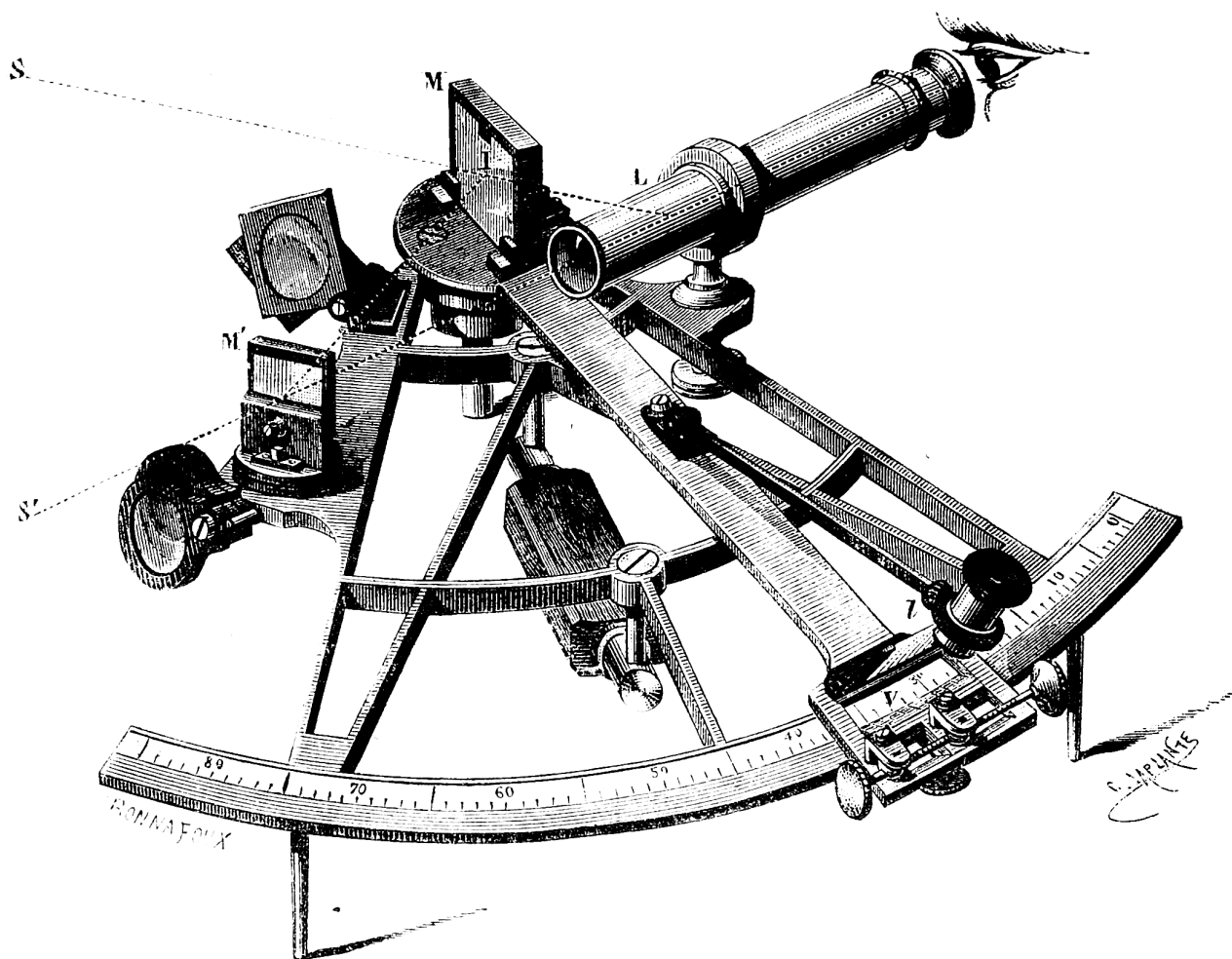




ALMANAQUE NÁUTICO PERSEIS 2003

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

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Introducción

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

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

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

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

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

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

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 03 ^m 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			Náutico	Civil		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	60 N	7 09	8 06	9 02	8 04	83	13 17	44	
1	194	12.1		03.0	219	52.9		30.3	58	7 02	7 54	8 46	7 42	79		39 48	
2	209	11.8		02.8	234	17.1		37.0	56	6 56	44	31	24	76	13 58	49	
3	224	11.5		02.6	248	41.4		43.5	54	50	36	19	7 09	74	14 13	50	
4	239	11.2		02.4	263	05.5		49.8	52	44	28	8 08	6 56	73	27	52	
5	254	10.9	-23	02.2	277	29.6	-23	56.0	50	6 39	7 20	7 59	6 44	72	14 38	54	
6	269	10.6	-23	02.0	291	53.7	-24	02.1	45	6 28	7 05	7 38	6 20	70	15 03	55	
7	284	10.3		01.8	306	17.8		07.9	40	17	6 51	22	6 01	68	23	56	
8	299	10.0		01.6	320	41.8		13.6	35	08	40	7 08	5 45	67	39	57	
9	314	09.7		01.4	335	05.7		19.2	30	6 00	30	6 56	32	65	15 53	58	
10	329	09.4		01.2	349	29.6		24.6	20	5 44	6 11	35	5 08	64	16 18	59	
11	344	09.1	-23	01.0	3	53.5	-24	29.8	10 N	5 28	5 54	6 17	4 48	62	16 39	59	
12	359	08.8	-23	00.8	18	17.4	-24	34.8	0	5 11	5 37	6 00	4 29	61	16 58	61	
13	14	08.5		00.6	32	41.2		39.7	10 S	4 52	5 19	5 42	4 11	59	17 18	61	
14	29	08.2		00.4	47	05.0		44.4	20	30	4 59	24	3 51	57	17 39	62	
15	44	07.9	-23	00.2	61	28.8		48.9	30	4 02	35	5 02	28	55	18 03	63	
16	59	07.6	-22	59.9	75	52.5		53.3	35	3 43	20	4 49	15	54	18	63	
17	74	07.3	-22	59.7	90	16.2	-24	57.5	40	3 21	4 02	4 35	3 00	52	18 34	64	
18	89	07.0	-22	59.5	104	39.9	-25	01.6	45	2 51	3 40	4 17	2 41	50	18 54	65	
19	104	06.7		59.3	119	03.6		05.4	50	2 07	3 11	3 55	19	47	19 19	66	
20	119	06.4		59.1	133	27.3		09.1	52	1 40	2 56	44	2 08	46	31	66	
21	134	06.1		58.9	147	50.9		12.6	54	0 59	39	32	1 56	44	19 45	66	
22	149	05.9		58.7	162	14.6		16.0	56	** ** *	2 17	18	42	42	20 01	67	
23	164	05.6		58.5	176	38.2		19.2	58	** ** *	1 49	3 02	26	38	20	68	
24	179	05.3	-22	58.3	191	01.8	-25	22.2	60 S	** ** *	1 05	2 42	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 ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	100	14.0	228	01.8	-15	14.7	320	39.0	+16	30.6
1	115	16.5	243	01.9		15.3	335	41.7		30.6
2	130	18.9	258	02.0		15.8	350	44.3		30.7
3	145	21.4	273	02.1		16.4	5	47.0		30.8
4	160	23.9	288	02.2		16.9	20	49.7		30.9
5	175	26.3	303	02.3	-15	17.4	35	52.4	+16	30.9
6	190	28.8	318	02.4	-15	18.0	50	55.0	+16	31.0
7	205	31.3	333	02.5		18.5	65	57.7		31.1
8	220	33.7	348	02.6		19.1	81	00.4		31.1
9	235	36.2	3	02.6		19.6	96	03.1		31.2
10	250	38.6	18	02.7		20.2	111	05.8		31.3
11	265	41.1	33	02.8	-15	20.7	126	08.4	+16	31.4
12	280	43.6	48	02.9	-15	21.2	141	11.1	+16	31.4
13	295	46.0	63	03.0		21.8	156	13.8		31.5
14	310	48.5	78	03.1		22.3	171	16.5		31.6
15	325	51.0	93	03.2		22.9	186	19.1		31.7
16	340	53.4	108	03.3		23.4	201	21.8		31.7
17	355	55.9	123	03.4	-15	24.0	216	24.5	+16	31.8
18	10	58.4	138	03.4	-15	24.5	231	27.2	+16	31.9
19	26	00.8	153	03.5		25.1	246	29.9		32.0
20	41	03.3	168	03.6		25.6	261	32.5		32.0
21	56	05.8	183	03.7		26.1	276	35.2		32.1
22	71	08.2	198	03.8		26.7	291	37.9		32.2
23	86	10.7	213	03.9		27.2	306	40.6		32.3
24	101	13.1	228	03.9	-15	27.8	321	43.3	+16	32.3
Dif	—		+1		-5		+27		+1	
									+27	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 28 ^d 7 PHE { 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'5										
	PMG: 12 ^h 03 ^m 9			SD: 16°0 PMG: 11 ^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 m	h m m	h m m
0	179	05.3	-22 58.3	191	01.8	-25 22.2	28	60 N	15 06	16 03	16 59	9 27 54	14 01 70	
1	194	05.0	58.1	205	25.4	25.0	28	58	23	14	17 06	9 01 56	27 68	
2	209	04.7	57.8	219	49.0	27.7	27	56	37	24	12	8 40 57	14 47 68	
3	224	04.4	57.6	234	12.6	30.2	25	54	15 49	32	18	23 58	15 04 66	
4	239	04.1	57.4	248	36.2	32.5	23	52	16 00	40	24	8 09 58	19 66	
5	254	03.8	-22 57.2	262	59.8	-25 34.6	21	50	16 09	16 48	17 29	7 56 58	15 32 65	
6	269	03.5	-22 57.0	277	23.4	-25 36.6	20	45	16 30	17 03	17 40	7 30 59	15 58 64	
7	284	03.2	56.8	291	47.0	38.4	18	40	16 46	16	50	7 09 59	16 19 63	
8	299	02.9	56.5	306	10.7	40.0	16	35	17 00	28	17 59	6 52 59	36 63	
9	314	02.6	56.3	320	34.3	41.5	15	30	12	38	18 08	37 60	16 51 62	
10	329	02.3	56.1	334	58.0	42.8	13	20	32	17 56	24	6 12 60	17 17 60	
11	344	02.0	-22 55.9	349	21.6	-25 43.9	11	10 N	17 51	18 13	18 40	5 50 60	17 38 60	
12	359	01.7	-22 55.7	3	45.3	-25 44.8	9	0	18 08	18 30	18 56	5 30 60	17 59 59	
13	14	01.4	55.4	18	09.0	45.6	8	10 S	25	18 48	19 15	5 10 60	18 19 58	
14	29	01.1	55.2	32	32.8	46.2	6	20	18 43	19 08	19 37	4 48 60	18 41 57	
15	44	00.9	55.0	46	56.5	46.6	4	30	19 05	32	20 05	23 60	19 06 56	
16	59	00.6	54.8	61	20.3	46.9	3	35	17	19 47	23	4 09 60	21 55	
17	74	00.3	-22 54.5	75	44.1	-25 46.9	0	40	19 32	20 05	20 46	3 52 60	19 38 54	
18	89	00.0	-22 54.3	90	08.0	-25 46.8	1	45	19 50	20 27	21 15	3 31 60	19 59 53	
19	103	59.7	54.1	104	31.8	46.6	2	50	20 11	20 55	21 59	3 06 60	20 25 51	
20	118	59.4	53.8	118	55.7	46.2	4	52	22	21 10	22 24	2 54 59	37 50	
21	133	59.1	53.6	133	19.7	45.6	6	54	34	27	23 03	40 59	20 51 49	
22	148	58.8	53.4	147	43.7	44.8	8	56	20 48	21 48	** **	24 58	21 08 47	
23	163	58.5	53.2	162	07.7	43.9	9	58	21 04	22 15	** **	2 04 58	28 45	
24	178	58.2	-22 52.9	176	31.8	-25 42.8	11	60 S	21 23	22 57	** **	1 40 57	21 53 42	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 12 ^m 3		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 26 ^m		Mag: -2.5 PMG: 2 ^h 33 ^m		Mag: -0.4 PMG: 22 ^h 47 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	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				
1	116	15.6	243 04.0	28.3	248 16.4	09.2	336 45.9	32.4	32 20.4	02.3				
2	131	18.1	258 04.1	28.9	263 17.3	09.7	351 48.6	32.5	47 23.1	02.3				
3	146	20.5	273 04.2	29.4	278 18.1	10.1	6 51.3	32.6	62 25.7	02.3				
4	161	23.0	288 04.2	29.9	293 18.9	10.5	21 54.0	32.6	77 28.4	02.3				
5	176	25.5	303 04.3	-15 30.5	308 19.8	-17 11.0	36 56.7	+16 32.7	92 31.1	+22 02.3				
6	191	27.9	318 04.4	-15 31.0	323 20.6	-17 11.4	51 59.4	+16 32.8	107 33.8	+22 02.3				
7	206	30.4	333 04.4	31.6	338 21.5	11.9	67 02.0	32.9	122 36.4	02.3				
8	221	32.9	348 04.5	32.1	353 22.3	12.3	82 04.7	32.9	137 39.1	02.3				
9	236	35.3	3 04.6	32.7	8 23.2	12.8	97 07.4	33.0	152 41.8	02.3				
10	251	37.8	18 04.6	33.2	23 24.0	13.2	112 10.1	33.1	167 44.4	02.3				
11	266	40.3	33 04.7	-15 33.7	38 24.8	-17 13.7	127 12.8	+16 33.2	182 47.1	+22 02.3				
12	281	42.7	48 04.8	-15 34.3	53 25.7	-17 14.1	142 15.5	+16 33.2	197 49.8	+22 02.3				
13	296	45.2	63 04.8	34.8	68 26.5	14.6	157 18.1	33.3	212 52.5	02.3				
14	311	47.6	78 04.9	35.4	83 27.4	15.0	172 20.8	33.4	227 55.1	02.3				
15	326	50.1	93 05.0	35.9	98 28.2	15.5	187 23.5	33.5	242 57.8	02.3				
16	341	52.6	108 05.0	36.5	113 29.1	15.9	202 26.2	33.5	258 00.5	02.3				
17	356	55.0	123 05.1	-15 37.0	128 29.9	-17 16.4	217 28.9	+16 33.6	273 03.1	+22 02.3				
18	11	57.5	138 05.1	-15 37.6	143 30.7	-17 16.8	232 31.6	+16 33.7	288 05.8	+22 02.3				
19	27	00.0	153 05.2	38.1	158 31.6	17.2	247 34.3	33.8	303 08.5	02.3				
20	42	02.4	168 05.3	38.6	173 32.4	17.7	262 36.9	33.9	318 11.2	02.3				
21	57	04.9	183 05.3	39.2	188 33.3	18.1	277 39.6	33.9	333 13.8	02.3				
22	72	07.4	198 05.4	39.7	203 34.1	18.6	292 42.3	34.0	348 16.5	02.3				
23	87	09.8	213 05.4	40.3	218 34.9	19.0	307 45.0	34.1	3 19.2	02.3				
24	102	12.3	228 05.5	-15 40.8	233 35.8	-17 19.5	322 47.7	+16 34.2	18 21.8	+22 02.3				
Dif	—		+1	-5	+8	-4	+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 04 ^m 4				Edad: 0 ^d 2 PHE { SD: 15'9 PMG: 12 ^h 44 ^m R ^c : 57 ^m 4 ^h : 58'3 12 ^h : 58'0 20 ^h : 57'8												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	58.2	-22	52.9	176	31.8	-25	42.8	60 N	7 09	8 05	9 01	10 21	30	15 11	88	
1	193	57.9		52.7	190	55.9	51	41.5	58	7 02	7 54	8 45	9 57	34	35	83	
2	208	57.6		52.5	205	20.1	52	40.1	56	6 55	44	31	37	38	15 55	79	
3	223	57.4		52.2	219	44.3	52	38.5	54	50	35	19	21	40	16 11	76	
4	238	57.1		52.0	234	08.6	53	36.7	52	44	27	8 08	9 07	42	25	74	
5	253	56.8	-22	51.8	248	32.9	53	-25 34.8	50	6 39	7 20	7 58	8 54	44	16 37	73	
6	268	56.5	-22	51.5	262	57.3	54	-25 32.7	45	6 28	7 05	7 38	8 29	47	17 02	69	
7	283	56.2		51.3	277	21.8	55	30.4	40	18	6 52	22	8 08	49	22	67	
8	298	55.9		51.0	291	46.3	55	28.0	35	09	40	7 08	7 51	51	39	65	
9	313	55.6		50.8	306	10.8	55	25.4	30	6 00	30	6 56	37	52	17 53	63	
10	328	55.3		50.6	320	35.5	57	22.7	20	5 44	6 12	36	7 12	54	18 17	61	
11	343	55.0	-22	50.3	335	00.1	56	-25 19.8	10 N	5 29	5 55	6 18	6 50	56	18 38	58	
12	358	54.7	-22	50.1	349	24.9	58	-25 16.8	0	5 12	5 38	6 01	6 30	58	18 58	56	
13	13	54.5		49.8	3	49.7	58	13.6	10 S	4 54	21	5 43	6 10	59	19 17	54	
14	28	54.2		49.6	18	14.6	59	10.2	20	31	5 01	25	5 48	61	19 38	51	
15	43	53.9		49.4	32	39.6	60	06.7	30	4 03	4 36	5 04	23	63	20 02	48	
16	58	53.6		49.1	47	04.7	61	-25 03.0	35	3 45	21	4 51	5 09	64	16	47	
17	73	53.3	-22	48.9	61	29.8	61	-24 59.2	40	3 22	4 04	4 36	4 52	65	20 32	45	
18	88	53.0	-22	48.6	75	55.0	62	-24 55.2	45	2 53	3 42	4 19	4 31	67	20 52	41	
19	103	52.7		48.4	90	20.3	63	51.1	50	2 10	3 13	3 57	4 06	69	21 16	38	
20	118	52.4		48.1	104	45.6	63	46.8	52	1 44	2 59	46	3 53	71	27	36	
21	133	52.1		47.9	119	11.1	65	42.4	54	1 05	41	35	39	72	40	34	
22	148	51.9		47.6	133	36.6	65	37.8	56	** **	2 20	21	22	74	21 55	31	
23	163	51.6		47.4	148	02.2	66	33.1	58	** **	1 53	3 05	3 02	77	22 13	28	
24	178	51.3	-22	47.1	162	27.9	67	-24 28.3	60 S	** **	1 11	2 46	2 37	81	22 35	22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 08 ^m 4		Mag: -4.6 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 25 ^m		Mag: -2.5 PMG: 2 ^h 28 ^m		Mag: -0.4 PMG: 22 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	102	12.3	228	05.5	-15	40.8	233	35.8	-17	19.5
1	117	14.8	243	05.5		41.4	248	36.6		19.9
2	132	17.2	258	05.6		41.9	263	37.5		20.4
3	147	19.7	273	05.6		42.4	278	38.3		20.8
4	162	22.1	288	05.7		43.0	293	39.2		21.2
5	177	24.6	303	05.7	-15	43.5	308	40.0	-17	21.7
6	192	27.1	318	05.8	-15	44.1	323	40.8	-17	22.1
7	207	29.5	333	05.8		44.6	338	41.7		22.6
8	222	32.0	348	05.8		45.2	353	42.5		23.0
9	237	34.5	3	05.9		45.7	8	43.4		23.5
10	252	36.9	18	05.9		46.2	23	44.2		23.9
11	267	39.4	33	06.0	-15	46.8	38	45.0	-17	24.3
12	282	41.9	48	06.0	-15	47.3	53	45.9	-17	24.8
13	297	44.3	63	06.0		47.9	68	46.7		25.2
14	312	46.8	78	06.1		48.4	83	47.6		25.7
15	327	49.3	93	06.1		49.0	98	48.4		26.1
16	342	51.7	108	06.1		49.5	113	49.2		26.5
17	357	54.2	123	06.2	-15	50.0	128	50.1	-17	27.0
18	12	56.6	138	06.2	-15	50.6	143	50.9	-17	27.4
19	27	59.1	153	06.2		51.1	158	51.7		27.9
20	43	01.6	168	06.3		51.7	173	52.6		28.3
21	58	04.0	183	06.3		52.2	188	53.4		28.7
22	73	06.5	198	06.3		52.8	203	54.3		29.2
23	88	09.0	213	06.3		53.3	218	55.1		29.6
24	103	11.4	228	06.4	-15	53.8	233	55.9	-17	30.1
Dif	—		0		-5		+8		-4	
							+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 04 ^m 8			Edad: 1 ^d 2	PHE { 4 ^h : 57/6 12 ^h : 57/3 20 ^h : 57/1 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	178	51.3	-22 47.1	162	27.9	-24 28.3	50	60 N	15 09	16 05	17 01	10 51 16	16 39 92			
1	193	51.0		176	53.7	23.3	50	58	26	16	08	31 21	16 58 87			
2	208	50.7		191	19.6	18.1	52	56	40	26	15	15 25	17 14 83			
3	223	50.4		205	45.5	12.8	53	54	15 52	35	20	10 01 28	27 80			
4	238	50.1		220	11.6	07.4	54	52	16 02	43	26	9 49 30	39 78			
5	253	49.8	-22 45.9	234	37.7	-24 01.8	56	50	16 12	16 50	17 31	9 38 33	17 50 75			
6	268	49.6	-22 45.6	249	03.9	-23 56.2	56	45	16 32	17 05	17 42	9 16 36	18 11 71			
7	283	49.3		263	30.2	50.3	59	40	16 48	18	17 52	8 57 40	29 67			
8	298	49.0		277	56.7	44.4	59	35	17 01	29	18 01	42 42	44 64			
9	313	48.7		292	23.2	38.3	61	30	13	39	09	29 44	18 56 62			
10	328	48.4		306	49.8	32.0	63	20	34	17 58	25	8 06 48	19 18 58			
11	343	48.1	-22 44.3	321	16.5	-23 25.7	63	10 N	17 52	18 14	18 41	7 46 51	19 36 55			
12	358	47.8	-22 44.1	335	43.3	-23 19.2	65	0	18 09	18 31	18 57	7 28 53	19 54 51			
13	13	47.6		350	10.2	12.6	66	10 S	26	18 48	19 15	7 09 56	20 11 49			
14	28	47.3		4	37.2	-23 05.8	68	20	18 44	19 08	19 37	6 49 59	29 46			
15	43	47.0		19	04.3	-22 59.0	68	30	19 05	32	20 05	26 63	20 50 42			
16	58	46.7		33	31.5	52.0	70	35	18	19 47	23	6 13 64	21 03 39			
17	73	46.4	-22 42.7	47	58.8	-22 44.9	71	40	19 32	20 05	20 46	5 57 67	21 17 36			
18	88	46.1	-22 42.5	62	26.2	-22 37.6	73	45	19 50	20 26	21 15	5 38 70	21 33 33			
19	103	45.8		76	53.6	30.3	73	50	20 11	20 55	21 57	15 74	21 54 28			
20	118	45.6		91	21.2	22.8	75	52	21	21 09	22 22	5 04 76	22 03 27			
21	133	45.3		105	49.0	15.2	76	54	33	26	22 59	4 51 79	14 24			
22	148	45.0		120	16.8	-22 07.5	77	56	20 47	21 46	** **	36 82	26 21			
23	163	44.7		134	44.7	-21 59.7	78	58	21 02	22 13	** **	4 19 85	41 17			
24	178	44.4	-22 40.9	149	12.7	-21 51.8	79	60 S	21 21	22 53	** **	3 58 90	22 57 13			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 17 ^h 04 ^m 4		Mag: -4.6 PMG: 8 ^h 48 ^m			Mag: +1.5 PMG: 8 ^h 24 ^m			Mag: -2.5 PMG: 2 ^h 24 ^m			Mag: -0.4 PMG: 22 ^h 38 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	103	11.4	228 06.4	-15 53.8		233 55.9	-17 30.1		323 52.3	+16 36.0		19 25.9	+22 02.2			
1	118	13.9	243 06.4	54.4		248 56.8	30.5		338 55.0	36.1		34 28.6	02.2			
2	133	16.4	258 06.4	54.9		263 57.6	30.9		353 57.7	36.2		49 31.2	02.2			
3	148	18.8	273 06.4	55.5		278 58.4	31.4		9 00.4	36.3		64 33.9	02.2			
4	163	21.3	288 06.5	56.0		293 59.3	31.8		24 03.1	36.3		79 36.6	02.2			
5	178	23.7	303 06.5	-15 56.6		309 00.1	-17 32.3		39 05.8	+16 36.4		94 39.2	+22 02.2			
6	193	26.2	318 06.5	-15 57.1		324 01.0	-17 32.7		54 08.4	+16 36.5		109 41.9	+22 02.2			
7	208	28.7	333 06.5	57.6		339 01.8	33.1		69 11.1	36.6		124 44.6	02.2			
8	223	31.1	348 06.5	58.2		354 02.6	33.6		84 13.8	36.7		139 47.2	02.2			
9	238	33.6	3 06.6	58.7		9 03.5	34.0		99 16.5	36.7		154 49.9	02.2			
10	253	36.1	18 06.6	59.3		24 04.3	34.4		114 19.2	36.8		169 52.6	02.2			
11	268	38.5	33 06.6	-15 59.8		39 05.1	-17 34.9		129 21.9	+16 36.9		184 55.2	+22 02.2			
12	283	41.0	48 06.6	-16 00.4		54 06.0	-17 35.3		144 24.6	+16 37.0		199 57.9	+22 02.2			
13	298	43.5	63 06.6	00.9		69 06.8	35.8		159 27.3	37.1		215 00.6	02.2			
14	313	45.9	78 06.6	01.4		84 07.7	36.2		174 30.0	37.1		230 03.2	02.2			
15	328	48.4	93 06.6	02.0		99 08.5	36.6		189 32.7	37.2		245 05.9	02.2			
16	343	50.9	108 06.6	02.5		114 09.3	37.1		204 35.4	37.3		260 08.6	02.2			
17	358	53.3	123 06.6	-16 03.1		129 10.2	-17 37.5		219 38.1	+16 37.4		275 11.2	+22 02.2			
18	13	55.8	138 06.7	-16 03.6		144 11.0	-17 37.9		234 40.8	+16 37.5		290 13.9	+22 02.2			
19	28	58.2	153 06.7	04.1		159 11.8	38.4		249 43.5	37.5		305 16.6	02.2			
20	44	00.7	168 06.7	04.7		174 12.7	38.8		264 46.2	37.6		320 19.2	02.2			
21	59	03.2	183 06.7	05.2		189 13.5	39.2		279 48.9	37.7		335 21.9	02.2			
22	74	05.6	198 06.7	05.8		204 14.3	39.7		294 51.6	37.8		350 24.6	02.2			
23	89	08.1	213 06.7	06.3		219 15.2	40.1		309 54.3	37.9		5 27.2	02.2			
24	104	10.6	228 06.7	-16 06.8		234 16.0	-17 40.5		324 57.0	+16 37.9		20 29.9	+22 02.2			
Dif	—		0 -5		+8 -4		-4		+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 05 ^m 3				Edad: 2 ^d 2 PHE { SD: 15'5 PMG: 14 ^h 33 ^m 4 ^h : 56'9 12 ^h : 56'6 20 ^h : 56'4 R ^o : 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	44.4	-22	40.9	149	12.7	-21	51.8	60 N	7	08	8	04	9	00	11	07	9
1	193	44.1		40.6	163	40.8	91	43.8	58	7	01	7	53	8	44	10	52	14
2	208	43.9		40.3	178	09.0	92	35.6	56	6	55	44	30		40	17	37	82
3	223	43.6		40.1	192	37.3	93	27.4	54		49	35	18		29	20	47	7
4	238	43.3		39.8	207	05.7	94	19.0	52		44	27	8	07	19	23	18	57
5	253	43.0	-22	39.5	221	34.3	96	-21	50	6	39	7	20	7	58	10	11	24
6	268	42.7	-22	39.2	236	02.9	96	-21	45	6	28	7	05	7	38	9	52	29
7	283	42.5		39.0	250	31.6	97	-20	40		18	6	52	22		37	33	
8	298	42.2		38.7	265	00.5	99	44.6	35		09	41	7	09		24	36	
9	313	41.9		38.4	279	29.4	99	35.7	30	6	01	30	6	57		9	13	38
10	328	41.6		38.1	293	58.5	101	26.8	20	5	45	6	12	36		8	54	42
11	343	41.3	-22	37.9	308	27.6	101	-20	10 N	5	29	5	56	6	18	8	37	46
12	358	41.0	-22	37.6	322	56.9	103	-20	0	5	13	5	39	6	02	8	21	50
13	13	40.8		37.3	337	26.2	103	-19	10 S	4	55	22	5	45		8	05	53
14	28	40.5		37.0	351	55.7	105	50.0	20		33	5	02	26		7	48	57
15	43	40.2		36.7	6	25.2	105	40.6	30	4	05	4	38	5	05	29	60	32
16	58	39.9		36.5	20	54.9	107	31.0	35	3	47	23	4	53		17	63	42
17	73	39.6	-22	36.2	35	24.7	108	-19	40	3	25	4	06	4	38	7	04	66
18	88	39.4	-22	35.9	49	54.5	108	-19	45	2	55	3	44	4	21	6	48	70
19	103	39.1		35.6	64	24.5	110	-19	50	2	13	16	3	59		29	74	22
20	118	38.8		35.3	78	54.6	111	-18	52	1	48	3	01	49		20	77	30
21	133	38.5		35.0	93	24.7	111	42.2	54	1	11	2	45	37		6	10	79
22	148	38.2		34.8	107	55.0	113	32.2	56	** **	2	24	24			5	58	82
23	163	38.0		34.5	122	25.4	114	22.1	58	** **	1	57	3	08		44	87	
24	178	37.7	-22	34.2	136	55.8	114	-18	60 S	** **	1	18	2	49		5	28	91
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 00 ^m 5		Mag: -4.6 PMG: 8 ^h 48 ^m				Mag: +1.5 PMG: 8 ^h 22 ^m				Mag: -2.5 PMG: 2 ^h 20 ^m				Mag: -0.4 PMG: 22 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	104	10.6	228	06.7	-16	06.8	234	16.0	-17	40.5	324	57.0	+16	37.9	20	29.9	+22	02.2
1	119	13.0	243	06.7		07.4	249	16.8		41.0	339	59.7		38.0	35	32.5		02.2
2	134	15.5	258	06.7		07.9	264	17.7		41.4	355	02.4		38.1	50	35.2		02.2
3	149	18.0	273	06.7		08.5	279	18.5		41.8	10	05.1		38.2	65	37.9		02.2
4	164	20.4	288	06.7		09.0	294	19.3		42.3	25	07.8		38.3	80	40.5		02.2
5	179	22.9	303	06.7	-16	09.6	309	20.2	-17	42.7	40	10.5	+16	38.3	95	43.2	+22	02.2
6	194	25.4	318	06.6	-16	10.1	324	21.0	-17	43.1	55	13.2	+16	38.4	110	45.9	+22	02.2
7	209	27.8	333	06.6		10.6	339	21.8		43.6	70	15.9		38.5	125	48.5		02.2
8	224	30.3	348	06.6		11.2	354	22.7		44.0	85	18.6		38.6	140	51.2		02.2
9	239	32.7	3	06.6		11.7	9	23.5		44.4	100	21.3		38.7	155	53.9		02.2
10	254	35.2	18	06.6		12.3	24	24.3		44.9	115	24.0		38.8	170	56.5		02.2
11	269	37.7	33	06.6	-16	12.8	39	25.2	-17	45.3	130	26.7	+16	38.8	185	59.2	+22	02.2
12	284	40.1	48	06.6	-16	13.3	54	26.0	-17	45.7	145	29.4	+16	38.9	201	01.9	+22	02.2
13	299	42.6	63	06.6		13.9	69	26.8		46.1	160	32.1		39.0	216	04.5		02.2
14	314	45.1	78	06.6		14.4	84	27.7		46.6	175	34.8		39.1	231	07.2		02.2
15	329	47.5	93	06.5		14.9	99	28.5		47.0	190	37.6		39.2	246	09.9		02.2
16	344	50.0	108	06.5		15.5	114	29.3		47.4	205	40.3		39.2	261	12.5		02.2
17	359	52.5	123	06.5	-16	16.0	129	30.2	-17	47.9	220	43.0	+16	39.3	276	15.2	+22	02.2
18	14	54.9	138	06.5	-16	16.6	144	31.0	-17	48.3	235	45.7	+16	39.4	291	17.8	+22	02.2
19	29	57.4	153	06.5		17.1	159	31.8		48.7	250	48.4		39.5	306	20.5		02.2
20	44	59.9	168	06.5		17.6	174	32.7		49.2	265	51.1		39.6	321	23.2		02.1
21	60	02.3	183	06.4		18.2	189	33.5		49.6	280	53.8		39.6	336	25.8		02.1
22	75	04.8	198	06.4		18.7	204	34.3		50.0	295	56.5		39.7	351	28.5		02.1
23	90	07.2	213	06.4		19.3	219	35.2		50.4	310	59.2		39.8	6	31.2		02.1
24	105	09.7	228	06.4	-16	19.8	234	36.0	-17	50.9	326	01.9	+16	39.9	21	33.8	+22	02.1
Dif	—		0		-5		+8		-4		+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 05 ^m 7			Edad: 3 ^d 2 PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7 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	
0	178	37.7	-22	34.2	136	55.8	-18	11.9	60 N	15 13	16 08	17 04	11 16	6	19 41	86		
1	193	37.4		33.9	151	26.4 ¹¹⁶	-18	01.6 ¹⁰³	58	29	19	11	11 06	9	51	81		
2	208	37.1		33.6	165	57.0 ¹¹⁶	-17	51.3 ¹⁰³	56	42	29	17	10 57	12	19 59	78		
3	223	36.9		33.3	180	27.8 ¹¹⁸		40.9 ¹⁰⁴	54	15 54	37	23	49	15	20 06	76		
4	238	36.6		33.0	194	58.7 ¹¹⁹		30.4 ¹⁰⁵	52	16 05	45	28	42	17	12	74		
5	253	36.3	-22	32.7	209	29.6 ¹¹⁹	-17	19.9 ¹⁰⁵	50	16 14	16 52	17 33	10 35	20	20 18	71		
6	268	36.0	-22	32.4	224	00.7 ¹²¹	-17	09.3 ¹⁰⁶	45	16 34	17 07	17 44	10 21	24	20 31	66		
7	283	35.7		32.1	238	31.8 ¹²¹	-16	58.6 ¹⁰⁷	40	16 49	20	17 54	10	27	41	63		
8	298	35.5		31.8	253	03.1 ¹²³		47.8 ¹⁰⁸	35	17 03	31	18 02	10 00	30	50	59		
9	313	35.2		31.6	267	34.4 ¹²³		37.0 ¹⁰⁸	30	15	41	11	9 51	33	20 58	56		
10	328	34.9		31.3	282	05.8 ¹²⁴		26.1 ¹⁰⁹	20	35	17 59	26	36	38	21 11	51		
11	343	34.6	-22	31.0	296	37.3 ¹²⁵	-16	15.2 ¹⁰⁹	10 N	17 53	18 15	18 42	9 23	42	21 22	48		
12	358	34.4	-22	30.7	311	08.9 ¹²⁶	-16	04.2 ¹¹⁰	0	18 09	18 32	18 58	9 11	45	21 33	44		
13	13	34.1		30.4	325	40.6 ¹²⁷	-15	53.1 ¹¹¹	10 S	26	18 49	19 16	8 58	49	43	40		
14	28	33.8		30.1	340	12.4 ¹²⁸		41.9 ¹¹²	20	18 44	19 09	19 38	45	53	21 54	37		
15	43	33.5		29.8	354	44.3 ¹²⁹		30.7 ¹¹²	30	19 05	33	20 05	29	58	22 07	32		
16	58	33.3		29.5	9	16.3 ¹³⁰		19.5 ¹¹²	35	18	19 47	23	20	61	15	28		
17	73	33.0	-22	29.2	23	48.3 ¹³⁰	-15	08.2 ¹¹³	40	19 32	20 04	20 45	8 10	64	22 23	26		
18	88	32.7	-22	28.9	38	20.5 ¹³²	-14	56.8 ¹¹⁴	45	19 49	20 26	21 14	7 58	68	22 32	23		
19	103	32.4		28.6	52	52.7 ¹³²		45.4 ¹¹⁴	50	20 10	20 54	21 56	43	73	44	18		
20	118	32.2		28.3	67	25.0 ¹³³		33.9 ¹¹⁵	52	21	21 08	22 20	37	74	49	16		
21	133	31.9		28.0	81	57.4 ¹³⁴		22.4 ¹¹⁵	54	32	24	22 54	29	77	22 55	14		
22	148	31.6		27.6	96	29.9 ¹³⁵	-14	10.8 ¹¹⁶	56	20 45	21 44	** **	20	80	23 02	11		
23	163	31.3		27.3	111	02.4 ¹³⁵	-13	59.2 ¹¹⁶	58	21 01	22 10	** **	7 11	83	09	8		
24	178	31.1	-22	27.0	125	35.1 ¹³⁷	-13	47.5 ¹¹⁷	60 S	21 19	22 48	** **	6 59	87	23 17	5		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 56 ^m 6		Mag: -4.6 PMG: 8 ^h 48 ^m				Mag: +1.5 PMG: 8 ^h 21 ^m				Mag: -2.5 PMG: 2 ^h 15 ^m				Mag: -0.4 PMG: 22 ^h 30 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	105	09.7	228	06.4	-16	19.8	234	36.0	-17	50.9	326	01.9	+16	39.9	21	33.8	+22	02.1
1	120	12.2	243	06.3		20.3	249	36.8		51.3	341	04.6		40.0	36	36.5		02.1
2	135	14.6	258	06.3		20.9	264	37.7		51.7	356	07.3		40.1	51	39.2		02.1
3	150	17.1	273	06.3		21.4	279	38.5		52.2	11	10.0		40.1	66	41.8		02.1
4	165	19.6	288	06.3		21.9	294	39.3		52.6	26	12.7		40.2	81	44.5		02.1
5	180	22.0	303	06.2	-16	22.5	309	40.2	-17	53.0	41	15.4	+16	40.3	96	47.1	+22	02.1
6	195	24.5	318	06.2	-16	23.0	324	41.0	-17	53.4	56	18.1	+16	40.4	111	49.8	+22	02.1
7	210	27.0	333	06.2		23.6	339	41.8		53.9	71	20.9		40.5	126	52.5		02.1
8	225	29.4	348	06.1		24.1	354	42.6		54.3	86	23.6		40.6	141	55.1		02.1
9	240	31.9	3	06.1		24.6	9	43.5		54.7	101	26.3		40.6	156	57.8		02.1
10	255	34.3	18	06.1		25.2	24	44.3		55.1	116	29.0		40.7	172	00.5		02.1
11	270	36.8	33	06.0	-16	25.7	39	45.1	-17	55.6	131	31.7	+16	40.8	187	03.1	+22	02.1
12	285	39.3	48	06.0	-16	26.2	54	46.0	-17	56.0	146	34.4	+16	40.9	202	05.8	+22	02.1
13	300	41.7	63	06.0		26.8	69	46.8		56.4	161	37.1		41.0	217	08.4		02.1
14	315	44.2	78	05.9		27.3	84	47.6		56.8	176	39.8		41.1	232	11.1		02.1
15	330	46.7	93	05.9		27.8	99	48.5		57.3	191	42.5		41.1	247	13.8		02.1
16	345	49.1	108	05.8		28.4	114	49.3		57.7	206	45.2		41.2	262	16.4		02.1
17	0	51.6	123	05.8	-16	28.9	129	50.1	-17	58.1	221	48.0	+16	41.3	277	19.1	+22	02.1
18	15	54.1	138	05.7	-16	29.5	144	50.9	-17	58.5	236	50.7	+16	41.4	292	21.7	+22	02.1
19	30	56.5	153	05.7		30.0	159	51.8		59.0	251	53.4		41.5	307	24.4		02.1
20	45	59.0	168	05.7		30.5	174	52.6		59.4	266	56.1		41.5	322	27.1		02.1
21	61	01.5	183	05.6		31.1	189	53.4	-17	59.8	281	58.8		41.6	337	29.7		02.1
22	76	03.9	198	05.6		31.6	204	54.3	-18	00.2	297	01.5		41.7	352	32.4		02.1
23	91	06.4	213	05.5		32.1	219	55.1		00.7	312	04.2		41.8	7	35.1		02.1
24	106	08.8	228	05.5	-16	32.7	234	55.9	-18	01.1	327	06.9	+16	41.9	22	37.7	+22	02.1
Dif	—		0		-5		+8		-4		+27		+1		+27		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 1				Edad: 4 ^d 2 SD: 15 ^h 1 PMG: 16 ^h 06 ^m												PHE { 4 ^h : 55 ^m 5 12 ^h : 55 ^m 3 20 ^h : 55 ^m 1 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	31.1	-22	27.0	125	35.1	-13	47.5	60 N	7	07	8	03	8	58	11	22	4
1	193	30.8		26.7	140	07.8 ¹³⁷		35.8 ¹¹⁷	58	7	01	7	52	42		15	7	12
2	208	30.5		26.4	154	40.6 ¹³⁸		24.0 ¹¹⁸	56	6	54		43	29		09	10	17
3	223	30.2		26.1	169	13.5 ¹³⁹		12.2 ¹¹⁸	54		49		34	17		11	04	12
4	238	30.0		25.8	183	46.4 ¹³⁹	-13	00.3 ¹¹⁹	52		43		27	8	07	10	59	14
5	253	29.7	-22	25.5	198	19.4 ¹⁴⁰	-12	48.4 ¹¹⁹	50	6	39	7	20	7	57	10	55	16
6	268	29.4	-22	25.2	212	52.5 ¹⁴¹	-12	36.5 ¹¹⁹	45	6	28	7	05	7	38	10	45	21
7	283	29.2		24.9	227	25.7 ¹⁴²		24.5 ¹²⁰	40		18		6	22		37	24	44
8	298	28.9		24.6	241	59.0 ¹⁴³		12.5 ¹²⁰	35		09		41	7	09	30	28	49
9	313	28.6		24.2	256	32.3 ¹⁴³	-12	00.4 ¹²¹	30	6	01		31	6	57	24	30	21
10	328	28.3		23.9	271	05.7 ¹⁴⁴	-11	48.3 ¹²¹	20	5	46	6	13	37		14	34	22
11	343	28.1	-22	23.6	285	39.2 ¹⁴⁵	-11	36.1 ¹²²	10 N	5	30	5	56	6	19	10	05	38
12	358	27.8	-22	23.3	300	12.7 ¹⁴⁵	-11	24.0 ¹²¹	0	5	14	5	40	6	02	9	56	42
13	13	27.5		23.0	314	46.3 ¹⁴⁶	-11	11.7 ¹²³	10 S	4	56		23	5	46	47	47	23
14	28	27.3		22.7	329	20.0 ¹⁴⁷	-10	59.5 ¹²²	20		34		5	28		38	50	31
15	43	27.0		22.3	343	53.8 ¹⁴⁸		47.2 ¹²³	30	4	07	4	39	5	07	27	55	39
16	58	26.7		22.0	358	27.6 ¹⁴⁸		34.9 ¹²³	35	3	49		25	4	54	21	58	43
17	73	26.4	-22	21.7	13	01.4 ¹⁴⁸	-10	22.5 ¹²⁴	40	3	27	4	08	4	40	9	14	61
18	88	26.2	-22	21.4	27	35.4 ¹⁵⁰	-10	10.1 ¹²⁴	45	2	58	3	46	4	23	9	06	65
19	103	25.9		21.1	42	09.4 ¹⁵⁰	-9	57.7 ¹²⁴	50	2	17		18	4	02	8	56	69
20	118	25.6		20.7	56	43.4 ¹⁵⁰		45.3 ¹²⁴	52	1	52	3	04	3	51	51	72	05
21	133	25.4		20.4	71	17.6 ¹⁵²		32.8 ¹²⁵	54	1	18	2	48	40		46	74	09
22	148	25.1		20.1	85	51.7 ¹⁵¹		20.3 ¹²⁵	56	** ** *			28	27		40	77	13
23	163	24.8		19.8	100	26.0 ¹⁵³	-9	07.8 ¹²⁵	58	** ** *	2	02	3	11		34	79	17
24	178	24.6	-22	19.4	115	00.3 ¹⁵³	-8	55.2 ¹²⁶	60 S	** ** *	1	25		2	53	8	26	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.6		Mag: +1.5		Mag: -2.5		Mag: -0.4	
	16 ^h 52 ^m 6		PMG: 8 ^h 48 ^m		PMG: 8 ^h 20 ^m		PMG: 2 ^h 11 ^m		PMG: 22 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	106	08.8	228	05.5	-16	32.7	327	06.9	+16	41.9
1	121	11.3	243	05.4		33.2	342	09.7		42.0
2	136	13.8	258	05.4		33.7	357	12.4		42.1
3	151	16.2	273	05.3		34.3	12	15.1		42.1
4	166	18.7	288	05.3		34.8	27	17.8		42.2
5	181	21.2	303	05.2	-16	35.3	42	20.5	+16	42.3
6	196	23.6	318	05.2	-16	35.9	57	23.2	+16	42.4
7	211	26.1	333	05.1		36.4	72	25.9		42.5
8	226	28.6	348	05.0		36.9	87	28.6		42.6
9	241	31.0	3	05.0		37.5	102	31.4		42.6
10	256	33.5	18	04.9		38.0	117	34.1		42.7
11	271	36.0	33	04.9	-16	38.5	132	36.8	+16	42.8
12	286	38.4	48	04.8	-16	39.1	147	39.5	+16	42.9
13	301	40.9	63	04.7		39.6	162	42.2		43.0
14	316	43.3	78	04.7		40.1	177	44.9		43.1
15	331	45.8	93	04.6		40.7	192	47.7		43.1
16	346	48.3	108	04.6		41.2	207	50.4		43.2
17	1	50.7	123	04.5	-16	41.7	222	53.1	+16	43.3
18	16	53.2	138	04.4	-16	42.3	237	55.8	+16	43.4
19	31	55.7	153	04.4		42.8	252	58.5		43.5
20	46	58.1	168	04.3		43.3	268	01.2		43.6
21	62	00.6	183	04.2		43.9	283	04.0		43.7
22	77	03.1	198	04.1		44.4	298	06.7		43.7
23	92	05.5	213	04.1		44.9	313	09.4		43.8
24	107	08.0	228	04.0	-16	45.4	328	12.1	+16	43.9
Dif	—		-1		-5		+27		+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 06 ^m 6			Edad: 5 ^d 2 PHE { 4 ^h : 54/9 12 ^h : 54/8 20 ^h : 54/7 PMG: 16 ^h 48 ^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	178	24.6	-22	19.4	115	00.3	-8 55.2	60 N	15 16	16 11	17 07	11 26 3	22 28 79	
1	193	24.3		19.1	129	34.6 ¹⁵³	42.7 ¹²⁵	58	32	22	13	22 6	30 77	
2	208	24.0		18.8	144	09.0 ¹⁵⁴	30.1 ¹²⁶	56	45	31	20	19 8	33 73	
3	223	23.8		18.5	158	43.5 ¹⁵⁵	17.4 ¹²⁷	54	15 57	40	25	16 11	34 71	
4	238	23.5		18.1	173	18.0 ¹⁵⁵	-8 04.8 ¹²⁶	52	16 07	47	30	13 13	36 69	
5	253	23.2	-22	17.8	187	52.6 ¹⁵⁶	-7 52.1 ¹²⁷	50	16 16	16 54	17 35	11 11 15	22 38 66	
6	268	23.0	-22	17.5	202	27.2 ¹⁵⁶	-7 39.4 ¹²⁷	45	16 36	17 09	17 46	11 06 19	22 41 62	
7	283	22.7		17.1	217	01.8 ¹⁵⁶	26.7 ¹²⁷	40	16 51	22	17 55	11 01 23	44 59	
8	298	22.4		16.8	231	36.5 ¹⁵⁷	14.0 ¹²⁷	35	17 05	33	18 04	10 58 25	46 56	
9	313	22.2		16.5	246	11.3 ¹⁵⁸	-7 01.3 ¹²⁷	30	16	17 42	12	54 28	48 53	
10	328	21.9		16.2	260	46.1 ¹⁵⁸	-6 48.5 ¹²⁸	20	36	18 00	27	48 33	52 48	
11	343	21.6	-22	15.8	275	21.0 ¹⁵⁹	-6 35.7 ¹²⁸	10 N	17 54	18 16	18 43	10 43 37	22 55 44	
12	358	21.4	-22	15.5	289	55.9 ¹⁵⁹	-6 22.9 ¹²⁸	0	18 10	18 33	18 59	10 38 41	22 58 40	
13	13	21.1		15.1	304	30.8 ¹⁵⁹	-6 10.1 ¹²⁸	10 S	27	18 50	19 17	34 44	23 01 36	
14	28	20.8		14.8	319	05.8 ¹⁶⁰	-5 57.3 ¹²⁸	20	18 45	19 09	19 38	28 49	04 32	
15	43	20.6		14.5	333	40.8 ¹⁶⁰	44.4 ¹²⁹	30	19 06	33	20 05	22 54	08 27	
16	58	20.3		14.1	348	15.8 ¹⁶⁰	31.6 ¹²⁸	35	18	19 47	23	19 56	09 25	
17	73	20.0	-22	13.8	2	50.9 ¹⁶¹	-5 18.7 ¹²⁹	40	19 32	20 04	20 45	10 15 59	23 12 22	
18	88	19.8	-22	13.5	17	26.1 ¹⁶²	-5 05.8 ¹²⁹	45	19 49	20 25	21 13	10 11 62	23 14 19	
19	103	19.5		13.1	32	01.3 ¹⁶²	-4 53.0 ¹²⁸	50	20 10	20 53	21 54	05 67	17 15	
20	118	19.2		12.8	46	36.5 ¹⁶²	40.1 ¹²⁹	52	20	21 06	22 17	03 69	19 12	
21	133	19.0		12.4	61	11.7 ¹⁶²	27.2 ¹²⁹	54	31	22	22 49	10 00 71	20 11	
22	148	18.7		12.1	75	47.0 ¹⁶³	14.2 ¹³⁰	56	44	21 42	** **	9 57 74	22 8	
23	163	18.5		11.8	90	22.3 ¹⁶³	-4 01.3 ¹²⁹	58	20 59	22 07	** **	53 77	24 6	
24	178	18.2	-22	11.4	104	57.6 ¹⁶³	-3 48.4 ¹²⁹	60 S	21 17	22 42	** **	9 49 80	23 26 3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 48 ^m 7		Mag: -4.6 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 18 ^m		Mag: -2.5 PMG: 2 ^h 07 ^m		Mag: -0.4 PMG: 22 ^h 21 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	107	08.0	228	04.0	235	15.8	328	12.1	23	41.5
1	122	10.4	243	03.9	250	16.6	343	14.8	38	44.2
2	137	12.9	258	03.9	265	17.4	358	17.6	53	46.9
3	152	15.4	273	03.8	280	18.2	13	20.3	68	49.5
4	167	17.8	288	03.7	295	19.1	28	23.0	83	52.2
5	182	20.3	303	03.6	310	19.9	43	25.7	98	54.8
6	197	22.8	318	03.5	325	20.7	58	28.4	113	57.5
7	212	25.2	333	03.5	340	21.5	73	31.1	129	00.1
8	227	27.7	348	03.4	355	22.4	88	33.9	144	02.8
9	242	30.2	3	03.3	10	23.2	103	36.6	159	05.5
10	257	32.6	18	03.2	25	24.0	118	39.3	174	08.1
11	272	35.1	33	03.1	40	24.8	133	42.0	189	10.8
12	287	37.6	48	03.1	55	25.7	148	44.8	204	13.4
13	302	40.0	63	03.0	70	26.5	163	47.5	219	16.1
14	317	42.5	78	02.9	85	27.3	178	50.2	234	18.7
15	332	44.9	93	02.8	100	28.1	193	52.9	249	21.4
16	347	47.4	108	02.7	115	29.0	208	55.6	264	24.1
17	2	49.9	123	02.6	130	29.8	223	58.4	279	26.7
18	17	52.3	138	02.5	145	30.6	239	01.1	294	29.4
19	32	54.8	153	02.4	160	31.4	254	03.8	309	32.0
20	47	57.3	168	02.3	175	32.3	269	06.5	324	34.7
21	62	59.7	183	02.3	190	33.1	284	09.3	339	37.3
22	78	02.2	198	02.2	205	33.9	299	12.0	354	40.0
23	93	04.7	213	02.1	220	34.7	314	14.7	9	42.6
24	108	07.1	228	02.0	235	35.5	329	17.4	24	45.3
Dif	—		-1		-5		+27		+1	
					+8				+27	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 07 ^m 0				Edad: 6 ^d 2 PHE { SD: 14'9 PMG: 17 ^h 29 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	18.2	-22	11.4	104	57.6	-3	48.4	60 N	7	06	8	01	8	56	11	29	3
1	193	17.9		11.1	119	33.0 ¹⁶⁴		35.5 ¹²⁹	58	7	00	7	51	41		28	6	47
2	208	17.7		10.7	134	08.4 ¹⁶⁴		22.5 ¹³⁰	56	6	54	42	27		27	9	46	7
3	223	17.4		10.4	148	43.8 ¹⁶⁴	-3	09.6 ¹²⁹	54		48	33	16		27	10	45	7
4	238	17.1		10.0	163	19.2 ¹⁶⁴	-2	56.6 ¹³⁰	52		43	26	8	06		26	13	45
5	253	16.9	-22	09.7	177	54.7 ¹⁶⁵	-2	43.6 ¹³⁰	50	6	38	7	19	7	57	11	26	14
6	268	16.6	-22	09.3	192	30.2 ¹⁶⁵	-2	30.7 ¹²⁹	45	6	27	7	04	7	37	11	25	18
7	283	16.4		09.0	207	05.7 ¹⁶⁵		17.7 ¹³⁰	40		18	6	52	22		24	22	43
8	298	16.1		08.6	221	41.3 ¹⁶⁶	-2	04.8 ¹²⁹	35		09	41	7	09	23	25	42	55
9	313	15.8		08.3	236	16.8 ¹⁶⁵	-1	51.8 ¹³⁰	30	6	01	31	6	57	22	28	41	53
10	328	15.6		07.9	250	52.4 ¹⁶⁶		38.8 ¹³⁰	20	5	46	6	13	37	21	32	40	48
11	343	15.3	-22	07.6	265	28.0 ¹⁶⁶	-1	25.9 ¹²⁹	10 N	5	31	5	57	6	20	11	20	36
12	358	15.1	-22	07.2	280	03.6 ¹⁶⁶	-1	12.9 ¹³⁰	0	5	15	5	41	6	03	11	19	40
13	13	14.8		06.9	294	39.3 ¹⁶⁷	-0	59.9 ¹³⁰	10 S	4	57	24	5	47	18	44	37	36
14	28	14.5		06.5	309	14.9 ¹⁶⁶		47.0 ¹²⁹	20		36	5	05	29	17	48	36	32
15	43	14.3		06.2	323	50.6 ¹⁶⁷		34.0 ¹³⁰	30	4	08	4	41	5	08	16	52	35
16	58	14.0		05.8	338	26.3 ¹⁶⁷		21.1 ¹²⁹	35	3	51	27	4	56	15	56	34	25
17	73	13.8	-22	05.5	353	01.9 ¹⁶⁶	-0	08.1 ¹³⁰	40	3	29	4	10	4	42	11	14	59
18	88	13.5	-22	05.1	7	37.6 ¹⁶⁷	+0	04.8 ¹²⁹	45	3	01	3	49	4	25	11	13	63
19	103	13.2		04.7	22	13.4 ¹⁶⁸		17.8 ¹³⁰	50	2	20	21	4	04	12	67	32	14
20	118	13.0		04.4	36	49.1 ¹⁶⁷		30.7 ¹²⁹	52	1	57	3	08	3	54	12	68	31
21	133	12.7		04.0	51	24.8 ¹⁶⁷		43.7 ¹³⁰	54	1	24	2	51	43	11	71	31	10
22	148	12.5		03.7	66	00.5 ¹⁶⁷	+0	56.6 ¹²⁹	56	** **		32	30		11	73	30	9
23	163	12.2		03.3	80	36.3 ¹⁶⁸	+1	09.5 ¹²⁹	58	** **	2	07	3	15	10	76	30	5
24	178	12.0	-22	03.0	95	12.0 ¹⁶⁷	+1	22.4 ¹²⁹	60 S	** **	1	32	2	57	11	09	79	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 44 ^m 8		Mag: -4.6 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 17 ^m		Mag: -2.6 PMG: 2 ^h 02 ^m		Mag: -0.3 PMG: 22 ^h 17 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	108	07.1	228	02.0	235	35.5	329	17.4	24	45.3
1	123	09.6	243	01.9	250	36.4	344	20.1	39	48.0
2	138	12.1	258	01.8	265	37.2	359	22.9	54	50.6
3	153	14.5	273	01.7	280	38.0	14	25.6	69	53.3
4	168	17.0	288	01.6	295	38.8	29	28.3	84	55.9
5	183	19.4	303	01.5	310	39.7	44	31.0	99	58.6
6	198	21.9	318	01.4	325	40.5	59	33.8	115	01.2
7	213	24.4	333	01.3	340	41.3	74	36.5	130	03.9
8	228	26.8	348	01.2	355	42.1	89	39.2	145	06.5
9	243	29.3	3	01.1	10	42.9	104	42.0	160	09.2
10	258	31.8	18	01.0	25	43.8	119	44.7	175	11.9
11	273	34.2	33	00.9	40	44.6	134	47.4	190	14.5
12	288	36.7	48	00.7	55	45.4	149	50.1	205	17.2
13	303	39.2	63	00.6	70	46.2	164	52.9	220	19.8
14	318	41.6	78	00.5	85	47.0	179	55.6	235	22.5
15	333	44.1	93	00.4	100	47.9	194	58.3	250	25.1
16	348	46.5	108	00.3	115	48.7	210	01.0	265	27.8
17	3	49.0	123	00.2	130	49.5	225	03.8	280	30.4
18	18	51.5	138	00.1	145	50.3	240	06.5	295	33.1
19	33	53.9	153	00.0	160	51.1	255	09.2	310	35.7
20	48	56.4	167	59.9	175	52.0	270	12.0	325	38.4
21	63	58.9	182	59.7	190	52.8	285	14.7	340	41.0
22	79	01.3	197	59.6	205	53.6	300	17.4	355	43.7
23	94	03.8	212	59.5	220	54.4	315	20.1	10	46.3
24	109	06.3	227	59.4	235	55.2	330	22.9	25	49.0
Dif	—		-1		+8		+27		+27	
			-5		-4		+1		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°3			Edad: 7 ^d 2	PHE { 4 ^h : 54°3 12 ^h : 54°3 20 ^h : 54°2											
	PMG: 12 ^h 07 ^m 4					SD: 14°8			PMG: 18 ^h 09 ^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	m	h m m	m	
0	178	12.0	-22 03.0	95	12.0	+1 22.4		60 N	15 20	16 15	17 10	11 32 3		** ** *	** ** *	
1	193	11.7	02.6	109	47.8 ¹⁶⁸	35.3 ¹²⁹		58	36	25	16	34 6		** ** *	** ** *	
2	208	11.4	02.2	124	23.5 ¹⁶⁷	+1 48.2 ¹²⁹		56	15 49	34	22	36 8		** ** *	** ** *	
3	223	11.2	01.9	138	59.3 ¹⁶⁸	+2 01.1 ¹²⁹		54	16 00	42	28	37 11		** ** *	** ** *	
4	238	10.9	01.5	153	35.0 ¹⁶⁷	14.0 ¹²⁹		52	10	50	33	39 13		** ** *	** ** *	
5	253	10.7	-22 01.1	168	10.7 ¹⁶⁷	+2 26.8 ¹²⁸		50	16 19	16 56	17 37	11 40 15		** ** *	** ** *	
6	268	10.4	-22 00.8	182	46.5 ¹⁶⁸	+2 39.7 ¹²⁹		45	16 38	17 11	17 48	11 43 19		** ** *	** ** *	
7	283	10.2	-22 00.4	197	22.2 ¹⁶⁷	+2 52.5 ¹²⁸		40	16 53	23	17 57	46 22		** ** *	** ** *	
8	298	09.9	-22 00.0	211	58.0 ¹⁶⁸	+3 05.3 ¹²⁸		35	17 07	34	18 06	48 25		** ** *	** ** *	
9	313	09.6	-21 59.7	226	33.7 ¹⁶⁷	18.1 ¹²⁸		30	18	17 44	14	50 28		** ** *	** ** *	
10	328	09.4	59.3	241	09.4 ¹⁶⁷	30.9 ¹²⁸		20	38	18 01	29	53 33		** ** *	** ** *	
11	343	09.1	-21 58.9	255	45.1 ¹⁶⁷	+3 43.7 ¹²⁸		10 N	17 55	18 17	18 44	11 56 37		** ** *	** ** *	
12	358	08.9	-21 58.6	270	20.9 ¹⁶⁸	+3 56.5 ¹²⁸		0	18 11	18 33	18 59	11 59 40		** ** *	** ** *	
13	13	08.6	58.2	284	56.6 ¹⁶⁷	+4 09.2 ¹²⁷		10 S	27	18 50	19 17	12 02 44		** ** *	** ** *	
14	28	08.4	57.8	299	32.2 ¹⁶⁶	21.9 ¹²⁷		20	18 45	19 09	19 38	05 48		** ** *	** ** *	
15	43	08.1	57.4	314	07.9 ¹⁶⁷	34.6 ¹²⁷		30	19 06	33	20 05	08 53		** ** *	** ** *	
16	58	07.9	57.1	328	43.6 ¹⁶⁷	+4 47.3 ¹²⁷		35	18	19 47	23	11 55	23 59 27			
17	73	07.6	-21 56.7	343	19.2 ¹⁶⁶	+5 00.0 ¹²⁷		40	19 32	20 04	20 44	12 13 58	23 56 23			
18	88	07.4	-21 56.3	357	54.9 ¹⁶⁷	+5 12.7 ¹²⁷		45	19 48	20 24	21 12	12 16 62	23 51 20			
19	103	07.1	55.9	12	30.5 ¹⁶⁶	25.3 ¹²⁶		50	20 09	20 51	21 51	19 66	46 16			
20	118	06.9	55.6	27	06.1 ¹⁶⁶	37.9 ¹²⁶		52	18	21 05	22 14	20 69	44 14			
21	133	06.6	55.2	41	41.7 ¹⁶⁶	+5 50.5 ¹²⁶		54	30	20	22 44	22 71	41 12			
22	148	06.4	54.8	56	17.2 ¹⁶⁵	+6 03.1 ¹²⁶		56	42	21 39	** ** *	24 73	39 9			
23	163	06.1	54.4	70	52.8 ¹⁶⁶	15.6 ¹²⁵		58	20 57	22 03	** ** *	26 76	35 7			
24	178	05.9	-21 54.1	85	28.3 ¹⁶⁵	+6 28.2 ¹²⁶		60 S	21 15	22 36	** ** *	12 28 80	23 32 4			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 16 ^h 40 ^m 8		Mag: -4.6 PMG: 8 ^h 48 ^m		Mag: +1.5 PMG: 8 ^h 16 ^m		Mag: -2.6 PMG: 1 ^h 58 ^m		Mag: -0.3 PMG: 22 ^h 13 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	°	°	°	°	°	°	°	°							
0	109 06.3	227 59.4	-17 10.6	235 55.2	-18 30.9	330 22.9	+16 48.1	25 49.0	+22 02.0							
1	124 08.7	242 59.3	11.1	250 56.1	31.3	345 25.6	48.2	40 51.7	02.0							
2	139 11.2	257 59.1	11.7	265 56.9	31.7	0 28.3	48.2	55 54.3	02.0							
3	154 13.7	272 59.0	12.2	280 57.7	32.1	15 31.1	48.3	70 57.0	02.0							
4	169 16.1	287 58.9	12.7	295 58.5	32.5	30 33.8	48.4	85 59.6	02.0							
5	184 18.6	302 58.8	-17 13.2	310 59.3	-18 32.9	45 36.5	+16 48.5	101 02.3	+22 02.0							
6	199 21.0	317 58.6	-17 13.7	326 00.2	-18 33.3	60 39.3	+16 48.6	116 04.9	+22 02.0							
7	214 23.5	332 58.5	14.3	341 01.0	33.8	75 42.0	48.7	131 07.6	02.0							
8	229 26.0	347 58.4	14.8	356 01.8	34.2	90 44.7	48.8	146 10.2	02.0							
9	244 28.4	2 58.3	15.3	11 02.6	34.6	105 47.4	48.9	161 12.9	02.0							
10	259 30.9	17 58.1	15.8	26 03.4	35.0	120 50.2	49.0	176 15.5	02.0							
11	274 33.4	32 58.0	-17 16.3	41 04.3	-18 35.4	135 52.9	+16 49.0	191 18.2	+22 02.0							
12	289 35.8	47 57.9	-17 16.8	56 05.1	-18 35.8	150 55.6	+16 49.1	206 20.8	+22 02.0							
13	304 38.3	62 57.8	17.4	71 05.9	36.2	165 58.4	49.2	221 23.5	02.0							
14	319 40.8	77 57.6	17.9	86 06.7	36.6	181 01.1	49.3	236 26.1	02.0							
15	334 43.2	92 57.5	18.4	101 07.5	37.0	196 03.8	49.4	251 28.8	02.0							
16	349 45.7	107 57.4	18.9	116 08.3	37.4	211 06.6	49.5	266 31.4	02.0							
17	4 48.2	122 57.2	-17 19.4	131 09.2	-18 37.8	226 09.3	+16 49.6	281 34.1	+22 02.0							
18	19 50.6	137 57.1	-17 19.9	146 10.0	-18 38.2	241 12.0	+16 49.7	296 36.7	+22 02.0							
19	34 53.1	152 56.9	20.4	161 10.8	38.6	256 14.8	49.8	311 39.4	02.0							
20	49 55.5	167 56.8	21.0	176 11.6	39.0	271 17.5	49.8	326 42.0	02.0							
21	64 58.0	182 56.7	21.5	191 12.4	39.4	286 20.2	49.9	341 44.7	02.0							
22	80 00.5	197 56.5	22.0	206 13.2	39.8	301 23.0	50.0	356 47.3	02.0							
23	95 02.9	212 56.4	22.5	221 14.1	40.2	316 25.7	50.1	11 50.0	02.0							
24	110 05.4	227 56.3	-17 23.0	236 14.9	-18 40.6	331 28.4	+16 50.2	26 52.6	+22 02.0							
Dif	—	-1	-5	+8	-4	+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 07 ^m 8			Edad: 8 ^d 2 PHE { SD: 14'8 PMG: 18 ^h 49 ^m 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	05.9	-21	54.1	85	28.3	+6	28.2	60 N	7 05	8 00	8 54	11 35	5	1 06	80		
1	193	05.6		53.7	100	03.8 ¹⁶⁵		40.7 ¹²⁵	58	6 58	7 49	39	40	8	1 02	77		
2	208	05.4		53.3	114	39.3 ¹⁶⁵	+6	53.2 ¹²⁵	56	52	40	26	44	11	0 59	74		
3	223	05.1		52.9	129	14.7 ¹⁶⁴	+7	05.6 ¹²⁴	54	47	32	14	48	13	56	77		
4	238	04.9		52.5	143	50.1 ¹⁶⁴		18.0 ¹²⁴	52	42	25	8 05	52	15	53	69		
5	253	04.6	-21	52.1	158	25.5 ¹⁶⁴	+7	30.4 ¹²⁴	50	6 37	7 18	7 56	11 55	17	0 51	67		
6	268	04.4	-21	51.8	173	00.9 ¹⁶⁴	+7	42.8 ¹²⁴	45	6 27	7 04	7 37	12 02	21	0 46	62		
7	283	04.1		51.4	187	36.3 ¹⁶⁴	+7	55.2 ¹²⁴	40	18	6 51	21	08	24	41	59		
8	298	03.9		51.0	202	11.6 ¹⁶³	+8	07.5 ¹²³	35	09	41	7 08	13	28	37	56		
9	313	03.6		50.6	216	46.8 ¹⁶²		19.8 ¹²³	30	6 02	31	6 57	18	30	34	53		
10	328	03.4		50.2	231	22.1 ¹⁶³		32.0 ¹²²	20	5 47	6 14	37	26	34	28	49		
11	343	03.1	-21	49.8	245	57.3 ¹⁶²	+8	44.3 ¹²³	10 N	5 32	5 58	6 20	12 33	38	0 23	45		
12	358	02.9	-21	49.4	260	32.5 ¹⁶²	+8	56.5 ¹²²	0	5 16	5 42	6 04	12 39	42	0 18	41		
13	13	02.6		49.1	275	07.6 ¹⁶¹	+9	08.7 ¹²²	10 S	4 58	25	5 48	46	45	13	38		
14	28	02.4		48.7	289	42.8 ¹⁶²		20.8 ¹²¹	20	37	5 06	30	12	53	08	34		
15	43	02.1		48.3	304	17.8 ¹⁶⁰		32.9 ¹²¹	30	4 10	4 43	5 10	13	01	54	0 03	28	
16	58	01.9		47.9	318	52.9 ¹⁶¹		45.0 ¹²¹	35	3 53	29	4 58	06	57	** ** *	**		
17	73	01.6	-21	47.5	333	27.9 ¹⁶⁰	+9	57.0 ¹²⁰	40	3 32	4 12	4 44	13	11	60	** ** *	**	
18	88	01.4	-21	47.1	348	02.8 ¹⁵⁹	+10	09.0 ¹²⁰	45	3 04	3 51	4 27	13	18	63	** ** *	**	
19	103	01.1		46.7	2	37.7 ¹⁵⁹		21.0 ¹²⁰	50	2 24	24	4 07	25	68	** ** *	**		
20	118	00.9		46.3	17	12.6 ¹⁵⁹		32.9 ¹¹⁹	52	2 02	3 11	3 57	29	70	23 58	16		
21	133	00.6		45.9	31	47.5 ¹⁵⁹		44.8 ¹¹⁹	54	1 31	2 55	46	33	72	53	14		
22	148	00.4		45.5	46	22.2 ¹⁵⁷	+10	56.7 ¹¹⁹	56	0 26	36	33	37	75	48	11		
23	163	00.2		45.1	60	57.0 ¹⁵⁸	+11	08.5 ¹¹⁸	58	** ** *	2 12	19	42	78	42	9		
24	177	59.9	-21	44.7	75	31.7 ¹⁵⁷	+11	20.3 ¹¹⁸	60 S	** ** *	1 39	3 01	13 48	81	23 36	5		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 16 ^h 36 ^m 9			Mag: -4.6 PMG: 8 ^h 48 ^m			Mag: +1.5 PMG: 8 ^h 15 ^m			Mag: -2.6 PMG: 1 ^h 54 ^m			Mag: -0.3 PMG: 22 ^h 09 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♉		Dec	hG ♊		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	110	05.4	227	56.3	-17	23.0	236	14.9	-18	40.6	331	28.4	+16	50.2	26	52.6		
1	125	07.9	242	56.1		23.5	251	15.7		41.0	346	31.2		50.3	41	55.3		
2	140	10.3	257	56.0		24.0	266	16.5		41.4	1	33.9		50.4	56	57.9		
3	155	12.8	272	55.8		24.5	281	17.3		41.8	16	36.6		50.5	72	00.6		
4	170	15.3	287	55.7		25.1	296	18.1		42.2	31	39.4		50.6	87	03.2		
5	185	17.7	302	55.5	-17	25.6	311	19.0	-18	42.6	46	42.1	+16	50.6	102	05.9		
6	200	20.2	317	55.4	-17	26.1	326	19.8	-18	43.0	61	44.9	+16	50.7	117	08.5		
7	215	22.6	332	55.2		26.6	341	20.6		43.4	76	47.6		50.8	132	11.2		
8	230	25.1	347	55.1		27.1	356	21.4		43.8	91	50.3		50.9	147	13.8		
9	245	27.6	2	54.9		27.6	11	22.2		44.2	106	53.1		51.0	162	16.5		
10	260	30.0	17	54.8		28.1	26	23.0		44.6	121	55.8		51.1	177	19.1		
11	275	32.5	32	54.6	-17	28.6	41	23.8	-18	45.0	136	58.5	+16	51.2	192	21.8		
12	290	35.0	47	54.5	-17	29.1	56	24.7	-18	45.4	152	01.3	+16	51.3	207	24.4		
13	305	37.4	62	54.3		29.6	71	25.5		45.8	167	04.0		51.4	222	27.1		
14	320	39.9	77	54.2		30.1	86	26.3		46.2	182	06.8		51.5	237	29.7		
15	335	42.4	92	54.0		30.7	101	27.1		46.6	197	09.5		51.5	252	32.4		
16	350	44.8	107	53.9		31.2	116	27.9		47.0	212	12.2		51.6	267	35.0		
17	5	47.3	122	53.7	-17	31.7	131	28.7	-18	47.4	227	15.0	+16	51.7	282	37.7		
18	20	49.8	137	53.6	-17	32.2	146	29.5	-18	47.8	242	17.7	+16	51.8	297	40.3		
19	35	52.2	152	53.4		32.7	161	30.4		48.2	257	20.4		51.9	312	43.0		
20	50	54.7	167	53.2		33.2	176	31.2		48.6	272	23.2		52.0	327	45.6		
21	65	57.1	182	53.1		33.7	191	32.0		48.9	287	25.9		52.1	342	48.2		
22	80	59.6	197	52.9		34.2	206	32.8		49.3	302	28.7		52.2	357	50.9		
23	96	02.1	212	52.7		34.7	221	33.6		49.7	317	31.4		52.3	12	53.5		
24	111	04.5	227	52.6	-17	35.2	236	34.4	-18	50.1	332	34.1	+16	52.4	27	56.2		
Dif	—			-2			+8			+27			+1			+26		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3		Edad: 9 ^d 2	PHE { 4 ^h : 54:3 12 ^h : 54:4 20 ^h : 54:5 R°: 45 ^m										
	PMG: 12 ^h 08 ^m 2													
	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	59.9	-21 44.7	75	31.7	+11 20.3	60 N	15 24	16 18	17 13	11 40 6	2 26 83		
1	192	59.7	44.3	90	06.3 ¹⁵⁶	32.0 ¹¹⁷	58	39	28	19	48 10	19 79		
2	207	59.4	43.9	104	40.9 ¹⁵⁶	43.7 ¹¹⁷	56	15 52	37	25	11 55 13	13 76		
3	222	59.2	43.5	119	15.5 ¹⁵⁶	+11 55.4 ¹¹⁷	54	16 03	45	30	12 01 16	07 73		
4	237	58.9	43.1	133	50.0 ¹⁵⁵	+12 07.0 ¹¹⁶	52	13	52	35	07 18	2 02 71		
5	252	58.7	-21 42.7	148	24.5 ¹⁵⁵	+12 18.6 ¹¹⁶	50	16 22	16 59	17 40	12 12 20	1 58 68		
6	267	58.4	-21 42.3	162	58.9 ¹⁵⁴	+12 30.1 ¹¹⁵	45	16 40	17 13	17 50	12 23 24	1 48 64		
7	282	58.2	41.9	177	33.2 ¹⁵³	41.6 ¹¹⁵	40	16 55	25	17 59	32 28	40 60		
8	297	58.0	41.5	192	07.5 ¹⁵³	+12 53.0 ¹¹⁴	35	17 08	36	18 07	41 30	33 58		
9	312	57.7	41.1	206	41.8 ¹⁵³	+13 04.4 ¹¹⁴	30	20	17 46	15	12 48 33	27 55		
10	327	57.5	40.7	221	15.9 ¹⁵¹	15.8 ¹¹⁴	20	39	18 03	30	13 00 37	17 50		
11	342	57.2	-21 40.3	235	50.1 ¹⁵²	+13 27.1 ¹¹³	10 N	17 56	18 18	18 44	13 11 41	1 08 46		
12	357	57.0	-21 39.9	250	24.2 ¹⁵¹	+13 38.3 ¹¹²	0	18 12	18 34	19 00	13 21 44	0 59 43		
13	12	56.8	39.5	264	58.2 ¹⁵⁰	+13 49.5 ¹¹²	10 S	28	18 51	17	31 48	51 39		
14	27	56.5	39.1	279	32.1 ¹⁴⁹	+14 00.7 ¹¹²	20	18 45	19 10	19 38	43 51	42 35		
15	42	56.3	38.7	294	06.0 ¹⁴⁹	11.8 ¹¹¹	30	19 05	32	20 05	13 55 56	31 32		
16	57	56.0	38.3	308	39.9 ¹⁴⁹	22.8 ¹¹⁰	35	17	19 46	22	14 03 58	26 28		
17	72	55.8	-21 37.9	323	13.7 ¹⁴⁸	+14 33.8 ¹¹⁰	40	19 31	20 03	20 43	14 11 61	0 19 26		
18	87	55.6	-21 37.5	337	47.4 ¹⁴⁷	+14 44.8 ¹¹⁰	45	19 47	20 23	21 10	14 21 65	0 11 23		
19	102	55.3	37.1	352	21.0 ¹⁴⁶	+14 55.7 ¹⁰⁹	50	20 07	20 50	21 49	33 69	0 02 18		
20	117	55.1	36.6	6	54.6 ¹⁴⁶	+15 06.5 ¹⁰⁸	52	17	21 03	22 10	39 71	** ** *		
21	132	54.8	36.2	21	28.1 ¹⁴⁵	17.3 ¹⁰⁸	54	28	18	22 39	45 74	** ** *		
22	147	54.6	35.8	36	01.6 ¹⁴⁵	28.0 ¹⁰⁷	56	40	36	23 31	14 52 77	23 59 15		
23	162	54.4	35.4	50	35.0 ¹⁴⁴	38.7 ¹⁰⁷	58	20 55	21 59	** ** *	15 00 80	51 11		
24	177	54.1	-21 35.0	65	08.3 ¹⁴³	+15 49.3 ¹⁰⁶	60 S	21 12	22 31	** ** *	15 09 84	23 41 8		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 33 ^m 0		Mag: -4.6 PMG: 8 ^h 49 ^m		Mag: +1.4 PMG: 8 ^h 13 ^m		Mag: -2.6 PMG: 1 ^h 49 ^m		Mag: -0.3 PMG: 22 ^h 04 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	111 04.5	227 52.6	-17 35.2	236 34.4	-18 50.1	332 34.1	+16 52.4	27 56.2	+22 01.9	
1	126 07.0	242 52.4	35.7	251 35.2	50.5	347 36.9	52.4	42 58.8	01.9	
2	141 09.5	257 52.3	36.2	266 36.1	50.9	2 39.6	52.5	58 01.5	01.9	
3	156 11.9	272 52.1	36.7	281 36.9	51.3	17 42.4	52.6	73 04.1	01.9	
4	171 14.4	287 51.9	37.2	296 37.7	51.7	32 45.1	52.7	88 06.8	01.9	
5	186 16.9	302 51.8	-17 37.7	311 38.5	-18 52.1	47 47.8	+16 52.8	103 09.4	+22 01.9	
6	201 19.3	317 51.6	-17 38.2	326 39.3	-18 52.5	62 50.6	+16 52.9	118 12.1	+22 01.9	
7	216 21.8	332 51.4	38.7	341 40.1	52.9	77 53.3	53.0	133 14.7	01.9	
8	231 24.3	347 51.2	39.2	356 40.9	53.3	92 56.1	53.1	148 17.4	01.9	
9	246 26.7	2 51.1	39.7	11 41.7	53.7	107 58.8	53.2	163 20.0	01.9	
10	261 29.2	17 50.9	40.2	26 42.6	54.1	123 01.6	53.3	178 22.6	01.9	
11	276 31.6	32 50.7	-17 40.7	41 43.4	-18 54.5	138 04.3	+16 53.4	193 25.3	+22 01.9	
12	291 34.1	47 50.6	-17 41.2	56 44.2	-18 54.8	153 07.0	+16 53.4	208 27.9	+22 01.9	
13	306 36.6	62 50.4	41.7	71 45.0	55.2	168 09.8	53.5	223 30.6	01.9	
14	321 39.0	77 50.2	42.2	86 45.8	55.6	183 12.5	53.6	238 33.2	01.9	
15	336 41.5	92 50.0	42.7	101 46.6	56.0	198 15.3	53.7	253 35.9	01.9	
16	351 44.0	107 49.9	43.2	116 47.4	56.4	213 18.0	53.8	268 38.5	01.9	
17	6 46.4	122 49.7	-17 43.7	131 48.2	-18 56.8	228 20.8	+16 53.9	283 41.2	+22 01.9	
18	21 48.9	137 49.5	-17 44.2	146 49.0	-18 57.2	243 23.5	+16 54.0	298 43.8	+22 01.9	
19	36 51.4	152 49.3	44.7	161 49.9	57.6	258 26.2	54.1	313 46.5	01.9	
20	51 53.8	167 49.1	45.2	176 50.7	58.0	273 29.0	54.2	328 49.1	01.9	
21	66 56.3	182 49.0	45.7	191 51.5	58.4	288 31.7	54.3	343 51.7	01.9	
22	81 58.7	197 48.8	46.2	206 52.3	58.8	303 34.5	54.4	358 54.4	01.9	
23	97 01.2	212 48.6	46.7	221 53.1	59.1	318 37.2	54.5	13 57.0	01.9	
24	112 03.7	227 48.4	-17 47.2	236 53.9	-18 59.5	333 40.0	+16 54.5	28 59.7	+22 01.9	
Dif	—	-2	-5	+8	-4	+27	+1	+26	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 10 ^d 2	PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 R°: 48 ^m										
	PMG: 12 ^h 08 ^m 6					SD: 14'9		PMG: 20 ^h 17 ^m			R°: 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	54.1	-21	65	08.3	+15	49.3	7	03	7	58	8	51	11	46
1	192	53.9		79	41.6 ¹⁴³	+15	59.9 ¹⁰⁶	6	57	48	36	11	58	15	38
2	207	53.6		94	14.8 ¹⁴²	+16	10.4 ¹⁰⁵	51	39	24		12	08	18	29
3	222	53.4		108	47.9 ¹⁴¹		20.8 ¹⁰⁴	46	31	13		17	21		20
4	237	53.2		123	20.9 ¹⁴⁰		31.2 ¹⁰⁴	41	24	8	03	25	23		13
5	252	52.9	-21	137	53.9 ¹⁴⁰	+16	41.5 ¹⁰³	6	37	7	17	7	54	12	32
6	267	52.7	-21	152	26.8 ¹³⁹	+16	51.7 ¹⁰²	6	27	7	03	7	36	12	47
7	282	52.5		166	59.7 ¹³⁹	+17	01.9 ¹⁰²	18	6	51	21	13	00	33	40
8	297	52.2		181	32.4 ¹³⁷		12.0 ¹⁰¹	09	40	7	08	11	35		31
9	312	52.0		196	05.1 ¹³⁷		22.1 ¹⁰¹	6	02	31	6	57	21	37	22
10	327	51.8		210	37.7 ¹³⁶		32.1 ¹⁰⁰	5	47	6	14	38	37	42	2
11	342	51.5	-21	225	10.3 ¹³⁶	+17	42.0 ⁹⁹	5	32	5	58	6	21	13	52
12	357	51.3	-21	239	42.7 ¹³⁴	+17	51.8 ⁹⁸	5	17	5	43	6	05	14	05
13	12	51.0		254	15.1 ¹³⁴	+18	01.6 ⁹⁸	4	59	26	5	49	19	51	30
14	27	50.8		268	47.4 ¹³³		11.3 ⁹⁷	39	5	07	32		34	54	17
15	42	50.6		283	19.7 ¹³³		20.9 ⁹⁶	4	12	4	45	12	14	51	58
16	57	50.3		297	51.8 ¹³¹		30.5 ⁹⁶	3	55	31	5	00	15	01	60
17	72	50.1	-21	312	23.9 ¹³¹	+18	40.0 ⁹⁵	3	34	4	14	4	46	15	12
18	87	49.9	-21	326	55.9 ¹³⁰	+18	49.4 ⁹⁴	3	07	3	54	4	30	15	26
19	102	49.6		341	27.8 ¹²⁹	+18	58.7 ⁹³	2	29	28	10		42	71	20
20	117	49.4		355	59.7 ¹²⁹	+19	08.0 ⁹³	2	07	3	14	4	00	50	73
21	132	49.2		10	31.4 ¹²⁷		17.2 ⁹²	1	38	2	59	3	49	15	59
22	147	48.9		25	03.1 ¹²⁷		26.3 ⁹¹	0	47	41	37		16	09	78
23	162	48.7		39	34.7 ¹²⁶		35.3 ⁹⁰	**	**	2	18	23	20	82	**
24	177	48.5	-21	54	06.2 ¹²⁵	+19	44.2 ⁸⁹	**	**	1	47	3	06	16	33
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 29 ^m 0			Mag: -4.5 PMG: 8 ^h 49 ^m			Mag: +1.4 PMG: 8 ^h 12 ^m			Mag: -2.6 PMG: 1 ^h 45 ^m			Mag: -0.3 PMG: 22 ^h 00 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	112	03.7		227	48.4	-17	236	53.9	-18	333	40.0	+16	28	59.7	+22
1	127	06.1		242	48.2		251	54.7	-18	348	42.7		44	02.3	
2	142	08.6		257	48.0		266	55.5	-19	3	45.5		59	05.0	
3	157	11.1		272	47.8		281	56.3		18	48.2		74	07.6	
4	172	13.5		287	47.7		296	57.2		33	50.9		89	10.2	
5	187	16.0		302	47.5	-17	311	58.0	-19	48	53.7	+16	104	12.9	+22
6	202	18.5		317	47.3	-17	326	58.8	-19	63	56.4	+16	119	15.5	+22
7	217	20.9		332	47.1		341	59.6		78	59.2		134	18.2	
8	232	23.4		347	46.9		357	00.4		94	01.9		149	20.8	
9	247	25.9		2	46.7		12	01.2		109	04.7		164	23.5	
10	262	28.3		17	46.5		27	02.0		124	07.4		179	26.1	
11	277	30.8		32	46.3	-17	42	02.8	-19	139	10.2	+16	194	28.7	+22
12	292	33.2		47	46.1	-17	57	03.6	-19	154	12.9	+16	209	31.4	+22
13	307	35.7		62	45.9		72	04.4		169	15.7		224	34.0	
14	322	38.2		77	45.7		87	05.2		184	18.4		239	36.7	
15	337	40.6		92	45.5		102	06.1		199	21.2		254	39.3	
16	352	43.1		107	45.3		117	06.9		214	23.9		269	42.0	
17	7	45.6		122	45.1	-17	132	07.7	-19	229	26.7	+16	284	44.6	+22
18	22	48.0		137	44.9	-17	147	08.5	-19	244	29.4	+16	299	47.2	+22
19	37	50.5		152	44.7		162	09.3		259	32.1		314	49.9	
20	52	53.0		167	44.5		177	10.1		274	34.9		329	52.5	
21	67	55.4		182	44.3		192	10.9		289	37.6		344	55.2	
22	82	57.9		197	44.1		207	11.7		304	40.4		359	57.8	
23	98	00.4		212	43.9		222	12.5		319	43.1		15	00.4	
24	113	02.8		227	43.7	-17	237	13.3	-19	334	45.9	+16	30	03.1	+22
Dif	—			-2			+8			+27			+1		

