36.0	-23 15.8	158	20.3 ¹⁰⁶	-8 15.0 ¹⁴⁹	45	19 49	20 26	21 16	0 37 24		13 46	78
19	104	35.7	15.7	172	49.9 ¹⁰⁶	29.8 ¹⁴⁸	50	20 12	20 56	22 01	34 19		52	83
20	119	35.3	15.6	187	19.5 ¹⁰⁶	44.5 ¹⁴⁷	52	22	21 11	22 28	33 17		55	85
21	134	35.0	15.4	201	49.0 ¹⁰⁵	-8 59.2 ¹⁴⁷	54	34	29	23 12	32 14		13 58	88
22	149	34.7	15.3	216	18.5 ¹⁰⁵	-9 13.9 ¹⁴⁷	56	20 49	21 50	** **	30 12		14 01	91
23	164	34.4	15.2	230	47.9 ¹⁰⁴	28.5 ¹⁴⁶	58	21 05	22 20	** **	28 9		05	95
24	179	34.1	-23 15.0	245	17.3 ¹⁰⁴	-9 43.1 ¹⁴⁶	60 S	21 25	23 07	** **	0 26 5		14 09	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 32 ^m 0		Mag: -4.7 PMG: 8 ^h 49 ^m		Mag: +1.6 PMG: 8 ^h 33 ^m		Mag: -2.5 PMG: 2 ^h 54 ^m		Mag: -0.4 PMG: 23 ^h 08 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	96	17.4	227	46.3	-14 23.2	231	33.3	-16 13.4	316	23.6	+16 23.9			
1	111	19.9	242	46.5	23.7	246	34.2	13.8	331	26.2	24.0			
2	126	22.4	257	46.7	24.2	261	35.1	14.3	346	28.9	24.0			
3	141	24.8	272	46.9	24.8	276	35.9	14.8	1	31.5	24.1			
4	156	27.3	287	47.2	25.3	291	36.8	15.3	16	34.2	24.2			
5	171	29.8	302	47.4	-14 25.8	306	37.6	-16 15.7	31	36.8	+16 24.2			
6	186	32.2	317	47.6	-14 26.4	321	38.5	-16 16.2	46	39.5	+16 24.3			
7	201	34.7	332	47.8	26.9	336	39.4	16.7	61	42.1	24.4			
8	216	37.2	347	48.0	27.4	351	40.2	17.1	76	44.8	24.4			
9	231	39.6	2	48.2	28.0	6	41.1	17.6	91	47.4	24.5			
10	246	42.1	17	48.4	28.5	21	41.9	18.1	106	50.1	24.6			
11	261	44.5	32	48.6	-14 29.0	36	42.8	-16 18.6	121	52.7	+16 24.6			
12	276	47.0	47	48.8	-14 29.5	51	43.6	-16 19.0	136	55.4	+16 24.7			
13	291	49.5	62	49.0	30.1	66	44.5	19.5	151	58.0	24.8			
14	306	51.9	77	49.2	30.6	81	45.4	20.0	167	00.7	24.8			
15	321	54.4	92	49.4	31.1	96	46.2	20.4	182	03.3	24.9			
16	336	56.9	107	49.6	31.7	111	47.1	20.9	197	06.0	25.0			
17	351	59.3	122	49.8	-14 32.2	126	47.9	-16 21.4	212	08.6	+16 25.0			
18	7	01.8	137	50.0	-14 32.7	141	48.8	-16 21.9	227	11.3	+16 25.1			
19	22	04.3	152	50.2	33.3	156	49.7	22.3	242	13.9	25.2			
20	37	06.7	167	50.4	33.8	171	50.5	22.8	257	16.6	25.2			
21	52	09.2	182	50.6	34.3	186	51.4	23.3	272	19.2	25.3			
22	67	11.7	197	50.8	34.9	201	52.2	23.7	287	21.9	25.4			
23	82	14.1	212	51.0	35.4	216	53.1	24.2	302	24.5	25.4			
24	97	16.6	227	51.2	-14 35.9	231	53.9	-16 24.7	317	27.2	+16 25.5			
Dif	—		+2		-5	+9		-5	+26		+1	+27		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 0				Edad: 24 ^d 7 PHE { 4 ^h : 59'5 12 ^h : 59'6 20 ^h : 59'6 SD: 16'2 PMG: 7 ^h 55 ^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	h	m
0	179	34.1	-23	15.0	245	17.3	-9	43.1	60 N	7	10	8	06	9	03	3	01	101	12	32	8	
1	194	33.8		14.9	259	46.6 ¹⁰³	-9	57.6 ¹⁴⁵	58	7	02	7	55	8	46	2	55	96		39	12	
2	209	33.5		14.8	274	15.8 ¹⁰²	-10	12.1 ¹⁴⁵	56	6	55		45	32		49	93		46	16		
3	224	33.2		14.6	288	45.0 ¹⁰²		26.5 ¹⁴⁴	54	49		36		19		44	89		52	19		
4	239	32.9		14.5	303	14.1 ¹⁰¹		40.9 ¹⁴⁴	52	44		27	8	08		39	87	12	57	22		
5	254	32.6	-23	14.3	317	43.2 ¹⁰¹	-10	55.2 ¹⁴³	50	6	39	7	20	7	58	2	35	84	13	02	24	
6	269	32.3	-23	14.2	332	12.2 ¹⁰⁰	-11	09.5 ¹⁴³	45	6	27	7	04	7	38	2	27	78	13	13	29	
7	284	32.0		14.1	346	41.1 ⁹⁹		23.7 ¹⁴²	40	17		6	51	21		19	74		21	34		
8	299	31.7		13.9	1	10.0 ⁹⁹		37.8 ¹⁴¹	35	6	07		39	7	07	13	70		29	37		
9	314	31.4		13.8	15	38.8 ⁹⁸	-11	51.9 ¹⁴¹	30	5	59	29	6	55	2	08	67		36	40		
10	329	31.1		13.6	30	07.6 ⁹⁸	-12	05.9 ¹⁴⁰	20	42		6	10	34	1	59	61		48	45		
11	344	30.8	-23	13.5	44	36.3 ⁹⁷	-12	19.8 ¹³⁹	10 N	5	26	5	53	6	16	1	51	56	13	58	50	
12	359	30.5	-23	13.3	59	04.9 ⁹⁶	-12	33.7 ¹³⁹	0	5	10	5	36	5	58	1	43	52	14	07	54	
13	14	30.2		13.2	73	33.4 ⁹⁵	-12	47.5 ¹³⁸	10 S	4	51	5	18	41		36	48		17	58		
14	29	29.9		13.0	88	01.9 ⁹⁵	-13	01.3 ¹³⁸	20	4	28	4	57	22		28	43		28	62		
15	44	29.6		12.9	102	30.3 ⁹⁴		14.9 ¹³⁶	30	3	59		33	5	00	19	38		40	67		
16	59	29.3		12.7	116	58.7 ⁹⁴		28.5 ¹³⁶	35	41	4	18	4	47		14	35		47	70		
17	74	28.9	-23	12.6	131	27.0 ⁹³	-13	42.1 ¹³⁶	40	3	18	3	59	4	32	1	08	31	14	54	75	
18	89	28.6	-23	12.4	145	55.2 ⁹²	-13	55.5 ¹³⁴	45	2	48	3	37	4	14	1	01	28	15	04	78	
19	104	28.3		12.3	160	23.3 ⁹¹	-14	08.9 ¹³⁴	50	2	03	3	08	3	52	0	53	23	15	84		
20	119	28.0		12.1	174	51.4 ⁹¹		22.1 ¹³²	52	1	36	2	53	41		50	20		20	87		
21	134	27.7		12.0	189	19.4 ⁹⁰		35.4 ¹³³	54	0	52		35	29		46	17		26	90		
22	149	27.4		11.8	203	47.3 ⁸⁹	-14	48.5 ¹³¹	56	** **	2	13	3	15		42	14		32	94		
23	164	27.1		11.7	218	15.1 ⁸⁸	-15	01.5 ¹³⁰	58	** **	1	44	2	58		37	10		40	97		
24	179	26.8	-23	11.5	232	42.9 ⁸⁸	-15	14.5 ¹³⁰	60 S	** **	0	56	2	38		0	31	7	15	48	102	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 28 ^m 0		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 32 ^m		Mag: -2.5 PMG: 2 ^h 50 ^m		Mag: -0.4 PMG: 23 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	97	16.6	227	51.2	-14	35.9	231	53.9	-16	24.7	317	27.2	+16	25.5	13	00.9	+22	02.6
1	112	19.0	242	51.4		36.5	246	54.8		25.1	332	29.8		25.6	28	03.6		02.6
2	127	21.5	257	51.6		37.0	261	55.7		25.6	347	32.5		25.6	43	06.2		02.6
3	142	24.0	272	51.8		37.5	276	56.5		26.1	2	35.1		25.7	58	08.9		02.6
4	157	26.4	287	52.0		38.1	291	57.4		26.6	17	37.8		25.8	73	11.6		02.5
5	172	28.9	302	52.1	-14	38.6	306	58.2	-16	27.0	32	40.4	+16	25.8	88	14.3	+22	02.5
6	187	31.4	317	52.3	-14	39.1	321	59.1	-16	27.5	47	43.1	+16	25.9	103	17.0	+22	02.5
7	202	33.8	332	52.5		39.7	336	59.9		28.0	62	45.8		26.0	118	19.6		02.5
8	217	36.3	347	52.7		40.2	352	00.8		28.4	77	48.4		26.0	133	22.3		02.5
9	232	38.8	2	52.9		40.7	7	01.6		28.9	92	51.1		26.1	148	25.0		02.5
10	247	41.2	17	53.0		41.3	22	02.5		29.4	107	53.7		26.2	163	27.7		02.5
11	262	43.7	32	53.2	-14	41.8	37	03.4	-16	29.8	122	56.4	+16	26.2	178	30.4	+22	02.5
12	277	46.2	47	53.4	-14	42.4	52	04.2	-16	30.3	137	59.0	+16	26.3	193	33.0	+22	02.5
13	292	48.6	62	53.6		42.9	67	05.1		30.8	153	01.7		26.4	208	35.7		02.5
14	307	51.1	77	53.7		43.4	82	05.9		31.2	168	04.4		26.4	223	38.4		02.5
15	322	53.5	92	53.9		44.0	97	06.8		31.7	183	07.0		26.5	238	41.1		02.5
16	337	56.0	107	54.1		44.5	112	07.6		32.2	198	09.7		26.6	253	43.7		02.5
17	352	58.5	122	54.3	-14	45.0	127	08.5	-16	32.6	213	12.3	+16	26.6	268	46.4	+22	02.5
18	8	00.9	137	54.4	-14	45.6	142	09.3	-16	33.1	228	15.0	+16	26.7	283	49.1	+22	02.5
19	23	03.4	152	54.6		46.1	157	10.2		33.6	243	17.6		26.8	298	51.8		02.5
20	38	05.9	167	54.8		46.6	172	11.0		34.0	258	20.3		26.9	313	54.5		02.5
21	53	08.3	182	54.9		47.2	187	11.9		34.5	273	23.0		26.9	328	57.1		02.5
22	68	10.8	197	55.1		47.7	202	12.8		34.9	288	25.6		27.0	343	59.8		02.5
23	83	13.3	212	55.2		48.3	217	13.6		35.4	303	28.3		27.1	359	02.5		02.5
24	98	15.7	227	55.4	-14	48.8	232	14.5	-16	35.9	318	30.9	+16	27.1	14	05.2	+22	02.5
Dif	—		+2		-5		+9		-5		+27		+1		+27		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 5			Edad: 25 ^d 7 PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/6 PMG: 8 ^h 48 ^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	h m m	h m m	h m m	
0	179	26.8	-23	11.5	232	42.9	-15	14.5	60 N	15 02	15 59	16 56	4 42	103	12 40	13	
1	194	26.5		11.4	247	10.6	87	27.3	58	19	16 10	17 03	31	98	12 51	19	
2	209	26.2		11.2	261	38.2	86	40.1	56	33	21	10	22	93	13 02	22	
3	224	25.9		11.1	276	05.8	86	-15 52.8	54	46	29	16	13	90	11	26	
4	239	25.6		10.9	290	33.3	85	-16 05.4	52	15 57	38	21	4	06 87	19	29	
5	254	25.3	-23	10.7	305	00.7	84	-16 17.8	50	16 07	16 45	17 26	3	59 84	13 26	31	
6	269	25.0	-23	10.6	319	28.0	83	-16 30.2	45	16 27	17 01	17 38	3	45 79	13 42	36	
7	284	24.7		10.4	333	55.2	82	42.5	40	44	14	48	33	75	13 55	40	