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: 11 ^d 2 PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/4 R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m		
0	177	48.5	-21	24.8	54	06.2	+19	44.2	60 N	15 29	16 22	17 16	11 57	18	5 14	85		
1	192	48.3		24.4	68	37.7 ¹²⁵	+19	53.1 ⁸⁹	58	43	32	22	12 13	22	4 59	80		
2	207	48.0		24.0	83	09.0 ¹²³	+20	01.9 ⁸⁸	56	15 56	40	28	26 26		46	77		
3	222	47.8		23.5	97	40.3 ¹²³		10.5 ⁸⁶	54	16 06	48	33	38 29		35	77		
4	237	47.6		23.1	112	11.5 ¹²²		19.2 ⁸⁷	52	16	16 55	38	48 31		25	71		
5	252	47.3	-21	22.7	126	42.6 ¹²¹	+20	27.7 ⁸⁵	50	16 25	17 02	17 42	12 57	33	4 16	70		
6	267	47.1	-21	22.2	141	13.6 ¹²⁰	+20	36.1 ⁸⁴	45	16 43	17 16	17 52	13 17	37	3 57	66		
7	282	46.9		21.8	155	44.5 ¹¹⁹		44.5 ⁸⁴	40	16 58	27	18 01	33 39		42	63		
8	297	46.6		21.4	170	15.3 ¹¹⁸	+20	52.7 ⁸²	35	17 10	38	09	46 42		30	60		
9	312	46.4		20.9	184	46.1 ¹¹⁸	+21	00.9 ⁸²	30	21	17 47	17	13 58	44	19	58		
10	327	46.2		20.5	199	16.8 ¹¹⁷		08.9 ⁸⁰	20	40	18 04	31	14 19	46	3 00	54		
11	342	46.0	-21	20.0	213	47.4 ¹¹⁶	+21	16.9 ⁸⁰	10 N	17 57	18 19	18 45	14 36	49	2 43	52		
12	357	45.7	-21	19.6	228	17.9 ¹¹⁵	+21	24.8 ⁷⁹	0	18 13	18 35	19 01	14 53	51	2 28	49		
13	12	45.5		19.2	242	48.3 ¹¹⁴		32.6 ⁷⁸	10 S	28	18 51	18	15 10	53	2 13	46		
14	27	45.3		18.7	257	18.6 ¹¹³		40.3 ⁷⁷	20	18 45	19 10	19 38	28 56		1 56	44		
15	42	45.0		18.3	271	48.9 ¹¹³		47.9 ⁷⁶	30	19 05	32	20 04	15 49	58	38	40		
16	57	44.8		17.8	286	19.1 ¹¹²	+21	55.4 ⁷⁵	35	17	19 46	21	16 01	60	27	38		
17	72	44.6	-21	17.4	300	49.1 ¹¹⁰	+22	02.8 ⁷⁴	40	19 30	20 02	20 42	16 15	62	1 15	35		
18	87	44.4	-21	16.9	315	19.1 ¹¹⁰	+22	10.1 ⁷³	45	19 46	20 22	21 08	16 32	65	1 00	33		
19	102	44.1		16.5	329	49.0 ¹⁰⁹		17.3 ⁷²	50	20 06	20 48	21 46	16 53	68	0 42	29		
20	117	43.9		16.0	344	18.9 ¹⁰⁹		24.4 ⁷¹	52	15	21 01	22 06	17 03	70	34	27		
21	132	43.7		15.6	358	48.6 ¹⁰⁷		31.4 ⁷⁰	54	26	15	22 34	14 72		25	24		
22	147	43.5		15.2	13	18.2 ¹⁰⁶		38.3 ⁶⁹	56	38	33	23 18	27 75		14	22		
23	162	43.2		14.7	27	47.8 ¹⁰⁶		45.1 ⁶⁸	58	20 52	21 55	** **	17 42	79	0 02	18		
24	177	43.0	-21	14.3	42	17.3 ¹⁰⁵	+22	51.8 ⁶⁷	60 S	21 08	22 25	** **	18 00	84	** **	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 25 ^m 1		Mag: -4.5 PMG: 8 ^h 49 ^m			Mag: +1.4 PMG: 8 ^h 11 ^m			Mag: -2.6 PMG: 1 ^h 41 ^m			Mag: -0.3 PMG: 21 ^h 56 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	113	02.8	227	43.7	-17	59.0	237	13.3	-19	08.8	334	45.9	+16	56.8	30	03.1	+22	01.9
1	128	05.3	242	43.5	-17	59.5	252	14.1		09.2	349	48.6		56.8	45	05.7		01.9
2	143	07.7	257	43.3	-18	00.0	267	14.9		09.6	4	51.4		56.9	60	08.4		01.9
3	158	10.2	272	43.1	-18	00.5	282	15.7		09.9	19	54.1		57.0	75	11.0		01.9
4	173	12.7	287	42.9		01.0	297	16.5		10.3	34	56.9		57.1	90	13.6		01.9
5	188	15.1	302	42.7	-18	01.5	312	17.4	-19	10.7	49	59.6	+16	57.2	105	16.3	+22	01.9
6	203	17.6	317	42.4	-18	01.9	327	18.2	-19	11.1	65	02.4	+16	57.3	120	18.9	+22	01.9
7	218	20.1	332	42.2		02.4	342	19.0		11.5	80	05.1		57.4	135	21.6		01.9
8	233	22.5	347	42.0		02.9	357	19.8		11.9	95	07.9		57.5	150	24.2		01.9
9	248	25.0	2	41.8		03.4	12	20.6		12.2	110	10.6		57.6	165	26.8		01.9
10	263	27.5	17	41.6		03.9	27	21.4		12.6	125	13.4		57.7	180	29.5		01.9
11	278	29.9	32	41.4	-18	04.4	42	22.2	-19	13.0	140	16.1	+16	57.8	195	32.1	+22	01.9
12	293	32.4	47	41.2	-18	04.8	57	23.0	-19	13.4	155	18.9	+16	57.9	210	34.8	+22	01.9
13	308	34.9	62	40.9		05.3	72	23.8		13.8	170	21.7		58.0	225	37.4		01.9
14	323	37.3	77	40.7		05.8	87	24.6		14.1	185	24.4		58.1	240	40.0		01.9
15	338	39.8	92	40.5		06.3	102	25.4		14.5	200	27.2		58.2	255	42.7		01.9
16	353	42.2	107	40.3		06.8	117	26.2		14.9	215	29.9		58.2	270	45.3		01.9
17	8	44.7	122	40.1	-18	07.3	132	27.0	-19	15.3	230	32.7	+16	58.3	285	48.0	+22	01.9
18	23	47.2	137	39.8	-18	07.7	147	27.8	-19	15.7	245	35.4	+16	58.4	300	50.6	+22	01.9
19	38	49.6	152	39.6		08.2	162	28.6		16.0	260	38.2		58.5	315	53.2		01.9
20	53	52.1	167	39.4		08.7	177	29.4		16.4	275	40.9		58.6	330	55.9		01.9
21	68	54.6	182	39.2		09.2	192	30.2		16.8	290	43.7		58.7	345	58.5		01.9
22	83	57.0	197	38.9		09.7	207	31.0		17.2	305	46.4		58.8	1	01.1		01.9
23	98	59.5	212	38.7		10.1	222	31.9		17.5	320	49.2		58.9	16	03.8		01.9
24	114	02.0	227	38.5	-18	10.6	237	32.7	-19	17.9	335	51.9	+16	59.0	31	06.4	+22	01.9
Dif	—		-2		-5		+8		-4		+28		+1		+26			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 12 ^d 2 PHE { 4 ^h : 55'6 12 ^h : 55'8 20 ^h : 56'0										
	PMG: 12 ^h 09 ^m 3			SD: 15'1 PMG: 21 ^h 57 ^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	177	43.0	-21	42	17.3	+22 51.8	60 N	7	01	7	55	8	48	12 15 32
1	192	42.8		56	46.7 ¹⁰⁴	+22 58.4 ⁶⁶	58	6	55		46	34		6 39 79
2	207	42.6		71	16.0 ¹⁰³	+23 04.8 ⁶⁴	56		50		37	22		19 75
3	222	42.3		85	45.2 ¹⁰²	11.2 ⁶⁴	54		45		29	11		6 03 7
4	237	42.1		100	14.4 ¹⁰²	17.4 ⁶²	52		40		22	8	02	5 49 69
5	252	41.9	-21	114	43.4 ¹⁰⁰	+23 23.6 ⁶²	50	6	36	7	16	7	53	36 68
6	267	41.7	-21	129	12.4 ¹⁰⁰	+23 29.6 ⁶⁰	45							5 26 66
7	282	41.5		143	41.3 ⁹⁹	35.5 ⁵⁹	40	6	26	7	02	7	35	5 03 64
8	297	41.2		158	10.1 ⁹⁸	41.3 ⁵⁸	35		17	6	50	20		4 45 62
9	312	41.0		172	38.8 ⁹⁷	47.0 ⁵⁷	30		09		40	7	08	28 49
10	327	40.8		187	07.5 ⁹⁷	52.5 ⁵⁵	20	6	02	31	6	57		30 60
11	342	40.6	-21	201	36.0 ⁹⁵	+23 58.0 ⁵⁵	10 N	5	47	6	14	38		4 17 58
12	357	40.3	-21	216	04.5 ⁹⁵	+24 03.3 ⁵³	0	5	47	6	14	38		15 05 52
13	12	40.1		230	32.9 ⁹⁴	08.5 ⁵²	10 S	5	33	5	59	6	21	3 54 57
14	27	39.9		245	01.3 ⁹⁴	13.5 ⁵⁰	20	5	33	5	59	6	21	15 25 53
15	42	39.7		259	29.5 ⁹²	18.5 ⁵⁰	30	5	18	5	43	6	06	3 35 55
16	57	39.5		273	57.7 ⁹²	23.3 ⁴⁸	35	5	01	5	27	5	50	3 17 53
17	72	39.2	-21	288	25.8 ⁹¹	+24 28.0 ⁴⁶	40	4	40	5	09	33		2 59 51
18	87	39.0	-21	302	53.8 ⁹⁰	+24 32.6 ⁴⁷	45	4	40	5	09	33		20 49
19	102	38.8		317	21.7 ⁸⁹	37.1 ⁴⁵	50	4	14	4	46	13		18 47
20	117	38.6		331	49.6 ⁸⁹	41.4 ⁴³	52	3	57		33	5	02	2 05 45
21	132	38.4		346	17.3 ⁸⁷	45.6 ⁴²	54	3	37	4	17	4	48	1 50 44
22	147	38.1		0	45.1 ⁸⁸	49.7 ⁴¹	56	3	37	4	17	4	48	17 17 61
23	162	37.9		15	12.7 ⁸⁶	53.6 ³⁹	58	3	10	3	57	4	32	17 37 61
24	177	37.7	-21	29	40.3 ⁸⁶	+24 57.4 ³⁸	60 S	2	33	31	13			1 33 41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 21 ^m 2		Mag: -4.5 PMG: 8 ^h 50 ^m		Mag: +1.4 PMG: 8 ^h 09 ^m		Mag: -2.6 PMG: 1 ^h 36 ^m		Mag: -0.3 PMG: 21 ^h 52 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	114	02.0	227	38.5	237	32.7	335	51.9	31	06.4
1	129	04.4	242	38.3	252	33.5	350	54.7	46	09.1
2	144	06.9	257	38.0	267	34.3	5	57.4	61	11.7
3	159	09.3	272	37.8	282	35.1	21	00.2	76	14.3
4	174	11.8	287	37.6	297	35.9	36	03.0	91	17.0
5	189	14.3	302	37.4	312	36.7	51	05.7	106	19.6
6	204	16.7	317	37.1	327	37.5	66	08.5	121	22.2
7	219	19.2	332	36.9	342	38.3	81	11.2	136	24.9
8	234	21.7	347	36.7	357	39.1	96	14.0	151	27.5
9	249	24.1	2	36.4	12	39.9	111	16.7	166	30.1
10	264	26.6	17	36.2	27	40.7	126	19.5	181	32.8
11	279	29.1	32	35.9	42	41.5	141	22.2	196	35.4
12	294	31.5	47	35.7	57	42.3	156	25.0	211	38.0
13	309	34.0	62	35.5	72	43.1	171	27.8	226	40.7
14	324	36.5	77	35.2	87	43.9	186	30.5	241	43.3
15	339	38.9	92	35.0	102	44.7	201	33.3	256	46.0
16	354	41.4	107	34.8	117	45.5	216	36.0	271	48.6
17	9	43.8	122	34.5	132	46.3	231	38.8	286	51.2
18	24	46.3	137	34.3	147	47.1	246	41.5	301	53.9
19	39	48.8	152	34.0	162	47.9	261	44.3	316	56.5
20	54	51.2	167	33.8	177	48.7	276	47.1	331	59.1
21	69	53.7	182	33.5	192	49.5	291	49.8	347	01.8
22	84	56.2	197	33.3	207	50.3	306	52.6	2	04.4
23	99	58.6	212	33.0	222	51.1	321	55.3	17	07.0
24	115	01.1	227	32.8	237	51.9	336	58.1	32	09.7
Dif	—		-2		+8		+28		+26	
			-5		-4		+1		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 7			Edad: 13 ^d 2 PHE { 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/6 PMG: 22 ^h 52 ^m R°: 57 ^m SD: 15/3										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	177	37.7	-21	03.3	29	40.3	+24	57.4	60 N	15 33	16 26	17 20	12 47 56	7 58 61
1	192	37.5		02.8	44	07.8	85	+25	01.1	58	47	35	26	13 12 56
2	207	37.3		02.3	58	35.2	84		04.6	56	15 59	44	31	31 57
3	222	37.1		01.9	73	02.5	83		08.0	54	16 10	51	36	13 48 56
4	237	36.8		01.4	87	29.8	83		11.3	52	19	16 58	40	14 02 56
5	252	36.6	-21	00.9	101	57.1	83	+25	14.5	50	16 27	17 04	17 45	14 14 57
6	267	36.4	-21	00.5	116	24.2	81	+25	17.5	45	16 45	17 18	17 54	14 40 56
7	282	36.2	-21	00.0	130	51.3	81		20.3	40	17 00	30	18 03	15 00 57
8	297	36.0	-20	59.5	145	18.3	80		23.0	35	12	40	11	17 57
9	312	35.8		59.1	159	45.3	80		25.6	30	23	17 49	18	32 57
10	327	35.6		58.6	174	12.2	79		28.1	20	42	18 05	32	15 57 56
11	342	35.3	-20	58.1	188	39.1	79	+25	30.4	10 N	17 58	18 20	18 46	16 18 57
12	357	35.1	-20	57.6	203	05.9	78	+25	32.5	0	18 13	18 35	19 01	16 38 57
13	12	34.9		57.2	217	32.6	77		34.6	10 S	29	18 51	18	16 59 56
14	27	34.7		56.7	231	59.3	77		36.4	20	18 46	19 10	19 38	17 20 57
15	42	34.5		56.2	246	25.9	76		38.2	30	19 05	32	20 04	17 46 55
16	57	34.3		55.7	260	52.5	76		39.8	35	16	19 45	20	18 00 56
17	72	34.1	-20	55.3	275	19.0	75	+25	41.2	40	19 29	20 01	20 40	18 18 55
18	87	33.8	-20	54.8	289	45.4	74	+25	42.5	45	19 45	20 21	21 06	18 38 55
19	102	33.6		54.3	304	11.9	75		43.7	50	20 04	46	21 43	19 05 54
20	117	33.4		53.8	318	38.2	73		44.7	52	13	20 58	22 03	17 54
21	132	33.2		53.3	333	04.6	74		45.5	54	24	21 13	22 28	32 53
22	147	33.0		52.9	347	30.8	72		46.2	56	35	30	23 07	19 49 52
23	162	32.8		52.4	1	57.1	73		46.8	58	20 49	21 51	** **	20 09 52
24	177	32.6	-20	51.9	16	23.3	72	+25	47.2	60 S	21 05	22 19	** **	20 35 50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 17 ^m 3		Mag: -4.5 PMG: 8 ^h 50 ^m		Mag: +1.4 PMG: 8 ^h 08 ^m		Mag: -2.6 PMG: 1 ^h 32 ^m		Mag: -0.3 PMG: 21 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	115	01.1	227	32.8	-18	22.0	237	51.9	-19	26.9
1	130	03.6	242	32.6		22.4	252	52.7		27.3
2	145	06.0	257	32.3		22.9	267	53.5		27.6
3	160	08.5	272	32.1		23.4	282	54.3		28.0
4	175	11.0	287	31.8		23.8	297	55.1		28.4
5	190	13.4	302	31.6	-18	24.3	312	55.9	-19	28.8
6	205	15.9	317	31.3	-18	24.7	327	56.7	-19	29.1
7	220	18.3	332	31.0		25.2	342	57.5		29.5
8	235	20.8	347	30.8		25.7	357	58.3		29.9
9	250	23.3	2	30.5		26.1	12	59.1		30.2
10	265	25.7	17	30.3		26.6	27	59.9		30.6
11	280	28.2	32	30.0	-18	27.1	43	00.7	-19	31.0
12	295	30.7	47	29.8	-18	27.5	58	01.5	-19	31.3
13	310	33.1	62	29.5		28.0	73	02.3		31.7
14	325	35.6	77	29.3		28.5	88	03.1		32.1
15	340	38.1	92	29.0		28.9	103	03.9		32.4
16	355	40.5	107	28.7		29.4	118	04.7		32.8
17	10	43.0	122	28.5	-18	29.8	133	05.5	-19	33.2
18	25	45.5	137	28.2	-18	30.3	148	06.3	-19	33.5
19	40	47.9	152	27.9		30.8	163	07.1		33.9
20	55	50.4	167	27.7		31.2	178	07.9		34.3
21	70	52.8	182	27.4		31.7	193	08.7		34.6
22	85	55.3	197	27.2		32.1	208	09.5		35.0
23	100	57.8	212	26.9		32.6	223	10.3		35.4
24	116	00.2	227	26.6	-18	33.0	238	11.1	-19	35.7
Dif	—		-3		-5		+8		-4	
							+28		+1	
									+26	
									0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 14 ^d 2 PHE { 4 ^h : 56'8 12 ^h : 57'1 20 ^h : 57'3 Rº: 56 ^m												
	PMG: 12 ^h 10 ^m 0			PMG: 23 ^h 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	177	32.6	-20 51.9	16	23.3	+25 47.2	2	60 N	6 59	7 53	8 45	13 43	80	8 59	39	
1	192	32.4	51.4	30	49.4	71 47.4	2	58	53	43	31	14 08	76	34	43	
2	207	32.2	50.9	45	15.5	71 47.5	1	56	48	35	19	28 73		8 14	45	
3	222	32.0	50.4	59	41.6	71 47.5	0	54	43	28	09	44 72		7 58	46	
4	237	31.7	50.0	74	07.7	71 47.3	2	52	39	21	8 00	14 58	70	43	48	
5	252	31.5	-20 49.5	88	33.7	70 +25 47.0	3	50	6 34	7 15	7 51	15 11	69	7 31	49	
6	267	31.3	-20 49.0	102	59.7	70 +25 46.5	5	45	6 25	7 01	7 34	15 36	67	7 05	51	
7	282	31.1	48.5	117	25.6	69 45.8	7	40	16	6 50	19	15 57	65	6 44	52	
8	297	30.9	48.0	131	51.5	69 45.0	8	35	09	40	7 07	16 14	63	27	53	
9	312	30.7	47.5	146	17.4	69 44.0	10	30	6 01	31	6 56	29 62		6 13	53	
10	327	30.5	47.0	160	43.3	69 42.9	11	20	5 47	6 14	38	16 53	61	5 47	55	
11	342	30.3	-20 46.5	175	09.2	69 +25 41.7	12	10 N	5 33	5 59	6 22	17 15	58	5 26	56	
12	357	30.1	-20 46.1	189	35.0	68 +25 40.2	15	0	5 18	5 44	6 06	17 35	57	5 05	57	
13	12	29.9	45.6	204	00.8	68 38.7	15	10 S	5 02	28	5 51	17 55	55	4 45	58	
14	27	29.7	45.1	218	26.6	68 36.9	18	20	4 42	5 10	34	18 17	53	4 23	59	
15	42	29.5	44.6	232	52.3	67 35.1	18	30	16	4 48	15	41 52		3 58	60	
16	57	29.3	44.1	247	18.1	68 33.0	21	35	4 00	35	5 04	18 56	50	43	60	
17	72	29.1	-20 43.6	261	43.8	67 +25 30.8	22	40	3 40	4 19	4 51	19 13	48	3 26	61	
18	87	28.8	-20 43.1	276	09.6	68 +25 28.5	23	45	3 14	4 00	4 35	19 33	47	3 05	62	
19	102	28.6	42.6	290	35.3	67 26.0	25	50	2 37	3 34	16	19 59	43	2 39	63	
20	117	28.4	42.1	305	01.0	67 23.3	27	52	2 18	22	4 07	20 11	42	26	64	
21	132	28.2	41.6	319	26.7	67 20.5	28	54	1 52	3 08	3 56	25 40		2 11	65	
22	147	28.0	41.1	333	52.4	67 17.5	30	56	1 13	2 50	45	20 41	38	1 54	65	
23	162	27.8	40.6	348	18.1	67 14.4	31	58	** **	29	31	21 01	34	34	66	
24	177	27.6	-20 40.1	2	43.8	67 +25 11.1	33	60 S	** **	2 02	3 15	21 25	29	1 08	68	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 16 ^h 13 ^m 3		Mag: -4.5 PMG: 8 ^h 50 ^m		Mag: +1.4 PMG: 8 ^h 07 ^m		Mag: -2.6 PMG: 1 ^h 27 ^m		Mag: -0.3 PMG: 21 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	116	00.2	227	26.6	-18 33.0	238	11.1	-19 35.7	338	04.3	+17 03.5	33	12.8	+22 01.9	
1	131	02.7	242	26.4	33.5	253	11.9	36.1	353	07.1	03.6	48	15.5	01.9	
2	146	05.2	257	26.1	33.9	268	12.7	36.5	8	09.9	03.7	63	18.1	01.9	
3	161	07.6	272	25.8	34.4	283	13.5	36.8	23	12.6	03.8	78	20.7	01.9	
4	176	10.1	287	25.5	34.9	298	14.3	37.2	38	15.4	03.9	93	23.4	01.9	
5	191	12.6	302	25.3	-18 35.3	313	15.1	-19 37.6	53	18.2	+17 04.0	108	26.0	+22 01.9	
6	206	15.0	317	25.0	-18 35.8	328	15.9	-19 37.9	68	20.9	+17 04.1	123	28.6	+22 01.9	
7	221	17.5	332	24.7	36.2	343	16.7	38.3	83	23.7	04.2	138	31.2	01.9	
8	236	20.0	347	24.5	36.7	358	17.5	38.7	98	26.4	04.3	153	33.9	01.9	
9	251	22.4	2	24.2	37.1	13	18.3	39.0	113	29.2	04.4	168	36.5	01.9	
10	266	24.9	17	23.9	37.6	28	19.1	39.4	128	32.0	04.5	183	39.1	01.9	
11	281	27.3	32	23.6	-18 38.0	43	19.9	-19 39.8	143	34.7	+17 04.6	198	41.8	+22 01.9	
12	296	29.8	47	23.4	-18 38.5	58	20.7	-19 40.1	158	37.5	+17 04.7	213	44.4	+22 01.9	
13	311	32.3	62	23.1	38.9	73	21.5	40.5	173	40.3	04.8	228	47.0	01.9	
14	326	34.7	77	22.8	39.4	88	22.3	40.8	188	43.0	04.9	243	49.6	01.9	
15	341	37.2	92	22.5	39.8	103	23.1	41.2	203	45.8	05.0	258	52.3	01.9	
16	356	39.7	107	22.2	40.3	118	23.9	41.6	218	48.6	05.1	273	54.9	01.9	
17	11	42.1	122	22.0	-18 40.7	133	24.7	-19 41.9	233	51.3	+17 05.2	288	57.5	+22 01.9	
18	26	44.6	137	21.7	-18 41.2	148	25.5	-19 42.3	248	54.1	+17 05.3	304	00.2	+22 01.9	
19	41	47.1	152	21.4	41.6	163	26.3	42.6	263	56.9	05.4	319	02.8	01.9	
20	56	49.5	167	21.1	42.1	178	27.0	43.0	278	59.6	05.5	334	05.4	01.9	
21	71	52.0	182	20.8	42.5	193	27.8	43.4	294	02.4	05.6	349	08.0	01.9	
22	86	54.5	197	20.5	43.0	208	28.6	43.7	309	05.2	05.7	4	10.7	01.9	
23	101	56.9	212	20.3	43.4	223	29.4	44.1	324	07.9	05.8	19	13.3	01.9	
24	116	59.4	227	20.0	-18 43.8	238	30.2	-19 44.4	339	10.7	+17 05.9	34	15.9	+22 01.9	
Dif	—		-3		-5	+8		-4	+28		+1	+26			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3 PMG: 12 ^h 10 ^m 3			Edad: 15 ^d 2 PHE { 4 ^h : 57/5 12 ^h : 57/7 20 ^h : 57/9 R°: ***m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	177	27.6	-20	40.1	2	43.8	+25	11.1	60 N	15 38	16 30	17 23	15 03 94	9 38 22				
1	192	27.4		39.6	17	09.5		07.7	58	15 51	39	29	24 89	9 17 27				
2	207	27.2		39.1	31	35.2		04.1	56	16 03	47	34	41 85	8 59 31				
3	222	27.0		38.6	46	00.9	+25	00.4	54	13	16 54	39	15 56 82	44 34				
4	237	26.8		38.1	60	26.6	+24	56.5	52	22	17 01	43	16 08 80	31 36				
5	252	26.6	-20	37.6	74	52.3	+24	52.4	50	16 31	17 07	17 47	16 20 77	8 20 38				
6	267	26.4	-20	37.1	89	18.1	+24	48.2	45	16 48	17 20	17 57	16 43 73	7 56 42				
7	282	26.2		36.6	103	43.8		43.9	40	17 02	32	18 05	17 02 70	36 45				
8	297	26.0		36.1	118	09.5		39.3	35	14	41	12	17 68	20 47				
9	312	25.8		35.6	132	35.3		34.7	30	25	17 50	20	31 65	7 06 49				
10	327	25.6		35.1	147	01.1		29.9	20	43	18 06	33	17 54 61	6 42 52				
11	342	25.4	-20	34.6	161	26.9	+24	24.9	10 N	17 59	18 21	18 47	18 13 59	6 22 54				
12	357	25.2	-20	34.1	175	52.7	+24	19.8	0	18 14	18 36	19 02	18 32 56	6 02 57				
13	12	25.0		33.6	190	18.5		14.5	10 S	29	18 52	18	18 50 53	5 43 59				
14	27	24.8		33.1	204	44.3		09.1	20	18 46	19 09	19 38	19 10 50	5 22 61				
15	42	24.6		32.6	219	10.2	+24	03.5	30	19 05	31	20 03	33 46	4 58 64				
16	57	24.4		32.0	233	36.1	+23	57.8	35	16	19 44	19	19 46 44	43 66				
17	72	24.2	-20	31.5	248	02.0	+23	51.9	40	19 28	20 00	20 39	20 01 42	4 27 67				
18	87	24.0	-20	31.0	262	28.0	+23	45.9	45	19 44	20 19	21 04	20 20 38	4 07 70				
19	102	23.8		30.5	276	53.9		39.7	50	20 02	43	39	42 34	3 42 73				
20	117	23.6		30.0	291	19.9		33.4	52	11	20 56	21 58	20 53 31	30 75				
21	132	23.4		29.5	305	46.0		26.9	54	21	21 09	22 23	21 05 29	3 16 77				
22	147	23.2		29.0	320	12.0		20.3	56	33	26	22 58	19 25	2 59 81				
23	162	23.0		28.5	334	38.1		13.5	58	20 46	21 46	** **	35 22	40 84				
24	177	22.8	-20	27.9	349	04.3	+23	06.6	60 S	21 01	22 12	** **	21 54 17	2 16 89				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 16 ^h 09 ^m 4		Mag: -4.5 PMG: 8 ^h 51 ^m			Mag: +1.4 PMG: 8 ^h 06 ^m			Mag: -2.6 PMG: 1 ^h 23 ^m				Mag: -0.3 PMG: 21 ^h 39 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	116	59.4	227	20.0	-18	43.8	238	30.2	-19	44.4	339	10.7	+17	05.9	34	15.9	+22	01.9
1	132	01.8	242	19.7		44.3	253	31.0		44.8	354	13.4		05.9	49	18.5		01.9
2	147	04.3	257	19.4		44.7	268	31.8		45.2	9	16.2		06.0	64	21.2		01.9
3	162	06.8	272	19.1		45.2	283	32.6		45.5	24	19.0		06.1	79	23.8		01.9
4	177	09.2	287	18.8		45.6	298	33.4		45.9	39	21.7		06.2	94	26.4		01.9
5	192	11.7	302	18.5	-18	46.1	313	34.2	-19	46.2	54	24.5	+17	06.3	109	29.1	+22	01.9
6	207	14.2	317	18.2	-18	46.5	328	35.0	-19	46.6	69	27.3	+17	06.4	124	31.7	+22	01.9
7	222	16.6	332	17.9		46.9	343	35.8		47.0	84	30.1		06.5	139	34.3		01.9
8	237	19.1	347	17.6		47.4	358	36.6		47.3	99	32.8		06.6	154	36.9		01.9
9	252	21.6	2	17.3		47.8	13	37.4		47.7	114	35.6		06.7	169	39.6		01.9
10	267	24.0	17	17.1		48.3	28	38.2		48.0	129	38.4		06.8	184	42.2		01.9
11	282	26.5	32	16.8	-18	48.7	43	39.0	-19	48.4	144	41.1	+17	06.9	199	44.8	+22	01.9
12	297	28.9	47	16.5	-18	49.1	58	39.8	-19	48.7	159	43.9	+17	07.0	214	47.4	+22	01.9
13	312	31.4	62	16.2		49.6	73	40.6		49.1	174	46.7		07.1	229	50.1		01.9
14	327	33.9	77	15.9		50.0	88	41.4		49.5	189	49.4		07.2	244	52.7		01.9
15	342	36.3	92	15.6		50.5	103	42.1		49.8	204	52.2		07.3	259	55.3		01.9
16	357	38.8	107	15.3		50.9	118	42.9		50.2	219	55.0		07.4	274	57.9		01.9
17	12	41.3	122	15.0	-18	51.3	133	43.7	-19	50.5	234	57.7	+17	07.5	290	00.6	+22	01.9
18	27	43.7	137	14.7	-18	51.8	148	44.5	-19	50.9	250	00.5	+17	07.6	305	03.2	+22	01.9
19	42	46.2	152	14.4		52.2	163	45.3		51.2	265	03.3		07.7	320	05.8		01.9
20	57	48.7	167	14.1		52.6	178	46.1		51.6	280	06.0		07.8	335	08.4		01.9
21	72	51.1	182	13.8		53.1	193	46.9		51.9	295	08.8		07.9	350	11.0		01.9
22	87	53.6	197	13.5		53.5	208	47.7		52.3	310	11.6		08.0	5	13.7		01.9
23	102	56.1	212	13.1		53.9	223	48.5		52.6	325	14.4		08.1	20	16.3		01.9
24	117	58.5	227	12.8	-18	54.4	238	49.3	-19	53.0	340	17.1	+17	08.2	35	18.9	+22	01.9
Dif	—		-3		-4		+8		-4		+28		+1		+26		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 16 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 58'2 20 ^h : 58'4													
	PMG: 12 ^h 10 ^m 6			SD: 15'8 PMG: 0 ^h 45 ^m R ^o : 56 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'		°	'	°	h	m	h	m		h	m	m
0	177	22.8	-20 27.9	349	04.3	+23 06.6	70	60 N	6 57	7 50	8 42	16 37	99	10 00	13		
1	192	22.7	27.4	3	30.4	+22 59.6	70	58	51	41	28	16 53	94	9 44	18		
2	207	22.5	26.9	17	56.6	72	52.4	72	56	46	33	17 06	90	30	22		
3	222	22.3	26.4	32	22.9	73	45.1	73	54	42	26	8 07	18 86	18	25		
4	237	22.1	25.9	46	49.1	72	37.6	75	52	37	19	7 58	28 84	9 07	28		
5	252	21.9	-20 25.4	61	15.5	74	+22 30.0	76	50	6 33	7 13	7 50	17 37	81	8 58	29	
6	267	21.7	-20 24.8	75	41.8	73	+22 22.2	78	45	6 24	7 00	7 33	17 56	76	8 38	34	
7	282	21.5	24.3	90	08.2	74	14.3	79	40	16	6 49	18	18 12	72	21	38	
8	297	21.3	23.8	104	34.7	75	+22 06.3	80	35	08	39	7 06	25 69	8 07	41		
9	312	21.1	23.3	119	01.1	74	+21 58.1	82	30	6 01	30	6 56	36 66	7 55	44		
10	327	20.9	22.8	133	27.7	76	49.8	83	20	5 47	14	38	18 55	62	34	48	
11	342	20.7	-20 22.2	147	54.3	76	+21 41.4	84	10 N	5 34	6 00	6 22	19 12	57	7 16	51	
12	357	20.5	-20 21.7	162	20.9	76	+21 32.8	86	0	5 19	5 45	6 07	19 28	53	6 59	55	
13	12	20.3	21.2	176	47.5	76	24.1	87	10 S	5 03	29	5 52	19 43	50	42	58	
14	27	20.1	20.7	191	14.3	78	15.2	89	20	4 43	5 12	36	20 00	46	23	62	
15	42	20.0	20.1	205	41.0	77	+21 06.3	89	30	18	4 50	17	19 41		6 02	65	
16	57	19.8	19.6	220	07.8	78	+20 57.2	91	35	4 02	37	5 06	30 38		5 49	68	
17	72	19.6	-20 19.1	234	34.7	79	+20 47.9	93	40	3 42	4 21	4 53	20 43	35	5 34	72	
18	87	19.4	-20 18.6	249	01.6	79	+20 38.5	94	45	3 17	4 02	4 38	20 58	31	5 17	75	
19	102	19.2	18.0	263	28.6	80	29.1	94	50	2 42	3 38	19	21 16	26	4 55	80	
20	117	19.0	17.5	277	55.6	80	19.4	97	52	2 23	26	10	24 24		45	82	
21	132	18.8	17.0	292	22.7	81	+20 09.7	97	54	1 59	3 12	4 00	34 21		33	85	
22	147	18.6	16.5	306	49.8	81	+19 59.8	99	56	1 23	2 55	3 49	44 18		20	88	
23	162	18.4	15.9	321	17.0	82	49.8	100	58	** **	35	36	21 57	14	4 04	93	
24	177	18.3	-20 15.4	335	44.2	82	+19 39.7	101	60 S	** **	2 09	3 20	22 11	9	3 45	99	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 05 ^m 5		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.4 PMG: 8 ^h 04 ^m		Mag: -2.6 PMG: 1 ^h 19 ^m		Mag: -0.3 PMG: 21 ^h 35 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	117	58.5	227	12.8	-18	54.4	238	49.3	-19	53.0	340	17.1	+17	08.2	35	18.9	+22	01.9
1	133	01.0	242	12.5		54.8	253	50.1		53.4	355	19.9		08.3	50	21.5		01.9
2	148	03.4	257	12.2		55.2	268	50.9		53.7	10	22.7		08.4	65	24.2		01.9
3	163	05.9	272	11.9		55.7	283	51.7		54.1	25	25.4		08.5	80	26.8		01.9
4	178	08.4	287	11.6		56.1	298	52.4		54.4	40	28.2		08.6	95	29.4		01.9
5	193	10.8	302	11.3	-18	56.5	313	53.2	-19	54.8	55	31.0	+17	08.7	110	32.0	+22	01.9
6	208	13.3	317	11.0	-18	57.0	328	54.0	-19	55.1	70	33.7	+17	08.8	125	34.7	+22	01.9
7	223	15.8	332	10.7		57.4	343	54.8		55.5	85	36.5		08.9	140	37.3		01.9
8	238	18.2	347	10.4		57.8	358	55.6		55.8	100	39.3		09.0	155	39.9		01.9
9	253	20.7	2	10.1		58.2	13	56.4		56.2	115	42.1		09.1	170	42.5		01.9
10	268	23.2	17	09.7		58.7	28	57.2		56.5	130	44.8		09.1	185	45.1		01.9
11	283	25.6	32	09.4	-18	59.1	43	58.0	-19	56.9	145	47.6	+17	09.2	200	47.8	+22	01.9
12	298	28.1	47	09.1	-18	59.5	58	58.8	-19	57.2	160	50.4	+17	09.3	215	50.4	+22	01.9
13	313	30.6	62	08.8	-18	59.9	73	59.6		57.6	175	53.1		09.4	230	53.0		01.9
14	328	33.0	77	08.5	-19	00.4	89	00.4		57.9	190	55.9		09.5	245	55.6		01.9
15	343	35.5	92	08.2		00.8	104	01.1		58.3	205	58.7		09.6	260	58.3		01.9
16	358	37.9	107	07.8		01.2	119	01.9		58.6	221	01.5		09.7	276	00.9		01.9
17	13	40.4	122	07.5	-19	01.6	134	02.7	-19	59.0	236	04.2	+17	09.8	291	03.5	+22	01.9
18	28	42.9	137	07.2	-19	02.1	149	03.5	-19	59.3	251	07.0	+17	09.9	306	06.1	+22	01.9
19	43	45.3	152	06.9		02.5	164	04.3	-19	59.7	266	09.8		10.0	321	08.7		01.9
20	58	47.8	167	06.6		02.9	179	05.1	-20	00.0	281	12.6		10.1	336	11.4		01.9
21	73	50.3	182	06.2		03.3	194	05.9	-20	00.4	296	15.3		10.2	351	14.0		01.9
22	88	52.7	197	05.9		03.7	209	06.7		00.7	311	18.1		10.3	6	16.6		01.9
23	103	55.2	212	05.6		04.2	224	07.5		01.1	326	20.9		10.4	21	19.2		01.9
24	118	57.7	227	05.3	-19	04.6	239	08.3	-20	01.4	341	23.6	+17	10.5	36	21.8	+22	01.9
Dif	—		-3		-4		+8		-4		+28		+1		+26			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 10 ^m 9			Edad: 17 ^d 2 PHE { 4 ^h : 58 ['] 5 12 ^h : 58 ['] 7 20 ^h : 58 ['] 8 PMG: 1 ^h 41 ^m R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	177	18.3	-20	15.4	335	44.2	+19	39.7	60 N	15 43	16 34	17 27	18 16 99	10 13 8
1	192	18.1		14.9	350	11.5	83	29.5	58	15 56	43	32	27 94	10 02 12
2	207	17.9		14.3	4	38.8	83	19.1	56	16 07	51	37	36 91	9 52 15
3	222	17.7		13.8	19	06.2	84	+19 08.7	54	17	16 58	42	44 88	43 18
4	237	17.5		13.3	33	33.7	85	+18 58.1	52	26	17 04	46	52 84	35 21
5	252	17.3	-20	12.7	48	01.2	85	+18 47.4	50	16 34	17 10	17 50	18 58 82	9 27 24
6	267	17.1	-20	12.2	62	28.7	85	+18 36.6	45	16 50	17 23	17 59	19 12 77	9 12 29
7	282	16.9		11.7	76	56.4	87	25.6	40	17 04	34	18 07	24 72	8 59 33
8	297	16.8		11.1	91	24.0	86	14.6	35	16	43	14	34 68	48 36
9	312	16.6		10.6	105	51.8	88	+18 03.4	30	26	17 52	21	42 66	39 39
10	327	16.4		10.0	120	19.6	88	+17 52.2	20	17 44	18 08	35	19 57 60	22 44
11	342	16.2	-20	09.5	134	47.4	88	+17 40.8	10 N	18 00	18 22	18 48	20 09 56	8 07 49
12	357	16.0	-20	09.0	149	15.3	89	+17 29.3	0	18 15	18 37	19 02	20 21 52	7 54 52
13	12	15.8		08.4	163	43.2	89	17.7	10 S	29	18 52	18	33 47	40 56
14	27	15.7		07.9	178	11.3	91	+17 06.1	20	18 45	19 09	19 38	20 46 42	25 61
15	42	15.5		07.4	192	39.3	90	+16 54.3	30	19 04	30	20 02	21 00 37	7 07 66
16	57	15.3		06.8	207	07.4	91	42.4	35	15	43	18	08 35	6 57 69
17	72	15.1	-20	06.3	221	35.6	92	+16 30.4	40	19 27	19 59	20 37	21 18 31	6 46 72
18	87	14.9	-20	05.7	236	03.9	93	+16 18.3	45	19 42	20 17	21 02	21 29 26	6 32 77
19	102	14.7		05.2	250	32.2	93	+16 06.1	50	20 00	41	36	42 22	15 82
20	117	14.6		04.6	265	00.5	93	+15 53.8	52	09	20 53	21 54	48 19	6 07 85
21	132	14.4		04.1	279	28.9	94	41.5	54	19	21 06	22 17	21 55 17	5 58 88
22	147	14.2		03.5	293	57.4	95	29.0	56	30	22	22 49	22 02 14	48 91
23	162	14.0		03.0	308	25.9	95	16.4	58	43	21 41	** **	11 10	37 95
24	177	13.8	-20	02.5	322	54.5	96	+15 03.8	60 S	20 57	22 06	** **	22 20 7	5 24 99
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 01 ^m 5		Mag: -4.5 PMG: 8 ^h 52 ^m		Mag: +1.4 PMG: 8 ^h 03 ^m		Mag: -2.6 PMG: 1 ^h 14 ^m		Mag: -0.3 PMG: 21 ^h 31 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	118	57.7	227	05.3	-19	04.6	239	08.3	341	23.6				
1	134	00.1	242	04.9		05.0	254	09.0		10.6				
2	149	02.6	257	04.6		05.4	269	09.8	11	29.2				
3	164	05.1	272	04.3		05.8	284	10.6	26	32.0				
4	179	07.5	287	04.0		06.3	299	11.4	41	34.7				
5	194	10.0	302	03.6	-19	06.7	314	12.2	56	37.5				
6	209	12.4	317	03.3	-19	07.1	329	13.0	71	40.3				
7	224	14.9	332	03.0		07.5	344	13.8	86	43.1				
8	239	17.4	347	02.6		07.9	359	14.6	101	45.8				
9	254	19.8	2	02.3		08.3	14	15.4	116	48.6				
10	269	22.3	17	02.0		08.7	29	16.1	131	51.4				
11	284	24.8	32	01.6	-19	09.2	44	16.9	146	54.2				
12	299	27.2	47	01.3	-19	09.6	59	17.7	161	56.9				
13	314	29.7	62	01.0		10.0	74	18.5	176	59.7				
14	329	32.2	77	00.6		10.4	89	19.3	192	02.5				
15	344	34.6	92	00.3		10.8	104	20.1	207	05.3				
16	359	37.1	107	00.0		11.2	119	20.9	222	08.0				
17	14	39.6	121	59.6	-19	11.6	134	21.7	237	10.8				
18	29	42.0	136	59.3	-19	12.0	149	22.4	252	13.6				
19	44	44.5	151	59.0		12.4	164	23.2	267	16.4				
20	59	46.9	166	58.6		12.8	179	24.0	282	19.1				
21	74	49.4	181	58.3		13.3	194	24.8	297	21.9				
22	89	51.9	196	57.9		13.7	209	25.6	312	24.7				
23	104	54.3	211	57.6		14.1	224	26.4	327	27.5				
24	119	56.8	226	57.3	-19	14.5	239	27.2	342	30.3				
Dif	—		-3		-4		+8		-3					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 11 ^m 2			Edad: 18 ^d 2 PHE { SD: 16'0 PMG: 2 ^h 34 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	177	13.8	-20	02.5	322	54.5	+15	03.8	60 N	6 54	7 47	8 38	19 55	97	10 21	6			
1	192	13.7		01.9	337	23.1	+14	51.0	58	49	38	25	20 01	93	14	9			
2	207	13.5		01.4	351	51.8		38.2	56	44	31	14	07 90		07	13			
3	222	13.3		00.8	6	20.5		25.3	54	40	24	8 04	12 86		10 01	16			
4	237	13.1	-20	00.3	20	49.3	+14	12.3	52	36	17	7 56	16 84		9 56	18			
5	252	12.9	-19	59.7	35	18.1	+13	59.2	50	6 32	7 11	7 48	20 20	82	9 51	20			
6	267	12.8	-19	59.2	49	47.0	+13	46.1	45	6 23	6 59	7 31	20 29	76	9 41	25			
7	282	12.6		58.6	64	15.9		32.8	40	15	48	17	36 72		32	29			
8	297	12.4		58.1	78	44.9		19.5	35	08	38	7 06	42 68		24	33			
9	312	12.2		57.5	93	14.0	+13	06.1	30	6 01	30	6 55	48 64		18	35			
10	327	12.1		57.0	107	43.1	+12	52.6	20	5 47	14	38	20 57	59	9 06	41			
11	342	11.9	-19	56.4	122	12.2	+12	39.1	10 N	5 34	6 00	6 22	21 05	54	8 56	46			
12	357	11.7	-19	55.8	136	41.4	+12	25.4	0	5 20	5 46	6 08	21 13	49	8 46	50			
13	12	11.5		55.3	151	10.7	+12	11.7	10 S	5 04	30	5 53	20 45		36	55			
14	27	11.3		54.7	165	39.9	+11	58.0	20	4 45	5 13	37	28 40		26	59			
15	42	11.2		54.2	180	09.3		44.1	30	20	4 52	18	37 35		13	66			
16	57	11.0		53.6	194	38.7		30.2	35	4 04	39	5 08	43 31		8 06	69			
17	72	10.8	-19	53.1	209	08.1	+11	16.3	40	3 45	4 24	4 55	21 49	28	7 58	72			
18	87	10.6	-19	52.5	223	37.6	+11	02.2	45	3 21	4 05	4 40	21 55	24	7 49	76			
19	102	10.5		51.9	238	07.1	+10	48.1	50	2 47	3 42	22	22 04	19	37	82			
20	117	10.3		51.4	252	36.7		34.0	52	28	30	13	07 17		32	84			
21	132	10.1		50.8	267	06.3		19.8	54	2 05	16	4 04	12 14		26	87			
22	147	10.0		50.3	281	35.9	+10	05.5	56	1 33	3 01	3 53	16 11		19	90			
23	162	09.8		49.7	296	05.6	+9	51.1	58	** **	2 41	40	21 8		12	94			
24	177	09.6	-19	49.1	310	35.3	+9	36.8	60 S	** **	2 17	3 25	22 27	5	7 03	98			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 15 ^h 57 ^m 6		Mag: -4.5 PMG: 8 ^h 52 ^m			Mag: +1.4 PMG: 8 ^h 02 ^m			Mag: -2.6 PMG: 1 ^h 10 ^m			Mag: -0.3 PMG: 21 ^h 27 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	119	56.8	226	57.3	-19	14.5	239	27.2	-20	09.7	342	30.3	+17	12.9	37	24.7	+22	01.9	
1	134	59.3	241	56.9		14.9	254	27.9		10.0	357	33.0		13.0	52	27.3		01.9	
2	150	01.7	256	56.6		15.3	269	28.7		10.3	12	35.8		13.1	67	29.9		01.9	
3	165	04.2	271	56.2		15.7	284	29.5		10.7	27	38.6		13.2	82	32.5		01.9	
4	180	06.7	286	55.9		16.1	299	30.3		11.0	42	41.4		13.3	97	35.1		01.9	
5	195	09.1	301	55.5	-19	16.5	314	31.1	-20	11.4	57	44.1	+17	13.4	112	37.7	+22	01.9	
6	210	11.6	316	55.2	-19	16.9	329	31.9	-20	11.7	72	46.9	+17	13.5	127	40.3	+22	01.9	
7	225	14.0	331	54.8		17.3	344	32.7		12.0	87	49.7		13.6	142	43.0		01.9	
8	240	16.5	346	54.5		17.7	359	33.4		12.4	102	52.5		13.7	157	45.6		01.9	
9	255	19.0	1	54.1		18.1	14	34.2		12.7	117	55.2		13.8	172	48.2		01.9	
10	270	21.4	16	53.8		18.5	29	35.0		13.1	132	58.0		13.9	187	50.8		01.9	
11	285	23.9	31	53.4	-19	18.9	44	35.8	-20	13.4	148	00.8	+17	14.0	202	53.4	+22	01.9	
12	300	26.4	46	53.1	-19	19.3	59	36.6	-20	13.7	163	03.6	+17	14.1	217	56.0	+22	01.9	
13	315	28.8	61	52.7		19.7	74	37.4		14.1	178	06.4		14.2	232	58.6		01.9	
14	330	31.3	76	52.4		20.1	89	38.2		14.4	193	09.1		14.3	248	01.3		01.9	
15	345	33.8	91	52.0		20.5	104	38.9		14.8	208	11.9		14.4	263	03.9		01.9	
16	0	36.2	106	51.7		20.9	119	39.7		15.1	223	14.7		14.5	278	06.5		01.9	
17	15	38.7	121	51.3	-19	21.3	134	40.5	-20	15.4	238	17.5	+17	14.6	293	09.1	+22	01.9	
18	30	41.2	136	51.0	-19	21.7	149	41.3	-20	15.8	253	20.3	+17	14.7	308	11.7	+22	01.9	
19	45	43.6	151	50.6		22.1	164	42.1		16.1	268	23.0		14.8	323	14.3		01.9	
20	60	46.1	166	50.2		22.5	179	42.9		16.4	283	25.8		14.9	338	16.9		01.9	
21	75	48.5	181	49.9		22.9	194	43.6		16.8	298	28.6		15.0	353	19.5		01.9	
22	90	51.0	196	49.5		23.2	209	44.4		17.1	313	31.4		15.0	8	22.2		01.9	
23	105	53.5	211	49.2		23.6	224	45.2		17.4	328	34.2		15.1	23	24.8		01.9	
24	120	55.9	226	48.8	-19	24.0	239	46.0	-20	17.8	343	36.9	+17	15.2	38	27.4	+22	01.9	
Dif	—		-4			-4	+8			-3	+28		+1		+26				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 11 ^m 5			Edad: 19 ^d 2 PHE { SD: 16:1 PMG: 3 ^h 25 ^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	177	09.6	-19 49.1	310	35.3	+9 36.8		60 N	15 47	16 38	17 31	21 32 96	10 27 4			
1	192	09.4		325	05.1 ¹⁰⁸	22.3 ¹⁴⁵		58	16 00	47	36	34 93	23 8			
2	207	09.3		339	34.9 ¹⁰⁸	+9 07.8 ¹⁴⁵		56	11	16 54	41	37 88	20 11			
3	222	09.1		354	04.8 ¹⁰⁹	+8 53.3 ¹⁴⁵		54	21	17 01	45	38 86	17 13			
4	237	08.9		8	34.6 ¹⁰⁸	38.7 ¹⁴⁶		52	29	07	49	40 83	14 16			
5	252	08.8	-19 46.3	23	04.6 ¹¹⁰	+8 24.0 ¹⁴⁷		50	16 37	17 13	17 53	21 42 81	10 11 19			
6	267	08.6	-19 45.8	37	34.5 ¹⁰⁹	+8 09.3 ¹⁴⁷		45	16 53	17 25	18 01	21 45 76	10 06 23			
7	282	08.4		52	04.5 ¹¹⁰	+7 54.6 ¹⁴⁷		40	17 07	36	09	48 71	10 01 27			
8	297	08.2		66	34.5 ¹¹⁰	39.8 ¹⁴⁸		35	18	45	16	50 68	9 57 31			
9	312	08.1		81	04.6 ¹¹¹	25.0 ¹⁴⁸		30	28	17 54	23	52 64	53 34			
10	327	07.9		95	34.7 ¹¹¹	+7 10.1 ¹⁴⁹		20	17 45	18 09	36	56 58	47 40			
11	342	07.7	-19 42.9	110	04.8 ¹¹¹	+6 55.2 ¹⁴⁹		10 N	18 01	18 23	18 49	21 59 54	9 42 44			
12	357	07.6	-19 42.4	124	35.0 ¹¹²	+6 40.2 ¹⁵⁰		0	18 15	18 37	19 03	22 02 49	9 36 49			
13	12	07.4		139	05.2 ¹¹²	25.2 ¹⁵⁰		10 S	30	18 52	18	05 44	31 54			
14	27	07.2		153	35.4 ¹¹²	+6 10.2 ¹⁵⁰		20	18 45	19 09	19 37	08 40	25 59			
15	42	07.1		168	05.6 ¹¹²	+5 55.2 ¹⁵⁰		30	19 03	30	20 01	12 34	19 64			
16	57	06.9		182	35.9 ¹¹³	40.1 ¹⁵¹		35	14	42	17	14 31	15 67			
17	72	06.7	-19 39.5	197	06.1 ¹¹²	+5 25.0 ¹⁵¹		40	19 26	19 57	20 35	22 17 26	9 10 72			
18	87	06.6	-19 38.9	211	36.5 ¹¹⁴	+5 09.8 ¹⁵²		45	19 41	20 15	20 59	22 19 23	9 05 76			
19	102	06.4		226	06.8 ¹¹³	+4 54.6 ¹⁵²		50	19 58	38	21 32	23 17	8 59 81			
20	117	06.2		240	37.1 ¹¹³	39.4 ¹⁵²		52	20 07	20 50	21 50	24 16	56 84			
21	132	06.1		255	07.5 ¹¹⁴	24.2 ¹⁵²		54	16	21 03	22 12	26 13	53 86			
22	147	05.9		269	37.9 ¹¹⁴	+4 08.9 ¹⁵³		56	27	18	22 41	27 11	49 90			
23	162	05.7		284	08.3 ¹¹⁴	+3 53.7 ¹⁵²		58	39	21 37	23 33	29 8	46 92			
24	177	05.6	-19 35.5	298	38.8 ¹¹⁵	+3 38.4 ¹⁵³		60 S	20 53	22 00	** **	22 32 4	8 41 97			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 53 ^m 7		Mag: -4.5 PMG: 8 ^h 53 ^m			Mag: +1.4 PMG: 8 ^h 01 ^m			Mag: -2.6 PMG: 1 ^h 05 ^m			Mag: -0.3 PMG: 21 ^h 22 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	120	55.9	226 48.8	-19 24.0		239 46.0	-20 17.8		343 36.9	+17 15.2		38 27.4	+22 01.9			
1	135	58.4	241 48.4	24.4		254 46.8	18.1		358 39.7	15.3		53 30.0	01.9			
2	151	00.9	256 48.1	24.8		269 47.6	18.4		13 42.5	15.4		68 32.6	01.9			
3	166	03.3	271 47.7	25.2		284 48.3	18.8		28 45.3	15.5		83 35.2	01.9			
4	181	05.8	286 47.3	25.6		299 49.1	19.1		43 48.1	15.6		98 37.8	01.9			
5	196	08.3	301 47.0	-19 26.0		314 49.9	-20 19.4		58 50.8	+17 15.7		113 40.4	+22 01.9			
6	211	10.7	316 46.6	-19 26.4		329 50.7	-20 19.8		73 53.6	+17 15.8		128 43.1	+22 01.9			
7	226	13.2	331 46.3	26.8		344 51.5	20.1		88 56.4	15.9		143 45.7	01.9			
8	241	15.6	346 45.9	27.1		359 52.3	20.4		103 59.2	16.0		158 48.3	01.9			
9	256	18.1	1 45.5	27.5		14 53.0	20.8		119 02.0	16.1		173 50.9	01.9			
10	271	20.6	16 45.2	27.9		29 53.8	21.1		134 04.7	16.2		188 53.5	01.9			
11	286	23.0	31 44.8	-19 28.3		44 54.6	-20 21.4		149 07.5	+17 16.3		203 56.1	+22 01.9			
12	301	25.5	46 44.4	-19 28.7		59 55.4	-20 21.8		164 10.3	+17 16.4		218 58.7	+22 01.9			
13	316	28.0	61 44.0	29.1		74 56.2	22.1		179 13.1	16.5		234 01.3	01.9			
14	331	30.4	76 43.7	29.4		89 56.9	22.4		194 15.9	16.6		249 03.9	01.9			
15	346	32.9	91 43.3	29.8		104 57.7	22.8		209 18.6	16.7		264 06.5	01.9			
16	1	35.4	106 42.9	30.2		119 58.5	23.1		224 21.4	16.8		279 09.2	01.9			
17	16	37.8	121 42.6	-19 30.6		134 59.3	-20 23.4		239 24.2	+17 16.9		294 11.8	+22 01.9			
18	31	40.3	136 42.2	-19 31.0		150 00.1	-20 23.8		254 27.0	+17 17.0		309 14.4	+22 01.9			
19	46	42.8	151 41.8	31.3		165 00.9	24.1		269 29.8	17.1		324 17.0	01.9			
20	61	45.2	166 41.4	31.7		180 01.6	24.4		284 32.6	17.2		339 19.6	01.9			
21	76	47.7	181 41.1	32.1		195 02.4	24.8		299 35.3	17.3		354 22.2	01.9			
22	91	50.1	196 40.7	32.5		210 03.2	25.1		314 38.1	17.4		9 24.8	01.9			
23	106	52.6	211 40.3	32.9		225 04.0	25.4		329 40.9	17.5		24 27.4	01.9			
24	121	55.1	226 39.9	-19 33.2		240 04.8	-20 25.7		344 43.7	+17 17.6		39 30.0	+22 01.9			
Dif	—		-4		-4	+8		-3	+28		+1	+26			0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 20 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3											
	PMG: 12 ^h 11 ^m 8				SD: 16:1			PMG: 4 ^h 14 ^m			R°: 48 ^m				
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	05.6	-19 35.5	298	38.8	+3 38.4	60 N	6 52	7 44	8 34	23 08	97	10 31	5	
1	192	05.4	34.9	313	09.2 ¹¹⁴	23.0 ¹⁵⁴	58	46	36	22	07 92		31	8	
2	207	05.2	34.3	327	39.7 ¹¹⁵	+3 07.7 ¹⁵³	56	42	28	11	05 90		31	10	
3	222	05.1	33.7	342	10.1 ¹¹⁴	+2 52.3 ¹⁵⁴	54	38	21	8 02	04 87		30	14	
4	237	04.9	33.2	356	40.6 ¹¹⁵	37.0 ¹⁵³	52	34	15	7 53	03 84		30	16	
5	252	04.7	-19 32.6	11	11.1 ¹¹⁵	+2 21.6 ¹⁵⁴	50	6 30	7 10	7 46	23 03	81	10 30	18	
6	267	04.6	-19 32.0	25	41.6 ¹¹⁵	+2 06.2 ¹⁵⁴	45	6 21	6 57	7 29	23 01	75	10 29	23	
7	282	04.4	31.4	40	12.2 ¹¹⁶	+1 50.8 ¹⁵⁴	40	14	47	16	22 59	71	28	27	
8	297	04.3	30.8	54	42.7 ¹¹⁵	35.4 ¹⁵⁴	35	07	38	7 05	58 67		28	31	
9	312	04.1	30.2	69	13.2 ¹¹⁵	19.9 ¹⁵⁵	30	6 00	29	6 55	56 65		27	34	
10	327	03.9	29.7	83	43.8 ¹¹⁶	+1 04.5 ¹⁵⁴	20	5 47	14	38	54 59		27	39	
11	342	03.8	-19 29.1	98	14.3 ¹¹⁵	+0 49.1 ¹⁵⁴	10 N	5 35	6 00	6 22	22 53	53	10 26	44	
12	357	03.6	-19 28.5	112	44.9 ¹¹⁶	+0 33.6 ¹⁵⁵	0	5 21	5 46	6 08	22 51	49	10 25	49	
13	12	03.5	27.9	127	15.4 ¹¹⁵	18.2 ¹⁵⁴	10 S	5 05	31	5 54	49 45		25	53	
14	27	03.3	27.3	141	46.0 ¹¹⁶	+0 02.7 ¹⁵⁵	20	4 46	5 14	38	48 39		24	58	
15	42	03.1	26.7	156	16.6 ¹¹⁶	-0 12.7 ¹⁵⁴	30	22	4 54	20	46 34		23	64	
16	57	03.0	26.1	170	47.1 ¹¹⁵	28.2 ¹⁵⁵	35	4 07	41	5 10	45 31		22	68	
17	72	02.8	-19 25.6	185	17.7 ¹¹⁶	-0 43.6 ¹⁵⁴	40	3 48	4 27	4 58	22 43	28	10 22	71	
18	87	02.7	-19 25.0	199	48.2 ¹¹⁵	-0 59.1 ¹⁵⁵	45	3 24	4 08	4 43	22 42	23	10 21	76	
19	102	02.5	24.4	214	18.8 ¹¹⁶	-1 14.5 ¹⁵⁴	50	2 51	3 45	25	40 19		20	81	
20	117	02.3	23.8	228	49.3 ¹¹⁵	30.0 ¹⁵⁵	52	34	34	17	40 16		20	83	
21	132	02.2	23.2	243	19.9 ¹¹⁶	-1 45.4 ¹⁵⁴	54	2 12	21	4 08	39 14		19	86	
22	147	02.0	22.6	257	50.4 ¹¹⁵	-2 00.8 ¹⁵⁴	56	1 43	3 06	3 57	38 11		19	89	
23	162	01.9	22.0	272	20.9 ¹¹⁵	16.2 ¹⁵⁴	58	0 50	2 47	45	37 8		18	92	
24	177	01.7	-19 21.4	286	51.4 ¹¹⁵	-2 31.6 ¹⁵⁴	60 S	** **	2 24	3 31	22 36	5	10 18	96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 49 ^m 7		Mag: -4.4 PMG: 8 ^h 54 ^m		Mag: +1.4 PMG: 7 ^h 59 ^m		Mag: -2.6 PMG: 1 ^h 01 ^m		Mag: -0.3 PMG: 21 ^h 18 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	121	55.1	226	39.9	-19 33.2	240 04.8	-20 25.7	344 43.7	+17 17.6	39 30.0	+22 01.9			
1	136	57.5	241	39.5	33.6	255 05.5	26.1	359 46.5	17.7	54 32.6	01.9			
2	152	00.0	256	39.2	34.0	270 06.3	26.4	14 49.3	17.8	69 35.2	01.9			
3	167	02.5	271	38.8	34.4	285 07.1	26.7	29 52.0	17.9	84 37.8	01.9			
4	182	04.9	286	38.4	34.7	300 07.9	27.0	44 54.8	18.0	99 40.5	01.9			
5	197	07.4	301	38.0	-19 35.1	315 08.7	-20 27.4	59 57.6	+17 18.1	114 43.1	+22 01.9			
6	212	09.9	316	37.6	-19 35.5	330 09.4	-20 27.7	75 00.4	+17 18.2	129 45.7	+22 01.9			
7	227	12.3	331	37.3	35.8	345 10.2	28.0	90 03.2	18.3	144 48.3	01.9			
8	242	14.8	346	36.9	36.2	0 11.0	28.4	105 06.0	18.4	159 50.9	01.9			
9	257	17.3	1 36.5	36.6	15 11.8	28.7	120 08.7	18.5	174 53.5	01.9				
10	272	19.7	16 36.1	37.0	30 12.6	29.0	135 11.5	18.6	189 56.1	01.9				
11	287	22.2	31 35.7	-19 37.3	45 13.3	-20 29.3	150 14.3	+17 18.7	204 58.7	+22 01.9				
12	302	24.6	46 35.3	-19 37.7	60 14.1	-20 29.7	165 17.1	+17 18.8	220 01.3	+22 01.9				
13	317	27.1	61 34.9	38.1	75 14.9	30.0	180 19.9	18.9	235 03.9	01.9				
14	332	29.6	76 34.6	38.4	90 15.7	30.3	195 22.7	19.0	250 06.5	01.9				
15	347	32.0	91 34.2	38.8	105 16.5	30.6	210 25.4	19.1	265 09.1	01.9				
16	2 34.5	106 33.8	39.2	120 17.2	31.0	225 28.2	19.2	225 28.2	19.2	280 11.7	01.9			
17	17 37.0	121 33.4	-19 39.5	135 18.0	-20 31.3	240 31.0	+17 19.3	240 31.0	+17 19.3	295 14.3	+22 01.9			
18	32 39.4	136 33.0	-19 39.9	150 18.8	-20 31.6	255 33.8	+17 19.4	255 33.8	+17 19.4	310 16.9	+22 01.9			
19	47 41.9	151 32.6	40.3	165 19.6	31.9	270 36.6	19.5	270 36.6	19.5	325 19.5	01.9			
20	62 44.4	166 32.2	40.6	180 20.3	32.3	285 39.4	19.6	285 39.4	19.6	340 22.2	01.9			
21	77 46.8	181 31.8	41.0	195 21.1	32.6	300 42.2	19.7	300 42.2	19.7	355 24.8	01.9			
22	92 49.3	196 31.4	41.3	210 21.9	32.9	315 44.9	19.8	315 44.9	19.8	10 27.4	01.9			
23	107 51.7	211 31.0	41.7	225 22.7	33.2	330 47.7	19.9	330 47.7	19.9	25 30.0	01.9			
24	122 54.2	226 30.6	-19 42.1	240 23.5	-20 33.5	345 50.5	+17 20.0	345 50.5	+17 20.0	40 32.6	+22 01.9			
Dif	—		-4		+8		+28		+1		+26		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 0			Edad: 21 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2 PMG: 5 ^h 02 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	01.7	-19 21.4	286	51.4	-2 31.6		60 N	15 52	16 42	17 35	** ** *		10 36	5
1	192	01.6		301	21.9 ¹¹⁵	-2 47.0 ¹⁵⁴		58	16 05		51 40	** ** *		39	8
2	207	01.4		315	52.4 ¹¹⁵	-3 02.3 ¹⁵³		56	15	16 58	44	** ** *		41	12
3	222	01.2		330	22.9 ¹¹⁵		17.7 ¹⁵⁴	54	24	17 04	48	** ** *		44	14
4	237	01.1		344	53.4 ¹¹⁵		33.0 ¹⁵³	52	33	10	52	** ** *		46	17
5	252	00.9	-19 18.5	359	23.8 ¹¹⁴	-3 48.3 ¹⁵³		50	16 40	17 16	17 56	** ** *		10 48	19
6	267	00.8	-19 17.9	13	54.3 ¹¹⁵	-4 03.6 ¹⁵³		45	16 56	17 28	18 04	** ** *		10 52	24
7	282	00.6		28	24.7 ¹¹⁴		18.8 ¹⁵²	40	17 09		38 11	** ** *		55	29
8	297	00.5		42	55.1 ¹¹⁴		34.1 ¹⁵³	35	20		47 18	** ** *		10 59	31
9	312	00.3		57	25.4 ¹¹³	-4 49.3 ¹⁵²		30	30	17 55	24	** ** *		11 01	35
10	327	00.2		71	55.8 ¹¹⁴	-5 04.5 ¹⁵²		20	17 47	18 10	37	23 53	60	06	40
11	342	00.0	-19 14.9	86	26.1 ¹¹³	-5 19.6 ¹⁵¹		10 N	18 02	18 24	18 49	23 46	55	11 10	45
12	356	59.9	-19 14.3	100	56.4 ¹¹³	-5 34.8 ¹⁵²		0	18 16	18 37	19 03	23 40	51	11 14	50
13	11	59.7		115	26.7 ¹¹³	-5 49.9 ¹⁵¹		10 S	30	18 52	18	34 46		18	54
14	26	59.6		129	57.0 ¹¹³	-6 05.0 ¹⁵¹		20	18 45	19 09	19 37	27 42		22	59
15	41	59.4		144	27.2 ¹¹²		20.0 ¹⁵⁰	30	19 03	29	20 00	20 36		27	65
16	56	59.2		158	57.4 ¹¹²		35.0 ¹⁵⁰	35	13	41	15	16 33		30	68
17	71	59.1	-19 11.3	173	27.6 ¹¹²	-6 50.0 ¹⁵⁰		40	19 25	19 55	20 34	23 11	30	11 33	72
18	86	58.9	-19 10.7	187	57.7 ¹¹¹	-7 04.9 ¹⁴⁹		45	19 39	20 13	20 57	23 05	26	11 37	76
19	101	58.8		202	27.8 ¹¹¹		19.8 ¹⁴⁹	50	19 56	36	21 29	22 59	21	41	82
20	116	58.6		216	57.9 ¹¹¹		34.6 ¹⁴⁸	52	20 04	47	21 45	56 18		43	84
21	131	58.5		231	28.0 ¹¹¹	-7 49.4 ¹⁴⁸		54	13	20 59	22 06	53 15		45	87
22	146	58.3		245	58.0 ¹¹⁰	-8 04.2 ¹⁴⁸		56	23	21 14	22 33	49 13		48	90
23	161	58.2		260	28.0 ¹¹⁰	18.9 ¹⁴⁷		58	35	31	23 16	45 10		50	94
24	176	58.0	-19 07.0	274	57.9 ¹⁰⁹	-8 33.6 ¹⁴⁷		60 S	20 49	21 53	** ** *	22 41	6	11 54	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 15 ^h 45 ^m 8		Mag: -4.4 PMG: 8 ^h 54 ^m		Mag: +1.3 PMG: 7 ^h 58 ^m		Mag: -2.6 PMG: 0 ^h 56 ^m		Mag: -0.3 PMG: 21 ^h 14 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	122	54.2	226	30.6	-19 42.1	240 23.5	-20 33.5	345 50.5	+17 20.0	40 32.6	+22 01.9
1	137	56.7	241	30.2	42.4	255 24.2	33.9	0 53.3	20.1	55 35.2	01.9
2	152	59.1	256	29.8	42.8	270 25.0	34.2	15 56.1	20.2	70 37.8	01.9
3	168	01.6	271	29.5	43.1	285 25.8	34.5	30 58.9	20.3	85 40.4	01.9
4	183	04.1	286	29.1	43.5	300 26.6	34.8	46 01.7	20.4	100 43.0	01.9
5	198	06.5	301	28.7	-19 43.9	315 27.3	-20 35.2	61 04.4	+17 20.5	115 45.6	+22 01.9
6	213	09.0	316	28.3	-19 44.2	330 28.1	-20 35.5	76 07.2	+17 20.6	130 48.2	+22 01.9
7	228	11.5	331	27.9	44.6	345 28.9	35.8	91 10.0	20.7	145 50.8	01.9
8	243	13.9	346	27.5	44.9	0 29.7	36.1	106 12.8	20.8	160 53.4	01.9
9	258	16.4	1 27.1	45.3	15 30.4	36.4	121 15.6	20.9	175 56.0	01.9	
10	273	18.9	16 26.7	45.6	30 31.2	36.8	136 18.4	21.0	190 58.6	01.9	
11	288	21.3	31 26.2	-19 46.0	45 32.0	-20 37.1	151 21.2	+17 21.1	206 01.2	+22 01.9	
12	303	23.8	46 25.8	-19 46.3	60 32.8	-20 37.4	166 23.9	+17 21.2	221 03.8	+22 01.9	
13	318	26.2	61 25.4	46.7	75 33.6	37.7	181 26.7	21.3	236 06.4	01.9	
14	333	28.7	76 25.0	47.0	90 34.3	38.0	196 29.5	21.4	251 09.0	01.9	
15	348	31.2	91 24.6	47.4	105 35.1	38.4	211 32.3	21.5	266 11.6	01.9	
16	3 33.6	106 24.2	47.7	120 35.9	38.7	226 35.1	21.6	281 14.2	02.0		
17	18 36.1	121 23.8	-19 48.1	135 36.7	-20 39.0	241 37.9	+17 21.7	296 16.8	+22 02.0		
18	33 38.6	136 23.4	-19 48.4	150 37.4	-20 39.3	256 40.7	+17 21.8	311 19.4	+22 02.0		
19	48 41.0	151 23.0	48.8	165 38.2	39.6	271 43.5	21.9	326 22.0	02.0		
20	63 43.5	166 22.6	49.1	180 39.0	39.9	286 46.2	22.0	341 24.6	02.0		
21	78 46.0	181 22.2	49.5	195 39.8	40.3	301 49.0	22.1	356 27.2	02.0		
22	93 48.4	196 21.8	49.8	210 40.5	40.6	316 51.8	22.2	11 29.8	02.0		
23	108 50.9	211 21.4	50.2	225 41.3	40.9	331 54.6	22.3	26 32.4	02.0		
24	123 53.4	226 21.0	-19 50.5	240 42.1	-20 41.2	346 57.4	+17 22.4	41 35.0	+22 02.0		
Dif	—	-4	-4	+8	-3	+28	+1	+26			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 12 ^m 2			Edad: 22 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/1 SD: 16:1 PMG: 5 ^h 52 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	176	58.0	-19 07.0	274	57.9	-8 33.6	60 N	6 49	7 41	8 30	0 45	98	10 41	7
1	191	57.9	06.4	289	27.8 ¹⁰⁹	-8 48.2 ¹⁴⁶	58	44	33	18	39	95	47	11
2	206	57.8	05.8	303	57.7 ¹⁰⁹	-9 02.8 ¹⁴⁶	56	39	25	8 08	35	91	53	14
3	221	57.6	05.2	318	27.5 ¹⁰⁸	17.3 ¹⁴⁵	54	35	19	7 59	31	87	10 58	17
4	236	57.5	04.6	332	57.3 ¹⁰⁸	31.8 ¹⁴⁵	52	32	13	51	27	85	11 03	20
5	251	57.3	-19 04.0	347	27.0 ¹⁰⁷	-9 46.2 ¹⁴⁴	50	6 28	7 08	7 43	0 24	82	11 07	22
6	266	57.2	-19 03.4	1	56.7 ¹⁰⁷	-10 00.6 ¹⁴⁴	45	6 20	6 56	7 28	0 16	77	11 16	28
7	281	57.0	02.8	16	26.4 ¹⁰⁷	14.9 ¹⁴³	40	13	46	15	10	73	24	31
8	296	56.9	02.1	30	56.0 ¹⁰⁶	29.2 ¹⁴³	35	06	37	7 04	05	69	30	35
9	311	56.7	01.5	45	25.6 ¹⁰⁶	43.4 ¹⁴²	30	6 00	29	6 54	0 01	65	36	38
10	326	56.6	00.9	59	55.1 ¹⁰⁵	-10 57.5 ¹⁴¹	20	5 47	14	37	** ** *	**	46	44
11	341	56.4	-19 00.3	74	24.6 ¹⁰⁵	-11 11.6 ¹⁴¹	10 N	5 35	6 00	6 23	** ** *	**	11 55	48
12	356	56.3	-18 59.7	88	54.0 ¹⁰⁴	-11 25.6 ¹⁴⁰	0	5 21	5 47	6 09	** ** *	**	12 04	52
13	11	56.1	59.1	103	23.4 ¹⁰⁴	39.5 ¹³⁹	10 S	5 06	32	5 55	** ** *	**	12 56	
14	26	56.0	58.5	117	52.7 ¹⁰³	-11 53.4 ¹³⁹	20	4 48	5 16	40	** ** *	**	21 61	
15	41	55.9	57.8	132	22.0 ¹⁰³	-12 07.2 ¹³⁸	30	24	4 56	22	23 56	40	32	66
16	56	55.7	57.2	146	51.2 ¹⁰²	21.0 ¹³⁸	35	4 09	44	12	49	37	38	69
17	71	55.6	-18 56.6	161	20.4 ¹⁰²	-12 34.7 ¹³⁷	40	3 51	4 29	5 00	23 41	34	12 45	72
18	86	55.4	-18 56.0	175	49.5 ¹⁰¹	-12 48.3 ¹³⁶	45	3 28	4 12	4 46	23 31	30	12 53	77
19	101	55.3	55.4	190	18.6 ¹⁰¹	-13 01.8 ¹³⁵	50	2 56	3 49	29	20 25	25	13 03	82
20	116	55.1	54.8	204	47.6 ¹⁰⁰	15.3 ¹³⁵	52	40	38	21	14	23	07	85
21	131	55.0	54.1	219	16.6 ¹⁰⁰	28.7 ¹³⁴	54	2 19	26	12	08	20	12	88
22	146	54.9	53.5	233	45.5 ⁹⁹	42.0 ¹³³	56	1 52	3 11	4 01	23 02	17	18	91
23	161	54.7	52.9	248	14.3 ⁹⁸	-13 55.2 ¹³²	58	1 09	2 53	3 50	22 55	13	24	95
24	176	54.6	-18 52.3	262	43.1 ⁹⁸	-14 08.4 ¹³²	60 S	** ** *	2 32	3 36	22 47	8	13 31	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 15 ^h 41 ^m 9		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.3 PMG: 7 ^h 57 ^m		Mag: -2.6 PMG: 0 ^h 52 ^m		Mag: -0.2 PMG: 21 ^h 10 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	123	53.4	226	21.0	-19 50.5	240 42.1	-20 41.2	346 57.4	+17 22.4	41 35.0	+22 02.0
1	138	55.8	241	20.5	50.9	255 42.9	41.5	2 00.2	22.5	56 37.6	02.0
2	153	58.3	256	20.1	51.2	270 43.6	41.8	17 03.0	22.6	71 40.2	02.0
3	169	00.7	271	19.7	51.6	285 44.4	42.1	32 05.8	22.7	86 42.8	02.0
4	184	03.2	286	19.3	51.9	300 45.2	42.5	47 08.5	22.8	101 45.4	02.0
5	199	05.7	301	18.9	-19 52.2	315 46.0	-20 42.8	62 11.3	+17 22.9	116 48.0	+22 02.0
6	214	08.1	316	18.5	-19 52.6	330 46.7	-20 43.1	77 14.1	+17 23.0	131 50.6	+22 02.0
7	229	10.6	331	18.1	52.9	345 47.5	43.4	92 16.9	23.1	146 53.2	02.0
8	244	13.1	346	17.6	53.3	0 48.3	43.7	107 19.7	23.2	161 55.8	02.0
9	259	15.5	1	17.2	53.6	15 49.1	44.0	122 22.5	23.3	176 58.4	02.0
10	274	18.0	16	16.8	53.9	30 49.8	44.3	137 25.3	23.4	192 01.0	02.0
11	289	20.5	31	16.4	-19 54.3	45 50.6	-20 44.7	152 28.1	+17 23.5	207 03.6	+22 02.0
12	304	22.9	46	16.0	-19 54.6	60 51.4	-20 45.0	167 30.9	+17 23.6	222 06.2	+22 02.0
13	319	25.4	61	15.6	54.9	75 52.1	45.3	182 33.6	23.7	237 08.8	02.0
14	334	27.8	76	15.1	55.3	90 52.9	45.6	197 36.4	23.8	252 11.4	02.0
15	349	30.3	91	14.7	55.6	105 53.7	45.9	212 39.2	23.9	267 14.0	02.0
16	4	32.8	106	14.3	55.9	120 54.5	46.2	227 42.0	24.0	282 16.6	02.0
17	19	35.2	121	13.9	-19 56.3	135 55.2	-20 46.5	242 44.8	+17 24.1	297 19.2	+22 02.0
18	34	37.7	136	13.4	-19 56.6	150 56.0	-20 46.8	257 47.6	+17 24.2	312 21.8	+22 02.0
19	49	40.2	151	13.0	56.9	165 56.8	47.2	272 50.4	24.3	327 24.4	02.0
20	64	42.6	166	12.6	57.3	180 57.6	47.5	287 53.2	24.4	342 27.0	02.0
21	79	45.1	181	12.2	57.6	195 58.3	47.8	302 56.0	24.5	357 29.6	02.0
22	94	47.6	196	11.7	57.9	210 59.1	48.1	317 58.7	24.6	12 32.2	02.0
23	109	50.0	211	11.3	58.3	225 59.9	48.4	333 01.5	24.7	27 34.8	02.0
24	124	52.5	226	10.9	-19 58.6	241 00.7	-20 48.7	348 04.3	+17 24.8	42 37.4	+22 02.0
Dif	—		-4		-3	+8	-3	+28	+1	+26	

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: 23 ^d 2 PHE { 4 ^h : 59:1 12 ^h : 59:0 20 ^h : 59:0 PMG: 6 ^h 43 ^m R°: 54 ^m					Civil	Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	54.6	-18 52.3	262	43.1	-14 08.4		60 N	15 57	16 47	17 39	2 23 101	10 48 10	
1	191	54.4		277	11.8	97 21.4	130	58	16 09	16 55	43	14 95	10 58 16	
2	206	54.3	51.0	291	40.5	97 34.4	130	56	19	17 02	48	2 06 91	11 07 20	
3	221	54.2	50.4	306	09.1	96 -14 47.3	129	54	28	08	51	1 58 88	15 23	
4	236	54.0	49.8	320	37.7	96 -15 00.2	129	52	36	14	55	52 85	23 25	
5	251	53.9	-18 49.2	335	06.2	95 -15 12.9	127	50	16 43	17 19	17 58	1 46 82	11 29 28	
6	266	53.7	-18 48.5	349	34.6	94 -15 25.5	126	45	16 59	17 31	18 06	1 33 77	11 44 32	
7	281	53.6	47.9	4	02.9	93 38.1	126	40	17 11	40	13	23 73	11 55 37	
8	296	53.5	47.3	18	31.3	94 -15 50.6	125	35	22	49	20	14 69	12 05 40	
9	311	53.3	46.6	32	59.5	92 -16 02.9	123	30	32	17 57	26	1 06 67	14 43	
10	326	53.2	46.0	47	27.7	92 15.2	123	20	17 48	18 11	38	0 53 61	30 47	
11	341	53.1	-18 45.4	61	55.8	91 -16 27.4	122	10 N	18 02	18 25	18 50	0 41 58	12 43 51	
12	356	52.9	-18 44.8	76	23.8	90 -16 39.5	121	0	18 16	18 38	19 03	0 31 53	12 56 54	
13	11	52.8	44.1	90	51.8	90 -16 51.5	120	10 S	30	18 52	18	20 49	13 08 59	
14	26	52.6	43.5	105	19.8	90 -17 03.4	119	20	18 45	19 08	36	0 09 45	22 62	
15	41	52.5	42.9	119	47.6	88 15.2	118	30	19 02	28	19 59	*** ** *	38 66	
16	56	52.4	42.2	134	15.4	88 26.9	117	35	12	40	20 14	*** ** *	47 69	
17	71	52.2	-18 41.6	148	43.1	87 -17 38.5	116	40	19 23	19 54	20 31	*** ** *	13 57 73	
18	86	52.1	-18 41.0	163	10.8	87 -17 49.9	114	45	19 37	20 11	20 54	*** ** *	14 10 76	
19	101	52.0	40.3	177	38.4	86 -18 01.3	114	50	19 53	33	21 25	23 45 31	25 81	
20	116	51.8	39.7	192	05.9	85 12.6	113	52	20 01	43	21 41	37 29	32 84	
21	131	51.7	39.1	206	33.4	85 23.8	112	54	10	20 55	22 00	28 27	40 87	
22	146	51.6	38.4	221	00.8	84 34.8	110	56	20	21 10	22 25	19 23	49 90	
23	161	51.4	37.8	235	28.1	83 45.7	109	58	31	26	23 02	23 08 19	14 59 94	
24	176	51.3	-18 37.2	249	55.4	83 -18 56.6	109	60 S	20 44	21 47	** ** *	22 55 15	15 10 100	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 37 ^m 9		Mag: -4.4 PMG: 8 ^h 56 ^m		Mag: +1.3 PMG: 7 ^h 56 ^m		Mag: -2.6 PMG: 0 ^h 48 ^m		Mag: -0.2 PMG: 21 ^h 06 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	°	°	'				
0	124	52.5	226 10.9	-19 58.6	241 00.7	-20 48.7	348 04.3	+17 24.8	42 37.4	+22 02.0				
1	139	55.0	241 10.5	58.9	256 01.4	49.0	3 07.1	24.9	57 40.0	02.0				
2	154	57.4	256 10.0	59.2	271 02.2	49.3	18 09.9	25.0	72 42.6	02.0				
3	169	59.9	271 09.6	59.6	286 03.0	49.6	33 12.7	25.1	87 45.1	02.0				
4	185	02.3	286 09.2	-19 59.9	301 03.7	49.9	48 15.5	25.2	102 47.7	02.0				
5	200	04.8	301 08.7	-20 00.2	316 04.5	-20 50.3	63 18.3	+17 25.3	117 50.3	+22 02.0				
6	215	07.3	316 08.3	-20 00.5	331 05.3	-20 50.6	78 21.1	+17 25.4	132 52.9	+22 02.0				
7	230	09.7	331 07.9	00.9	346 06.1	50.9	93 23.9	25.5	147 55.5	02.0				
8	245	12.2	346 07.4	01.2	1 06.8	51.2	108 26.7	25.6	162 58.1	02.0				
9	260	14.7	1 07.0	01.5	16 07.6	51.5	123 29.4	25.7	178 00.7	02.0				
10	275	17.1	16 06.6	01.8	31 08.4	51.8	138 32.2	25.8	193 03.3	02.0				
11	290	19.6	31 06.1	-20 02.1	46 09.1	-20 52.1	153 35.0	+17 25.9	208 05.9	+22 02.0				
12	305	22.1	46 05.7	-20 02.5	61 09.9	-20 52.4	168 37.8	+17 26.0	223 08.5	+22 02.0				
13	320	24.5	61 05.3	02.8	76 10.7	52.7	183 40.6	26.1	238 11.1	02.0				
14	335	27.0	76 04.8	03.1	91 11.5	53.0	198 43.4	26.2	253 13.7	02.0				
15	350	29.5	91 04.4	03.4	106 12.2	53.3	213 46.2	26.3	268 16.3	02.0				
16	5 31.9	106 04.0	03.7	121 13.0	53.6	228 49.0	26.4	283 18.9	26.4	02.0				
17	20 34.4	121 03.5	-20 04.1	136 13.8	-20 53.9	243 51.8	+17 26.5	298 21.5	+22 02.0					
18	35 36.8	136 03.1	-20 04.4	151 14.5	-20 54.2	258 54.6	+17 26.6	313 24.1	+22 02.0					
19	50 39.3	151 02.7	04.7	166 15.3	54.5	273 57.4	26.7	328 26.6	02.0					
20	65 41.8	166 02.2	05.0	181 16.1	54.8	289 00.1	26.8	343 29.2	02.0					
21	80 44.2	181 01.8	05.3	196 16.8	55.1	304 02.9	26.9	358 31.8	02.0					
22	95 46.7	196 01.3	05.6	211 17.6	55.4	319 05.7	27.0	13 34.4	02.0					
23	110 49.2	211 00.9	05.9	226 18.4	55.8	334 08.5	27.1	28 37.0	02.0					
24	125 51.6	226 00.4	-20 06.2	241 19.2	-20 56.1	349 11.3	+17 27.2	43 39.6	+22 02.0					
Dif	—	—	-4 -3	+8 -3	+28 +1	+26 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: 24 ^d 2 PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7 SD: 16:0 PMG: 7 ^h 37 ^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	176	51.3	-18	37.2	249	55.4	-18	56.6	60 N	6 45	7 37	8 26	4 04	99	10 58	19		
1	191	51.2		36.5	264	22.6	82	-19 07.3	58	41	29	15	3 49	93	11 14	24		
2	206	51.0		35.9	278	49.7	81	17.9	56	37	22	8 05	37	89	27	28		
3	221	50.9		35.3	293	16.7	80	28.4	54	33	16	7 56	26	85	38	33		
4	236	50.8		34.6	307	43.7	80	38.7	52	29	11	48	17	82	48	34		
5	251	50.6	-18	34.0	322	10.7	80	-19 49.0	50	6 26	7 05	7 41	3 08	80	11 57	36		
6	266	50.5	-18	33.3	336	37.5	78	-19 59.1	45	6 18	6 54	7 26	2 50	76	12 16	41		
7	281	50.4		32.7	351	04.3	78	-20 09.1	40	12	44	13	36	72	32	43		
8	296	50.3		32.1	5	31.1	78	19.0	35	6 05	36	7 03	23	69	45	46		
9	311	50.1		31.4	19	57.7	76	28.8	30	5 59	28	6 53	2 13	66	12 57	48		
10	326	50.0		30.8	34	24.3	76	38.4	20	47	14	37	1 54	63	13 17	51		
11	341	49.9	-18	30.1	48	50.9	76	-20 47.9	10 N	5 35	6 01	6 23	1 39	59	13 34	55		
12	356	49.7	-18	29.5	63	17.3	74	-20 57.3	0	5 22	5 47	6 09	1 24	56	13 50	58		
13	11	49.6		28.8	77	43.7	74	-21 06.5	10 S	5 07	33	5 55	1 09	53	14 07	60		
14	26	49.5		28.2	92	10.1	74	15.6	20	4 49	5 17	41	0 54	49	24	63		
15	41	49.4		27.6	106	36.4	73	24.6	30	26	4 58	24	36	46	44	67		
16	56	49.2		26.9	121	02.6	72	33.5	35	4 12	46	14	26	43	14 56	68		
17	71	49.1	-18	26.3	135	28.7	71	-21 42.2	40	3 54	4 32	5 02	0 15	39	15 10	70		
18	86	49.0	-18	25.6	149	54.8	71	-21 50.8	45	3 32	4 15	4 49	0 01	36	15 26	74		
19	101	48.8		25.0	164	20.9	71	-21 59.2	50	3 01	3 53	32	** ** *	**	46	78		
20	116	48.7		24.3	178	46.8	69	-22 07.6	52	2 45	42	24	** ** *	**	15 56	79		
21	131	48.6		23.7	193	12.7	69	15.7	54	26	30	16	23	55	37	82		
22	146	48.5		23.0	207	38.6	69	23.8	56	2 01	16	4 06	42	35	19	85		
23	161	48.3		22.4	222	04.4	68	31.7	58	1 23	3 00	3 54	27	31	33	89		
24	176	48.2	-18	21.7	236	30.1	67	-22 39.4	60 S	** ** *	2 39	3 41	23 10	26	16 50	94		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 15 ^h 34 ^m 0			Mag: -4.4 PMG: 8 ^h 56 ^m			Mag: +1.3 PMG: 7 ^h 54 ^m			Mag: -2.6 PMG: 0 ^h 43 ^m			Mag: -0.2 PMG: 21 ^h 02 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	125	51.6	226	00.4	-20	06.2	241	19.2	-20	56.1	349	11.3	+17	27.2	43	39.6	+22	02.0
1	140	54.1	241	00.0		06.6	256	19.9		56.4	4	14.1		27.3	58	42.2		02.0
2	155	56.6	255	59.6		06.9	271	20.7		56.7	19	16.9		27.4	73	44.8		02.0
3	170	59.0	270	59.1		07.2	286	21.5		57.0	34	19.7		27.5	88	47.4		02.0
4	186	01.5	285	58.7		07.5	301	22.2		57.3	49	22.5		27.6	103	50.0		02.0
5	201	03.9	300	58.2	-20	07.8	316	23.0	-20	57.6	64	25.3	+17	27.7	118	52.6	+22	02.0
6	216	06.4	315	57.8	-20	08.1	331	23.8	-20	57.9	79	28.1	+17	27.8	133	55.2	+22	02.0
7	231	08.9	330	57.3		08.4	346	24.5		58.2	94	30.9		27.9	148	57.7		02.0
8	246	11.3	345	56.9		08.7	1	25.3		58.5	109	33.7		28.0	164	00.3		02.0
9	261	13.8	0	56.4		09.0	16	26.1		58.8	124	36.4		28.1	179	02.9		02.1
10	276	16.3	15	56.0		09.3	31	26.8		59.1	139	39.2		28.2	194	05.5		02.1
11	291	18.7	30	55.5	-20	09.6	46	27.6	-20	59.4	154	42.0	+17	28.3	209	08.1	+22	02.1
12	306	21.2	45	55.1	-20	09.9	61	28.4	-20	59.7	169	44.8	+17	28.4	224	10.7	+22	02.1
13	321	23.7	60	54.6		10.2	76	29.1	-21	00.0	184	47.6		28.5	239	13.3		02.1
14	336	26.1	75	54.2		10.5	91	29.9	-21	00.3	199	50.4		28.6	254	15.9		02.1
15	351	28.6	90	53.7		10.8	106	30.7		00.6	214	53.2		28.8	269	18.5		02.1
16	6	31.1	105	53.3		11.1	121	31.5		00.9	229	56.0		28.9	284	21.0		02.1
17	21	33.5	120	52.8	-20	11.4	136	32.2	-21	01.2	244	58.8	+17	29.0	299	23.6	+22	02.1
18	36	36.0	135	52.4	-20	11.7	151	33.0	-21	01.5	260	01.6	+17	29.1	314	26.2	+22	02.1
19	51	38.4	150	51.9		12.0	166	33.8		01.8	275	04.4		29.2	329	28.8		02.1
20	66	40.9	165	51.5		12.3	181	34.5		02.1	290	07.2		29.3	344	31.4		02.1
21	81	43.4	180	51.0		12.6	196	35.3		02.4	305	10.0		29.4	359	34.0		02.1
22	96	45.8	195	50.6		12.9	211	36.1		02.7	320	12.8		29.5	14	36.6		02.1
23	111	48.3	210	50.1		13.2	226	36.8		03.0	335	15.6		29.6	29	39.2		02.1
24	126	50.8	225	49.7	-20	13.5	241	37.6	-21	03.2	350	18.3	+17	29.7	44	41.8	+22	02.1
Dif	—			-4 -3			+8 -3			+28 +1			+26 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 9			Edad: 25 ^d 2 PHE { 4 ^h : 58°6 12 ^h : 58°5 20 ^h : 58°4 SD: 16°0 PMG: 8 ^h 34 ^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	h m m			
0	176	48.2	-18	21.7	236	30.1	-22	39.4	60 N	16 03	16 51	17 43	5 43 88	11 17 34				
1	191	48.1		21.1	250	55.8	67	47.0	58	14	16 59	47	22 83	38 38				
2	206	48.0		20.4	265	21.4	66	-22 54.5	56	23	17 05	51	5 06 79	11 55 42				
3	221	47.8		19.8	279	47.0	66	-23 01.8	54	32	12	55	4 51 78	12 09 44				
4	236	47.7		19.1	294	12.5	65	09.0	52	40	17	57 58	39 75	22 46				
5	251	47.6	-18	18.5	308	38.0	65	-23 16.0	50	16 47	17 22	18 01	4 28 74	12 33 47				
6	266	47.5	-18	17.8	323	03.4	64	-23 22.9	45	17 01	17 33	18 09	4 06 70	12 57 49				
7	281	47.4		17.2	337	28.8	64	29.6	40	14	43	15	3 48 68	13 15 52				
8	296	47.2		16.5	351	54.1	63	36.2	35	24	51	22	32 67	31 53				
9	311	47.1		15.9	6	19.4	63	42.7	30	33	17 59	27	3 19 65	13 45 54				
10	326	47.0		15.2	20	44.6	62	48.9	20	17 49	18 12	39	2 57 62	14 08 56				
11	341	46.9	-18	14.5	35	09.8	62	-23 55.1	10 N	18 03	18 25	18 51	2 38 60	14 29 57				
12	356	46.8	-18	13.9	49	34.9	61	-24 01.1	0	18 16	18 38	19 03	2 20 58	14 48 58				
13	11	46.6		13.2	64	00.0	61	06.9	10 S	30	18 52	18	2 02 56	15 07 60				
14	26	46.5		12.6	78	25.0	60	12.6	20	18 44	19 08	35	1 43 54	27 61				
15	41	46.4		11.9	92	50.0	60	18.1	30	19 01	27	19 58	22 51	15 51 63				
16	56	46.3		11.3	107	15.0	60	23.4	35	10	38	20 12	1 09 49	16 04 64				
17	71	46.2	-18	10.6	121	39.9	59	-24 28.6	40	19 22	19 52	20 29	0 54 48	16 20 66				
18	86	46.0	-18	09.9	136	04.8	59	-24 33.7	45	19 35	20 09	20 51	0 37 45	16 40 66				
19	101	45.9		09.3	150	29.7	59	38.6	50	51	30	21 21	16 42	17 04 68				
20	116	45.8		08.6	164	54.5	58	43.3	52	19 58	40	36	0 06 40	15 70				
21	131	45.7		07.9	179	19.3	58	47.9	54	20 07	20 51	21 54	** ** *	29 70				
22	146	45.6		07.3	193	44.1	58	52.3	56	16	21 05	22 18	** ** *	17 44 72				
23	161	45.5		06.6	208	08.8	57	-24 56.6	58	27	21	22 51	23 58 49	18 02 74				
24	176	45.3	-18	06.0	222	33.5	57	-25 00.6	60 S	20 40	21 41	** ** *	23 36 46	18 24 78				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 30 ^m 1		Mag: -4.4 PMG: 8 ^h 57 ^m			Mag: +1.3 PMG: 7 ^h 53 ^m			Mag: -2.6 PMG: 0 ^h 39 ^m			Mag: -0.2 PMG: 20 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	126	50.8	225	49.7	-20	13.5	241	37.6	-21	03.2	350	18.3	+17	29.7	44	41.8	+22	02.1
1	141	53.2	240	49.2		13.8	256	38.4		03.5	5	21.1		29.8	59	44.3		02.1
2	156	55.7	255	48.7		14.1	271	39.1		03.8	20	23.9		29.9	74	46.9		02.1
3	171	58.2	270	48.3		14.4	286	39.9		04.1	35	26.7		30.0	89	49.5		02.1
4	187	00.6	285	47.8		14.6	301	40.7		04.4	50	29.5		30.1	104	52.1		02.1
5	202	03.1	300	47.4	-20	14.9	316	41.4	-21	04.7	65	32.3	+17	30.2	119	54.7	+22	02.1
6	217	05.6	315	46.9	-20	15.2	331	42.2	-21	05.0	80	35.1	+17	30.3	134	57.3	+22	02.1
7	232	08.0	330	46.4		15.5	346	43.0		05.3	95	37.9		30.4	149	59.9		02.1
8	247	10.5	345	46.0		15.8	1	43.7		05.6	110	40.7		30.5	165	02.4		02.1
9	262	12.9	0	45.5		16.1	16	44.5		05.9	125	43.5		30.6	180	05.0		02.1
10	277	15.4	15	45.0		16.4	31	45.3		06.2	140	46.3		30.7	195	07.6		02.1
11	292	17.9	30	44.6	-20	16.6	46	46.0	-21	06.5	155	49.1	+17	30.8	210	10.2	+22	02.1
12	307	20.3	45	44.1	-20	16.9	61	46.8	-21	06.8	170	51.9	+17	30.9	225	12.8	+22	02.1
13	322	22.8	60	43.7		17.2	76	47.6		07.1	185	54.7		31.0	240	15.4		02.1
14	337	25.3	75	43.2		17.5	91	48.3		07.4	200	57.5		31.1	255	18.0		02.1
15	352	27.7	90	42.7		17.8	106	49.1		07.7	216	00.3		31.2	270	20.5		02.1
16	7	30.2	105	42.3		18.1	121	49.9		08.0	231	03.1		31.3	285	23.1		02.1
17	22	32.7	120	41.8	-20	18.3	136	50.6	-21	08.2	246	05.8	+17	31.4	300	25.7	+22	02.1
18	37	35.1	135	41.3	-20	18.6	151	51.4	-21	08.5	261	08.6	+17	31.5	315	28.3	+22	02.1
19	52	37.6	150	40.9		18.9	166	52.1		08.8	276	11.4		31.6	330	30.9		02.1
20	67	40.1	165	40.4		19.2	181	52.9		09.1	291	14.2		31.7	345	33.5		02.1
21	82	42.5	180	39.9		19.5	196	53.7		09.4	306	17.0		31.8	0	36.0		02.1
22	97	45.0	195	39.5		19.7	211	54.4		09.7	321	19.8		31.9	15	38.6		02.1
23	112	47.4	210	39.0		20.0	226	55.2		10.0	336	22.6		32.0	30	41.2		02.1
24	127	49.9	225	38.5	-20	20.3	241	56.0	-21	10.3	351	25.4	+17	32.1	45	43.8	+22	02.1
Dif	—		-5		-3		+8		-3		+28		+1		+26			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 26 ^d 2 PHE { 4 ^h : 58 ^m 3 12 ^h : 58 ^m 2 20 ^h : 58 ^m 0 SD: 15:9 PMG: 9 ^h 32 ^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	45.3	-18	06.0	222	33.5	-25	00.6	60 N	6 42	7 33	8 22	7 11	64	11 51	59
1	191	45.2		05.3	236	58.2	57	04.6	58	38	26	11	6 45	64	12 16	59
2	206	45.1		04.6	251	22.9	57	08.4	56	34	19	8 01	25	63	37	59
3	221	45.0		04.0	265	47.5	56	12.0	54	30	13	7 53	6 09	62	12 53	60
4	236	44.9		03.3	280	12.1	56	15.4	52	27	08	45	5 54	63	13 08	59
5	251	44.8	-18	02.6	294	36.7	56	-25	50	6 24	7 03	7 38	5 42	62	13 20	60
6	266	44.6	-18	02.0	309	01.3	56	-25	45	6 17	6 52	7 24	5 16	62	13 46	60
7	281	44.5		01.3	323	25.9	56	24.8	40	10	43	12	4 56	61	14 07	59
8	296	44.4	-18	00.6	337	50.5	56	27.6	35	6 04	35	7 01	39	61	24	60
9	311	44.3	-18	00.0	352	15.0	55	30.2	30	5 58	27	6 52	4 24	61	14 39	59
10	326	44.2	-17	59.3	6	39.6	56	32.7	20	47	13	36	3 59	60	15 04	59
11	341	44.1	-17	58.6	21	04.1	55	-25	10 N	5 35	6 01	6 23	3 38	60	15 26	59
12	356	44.0	-17	57.9	35	28.6	55	-25	0	5 22	5 48	6 10	3 18	59	15 46	59
13	11	43.9		57.3	49	53.2	56	39.1	10 S	5 08	34	5 56	2 58	59	16 07	58
14	26	43.7		56.6	64	17.7	55	40.9	20	4 51	19	42	37	58	28	59
15	41	43.6		55.9	78	42.2	55	42.5	30	28	5 00	26	2 13	57	16 54	57
16	56	43.5		55.3	93	06.7	55	44.0	35	4 14	4 48	16	1 58	57	17 08	58
17	71	43.4	-17	54.6	107	31.3	56	-25	40	3 57	4 34	5 05	1 42	56	17 26	57
18	86	43.3	-17	53.9	121	55.8	55	-25	45	3 35	4 18	4 52	1 22	55	17 46	57
19	101	43.2		53.2	136	20.4	56	47.5	50	3 06	3 57	36	0 58	53	18 12	56
20	116	43.1		52.6	150	44.9	55	48.3	52	2 51	47	28	46	52	25	55
21	131	43.0		51.9	165	09.5	56	48.9	54	32	35	20	32	52	39	55
22	146	42.9		51.2	179	34.1	56	49.4	56	2 09	22	4 10	0 17	50	18 56	54
23	161	42.8		50.5	193	58.7	56	49.8	58	1 36	3 06	3 59	** ** *	**	19 16	53
24	176	42.7	-17	49.9	208	23.3	56	-25	60 S	** ** *	2 46	3 47	** ** *	**	19 42	50
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 15 ^h 26 ^m 1			Mag: -4.4 PMG: 8 ^h 58 ^m			Mag: +1.3 PMG: 7 ^h 52 ^m			Mag: -2.6 PMG: 0 ^h 34 ^m			Mag: -0.2 PMG: 20 ^h 53 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	127	49.9	225	38.5	-20	20.3	241	56.0	-21	10.3	351	25.4	+17	32.1	45	43.8
1	142	52.4	240	38.0		20.6	256	56.7		10.6	6	28.2		32.2	60	46.4
2	157	54.8	255	37.6		20.8	271	57.5		10.9	21	31.0		32.3	75	49.0
3	172	57.3	270	37.1		21.1	286	58.3		11.1	36	33.8		32.4	90	51.5
4	187	59.8	285	36.6		21.4	301	59.0		11.4	51	36.6		32.5	105	54.1
5	203	02.2	300	36.1	-20	21.6	316	59.8	-21	11.7	66	39.4	+17	32.6	120	56.7
6	218	04.7	315	35.7	-20	21.9	332	00.6	-21	12.0	81	42.2	+17	32.7	135	59.3
7	233	07.2	330	35.2		22.2	347	01.3		12.3	96	45.0		32.8	151	01.9
8	248	09.6	345	34.7		22.4	2	02.1		12.6	111	47.8		32.9	166	04.4
9	263	12.1	0	34.2		22.7	17	02.8		12.9	126	50.6		33.0	181	07.0
10	278	14.6	15	33.8		23.0	32	03.6		13.2	141	53.4		33.1	196	09.6
11	293	17.0	30	33.3	-20	23.3	47	04.4	-21	13.5	156	56.2	+17	33.2	211	12.2
12	308	19.5	45	32.8	-20	23.5	62	05.1	-21	13.7	171	59.0	+17	33.3	226	14.8
13	323	21.9	60	32.3		23.8	77	05.9		14.0	187	01.8		33.4	241	17.4
14	338	24.4	75	31.9		24.0	92	06.7		14.3	202	04.5		33.5	256	19.9
15	353	26.9	90	31.4		24.3	107	07.4		14.6	217	07.3		33.6	271	22.5
16	8	29.3	105	30.9		24.6	122	08.2		14.9	232	10.1		33.7	286	25.1
17	23	31.8	120	30.4	-20	24.8	137	09.0	-21	15.2	247	12.9	+17	33.8	301	27.7
18	38	34.3	135	29.9	-20	25.1	152	09.7	-21	15.5	262	15.7	+17	33.9	316	30.3
19	53	36.7	150	29.5		25.4	167	10.5		15.7	277	18.5		34.0	331	32.8
20	68	39.2	165	29.0		25.6	182	11.2		16.0	292	21.3		34.1	346	35.4
21	83	41.7	180	28.5		25.9	197	12.0		16.3	307	24.1		34.2	1	38.0
22	98	44.1	195	28.0		26.1	212	12.8		16.6	322	26.9		34.3	16	40.6
23	113	46.6	210	27.5		26.4	227	13.5		16.9	337	29.7		34.4	31	43.1
24	128	49.1	225	27.0	-20	26.6	242	14.3	-21	17.2	352	32.5	+17	34.5	46	45.7
Dif	—			-5 -3			+8 -3			+28 +1			+26 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 27 ^d 2 PHE { 4 ^h : 57 ^m 9 12 ^h : 57 ^m 7 20 ^h : 57 ^m 6 R°: 57 ^m											
	PMG: 12 ^h 13 ^m 2			SD: 15 ^h 8 PMG: 10 ^h 31 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	42.7	-17 49.9	208	23.3	-25 49.9	0	60 N	16 08	16 56	17 47	8 15 37	12 50 81		
1	191	42.5	49.2	222	47.9	49.9	1	58	18	17 03	51	7 49 41	13 15 78		
2	206	42.4	48.5	237	12.6	49.8	2	56	28	09	55	28 44	36 74		
3	221	42.3	47.8	251	37.3	49.4	3	54	36	15	17 58	7 11 46	13 53 72		
4	236	42.2	47.1	266	02.0	48.9	4	52	43	20	18 01	6 57 47	14 07 71		
5	251	42.1	-17 46.5	280	26.7	48.3	5	50	16 50	17 25	18 04	6 44 49	14 20 69		
6	266	42.0	-17 45.8	294	51.5	47.5	6	45	17 04	17 36	18 11	6 18 50	14 46 67		
7	281	41.9	45.1	309	16.3	46.5	7	40	16	45	17	5 57 52	15 06 65		
8	296	41.8	44.4	323	41.1	45.4	8	35	26	17 53	23	40 53	24 63		
9	311	41.7	43.7	338	06.0	44.1	9	30	35	18 00	29	5 25 54	15 38 62		
10	326	41.6	43.1	352	30.9	42.6	10	20	17 50	14	40	4 59 56	16 03 60		
11	341	41.5	-17 42.4	6	55.9	41.0	11	10 N	18 04	18 26	18 51	4 38 56	16 25 58		
12	356	41.4	-17 41.7	21	20.8	39.2	12	0	18 17	18 38	19 04	4 17 58	16 45 57		
13	11	41.3	41.0	35	45.9	37.3	13	10 S	30	18 52	18	3 57 59	17 05 55		
14	26	41.2	40.3	50	10.9	35.2	14	20	18 44	19 07	35	35 60	27 53		
15	41	41.1	39.6	64	36.1	32.9	15	30	19 00	25	19 56	3 10 61	17 51 51		
16	56	41.0	38.9	79	01.2	30.5	16	35	09	37	20 10	2 55 61	18 06 49		
17	71	40.9	-17 38.3	93	26.4	28.0	17	40	19 20	19 50	20 27	2 38 62	18 23 47		
18	86	40.8	-17 37.6	107	51.7	25.2	18	45	19 33	20 06	20 48	2 17 63	18 43 45		
19	101	40.7	36.9	122	17.0	22.4	19	50	48	26	21 17	1 51 65	19 08 42		
20	116	40.6	36.2	136	42.4	19.3	20	52	19 55	36	31	38 66	20 41		
21	131	40.5	35.5	151	07.8	16.2	21	54	20 04	20 47	21 49	24 66	34 38		
22	146	40.4	34.8	165	33.3	12.8	22	56	13	21 00	22 10	1 07 67	19 50 36		
23	161	40.3	34.1	179	58.8	09.3	23	58	23	16	22 40	0 47 69	20 09 33		
24	176	40.2	-17 33.4	194	24.4	05.7	24	60 S	20 35	21 34	23 33	0 22 70	20 32 28		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 22 ^m 2		Mag: -4.4 PMG: 8 ^h 58 ^m			Mag: +1.3 PMG: 7 ^h 51 ^m			Mag: -2.6 PMG: 0 ^h 30 ^m			Mag: -0.2 PMG: 20 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	128	49.1	225 27.0	-20 26.6	242 14.3	-21 17.2	352 32.5	+17 34.5	46 45.7	+22 02.2					
1	143	51.5	240 26.6	26.9	257 15.1	17.4	7 35.3	34.6	61 48.3	02.2					
2	158	54.0	255 26.1	27.1	272 15.8	17.7	22 38.1	34.7	76 50.9	02.2					
3	173	56.4	270 25.6	27.4	287 16.6	18.0	37 40.9	34.8	91 53.5	02.2					
4	188	58.9	285 25.1	27.7	302 17.3	18.3	52 43.7	34.9	106 56.0	02.2					
5	204	01.4	300 24.6	-20 27.9	317 18.1	-21 18.6	67 46.5	+17 35.0	121 58.6	+22 02.2					
6	219	03.8	315 24.1	-20 28.2	332 18.9	-21 18.9	82 49.3	+17 35.1	137 01.2	+22 02.2					
7	234	06.3	330 23.6	28.4	347 19.6	19.1	97 52.1	35.2	152 03.8	02.2					
8	249	08.8	345 23.1	28.7	2 20.4	19.4	112 54.9	35.3	167 06.3	02.2					
9	264	11.2	0 22.7	28.9	17 21.2	19.7	127 57.7	35.4	182 08.9	02.2					
10	279	13.7	15 22.2	29.2	32 21.9	20.0	143 00.5	35.5	197 11.5	02.2					
11	294	16.2	30 21.7	-20 29.4	47 22.7	-21 20.3	158 03.3	+17 35.6	212 14.1	+22 02.2					
12	309	18.6	45 21.2	-20 29.6	62 23.4	-21 20.5	173 06.1	+17 35.7	227 16.7	+22 02.2					
13	324	21.1	60 20.7	29.9	77 24.2	20.8	188 08.9	35.8	242 19.2	02.2					
14	339	23.5	75 20.2	30.1	92 25.0	21.1	203 11.7	35.9	257 21.8	02.2					
15	354	26.0	90 19.7	30.4	107 25.7	21.4	218 14.5	36.0	272 24.4	02.2					
16	9	28.5	105 19.2	30.6	122 26.5	21.7	233 17.3	36.1	287 27.0	02.2					
17	24	30.9	120 18.7	-20 30.9	137 27.2	-21 21.9	248 20.1	+17 36.2	302 29.5	+22 02.2					
18	39	33.4	135 18.2	-20 31.1	152 28.0	-21 22.2	263 22.8	+17 36.3	317 32.1	+22 02.2					
19	54	35.9	150 17.7	31.4	167 28.8	22.5	278 25.6	36.4	332 34.7	02.2					
20	69	38.3	165 17.2	31.6	182 29.5	22.8	293 28.4	36.5	347 37.3	02.2					
21	84	40.8	180 16.7	31.8	197 30.3	23.0	308 31.2	36.6	2 39.8	02.2					
22	99	43.3	195 16.2	32.1	212 31.0	23.3	323 34.0	36.7	17 42.4	02.2					
23	114	45.7	210 15.7	32.3	227 31.8	23.6	338 36.8	36.8	32 45.0	02.2					
24	129	48.2	225 15.2	-20 32.5	242 32.6	-21 23.9	353 39.6	+17 36.9	47 47.6	+22 02.3					
Dif	—		-5	-2	+8	-3	+28	+1	+26	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16:2 PMG: 12 ^h 13 ^m 4			Edad: 28 ^d 2 PHE { 4 ^h : 57/4 12 ^h : 57/2 20 ^h : 57/1 PMG: 11 ^h 28 ^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	h	m	h	m
0	176	40.2	-17	33.4	194	24.4	-25	05.7	60 N	6 39	7 29	8 17	8 52	20	14 11	92				
1	191	40.1		32.8	208	50.1	67	-25 01.9	58	35	22	8 07	30	26	33	86				
2	206	40.0		32.1	223	15.8	67	-24 58.0	56	31	16	7 58	8 12	30	14 50	82				
3	221	39.9		31.4	237	41.6	68	53.9	54	28	11	49	7 57	32	15 05	79				
4	236	39.8		30.7	252	07.5	69	49.7	52	25	05	42	44	35	18	76				
5	251	39.7	-17	30.0	266	33.4	69	-24 45.3	50	6 22	7 01	7 36	7 33	36	15 29	74				
6	266	39.6	-17	29.3	280	59.4	70	-24 40.8	45	6 15	6 50	7 22	7 08	41	15 53	70				
7	281	39.5		28.6	295	25.5	71	36.1	40	09	41	10	6 49	43	16 11	67				
8	296	39.4		27.9	309	51.6	71	31.3	35	6 03	33	7 00	33	45	27	64				
9	311	39.3		27.2	324	17.8	72	26.4	30	5 57	26	6 51	6 19	47	16 40	63				
10	326	39.2		26.5	338	44.1	73	21.3	20	46	13	36	5 55	50	17 03	59				
11	341	39.1	-17	25.8	353	10.5	74	-24 16.1	10 N	5 35	6 01	6 23	5 34	53	17 23	56				
12	356	39.0	-17	25.1	7	36.9	74	-24 10.7	0	5 23	5 48	6 10	5 15	55	17 42	53				
13	11	38.9		24.4	22	03.4	75	-24 05.2	10 S	5 09	35	5 57	4 56	57	18 00	50				
14	26	38.8		23.7	36	30.0	76	-23 59.6	20	4 52	20	43	35	59	20	47				
15	41	38.7		23.0	50	56.7	77	53.8	30	31	5 01	27	4 11	62	42	44				
16	56	38.6		22.3	65	23.5	78	47.9	35	17	4 50	18	3 56	65	18 55	42				
17	71	38.5	-17	21.6	79	50.3	78	-23 41.9	40	4 00	4 37	5 07	3 40	66	19 10	39				
18	86	38.4	-17	20.9	94	17.2	79	-23 35.7	45	3 39	4 21	4 55	3 20	69	19 28	36				
19	101	38.3		20.2	108	44.2	80	29.4	50	3 11	4 01	39	2 56	72	19 50	32				
20	116	38.3		19.5	123	11.3	81	23.0	52	2 56	3 51	32	44	74	20 01	29				
21	131	38.2		18.8	137	38.5	82	16.4	54	39	40	24	30	76	12	28				
22	146	38.1		18.1	152	05.7	82	09.7	56	2 17	27	15	2 14	79	26	24				
23	161	38.0		17.4	166	33.0	83	-23 02.9	58	1 47	3 12	4 04	1 56	82	20 42	20				
24	176	37.9	-17	16.7	181	00.5	85	-22 56.0	60 S	0 55	2 53	3 52	1 32	88	21 00	16				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 15 ^h 18 ^m 3			Mag: -4.4 PMG: 8 ^h 59 ^m			Mag: +1.3 PMG: 7 ^h 49 ^m			Mag: -2.6 PMG: 0 ^h 25 ^m			Mag: -0.2 PMG: 20 ^h 45 ^m							
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	129	48.2	225	15.2	-20	32.5	242	32.6	-21	23.9	353	39.6	+17	36.9	47	47.6				
1	144	50.7	240	14.8		32.8	257	33.3		24.2	8	42.4		37.0	62	50.1				
2	159	53.1	255	14.3		33.0	272	34.1		24.4	23	45.2		37.1	77	52.7				
3	174	55.6	270	13.8		33.2	287	34.8		24.7	38	48.0		37.2	92	55.3				
4	189	58.0	285	13.3		33.5	302	35.6		25.0	53	50.8		37.3	107	57.9				
5	205	00.5	300	12.8	-20	33.7	317	36.4	-21	25.3	68	53.6	+17	37.4	123	00.4				
6	220	03.0	315	12.3	-20	33.9	332	37.1	-21	25.5	83	56.4	+17	37.5	138	03.0				
7	235	05.4	330	11.8		34.2	347	37.9		25.8	98	59.2		37.6	153	05.6				
8	250	07.9	345	11.3		34.4	2	38.6		26.1	114	02.0		37.7	168	08.1				
9	265	10.4	0	10.8		34.6	17	39.4		26.4	129	04.8		37.8	183	10.7				
10	280	12.8	15	10.2		34.9	32	40.2		26.6	144	07.6		37.9	198	13.3				
11	295	15.3	30	09.7	-20	35.1	47	40.9	-21	26.9	159	10.4	+17	38.0	213	15.9				
12	310	17.8	45	09.2	-20	35.3	62	41.7	-21	27.2	174	13.2	+17	38.1	228	18.4				
13	325	20.2	60	08.7		35.5	77	42.4		27.4	189	16.0		38.2	243	21.0				
14	340	22.7	75	08.2		35.8	92	43.2		27.7	204	18.8		38.3	258	23.6				
15	355	25.2	90	07.7		36.0	107	44.0		28.0	219	21.6		38.4	273	26.1				
16	10	27.6	105	07.2		36.2	122	44.7		28.3	234	24.4		38.5	288	28.7				
17	25	30.1	120	06.7	-20	36.4	137	45.5	-21	28.5	249	27.2	+17	38.6	303	31.3				
18	40	32.5	135	06.2	-20	36.7	152	46.2	-21	28.8	264	30.0	+17	38.7	318	33.9				
19	55	35.0	150	05.7		36.9	167	47.0		29.1	279	32.8		38.8	333	36.4				
20	70	37.5	165	05.2		37.1	182	47.7		29.3	294	35.6		38.9	348	39.0				
21	85	39.9	180	04.7		37.3	197	48.5		29.6	309	38.4		39.0	3	41.6				
22	100	42.4	195	04.2		37.5	212	49.3		29.9	324	41.2		39.1	18	44.1				
23	115	44.9	210	03.7		37.8	227	50.0		30.2	339	44.0		39.2	33	46.7				
24	130	47.3	225	03.2	-20	38.0	242	50.8	-21	30.4	354	46.8	+17	39.3	48	49.3				
Dif	—			-5			+8			+28			+1			+26				

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 13 ^m 5		Edad: 29 ^d 2 PHE { 4 ^h : 56/9 12 ^h : 56/7 20 ^h : 56/5 R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	37.9	-17	16.7	181	00.5	-22 56.0	60 N	16 13	17 01	17 51	9 12 11	15 43 91	
1	191	37.8		16.0	195	28.0 ⁸⁵	48.9 ⁷¹	58	23	07	55	8 56 16	15 59 87	
2	206	37.7		15.3	209	55.6 ⁸⁶	41.8 ⁷³	56	32	13	17 58	42 19	16 12 83	
3	221	37.6		14.6	224	23.3 ⁸⁷	34.5 ⁷⁴	54	40	19	18 02	29 23	24 80	
4	236	37.5		13.9	238	51.1 ⁸⁸	27.1 ⁷⁴	52	47	24	04	19 25	34 77	
5	251	37.4	-17	13.2	253	18.9 ⁸⁸	-22 19.5 ⁷⁶	50	16 53	17 28	18 07	8 09 27	16 43 75	
6	266	37.4	-17	12.5	267	46.9 ⁹⁰	-22 11.9 ⁷⁶	45	17 07	17 39	18 14	7 49 32	17 03 70	
7	281	37.3		11.8	282	14.9 ⁹⁰	-22 04.1 ⁷⁸	40	19	47	20	32 35	18 67	
8	296	37.2		11.1	296	43.1 ⁹²	-21 56.2 ⁷⁹	35	28	17 55	25	18 38	31 64	
9	311	37.1		10.4	311	11.3 ⁹²	48.2 ⁸⁰	30	37	18 02	31	7 06 40	17 43 60	
10	326	37.0		09.7	325	39.7 ⁹⁴	40.1 ⁸¹	20	17 52	15	41	6 45 45	18 02 57	
11	341	36.9	-17	08.9	340	08.1 ⁹⁴	-21 31.9 ⁸²	10 N	18 05	18 27	18 52	6 27 48	18 19 53	
12	356	36.8	-17	08.2	354	36.6 ⁹⁵	-21 23.6 ⁸³	0	18 17	18 39	19 04	6 10 51	18 35 49	
13	11	36.7		07.5	9	05.2 ⁹⁶	15.2 ⁸⁴	10 S	30	18 52	17	5 53 54	18 50 46	
14	26	36.7		06.8	23	33.9 ⁹⁷	-21 06.6 ⁸⁶	20	43	19 06	34	34 58	19 07 42	
15	41	36.6		06.1	38	02.7 ⁹⁸	-20 58.0 ⁸⁶	30	18 58	24	19 55	13 62	26 37	
16	56	36.5		05.4	52	31.6 ⁹⁹	49.3 ⁸⁷	35	19 08	35	20 08	5 01 64	37 35	
17	71	36.4	-17	04.7	67	00.5 ⁹⁹	-20 40.4 ⁸⁹	40	19 18	19 48	20 25	4 46 67	19 49 32	
18	86	36.3	-17	04.0	81	29.6 ¹⁰¹	-20 31.5 ⁸⁹	45	19 30	20 03	20 45	4 29 70	20 04 29	
19	101	36.2		03.3	95	58.8 ¹⁰²	22.4 ⁹¹	50	45	23	21 12	4 08 75	22 24	
20	116	36.1		02.5	110	28.0 ¹⁰²	13.3 ⁹¹	52	19 52	33	26	3 58 77	30 22	
21	131	36.1		01.8	124	57.4 ¹⁰⁴	-20 04.1 ⁹²	54	20 00	43	21 43	46 80	40 19	
22	146	36.0		01.1	139	26.8 ¹⁰⁴	-19 54.7 ⁹⁴	56	09	20 56	22 03	33 83	20 50 17	
23	161	35.9	-17	00.4	153	56.4 ¹⁰⁶	45.3 ⁹⁴	58	19	21 10	22 30	18 87	21 02 13	
24	176	35.8	-16	59.7	168	26.0 ¹⁰⁶	-19 35.8 ⁹⁵	60 S	20 30	21 28	23 12	3 00 91	21 16 9	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 15 ^h 14 ^m 3	Mag: -4.4 PMG: 9 ^h 00 ^m	Mag: +1.3 PMG: 7 ^h 48 ^m	Mag: -2.6 PMG: 0 ^h 21 ^m	Mag: -0.2 PMG: 20 ^h 41 ^m									
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄									
h	°	'	°	'	°	'								
0	130	47.3	225	03.2	242	50.8	354	46.8	48	49.3				
1	145	49.8	240	02.6	257	51.5	9	49.6	63	51.8				
2	160	52.3	255	02.1	272	52.3	24	52.4	78	54.4				
3	175	54.7	270	01.6	287	53.0	39	55.2	93	57.0				
4	190	57.2	285	01.1	302	53.8	54	58.0	108	59.6				
5	205	59.7	300	00.6	317	54.6	70	00.8	124	02.1				
6	221	02.1	315	00.1	332	55.3	85	03.6	139	04.7				
7	236	04.6	329	59.6	347	56.1	100	06.4	154	07.3				
8	251	07.0	344	59.1	362	56.8	115	09.2	169	09.8				
9	266	09.5	359	58.6	379	57.6	130	12.0	184	12.4				
10	281	12.0	14	58.0	392	58.3	145	14.8	199	15.0				
11	296	14.4	29	57.5	407	59.1	160	17.6	214	17.5				
12	311	16.9	44	57.0	422	59.9	175	20.4	229	20.1				
13	326	19.4	59	56.5	437	00.6	190	23.1	244	22.7				
14	341	21.8	74	56.0	449	01.4	205	25.9	259	25.2				
15	356	24.3	89	55.5	461	02.1	220	28.7	274	27.8				
16	11	26.8	104	54.9	473	02.9	235	31.5	289	30.4				
17	26	29.2	119	54.4	485	03.6	250	34.3	304	32.9				
18	41	31.7	134	53.9	497	04.4	265	37.1	319	35.5				
19	56	34.2	149	53.4	509	05.2	280	39.9	334	38.1				
20	71	36.6	164	52.9	521	05.9	295	42.7	349	40.6				
21	86	39.1	179	52.3	533	06.7	310	45.5	4	43.2				
22	101	41.5	194	51.8	545	07.4	325	48.3	19	45.8				
23	116	44.0	209	51.3	557	08.2	340	51.1	34	48.3				
24	131	46.5	224	50.8	569	08.9	355	53.9	49	50.9				
Dif	—	-5	-2	+8	-3	+28	+1	+26	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: 0 ^d 5 PHE { SD: 15/4 PMG: 13 ^h 12 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	176	35.8	-16	59.7	168	26.0	-19 35.8	60 N	6 35	7 25	8 13	9 23	7	17	14	88	
1	191	35.7		59.0	182	55.7 ¹⁰⁷	26.2 ⁹⁶	58	31	19	8 03	12	10	26	84		
2	206	35.6		58.2	197	25.5 ¹⁰⁸	16.5 ⁹⁷	56	28	13	7 54	9 01	14	35	81		
3	221	35.6		57.5	211	55.4 ¹⁰⁹	-19 06.7 ⁹⁸	54	25	07	46	8 52	17	44	77		
4	236	35.5		56.8	226	25.4 ¹¹⁰	-18 56.8 ⁹⁹	52	22	7 03	39	44	19	51	75		
5	251	35.4	-16	56.1	240	55.5 ¹¹¹	-18 46.9 ⁹⁹	50	6 19	6 58	7 33	8 36	22	17	58	73	
6	266	35.3	-16	55.4	255	25.7 ¹¹²	-18 36.8 ¹⁰¹	45	6 13	6 48	7 19	8 21	25	18	13	68	
7	281	35.2		54.7	269	56.0 ¹¹³	26.7 ¹⁰¹	40	07	39	7 08	8 07	30	25	64		
8	296	35.2		53.9	284	26.4 ¹¹⁴	16.5 ¹⁰²	35	6 02	32	6 58	7 56	33	35	61		
9	311	35.1		53.2	298	56.8 ¹¹⁴	-18 06.2 ¹⁰³	30	5 56	25	50	46	36	43	59		
10	326	35.0		52.5	313	27.4 ¹¹⁶	-17 55.8 ¹⁰⁴	20	46	12	35	30	39	18	59	53	
11	341	34.9	-16	51.8	327	58.0 ¹¹⁶	-17 45.4 ¹⁰⁴	10 N	5 35	6 01	6 22	7 15	43	19	12	49	
12	356	34.9	-16	51.0	342	28.7 ¹¹⁷	-17 34.9 ¹⁰⁵	0	5 23	5 49	6 10	7 01	47	19	24	45	
13	11	34.8		50.3	356	59.6 ¹¹⁹	24.3 ¹⁰⁶	10 S	5 10	36	5 58	6 47	51	36	42		
14	26	34.7		49.6	11	30.5 ¹¹⁹	13.6 ¹⁰⁷	20	4 54	21	44	32	55	19	49	38	
15	41	34.6		48.9	26	01.5 ¹²⁰	-17 02.9 ¹⁰⁷	30	33	5 03	29	15	59	20	03	34	
16	56	34.5		48.2	40	32.5 ¹²⁰	-16 52.0 ¹⁰⁹	35	19	4 53	20	6 05	62	12	30		
17	71	34.5	-16	47.4	55	03.7 ¹²²	-16 41.1 ¹⁰⁹	40	4 03	4 40	5 10	5 53	65	20	21	28	
18	86	34.4	-16	46.7	69	35.0 ¹²³	-16 30.2 ¹⁰⁹	45	3 43	4 24	4 58	5 39	69	20	33	23	
19	101	34.3		46.0	84	06.3 ¹²³	19.2 ¹¹⁰	50	15	4 05	43	23	73	46	19		
20	116	34.2		45.3	98	37.8 ¹²⁵	-16 08.1 ¹¹¹	52	3 02	3 55	36	15	76	52	18		
21	131	34.2		44.5	113	09.3 ¹²⁵	-15 56.9 ¹¹²	54	2 45	45	28	5 06	79	20	59	15	
22	146	34.1		43.8	127	40.9 ¹²⁶	45.7 ¹¹²	56	2 25	32	19	4 56	82	21	07	12	
23	161	34.0		43.1	142	12.6 ¹²⁷	34.4 ¹¹³	58	1 58	18	4 09	45	85	15	10		
24	176	33.9	-16	42.3	156	44.3 ¹²⁷	-15 23.1 ¹¹³	60 S	1 16	3 00	3 58	4 31	90	21	25	6	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 15 ^h 10 ^m 4		Mag: -4.3 PMG: 9 ^h 01 ^m			Mag: +1.3 PMG: 7 ^h 47 ^m			Mag: -2.6 PMG: 0 ^h 16 ^m			Mag: -0.2 PMG: 20 ^h 37 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	131	46.5	224	50.8	-20	42.9	243	08.9	-21	36.8	355	53.9	+17	41.7	49	50.9	+22	02.4
1	146	48.9	239	50.3		43.1	258	09.7		37.1	10	56.7		41.8	64	53.5		02.4
2	161	51.4	254	49.7		43.3	273	10.4		37.4	25	59.5		41.9	79	56.0		02.4
3	176	53.9	269	49.2		43.5	288	11.2		37.6	41	02.3		42.0	94	58.6		02.4
4	191	56.3	284	48.7		43.7	303	12.0		37.9	56	05.1		42.1	110	01.1		02.4
5	206	58.8	299	48.2	-20	43.9	318	12.7	-21	38.1	71	07.9	+17	42.2	125	03.7	+22	02.4
6	222	01.3	314	47.6	-20	44.1	333	13.5	-21	38.4	86	10.7	+17	42.3	140	06.3	+22	02.4
7	237	03.7	329	47.1		44.3	348	14.2		38.7	101	13.5		42.4	155	08.8		02.4
8	252	06.2	344	46.6		44.5	3	15.0		38.9	116	16.3		42.5	170	11.4		02.4
9	267	08.6	359	46.1		44.7	18	15.7		39.2	131	19.1		42.6	185	14.0		02.4
10	282	11.1	14	45.5		44.9	33	16.5		39.4	146	21.9		42.7	200	16.5		02.4
11	297	13.6	29	45.0	-20	45.1	48	17.2	-21	39.7	161	24.7	+17	42.8	215	19.1	+22	02.4
12	312	16.0	44	44.5	-20	45.2	63	18.0	-21	40.0	176	27.5	+17	42.9	230	21.6	+22	02.4
13	327	18.5	59	44.0		45.4	78	18.8		40.2	191	30.3		43.0	245	24.2		02.4
14	342	21.0	74	43.4		45.6	93	19.5		40.5	206	33.1		43.1	260	26.8		02.4
15	357	23.4	89	42.9		45.8	108	20.3		40.7	221	35.9		43.2	275	29.3		02.4
16	12	25.9	104	42.4		46.0	123	21.0		41.0	236	38.7		43.3	290	31.9		02.5
17	27	28.4	119	41.8	-20	46.2	138	21.8	-21	41.3	251	41.5	+17	43.4	305	34.5	+22	02.5
18	42	30.8	134	41.3	-20	46.3	153	22.5	-21	41.5	266	44.3	+17	43.5	320	37.0	+22	02.5
19	57	33.3	149	40.8		46.5	168	23.3		41.8	281	47.1		43.6	335	39.6		02.5
20	72	35.8	164	40.3		46.7	183	24.0		42.0	296	49.9		43.7	350	42.1		02.5
21	87	38.2	179	39.7		46.9	198	24.8		42.3	311	52.7		43.8	5	44.7		02.5
22	102	40.7	194	39.2		47.1	213	25.5		42.5	326	55.5		43.9	20	47.3		02.5
23	117	43.1	209	38.7		47.2	228	26.3		42.8	341	58.3		44.0	35	49.8		02.5
24	132	45.6	224	38.1	-20	47.4	243	27.1	-21	43.1	357	01.1	+17	44.1	50	52.4	+22	02.5
Dif	—		-5 -2			+8 -3			+28 +1			+26 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: 1 ^d 5 PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'4 PMG: 13 ^h 59 ^m R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	33.9	-16	42.3	156	44.3	-15 23.1	60 N	16 18	17 05	17 56	9 30 5	18 42 84	
1	191	33.9		41.6	171	16.2 ¹²⁹	11.7 ¹¹⁴	58	28	12	17 59	22 8	50 80	
2	206	33.8		40.9	185	48.1 ¹²⁹	-15 00.2 ¹¹⁵	56	36	17	18 02	15 11	18 56 77	
3	221	33.7		40.2	200	20.1 ¹³⁰	-14 48.7 ¹¹⁵	54	44	22	05	09 13	19 01 75	
4	236	33.7		39.4	214	52.2 ¹³¹	37.1 ¹¹⁶	52	51	27	08	9 03 15	06 73	
5	251	33.6	-16	38.7	229	24.4 ¹³²	-14 25.5 ¹¹⁶	50	16 57	17 32	18 10	8 58 17	19 11 70	
6	266	33.5	-16	38.0	243	56.7 ¹³³	-14 13.8 ¹¹⁷	45	17 10	17 41	18 16	8 46 22	19 21 65	
7	281	33.4		37.2	258	29.0 ¹³³	-14 02.1 ¹¹⁷	40	21	49	22	37 25	29 61	
8	296	33.4		36.5	273	01.4 ¹³⁴	-13 50.3 ¹¹⁸	35	30	17 57	27	29 28	36 58	
9	311	33.3		35.8	287	33.9 ¹³⁵	38.4 ¹¹⁹	30	39	18 04	32	22 31	42 55	
10	326	33.2		35.0	302	06.5 ¹³⁶	26.5 ¹¹⁹	20	17 53	16	42	8 09 36	19 52 51	
11	341	33.2	-16	34.3	316	39.1 ¹³⁶	-13 14.6 ¹¹⁹	10 N	18 05	18 27	18 53	7 58 40	20 01 47	
12	356	33.1	-16	33.6	331	11.8 ¹³⁷	-13 02.6 ¹²⁰	0	18 17	18 39	19 04	7 48 44	20 09 43	
13	11	33.0		32.8	345	44.6 ¹³⁸	-12 50.6 ¹²⁰	10 S	29	18 51	17	38 48	18 39	
14	26	32.9		32.1	0	17.5 ¹³⁹	38.5 ¹²¹	20	42	19 06	33	27 52	27 34	
15	41	32.9		31.4	14	50.4 ¹³⁹	26.3 ¹²²	30	18 57	23	19 53	14 57	37 30	
16	56	32.8		30.6	29	23.4 ¹⁴⁰	14.2 ¹²¹	35	19 06	33	20 06	7 07 59	42 28	
17	71	32.7	-16	29.9	43	56.5 ¹⁴¹	-12 02.0 ¹²²	40	19 16	19 46	20 22	6 58 63	20 49 24	
18	86	32.7	-16	29.1	58	29.7 ¹⁴²	-11 49.7 ¹²³	45	19 28	20 01	20 42	6 48 67	20 56 21	
19	101	32.6		28.4	73	02.9 ¹⁴²	37.4 ¹²³	50	42	20	21 08	36 72	21 05 17	
20	116	32.5		27.7	87	36.2 ¹⁴³	25.1 ¹²³	52	49	29	21	31 73	10 14	
21	131	32.5		26.9	102	09.5 ¹⁴³	12.7 ¹²⁴	54	19 56	39	37	25 76	14 12	
22	146	32.4		26.2	116	42.9 ¹⁴⁴	-11 00.3 ¹²⁴	56	20 05	20 51	21 56	18 78	19 10	
23	161	32.3		25.5	131	16.4 ¹⁴⁵	-10 47.9 ¹²⁴	58	14	21 05	22 21	10 82	25 7	
24	176	32.3	-16	24.7	145	50.0 ¹⁴⁶	-10 35.4 ¹²⁵	60 S	20 25	21 21	22 57	6 01 86	21 31 4	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 06 ^m 5		Mag: -4.3 PMG: 9 ^h 02 ^m		Mag: +1.2 PMG: 7 ^h 46 ^m		Mag: -2.6 PMG: 0 ^h 12 ^m		Mag: -0.2 PMG: 20 ^h 33 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	132	45.6	224	38.1	243	27.1	357	01.1	50	52.4				
1	147	48.1	239	37.6	258	27.8	12	03.9	65	54.9				
2	162	50.5	254	37.1	273	28.6	27	06.7	80	57.5				
3	177	53.0	269	36.5	288	29.3	42	09.5	96	00.1				
4	192	55.5	284	36.0	303	30.1	57	12.3	111	02.6				
5	207	57.9	299	35.5	318	30.8	72	15.1	126	05.2				
6	223	00.4	314	34.9	333	31.6	87	17.9	141	07.7				
7	238	02.9	329	34.4	348	32.3	102	20.7	156	10.3				
8	253	05.3	344	33.9	3	33.1	117	23.5	171	12.9				
9	268	07.8	359	33.3	18	33.8	132	26.3	186	15.4				
10	283	10.3	14	32.8	33	34.6	147	29.1	201	18.0				
11	298	12.7	29	32.2	48	35.3	162	31.9	216	20.5				
12	313	15.2	44	31.7	63	36.1	177	34.7	231	23.1				
13	328	17.6	59	31.2	78	36.8	192	37.5	246	25.7				
14	343	20.1	74	30.6	93	37.6	207	40.3	261	28.2				
15	358	22.6	89	30.1	108	38.3	222	43.1	276	30.8				
16	13	25.0	104	29.6	123	39.1	237	45.9	291	33.3				
17	28	27.5	119	29.0	138	39.9	252	48.7	306	35.9				
18	43	30.0	134	28.5	153	40.6	267	51.5	321	38.4				
19	58	32.4	149	27.9	168	41.4	282	54.3	336	41.0				
20	73	34.9	164	27.4	183	42.1	297	57.1	351	43.5				
21	88	37.4	179	26.8	198	42.9	312	59.9	6	46.1				
22	103	39.8	194	26.3	213	43.6	328	02.7	21	48.7				
23	118	42.3	209	25.8	228	44.4	343	05.5	36	51.2				
24	133	44.7	224	25.2	243	45.1	358	08.3	51	53.8				
Dif	—		-5		+8		+28		+26					
			-2		-3		+1		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: 2 ^d 5 PHE { 4 ^h : 55:2 12 ^h : 55:1 20 ^h : 54:9 PMG: 14 ^h 42 ^m R°: 41 ^m																	
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m						
0	176	32.3	-16	24.7	145	50.0	-10	35.4	60 N	6 31	7 21	8 08	9 35	3	20 06	81						
1	191	32.2		24.0	160	23.6 ¹⁴⁶		22.9 ¹²⁵	58	28	15	7 58	30	6	10	78						
2	206	32.1		23.2	174	57.2 ¹⁴⁶	-10	10.3 ¹²⁶	56	25	09	50	26	9	13	75						
3	221	32.1		22.5	189	31.0 ¹⁴⁸	-9	57.8 ¹²⁵	54	22	04	43	22	11	16	77						
4	236	32.0		21.7	204	04.8 ¹⁴⁸		45.2 ¹²⁶	52	19	7 00	36	18	14	19	70						
5	251	32.0	-16	21.0	218	38.6 ¹⁴⁸	-9	32.5 ¹²⁷	50	6 17	6 55	7 30	9 15	16	20 21	68						
6	266	31.9	-16	20.3	233	12.5 ¹⁴⁹	-9	19.9 ¹²⁶	45	6 11	6 46	7 17	9 08	20	20 26	64						
7	281	31.8		19.5	247	46.5 ¹⁵⁰	-9	07.2 ¹²⁷	40	05	38	7 06	9 02	24	30	60						
8	296	31.8		18.8	262	20.5 ¹⁵⁰	-8	54.4 ¹²⁸	35	6 00	30	6 57	8 57	27	34	57						
9	311	31.7		18.0	276	54.6 ¹⁵¹		41.7 ¹²⁷	30	5 55	24	49	53	29	37	54						
10	326	31.6		17.3	291	28.8 ¹⁵²		28.9 ¹²⁸	20	45	12	35	45	34	43	49						
11	341	31.6	-16	16.5	306	03.0 ¹⁵²	-8	16.1 ¹²⁸	10 N	5 35	6 00	6 22	8 38	38	20 48	45						
12	356	31.5	-16	15.8	320	37.2 ¹⁵²	-8	03.3 ¹²⁸	0	5 24	5 49	6 10	8 32	42	20 52	41						
13	11	31.5		15.0	335	11.5 ¹⁵³	-7	50.5 ¹²⁸	10 S	5 11	37	5 58	26	45	20 57	37						
14	26	31.4		14.3	349	45.9 ¹⁵⁴		37.6 ¹²⁹	20	4 55	22	46	19	49	21 01	33						
15	41	31.3		13.6	4	20.3 ¹⁵⁴		24.7 ¹²⁹	30	35	5 05	31	11	54	07	28						
16	56	31.3		12.8	18	54.7 ¹⁵⁴	-7	11.8 ¹²⁹	35	22	4 55	22	06	58	10	25						
17	71	31.2	-16	12.1	33	29.2 ¹⁵⁵	-6	58.9 ¹²⁹	40	4 06	4 42	5 12	8 01	61	21 13	23						
18	86	31.2	-16	11.3	48	03.7 ¹⁵⁵	-6	46.0 ¹²⁹	45	3 46	4 28	5 00	7 55	64	21 17	19						
19	101	31.1		10.6	62	38.3 ¹⁵⁶		33.0 ¹³⁰	50	20	09	4 46	48	69	22	15						
20	116	31.0		09.8	77	13.0 ¹⁵⁷		20.0 ¹³⁰	52	3 07	4 00	40	44	71	24	13						
21	131	31.0		09.1	91	47.7 ¹⁵⁷	-6	07.1 ¹²⁹	54	2 51	3 49	32	41	73	26	11						
22	146	30.9		08.3	106	22.4 ¹⁵⁷	-5	54.1 ¹³⁰	56	32	38	24	36	76	29	8						
23	161	30.9		07.6	120	57.1 ¹⁵⁷		41.0 ¹³¹	58	2 08	24	14	32	79	32	6						
24	176	30.8	-16	06.8	135	31.9 ¹⁵⁸	-5	28.0 ¹³⁰	60 S	1 32	3 07	4 03	7 27	82	21 35	3						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 15 ^h 02 ^m 5		Mag: -4.3 PMG: 9 ^h 03 ^m				Mag: +1.2 PMG: 7 ^h 45 ^m				Mag: -2.6 PMG: 0 ^h 07 ^m				Mag: -0.2 PMG: 20 ^h 29 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	133	44.7	224	25.2	-20	51.4	243	45.1	-21	49.1	358	08.3	+17	46.5	51	53.8	+22	02.6				
1	148	47.2	239	24.7		51.6	258	45.9		49.4	13	11.0		46.6	66	56.3		02.6				
2	163	49.7	254	24.1		51.7	273	46.6		49.6	28	13.8		46.7	81	58.9		02.6				
3	178	52.1	269	23.6		51.9	288	47.4		49.9	43	16.6		46.8	97	01.4		02.6				
4	193	54.6	284	23.0		52.0	303	48.1		50.1	58	19.4		46.9	112	04.0		02.6				
5	208	57.1	299	22.5	-20	52.2	318	48.9	-21	50.4	73	22.2	+17	47.0	127	06.5	+22	02.6				
6	223	59.5	314	22.0	-20	52.3	333	49.6	-21	50.6	88	25.0	+17	47.1	142	09.1	+22	02.6				
7	239	02.0	329	21.4		52.5	348	50.4		50.9	103	27.8		47.2	157	11.7		02.6				
8	254	04.5	344	20.9		52.6	3	51.1		51.1	118	30.6		47.3	172	14.2		02.6				
9	269	06.9	359	20.3		52.8	18	51.9		51.4	133	33.4		47.4	187	16.8		02.6				
10	284	09.4	14	19.8		52.9	33	52.6		51.6	148	36.2		47.5	202	19.3		02.6				
11	299	11.9	29	19.2	-20	53.1	48	53.4	-21	51.8	163	39.0	+17	47.6	217	21.9	+22	02.6				
12	314	14.3	44	18.7	-20	53.2	63	54.1	-21	52.1	178	41.8	+17	47.7	232	24.4	+22	02.6				
13	329	16.8	59	18.1		53.4	78	54.9		52.3	193	44.6		47.8	247	27.0		02.6				
14	344	19.2	74	17.6		53.5	93	55.6		52.6	208	47.4		47.9	262	29.5		02.6				
15	359	21.7	89	17.0		53.6	108	56.4		52.8	223	50.2		48.0	277	32.1		02.6				
16	14	24.2	104	16.5		53.8	123	57.1		53.1	238	53.0		48.1	292	34.6		02.6				
17	29	26.6	119	15.9	-20	53.9	138	57.9	-21	53.3	253	55.8	+17	48.2	307	37.2	+22	02.6				
18	44	29.1	134	15.4	-20	54.1	153	58.6	-21	53.6	268	58.6	+17	48.3	322	39.7	+22	02.6				
19	59	31.6	149	14.8		54.2	168	59.4		53.8	284	01.4		48.4	337	42.3		02.6				
20	74	34.0	164	14.3		54.3	184	00.1		54.1	299	04.2		48.5	352	44.8		02.6				
21	89	36.5	179	13.7		54.5	199	00.9		54.3	314	07.0		48.6	7	47.4		02.7				
22	104	39.0	194	13.2		54.6	214	01.6		54.5	329	09.8		48.7	22	49.9		02.7				
23	119	41.4	209	12.6		54.7	229	02.4		54.8	344	12.6		48.8	37	52.5		02.7				
24	134	43.9	224	12.1	-20	54.9	244	03.1	-21	55.0	359	15.4	+17	48.9	52	55.0	+22	02.7				
Dif	—		-5				-1				+8				+2				+26			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 3 ^d 5 PHE { 4 ^h : 54:8 12 ^h : 54:7 20 ^h : 54:5 R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	30.8	-16	06.8	135	31.9	-5 28.0	60 N	16 24	17 10	18 00	9 38 3	21 27 80		
1	191	30.8		06.1	150	06.8 ¹⁵⁹	15.0 ¹³⁰	58	33	16	03	36 6	28 76		
2	206	30.7		05.3	164	41.7 ¹⁵⁹	-5 01.9 ¹³¹	56	41	21	06	35 8	28 74		
3	221	30.7		04.5	179	16.6 ¹⁵⁹	-4 48.9 ¹³⁰	54	48	26	09	33 11	28 72		
4	236	30.6		03.8	193	51.6 ¹⁶⁰	35.8 ¹³¹	52	16 54	31	11	32 12	29 69		
5	251	30.5	-16	03.0	208	26.6 ¹⁶⁰	-4 22.7 ¹³¹	50	17 00	17 35	18 13	9 31 14	21 29 67		
6	266	30.5	-16	02.3	223	01.6 ¹⁶⁰	-4 09.6 ¹³¹	45	17 13	17 44	18 19	9 28 18	21 30 62		
7	281	30.4		01.5	237	36.7 ¹⁶¹	-3 56.5 ¹³¹	40	23	52	24	26 22	30 59		
8	296	30.4	-16	00.8	252	11.8 ¹⁶¹	43.4 ¹³¹	35	32	17 59	29	24 25	31 56		
9	311	30.3	-16	00.0	266	46.9 ¹⁶¹	30.3 ¹³¹	30	40	18 05	34	22 28	31 53		
10	326	30.3	-15	59.3	281	22.0 ¹⁶¹	17.2 ¹³¹	20	17 54	17	43	19 32	32 48		
11	341	30.2	-15	58.5	295	57.2 ¹⁶²	-3 04.1 ¹³¹	10 N	18 06	18 28	18 53	9 16 37	21 33 44		
12	356	30.2	-15	57.7	310	32.5 ¹⁶³	-2 51.0 ¹³¹	0	18 17	18 39	19 04	9 14 40	21 33 40		
13	11	30.1		57.0	325	07.7 ¹⁶²	37.8 ¹³²	10 S	29	18 51	17	11 44	34 36		
14	26	30.1		56.2	339	43.0 ¹⁶³	24.7 ¹³¹	20	41	19 05	32	08 49	34 32		
15	41	30.0		55.5	354	18.3 ¹⁶³	-2 11.6 ¹³¹	30	18 56	21	19 52	05 54	35 27		
16	56	30.0		54.7	8	53.6 ¹⁶³	-1 58.5 ¹³¹	35	19 04	31	20 04	04 56	35 25		
17	71	29.9	-15	53.9	23	29.0 ¹⁶⁴	-1 45.3 ¹³²	40	19 14	19 43	20 19	9 02 59	21 36 22		
18	86	29.9	-15	53.2	38	04.3 ¹⁶³	-1 32.2 ¹³¹	45	19 25	19 58	20 39	8 59 63	21 36 19		
19	101	29.8		52.4	52	39.7 ¹⁶⁴	19.1 ¹³¹	50	39	20 16	21 04	57 67	37 14		
20	116	29.8		51.7	67	15.1 ¹⁶⁴	-1 06.0 ¹³¹	52	45	25	16	55 70	37 12		
21	131	29.7		50.9	81	50.6 ¹⁶⁵	-0 52.9 ¹³¹	54	19 53	35	31	54 71	37 11		
22	146	29.7		50.1	96	26.0 ¹⁶⁴	39.7 ¹³²	56	20 01	46	21 49	52 74	37 9		
23	161	29.6		49.4	111	01.5 ¹⁶⁵	26.6 ¹³¹	58	10	20 59	22 12	51 76	38 5		
24	176	29.6	-15	48.6	125	37.0 ¹⁶⁵	-0 13.5 ¹³¹	60 S	20 20	21 15	22 44	8 49 80	21 38 3		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 58 ^m 6		Mag: -4.3 PMG: 9 ^h 04 ^m		Mag: +1.2 PMG: 7 ^h 43 ^m		Mag: -2.6 PMG: 0 ^h 03 ^m		Mag: -0.2 PMG: 20 ^h 25 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	134	43.9	224	12.1	244	03.1	359	15.4	52	55.0					
1	149	46.3	239	11.5	259	03.9	14	18.2	67	57.6					
2	164	48.8	254	11.0	274	04.6	29	21.0	83	00.1					
3	179	51.3	269	10.4	289	05.4	44	23.8	98	02.7					
4	194	53.7	284	09.8	304	06.1	59	26.6	113	05.2					
5	209	56.2	299	09.3	319	06.9	74	29.4	128	07.8					
6	224	58.7	314	08.7	334	07.6	89	32.2	143	10.3					
7	240	01.1	329	08.2	349	08.4	104	35.0	158	12.9					
8	255	03.6	344	07.6	4	09.1	119	37.8	173	15.4					
9	270	06.1	359	07.1	19	09.9	134	40.6	188	18.0					
10	285	08.5	14	06.5	34	10.6	149	43.4	203	20.5					
11	300	11.0	29	06.0	49	11.4	164	46.2	218	23.1					
12	315	13.5	44	05.4	64	12.1	179	49.0	233	25.6					
13	330	15.9	59	04.8	79	12.9	194	51.8	248	28.2					
14	345	18.4	74	04.3	94	13.6	209	54.6	263	30.7					
15	0	20.8	89	03.7	109	14.4	224	57.4	278	33.3					
16	15	23.3	104	03.2	124	15.1	240	00.2	293	35.8					
17	30	25.8	119	02.6	139	15.9	255	03.0	308	38.4					
18	45	28.2	134	02.0	154	16.6	270	05.8	323	40.9					
19	60	30.7	149	01.5	169	17.4	285	08.6	338	43.5					
20	75	33.2	164	00.9	184	18.1	300	11.4	353	46.0					
21	90	35.6	179	00.4	199	18.9	315	14.2	8	48.6					
22	105	38.1	193	59.8	214	19.6	330	17.0	23	51.1					
23	120	40.6	208	59.2	229	20.4	345	19.8	38	53.7					
24	135	43.0	223	58.7	244	21.1	0	22.5	53	56.2					
Dif	—		-6		+7		-8972		+1						

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: 4 ^d 5 SD: 14'8 PMG: 16 ^h 04 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3 R°: 40 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	29.6	-15 48.6	125	37.0	-0 13.5		60 N	6 27	7 17	8 03	9 41	3	22 47	79
1	191	29.5		140	12.5 ¹⁶⁵	-0 00.4 ¹³¹		58	24	11	7 54	42	6	44	76
2	206	29.5		154	48.0 ¹⁶⁵	+0 12.7 ¹³¹		56	21	06	46	43	8	42	73
3	221	29.4		169	23.5 ¹⁶⁵	25.7 ¹³⁰		54	19	7 01	39	44	10	40	71
4	236	29.4		183	59.1 ¹⁶⁶	38.8 ¹³¹		52	16	6 56	32	44	13	38	69
5	251	29.3	-15 44.8	198	34.6 ¹⁶⁵	+0 51.9 ¹³¹		50	6 14	6 52	7 27	9 45	15	22 36	67
6	266	29.3	-15 44.0	213	10.2 ¹⁶⁶	+1 04.9 ¹³⁰		45	6 09	6 43	7 14	9 46	19	22 32	63
7	281	29.2		227	45.8 ¹⁶⁶	18.0 ¹³¹		40	6 04	36	7 04	48	22	29	59
8	296	29.2		242	21.4 ¹⁶⁶	31.0 ¹³⁰		35	5 59	29	6 55	49	25	27	55
9	311	29.2		256	56.9 ¹⁶⁵	44.0 ¹³⁰		30	54	23	47	50	27	24	53
10	326	29.1		271	32.5 ¹⁶⁶	+1 57.1 ¹³¹		20	45	11	34	51	32	20	49
11	341	29.1	-15 40.2	286	08.1 ¹⁶⁶	+2 10.1 ¹³⁰		10 N	5 35	6 00	6 22	9 53	36	22 17	44
12	356	29.0	-15 39.4	300	43.7 ¹⁶⁶	+2 23.0 ¹²⁹		0	5 24	5 49	6 11	9 54	40	22 13	41
13	11	29.0		315	19.4 ¹⁶⁷	36.0 ¹³⁰		10 S	5 12	37	5 59	55	44	10	37
14	26	28.9		329	55.0 ¹⁶⁶	+2 49.0 ¹³⁰		20	4 56	24	47	57	48	06	33
15	41	28.9		344	30.6 ¹⁶⁶	+3 01.9 ¹²⁹		30	37	5 07	33	9 59	53	02	29
16	56	28.8		359	06.2 ¹⁶⁶	14.8 ¹²⁹		35	24	4 57	24	10 00	55	22 00	26
17	71	28.8	-15 35.6	13	41.8 ¹⁶⁶	+3 27.7 ¹²⁹		40	4 09	4 45	5 15	10 01	59	21 58	22
18	86	28.8	-15 34.8	28	17.4 ¹⁶⁶	+3 40.6 ¹²⁹		45	3 50	4 31	5 03	10 02	63	21 55	19
19	101	28.7		42	53.0 ¹⁶⁶	+3 53.5 ¹²⁹		50	25	13	4 50	04	67	51	15
20	116	28.7		57	28.6 ¹⁶⁶	+4 06.4 ¹²⁹		52	3 12	4 04	43	05	68	49	13
21	131	28.6		72	04.2 ¹⁶⁶	19.2 ¹²⁸		54	2 57	3 54	36	05	71	48	11
22	146	28.6		86	39.8 ¹⁶⁶	32.0 ¹²⁸		56	40	43	28	06	74	46	8
23	161	28.6		101	15.4 ¹⁶⁶	44.8 ¹²⁸		58	2 17	30	19	07	77	43	7
24	176	28.5	-15 30.2	115	51.0 ¹⁶⁶	+4 57.6 ¹²⁸		60 S	1 45	3 14	4 09	10 09	79	21 41	3
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 54 ^m 7			Mag: -4.3 PMG: 9 ^h 04 ^m			Mag: +1.2 PMG: 7 ^h 42 ^m			Mag: -2.6 PMG: 23 ^h 54 ^m			Mag: -0.2 PMG: 20 ^h 21 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	135	43.0	223 58.7	-20 57.9	244 21.1	-22 00.8	0	22.5	+17 51.2	53 56.2	+22 02.8				
1	150	45.5	238 58.1	58.0	259 21.9	01.0	15	25.3	51.3	68 58.7	02.8				
2	165	48.0	253 57.5	58.1	274 22.6	01.2	30	28.1	51.4	84 01.3	02.8				
3	180	50.4	268 57.0	58.2	289 23.3	01.5	45	30.9	51.5	99 03.8	02.8				
4	195	52.9	283 56.4	58.3	304 24.1	01.7	60	33.7	51.6	114 06.4	02.8				
5	210	55.3	298 55.9	-20 58.4	319 24.8	-22 01.9	75	36.5	+17 51.7	129 08.9	+22 02.8				
6	225	57.8	313 55.3	-20 58.5	334 25.6	-22 02.2	90	39.3	+17 51.8	144 11.5	+22 02.8				
7	241	00.3	328 54.7	58.6	349 26.3	02.4	105	42.1	51.9	159 14.0	02.8				
8	256	02.7	343 54.2	58.7	4 27.1	02.6	120	44.9	52.0	174 16.6	02.8				
9	271	05.2	358 53.6	58.8	19 27.8	02.9	135	47.7	52.1	189 19.1	02.8				
10	286	07.7	13 53.0	58.9	34 28.6	03.1	150	50.5	52.2	204 21.7	02.8				
11	301	10.1	28 52.5	-20 59.0	49 29.3	-22 03.3	165	53.3	+17 52.3	219 24.2	+22 02.8				
12	316	12.6	43 51.9	-20 59.1	64 30.1	-22 03.6	180	56.1	+17 52.4	234 26.7	+22 02.8				
13	331	15.1	58 51.3	59.2	79 30.8	03.8	195	58.9	52.5	249 29.3	02.8				
14	346	17.5	73 50.8	59.3	94 31.6	04.0	211	01.7	52.6	264 31.8	02.8				
15	1	20.0	88 50.2	59.4	109 32.3	04.3	226	04.5	52.7	279 34.4	02.8				
16	16	22.4	103 49.6	59.5	124 33.1	04.5	241	07.3	52.8	294 36.9	02.8				
17	31	24.9	118 49.1	-20 59.6	139 33.8	-22 04.7	256	10.1	+17 52.9	309 39.5	+22 02.8				
18	46	27.4	133 48.5	-20 59.7	154 34.6	-22 05.0	271	12.9	+17 53.0	324 42.0	+22 02.8				
19	61	29.8	148 47.9	59.8	169 35.3	05.2	286	15.7	53.1	339 44.5	02.8				
20	76	32.3	163 47.3	-20 59.9	184 36.0	05.4	301	18.5	53.2	354 47.1	02.9				
21	91	34.8	178 46.8	-21 00.0	199 36.8	05.6	316	21.3	53.3	9 49.6	02.9				
22	106	37.2	193 46.2	-21 00.1	214 37.5	05.9	331	24.1	53.4	24 52.2	02.9				
23	121	39.7	208 45.6	00.2	229 38.3	06.1	346	26.9	53.5	39 54.7	02.9				
24	136	42.2	223 45.1	-21 00.3	244 39.0	-22 06.3	1	29.7	+17 53.6	54 57.2	+22 02.9				
Dif	—			-6	-1	+7	-2	+28		+1	+25			0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1				Edad: 5 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 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	h m m
0	176	28.5	-15	30.2	115	51.0	+4	57.6	60 N	16 29	17 15	18 05	9 44 4	*** ** *	*** ** *	*** ** *
1	191	28.5		29.4	130	26.5 ¹⁶⁵	+5	10.3 ¹²⁷	58	38	20	07	48 7	*** ** *	*** ** *	*** ** *
2	206	28.4		28.6	145	02.1 ¹⁶⁶		23.1 ¹²⁸	56	45	25	10	51 10	23 55	75	
3	221	28.4		27.8	159	37.6 ¹⁶⁵		35.8 ¹²⁷	54	52	30	12	54 12	51 72		
4	236	28.4		27.1	174	13.2 ¹⁶⁶	+5	48.5 ¹²⁷	52	16 58	34	14	9 57 14	47 69		
5	251	28.3	-15	26.3	188	48.7 ¹⁶⁵	+6	01.1 ¹²⁶	50	17 04	17 38	18 16	10 00 15	23 43	67	
6	266	28.3	-15	25.5	203	24.2 ¹⁶⁵	+6	13.8 ¹²⁷	45	17 16	17 47	18 21	10 05 20	23 35	63	
7	281	28.3		24.7	217	59.7 ¹⁶⁵		26.4 ¹²⁶	40	26	17 54	26	10 23	28 60		
8	296	28.2		23.9	232	35.2 ¹⁶⁵		38.9 ¹²⁵	35	34	18 01	31	14 26	22 57		
9	311	28.2		23.2	247	10.6 ¹⁶⁴	+6	51.5 ¹²⁶	30	42	07	35	17 29	17 54		
10	326	28.1		22.4	261	46.1 ¹⁶⁵	+7	04.0 ¹²⁵	20	17 55	18	44	23 34	09 49		
11	341	28.1	-15	21.6	276	21.5 ¹⁶⁴	+7	16.5 ¹²⁵	10 N	18 07	18 28	18 53	10 29 37	23 01	45	
12	356	28.1	-15	20.8	290	56.9 ¹⁶⁴	+7	29.0 ¹²⁵	0	18 18	18 39	19 04	10 34 41	22 54	42	
13	11	28.0		20.0	305	32.3 ¹⁶⁴		41.4 ¹²⁴	10 S	29	18 51	16	39 45	47 38		
14	26	28.0		19.3	320	07.6 ¹⁶³	+7	53.9 ¹²⁵	20	41	19 04	31	45 49	39 34		
15	41	28.0		18.5	334	43.0 ¹⁶⁴	+8	06.2 ¹²³	30	18 54	20	19 50	52 53	31 29		
16	56	27.9		17.7	349	18.3 ¹⁶³		18.6 ¹²⁴	35	19 02	30	20 02	10 55 56	26 27		
17	71	27.9	-15	16.9	3	53.6 ¹⁶³	+8	30.9 ¹²³	40	19 12	19 41	20 17	11 00 59	22 20 25		
18	86	27.9	-15	16.1	18	28.8 ¹⁶²	+8	43.2 ¹²³	45	19 23	19 55	20 35	11 05 62	22 14 21		
19	101	27.8		15.4	33	04.0 ¹⁶²	+8	55.4 ¹²²	50	36	20 12	20 59	11 67	06 17		
20	116	27.8		14.6	47	39.3 ¹⁶³	+9	07.6 ¹²²	52	42	21	21 11	13 70	22 02 15		
21	131	27.8		13.8	62	14.4 ¹⁶¹		19.8 ¹²²	54	49	30	25	16 72	21 59 12		
22	146	27.7		13.0	76	49.6 ¹⁶²		32.0 ¹²²	56	19 56	41	21 42	20 74	54 10		
23	161	27.7		12.2	91	24.7 ¹⁶¹		44.1 ¹²¹	58	20 05	20 53	22 04	24 77	50 7		
24	176	27.7	-15	11.4	105	59.8 ¹⁶¹	+9	56.2 ¹²¹	60 S	20 15	21 08	22 32	11 28 80	21 44 4		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 50 ^m 8		Mag: -4.3 PMG: 9 ^h 05 ^m		Mag: +1.2 PMG: 7 ^h 41 ^m		Mag: -2.6 PMG: 23 ^h 50 ^m		Mag: -0.2 PMG: 20 ^h 17 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	136	42.2	223	45.1	-21	00.3	244	39.0	-22	06.3	1	29.7	+17	53.6	54	57.2	+22	02.9
1	151	44.6	238	44.5		00.4	259	39.8		06.6	16	32.5		53.6	69	59.8		02.9
2	166	47.1	253	43.9		00.5	274	40.5		06.8	31	35.3		53.7	85	02.3		02.9
3	181	49.6	268	43.3		00.6	289	41.3		07.0	46	38.1		53.8	100	04.9		02.9
4	196	52.0	283	42.8		00.7	304	42.0		07.2	61	40.9		53.9	115	07.4		02.9
5	211	54.5	298	42.2	-21	00.7	319	42.8	-22	07.5	76	43.7	+17	54.0	130	10.0	+22	02.9
6	226	56.9	313	41.6	-21	00.8	334	43.5	-22	07.7	91	46.4	+17	54.1	145	12.5	+22	02.9
7	241	59.4	328	41.1		00.9	349	44.3		07.9	106	49.2		54.2	160	15.0		02.9
8	257	01.9	343	40.5		01.0	4	45.0		08.1	121	52.0		54.3	175	17.6		02.9
9	272	04.3	358	39.9		01.1	19	45.7		08.4	136	54.8		54.4	190	20.1		02.9
10	287	06.8	13	39.3		01.2	34	46.5		08.6	151	57.6		54.5	205	22.6		02.9
11	302	09.3	28	38.8	-21	01.2	49	47.2	-22	08.8	167	00.4	+17	54.6	220	25.2	+22	02.9
12	317	11.7	43	38.2	-21	01.3	64	48.0	-22	09.1	182	03.2	+17	54.7	235	27.7	+22	02.9
13	332	14.2	58	37.6		01.4	79	48.7		09.3	197	06.0		54.8	250	30.3		02.9
14	347	16.7	73	37.0		01.5	94	49.5		09.5	212	08.8		54.9	265	32.8		02.9
15	2	19.1	88	36.5		01.6	109	50.2		09.7	227	11.6		55.0	280	35.3		02.9
16	17	21.6	103	35.9		01.6	124	51.0		09.9	242	14.4		55.1	295	37.9		02.9
17	32	24.0	118	35.3	-21	01.7	139	51.7	-22	10.2	257	17.2	+17	55.2	310	40.4	+22	03.0
18	47	26.5	133	34.7	-21	01.8	154	52.5	-22	10.4	272	20.0	+17	55.3	325	43.0	+22	03.0
19	62	29.0	148	34.1		01.9	169	53.2		10.6	287	22.8		55.4	340	45.5		03.0
20	77	31.4	163	33.6		01.9	184	53.9		10.8	302	25.6		55.5	355	48.0		03.0
21	92	33.9	178	33.0		02.0	199	54.7		11.1	317	28.4		55.6	10	50.6		03.0
22	107	36.4	193	32.4		02.1	214	55.4		11.3	332	31.2		55.7	25	53.1		03.0
23	122	38.8	208	31.8		02.2	229	56.2		11.5	347	34.0		55.8	40	55.6		03.0
24	137	41.3	223	31.3	-21	02.2	244	56.9	-22	11.7	2	36.8	+17	55.9	55	58.2	+22	03.0
Dif	—		-6		-1		+7		-2		+28		+1		+25		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 6 ^d 5 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	27.7	-15	11.4	105	59.8	+9	56.2	60 N	6	23	7	12	7	58	9	48	
1	191	27.6		10.6	120	34.8 ¹⁶⁰	+10	08.2 ¹²⁰	58	20	07		49	9	55	8	0	
2	206	27.6		09.9	135	09.8 ¹⁶⁰		20.2 ¹²⁰	56	18	7	02	42	10	01	11	**	
3	221	27.6		09.1	149	44.8 ¹⁶⁰		32.2 ¹²⁰	54	15	6	57	35	06	14		**	
4	236	27.6		08.3	164	19.8 ¹⁶⁰		44.1 ¹¹⁹	52	13	53		29	11	16		**	
5	251	27.5	-15	07.5	178	54.7 ¹⁵⁹	+10	56.0 ¹¹⁹	50	6	11	6	49	7	24	10	15	
6	266	27.5	-15	06.7	193	29.5 ¹⁵⁸	+11	07.8 ¹¹⁸	45	6	06	6	41	7	12	10	25	
7	281	27.5		05.9	208	04.4 ¹⁵⁹		19.6 ¹¹⁸	40	6	02	34	7	02	33	26	**	
8	296	27.4		05.1	222	39.2 ¹⁵⁸		31.4 ¹¹⁸	35	5	57	27	6	53	40	29	**	
9	311	27.4		04.3	237	13.9 ¹⁵⁷		43.1 ¹¹⁷	30		53	21	46	46	31		**	
10	326	27.4		03.6	251	48.6 ¹⁵⁷	+11	54.7 ¹¹⁶	20		44	10	33	10	57	35	23	
11	341	27.4	-15	02.8	266	23.3 ¹⁵⁷	+12	06.4 ¹¹⁷	10 N	5	35	6	00	6	22	11	06	
12	356	27.3	-15	02.0	280	57.9 ¹⁵⁶	+12	17.9 ¹¹⁵	0	5	24	5	49	6	11	11	15	
13	11	27.3		01.2	295	32.5 ¹⁵⁶		29.5 ¹¹⁶	10 S	5	12	38	6	00	24	47	25	
14	26	27.3	-15	00.4	310	07.0 ¹⁵⁵		41.0 ¹¹⁵	20	4	58	25	5	48	34	50	13	
15	41	27.3	-14	59.6	324	41.5 ¹⁵⁵	+12	52.4 ¹¹⁴	30	39	5	09	34	45	55	23	00	
16	56	27.2		58.8	339	16.0 ¹⁵⁵	+13	03.8 ¹¹⁴	35	27	4	59	26	51	58	22	53	
17	71	27.2	-14	58.0	353	50.4 ¹⁵⁴	+13	15.2 ¹¹⁴	40	4	12	4	48	5	17	11	59	
18	86	27.2	-14	57.2	8	24.7 ¹⁵³	+13	26.5 ¹¹³	45	3	54	4	34	5	06	12	07	
19	101	27.2		56.4	22	59.0 ¹⁵³		37.7 ¹¹²	50	30	17		4	53	18	68	23	
20	116	27.1		55.6	37	33.3 ¹⁵³	+13	48.9 ¹¹²	52	18	4	08	47	23	70	17	18	
21	131	27.1		54.8	52	07.5 ¹⁵²	+14	00.0 ¹¹¹	54	3	04	3	59	40	28	73	11	
22	146	27.1		54.0	66	41.6 ¹⁵¹	+14	11.1 ¹¹¹	56	2	47	48	33	34	76	22	04	
23	161	27.1		53.2	81	15.7 ¹⁵¹		22.2 ¹¹¹	58	2	26	36	24	41	78	21	57	
24	176	27.0	-14	52.5	95	49.7 ¹⁵⁰	+14	33.2 ¹¹⁰	60 S	1	57	3	21	4	15	12	48	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 46 ^m 8			Mag: -4.3 PMG: 9 ^h 06 ^m			Mag: +1.2 PMG: 7 ^h 40 ^m			Mag: -2.6 PMG: 23 ^h 45 ^m			Mag: -0.2 PMG: 20 ^h 13 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	137	41.3	223	31.3	-21	02.2	244	56.9	-22	11.7	2	36.8	+17	55.9	55	58.2		
1	152	43.8	238	30.7		02.3	259	57.7		12.0	17	39.6		56.0	71	00.7		
2	167	46.2	253	30.1		02.4	274	58.4		12.2	32	42.4		56.1	86	03.2		
3	182	48.7	268	29.5		02.4	289	59.2		12.4	47	45.2		56.2	101	05.8		
4	197	51.2	283	28.9		02.5	304	59.9		12.6	62	48.0		56.3	116	08.3		
5	212	53.6	298	28.4	-21	02.6	320	00.6	-22	12.8	77	50.7	+17	56.4	131	10.9		
6	227	56.1	313	27.8	-21	02.6	335	01.4	-22	13.1	92	53.5	+17	56.5	146	13.4		
7	242	58.5	328	27.2		02.7	350	02.1		13.3	107	56.3		56.5	161	15.9		
8	258	01.0	343	26.6		02.7	5	02.9		13.5	122	59.1		56.6	176	18.5		
9	273	03.5	358	26.0		02.8	20	03.6		13.7	138	01.9		56.7	191	21.0		
10	288	05.9	13	25.4		02.9	35	04.4		13.9	153	04.7		56.8	206	23.5		
11	303	08.4	28	24.9	-21	02.9	50	05.1	-22	14.2	168	07.5	+17	56.9	221	26.1		
12	318	10.9	43	24.3	-21	03.0	65	05.8	-22	14.4	183	10.3	+17	57.0	236	28.6		
13	333	13.3	58	23.7		03.0	80	06.6		14.6	198	13.1		57.1	251	31.1		
14	348	15.8	73	23.1		03.1	95	07.3		14.8	213	15.9		57.2	266	33.7		
15	3	18.3	88	22.5		03.2	110	08.1		15.0	228	18.7		57.3	281	36.2		
16	18	20.7	103	21.9		03.2	125	08.8		15.2	243	21.5		57.4	296	38.7		
17	33	23.2	118	21.4	-21	03.3	140	09.6	-22	15.5	258	24.3	+17	57.5	311	41.3		
18	48	25.7	133	20.8	-21	03.3	155	10.3	-22	15.7	273	27.1	+17	57.6	326	43.8		
19	63	28.1	148	20.2		03.4	170	11.0		15.9	288	29.9		57.7	341	46.3		
20	78	30.6	163	19.6		03.4	185	11.8		16.1	303	32.7		57.8	356	48.9		
21	93	33.0	178	19.0		03.5	200	12.5		16.3	318	35.5		57.9	11	51.4		
22	108	35.5	193	18.4		03.5	215	13.3		16.5	333	38.2		58.0	26	53.9		
23	123	38.0	208	17.8		03.6	230	14.0		16.8	348	41.0		58.1	41	56.5		
24	138	40.4	223	17.2	-21	03.6	245	14.8	-22	17.0	3	43.8	+17	58.2	56	59.0		
Dif	—			-6			+7			-2			+28			+1		