8	299	24.4		10.3	348	22.4	82	-16 54.7	35	16 58	26	17 57	23	72	14 06	43	
9	314	24.1		10.1	2	49.5	81	-17 06.8	30	17 10	36	18 06	15	68	16	45	
10	329	23.8		09.9	17	16.5	80	18.8	20	31	17 55	22	3	00 64	33	50	
11	344	23.5	-23	09.8	31	43.5	80	-17 30.7	10 N	17 49	18 12	18 38	2	47 60	14 48	53	
12	359	23.2	-23	09.6	46	10.3	78	-17 42.5	0	18 06	18 29	18 55	2	35 56	15 01	57	
13	14	22.9		09.4	60	37.1	78	-17 54.2	10 S	24	18 47	19 14	24	51	15	61	
14	29	22.6		09.3	75	03.8	77	-18 05.8	20	18 42	19 07	19 36	2	11 48	30	64	
15	44	22.3		09.1	89	30.4	76	17.2	30	19 04	31	20 05	1	57 43	47	69	
16	59	22.0		08.9	103	57.0	76	28.6	35	17	19 47	23	49	40	15 57	72	
17	74	21.7	-23	08.8	118	23.5	75	-18 39.8	40	19 32	20 04	20 46	1	39 37	16 09	74	
18	89	21.4	-23	08.6	132	49.9	74	-18 50.9	45	19 50	20 27	21 16	1	29 32	16 22	79	
19	104	21.1		08.4	147	16.2	73	-19 01.9	50	20 12	20 56	22 00	16	27	39	83	
20	119	20.8		08.3	161	42.5	73	12.8	52	22	21 11	22 27	10	25	47	85	
21	134	20.5		08.1	176	08.6	71	23.6	54	34	28	23 09	1	03 22	16 56	88	
22	149	20.2		07.9	190	34.7	71	34.2	56	20 48	21 50	** **	0	56 19	17 06	91	
23	164	19.9		07.7	205	00.7	70	44.7	58	21 05	22 18	** **	47	16	17	96	
24	179	19.6	-23	07.6	219	26.7	70	-19 55.1	60 S	21 25	23 04	** **	0	38 11	17 30	102	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 17 ^h 24 ^m 1			Mag: -4.7 PMG: 8 ^h 48 ^m			Mag: +1.5 PMG: 8 ^h 31 ^m			Mag: -2.5 PMG: 2 ^h 45 ^m			Mag: -0.4 PMG: 23 ^h 00 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	98	15.7	227	55.4	-14	48.8	232	14.5	-16	35.9	318	30.9	+16	27.1	14	05.2	
1	113	18.2	242	55.6		49.3	247	15.3		36.3	333	33.6		27.2	29	07.8	
2	128	20.7	257	55.7		49.9	262	16.2		36.8	348	36.3		27.3	44	10.5	
3	143	23.1	272	55.9		50.4	277	17.0		37.3	3	38.9		27.3	59	13.2	
4	158	25.6	287	56.0		50.9	292	17.9		37.7	18	41.6		27.4	74	15.9	
5	173	28.0	302	56.2	-14	51.5	307	18.7	-16	38.2	33	44.3	+16	27.5	89	18.5	
6	188	30.5	317	56.3	-14	52.0	322	19.6	-16	38.7	48	46.9	+16	27.6	104	21.2	
7	203	33.0	332	56.5		52.6	337	20.4		39.1	63	49.6		27.6	119	23.9	
8	218	35.4	347	56.7		53.1	352	21.3		39.6	78	52.2		27.7	134	26.6	
9	233	37.9	2	56.8		53.6	7	22.1		40.0	93	54.9		27.8	149	29.3	
10	248	40.4	17	57.0		54.2	22	23.0		40.5	108	57.6		27.8	164	31.9	
11	263	42.8	32	57.1	-14	54.7	37	23.8	-16	41.0	124	00.2	+16	27.9	179	34.6	
12	278	45.3	47	57.2	-14	55.3	52	24.7	-16	41.4	139	02.9	+16	28.0	194	37.3	
13	293	47.8	62	57.4		55.8	67	25.5		41.9	154	05.6		28.0	209	40.0	
14	308	50.2	77	57.5		56.3	82	26.4		42.4	169	08.2		28.1	224	42.6	
15	323	52.7	92	57.7		56.9	97	27.3		42.8	184	10.9		28.2	239	45.3	
16	338	55.1	107	57.8		57.4	112	28.1		43.3	199	13.6		28.3	254	48.0	
17	353	57.6	122	58.0	-14	58.0	127	29.0	-16	43.7	214	16.2	+16	28.3	269	50.7	
18	9	00.1	137	58.1	-14	58.5	142	29.8	-16	44.2	229	18.9	+16	28.4	284	53.3	
19	24	02.5	152	58.2		59.0	157	30.7		44.7	244	21.6		28.5	299	56.0	
20	39	05.0	167	58.4	-14	59.6	172	31.5		45.1	259	24.2		28.5	314	58.7	
21	54	07.5	182	58.5	-15	00.1	187	32.4		45.6	274	26.9		28.6	330	01.4	
22	69	09.9	197	58.7		00.7	202	33.2		46.0	289	29.6		28.7	345	04.0	
23	84	12.4	212	58.8		01.2	217	34.1		46.5	304	32.2		28.8	0	06.7	
24	99	14.9	227	58.9	-15	01.7	232	34.9	-16	47.0	319	34.9	+16	28.8	15	09.4	
Dif	—			+1 -5			+9 -5			+27 +1			+27 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 9			Edad: 26 ^d 7 PHE { 4 ^h : 59/5 12 ^h : 59/4 20 ^h : 59/4 SD: 16/2 PMG: 9 ^h 45 ^m R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	19.6	-23	07.6	219	26.7	-19	55.1	60 N	7 10	8 06	9 03	6 25	99	12 53	24
1	194	19.3		07.4	233	52.6	69	-20 05.4	58	7 02	7 55	8 46	6 09	93	13 10	29
2	209	19.0		07.2	248	18.4	68	15.5	56	6 56	45	32	5 55	89	24	34
3	224	18.7		07.0	262	44.1	67	25.5	54	50	36	19	43	86	37	36
4	239	18.4		06.9	277	09.7	66	35.4	52	44	28	8 08	33	83	48	39
5	254	18.1	-23	06.7	291	35.3	66	-20 45.1	50	6 39	7 20	7 59	5 23	81	13 57	41
6	269	17.8	-23	06.5	306	00.8	65	-20 54.8	45	6 27	7 05	7 38	5 04	76	14 18	45
7	284	17.5		06.3	320	26.2	64	-21 04.2	40	17	6 51	22	4 48	73	35	48
8	299	17.2		06.1	334	51.6	64	13.6	35	6 08	40	7 08	35	70	14 49	50
9	314	16.9		06.0	349	16.9	63	22.8	30	5 59	29	6 56	23	69	15 01	52
10	329	16.6		05.8	3	42.1	62	31.8	20	43	6 11	35	4 04	64	23	55
11	344	16.3	-23	05.6	18	07.3	62	-21 40.8	10 N	5 27	5 54	6 16	3 47	61	15 41	58
12	359	16.0	-23	05.4	32	32.4	61	-21 49.6	0	5 11	5 37	5 59	3 31	58	15 58	60
13	14	15.7		05.2	46	57.4	60	-21 58.2	10 S	4 52	5 19	42	3 15	56	16 16	62
14	29	15.4		05.0	61	22.3	59	-22 06.7	20	29	4 59	23	2 59	52	34	65
15	44	15.1		04.9	75	47.2	59	15.0	30	4 01	34	5 01	40	48	16 56	67
16	59	14.8		04.7	90	12.1	59	23.3	35	3 42	19	4 49	29	46	17 09	69
17	74	14.5	-23	04.5	104	36.8	57	-22 31.3	40	3 20	4 01	4 34	2 16	44	17 23	71
18	89	14.2	-23	04.3	119	01.5	57	-22 39.2	45	2 50	3 39	4 16	2 01	40	17 41	73
19	104	13.9		04.1	133	26.2	57	47.0	50	2 05	3 10	3 54	1 43	36	18 02	77
20	119	13.6		03.9	147	50.8	56	-22 54.6	52	1 39	2 55	43	35	33	12	79
21	134	13.3		03.7	162	15.3	55	-23 02.0	54	0 57	37	31	25	31	24	81
22	149	13.0		03.5	176	39.8	55	09.3	56	** **	2 16	17	15	27	37	84
23	164	12.7		03.3	191	04.2	54	16.5	58	** **	1 47	3 01	1 03	23	18 53	87
24	179	12.4	-23	03.1	205	28.6	54	-23 23.5	60 S	** **	1 02	2 41	0 49	18	19 12	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 20 ^m 2		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 29 ^m		Mag: -2.5 PMG: 2 ^h 41 ^m		Mag: -0.4 PMG: 22 ^h 55 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	99	14.9	227	58.9	-15	01.7	232	34.9	-16	47.0	319	34.9	+16	28.8	15	09.4	+22	02.4
1	114	17.3	242	59.0		02.3	247	35.8		47.4	334	37.6		28.9	30	12.1		02.4
2	129	19.8	257	59.2		02.8	262	36.6		47.9	349	40.2		29.0	45	14.7		02.4
3	144	22.3	272	59.3		03.4	277	37.5		48.3	4	42.9		29.0	60	17.4		02.4
4	159	24.7	287	59.4		03.9	292	38.3		48.8	19	45.6		29.1	75	20.1		02.4
5	174	27.2	302	59.6	-15	04.4	307	39.2	-16	49.2	34	48.2	+16	29.2	90	22.8	+22	02.4
6	189	29.6	317	59.7	-15	05.0	322	40.0	-16	49.7	49	50.9	+16	29.3	105	25.4	+22	02.4
7	204	32.1	332	59.8		05.5	337	40.9		50.2	64	53.6		29.3	120	28.1		02.4
8	219	34.6	347	59.9		06.1	352	41.7		50.6	79	56.2		29.4	135	30.8		02.4
9	234	37.0	3	00.1		06.6	7	42.6		51.1	94	58.9		29.5	150	33.5		02.4
10	249	39.5	18	00.2		07.1	22	43.4		51.5	110	01.6		29.5	165	36.1		02.4
11	264	42.0	33	00.3	-15	07.7	37	44.3	-16	52.0	125	04.2	+16	29.6	180	38.8	+22	02.4
12	279	44.4	48	00.4	-15	08.2	52	45.1	-16	52.4	140	06.9	+16	29.7	195	41.5	+22	02.4
13	294	46.9	63	00.5		08.8	67	46.0		52.9	155	09.6		29.8	210	44.2		02.4
14	309	49.4	78	00.7		09.3	82	46.8		53.4	170	12.3		29.8	225	46.8		02.4
15	324	51.8	93	00.8		09.9	97	47.6		53.8	185	14.9		29.9	240	49.5		02.4
16	339	54.3	108	00.9		10.4	112	48.5		54.3	200	17.6		30.0	255	52.2		02.4
17	354	56.8	123	01.0	-15	10.9	127	49.3	-16	54.7	215	20.3	+16	30.0	270	54.9	+22	02.4
18	9	59.2	138	01.1	-15	11.5	142	50.2	-16	55.2	230	22.9	+16	30.1	285	57.5	+22	02.4
19	25	01.7	153	01.2		12.0	157	51.0		55.6	245	25.6		30.2	301	00.2		02.4
20	40	04.1	168	01.3		12.6	172	51.9		56.1	260	28.3		30.3	316	02.9		02.4
21	55	06.6	183	01.4		13.1	187	52.7		56.6	275	31.0		30.3	331	05.6		02.4
22	70	09.1	198	01.5		13.7	202	53.6		57.0	290	33.6		30.4	346	08.2		02.4
23	85	11.5	213	01.6		14.2	217	54.4		57.5	305	36.3		30.5	1	10.9		02.4
24	100	14.0	228	01.8	-15	14.7	232	55.3	-16	57.9	320	39.0	+16	30.6	16	13.6	+22	02.4