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: 7 ^d 5 PHE { SD: 14'8 PMG: 18 ^h 09 ^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	176	27.0	-14	52.5	95	49.7	+14	33.2	60 N	16 34	17 19	18 09	9 53 8	1 27 84					
1	191	27.0		51.7	110	23.7 ¹⁵⁰		44.1 ¹⁰⁹	58	42	25	11	10 03 12	18 80					
2	206	27.0		50.9	124	57.6 ¹⁴⁹	+14	55.0 ¹⁰⁹	56	50	29	14	12 15	10 76					
3	221	27.0		50.1	139	31.5 ¹⁴⁹	+15	05.8 ¹⁰⁸	54	16 56	34	16	20 18	1 03 73					
4	236	26.9		49.3	154	05.3 ¹⁴⁸		16.6 ¹⁰⁸	52	17 02	38	18	27 20	0 56 71					
5	251	26.9	-14	48.5	168	39.1 ¹⁴⁸	+15	27.3 ¹⁰⁷	50	17 07	17 41	18 20	10 34 22	0 50 69					
6	266	26.9	-14	47.7	183	12.7 ¹⁴⁶	+15	37.9 ¹⁰⁶	45	17 19	17 49	18 24	10 47 27	0 38 64					
7	281	26.9		46.9	197	46.4 ¹⁴⁷		48.5 ¹⁰⁶	40	28	17 56	28	10 59 30	28 60					
8	296	26.9		46.1	212	20.0 ¹⁴⁶	+15	59.1 ¹⁰⁶	35	36	18 03	32	11 09 32	19 58					
9	311	26.8		45.3	226	53.5 ¹⁴⁵	+16	09.5 ¹⁰⁴	30	44	08	37	17 35	0 11 55					
10	326	26.8		44.5	241	26.9 ¹⁴⁴		19.9 ¹⁰⁴	20	17 56	19	45	32 39	** ** *					
11	341	26.8	-14	43.7	256	00.3 ¹⁴⁴	+16	30.3 ¹⁰⁴	10 N	18 07	18 29	18 54	11 46 42	** ** *					
12	356	26.8	-14	42.9	270	33.6 ¹⁴³	+16	40.6 ¹⁰³	0	18 18	18 39	19 04	11 58 46	** ** *					
13	11	26.8		42.1	285	06.9 ¹⁴³	+16	50.8 ¹⁰²	10 S	28	18 50	15	12 11 48	** ** *					
14	26	26.8		41.3	299	40.1 ¹⁴²	+17	01.0 ¹⁰²	20	40	19 03	30	24 52	23 51 41					
15	41	26.7		40.5	314	13.2 ¹⁴¹		11.0 ¹⁰⁰	30	18 53	18	19 48	40 56	33 38					
16	56	26.7		39.7	328	46.3 ¹⁴¹		21.1 ¹⁰¹	35	19 01	28	20 00	49 58	23 36					
17	71	26.7	-14	38.9	343	19.2 ¹³⁹	+17	31.0 ⁹⁹	40	19 09	19 39	20 14	12 59 61	23 12 33					
18	86	26.7	-14	38.1	357	52.2 ¹⁴⁰	+17	40.9 ⁹⁹	45	19 20	19 52	20 32	13 11 65	22 59 29					
19	101	26.7		37.2	12	25.0 ¹³⁸	+17	50.7 ⁹⁸	50	32	20 09	20 55	26 69	43 25					
20	116	26.7		36.4	26	57.8 ¹³⁸	+18	00.5 ⁹⁸	52	38	17	21 06	33 71	35 23					
21	131	26.6		35.6	41	30.5 ¹³⁷		10.2 ⁹⁷	54	45	26	20	41 74	27 21					
22	146	26.6		34.8	56	03.2 ¹³⁷		19.8 ⁹⁶	56	19 52	36	36	50 76	17 18					
23	161	26.6		34.0	70	35.7 ¹³⁵		29.3 ⁹⁵	58	20 00	20 48	21 55	13 59 81	22 07 14					
24	176	26.6	-14	33.2	85	08.2 ¹³⁵	+18	38.8 ⁹⁵	60 S	20 09	21 02	22 21	14 11 85	21 55 10					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 14 ^h 42 ^m 9		Mag: -4.3 PMG: 9 ^h 07 ^m			Mag: +1.2 PMG: 7 ^h 39 ^m			Mag: -2.6 PMG: 23 ^h 41 ^m			Mag: -0.1 PMG: 20 ^h 09 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	138	40.4	223	17.2	-21	03.6	245	14.8	-22	17.0	3	43.8	+17	58.2	56	59.0	+22	03.1	
1	153	42.9	238	16.7		03.7	260	15.5		17.2	18	46.6		58.3	72	01.5		03.1	
2	168	45.4	253	16.1		03.7	275	16.2		17.4	33	49.4		58.4	87	04.0		03.1	
3	183	47.8	268	15.5		03.8	290	17.0		17.6	48	52.2		58.5	102	06.6		03.1	
4	198	50.3	283	14.9		03.8	305	17.7		17.8	63	55.0		58.6	117	09.1		03.1	
5	213	52.8	298	14.3	-21	03.8	320	18.5	-22	18.0	78	57.8	+17	58.7	132	11.6	+22	03.1	
6	228	55.2	313	13.7	-21	03.9	335	19.2	-22	18.2	94	00.6	+17	58.8	147	14.2	+22	03.1	
7	243	57.7	328	13.1		03.9	350	20.0		18.5	109	03.4		58.8	162	16.7		03.1	
8	259	00.1	343	12.5		04.0	5	20.7		18.7	124	06.2		58.9	177	19.2		03.1	
9	274	02.6	358	11.9		04.0	20	21.4		18.9	139	09.0		59.0	192	21.8		03.2	
10	289	05.1	13	11.4		04.0	35	22.2		19.1	154	11.8		59.1	207	24.3		03.2	
11	304	07.5	28	10.8	-21	04.1	50	22.9	-22	19.3	169	14.6	+17	59.2	222	26.8	+22	03.2	
12	319	10.0	43	10.2	-21	04.1	65	23.7	-22	19.5	184	17.4	+17	59.3	237	29.3	+22	03.2	
13	334	12.5	58	09.6		04.1	80	24.4		19.7	199	20.2		59.4	252	31.9		03.2	
14	349	14.9	73	09.0		04.2	95	25.2		19.9	214	22.9		59.5	267	34.4		03.2	
15	4	17.4	88	08.4		04.2	110	25.9		20.2	229	25.7		59.6	282	36.9		03.2	
16	19	19.9	103	07.8		04.2	125	26.6		20.4	244	28.5		59.7	297	39.5		03.2	
17	34	22.3	118	07.2	-21	04.3	140	27.4	-22	20.6	259	31.3	+17	59.8	312	42.0	+22	03.2	
18	49	24.8	133	06.6	-21	04.3	155	28.1	-22	20.8	274	34.1	+17	59.9	327	44.5	+22	03.2	
19	64	27.3	148	06.0		04.3	170	28.9		21.0	289	36.9	+18	00.0	342	47.0		03.2	
20	79	29.7	163	05.4		04.4	185	29.6		21.2	304	39.7	+18	00.1	357	49.6		03.2	
21	94	32.2	178	04.8		04.4	200	30.3		21.4	319	42.5		00.2	12	52.1		03.2	
22	109	34.6	193	04.3		04.4	215	31.1		21.6	334	45.3		00.3	27	54.6		03.2	
23	124	37.1	208	03.7		04.4	230	31.8		21.8	349	48.1		00.4	42	57.2		03.2	
24	139	39.6	223	03.1	-21	04.5	245	32.6	-22	22.0	4	50.9	+18	00.5	57	59.7	+22	03.2	
Dif	—		-6			0	+7		-2		+28		+1		+25				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 8 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 Rº: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	26.6	-14	33.2	85	08.2	+18	38.8	60 N	6 18	7 08	7 53	10 01	14	2 51	85
1	191	26.6		32.4	99	40.7 ¹³⁵		48.2 ⁹⁴	58	16	7 02	45	15 19		38	80
2	206	26.6		31.6	114	13.0 ¹³³	+18	57.5 ⁹³	56	14	6 58	37	27 22		26	77
3	221	26.6		30.8	128	45.3 ¹³³	+19	06.7 ⁹²	54	12	54	31	38 25		16	74
4	236	26.5		30.0	143	17.5 ¹³²		15.9 ⁹²	52	10	50	25	47 27	2 07	71	71
5	251	26.5	-14	29.2	157	49.6 ¹³¹	+19	25.0 ⁹¹	50	6 08	6 46	7 20	10 56	29	1 59	69
6	266	26.5	-14	28.4	172	21.7 ¹³¹	+19	34.0 ⁹⁰	45	6 04	6 38	7 09	11 14	33	1 42	65
7	281	26.5		27.6	186	53.7 ¹³⁰		42.9 ⁸⁹	40	6 00	32	7 00	29 36		28	62
8	296	26.5		26.8	201	25.6 ¹²⁹	+19	51.8 ⁸⁹	35	5 56	25	6 52	41 39		17	59
9	311	26.5		25.9	215	57.4 ¹²⁸	+20	00.6 ⁸⁸	30	52	20	44	11 52	41	1 06	57
10	326	26.5		25.1	230	29.2 ¹²⁸		09.2 ⁸⁶	20	43	09	32	12 11	44	0 49	53
11	341	26.5	-14	24.3	245	00.8 ¹²⁶	+20	17.8 ⁸⁶	10 N	5 34	6 00	6 21	12 28	46	0 34	50
12	356	26.5	-14	23.5	259	32.4 ¹²⁶	+20	26.4 ⁸⁶	0	5 25	5 49	6 11	12 44	49	0 20	47
13	11	26.4		22.7	274	03.9 ¹²⁵		34.8 ⁸⁴	10 S	5 13	39	6 00	12 59	52	0 06	44
14	26	26.4		21.9	288	35.4 ¹²⁵		43.1 ⁸³	20	4 59	26	5 49	13 16	54	***	***
15	41	26.4		21.1	303	06.7 ¹²³		51.4 ⁸³	30	41	11	36	36 57		***	***
16	56	26.4		20.3	317	38.0 ¹²³	+20	59.6 ⁸²	35	29	5 01	28	13 47	60	23 59	41
17	71	26.4	-14	19.5	332	09.2 ¹²²	+21	07.7 ⁸¹	40	4 15	4 50	5 20	14 00	62	23 45	39
18	86	26.4	-14	18.6	346	40.3 ¹²¹	+21	15.7 ⁸⁰	45	3 57	4 37	5 09	14 16	65	23 28	37
19	101	26.4		17.8	1	11.3 ¹²⁰		23.6 ⁷⁹	50	34	21	4 57	35 69		23 08	33
20	116	26.4		17.0	15	42.3 ¹²⁰		31.4 ⁷⁸	52	23	13	51	44 71		22 58	31
21	131	26.4		16.2	30	13.1 ¹¹⁸		39.1 ⁷⁷	54	3 09	4 04	45	14 55	73	48	28
22	146	26.4		15.4	44	43.9 ¹¹⁸		46.7 ⁷⁶	56	2 54	3 53	37	15 06	76	35	26
23	161	26.4		14.6	59	14.6 ¹¹⁷	+21	54.2 ⁷⁵	58	34	42	29	20 80		21	23
24	176	26.4	-14	13.8	73	45.3 ¹¹⁷	+22	01.7 ⁷⁵	60 S	2 08	3 28	4 20	15 36	85	22 05	17

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 14 ^h 39 ^m 0		Mag: -4.3 PMG: 9 ^h 08 ^m			Mag: +1.2 PMG: 7 ^h 37 ^m			Mag: -2.6 PMG: 23 ^h 36 ^m			Mag: -0.1 PMG: 20 ^h 05 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	139	39.6	223	03.1	-21	04.5	245	32.6	-22	22.0	4	50.9	+18	00.5	57	59.7	+22	03.2	
1	154	42.0	238	02.5		04.5	260	33.3		22.2	19	53.7		00.6	73	02.2		03.2	
2	169	44.5	253	01.9		04.5	275	34.1		22.4	34	56.5		00.7	88	04.7		03.2	
3	184	47.0	268	01.3		04.5	290	34.8		22.7	49	59.2		00.7	103	07.3		03.3	
4	199	49.4	283	00.7		04.6	305	35.5		22.9	65	02.0		00.8	118	09.8		03.3	
5	214	51.9	298	00.1	-21	04.6	320	36.3	-22	23.1	80	04.8	+18	00.9	133	12.3	+22	03.3	
6	229	54.4	312	59.5	-21	04.6	335	37.0	-22	23.3	95	07.6	+18	01.0	148	14.8	+22	03.3	
7	244	56.8	327	58.9		04.6	350	37.8		23.5	110	10.4		01.1	163	17.4		03.3	
8	259	59.3	342	58.3		04.6	5	38.5		23.7	125	13.2		01.2	178	19.9		03.3	
9	275	01.8	357	57.7		04.6	20	39.2		23.9	140	16.0		01.3	193	22.4		03.3	
10	290	04.2	12	57.1		04.7	35	40.0		24.1	155	18.8		01.4	208	24.9		03.3	
11	305	06.7	27	56.5	-21	04.7	50	40.7	-22	24.3	170	21.6	+18	01.5	223	27.5	+22	03.3	
12	320	09.1	42	55.9	-21	04.7	65	41.5	-22	24.5	185	24.4	+18	01.6	238	30.0	+22	03.3	
13	335	11.6	57	55.3		04.7	80	42.2		24.7	200	27.2		01.7	253	32.5		03.3	
14	350	14.1	72	54.7		04.7	95	42.9		24.9	215	30.0		01.8	268	35.0		03.3	
15	5	16.5	87	54.1		04.7	110	43.7		25.1	230	32.7		01.9	283	37.6		03.3	
16	20	19.0	102	53.5		04.7	125	44.4		25.3	245	35.5		02.0	298	40.1		03.3	
17	35	21.5	117	52.9	-21	04.7	140	45.2	-22	25.5	260	38.3	+18	02.1	313	42.6	+22	03.3	
18	50	23.9	132	52.3	-21	04.8	155	45.9	-22	25.7	275	41.1	+18	02.2	328	45.1	+22	03.3	
19	65	26.4	147	51.7		04.8	170	46.6		25.9	290	43.9		02.3	343	47.6		03.3	
20	80	28.9	162	51.1		04.8	185	47.4		26.1	305	46.7		02.4	358	50.2		03.3	
21	95	31.3	177	50.5		04.8	200	48.1		26.3	320	49.5		02.4	13	52.7		03.4	
22	110	33.8	192	49.9		04.8	215	48.9		26.5	335	52.3		02.5	28	55.2		03.4	
23	125	36.2	207	49.3		04.8	230	49.6		26.7	350	55.1		02.6	43	57.7		03.4	
24	140	38.7	222	48.7	-21	04.8	245	50.3	-22	26.9	5	57.9	+18	02.7	59	00.3	+22	03.4	
Dif	—		-6			0	+7			-2	+28			+1		+25			

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 10 ^d 5	PHE {	SD: 15:1	4 ^h : 55:7 12 ^h : 56:0 20 ^h : 56:2	Rº: 56 ^m		Náutico	Civil		Hora	Rº	Hora	Rº	
	PMG: 12 ^h 14 ^m 2																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	176	26.3	-13	54.0	61	35.4	+24	28.8	60 N	6	14	7	03	7	47	10	39
1	191	26.3		53.2	76	04.0	96	33.5	58	12	6	58	40	11	03	46	5
2	206	26.3		52.4	90	32.4	94	38.1	56	10	54	33	21	48	4	56	65
3	221	26.3		51.6	105	00.9	95	42.6	54	08	50	27	37	49	41	63	
4	236	26.3		50.7	119	29.2	93	46.9	52	07	46	22	11	51	50	27	63
5	251	26.3	-13	49.9	133	57.5	93	+24 51.1	50	6	05	6	43	7	17	12	03
6	266	26.3	-13	49.1	148	25.6	91	+24 55.2	41	6	01	6	36	7	06	12	28
7	281	26.3		48.3	162	53.7	91	+24 59.2	40	5	57	29	6	57	12	48	52
8	296	26.3		47.4	177	21.8	91	+25 03.1	39	54	24	50	13	05	53	15	58
9	311	26.4		46.6	191	49.7	89	06.8	37	30	50	18	43	19	53	3	01
10	326	26.4		45.8	206	17.6	89	10.4	36	20	42	6	09	31	13	44	54
11	341	26.4	-13	44.9	220	45.4	88	+25 13.8	34	10 N	5	34	5	59	6	21	14
12	356	26.4	-13	44.1	235	13.2	88	+25 17.1	33	0	5	25	5	50	6	11	14
13	11	26.4		43.3	249	40.9	87	20.3	32	10 S	14	39	6	01	14	45	55
14	26	26.4		42.4	264	08.5	86	23.4	31	20	5	00	27	5	50	15	06
15	41	26.4		41.6	278	36.0	85	26.3	29	30	4	43	12	38	31	57	0
16	56	26.4		40.8	293	03.4	84	29.1	28	35	31	5	03	30	15	46	57
17	71	26.4	-13	39.9	307	30.8	84	+25 31.7	26	40	4	18	4	53	5	22	16
18	86	26.4	-13	39.1	321	58.2	84	+25 34.3	26	45	4	01	4	40	5	12	16
19	101	26.4		38.3	336	25.4	82	36.6	23	50	3	39	24	5	00	16	49
20	116	26.4		37.4	350	52.6	82	38.9	23	52	28	17	4	55	17	02	58
21	131	26.4		36.6	5	19.8	82	41.0	21	54	15	4	08	49	16	59	23
22	146	26.4		35.8	19	46.8	80	42.9	19	56	3	00	3	59	42	33	59
23	161	26.5		34.9	34	13.8	80	44.8	19	58	2	42	47	34	17	53	59
24	176	26.5	-13	34.1	48	40.8	80	+25 46.4	16	60 S	2	19	3	34	4	26	18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 31 ^m 1		Mag: -4.3 PMG: 9 ^h 10 ^m			Mag: +1.1 PMG: 7 ^h 35 ^m			Mag: -2.6 PMG: 23 ^h 27 ^m			Mag: -0.1 PMG: 19 ^h 57 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	141	37.9	222	34.2	-21	04.5	246	08.1	-22	31.7	7	04.8	+18	05.0	60	00.7	+22	03.5
1	156	40.3	237	33.6		04.5	261	08.8		31.9	22	07.6		05.1	75	03.2		03.5
2	171	42.8	252	33.0		04.5	276	09.5		32.0	37	10.4		05.2	90	05.7		03.5
3	186	45.2	267	32.4		04.5	291	10.3		32.2	52	13.2		05.2	105	08.3		03.5
4	201	47.7	282	31.8		04.4	306	11.0		32.4	67	15.9		05.3	120	10.8		03.5
5	216	50.2	297	31.2	-21	04.4	321	11.8	-22	32.6	82	18.7	+18	05.4	135	13.3	+22	03.5
6	231	52.6	312	30.6	-21	04.4	336	12.5	-22	32.8	97	21.5	+18	05.5	150	15.8	+22	03.5
7	246	55.1	327	30.0		04.4	351	13.2		33.0	112	24.3		05.6	165	18.3		03.6
8	261	57.6	342	29.4		04.3	6	14.0		33.2	127	27.1		05.7	180	20.8		03.6
9	277	00.0	357	28.7		04.3	21	14.7		33.4	142	29.9		05.8	195	23.3		03.6
10	292	02.5	12	28.1		04.3	36	15.4		33.6	157	32.7		05.9	210	25.9		03.6
11	307	05.0	27	27.5	-21	04.2	51	16.2	-22	33.8	172	35.5	+18	06.0	225	28.4	+22	03.6
12	322	07.4	42	26.9	-21	04.2	66	16.9	-22	34.0	187	38.2	+18	06.1	240	30.9	+22	03.6
13	337	09.9	57	26.3		04.2	81	17.7		34.1	202	41.0		06.2	255	33.4		03.6
14	352	12.4	72	25.7		04.1	96	18.4		34.3	217	43.8		06.3	270	35.9		03.6
15	7	14.8	87	25.1		04.1	111	19.1		34.5	232	46.6		06.4	285	38.4		03.6
16	22	17.3	102	24.5		04.1	126	19.9		34.7	247	49.4		06.4	300	40.9		03.6
17	37	19.7	117	23.9	-21	04.0	141	20.6	-22	34.9	262	52.2	+18	06.5	315	43.5	+22	03.6
18	52	22.2	132	23.3	-21	04.0	156	21.3	-22	35.1	277	55.0	+18	06.6	330	46.0	+22	03.6
19	67	24.7	147	22.6		04.0	171	22.1		35.3	292	57.8		06.7	345	48.5		03.6
20	82	27.1	162	22.0		03.9	186	22.8		35.5	308	00.5		06.8	0	51.0		03.6
21	97	29.6	177	21.4		03.9	201	23.6		35.7	323	03.3		06.9	15	53.5		03.6
22	112	32.1	192	20.8		03.8	216	24.3		35.8	338	06.1		07.0	30	56.0		03.6
23	127	34.5	207	20.2		03.8	231	25.0		36.0	353	08.9		07.1	45	58.5		03.6
24	142	37.0	222	19.6	-21	03.7	246	25.8	-22	36.2	8	11.7	+18	07.2	61	01.0	+22	03.7
Dif	—		-6			0	+7			-2	+28			+1	+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 2				Edad: 11 ^d 5 PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 7 20 ^h : 57 ^s 0 PMG: 21 ^h 34 ^m R°: 57 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	176	26.5	-13	34.1	48	40.8	+25	46.4	60 N	16 45	17 29	18 18	11 23 70		6 47 49			
1	191	26.5		33.3	63	07.7	79	48.0	58	52	34	20	11 49 68		22 50			
2	206	26.5		32.4	77	34.5	78	49.4	56	16 58	38	21	12 09 66		6 01 52			
3	221	26.5		31.6	92	01.3	78	50.6	54	17 04	41	23	26 65		5 44 52			
4	236	26.5		30.8	106	28.0	77	51.7	52	09	45	24	41 64		30 53			
5	251	26.5	-13	29.9	120	54.7	77	+25 52.7	50	17 14	17 48	18 26	12 53 64		5 17 53			
6	266	26.5	-13	29.1	135	21.3	76	+25 53.5	45	17 24	17 55	18 29	13 20 62		4 51 54			
7	281	26.5		28.3	149	47.8	75	54.2	40	33	18 01	33	40 62		31 54			
8	296	26.6		27.4	164	14.3	75	54.7	35	40	06	36	13 58 60		4 13 55			
9	311	26.6		26.6	178	40.8	75	55.1	30	47	11	40	14 12 60		3 58 56			
10	326	26.6		25.7	193	07.2	74	55.3	20	17 58	21	47	14 38 59		33 56			
11	341	26.6	-13	24.9	207	33.6	74	+25 55.4	10 N	18 08	18 30	18 55	15 00 57		3 11 56			
12	356	26.6	-13	24.1	221	59.9	73	+25 55.3	0	18 18	18 39	19 04	15 20 57		2 51 56			
13	11	26.6		23.2	236	26.2	73	55.1	10 S	27	18 49	14	15 40 56		31 56			
14	26	26.6		22.4	250	52.4	72	54.7	20	38	19 00	27	16 02 55		2 09 56			
15	41	26.7		21.5	265	18.6	72	54.2	30	50	15	44	28 53		1 44 56			
16	56	26.7		20.7	279	44.7	71	53.5	35	18 57	23	19 55	16 43 52		29 56			
17	71	26.7	-13	19.9	294	10.9	72	+25 52.6	40	19 05	19 33	20 08	17 00 52		1 11 57			
18	86	26.7	-13	19.0	308	36.9	70	+25 51.7	45	19 14	19 46	20 24	17 21 50		0 51 57			
19	101	26.7		18.2	323	03.0	71	50.5	50	25	20 01	46	17 47 48		25 56			
20	116	26.7		17.3	337	29.0	70	49.2	52	30	08	20 56	18 00 47		0 12 57			
21	131	26.8		16.5	351	55.0	70	47.8	54	36	16	21 08	15 45	** ** *	** ** *			
22	146	26.8		15.6	6	20.9	69	46.2	56	43	26	22	32 43	** ** *	** ** *			
23	161	26.8		14.8	20	46.8	69	44.5	58	50	36	21 39	18 52 42	** ** *	** ** *			
24	176	26.8	-13	14.0	35	12.7	69	+25 42.5	60 S	19 58	20 49	22 01	19 19 37		23 51 81			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 27 ^m 2		Mag: -4.3 PMG: 9 ^h 11 ^m				Mag: +1.1 PMG: 7 ^h 34 ^m				Mag: -2.6 PMG: 23 ^h 23 ^m				Mag: -0.1 PMG: 19 ^h 53 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	142	37.0	222	19.6	-21	03.7	246	25.8	-22	36.2	8	11.7	+18	07.2	61	01.0	+22	03.7
1	157	39.5	237	19.0		03.7	261	26.5		36.4	23	14.5		07.3	76	03.6		03.7
2	172	41.9	252	18.4		03.7	276	27.2		36.6	38	17.3		07.4	91	06.1		03.7
3	187	44.4	267	17.7		03.6	291	28.0		36.8	53	20.0		07.5	106	08.6		03.7
4	202	46.8	282	17.1		03.6	306	28.7		37.0	68	22.8		07.5	121	11.1		03.7
5	217	49.3	297	16.5	-21	03.5	321	29.4	-22	37.1	83	25.6	+18	07.6	136	13.6	+22	03.7
6	232	51.8	312	15.9	-21	03.5	336	30.2	-22	37.3	98	28.4	+18	07.7	151	16.1	+22	03.7
7	247	54.2	327	15.3		03.4	351	30.9		37.5	113	31.2		07.8	166	18.6		03.7
8	262	56.7	342	14.7		03.4	6	31.7		37.7	128	34.0		07.9	181	21.1		03.7
9	277	59.2	357	14.1		03.3	21	32.4		37.9	143	36.7		08.0	196	23.6		03.7
10	293	01.6	12	13.4		03.3	36	33.1		38.1	158	39.5		08.1	211	26.1		03.7
11	308	04.1	27	12.8	-21	03.2	51	33.9	-22	38.3	173	42.3	+18	08.2	226	28.7	+22	03.7
12	323	06.6	42	12.2	-21	03.1	66	34.6	-22	38.4	188	45.1	+18	08.3	241	31.2	+22	03.7
13	338	09.0	57	11.6		03.1	81	35.3		38.6	203	47.9		08.4	256	33.7		03.7
14	353	11.5	72	11.0		03.0	96	36.1		38.8	218	50.7		08.5	271	36.2		03.7
15	8	14.0	87	10.4		03.0	111	36.8		39.0	233	53.5		08.5	286	38.7		03.8
16	23	16.4	102	09.8		02.9	126	37.5		39.2	248	56.2		08.6	301	41.2		03.8
17	38	18.9	117	09.1	-21	02.8	141	38.3	-22	39.3	263	59.0	+18	08.7	316	43.7	+22	03.8
18	53	21.3	132	08.5	-21	02.8	156	39.0	-22	39.5	279	01.8	+18	08.8	331	46.2	+22	03.8
19	68	23.8	147	07.9		02.7	171	39.7		39.7	294	04.6		08.9	346	48.7		03.8
20	83	26.3	162	07.3		02.7	186	40.5		39.9	309	07.4		09.0	1	51.2		03.8
21	98	28.7	177	06.7		02.6	201	41.2		40.1	324	10.2		09.1	16	53.7		03.8
22	113	31.2	192	06.1		02.5	216	42.0		40.2	339	12.9		09.2	31	56.2		03.8
23	128	33.7	207	05.4		02.5	231	42.7		40.4	354	15.7		09.3	46	58.8		03.8
24	143	36.1	222	04.8	-21	02.4	246	43.4	-22	40.6	9	18.5	+18	09.4	62	01.3	+22	03.8
Dif	—		-6		+1		+7		-2		+28		+1		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 12 ^d 5 PHE { 4 ^h : 57'3 12 ^h : 57'5 20 ^h : 57'8 Rº: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	176	26.8	-13	14.0	35	12.7	+25	42.5	20	60 N	6 09	6 58	7 42	12 33	91	7 36	28	
1	191	26.8		13.1	49	38.6	69	40.5	20	58	08	54	35	12 57	85	7 12	33	
2	206	26.8		12.3	64	04.4	68	38.3	22	56	06	50	29	13 15	82	6 53	36	
3	221	26.9		11.4	78	30.3	69	35.9	24	54	05	46	23	31 79		36	40	
4	236	26.9		10.6	92	56.1	68	33.4	25	52	03	43	18	45 77		23	41	
5	251	26.9	-13	09.7	107	21.8	67	+25	30.7	27	50	6 02	6 40	7 13	13 57	75	6 10	43
6	266	26.9	-13	08.9	121	47.6	68	+25	27.8	29	45	5 59	6 33	7 03	14 22	71	5 45	46
7	281	26.9		08.0	136	13.3	67	24.9	29	40	55	27	6 55	42 68		25	48	
8	296	27.0		07.2	150	39.1	68	21.7	32	35	52	22	48	14 58	67	5 08	50	
9	311	27.0		06.3	165	04.8	67	18.4	33	30	49	17	41	15 12	65	4 54	51	
10	326	27.0		05.5	179	30.5	67	14.9	35	20	42	6 08	30	37 61		29	53	
11	341	27.0	-13	04.6	193	56.2	67	+25	11.3	36	10 N	5 34	5 59	6 20	15 57	60	4 07	56
12	356	27.1	-13	03.8	208	21.9	67	+25	07.5	38	0	5 25	5 50	6 11	16 17	57	3 47	57
13	11	27.1		02.9	222	47.5	66	+25	03.6	39	10 S	14	40	6 01	36 55		27	59
14	26	27.1		02.1	237	13.2	67	+24	59.5	41	20	5 01	28	5 51	16 57	52	3 05	61
15	41	27.1		01.2	251	38.9	67	55.3	42	30	4 44	14	39	17 21	49	2 40	63	
16	56	27.1	-13	00.4	266	04.5	66	50.8	45	35	34	5 06	32	35 47		25	64	
17	71	27.2	-12	59.5	280	30.2	67	+24	46.3	45	40	4 21	4 56	5 24	17 52	44	2 08	65
18	86	27.2	-12	58.7	294	55.9	67	+24	41.6	47	45	4 05	4 43	5 15	18 11	42	1 48	67
19	101	27.2		57.8	309	21.5	66	36.7	49	50	3 43	28	5 04	35 38		21	70	
20	116	27.2		57.0	323	47.2	67	31.7	50	52	33	21	4 59	18 47	36	1 09	71	
21	131	27.3		56.1	338	12.9	67	26.5	52	54	21	13	53	19 00	34	0 54	73	
22	146	27.3		55.3	352	38.6	67	21.2	53	56	3 07	4 04	46	15 31		37	75	
23	161	27.3		54.4	7	04.3	67	15.7	55	58	2 50	3 53	39	34 26		0 17	77	
24	176	27.3	-12	53.6	21	30.0	67	+24	10.0	57	60 S	2 28	3 41	4 31	19 56	20	** ** *	**
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 14 ^h 23 ^m 2			Mag: -4.2 PMG: 9 ^h 12 ^m			Mag: +1.1 PMG: 7 ^h 33 ^m			Mag: -2.6 PMG: 23 ^h 18 ^m			Mag: -0.1 PMG: 19 ^h 49 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	143	36.1	222	04.8	-21	02.4	246	43.4	-22	40.6	9	18.5	+18	09.4	62	01.3	+22	03.8
1	158	38.6	237	04.2		02.3	261	44.2		40.8	24	21.3		09.5	77	03.8		03.8
2	173	41.1	252	03.6		02.3	276	44.9		41.0	39	24.1		09.5	92	06.3		03.8
3	188	43.5	267	03.0		02.2	291	45.6		41.1	54	26.9		09.6	107	08.8		03.8
4	203	46.0	282	02.3		02.1	306	46.4		41.3	69	29.6		09.7	122	11.3		03.8
5	218	48.5	297	01.7	-21	02.0	321	47.1	-22	41.5	84	32.4	+18	09.8	137	13.8	+22	03.8
6	233	50.9	312	01.1	-21	02.0	336	47.8	-22	41.7	99	35.2	+18	09.9	152	16.3	+22	03.9
7	248	53.4	327	00.5		01.9	351	48.6		41.9	114	38.0		10.0	167	18.8		03.9
8	263	55.8	341	59.9		01.8	6	49.3		42.0	129	40.8		10.1	182	21.3		03.9
9	278	58.3	356	59.3		01.7	21	50.0		42.2	144	43.5		10.2	197	23.8		03.9
10	294	00.8	11	58.6		01.7	36	50.8		42.4	159	46.3		10.3	212	26.3		03.9
11	309	03.2	26	58.0	-21	01.6	51	51.5	-22	42.6	174	49.1	+18	10.4	227	28.8	+22	03.9
12	324	05.7	41	57.4	-21	01.5	66	52.2	-22	42.7	189	51.9	+18	10.5	242	31.3	+22	03.9
13	339	08.2	56	56.8		01.4	81	53.0		42.9	204	54.7		10.5	257	33.8		03.9
14	354	10.6	71	56.2		01.4	96	53.7		43.1	219	57.5		10.6	272	36.3		03.9
15	9	13.1	86	55.5		01.3	111	54.4		43.3	235	00.2		10.7	287	38.8		03.9
16	24	15.6	101	54.9		01.2	126	55.2		43.4	250	03.0		10.8	302	41.3		03.9
17	39	18.0	116	54.3	-21	01.1	141	55.9	-22	43.6	265	05.8	+18	10.9	317	43.8	+22	03.9
18	54	20.5	131	53.7	-21	01.0	156	56.6	-22	43.8	280	08.6	+18	11.0	332	46.3	+22	03.9
19	69	23.0	146	53.1		00.9	171	57.4		44.0	295	11.4		11.1	347	48.8		03.9
20	84	25.4	161	52.4		00.8	186	58.1		44.1	310	14.1		11.2	2	51.4		03.9
21	99	27.9	176	51.8		00.8	201	58.8		44.3	325	16.9		11.3	17	53.9		04.0
22	114	30.3	191	51.2		00.7	216	59.6		44.5	340	19.7		11.3	32	56.4		04.0
23	129	32.8	206	50.6		00.6	232	00.3		44.7	355	22.5		11.4	47	58.9		04.0
24	144	35.3	221	49.9	-21	00.5	247	01.1	-22	44.8	10	25.3	+18	11.5	63	01.4	+22	04.0
Dif	—			-6			+1			+28			+1			+25		

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 13 ^d 5 PHE { 4 ^h : 58 ^m 1 12 ^h : 58 ^m 3 20 ^h : 58 ^m 6 R°: 55 ^m											
	PMG: 12 ^h 14 ^m 2			SD: 15 ^h 8 PMG: 23 ^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		h m m	
0	176	27.3	-12 53.6	21	30.0	+24 10.0	58	60 N	16 50	17 34	18 23	14 04 100		8 04 16	
1	191	27.4	52.7	35	55.7	+24 04.2	58	58	16 57	38	24	22 95		7 45 21	
2	206	27.4	51.9	50	21.4	+23 58.3	59	56	17 03	42	25	37 91		29 25	
3	221	27.4	51.0	64	47.1	52.2	61	54	08	45	27	14 50 87		16 28	
4	236	27.5	50.2	79	12.9	45.9	63	52	13	48	28	15 02 84		7 04 31	
5	251	27.5	-12 49.3	93	38.6	+23 39.5	64	50	17 18	17 51	18 29	15 12 82		6 53 34	
6	266	27.5	-12 48.5	108	04.4	+23 32.9	66	45	17 27	17 57	18 32	15 33 77		6 31 38	
7	281	27.5	47.6	122	30.2	26.2	67	40	35	18 03	35	15 50 73		6 13 41	
8	296	27.6	46.7	136	56.0	19.3	69	35	42	08	38	16 05 69		5 58 44	
9	311	27.6	45.9	151	21.9	12.3	70	30	48	13	41	17 67		45 46	
10	326	27.6	45.0	165	47.8	+23 05.1	72	20	17 59	22	48	38 63		22 50	
11	341	27.7	-12 44.2	180	13.6	+22 57.8	73	10 N	18 09	18 30	18 55	16 57 59		5 03 53	
12	356	27.7	-12 43.3	194	39.6	+22 50.4	74	0	18 18	18 39	19 03	17 14 55		4 44 57	
13	11	27.7	42.5	209	05.5	42.7	77	10 S	27	48	13	31 52		26 59	
14	26	27.7	41.6	223	31.5	35.0	77	20	36	18 59	26	17 49 49		4 06 62	
15	41	27.8	40.7	237	57.5	27.1	79	30	48	19 13	42	18 10 44		3 43 66	
16	56	27.8	39.9	252	23.5	19.0	81	35	18 54	21	19 53	22 42		29 69	
17	71	27.8	-12 39.0	266	49.6	+22 10.8	82	40	19 02	19 31	20 05	18 36 38		3 13 72	
18	86	27.9	-12 38.2	281	15.6	+22 02.5	83	45	19 11	19 42	20 21	18 53 34		2 55 74	
19	101	27.9	37.3	295	41.8	+21 54.0	85	50	22	19 57	41	19 13 30		31 79	
20	116	27.9	36.5	310	07.9	45.4	86	52	27	20 04	20 51	23 27		20 81	
21	131	28.0	35.6	324	34.1	36.6	88	54	32	11	21 02	34 24		2 07 83	
22	146	28.0	34.7	339	00.3	27.7	89	56	38	20	16	19 46 21		1 52 87	
23	161	28.0	33.9	353	26.6	18.6	91	58	45	30	32	20 00 17		34 91	
24	176	28.1	-12 33.0	7	52.9	+21 09.4	92	60 S	19 53	20 42	21 52	20 16 12		1 12 98	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 19 ^m 3		Mag: -4.2 PMG: 9 ^h 13 ^m			Mag: +1.1 PMG: 7 ^h 32 ^m			Mag: -2.6 PMG: 23 ^h 14 ^m			Mag: -0.1 PMG: 19 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	144	35.3	221	49.9	-21 00.5	247	01.1	-22 44.8	10	25.3	+18 11.5	63	01.4	+22 04.0	
1	159	37.7	236	49.3	00.4	262	01.8	45.0	25	28.0	11.6	78	03.9	04.0	
2	174	40.2	251	48.7	00.3	277	02.5	45.2	40	30.8	11.7	93	06.4	04.0	
3	189	42.7	266	48.1	00.2	292	03.3	45.3	55	33.6	11.8	108	08.9	04.0	
4	204	45.1	281	47.5	-21 00.1	307	04.0	45.5	70	36.4	11.9	123	11.4	04.0	
5	219	47.6	296	46.8	-21 00.0	322	04.7	-22 45.7	85	39.2	+18 12.0	138	13.9	+22 04.0	
6	234	50.1	311	46.2	-20 59.9	337	05.5	-22 45.9	100	41.9	+18 12.1	153	16.4	+22 04.0	
7	249	52.5	326	45.6	59.8	352	06.2	46.0	115	44.7	12.2	168	18.9	04.0	
8	264	55.0	341	45.0	59.7	7	06.9	46.2	130	47.5	12.2	183	21.4	04.0	
9	279	57.5	356	44.3	59.6	22	07.7	46.4	145	50.3	12.3	198	23.9	04.0	
10	294	59.9	11	43.7	59.5	37	08.4	46.5	160	53.1	12.4	213	26.4	04.0	
11	310	02.4	26	43.1	-20 59.4	52	09.1	-22 46.7	175	55.8	+18 12.5	228	28.9	+22 04.0	
12	325	04.8	41	42.5	-20 59.3	67	09.9	-22 46.9	190	58.6	+18 12.6	243	31.4	+22 04.1	
13	340	07.3	56	41.8	59.2	82	10.6	47.0	206	01.4	12.7	258	33.9	04.1	
14	355	09.8	71	41.2	59.1	97	11.3	47.2	221	04.2	12.8	273	36.4	04.1	
15	10	12.2	86	40.6	59.0	112	12.1	47.4	236	07.0	12.9	288	38.9	04.1	
16	25	14.7	101	40.0	58.9	127	12.8	47.5	251	09.7	13.0	303	41.4	04.1	
17	40	17.2	116	39.4	-20 58.8	142	13.5	-22 47.7	266	12.5	+18 13.0	318	43.9	+22 04.1	
18	55	19.6	131	38.7	-20 58.7	157	14.3	-22 47.9	281	15.3	+18 13.1	333	46.4	+22 04.1	
19	70	22.1	146	38.1	58.6	172	15.0	48.0	296	18.1	13.2	348	48.8	04.1	
20	85	24.6	161	37.5	58.5	187	15.7	48.2	311	20.8	13.3	3	51.3	04.1	
21	100	27.0	176	36.9	58.4	202	16.5	48.4	326	23.6	13.4	18	53.8	04.1	
22	115	29.5	191	36.2	58.2	217	17.2	48.5	341	26.4	13.5	33	56.3	04.1	
23	130	31.9	206	35.6	58.1	232	17.9	48.7	356	29.2	13.6	48	58.8	04.1	
24	145	34.4	221	35.0	-20 58.0	247	18.6	-22 48.9	11	32.0	+18 13.7	64	01.3	+22 04.1	
Dif	—		-6 +1			+7 -2			+28 +1			+25 0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 1			Edad: 14 ^d 5 PHE { 4 ^h : 58'8 12 ^h : 59'0 20 ^h : 59'2 R°: **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	28.1	-12	33.0	7	52.9	+21 09.4	60 N	6 04	6 53	7 37	15 44	102	8 20	9
1	191	28.1		32.1	22	19.2	+21 00.1	58	03	49	30	15 57	97	8 06	14
2	206	28.1		31.3	36	45.6	+20 50.7	56	02	45	24	16 08	93	7 54	18
3	221	28.2		30.4	51	12.0	41.1	54	01	42	19	17 90		44	2
4	236	28.2		29.6	65	38.5	31.3	52	6 00	39	14	26 87		35	24
5	251	28.2	-12	28.7	80	05.0	+20 21.4	50	5 59	6 36	7 10	16 34	84	7 27	26
6	266	28.3	-12	27.8	94	31.5	+20 11.4	45	5 56	6 30	7 00	16 50	79	7 09	31
7	281	28.3		27.0	108	58.1	+20 01.3	40	53	25	6 52	17 03	75	6 54	36
8	296	28.3		26.1	123	24.7	+19 51.0	35	50	20	45	14 71		42	39
9	311	28.4		25.2	137	51.4	40.7	30	47	15	39	24 68		31	42
10	326	28.4		24.4	152	18.1	30.1	20	41	6 06	29	41 63		6 12	47
11	341	28.5	-12	23.5	166	44.9	+19 19.5	10 N	5 33	5 58	6 20	17 56	58	5 56	51
12	356	28.5	-12	22.6	181	11.7	+19 08.7	0	5 25	5 50	6 11	18 09	54	5 41	54
13	11	28.5		21.8	195	38.5	+18 57.8	10 S	15	40	6 02	23 49		25	59
14	26	28.6		20.9	210	05.4	46.8	20	5 03	29	5 52	38 44		5 08	63
15	41	28.6		20.0	224	32.3	35.6	30	4 46	16	41	18 54	40	4 49	68
16	56	28.6		19.2	238	59.3	24.4	35	36	5 08	34	19 04	36	38	70
17	71	28.7	-12	18.3	253	26.3	+18 13.0	40	4 24	4 58	5 27	19 14	34	4 25	73
18	86	28.7	-12	17.4	267	53.4	+18 01.5	45	4 08	4 47	5 18	19 27	29	4 09	78
19	101	28.8		16.6	282	20.5	+17 49.8	50	3 48	32	07	43 23		3 50	83
20	116	28.8		15.7	296	47.7	38.1	52	38	25	5 03	50 21		41	86
21	131	28.8		14.8	311	14.9	26.2	54	27	18	4 57	19 58	18	30	90
22	146	28.9		14.0	325	42.2	14.3	56	3 13	4 09	51	20 07	15	19	92
23	161	28.9		13.1	340	09.5	+17 02.2	58	2 57	3 59	44	17 11		3 05	97
24	176	29.0	-12	12.2	354	36.9	+16 50.0	60 S	2 38	3 47	4 36	20 28	8	2 50	102
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 15 ^m 4			Mag: -4.2 PMG: 9 ^h 14 ^m			Mag: +1.1 PMG: 7 ^h 30 ^m			Mag: -2.6 PMG: 23 ^h 10 ^m			Mag: -0.1 PMG: 19 ^h 41 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	145	34.4		221	35.0	-20 58.0	247	18.6	-22 48.9	11	32.0	+18 13.7	64	01.3	+22 04.1
1	160	36.9		236	34.4	57.9	262	19.4	49.0	26	34.7	13.7	79	03.8	04.1
2	175	39.3		251	33.7	57.8	277	20.1	49.2	41	37.5	13.8	94	06.3	04.2
3	190	41.8		266	33.1	57.7	292	20.8	49.4	56	40.3	13.9	109	08.8	04.2
4	205	44.3		281	32.5	57.5	307	21.6	49.5	71	43.1	14.0	124	11.3	04.2
5	220	46.7		296	31.8	-20 57.4	322	22.3	-22 49.7	86	45.8	+18 14.1	139	13.8	+22 04.2
6	235	49.2		311	31.2	-20 57.3	337	23.0	-22 49.9	101	48.6	+18 14.2	154	16.3	+22 04.2
7	250	51.7		326	30.6	57.2	352	23.8	50.0	116	51.4	14.3	169	18.8	04.2
8	265	54.1		341	30.0	57.1	7	24.5	50.2	131	54.2	14.4	184	21.3	04.2
9	280	56.6		356	29.3	56.9	22	25.2	50.4	146	56.9	14.5	199	23.8	04.2
10	295	59.1		11	28.7	56.8	37	26.0	50.5	161	59.7	14.5	214	26.3	04.2
11	311	01.5		26	28.1	-20 56.7	52	26.7	-22 50.7	177	02.5	+18 14.6	229	28.8	+22 04.2
12	326	04.0		41	27.5	-20 56.6	67	27.4	-22 50.8	192	05.3	+18 14.7	244	31.3	+22 04.2
13	341	06.4		56	26.8	56.4	82	28.2	51.0	207	08.0	14.8	259	33.8	04.2
14	356	08.9		71	26.2	56.3	97	28.9	51.2	222	10.8	14.9	274	36.3	04.2
15	11	11.4		86	25.6	56.2	112	29.6	51.3	237	13.6	15.0	289	38.8	04.3
16	26	13.8		101	24.9	56.1	127	30.4	51.5	252	16.4	15.1	304	41.3	04.3
17	41	16.3		116	24.3	-20 55.9	142	31.1	-22 51.6	267	19.1	+18 15.2	319	43.7	+22 04.3
18	56	18.8		131	23.7	-20 55.8	157	31.8	-22 51.8	282	21.9	+18 15.2	334	46.2	+22 04.3
19	71	21.2		146	23.1	55.7	172	32.6	52.0	297	24.7	15.3	349	48.7	04.3
20	86	23.7		161	22.4	55.5	187	33.3	52.1	312	27.5	15.4	4	51.2	04.3
21	101	26.2		176	21.8	55.4	202	34.0	52.3	327	30.2	15.5	19	53.7	04.3
22	116	28.6		191	21.2	55.3	217	34.8	52.4	342	33.0	15.6	34	56.2	04.3
23	131	31.1		206	20.5	55.1	232	35.5	52.6	357	35.8	15.7	49	58.7	04.3
24	146	33.6		221	19.9	-20 55.0	247	36.2	-22 52.8	12	38.6	+18 15.8	65	01.2	+22 04.3
Dif	—			-6 +1			+7 -2			+28 +1			+25 0		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 0			Edad: 15 ^d 5 PHE { 4 ^h : 59'4 12 ^h : 59'6 20 ^h : 59'7 SD: 16'2 PMG: 0 ^h 22 ^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	176	29.0	-12	12.2	354	36.9	+16	50.0	60 N	16 55	17 39	18 28	17 26 101	8 29 7				
1	191	29.0		11.4	9	04.3	84	37.7	58	17 02		43	28	34 97				
2	206	29.0		10.5	23	31.8	85	25.3	56	07		46	29	41 93				
3	221	29.1		09.6	37	59.3	85	12.8	54	12		49	30	47 90				
4	236	29.1		08.8	52	26.8	85	+16 00.2	52	17		52	31	53 87				
5	251	29.2	-12	07.9	66	54.4	86	+15 47.4	50	17 21	17 54	18 32	17 58 84	7 53 22				
6	266	29.2	-12	07.0	81	22.1	87	+15 34.6	45	17 30	18 00	18 34	18 09 79	7 40 27				
7	281	29.3		06.1	95	49.8	87	21.7	40	38		05	37	18 74				
8	296	29.3		05.3	110	17.5	87	+15 08.7	35	44		10	40	25 71				
9	311	29.3		04.4	124	45.3	88	+14 55.5	30	17 50		14	42	32 67				
10	326	29.4		03.5	139	13.2	89	42.3	20	18 00		22	48	44 61				
11	341	29.4	-12	02.6	153	41.1	89	+14 29.0	10 N	18 09	18 30	18 55	18 54 56	6 47 48				
12	356	29.5	-12	01.8	168	09.0	89	+14 15.6	0	18 17	18 39	19 03	19 03 52	6 35 53				
13	11	29.5	-12	00.9	182	37.0	90	+14 02.1	10 S	26		48	13	12 48				
14	26	29.6	-12	00.0	197	05.1	91	+13 48.5	20	35	18 58	25	22 43	6 11 62				
15	41	29.6	-11	59.1	211	33.1	90	34.8	30	46	19 11	40	34 36	5 57 67				
16	56	29.7		58.3	226	01.3	92	21.1	35	52		19	40 34	48 71				
17	71	29.7	-11	57.4	240	29.4	91	+13 07.2	40	18 59	19 28	20 02	19 48 29	5 38 75				
18	86	29.7	-11	56.5	254	57.7	93	+12 53.3	45	19 08	19 39	20 17	19 56 26	5 27 79				
19	101	29.8		55.6	269	25.9	92	39.3	50	18		53	36	20 06 21				
20	116	29.8		54.8	283	54.2	93	25.2	52	22	19 59	46	11 18	07 87				
21	131	29.9		53.9	298	22.6	94	+12 11.0	54	28	20 07	20 57	16 16	5 00 90				
22	146	29.9		53.0	312	51.0	94	+11 56.8	56	33		15	21 09	22 12				
23	161	30.0		52.1	327	19.4	94	42.4	58	40		24	28 9	4 51 94				
24	176	30.0	-11	51.3	341	47.9	95	+11 28.0	60 S	19 47	20 35	21 43	20 36 5	4 32 102				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 11 ^m 4		Mag: -4.2 PMG: 9 ^h 15 ^m			Mag: +1.1 PMG: 7 ^h 29 ^m			Mag: -2.6 PMG: 23 ^h 05 ^m			Mag: -0.1 PMG: 19 ^h 37 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	146	33.6	221	19.9	-20	55.0	247	36.2	-22	52.8	12	38.6	+18	15.8				
1	161	36.0	236	19.3		54.8	262	36.9		52.9	27	41.3		15.8				
2	176	38.5	251	18.7		54.7	277	37.7		53.1	42	44.1		15.9				
3	191	40.9	266	18.0		54.6	292	38.4		53.2	57	46.9		16.0				
4	206	43.4	281	17.4		54.4	307	39.1		53.4	72	49.7		16.1				
5	221	45.9	296	16.8	-20	54.3	322	39.9	-22	53.5	87	52.4	+18	16.2				
6	236	48.3	311	16.1	-20	54.1	337	40.6	-22	53.7	102	55.2	+18	16.3				
7	251	50.8	326	15.5		54.0	352	41.3		53.9	117	58.0		16.4				
8	266	53.3	341	14.9		53.8	7	42.1		54.0	133	00.8		16.5				
9	281	55.7	356	14.3		53.7	22	42.8		54.2	148	03.5		16.5				
10	296	58.2	11	13.6		53.5	37	43.5		54.3	163	06.3		16.6				
11	312	00.7	26	13.0	-20	53.4	52	44.3	-22	54.5	178	09.1	+18	16.7				
12	327	03.1	41	12.4	-20	53.2	67	45.0	-22	54.6	193	11.8	+18	16.8				
13	342	05.6	56	11.7		53.1	82	45.7		54.8	208	14.6		16.9				
14	357	08.0	71	11.1		52.9	97	46.4		54.9	223	17.4		17.0				
15	12	10.5	86	10.5		52.8	112	47.2		55.1	238	20.2		17.1				
16	27	13.0	101	09.8		52.6	127	47.9		55.2	253	22.9		17.1				
17	42	15.4	116	09.2	-20	52.5	142	48.6	-22	55.4	268	25.7	+18	17.2				
18	57	17.9	131	08.6	-20	52.3	157	49.4	-22	55.6	283	28.5	+18	17.3				
19	72	20.4	146	07.9		52.2	172	50.1		55.7	298	31.3		17.4				
20	87	22.8	161	07.3		52.0	187	50.8		55.9	313	34.0		17.5				
21	102	25.3	176	06.7		51.8	202	51.6		56.0	328	36.8		17.6				
22	117	27.8	191	06.1		51.7	217	52.3		56.2	343	39.6		17.7				
23	132	30.2	206	05.4		51.5	232	53.0		56.3	358	42.3		17.7				
24	147	32.7	221	04.8	-20	51.4	247	53.8	-22	56.5	13	45.1	+18	17.8				
Dif	—		-6		+2		+7		-2		+28		+1		+25		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 14 ^m 0				Edad: 16 ^d 5 PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'0 SD: 16:3 PMG: 1 ^h 15 ^m R°: 52 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	176	30.0	-11	51.3	341	47.9	+11	28.0	60 N	5 59	6 48	7 31	19 07	100	8 36	5				
1	191	30.1		50.4	356	16.4	95	+11 13.6 ¹⁴⁴	58	59	44	25	11 96		31	8				
2	206	30.1		49.5	10	45.0	96	+10 59.0 ¹⁴⁶	56	58	41	19	14 93		26	12				
3	221	30.2		48.6	25	13.6	96	44.4 ¹⁴⁶	54	57	38	14	17 89		22	14				
4	236	30.2		47.7	39	42.2	96	29.7 ¹⁴⁷	52	56	35	10	20 86		18	17				
5	251	30.3	-11	46.9	54	10.9	97	+10 15.0 ¹⁴⁷	50	5 55	6 33	7 06	19 22	84	8 15	19				
6	266	30.3	-11	46.0	68	39.7	98	+10 00.2 ¹⁴⁸	45	5 53	6 27	6 57	19 28	78	8 07	25				
7	281	30.4		45.1	83	08.4	97	+9 45.3 ¹⁴⁹	40	50	22	50	32 74		8 01	29				
8	296	30.4		44.2	97	37.2	98	30.3 ¹⁵⁰	35	48	18	43	36 70		7 56	32				
9	311	30.5		43.3	112	06.1	99	15.4 ¹⁴⁹	30	45	13	38	39 67		51	35				
10	326	30.5		42.5	126	34.9	98	+9 00.3 ¹⁵¹	20	39	6 05	28	45 61		42	42				
11	341	30.6	-11	41.6	141	03.9	100	+8 45.2 ¹⁵¹	10 N	5 33	5 58	6 19	19 50	55	7 35	46				
12	356	30.6	-11	40.7	155	32.8	99	+8 30.0 ¹⁵²	0	5 25	5 49	6 11	19 55	50	7 28	51				
13	11	30.7		39.8	170	01.8	100	+8 14.8 ¹⁵²	10 S	15	41	6 02	20 00	45	21	55				
14	26	30.7		38.9	184	30.8	100	+7 59.5 ¹⁵³	20	5 04	30	5 53	05 40		13	61				
15	41	30.8		38.1	198	59.9	101	44.2 ¹⁵³	30	4 48	18	42	10 35		7 04	67				
16	56	30.8		37.2	213	28.9	100	28.9 ¹⁵³	35	38	10	36	14 31		6 59	70				
17	71	30.9	-11	36.3	227	58.0	101	+7 13.4 ¹⁵⁵	40	4 26	5 01	5 29	20 17	28	6 53	74				
18	86	31.0	-11	35.4	242	27.2	102	+6 58.0 ¹⁵⁴	45	4 12	4 50	5 21	20 22	23	6 46	79				
19	101	31.0		34.5	256	56.4	102	42.5 ¹⁵⁵	50	3 52	36	11	27 18		38	84				
20	116	31.1		33.6	271	25.6	102	27.0 ¹⁵⁵	52	43	29	06	29 16		34	87				
21	131	31.1		32.8	285	54.8	102	+6 11.4 ¹⁵⁶	54	32	22	5 01	32 13		30	89				
22	146	31.2		31.9	300	24.0	102	+5 55.8 ¹⁵⁶	56	20	14	4 55	34 11		25	93				
23	161	31.2		31.0	314	53.3	103	40.1 ¹⁵⁷	58	3 05	4 04	49	37 8		20	96				
24	176	31.3	-11	30.1	329	22.6	103	+5 24.4 ¹⁵⁷	60 S	2 46	3 53	4 42	20 41	4	6 14	100				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 07 ^m 5				Mag: -4.2 PMG: 9 ^h 16 ^m				Mag: +1.1 PMG: 7 ^h 28 ^m				Mag: -2.6 PMG: 23 ^h 01 ^m				Mag: -0.1 PMG: 19 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	147	32.7	221	04.8	-20	51.4	247	53.8	-22	56.5	13	45.1	+18	17.8	66	00.9	+22	04.5		
1	162	35.2	236	04.2		51.2	262	54.5		56.6	28	47.9		17.9	81	03.4		04.5		
2	177	37.6	251	03.5		51.0	277	55.2		56.8	43	50.6		18.0	96	05.9		04.5		
3	192	40.1	266	02.9		50.9	292	55.9		56.9	58	53.4		18.1	111	08.4		04.5		
4	207	42.5	281	02.3		50.7	307	56.7		57.1	73	56.2		18.2	126	10.9		04.5		
5	222	45.0	296	01.6	-20	50.5	322	57.4	-22	57.2	88	59.0	+18	18.3	141	13.4	+22	04.5		
6	237	47.5	311	01.0	-20	50.4	337	58.1	-22	57.4	104	01.7	+18	18.3	156	15.8	+22	04.5		
7	252	49.9	326	00.4		50.2	352	58.9		57.5	119	04.5		18.4	171	18.3		04.6		
8	267	52.4	340	59.7		50.0	7	59.6		57.7	134	07.3		18.5	186	20.8		04.6		
9	282	54.9	355	59.1		49.9	23	00.3		57.8	149	10.0		18.6	201	23.3		04.6		
10	297	57.3	10	58.5		49.7	38	01.1		58.0	164	12.8		18.7	216	25.8		04.6		
11	312	59.8	25	57.8	-20	49.5	53	01.8	-22	58.1	179	15.6	+18	18.8	231	28.3	+22	04.6		
12	328	02.3	40	57.2	-20	49.4	68	02.5	-22	58.3	194	18.3	+18	18.9	246	30.8	+22	04.6		
13	343	04.7	55	56.6		49.2	83	03.2		58.4	209	21.1		18.9	261	33.2		04.6		
14	358	07.2	70	55.9		49.0	98	04.0		58.5	224	23.9		19.0	276	35.7		04.6		
15	13	09.7	85	55.3		48.8	113	04.7		58.7	239	26.6		19.1	291	38.2		04.6		
16	28	12.1	100	54.7		48.6	128	05.4		58.8	254	29.4		19.2	306	40.7		04.6		
17	43	14.6	115	54.0	-20	48.5	143	06.2	-22	59.0	269	32.2	+18	19.3	321	43.2	+22	04.6		
18	58	17.0	130	53.4	-20	48.3	158	06.9	-22	59.1	284	34.9	+18	19.4	336	45.7	+22	04.6		
19	73	19.5	145	52.8		48.1	173	07.6		59.3	299	37.7		19.4	351	48.1		04.6		
20	88	22.0	160	52.1		47.9	188	08.3		59.4	314	40.5		19.5	6	50.6		04.7		
21	103	24.4	175	51.5		47.7	203	09.1		59.6	329	43.3		19.6	21	53.1		04.7		
22	118	26.9	190	50.9		47.6	218	09.8		59.7	344	46.0		19.7	36	55.6		04.7		
23	133	29.4	205	50.2		47.4	233	10.5	-22	59.9	359	48.8		19.8	51	58.1		04.7		
24	148	31.8	220	49.6	-20	47.2	248	11.3	-23	00.0	14	51.6	+18	19.9	67	00.5	+22	04.7		
Dif	—		-6		+2		+7		-1		+28		+1		+25		0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 9			Edad: 17 ^d 5 PHE { 4 ^h : 60':1 12 ^h : 60':1 20 ^h : 60':1 PMG: 2 ^h 07 ^m R°: 50 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	31.3	-11	30.1	329	22.6	+5	24.4	60 N	17 00	17 44	18 32	20 47 99	8 41 4	
1	191	31.3		29.2	343	51.9 ¹⁰³	+5	08.7 ¹⁵⁷	58	06	47	33	47 95	39 8	
2	206	31.4		28.3	358	21.3 ¹⁰⁴	+4	53.0 ¹⁵⁷	56	12	50	33	47 92	38 10	
3	221	31.4		27.4	12	50.7 ¹⁰⁴		37.2 ¹⁵⁸	54	16	53	34	46 89	36 14	
4	236	31.5		26.6	27	20.1 ¹⁰⁴		21.4 ¹⁵⁸	52	21	55	35	46 87	35 16	
5	251	31.6	-11	25.7	41	49.5 ¹⁰⁴	+4	05.5 ¹⁵⁹	50	17 24	17 58	18 35	20 46 84	8 34 18	
6	266	31.6	-11	24.8	56	18.9 ¹⁰⁴	+3	49.7 ¹⁵⁸	45	17 33	18 03	18 37	20 46 78	8 32 23	
7	281	31.7		23.9	70	48.4 ¹⁰⁵		33.8 ¹⁵⁹	40	40	08	39	46 74	30 27	
8	296	31.7		23.0	85	17.9 ¹⁰⁵		17.9 ¹⁵⁹	35	46	12	41	46 70	28 31	
9	311	31.8		22.1	99	47.3 ¹⁰⁴	+3	02.0 ¹⁵⁹	30	17 51	16	44	46 66	26 35	
10	326	31.8		21.2	114	16.8 ¹⁰⁵	+2	46.1 ¹⁵⁹	20	18 01	23	49	46 60	24 40	
11	341	31.9	-11	20.3	128	46.4 ¹⁰⁶	+2	30.1 ¹⁶⁰	10 N	18 09	18 31	18 55	20 45 56	8 21 46	
12	356	32.0	-11	19.5	143	15.9 ¹⁰⁵	+2	14.1 ¹⁶⁰	0	18 17	18 38	19 03	20 45 51	8 19 50	
13	11	32.0		18.6	157	45.4 ¹⁰⁵	+1	58.2 ¹⁵⁹	10 S	25	47	12	45 46	16 56	
14	26	32.1		17.7	172	15.0 ¹⁰⁶		42.2 ¹⁶⁰	20	34	18 57	23	45 41	14 60	
15	41	32.1		16.8	186	44.6 ¹⁰⁶		26.2 ¹⁶⁰	30	44	19 09	38	45 35	11 66	
16	56	32.2		15.9	201	14.2 ¹⁰⁶	+1	10.2 ¹⁶⁰	35	50	16	48	45 32	09 70	
17	71	32.3	-11	15.0	215	43.7 ¹⁰⁵	+0	54.2 ¹⁶⁰	40	18 57	19 25	19 59	20 45 28	8 07 74	
18	86	32.3	-11	14.1	230	13.3 ¹⁰⁶	+0	38.1 ¹⁶¹	45	19 05	19 36	20 13	20 45 24	8 05 78	
19	101	32.4		13.2	244	42.9 ¹⁰⁶		22.1 ¹⁶⁰	50	14	49	32	45 19	02 84	
20	116	32.4		12.3	259	12.5 ¹⁰⁶	+0	06.1 ¹⁶⁰	52	18	19 55	41	45 16	8 01 86	
21	131	32.5		11.4	273	42.1 ¹⁰⁶	-0	09.9 ¹⁶⁰	54	23	20 02	20 51	45 14	7 59 90	
22	146	32.6		10.5	288	11.8 ¹⁰⁷		25.9 ¹⁶⁰	56	29	10	21 03	45 11	58 92	
23	161	32.6		09.7	302	41.4 ¹⁰⁶		41.9 ¹⁶⁰	58	35	19	17	45 8	56 96	
24	176	32.7	-11	08.8	317	11.0 ¹⁰⁶	-0	57.9 ¹⁶⁰	60 S	19 41	20 29	21 34	20 45 5	7 54 100	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 03 ^m 6		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: +1.1 PMG: 7 ^h 27 ^m		Mag: -2.6 PMG: 22 ^h 56 ^m		Mag: -0.1 PMG: 19 ^h 29 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'					
0	148	31.8	220	49.6	-20	47.2	248	11.3	-23	00.0					
1	163	34.3	235	49.0		47.0	263	12.0	-23	00.1					
2	178	36.8	250	48.3		46.8	278	12.7		00.3					
3	193	39.2	265	47.7		46.6	293	13.4		00.4					
4	208	41.7	280	47.1		46.4	308	14.2		00.6					
5	223	44.1	295	46.4	-20	46.2	323	14.9	-23	00.7					
6	238	46.6	310	45.8	-20	46.1	338	15.6	-23	00.9					
7	253	49.1	325	45.2		45.9	353	16.4		01.0					
8	268	51.5	340	44.5		45.7	8	17.1		01.1					
9	283	54.0	355	43.9		45.5	23	17.8		01.3					
10	298	56.5	10	43.3		45.3	38	18.6		01.4					
11	313	58.9	25	42.6	-20	45.1	53	19.3	-23	01.6					
12	329	01.4	40	42.0	-20	44.9	68	20.0	-23	01.7					
13	344	03.9	55	41.3		44.7	83	20.7		01.8					
14	359	06.3	70	40.7		44.5	98	21.5		02.0					
15	14	08.8	85	40.1		44.3	113	22.2		02.1					
16	29	11.3	100	39.4		44.1	128	22.9		02.3					
17	44	13.7	115	38.8	-20	43.9	143	23.7	-23	02.4					
18	59	16.2	130	38.2	-20	43.7	158	24.4	-23	02.5					
19	74	18.6	145	37.5		43.5	173	25.1		02.7					
20	89	21.1	160	36.9		43.3	188	25.8		02.8					
21	104	23.6	175	36.3		43.1	203	26.6		02.9					
22	119	26.0	190	35.6		42.9	218	27.3		03.1					
23	134	28.5	205	35.0		42.6	233	28.0		03.2					
24	149	31.0	220	34.4	-20	42.4	248	28.7	-23	03.4					
Dif	—		-6	+2		+7	-1		+28	+1		+25	0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 18 ^d 5 PHE SD: 16:4 PMG: 2 ^h 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	32.7	-11	08.8	317	11.0	-0	57.9	60 N	5 54	6 43	7 26	22 26	101	8 45	4
1	191	32.8		07.9	331	40.6 ¹⁰⁶	-1	13.9 ¹⁶⁰	58	54	39	20	22 97		47	8
2	206	32.8		07.0	346	10.2 ¹⁰⁶		29.9 ¹⁶⁰	56	53	37	15	19 92		48	12
3	221	32.9		06.1	0	39.9 ¹⁰⁷	-1	45.9 ¹⁶⁰	54	53	34	10	15 90		50	14
4	236	32.9		05.2	15	09.5 ¹⁰⁶	-2	01.9 ¹⁶⁰	52	52	31	06	13 86		51	17
5	251	33.0	-11	04.3	29	39.1 ¹⁰⁶	-2	17.8 ¹⁵⁹	50	5 52	6 29	7 02	22 10	84	8 52	19
6	266	33.1	-11	03.4	44	08.7 ¹⁰⁶	-2	33.7 ¹⁵⁹	45	5 50	6 24	6 54	22 04	79	8 55	24
7	281	33.1		02.5	58	38.3 ¹⁰⁶	-2	49.7 ¹⁶⁰	40	48	19	47	22 00	73	57	29
8	296	33.2		01.6	73	07.9 ¹⁰⁶	-3	05.6 ¹⁵⁹	35	46	15	41	21 56	70	8 59	32
9	311	33.3	-11	00.7	87	37.5 ¹⁰⁶		21.4 ¹⁵⁸	30	44	11	36	52 67		9 01	35
10	326	33.3	-10	59.8	102	07.0 ¹⁰⁵		37.3 ¹⁵⁹	20	38	6 04	26	46 61		04	41
11	341	33.4	-10	58.9	116	36.6 ¹⁰⁶	-3	53.1 ¹⁵⁸	10 N	5 32	5 57	6 18	21 41	56	9 07	46
12	356	33.5	-10	58.0	131	06.2 ¹⁰⁶	-4	08.9 ¹⁵⁸	0	5 25	5 49	6 10	21 36	51	9 09	51
13	11	33.5		57.1	145	35.7 ¹⁰⁵		24.7 ¹⁵⁸	10 S	16	41	6 02	31 47		12	55
14	26	33.6		56.2	160	05.2 ¹⁰⁵		40.4 ¹⁵⁷	20	5 05	31	5 54	26 42		14	61
15	41	33.7		55.3	174	34.7 ¹⁰⁵	-4	56.2 ¹⁵⁸	30	4 50	19	44	20 36		17	67
16	56	33.7		54.4	189	04.2 ¹⁰⁵	-5	11.9 ¹⁵⁷	35	41	12	38	17 33		19	70
17	71	33.8	-10	53.5	203	33.7 ¹⁰⁵	-5	27.5 ¹⁵⁶	40	4 29	5 03	5 32	21 13	30	9 21	74
18	86	33.9	-10	52.6	218	03.2 ¹⁰⁵	-5	43.1 ¹⁵⁶	45	4 15	4 53	5 24	21 09	25	9 23	78
19	101	33.9		51.7	232	32.6 ¹⁰⁴	-5	58.7 ¹⁵⁶	50	3 57	40	14	04 20		26	84
20	116	34.0		50.8	247	02.1 ¹⁰⁵	-6	14.2 ¹⁵⁵	52	48	34	10	21 01	18	27	87
21	131	34.1		49.9	261	31.5 ¹⁰⁴		29.8 ¹⁵⁶	54	38	27	05	20 59	15	29	89
22	146	34.1		49.0	276	00.9 ¹⁰⁴	-6	45.2 ¹⁵⁴	56	26	19	5 00	56 12		30	92
23	161	34.2		48.1	290	30.2 ¹⁰³	-7	00.6 ¹⁵⁴	58	3 12	10	4 54	53 9		32	96
24	176	34.3	-10	47.2	304	59.6 ¹⁰⁴	-7	16.0 ¹⁵⁴	60 S	2 55	4 00	4 47	20 50	5	9 34	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 59 ^m 6		Mag: -4.2 PMG: 9 ^h 18 ^m		Mag: +1.1 PMG: 7 ^h 26 ^m		Mag: -2.6 PMG: 22 ^h 52 ^m		Mag: -0.1 PMG: 19 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	149	31.0	220	34.4	-20	42.4	248	28.7	-23	03.4	15	57.9	+18	21.9	68	00.0	+22	04.9
1	164	33.4	235	33.7		42.2	263	29.5		03.5	31	00.7		22.0	83	02.5		04.9
2	179	35.9	250	33.1		42.0	278	30.2		03.6	46	03.4		22.0	98	05.0		04.9
3	194	38.4	265	32.5		41.8	293	30.9		03.8	61	06.2		22.1	113	07.5		04.9
4	209	40.8	280	31.8		41.6	308	31.7		03.9	76	09.0		22.2	128	09.9		04.9
5	224	43.3	295	31.2	-20	41.4	323	32.4	-23	04.0	91	11.7	+18	22.3	143	12.4	+22	04.9
6	239	45.7	310	30.5	-20	41.2	338	33.1	-23	04.2	106	14.5	+18	22.4	158	14.9	+22	04.9
7	254	48.2	325	29.9		40.9	353	33.8		04.3	121	17.2		22.5	173	17.4		04.9
8	269	50.7	340	29.3		40.7	8	34.6		04.4	136	20.0		22.5	188	19.8		04.9
9	284	53.1	355	28.6		40.5	23	35.3		04.6	151	22.8		22.6	203	22.3		05.0
10	299	55.6	10	28.0		40.3	38	36.0		04.7	166	25.5		22.7	218	24.8		05.0
11	314	58.1	25	27.4	-20	40.1	53	36.8	-23	04.8	181	28.3	+18	22.8	233	27.3	+22	05.0
12	330	00.5	40	26.7	-20	39.8	68	37.5	-23	05.0	196	31.1	+18	22.9	248	29.7	+22	05.0
13	345	03.0	55	26.1		39.6	83	38.2		05.1	211	33.8		22.9	263	32.2		05.0
14	0	05.5	70	25.5		39.4	98	38.9		05.2	226	36.6		23.0	278	34.7		05.0
15	15	07.9	85	24.8		39.2	113	39.7		05.4	241	39.3		23.1	293	37.2		05.0
16	30	10.4	100	24.2		39.0	128	40.4		05.5	256	42.1		23.2	308	39.6		05.0
17	45	12.9	115	23.5	-20	38.7	143	41.1	-23	05.6	271	44.9	+18	23.3	323	42.1	+22	05.0
18	60	15.3	130	22.9	-20	38.5	158	41.8	-23	05.8	286	47.6	+18	23.4	338	44.6	+22	05.0
19	75	17.8	145	22.3		38.3	173	42.6		05.9	301	50.4		23.4	353	47.1		05.0
20	90	20.2	160	21.6		38.0	188	43.3		06.0	316	53.1		23.5	8	49.5		05.0
21	105	22.7	175	21.0		37.8	203	44.0		06.2	331	55.9		23.6	23	52.0		05.1
22	120	25.2	190	20.4		37.6	218	44.8		06.3	346	58.7		23.7	38	54.5		05.1
23	135	27.6	205	19.7		37.3	233	45.5		06.4	2	01.4		23.8	53	56.9		05.1
24	150	30.1	220	19.1	-20	37.1	248	46.2	-23	06.5	17	04.2	+18	23.8	68	59.4	+22	05.1
Dif	—		-6		+2		+7		-1		+28		+1		+25		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2		Edad: 19 ^d 5		PHE { 4 ^h : 59:9 12 ^h : 59:8 20 ^h : 59:7										
	PMG: 12 ^h 13 ^m 7		SD: 16:3			PMG: 3 ^h 48 ^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	34.3	-10 47.2	304	59.6	-7 16.0	60 N	17 06	17 49	18 37	** ** *	**	8 49	6	
1	191	34.3	46.3	319	28.9 ¹⁰³	31.3 ¹⁵³	58	11	51	37	23 59	96	8 55	10	
2	206	34.4	45.4	333	58.2 ¹⁰³	-7 46.6 ¹⁵³	56	16	54	37	51 93		9 00	13	
3	221	34.5	44.5	348	27.4 ¹⁰²	-8 01.8 ¹⁵²	54	20	56	38	45 89		04	16	
4	236	34.5	43.6	2	56.7 ¹⁰³	17.0 ¹⁵²	52	24	17 59	38	39 86		08	19	
5	251	34.6	-10 42.7	17	25.9 ¹⁰²	-8 32.2 ¹⁵²	50	17 28	18 01	18 38	23 34	84	9 11	22	
6	266	34.7	-10 41.8	31	55.1 ¹⁰²	-8 47.2 ¹⁵⁰	45	17 36	18 06	18 40	23 23	78	9 19	27	
7	281	34.8	40.9	46	24.2 ¹⁰¹	-9 02.3 ¹⁵¹	40	42	10	41	13 74		26	31	
8	296	34.8	40.0	60	53.4 ¹⁰²	17.2 ¹⁴⁹	35	48	14	43	23 06	70	31	35	
9	311	34.9	39.1	75	22.4 ¹⁰⁰	32.1 ¹⁴⁹	30	17 53	17	45	22 59	67	36	38	
10	326	35.0	38.2	89	51.5 ¹⁰¹	-9 47.0 ¹⁴⁹	20	18 02	24	50	47 62		45	43	
11	341	35.0	-10 37.3	104	20.5 ¹⁰⁰	-10 01.7 ¹⁴⁷	10 N	18 10	18 31	18 56	22 37	57	9 53	47	
12	356	35.1	-10 36.4	118	49.5 ¹⁰⁰	-10 16.5 ¹⁴⁸	0	18 17	18 38	19 02	22 27	53	10 00	52	
13	11	35.2	35.5	133	18.5 ¹⁰⁰	31.1 ¹⁴⁶	10 S	25	46	11	18 49		07	57	
14	26	35.3	34.6	147	47.4 ⁹⁹	-10 45.7 ¹⁴⁶	20	33	18 55	22	22 08	44	15	61	
15	41	35.3	33.7	162	16.3 ⁹⁹	-11 00.2 ¹⁴⁵	30	42	19 07	36	21 56	40	24	67	
16	56	35.4	32.8	176	45.1 ⁹⁸	14.7 ¹⁴⁵	35	48	14	45	50 36		29	70	
17	71	35.5	-10 31.9	191	13.9 ⁹⁸	-11 29.1 ¹⁴⁴	40	18 54	19 22	19 56	21 43	32	10 35	74	
18	86	35.6	-10 31.0	205	42.7 ⁹⁸	-11 43.4 ¹⁴³	45	19 01	19 32	20 09	21 34	29	10 41	79	
19	101	35.6	30.1	220	11.4 ⁹⁷	-11 57.6 ¹⁴²	50	10	44	27	24 23		50	84	
20	116	35.7	29.2	234	40.1 ⁹⁷	-12 11.8 ¹⁴²	52	14	50	35	19 21		54	86	
21	131	35.8	28.3	249	08.8 ⁹⁷	25.9 ¹⁴¹	54	19	19 57	45	14 18		10 58	89	
22	146	35.9	27.4	263	37.4 ⁹⁶	39.9 ¹⁴⁰	56	24	20 04	20 56	08 16		11 02	93	
23	161	35.9	26.5	278	06.0 ⁹⁶	-12 53.8 ¹³⁹	58	29	13	21 10	21 02	12	08	96	
24	176	36.0	-10 25.6	292	34.5 ⁹⁵	-13 07.7 ¹³⁹	60 S	19 36	20 22	21 25	20 55	8	11 14	101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 55 ^m 7		Mag: -4.2 PMG: 9 ^h 19 ^m		Mag: +1.0 PMG: 7 ^h 25 ^m		Mag: -2.6 PMG: 22 ^h 48 ^m		Mag: -0.1 PMG: 19 ^h 21 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	150	30.1	220 19.1	-20 37.1	248 46.2	-23 06.5	17 04.2	+18 23.8	68 59.4	+22 05.1
1	165	32.6	235 18.5	36.9	263 46.9	06.7	32 06.9	23.9	84 01.9	05.1
2	180	35.0	250 17.8	36.6	278 47.7	06.8	47 09.7	24.0	99 04.4	05.1
3	195	37.5	265 17.2	36.4	293 48.4	06.9	62 12.4	24.1	114 06.8	05.1
4	210	40.0	280 16.5	36.2	308 49.1	07.1	77 15.2	24.2	129 09.3	05.1
5	225	42.4	295 15.9	-20 35.9	323 49.8	-23 07.2	92 18.0	+18 24.2	144 11.8	+22 05.1
6	240	44.9	310 15.3	-20 35.7	338 50.6	-23 07.3	107 20.7	+18 24.3	159 14.2	+22 05.1
7	255	47.3	325 14.6	35.5	353 51.3	07.4	122 23.5	24.4	174 16.7	05.1
8	270	49.8	340 14.0	35.2	8 52.0	07.6	137 26.2	24.5	189 19.2	05.2
9	285	52.3	355 13.4	35.0	23 52.8	07.7	152 29.0	24.6	204 21.6	05.2
10	300	54.7	10 12.7	34.7	38 53.5	07.8	167 31.8	24.7	219 24.1	05.2
11	315	57.2	25 12.1	-20 34.5	53 54.2	-23 08.0	182 34.5	+18 24.7	234 26.6	+22 05.2
12	330	59.7	40 11.4	-20 34.2	68 54.9	-23 08.1	197 37.3	+18 24.8	249 29.1	+22 05.2
13	346	02.1	55 10.8	34.0	83 55.7	08.2	212 40.0	24.9	264 31.5	05.2
14	1	04.6	70 10.2	33.7	98 56.4	08.3	227 42.8	25.0	279 34.0	05.2
15	16	07.1	85 09.5	33.5	113 57.1	08.5	242 45.5	25.1	294 36.5	05.2
16	31	09.5	100 08.9	33.2	128 57.8	08.6	257 48.3	25.1	309 38.9	05.2
17	46	12.0	115 08.3	-20 33.0	143 58.6	-23 08.7	272 51.0	+18 25.2	324 41.4	+22 05.2
18	61	14.5	130 07.6	-20 32.7	158 59.3	-23 08.8	287 53.8	+18 25.3	339 43.9	+22 05.2
19	76	16.9	145 07.0	32.5	174 00.0	09.0	302 56.6	25.4	354 46.3	05.2
20	91	19.4	160 06.3	32.2	189 00.7	09.1	317 59.3	25.5	9 48.8	05.3
21	106	21.8	175 05.7	32.0	204 01.5	09.2	333 02.1	25.5	24 51.3	05.3
22	121	24.3	190 05.1	31.7	219 02.2	09.3	348 04.8	25.6	39 53.7	05.3
23	136	26.8	205 04.4	31.5	234 02.9	09.4	3 07.6	25.7	54 56.2	05.3
24	151	29.2	220 03.8	-20 31.2	249 03.7	-23 09.6	18 10.3	+18 25.8	69 58.7	+22 05.3
Dif	—		-6	+2	+7	-1	+28	+1	+25	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 5			Edad: 20 ^d 5 PHE { 4 ^h : 59/6 12 ^h : 59/4 20 ^h : 59/3 PMG: 4 ^h 40 ^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	176	36.0	-10	25.6	292	34.5	-13	07.7	60 N	5 49	6 37	7 20	0 07	102	8 55	9	
1	191	36.1		24.7	307	02.9	94	21.4 ¹³⁷	58	49	34	15	** ** *	**	9 05	13	
2	206	36.2		23.8	321	31.4	95	35.1 ¹³⁷	56	49	32	10	** ** *	**	13	17	
3	221	36.2		22.8	335	59.8	94	-13 48.7 ¹³⁶	54	49	30	06	** ** *	**	20	2	
4	236	36.3		21.9	350	28.1	93	-14 02.2 ¹³⁵	52	48	27	7 02	** ** *	**	27	24	
5	251	36.4	-10	21.0	4	56.4	93	-14 15.6 ¹³⁴	50	5 48	6 25	6 58	** ** *	**	9 33	26	
6	266	36.5	-10	20.1	19	24.7	93	-14 29.0 ¹³⁴	45	5 47	6 21	6 51	** ** *	**	9 46	31	
7	281	36.5		19.2	33	52.9	92	42.2 ¹³²	40	45	17	44	** ** *	**	9 57	35	
8	296	36.6		18.3	48	21.0	91	-14 55.4 ¹³²	35	44	13	39	** ** *	**	10 06	38	
9	311	36.7		17.4	62	49.1	91	-15 08.4 ¹³⁰	30	42	10	34	** ** *	**	14	41	
10	326	36.8		16.5	77	17.2	91	21.4 ¹³⁰	20	37	6 03	25	23 49	62	28	46	
11	341	36.9	-10	15.6	91	45.2	90	-15 34.3 ¹²⁹	10 N	5 32	5 56	6 17	23 34	59	10	40	51
12	356	36.9	-10	14.7	106	13.1	89	-15 47.0 ¹²⁷	0	5 25	5 49	6 10	23 20	56	10	52	54
13	11	37.0		13.8	120	41.0	89	-15 59.7 ¹²⁷	10 S	16	41	6 03	23 07	51	11	04	58
14	26	37.1		12.8	135	08.9	89	-16 12.3 ¹²⁶	20	5 06	32	5 55	22 52	48	16	63	
15	41	37.2		11.9	149	36.7	88	24.8 ¹²⁵	30	4 52	21	45	36	43	31	67	
16	56	37.3		11.0	164	04.4	87	37.1 ¹²³	35	43	14	40	26	41	39	70	
17	71	37.3	-10	10.1	178	32.1	87	-16 49.4 ¹²³	40	4 32	5 06	5 34	22 15	38	11	49	73
18	86	37.4	-10	09.2	192	59.8	87	-17 01.6 ¹²²	45	4 18	4 56	5 27	22 03	34	12	00	77
19	101	37.5		08.3	207	27.4	86	13.6 ¹²⁰	50	4 01	43	18	21 47	30	14	82	
20	116	37.6		07.4	221	54.9	85	25.6 ¹²⁰	52	3 52	38	14	40	27	20	85	
21	131	37.7		06.5	236	22.4	85	37.4 ¹¹⁸	54	43	31	09	32	25	27	89	
22	146	37.7		05.5	250	49.8	84	-17 49.1 ¹¹⁷	56	32	24	5 04	24	21	35	92	
23	161	37.8		04.6	265	17.2	84	-18 00.7 ¹¹⁶	58	18	15	4 59	14	17	44	96	
24	176	37.9	-10	03.7	279	44.6	84	-18 12.2 ¹¹⁵	60 S	3 03	4 06	4 53	21 03	12	12	55	101