Dif	—	+1	-5	+8	-5	+27	+1	+27

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 03 ^m 4			Edad: 27 ^d 7 PHE { 4 ^h : 59/2 12 ^h : 59/1 20 ^h : 59/0 PMG: 10 ^h 44 ^m R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'		h	m	h	m	h	m	h	m
0	179	12.4	-23 03.1	205	28.6	-23 23.5	68	60 N	15 05	16 01	16 58	8 04 83	13 17 44		
1	194	12.1	03.0	219	52.9	30.3	68	58	21	13	17 05	7 42 79	39 48		
2	209	11.8	02.8	234	17.1	37.0	67	56	36	23	11	24 76	13 58 49		
3	224	11.5	02.6	248	41.4	43.5	65	54	48	31	17	7 09 74	14 13 51		
4	239	11.2	02.4	263	05.5	49.8	63	52	15 59	39	23	6 56 73	27 52		
5	254	10.9	-23 02.2	277	29.6	-23 56.0	62	50	16 08	16 47	17 28	6 44 72	14 38 54		
6	269	10.6	-23 02.0	291	53.7	-24 02.1	61	45	16 29	17 02	17 39	6 20 70	15 03 55		
7	284	10.3	01.8	306	17.8	07.9	58	40	45	16	49	6 01 68	23 56		
8	299	10.0	01.6	320	41.8	13.6	57	35	16 59	27	17 59	5 45 67	39 57		
9	314	09.7	01.4	335	05.7	19.2	56	30	17 11	37	18 07	32 65	15 53 58		
10	329	09.4	01.2	349	29.6	24.6	54	20	32	17 56	23	5 08 64	16 18 59		
11	344	09.1	-23 01.0	3	53.5	-24 29.8	52	10 N	17 50	18 13	18 39	4 48 62	16 39 59		
12	359	08.8	-23 00.8	18	17.4	-24 34.8	50	0	18 07	18 30	18 56	4 29 61	16 58 61		
13	14	08.5	00.6	32	41.2	39.7	49	10 S	24	18 47	19 14	4 11 59	17 18 61		
14	29	08.2	00.4	47	05.0	44.4	47	20	18 43	19 07	19 37	3 51 57	17 39 62		
15	44	07.9	-23 00.2	61	28.8	48.9	45	30	19 05	32	20 05	28 55	18 03 63		
16	59	07.6	-22 59.9	75	52.5	53.3	44	35	17	19 47	23	15 54	18 63		
17	74	07.3	-22 59.7	90	16.2	-24 57.5	42	40	19 32	20 05	20 46	3 00 52	18 34 64		
18	89	07.0	-22 59.5	104	39.9	-25 01.6	41	45	19 50	20 27	21 16	2 41 50	18 54 65		
19	104	06.7	59.3	119	03.6	05.4	38	50	20 12	20 56	21 59	19 47	19 19 66		
20	119	06.4	59.1	133	27.3	09.1	37	52	22	21 10	22 25	2 08 46	31 66		
21	134	06.1	58.9	147	50.9	12.6	35	54	34	27	23 05	1 56 44	19 45 66		
22	149	05.9	58.7	162	14.6	16.0	34	56	20 48	21 49	** **	42 42	20 01 67		
23	164	05.6	58.5	176	38.2	19.2	32	58	21 04	22 17	** **	26 38	20 68		
24	179	05.3	-22 58.3	191	01.8	-25 22.2	30	60 S	21 24	23 00	** **	1 07 33	20 44 69		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 17 ^h 16 ^m 2		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 28 ^m		Mag: -2.5 PMG: 2 ^h 37 ^m		Mag: -0.4 PMG: 22 ^h 51 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	100	14.0	228	01.8	-15 14.7	232	55.3	-16 57.9	320	39.0	+16 30.6	16 13.6	+22 02.4		
1	115	16.5	243	01.9	15.3	247	56.1	58.4	335	41.7	30.6	31 16.3	02.4		
2	130	18.9	258	02.0	15.8	262	57.0	58.8	350	44.3	30.7	46 18.9	02.4		
3	145	21.4	273	02.1	16.4	277	57.8	59.3	5	47.0	30.8	61 21.6	02.4		
4	160	23.9	288	02.2	16.9	292	58.7	-16 59.7	20	49.7	30.9	76 24.3	02.4		
5	175	26.3	303	02.3	-15 17.4	307	59.5	-17 00.2	35	52.4	+16 30.9	91 26.9	+22 02.4		
6	190	28.8	318	02.4	-15 18.0	323	00.4	-17 00.6	50	55.0	+16 31.0	106 29.6	+22 02.4		
7	205	31.3	333	02.5	18.5	338	01.2	01.1	65	57.7	31.1	121 32.3	02.4		
8	220	33.7	348	02.6	19.1	353	02.1	01.5	81	00.4	31.1	136 35.0	02.4		
9	235	36.2	3	02.6	19.6	8	02.9	02.0	96	03.1	31.2	151 37.6	02.4		
10	250	38.6	18	02.7	20.2	23	03.7	02.4	111	05.8	31.3	166 40.3	02.4		
11	265	41.1	33	02.8	-15 20.7	38	04.6	-17 02.9	126	08.4	+16 31.4	181 43.0	+22 02.4		
12	280	43.6	48	02.9	-15 21.2	53	05.4	-17 03.3	141	11.1	+16 31.4	196 45.7	+22 02.4		
13	295	46.0	63	03.0	21.8	68	06.3	03.8	156	13.8	31.5	211 48.3	02.4		
14	310	48.5	78	03.1	22.3	83	07.1	04.3	171	16.5	31.6	226 51.0	02.4		
15	325	51.0	93	03.2	22.9	98	08.0	04.7	186	19.1	31.7	241 53.7	02.4		
16	340	53.4	108	03.3	23.4	113	08.8	05.2	201	21.8	31.7	256 56.4	02.3		
17	355	55.9	123	03.4	-15 24.0	128	09.7	-17 05.6	216	24.5	+16 31.8	271 59.0	+22 02.3		
18	10	58.4	138	03.4	-15 24.5	143	10.5	-17 06.1	231	27.2	+16 31.9	287 01.7	+22 02.3		
19	26	00.8	153	03.5	25.1	158	11.4	06.5	246	29.9	32.0	302 04.4	02.3		
20	41	03.3	168	03.6	25.6	173	12.2	07.0	261	32.5	32.0	317 07.0	02.3		
21	56	05.8	183	03.7	26.1	188	13.0	07.4	276	35.2	32.1	332 09.7	02.3		
22	71	08.2	198	03.8	26.7	203	13.9	07.9	291	37.9	32.2	347 12.4	02.3		
23	86	10.7	213	03.9	27.2	218	14.7	08.3	306	40.6	32.3	2 15.1	02.3		
24	101	13.1	228	03.9	-15 27.8	233	15.6	-17 08.8	321	43.3	+16 32.3	17 17.7	+22 02.3		
Dif	—		+1 -5		+8 -5		+27 +1		+27 0		+27 0		+27 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	53.0	53.1	53.1	53.0	52.9	52.6	52.3	52.1	52.0	52.0	52.0	52.1
2 - β Cas	<i>Caph</i>	2.3	357	41.2	41.4	41.5	41.4	41.1	40.7	40.4	40.1	39.9	39.9	40.0	40.2
3 - γ Peg	<i>Algenib</i>	2.8	356	40.2	40.3	40.3	40.3	40.1	39.9	39.6	39.4	39.3	39.3	39.3	39.4
4 - α Phe	<i>Ankaa</i>	2.4	353	24.6	24.7	24.7	24.7	24.5	24.3	24.0	23.7	23.5	23.5	23.5	23.7
5 - α Cas	<i>Schedar</i>	2.2	349	51.1	51.3	51.4	51.3	51.1	50.8	50.4	50.1	49.9	49.8	49.9	50.0
6 - β Cet	<i>Diphda</i>	2.0	349	4.9	5.0	5.1	5.0	4.9	4.7	4.4	4.2	4.0	4.0	4.0	4.1
7 - γ Cas	<i>Navi</i>	1.6	345	47.9	48.2	48.3	48.3	48.1	47.7	47.3	46.9	46.7	46.6	46.6	46.8
8 - β And	<i>Mirach</i>	2.1	342	32.6	32.7	32.8	32.8	32.7	32.4	32.1	31.9	31.7	31.6	31.6	31.7
9 - α Eri	<i>Achernar</i>	0.5	335	33.3	33.5	33.7	33.8	33.7	33.4	33.0	32.7	32.4	32.3	32.3	32.4
10 - γ And	<i>Almak</i>	2.3	328	59.9	60.0	60.1	60.2	60.1	59.8	59.6	59.3	59.0	58.9	58.8	58.8
12 - α Ari	<i>Hamal</i>	2.0	328	10.9	11.0	11.1	11.1	11.0	10.8	10.6	10.3	10.1	10.0	9.9	10.0
11 - α UMi	<i>Polaris</i>	2.0	320	86.6	100.0	110.5	116.5	114.9	106.7	94.9	81.2	68.5	60.2	57.6	61.6
13 - θ Eri	<i>Acamar</i>	3.3	315	24.9	25.1	25.2	25.4	25.3	25.2	25.0	24.7	24.4	24.3	24.2	24.2
14 - α Cet	<i>Menkar</i>	2.5	314	24.3	24.4	24.5	24.6	24.6	24.4	24.2	24.0	23.7	23.6	23.5	23.5
15 - β Per	<i>Algol</i>	2.1	312	55.6	55.8	55.9	56.0	55.9	55.8	55.5	55.2	54.9	54.7	54.6	54.6
16 - α Per	<i>Mirfak</i>	1.8	308	53.1	53.2	53.4	53.6	53.5	53.3	53.0	52.7	52.4	52.1	52.0	51.9
17 - η Tau	<i>Alcyone</i>	2.9	303	6.0	6.1	6.2	6.3	6.3	6.2	6.0	5.7	5.5	5.3	5.1	5.1
18 - γ Eri	<i>Zaurak</i>	3.0	300	28.1	28.2	28.4	28.5	28.5	28.4	28.2	28.0	27.8	27.6	27.4	27.4
19 - α Tau	<i>Aldebaran</i>	0.9	290	59.4	59.5	59.7	59.8	59.8	59.7	59.5	59.3	59.1	58.8	58.7	58.6
20 - β Ori	<i>Rigel</i>	0.1	281	20.4	20.5	20.6	20.7	20.8	20.7	20.6	20.4	20.2	20.0	19.8	19.7
21 - α Aur	<i>Capella</i>	0.1	280	47.3	47.4	47.6	47.8	47.9	47.8	47.6	47.3	47.0	46.7	46.4	46.3
22 - γ Ori	<i>Bellatrix</i>	1.6	278	41.4	41.4	41.5	41.7	41.7	41.7	41.5	41.3	41.1	40.9	40.7	40.6
23 - β Tau	<i>Elnath</i>	1.7	278	23.7	23.7	23.9	24.0	24.1	24.0	23.8	23.6	23.4	23.1	22.9	22.7
24 - δ Ori	<i>Mintaka</i>	2.2	276	58.3	58.3	58.5	58.6	58.7	58.6	58.5	58.3	58.1	57.9	57.7	57.5
25 - ε Ori	<i>Alnilam</i>	1.7	275	55.2	55.3	55.4	55.5	55.6	55.5	55.4	55.2	55.0	54.8	54.6	54.4
26 - ζ Ori	<i>Alnitak</i>	1.9	274	47.0	47.1	47.2	47.3	47.4	47.3	47.2	47.1	46.8	46.6	46.4	46.3
27 - κ Ori	<i>Saiph</i>	2.1	273	2.1	2.2	2.3	2.4	2.5	2.5	2.4	2.2	2.0	1.8	1.6	1.4
28 - α Ori	<i>Betelgeuse</i>	0.4	271	10.7	10.8	10.9	11.0	11.1	11.0	10.9	10.7	10.5	10.3	10.1	9.9
29 - β Aur	<i>Menkalinan</i>	1.9	270	4.7	4.8	5.0	5.1	5.2	5.2	5.1	4.8	4.5	4.2	3.9	3.7
30 - β CMa	<i>Mirzam</i>	2.0	264	18.0	18.1	18.2	18.4	18.4	18.5	18.4	18.2	18.0	17.8	17.6	17.4
31 - α Car	<i>Canopus</i>	-0.7	263	59.6	59.8	60.0	60.3	60.5	60.6	60.5	60.3	60.1	59.7	59.5	59.3
32 - γ Gem	<i>Alhena</i>	1.9	260	32.5	32.5	32.6	32.7	32.8	32.8	32.7	32.6	32.3	32.1	31.9	31.7
33 - α CMa	<i>Sirius</i>	-1.5	258	41.3	41.3	41.5	41.6	41.7	41.7	41.7	41.5	41.3	41.1	40.9	40.7
34 - ε CMa	<i>Adhara</i>	1.5	255	19.2	19.3	19.4	19.6	19.7	19.7	19.7	19.6	19.3	19.1	18.9	18.7
35 - δ CMa	<i>Wezen</i>	1.9	252	52.7	52.7	52.8	53.0	53.1	53.2	53.1	53.0	52.8	52.6	52.4	52.2
36 - η CMa	<i>Aludra</i>	2.5	248	57.2	57.2	57.3	57.5	57.6	57.7	57.6	57.5	57.3	57.1	56.9	56.7
37 - α Gem	<i>Castor</i>	2.0	246	18.9	18.9	19.0	19.2	19.3	19.3	19.3	19.1	18.9	18.6	18.4	18.1
38 - α CMi	<i>Procyon</i>	0.4	245	8.8	8.8	8.8	9.0	9.1	9.1	9.1	8.9	8.8	8.6	8.3	8.1
39 - β Gem	<i>Pollux</i>	1.1	243	38.3	38.3	38.4	38.5	38.6	38.6	38.6	38.5	38.3	38.0	37.8	37.5
40 - ζ Pup	<i>Naos</i>	2.3	239	4.9	4.9	5.0	5.2	5.4	5.5	5.5	5.4	5.3	5.0	4.7	4.5
41 - γ Vel	<i>Regor</i>	1.8	237	35.7	35.7	35.9	36.1	36.3	36.4	36.5	36.4	36.2	36.0	35.7	35.4
42 - ε Car	<i>Avior</i>	1.9	234	21.1	21.1	21.3	21.6	21.9	22.2	22.3	22.2	22.0	21.7	21.3	21.0
43 - δ Velorum		2.0	228	48.2	48.2	48.3	48.5	48.8	49.0	49.1	49.1	48.9	48.6	48.3	48.0
44 - ζ Hydrae		3.1	226	7.4	7.3	7.4	7.5	7.6	7.6	7.6	7.6	7.4	7.3	7.0	6.8
45 - λ Vel	<i>Suhail</i>	2.2	222	58.7	58.6	58.7	58.9	59.0	59.2	59.3	59.3	59.1	58.9	58.6	58.4
46 - β Car	<i>Miaplacidus</i>	1.7	221	40.9	40.8	41.0	41.4	41.9	42.3	42.6	42.7	42.5	42.1	41.6	41.1
47 - ι Car	<i>Aspidiske</i>	2.3	220	42.4	42.3	42.4	42.7	42.9	43.2	43.4	43.4	43.3	43.0	42.6	42.3
48 - α Lyn	<i>Elvashak</i>	3.1	219	42.2	42.1	42.1	42.2	42.4	42.5	42.5	42.4	42.3	42.1	41.8	41.5
49 - α Hyd	<i>Alphard</i>	2.0	218	4.6	4.5	4.5	4.6	4.7	4.8	4.8	4.8	4.7	4.5	4.3	4.1
50 - α Leo	<i>Regulus</i>	1.4	207	52.8	52.6	52.6	52.7	52.8	52.9	52.9	52.9	52.8	52.7	52.4	52.2

ESTRELLAS, 2002
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	6.1	6.0	6.0	5.9	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.5
2 - β Cas	<i>Caph</i>	2.3	+59	9.8	9.7	9.6	9.5	9.4	9.4	9.5	9.6	9.8	10.0	10.1	10.2
3 - γ Peg	<i>Algenib</i>	2.8	+15	11.6	11.6	11.5	11.5	11.5	11.6	11.7	11.8	11.9	12.0	12.0	12.0
4 - α Phe	<i>Ankaa</i>	2.4	-42	18.1	18.0	17.9	17.8	17.6	17.5	17.4	17.4	17.4	17.5	17.6	17.7
5 - α Cas	<i>Schedar</i>	2.2	+56	33.1	33.0	32.9	32.7	32.7	32.7	32.7	32.9	33.0	33.2	33.3	33.4
6 - β Cet	<i>Diphda</i>	2.0	-17	58.8	58.8	58.7	58.7	58.5	58.4	58.3	58.3	58.2	58.3	58.4	58.4
7 - γ Cas	<i>Navi</i>	1.6	+60	43.8	43.8	43.7	43.5	43.4	43.4	43.5	43.6	43.8	43.9	44.1	44.2
8 - β And	<i>Mirach</i>	2.1	+35	37.9	37.9	37.8	37.7	37.7	37.7	37.8	37.9	38.0	38.1	38.2	38.3
9 - α Eri	<i>Achernar</i>	0.5	-57	14.0	13.9	13.8	13.7	13.5	13.3	13.2	13.2	13.2	13.4	13.5	13.6
10 - γ And	<i>Almak</i>	2.3	+42	20.5	20.4	20.4	20.3	20.2	20.2	20.3	20.3	20.5	20.6	20.7	20.8
12 - α Ari	<i>Hamal</i>	2.0	+23	28.3	28.3	28.2	28.2	28.2	28.2	28.3	28.4	28.5	28.6	28.6	28.6
11 - α UMi	<i>Polaris</i>	2.0	+89	16.6	16.6	16.6	16.4	16.3	16.2	16.1	16.2	16.3	16.4	16.6	16.8
13 - θ Eri	<i>Acamar</i>	3.3	-40	18.1	18.1	18.1	18.0	17.8	17.6	17.5	17.4	17.4	17.5	17.6	17.8
14 - α Cet	<i>Menkar</i>	2.5	+4	5.8	5.7	5.7	5.7	5.8	5.9	6.0	6.0	6.1	6.1	6.1	6.1
15 - β Per	<i>Algol</i>	2.1	+40	57.9	57.9	57.9	57.8	57.7	57.7	57.7	57.8	57.9	58.0	58.0	58.1
16 - α Per	<i>Mirfak</i>	1.8	+49	52.2	52.2	52.2	52.1	52.0	52.0	52.0	52.0	52.1	52.2	52.3	52.4
17 - η Tau	<i>Alcyone</i>	2.9	+24	6.7	6.7	6.7	6.6	6.6	6.6	6.7	6.7	6.8	6.8	6.9	6.9
18 - γ Eri	<i>Zaurak</i>	3.0	-13	30.3	30.4	30.4	30.3	30.2	30.1	30.0	29.9	29.9	29.9	30.0	30.0
19 - α Tau	<i>Aldebaran</i>	0.9	+16	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.9	30.9	31.0	31.0	30.9
20 - β Ori	<i>Rigel</i>	0.1	-8	12.1	12.1	12.1	12.1	12.0	11.9	11.8	11.8	11.7	11.7	11.8	11.9
21 - α Aur	<i>Capella</i>	0.1	+45	60.1	60.1	60.1	60.1	60.1	60.0	59.9	59.9	59.9	60.0	60.0	60.1
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.0	21.0	21.0	21.0	21.0	21.1	21.2	21.2	21.3	21.3	21.2	21.2
23 - β Tau	<i>Elnath</i>	1.7	+28	36.6	36.6	36.6	36.6	36.6	36.5	36.5	36.6	36.6	36.6	36.6	36.6
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.9	18.0	18.0	18.0	17.9	17.9	17.8	17.7	17.7	17.7	17.7	17.8
25 - ε Ori	<i>Alnilam</i>	1.7	-1	12.1	12.2	12.2	12.1	12.1	12.0	12.0	11.9	11.8	11.8	11.9	12.0
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.6	56.6	56.6	56.6	56.6	56.5	56.4	56.3	56.3	56.3	56.3	56.4
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.2	40.3	40.3	40.3	40.2	40.1	40.0	39.9	39.9	39.9	40.0	40.1
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.4	24.4	24.4	24.4	24.4	24.5	24.5	24.6	24.6	24.6	24.6	24.5
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.9	57.0	57.0	57.0	56.9	56.9	56.8	56.8	56.8	56.8	56.8	56.9
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.5	57.6	57.6	57.6	57.5	57.4	57.3	57.2	57.2	57.2	57.2	57.4
31 - α Car	<i>Canopus</i>	-0.7	-52	41.9	42.0	42.1	42.1	42.0	41.9	41.7	41.5	41.4	41.5	41.6	41.7
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.8	23.8	23.8	23.8	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.8
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.2	43.3	43.3	43.3	43.3	43.2	43.1	43.0	42.9	42.9	43.0	43.1
34 - ε CMa	<i>Adhara</i>	1.5	-28	58.5	58.7	58.7	58.7	58.7	58.6	58.4	58.3	58.2	58.2	58.3	58.4
35 - δ CMa	<i>Wezen</i>	1.9	-26	23.8	23.9	24.0	24.0	24.0	23.8	23.7	23.6	23.5	23.5	23.6	23.7
36 - η CMa	<i>Aludra</i>	2.5	-29	18.4	18.6	18.6	18.7	18.6	18.5	18.4	18.3	18.2	18.2	18.2	18.4
37 - α Gem	<i>Castor</i>	2.0	+31	53.0	53.1	53.1	53.1	53.1	53.1	53.1	53.1	53.0	53.0	52.9	52.9
38 - α CMi	<i>Procyon</i>	0.4	+5	13.2	13.1	13.1	13.1	13.1	13.2	13.2	13.3	13.3	13.3	13.2	13.1
39 - β Gem	<i>Pollux</i>	1.1	+28	1.3	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.2
40 - ζ Pup	<i>Naos</i>	2.3	-40	0.5	0.7	0.7	0.8	0.8	0.7	0.5	0.4	0.3	0.3	0.3	0.5
41 - γ Vel	<i>Regor</i>	1.8	-47	20.5	20.7	20.8	20.8	20.8	20.7	20.6	20.4	20.3	20.3	20.3	20.5
42 - ε Car	<i>Avior</i>	1.9	-59	30.9	31.1	31.2	31.3	31.3	31.2	31.0	30.9	30.7	30.7	30.7	30.8
43 - δ Velorum		2.0	-54	42.9	43.0	43.2	43.3	43.3	43.2	43.1	42.9	42.8	42.7	42.7	42.9
44 - ζ Hydrae		3.1	+5	56.3	56.2	56.2	56.2	56.2	56.3	56.3	56.3	56.3	56.3	56.2	56.1
45 - λ Vel	<i>Suhail</i>	2.2	-43	26.3	26.5	26.6	26.7	26.7	26.7	26.5	26.4	26.3	26.2	26.2	26.4
46 - β Car	<i>Miaplacidus</i>	1.7	-69	43.3	43.5	43.7	43.8	43.8	43.8	43.7	43.5	43.4	43.3	43.3	43.4
47 - ι Car	<i>Aspidiske</i>	2.3	-59	16.8	17.0	17.2	17.3	17.3	17.3	17.2	17.0	16.9	16.8	16.8	16.9
48 - α Lyn	<i>Elvashak</i>	3.1	+34	23.0	23.0	23.1	23.1	23.2	23.2	23.1	23.1	23.0	22.9	22.8	22.8
49 - α Hyd	<i>Alphard</i>	2.0	-8	40.0	40.1	40.1	40.2	40.2	40.1	40.1	40.0	40.0	40.0	40.0	40.1
50 - α Leo	<i>Regulus</i>	1.4	+11	57.4	57.4	57.4	57.4	57.4	57.5	57.5	57.5	57.5	57.4	57.3	57.2