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 51 ^m 8		Mag: -4.2 PMG: 9 ^h 20 ^m			Mag: +1.0 PMG: 7 ^h 23 ^m			Mag: -2.6 PMG: 22 ^h 43 ^m			Mag: -0.1 PMG: 19 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	151	29.2	220	03.8	-20	31.2	249	03.7	-23	09.6	18	10.3	+18	25.8	69	58.7	+22	05.3
1	166	31.7	235	03.2		31.0	264	04.4		09.7	33	13.1		25.9	85	01.1		05.3
2	181	34.2	250	02.5		30.7	279	05.1		09.8	48	15.8		25.9	100	03.6		05.3
3	196	36.6	265	01.9		30.4	294	05.8		09.9	63	18.6		26.0	115	06.1		05.3
4	211	39.1	280	01.2		30.2	309	06.6		10.1	78	21.4		26.1	130	08.5		05.3
5	226	41.6	295	00.6	-20	29.9	324	07.3	-23	10.2	93	24.1	+18	26.2	145	11.0	+22	05.3
6	241	44.0	310	00.0	-20	29.7	339	08.0	-23	10.3	108	26.9	+18	26.3	160	13.5	+22	05.3
7	256	46.5	324	59.3		29.4	354	08.7		10.4	123	29.6		26.3	175	15.9		05.4
8	271	49.0	339	58.7		29.1	9	09.5		10.5	138	32.4		26.4	190	18.4		05.4
9	286	51.4	354	58.1		28.9	24	10.2		10.7	153	35.1		26.5	205	20.9		05.4
10	301	53.9	9	57.4		28.6	39	10.9		10.8	168	37.9		26.6	220	23.3		05.4
11	316	56.3	24	56.8	-20	28.3	54	11.6	-23	10.9	183	40.6	+18	26.6	235	25.8	+22	05.4
12	331	58.8	39	56.1	-20	28.1	69	12.4	-23	11.0	198	43.4	+18	26.7	250	28.2	+22	05.4
13	347	01.3	54	55.5		27.8	84	13.1		11.1	213	46.1		26.8	265	30.7		05.4
14	2	03.7	69	54.9		27.5	99	13.8		11.2	228	48.9		26.9	280	33.2		05.4
15	17	06.2	84	54.2		27.2	114	14.5		11.4	243	51.6		27.0	295	35.6		05.4
16	32	08.7	99	53.6		27.0	129	15.3		11.5	258	54.4		27.0	310	38.1		05.4
17	47	11.1	114	53.0	-20	26.7	144	16.0	-23	11.6	273	57.1	+18	27.1	325	40.6	+22	05.4
18	62	13.6	129	52.3	-20	26.4	159	16.7	-23	11.7	288	59.9	+18	27.2	340	43.0	+22	05.4
19	77	16.1	144	51.7		26.1	174	17.5		11.8	304	02.6		27.3	355	45.5		05.5
20	92	18.5	159	51.0		25.9	189	18.2		11.9	319	05.4		27.4	10	47.9		05.5
21	107	21.0	174	50.4		25.6	204	18.9		12.1	334	08.1		27.4	25	50.4		05.5
22	122	23.4	189	49.8		25.3	219	19.6		12.2	349	10.9		27.5	40	52.9		05.5
23	137	25.9	204	49.1		25.0	234	20.4		12.3	4	13.6		27.6	55	55.3		05.5
24	152	28.4	219	48.5	-20	24.8	249	21.1	-23	12.4	19	16.4	+18	27.7	70	57.8	+22	05.5
Dif	—		-6		+3		+7		-1		+28		+1		+25		0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2				Edad: 21 ^d 5	PHE	4 ^h : 59:1 12 ^h : 59:0 20 ^h : 58:8											
	PMG: 12 ^h 13 ^m 4										SD: 16:1							
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	37.9	-10	03.7	279	44.6	-18	12.2	60 N	17 11	17 53	18 42	1 49	100	9 04	16		
1	191	38.0		02.8	294	11.8	82	23.6	58	16	56	41	35	95	18	21		
2	206	38.1		01.9	308	39.1	83	34.9	56	20	17 58	41	24	91	30	25		
3	221	38.1		01.0	323	06.2	81	46.0	54	24	18 00	41	14	87	41	28		
4	236	38.2	-10	00.1	337	33.4	82	-18 57.1	52	28	02	41	1 05	84	51	30		
5	251	38.3	-9	59.1	352	00.4	80	-19 08.0	50	17 31	18 04	18 42	0 58	81	9 59	33		
6	266	38.4	-9	58.2	6	27.4	80	-19 18.8	45	17 38	18 08	18 42	0 41	76	10 17	38		
7	281	38.5		57.3	20	54.4	80	29.5	40	45	12	43	27	73	32	41		
8	296	38.6		56.4	35	21.3	79	40.0	35	50	15	45	16	69	44	44		
9	311	38.6		55.5	49	48.1	78	-19 50.4	30	17 54	19	47	0 06	67	10 55	47		
10	326	38.7		54.6	64	14.9	78	-20 00.7	20	18 03	25	51	**	**	11 14	50		
11	341	38.8	-9	53.7	78	41.7	78	-20 10.9	10 N	18 10	18 31	18 56	**	**	11 31	53		
12	356	38.9	-9	52.7	93	08.4	77	-20 21.0	0	18 17	18 38	19 02	**	**	11 46	57		
13	11	39.0		51.8	107	35.0	76	30.9	10 S	24	45	10	23	58	12 02	59		
14	26	39.1		50.9	122	01.6	76	40.7	20	31	18 54	20	40	52	19	62		
15	41	39.2		50.0	136	28.1	75	50.3	30	40	19 05	34	19	49	38	66		
16	56	39.2		49.1	150	54.6	75	-20 59.9	35	45	11	42	23	07	12 49	69		
17	71	39.3	-9	48.2	165	21.1	75	-21 09.3	40	18 51	19 19	19 53	22	53	13 02	71		
18	86	39.4	-9	47.2	179	47.5	74	-21 18.5	45	18 58	19 29	20 06	22	37	13 17	75		
19	101	39.5		46.3	194	13.8	73	27.7	50	19 06	40	22	17	38	36	79		
20	116	39.6		45.4	208	40.1	73	36.6	52	10	46	30	22	07	36	82		
21	131	39.7		44.5	223	06.3	72	45.5	54	14	52	39	21	57	33	84		
22	146	39.8		43.6	237	32.5	72	-21 54.2	56	19	19 59	20 50	45	30	14 07	87		
23	161	39.8		42.6	251	58.6	71	-22 02.8	58	24	20 07	21 02	31	26	20	92		
24	176	39.9	-9	41.7	266	24.7	71	-22 11.2	60 S	19 30	20 16	21 17	21	15	14 36	97		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.2		Mag: +1.0		Mag: -2.6		Mag: -0.1	
	13 ^h 47 ^m 8		PMG: 9 ^h 21 ^m		PMG: 7 ^h 22 ^m		PMG: 22 ^h 39 ^m		PMG: 19 ^h 13 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	152	28.4	219	48.5	249	21.1	19	16.4	70	57.8
1	167	30.8	234	47.9	264	21.8	34	19.1	86	00.3
2	182	33.3	249	47.2	279	22.5	49	21.9	101	02.7
3	197	35.8	264	46.6	294	23.3	64	24.6	116	05.2
4	212	38.2	279	45.9	309	24.0	79	27.4	131	07.6
5	227	40.7	294	45.3	324	24.7	94	30.1	146	10.1
6	242	43.2	309	44.7	339	25.4	109	32.9	161	12.6
7	257	45.6	324	44.0	354	26.2	124	35.6	176	15.0
8	272	48.1	339	43.4	9	26.9	139	38.4	191	17.5
9	287	50.6	354	42.8	24	27.6	154	41.1	206	19.9
10	302	53.0	9	42.1	39	28.3	169	43.9	221	22.4
11	317	55.5	24	41.5	54	29.1	184	46.6	236	24.9
12	332	57.9	39	40.9	69	29.8	199	49.4	251	27.3
13	348	00.4	54	40.2	84	30.5	214	52.1	266	29.8
14	3	02.9	69	39.6	99	31.2	229	54.9	281	32.2
15	18	05.3	84	38.9	114	32.0	244	57.6	296	34.7
16	33	07.8	99	38.3	129	32.7	260	00.4	311	37.1
17	48	10.3	114	37.7	144	33.4	275	03.1	326	39.6
18	63	12.7	129	37.0	159	34.1	290	05.9	341	42.1
19	78	15.2	144	36.4	174	34.9	305	08.6	356	44.5
20	93	17.7	159	35.8	189	35.6	320	11.4	11	47.0
21	108	20.1	174	35.1	204	36.3	335	14.1	26	49.4
22	123	22.6	189	34.5	219	37.0	350	16.8	41	51.9
23	138	25.1	204	33.8	234	37.8	5	19.6	56	54.3
24	153	27.5	219	33.2	249	38.5	20	22.3	71	56.8
Dif	—		-6		+3		+27		+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 3			Edad: 22 ^d 5 SD: 16'0 PMG: 6 ^h 29 ^m	PHE { 4 ^h : 58'6 12 ^h : 58'5 20 ^h : 58'3 R°: 58 ^m	Dec		Dif			Hora	R°	Hora	R°				
	hG ☉	Dec							hG ☾						Dif	Dec	Dif	Náutico
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m	m
0	176	39.9	-9	266	24.7	-22	11.2	60 N	5	44	6	32	7	14	3	29	92	9
1	191	40.0		280	50.8		19.5	58	44		29	09	3	10	87		39	
2	206	40.1		295	16.8		27.7	82	44		27	05	2	55	82		9	
3	221	40.2		309	42.7		35.7	80	44		25	7	01	41	80		10	
4	236	40.3		324	08.6		43.6	79	44		23	6	58	29	78		21	
5	251	40.4	-9	338	34.5	-22	51.3	77	50	5	44	6	54	2	19	76	10	
6	266	40.5	-9	353	00.3	-22	58.9	76	45	5	44	6	47	1	57	72	10	
7	281	40.6		7	26.1	-23	06.3	74	40	43		14	41	40	69		11	
8	296	40.6		21	51.9		13.6	73	35	41		11	36	25	67		28	
9	311	40.7		36	17.6		20.7	71	30	40		08	32	1	13	65	11	
10	326	40.8		50	43.2		27.7	70	20	36	6	02	24	0	51	62	12	
11	341	40.9	-9	65	08.9	-23	34.6	69	10 N	5	31	5	55	6	17	0	33	
12	356	41.0	-9	79	34.4	-23	41.3	67	0	5	25	5	49	6	10	0	16	
13	11	41.1		94	00.0		47.8	65	10 S	17		42	6	03	***	***	***	
14	26	41.2		108	25.5	-23	54.2	64	20	5	07	33	5	56	***	***	***	
15	41	41.3		122	51.0	-24	00.4	62	30	4	53	22	47	***	***	***	44	
16	56	41.4		137	16.4		06.5	61	35	45		16	42	23	54	54	13	
17	71	41.5	-9	151	41.9	-24	12.5	60	40	4	35	5	08	5	36	23	38	
18	86	41.6	-9	166	07.2	-24	18.2	57	45	4	22	4	59	5	29	23	19	
19	101	41.7		180	32.6		23.9	57	50	4	05	47	21	22	55	49	14	
20	116	41.7		194	57.9		29.3	54	52	3	57	42	18	43	48	15	07	
21	131	41.8		209	23.2		34.7	51	54	48		36	13	30	47		20	
22	146	41.9		223	48.5		39.8	50	56	37		29	09	22	15	45		
23	161	42.0		238	13.8		44.8	50	58	25		21	5	04	21	57	42	
24	176	42.1	-9	252	39.0	-24	49.7	49	60 S	3	10	4	12	4	58	21	36	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 13 ^h 43 ^m 9		Mag: -4.2 PMG: 9 ^h 22 ^m			Mag: +1.0 PMG: 7 ^h 21 ^m			Mag: -2.5 PMG: 22 ^h 34 ^m			Mag: -0.1 PMG: 19 ^h 09 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	153	27.5	219	33.2	-20	17.7	249	38.5	-23	15.1	20	22.3	71	56.8			
1	168	30.0	234	32.6		17.4	264	39.2		15.2	35	25.1	86	59.3			
2	183	32.4	249	31.9		17.1	279	39.9		15.3	50	27.8	102	01.7			
3	198	34.9	264	31.3		16.8	294	40.7		15.4	65	30.6	117	04.2			
4	213	37.4	279	30.7		16.5	309	41.4		15.5	80	33.3	132	06.6			
5	228	39.8	294	30.0	-20	16.2	324	42.1	-23	15.6	95	36.1	147	09.1			
6	243	42.3	309	29.4	-20	15.9	339	42.8	-23	15.7	110	38.8	162	11.5			
7	258	44.8	324	28.7		15.6	354	43.6		15.8	125	41.6	177	14.0			
8	273	47.2	339	28.1		15.2	9	44.3		15.9	140	44.3	192	16.4			
9	288	49.7	354	27.5		14.9	24	45.0		16.0	155	47.0	207	18.9			
10	303	52.2	9	26.8		14.6	39	45.7		16.1	170	49.8	222	21.4			
11	318	54.6	24	26.2	-20	14.3	54	46.5	-23	16.2	185	52.5	237	23.8			
12	333	57.1	39	25.6	-20	14.0	69	47.2	-23	16.3	200	55.3	252	26.3			
13	348	59.6	54	24.9		13.7	84	47.9		16.5	215	58.0	267	28.7			
14	4	02.0	69	24.3		13.3	99	48.6		16.6	231	00.8	282	31.2			
15	19	04.5	84	23.7		13.0	114	49.4		16.7	246	03.5	297	33.6			
16	34	06.9	99	23.0		12.7	129	50.1		16.8	261	06.2	312	36.1			
17	49	09.4	114	22.4	-20	12.4	144	50.8	-23	16.9	276	09.0	327	38.5			
18	64	11.9	129	21.7	-20	12.1	159	51.5	-23	17.0	291	11.7	342	41.0			
19	79	14.3	144	21.1		11.7	174	52.3		17.1	306	14.5	357	43.4			
20	94	16.8	159	20.5		11.4	189	53.0		17.2	321	17.2	12	45.9			
21	109	19.3	174	19.8		11.1	204	53.7		17.3	336	19.9	27	48.3			
22	124	21.7	189	19.2		10.8	219	54.4		17.4	351	22.7	42	50.8			
23	139	24.2	204	18.6		10.4	234	55.2		17.5	6	25.4	57	53.2			
24	154	26.7	219	17.9	-20	10.1	249	55.9	-23	17.6	21	28.2	72	55.7			
Dif	—		-6	+3			+7	-1			+27	+1		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 23 ^d 5	PHE { 4 ^h : 58 ¹ 12 ^h : 57 ⁹ 20 ^h : 57 ⁸	SD: 15 ^h 8 PMG: 7 ^h 27 ^m			R°: 58 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	176	42.1	-9	252	39.0	-24	49.7	60 N	17 16	17 58	18 47	5 01	72	9 47	50	
1	191	42.2		267	04.2		54.4	58	21	18 00	46	4 37	69	10 12	52	
2	206	42.3		281	29.4		58.9	56	25	02	45	17 68		32	53	
3	221	42.4		295	54.6		03.3	54	28	04	45	4 01	66	10 49	54	
4	236	42.5		310	19.7		07.5	52	32	06	45	3 47	65	11 03	55	
5	251	42.6	-9	324	44.9		11.5	50	17 35	18 07	18 45	3 35	64	11 15	55	
6	266	42.7	-9	339	10.0		15.4	45	17 41	18 11	18 45	3 09	64	11 41	56	
7	281	42.8		353	35.1		19.2	40	47	14	46	2 49	63	12 02	56	
8	296	42.9		8	00.2		22.8	35	52	17	47	32	62	19	57	
9	311	43.0		22	25.3		26.2	30	17 56	20	48	2 18	61	34	57	
10	326	43.1		36	50.3		29.4	20	18 03	26	51	1 53	60	12 59	57	
11	341	43.2	-9	51	15.4		32.5	10 N	18 10	18 31	18 56	1 32	59	13 20	58	
12	356	43.3	-9	65	40.5		35.5	0	18 16	18 37	19 02	1 13	58	13 41	58	
13	11	43.4		80	05.5		38.2	10 S	23	44	09	0 53	57	14 01	58	
14	26	43.5		94	30.6		40.9	20	30	18 52	19	32	56	23	58	
15	41	43.6		108	55.7		43.3	30	38	19 02	31	0 08	55	14 48	58	
16	56	43.7		123	20.7		45.6	35	43	09	39	** ** *	**	15 02	59	
17	71	43.8	-9	137	45.8		47.7	40	18 48	19 16	19 49	** ** *	**	15 20	58	
18	86	43.9	-9	152	10.8		49.7	45	18 55	19 25	20 02	** ** *	**	15 40	59	
19	101	44.0		166	35.9		51.5	50	19 02	36	17	23 44	60	16 06	59	
20	116	44.1		181	01.0		53.2	52	06	41	25	31	61	19	58	
21	131	44.2	-9	195	26.1		54.7	54	10	47	34	17	61	33	59	
22	146	44.3	-8	209	51.2		56.0	56	14	19 54	44	23 00	61	16 50	58	
23	161	44.4		224	16.3		57.2	58	19	20 01	20 55	22 39	62	17 10	58	
24	176	44.5	-8	238	41.4		58.2	60 S	19 24	20 09	21 09	22 14	62	17 36	57	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 40 ^m 0		Mag: -4.2 PMG: 9 ^h 23 ^m		Mag: +1.0 PMG: 7 ^h 20 ^m		Mag: -2.5 PMG: 22 ^h 30 ^m		Mag: -0.1 PMG: 19 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	154	26.7	219	17.9	-20	10.1	249	55.9	-23	17.6	21	28.2	+18	31.3	72	55.7	+22	06.0
1	169	29.1	234	17.3		09.8	264	56.6		17.7	36	30.9		31.4	87	58.1		06.0
2	184	31.6	249	16.7		09.4	279	57.3		17.8	51	33.7		31.5	103	00.6		06.0
3	199	34.0	264	16.0		09.1	294	58.1		17.9	66	36.4		31.6	118	03.0		06.0
4	214	36.5	279	15.4		08.8	309	58.8		18.0	81	39.1		31.6	133	05.5		06.0
5	229	39.0	294	14.8	-20	08.4	324	59.5	-23	18.1	96	41.9	+18	31.7	148	07.9	+22	06.0
6	244	41.4	309	14.1	-20	08.1	340	00.2	-23	18.2	111	44.6	+18	31.8	163	10.4	+22	06.0
7	259	43.9	324	13.5		07.8	355	01.0		18.3	126	47.4		31.9	178	12.8		06.0
8	274	46.4	339	12.8		07.4	10	01.7		18.4	141	50.1		31.9	193	15.3		06.0
9	289	48.8	354	12.2		07.1	25	02.4		18.5	156	52.8		32.0	208	17.7		06.0
10	304	51.3	9	11.6		06.8	40	03.1		18.6	171	55.6		32.1	223	20.2		06.0
11	319	53.8	24	10.9	-20	06.4	55	03.9	-23	18.7	186	58.3	+18	32.2	238	22.6	+22	06.1
12	334	56.2	39	10.3	-20	06.1	70	04.6	-23	18.8	202	01.0	+18	32.2	253	25.1	+22	06.1
13	349	58.7	54	09.7		05.7	85	05.3		18.9	217	03.8		32.3	268	27.5		06.1
14	5	01.2	69	09.0		05.4	100	06.0		18.9	232	06.5		32.4	283	30.0		06.1
15	20	03.6	84	08.4		05.1	115	06.8		19.0	247	09.3		32.5	298	32.4		06.1
16	35	06.1	99	07.8		04.7	130	07.5		19.1	262	12.0		32.5	313	34.9		06.1
17	50	08.5	114	07.1	-20	04.4	145	08.2	-23	19.2	277	14.7	+18	32.6	328	37.3	+22	06.1
18	65	11.0	129	06.5	-20	04.0	160	08.9	-23	19.3	292	17.5	+18	32.7	343	39.8	+22	06.1
19	80	13.5	144	05.9		03.7	175	09.7		19.4	307	20.2		32.8	358	42.2		06.1
20	95	15.9	159	05.2		03.3	190	10.4		19.5	322	22.9		32.8	13	44.7		06.1
21	110	18.4	174	04.6		03.0	205	11.1		19.6	337	25.7		32.9	28	47.1		06.2
22	125	20.9	189	04.0		02.6	220	11.8		19.7	352	28.4		33.0	43	49.6		06.2
23	140	23.3	204	03.3		02.3	235	12.6		19.8	7	31.1		33.1	58	52.0		06.2
24	155	25.8	219	02.7	-20	01.9	250	13.3	-23	19.9	22	33.9	+18	33.1	73	54.5	+22	06.2
Dif	—		-6		+3		+7		-1		+27		+1		+24			0

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 13 ^m 0			Edad: 24 ^d 5 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/2 PMG: 8 ^h 25 ^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	176	44.5	-8 57.3	238	41.4	-25 58.2	8	60 N	5 38	6 26	7 09	6 13	43	10 37	75		
1	191	44.6	56.3	253	06.6	62 59.0	7	58	39	24	04	5 46	47	11 04	71		
2	206	44.7	55.4	267	31.7	61 -25 59.7	5	56	40	23	7 00	25	48	25	69		
3	221	44.8	54.5	281	56.9	62 -26 00.2	4	54	40	21	6 57	5 07	50	43	67		
4	236	44.9	53.5	296	22.1	62 00.6	2	52	40	19	53	4 52	51	11 58	66		
5	251	45.0	-8 52.6	310	47.3	62 -26 00.8	1	50	5 40	6 18	6 50	4 39	52	12 10	66		
6	266	45.1	-8 51.7	325	12.6	63 -26 00.9	2	45	5 40	6 14	6 44	4 13	53	12 37	64		
7	281	45.2	50.7	339	37.8	62 00.7	2	40	40	11	39	3 52	54	12 58	62		
8	296	45.3	49.8	354	03.1	63 -26 00.5	5	35	39	08	34	34	55	13 16	61		
9	311	45.4	48.9	8	28.5	64 -26 00.0	5	30	38	06	30	3 19	55	31	60		
10	326	45.5	47.9	22	53.8	63 -25 59.5	8	20	35	6 00	22	2 53	57	13 56	59		
11	341	45.6	-8 47.0	37	19.2	64 -25 58.7	9	10 N	5 30	5 55	6 16	2 31	57	14 18	58		
12	356	45.7	-8 46.1	51	44.6	64 -25 57.8	10	0	5 24	5 49	6 10	2 11	57	14 39	56		
13	11	45.8	45.1	66	10.1	65 56.8	13	10 S	17	42	6 03	1 50	58	14 59	55		
14	26	45.9	44.2	80	35.6	65 55.5	13	20	5 08	34	5 56	28	59	15 21	53		
15	41	46.0	43.3	95	01.1	65 54.2	13	30	4 55	24	48	1 03	59	15 46	52		
16	56	46.1	42.3	109	26.7	66 52.7	15	35	47	18	44	0 48	59	16 01	51		
17	71	46.2	-8 41.4	123	52.3	66 -25 51.0	17	40	4 37	5 11	5 38	0 31	59	16 18	50		
18	86	46.3	-8 40.5	138	17.9	66 -25 49.1	19	45	4 25	5 02	5 32	0 10	60	16 39	47		
19	101	46.4	39.5	152	43.6	67 47.2	19	50	09	4 51	25	** ** *	**	17 05	45		
20	116	46.5	38.6	167	09.4	68 45.0	22	52	4 02	46	21	** ** *	**	17	44		
21	131	46.6	37.7	181	35.2	68 42.7	23	54	3 53	40	17	** ** *	**	32	42		
22	146	46.7	36.7	196	01.0	68 40.3	24	56	43	33	13	** ** *	**	17 48	41		
23	161	46.8	35.8	210	26.9	69 37.7	26	58	32	26	09	23 41	78	18 08	38		
24	176	46.9	-8 34.8	224	52.9	70 -25 34.9	28	60 S	3 18	4 18	5 03	23 16	83	18 33	34		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 36 ^m 0		Mag: -4.2 PMG: 9 ^h 24 ^m		Mag: +1.0 PMG: 7 ^h 19 ^m		Mag: -2.5 PMG: 22 ^h 26 ^m		Mag: 0.0 PMG: 19 ^h 01 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	155	25.8	219	02.7	-20	01.9	250	13.3	-23	19.9
1	170	28.3	234	02.1		01.6	265	14.0		20.0
2	185	30.7	249	01.4		01.2	280	14.7		20.1
3	200	33.2	264	00.8		00.9	295	15.5		20.2
4	215	35.7	279	00.2		00.5	310	16.2		20.3
5	230	38.1	293	59.5	-20	00.2	325	16.9	-23	20.4
6	245	40.6	308	58.9	-19	59.8	340	17.6	-23	20.4
7	260	43.0	323	58.3		59.4	355	18.4		20.5
8	275	45.5	338	57.6		59.1	10	19.1		20.6
9	290	48.0	353	57.0		58.7	25	19.8		20.7
10	305	50.4	8	56.4		58.4	40	20.5		20.8
11	320	52.9	23	55.7	-19	58.0	55	21.2	-23	20.9
12	335	55.4	38	55.1	-19	57.6	70	22.0	-23	21.0
13	350	57.8	53	54.5		57.3	85	22.7		21.1
14	6	00.3	68	53.8		56.9	100	23.4		21.2
15	21	02.8	83	53.2		56.5	115	24.1		21.3
16	36	05.2	98	52.6		56.2	130	24.9		21.3
17	51	07.7	113	51.9	-19	55.8	145	25.6	-23	21.4
18	66	10.2	128	51.3	-19	55.4	160	26.3	-23	21.5
19	81	12.6	143	50.7		55.1	175	27.0		21.6
20	96	15.1	158	50.0		54.7	190	27.8		21.7
21	111	17.5	173	49.4		54.3	205	28.5		21.8
22	126	20.0	188	48.8		53.9	220	29.2		21.9
23	141	22.5	203	48.1		53.6	235	29.9		22.0
24	156	24.9	218	47.5	-19	53.2	250	30.7	-23	22.0
Dif	—		-6		+4		+7		-1	
							+27		+1	
									+24	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2		Edad: 25 ^d 5 PHE { 4 ^h : 57 ^m 1 12 ^h : 56 ^m 9 20 ^h : 56 ^m 7						Civil		R°		R°		
	PMG: 12 ^h 12 ^m 8		SD: 15 ^h 6		PMG: 9 ^h 22 ^m R°: 54 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	176	46.9	-8	34.8	224	52.9	-25 34.9	60 N	17 21	18 03	18 51	6 56	24	11 52	89
1	191	47.0		33.9	239	18.9	32.1 28	58	25	05	50	33	28	12 15	84
2	206	47.1		33.0	253	44.9	29.0 31	56	29	06	50	6 13	33	34	80
3	221	47.2		32.0	268	11.0	25.8 32	54	32	08	49	5 57	35	12 50	77
4	236	47.3		31.1	282	37.2	22.5 33	52	35	09	48	43	38	13 04	74
5	251	47.5	-8	30.2	297	03.4	-25 19.0 35	50	17 38	18 11	18 48	5 31	39	13 16	72
6	266	47.6	-8	29.2	311	29.7	-25 15.4 36	45	17 44	18 14	18 48	5 06	42	13 41	68
7	281	47.7		28.3	325	56.0	11.6 38	40	49	16	48	4 46	44	14 00	66
8	296	47.8		27.3	340	22.4	07.7 39	35	53	19	48	29	47	17	63
9	311	47.9		26.4	354	48.9	-25 03.6 41	30	17 57	21	49	4 14	49	31	61
10	326	48.0		25.5	9	15.4	-24 59.4 42	20	18 04	26	52	3 50	50	14 55	58
11	341	48.1	-8	24.5	23	42.0	-24 55.1 43	10 N	18 10	18 31	18 56	3 28	53	15 16	55
12	356	48.2	-8	23.6	38	08.7	-24 50.6 45	0	18 16	18 37	19 01	3 08	55	15 35	53
13	11	48.3		22.6	52	35.4	46.0 46	10 S	22	43	08	2 48	57	15 54	51
14	26	48.4		21.7	67	02.2	41.2 48	20	28	18 51	17	27	58	16 14	49
15	41	48.5		20.8	81	29.1	36.3 49	30	36	19 00	29	2 02	61	38	45
16	56	48.6		19.8	95	56.0	31.3 50	35	40	06	37	1 47	63	16 52	43
17	71	48.7	-8	18.9	110	23.0	-24 26.1 52	40	18 45	19 13	19 46	1 30	64	17 08	40
18	86	48.9	-8	17.9	124	50.1	-24 20.8 53	45	18 51	19 21	19 58	1 10	66	17 26	38
19	101	49.0		17.0	139	17.2	15.4 54	50	18 58	32	20 13	0 44	69	17 50	34
20	116	49.1		16.1	153	44.5	09.8 56	52	19 01	37	20	32	71	18 01	32
21	131	49.2		15.1	168	11.8	-24 04.1 57	54	05	42	28	18	72	14	30
22	146	49.3		14.2	182	39.1	-23 58.3 58	56	09	48	38	0 01	75	29	26
23	161	49.4		13.2	197	06.6	52.3 60	58	13	19 55	20 49	** ** *	**	18 46	23
24	176	49.5	-8	12.3	211	34.1	-23 46.2 61	60 S	19 18	20 03	21 01	** ** *	**	19 07	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 32 ^m 1		Mag: -4.1 PMG: 9 ^h 25 ^m		Mag: +1.0 PMG: 7 ^h 18 ^m		Mag: -2.5 PMG: 22 ^h 21 ^m		Mag: 0.0 PMG: 18 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	156	24.9	218	47.5	-19 53.2	250	30.7	-23 22.0	23 39.5	+18 34.9
1	171	27.4	233	46.9	52.8	265	31.4	22.1	38 42.2	34.9
2	186	29.9	248	46.2	52.4	280	32.1	22.2	53 44.9	35.0
3	201	32.3	263	45.6	52.1	295	32.8	22.3	68 47.7	35.1
4	216	34.8	278	45.0	51.7	310	33.6	22.4	83 50.4	35.1
5	231	37.3	293	44.3	-19 51.3	325	34.3	-23 22.5	98 53.1	+18 35.2
6	246	39.7	308	43.7	-19 50.9	340	35.0	-23 22.6	113 55.8	+18 35.3
7	261	42.2	323	43.1	50.5	355	35.7	22.6	128 58.6	35.4
8	276	44.7	338	42.4	50.1	10 36.5	22.7	144 01.3	144 01.3	35.4
9	291	47.1	353	41.8	49.8	25 37.2	22.8	159 04.0	159 04.0	35.5
10	306	49.6	8 41.2	49.4	40 37.9	22.9	174 06.8	35.6	174 06.8	35.6
11	321	52.0	23 40.5	-19 49.0	55 38.6	-23 23.0	189 09.5	+18 35.6	189 09.5	+18 35.6
12	336	54.5	38 39.9	-19 48.6	70 39.4	-23 23.1	204 12.2	+18 35.7	204 12.2	+18 35.7
13	351	57.0	53 39.3	48.2	85 40.1	23.1	219 14.9	35.8	219 14.9	35.8
14	6 59.4	68 38.7	47.8	100 40.8	23.2	234 17.7	35.9	234 17.7	234 17.7	35.9
15	22 01.9	83 38.0	47.4	115 41.5	23.3	249 20.4	35.9	249 20.4	249 20.4	35.9
16	37 04.4	98 37.4	47.0	130 42.3	23.4	264 23.1	36.0	264 23.1	264 23.1	36.0
17	52 06.8	113 36.8	-19 46.7	145 43.0	-23 23.5	279 25.9	+18 36.1	279 25.9	279 25.9	+18 36.1
18	67 09.3	128 36.1	-19 46.3	160 43.7	-23 23.5	294 28.6	+18 36.1	294 28.6	294 28.6	+18 36.1
19	82 11.8	143 35.5	45.9	175 44.4	23.6	309 31.3	36.2	309 31.3	309 31.3	36.2
20	97 14.2	158 34.9	45.5	190 45.2	23.7	324 34.0	36.3	324 34.0	324 34.0	36.3
21	112 16.7	173 34.2	45.1	205 45.9	23.8	339 36.8	36.3	339 36.8	339 36.8	36.3
22	127 19.1	188 33.6	44.7	220 46.6	23.9	354 39.5	36.4	354 39.5	354 39.5	36.4
23	142 21.6	203 33.0	44.3	235 47.3	23.9	9 42.2	36.5	9 42.2	9 42.2	36.5
24	157 24.1	218 32.4	-19 43.9	250 48.0	-23 24.0	24 44.9	+18 36.6	24 44.9	24 44.9	+18 36.6
Dif	—		-6 +4		+7 -1		+27 +1		+24 0	

UT	SOL		● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 26 ^d 5 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 4 20 ^h : 56 ^m 3 PMG: 10 ^h 16 ^m R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	49.5	-8	12.3	211	34.1	-23	46.2	53	621	703	720	13	132191
1	191	49.6		11.3	226	01.7		40.0	34	19	659	701	18	3986
2	206	49.7		10.4	240	29.4		33.7	35	18	55	646	21	135482
3	221	49.9		09.5	254	57.2		27.2	36	16	52	32	25	140779
4	236	50.0		08.5	269	25.0		20.6	36	15	49	21	27	1876
5	251	50.1	-8	07.6	283	52.9	-23	13.9	537	614	646	610	29	142874
6	266	50.2	-8	06.6	298	20.9	-23	07.1	537	611	641	548	34	144969
7	281	50.3		05.7	312	49.0	-23	00.1	37	08	36	30	37	150666
8	296	50.4		04.7	327	17.2	-22	53.1	37	06	31	16	39	2063
9	311	50.5		03.8	341	45.5		45.9	36	604	28	503	41	3261
10	326	50.6		02.9	356	13.8		38.6	33	559	21	440	46	155357
11	341	50.8	-8	01.9	10	42.2	-22	31.1	529	554	615	421	49	161153
12	356	50.9	-8	01.0	25	10.7	-22	23.6	524	548	609	403	51	162850
13	11	51.0	-8	00.0	39	39.3		16.0	17	42	603	345	54	164546
14	26	51.1	-7	59.1	54	08.0		08.2	509	35	557	25	58	170343
15	41	51.2		58.1	68	36.7	-22	00.3	457	26	50	303	61	2339
16	56	51.3		57.2	83	05.5	-21	52.3	49	20	46	250	63	3536
17	71	51.4	-7	56.2	97	34.5	-21	44.2	440	513	541	234	66	174834
18	86	51.6	-7	55.3	112	03.5	-21	36.0	428	505	535	216	69	180431
19	101	51.7		54.3	126	32.6		27.7	13	455	28	153	74	2426
20	116	51.8		53.4	141	01.7		19.3	406	50	25	43	75	3324
21	131	51.9		52.5	155	31.0		10.8	358	44	21	30	78	4421
22	146	52.0		51.5	170	00.3	-21	02.2	49	38	18	116	81	185518
23	161	52.1		50.6	184	29.8	-20	53.5	38	31	13	059	85	190914
24	176	52.3	-7	49.6	198	59.3	-20	44.6	325	423	508	039	90	192411

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 28 ^m 2		Mag: -4.1 PMG: 9 ^h 26 ^m		Mag: +1.0 PMG: 7 ^h 16 ^m		Mag: -2.5 PMG: 22 ^h 17 ^m		Mag: 0.0 PMG: 18 ^h 53 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	157	24.1	218	32.4	-19	43.9	250	48.0	-23	24.0
1	172	26.5	233	31.7		43.5	265	48.8		24.1
2	187	29.0	248	31.1		43.1	280	49.5		24.2
3	202	31.5	263	30.5		42.7	295	50.2		24.3
4	217	33.9	278	29.8		42.3	310	50.9		24.3
5	232	36.4	293	29.2	-19	41.9	325	51.7	-23	24.4
6	247	38.9	308	28.6	-19	41.5	340	52.4	-23	24.5
7	262	41.3	323	28.0		41.1	355	53.1		24.6
8	277	43.8	338	27.3		40.7	10	53.8		24.6
9	292	46.3	353	26.7		40.2	25	54.6		24.7
10	307	48.7	8	26.1		39.8	40	55.3		24.8
11	322	51.2	23	25.4	-19	39.4	55	56.0	-23	24.9
12	337	53.6	38	24.8	-19	39.0	70	56.7	-23	24.9
13	352	56.1	53	24.2		38.6	85	57.5		25.0
14	7	58.6	68	23.6		38.2	100	58.2		25.1
15	23	01.0	83	22.9		37.8	115	58.9		25.2
16	38	03.5	98	22.3		37.4	130	59.6		25.2
17	53	06.0	113	21.7	-19	36.9	146	00.4	-23	25.3
18	68	08.4	128	21.0	-19	36.5	161	01.1	-23	25.4
19	83	10.9	143	20.4		36.1	176	01.8		25.5
20	98	13.4	158	19.8		35.7	191	02.5		25.5
21	113	15.8	173	19.2		35.3	206	03.3		25.6
22	128	18.3	188	18.5		34.9	221	04.0		25.7
23	143	20.8	203	17.9		34.4	236	04.7		25.8
24	158	23.2	218	17.3	-19	34.0	251	05.4	-23	25.8
Dif	—		-6		+4		+7		-1	
									+27	
									+1	
									+24	
									0	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1		Edad: 27 ^d 5 PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 20 ^h : 55 ^m 8 R°: 47 ^m													
	PMG: 12 ^h 12 ^m 4	PMG: 11 ^h 06 ^m	hG ☉	Dec	hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	52.3	-7	49.6	198	59.3	-20	44.6	60 N	17 26	18 08	18 56	7 33	7	14 52	89
1	191	52.4		48.7	213	28.9 ¹⁰⁶		35.7 ⁸⁹	58	30	09	55	19	12	15 05	85
2	206	52.5		47.7	227	58.6 ¹⁰⁷		26.7 ⁹⁰	56	33	11	54	7 07	15	16	81
3	221	52.6		46.8	242	28.4 ¹⁰⁸		17.6 ⁹¹	54	36	12	53	6 57	18	26	78
4	236	52.7		45.8	256	58.2 ¹⁰⁸	-20	08.4 ⁹²	52	39	13	52	48	20	34	76
5	251	52.8	-7	44.9	271	28.2 ¹¹⁰	-19	59.1 ⁹³	50	17 41	18 14	18 51	6 39	23	15 42	73
6	266	53.0	-7	43.9	285	58.2 ¹¹⁰	-19	49.7 ⁹⁴	45	17 47	18 16	18 50	6 22	27	15 58	69
7	281	53.1		43.0	300	28.3 ¹¹¹		40.2 ⁹⁵	40	51	18	50	6 07	31	16 12	64
8	296	53.2		42.0	314	58.5 ¹¹²		30.6 ⁹⁶	35	55	21	50	5 55	34	23	61
9	311	53.3		41.1	329	28.8 ¹¹³		20.9 ⁹⁷	30	17 59	23	51	44	37	33	58
10	326	53.4		40.1	343	59.2 ¹¹⁴		11.2 ⁹⁷	20	18 05	27	53	26	40	16 50	54
11	341	53.6	-7	39.2	358	29.6 ¹¹⁴	-19	01.3 ⁹⁹	10 N	18 10	18 32	18 56	5 10	44	17 04	50
12	356	53.7	-7	38.2	13	00.2 ¹¹⁶	-18	51.4 ⁹⁹	0	18 16	18 37	19 01	4 54	48	17 18	46
13	11	53.8		37.3	27	30.8 ¹¹⁶		41.4 ¹⁰⁰	10 S	21	42	07	39	52	31	43
14	26	53.9		36.3	42	01.5 ¹¹⁷		31.3 ¹⁰¹	20	27	49	15	23	55	17 46	38
15	41	54.0		35.4	56	32.3 ¹¹⁸		21.1 ¹⁰²	30	34	18 58	27	4 04	59	18 02	34
16	56	54.2		34.4	71	03.2 ¹¹⁹		10.9 ¹⁰²	35	38	19 03	34	3 53	62	11	32
17	71	54.3	-7	33.5	85	34.1 ¹¹⁹	-18	00.5 ¹⁰⁴	40	18 42	19 10	19 43	3 40	65	18 22	29
18	86	54.4	-7	32.5	100	05.2 ¹²¹	-17	50.1 ¹⁰⁴	45	18 48	19 18	19 54	3 25	69	18 35	25
19	101	54.5		31.6	114	36.3 ¹²¹		39.6 ¹⁰⁵	50	54	27	20 08	3 07	73	50	20
20	116	54.6		30.6	129	07.5 ¹²²		29.1 ¹⁰⁵	52	18 57	32	15	2 58	76	18 57	18
21	131	54.8		29.7	143	38.8 ¹²³		18.4 ¹⁰⁷	54	19 00	37	23	48	79	19 05	16
22	146	54.9		28.7	158	10.1 ¹²³	-17	07.7 ¹⁰⁷	56	04	43	31	37	82	13	14
23	161	55.0		27.8	172	41.6 ¹²⁵	-16	56.9 ¹⁰⁸	58	08	49	42	24	86	23	10
24	176	55.1	-7	26.8	187	13.1 ¹²⁵	-16	46.0 ¹⁰⁹	60 S	19 12	19 57	20 54	2 09	90	19 35	6
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 13 ^h 24 ^m 3		Mag: -4.1 PMG: 9 ^h 27 ^m		Mag: +0.9 PMG: 7 ^h 15 ^m		Mag: -2.5 PMG: 22 ^h 13 ^m		Mag: 0.0 PMG: 18 ^h 50 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	158	23.2	218	17.3	251	05.4	25	50.3	76	50.0						
1	173	25.7	233	16.7	266	06.2	40	53.0	91	52.4						
2	188	28.1	248	16.0	281	06.9	55	55.7	106	54.9						
3	203	30.6	263	15.4	296	07.6	70	58.4	121	57.3						
4	218	33.1	278	14.8	311	08.3	86	01.1	136	59.7						
5	233	35.5	293	14.2	326	09.1	101	03.8	152	02.2						
6	248	38.0	308	13.5	341	09.8	116	06.6	167	04.6						
7	263	40.5	323	12.9	356	10.5	131	09.3	182	07.0						
8	278	42.9	338	12.3	11	11.2	146	12.0	197	09.5						
9	293	45.4	353	11.7	26	12.0	161	14.7	212	11.9						
10	308	47.9	8	11.0	41	12.7	176	17.4	227	14.3						
11	323	50.3	23	10.4	56	13.4	191	20.1	242	16.7						
12	338	52.8	38	09.8	71	14.1	206	22.9	257	19.2						
13	353	55.2	53	09.2	86	14.9	221	25.6	272	21.6						
14	8	57.7	68	08.5	101	15.6	236	28.3	287	24.0						
15	24	00.2	83	07.9	116	16.3	251	31.0	302	26.4						
16	39	02.6	98	07.3	131	17.0	266	33.7	317	28.9						
17	54	05.1	113	06.7	146	17.8	281	36.4	332	31.3						
18	69	07.6	128	06.0	161	18.5	296	39.2	347	33.7						
19	84	10.0	143	05.4	176	19.2	311	41.9	2	36.2						
20	99	12.5	158	04.8	191	19.9	326	44.6	17	38.6						
21	114	15.0	173	04.2	206	20.6	341	47.3	32	41.0						
22	129	17.4	188	03.5	221	21.4	356	50.0	47	43.4						
23	144	19.9	203	02.9	236	22.1	11	52.7	62	45.9						
24	159	22.4	218	02.3	251	22.8	26	55.4	77	48.3						
Dif	—		-6	+4	+7	-1	+27	+1	+24	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 28 ^d 5	PHE {	R°: 44 ^m		R°			R°			
	PMG: 12 ^h 12 ^m 2					R°: 44 ^m		R°			R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	176	55.1	-7 26.8	187	13.1	-16 46.0	109	5 27	6 15	6 57	7 40	5	16 21	85
1	191	55.2	25.9	201	44.7 ¹²⁶	35.1	109	29	14	53	31	8	30	81
2	206	55.4	24.9	216	16.4 ¹²⁷	24.1	110	30	13	50	22	11	37	78
3	221	55.5	24.0	230	48.1 ¹²⁷	13.0	111	31	12	47	15	14	44	75
4	236	55.6	23.0	245	20.0 ¹²⁹	-16 01.9	111	32	11	45	08	16	50	73
5	251	55.7	-7 22.1	259	51.9 ¹²⁹	-15 50.7	112	5 33	6 10	6 42	7 02	18	16 55	71
6	266	55.9	-7 21.1	274	23.9 ¹³⁰	-15 39.4	113	5 34	6 08	6 37	6 49	23	17 07	66
7	281	56.0	20.2	288	55.9 ¹³⁰	28.1	113	34	06	33	38	27	16	63
8	296	56.1	19.2	303	28.1 ¹³²	16.7	114	34	03	29	29	29	24	59
9	311	56.2	18.2	318	00.3 ¹³²	-15 05.3	114	34	6 01	25	21	32	31	57
10	326	56.4	17.3	332	32.6 ¹³³	-14 53.7	116	32	5 57	19	6 06	37	44	51
11	341	56.5	-7 16.3	347	04.9 ¹³³	-14 42.2	115	5 28	5 53	6 14	5 54	41	17 54	48
12	356	56.6	-7 15.4	1	37.4 ¹³⁵	-14 30.5	117	5 24	5 48	6 09	5 42	45	18 04	44
13	11	56.7	14.4	16	09.9 ¹³⁵	18.9	116	18	42	6 04	31	48	14	40
14	26	56.8	13.5	30	42.5 ¹³⁶	-14 07.1	118	20	5 10	36	5 58	18	53	24
15	41	57.0	12.5	45	15.1 ¹³⁶	-13 55.3	118	30	4 58	27	5 03	58	36	31
16	56	57.1	11.6	59	47.8 ¹³⁷	43.5	118	35	51	22	4 55	60	43	28
17	71	57.2	-7 10.6	74	20.6 ¹³⁸	-13 31.6	119	40	4 42	5 15	4 45	64	18 51	25
18	86	57.3	-7 09.7	88	53.5 ¹³⁹	-13 19.6	120	45	4 31	5 08	4 34	67	19 00	21
19	101	57.5	08.7	103	26.4 ¹³⁹	-13 07.6	120	50	17	4 58	32	20	72	10
20	116	57.6	07.7	117	59.4 ¹⁴⁰	-12 55.6	120	52	11	54	14	74	15	15
21	131	57.7	06.8	132	32.4 ¹⁴⁰	43.5	121	54	4 03	49	4 07	76	21	12
22	146	57.9	05.8	147	05.6 ¹⁴²	31.3	122	56	3 54	43	3 59	79	27	10
23	161	58.0	04.9	161	38.7 ¹⁴¹	19.1	122	58	44	36	50	82	33	8
24	176	58.1	-7 03.9	176	12.0 ¹⁴³	-12 06.9	122	60 S	3 32	4 29	3 39	87	19 41	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 20 ^m 3		Mag: -4.1 PMG: 9 ^h 28 ^m		Mag: +0.9 PMG: 7 ^h 14 ^m		Mag: -2.5 PMG: 22 ^h 08 ^m		Mag: 0.0 PMG: 18 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	159	22.4	218 02.3	-19 23.6	251 22.8	-23 27.4	26 55.4	+18 39.8	77 48.3	+22 07.2
1	174	24.8	233 01.7	23.2	266 23.5	27.5	41 58.2	39.9	92 50.7	07.2
2	189	27.3	248 01.1	22.7	281 24.3	27.6	57 00.9	40.0	107 53.1	07.2
3	204	29.7	263 00.4	22.3	296 25.0	27.6	72 03.6	40.0	122 55.6	07.2
4	219	32.2	277 59.8	21.8	311 25.7	27.7	87 06.3	40.1	137 58.0	07.2
5	234	34.7	292 59.2	-19 21.4	326 26.4	-23 27.8	102 09.0	+18 40.2	153 00.4	+22 07.2
6	249	37.1	307 58.6	-19 20.9	341 27.2	-23 27.8	117 11.7	+18 40.2	168 02.8	+22 07.3
7	264	39.6	322 57.9	20.5	356 27.9	27.9	132 14.4	40.3	183 05.3	07.3
8	279	42.1	337 57.3	20.0	11 28.6	28.0	147 17.1	40.4	198 07.7	07.3
9	294	44.5	352 56.7	19.5	26 29.3	28.0	162 19.8	40.4	213 10.1	07.3
10	309	47.0	7 56.1	19.1	41 30.1	28.1	177 22.6	40.5	228 12.5	07.3
11	324	49.5	22 55.5	-19 18.6	56 30.8	-23 28.1	192 25.3	+18 40.5	243 15.0	+22 07.3
12	339	51.9	37 54.8	-19 18.2	71 31.5	-23 28.2	207 28.0	+18 40.6	258 17.4	+22 07.3
13	354	54.4	52 54.2	17.7	86 32.2	28.3	222 30.7	40.7	273 19.8	07.3
14	9	56.9	67 53.6	17.3	101 33.0	28.3	237 33.4	40.7	288 22.2	07.3
15	24	59.3	82 53.0	16.8	116 33.7	28.4	252 36.1	40.8	303 24.7	07.4
16	40	01.8	97 52.4	16.3	131 34.4	28.4	267 38.8	40.9	318 27.1	07.4
17	55	04.2	112 51.7	-19 15.9	146 35.1	-23 28.5	282 41.5	+18 40.9	333 29.5	+22 07.4
18	70	06.7	127 51.1	-19 15.4	161 35.9	-23 28.6	297 44.2	+18 41.0	348 31.9	+22 07.4
19	85	09.2	142 50.5	15.0	176 36.6	28.6	312 46.9	41.1	3 34.3	07.4
20	100	11.6	157 49.9	14.5	191 37.3	28.7	327 49.7	41.1	18 36.8	07.4
21	115	14.1	172 49.3	14.0	206 38.0	28.7	342 52.4	41.2	33 39.2	07.4
22	130	16.6	187 48.6	13.6	221 38.8	28.8	357 55.1	41.3	48 41.6	07.4
23	145	19.0	202 48.0	13.1	236 39.5	28.8	12 57.8	41.3	63 44.0	07.4
24	160	21.5	217 47.4	-19 12.6	251 40.2	-23 28.9	28 00.5	+18 41.4	78 46.4	+22 07.5
Dif	—		-6	+5	+7	-1	+27	+1	+24	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1		Edad: 29 ^d 5	PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 1 20 ^h : 54 ^m 9	SD: 15 ^h 1	PMG: 12 ^h 37 ^m			R°: 42 ^m									
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	58.1	-7	03.9	176	12.0	-12	06.9	60 N	17 31	18 13	19 01	7 45	3	17 46	82		
1	191	58.2		03.0	190	45.3 ¹⁴³	-11	54.6 ¹²³	58	35	14	18 59	39	6	51	79		
2	206	58.4		02.0	205	18.7 ¹⁴⁴		42.3 ¹²³	56	37	15	58	33	10	55	76		
3	221	58.5		01.1	219	52.1 ¹⁴⁴		29.9 ¹²⁴	54	40	16	56	29	11	17 59	74		
4	236	58.6	-7	00.1	234	25.6 ¹⁴⁵		17.5 ¹²⁴	52	42	16	55	24	14	18 03	71		
5	251	58.7	-6	59.1	248	59.2 ¹⁴⁶	-11	05.1 ¹²⁴	50	17 45	18 17	18 54	7 20	16	18 06	69		
6	266	58.9	-6	58.2	263	32.8 ¹⁴⁶	-10	52.6 ¹²⁵	45	17 49	18 19	18 53	7 12	20	18 13	64		
7	281	59.0		57.2	278	06.5 ¹⁴⁷		40.1 ¹²⁵	40	53	21	52	7 05	23	19	60		
8	296	59.1		56.3	292	40.2 ¹⁴⁷		27.6 ¹²⁵	35	17 57	22	52	6 58	27	23	58		
9	311	59.3		55.3	307	14.0 ¹⁴⁸		15.0 ¹²⁶	30	18 00	24	52	53	29	28	54		
10	326	59.4		54.3	321	47.8 ¹⁴⁸	-10	02.3 ¹²⁷	20	06	28	53	43	35	35	50		
11	341	59.5	-6	53.4	336	21.7 ¹⁴⁹	-9	49.7 ¹²⁶	10 N	18 11	18 32	18 56	6 35	38	18 42	45		
12	356	59.6	-6	52.4	350	55.7 ¹⁵⁰	-9	37.0 ¹²⁷	0	18 15	18 36	19 00	6 27	42	18 48	41		
13	11	59.8		51.5	5	29.7 ¹⁵⁰		24.3 ¹²⁷	10 S	20	41	06	19	46	18 54	37		
14	26	59.9		50.5	20	03.8 ¹⁵¹	-9	11.5 ¹²⁸	20	25	48	14	11	50	19 00	33		
15	42	00.0		49.6	34	37.9 ¹⁵¹	-8	58.7 ¹²⁸	30	32	18 56	24	6 01	55	07	29		
16	57	00.2		48.6	49	12.0 ¹⁵¹		45.9 ¹²⁸	35	35	19 01	31	5 55	58	11	26		
17	72	00.3	-6	47.6	63	46.3 ¹⁵³	-8	33.1 ¹²⁸	40	18 39	19 07	19 39	5 49	61	19 16	22		
18	87	00.4	-6	46.7	78	20.5 ¹⁵²	-8	20.2 ¹²⁹	45	18 44	19 14	19 50	5 41	65	19 21	19		
19	102	00.6		45.7	92	54.8 ¹⁵³	-8	07.3 ¹²⁹	50	50	23	20 03	32	70	27	15		
20	117	00.7		44.8	107	29.2 ¹⁵⁴	-7	54.4 ¹²⁹	52	52	27	10	28	72	30	13		
21	132	00.8		43.8	122	03.6 ¹⁵⁴		41.5 ¹²⁹	54	55	32	17	23	75	33	11		
22	147	01.0		42.8	136	38.0 ¹⁵⁴		28.5 ¹³⁰	56	18 59	37	25	18	77	37	8		
23	162	01.1		41.9	151	12.5 ¹⁵⁵		15.5 ¹³⁰	58	19 02	43	35	12	80	41	6		
24	177	01.2	-6	40.9	165	47.1 ¹⁵⁶	-7	02.5 ¹³⁰	60 S	19 06	19 50	20 46	5 06	83	19 45	3		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 16 ^m 4		Mag: -4.1 PMG: 9 ^h 29 ^m			Mag: +0.9 PMG: 7 ^h 13 ^m			Mag: -2.5 PMG: 22 ^h 04 ^m			Mag: 0.0 PMG: 18 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	160	21.5	217	47.4	-19	12.6	251	40.2	-23	28.9	28	00.5	+18	41.4	78	46.4	+22	07.5
1	175	24.0	232	46.8		12.2	266	40.9		29.0	43	03.2		41.5	93	48.9		07.5
2	190	26.4	247	46.2		11.7	281	41.7		29.0	58	05.9		41.5	108	51.3		07.5
3	205	28.9	262	45.5		11.2	296	42.4		29.1	73	08.6		41.6	123	53.7		07.5
4	220	31.3	277	44.9		10.7	311	43.1		29.1	88	11.3		41.6	138	56.1		07.5
5	235	33.8	292	44.3	-19	10.3	326	43.8	-23	29.2	103	14.0	+18	41.7	153	58.5	+22	07.5
6	250	36.3	307	43.7	-19	09.8	341	44.6	-23	29.2	118	16.7	+18	41.8	169	01.0	+22	07.5
7	265	38.7	322	43.1		09.3	356	45.3		29.3	133	19.4		41.8	184	03.4		07.5
8	280	41.2	337	42.5		08.8	11	46.0		29.4	148	22.1		41.9	199	05.8		07.5
9	295	43.7	352	41.8		08.4	26	46.7		29.4	163	24.8		42.0	214	08.2		07.6
10	310	46.1	7	41.2		07.9	41	47.5		29.5	178	27.5		42.0	229	10.6		07.6
11	325	48.6	22	40.6	-19	07.4	56	48.2	-23	29.5	193	30.2	+18	42.1	244	13.1	+22	07.6
12	340	51.1	37	40.0	-19	06.9	71	48.9	-23	29.6	208	33.0	+18	42.2	259	15.5	+22	07.6
13	355	53.5	52	39.4		06.5	86	49.6		29.6	223	35.7		42.2	274	17.9		07.6
14	10	56.0	67	38.8		06.0	101	50.4		29.7	238	38.4		42.3	289	20.3		07.6
15	25	58.5	82	38.1		05.5	116	51.1		29.7	253	41.1		42.3	304	22.7		07.6
16	41	00.9	97	37.5		05.0	131	51.8		29.8	268	43.8		42.4	319	25.1		07.6
17	56	03.4	112	36.9	-19	04.5	146	52.5	-23	29.8	283	46.5	+18	42.5	334	27.6	+22	07.6
18	71	05.8	127	36.3	-19	04.0	161	53.3	-23	29.9	298	49.2	+18	42.5	349	30.0	+22	07.7
19	86	08.3	142	35.7		03.6	176	54.0		29.9	313	51.9		42.6	4	32.4		07.7
20	101	10.8	157	35.1		03.1	191	54.7		30.0	328	54.6		42.7	19	34.8		07.7
21	116	13.2	172	34.5		02.6	206	55.4		30.0	343	57.3		42.7	34	37.2		07.7
22	131	15.7	187	33.8		02.1	221	56.2		30.1	359	00.0		42.8	49	39.6		07.7
23	146	18.2	202	33.2		01.6	236	56.9		30.1	14	02.7		42.9	64	42.1		07.7
24	161	20.6	217	32.6	-19	01.1	251	57.6	-23	30.2	29	05.4	+18	42.9	79	44.5	+22	07.7
Dif	—		-6		+5		+7		-1		+27		+1		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 0 ^d 9	PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6			Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 11 ^m 8														SD: 14 ^h 9	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	01.2	-6 40.9	165	47.1	-7 02.5		60 N	5 21	6 09	6 51	7 48	3	19 08	81	
1	192	01.3	40.0	180	21.7 ¹⁵⁶	-6 49.5 ¹³⁰		58	23	09	48	45	6	10 77		
2	207	01.5	39.0	194	56.3 ¹⁵⁶	36.5 ¹³⁰		56	25	08	45	43	8	11 75		
3	222	01.6	38.0	209	31.0 ¹⁵⁷	23.4 ¹³¹		54	26	07	43	40	11	13 72		
4	237	01.7	37.1	224	05.7 ¹⁵⁷	-6 10.3 ¹³¹		52	28	07	40	38	13	14 70		
5	252	01.9	-6 36.1	238	40.4 ¹⁵⁷	-5 57.2 ¹³¹		50	5 29	6 06	6 38	7 36	15	19 15	68	
6	267	02.0	-6 35.2	253	15.2 ¹⁵⁸	-5 44.1 ¹³¹		45	5 30	6 04	6 34	7 32	18	19 17	63	
7	282	02.1	34.2	267	50.0 ¹⁵⁸	31.0 ¹³¹		40	31	03	30	28	22	19 60		
8	297	02.3	33.2	282	24.9 ¹⁵⁹	17.8 ¹³²		35	32	6 01	26	25	25	21 56		
9	312	02.4	32.3	296	59.8 ¹⁵⁹	-5 04.7 ¹³¹		30	32	5 59	23	22	28	22 54		
10	327	02.5	31.3	311	34.7 ¹⁵⁹	-4 51.5 ¹³²		20	30	56	18	18	32	25 48		
11	342	02.7	-6 30.3	326	09.6 ¹⁵⁹	-4 38.3 ¹³²		10 N	5 28	5 52	6 13	7 13	37	19 27	44	
12	357	02.8	-6 29.4	340	44.6 ¹⁶⁰	-4 25.1 ¹³²		0	5 24	5 48	6 09	7 09	41	19 29	40	
13	12	02.9	28.4	355	19.7 ¹⁶¹	-4 11.9 ¹³²		10 S	18	43	6 04	05	45	31 37		
14	27	03.1	27.5	9	54.7 ¹⁶⁰	-3 58.7 ¹³²		20	10	36	5 59	7 01	49	33 32		
15	42	03.2	26.5	24	29.8 ¹⁶¹	45.5 ¹³²		30	5 00	28	53	6 56	54	36 27		
16	57	03.4	25.5	39	04.9 ¹⁶¹	32.3 ¹³²		35	4 53	24	49	53	57	37 25		
17	72	03.5	-6 24.6	53	40.1 ¹⁶²	-3 19.1 ¹³²		40	4 45	5 18	5 45	6 50	60	19 38	22	
18	87	03.6	-6 23.6	68	15.2 ¹⁶¹	-3 05.8 ¹³³		45	4 35	5 11	5 41	6 46	64	19 40	19	
19	102	03.8	22.6	82	50.4 ¹⁶²	-2 52.6 ¹³²		50	21	5 02	35	42	68	42 14		
20	117	03.9	21.7	97	25.7 ¹⁶³	39.3 ¹³³		52	15	4 57	32	40	70	43 12		
21	132	04.0	20.7	112	00.9 ¹⁶²	26.1 ¹³²		54	4 08	53	29	38	72	44 10		
22	147	04.2	19.8	126	36.2 ¹⁶³	-2 12.8 ¹³³		56	3 59	48	26	35	75	45 8		
23	162	04.3	18.8	141	11.5 ¹⁶³	-1 59.6 ¹³²		58	50	42	23	32	78	47 5		
24	177	04.4	-6 17.8	155	46.8 ¹⁶³	-1 46.3 ¹³³		60 S	3 39	4 35	5 19	6 29	81	19 48	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 13 ^h 12 ^m 5		Mag: -4.1 PMG: 9 ^h 30 ^m		Mag: +0.9 PMG: 7 ^h 12 ^m		Mag: -2.5 PMG: 22 ^h 00 ^m		Mag: 0.0 PMG: 18 ^h 38 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	161	20.6	217	32.6	-19 01.1	251	57.6	-23 30.2	29 05.4	+18 42.9	79 44.5	+22 07.7
1	176	23.1	232	32.0	00.6	266	58.4	30.2	44 08.1	43.0	94 46.9	07.7
2	191	25.6	247	31.4	-19 00.1	281	59.1	30.3	59 10.8	43.0	109 49.3	07.7
3	206	28.0	262	30.8	-18 59.6	296	59.8	30.3	74 13.5	43.1	124 51.7	07.8
4	221	30.5	277	30.2	59.1	312	00.5	30.4	89 16.2	43.2	139 54.1	07.8
5	236	32.9	292	29.5	-18 58.6	327	01.3	-23 30.4	104 18.9	+18 43.2	154 56.6	+22 07.8
6	251	35.4	307	28.9	-18 58.1	342	02.0	-23 30.5	119 21.6	+18 43.3	169 59.0	+22 07.8
7	266	37.9	322	28.3	57.7	357	02.7	30.5	134 24.3	43.3	185 01.4	07.8
8	281	40.3	337	27.7	57.2	12 03.4	30.6		149 27.0	43.4	200 03.8	07.8
9	296	42.8	352	27.1	56.7	27 04.2	30.6		164 29.7	43.5	215 06.2	07.8
10	311	45.3	7 26.5	56.2	56.2	42 04.9	30.7		179 32.4	43.5	230 08.6	07.8
11	326	47.7	22 25.9	-18 55.7	55.7	57 05.6	-23 30.7		194 35.1	+18 43.6	245 11.0	+22 07.9
12	341	50.2	37 25.3	-18 55.2	55.2	72 06.3	-23 30.8		209 37.8	+18 43.7	260 13.4	+22 07.9
13	356	52.7	52 24.6	54.6	54.6	87 07.1	30.8		224 40.5	43.7	275 15.9	07.9
14	11 55.1	67 24.0	54.1	54.1	54.1	102 07.8	30.9		239 43.2	43.8	290 18.3	07.9
15	26 57.6	82 23.4	53.6	53.6	53.6	117 08.5	30.9		254 45.9	43.8	305 20.7	07.9
16	42 00.1	97 22.8	53.1	53.1	53.1	132 09.2	30.9		269 48.6	43.9	320 23.1	07.9
17	57 02.5	112 22.2	-18 52.6	52.6	52.6	147 10.0	-23 31.0		284 51.3	+18 44.0	335 25.5	+22 07.9
18	72 05.0	127 21.6	-18 52.1	52.1	52.1	162 10.7	-23 31.0		299 54.0	+18 44.0	350 27.9	+22 07.9
19	87 07.4	142 21.0	51.6	51.6	51.6	177 11.4	31.1		314 56.7	44.1	5 30.3	07.9
20	102 09.9	157 20.4	51.1	51.1	51.1	192 12.1	31.1		329 59.4	44.1	20 32.7	08.0
21	117 12.4	172 19.8	50.6	50.6	50.6	207 12.9	31.2		345 02.0	44.2	35 35.2	08.0
22	132 14.8	187 19.1	50.1	50.1	50.1	222 13.6	31.2		0 04.7	44.3	50 37.6	08.0
23	147 17.3	202 18.5	49.6	49.6	49.6	237 14.3	31.3		15 07.4	44.3	65 40.0	08.0
24	162 19.8	217 17.9	-18 49.1	49.1	49.1	252 15.0	-23 31.3		30 10.1	+18 44.4	80 42.4	+22 08.0
Dif	—		-6	+5		+7	0		+27	+1	+24	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 1 ^d 9	PHE {	4 ^h : 54:5 12 ^h : 54:4 20 ^h : 54:3			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 6								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	177	04.4	-6	155	46.8	-1	46.3	60 N	17 36	18 18	19 06	7 51	2	20 29	79
1	192	04.6		170	22.1 ¹⁶³		33.1 ¹³²	58	39	18	04	51	5	27	77
2	207	04.7		184	57.5 ¹⁶⁴		19.8 ¹³³	56	42	19	02	51	8	26	74
3	222	04.9		199	32.8 ¹⁶³	-1	06.6 ¹³²	54	44	19	00	51	10	25	70
4	237	05.0		214	08.2 ¹⁶⁴	-0	53.3 ¹³³	52	46	20	18 59	51	12	24	69
5	252	05.1	-6	228	43.6 ¹⁶⁴	-0	40.1 ¹³²	50	17 48	18 20	18 58	7 51	14	20 23	67
6	267	05.3	-6	243	19.1 ¹⁶⁵	-0	26.8 ¹³³	45	17 52	18 22	18 55	7 50	19	20 20	63
7	282	05.4		257	54.5 ¹⁶⁴		13.6 ¹³²	40	56	23	54	50	22	19	59
8	297	05.5		272	30.0 ¹⁶⁵	-0	00.4 ¹³²	35	17 59	24	53	50	25	17	56
9	312	05.7		287	05.4 ¹⁶⁴	+0	12.9 ¹³³	30	18 01	25	53	50	28	16	53
10	327	05.8		301	40.9 ¹⁶⁵		26.1 ¹³²	20	06	28	54	50	32	13	49
11	342	06.0	-6	316	16.4 ¹⁶⁵	+0	39.3 ¹³²	10 N	18 11	18 32	18 56	7 50	36	20 11	45
12	357	06.1	-6	330	51.9 ¹⁶⁵	+0	52.5 ¹³²	0	18 15	18 36	19 00	7 50	40	20 09	41
13	12	06.2		345	27.4 ¹⁶⁵	+1	05.7 ¹³²	10 S	19	40	05	50	44	08	36
14	27	06.4		0	02.9 ¹⁶⁵		18.9 ¹³²	20	24	46	12	50	48	05	33
15	42	06.5		14	38.5 ¹⁶⁶		32.1 ¹³²	30	29	53	22	50	53	03	28
16	57	06.7		29	14.0 ¹⁶⁵		45.2 ¹³¹	35	33	18 58	28	50	56	02	25
17	72	06.8	-6	43	49.6 ¹⁶⁶	+1	58.4 ¹³²	40	18 36	19 04	19 36	7 50	59	20 00	22
18	87	06.9	-6	58	25.1 ¹⁶⁵	+2	11.5 ¹³¹	45	18 40	19 10	19 46	7 50	63	19 59	18
19	102	07.1	-5	73	00.7 ¹⁶⁶		24.6 ¹³¹	50	46	19	19 58	50	67	56	15
20	117	07.2		87	36.2 ¹⁶⁵		37.7 ¹³¹	52	48	23	20 05	50	69	55	13
21	132	07.4		102	11.8 ¹⁶⁶	+2	50.8 ¹³¹	54	51	27	11	50	72	54	11
22	147	07.5		116	47.3 ¹⁶⁵	+3	03.9 ¹³¹	56	53	32	19	50	74	53	8
23	162	07.6		131	22.9 ¹⁶⁶		17.0 ¹³¹	58	18 57	37	28	50	77	52	6
24	177	07.8	-5	145	58.4 ¹⁶⁵	+3	30.0 ¹³⁰	60 S	19 00	19 44	20 39	7 50	80	19 51	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 08 ^m 5		Mag: -4.1 PMG: 9 ^h 31 ^m		Mag: +0.9 PMG: 7 ^h 11 ^m		Mag: -2.5 PMG: 21 ^h 55 ^m		Mag: 0.0 PMG: 18 ^h 34 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	162	19.8	217	17.9	-18	49.1	252	15.0	-23	31.3	30	10.1	+18	44.4	80	42.4	+22	08.0
1	177	22.2	232	17.3		48.5	267	15.8		31.3	45	12.8		44.4	95	44.8		08.0
2	192	24.7	247	16.7		48.0	282	16.5		31.4	60	15.5		44.5	110	47.2		08.0
3	207	27.2	262	16.1		47.5	297	17.2		31.4	75	18.2		44.6	125	49.6		08.0
4	222	29.6	277	15.5		47.0	312	17.9		31.5	90	20.9		44.6	140	52.0		08.1
5	237	32.1	292	14.9	-18	46.5	327	18.7	-23	31.5	105	23.6	+18	44.7	155	54.4	+22	08.1
6	252	34.5	307	14.3	-18	46.0	342	19.4	-23	31.5	120	26.3	+18	44.8	170	56.9	+22	08.1
7	267	37.0	322	13.7		45.4	357	20.1		31.6	135	29.0		44.8	185	59.3		08.1
8	282	39.5	337	13.1		44.9	12	20.9		31.6	150	31.7		44.9	201	01.7		08.1
9	297	41.9	352	12.4		44.4	27	21.6		31.7	165	34.4		44.9	216	04.1		08.1
10	312	44.4	7	11.8		43.9	42	22.3		31.7	180	37.1		45.0	231	06.5		08.1
11	327	46.9	22	11.2	-18	43.3	57	23.0	-23	31.7	195	39.8	+18	45.0	246	08.9	+22	08.1
12	342	49.3	37	10.6	-18	42.8	72	23.8	-23	31.8	210	42.5	+18	45.1	261	11.3	+22	08.1
13	357	51.8	52	10.0		42.3	87	24.5		31.8	225	45.1		45.2	276	13.7		08.2
14	12	54.3	67	09.4		41.8	102	25.2		31.9	240	47.8		45.2	291	16.1		08.2
15	27	56.7	82	08.8		41.2	117	25.9		31.9	255	50.5		45.3	306	18.5		08.2
16	42	59.2	97	08.2		40.7	132	26.7		31.9	270	53.2		45.3	321	20.9		08.2
17	58	01.7	112	07.6	-18	40.2	147	27.4	-23	32.0	285	55.9	+18	45.4	336	23.3	+22	08.2
18	73	04.1	127	07.0	-18	39.7	162	28.1	-23	32.0	300	58.6	+18	45.5	351	25.7	+22	08.2
19	88	06.6	142	06.4		39.1	177	28.8		32.0	316	01.3		45.5	6	28.2		08.2
20	103	09.0	157	05.8		38.6	192	29.6		32.1	331	04.0		45.6	21	30.6		08.2
21	118	11.5	172	05.2		38.1	207	30.3		32.1	346	06.7		45.6	36	33.0		08.3
22	133	14.0	187	04.6		37.5	222	31.0		32.2	1	09.4		45.7	51	35.4		08.3
23	148	16.4	202	04.0		37.0	237	31.7		32.2	16	12.0		45.8	66	37.8		08.3
24	163	18.9	217	03.4	-18	36.5	252	32.5	-23	32.2	31	14.7	+18	45.8	81	40.2	+22	08.3
Dif	—		-6		+5		+7		0		+27		+1		+24			