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	17.0	16.8	16.8	16.9	17.0	17.2	17.4	17.5	17.4	17.3	17.0	16.7
52 - ν	Hydrae	3.1	197	34.1	34.0	33.9	34.0	34.0	34.1	34.2	34.2	34.2	34.1	33.9	33.6
53 - β	UMa Merak	2.4	194	30.4	30.2	30.1	30.2	30.3	30.5	30.7	30.8	30.7	30.5	30.2	29.9
54 - α	UMa Dubhe	1.8	194	2.1	1.7	1.7	1.8	2.0	2.2	2.4	2.5	2.5	2.3	1.9	1.5
55 - β	Leo Denebola	2.1	182	42.6	42.4	42.3	42.3	42.4	42.5	42.5	42.6	42.6	42.5	42.3	42.1
56 - γ	Crv Gienah	2.6	176	1.5	1.3	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.3	1.2	1.0
57 - α	Cru Acrux	1.4	173	19.4	19.0	18.8	18.8	18.9	19.1	19.4	19.7	19.8	19.7	19.5	19.1
58 - γ	Cru Gacrux	1.6	172	10.9	10.6	10.4	10.4	10.5	10.6	10.8	11.0	11.2	11.1	10.9	10.5
59 - γ	Cen Muhlifain	2.2	169	35.7	35.4	35.3	35.2	35.2	35.4	35.5	35.7	35.8	35.7	35.6	35.3
60 - β	Cru Mimosa	1.3	168	2.6	2.2	2.0	1.9	2.0	2.2	2.4	2.6	2.8	2.7	2.5	2.2
61 - ε	UMa Alioth	1.8	166	28.3	28.0	27.8	27.7	27.8	27.9	28.1	28.3	28.4	28.4	28.3	28.0
62 - α^2	CVn Cor Caroli	2.9	165	58.3	58.0	57.9	57.8	57.8	57.9	58.1	58.2	58.2	58.2	58.1	57.9
63 - ε	Vir Vindemiatrix	2.8	164	26.0	25.8	25.7	25.6	25.6	25.6	25.7	25.8	25.9	25.8	25.7	25.5
64 - ζ	UMa Mizar	2.3	158	60.0	59.7	59.5	59.4	59.4	59.5	59.7	59.9	60.1	60.1	60.0	59.7
65 - α	Vir Spica	1.0	158	40.7	40.5	40.3	40.3	40.2	40.3	40.3	40.4	40.5	40.5	40.4	40.2
66 - η	UMa Alkaid	1.9	153	5.9	5.6	5.4	5.2	5.2	5.3	5.5	5.7	5.8	5.9	5.8	5.6
67 - β	Cen Hadar	0.6	148	60.9	60.5	60.2	60.0	59.9	60.0	60.2	60.5	60.7	60.8	60.6	60.3
68 - θ	Cen Menkent	2.1	148	18.3	18.0	17.8	17.7	17.6	17.6	17.7	17.9	18.0	18.0	17.9	17.7
69 - α	Boo Arcturus	0.0	146	4.0	3.7	3.5	3.4	3.4	3.4	3.5	3.6	3.7	3.7	3.7	3.5
70 - α^1	Cen Rigil Kentaurus	0.0	140	4.5	4.1	3.7	3.5	3.4	3.4	3.6	3.9	4.1	4.3	4.2	3.9
71 - α^2	Lib Zubenelgenubi	2.8	137	15.5	15.3	15.1	14.9	14.8	14.8	14.9	15.0	15.1	15.1	15.1	14.9
72 - β	UMi Kochab	2.1	137	19.9	19.2	18.6	18.3	18.2	18.5	18.9	19.5	20.1	20.4	20.5	20.3
73 - β	Lib Zubeneschamali	2.6	130	43.7	43.4	43.2	43.0	42.9	42.9	42.9	43.0	43.1	43.2	43.2	43.1
74 - α	CrB Alphecca	2.2	126	18.8	18.5	18.3	18.1	18.0	18.0	18.1	18.2	18.3	18.4	18.4	18.3
75 - α	Ser Unukalhai	2.7	123	54.9	54.7	54.4	54.3	54.2	54.1	54.1	54.2	54.3	54.4	54.4	54.3
76 - α	Sco Antares	0.9	112	37.6	37.3	37.1	36.9	36.7	36.6	36.6	36.7	36.8	36.9	36.9	36.8
77 - α	TrA Atria	1.9	107	48.0	47.5	46.9	46.4	46.0	45.7	45.8	46.0	46.4	46.8	46.9	46.8
78 - ε	Scorpii	2.3	107	26.2	25.9	25.7	25.4	25.2	25.1	25.1	25.2	25.3	25.4	25.5	25.4
79 - η	Oph Sabik	2.4	102	23.1	22.9	22.7	22.5	22.3	22.2	22.1	22.2	22.3	22.4	22.5	22.4
80 - α	Her Rasalgethi	3.1	101	19.4	19.2	19.0	18.8	18.6	18.5	18.5	18.5	18.7	18.8	18.9	18.8
81 - λ	Sco Shaula	1.6	96	34.5	34.2	34.0	33.7	33.5	33.3	33.2	33.3	33.4	33.6	33.7	33.6
82 - α	Oph Rasalhague	2.1	96	15.1	14.9	14.7	14.5	14.3	14.2	14.1	14.2	14.3	14.4	14.5	14.5
83 - θ	Sco Sargas	1.9	95	38.8	38.5	38.2	37.9	37.7	37.5	37.4	37.5	37.6	37.8	37.9	37.9
84 - γ	Dra Eltanin	2.2	90	50.8	50.6	50.3	50.0	49.8	49.6	49.6	49.8	50.0	50.3	50.5	50.5
85 - ε	Sgr Kaus Australis	1.9	83	56.1	55.9	55.6	55.4	55.1	54.9	54.8	54.8	55.0	55.1	55.2	55.2
86 - α	Lyr Vega	0.0	80	45.5	45.3	45.1	44.8	44.6	44.4	44.4	44.4	44.6	44.8	44.9	45.0
87 - σ	Sgr Nunki	2.0	76	9.8	9.6	9.4	9.2	8.9	8.7	8.6	8.6	8.7	8.8	8.9	8.9
88 - α	Aql Altair	0.8	62	17.3	17.2	17.1	16.8	16.6	16.4	16.3	16.3	16.3	16.4	16.6	16.6
89 - γ	Cyg Sadr	2.2	54	26.1	26.0	25.9	25.6	25.4	25.1	25.0	24.9	25.0	25.2	25.4	25.5
90 - α	Pav Peacock	1.9	53	33.9	33.7	33.5	33.1	32.7	32.3	32.1	32.0	32.0	32.2	32.5	32.6
91 - α	Cyg Deneb	1.3	49	38.1	38.1	37.9	37.7	37.4	37.1	37.0	36.9	37.0	37.2	37.4	37.5
92 - α	Cep Alderamin	2.4	40	21.4	21.4	21.3	20.9	20.5	20.2	19.9	19.9	20.0	20.2	20.6	20.9
93 - ε	Peg Enif	0.7	33	56.2	56.2	56.1	56.0	55.7	55.5	55.3	55.2	55.2	55.2	55.4	55.4
94 - δ	Cap Deneb Algedi	2.9	33	13.3	13.2	13.1	13.0	12.7	12.5	12.3	12.1	12.1	12.2	12.3	12.4
95 - α	Gru Al Na'ir	1.7	27	55.3	55.2	55.1	54.9	54.6	54.3	54.0	53.8	53.8	53.9	54.0	54.2
96 - β	Gruis	2.1	19	18.8	18.8	18.7	18.6	18.3	18.0	17.7	17.4	17.4	17.4	17.6	17.7
97 - α	PsA Fomalhaut	1.2	15	34.1	34.1	34.0	33.9	33.7	33.4	33.2	33.0	32.9	32.9	33.0	33.1
98 - β	Peg Scheat	2.4	14	2.4	2.4	2.4	2.3	2.1	1.8	1.6	1.4	1.3	1.3	1.4	1.5
99 - α	Peg Markab	2.5	13	47.5	47.5	47.5	47.4	47.2	47.0	46.7	46.6	46.5	46.5	46.6	46.7

ESTRELLAS, 2002
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	25.6	25.8	25.9	26.1	26.1	26.1	26.1	26.0	25.8	25.7	25.7	25.8
52 - ν	Hydrae	3.1	-16	12.1	12.3	12.3	12.4	12.4	12.4	12.3	12.3	12.2	12.2	12.2	12.3
53 - β	UMa Merak	2.4	+56	22.1	22.2	22.3	22.4	22.5	22.5	22.5	22.4	22.2	22.1	21.9	21.8
54 - α	UMa Dubhe	1.8	+61	44.2	44.3	44.4	44.6	44.6	44.7	44.6	44.5	44.3	44.2	44.0	43.9
55 - β	Leo Denebola	2.1	+14	33.6	33.6	33.6	33.6	33.6	33.7	33.7	33.7	33.7	33.6	33.5	33.4
56 - γ	Crv Gienah	2.6	-17	33.0	33.2	33.3	33.3	33.3	33.3	33.3	33.3	33.2	33.2	33.2	33.3
57 - α	Cru Acrux	1.4	-63	6.2	6.4	6.6	6.7	6.9	6.9	6.9	6.9	6.7	6.6	6.5	6.5
58 - γ	Cru Gacrux	1.6	-57	7.1	7.3	7.4	7.6	7.7	7.8	7.8	7.7	7.6	7.5	7.4	7.4
59 - γ	Cen Muhlifain	2.2	-48	57.9	58.1	58.2	58.4	58.5	58.5	58.5	58.5	58.4	58.3	58.2	58.2
60 - β	Cru Mimoso	1.3	-59	41.6	41.8	41.9	42.1	42.2	42.3	42.3	42.3	42.1	42.0	41.9	41.9
61 - ϵ	UMa Alioth	1.8	+55	56.7	56.7	56.8	56.9	57.1	57.2	57.2	57.1	57.0	56.8	56.6	56.5
62 - α^2	CVn Cor Caroli	2.9	+38	18.3	18.3	18.3	18.4	18.5	18.6	18.6	18.6	18.5	18.4	18.2	18.1
63 - ϵ	Vir Vindemiatrix	2.8	+10	56.9	56.8	56.8	56.8	56.9	56.9	56.9	56.9	56.9	56.9	56.8	56.6
64 - ζ	UMa Mizar	2.3	+54	54.7	54.7	54.7	54.9	55.0	55.1	55.1	55.1	55.0	54.8	54.6	54.4
65 - α	Vir Spica	1.0	-11	10.2	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.3	10.3	10.4	10.4
66 - η	UMa Alkaid	1.9	+49	18.0	18.0	18.0	18.1	18.3	18.4	18.4	18.4	18.3	18.1	18.0	17.8
67 - β	Cen Hadar	0.6	-60	22.6	22.7	22.8	23.0	23.1	23.2	23.3	23.3	23.2	23.1	23.0	22.9
68 - θ	Cen Menkent	2.1	-36	22.6	22.7	22.8	22.9	22.9	23.0	23.0	23.0	22.9	22.9	22.8	22.8
69 - α	Boo Arcturus	0.0	+19	10.2	10.2	10.1	10.2	10.3	10.3	10.4	10.4	10.4	10.3	10.2	10.0
70 - α^1	Cen Rigil Kentaurus	0.0	-60	50.3	50.4	50.5	50.6	50.8	50.9	50.9	50.9	50.9	50.8	50.6	50.6
71 - α^2	Lib Zubenelgenubi	2.8	-16	2.9	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
72 - β	UMi Kochab	2.1	+74	8.6	8.5	8.6	8.7	8.9	9.0	9.1	9.1	9.0	8.8	8.6	8.4
73 - β	Lib Zubeneshamali	2.6	-9	23.4	23.4	23.5	23.5	23.5	23.5	23.5	23.5	23.4	23.5	23.5	23.5
74 - α	CrB Alphecca	2.2	+26	42.3	42.3	42.2	42.3	42.4	42.5	42.6	42.6	42.6	42.5	42.4	42.3
75 - α	Ser Unukalhai	2.7	+6	25.1	25.0	25.0	25.0	25.1	25.1	25.2	25.2	25.2	25.2	25.1	25.0
76 - α	Sco Antares	0.9	-26	26.1	26.1	26.2	26.2	26.2	26.3	26.3	26.3	26.3	26.3	26.3	26.2
77 - α	TrA Atria	1.9	-69	1.7	1.6	1.6	1.7	1.8	2.0	2.1	2.2	2.2	2.1	2.0	1.9
78 - ϵ	Scorpii	2.3	-34	17.7	17.7	17.8	17.8	17.8	17.9	17.9	18.0	18.0	17.9	17.9	17.9
79 - η	Oph Sabik	2.4	-15	43.6	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7
80 - α	Her Rasalgethi	3.1	+14	23.2	23.1	23.1	23.1	23.2	23.3	23.3	23.4	23.4	23.4	23.3	23.2
81 - λ	Sco Shaula	1.6	-37	6.2	6.2	6.3	6.3	6.3	6.3	6.4	6.4	6.5	6.4	6.4	6.4
82 - α	Oph Rasalhague	2.1	+12	33.4	33.3	33.3	33.3	33.4	33.5	33.6	33.6	33.7	33.6	33.6	33.5
83 - θ	Sco Sargas	1.9	-42	59.9	59.8	59.8	59.9	59.9	60.0	60.0	60.1	60.1	60.1	60.1	60.0
84 - γ	Dra Eltanin	2.2	+51	29.2	29.0	29.0	29.0	29.1	29.3	29.4	29.5	29.6	29.6	29.5	29.3
85 - ϵ	Sgr Kaus Australis	1.9	-34	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.1	23.1	23.1	23.1	23.1
86 - α	Lyr Vega	0.0	+38	47.0	46.9	46.8	46.8	46.9	47.1	47.2	47.3	47.4	47.4	47.3	47.2
87 - σ	Sgr Nunki	2.0	-26	17.7	17.7	17.7	17.7	17.6	17.6	17.6	17.7	17.7	17.7	17.7	17.7
88 - α	Aql Altair	0.8	+8	52.3	52.2	52.2	52.2	52.3	52.4	52.5	52.6	52.6	52.6	52.6	52.5
89 - γ	Cyg Sadr	2.2	+40	15.7	15.6	15.5	15.5	15.5	15.6	15.8	15.9	16.1	16.1	16.1	16.0
90 - α	Pav Peacock	1.9	-56	43.9	43.8	43.6	43.6	43.5	43.5	43.6	43.7	43.8	43.9	43.9	43.8
91 - α	Cyg Deneb	1.3	+45	17.2	17.1	17.0	16.9	17.0	17.1	17.2	17.4	17.5	17.6	17.6	17.5
92 - α	Cep Alderamin	2.4	+62	35.7	35.5	35.4	35.3	35.3	35.4	35.6	35.7	35.9	36.0	36.1	36.0
93 - ϵ	Peg Enif	0.7	+9	52.9	52.9	52.8	52.8	52.9	53.0	53.1	53.2	53.3	53.3	53.3	53.3
94 - δ	Cap Deneb Algedi	2.9	-16	7.3	7.3	7.2	7.2	7.1	7.0	6.9	6.9	6.9	7.0	7.0	7.0
95 - α	Gru Al Na'ir	1.7	-46	57.4	57.3	57.1	57.0	56.9	56.8	56.8	56.9	57.0	57.1	57.1	57.1
96 - β	Gruis	2.1	-46	52.8	52.7	52.5	52.4	52.3	52.2	52.2	52.2	52.3	52.4	52.5	52.5
97 - α	PsA Fomalhaut	1.2	-29	37.0	36.9	36.8	36.7	36.6	36.5	36.5	36.5	36.5	36.6	36.6	36.7
98 - β	Peg Scheat	2.4	+28	5.6	5.5	5.4	5.4	5.4	5.5	5.6	5.7	5.9	6.0	6.0	6.0
99 - α	Peg Markab	2.5	+15	12.9	12.8	12.8	12.8	12.8	12.9	13.0	13.1	13.2	13.3	13.3	13.3