UT	SOL		● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 2 ^d 9	PHE { 4 ^h : 54 ^h /2 12 ^h : 54 ^h /2 20 ^h : 54 ^h /1 R°: 41 ^m	SD: 14 ^h 8			Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 11 ^m 4		PMG: 14 ^h 40 ^m		Náutico			Civil	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	177	07.8	-5 54.6	145	58.4	+3 30.0	131	5 16	6 04	6 45	7 53	3	21 48	81	
1	192	07.9		160	34.0	43.1	166	18	03	42	56	6	44	77	
2	207	08.1		175	09.5	+3 56.1	130	20	03	40	7 59	8	40	74	
3	222	08.2		189	45.1	+4 09.1	130	22	03	38	8 01	11	36	72	
4	237	08.3		204	20.6	22.0	129	23	02	36	03	13	33	69	
5	252	08.5	-5 49.8	218	56.2	+4 35.0	130	5 24	6 02	6 34	8 05	15	21 30	67	
6	267	08.6	-5 48.8	233	31.7	+4 47.9	129	5 27	6 01	6 30	8 09	19	21 23	63	
7	282	08.8		248	07.2	+5 00.8	129	28	6 00	27	12	23	18	59	
8	297	08.9		262	42.8	13.7	129	29	5 58	24	15	26	13	56	
9	312	09.1		277	18.3	26.6	129	30	29	57	18	28	09	53	
10	327	09.2		291	53.8	39.4	128	29	54	16	22	33	21 02	49	
11	342	09.3	-5 44.0	306	29.3	+5 52.2	128	10 N	5 27	5 51	6 12	8 26	37	20 56	45
12	357	09.5	-5 43.0	321	04.7	+6 05.0	128	0	5 23	5 47	6 08	8 30	41	20 50	41
13	12	09.6		335	40.2	17.8	128	10 S	18	43	6 04	34	45	44	37
14	27	09.8		350	15.7	30.5	127	20	11	37	5 59	38	49	38	33
15	42	09.9		4	51.1	43.2	127	30	5 02	30	54	43	53	31	29
16	57	10.1		19	26.5	+6 55.9	127	35	4 55	25	51	46	56	27	26
17	72	10.2	-5 38.2	34	01.9	+7 08.6	127	40	4 47	5 20	5 47	8 49	59	20 22	24
18	87	10.4	-5 37.2	48	37.3	+7 21.2	126	45	4 38	5 13	5 43	8 53	63	20 17	20
19	102	10.5		63	12.7	33.8	126	50	25	05	38	57	68	11	16
20	117	10.6		77	48.0	46.3	125	52	19	5 01	36	8 59	70	08	14
21	132	10.8		92	23.4	+7 58.9	126	54	12	4 57	33	9 02	71	05	12
22	147	10.9		106	58.7	+8 11.4	125	56	4 05	52	31	04	74	20 01	10
23	162	11.1		121	34.0	23.8	124	58	3 56	47	27	07	77	19 58	6
24	177	11.2	-5 31.4	136	09.2	+8 36.3	125	60 S	3 45	4 40	5 24	9 10	80	19 53	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 04 ^m 6		Mag: -4.1 PMG: 9 ^h 32 ^m		Mag: +0.9 PMG: 7 ^h 09 ^m		Mag: -2.5 PMG: 21 ^h 51 ^m		Mag: 0.0 PMG: 18 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	163	18.9	217	03.4	252	32.5	31	14.7	81	40.2
1	178	21.4	232	02.8	267	33.2	46	17.4	96	42.6
2	193	23.8	247	02.2	282	33.9	61	20.1	111	45.0
3	208	26.3	262	01.5	297	34.7	76	22.8	126	47.4
4	223	28.8	277	00.9	312	35.4	91	25.5	141	49.8
5	238	31.2	292	00.3	327	36.1	106	28.2	156	52.2
6	253	33.7	306	59.7	342	36.8	121	30.9	171	54.6
7	268	36.2	321	59.1	357	37.6	136	33.5	186	57.0
8	283	38.6	336	58.5	12	38.3	151	36.2	201	59.4
9	298	41.1	351	57.9	27	39.0	166	38.9	217	01.8
10	313	43.5	6	57.3	42	39.7	181	41.6	232	04.2
11	328	46.0	21	56.7	57	40.5	196	44.3	247	06.6
12	343	48.5	36	56.1	72	41.2	211	47.0	262	09.0
13	358	50.9	51	55.5	87	41.9	226	49.7	277	11.4
14	13	53.4	66	54.9	102	42.7	241	52.3	292	13.8
15	28	55.9	81	54.3	117	43.4	256	55.0	307	16.2
16	43	58.3	96	53.7	132	44.1	271	57.7	322	18.6
17	59	00.8	111	53.1	147	44.8	287	00.4	337	21.0
18	74	03.3	126	52.5	162	45.6	302	03.1	352	23.4
19	89	05.7	141	51.9	177	46.3	317	05.8	7	25.9
20	104	08.2	156	51.3	192	47.0	332	08.4	22	28.3
21	119	10.6	171	50.7	207	47.7	347	11.1	37	30.7
22	134	13.1	186	50.1	222	48.5	2	13.8	52	33.1
23	149	15.6	201	49.5	237	49.2	17	16.5	67	35.5
24	164	18.0	216	48.9	252	49.9	32	19.2	82	37.9
Dif	—		-6	+5	+7	0	+27	+1	+24	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 3 ^d 9	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1	SD: 14 ^h 7			PMG: 15 ^h 21 ^m	R°: 42 ^m									
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	177	11.2	-5	31.4	136	09.2	+8	36.3	60 N	17 41	18 23	19 11	7 56	5	23 09	83			
1	192	11.4		30.4	150	44.5 ¹⁶³	+8	48.7 ¹²⁴	58	44	23	08	8 02	8	23 01	79			
2	207	11.5		29.4	165	19.7 ¹⁶²	+9	01.0 ¹²³	56	46	23	06	07	10	22 54	76			
3	222	11.7		28.5	179	54.9 ¹⁶²		13.3 ¹²³	54	48	23	04	12	12	48	77			
4	237	11.8		27.5	194	30.1 ¹⁶²		25.6 ¹²³	52	50	23	02	16	15	42	71			
5	252	12.0	-5	26.5	209	05.2 ¹⁶¹	+9	37.9 ¹²³	50	17 51	18 24	19 01	8 20	17	22 37	68			
6	267	12.1	-5	25.6	223	40.3 ¹⁶¹	+9	50.1 ¹²²	45	17 55	18 24	18 58	8 28	21	22 26	64			
7	282	12.3		24.6	238	15.4 ¹⁶¹	+10	02.3 ¹²²	40	17 58	25	56	35	24	17	60			
8	297	12.4		23.6	252	50.5 ¹⁶¹		14.4 ¹²¹	35	18 00	26	55	41	27	09	57			
9	312	12.5		22.6	267	25.5 ¹⁶⁰		26.5 ¹²¹	30	03	27	54	46	30	22	02	55		
10	327	12.7		21.7	282	00.5 ¹⁶⁰		38.5 ¹²⁰	20	07	29	55	8 55	35	21 51	50			
11	342	12.8	-5	20.7	296	35.5 ¹⁶⁰	+10	50.6 ¹²¹	10 N	18 11	18 32	18 56	9 03	39	21 41	46			
12	357	13.0	-5	19.7	311	10.4 ¹⁵⁹	+11	02.5 ¹¹⁹	0	18 14	18 35	18 59	9 11	42	21 31	43			
13	12	13.1		18.8	325	45.3 ¹⁵⁹		14.5 ¹²⁰	10 S	18	39	19 04	19	45	21	40			
14	27	13.3		17.8	340	20.2 ¹⁵⁹		26.3 ¹¹⁸	20	22	44	10	27	49	11	36			
15	42	13.4		16.8	354	55.0 ¹⁵⁸		38.2 ¹¹⁹	30	27	51	19	36	54	21 00	31			
16	57	13.6		15.8	9	29.8 ¹⁵⁸	+11	50.0 ¹¹⁸	35	30	18 55	25	42	57	20 53	29			
17	72	13.7	-5	14.9	24	04.5 ¹⁵⁷	+12	01.7 ¹¹⁷	40	18 33	19 00	19 33	9 48	60	20 46	26			
18	87	13.9	-5	13.9	38	39.3 ¹⁵⁸	+12	13.4 ¹¹⁷	45	18 37	19 07	19 42	9 56	63	20 37	23			
19	102	14.0		12.9	53	13.9 ¹⁵⁶		25.1 ¹¹⁷	50	41	14	54	10 05	67	27	18			
20	117	14.2		11.9	67	48.6 ¹⁵⁷		36.7 ¹¹⁶	52	43	18	19 59	09	70	22	16			
21	132	14.3		11.0	82	23.2 ¹⁵⁶		48.3 ¹¹⁶	54	46	22	20 06	13	73	17	13			
22	147	14.5		10.0	96	57.7 ¹⁵⁵	+12	59.8 ¹¹⁵	56	48	26	13	18	75	11	11			
23	162	14.6		09.0	111	32.3 ¹⁵⁶	+13	11.2 ¹¹⁴	58	51	32	22	24	78	20 04	8			
24	177	14.8	-5	08.1	126	06.7 ¹⁵⁴	+13	22.6 ¹¹⁴	60 S	18 54	19 37	20 31	10 30	82	19 57	5			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 13 ^h 00 ^m 7		Mag: -4.1 PMG: 9 ^h 33 ^m			Mag: +0.9 PMG: 7 ^h 08 ^m			Mag: -2.5 PMG: 21 ^h 47 ^m			Mag: 0.0 PMG: 18 ^h 27 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	164	18.0	216	48.9	-18	23.3	252	49.9	-23	33.0	32	19.2	+18	47.2	82	37.9	+22	08.6	
1	179	20.5	231	48.3		22.8	267	50.7		33.0	47	21.8		47.3	97	40.3		08.6	
2	194	23.0	246	47.7		22.2	282	51.4		33.0	62	24.5		47.3	112	42.7		08.6	
3	209	25.4	261	47.1		21.7	297	52.1		33.1	77	27.2		47.4	127	45.1		08.6	
4	224	27.9	276	46.5		21.1	312	52.8		33.1	92	29.9		47.4	142	47.5		08.6	
5	239	30.4	291	45.9	-18	20.5	327	53.6	-23	33.1	107	32.6	+18	47.5	157	49.9	+22	08.6	
6	254	32.8	306	45.3	-18	20.0	342	54.3	-23	33.2	122	35.3	+18	47.5	172	52.3	+22	08.7	
7	269	35.3	321	44.7		19.4	357	55.0		33.2	137	37.9		47.6	187	54.7		08.7	
8	284	37.8	336	44.1		18.9	12	55.7		33.2	152	40.6		47.7	202	57.1		08.7	
9	299	40.2	351	43.5		18.3	27	56.5		33.2	167	43.3		47.7	217	59.5		08.7	
10	314	42.7	6	43.0		17.7	42	57.2		33.3	182	46.0		47.8	233	01.9		08.7	
11	329	45.1	21	42.4	-18	17.2	57	57.9	-23	33.3	197	48.6	+18	47.8	248	04.2	+22	08.7	
12	344	47.6	36	41.8	-18	16.6	72	58.7	-23	33.3	212	51.3	+18	47.9	263	06.6	+22	08.7	
13	359	50.1	51	41.2		16.0	87	59.4		33.3	227	54.0		47.9	278	09.0		08.7	
14	14	52.5	66	40.6		15.4	103	00.1		33.4	242	56.7		48.0	293	11.4		08.7	
15	29	55.0	81	40.0		14.9	118	00.8		33.4	257	59.4		48.0	308	13.8		08.8	
16	44	57.5	96	39.4		14.3	133	01.6		33.4	273	02.0		48.1	323	16.2		08.8	
17	59	59.9	111	38.8	-18	13.7	148	02.3	-23	33.4	288	04.7	+18	48.2	338	18.6	+22	08.8	
18	75	02.4	126	38.2	-18	13.2	163	03.0	-23	33.5	303	07.4	+18	48.2	353	21.0	+22	08.8	
19	90	04.9	141	37.6		12.6	178	03.8		33.5	318	10.1		48.3	8	23.4		08.8	
20	105	07.3	156	37.0		12.0	193	04.5		33.5	333	12.7		48.3	23	25.8		08.8	
21	120	09.8	171	36.4		11.4	208	05.2		33.5	348	15.4		48.4	38	28.2		08.8	
22	135	12.2	186	35.8		10.9	223	05.9		33.5	3	18.1		48.4	53	30.6		08.8	
23	150	14.7	201	35.2		10.3	238	06.7		33.6	18	20.8		48.5	68	33.0		08.9	
24	165	17.2	216	34.6	-18	09.7	253	07.4	-23	33.6	33	23.4	+18	48.5	83	35.4	+22	08.9	
Dif	—		-6			+6	+7		0		+27		+1		+24			0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 4 ^d 9	PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2	R°: 45 ^m		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 10 ^m 9															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	14.8	-5 08.1	126	06.7	+13 22.6		60 N	5	10	5	58	6	39	8	01
1	192	14.9	07.1	140	41.2 ¹⁵⁵	34.0 ¹¹⁴		58	12	58	37	10	10		***	***
2	207	15.1	06.1	155	15.5 ¹⁵³	45.3 ¹¹³		56	15	58	35	17	14		***	***
3	222	15.2	05.1	169	49.9 ¹⁵⁴	+13 56.6 ¹¹³		54	17	58	33	24	16		***	***
4	237	15.4	04.2	184	24.2 ¹⁵³	+14 07.8 ¹¹²		52	19	58	31	31	18		23	53
5	252	15.5	-5 03.2	198	58.4 ¹⁵²	+14 18.9 ¹¹¹		50	5	20	5	58	6	30	8	37
6	267	15.7	-5 02.2	213	32.6 ¹⁵²	+14 30.0 ¹¹¹		45	5	23	5	57	6	26	8	49
7	282	15.8	01.2	228	06.8 ¹⁵²	41.0 ¹¹⁰		40	25	57	24	8	59	28		17
8	297	16.0	-5 00.3	242	40.9 ¹⁵¹	+14 52.0 ¹¹⁰		35	26	56	21	9	08	31		23
9	312	16.1	-4 59.3	257	14.9 ¹⁵⁰	+15 02.9 ¹⁰⁹		30	27	55	19	16	33		22	57
10	327	16.3	58.3	271	48.9 ¹⁵⁰	13.8 ¹⁰⁹		20	27	53	15	30	37		41	52
11	342	16.4	-4 57.3	286	22.9 ¹⁵⁰	+15 24.6 ¹⁰⁸		10 N	5	26	5	50	6	11	9	42
12	357	16.6	-4 56.4	300	56.8 ¹⁴⁹	+15 35.4 ¹⁰⁸		0	5	23	5	47	6	08	9	53
13	12	16.7	55.4	315	30.7 ¹⁴⁹	46.0 ¹⁰⁶		10 S	18	43	04	10	04	48		22
14	27	16.9	54.4	330	04.4 ¹⁴⁷	+15 56.7 ¹⁰⁷		20	12	38	6	00	16	51		21
15	42	17.1	53.4	344	38.2 ¹⁴⁸	+16 07.2 ¹⁰⁵		30	5	03	31	5	55	30	56	
16	57	17.2	52.5	359	11.9 ¹⁴⁷	17.7 ¹⁰⁵		35	4	57	27	53	39	57		22
17	72	17.4	-4 51.5	13	45.5 ¹⁴⁶	+16 28.2 ¹⁰⁵		40	4	50	5	22	5	50	10	48
18	87	17.5	-4 50.5	28	19.1 ¹⁴⁶	+16 38.5 ¹⁰³		45	4	41	5	16	5	46	10	59
19	102	17.7	49.5	42	52.6 ¹⁴⁵	48.8 ¹⁰³		50	29	09	42	11	12	69		20
20	117	17.8	48.6	57	26.1 ¹⁴⁵	+16 59.1 ¹⁰³		52	23	05	40	19	70		38	20
21	132	18.0	47.6	71	59.5 ¹⁴⁴	+17 09.3 ¹⁰²		54	17	5	01	37	26	73		30
22	147	18.1	46.6	86	32.8 ¹⁴³	19.4 ¹⁰¹		56	10	4	57	35	33	77		22
23	162	18.3	45.6	101	06.1 ¹⁴³	29.4 ¹⁰⁰		58	4	01	52	32	42	80		12
24	177	18.4	-4 44.6	115	39.3 ¹⁴²	+17 39.4 ¹⁰⁰		60 S	3	52	4	46	5	29	11	52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 56 ^m 7		Mag: -4.1 PMG: 9 ^h 34 ^m		Mag: +0.9 PMG: 7 ^h 07 ^m		Mag: -2.5 PMG: 21 ^h 43 ^m		Mag: 0.0 PMG: 18 ^h 23 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	165	17.2	216	34.6	-18	09.7	253	07.4	-23	33.6	33	23.4	+18	48.5	83	35.4	+22	08.9
1	180	19.6	231	34.0		09.1	268	08.1		33.6	48	26.1		48.6	98	37.8		08.9
2	195	22.1	246	33.4		08.5	283	08.9		33.6	63	28.8		48.6	113	40.2		08.9
3	210	24.6	261	32.9		08.0	298	09.6		33.6	78	31.5		48.7	128	42.6		08.9
4	225	27.0	276	32.3		07.4	313	10.3		33.7	93	34.1		48.8	143	45.0		08.9
5	240	29.5	291	31.7	-18	06.8	328	11.0	-23	33.7	108	36.8	+18	48.8	158	47.4	+22	08.9
6	255	32.0	306	31.1	-18	06.2	343	11.8	-23	33.7	123	39.5	+18	48.9	173	49.8	+22	08.9
7	270	34.4	321	30.5		05.6	358	12.5		33.7	138	42.2		48.9	188	52.2		09.0
8	285	36.9	336	29.9		05.0	13	13.2		33.7	153	44.8		49.0	203	54.6		09.0
9	300	39.4	351	29.3		04.4	28	13.9		33.8	168	47.5		49.0	218	57.0		09.0
10	315	41.8	6	28.7		03.9	43	14.7		33.8	183	50.2		49.1	233	59.4		09.0
11	330	44.3	21	28.1	-18	03.3	58	15.4	-23	33.8	198	52.9	+18	49.1	249	01.7	+22	09.0
12	345	46.7	36	27.5	-18	02.7	73	16.1	-23	33.8	213	55.5	+18	49.2	264	04.1	+22	09.0
13	0	49.2	51	26.9		02.1	88	16.9		33.8	228	58.2		49.2	279	06.5		09.0
14	15	51.7	66	26.4		01.5	103	17.6		33.8	244	00.9		49.3	294	08.9		09.0
15	30	54.1	81	25.8		00.9	118	18.3		33.9	259	03.5		49.3	309	11.3		09.1
16	45	56.6	96	25.2	-18	00.3	133	19.1		33.9	274	06.2		49.4	324	13.7		09.1
17	60	59.1	111	24.6	-17	59.7	148	19.8	-23	33.9	289	08.9	+18	49.4	339	16.1	+22	09.1
18	76	01.5	126	24.0	-17	59.1	163	20.5	-23	33.9	304	11.5	+18	49.5	354	18.5	+22	09.1
19	91	04.0	141	23.4		58.5	178	21.2		33.9	319	14.2		49.6	9	20.9		09.1
20	106	06.5	156	22.8		57.9	193	22.0		33.9	334	16.9		49.6	24	23.3		09.1
21	121	08.9	171	22.2		57.3	208	22.7		34.0	349	19.6		49.7	39	25.7		09.1
22	136	11.4	186	21.6		56.7	223	23.4		34.0	4	22.2		49.7	54	28.1		09.1
23	151	13.9	201	21.1		56.1	238	24.2		34.0	19	24.9		49.8	69	30.5		09.2
24	166	16.3	216	20.5	-17	55.5	253	24.9	-23	34.0	34	27.6	+18	49.8	84	32.8	+22	09.2
Dif	—		-6	+6			+7	0			+27	+1			+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 5 ^d 9	PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/4	PMG: 12 ^h 10 ^m 6									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	18.4	-4	44.6	115	39.3	+17 39.4	60 N	17 46	18 28	19 16	8 07 10	0 32 84		
1	192	18.6		43.7	130	12.5 ¹⁴²	49.3 99	58	48	27	13	20 14	20 80		
2	207	18.7		42.7	144	45.6 ¹⁴¹	+17 59.1 98	56	50	27	10	31 18	10 76		
3	222	18.9		41.7	159	18.6 ¹⁴⁰	+18 08.9 98	54	52	27	08	40 21	0 01 73		
4	237	19.1		40.7	173	51.6 ¹⁴⁰	18.6 97	52	53	27	06	49 23	** ** *		
5	252	19.2	-4	39.8	188	24.5 ¹³⁹	+18 28.2 96	50	17 55	18 27	19 04	8 57 25	** ** *		
6	267	19.4	-4	38.8	202	57.4 ¹³⁹	+18 37.7 95	45	17 57	18 27	19 01	9 13 30	** ** *		
7	282	19.5		37.8	217	30.1 ¹³⁷	47.2 95	40	18 00	27	18 58	27 33	** ** *		
8	297	19.7		36.8	232	02.9 ¹³⁸	+18 56.6 94	35	02	27	57	39 35	** ** *		
9	312	19.8		35.9	246	35.5 ¹³⁶	+19 05.9 93	30	04	28	56	9 49 37	23 53 56		
10	327	20.0		34.9	261	08.1 ¹³⁶	15.2 93	20	08	30	55	10 07 41	33 53		
11	342	20.1	-4	33.9	275	40.6 ¹³⁵	+19 24.3 91	10 N	18 11	18 32	18 56	10 22 44	23 15 51		
12	357	20.3	-4	32.9	290	13.1 ¹³⁵	+19 33.4 91	0	18 14	18 35	18 59	10 37 47	22 59 49		
13	12	20.5		31.9	304	45.5 ¹³⁴	42.4 90	10 S	17	38	19 03	10 52 49	43 46		
14	27	20.6		31.0	319	17.8 ¹³³	+19 51.3 89	20	21	43	09	11 07 53	26 43		
15	42	20.8		30.0	333	50.0 ¹³²	+20 00.2 89	30	25	49	17	26 56	22 06 40		
16	57	20.9		29.0	348	22.2 ¹³²	09.0 88	35	27	53	23	36 59	21 55 38		
17	72	21.1	-4	28.0	2	54.4 ¹³²	+20 17.6 86	40	18 30	18 57	19 29	11 49 61	21 42 35		
18	87	21.2	-4	27.1	17	26.4 ¹³⁰	+20 26.2 86	45	18 33	19 03	19 38	12 03 64	21 26 33		
19	102	21.4		26.1	31	58.4 ¹³⁰	34.7 85	50	37	10	49	21 68	21 07 29		
20	117	21.5		25.1	46	30.3 ¹²⁹	43.2 85	52	39	13	19 54	29 71	20 58 27		
21	132	21.7		24.1	61	02.1 ¹²⁸	51.5 83	54	41	17	20 00	39 73	48 25		
22	147	21.9		23.1	75	33.9 ¹²⁸	+20 59.8 83	56	43	21	07	12 50 76	37 22		
23	162	22.0		22.2	90	05.6 ¹²⁷	+21 07.9 81	58	45	26	15	13 02 80	24 18		
24	177	22.2	-4	21.2	104	37.2 ¹²⁶	+21 16.0 81	60 S	18 48	19 31	20 24	13 16 85	20 09 13		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 52 ^m 8			Mag: -4.1 PMG: 9 ^h 35 ^m			Mag: +0.8 PMG: 7 ^h 06 ^m			Mag: -2.5 PMG: 21 ^h 38 ^m			Mag: 0.0 PMG: 18 ^h 19 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	°	'	°	'	°	'
0	166	16.3	216 20.5	-17 55.5	253 24.9	-23 34.0	34 27.6	+18 49.8	84 32.8	+22 09.2					
1	181	18.8	231 19.9	54.9	268 25.6	34.0	49 30.2	49.9	99 35.2	09.2					
2	196	21.2	246 19.3	54.3	283 26.3	34.0	64 32.9	49.9	114 37.6	09.2					
3	211	23.7	261 18.7	53.7	298 27.1	34.0	79 35.6	50.0	129 40.0	09.2					
4	226	26.2	276 18.1	53.1	313 27.8	34.1	94 38.2	50.0	144 42.4	09.2					
5	241	28.6	291 17.5	-17 52.5	328 28.5	-23 34.1	109 40.9	+18 50.1	159 44.8	+22 09.2					
6	256	31.1	306 17.0	-17 51.9	343 29.3	-23 34.1	124 43.6	+18 50.1	174 47.2	+22 09.2					
7	271	33.6	321 16.4	51.3	358 30.0	34.1	139 46.2	50.2	189 49.6	09.3					
8	286	36.0	336 15.8	50.7	13 30.7	34.1	154 48.9	50.2	204 52.0	09.3					
9	301	38.5	351 15.2	50.1	28 31.4	34.1	169 51.6	50.3	219 54.3	09.3					
10	316	41.0	6 14.6	49.5	43 32.2	34.1	184 54.2	50.3	234 56.7	09.3					
11	331	43.4	21 14.0	-17 48.9	58 32.9	-23 34.1	199 56.9	+18 50.4	249 59.1	+22 09.3					
12	346	45.9	36 13.5	-17 48.3	73 33.6	-23 34.1	214 59.6	+18 50.4	265 01.5	+22 09.3					
13	1	48.3	51 12.9	47.6	88 34.4	34.2	230 02.2	50.5	280 03.9	09.3					
14	16	50.8	66 12.3	47.0	103 35.1	34.2	245 04.9	50.5	295 06.3	09.3					
15	31	53.3	81 11.7	46.4	118 35.8	34.2	260 07.5	50.6	310 08.7	09.4					
16	46	55.7	96 11.1	45.8	133 36.6	34.2	275 10.2	50.7	325 11.1	09.4					
17	61	58.2	111 10.5	-17 45.2	148 37.3	-23 34.2	290 12.9	+18 50.7	340 13.5	+22 09.4					
18	77	00.7	126 10.0	-17 44.6	163 38.0	-23 34.2	305 15.5	+18 50.8	355 15.8	+22 09.4					
19	92	03.1	141 09.4	44.0	178 38.7	34.2	320 18.2	50.8	10 18.2	09.4					
20	107	05.6	156 08.8	43.3	193 39.5	34.2	335 20.9	50.9	25 20.6	09.4					
21	122	08.1	171 08.2	42.7	208 40.2	34.2	350 23.5	50.9	40 23.0	09.4					
22	137	10.5	186 07.6	42.1	223 40.9	34.2	5 26.2	51.0	55 25.4	09.5					
23	152	13.0	201 07.1	41.5	238 41.7	34.2	20 28.8	51.0	70 27.8	09.5					
24	167	15.5	216 06.5	-17 40.9	253 42.4	-23 34.3	35 31.5	+18 51.1	85 30.2	+22 09.5					
Dif	—			-6	+6	+7	0	+27	+1	+24	0				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 4			Edad: 6 ^d 9	PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 R°: 50 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	22.2	-4	21.2	104	37.2	+21 16.0	5 04	5 52	6 33		8 17	18	1 56	84
1	192	22.3		20.2	119	08.7 ¹²⁵	24.0 ⁸⁰	07	52	31		34	23	40	78
2	207	22.5		19.2	133	40.2 ¹²⁵	31.9 ⁷⁹	10	53	30		8 49	26	26	74
3	222	22.7		18.3	148	11.6 ¹²⁴	39.7 ⁷⁸	12	53	28		9 01	30	14	72
4	237	22.8		17.3	162	43.0 ¹²⁴	47.4 ⁷⁷	14	53	27		12	32	1 03	70
5	252	23.0	-4	16.3	177	14.2 ¹²²	+21 55.0	5 16	5 53	6 26		9 22	33	0 54	67
6	267	23.1	-4	15.3	191	45.4 ¹²²	+22 02.6	5 20	5 54	6 23		9 43	37	0 34	64
7	282	23.3		14.3	206	16.5 ¹²¹	10.0 ⁷⁴	22	53	20		10 00	39	18	61
8	297	23.5		13.4	220	47.5 ¹²⁰	17.3 ⁷³	24	53	18		14	41	0 04	59
9	312	23.6		12.4	235	18.5 ¹²⁰	24.6 ⁷³	25	53	16		26	43	** ** *	**
10	327	23.8		11.4	249	49.4 ¹¹⁹	31.7 ⁷¹	26	51	13		10 48	45	** ** *	**
11	342	23.9	-4	10.4	264	20.2 ¹¹⁸	+22 38.8	5 25	5 49	6 10		11 06	48	** ** *	**
12	357	24.1	-4	09.4	278	51.0 ¹¹⁸	+22 45.7	5 22	5 46	6 07		11 24	50	23 48	51
13	12	24.2		08.5	293	21.6 ¹¹⁶	52.6 ⁶⁹	18	43	04		11 41	52	29	50
14	27	24.4		07.5	307	52.2 ¹¹⁶	+22 59.3	13	39	6 01		12 00	54	23 09	48
15	42	24.6		06.5	322	22.7 ¹¹⁵	+23 06.0	5 05	33	5 57		22	57	22 46	46
16	57	24.7		05.5	336	53.2 ¹¹⁵	12.5 ⁶⁵	4 59	29	54		35	58	33	44
17	72	24.9	-4	04.5	351	23.6 ¹¹⁴	+23 18.9	4 52	5 24	5 52		12 50	60	22 17	43
18	87	25.1	-4	03.6	5	53.9 ¹¹³	+23 25.3	4 44	5 19	5 49		13 07	63	21 59	41
19	102	25.2		02.6	20	24.1 ¹¹²	31.5 ⁶²	33	12	45		29	66	36	38
20	117	25.4		01.6	34	54.2 ¹¹¹	37.6 ⁶¹	27	09	43		40	68	25	37
21	132	25.5	-4	00.6	49	24.3 ¹¹¹	43.6 ⁶⁰	22	05	41		13 52	70	21 13	34
22	147	25.7	-3	59.6	63	54.3 ¹¹⁰	49.5 ⁵⁹	15	5 01	39		14 06	72	20 59	32
23	162	25.9		58.7	78	24.2 ¹⁰⁹	+23 55.3	4 07	4 56	37		22	76	42	29
24	177	26.0	-3	57.7	92	54.1 ¹⁰⁹	+24 01.0	3 58	4 51	5 34		14 41	81	20 22	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 48 ^m 9		Mag: -4.1 PMG: 9 ^h 36 ^m		Mag: +0.8 PMG: 7 ^h 05 ^m		Mag: -2.5 PMG: 21 ^h 34 ^m		Mag: 0.0 PMG: 18 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	167	15.5	216	06.5	-17	40.9	253	42.4	-23	34.3
1	182	17.9	231	05.9		40.2	268	43.1		34.3
2	197	20.4	246	05.3		39.6	283	43.9		34.3
3	212	22.8	261	04.7		39.0	298	44.6		34.3
4	227	25.3	276	04.2		38.4	313	45.3		34.3
5	242	27.8	291	03.6	-17	37.7	328	46.0	-23	34.3
6	257	30.2	306	03.0	-17	37.1	343	46.8	-23	34.3
7	272	32.7	321	02.4		36.5	358	47.5		34.3
8	287	35.2	336	01.8		35.9	13	48.2		34.3
9	302	37.6	351	01.3		35.2	28	49.0		34.3
10	317	40.1	6	00.7		34.6	43	49.7		34.3
11	332	42.6	21	00.1	-17	34.0	58	50.4	-23	34.3
12	347	45.0	35	59.5	-17	33.3	73	51.2	-23	34.3
13	2	47.5	50	59.0		32.7	88	51.9		34.3
14	17	50.0	65	58.4		32.1	103	52.6		34.3
15	32	52.4	80	57.8		31.4	118	53.4		34.3
16	47	54.9	95	57.2		30.8	133	54.1		34.3
17	62	57.3	110	56.6	-17	30.2	148	54.8	-23	34.3
18	77	59.8	125	56.1	-17	29.5	163	55.5	-23	34.3
19	93	02.3	140	55.5		28.9	178	56.3		34.3
20	108	04.7	155	54.9		28.3	193	57.0		34.3
21	123	07.2	170	54.3		27.6	208	57.7		34.3
22	138	09.7	185	53.8		27.0	223	58.5		34.3
23	153	12.1	200	53.2		26.3	238	59.2		34.3
24	168	14.6	215	52.6	-17	25.7	253	59.9	-23	34.3
Dif	—		-6		+6		+7		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 16 ^h 1			Edad: 7 ^d 9	PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/4	PMG: 12 ^h 10 ^m 1			R°: 54 ^m															
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m								
0	177	26.0	-3	57.7	92	54.1	+24	01.0	60 N	17 51	18 33	19 21	8 35 33	3 20 75										
1	192	26.2		56.7	107	23.8 ¹⁰⁷		06.6 ⁵⁶	58	53	32	18	8 57 37	2 58 71										
2	207	26.3		55.7	121	53.6 ¹⁰⁸		12.1 ⁵⁵	56	54	31	15	9 15 40	40 69										
3	222	26.5		54.7	136	23.2 ¹⁰⁶		17.4 ⁵³	54	56	31	12	31 41	26 66										
4	237	26.7		53.7	150	52.7 ¹⁰⁵		22.6 ⁵²	52	57	30	10	44 42	13 64										
5	252	26.8	-3	52.8	165	22.2 ¹⁰⁵	+24	27.8 ⁵²	50	17 58	18 30	19 08	9 55 44	2 01 64										
6	267	27.0	-3	51.8	179	51.6 ¹⁰⁴	+24	32.8 ⁵⁰	45	18 00	18 29	19 03	10 20 45	1 38 61										
7	282	27.2		50.8	194	21.0 ¹⁰⁴		37.7 ⁴⁹	40	02	29	19 01	39 47	19 59										
8	297	27.3		49.8	208	50.2 ¹⁰²		42.4 ⁴⁷	35	04	29	18 58	10 55 49	1 03 58										
9	312	27.5		48.8	223	19.4 ¹⁰²		47.1 ⁴⁷	30	05	29	57	11 09 50	0 49 57										
10	327	27.6		47.9	237	48.6 ¹⁰²		51.6 ⁴⁵	20	08	30	56	33 51	26 55										
11	342	27.8	-3	46.9	252	17.6 ¹⁰⁰	+24	56.1 ⁴⁵	10 N	18 11	18 32	18 56	11 54 52	0 06 53										
12	357	28.0	-3	45.9	266	46.6 ¹⁰⁰	+25	00.4 ⁴³	0	18 13	18 34	18 58	12 14 53	*** ** *										
13	12	28.1		44.9	281	15.5 ⁹⁹		04.5 ⁴¹	10 S	16	37	19 02	33 54	*** ** *										
14	27	28.3		43.9	295	44.4 ⁹⁹		08.6 ⁴¹	20	19	41	07	12 54 55	23 57 53										
15	42	28.5		43.0	310	13.2 ⁹⁸		12.5 ³⁹	30	22	46	14	13 19 56	32 53										
16	57	28.6		42.0	324	41.9 ⁹⁷		16.3 ³⁸	35	24	50	20	33 57	17 52										
17	72	28.8	-3	41.0	339	10.5 ⁹⁶	+25	20.0 ³⁷	40	18 27	18 54	19 26	13 50 58	23 00 52										
18	87	29.0	-3	40.0	353	39.1 ⁹⁶	+25	23.6 ³⁶	45	18 29	18 59	19 34	14 10 59	22 40 51										
19	102	29.1		39.0	8	07.6 ⁹⁵		27.0 ³⁴	50	33	19 05	44	35 61	14 50										
20	117	29.3		38.0	22	36.0 ⁹⁴		30.3 ³³	52	34	08	49	14 48 61	22 02 49										
21	132	29.4		37.1	37	04.4 ⁹⁴		33.5 ³²	54	36	12	19 55	15 02 62	21 47 49										
22	147	29.6		36.1	51	32.7 ⁹³		36.5 ³⁰	56	38	16	20 01	18 63	31 47										
23	162	29.8		35.1	66	01.0 ⁹³		39.5 ³⁰	58	40	20	09	15 38 65	21 11 46										
24	177	29.9	-3	34.1	80	29.2 ⁹²	+25	42.3 ²⁸	60 S	18 42	19 25	20 17	16 02 68	20 46 43										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 12 ^h 44 ^m 9			Mag: -4.1 PMG: 9 ^h 37 ^m			Mag: +0.8 PMG: 7 ^h 04 ^m			Mag: -2.5 PMG: 21 ^h 30 ^m			Mag: 0.0 PMG: 18 ^h 11 ^m											
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	168	14.6	215	52.6	-17	25.7	253	59.9	-23	34.3	36	35.3	+18	52.2	86	27.4	+22	09.8						
1	183	17.1	230	52.1		25.0	269	00.7		34.3	51	37.9		52.3	101	29.7		09.8						
2	198	19.5	245	51.5		24.4	284	01.4		34.3	66	40.6		52.3	116	32.1		09.8						
3	213	22.0	260	50.9		23.8	299	02.1		34.3	81	43.2		52.4	131	34.5		09.8						
4	228	24.4	275	50.3		23.1	314	02.9		34.3	96	45.9		52.4	146	36.9		09.8						
5	243	26.9	290	49.8	-17	22.5	329	03.6	-23	34.3	111	48.6	+18	52.5	161	39.3	+22	09.9						
6	258	29.4	305	49.2	-17	21.8	344	04.3	-23	34.3	126	51.2	+18	52.5	176	41.6	+22	09.9						
7	273	31.8	320	48.6		21.2	359	05.1		34.3	141	53.9		52.6	191	44.0		09.9						
8	288	34.3	335	48.0		20.5	14	05.8		34.3	156	56.5		52.6	206	46.4		09.9						
9	303	36.8	350	47.5		19.9	29	06.5		34.3	171	59.2		52.7	221	48.8		09.9						
10	318	39.2	5	46.9		19.2	44	07.3		34.3	187	01.8		52.7	236	51.2		09.9						
11	333	41.7	20	46.3	-17	18.6	59	08.0	-23	34.3	202	04.5	+18	52.8	251	53.5	+22	09.9						
12	348	44.2	35	45.8	-17	17.9	74	08.7	-23	34.3	217	07.1	+18	52.8	266	55.9	+22	09.9						
13	3	46.6	50	45.2		17.3	89	09.4		34.3	232	09.8		52.9	281	58.3		10.0						
14	18	49.1	65	44.6		16.6	104	10.2		34.3	247	12.4		52.9	297	00.7		10.0						
15	33	51.6	80	44.1		16.0	119	10.9		34.3	262	15.1		53.0	312	03.0		10.0						
16	48	54.0	95	43.5		15.3	134	11.6		34.3	277	17.7		53.0	327	05.4		10.0						
17	63	56.5	110	42.9	-17	14.6	149	12.4	-23	34.3	292	20.4	+18	53.1	342	07.8	+22	10.0						
18	78	58.9	125	42.3	-17	14.0	164	13.1	-23	34.3	307	23.0	+18	53.1	357	10.2	+22	10.0						
19	94	01.4	140	41.8		13.3	179	13.8		34.3	322	25.7		53.2	12	12.6		10.0						
20	109	03.9	155	41.2		12.7	194	14.6		34.3	337	28.3		53.2	27	14.9		10.1						
21	124	06.3	170	40.6		12.0	209	15.3		34.3	352	31.0		53.2	42	17.3		10.1						
22	139	08.8	185	40.1		11.3	224	16.0		34.3	7	33.6		53.3	57	19.7		10.1						
23	154	11.3	200	39.5		10.7	239	16.8		34.3	22	36.2		53.3	72	22.1		10.1						
24	169	13.7	215	38.9	-17	10.0	254	17.5	-23	34.2	37	38.9	+18	53.4	87	24.4	+22	10.1						
Dif	—			-6 +7			+7			0			+27			0			+24			0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'1			Edad: 8 ^d 9	PHE {	4 ^h : 55'7 12 ^h : 55'9 20 ^h : 56'2	R°: 55 ^m															
	PMG: 12 ^h 09 ^m 9																					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°							
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m						
0	177	29.9	-3	80	29.2	+25	42.3	26	60 N	4	57	5	46	6	27	9	08	57	4	35	57	
1	192	30.1		94	57.3		44.9	26	58	5	01		47	26		34	57		4	09	57	
2	207	30.3		109	25.3		47.4	25	56		04		48	25		9	55	57		3	49	56
3	222	30.4		123	53.3		49.8	24	54		07		48	23		10	12	57		32	56	
4	237	30.6		138	21.3		52.1	23	52		10		49	22		26	57		17	56		
5	252	30.8	-3	152	49.2	+25	54.2	21	50	5	12	5	49	6	21	10	39	57	3	05	56	
6	267	30.9	-3	167	17.0	+25	56.2	20	45	5	16	5	50	6	19	11	05	57	2	39	55	
7	282	31.1		181	44.8		58.1	19	40		19		50	17		26	56			18	55	
8	297	31.3		196	12.5	+25	59.8	17	35		21		50	16		44	56		2	01	55	
9	312	31.4		210	40.1	+26	01.4	16	30		23		50	14		11	59	56	1	46	55	
10	327	31.6		225	07.7		02.8	14	20		24		49	11		12	24	56	1	21	55	
11	342	31.8	-3	239	35.3	+26	04.1	13	10 N	5	24	5	48	6	09	12	46	55	0	59	55	
12	357	31.9	-3	254	02.8	+26	05.3	12	0	5	22	5	46	6	07	13	07	55	0	39	54	
13	12	32.1		268	30.2		06.3	10	10 S		19		43	04		27	55		0	19	53	
14	27	32.3		282	57.6		07.2	9	20		13		39	6	01	13	49	55	**	**	**	
15	42	32.4		297	24.9		08.0	8	30		06		34	5	58	14	15	54	**	**	**	
16	57	32.6		311	52.2		08.6	6	35	5	01		31	56		30	54		**	**	**	
17	72	32.8	-3	326	19.5	+26	09.0	4	40	4	55	5	27	5	54	14	48	53	23	52	60	
18	87	32.9	-3	340	46.7	+26	09.4	4	45	4	47	5	22	5	51	15	09	52	23	31	61	
19	102	33.1		355	13.8		09.5	1	50		36		15	48		36	51		23	04	63	
20	117	33.3		9	40.9		09.6	1	52		32		13	47		15	49	51	22	51	63	
21	132	33.4		24	08.0		09.5	1	54		26		09	45		16	04	50		36	64	
22	147	33.6		38	35.0		09.2	3	56		20		05	43		21	50		22	18	66	
23	162	33.8		53	02.0		08.8	4	58		12	5	01	41		16	43	48	21	57	67	
24	177	33.9	-3	67	28.9	+26	08.3	5	60 S	4	04	4	57	5	39	17	10	46	21	29	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 41 ^m 0		Mag: -4.1 PMG: 9 ^h 38 ^m		Mag: +0.8 PMG: 7 ^h 02 ^m		Mag: -2.5 PMG: 21 ^h 26 ^m		Mag: 0.0 PMG: 18 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	169	13.7	215	38.9	-17	10.0	254	17.5	-23	34.2	37	38.9	+18	53.4	87	24.4	+22	10.1
1	184	16.2	230	38.4		09.4	269	18.2		34.2	52	41.5		53.4	102	26.8		10.1
2	199	18.7	245	37.8		08.7	284	19.0		34.2	67	44.2		53.5	117	29.2		10.1
3	214	21.1	260	37.2		08.0	299	19.7		34.2	82	46.8		53.5	132	31.6		10.1
4	229	23.6	275	36.7		07.4	314	20.4		34.2	97	49.5		53.6	147	33.9		10.2
5	244	26.1	290	36.1	-17	06.7	329	21.2	-23	34.2	112	52.1	+18	53.6	162	36.3	+22	10.2
6	259	28.5	305	35.5	-17	06.0	344	21.9	-23	34.2	127	54.8	+18	53.7	177	38.7	+22	10.2
7	274	31.0	320	35.0		05.4	359	22.6		34.2	142	57.4		53.7	192	41.1		10.2
8	289	33.4	335	34.4		04.7	14	23.4		34.2	158	00.1		53.8	207	43.4		10.2
9	304	35.9	350	33.8		04.0	29	24.1		34.2	173	02.7		53.8	222	45.8		10.2
10	319	38.4	5	33.3		03.3	44	24.8		34.2	188	05.3		53.8	237	48.2		10.2
11	334	40.8	20	32.7	-17	02.7	59	25.6	-23	34.1	203	08.0	+18	53.9	252	50.6	+22	10.3
12	349	43.3	35	32.2	-17	02.0	74	26.3	-23	34.1	218	10.6	+18	53.9	267	52.9	+22	10.3
13	4	45.8	50	31.6		01.3	89	27.0		34.1	233	13.3		54.0	282	55.3		10.3
14	19	48.2	65	31.0	-17	00.6	104	27.8		34.1	248	15.9		54.0	297	57.7		10.3
15	34	50.7	80	30.5	-17	00.0	119	28.5		34.1	263	18.6		54.1	313	00.1		10.3
16	49	53.2	95	29.9	-16	59.3	134	29.2		34.1	278	21.2		54.1	328	02.4		10.3
17	64	55.6	110	29.3	-16	58.6	149	30.0	-23	34.1	293	23.8	+18	54.2	343	04.8	+22	10.3
18	79	58.1	125	28.8	-16	57.9	164	30.7	-23	34.1	308	26.5	+18	54.2	358	07.2	+22	10.3
19	95	00.6	140	28.2		57.3	179	31.4		34.1	323	29.1		54.3	13	09.5		10.4
20	110	03.0	155	27.7		56.6	194	32.2		34.0	338	31.8		54.3	28	11.9		10.4
21	125	05.5	170	27.1		55.9	209	32.9		34.0	353	34.4		54.3	43	14.3		10.4
22	140	07.9	185	26.5		55.2	224	33.6		34.0	8	37.1		54.4	58	16.7		10.4
23	155	10.4	200	26.0		54.5	239	34.4		34.0	23	39.7		54.4	73	19.0		10.4
24	170	12.9	215	25.4	-16	53.9	254	35.1	-23	34.0	38	42.3	+18	54.5	88	21.4	+22	10.4
Dif	—		-6		+7		+7		0		+26		0		+24			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 9 ^d 9 PHE { 4 ^h : 56 ^m 5 12 ^h : 56 ^m 7 20 ^h : 57 ^m 0											
	PMG: 12 ^h 09 ^m 6				SD: 15 ^h 3				PMG: 20 ^h 15 ^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	m	h m m	m
0	177	33.9	-3	67	28.9	+26	08.3	60 N	17 56	18 38	19 27	10 05 82	5 32 35		
1	192	34.1		81	55.8		07.6	58	57	36	22	31 77	5 06 39		
2	207	34.3		96	22.7		06.7	56	58	35	19	10 52 74	4 45 42		
3	222	34.5		110	49.5		05.8	54	17 59	35	16	11 09 71	28 44		
4	237	34.6		125	16.3		04.6	52	18 00	34	13	23 70	13 46		
5	252	34.8	-3	139	43.0	+26	03.3	50	18 01	18 33	19 11	11 36 69	4 01 46		
6	267	35.0	-3	154	09.8	+26	01.9	45	18 03	18 32	19 06	12 02 66	3 34 49		
7	282	35.1		168	36.5	+26	00.3	40	04	31	03	22 65	3 13 50		
8	297	35.3		183	03.1	+25	58.6	35	06	31	19 00	40 63	2 56 51		
9	312	35.5		197	29.8		56.7	30	07	31	18 58	12 55 61	41 52		
10	327	35.6	-3	211	56.4		54.7	20	09	31	56	13 20 59	2 16 53		
11	342	35.8	-2	226	23.0	+25	52.5	10 N	18 11	18 32	18 56	13 41 58	1 54 54		
12	357	36.0	-2	240	49.5	+25	50.2	0	18 13	18 34	18 58	14 02 56	1 33 56		
13	12	36.2		255	16.0		47.7	10 S	15	36	19 00	22 54	1 12 57		
14	27	36.3		269	42.5		45.1	20	17	39	05	14 44 52	0 50 58		
15	42	36.5		284	09.0		42.3	30	20	44	12	15 09 50	25 58		
16	57	36.7		298	35.5		39.4	35	22	47	17	24 48	0 09 60		
17	72	36.8	-2	313	01.9	+25	36.3	40	18 24	18 51	19 23	15 41 47	*** ** *		
18	87	37.0	-2	327	28.4	+25	33.1	45	18 26	18 55	19 30	16 01 45	*** ** *		
19	102	37.2		341	54.8		29.7	50	28	19 01	40	27 42	*** ** *		
20	117	37.3		356	21.2		26.2	52	30	04	44	40 39	23 54 76		
21	132	37.5		10	47.6		22.5	54	31	07	50	16 54 38	40 78		
22	147	37.7		25	14.0		18.6	56	33	10	19 55	17 11 35	24 81		
23	162	37.9		39	40.3		14.6	58	34	14	20 02	31 31	23 04 85		
24	177	38.0	-2	54	06.7	+25	10.5	60 S	18 36	19 18	20 10	17 56 25	22 39 91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 37 ^m 1		Mag: -4.1 PMG: 9 ^h 39 ^m		Mag: +0.8 PMG: 7 ^h 01 ^m		Mag: -2.5 PMG: 21 ^h 21 ^m		Mag: 0.0 PMG: 18 ^h 04 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	170	12.9	215	25.4	-16	53.9	254	35.1	-23	34.0	38	42.3	+18	54.5	88	21.4	+22	10.4
1	185	15.3	230	24.9		53.2	269	35.8		34.0	53	45.0		54.5	103	23.8		10.4
2	200	17.8	245	24.3		52.5	284	36.6		34.0	68	47.6		54.6	118	26.1		10.5
3	215	20.3	260	23.7		51.8	299	37.3		33.9	83	50.2		54.6	133	28.5		10.5
4	230	22.7	275	23.2		51.1	314	38.0		33.9	98	52.9		54.7	148	30.9		10.5
5	245	25.2	290	22.6	-16	50.4	329	38.8	-23	33.9	113	55.5	+18	54.7	163	33.3	+22	10.5
6	260	27.7	305	22.1	-16	49.7	344	39.5	-23	33.9	128	58.2	+18	54.7	178	35.6	+22	10.5
7	275	30.1	320	21.5		49.1	359	40.2		33.9	144	00.8		54.8	193	38.0		10.5
8	290	32.6	335	20.9		48.4	14	41.0		33.9	159	03.4		54.8	208	40.4		10.5
9	305	35.0	350	20.4		47.7	29	41.7		33.8	174	06.1		54.9	223	42.7		10.5
10	320	37.5	5	19.8		47.0	44	42.4		33.8	189	08.7		54.9	238	45.1		10.6
11	335	40.0	20	19.3	-16	46.3	59	43.2	-23	33.8	204	11.3	+18	55.0	253	47.5	+22	10.6
12	350	42.4	35	18.7	-16	45.6	74	43.9	-23	33.8	219	14.0	+18	55.0	268	49.8	+22	10.6
13	5	44.9	50	18.2		44.9	89	44.6		33.8	234	16.6		55.0	283	52.2		10.6
14	20	47.4	65	17.6		44.2	104	45.4		33.8	249	19.3		55.1	298	54.6		10.6
15	35	49.8	80	17.1		43.5	119	46.1		33.7	264	21.9		55.1	313	56.9		10.6
16	50	52.3	95	16.5		42.8	134	46.8		33.7	279	24.5		55.2	328	59.3		10.6
17	65	54.8	110	15.9	-16	42.1	149	47.6	-23	33.7	294	27.2	+18	55.2	344	01.7	+22	10.7
18	80	57.2	125	15.4	-16	41.4	164	48.3	-23	33.7	309	29.8	+18	55.3	359	04.0	+22	10.7
19	95	59.7	140	14.8		40.7	179	49.1		33.7	324	32.4		55.3	14	06.4		10.7
20	111	02.2	155	14.3		40.0	194	49.8		33.6	339	35.1		55.3	29	08.8		10.7
21	126	04.6	170	13.7		39.3	209	50.5		33.6	354	37.7		55.4	44	11.1		10.7
22	141	07.1	185	13.2		38.6	224	51.3		33.6	9	40.3		55.4	59	13.5		10.7
23	156	09.5	200	12.6		37.9	239	52.0		33.6	24	43.0		55.5	74	15.9		10.7
24	171	12.0	215	12.1	-16	37.2	254	52.7	-23	33.6	39	45.6	+18	55.5	89	18.2	+22	10.8
Dif	—		-6		+7		+7		0		+26		0		+24			

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 9 PHE { 4 ^h : 57 ^h 3 12 ^h : 57 ^h 6 20 ^h : 58 ^h 0 R°: 55 ^m												
	PMG: 12 ^h 09 ^m 3			PMG: 21 ^h 11 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	38.0	-2 46.9	54	06.7	+25	10.5	60 N	4 51	5 40	6 21	11 27	96	6 07	19	
1	192	38.2	45.9	68	33.0	73	06.2	58	55	41	20	11 48	91	5 45	25	
2	207	38.4	44.9	82	59.3	73	+25 01.7	56	4 59	42	19	12 06	86	27	29	
3	222	38.5	43.9	97	25.7	74	+24 57.1	54	5 02	43	18	20 83		5 12	39	
4	237	38.7	42.9	111	52.0	73	52.4	52	05	44	18	33 81		4 59	34	
5	252	38.9	-2 41.9	126	18.3	73	+24 47.5	50	5 07	5 45	6 17	12 45	78	4 47	37	
6	267	39.1	-2 41.0	140	44.6	73	+24 42.4	45	5 12	5 46	6 15	13 08	74	4 23	40	
7	282	39.2	40.0	155	11.0	74	37.2	40	16	47	14	27 70		4 03	44	
8	297	39.4	39.0	169	37.3	73	31.9	35	18	48	13	43 67		3 47	46	
9	312	39.6	38.0	184	03.6	73	26.3	30	20	48	12	13 56	66	33	48	
10	327	39.8	37.0	198	29.9	73	20.7	20	22	48	10	14 19	62	3 09	51	
11	342	39.9	-2 36.0	212	56.2	73	+24 14.9	10 N	5 23	5 47	6 08	14 39	59	2 48	54	
12	357	40.1	-2 35.0	227	22.6	74	+24 08.9	0	5 21	5 45	6 06	14 58	55	2 29	55	
13	12	40.3	34.1	241	48.9	73	+24 02.8	10 S	19	43	04	15 16	53	2 09	58	
14	27	40.4	33.1	256	15.2	73	+23 56.5	20	14	40	6 02	36 50		1 48	61	
15	42	40.6	32.1	270	41.6	74	50.1	30	07	35	5 59	15 59	46	23	64	
16	57	40.8	31.1	285	07.9	73	43.5	35	5 03	32	58	16 12	44	1 09	65	
17	72	41.0	-2 30.1	299	34.3	74	+23 36.8	40	4 57	5 29	5 56	16 28	40	0 52	68	
18	87	41.1	-2 29.1	314	00.7	74	+23 29.9	45	4 50	5 24	5 54	16 46	37	0 32	70	
19	102	41.3	28.1	328	27.1	74	22.9	50	40	19	51	17 09	32	0 07	73	
20	117	41.5	27.2	342	53.5	74	15.8	52	35	16	50	19 31		** ** *	**	
21	132	41.7	26.2	357	19.9	74	08.5	54	30	13	49	32 27		** ** *	**	
22	147	41.8	25.2	11	46.3	74	+23 01.0	56	24	10	47	17 46	24	** ** *	**	
23	162	42.0	24.2	26	12.8	75	+22 53.4	58	18	06	46	18 02	20	** ** *	**	
24	177	42.2	-2 23.2	40	39.3	75	+22 45.6	60 S	4 10	5 02	5 44	18 21	15	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 33 ^m 1		Mag: -4.0 PMG: 9 ^h 40 ^m		Mag: +0.8 PMG: 7 ^h 00 ^m		Mag: -2.5 PMG: 21 ^h 17 ^m		Mag: 0.0 PMG: 18 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	171	12.0	215	12.1	-16	37.2	254	52.7	-23	33.6	39	45.6	+18	55.5	89	18.2	+22	10.8
1	186	14.5	230	11.5		36.5	269	53.5		33.5	54	48.2		55.6	104	20.6		10.8
2	201	16.9	245	11.0		35.8	284	54.2		33.5	69	50.9		55.6	119	23.0		10.8
3	216	19.4	260	10.4		35.1	299	54.9		33.5	84	53.5		55.6	134	25.3		10.8
4	231	21.9	275	09.9		34.4	314	55.7		33.5	99	56.1		55.7	149	27.7		10.8
5	246	24.3	290	09.3	-16	33.7	329	56.4	-23	33.5	114	58.7	+18	55.7	164	30.1	+22	10.8
6	261	26.8	305	08.8	-16	33.0	344	57.1	-23	33.4	130	01.4	+18	55.8	179	32.4	+22	10.8
7	276	29.3	320	08.2		32.3	359	57.9		33.4	145	04.0		55.8	194	34.8		10.8
8	291	31.7	335	07.7		31.6	14	58.6		33.4	160	06.6		55.8	209	37.2		10.9
9	306	34.2	350	07.1		30.9	29	59.3		33.4	175	09.3		55.9	224	39.5		10.9
10	321	36.7	5	06.6		30.1	45	00.1		33.3	190	11.9		55.9	239	41.9		10.9
11	336	39.1	20	06.0	-16	29.4	60	00.8	-23	33.3	205	14.5	+18	56.0	254	44.3	+22	10.9
12	351	41.6	35	05.5	-16	28.7	75	01.6	-23	33.3	220	17.2	+18	56.0	269	46.6	+22	10.9
13	6	44.0	50	04.9		28.0	90	02.3		33.3	235	19.8		56.1	284	49.0		10.9
14	21	46.5	65	04.4		27.3	105	03.0		33.2	250	22.4		56.1	299	51.4		10.9
15	36	49.0	80	03.8		26.6	120	03.8		33.2	265	25.0		56.1	314	53.7		11.0
16	51	51.4	95	03.3		25.9	135	04.5		33.2	280	27.7		56.2	329	56.1		11.0
17	66	53.9	110	02.7	-16	25.1	150	05.2	-23	33.2	295	30.3	+18	56.2	344	58.4	+22	11.0
18	81	56.4	125	02.2	-16	24.4	165	06.0	-23	33.1	310	32.9	+18	56.3	0	00.8	+22	11.0
19	96	58.8	140	01.6		23.7	180	06.7		33.1	325	35.5		56.3	15	03.2		11.0
20	112	01.3	155	01.1		23.0	195	07.4		33.1	340	38.2		56.3	30	05.5		11.0
21	127	03.8	170	00.5		22.3	210	08.2		33.1	355	40.8		56.4	45	07.9		11.0
22	142	06.2	185	00.0		21.6	225	08.9		33.0	10	43.4		56.4	60	10.3		11.1
23	157	08.7	199	59.4		20.8	240	09.7		33.0	25	46.0		56.5	75	12.6		11.1
24	172	11.2	214	58.9	-16	20.1	255	10.4	-23	33.0	40	48.7	+18	56.5	90	15.0	+22	11.1
Dif	—		-5		+7		+7		0		+26		0		+24			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16 ^h 1			Edad: 11 ^d 9	PHE {	4 ^h : 58 ^h /3 12 ^h : 58 ^h /6 20 ^h : 58 ^h /9			Final del crepúsculo			Salida de Luna			Puesta de Luna		
	PMG: 12 ^h 09 ^m 0								Rº: 54 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	177	42.2	-2 23.2	40	39.3	+22 45.6	79	60 N	18 01	18 43	19 32	13 03 102		6 26 12			
1	192	42.4	22.2	55	05.7	74	37.7	58	02	41	27	19 96		6 10 16			
2	207	42.5	21.2	69	32.2	75	29.7	56	03	40	23	32 92		5 56 20			
3	222	42.7	20.2	83	58.8	76	21.5	54	03	38	20	43 89		44 24			
4	237	42.9	19.3	98	25.3	75	13.2	52	04	37	17	13 54 86		33 27			
5	252	43.1	-2 18.3	112	51.9	76	+22 04.7	50	18 04	18 36	19 14	14 03 83		5 24 29			
6	267	43.2	-2 17.3	127	18.5	76	+21 56.1	45	18 05	18 35	19 09	14 22 78		5 03 34			
7	282	43.4	16.3	141	45.1	76	47.3	40	06	33	05	37 74		4 47 38			
8	297	43.6	15.3	156	11.7	76	38.4	35	07	32	02	14 50 71		33 41			
9	312	43.8	14.3	170	38.3	76	29.4	30	08	32	19 00	15 02 67		21 43			
10	327	43.9	13.3	185	05.0	77	20.2	20	09	31	18 57	21 62		4 00 48			
11	342	44.1	-2 12.4	199	31.7	77	+21 10.9	10 N	18 11	18 32	18 56	15 38 58		3 42 51			
12	357	44.3	-2 11.4	213	58.5	78	+21 01.4	0	18 12	18 33	18 57	15 53 55		3 24 55			
13	12	44.5	10.4	228	25.2	77	+20 51.8	10 S	14	35	18 59	16 09 50		3 07 59			
14	27	44.6	09.4	242	52.0	78	42.1	20	16	38	19 03	26 46		2 49 62			
15	42	44.8	08.4	257	18.8	78	32.2	30	18	42	10	45 41		27 67			
16	57	45.0	07.4	271	45.7	79	22.2	35	19	44	14	16 56 38		14 70			
17	72	45.2	-2 06.4	286	12.6	79	+20 12.1	40	18 20	18 47	19 19	17 08 35		2 00 72			
18	87	45.3	-2 05.4	300	39.5	79	+20 01.8	45	18 22	18 51	19 26	17 23 31		1 42 76			
19	102	45.5	04.5	315	06.4	79	+19 51.4	50	24	56	35	41 26		20 82			
20	117	45.7	03.5	329	33.4	80	40.9	52	25	18 59	39	50 23		1 10 84			
21	132	45.9	02.5	344	00.3	79	30.2	54	26	19 02	44	17 59 21		0 58 87			
22	147	46.0	01.5	358	27.4	81	19.4	56	27	05	50	18 10 17		45 90			
23	162	46.2	-2 00.5	12	54.4	80	+19 08.5	58	29	08	19 56	22 13		29 95			
24	177	46.4	-1 59.5	27	21.5	81	+18 57.4	60 S	18 30	19 12	20 03	18 36 8		0 10 100			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 29 ^m 2		Mag: -4.0 PMG: 9 ^h 40 ^m			Mag: +0.8 PMG: 6 ^h 59 ^m			Mag: -2.5 PMG: 21 ^h 13 ^m			Mag: 0.0 PMG: 17 ^h 56 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	172	11.2	214 58.9	-16 20.1	255 10.4	-23 33.0	40 48.7	+18 56.5	90 15.0	+22 11.1							
1	187	13.6	229 58.3	19.4	270 11.1	32.9	55 51.3	56.5	105 17.3	11.1							
2	202	16.1	244 57.8	18.7	285 11.9	32.9	70 53.9	56.6	120 19.7	11.1							
3	217	18.5	259 57.3	17.9	300 12.6	32.9	85 56.5	56.6	135 22.1	11.1							
4	232	21.0	274 56.7	17.2	315 13.3	32.9	100 59.2	56.7	150 24.4	11.1							
5	247	23.5	289 56.2	-16 16.5	330 14.1	-23 32.8	116 01.8	+18 56.7	165 26.8	+22 11.2							
6	262	25.9	304 55.6	-16 15.8	345 14.8	-23 32.8	131 04.4	+18 56.7	180 29.1	+22 11.2							
7	277	28.4	319 55.1	15.0	0 15.5	32.8	146 07.0	56.8	195 31.5	11.2							
8	292	30.9	334 54.5	14.3	15 16.3	32.7	161 09.7	56.8	210 33.9	11.2							
9	307	33.3	349 54.0	13.6	30 17.0	32.7	176 12.3	56.9	225 36.2	11.2							
10	322	35.8	4 53.5	12.8	45 17.8	32.7	191 14.9	56.9	240 38.6	11.2							
11	337	38.3	19 52.9	-16 12.1	60 18.5	-23 32.6	206 17.5	+18 56.9	255 40.9	+22 11.2							
12	352	40.7	34 52.4	-16 11.4	75 19.2	-23 32.6	221 20.1	+18 57.0	270 43.3	+22 11.2							
13	7	43.2	49 51.8	10.6	90 20.0	32.6	236 22.8	57.0	285 45.7	11.3							
14	22	45.6	64 51.3	09.9	105 20.7	32.6	251 25.4	57.1	300 48.0	11.3							
15	37	48.1	79 50.7	09.2	120 21.4	32.5	266 28.0	57.1	315 50.4	11.3							
16	52	50.6	94 50.2	08.4	135 22.2	32.5	281 30.6	57.1	330 52.7	11.3							
17	67	53.0	109 49.7	-16 07.7	150 22.9	-23 32.5	296 33.2	+18 57.2	345 55.1	+22 11.3							
18	82	55.5	124 49.1	-16 07.0	165 23.7	-23 32.4	311 35.9	+18 57.2	0 57.5	+22 11.3							
19	97	58.0	139 48.6	06.2	180 24.4	32.4	326 38.5	57.3	15 59.8	11.3							
20	113	00.4	154 48.0	05.5	195 25.1	32.4	341 41.1	57.3	31 02.2	11.4							
21	128	02.9	169 47.5	04.8	210 25.9	32.3	356 43.7	57.3	46 04.5	11.4							
22	143	05.4	184 47.0	04.0	225 26.6	32.3	11 46.3	57.4	61 06.9	11.4							
23	158	07.8	199 46.4	03.3	240 27.3	32.3	26 49.0	57.4	76 09.2	11.4							
24	173	10.3	214 45.9	-16 02.5	255 28.1	-23 32.2	41 51.6	+18 57.4	91 11.6	+22 11.4							
Dif	—		-5	+7	+7		0	+26		0	+24		0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 12 ^d 9	PHE {	SD: 16 ^h 1	SD: 23 ^h 00 ^m	4 ^h : 59 ^m /2 12 ^h : 59 ^m /4 20 ^h : 59 ^m /7 Rº: 53 ^m		Náutico	Civil		Hora	Rº	Hora	Rº	
	hG ☉	Dec															hG ☾
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	177	46.4	-1 59.5	27	21.5	+18	57.4		60 N	4 45	5 34	6 15	14 45	103		6 38	7
1	192	46.6		41	48.6			81	58	50	36	15	14 55	99		26	12
2	207	46.8		56	15.8			82	56	54	37	14	15 04	95		16	15
3	222	46.9		70	43.0			82	54	4 57	38	14	12 92			08	18
4	237	47.1		85	10.2			82	52	5 00	40	13	20 88			6 00	21
5	252	47.3	-1 54.6	99	37.5		+18	83	50	5 03	5 41	6 13	15 26	86		5 53	23
6	267	47.5	-1 53.6	114	04.7		+17	82	45	5 08	5 42	6 12	15 40	80		5 37	29
7	282	47.6		128	32.1			84	40	12	44	11	15 51	75		25	32
8	297	47.8		142	59.4			83	35	16	45	10	16 01	71		14	36
9	312	48.0		157	26.8			84	30	18	46	09	09 68			5 04	40
10	327	48.2		171	54.2		+17	84	20	21	46	08	23 63			4 48	44
11	342	48.4	-1 48.7	186	21.7		+16	85	10 N	5 21	5 46	6 07	16 36	58		4 33	49
12	357	48.5	-1 47.7	200	49.2		+16	85	0	5 21	5 45	6 05	16 48	53		4 19	54
13	12	48.7		215	16.7			85	10 S	19	43	04	16 59	49		4 06	58
14	27	48.9		229	44.3		+16	86	20	15	40	03	17 12	43		3 51	62
15	42	49.1		244	11.9		+15	86	30	09	37	6 01	26 38			34	68
16	57	49.2		258	39.5			86	35	5 04	34	5 59	34 35			24	71
17	72	49.4	-1 42.7	273	07.1		+15	86	40	4 59	5 31	5 58	17 43	31		3 12	75
18	87	49.6	-1 41.7	287	34.8		+15	87	45	4 52	5 27	5 57	17 54	27		2 58	80
19	102	49.8		302	02.6		+15	88	50	44	22	55	18 07	22		42	84
20	117	50.0		316	30.3		+14	87	52	39	20	54	13 19			34	87
21	132	50.1		330	58.1			88	54	35	17	53	20 16			25	90
22	147	50.3		345	26.0			89	56	29	14	52	27 13			15	94
23	162	50.5		359	53.8		+14	88	58	23	11	50	35 10			2 04	98
24	177	50.7	-1 35.8	14	21.7		+13	89	60 S	4 16	5 07	5 49	18 44	6		1 50	103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 25 ^m 3		Mag: -4.0 PMG: 9 ^h 41 ^m		Mag: +0.7 PMG: 6 ^h 58 ^m		Mag: -2.5 PMG: 21 ^h 09 ^m		Mag: 0.0 PMG: 17 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	173	10.3	214	45.9	-16	02.5	255	28.1	-23	32.2	41	51.6	+18	57.4	91	11.6	+22	11.4
1	188	12.8	229	45.4		01.8	270	28.8		32.2	56	54.2		57.5	106	14.0		11.4
2	203	15.2	244	44.8		01.1	285	29.6		32.1	71	56.8		57.5	121	16.3		11.4
3	218	17.7	259	44.3	-16	00.3	300	30.3		32.1	86	59.4		57.6	136	18.7		11.5
4	233	20.1	274	43.7	-15	59.6	315	31.0		32.1	102	02.0		57.6	151	21.0		11.5
5	248	22.6	289	43.2	-15	58.8	330	31.8	-23	32.0	117	04.7	+18	57.6	166	23.4	+22	11.5
6	263	25.1	304	42.7	-15	58.1	345	32.5	-23	32.0	132	07.3	+18	57.7	181	25.7	+22	11.5
7	278	27.5	319	42.1		57.3	0	33.2		32.0	147	09.9		57.7	196	28.1		11.5
8	293	30.0	334	41.6		56.6	15	34.0		31.9	162	12.5		57.7	211	30.5		11.5
9	308	32.5	349	41.1		55.8	30	34.7		31.9	177	15.1		57.8	226	32.8		11.5
10	323	34.9	4	40.5		55.1	45	35.5		31.9	192	17.7		57.8	241	35.2		11.6
11	338	37.4	19	40.0	-15	54.3	60	36.2	-23	31.8	207	20.3	+18	57.9	256	37.5	+22	11.6
12	353	39.9	34	39.5	-15	53.6	75	36.9	-23	31.8	222	23.0	+18	57.9	271	39.9	+22	11.6
13	8	42.3	49	38.9		52.8	90	37.7		31.7	237	25.6		57.9	286	42.2		11.6
14	23	44.8	64	38.4		52.1	105	38.4		31.7	252	28.2		58.0	301	44.6		11.6
15	38	47.3	79	37.9		51.3	120	39.2		31.7	267	30.8		58.0	316	46.9		11.6
16	53	49.7	94	37.3		50.6	135	39.9		31.6	282	33.4		58.0	331	49.3		11.6
17	68	52.2	109	36.8	-15	49.8	150	40.6	-23	31.6	297	36.0	+18	58.1	346	51.6	+22	11.7
18	83	54.6	124	36.3	-15	49.1	165	41.4	-23	31.5	312	38.6	+18	58.1	1	54.0	+22	11.7
19	98	57.1	139	35.7		48.3	180	42.1		31.5	327	41.2		58.2	16	56.3		11.7
20	113	59.6	154	35.2		47.5	195	42.9		31.5	342	43.8		58.2	31	58.7		11.7
21	129	02.0	169	34.7		46.8	210	43.6		31.4	357	46.5		58.2	47	01.1		11.7
22	144	04.5	184	34.1		46.0	225	44.3		31.4	12	49.1		58.3	62	03.4		11.7
23	159	07.0	199	33.6		45.3	240	45.1		31.3	27	51.7		58.3	77	05.8		11.7
24	174	09.4	214	33.1	-15	44.5	255	45.8	-23	31.3	42	54.3	+18	58.3	92	08.1	+22	11.8
Dif	—		-5		+8		+7		0		+26		0		+24		0	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 08 ^m 5			Edad: 13 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'4 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m	
0	177	50.7	-1	35.8	14	21.7	+13	56.8	60 N	18 06	18 48	19 37	16 28 103	6 45 5	
1	192	50.9		34.8	28	49.6	89	43.0	58	06	46	32	34 99	38 8	
2	207	51.0		33.8	43	17.6	90	29.0	56	07	44	28	39 95	31 13	
3	222	51.2		32.9	57	45.6	90	14.9	54	07	42	24	44 91	26 15	
4	237	51.4		31.9	72	13.6	90	+13	52	07	41	20	48 89	21 17	
5	252	51.6	-1	30.9	86	41.6	90	+12	50	18 07	18 40	19 17	16 52 86	6 16 20	
6	267	51.8	-1	29.9	101	09.7	91	+12	45	18 08	18 37	19 11	17 00 80	6 06 25	
7	282	51.9		28.9	115	37.8	91	17.8	40	08	35	07	06 76	5 57 30	
8	297	52.1		27.9	130	06.0	92	+12	35	09	34	04	12 72	50 34	
9	312	52.3		26.9	144	34.1	91	+11	30	09	33	19 01	17 69	44 37	
10	327	52.5		25.9	159	02.3	92	34.1	20	10	32	18 58	26 62	32 43	
11	342	52.7	-1	25.0	173	30.5	92	+11	10 N	18 11	18 32	18 56	17 34 57	5 22 48	
12	357	52.8	-1	24.0	187	58.8	93	+11	0	18 12	18 32	18 56	17 41 52	5 13 52	
13	12	53.0		23.0	202	27.1	93	+10	10 S	13	34	18 58	48 47	5 04 57	
14	27	53.2		22.0	216	55.4	93	34.7	20	14	36	19 01	17 55 42	4 53 63	
15	42	53.4		21.0	231	23.7	93	19.6	30	15	39	07	18 04 36	42 68	
16	57	53.6		20.0	245	52.1	94	+10	35	16	41	11	09 33	35 71	
17	72	53.7	-1	19.0	260	20.4	93	+9	40	18 17	18 44	19 16	18 14 29	4 27 75	
18	87	53.9	-1	18.0	274	48.8	94	+9	45	18 18	18 48	19 22	18 21 24	4 18 80	
19	102	54.1		17.1	289	17.3	95	18.7	50	20	52	30	29 19	06 86	
20	117	54.3		16.1	303	45.7	94	+9	52	20	54	34	32 17	4 01 89	
21	132	54.5		15.1	318	14.2	95	+8	54	21	57	39	36 14	3 55 92	
22	147	54.6		14.1	332	42.7	95	32.3	56	22	18 59	44	40 11	49 95	
23	162	54.8		13.1	347	11.2	95	16.7	58	23	19 02	50	45 8	42 98	
24	177	55.0	-1	12.1	1	39.7	95	+8	60 S	18 24	19 06	19 56	18 50 5	3 33 104	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 21 ^m 3		Mag: -4.0 PMG: 9 ^h 42 ^m			Mag: +0.7 PMG: 6 ^h 57 ^m			Mag: -2.4 PMG: 21 ^h 05 ^m			Mag: 0.0 PMG: 17 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	174	09.4	214	33.1	-15	44.5	255	45.8	-23	31.3	42	54.3	+18	58.3	
1	189	11.9	229	32.5		43.7	270	46.6		31.3	57	56.9		58.4	
2	204	14.4	244	32.0		43.0	285	47.3		31.2	72	59.5		58.4	
3	219	16.8	259	31.5		42.2	300	48.0		31.2	88	02.1		58.4	
4	234	19.3	274	30.9		41.5	315	48.8		31.1	103	04.7		58.5	
5	249	21.7	289	30.4	-15	40.7	330	49.5	-23	31.1	118	07.3	+18	58.5	
6	264	24.2	304	29.9	-15	39.9	345	50.3	-23	31.0	133	09.9	+18	58.5	
7	279	26.7	319	29.4		39.2	0	51.0		31.0	148	12.5		58.6	
8	294	29.1	334	28.8		38.4	15	51.7		31.0	163	15.2		58.6	
9	309	31.6	349	28.3		37.6	30	52.5		30.9	178	17.8		58.7	
10	324	34.1	4	27.8		36.9	45	53.2		30.9	193	20.4		58.7	
11	339	36.5	19	27.2	-15	36.1	60	54.0	-23	30.8	208	23.0	+18	58.7	
12	354	39.0	34	26.7	-15	35.3	75	54.7	-23	30.8	223	25.6	+18	58.8	
13	9	41.5	49	26.2		34.6	90	55.4		30.7	238	28.2		58.8	
14	24	43.9	64	25.7		33.8	105	56.2		30.7	253	30.8		58.8	
15	39	46.4	79	25.1		33.0	120	56.9		30.6	268	33.4		58.9	
16	54	48.9	94	24.6		32.2	135	57.7		30.6	283	36.0		58.9	
17	69	51.3	109	24.1	-15	31.5	150	58.4	-23	30.5	298	38.6	+18	58.9	
18	84	53.8	124	23.6	-15	30.7	165	59.1	-23	30.5	313	41.2	+18	59.0	
19	99	56.2	139	23.0		29.9	180	59.9		30.5	328	43.8		59.0	
20	114	58.7	154	22.5		29.1	196	00.6		30.4	343	46.4		59.0	
21	130	01.2	169	22.0		28.4	211	01.4		30.4	358	49.0		59.1	
22	145	03.6	184	21.5		27.6	226	02.1		30.3	13	51.6		59.1	
23	160	06.1	199	20.9		26.8	241	02.8		30.3	28	54.2		59.1	
24	175	08.6	214	20.4	-15	26.0	256	03.6	-23	30.2	43	56.8	+18	59.2	
Dif	—		-5		+8		+7		0		+26		0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16 ¹ PMG: 12 ^h 08 ^m 2			Edad: 14 ^d 9 PHE { SD: 16 ⁵ PMG: ***h ***m 4 ^h : 60 ⁶ / ₆ 12 ^h : 60 ⁷ / ₇ 20 ^h : 60 ⁸ / ₈ R°: ***m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m								
0	177	55.0	-1	12.1	1	39.7	+8	01.0	60 N	4 38	5 28	6 09	18 11	103	6 50	4								
1	192	55.2		11.1	16	08.3 96	+7	45.3 157	58	44	30	09	13	99	46	8								
2	207	55.4		10.1	30	36.9 96		29.6 157	56	48	32	09	14	95	44	10								
3	222	55.5		09.1	45	05.5 96	+7	13.7 159	54	52	33	09	15	93	41	14								
4	237	55.7		08.2	59	34.1 96	+6	57.9 158	52	55	35	08	17	89	38	17								
5	252	55.9	-1	07.2	74	02.7 96	+6	42.0 159	50	4 58	5 36	6 08	18 18	86	6 36	19								
6	267	56.1	-1	06.2	88	31.3 96	+6	26.0 160	45	5 05	5 39	6 08	18 20	81	6 31	24								
7	282	56.3		05.2	103	00.0 97	+6	10.0 160	40	09	41	08	22	76	27	29								
8	297	56.5		04.2	117	28.6 96	+5	53.9 161	35	13	42	07	24	72	24	32								
9	312	56.6		03.2	131	57.3 97		37.8 161	30	15	43	07	26	68	21	35								
10	327	56.8		02.2	146	26.0 97		21.6 162	20	19	44	06	28	63	15	42								
11	342	57.0	-1	01.2	160	54.7 97	+5	05.4 162	10 N	5 20	5 45	6 06	18 31	56	6 10	47								
12	357	57.2	-1	00.3	175	23.4 97	+4	49.2 162	0	5 20	5 44	6 05	18 33	52	6 05	52								
13	12	57.4	-0	59.3	189	52.1 97		32.9 163	10 S	19	43	04	35	47	6 01	57								
14	27	57.6		58.3	204	20.9 98		16.6 163	20	15	41	03	37	42	5 56	62								
15	42	57.7		57.3	218	49.6 97	+4	00.3 163	30	10	38	02	40	36	50	68								
16	57	57.9		56.3	233	18.4 98	+3	43.9 164	35	06	36	01	42	32	46	72								
17	72	58.1	-0	55.3	247	47.1 97	+3	27.6 163	40	5 01	5 33	6 00	18 43	29	5 42	76								
18	87	58.3	-0	54.3	262	15.9 98	+3	11.1 165	45	4 55	5 30	5 59	18 45	24	5 38	81								
19	102	58.5		53.3	276	44.6 97	+2	54.7 164	50	47	25	58	48	19	32	87								
20	117	58.6		52.4	291	13.4 98		38.2 165	52	43	23	57	49	16	30	89								
21	132	58.8		51.4	305	42.2 98		21.7 165	54	39	21	57	50	14	27	92								
22	147	59.0		50.4	320	10.9 97	+2	05.2 165	56	34	18	56	51	11	24	95								
23	162	59.2		49.4	334	39.7 98	+1	48.7 165	58	28	15	55	53	8	20	99								
24	177	59.4	-0	48.4	349	08.5 98	+1	32.1 166	60 S	4 21	5 12	5 54	18 55	4	5 17	102								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 12 ^h 17 ^m 4			Mag: -4.0 PMG: 9 ^h 43 ^m			Mag: +0.7 PMG: 6 ^h 55 ^m			Mag: -2.4 PMG: 21 ^h 01 ^m			Mag: 0.0 PMG: 17 ^h 45 ^m											
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	175	08.6	214	20.4	-15	26.0	256	03.6	-23	30.2	43	56.8	+18	59.2	93	04.5	+22	12.1						
1	190	11.0	229	19.9		25.3	271	04.3		30.2	58	59.4		59.2	108	06.9		12.1						
2	205	13.5	244	19.4		24.5	286	05.1		30.1	74	02.0		59.2	123	09.2		12.1						
3	220	16.0	259	18.9		23.7	301	05.8		30.1	89	04.6		59.3	138	11.6		12.1						
4	235	18.4	274	18.3		22.9	316	06.5		30.0	104	07.2		59.3	153	13.9		12.2						
5	250	20.9	289	17.8	-15	22.1	331	07.3	-23	30.0	119	09.8	+18	59.3	168	16.2	+22	12.2						
6	265	23.3	304	17.3	-15	21.3	346	08.0	-23	29.9	134	12.4	+18	59.4	183	18.6	+22	12.2						
7	280	25.8	319	16.8		20.6	1	08.8		29.9	149	15.0		59.4	198	20.9		12.2						
8	295	28.3	334	16.2		19.8	16	09.5		29.8	164	17.6		59.4	213	23.3		12.2						
9	310	30.7	349	15.7		19.0	31	10.3		29.8	179	20.2		59.5	228	25.6		12.2						
10	325	33.2	4	15.2		18.2	46	11.0		29.7	194	22.8		59.5	243	28.0		12.2						
11	340	35.7	19	14.7	-15	17.4	61	11.7	-23	29.7	209	25.4	+18	59.5	258	30.3	+22	12.3						
12	355	38.1	34	14.2	-15	16.6	76	12.5	-23	29.6	224	28.0	+18	59.6	273	32.7	+22	12.3						
13	10	40.6	49	13.7		15.8	91	13.2		29.6	239	30.6		59.6	288	35.0		12.3						
14	25	43.1	64	13.1		15.1	106	14.0		29.5	254	33.2		59.6	303	37.4		12.3						
15	40	45.5	79	12.6		14.3	121	14.7		29.5	269	35.8		59.7	318	39.7		12.3						
16	55	48.0	94	12.1		13.5	136	15.5		29.4	284	38.4		59.7	333	42.0		12.3						
17	70	50.5	109	11.6	-15	12.7	151	16.2	-23	29.3	299	41.0	+18	59.7	348	44.4	+22	12.3						
18	85	52.9	124	11.1	-15	11.9	166	16.9	-23	29.3	314	43.6	+18	59.8	3	46.7	+22	12.4						
19	100	55.4	139	10.5		11.1	181	17.7		29.2	329	46.2		59.8	18	49.1		12.4						
20	115	57.8	154	10.0		10.3	196	18.4		29.2	344	48.8		59.8	33	51.4		12.4						
21	131	00.3	169	09.5		09.5	211	19.2		29.1	359	51.4		59.9	48	53.8		12.4						
22	146	02.8	184	09.0		08.7	226	19.9		29.1	14	54.0		59.9	63	56.1		12.4						
23	161	05.2	199	08.5		07.9	241	20.6		29.0	29	56.6	+18	59.9	78	58.5		12.4						
24	176	07.7	214	08.0	-15	07.1	256	21.4	-23	29.0	44	59.2	+19	00.0	94	00.8	+22	12.4						
Dif	—			-5			+8			+1			+26			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 07 ^m 9			Edad: 15 ^d 9 PHE { 4 ^h : 60'9 12 ^h : 60'9 SD: 16'6 20 ^h : 60'9 PMG: 0 ^h 45 ^m R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	177	59.4	-0 48.4	349	08.5	+1 32.1		60 N	18 11	18 53	19 42	19 54 104	6 54 4					
1	192	59.6	47.4	3	37.2	+1 15.6	165	58	11	50	37	52 100	54 8					
2	207	59.7	46.4	18	06.0	+0 59.0	166	56	11	48	32	49 97	54 11					
3	222	59.9	45.4	32	34.8		166	54	11	46	28	48 93	55 13					
4	238	00.1	44.4	47	03.5		166	52	11	44	24	46 90	55 16					
5	253	00.3	-0 43.5	61	32.3	+0 09.2	166	50	18 11	18 43	19 21	19 44 88	6 55 19					
6	268	00.5	-0 42.5	76	01.0	-0 07.4	166	45	18 11	18 40	19 14	19 41 82	6 55 25					
7	283	00.7	41.5	90	29.8		166	40	10	37	09	38 77	56 28					
8	298	00.8	40.5	104	58.5		166	35	10	36	05	36 73	56 32					
9	313	01.0	39.5	119	27.2	-0 57.2	166	30	10	34	19 02	34 69	56 36					
10	328	01.2	38.5	133	55.9	-1 13.8	166	20	11	33	18 58	31 62	57 41					
11	343	01.4	-0 37.5	148	24.6	-1 30.4	166	10 N	18 11	18 32	18 56	19 27 58	6 57 47					
12	358	01.6	-0 36.5	162	53.3	-1 47.0	166	0	18 11	18 32	18 56	19 25 52	6 57 52					
13	13	01.8	35.6	177	22.0	-2 03.6	166	10 S	12	33	18 57	22 48	58 57					
14	28	02.0	34.6	191	50.7		165	20	12	34	19 00	19 43	58 62					
15	43	02.1	33.6	206	19.3		166	30	13	37	05	16 36	58 69					
16	58	02.3	32.6	220	47.9	-2 53.3	166	35	13	39	08	14 33	58 73					
17	73	02.5	-0 31.6	235	16.6	-3 09.8	165	40	18 14	18 41	19 13	19 12 29	6 58 77					
18	88	02.7	-0 30.6	249	45.2	-3 26.3	165	45	18 15	18 44	19 18	19 09 25	6 59 81					
19	103	02.9	29.6	264	13.7		165	50	15	48	26	07 19	59 87					
20	118	03.1	28.6	278	42.3	-3 59.3	165	52	16	49	29	05 17	59 89					
21	133	03.2	27.6	293	10.8	-4 15.7	164	54	16	52	34	04 14	59 92					
22	148	03.4	26.7	307	39.3		164	56	17	54	38	02 12	59 96					
23	163	03.6	25.7	322	07.8	-4 48.5	164	58	17	57	44	19 01 8	59 100					
24	178	03.8	-0 24.7	336	36.3	-5 04.9	164	60 S	18 18	19 00	19 50	18 59 4	6 59 104					
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 12 ^h 13 ^m 5		Mag: -4.0 PMG: 9 ^h 44 ^m		Mag: +0.7 PMG: 6 ^h 54 ^m		Mag: -2.4 PMG: 20 ^h 56 ^m			Mag: 0.0 PMG: 17 ^h 41 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	176	07.7	214	08.0	-15	07.1	256	21.4	-23	29.0	44	59.2	+19	00.0	94	00.8	+22	12.4
1	191	10.2	229	07.4		06.3	271	22.1		28.9	60	01.8		00.0	109	03.1		12.5
2	206	12.6	244	06.9		05.5	286	22.9		28.9	75	04.4	+19	00.0	124	05.5		12.5
3	221	15.1	259	06.4		04.7	301	23.6		28.8	90	07.0	+19	00.1	139	07.8		12.5
4	236	17.6	274	05.9		03.9	316	24.4		28.7	105	09.6		00.1	154	10.2		12.5
5	251	20.0	289	05.4	-15	03.1	331	25.1	-23	28.7	120	12.1	+19	00.1	169	12.5	+22	12.5
6	266	22.5	304	04.9	-15	02.3	346	25.9	-23	28.6	135	14.7	+19	00.2	184	14.8	+22	12.5
7	281	24.9	319	04.4		01.5	1	26.6		28.6	150	17.3		00.2	199	17.2		12.5
8	296	27.4	334	03.8	-15	00.7	16	27.3		28.5	165	19.9		00.2	214	19.5		12.6
9	311	29.9	349	03.3	-14	59.9	31	28.1		28.5	180	22.5		00.2	229	21.9		12.6
10	326	32.3	4	02.8		59.1	46	28.8		28.4	195	25.1		00.3	244	24.2		12.6
11	341	34.8	19	02.3	-14	58.3	61	29.6	-23	28.3	210	27.7	+19	00.3	259	26.6	+22	12.6
12	356	37.3	34	01.8	-14	57.5	76	30.3	-23	28.3	225	30.3	+19	00.3	274	28.9	+22	12.6
13	11	39.7	49	01.3		56.7	91	31.1		28.2	240	32.9		00.4	289	31.2		12.6
14	26	42.2	64	00.8		55.9	106	31.8		28.2	255	35.5		00.4	304	33.6		12.7
15	41	44.7	79	00.3		55.1	121	32.5		28.1	270	38.1		00.4	319	35.9		12.7
16	56	47.1	93	59.8		54.3	136	33.3		28.0	285	40.6		00.5	334	38.3		12.7
17	71	49.6	108	59.2	-14	53.5	151	34.0	-23	28.0	300	43.2	+19	00.5	349	40.6	+22	12.7
18	86	52.1	123	58.7	-14	52.6	166	34.8	-23	27.9	315	45.8	+19	00.5	4	42.9	+22	12.7
19	101	54.5	138	58.2		51.8	181	35.5		27.9	330	48.4		00.6	19	45.3		12.7
20	116	57.0	153	57.7		51.0	196	36.3		27.8	345	51.0		00.6	34	47.6		12.7
21	131	59.4	168	57.2		50.2	211	37.0		27.7	0	53.6		00.6	49	50.0		12.8
22	147	01.9	183	56.7		49.4	226	37.8		27.7	15	56.2		00.6	64	52.3		12.8
23	162	04.4	198	56.2		48.6	241	38.5		27.6	30	58.8		00.7	79	54.6		12.8
24	177	06.8	213	55.7	-14	47.8	256	39.2	-23	27.6	46	01.3	+19	00.7	94	57.0	+22	12.8
Dif	—		-5		+8		+7		+1		+26		0		+23		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 16 ^d 9 PHE	4 ^h : 60 ^m 9 12 ^h : 60 ^m 9 20 ^h : 60 ^m 8											
	PMG: 12 ^h 07 ^m 6				SD: 16 ^h 6		PMG: 1 ^h 37 ^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	178	03.8	-0 24.7	336	36.3	-5 04.9		60 N	4 32	5 22	6 03	21 38	106	6 58	5	
1	193	04.0	23.7	351	04.8	21.2	163	58	38	24	03	32	101	7 02	9	
2	208	04.2	22.7	5	33.2	37.5	163	56	43	27	04	26	97	05	13	
3	223	04.4	21.7	20	01.6	-5 53.8	163	54	47	29	04	21	93	08	16	
4	238	04.5	20.7	34	30.0	-6 10.0	162	52	51	30	04	16	90	11	19	
5	253	04.7	-0 19.7	48	58.3	-6 26.2	162	50	4 54	5 32	6 04	21 12	87	7 14	21	
6	268	04.9	-0 18.8	63	26.6	-6 42.3	161	45	5 01	5 35	6 04	21 03	81	7 20	26	
7	283	05.1	17.8	77	54.9	-6 58.4	161	40	06	37	04	20 55	77	24	31	
8	298	05.3	16.8	92	23.2	-7 14.5	161	35	10	39	04	49	73	28	35	
9	313	05.5	15.8	106	51.4	30.5	160	30	13	41	05	43	70	32	38	
10	328	05.6	14.8	121	19.6	-7 46.5	160	20	17	43	05	33	64	38	44	
11	343	05.8	-0 13.8	135	47.7	-8 02.4	159	10 N	5 19	5 44	6 05	20 25	59	7 44	49	
12	358	06.0	-0 12.8	150	15.9	-8 18.2	158	0	5 20	5 44	6 04	20 17	55	7 49	54	
13	13	06.2	11.8	164	44.0	34.1	159	10 S	19	43	04	10	49	7 55	58	
14	28	06.4	10.9	179	12.0	-8 49.8	157	20	16	42	04	20	02	44	8 00	64
15	43	06.6	09.9	193	40.0	-9 05.5	157	30	11	39	03	19	52	40	07	69
16	58	06.8	08.9	208	08.0	21.1	156	35	08	37	03	47	36	11	72	
17	73	06.9	-0 07.9	222	36.0	-9 36.7	156	40	5 04	5 35	6 02	19 41	32	8 15	77	
18	88	07.1	-0 06.9	237	03.9	-9 52.2	155	45	4 58	5 32	6 02	19 34	28	8 20	81	
19	103	07.3	05.9	251	31.7	-10 07.7	155	50	51	29	01	26	23	26	87	
20	118	07.5	04.9	265	59.6	23.0	153	52	47	27	01	22	20	28	91	
21	133	07.7	03.9	280	27.3	38.3	153	54	43	25	00	18	18	31	94	
22	148	07.9	03.0	294	55.1	-10 53.6	153	56	38	23	6 00	14	14	35	96	
23	163	08.1	02.0	309	22.8	-11 08.7	151	58	33	20	5 59	09	10	39	100	
24	178	08.2	-0 01.0	323	50.5	-11 23.8	151	60 S	4 27	5 17	5 59	19 03	7	8 43	105	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 09 ^m 5		Mag: -4.0 PMG: 9 ^h 45 ^m			Mag: +0.7 PMG: 6 ^h 53 ^m			Mag: -2.4 PMG: 20 ^h 52 ^m			Mag: 0.0 PMG: 17 ^h 37 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	177	06.8	213	55.7	-14 47.8	256	39.2	-23 27.6	46	01.3	+19 00.7	94	57.0	+22 12.8
1	192	09.3	228	55.2	47.0	271	40.0	27.5	61	03.9	00.7	109	59.3	12.8
2	207	11.8	243	54.7	46.1	286	40.7	27.4	76	06.5	00.8	125	01.6	12.8
3	222	14.2	258	54.2	45.3	301	41.5	27.4	91	09.1	00.8	140	04.0	12.8
4	237	16.7	273	53.7	44.5	316	42.2	27.3	106	11.7	00.8	155	06.3	12.9
5	252	19.2	288	53.1	-14 43.7	331	43.0	-23 27.2	121	14.3	+19 00.8	170	08.7	+22 12.9
6	267	21.6	303	52.6	-14 42.9	346	43.7	-23 27.2	136	16.9	+19 00.9	185	11.0	+22 12.9
7	282	24.1	318	52.1	42.1	1 44.5	27.1	27.1	151	19.4	00.9	200	13.3	12.9
8	297	26.5	333	51.6	41.2	16 45.2	27.1	27.1	166	22.0	00.9	215	15.7	12.9
9	312	29.0	348	51.1	40.4	31 45.9	27.0	27.0	181	24.6	01.0	230	18.0	12.9
10	327	31.5	3 50.6	39.6		46 46.7	26.9	26.9	196	27.2	01.0	245	20.3	12.9
11	342	33.9	18 50.1	-14 38.8		61 47.4	-23 26.9	26.9	211	29.8	+19 01.0	260	22.7	+22 13.0
12	357	36.4	33 49.6	-14 37.9		76 48.2	-23 26.8	26.8	226	32.4	+19 01.0	275	25.0	+22 13.0
13	12	38.9	48 49.1	37.1		91 48.9	26.7	26.7	241	34.9	01.1	290	27.4	13.0
14	27	41.3	63 48.6	36.3		106 49.7	26.7	26.7	256	37.5	01.1	305	29.7	13.0
15	42	43.8	78 48.1	35.5		121 50.4	26.6	26.6	271	40.1	01.1	320	32.0	13.0
16	57	46.3	93 47.6	34.6		136 51.2	26.5	26.5	286	42.7	01.2	335	34.4	13.0
17	72	48.7	108 47.1	-14 33.8		151 51.9	-23 26.5	26.5	301	45.3	+19 01.2	350	36.7	+22 13.0
18	87	51.2	123 46.6	-14 33.0		166 52.7	-23 26.4	26.4	316	47.9	+19 01.2	5 39.0	+22 13.1	
19	102	53.7	138 46.1	32.2		181 53.4	26.3	26.3	331	50.4	01.2	20 41.4	13.1	
20	117	56.1	153 45.6	31.3		196 54.2	26.3	26.3	346	53.0	01.3	35 43.7	13.1	
21	132	58.6	168 45.1	30.5		211 54.9	26.2	26.2	1 55.6	01.3	01.3	50 46.0	13.1	
22	148	01.0	183 44.6	29.7		226 55.6	26.1	26.1	16 58.2	01.3	01.3	65 48.4	13.1	
23	163	03.5	198 44.1	28.8		241 56.4	26.1	26.1	32 00.8	01.4	01.4	80 50.7	13.1	
24	178	06.0	213 43.6	-14 28.0		256 57.1	-23 26.0	26.0	47 03.3	+19 01.4		95 53.0	+22 13.2	
Dif	—		-5 +8			+7 +1			+26 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 07 ^m 3			Edad: 17 ^d 9 PHE { SD: 16:5 PMG: 2 ^h 30 ^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	m
0	178	08.2	-0 01.0	323	50.5	-11 23.8	60 N	18 16	18 58	19 48	23 24 106	7 03	7	
1	193	08.4	+0 00.0	338	18.1	86 38.8	58	15	55	42	13 100	11 12		
2	208	08.6	+0 01.0	352	45.7	86 -11 53.8	56	15	52	36	23 03 95	18 16		
3	223	08.8	02.0	7	13.2	85 -12 08.6	54	14	50	32	22 54 92	24 19		
4	238	09.0	03.0	21	40.7	85 23.4	52	14	48	28	46 89	30 22		
5	253	09.2	+0 04.0	36	08.1	84 -12 38.1	50	18 14	18 46	19 24	22 39 86	7 35	24	
6	268	09.4	+0 04.9	50	35.5	84 -12 52.7	45	18 13	18 42	19 17	22 24 81	7 46	30	
7	283	09.5	05.9	65	02.9	84 -13 07.2	40	13	40	11	12 76	7 55	34	
8	298	09.7	06.9	79	30.2	83 21.7	35	12	37	07	22 02 73	8 03	38	
9	313	09.9	07.9	93	57.4	82 36.0	30	12	36	19 03	21 53 70	10 41		
10	328	10.1	08.9	108	24.6	82 -13 50.3	20	11	33	18 59	37 65	22 47		
11	343	10.3	+0 09.9	122	51.8	82 -14 04.4	10 N	18 11	18 32	18 56	21 24 61	8 33	51	
12	358	10.5	+0 10.9	137	18.9	81 -14 18.5	0	18 11	18 31	18 55	21 12 56	8 43	55	
13	13	10.7	11.9	151	45.9	80 32.5	10 S	10	31	56	20 59 53	8 53	60	
14	28	10.9	12.8	166	12.9	80 -14 46.3	20	10	32	18 58	46 49	9 04	64	
15	43	11.0	13.8	180	39.9	80 -15 00.1	30	10	34	19 02	32 43	16 70		
16	58	11.2	14.8	195	06.8	79 13.8	35	11	36	05	23 41	23 74		
17	73	11.4	+0 15.8	209	33.7	79 -15 27.3	40	18 11	18 38	19 09	20 13 38	9 32	77	
18	88	11.6	+0 16.8	224	00.5	78 -15 40.8	45	18 11	18 40	19 14	20 02 33	9 41	82	
19	103	11.8	17.8	238	27.2	77 -15 54.2	50	11	43	21	19 49 27	53 87		
20	118	12.0	18.8	252	53.9	77 -16 07.4	52	11	45	25	42 26	9 59	89	
21	133	12.2	19.8	267	20.6	77 20.5	54	11	47	28	36 22	10 05	93	
22	148	12.3	20.7	281	47.2	76 33.6	56	12	49	33	28 19	11 97		
23	163	12.5	21.7	296	13.8	76 46.5	58	12	51	37	19 15	19 101		
24	178	12.7	+0 22.7	310	40.3	75 -16 59.3	60 S	18 12	18 53	19 43	19 10 9	10 28	106	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 05 ^m 6		Mag: -4.0 PMG: 9 ^h 45 ^m		Mag: +0.7 PMG: 6 ^h 52 ^m		Mag: -2.4 PMG: 20 ^h 48 ^m		Mag: +0.1 PMG: 17 ^h 34 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	178	06.0	213	43.6 -14 28.0	256	57.1 -23 26.0	47	03.3 +19 01.4	95	53.0 +22 13.2
1	193	08.4	228	43.1 27.2	271	57.9 25.9	62	05.9 01.4	110	55.4 13.2
2	208	10.9	243	42.6 26.3	286	58.6 25.8	77	08.5 01.4	125	57.7 13.2
3	223	13.4	258	42.1 25.5	301	59.4 25.8	92	11.1 01.5	141	00.0 13.2
4	238	15.8	273	41.6 24.7	317	00.1 25.7	107	13.6 01.5	156	02.4 13.2
5	253	18.3	288	41.1 -14 23.8	332	00.9 -23 25.6	122	16.2 +19 01.5	171	04.7 +22 13.2
6	268	20.8	303	40.6 -14 23.0	347	01.6 -23 25.6	137	18.8 +19 01.5	186	07.0 +22 13.2
7	283	23.2	318	40.1 22.2	2	02.4 25.5	152	21.4 01.6	201	09.4 13.3
8	298	25.7	333	39.6 21.3	17	03.1 25.4	167	23.9 01.6	216	11.7 13.3
9	313	28.2	348	39.1 20.5	32	03.9 25.4	182	26.5 01.6	231	14.0 13.3
10	328	30.6	3	38.6 19.6	47	04.6 25.3	197	29.1 01.7	246	16.4 13.3
11	343	33.1	18	38.1 -14 18.8	62	05.4 -23 25.2	212	31.7 +19 01.7	261	18.7 +22 13.3
12	358	35.5	33	37.6 -14 18.0	77	06.1 -23 25.1	227	34.3 +19 01.7	276	21.0 +22 13.3
13	13	38.0	48	37.1 17.1	92	06.9 25.1	242	36.8 01.7	291	23.4 13.3
14	28	40.5	63	36.6 16.3	107	07.6 25.0	257	39.4 01.8	306	25.7 13.4
15	43	42.9	78	36.1 15.4	122	08.3 24.9	272	42.0 01.8	321	28.0 13.4
16	58	45.4	93	35.6 14.6	137	09.1 24.8	287	44.5 01.8	336	30.4 13.4
17	73	47.9	108	35.1 -14 13.8	152	09.8 -23 24.8	302	47.1 +19 01.8	351	32.7 +22 13.4
18	88	50.3	123	34.6 -14 12.9	167	10.6 -23 24.7	317	49.7 +19 01.9	6	35.0 +22 13.4
19	103	52.8	138	34.1 12.1	182	11.3 24.6	332	52.3 01.9	21	37.3 13.4
20	118	55.3	153	33.6 11.2	197	12.1 24.6	347	54.8 01.9	36	39.7 13.4
21	133	57.7	168	33.2 10.4	212	12.8 24.5	2	57.4 01.9	51	42.0 13.5
22	149	00.2	183	32.7 09.5	227	13.6 24.4	18	00.0 02.0	66	44.3 13.5
23	164	02.6	198	32.2 08.7	242	14.3 24.3	33	02.6 02.0	81	46.7 13.5
24	179	05.1	213	31.7 -14 07.8	257	15.1 -23 24.3	48	05.1 +19 02.0	96	49.0 +22 13.5
Dif	—		-5 +8		+7 +1		+26 0		+23 0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 0			Edad: 18 ^d 9 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 0 20 ^h : 59 ^m 8 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	178	12.7	+0	22.7	310	40.3	74	-16	59.3	4	25	5	16	5	57	7	10
1	193	12.9			325	06.7	74	-17	12.0 ¹²⁷	32	19			58			23
2	208	13.1			339	33.1	74		24.5 ¹²⁵	37	21			58			34
3	223	13.3			353	59.5	74		37.0 ¹²⁵	42	23			59			43
4	238	13.5			8	25.7	72	-17	49.3 ¹²³	46	26	5	59				52
5	253	13.7	+0	27.7	22	52.0	73	-18	01.5 ¹²²	4	49	5	27	6	00		7
6	268	13.8	+0	28.6	37	18.2	72	-18	13.6 ¹²¹	4	57	5	31	6	00	23	45
7	283	14.0			51	44.3	71		25.6 ¹²⁰	5	02			01		28	73
8	298	14.2			66	10.4	71		37.4 ¹¹⁸	07	36			02		15	70
9	313	14.4			80	36.4	70	-18	49.1 ¹¹⁷	10	38			02		23	03
10	328	14.6			95	02.4	70	-19	00.7 ¹¹⁶	15	41			03		22	42
11	343	14.8	+0	33.6	109	28.4	70	-19	12.1 ¹¹⁴	5	18	5	42	6	03	22	25
12	358	15.0	+0	34.6	123	54.3	69	-19	23.5 ¹¹⁴	5	19	5	43	6	04	22	08
13	13	15.2			138	20.1	68		34.6 ¹¹¹	19		43		04		21	52
14	28	15.3			152	45.9	68		45.7 ¹¹¹	17	42			04		35	52
15	43	15.5			167	11.6	67	-19	56.6 ¹⁰⁹	13	40			04		15	49
16	58	15.7			181	37.3	67	-20	07.4 ¹⁰⁸	10	39			04		21	04
17	73	15.9	+0	39.5	196	02.9	66	-20	18.0 ¹⁰⁶	5	06	5	37	6	04	20	51
18	88	16.1	+0	40.5	210	28.5	66	-20	28.5 ¹⁰⁵	5	01	5	35	6	04	20	35
19	103	16.3			224	54.1	66		38.9 ¹⁰⁴	4	54	32		04		16	36
20	118	16.5			239	19.6	65		49.1 ¹⁰²	51	30			04		20	08
21	133	16.7			253	45.0	64	-20	59.2 ¹⁰¹	47	29			04		19	58
22	148	16.8			268	10.4	64	-21	09.2 ¹⁰⁰	43	27			04		47	27
23	163	17.0			282	35.8	64		19.0 ⁹⁸	38	25			04		34	23
24	178	17.2	+0	46.4	297	01.1	63	-21	28.6 ⁹⁶	4	32	5	22	6	04	19	19