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 24	15 22	13 32	11 30	9 32	7 30	5 32
2 - β Cassiopeae	<i>Caph</i>	2.3	17 25	15 23	13 33	11 31	9 33	7 31	5 33
6 - β Ceti	<i>Diphda</i>	2.0	17 59	15 57	14 07	12 05	10 07	8 05	6 07
9 - α Eridani	<i>Achernar</i>	0.5	18 53	16 51	15 01	12 59	11 01	8 59	7 01
12 - α Arietis	<i>Hamal</i>	2.0	19 22	17 20	15 30	13 28	11 30	9 28	7 31
13 - θ Eridani	<i>Acamar</i>	3.3	20 13	18 11	16 21	14 19	12 21	10 19	8 21
16 - α Persei	<i>Mirfak</i>	1.8	20 39	18 37	16 47	14 45	12 47	10 45	8 48
19 - α Tauri	<i>Aldebaran</i>	0.9	21 51	19 49	17 59	15 57	13 59	11 57	9 59
20 - β Orionis	<i>Rigel</i>	0.1	22 29	20 27	18 37	16 35	14 37	12 35	10 37
21 - α Aurigae	<i>Capella</i>	0.1	22 31	20 29	18 39	16 37	14 39	12 38	10 40
22 - γ Orionis	<i>Bellatrix</i>	1.6	22 40	20 38	18 48	16 46	14 48	12 46	10 48
28 - α Orionis	<i>Betelgeuse</i>	0.4	23 10	21 08	19 18	17 16	15 18	13 16	11 18
31 - α Carinae	<i>Canopus</i>	-0.7	23 38	21 36	19 46	17 44	15 46	13 44	11 47
33 - α Canis Majoris	<i>Sirius</i>	-1.5	0 03	21 58	20 07	18 06	16 08	14 06	12 08
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	0 17	22 11	20 21	18 19	16 21	14 19	12 21
38 - α Canis Minoris	<i>Procyon</i>	0.4	0 57	22 52	21 01	19 00	17 02	15 00	13 02
39 - β Geminorum	<i>Pollux</i>	1.1	1 03	22 58	21 07	19 06	17 08	15 06	13 08
42 - ϵ Carinae	<i>Avior</i>	1.9	1 40	23 35	21 45	19 43	17 45	15 43	13 45
45 - λ Velorum	<i>Suhail</i>	2.2	2 26	0 24	22 30	20 28	18 30	16 28	14 30
46 - β Carinae	<i>Miaplacidus</i>	1.7	2 31	0 29	22 35	20 33	18 35	16 33	14 35
49 - α Hydrae	<i>Alphard</i>	2.0	2 45	0 43	22 49	20 48	18 50	16 48	14 50
50 - α Leonis	<i>Regulus</i>	1.4	3 26	1 24	23 30	21 28	19 30	17 28	15 30
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	4 21	2 19	0 29	22 23	20 26	18 24	16 26
55 - β Leonis	<i>Denebola</i>	2.1	5 06	3 05	1 14	23 09	21 11	19 09	17 11
57 - α Crucis	<i>Acrux</i>	1.4	5 44	3 42	1 52	23 46	21 48	19 46	17 48
58 - γ Crucis	<i>Gacrux</i>	1.6	5 48	3 47	1 56	23 51	21 53	19 51	17 53
60 - β Crucis	<i>Mimosa</i>	1.3	6 05	4 03	2 13	0 11	22 09	20 07	18 09
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	6 11	4 09	2 19	0 17	22 15	20 14	18 16
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	6 41	4 39	2 49	0 47	22 45	20 43	18 45
65 - α Virginis	<i>Spica</i>	1.0	6 42	4 40	2 50	0 48	22 47	20 45	18 47
68 - θ Centauri	<i>Menkent</i>	2.1	7 24	5 22	3 32	1 30	23 28	21 26	19 28
69 - α Bootis	<i>Arcturus</i>	0.0	7 33	5 31	3 41	1 39	23 37	21 35	19 37
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	7 56	5 55	4 05	2 03	0 05	21 59	20 01
72 - β Ursae Minoris	<i>Kochab</i>	2.1	8 07	6 06	4 16	2 14	0 16	22 10	20 12
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	8 51	6 50	4 59	2 58	1 00	22 54	20 56
76 - α Scorpii	<i>Antares</i>	0.9	9 46	7 44	5 54	3 52	1 54	23 48	21 50
77 - α Trianguli Aust.	<i>Atria</i>	1.9	10 05	8 03	6 13	4 11	2 14	0 12	22 10
81 - λ Scorpii	<i>Shaula</i>	1.6	10 50	8 48	6 58	4 56	2 58	0 56	22 55
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	10 51	8 49	6 59	4 57	3 00	0 58	22 56
84 - γ Draconis	<i>Eltanin</i>	2.2	11 13	9 11	7 21	5 19	3 21	1 19	23 17
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	11 40	9 39	7 48	5 47	3 49	1 47	23 45
86 - α Lyrae	<i>Vega</i>	0.0	11 53	9 51	8 01	5 59	4 01	1 59	0 02
87 - σ Sagittarii	<i>Nunki</i>	2.0	12 11	10 10	8 19	6 18	4 20	2 18	0 20
88 - α Aquilae	<i>Altair</i>	0.8	13 07	11 05	9 15	7 13	5 15	3 13	1 15
90 - α Pavonis	<i>Peacock</i>	1.9	13 42	11 40	9 50	7 48	5 50	3 48	1 50
91 - α Cygni	<i>Deneb</i>	1.3	13 57	11 55	10 05	8 03	6 06	4 04	2 06
93 - ϵ Pegasi	<i>Enif</i>	0.7	15 00	12 58	11 08	9 06	7 08	5 06	3 08
95 - α Gruis	<i>Al Na'ir</i>	1.7	15 24	13 22	11 32	9 30	7 32	5 30	3 32
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	16 13	14 11	12 21	10 19	8 21	6 20	4 22
99 - α Pegasi	<i>Markab</i>	2.5	16 20	14 18	12 28	10 26	8 28	6 27	4 29

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

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN																																																																		
1 - α Andromedae	<i>Alpheratz</i>	2.1	h m 3 30	h m 1 28	h m 23 26	h m 21 25	h m 19 27	Se restará para obtener la hora del paso en otro día del mismo mes.																																																																		
2 - β Cassiopeae	<i>Caph</i>	2.3	3 31	1 29	23 27	21 25	19 27																																																																			
6 - β Ceti	<i>Diphda</i>	2.0	4 05	2 03	0 06	22 00	20 02																																																																			
9 - α Eridani	<i>Achernar</i>	0.5	4 59	2 57	0 59	22 54	20 56																																																																			
12 - α Arietis	<i>Hamal</i>	2.0	5 29	3 27	1 29	23 23	21 25	<table><tr><th>Día</th><th>Corr.</th></tr><tr><td></td><td>h m</td></tr><tr><td>1</td><td>0 00</td></tr><tr><td>2</td><td>0 04</td></tr><tr><td>3</td><td>0 08</td></tr><tr><td>4</td><td>0 12</td></tr><tr><td>5</td><td>0 16</td></tr><tr><td>6</td><td>0 20</td></tr><tr><td>7</td><td>0 24</td></tr><tr><td>8</td><td>0 28</td></tr><tr><td>9</td><td>0 31</td></tr><tr><td>10</td><td>0 35</td></tr><tr><td>11</td><td>0 39</td></tr><tr><td>12</td><td>0 43</td></tr><tr><td>13</td><td>0 47</td></tr><tr><td>14</td><td>0 51</td></tr><tr><td>15</td><td>0 55</td></tr><tr><td>16</td><td>0 59</td></tr><tr><td>17</td><td>1 03</td></tr><tr><td>18</td><td>1 07</td></tr><tr><td>19</td><td>1 11</td></tr><tr><td>20</td><td>1 15</td></tr><tr><td>21</td><td>1 19</td></tr><tr><td>22</td><td>1 23</td></tr><tr><td>23</td><td>1 27</td></tr><tr><td>24</td><td>1 30</td></tr><tr><td>25</td><td>1 34</td></tr><tr><td>26</td><td>1 38</td></tr><tr><td>27</td><td>1 42</td></tr><tr><td>28</td><td>1 46</td></tr><tr><td>29</td><td>1 50</td></tr><tr><td>30</td><td>1 54</td></tr><tr><td>31</td><td>1 58</td></tr></table>	Día	Corr.		h m	1	0 00	2	0 04	3	0 08	4	0 12	5	0 16	6	0 20	7	0 24	8	0 28	9	0 31	10	0 35	11	0 39	12	0 43	13	0 47	14	0 51	15	0 55	16	0 59	17	1 03	18	1 07	19	1 11	20	1 15	21	1 19	22	1 23	23	1 27	24	1 30	25	1 34	26	1 38	27	1 42	28	1 46	29	1 50	30	1 54	31	1 58
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30	1 54																																																																									
31	1 58																																																																									
13 - θ Eridani	<i>Acamar</i>	3.3	6 20	4 18	2 20	0 18	22 16	Si el resultado es negativo sumar 23 ^h 56 ^m .																																																																		
16 - α Persei	<i>Mirfak</i>	1.8	6 46	4 44	2 46	0 44	22 42																																																																			
19 - α Tauri	<i>Aldebaran</i>	0.9	7 57	5 55	3 57	1 55	23 53																																																																			
20 - β Orionis	<i>Rigel</i>	0.1	8 36	6 34	4 36	2 34	0 36																																																																			
21 - α Aurigae	<i>Capella</i>	0.1	8 38	6 36	4 38	2 36	0 38	2ª CORRECCIÓN																																																																		
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 46	6 44	4 46	2 44	0 46																																																																			
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 16	7 14	5 16	3 14	1 16																																																																			
31 - α Carinae	<i>Canopus</i>	-0.7	9 45	7 43	5 45	3 43	1 45																																																																			
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 06	8 04	6 06	4 04	2 06	Se aplicará para tener la hora civil del paso por otro meridiano.																																																																		
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 19	8 17	6 19	4 18	2 20																																																																			
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 00	8 58	7 00	4 58	3 00																																																																			
39 - β Geminorum	<i>Pollux</i>	1.1	11 06	9 04	7 06	5 04	3 06																																																																			
42 - ϵ Carinae	<i>Avior</i>	1.9	11 43	9 41	7 43	5 41	3 43	2ª CORRECCIÓN																																																																		
45 - λ Velorum	<i>Suhail</i>	2.2	12 28	10 26	8 28	6 27	4 29																																																																			
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 33	10 31	8 34	6 32	4 34																																																																			
49 - α Hydrae	<i>Alphard</i>	2.0	12 48	10 46	8 48	6 46	4 48																																																																			
50 - α Leonis	<i>Regulus</i>	1.4	13 29	11 27	9 29	7 27	5 29	Se aplicará para tener la hora civil del paso por otro meridiano.																																																																		
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 24	12 22	10 24	8 22	6 24																																																																			
55 - β Leonis	<i>Denebola</i>	2.1	15 09	13 07	11 09	9 07	7 09																																																																			
57 - α Crucis	<i>Acrux</i>	1.4	15 46	13 44	11 47	9 45	7 47																																																																			
58 - γ Crucis	<i>Gacrux</i>	1.6	15 51	13 49	11 51	9 49	7 51	2ª CORRECCIÓN																																																																		
60 - β Crucis	<i>Mimosa</i>	1.3	16 07	14 06	12 08	10 06	8 08																																																																			
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 14	14 12	12 14	10 12	8 14																																																																			
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 44	14 42	12 44	10 42	8 44																																																																			
65 - α Virginis	<i>Spica</i>	1.0	16 45	14 43	12 45	10 43	8 45	Se aplicará para tener la hora civil del paso por otro meridiano.																																																																		
68 - θ Centauri	<i>Menkent</i>	2.1	17 26	15 24	13 26	11 24	9 27																																																																			
69 - α Bootis	<i>Arcturus</i>	0.0	17 35	15 33	13 35	11 33	9 35																																																																			
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	17 59	15 57	13 59	11 57	9 59																																																																			
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 10	16 08	14 10	12 08	10 10	2ª CORRECCIÓN																																																																		
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 54	16 52	14 54	12 52	10 54																																																																			
76 - α Scorpii	<i>Antares</i>	0.9	19 49	17 47	15 49	13 47	11 49																																																																			
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 08	18 06	16 08	14 06	12 08																																																																			
81 - λ Scorpii	<i>Shaula</i>	1.6	20 53	18 51	16 53	14 51	12 53	Se aplicará para tener la hora civil del paso por otro meridiano.																																																																		
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 54	18 52	16 54	14 52	12 54																																																																			
84 - γ Draconis	<i>Eltanin</i>	2.2	21 15	19 14	17 16	15 14	13 16																																																																			
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 43	19 41	17 43	15 41	13 43																																																																			
86 - α Lyrae	<i>Vega</i>	0.0	21 56	19 54	17 56	15 54	13 56	2ª CORRECCIÓN																																																																		
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 14	20 12	18 14	16 12	14 14																																																																			
88 - α Aquilae	<i>Altair</i>	0.8	23 09	21 08	19 10	17 08	15 10																																																																			
90 - α Pavonis	<i>Peacock</i>	1.9	23 44	21 42	19 44	17 43	15 45																																																																			
91 - α Cygni	<i>Deneb</i>	1.3	0 04	21 58	20 00	17 58	16 00	2ª CORRECCIÓN																																																																		
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 06	23 01	21 03	19 01	17 03																																																																			
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 30	23 25	21 27	19 25	17 27																																																																			
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 20	0 18	22 16	20 14	18 16																																																																			
99 - α Pegasi	<i>Markab</i>	2.5	2 27	0 25	22 23	20 21	18 23	<table><tr><th>Long.</th><th>Corr.</th></tr><tr><td>o</td><td>m</td></tr><tr><td>180 W</td><td>-2</td></tr><tr><td>138 W</td><td>-1</td></tr><tr><td>46 W</td><td>0</td></tr><tr><td>46 E</td><td>+1</td></tr><tr><td>136 E</td><td>+2</td></tr><tr><td>180 E</td><td></td></tr></table>	Long.	Corr.	o	m	180 W	-2	138 W	-1	46 W	0	46 E	+1	136 E	+2	180 E																																																			
Long.	Corr.																																																																									
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138 W	-1																																																																									
46 W	0																																																																									
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136 E	+2																																																																									
180 E																																																																										