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 01 ^m 7		Mag: -4.0 PMG: 9 ^h 46 ^m			Mag: +0.7 PMG: 6 ^h 51 ^m			Mag: -2.4 PMG: 20 ^h 44 ^m			Mag: +0.1 PMG: 17 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	179	05.1	213	31.7	-14	07.8	257	15.1	-23	24.3	48	05.1	+19	02.0	96	49.0	+22	13.5
1	194	07.6	228	31.2		07.0	272	15.8		24.2	63	07.7		02.0	111	51.3		13.5
2	209	10.0	243	30.7		06.1	287	16.6		24.1	78	10.3		02.1	126	53.7		13.5
3	224	12.5	258	30.2		05.3	302	17.3		24.0	93	12.8		02.1	141	56.0		13.6
4	239	15.0	273	29.7		04.4	317	18.1		23.9	108	15.4		02.1	156	58.3		13.6
5	254	17.4	288	29.2	-14	03.6	332	18.8	-23	23.9	123	18.0	+19	02.1	172	00.6	+22	13.6
6	269	19.9	303	28.7	-14	02.7	347	19.6	-23	23.8	138	20.5	+19	02.2	187	03.0	+22	13.6
7	284	22.4	318	28.2		01.9	2	20.3		23.7	153	23.1		02.2	202	05.3		13.6
8	299	24.8	333	27.7		01.0	17	21.1		23.6	168	25.7		02.2	217	07.6		13.6
9	314	27.3	348	27.3	-14	00.2	32	21.8		23.6	183	28.2		02.2	232	09.9		13.6
10	329	29.8	3	26.8	-13	59.3	47	22.6		23.5	198	30.8		02.3	247	12.3		13.7
11	344	32.2	18	26.3	-13	58.4	62	23.3	-23	23.4	213	33.4	+19	02.3	262	14.6	+22	13.7
12	359	34.7	33	25.8	-13	57.6	77	24.1	-23	23.3	228	35.9	+19	02.3	277	16.9	+22	13.7
13	14	37.1	48	25.3		56.7	92	24.8		23.2	243	38.5		02.3	292	19.3		13.7
14	29	39.6	63	24.8		55.9	107	25.6		23.2	258	41.1		02.4	307	21.6		13.7
15	44	42.1	78	24.3		55.0	122	26.3		23.1	273	43.6		02.4	322	23.9		13.7
16	59	44.5	93	23.8		54.2	137	27.1		23.0	288	46.2		02.4	337	26.2		13.7
17	74	47.0	108	23.3	-13	53.3	152	27.8	-23	22.9	303	48.8	+19	02.4	352	28.6	+22	13.8
18	89	49.5	123	22.9	-13	52.4	167	28.6	-23	22.8	318	51.3	+19	02.5	7	30.9	+22	13.8
19	104	51.9	138	22.4		51.6	182	29.3		22.8	333	53.9		02.5	22	33.2		13.8
20	119	54.4	153	21.9		50.7	197	30.1		22.7	348	56.5		02.5	37	35.5		13.8
21	134	56.9	168	21.4		49.8	212	30.8		22.6	3	59.0		02.5	52	37.9		13.8
22	149	59.3	183	20.9		49.0	227	31.6		22.5	19	01.6		02.6	67	40.2		13.8
23	165	01.8	198	20.4		48.1	242	32.3		22.4	34	04.2		02.6	82	42.5		13.9
24	180	04.3	213	19.9	-13	47.2	257	33.1	-23	22.4	49	06.7	+19	02.6	97	44.8	+22	13.9
Dif	—		-5		+9		+7		+1		+26		0		+23			0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 06 ^m 7			Edad: 19 ^d 9 PHE { 4 ^h : 59'6 12 ^h : 59'3 20 ^h : 59'1 PMG: 4 ^h 22 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	17.2	+0	46.4	297	01.1	-21	28.6	60 N	18	21	19	03	19	53
1	193	17.4		47.4	311	26.4	63	38.1	58	20	18	59	47	0	53
2	208	17.6		48.4	325	51.6	62	47.5	56	19	56	41	38	89	7
3	223	17.8		49.4	340	16.8	62	-21	56.7	54	18	54	36	26	85
4	238	18.0		50.3	354	41.9	61	-22	05.7	52	18	51	32	15	83
5	253	18.2	+0	51.3	9	07.1	62	-22	14.6	50	18	17	18	49	19
6	268	18.4	+0	52.3	23	32.1	60	-22	23.4	45	18	16	18	45	19
7	283	18.5		53.3	37	57.2	61	32.0	40	15	42	13	**	**	**
8	298	18.7		54.3	52	22.1	59	40.4	35	14	39	09	**	**	**
9	313	18.9		55.3	66	47.1	60	48.7	30	13	37	19	05	**	**
10	328	19.1		56.3	81	12.0	59	-22	56.9	20	12	34	18	59	23
11	343	19.3	+0	57.2	95	36.9	59	-23	04.9	10 N	18	11	18	32	18
12	358	19.5	+0	58.2	110	01.7	58	-23	12.7	0	18	10	18	31	18
13	13	19.7	+0	59.2	124	26.6	59	20.4	10 S	09	30	55	22	48	57
14	28	19.9	+1	00.2	138	51.4	58	27.9	20	09	31	18	56	27	56
15	43	20.0		01.2	153	16.1	57	35.2	30	08	32	19	00	22	04
16	58	20.2		02.2	167	40.8	57	42.4	35	08	33	02	21	50	53
17	73	20.4	+1	03.2	182	05.5	57	-23	49.5	40	18	07	18	34	19
18	88	20.6	+1	04.1	196	30.2	57	-23	56.3	45	18	07	18	36	19
19	103	20.8		05.1	210	54.9	57	-24	03.0	50	07	39	17	20	52
20	118	21.0		06.1	225	19.5	56	09.6	52	07	40	20	41	45	12
21	133	21.2		07.1	239	44.1	56	16.0	54	06	42	23	28	43	13
22	148	21.4		08.1	254	08.7	56	22.2	56	06	43	27	20	14	40
23	163	21.6		09.1	268	33.2	55	28.3	58	06	45	31	19	57	37
24	178	21.7	+1	10.1	282	57.8	56	-24	34.2	60 S	18	06	18	47	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 57 ^m 8		Mag: -4.0 PMG: 9 ^h 47 ^m		Mag: +0.6 PMG: 6 ^h 49 ^m		Mag: -2.4 PMG: 20 ^h 40 ^m		Mag: +0.1 PMG: 17 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	180	04.3	213	19.9	-13	47.2	257	33.1	-23	22.4
1	195	06.7	228	19.5		46.4	272	33.8		22.3
2	210	09.2	243	19.0		45.5	287	34.6		22.2
3	225	11.6	258	18.5		44.6	302	35.3		22.1
4	240	14.1	273	18.0		43.8	317	36.1		22.0
5	255	16.6	288	17.5	-13	42.9	332	36.8	-23	21.9
6	270	19.0	303	17.0	-13	42.0	347	37.6	-23	21.9
7	285	21.5	318	16.6		41.2	2	38.3		21.8
8	300	24.0	333	16.1		40.3	17	39.1		21.7
9	315	26.4	348	15.6		39.4	32	39.8		21.6
10	330	28.9	3	15.1		38.6	47	40.6		21.5
11	345	31.4	18	14.6	-13	37.7	62	41.3	-23	21.4
12	0	33.8	33	14.1	-13	36.8	77	42.1	-23	21.4
13	15	36.3	48	13.7		35.9	92	42.8		21.3
14	30	38.7	63	13.2		35.1	107	43.6		21.2
15	45	41.2	78	12.7		34.2	122	44.3		21.1
16	60	43.7	93	12.2		33.3	137	45.1		21.0
17	75	46.1	108	11.7	-13	32.4	152	45.8	-23	20.9
18	90	48.6	123	11.3	-13	31.6	167	46.6	-23	20.8
19	105	51.1	138	10.8		30.7	182	47.4		20.7
20	120	53.5	153	10.3		29.8	197	48.1		20.7
21	135	56.0	168	09.8		28.9	212	48.9		20.6
22	150	58.5	183	09.4		28.0	227	49.6		20.5
23	166	00.9	198	08.9		27.2	242	50.4		20.4
24	181	03.4	213	08.4	-13	26.3	257	51.1	-23	20.3
Dif	—		-5	+9		+8	+1	+26		0
									+23	0

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 06 ^m 4			Edad: 20 ^d 9 PHE 4^h: 58'8 12^h: 58'6 20^h: 58'3 SD: 16'1 PMG: 5^h 21^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	178	21.7	+1 10.1	282	57.8	-24	34.2	60 N	4 19	5 09	5 51	2 50	81	7 45	43	
1	193	21.9		297	22.3		39.9	58		25	13		26	77	8 09	47
2	208	22.1		311	46.8		45.5	56	56	31	16		2 07	75	29	48
3	223	22.3		326	11.3		50.9	54	54	36	18		1 51	73	45	50
4	238	22.5		340	35.8		56.1	52	52	41	21		38	71	8 59	51
5	253	22.7	+1 15.0	355	00.3		01.2	51	50	4 45	5 23	5 55	1 26	70	9 11	52
6	268	22.9	+1 16.0	9	24.7		06.1	49	45	4 53	5 27	5 57	1 01	68	9 37	53
7	283	23.1		23	49.2		10.8	47	40	4 59	31	58	0 41	66	9 57	55
8	298	23.2		38	13.6		15.4	46	35	5 04	34	5 59	25	65	10 14	56
9	313	23.4		52	38.1		19.8	44	30		08	36	6 00	0 11	63	28 57
10	328	23.6		67	02.5		24.0	42	20		13	39	01	** ** *	10 53	58
11	343	23.8	+1 20.9	81	27.0		28.1	41	10 N	5 17	5 41	6 02	** ** *	**	11 15	58
12	358	24.0	+1 21.9	95	51.4		32.0	39	0	5 18	5 42	6 03	** ** *	**	11 35	59
13	13	24.2		110	15.8		35.7	37	10 S		19	43	04	23 45	58	
14	28	24.4		124	40.3		39.3	36	20		17	43	05	23 23	58	12 17 60
15	43	24.6		139	04.7		42.7	34	30		14	42	06	22 58	58	42 61
16	58	24.8		153	29.2		45.9	32	35		11	41	06	43	58	12 56 62
17	73	24.9	+1 26.8	167	53.7		49.0	31	40	5 08	5 39	6 06	22 25	59	13 13	62
18	88	25.1	+1 27.8	182	18.1		51.9	29	45	5 03	5 38	6 07	22 04	59	13 34	62
19	103	25.3		196	42.6		54.6	27	50	4 57	35	07	21 38	58	14 00	63
20	118	25.5		211	07.1		57.1	25	52		54	34	08	26	57	12 64
21	133	25.7		225	31.6		59.5	24	54		51	33	08	21 11	58	27 64
22	148	25.9		239	56.2		01.8	23	56		47	31	08	20 54	57	14 43 65
23	163	26.1		254	20.7		03.8	20	58		43	29	08	34	56	15 04 65
24	178	26.3	+1 33.7	268	45.3		05.7	19	60 S	4 38	5 27	6 09	20 08	56	15 29	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 11 ^h 53 ^m 8		Mag: -4.0 PMG: 9 ^h 48 ^m		Mag: +0.6 PMG: 6 ^h 48 ^m		Mag: -2.4 PMG: 20 ^h 36 ^m		Mag: +0.1 PMG: 17 ^h 23 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	181	03.4	213	08.4	-13 26.3	257	51.1	-23 20.3	50	08.1	+19 03.1	98	40.6	+22 14.2		
1	196	05.9	228	07.9		272	51.9		65	10.7		113	42.9			
2	211	08.3	243	07.4		287	52.6		80	13.3		128	45.2			
3	226	10.8	258	07.0		302	53.4		95	15.8		143	47.5			
4	241	13.2	273	06.5		317	54.1		110	18.4		158	49.9			
5	256	15.7	288	06.0	-13 21.9	332	54.9	-23 19.9	125	20.9	+19 03.2	173	52.2	+22 14.3		
6	271	18.2	303	05.5	-13 21.0	347	55.6	-23 19.8	140	23.5	+19 03.3	188	54.5	+22 14.3		
7	286	20.6	318	05.1		2	56.4		155	26.0		203	56.8			
8	301	23.1	333	04.6		17	57.1		170	28.6		218	59.1			
9	316	25.6	348	04.1		32	57.9		185	31.1		234	01.5			
10	331	28.0	3	03.6		47	58.7		200	33.7		249	03.8			
11	346	30.5	18	03.2	-13 16.5	62	59.4	-23 19.3	215	36.2	+19 03.4	264	06.1	+22 14.4		
12	1	33.0	33	02.7	-13 15.6	78	00.2	-23 19.2	230	38.8	+19 03.4	279	08.4	+22 14.4		
13	16	35.4	48	02.2		93	00.9		245	41.3		294	10.7			
14	31	37.9	63	01.7		108	01.7		260	43.9		309	13.0			
15	46	40.4	78	01.3		123	02.4		275	46.4		324	15.4			
16	61	42.8	93	00.8		138	03.2		290	49.0		339	17.7			
17	76	45.3	108	00.3	-13 11.2	153	03.9	-23 18.8	305	51.5	+19 03.5	354	20.0	+22 14.5		
18	91	47.7	122	59.9	-13 10.3	168	04.7	-23 18.7	320	54.1	+19 03.5	9	22.3	+22 14.5		
19	106	50.2	137	59.4		183	05.4		335	56.6		24	24.6			
20	121	52.7	152	58.9		198	06.2		350	59.2		39	27.0			
21	136	55.1	167	58.4		213	07.0		6	01.7		54	29.3			
22	151	57.6	182	58.0		228	07.7		21	04.3		69	31.6			
23	167	00.1	197	57.5		243	08.5		36	06.8		84	33.9			
24	182	02.5	212	57.0	-13 04.9	258	09.2	-23 18.1	51	09.4	+19 03.6	99	36.2	+22 14.6		
Dif	—		-5 +9		+8 +1		+26 0		+23 0							