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2002

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	-34.1	26 00	-42.5	52 00	-42.3	78 00	-33.6	104 00	-18.1	130 00	+1.1	156 00	+20.1
0 30	-34.3	26 30	-42.6	52 30	-42.3	78 30	-33.4	104 30	-17.7	130 30	+1.5	156 30	+20.4
1 00	-34.5	27 00	-42.7	53 00	-42.2	79 00	-33.1	105 00	-17.4	131 00	+1.9	157 00	+20.7
1 30	-34.8	27 30	-42.7	53 30	-42.1	79 30	-32.9	105 30	-17.0	131 30	+2.2	157 30	+21.1
2 00	-35.0	28 00	-42.8	54 00	-42.0	80 00	-32.6	106 00	-16.7	132 00	+2.6	158 00	+21.4
2 30	-35.2	28 30	-42.9	54 30	-41.9	80 30	-32.4	106 30	-16.3	132 30	+3.0	158 30	+21.7
3 00	-35.4	29 00	-42.9	55 00	-41.8	81 00	-32.1	107 00	-16.0	133 00	+3.4	159 00	+22.1
3 30	-35.6	29 30	-43.0	55 30	-41.6	81 30	-31.9	107 30	-15.6	133 30	+3.8	159 30	+22.4
4 00	-35.9	30 00	-43.1	56 00	-41.5	82 00	-31.6	108 00	-15.3	134 00	+4.1	160 00	+22.7
4 30	-36.1	30 30	-43.1	56 30	-41.4	82 30	-31.3	108 30	-14.9	134 30	+4.5	160 30	+23.0
5 00	-36.3	31 00	-43.2	57 00	-41.3	83 00	-31.1	109 00	-14.6	135 00	+4.9	161 00	+23.4
5 30	-36.5	31 30	-43.2	57 30	-41.2	83 30	-30.8	109 30	-14.2	135 30	+5.3	161 30	+23.7
6 00	-36.7	32 00	-43.3	58 00	-41.1	84 00	-30.5	110 00	-13.9	136 00	+5.6	162 00	+24.0
6 30	-36.9	32 30	-43.3	58 30	-40.9	84 30	-30.3	110 30	-13.5	136 30	+6.0	162 30	+24.3
7 00	-37.1	33 00	-43.3	59 00	-40.8	85 00	-30.0	111 00	-13.1	137 00	+6.4	163 00	+24.6
7 30	-37.3	33 30	-43.4	59 30	-40.7	85 30	-29.7	111 30	-12.8	137 30	+6.8	163 30	+24.9
8 00	-37.5	34 00	-43.4	60 00	-40.5	86 00	-29.4	112 00	-12.4	138 00	+7.1	164 00	+25.3
8 30	-37.7	34 30	-43.4	60 30	-40.4	86 30	-29.2	112 30	-12.0	138 30	+7.5	164 30	+25.6
9 00	-37.9	35 00	-43.5	61 00	-40.2	87 00	-28.9	113 00	-11.7	139 00	+7.9	165 00	+25.9
9 30	-38.1	35 30	-43.5	61 30	-40.1	87 30	-28.6	113 30	-11.3	139 30	+8.3	165 30	+26.2
10 00	-38.2	36 00	-43.5	62 00	-39.9	88 00	-28.3	114 00	-10.9	140 00	+8.6	166 00	+26.5
10 30	-38.4	36 30	-43.5	62 30	-39.8	88 30	-28.0	114 30	-10.6	140 30	+9.0	166 30	+26.8
11 00	-38.6	37 00	-43.5	63 00	-39.6	89 00	-27.7	115 00	-10.2	141 00	+9.4	167 00	+27.1
11 30	-38.8	37 30	-43.5	63 30	-39.5	89 30	-27.4	115 30	-9.8	141 30	+9.8	167 30	+27.4
12 00	-38.9	38 00	-43.5	64 00	-39.3	90 00	-27.1	116 00	-9.5	142 00	+10.1	168 00	+27.7
12 30	-39.1	38 30	-43.5	64 30	-39.2	90 30	-26.8	116 30	-9.1	142 30	+10.5	168 30	+28.0
13 00	-39.3	39 00	-43.5	65 00	-39.0	91 00	-26.5	117 00	-8.7	143 00	+10.9	169 00	+28.2
13 30	-39.4	39 30	-43.5	65 30	-38.8	91 30	-26.2	117 30	-8.3	143 30	+11.2	169 30	+28.5
14 00	-39.6	40 00	-43.5	66 00	-38.6	92 00	-25.9	118 00	-8.0	144 00	+11.6	170 00	+28.8
14 30	-39.8	40 30	-43.5	66 30	-38.5	92 30	-25.6	118 30	-7.6	144 30	+12.0	170 30	+29.1
15 00	-39.9	41 00	-43.5	67 00	-38.3	93 00	-25.3	119 00	-7.2	145 00	+12.3	171 00	+29.4
15 30	-40.1	41 30	-43.5	67 30	-38.1	93 30	-25.0	119 30	-6.8	145 30	+12.7	171 30	+29.7
16 00	-40.2	42 00	-43.5	68 00	-37.9	94 00	-24.7	120 00	-6.5	146 00	+13.1	172 00	+29.9
16 30	-40.4	42 30	-43.4	68 30	-37.7	94 30	-24.4	120 30	-6.1	146 30	+13.4	172 30	+30.2
17 00	-40.5	43 00	-43.4	69 00	-37.5	95 00	-24.1	121 00	-5.7	147 00	+13.8	173 00	+30.5
17 30	-40.6	43 30	-43.4	69 30	-37.3	95 30	-23.7	121 30	-5.3	147 30	+14.1	173 30	+30.8
18 00	-40.8	44 00	-43.3	70 00	-37.1	96 00	-23.4	122 00	-5.0	148 00	+14.5	174 00	+31.0
18 30	-40.9	44 30	-43.3	70 30	-36.9	96 30	-23.1	122 30	-4.6	148 30	+14.9	174 30	+31.3
19 00	-41.0	45 00	-43.3	71 00	-36.7	97 00	-22.8	123 00	-4.2	149 00	+15.2	175 00	+31.6
19 30	-41.2	45 30	-43.2	71 30	-36.5	97 30	-22.5	123 30	-3.8	149 30	+15.6	175 30	+31.8
20 00	-41.3	46 00	-43.2	72 00	-36.3	98 00	-22.1	124 00	-3.5	150 00	+15.9	176 00	+32.1
20 30	-41.4	46 30	-43.1	72 30	-36.1	98 30	-21.8	124 30	-3.1	150 30	+16.3	176 30	+32.3
21 00	-41.5	47 00	-43.1	73 00	-35.9	99 00	-21.5	125 00	-2.7	151 00	+16.6	177 00	+32.6
21 30	-41.6	47 30	-43.0	73 30	-35.7	99 30	-21.1	125 30	-2.3	151 30	+17.0	177 30	+32.8
22 00	-41.7	48 00	-42.9	74 00	-35.5	100 00	-20.8	126 00	-1.9	152 00	+17.3	178 00	+33.1
22 30	-41.8	48 30	-42.9	74 30	-35.2	100 30	-20.5	126 30	-1.6	152 30	+17.7	178 30	+33.3
23 00	-41.9	49 00	-42.8	75 00	-35.0	101 00	-20.1	127 00	-1.2	153 00	+18.0	179 00	+33.6
23 30	-42.0	49 30	-42.7	75 30	-34.8	101 30	-19.8	127 30	-0.8	153 30	+18.4	179 30	+33.8
24 00	-42.1	50 00	-42.7	76 00	-34.6	102 00	-19.5	128 00	-0.4	154 00	+18.7	180 00	+34.1
24 30	-42.2	50 30	-42.6	76 30	-34.3	102 30	-19.1	128 30	0.0	154 30	+19.1	180 30	+34.3
25 00	-42.3	51 00	-42.5	77 00	-34.1	103 00	-18.8	129 00	+0.3	155 00	+19.4	181 00	+34.5
25 30	-42.4	51 30	-42.4	77 30	-33.9	103 30	-18.4	129 30	+0.7	155 30	+19.7	181 30	+34.8
26 00	-42.5	52 00	-42.3	78 00	-33.6	104 00	-18.1	130 00	+1.1	156 00	+20.1	182 00	+35.0

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2002

383

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	+35.0	208 00	+42.8	234 00	+42.0	260 00	+32.6	286 00	+16.7	312 00	-2.6	338 00	-21.4
182 30	+35.2	208 30	+42.9	234 30	+41.9	260 30	+32.4	286 30	+16.3	312 30	-3.0	338 30	-21.7
183 00	+35.4	209 00	+42.9	235 00	+41.8	261 00	+32.1	287 00	+16.0	313 00	-3.4	339 00	-22.1
183 30	+35.6	209 30	+43.0	235 30	+41.6	261 30	+31.9	287 30	+15.6	313 30	-3.8	339 30	-22.4
184 00	+35.9	210 00	+43.1	236 00	+41.5	262 00	+31.6	288 00	+15.3	314 00	-4.1	340 00	-22.7
184 30	+36.1	210 30	+43.1	236 30	+41.4	262 30	+31.3	288 30	+14.9	314 30	-4.5	340 30	-23.0
185 00	+36.3	211 00	+43.2	237 00	+41.3	263 00	+31.1	289 00	+14.6	315 00	-4.9	341 00	-23.4
185 30	+36.5	211 30	+43.2	237 30	+41.2	263 30	+30.8	289 30	+14.2	315 30	-5.3	341 30	-23.7
186 00	+36.7	212 00	+43.3	238 00	+41.1	264 00	+30.5	290 00	+13.9	316 00	-5.6	342 00	-24.0
186 30	+36.9	212 30	+43.3	238 30	+40.9	264 30	+30.3	290 30	+13.5	316 30	-6.0	342 30	-24.3
187 00	+37.1	213 00	+43.3	239 00	+40.8	265 00	+30.0	291 00	+13.1	317 00	-6.4	343 00	-24.6
187 30	+37.3	213 30	+43.4	239 30	+40.7	265 30	+29.7	291 30	+12.8	317 30	-6.8	343 30	-24.9
188 00	+37.5	214 00	+43.4	240 00	+40.5	266 00	+29.4	292 00	+12.4	318 00	-7.1	344 00	-25.3
188 30	+37.7	214 30	+43.4	240 30	+40.4	266 30	+29.2	292 30	+12.0	318 30	-7.5	344 30	-25.6
189 00	+37.9	215 00	+43.5	241 00	+40.2	267 00	+28.9	293 00	+11.7	319 00	-7.9	345 00	-25.9
189 30	+38.1	215 30	+43.5	241 30	+40.1	267 30	+28.6	293 30	+11.3	319 30	-8.3	345 30	-26.2
190 00	+38.2	216 00	+43.5	242 00	+39.9	268 00	+28.3	294 00	+10.9	320 00	-8.6	346 00	-26.5
190 30	+38.4	216 30	+43.5	242 30	+39.8	268 30	+28.0	294 30	+10.6	320 30	-9.0	346 30	-26.8
191 00	+38.6	217 00	+43.5	243 00	+39.6	269 00	+27.7	295 00	+10.2	321 00	-9.4	347 00	-27.1
191 30	+38.8	217 30	+43.5	243 30	+39.5	269 30	+27.4	295 30	+9.8	321 30	-9.8	347 30	-27.4
192 00	+38.9	218 00	+43.5	244 00	+39.3	270 00	+27.1	296 00	+9.5	322 00	-10.1	348 00	-27.7
192 30	+39.1	218 30	+43.5	244 30	+39.2	270 30	+26.8	296 30	+9.1	322 30	-10.5	348 30	-28.0
193 00	+39.3	219 00	+43.5	245 00	+39.0	271 00	+26.5	297 00	+8.7	323 00	-10.9	349 00	-28.2
193 30	+39.4	219 30	+43.5	245 30	+38.8	271 30	+26.2	297 30	+8.3	323 30	-11.2	349 30	-28.5
194 00	+39.6	220 00	+43.5	246 00	+38.6	272 00	+25.9	298 00	+8.0	324 00	-11.6	350 00	-28.8
194 30	+39.8	220 30	+43.5	246 30	+38.5	272 30	+25.6	298 30	+7.6	324 30	-12.0	350 30	-29.1
195 00	+39.9	221 00	+43.5	247 00	+38.3	273 00	+25.3	299 00	+7.2	325 00	-12.3	351 00	-29.4
195 30	+40.1	221 30	+43.5	247 30	+38.1	273 30	+25.0	299 30	+6.8	325 30	-12.7	351 30	-29.7
196 00	+40.2	222 00	+43.5	248 00	+37.9	274 00	+24.7	300 00	+6.5	326 00	-13.1	352 00	-29.9
196 30	+40.4	222 30	+43.4	248 30	+37.7	274 30	+24.4	300 30	+6.1	326 30	-13.4	352 30	-30.2
197 00	+40.5	223 00	+43.4	249 00	+37.5	275 00	+24.1	301 00	+5.7	327 00	-13.8	353 00	-30.5
197 30	+40.6	223 30	+43.4	249 30	+37.3	275 30	+23.7	301 30	+5.3	327 30	-14.1	353 30	-30.8
198 00	+40.8	224 00	+43.3	250 00	+37.1	276 00	+23.4	302 00	+5.0	328 00	-14.5	354 00	-31.0
198 30	+40.9	224 30	+43.3	250 30	+36.9	276 30	+23.1	302 30	+4.6	328 30	-14.9	354 30	-31.3
199 00	+41.0	225 00	+43.3	251 00	+36.7	277 00	+22.8	303 00	+4.2	329 00	-15.2	355 00	-31.6
199 30	+41.2	225 30	+43.2	251 30	+36.5	277 30	+22.5	303 30	+3.8	329 30	-15.6	355 30	-31.8
200 00	+41.3	226 00	+43.2	252 00	+36.3	278 00	+22.1	304 00	+3.5	330 00	-15.9	356 00	-32.1
200 30	+41.4	226 30	+43.1	252 30	+36.1	278 30	+21.8	304 30	+3.1	330 30	-16.3	356 30	-32.3
201 00	+41.5	227 00	+43.1	253 00	+35.9	279 00	+21.5	305 00	+2.7	331 00	-16.6	357 00	-32.6
201 30	+41.6	227 30	+43.0	253 30	+35.7	279 30	+21.1	305 30	+2.3	331 30	-17.0	357 30	-32.8
202 00	+41.7	228 00	+42.9	254 00	+35.5	280 00	+20.8	306 00	+1.9	332 00	-17.3	358 00	-33.1
202 30	+41.8	228 30	+42.9	254 30	+35.2	280 30	+20.5	306 30	+1.6	332 30	-17.7	358 30	-33.3
203 00	+41.9	229 00	+42.8	255 00	+35.0	281 00	+20.1	307 00	+1.2	333 00	-18.0	359 00	-33.6
203 30	+42.0	229 30	+42.7	255 30	+34.8	281 30	+19.8	307 30	+0.8	333 30	-18.4	359 30	-33.8
204 00	+42.1	230 00	+42.7	256 00	+34.6	282 00	+19.5	308 00	+0.4	334 00	-18.7	360 00	-34.1
204 30	+42.2	230 30	+42.6	256 30	+34.3	282 30	+19.1	308 30	0.0	334 30	-19.1		
205 00	+42.3	231 00	+42.5	257 00	+34.1	283 00	+18.8	309 00	-0.3	335 00	-19.4		
205 30	+42.4	231 30	+42.4	257 30	+33.9	283 30	+18.4	309 30	-0.7	335 30	-19.7		
206 00	+42.5	232 00	+42.3	258 00	+33.6	284 00	+18.1	310 00	-1.1	336 00	-20.1		
206 30	+42.6	232 30	+42.3	258 30	+33.4	284 30	+17.7	310 30	-1.5	336 30	-20.4		
207 00	+42.7	233 00	+42.2	259 00	+33.1	285 00	+17.4	311 00	-1.9	337 00	-20.7		
207 30	+42.7	233 30	+42.1	259 30	+32.9	285 30	+17.0	311 30	-2.2	337 30	-21.1		
208 00	+42.8	234 00	+42.0	260 00	+32.6	286 00	+16.7	312 00	-2.6	338 00	-21.4		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2002

TABLA II

(SIEMPRE POSITIVA)

hL $\cap$	Altura											
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
°	/	/	/	/	/	/	/	/	/	/	/	/
0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	0.1	0.1
80	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3
100	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5
120	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
140	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
160	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
180	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	0.1	0.1
260	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3
280	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5
300	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
320	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
340	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
360	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2

TABLA III

hL $\cap$	Ene 1	Feb 1	Mar 1	Abr 1	May 1	Jun 1	Jul 1	Ago 1	Sep 1	Oct 1	Nov 1	Dic 1	Dic 32
°	/	/	/	/	/	/	/	/	/	/	/	/	/
0	+0.1	+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	+0.1	+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	+0.1	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4
60	+0.1	+0.2	+0.2	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.3
80	0.0	+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	-0.1	-0.3	-0.3	-0.3	-0.2	0.0
120	-0.1	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	0.0	-0.2	-0.3	-0.3	-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	-0.4	-0.4	-0.4
180	-0.1	-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	-0.1	-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	-0.1	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4
240	-0.1	-0.2	-0.2	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.3
260	0.0	-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	+0.1	+0.3	+0.3	+0.3	+0.2	0.0
300	+0.1	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.3	+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	+0.4	+0.4	+0.4
360	+0.1	+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	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	10
20	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	20
30	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40
50	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	50
60	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.5	-0.6	60
70	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	-0.9	70
80	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.8	-1.0	-1.2	80
90	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	-1.4	90
100	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	100
110	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	110
120	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.4	-1.7	120
130	-0.7	-0.8	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.4	-1.7	130
140	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	140
150	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.0	-1.2	-1.3	-1.6	150
160	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	160
170	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	-0.8	190
200	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.5	200
210	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220
230	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	230
240	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.5	+0.6	240
250	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.7	+0.9	250
260	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.1	260
270	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	270
280	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	280
290	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	290
300	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	300
310	+0.7	+0.8	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.5	+1.7	310
320	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	320
330	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	330
340	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	340
350	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	360

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2002**

387

TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2002)	
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 22	+0'2		
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	Feb 27	+0'1		
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5	Mar 22	0'0		
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	Abr 13	-0'1		
2.3	-2.8	14.8	-6.9	6 53	+8.7	9 47	+10.7	15 45	+12.7	35 16	+14.8	May 7	-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 12	-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 10	+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 15	+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	TABLA C = PLANETAS Y ESTRELLAS											
6.0	-4.4	22.6	-8.5	Refracción				Paralaje (2002)							
6.2	-4.5	23.1	-8.6	Altura apte. ° /	Corrección /	Altura apte. ° /	Corrección /	Fechas	Venus para cualquier altura	Marte					
6.5	-4.6	23.7	-8.7							Altura aparente					
6.8	-4.7	24.2	-8.8						< 30°	> 30° < 60°	> 60°				
7.1	-4.8	24.8	-8.9	6 30	-7.8	14 00	-3.8	Ene 1	+0'1	+0'1	+0'1	0'0			
7.4	-4.9	25.4	-9.0	6 40	-7.6	15 00	-3.6	Mar 19	+0'1	+0'1	0'0	0'0			
7.7	-5.0	25.9	-9.1	6 50	-7.5	16 00	-3.3	Jul 28	+0'1	+0'1	0'0	0'0			
8.0	-5.1	26.5	-9.2	7 00	-7.3	17 00	-3.1	Sep 11	+0'2	+0'1	0'0	0'0			
8.4	-5.2	27.1	-9.3	7 15	-7.1	18 00	-3.0	Oct 2	+0'3	+0'1	0'0	0'0			
8.7	-5.3	27.7	-9.4	7 30	-6.9	19 00	-2.8	Oct 19	+0'4	+0'1	0'0	0'0			
9.0	-5.4	28.3	-9.5	7 45	-6.7	20 00	-2.6	Nov 14	+0'5	+0'1	0'0	0'0			
9.4	-5.5	28.9	-9.6	8 00	-6.5	21 00	-2.5	Dic 1	+0'4	+0'1	0'0	0'0			
9.7	-5.6	29.5	-9.7	8 15	-6.3	22 00	-2.4	Dic 23	+0'3	+0'1	0'0	0'0			
10.1	-5.7	30.1	-9.8	8 30	-6.2	24 00	-2.2	Dic 29	+0'2	+0'1	0'0	0'0			
10.4	-5.8	30.7	-9.9	8 45	-6.0	26 00	-2.0	Dic 31	+0'2	+0'1	+0'1	0'0			
10.8	-5.9	31.3	-10.0	9 00	-5.9	28 00	-1.8								
11.2	-6.0	32.0	-10.1	9 20	-5.7	32 00	-1.6								
11.6	-6.1	32.6	-10.2	9 40	-5.5	36 00	-1.3								
11.9	-6.2	33.3	-10.3	10 00	-5.3	40 00	-1.2								
12.3	-6.3	33.9	-10.4	10 30	-5.1	45 00	-1.0								
12.7		34.6		11 00	-4.8	50 00	-0.8								
				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.