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0			Edad: 21 ^d 9 PHE	SD: 15 ^h 8				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 06 ^m 1				PMG: 6 ^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	h m m	h m m
0	178	26.3	+1 33.7	268	45.3	-26 05.7	17	60 N	18 26	19 08	19 59	4 11 51	8 28 69		
1	193	26.5		283	09.9	07.4	16	58	24	04	52	3 43 54	8 56 66		
2	208	26.6	35.6	297	34.5	09.0	14	56	23	19 00	46	22 54	9 17 66		
3	223	26.8	36.6	311	59.1	10.4	14	54	22	18 58	40	3 04 55	35 65		
4	238	27.0	37.6	326	23.8	11.6	12	52	21	55	35	2 49 55	9 50 64		
5	253	27.2	+1 38.6	340	48.5	-26 12.6	10	50	18 20	18 53	19 31	2 36 56	10 03 64		
6	268	27.4	+1 39.6	355	13.2	-26 13.5	9	45	18 18	18 48	19 22	2 09 56	10 30 63		
7	283	27.6	40.6	9	38.0	14.3	8	40	17	44	16	1 47 57	10 52 61		
8	298	27.8	41.5	24	02.8	14.8	5	35	15	41	10	30 57	11 10 60		
9	313	28.0	42.5	38	27.6	15.2	4	30	14	38	06	1 14 58	25 60		
10	328	28.2	43.5	52	52.5	15.5	3	20	12	34	19 00	0 49 58	11 51 59		
11	343	28.3	+1 44.5	67	17.4	-26 15.5	0	10 N	18 11	18 32	18 56	0 26 59	12 13 58		
12	358	28.5	+1 45.5	81	42.3	-26 15.4	2	0	18 09	18 30	18 54	0 06 58	12 34 57		
13	13	28.7	46.5	96	07.3	15.2	1	10 S	08	29	53	** ** *	12 55 56		
14	28	28.9	47.4	110	32.3	14.8	4	20	07	29	54	** ** *	13 17 55		
15	43	29.1	48.4	124	57.4	14.2	6	30	06	29	57	23 56 61	43 54		
16	58	29.3	49.4	139	22.5	13.4	8	35	05	30	18 59	41 62	13 58 53		
17	73	29.5	+1 50.4	153	47.7	-26 12.6	8	40	18 04	18 31	19 03	23 24 63	14 15 53		
18	88	29.7	+1 51.4	168	12.9	-26 11.5	11	45	18 03	18 33	19 07	23 03 65	14 36 51		
19	103	29.9	52.4	182	38.1	10.3	12	50	02	34	12	22 36 67	15 03 49		
20	118	30.0	53.3	197	03.5	08.9	14	52	02	35	15	23 69	16 48		
21	133	30.2	54.3	211	28.8	07.4	15	54	01	37	18	22 09 70	31 47		
22	148	30.4	55.3	225	54.3	05.7	17	56	01	38	21	21 51 72	15 48 45		
23	163	30.6	56.3	240	19.7	03.9	18	58	00	39	26	30 75	16 09 43		
24	178	30.8	+1 57.3	254	45.3	-26 01.9	20	60 S	18 00	18 41	19 30	21 04 79	16 36 38		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 49 ^m 9		Mag: -4.0 PMG: 9 ^h 49 ^m		Mag: +0.6 PMG: 6 ^h 47 ^m		Mag: -2.4 PMG: 20 ^h 32 ^m		Mag: +0.1 PMG: 17 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	182	02.5	212	57.0	258	09.2	51	09.4	99	36.2
1	197	05.0	227	56.6	273	10.0	66	11.9	114	38.5
2	212	07.5	242	56.1	288	10.7	81	14.5	129	40.8
3	227	09.9	257	55.6	303	11.5	96	17.0	144	43.2
4	242	12.4	272	55.2	318	12.2	111	19.6	159	45.5
5	257	14.9	287	54.7	333	13.0	126	22.1	174	47.8
6	272	17.3	302	54.2	348	13.8	141	24.6	189	50.1
7	287	19.8	317	53.8	3	14.5	156	27.2	204	52.4
8	302	22.2	332	53.3	18	15.3	171	29.7	219	54.7
9	317	24.7	347	52.8	33	16.0	186	32.3	234	57.1
10	332	27.2	2	52.4	48	16.8	201	34.8	249	59.4
11	347	29.6	17	51.9	63	17.5	216	37.4	265	01.7
12	2	32.1	32	51.4	78	18.3	231	39.9	280	04.0
13	17	34.6	47	51.0	93	19.1	246	42.4	295	06.3
14	32	37.0	62	50.5	108	19.8	261	45.0	310	08.6
15	47	39.5	77	50.0	123	20.6	276	47.5	325	10.9
16	62	42.0	92	49.6	138	21.3	291	50.1	340	13.2
17	77	44.4	107	49.1	153	22.1	306	52.6	355	15.6
18	92	46.9	122	48.6	168	22.8	321	55.2	10	17.9
19	107	49.4	137	48.2	183	23.6	336	57.7	25	20.2
20	122	51.8	152	47.7	198	24.4	352	00.2	40	22.5
21	137	54.3	167	47.2	213	25.1	7	02.8	55	24.8
22	152	56.7	182	46.8	228	25.9	22	05.3	70	27.1
23	167	59.2	197	46.3	243	26.6	37	07.9	85	29.4
24	183	01.7	212	45.9	258	27.4	52	10.4	100	31.7
Dif	—		-5	+9	+8	+1	+25	0	+23	0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16:0 PMG: 12 ^h 05 ^m 8			Edad: 22 ^d 9 PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/9 SD: 15:6 PMG: 7 ^h 18 ^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	178	30.8	+1	57.3	254	45.3	-26	01.9	60 N	4	12	5	03	5	02	28	9	37	86					
1	193	31.0		58.3	269	10.9	66	-25	59.7	58	19		07	4	37	32	10	02	81					
2	208	31.2	+1	59.2	283	36.5	66		57.4	56	25		10	4	16	36		23	77					
3	223	31.4	+2	00.2	298	02.3	68		54.9	54	31		13	3	59	38		40	74					
4	238	31.6		01.2	312	28.0	67		52.3	52	36		16		44	41	10	54	72					
5	253	31.7	+2	02.2	326	53.9	69	-25	49.6	50	4	40	5	19	3	32	42	11	07	70				
6	268	31.9	+2	03.2	341	19.8	69	-25	46.7	45	4	49	5	24	3	05	45	11	33	67				
7	283	32.1		04.1	355	45.8	70		43.6	40	4	56		28	2	44	48	11	53	65				
8	298	32.3		05.1	10	11.8	70		40.4	35	5	01		31		27	49	12	10	63				
9	313	32.5		06.1	24	37.9	71		37.0	30		05		33	2	12	50		25	61				
10	328	32.7		07.1	39	04.1	72		33.5	20		12		37	1	47	52	12	50	58				
11	343	32.9	+2	08.1	53	30.4	73	-25	29.9	10 N	5	16		5	40	1	25	54	13	11	56			
12	358	33.1	+2	09.1	67	56.7	73	-25	26.1	0	5	18		5	42	1	04	56	13	31	54			
13	13	33.3		10.0	82	23.1	74		22.2	10 S		19		43		0	43	58	13	51	52			
14	28	33.4		11.0	96	49.6	75		18.1	20		18		43	0	21	59		14	12	50			
15	43	33.6		12.0	111	16.2	76		13.9	30		15		43	0	7	***	***	***		37	46		
16	58	33.8		13.0	125	42.8	76		09.5	35		13		42	0	8	***	***	***		14	51	45	
17	73	34.0	+2	14.0	140	09.5	77	-25	05.0	40	5	10		5	41	6	0	8	***	***	***	15	08	42
18	88	34.2	+2	14.9	154	36.3	78	-25	00.4	45	5	06		5	40	6	0	9	***	***	***	15	27	41
19	103	34.4		15.9	169	03.1	78	-24	55.6	50	5	01		38	10		23	43	73	15	52	37		
20	118	34.6		16.9	183	30.1	80		50.7	52	4	58		37	11		32	74	16	04	35			
21	133	34.8		17.9	197	57.1	80		45.7	54		55		36	12		19	76		18	32			
22	148	35.0		18.9	212	24.2	81		40.5	56		51		35	12		23	03	80		33	30		
23	163	35.1		19.8	226	51.4	82		35.2	58		47		34	13		22	45	84		16	52	25	
24	178	35.3	+2	20.8	241	18.7	83	-24	29.7	60 S	4	43		5	32	6	13	22	23	89	17	14	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 46 ^m 0		Mag: -4.0 PMG: 9 ^h 49 ^m		Mag: +0.6 PMG: 6 ^h 46 ^m		Mag: -2.4 PMG: 20 ^h 28 ^m		Mag: +0.1 PMG: 17 ^h 15 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	183	01.7	212	45.9	-12	43.2	258	27.4	-23	15.7	52	10.4	+19	04.1	100	31.7	+22	15.0
1	198	04.1	227	45.4		42.3	273	28.1		15.6	67	12.9		04.1	115	34.1		15.0
2	213	06.6	242	44.9		41.4	288	28.9		15.5	82	15.5		04.1	130	36.4		15.0
3	228	09.1	257	44.5		40.4	303	29.7		15.4	97	18.0		04.1	145	38.7		15.0
4	243	11.5	272	44.0		39.5	318	30.4		15.3	112	20.6		04.1	160	41.0		15.0
5	258	14.0	287	43.6	-12	38.6	333	31.2	-23	15.2	127	23.1	+19	04.1	175	43.3	+22	15.0
6	273	16.5	302	43.1	-12	37.7	348	31.9	-23	15.1	142	25.6	+19	04.2	190	45.6	+22	15.1
7	288	18.9	317	42.6		36.8	3	32.7		15.0	157	28.2		04.2	205	47.9		15.1
8	303	21.4	332	42.2		35.9	18	33.5		14.9	172	30.7		04.2	220	50.2		15.1
9	318	23.8	347	41.7		34.9	33	34.2		14.8	187	33.2		04.2	235	52.5		15.1
10	333	26.3	2	41.3		34.0	48	35.0		14.7	202	35.8		04.2	250	54.8		15.1
11	348	28.8	17	40.8	-12	33.1	63	35.7	-23	14.6	217	38.3	+19	04.2	265	57.2	+22	15.1
12	3	31.2	32	40.3	-12	32.2	78	36.5	-23	14.5	232	40.8	+19	04.2	280	59.5	+22	15.2
13	18	33.7	47	39.9		31.3	93	37.3		14.4	247	43.4		04.3	296	01.8		15.2
14	33	36.2	62	39.4		30.3	108	38.0		14.3	262	45.9		04.3	311	04.1		15.2
15	48	38.6	77	39.0		29.4	123	38.8		14.2	277	48.4		04.3	326	06.4		15.2
16	63	41.1	92	38.5		28.5	138	39.5		14.1	292	51.0		04.3	341	08.7		15.2
17	78	43.6	107	38.0	-12	27.6	153	40.3	-23	14.0	307	53.5	+19	04.3	356	11.0	+22	15.2
18	93	46.0	122	37.6	-12	26.7	168	41.1	-23	13.9	322	56.0	+19	04.3	11	13.3	+22	15.2
19	108	48.5	137	37.1		25.7	183	41.8		13.8	337	58.6		04.4	26	15.6		15.3
20	123	51.0	152	36.7		24.8	198	42.6		13.7	353	01.1		04.4	41	17.9		15.3
21	138	53.4	167	36.2		23.9	213	43.3		13.5	8	03.6		04.4	56	20.2		15.3
22	153	55.9	182	35.8		23.0	228	44.1		13.4	23	06.2		04.4	71	22.6		15.3
23	168	58.3	197	35.3		22.0	243	44.9		13.3	38	08.7		04.4	86	24.9		15.3
24	184	00.8	212	34.9	-12	21.1	258	45.6	-23	13.2	53	11.2	+19	04.4	101	27.2	+22	15.3
Dif	—		-5		+9		+8		+1		+25		0		+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 5			Edad: 23 ^d 9 PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'2 SD: 15'5 PMG: 8 ^h 12 ^m R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	35.3	+2 20.8	241	18.7	-24 29.7	55	60 N	18 31	19 13	20 05	5 30 14	11 03 92	
1	193	35.5		255	46.0	83	24.2	58	29	08	19 57	5 09 20	23 86	
2	208	35.7	22.8	270	13.5	85	18.5	56	27	05	50	4 52 23	40 82	
3	223	35.9	23.8	284	41.0	85	12.6	54	26	19 01	44	37 27	11 54 79	
4	238	36.1	24.7	299	08.6	86	06.7	52	24	18 58	39	25 29	12 06 76	
5	253	36.3	+2 25.7	313	36.3	87	-24 00.6	50	18 23	18 56	19 35	4 14 31	12 17 74	
6	268	36.5	+2 26.7	328	04.0	87	-23 54.4	45	18 21	18 50	19 25	3 50 36	12 40 69	
7	283	36.7	27.7	342	31.9	89	48.0	40	19	46	18	32 38	12 58 65	
8	298	36.8	28.7	356	59.9	90	41.6	35	17	42	12	16 41	13 13 63	
9	313	37.0	29.6	11	27.9	90	35.0	30	15	39	07	3 02 43	26 60	
10	328	37.2	30.6	25	56.0	91	28.3	20	13	35	19 01	2 39 46	13 48 57	
11	343	37.4	+2 31.6	40	24.2	92	-23 21.5	10 N	18 11	18 32	18 56	2 19 49	14 07 54	
12	358	37.6	+2 32.6	54	52.5	93	-23 14.6	0	18 09	18 29	18 53	2 00 52	14 25 50	
13	13	37.8	33.6	69	20.9	94	07.5	10 S	07	28	52	1 41 54	14 43 47	
14	28	38.0	34.5	83	49.4	95	-23 00.3	20	05	27	53	1 20 58	15 02 44	
15	43	38.2	35.5	98	18.0	96	-22 53.0	30	03	27	55	0 57 61	23 40	
16	58	38.4	36.5	112	46.6	96	45.6	35	02	27	57	43 63	36 38	
17	73	38.5	+2 37.5	127	15.3	97	-22 38.1	40	18 01	18 28	18 59	0 27 65	15 50 35	
18	88	38.7	+2 38.5	141	44.2	99	-22 30.5	45	18 00	18 29	19 03	0 08 68	16 08 31	
19	103	38.9	39.4	156	13.1	99	22.8	50	17 58	30	08	** ** *	29 27	
20	118	39.1	40.4	170	42.1	100	14.9	52	57	31	10	** ** *	39 25	
21	133	39.3	41.4	185	11.2	101	-22 07.0	54	57	32	13	** ** *	16 50 22	
22	148	39.5	42.4	199	40.4	102	-21 58.9	56	56	33	16	** ** *	17 03 19	
23	163	39.7	43.3	214	09.7	103	50.8	58	55	34	20	** ** *	17 16	
24	178	39.9	+2 44.3	228	39.1	104	-21 42.5	60 S	17 54	18 35	19 24	23 52 90	17 35 11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 11 ^h 42 ^m 0		Mag: -4.0 PMG: 9 ^h 50 ^m			Mag: +0.6 PMG: 6 ^h 45 ^m			Mag: -2.4 PMG: 20 ^h 24 ^m			Mag: +0.1 PMG: 17 ^h 12 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	184	00.8	212 34.9	-12 21.1	258 45.6	-23 13.2	53 11.2	+19 04.4	101 27.2	+22 15.3				
1	199	03.3	227 34.4	20.2	273 46.4	13.1	68 13.8	04.4	116 29.5	15.4				
2	214	05.7	242 34.0	19.2	288 47.1	13.0	83 16.3	04.5	131 31.8	15.4				
3	229	08.2	257 33.5	18.3	303 47.9	12.9	98 18.8	04.5	146 34.1	15.4				
4	244	10.7	272 33.0	17.4	318 48.7	12.8	113 21.4	04.5	161 36.4	15.4				
5	259	13.1	287 32.6	-12 16.5	333 49.4	-23 12.7	128 23.9	+19 04.5	176 38.7	+22 15.4				
6	274	15.6	302 32.1	-12 15.5	348 50.2	-23 12.6	143 26.4	+19 04.5	191 41.0	+22 15.4				
7	289	18.1	317 31.7	14.6	3 50.9	12.5	158 28.9	04.5	206 43.3	15.5				
8	304	20.5	332 31.2	13.7	18 51.7	12.3	173 31.5	04.5	221 45.6	15.5				
9	319	23.0	347 30.8	12.7	33 52.5	12.2	188 34.0	04.6	236 47.9	15.5				
10	334	25.5	2 30.3	11.8	48 53.2	12.1	203 36.5	04.6	251 50.2	15.5				
11	349	27.9	17 29.9	-12 10.9	63 54.0	-23 12.0	218 39.1	+19 04.6	266 52.5	+22 15.5				
12	4 30.4	32 29.4	-12 09.9	78 54.8	-23 11.9	233 41.6	+19 04.6	281 54.8	+22 15.5					
13	19 32.8	47 29.0	09.0	93 55.5	11.8	248 44.1	04.6	296 57.1	15.5					
14	34 35.3	62 28.5	08.1	108 56.3	11.7	263 46.6	04.6	311 59.4	15.6					
15	49 37.8	77 28.1	07.1	123 57.0	11.6	278 49.2	04.6	327 01.8	15.6					
16	64 40.2	92 27.6	06.2	138 57.8	11.5	293 51.7	04.7	342 04.1	15.6					
17	79 42.7	107 27.2	-12 05.2	153 58.6	-23 11.3	308 54.2	+19 04.7	357 06.4	+22 15.6					
18	94 45.2	122 26.7	-12 04.3	168 59.3	-23 11.2	323 56.7	+19 04.7	12 08.7	+22 15.6					
19	109 47.6	137 26.3	03.4	184 00.1	11.1	338 59.3	04.7	27 11.0	15.6					
20	124 50.1	152 25.8	02.4	199 00.9	11.0	354 01.8	04.7	42 13.3	15.7					
21	139 52.6	167 25.4	01.5	214 01.6	10.9	9 04.3	04.7	57 15.6	15.7					
22	154 55.0	182 24.9	-12 00.5	229 02.4	10.8	24 06.8	04.7	72 17.9	15.7					
23	169 57.5	197 24.5	-11 59.6	244 03.1	10.7	39 09.4	04.8	87 20.2	15.7					
24	185 00.0	212 24.0	-11 58.7	259 03.9	-23 10.6	54 11.9	+19 04.8	102 22.5	+22 15.7					
Dif	—		-5 +9		+8 +1		+25 0		+23 0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 05 ^m 2			Edad: 24 ^d 9 PHE { 4 ^h : 56'0 12 ^h : 55'9 20 ^h : 55'7 SD: 15'3 PMG: 9 ^h 04 ^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	178	39.9	+2	44.3	228	39.1	-21	42.5	4	05	4	57	5	39	5	44
1	193	40.1		45.3	243	08.5 ¹⁰⁴		34.1 ⁸⁴	13	5	01	41	29	12	12	49
2	208	40.2		46.3	257	38.1 ¹⁰⁶		25.7 ⁸⁴	20	05	42	15	16	13	02	81
3	223	40.4		47.3	272	07.7 ¹⁰⁶		17.1 ⁸⁶	26	08	44	5	04	19	13	78
4	238	40.6		48.2	286	37.4 ¹⁰⁷	-21	08.4 ⁸⁷	31	11	45	4	54	21	22	75
5	253	40.8	+2	49.2	301	07.2 ¹⁰⁸	-20	59.7 ⁸⁷	4	35	5	14	5	47	4	45
6	268	41.0	+2	50.2	315	37.1 ¹⁰⁹	-20	50.8 ⁸⁹	4	45	5	20	5	49	4	26
7	283	41.2		51.2	330	07.1 ¹¹⁰		41.8 ⁹⁰	52	24	51	4	10	32	14	03
8	298	41.4		52.1	344	37.2 ¹¹¹		32.8 ⁹⁰	4	58	28	53	3	57	35	16
9	313	41.6		53.1	359	07.4 ¹¹²		23.6 ⁹²	5	03	31	55	4	5	38	26
10	328	41.8		54.1	13	37.7 ¹¹³		14.4 ⁹²	10	36	5	58	25	42	14	45
11	343	41.9	+2	55.1	28	08.0 ¹¹³	-20	05.1 ⁹³	5	14	5	39	6	00	3	08
12	358	42.1	+2	56.1	42	38.4 ¹¹⁴	-19	55.6 ⁹⁵	5	17	5	41	6	02	2	52
13	13	42.3		57.0	57	09.0 ¹¹⁶		46.1 ⁹⁵	19	43	04	35	52	30	43	
14	28	42.5		58.0	71	39.6 ¹¹⁶		36.5 ⁹⁶	20	18	44	06	2	18	55	15
15	43	42.7	+2	59.0	86	10.3 ¹¹⁷		26.8 ⁹⁷	30	16	44	08	1	58	59	16
16	58	42.9	+3	00.0	100	41.0 ¹¹⁷		17.1 ⁹⁷	35	15	44	09	46	62	14	32
17	73	43.1	+3	00.9	115	11.9 ¹¹⁹	-19	07.2 ⁹⁹	40	5	12	5	43	6	10	1
18	88	43.3	+3	01.9	129	42.8 ¹¹⁹	-18	57.3 ⁹⁹	45	5	09	5	43	6	12	1
19	103	43.4		02.9	144	13.9 ¹²¹		47.3 ¹⁰⁰	50	04	41	14	0	56	73	16
20	118	43.6		03.9	158	45.0 ¹²¹		37.2 ¹⁰¹	52	5	01	41	14	46	76	17
21	133	43.8		04.8	173	16.2 ¹²²		27.0 ¹⁰²	54	4	59	40	15	35	79	12
22	148	44.0		05.8	187	47.5 ¹²³		16.7 ¹⁰³	56	56	39	16	23	81	22	14
23	163	44.2		06.8	202	18.8 ¹²³	-18	06.4 ¹⁰³	58	52	38	17	0	09	85	33
24	178	44.4	+3	07.8	216	50.3 ¹²⁵	-17	56.0 ¹⁰⁴	60	4	48	5	37	6	18	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 38 ^m 1		Mag: -4.0 PMG: 9 ^h 51 ^m			Mag: +0.6 PMG: 6 ^h 43 ^m			Mag: -2.4 PMG: 20 ^h 20 ^m			Mag: +0.1 PMG: 17 ^h 08 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	185	00.0	212	24.0	-11	58.7	259	03.9	-23	10.6	54	11.9	+19	04.8		
1	200	02.4	227	23.6		57.7	274	04.7		10.4	69	14.4		04.8		
2	215	04.9	242	23.1		56.8	289	05.4		10.3	84	16.9		04.8		
3	230	07.3	257	22.7		55.8	304	06.2		10.2	99	19.4		04.8		
4	245	09.8	272	22.3		54.9	319	07.0		10.1	114	22.0		04.8		
5	260	12.3	287	21.8	-11	53.9	334	07.7	-23	10.0	129	24.5	+19	04.8		
6	275	14.7	302	21.4	-11	53.0	349	08.5	-23	09.9	144	27.0	+19	04.8		
7	290	17.2	317	20.9		52.1	4	09.3		09.7	159	29.5		04.9		
8	305	19.7	332	20.5		51.1	19	10.0		09.6	174	32.1		04.9		
9	320	22.1	347	20.0		50.2	34	10.8		09.5	189	34.6		04.9		
10	335	24.6	2	19.6		49.2	49	11.6		09.4	204	37.1		04.9		
11	350	27.1	17	19.1	-11	48.3	64	12.3	-23	09.3	219	39.6	+19	04.9		
12	5	29.5	32	18.7	-11	47.3	79	13.1	-23	09.2	234	42.1	+19	04.9		
13	20	32.0	47	18.3		46.4	94	13.9		09.0	249	44.6		04.9		
14	35	34.4	62	17.8		45.4	109	14.6		08.9	264	47.2		04.9		
15	50	36.9	77	17.4		44.5	124	15.4		08.8	279	49.7		04.9		
16	65	39.4	92	16.9		43.5	139	16.1		08.7	294	52.2		05.0		
17	80	41.8	107	16.5	-11	42.6	154	16.9	-23	08.6	309	54.7	+19	05.0		
18	95	44.3	122	16.0	-11	41.6	169	17.7	-23	08.5	324	57.2	+19	05.0		
19	110	46.8	137	15.6		40.7	184	18.4		08.3	339	59.8		05.0		
20	125	49.2	152	15.2		39.7	199	19.2		08.2	355	02.3		05.0		
21	140	51.7	167	14.7		38.7	214	20.0		08.1	10	04.8		05.0		
22	155	54.2	182	14.3		37.8	229	20.7		08.0	25	07.3		05.0		
23	170	56.6	197	13.8		36.8	244	21.5		07.9	40	09.8		05.0		
24	185	59.1	212	13.4	-11	35.9	259	22.3	-23	07.7	55	12.3	+19	05.0		
Dif	—		-4		+9		+8		+1		+25		0		+23	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 04 ^m 9			Edad: 25 ^d 9 PHE { 4 ^h : 55'5 12 ^h : 55'4 20 ^h : 55'2 SD: 15'1 PMG: 9 ^h 51 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	44.4	+3	07.8	216	50.3	-17	56.0	60 N	18 35	19 18	20 10	5 52	4	14 04	86
1	193	44.6		08.8	231	21.8 ¹²⁵		45.5 ¹⁰⁵	58	33	13	20 02	41	8	14	82
2	208	44.8		09.7	245	53.4 ¹²⁶		34.9 ¹⁰⁶	56	31	09	19 55	31	12	23	79
3	223	45.0		10.7	260	25.1 ¹²⁷		24.3 ¹⁰⁶	54	29	05	49	23	14	31	75
4	238	45.1		11.7	274	56.9 ¹²⁸		13.6 ¹⁰⁷	52	28	19 02	43	15	17	37	74
5	253	45.3	+3	12.7	289	28.8 ¹²⁹	-17	02.8 ¹⁰⁸	50	18 26	18 59	19 38	5 09	19	14 44	71
6	268	45.5	+3	13.6	304	00.7 ¹²⁹	-16	52.0 ¹⁰⁸	45	18 23	18 53	19 28	4 54	23	14 57	66
7	283	45.7		14.6	318	32.7 ¹³⁰		41.0 ¹¹⁰	40	21	48	20	42	27	15 08	62
8	298	45.9		15.6	333	04.8 ¹³¹		30.1 ¹⁰⁹	35	19	44	14	32	30	17	59
9	313	46.1		16.6	347	36.9 ¹³¹		19.0 ¹¹¹	30	17	41	09	23	32	25	56
10	328	46.3		17.5	2	09.2 ¹³³	-16	07.9 ¹¹¹	20	13	35	19 01	4 07	37	39	51
11	343	46.5	+3	18.5	16	41.5 ¹³³	-15	56.7 ¹¹²	10 N	18 11	18 32	18 56	3 53	41	15 51	47
12	358	46.6	+3	19.5	31	13.9 ¹³⁴	-15	45.5 ¹¹²	0	18 08	18 29	18 53	3 40	45	16 02	44
13	13	46.8		20.5	45	46.3 ¹³⁴		34.2 ¹¹³	10 S	06	27	51	27	49	13	40
14	28	47.0		21.4	60	18.9 ¹³⁶		22.8 ¹¹⁴	20	03	25	51	3 13	53	25	36
15	43	47.2		22.4	74	51.5 ¹³⁶	-15	11.4 ¹¹⁴	30	18 01	25	52	2 57	57	38	31
16	58	47.4		23.4	89	24.2 ¹³⁷	-14	59.9 ¹¹⁵	35	17 59	25	54	48	60	46	29
17	73	47.6	+3	24.4	103	56.9 ¹³⁷	-14	48.4 ¹¹⁵	40	17 58	18 25	18 56	2 37	63	16 55	25
18	88	47.8	+3	25.3	118	29.7 ¹³⁸	-14	36.8 ¹¹⁶	45	17 56	18 25	18 59	2 24	67	17 05	22
19	103	48.0		26.3	133	02.6 ¹³⁹		25.1 ¹¹⁷	50	54	26	19 03	09	72	17	18
20	118	48.2		27.3	147	35.6 ¹⁴⁰		13.4 ¹¹⁷	52	53	26	05	2 02	74	23	15
21	133	48.3		28.2	162	08.6 ¹⁴⁰	-14	01.7 ¹¹⁷	54	52	27	08	1 54	76	29	13
22	148	48.5		29.2	176	41.7 ¹⁴¹	-13	49.8 ¹¹⁹	56	50	27	11	44	80	36	10
23	163	48.7		30.2	191	14.9 ¹⁴²		38.0 ¹¹⁸	58	49	28	14	34	83	44	7
24	178	48.9	+3	31.2	205	48.1 ¹⁴²	-13	26.1 ¹¹⁹	60 S	17 48	18 29	19 18	1 22	87	17 52	5
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 11 ^h 34 ^m 2		Mag: -4.0 PMG: 9 ^h 51 ^m		Mag: +0.6 PMG: 6 ^h 42 ^m		Mag: -2.4 PMG: 20 ^h 16 ^m		Mag: +0.1 PMG: 17 ^h 04 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	185	59.1	212	13.4	259	22.3	55	12.3	103	17.7						
1	201	01.6	227	13.0	274	23.0	70	14.8	118	20.0						
2	216	04.0	242	12.5	289	23.8	85	17.4	133	22.3						
3	231	06.5	257	12.1	304	24.6	100	19.9	148	24.6						
4	246	08.9	272	11.6	319	25.3	115	22.4	163	26.9						
5	261	11.4	287	11.2	334	26.1	130	24.9	178	29.2						
6	276	13.9	302	10.8	349	26.9	145	27.4	193	31.5						
7	291	16.3	317	10.3	4	27.7	160	29.9	208	33.8						
8	306	18.8	332	09.9	19	28.4	175	32.4	223	36.1						
9	321	21.3	347	09.5	34	29.2	190	35.0	238	38.4						
10	336	23.7	2	09.0	49	30.0	205	37.5	253	40.7						
11	351	26.2	17	08.6	64	30.7	220	40.0	268	43.0						
12	6	28.7	32	08.2	79	31.5	235	42.5	283	45.3						
13	21	31.1	47	07.7	94	32.3	250	45.0	298	47.6						
14	36	33.6	62	07.3	109	33.0	265	47.5	313	49.9						
15	51	36.0	77	06.8	124	33.8	280	50.0	328	52.2						
16	66	38.5	92	06.4	139	34.6	295	52.5	343	54.5						
17	81	41.0	107	06.0	154	35.3	310	55.0	358	56.8						
18	96	43.4	122	05.5	169	36.1	325	57.5	13	59.0						
19	111	45.9	137	05.1	184	36.9	341	00.0	29	01.3						
20	126	48.4	152	04.7	199	37.6	356	02.6	44	03.6						
21	141	50.8	167	04.2	214	38.4	11	05.1	59	05.9						
22	156	53.3	182	03.8	229	39.2	26	07.6	74	08.2						
23	171	55.8	197	03.4	244	40.0	41	10.1	89	10.5						
24	186	58.2	212	02.9	259	40.7	56	12.6	104	12.8						
Dif	—		-4	+10	+8	+1	+25	0	+23	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 6			Edad: 26 ^d 9 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8 R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	48.9	+3	31.2	205	48.1	-13	26.1	60 N	3 58	4 50	5 33	5 56	4 15 30 83
1	193	49.1		32.1	220	21.4 ¹⁴³		14.1 ¹²⁰	58	4 06	55	35	49	7 36 79
2	208	49.3		33.1	234	54.7 ¹⁴³	-13	02.1 ¹²⁰	56	14	4 59	37	43	9 42 76
3	223	49.5		34.1	249	28.2 ¹⁴⁵	-12	50.0 ¹²¹	54	20	5 03	39	37	12 46 74
4	238	49.7		35.1	264	01.6 ¹⁴⁴		37.9 ¹²¹	52	26	07	41	32	14 51 71
5	253	49.8	+3	36.0	278	35.2 ¹⁴⁶	-12	25.8 ¹²¹	50	4 31	5 10	5 42	5 28	15 15 55 69
6	268	50.0	+3	37.0	293	08.8 ¹⁴⁶	-12	13.6 ¹²²	45	4 41	5 16	5 45	5 17	21 16 03 65
7	283	50.2		38.0	307	42.5 ¹⁴⁷	-12	01.3 ¹²³	40	49	21	48	09	24 10 61
8	298	50.4		39.0	322	16.2 ¹⁴⁷	-11	49.0 ¹²³	35	4 55	25	50	5 02	27 16 58
9	313	50.6		39.9	336	50.0 ¹⁴⁸		36.7 ¹²³	30	5 00	28	52	4 55	30 21 55
10	328	50.8		40.9	351	23.8 ¹⁴⁸		24.3 ¹²⁴	20	08	34	56	44	35 30 50
11	343	51.0	+3	41.9	5	57.7 ¹⁴⁹	-11	11.9 ¹²⁴	10 N	5 13	5 38	5 59	4 34	39 16 38 46
12	358	51.2	+3	42.8	20	31.7 ¹⁵⁰	-10	59.5 ¹²⁴	0	5 17	5 41	6 01	4 25	42 16 46 41
13	13	51.3		43.8	35	05.7 ¹⁵⁰		47.0 ¹²⁵	10 S	18	43	04	16	46 16 53 38
14	28	51.5		44.8	49	39.7 ¹⁵⁰		34.5 ¹²⁵	20	19	44	06	4 06	50 17 01 33
15	43	51.7		45.8	64	13.8 ¹⁵¹		21.9 ¹²⁶	30	18	45	09	3 54	56 09 29
16	58	51.9		46.7	78	48.0 ¹⁵²	-10	09.3 ¹²⁶	35	16	45	11	48	58 15 25
17	73	52.1	+3	47.7	93	22.2 ¹⁵²	-9	56.7 ¹²⁶	40	5 14	5 45	6 12	3 40	62 17 20 23
18	88	52.3	+3	48.7	107	56.5 ¹⁵³	-9	44.0 ¹²⁷	45	5 11	5 45	6 14	3 31	66 17 27 19
19	103	52.5		49.6	122	30.8 ¹⁵³		31.3 ¹²⁷	50	07	45	17	21	70 35 15
20	118	52.7		50.6	137	05.2 ¹⁵⁴		18.6 ¹²⁷	52	05	44	18	16	72 38 13
21	133	52.8		51.6	151	39.6 ¹⁵⁴	-9	05.8 ¹²⁸	54	03	44	19	10	75 42 11
22	148	53.0		52.6	166	14.1 ¹⁵⁵	-8	53.1 ¹²⁷	56	5 00	43	20	3 04	77 46 9
23	163	53.2		53.5	180	48.6 ¹⁵⁵		40.2 ¹²⁹	58	4 57	42	22	2 57	81 51 6
24	178	53.4	+3	54.5	195	23.1 ¹⁵⁵	-8	27.4 ¹²⁸	60 S	4 53	5 42	6 23	2 49	84 17 57 2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 30 ^m 2		Mag: -4.0 PMG: 9 ^h 52 ^m		Mag: +0.5 PMG: 6 ^h 41 ^m		Mag: -2.4 PMG: 20 ^h 12 ^m		Mag: +0.1 PMG: 17 ^h 01 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	186	58.2	212	02.9	-11	12.8	259	40.7	-23	04.8	104	12.8	+22	16.5
1	202	00.7	227	02.5		11.8	274	41.5		04.6	119	15.1		16.5
2	217	03.2	242	02.1		10.8	289	42.3		04.5	134	17.4		16.5
3	232	05.6	257	01.6		09.9	304	43.0		04.4	149	19.7		16.5
4	247	08.1	272	01.2		08.9	319	43.8		04.3	164	22.0		16.5
5	262	10.5	287	00.8	-11	07.9	334	44.6	-23	04.1	179	24.3	+22	16.6
6	277	13.0	302	00.4	-11	06.9	349	45.3	-23	04.0	194	26.6	+22	16.6
7	292	15.5	316	59.9		06.0	4	46.1		03.9	209	28.9		16.6
8	307	17.9	331	59.5		05.0	19	46.9		03.7	224	31.2		16.6
9	322	20.4	346	59.1		04.0	34	47.7		03.6	239	33.5		16.6
10	337	22.9	1	58.6		03.0	49	48.4		03.5	254	35.8		16.6
11	352	25.3	16	58.2	-11	02.1	64	49.2	-23	03.4	269	38.0	+22	16.6
12	7	27.8	31	57.8	-11	01.1	79	50.0	-23	03.2	284	40.3	+22	16.7
13	22	30.3	46	57.4	-11	00.1	94	50.7		03.1	299	42.6		16.7
14	37	32.7	61	56.9	-10	59.1	109	51.5		03.0	314	44.9		16.7
15	52	35.2	76	56.5		58.2	124	52.3		02.8	329	47.2		16.7
16	67	37.7	91	56.1		57.2	139	53.1		02.7	344	49.5		16.7
17	82	40.1	106	55.6	-10	56.2	154	53.8	-23	02.6	359	51.8	+22	16.7
18	97	42.6	121	55.2	-10	55.2	169	54.6	-23	02.4	14	54.1	+22	16.8
19	112	45.0	136	54.8		54.2	184	55.4		02.3	29	56.4		16.8
20	127	47.5	151	54.4		53.3	199	56.1		02.2	44	58.7		16.8
21	142	50.0	166	53.9		52.3	214	56.9		02.0	60	01.0		16.8
22	157	52.4	181	53.5		51.3	229	57.7		01.9	75	03.2		16.8
23	172	54.9	196	53.1		50.3	244	58.5		01.8	90	05.5		16.8
24	187	57.4	211	52.7	-10	49.3	259	59.2	-23	01.6	105	07.8	+22	16.9
Dif	—		-4	+10		+8	+1		+25	0	+23			0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 04 ^m 3			Edad: 27 ^d 9 PHE { SD: 14:9 PMG: 11 ^h 17 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	53.4	+3	54.5	195	23.1	-8	27.4	60 N	18 40	19 23	20 16	6 00 2	16 53 80
1	193	53.6		55.5	209	57.7 ¹⁵⁶		14.5 ¹²⁹	58	38	18	07	5 56 5	55 78
2	208	53.8		56.4	224	32.3 ¹⁵⁶	-8	01.6 ¹²⁹	56	35	13	20 00	52 8	16 58 74
3	223	54.0		57.4	239	07.0 ¹⁵⁷	-7	48.7 ¹²⁹	54	33	09	19 53	49 10	17 00 72
4	238	54.1		58.4	253	41.8 ¹⁵⁸		35.8 ¹²⁹	52	31	06	47	46 13	02 70
5	253	54.3	+3	59.3	268	16.5 ¹⁵⁷	-7	22.8 ¹³⁰	50	18 30	19 02	19 42	5 43 15	17 04 67
6	268	54.5	+4	00.3	282	51.3 ¹⁵⁸	-7	09.8 ¹³⁰	45	18 26	18 55	19 31	5 38 18	17 08 63
7	283	54.7		01.3	297	26.2 ¹⁵⁹	-6	56.8 ¹³⁰	40	23	50	22	33 22	11 59
8	298	54.9		02.3	312	01.0 ¹⁵⁸		43.7 ¹³¹	35	20	46	16	29 25	14 56
9	313	55.1		03.2	326	36.0 ¹⁶⁰		30.7 ¹³⁰	30	18	42	10	25 28	16 53
10	328	55.3		04.2	341	10.9 ¹⁵⁹		17.6 ¹³¹	20	14	36	19 02	19 32	20 49
11	343	55.5	+4	05.2	355	45.9 ¹⁶⁰	-6	04.5 ¹³¹	10 N	18 11	18 32	18 56	5 13 37	17 24 44
12	358	55.6	+4	06.1	10	20.9 ¹⁶⁰	-5	51.4 ¹³¹	0	18 08	18 28	18 52	5 07 41	17 27 41
13	13	55.8		07.1	24	56.0 ¹⁶¹		38.3 ¹³¹	10 S	05	26	50	5 02 45	31 36
14	28	56.0		08.1	39	31.1 ¹⁶¹		25.1 ¹³²	20	18 02	24	49	4 56 49	34 32
15	43	56.2		09.0	54	06.2 ¹⁶¹	-5	12.0 ¹³¹	30	17 58	22	50	50 54	38 28
16	58	56.4		10.0	68	41.4 ¹⁶²	-4	58.8 ¹³²	35	57	22	51	46 57	40 25
17	73	56.6	+4	11.0	83	16.5 ¹⁶¹	-4	45.6 ¹³²	40	17 54	18 21	18 53	4 42 60	17 43 22
18	88	56.8	+4	11.9	97	51.8 ¹⁶³	-4	32.4 ¹³²	45	17 52	18 21	18 55	4 37 63	17 46 18
19	103	56.9		12.9	112	27.0 ¹⁶²		19.2 ¹³²	50	49	22	18 59	31 68	50 14
20	118	57.1		13.9	127	02.3 ¹⁶³	-4	06.0 ¹³²	52	48	22	19 01	28 70	51 12
21	133	57.3		14.8	141	37.6 ¹⁶³	-3	52.7 ¹³³	54	47	22	03	25 72	53 10
22	148	57.5		15.8	156	12.9 ¹⁶³		39.5 ¹³²	56	45	22	05	21 76	55 8
23	163	57.7		16.8	170	48.2 ¹⁶³		26.2 ¹³³	58	44	23	08	18 78	57 5
24	178	57.9	+4	17.7	185	23.6 ¹⁶⁴	-3	13.0 ¹³²	60 S	17 42	18 23	19 11	4 13 82	17 59 3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 26 ^m 3		Mag: -4.0 PMG: 9 ^h 53 ^m		Mag: +0.5 PMG: 6 ^h 40 ^m		Mag: -2.4 PMG: 20 ^h 08 ^m		Mag: +0.1 PMG: 16 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	187	57.4	211	52.7	-10	49.3	259	59.2	-23	01.6
1	202	59.8	226	52.2		48.4	275	00.0		01.5
2	218	02.3	241	51.8		47.4	290	00.8		01.4
3	233	04.8	256	51.4		46.4	305	01.6		01.2
4	248	07.2	271	51.0		45.4	320	02.3		01.1
5	263	09.7	286	50.5	-10	44.4	335	03.1	-23	01.0
6	278	12.1	301	50.1	-10	43.4	350	03.9	-23	00.8
7	293	14.6	316	49.7		42.4	5	04.7		00.7
8	308	17.1	331	49.3		41.5	20	05.4		00.6
9	323	19.5	346	48.8		40.5	35	06.2		00.4
10	338	22.0	1	48.4		39.5	50	07.0		00.3
11	353	24.5	16	48.0	-10	38.5	65	07.8	-23	00.2
12	8	26.9	31	47.6	-10	37.5	80	08.5	-23	00.0
13	23	29.4	46	47.2		36.5	95	09.3	-22	59.9
14	38	31.9	61	46.7		35.5	110	10.1		59.8
15	53	34.3	76	46.3		34.5	125	10.9		59.6
16	68	36.8	91	45.9		33.5	140	11.6		59.5
17	83	39.3	106	45.5	-10	32.6	155	12.4	-22	59.3
18	98	41.7	121	45.1	-10	31.6	170	13.2	-22	59.2
19	113	44.2	136	44.6		30.6	185	14.0		59.1
20	128	46.6	151	44.2		29.6	200	14.7		58.9
21	143	49.1	166	43.8		28.6	215	15.5		58.8
22	158	51.6	181	43.4		27.6	230	16.3		58.7
23	173	54.0	196	43.0		26.6	245	17.1		58.5
24	188	56.5	211	42.5	-10	25.6	260	17.8	-22	58.4
Dif	—		-4		+10		+8		+1	
								+25	0	
									+23	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 04 ^m 0			Edad: 28 ^d 9 PHE { SD: 14'8 PMG: 11 ^h 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	57.9	+4	17.7	185	23.6	-3	13.0	60 N	3 51	4 44	5 27	6 02	2	18 13 80
1	193	58.1		18.7	199	59.0 ¹⁶⁴	-2	59.7 ¹³³	58	4 00	49	30	01	5	13 76
2	208	58.2		19.7	214	34.4 ¹⁶⁴		46.4 ¹³³	56	08	54	32	6 00	8	12 74
3	223	58.4		20.6	229	09.8 ¹⁶⁴		33.1 ¹³³	54	15	4 58	34	5 59	10	12 7
4	238	58.6		21.6	243	45.3 ¹⁶⁵		19.9 ¹³²	52	21	5 02	36	59	11	12 69
5	253	58.8	+4	22.6	258	20.7 ¹⁶⁴	-2	06.6 ¹³³	50	4 26	5 05	5 38	5 58	14	18 11 68
6	268	59.0	+4	23.5	272	56.2 ¹⁶⁵	-1	53.3 ¹³³	45	4 37	5 12	5 42	5 56	18	18 11 63
7	283	59.2		24.5	287	31.7 ¹⁶⁵		40.0 ¹³³	40	45	18	45	55	22	10 59
8	298	59.4		25.5	302	07.2 ¹⁶⁵		26.7 ¹³³	35	52	22	48	54	24	10 56
9	313	59.5		26.4	316	42.8 ¹⁶⁶		13.4 ¹³³	30	4 58	26	50	53	27	09 54
10	328	59.7		27.4	331	18.3 ¹⁶⁵	-1	00.1 ¹³³	20	5 06	32	54	51	32	09 48
11	343	59.9	+4	28.4	345	53.9 ¹⁶⁶	-0	46.8 ¹³³	10 N	5 12	5 37	5 58	5 50	36	18 08 44
12	359	00.1	+4	29.3	0	29.5 ¹⁶⁶	-0	33.5 ¹³³	0	5 16	5 40	6 01	5 48	40	18 08 40
13	14	00.3		30.3	15	05.0 ¹⁶⁵		20.2 ¹³³	10 S	18	43	04	47	44	07 36
14	29	00.5		31.3	29	40.6 ¹⁶⁶	-0	06.9 ¹³³	20	19	45	07	45	49	06 32
15	44	00.7		32.2	44	16.2 ¹⁶⁶	+0	06.4 ¹³³	30	19	46	10	44	53	06 27
16	59	00.8		33.2	58	51.9 ¹⁶⁷		19.6 ¹³²	35	18	47	12	43	56	05 25
17	74	01.0	+4	34.2	73	27.5 ¹⁶⁶	+0	32.9 ¹³³	40	5 16	5 47	6 14	5 42	59	18 05 21
18	89	01.2	+4	35.1	88	03.1 ¹⁶⁶	+0	46.2 ¹³³	45	5 14	5 48	6 17	5 40	63	18 04 18
19	104	01.4		36.1	102	38.8 ¹⁶⁷	+0	59.5 ¹³³	50	10	48	20	39	67	04 14
20	119	01.6		37.1	117	14.4 ¹⁶⁶	+1	12.7 ¹³²	52	08	48	21	38	70	03 12
21	134	01.8		38.0	131	50.0 ¹⁶⁶		26.0 ¹³³	54	06	47	23	37	72	03 10
22	149	02.0		39.0	146	25.7 ¹⁶⁷		39.2 ¹³²	56	04	47	24	37	74	03 7
23	164	02.1		40.0	161	01.3 ¹⁶⁶	+1	52.4 ¹³²	58	5 01	47	26	36	77	02 5
24	179	02.3	+4	40.9	175	37.0 ¹⁶⁷	+2	05.6 ¹³²	60 S	4 58	5 46	6 28	5 35	80	18 02 2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 22 ^m 4		Mag: -4.0 PMG: 9 ^h 53 ^m		Mag: +0.5 PMG: 6 ^h 38 ^m		Mag: -2.4 PMG: 20 ^h 04 ^m		Mag: +0.1 PMG: 16 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	188	56.5	211	42.5	-10	25.6	260	17.8	-22	58.4	58	12.5	+19	05.6	106	02.7	+22	17.2
1	203	59.0	226	42.1		24.6	275	18.6		58.2	73	15.0		05.6	121	05.0		17.3
2	219	01.4	241	41.7		23.6	290	19.4		58.1	88	17.5		05.6	136	07.3		17.3
3	234	03.9	256	41.3		22.6	305	20.2		58.0	103	20.0		05.6	151	09.6		17.3
4	249	06.4	271	40.9		21.6	320	20.9		57.8	118	22.5		05.6	166	11.9		17.3
5	264	08.8	286	40.5	-10	20.6	335	21.7	-22	57.7	133	25.0	+19	05.6	181	14.2	+22	17.3
6	279	11.3	301	40.0	-10	19.6	350	22.5	-22	57.5	148	27.4	+19	05.6	196	16.5	+22	17.3
7	294	13.7	316	39.6		18.6	5	23.3		57.4	163	29.9		05.6	211	18.7		17.4
8	309	16.2	331	39.2		17.6	20	24.1		57.3	178	32.4		05.6	226	21.0		17.4
9	324	18.7	346	38.8		16.6	35	24.8		57.1	193	34.9		05.6	241	23.3		17.4
10	339	21.1	1	38.4		15.6	50	25.6		57.0	208	37.4		05.6	256	25.6		17.4
11	354	23.6	16	38.0	-10	14.6	65	26.4	-22	56.8	223	39.9	+19	05.6	271	27.9	+22	17.4
12	9	26.1	31	37.6	-10	13.6	80	27.2	-22	56.7	238	42.4	+19	05.6	286	30.2	+22	17.4
13	24	28.5	46	37.1		12.6	95	28.0		56.5	253	44.9		05.6	301	32.4		17.4
14	39	31.0	61	36.7		11.6	110	28.7		56.4	268	47.3		05.6	316	34.7		17.5
15	54	33.5	76	36.3		10.6	125	29.5		56.3	283	49.8		05.6	331	37.0		17.5
16	69	35.9	91	35.9		9.6	140	30.3		56.1	298	52.3		05.6	346	39.3		17.5
17	84	38.4	106	35.5	-10	08.6	155	31.1	-22	56.0	313	54.8	+19	05.6	1	41.6	+22	17.5
18	99	40.9	121	35.1	-10	07.6	170	31.8	-22	55.8	328	57.3	+19	05.6	16	43.9	+22	17.5
19	114	43.3	136	34.7		06.6	185	32.6		55.7	343	59.8		05.6	31	46.1		17.5
20	129	45.8	151	34.2		05.6	200	33.4		55.5	359	02.2		05.6	46	48.4		17.6
21	144	48.2	166	33.8		04.6	215	34.2		55.4	14	04.7		05.6	61	50.7		17.6
22	159	50.7	181	33.4		03.6	230	35.0		55.3	29	07.2		05.6	76	53.0		17.6
23	174	53.2	196	33.0		02.6	245	35.7		55.1	44	09.7		05.6	91	55.3		17.6
24	189	55.6	211	32.6	-10	01.6	260	36.5	-22	55.0	59	12.2	+19	05.7	106	57.6	+22	17.6
Dif	—		-4	+10			+8	+1			+25	0			+23			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 7			Edad: 29 ^d 9 PHE { 4 ^h : 54'2 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	m	
0	179	02.3	+4 40.9	175	37.0	+2 05.6	60 N	18 45	19 28	20 22	6 04 3		19 33 81		
1	194	02.5		190	12.7 ¹⁶⁷	18.8 ¹³²	58	42	23	13	06 5		29 78		
2	209	02.7		204	48.3 ¹⁶⁶	32.0 ¹³²	56	39	18	20 04	08 8		26 75		
3	224	02.9		219	24.0 ¹⁶⁷	45.2 ¹³²	54	37	13	19 57	09 10		23 72		
4	239	03.1		233	59.6 ¹⁶⁶	+2 58.4 ¹³²	52	35	09	51	10 13		21 69		
5	254	03.2	+4 45.7	248	35.3 ¹⁶⁷	+3 11.5 ¹³¹	50	18 33	19 06	19 45	6 12 14		19 19 67		
6	269	03.4	+4 46.7	263	10.9 ¹⁶⁶	+3 24.7 ¹³²	45	18 28	18 58	19 34	6 14 19		19 14 62		
7	284	03.6		277	46.6 ¹⁶⁷	37.8 ¹³¹	40	25	52	25	17 22		09 60		
8	299	03.8		292	22.2 ¹⁶⁶	+3 50.9 ¹³¹	35	22	47	17	18 25		06 56		
9	314	04.0		306	57.8 ¹⁶⁶	+4 04.0 ¹³¹	30	19	43	11	20 28		19 03 53		
10	329	04.2		321	33.5 ¹⁶⁷	17.1 ¹³¹	20	14	37	19 02	23 33		18 57 49		
11	344	04.4	+4 51.5	336	09.1 ¹⁶⁶	+4 30.1 ¹³⁰	10 N	18 11	18 32	18 56	6 26 36		18 52 45		
12	359	04.5	+4 52.5	350	44.7 ¹⁶⁶	+4 43.1 ¹³⁰	0	18 07	18 28	18 52	6 28 41		18 48 40		
13	14	04.7		5	20.3 ¹⁶⁶	+4 56.1 ¹³⁰	10 S	04	25	49	31 44		43 37		
14	29	04.9		19	55.9 ¹⁶⁶	+5 09.1 ¹³⁰	20	18 00	22	48	34 48		38 33		
15	44	05.1		34	31.5 ¹⁶⁶	22.1 ¹³⁰	30	17 56	20	48	37 53		33 28		
16	59	05.3		49	07.0 ¹⁶⁵	35.0 ¹²⁹	35	54	19	48	39 56		30 26		
17	74	05.5	+4 57.3	63	42.6 ¹⁶⁶	+5 48.0 ¹³⁰	40	17 51	18 18	18 50	6 41 59		18 26 23		
18	89	05.6	+4 58.3	78	18.1 ¹⁶⁵	+6 00.9 ¹²⁹	45	17 48	18 18	18 52	6 43 63		18 22 19		
19	104	05.8	+4 59.2	92	53.6 ¹⁶⁵	13.7 ¹²⁸	50	45	17	55	46 67		18 14		
20	119	06.0	+5 00.2	107	29.1 ¹⁶⁵	26.6 ¹²⁹	52	44	17	56	48 69		15 13		
21	134	06.2		122	04.6 ¹⁶⁵	39.4 ¹²⁸	54	42	17	18 58	49 72		13 11		
22	149	06.4		136	40.1 ¹⁶⁵	+6 52.2 ¹²⁸	56	40	17	19 00	51 74		10 9		
23	164	06.6		151	15.6 ¹⁶⁵	+7 05.0 ¹²⁸	58	38	17	03	53 76		07 6		
24	179	06.7	+5 04.0	165	51.0 ¹⁶⁴	+7 17.7 ¹²⁷	60 S	17 36	18 17	19 05	6 55 80		18 04 3		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 18 ^m 4		Mag: -3.9 PMG: 9 ^h 54 ^m			Mag: +0.5 PMG: 6 ^h 37 ^m			Mag: -2.3 PMG: 20 ^h 00 ^m			Mag: +0.1 PMG: 16 ^h 50 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	189	55.6	211 32.6	-10 01.6		260 36.5	-22 55.0		59 12.2	+19 05.7		106 57.6	+22 17.6		
1	204	58.1	226 32.2	-10 00.6		275 37.3	54.8		74 14.7	05.7		121 59.8	17.6		
2	220	00.6	241 31.8	-9 59.5		290 38.1	54.7		89 17.1	05.7		137 02.1	17.7		
3	235	03.0	256 31.4	58.5		305 38.9	54.5		104 19.6	05.7		152 04.4	17.7		
4	250	05.5	271 31.0	57.5		320 39.6	54.4		119 22.1	05.7		167 06.7	17.7		
5	265	08.0	286 30.5	-9 56.5		335 40.4	-22 54.2		134 24.6	+19 05.7		182 09.0	+22 17.7		
6	280	10.4	301 30.1	-9 55.5		350 41.2	-22 54.1		149 27.1	+19 05.7		197 11.2	+22 17.7		
7	295	12.9	316 29.7	54.5		5 42.0	53.9		164 29.5	05.7		212 13.5	17.7		
8	310	15.3	331 29.3	53.5		20 42.8	53.8		179 32.0	05.7		227 15.8	17.8		
9	325	17.8	346 28.9	52.5		35 43.6	53.7		194 34.5	05.7		242 18.1	17.8		
10	340	20.3	1 28.5	51.5		50 44.3	53.5		209 37.0	05.7		257 20.4	17.8		
11	355	22.7	16 28.1	-9 50.4		65 45.1	-22 53.4		224 39.5	+19 05.7		272 22.6	+22 17.8		
12	10	25.2	31 27.7	-9 49.4		80 45.9	-22 53.2		239 41.9	+19 05.7		287 24.9	+22 17.8		
13	25	27.7	46 27.3	48.4		95 46.7	53.1		254 44.4	05.7		302 27.2	17.8		
14	40	30.1	61 26.9	47.4		110 47.5	52.9		269 46.9	05.7		317 29.5	17.8		
15	55	32.6	76 26.5	46.4		125 48.2	52.8		284 49.4	05.7		332 31.8	17.9		
16	70	35.1	91 26.1	45.4		140 49.0	52.6		299 51.8	05.7		347 34.0	17.9		
17	85	37.5	106 25.7	-9 44.4		155 49.8	-22 52.5		314 54.3	+19 05.7		2 36.3	+22 17.9		
18	100	40.0	121 25.2	-9 43.3		170 50.6	-22 52.3		329 56.8	+19 05.7		17 38.6	+22 17.9		
19	115	42.5	136 24.8	42.3		185 51.4	52.2		344 59.3	05.7		32 40.9	17.9		
20	130	44.9	151 24.4	41.3		200 52.2	52.0		0 01.8	05.7		47 43.2	17.9		
21	145	47.4	166 24.0	40.3		215 52.9	51.9		15 04.2	05.7		62 45.4	18.0		
22	160	49.8	181 23.6	39.3		230 53.7	51.7		30 06.7	05.7		77 47.7	18.0		
23	175	52.3	196 23.2	38.3		245 54.5	51.6		45 09.2	05.7		92 50.0	18.0		
24	190	54.8	211 22.8	-9 37.2		260 55.3	-22 51.4		60 11.7	+19 05.7		107 52.3	+22 18.0		
Dif	—		-4	+10		+8	+1		+25	0		+23	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 03 ^m 4			Edad: 1 ^d 2 PHE { SD: 14'7 PMG: 13 ^h 19 ^m										
				R ^e : 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	06.7	+5	04.0		165	51.0	3	44	4	38	5	21	
1	194	06.9		05.0		180	26.4 ¹⁶⁴	3	53	43	24	11	7	
2	209	07.1		05.9		195	01.8 ¹⁶⁴	4	02	49	27	16	9	
3	224	07.3		06.9		209	37.2 ¹⁶⁴	09	53	29	19	12	35	7
4	239	07.5		07.9		224	12.5 ¹⁶³	15	4	57	31	23	14	
5	254	07.7	+5	08.8		238	47.9 ¹⁶⁴	4	21	5	01	5	34	
6	269	07.8	+5	09.8		253	23.2 ¹⁶³	4	33	5	08	5	38	
7	284	08.0		10.7		267	58.5 ¹⁶³	42	14	42	39	23	09	60
8	299	08.2		11.7		282	33.7 ¹⁶²	49	19	45	43	27	20	67
9	314	08.4		12.7		297	09.0 ¹⁶³	4	55	24	48	48	29	
10	329	08.6		13.6		311	44.2 ¹⁶²	5	04	30	52	6	56	
11	344	08.8	+5	14.6		326	19.3 ¹⁶¹	5	11	5	35	7	02	
12	359	08.9	+5	15.5		340	54.5 ¹⁶²	5	15	5	39	7	09	
13	14	09.1		16.5		355	29.6 ¹⁶¹	18	43	04	15	45	20	39
14	29	09.3		17.4		10	04.7 ¹⁶¹	20	20	45	07	22	49	
15	44	09.5		18.4		24	39.7 ¹⁶⁰	20	48	12	30	54	19	01
16	59	09.7		19.4		39	14.8 ¹⁶¹	19	49	14	35	56	18	56
17	74	09.9	+5	20.3		53	49.8 ¹⁶⁰	5	18	5	49	6	17	
18	89	10.0	+5	21.3		68	24.7 ¹⁵⁹	5	16	5	50	6	19	
19	104	10.2		22.2		82	59.7 ¹⁶⁰	13	51	23	53	68	32	17
20	119	10.4		23.2		97	34.5 ¹⁵⁸	12	51	25	7	57	70	
21	134	10.6		24.1		112	09.4 ¹⁵⁹	10	51	26	8	01	72	
22	149	10.8		25.1		126	44.2 ¹⁵⁸	08	51	28	05	75	19	10
23	164	11.0		26.1		141	19.0 ¹⁵⁸	06	51	30	09	79	13	7
24	179	11.1	+5	27.0		155	53.7 ¹⁵⁷	5	03	5	51	6	33	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 14 ^m 5		Mag: -3.9 PMG: 9 ^h 55 ^m		Mag: +0.5 PMG: 6 ^h 36 ^m		Mag: -2.3 PMG: 19 ^h 56 ^m		Mag: +0.1 PMG: 16 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	190	54.8	211	22.8	260	55.3	60	11.7	107	52.3
1	205	57.2	226	22.4	275	56.1	75	14.1	122	54.5
2	220	59.7	241	22.0	290	56.9	90	16.6	137	56.8
3	236	02.2	256	21.6	305	57.6	105	19.1	152	59.1
4	251	04.6	271	21.2	320	58.4	120	21.5	168	01.4
5	266	07.1	286	20.8	335	59.2	135	24.0	183	03.7
6	281	09.6	301	20.4	351	00.0	150	26.5	198	05.9
7	296	12.0	316	20.0	6	00.8	165	29.0	213	08.2
8	311	14.5	331	19.6	21	01.6	180	31.4	228	10.5
9	326	16.9	346	19.2	36	02.4	195	33.9	243	12.8
10	341	19.4	1	18.8	51	03.1	210	36.4	258	15.0
11	356	21.9	16	18.4	66	03.9	225	38.8	273	17.3
12	11	24.3	31	18.0	81	04.7	240	41.3	288	19.6
13	26	26.8	46	17.6	96	05.5	255	43.8	303	21.9
14	41	29.3	61	17.2	111	06.3	270	46.3	318	24.1
15	56	31.7	76	16.8	126	07.1	285	48.7	333	26.4
16	71	34.2	91	16.4	141	07.9	300	51.2	348	28.7
17	86	36.7	106	16.0	156	08.6	315	53.7	3	31.0
18	101	39.1	121	15.6	171	09.4	330	56.1	18	33.2
19	116	41.6	136	15.2	186	10.2	345	58.6	33	35.5
20	131	44.1	151	14.8	201	11.0	1	01.1	48	37.8
21	146	46.5	166	14.4	216	11.8	16	03.5	63	40.1
22	161	49.0	181	14.0	231	12.6	31	06.0	78	42.3
23	176	51.4	196	13.6	246	13.4	46	08.5	93	44.6
24	191	53.9	211	13.2	261	14.2	61	10.9	108	46.9
Dif	—		-4	+10	+8	+2	+25	0	+23	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 2 ^d 2 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0										
	PMG: 12 ^h 03 ^m 1			SD: 14'7 PMG: 14 ^h 00 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	11.1	+5 27.0	155	53.7	+12 12.9	60 N	18 50	19 34	20 29	6 10 5	22 16 85		
1	194	11.3	28.0	170	28.4 ¹⁵⁷	24.7 ¹¹⁸	58	47	27	18	18 8	22 06 79		
2	209	11.5	28.9	185	03.1 ¹⁵⁷	36.5 ¹¹⁸	56	43	22	09	25 11	21 56 77		
3	224	11.7	29.9	199	37.7 ¹⁵⁶	48.2 ¹¹⁷	54	41	17	20 02	31 14	48 73		
4	239	11.9	30.8	214	12.3 ¹⁵⁶	+12 59.8 ¹¹⁶	52	38	13	19 55	37 16	41 71		
5	254	12.0	+5 31.8	228	46.9 ¹⁵⁶	+13 11.4 ¹¹⁶	50	18 36	19 09	19 49	6 42 18	21 34 69		
6	269	12.2	+5 32.8	243	21.4 ¹⁵⁵	+13 22.9 ¹¹⁵	45	18 31	19 01	19 36	6 53 23	21 20 64		
7	284	12.4	33.7	257	55.8 ¹⁵⁴	34.4 ¹¹⁵	40	27	18 54	27	7 02 26	21 09 60		
8	299	12.6	34.7	272	30.3 ¹⁵⁵	45.8 ¹¹⁴	35	23	49	19	10 29	20 59 58		
9	314	12.8	35.6	287	04.6 ¹⁵³	+13 57.2 ¹¹⁴	30	20	44	13	17 32	50 55		
10	329	13.0	36.6	301	39.0 ¹⁵⁴	+14 08.5 ¹¹³	20	15	37	19 03	29 36	35 52		
11	344	13.1	+5 37.5	316	13.2 ¹⁵²	+14 19.8 ¹¹³	10 N	18 11	18 32	18 56	7 40 40	20 23 47		
12	359	13.3	+5 38.5	330	47.5 ¹⁵³	+14 31.0 ¹¹²	0	18 06	18 27	18 51	7 50 43	20 11 44		
13	14	13.5	39.4	345	21.7 ¹⁵²	42.2 ¹¹²	10 S	18 02	23	48	8 00 47	19 59 41		
14	29	13.7	40.4	359	55.8 ¹⁵¹	+14 53.3 ¹¹¹	20	17 58	20	46	11 51	46 38		
15	44	13.9	41.3	14	29.9 ¹⁵¹	+15 04.3 ¹¹⁰	30	54	18	45	24 55	32 33		
16	59	14.0	42.3	29	03.9 ¹⁵⁰	15.3 ¹¹⁰	35	51	16	46	31 58	23 31		
17	74	14.2	+5 43.3	43	37.9 ¹⁵⁰	+15 26.3 ¹¹⁰	40	17 48	18 15	18 46	8 39 61	19 14 28		
18	89	14.4	+5 44.2	58	11.9 ¹⁵⁰	+15 37.1 ¹⁰⁸	45	17 45	18 14	18 48	8 49 64	19 03 24		
19	104	14.6	45.2	72	45.8 ¹⁴⁹	47.9 ¹⁰⁸	50	41	13	50	9 01 69	18 49 21		
20	119	14.8	46.1	87	19.6 ¹⁴⁸	+15 58.7 ¹⁰⁸	52	39	13	52	07 71	43 18		
21	134	14.9	47.1	101	53.4 ¹⁴⁸	+16 09.3 ¹⁰⁶	54	37	12	53	13 73	36 16		
22	149	15.1	48.0	116	27.2 ¹⁴⁸	20.0 ¹⁰⁷	56	35	12	55	20 76	29 13		
23	164	15.3	49.0	131	00.8 ¹⁴⁶	30.5 ¹⁰⁵	58	32	12	57	28 79	20 10		
24	179	15.5	+5 49.9	145	34.5 ¹⁴⁷	+16 41.0 ¹⁰⁵	60 S	17 30	18 11	18 59	9 36 84	18 11 5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 10 ^m 6		Mag: -3.9 PMG: 9 ^h 55 ^m		Mag: +0.5 PMG: 6 ^h 35 ^m		Mag: -2.3 PMG: 19 ^h 52 ^m		Mag: +0.1 PMG: 16 ^h 42 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	°
0	191	53.9	211 13.2	-9 12.6	261 14.2	-22 47.7	61 10.9	+19 05.6	108 46.9	+22 18.4
1	206	56.4	226 12.8	11.6	276 14.9	47.6	76 13.4	05.6	123 49.2	18.4
2	221	58.8	241 12.4	10.6	291 15.7	47.4	91 15.9	05.6	138 51.4	18.4
3	237	01.3	256 12.0	09.5	306 16.5	47.3	106 18.3	05.6	153 53.7	18.4
4	252	03.8	271 11.6	08.5	321 17.3	47.1	121 20.8	05.6	168 56.0	18.5
5	267	06.2	286 11.2	-9 07.5	336 18.1	-22 46.9	136 23.3	+19 05.6	183 58.3	+22 18.5
6	282	08.7	301 10.8	-9 06.4	351 18.9	-22 46.8	151 25.7	+19 05.6	199 00.5	+22 18.5
7	297	11.2	316 10.4	05.4	6 19.7	46.6	166 28.2	05.6	214 02.8	18.5
8	312	13.6	331 10.0	04.4	21 20.5	46.5	181 30.6	05.6	229 05.1	18.5
9	327	16.1	346 09.6	03.3	36 21.2	46.3	196 33.1	05.6	244 07.3	18.5
10	342	18.6	1 09.2	02.3	51 22.0	46.1	211 35.6	05.6	259 09.6	18.6
11	357	21.0	16 08.8	-9 01.3	66 22.8	-22 46.0	226 38.0	+19 05.6	274 11.9	+22 18.6
12	12	23.5	31 08.4	-9 00.2	81 23.6	-22 45.8	241 40.5	+19 05.6	289 14.2	+22 18.6
13	27	25.9	46 08.1	-8 59.2	96 24.4	45.7	256 43.0	05.6	304 16.4	18.6
14	42	28.4	61 07.7	58.2	111 25.2	45.5	271 45.4	05.6	319 18.7	18.6
15	57	30.9	76 07.3	57.1	126 26.0	45.3	286 47.9	05.6	334 21.0	18.6
16	72	33.3	91 06.9	56.1	141 26.8	45.2	301 50.3	05.6	349 23.2	18.7
17	87	35.8	106 06.5	-8 55.0	156 27.6	-22 45.0	316 52.8	+19 05.6	4 25.5	+22 18.7
18	102	38.3	121 06.1	-8 54.0	171 28.4	-22 44.9	331 55.3	+19 05.6	19 27.8	+22 18.7
19	117	40.7	136 05.7	53.0	186 29.1	44.7	346 57.7	05.6	34 30.1	18.7
20	132	43.2	151 05.3	51.9	201 29.9	44.5	2 00.2	05.6	49 32.3	18.7
21	147	45.7	166 04.9	50.9	216 30.7	44.4	17 02.6	05.6	64 34.6	18.7
22	162	48.1	181 04.5	49.9	231 31.5	44.2	32 05.1	05.6	79 36.9	18.7
23	177	50.6	196 04.1	48.8	246 32.3	44.1	47 07.6	05.6	94 39.1	18.8
24	192	53.0	211 03.7	-8 47.8	261 33.1	-22 43.9	62 10.0	+19 05.6	109 41.4	+22 18.8
Dif	—	—	-4	+10	+8	+2	+25	0	+23	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 8			Edad: 3 ^d 2 SD: 14'7 PMG: 14 ^h 44 ^m	PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1 R°: 46 ^m											
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	15.5	+5	49.9	145	34.5	+16	41.0	60 N	3	36	4	31	5	15	
1	194	15.7		50.9	160	08.1 ¹⁴⁶	+16	51.4 ¹⁰⁴	58	47	38	18	26	13	25	
2	209	15.9		51.8	174	41.6 ¹⁴⁵	+17	01.8 ¹⁰⁴	56	3	56	43	21	36	16	
3	224	16.0		52.8	189	15.1 ¹⁴⁵		12.1 ¹⁰³	54	4	04	48	24	45	19	
4	239	16.2		53.7	203	48.5 ¹⁴⁴		22.3 ¹⁰²	52	10	52	27	6	53	21	
5	254	16.4	+5	54.7	218	21.8 ¹⁴³	+17	32.4 ¹⁰¹	50	4	16	4	56	5	29	
6	269	16.6	+5	55.6	232	55.1 ¹⁴³	+17	42.5 ¹⁰¹	45	4	29	5	04	5	34	
7	284	16.8		56.6	247	28.4 ¹⁴³	+17	52.5 ¹⁰⁰	40	39	11	39	28	31	22	
8	299	16.9		57.5	262	01.6 ¹⁴²	+18	02.5 ¹⁰⁰	35	46	17	42	39	33	21	
9	314	17.1		58.5	276	34.7 ¹⁴¹		12.3 ⁹⁸	30	4	53	21	45	7	49	
10	329	17.3	+5	59.4	291	07.7 ¹⁴⁰		22.1 ⁹⁸	20	5	03	28	51	8	05	
11	344	17.5	+6	00.4	305	40.8 ¹⁴¹	+18	31.9 ⁹⁸	10 N	5	10	5	34	5	55	
12	359	17.7	+6	01.3	320	13.7 ¹³⁹	+18	41.5 ⁹⁶	0	5	15	5	39	6	00	
13	14	17.8		02.3	334	46.6 ¹³⁹	+18	51.1 ⁹⁶	10 S	18	43	04	08	4	47	
14	29	18.0		03.2	349	19.4 ¹³⁸	+19	00.6 ⁹⁵	20	20	46	08	9	02	52	
15	44	18.2		04.2	3	52.2 ¹³⁸		10.0 ⁹⁴	30	21	49	13	19	55	20	
16	59	18.4		05.1	18	24.9 ¹³⁷		19.3 ⁹³	35	21	50	15	29	58	19	
17	74	18.5	+6	06.1	32	57.6 ¹³⁷	+19	28.6 ⁹³	40	5	20	5	51	6	19	
18	89	18.7	+6	07.0	47	30.1 ¹³⁵	+19	37.8 ⁹²	45	5	19	5	53	6	22	
19	104	18.9		08.0	62	02.7 ¹³⁶		46.9 ⁹¹	50	16	54	26	10	10	68	
20	119	19.1		08.9	76	35.1 ¹³⁴	+19	55.9 ⁹⁰	52	15	54	28	18	70	19	
21	134	19.3		09.9	91	07.5 ¹³⁴	+20	04.8 ⁸⁹	54	14	55	30	26	74	18	
22	149	19.4		10.8	105	39.8 ¹³³		13.7 ⁸⁹	56	12	55	32	36	77	42	
23	164	19.6		11.8	120	12.1 ¹³³		22.4 ⁸⁷	58	10	56	35	10	47	81	
24	179	19.8	+6	12.7	134	44.3 ¹³²	+20	31.1 ⁸⁷	60 S	5	08	5	56	6	38	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag: -3.9			Mag: +0.4			Mag: -2.3			Mag: +0.1				
	11 ^h 06 ^m 6		PMG: 9 ^h 56 ^m			PMG: 6 ^h 33 ^m			PMG: 19 ^h 48 ^m			PMG: 16 ^h 39 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	192	53.0	211	03.7	-8	47.8	261	33.1	-22	43.9	62	10.0	+19	05.6	109	41.4
1	207	55.5	226	03.3		46.7	276	33.9		43.7	77	12.5		05.6	124	43.7
2	222	58.0	241	03.0		45.7	291	34.7		43.6	92	14.9		05.6	139	45.9
3	238	00.4	256	02.6		44.6	306	35.5		43.4	107	17.4		05.6	154	48.2
4	253	02.9	271	02.2		43.6	321	36.3		43.2	122	19.8		05.6	169	50.5
5	268	05.4	286	01.8	-8	42.6	336	37.1	-22	43.1	137	22.3	+19	05.5	184	52.8
6	283	07.8	301	01.4	-8	41.5	351	37.8	-22	42.9	152	24.8	+19	05.5	199	55.0
7	298	10.3	316	01.0		40.5	6	38.6		42.7	167	27.2		05.5	214	57.3
8	313	12.8	331	00.6		39.4	21	39.4		42.6	182	29.7		05.5	229	59.6
9	328	15.2	346	00.2		38.4	36	40.2		42.4	197	32.1		05.5	245	01.8
10	343	17.7	0	59.8		37.3	51	41.0		42.3	212	34.6		05.5	260	04.1
11	358	20.2	15	59.4	-8	36.3	66	41.8	-22	42.1	227	37.0	+19	05.5	275	06.4
12	13	22.6	30	59.1	-8	35.2	81	42.6	-22	41.9	242	39.5	+19	05.5	290	08.6
13	28	25.1	45	58.7		34.2	96	43.4		41.8	257	41.9		05.5	305	10.9
14	43	27.5	60	58.3		33.1	111	44.2		41.6	272	44.4		05.5	320	13.2
15	58	30.0	75	57.9		32.1	126	45.0		41.4	287	46.8		05.5	335	15.4
16	73	32.5	90	57.5		31.1	141	45.8		41.3	302	49.3		05.5	350	17.7
17	88	34.9	105	57.1	-8	30.0	156	46.6	-22	41.1	317	51.7	+19	05.5	5	20.0
18	103	37.4	120	56.7	-8	29.0	171	47.4	-22	40.9	332	54.2	+19	05.5	20	22.2
19	118	39.9	135	56.3		27.9	186	48.2		40.8	347	56.6		05.5	35	24.5
20	133	42.3	150	56.0		26.9	201	49.0		40.6	2	59.1		05.5	50	26.8
21	148	44.8	165	55.6		25.8	216	49.8		40.4	18	01.5		05.5	65	29.0
22	163	47.3	180	55.2		24.8	231	50.5		40.3	33	04.0		05.5	80	31.3
23	178	49.7	195	54.8		23.7	246	51.3		40.1	48	06.4		05.4	95	33.6
24	193	52.2	210	54.4	-8	22.7	261	52.1	-22	39.9	63	08.9	+19	05.4	110	35.8
Dif	—		-4	+10		+8	+2			+2	+25	0			+23	0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 02 ^m 5			Edad: 4 ^d 2 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	19.8	+6	12.7	134	44.3	+20 31.1	60 N	18 55	19 39	20 35	6 23 14	** ** *	
1	194	20.0			149	16.5 ¹³²	39.7 ⁸⁶	58	51	32	24	39 18	** ** *	
2	209	20.2			163	48.5 ¹³⁰	48.3 ⁸⁶	56	48	26	14	6 52 22	** ** *	
3	224	20.3			178	20.5 ¹³⁰	+20 56.7	54	44	21	20 06	7 04 25	** ** *	
4	239	20.5			192	52.5 ¹³⁰	+21 05.0	52	42	16	19 59	14 28	** ** *	
5	254	20.7	+6	17.5	207	24.4 ¹²⁹	+21 13.3	50	18 39	19 12	19 52	7 23 30	23 51 64	
6	269	20.9	+6	18.4	221	56.2 ¹²⁸	+21 21.4	45	18 33	19 03	19 39	7 43 33	23 28 62	
7	284	21.1		19.4	236	27.9 ¹²⁷	29.5 ⁸¹	40	29	18 56	29	7 59 36	23 10 59	
8	299	21.2		20.3	250	59.6 ¹²⁷	37.5 ⁸⁰	35	25	51	21	8 12 39	22 55 57	
9	314	21.4		21.3	265	31.2 ¹²⁶	45.4 ⁷⁹	30	21	46	14	24 40	42 56	
10	329	21.6		22.2	280	02.8 ¹²⁶	+21 53.2	20	16	38	19 04	8 44 44	19 54	
11	344	21.8	+6	23.1	294	34.3 ¹²⁵	+22 00.9	10 N	18 10	18 32	18 56	9 02 46	22 00 52	
12	359	21.9	+6	24.1	309	05.7 ¹²⁴	+22 08.5	0	18 06	18 27	18 51	9 19 48	21 42 50	
13	14	22.1		25.0	323	37.1 ¹²⁴	16.0 ⁷⁵	10 S	18 01	22	47	36 50	24 48	
14	29	22.3		26.0	338	08.4 ¹²³	23.4 ⁷⁴	20	17 57	19	44	9 54 53	21 05 45	
15	44	22.5		26.9	352	39.6 ¹²²	30.7 ⁷³	30	51	15	43	10 14 57	20 43 43	
16	59	22.7		27.9	7	10.7 ¹²¹	37.9 ⁷²	35	48	14	43	27 58	30 41	
17	74	22.8	+6	28.8	21	41.8 ¹²¹	+22 45.1	40	17 45	18 12	18 43	10 41 60	20 15 39	
18	89	23.0	+6	29.8	36	12.8 ¹²⁰	+22 52.1	45	17 41	18 10	18 44	10 58 63	19 57 37	
19	104	23.2		30.7	50	43.8 ¹²⁰	+22 59.0	50	37	09	46	11 18 67	36 33	
20	119	23.4		31.7	65	14.7 ¹¹⁹	+23 05.8	52	34	08	47	28 69	25 32	
21	134	23.5		32.6	79	45.5 ¹¹⁸	12.6 ⁶⁸	54	32	08	48	40 71	14 29	
22	149	23.7		33.5	94	16.3 ¹¹⁸	19.2 ⁶⁶	56	30	07	50	11 53 74	19 00 27	
23	164	23.9		34.5	108	47.0 ¹¹⁷	25.7 ⁶⁵	58	27	06	51	12 08 77	18 45 23	
24	179	24.1	+6	35.4	123	17.6 ¹¹⁶	+23 32.1	60 S	17 24	18 05	18 53	12 25 84	18 26 18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 02 ^m 7		Mag: -3.9 PMG: 9 ^h 57 ^m		Mag: +0.4 PMG: 6 ^h 32 ^m		Mag: -2.3 PMG: 19 ^h 44 ^m		Mag: +0.1 PMG: 16 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	193	52.2	210	54.4	-8	22.7	261	52.1	-22	39.9
1	208	54.7	225	54.0		21.6	276	52.9		39.7
2	223	57.1	240	53.6		20.5	291	53.7		39.6
3	238	59.6	255	53.3		19.5	306	54.5		39.4
4	254	02.0	270	52.9		18.4	321	55.3		39.2
5	269	04.5	285	52.5	-8	17.4	336	56.1	-22	39.1
6	284	07.0	300	52.1	-8	16.3	351	56.9	-22	38.9
7	299	09.4	315	51.7		15.3	6	57.7		38.7
8	314	11.9	330	51.3		14.2	21	58.5		38.6
9	329	14.4	345	51.0		13.2	36	59.3		38.4
10	344	16.8	0	50.6		12.1	52	00.1		38.2
11	359	19.3	15	50.2	-8	11.1	67	00.9	-22	38.1
12	14	21.8	30	49.8	-8	10.0	82	01.7	-22	37.9
13	29	24.2	45	49.4		08.9	97	02.5		37.7
14	44	26.7	60	49.1		07.9	112	03.3		37.5
15	59	29.1	75	48.7		06.8	127	04.1		37.4
16	74	31.6	90	48.3		05.8	142	04.9		37.2
17	89	34.1	105	47.9	-8	04.7	157	05.7	-22	37.0
18	104	36.5	120	47.5	-8	03.7	172	06.5	-22	36.9
19	119	39.0	135	47.1		02.6	187	07.3		36.7
20	134	41.5	150	46.8		01.5	202	08.1		36.5
21	149	43.9	165	46.4	-8	00.5	217	08.9		36.3
22	164	46.4	180	46.0	-7	59.4	232	09.7		36.2
23	179	48.9	195	45.6		58.4	247	10.5		36.0
24	194	51.3	210	45.2	-7	57.3	262	11.3	-22	35.8
Dif	—		-4		+11		+8		+2	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 02 ^m 3			Edad: 5 ^d 2 SD: 14'8 PMG: 16 ^h 19 ^m											PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8 R°: 52 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora		R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	24.1	+6 35.4	123	17.6	+23 32.1	63	60 N	3 29	4 25	5 09	6 37	25	1 05	79		
1	194	24.2	36.4	137	48.1 ¹¹⁵	38.4	62	58	40	32	13	6 57	30	0 45	74		
2	209	24.4	37.3	152	18.6 ¹¹⁵	44.6	61	56	50	38	16	7 14	34	28	71		
3	224	24.6	38.3	166	49.1 ¹¹⁵	50.7	61	54	3 58	43	19	29	36	14	68		
4	239	24.8	39.2	181	19.4 ¹¹³	+23 56.7	60	52	4 05	48	22	42	37	0 02	66		
5	254	25.0	+6 40.1	195	49.7 ¹¹³	+24 02.6	59	50	4 12	4 52	5 25	7 53	39	** ** *	**		
6	269	25.1	+6 41.1	210	20.0 ¹¹³	+24 08.3	57	45	4 25	5 01	5 31	8 16	42	** ** *	**		
7	284	25.3	42.0	224	50.1 ¹¹¹	14.0	57	40	35	08	35	35	43	** ** *	**		
8	299	25.5	43.0	239	20.2 ¹¹¹	19.5	55	35	43	14	39	8 51	45	23	52	56	
9	314	25.7	43.9	253	50.3 ¹¹¹	25.0	55	30	4 50	19	43	9 04	47	38	55		
10	329	25.8	44.8	268	20.2 ¹⁰⁹	30.3	53	20	5 01	27	49	28	48	23	13	54	
11	344	26.0	+6 45.8	282	50.2 ¹¹⁰	+24 35.5	52	10 N	5 08	5 33	5 54	9 48	50	22	52	53	
12	359	26.2	+6 46.7	297	20.0 ¹⁰⁸	+24 40.6	51	0	5 14	5 38	5 59	10 07	51	22	32	52	
13	14	26.4	47.7	311	49.8 ¹⁰⁸	45.6	50	10 S	18	43	6 04	26	53	22	12	51	
14	29	26.5	48.6	326	19.5 ¹⁰⁷	50.5	49	20	21	46	09	10 47	54	21	50	51	
15	44	26.7	49.6	340	49.2 ¹⁰⁷	55.2	47	30	22	50	14	11 11	56	26	49		
16	59	26.9	50.5	355	18.8 ¹⁰⁶	+24 59.8	46	35	22	52	17	25	57	21	11	48	
17	74	27.1	+6 51.4	9	48.3 ¹⁰⁵	+25 04.4	46	40	5 22	5 53	6 21	11 41	58	20	54	48	
18	89	27.2	+6 52.4	24	17.8 ¹⁰⁵	+25 08.7	43	45	5 21	5 55	6 24	12 01	60	20	34	46	
19	104	27.4	53.3	38	47.2 ¹⁰⁴	13.0	43	50	19	57	29	25	62	20	09	44	
20	119	27.6	54.3	53	16.6 ¹⁰⁴	17.2	42	52	18	58	31	37	63	19	57	43	
21	134	27.8	55.2	67	45.9 ¹⁰³	21.2	40	54	17	58	34	12 51	64	43	42		
22	149	27.9	56.1	82	15.1 ¹⁰²	25.1	39	56	16	5 59	36	13 07	66	27	40		
23	164	28.1	57.1	96	44.3 ¹⁰²	28.9	38	58	14	6 00	39	25	70	19	08	38	
24	179	28.3	+6 58.0	111	13.4 ¹⁰¹	+25 32.6	37	60 S	5 12	6 01	6 42	13 49	73	18	44	34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 58 ^m 8		Mag: -3.9 PMG: 9 ^h 57 ^m		Mag: +0.4 PMG: 6 ^h 31 ^m		Mag: -2.3 PMG: 19 ^h 40 ^m		Mag: +0.1 PMG: 16 ^h 31 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	194	51.3	210	45.2	-7 57.3	262	11.3	-22 35.8	64	07.6	+19 05.3	111	30.2	+22 19.6
1	209	53.8	225	44.9	56.2	277	12.1	35.6	79	10.0	05.3	126	32.4	19.6
2	224	56.3	240	44.5	55.2	292	12.9	35.5	94	12.5	05.2	141	34.7	19.6
3	239	58.7	255	44.1	54.1	307	13.7	35.3	109	14.9	05.2	156	37.0	19.6
4	255	01.2	270	43.7	53.0	322	14.5	35.1	124	17.4	05.2	171	39.2	19.6
5	270	03.6	285	43.4	-7 52.0	337	15.3	-22 34.9	139	19.8	+19 05.2	186	41.5	+22 19.6
6	285	06.1	300	43.0	-7 50.9	352	16.1	-22 34.8	154	22.2	+19 05.2	201	43.7	+22 19.7
7	300	08.6	315	42.6	49.8	7	16.9	34.6	169	24.7	05.2	216	46.0	19.7
8	315	11.0	330	42.2	48.8	22	17.7	34.4	184	27.1	05.2	231	48.3	19.7
9	330	13.5	345	41.8	47.7	37	18.5	34.2	199	29.5	05.2	246	50.5	19.7
10	345	16.0	0	41.5	46.7	52	19.3	34.1	214	32.0	05.2	261	52.8	19.7
11	0	18.4	15	41.1	-7 45.6	67	20.1	-22 33.9	229	34.4	+19 05.2	276	55.0	+22 19.7
12	15	20.9	30	40.7	-7 44.5	82	20.9	-22 33.7	244	36.9	+19 05.2	291	57.3	+22 19.7
13	30	23.4	45	40.3	43.5	97	21.7	33.5	259	39.3	05.1	306	59.6	19.8
14	45	25.8	60	40.0	42.4	112	22.5	33.4	274	41.7	05.1	322	01.8	19.8
15	60	28.3	75	39.6	41.3	127	23.3	33.2	289	44.2	05.1	337	04.1	19.8
16	75	30.8	90	39.2	40.3	142	24.1	33.0	304	46.6	05.1	352	06.3	19.8
17	90	33.2	105	38.8	-7 39.2	157	24.9	-22 32.8	319	49.0	+19 05.1	7	08.6	+22 19.8
18	105	35.7	120	38.5	-7 38.1	172	25.7	-22 32.6	334	51.5	+19 05.1	22	10.9	+22 19.8
19	120	38.1	135	38.1	37.0	187	26.5	32.5	349	53.9	05.1	37	13.1	19.9
20	135	40.6	150	37.7	36.0	202	27.3	32.3	4	56.4	05.1	52	15.4	19.9
21	150	43.1	165	37.3	34.9	217	28.1	32.1	19	58.8	05.1	67	17.6	19.9
22	165	45.5	180	37.0	33.8	232	28.9	31.9	35	01.2	05.1	82	19.9	19.9
23	180	48.0	195	36.6	32.8	247	29.7	31.8	50	03.7	05.0	97	22.1	19.9
24	195	50.5	210	36.2	-7 31.7	262	30.5	-22 31.6	65	06.1	+19 05.0	112	24.4	+22 19.9
Dif	—		-4	+11		+8	+2		+24		0	+23		0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:0 PMG: 12 ^h 02 ^m 0			Edad: 6 ^d 2 SD: 14:9 PMG: 17 ^h 11 ^m	PHE { 4 ^h : 55/0 12 ^h : 55/1 20 ^h : 55/3 R°: 53 ^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	28.3	+6	58.0	111	13.4	+25 32.6	60 N	19 00	19 44	20 41	7 02	46		2 24	64	
1	194	28.5		58.9	125	42.5 ¹⁰¹	36.2	36	58	18 55	37	29	27	48	1 59	62	
2	209	28.6	+6	59.9	140	11.5 ¹⁰⁰	39.6	34	56	52	31	19	7 48	48	39	60	
3	224	28.8	+7	00.8	154	40.5 ¹⁰⁰	42.9	33	54	48	25	11	8 05	49	22	60	
4	239	29.0		01.8	169	09.4 ⁹⁹	46.1	32	52	45	20	20 03	19	50	1 08	59	
5	254	29.2	+7	02.7	183	38.2 ⁹⁸	+25 49.1	30	50	18 42	19 16	19 56	8 32	50	0 55	59	
6	269	29.3	+7	03.6	198	07.0 ⁹⁸	+25 52.0	29	45	18 36	19 06	19 42	8 58	51	0 30	57	
7	284	29.5		04.6	212	35.8 ⁹⁸	54.8	28	40	31	18 59	31	9 18	52	0 09	57	
8	299	29.7		05.5	227	04.4 ⁹⁶	+25 57.5	27	35	26	52	23	36	52	**	**	**
9	314	29.9		06.4	241	33.1 ⁹⁷	+26 00.0	25	30	23	47	15	9 51	52	**	**	**
10	329	30.0		07.4	256	01.7 ⁹⁶	+26 02.4	24	20	16	38	19 04	10 16	53	**	**	**
11	344	30.2	+7	08.3	270	30.2 ⁹⁵	+26 04.7	23	10 N	18 10	18 32	18 56	10 38	53	23	45	53
12	359	30.4	+7	09.3	284	58.7 ⁹⁵	+26 06.9	22	0	18 05	18 26	18 50	10 58	54	23	24	53
13	14	30.6		10.2	299	27.1 ⁹⁴	08.9	20	10 S	18 00	21	46	11 19	53	23	03	54
14	29	30.7		11.1	313	55.5 ⁹⁴	10.8	19	20	17 55	17	43	11 41	54	22	41	54
15	44	30.9		12.1	328	23.9 ⁹⁴	12.5	17	30	49	13	41	12 07	53	22	15	55
16	59	31.1		13.0	342	52.2 ⁹³	14.1	16	35	46	11	40	22	54	21	59	56
17	74	31.2	+7	13.9	357	20.5 ⁹³	+26 15.6	15	40	17 42	18 09	18 40	12 39	54	21	42	55
18	89	31.4	+7	14.9	11	48.7 ⁹²	+26 17.0	14	45	17 37	18 07	18 41	13 01	53	21	20	56
19	104	31.6		15.8	26	16.8 ⁹¹	18.2	12	50	32	05	42	27	54	20	53	57
20	119	31.8		16.7	40	45.0 ⁹²	19.3	11	52	30	04	43	40	54	40	57	
21	134	31.9		17.7	55	13.1 ⁹¹	20.2	9	54	27	03	44	13 55	54	25	57	
22	149	32.1		18.6	69	41.1 ⁹⁰	21.1	9	56	25	02	45	14 13	54	20	07	57
23	164	32.3		19.5	84	09.1 ⁹⁰	21.7	6	58	21	01	46	14 35	53	19	46	57
24	179	32.5	+7	20.5	98	37.1 ⁹⁰	+26 22.3	6	60 S	17 18	18 00	18 48	15 02	54	19	18	58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 54 ^m 8		Mag: -3.9 PMG: 9 ^h 58 ^m		Mag: +0.4 PMG: 6 ^h 30 ^m		Mag: -2.3 PMG: 19 ^h 36 ^m		Mag: +0.1 PMG: 16 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	195	50.5	210	36.2	-7	31.7	262	30.5	-22	31.6	65	06.1	+19	05.0	112	24.4	+22	19.9
1	210	52.9	225	35.8		30.6	277	31.3		31.4	80	08.5		05.0	127	26.7		20.0
2	225	55.4	240	35.5		29.6	292	32.1		31.2	95	11.0		05.0	142	28.9		20.0
3	240	57.9	255	35.1		28.5	307	32.9		31.0	110	13.4		05.0	157	31.2		20.0
4	256	00.3	270	34.7		27.4	322	33.7		30.9	125	15.8		05.0	172	33.4		20.0
5	271	02.8	285	34.4	-7	26.3	337	34.5	-22	30.7	140	18.3	+19	05.0	187	35.7	+22	20.0
6	286	05.3	300	34.0	-7	25.3	352	35.3	-22	30.5	155	20.7	+19	05.0	202	38.0	+22	20.0
7	301	07.7	315	33.6		24.2	7	36.1		30.3	170	23.1		05.0	217	40.2		20.1
8	316	10.2	330	33.2		23.1	22	36.9		30.1	185	25.5		04.9	232	42.5		20.1
9	331	12.6	345	32.9		22.0	37	37.7		30.0	200	28.0		04.9	247	44.7		20.1
10	346	15.1	0	32.5		21.0	52	38.5		29.8	215	30.4		04.9	262	47.0		20.1
11	1	17.6	15	32.1	-7	19.9	67	39.4	-22	29.6	230	32.8	+19	04.9	277	49.2	+22	20.1
12	16	20.0	30	31.8	-7	18.8	82	40.2	-22	29.4	245	35.3	+19	04.9	292	51.5	+22	20.1
13	31	22.5	45	31.4		17.7	97	41.0		29.2	260	37.7		04.9	307	53.7		20.2
14	46	25.0	60	31.0		16.7	112	41.8		29.0	275	40.1		04.9	322	56.0		20.2
15	61	27.4	75	30.6		15.6	127	42.6		28.9	290	42.6		04.9	337	58.3		20.2
16	76	29.9	90	30.3		14.5	142	43.4		28.7	305	45.0		04.9	353	00.5		20.2
17	91	32.4	105	29.9	-7	13.4	157	44.2	-22	28.5	320	47.4	+19	04.8	8	02.8	+22	20.2
18	106	34.8	120	29.5	-7	12.4	172	45.0	-22	28.3	335	49.8	+19	04.8	23	05.0	+22	20.2
19	121	37.3	135	29.2		11.3	187	45.8		28.1	350	52.3		04.8	38	07.3		20.2
20	136	39.7	150	28.8		10.2	202	46.6		27.9	5	54.7		04.8	53	09.5		20.3
21	151	42.2	165	28.4		09.1	217	47.4		27.8	20	57.1		04.8	68	11.8		20.3
22	166	44.7	180	28.1		08.0	232	48.2		27.6	35	59.5		04.8	83	14.0		20.3
23	181	47.1	195	27.7		07.0	247	49.0		27.4	51	02.0		04.8	98	16.3		20.3
24	196	49.6	210	27.3	-7	05.9	262	49.8	-22	27.2	66	04.4	+19	04.8	113	18.6	+22	20.3
Dif	—		-4		+11		+8		+2		+24		0		+23			0

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 7			Edad: 7 ^d 2 PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /8 20 ^h : 56 ^m /0 PMG: 18 ^h 04 ^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	179	32.5	+7 20.5	98	37.1	+26 22.3		60 N	3 21	4 18	5 03	7 48	70	3 28	42
1	194	32.6		113	05.0	22.7	4	58	33	26	07	8 15	67	3 01	44
2	209	32.8		127	32.9	22.9	2	56	44	32	11	36	66	2 39	47
3	224	33.0		142	00.8	23.1	2	54	3 52	38	15	8 54	64	22	47
4	239	33.1		156	28.6	23.0	1	52	4 00	43	18	9 09	63	2 07	48
5	254	33.3	+7 25.1	170	56.4	22.9	1	50	4 07	4 47	5 21	9 22	62	1 54	49
6	269	33.5	+7 26.1	185	24.2	22.6	3	45	4 21	4 57	5 27	9 49	60	1 27	50
7	284	33.7		199	51.9	22.2	4	40	32	5 05	32	10 10	59	1 06	51
8	299	33.8		214	19.6	21.6	6	35	41	11	37	28	58	0 48	51
9	314	34.0		228	47.3	20.9	7	30	48	16	41	10 43	58	33	52
10	329	34.2		243	14.9	20.0	9	20	4 59	25	47	11 09	56	0 07	53
11	344	34.3	+7 30.7	257	42.5	19.0	10	10 N	5 07	5 32	5 53	11 31	55	** ** *	**
12	359	34.5	+7 31.7	272	10.1	17.9	11	0	5 13	5 38	5 58	11 52	54	** ** *	**
13	14	34.7		286	37.7	16.6	13	10 S	18	42	6 04	12 12	53	23 57	56
14	29	34.9		301	05.2	15.2	14	20	21	47	09	12 35	51	35	58
15	44	35.0		315	32.8	13.7	15	30	23	51	15	13 00	51	23 10	60
16	59	35.2		330	00.3	11.9	18	35	24	53	19	16	49	22 55	61
17	74	35.4	+7 36.3	344	27.7	10.1	18	40	5 24	5 55	6 23	13 33	48	22 37	63
18	89	35.5	+7 37.2	358	55.2	08.1	20	45	5 24	5 58	6 27	13 54	47	22 16	65
19	104	35.7		13	22.6	06.0	21	50	22	6 00	32	14 21	44	21 50	67
20	119	35.9		27	50.1	03.7	23	52	22	01	35	34	43	37	69
21	134	36.1		42	17.5	01.3	24	54	21	02	37	14 49	42	22	71
22	149	36.2		56	44.9	58.7	26	56	20	03	40	15 07	39	21 04	73
23	164	36.4		71	12.2	56.0	27	58	19	04	44	28	37	20 43	76
24	179	36.6	+7 42.8	85	39.6	53.1	29	60 S	5 17	6 05	6 47	15 56	31	20 16	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 50 ^m 9		Mag: -3.9 PMG: 9 ^h 58 ^m		Mag: +0.4 PMG: 6 ^h 28 ^m		Mag: -2.3 PMG: 19 ^h 33 ^m		Mag: +0.1 PMG: 16 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	196	49.6	210	27.3	-7 05.9	262	49.8	-22 27.2	66 04.4	+19 04.8
1	211	52.1	225	27.0	04.8	277	50.6	27.0	81 06.8	04.7
2	226	54.5	240	26.6	03.7	292	51.5	26.8	96 09.2	04.7
3	241	57.0	255	26.2	02.6	307	52.3	26.6	111 11.7	04.7
4	256	59.5	270	25.9	01.6	322	53.1	26.5	126 14.1	04.7
5	272	01.9	285	25.5	-7 00.5	337	53.9	-22 26.3	141 16.5	+19 04.7
6	287	04.4	300	25.1	-6 59.4	352	54.7	-22 26.1	156 18.9	+19 04.7
7	302	06.9	315	24.8	58.3	7 55.5	25.9		171 21.4	04.7
8	317	09.3	330	24.4	57.2	22 56.3	25.7		186 23.8	04.7
9	332	11.8	345	24.0	56.1	37 57.1	25.5		201 26.2	04.6
10	347	14.2	0	23.7	55.1	52 57.9	25.3		216 28.6	04.6
11	2	16.7	15	23.3	-6 54.0	67 58.7	-22 25.2		231 31.1	+19 04.6
12	17	19.2	30	22.9	-6 52.9	82 59.5	-22 25.0		246 33.5	+19 04.6
13	32	21.6	45	22.6	51.8	98 00.3	24.8		261 35.9	04.6
14	47	24.1	60	22.2	50.7	113 01.2	24.6		276 38.3	04.6
15	62	26.6	75	21.8	49.6	128 02.0	24.4		291 40.7	04.6
16	77	29.0	90	21.5	48.6	143 02.8	24.2		306 43.2	04.5
17	92	31.5	105	21.1	-6 47.5	158 03.6	-22 24.0		321 45.6	+19 04.5
18	107	34.0	120	20.7	-6 46.4	173 04.4	-22 23.8		336 48.0	+19 04.5
19	122	36.4	135	20.4	45.3	188 05.2	23.7		351 50.4	04.5
20	137	38.9	150	20.0	44.2	203 06.0	23.5		6 52.8	04.5
21	152	41.4	165	19.6	43.1	218 06.8	23.3		21 55.3	04.5
22	167	43.8	180	19.3	42.0	233 07.6	23.1		36 57.7	04.5
23	182	46.3	195	18.9	40.9	248 08.5	22.9		52 00.1	04.4
24	197	48.7	210	18.6	-6 39.9	263 09.3	-22 22.7		67 02.5	+19 04.4
Dif	—		-4	+11		+8	+2		+24	0
										+23
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0			Edad: 8 ^d 2	PHE { 4 ^h : 56 ^h /3 12 ^h : 56 ^h /6 20 ^h : 56 ^h /9									
	PMG: 12 ^h 01 ^m 4					SD: 15 ^h 3			PMG: 18 ^h 59 ^m		Rº: 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	36.6	+7 42.8	85	39.6	+25 53.1	29	60 N	19 05	19 50	20 48	8 58 89	4 10 24	
1	194	36.7		100	07.0	50.2	84	58	19 00	42	35	9 22 84	3 45 29	
2	209	36.9	44.7	114	34.3	47.0	83	56	18 56	35	24	42 79	26 32	
3	224	37.1	45.6	129	01.6	43.7	83	54	52	29	15	9 58 77	3 09 36	
4	239	37.2	46.5	143	29.0	40.3	84	52	48	24	07	10 12 74	2 55 38	
5	254	37.4	+7 47.4	157	56.3	36.7	83	50	18 45	19 19	20 00	10 24 73	2 43 39	
6	269	37.6	+7 48.4	172	23.6	33.0	83	45	18 38	19 09	19 45	10 49 69	2 17 42	
7	284	37.8	49.3	186	50.9	29.1	83	40	33	19 01	34	11 09 67	1 57 44	
8	299	37.9	50.2	201	18.2	25.1	83	35	28	18 54	24	26 64	39 47	
9	314	38.1	51.1	215	45.5	21.0	83	30	24	48	17	11 41 62	25 48	
10	329	38.3	52.1	230	12.8	16.7	83	20	17	39	19 05	12 05 59	1 00 50	
11	344	38.4	+7 53.0	244	40.1	12.2	83	10 N	18 10	18 32	18 56	12 26 57	0 38 52	
12	359	38.6	+7 53.9	259	07.3	07.6	82	0	18 05	18 26	18 50	12 46 54	0 17 55	
13	14	38.8	54.8	273	34.6	02.9	83	10 S	17 59	20	45	13 05 52	** ** *	
14	29	38.9	55.8	288	01.9	58.0	83	20	53	15	41	26 49	** ** *	
15	44	39.1	56.7	302	29.2	53.0	83	30	47	11	38	13 51 46	** ** *	
16	59	39.3	57.6	316	56.5	47.9	83	35	43	08	38	14 05 44	23 56 66	
17	74	39.4	+7 58.5	331	23.8	42.6	83	40	17 39	18 06	18 37	14 21 42	23 40 69	
18	89	39.6	+7 59.5	345	51.1	37.1	83	45	17 34	18 03	18 37	14 41 39	23 21 72	
19	104	39.8	+8 00.4	0	18.4	31.5	83	50	28	18 01	38	15 05 35	22 57 77	
20	119	39.9	01.3	14	45.7	25.8	83	52	26	17 59	38	17 33	46 78	
21	134	40.1	02.2	29	13.1	19.9	84	54	23	58	39	31 30	33 81	
22	149	40.3	03.2	43	40.4	13.9	83	56	20	57	40	15 46 27	22 17 85	
23	164	40.4	04.1	58	07.7	07.7	83	58	16	56	41	16 05 22	21 59 89	
24	179	40.6	+8 05.0	72	35.1	01.4	84	60 S	17 12	17 54	18 42	16 27 17	21 37 95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 47 ^m 0		Mag: -3.9 PMG: 9 ^h 59 ^m		Mag: +0.4 PMG: 6 ^h 27 ^m		Mag: -2.3 PMG: 19 ^h 29 ^m		Mag: +0.1 PMG: 16 ^h 21 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	197	48.7	210	18.6	-6 39.9	263 09.3	-22 22.7	67 02.5	+19 04.4	114 12.6	+22 20.7
1	212	51.2	225	18.2	38.8	278 10.1	22.5	82 04.9	04.4	129 14.9	20.7
2	227	53.7	240	17.8	37.7	293 10.9	22.3	97 07.3	04.4	144 17.1	20.8
3	242	56.1	255	17.5	36.6	308 11.7	22.1	112 09.8	04.4	159 19.4	20.8
4	257	58.6	270	17.1	35.5	323 12.5	21.9	127 12.2	04.4	174 21.6	20.8
5	273	01.1	285	16.7	-6 34.4	338 13.3	-22 21.8	142 14.6	+19 04.4	189 23.9	+22 20.8
6	288	03.5	300	16.4	-6 33.3	353 14.1	-22 21.6	157 17.0	+19 04.3	204 26.1	+22 20.8
7	303	06.0	315	16.0	32.2	8 15.0	21.4	172 19.4	04.3	219 28.4	20.8
8	318	08.5	330	15.7	31.1	23 15.8	21.2	187 21.8	04.3	234 30.6	20.8
9	333	10.9	345	15.3	30.0	38 16.6	21.0	202 24.2	04.3	249 32.9	20.9
10	348	13.4	0	14.9	28.9	53 17.4	20.8	217 26.7	04.3	264 35.1	20.9
11	3	15.9	15	14.6	-6 27.9	68 18.2	-22 20.6	232 29.1	+19 04.3	279 37.4	+22 20.9
12	18	18.3	30	14.2	-6 26.8	83 19.0	-22 20.4	247 31.5	+19 04.2	294 39.6	+22 20.9
13	33	20.8	45	13.9	25.7	98 19.8	20.2	262 33.9	04.2	309 41.9	20.9
14	48	23.2	60	13.5	24.6	113 20.6	20.0	277 36.3	04.2	324 44.1	20.9
15	63	25.7	75	13.1	23.5	128 21.5	19.8	292 38.7	04.2	339 46.4	21.0
16	78	28.2	90	12.8	22.4	143 22.3	19.6	307 41.1	04.2	354 48.6	21.0
17	93	30.6	105	12.4	-6 21.3	158 23.1	-22 19.4	322 43.6	+19 04.2	9 50.9	+22 21.0
18	108	33.1	120	12.1	-6 20.2	173 23.9	-22 19.2	337 46.0	+19 04.2	24 53.1	+22 21.0
19	123	35.6	135	11.7	19.1	188 24.7	19.1	352 48.4	04.1	39 55.3	21.0
20	138	38.0	150	11.3	18.0	203 25.5	18.9	7 50.8	04.1	54 57.6	21.0
21	153	40.5	165	11.0	16.9	218 26.4	18.7	22 53.2	04.1	69 59.8	21.1
22	168	43.0	180	10.6	15.8	233 27.2	18.5	37 55.6	04.1	85 02.1	21.1
23	183	45.4	195	10.3	14.7	248 28.0	18.3	52 58.0	04.1	100 04.3	21.1
24	198	47.9	210	09.9	-6 13.6	263 28.8	-22 18.1	68 00.4	+19 04.1	115 06.6	+22 21.1
Dif	—		-4	+11		+8	+2	+24	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 01 ^m 2			Edad: 9 ^d 2 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/8 PMG: 19 ^h 53 ^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	m
0	179	40.6	+8 05.0	72	35.1	+24 01.4	65	60 N	3	14	4	12	4	57	10	27	98
1	194	40.8	05.9	87	02.4	+23 54.9	65	58	26	20	5	02	10	46	92	4	14
2	209	40.9	06.9	101	29.8	84 48.4	65	56	37	27	06	11	01	89	3	58	22
3	224	41.1	07.8	115	57.2	84 41.6	68	54	47	33	10	15	84	45	25		
4	239	41.3	08.7	130	24.6	84 34.7	69	52	3	55	38	13	26	82	33	28	
5	254	41.5	+8 09.6	144	52.0	+23 27.7	70	50	4	02	4	43	5	17	11	37	79
6	269	41.6	+8 10.5	159	19.4	+23 20.6	71	45	4	17	4	53	5	23	11	58	75
7	284	41.8	11.5	173	46.9	85 13.3	73	40	28	5	01	29	12	16	70	41	39
8	299	42.0	12.4	188	14.3	+23 05.8	75	35	38	08	34	30	68	26	42		
9	314	42.1	13.3	202	41.8	+22 58.3	75	30	45	14	38	12	43	64	2	13	44
10	329	42.3	14.2	217	09.3	85 50.6	77	20	4	57	23	46	13	04	61	1	50
11	344	42.4	+8 15.1	231	36.8	+22 42.7	79	10 N	5	06	5	31	5	52	13	23	56
12	359	42.6	+8 16.1	246	04.4	+22 34.7	80	0	5	13	5	37	5	58	13	40	53
13	14	42.8	17.0	260	31.9	85 26.6	81	10 S	18	42	6	04	13	57	50	0	53
14	29	42.9	17.9	274	59.5	86 18.3	83	20	22	47	10	14	15	47	33	60	
15	44	43.1	18.8	289	27.1	86 09.9	84	30	24	52	16	37	41	0	10	63	
16	59	43.3	19.7	303	54.7	+22 01.4	85	35	25	55	20	14	49	39	** ** *		
17	74	43.4	+8 20.7	318	22.3	+21 52.7	87	40	5	26	5	57	6	25	15	03	36
18	89	43.6	+8 21.6	332	49.9	+21 43.9	88	45	5	26	6	00	6	29	15	20	32
19	104	43.8	22.5	347	17.6	89 35.0	89	50	25	03	35	40	28	** ** *			
20	119	43.9	23.4	1	45.3	91 25.9	91	52	25	04	38	15	50	25	** ** *		
21	134	44.1	24.3	16	13.0	92 16.7	92	54	24	05	41	16	01	22	23	54	87
22	149	44.3	25.2	30	40.8	+21 07.4	93	56	24	07	44	13	19	42	91		
23	164	44.4	26.2	45	08.5	+20 57.9	95	58	23	08	48	27	15	28	95		
24	179	44.6	+8 27.1	59	36.3	+20 48.3	96	60 S	5	22	6	10	6	52	16	44	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 43 ^m 0		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +0.3 PMG: 6 ^h 26 ^m		Mag: -2.3 PMG: 19 ^h 25 ^m		Mag: +0.1 PMG: 16 ^h 17 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	198	47.9	210	09.9	-6 13.6	263	28.8	-22 18.1	68	00.4	+19 04.1	115	06.6	+22 21.1
1	213	50.3	225	09.6	12.5	278	29.6	17.9	83	02.8	04.0	130	08.8	21.1
2	228	52.8	240	09.2	11.4	293	30.4	17.7	98	05.2	04.0	145	11.1	21.1
3	243	55.3	255	08.8	10.3	308	31.2	17.5	113	07.7	04.0	160	13.3	21.2
4	258	57.7	270	08.5	09.2	323	32.1	17.3	128	10.1	04.0	175	15.6	21.2
5	274	00.2	285	08.1	-6 08.1	338	32.9	-22 17.1	143	12.5	+19 04.0	190	17.8	+22 21.2
6	289	02.7	300	07.8	-6 07.0	353	33.7	-22 16.9	158	14.9	+19 04.0	205	20.1	+22 21.2
7	304	05.1	315	07.4	05.9	8	34.5	16.7	173	17.3	03.9	220	22.3	21.2
8	319	07.6	330	07.1	04.8	23	35.3	16.5	188	19.7	03.9	235	24.6	21.2
9	334	10.1	345	06.7	03.7	38	36.2	16.3	203	22.1	03.9	250	26.8	21.3
10	349	12.5	0	06.3	02.6	53	37.0	16.1	218	24.5	03.9	265	29.0	21.3
11	4	15.0	15	06.0	-6 01.5	68	37.8	-22 15.9	233	26.9	+19 03.9	280	31.3	+22 21.3
12	19	17.5	30	05.6	-6 00.4	83	38.6	-22 15.7	248	29.3	+19 03.8	295	33.5	+22 21.3
13	34	19.9	45	05.3	-5 59.3	98	39.4	15.5	263	31.7	03.8	310	35.8	21.3
14	49	22.4	60	04.9	58.2	113	40.2	15.3	278	34.1	03.8	325	38.0	21.3
15	64	24.8	75	04.6	57.1	128	41.1	15.1	293	36.5	03.8	340	40.3	21.3
16	79	27.3	90	04.2	56.0	143	41.9	14.9	308	38.9	03.8	355	42.5	21.4
17	94	29.8	105	03.9	-5 54.9	158	42.7	-22 14.7	323	41.3	+19 03.8	10	44.8	+22 21.4
18	109	32.2	120	03.5	-5 53.8	173	43.5	-22 14.5	338	43.7	+19 03.7	25	47.0	+22 21.4
19	124	34.7	135	03.1	52.7	188	44.3	14.3	353	46.1	03.7	40	49.3	21.4
20	139	37.2	150	02.8	51.6	203	45.2	14.1	8	48.6	03.7	55	51.5	21.4
21	154	39.6	165	02.4	50.5	218	46.0	13.9	23	51.0	03.7	70	53.7	21.4
22	169	42.1	180	02.1	49.4	233	46.8	13.7	38	53.4	03.7	85	56.0	21.5
23	184	44.6	195	01.7	48.3	248	47.6	13.5	53	55.8	03.6	100	58.2	21.5
24	199	47.0	210	01.4	-5 47.2	263	48.4	-22 13.3	68	58.2	+19 03.6	116	00.5	+22 21.5
Dif	—		-4 +11		+8 +2		+24 0		+22 0					

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0			Edad: 10 ^d 2	PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'8	SD: 15'8	PMG: 20 ^h 46 ^m	R°: 52 ^m										
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	44.6	+8 27.1	59	36.3	+20 48.3	88	60 N	19	10	19	55	20	55		12	05	101
1	194	44.8		74	04.1	38.6	97	58		04	47		41			18	96	
2	209	44.9		88	32.0	28.7	99	56	19	00	39		30			30	92	
3	224	45.1		102	59.8	18.8	99	54	18	56	33		20			39	89	
4	239	45.3		117	27.7	+20 08.6	102	52		52	27		11			48	86	
5	254	45.4	+8 31.7	131	55.6	+19 58.4	102	50	18	48	19	22	20	04		12	56	83
6	269	45.6	+8 32.6	146	23.6	+19 48.0	104	45	18	41	19	11	19	48		13	13	77
7	284	45.7		160	51.5	37.5	105	40	35		19	03		36		26	73	
8	299	45.9		175	19.5	26.9	106	35	30		18	56		26		38	69	
9	314	46.1		189	47.5	16.2	107	30	25		50		18			13	47	67
10	329	46.2		204	15.6	+19 05.3	109	20		17	40		19	06		14	05	61
11	344	46.4	+8 37.1	218	43.6	+18 54.3	110	10 N	18	10	18	32		18	57	14	19	57
12	359	46.6	+8 38.1	233	11.7	+18 43.2	111	0	18	04	18	25		18	49	14	33	53
13	14	46.7		247	39.8	32.0	112	10 S	17	58	19		44			14	47	48
14	29	46.9		262	08.0	20.6	114	20		52	14		39			15	02	43
15	44	47.1		276	36.1	+18 09.2	114	30		44	09		36			18	39	
16	59	47.2		291	04.3	+17 57.6	116	35		40	06		35			28	36	
17	74	47.4	+8 42.6	305	32.6	+17 45.9	117	40	17	36	18	03		18	34	15	39	32
18	89	47.5	+8 43.5	320	00.8	+17 34.1	118	45	17	30	18	00		18	34	15	52	28
19	104	47.7		334	29.1	22.1	120	50		24	17	57		34		16	08	22
20	119	47.9		348	57.4	+17 10.1	120	52		21	55		34			15	20	
21	134	48.0		3	25.7	+16 57.9	122	54		18	54		35			23	17	
22	149	48.2		17	54.0	45.6	123	56		14	52		35			32	14	
23	164	48.4		32	22.4	33.3	123	58		11	50		36			42	11	
24	179	48.5	+8 49.0	46	50.8	+16 20.8	125	60 S	17	06	17	48		18	36	16	54	6
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 10 ^h 39 ^m 1		Mag: -3.9 PMG: 10 ^h 00 ^m			Mag: +0.3 PMG: 6 ^h 24 ^m			Mag: -2.3 PMG: 19 ^h 21 ^m			Mag: +0.1 PMG: 16 ^h 14 ^m						
h	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
0	199	47.0	210	01.4	-5 47.2	263	48.4	-22 13.3	68	58.2	+19 03.6	116	00.5	+22 21.5				
1	214	49.5	225	01.0	46.1	278	49.3	13.1	84	00.6	03.6	131	02.7	21.5				
2	229	52.0	240	00.7	45.0	293	50.1	12.9	99	03.0	03.6	146	05.0	21.5				
3	244	54.4	255	00.3	43.9	308	50.9	12.7	114	05.4	03.6	161	07.2	21.5				
4	259	56.9	270	00.0	42.8	323	51.7	12.5	129	07.8	03.6	176	09.4	21.6				
5	274	59.3	284	59.6	-5 41.7	338	52.5	-22 12.3	144	10.2	+19 03.5	191	11.7	+22 21.6				
6	290	01.8	299	59.3	-5 40.6	353	53.4	-22 12.1	159	12.6	+19 03.5	206	13.9	+22 21.6				
7	305	04.3	314	58.9	39.5	8	54.2	11.9	174	15.0	03.5	221	16.2	21.6				
8	320	06.7	329	58.6	38.4	23	55.0	11.7	189	17.4	03.5	236	18.4	21.6				
9	335	09.2	344	58.2	37.3	38	55.8	11.5	204	19.8	03.5	251	20.7	21.6				
10	350	11.7	359	57.8	36.2	53	56.6	11.3	219	22.2	03.4	266	22.9	21.7				
11	5	14.1	14	57.5	-5 35.1	68	57.5	-22 11.1	234	24.6	+19 03.4	281	25.1	+22 21.7				
12	20	16.6	29	57.1	-5 33.9	83	58.3	-22 10.9	249	27.0	+19 03.4	296	27.4	+22 21.7				
13	35	19.1	44	56.8	32.8	98	59.1	10.7	264	29.4	03.4	311	29.6	21.7				
14	50	21.5	59	56.4	31.7	113	59.9	10.5	279	31.7	03.4	326	31.9	21.7				
15	65	24.0	74	56.1	30.6	129	00.8	10.3	294	34.1	03.3	341	34.1	21.7				
16	80	26.4	89	55.7	29.5	144	01.6	10.1	309	36.5	03.3	356	36.3	21.8				
17	95	28.9	104	55.4	-5 28.4	159	02.4	-22 09.9	324	38.9	+19 03.3	11	38.6	+22 21.8				
18	110	31.4	119	55.0	-5 27.3	174	03.2	-22 09.7	339	41.3	+19 03.3	26	40.8	+22 21.8				
19	125	33.8	134	54.7	26.2	189	04.1	09.5	354	43.7	03.3	41	43.1	21.8				
20	140	36.3	149	54.3	25.1	204	04.9	09.3	9	46.1	03.2	56	45.3	21.8				
21	155	38.8	164	54.0	24.0	219	05.7	09.1	24	48.5	03.2	71	47.5	21.8				
22	170	41.2	179	53.6	22.8	234	06.5	08.9	39	50.9	03.2	86	49.8	21.8				
23	185	43.7	194	53.3	21.7	249	07.4	08.7	54	53.3	03.2	101	52.0	21.9				
24	200	46.2	209	52.9	-5 20.6	264	08.2	-22 08.5	69	55.7	+19 03.2	116	54.3	+22 21.9				
Dif	—		-4	+11		+8	+2		+24		0	+22		0				

UT	SOL			O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 00 ^m 6			Edad: 11 ^d 2 PHE { SD: 16'0 PMG: 21 ^h 38 ^m 4 ^h : 59'1 12 ^h : 59'4 20 ^h : 59'7 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	179	48.5	+8 49.0	46	50.8	+16 20.8		60 N	3 06	4 05	4 51	13 46	102	4 55	5			
1	194	48.7		61	19.2 94	+16 08.2 126		58	20	14	4 56	13 54	98	45	10			
2	209	48.8		75	47.7 95	+15 55.4 128		56	31	21	5 01	14 02	93	37	13			
3	224	49.0		90	16.1 94	42.6 128		54	41	28	05	08 90		30	16			
4	239	49.2		104	44.6 95	29.7 129		52	50	33	09	14 87		23	19			
5	254	49.3	+8 53.5	119	13.1 95	+15 16.7 130		50	3 57	4 39	5 12	14 19	85	4 17	21			
6	269	49.5	+8 54.5	133	41.7 96	+15 03.5 132		45	4 13	4 49	5 20	14 30	79	4 05	26			
7	284	49.6		148	10.2 95	+14 50.3 132		40	25	4 58	26	39 75		3 54	30			
8	299	49.8		162	38.8 96	36.9 134		35	35	5 05	31	47 71		45	34			
9	314	50.0		177	07.4 96	23.5 134		30	43	12	36	14 54	67	37	37			
10	329	50.1		191	36.1 97	+14 10.0 135		20	4 55	22	44	15 06	61	22	43			
11	344	50.3	+8 59.0	206	04.7 96	+13 56.3 137		10 N	5 05	5 30	5 51	15 16	56	3 10	47			
12	359	50.4	+8 59.9	220	33.4 97	+13 42.6 137		0	5 12	5 36	5 57	15 26	51	2 58	52			
13	14	50.6	+9 00.8	235	02.1 97	28.8 138		10 S	18	42	6 04	35 47		46	57			
14	29	50.8		249	30.8 97	14.8 140		20	22	48	10	45 42		34	61			
15	44	50.9		263	59.5 97	+13 00.8 140		30	26	53	18	15 57	36	19	67			
16	59	51.1		278	28.2 97	+12 46.7 141		35	27	56	22	16 04	32	10	70			
17	74	51.2	+9 04.4	292	57.0 98	+12 32.5 142		40	5 28	5 59	6 27	16 11	29	2 01	73			
18	89	51.4	+9 05.3	307	25.8 98	+12 18.2 143		45	5 28	6 02	6 32	16 20	25	1 49	78			
19	104	51.6		321	54.6 98	+12 03.9 143		50	28	06	38	30 20		35	84			
20	119	51.7		336	23.4 98	+11 49.4 145		52	28	07	41	35 17		28	87			
21	134	51.9		350	52.2 98	34.9 145		54	28	09	45	40 15		21	90			
22	149	52.0		5	21.1 99	20.2 147		56	28	11	48	46 12		13	93			
23	164	52.2		19	49.9 98	+11 05.5 147		58	27	12	52	16 53	8	1 03	97			
24	179	52.4	+9 10.8	34	18.8 99	+10 50.7 148		60 S	5 26	6 14	6 57	17 00	5	0 53	101			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 10 ^h 35 ^m 2			Mag: -3.9 PMG: 10 ^h 01 ^m			Mag: +0.3 PMG: 6 ^h 23 ^m			Mag: -2.3 PMG: 19 ^h 17 ^m			Mag: +0.1 PMG: 16 ^h 10 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	200	46.2	209	52.9	-5 20.6	264	08.2	-22 08.5	69	55.7	+19 03.2	116	54.3	+22 21.9				
1	215	48.6	224	52.6	19.5	279	09.0	08.2	84	58.1	03.1	131	56.5	21.9				
2	230	51.1	239	52.2	18.4	294	09.8	08.0	100	00.5	03.1	146	58.7	21.9				
3	245	53.6	254	51.9	17.3	309	10.7	07.8	115	02.9	03.1	162	01.0	21.9				
4	260	56.0	269	51.6	16.2	324	11.5	07.6	130	05.3	03.1	177	03.2	21.9				
5	275	58.5	284	51.2	-5 15.1	339	12.3	-22 07.4	145	07.7	+19 03.1	192	05.5	+22 22.0				
6	291	00.9	299	50.9	-5 14.0	354	13.1	-22 07.2	160	10.1	+19 03.0	207	07.7	+22 22.0				
7	306	03.4	314	50.5	12.8	9	14.0	07.0	175	12.5	03.0	222	09.9	22.0				
8	321	05.9	329	50.2	11.7	24	14.8	06.8	190	14.8	03.0	237	12.2	22.0				
9	336	08.3	344	49.8	10.6	39	15.6	06.6	205	17.2	03.0	252	14.4	22.0				
10	351	10.8	359	49.5	09.5	54	16.4	06.4	220	19.6	02.9	267	16.7	22.0				
11	6	13.3	14	49.1	-5 08.4	69	17.3	-22 06.2	235	22.0	+19 02.9	282	18.9	+22 22.1				
12	21	15.7	29	48.8	-5 07.3	84	18.1	-22 06.0	250	24.4	+19 02.9	297	21.1	+22 22.1				
13	36	18.2	44	48.4	06.2	99	18.9	05.8	265	26.8	02.9	312	23.4	22.1				
14	51	20.7	59	48.1	05.0	114	19.7	05.6	280	29.2	02.9	327	25.6	22.1				
15	66	23.1	74	47.7	03.9	129	20.6	05.3	295	31.6	02.8	342	27.8	22.1				
16	81	25.6	89	47.4	02.8	144	21.4	05.1	310	34.0	02.8	357	30.1	22.1				
17	96	28.1	104	47.0	-5 01.7	159	22.2	-22 04.9	325	36.3	+19 02.8	12	32.3	+22 22.2				
18	111	30.5	119	46.7	-5 00.6	174	23.1	-22 04.7	340	38.7	+19 02.8	27	34.6	+22 22.2				
19	126	33.0	134	46.3	-4 59.5	189	23.9	04.5	355	41.1	02.7	42	36.8	22.2				
20	141	35.4	149	46.0	58.3	204	24.7	04.3	10	43.5	02.7	57	39.0	22.2				
21	156	37.9	164	45.7	57.2	219	25.5	04.1	25	45.9	02.7	72	41.3	22.2				
22	171	40.4	179	45.3	56.1	234	26.4	03.9	40	48.3	02.7	87	43.5	22.2				
23	186	42.8	194	45.0	55.0	249	27.2	03.7	55	50.7	02.7	102	45.7	22.3				
24	201	45.3	209	44.6	-4 53.9	264	28.0	-22 03.5	70	53.1	+19 02.6	117	48.0	+22 22.3				
Dif	—			-3 +11			+8 +2			+24 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 4			Edad: 12 ^d 2 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'5 R°: 52 ^m SD: 16'3 PMG: 22 ^h 29 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	52.4	+9 10.8	34	18.8	+10 50.7	149	60 N	19 15	20 01	21 02	15 28 103	5 00 4		
1	194	52.5		48	47.7	35.8	149	58	09	19 52	20 47	32 98	4 55 7		
2	209	52.7	12.6	63	16.6	20.9	149	56	19 04	44	35	35 95	50 11		
3	224	52.8	13.5	77	45.5	+10 05.9	150	54	18 59	37	25	38 92	46 13		
4	239	53.0	14.4	92	14.4	+9 50.8	151	52	55	31	15	41 89	42 16		
5	254	53.1	+9 15.3	106	43.3	+9 35.6	152	50	18 52	19 26	20 08	15 44 86	4 38 19		
6	269	53.3	+9 16.2	121	12.3	+9 20.3	153	45	18 44	19 14	19 51	15 49 81	4 31 24		
7	284	53.5	17.1	135	41.2	+9 05.0	153	40	37	19 05	38	54 75	24 29		
8	299	53.6	18.0	150	10.2	+8 49.6	154	35	31	18 57	28	15 58 71	19 32		
9	314	53.8	18.9	164	39.1	34.2	154	30	26	51	20	16 01 68	14 35		
10	329	53.9	19.8	179	08.1	18.6	156	20	18	40	19 07	07 62	4 05 41		
11	344	54.1	+9 20.7	193	37.1	+8 03.0	156	10 N	18 10	18 32	18 57	16 12 57	3 57 47		
12	359	54.2	+9 21.6	208	06.0	+7 47.4	156	0	18 04	18 25	18 49	16 17 52	3 50 51		
13	14	54.4	22.5	222	35.0	31.7	157	10 S	17 57	18	43	22 47	43 56		
14	29	54.6	23.4	237	04.0	15.9	158	20	50	12	38	27 42	35 61		
15	44	54.7	24.3	251	33.0	+7 00.1	158	30	42	06	34	33 35	26 67		
16	59	54.9	25.2	266	02.0	+6 44.2	159	35	38	03	33	36 32	20 72		
17	74	55.0	+9 26.1	280	31.0	+6 28.2	160	40	17 33	18 00	18 31	16 40 28	3 14 76		
18	89	55.2	+9 27.0	294	59.9	+6 12.2	160	45	17 27	17 57	18 31	16 45 23	3 07 80		
19	104	55.3	27.9	309	28.9	+5 56.2	160	50	20	53	30	50 18	2 59 85		
20	119	55.5	28.8	323	57.9	40.0	162	52	17	51	30	52 16	55 88		
21	134	55.7	29.7	338	26.9	23.9	161	54	13	49	30	55 13	51 91		
22	149	55.8	30.6	352	55.9	+5 07.7	162	56	09	47	30	16 58 10	46 94		
23	164	56.0	31.5	7	24.8	+4 51.4	163	58	05	45	30	17 01 7	40 98		
24	179	56.1	+9 32.4	21	53.8	+4 35.1	163	60 S	17 00	17 43	18 31	17 05 3	2 34 102		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 31 ^m 3		Mag: -3.9 PMG: 10 ^h 01 ^m		Mag: +0.3 PMG: 6 ^h 22 ^m		Mag: -2.3 PMG: 19 ^h 13 ^m		Mag: +0.1 PMG: 16 ^h 06 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	201	45.3	209 44.6	-4 53.9	264 28.0	-22 03.5	70 53.1	+19 02.6	117 48.0	+22 22.3
1	216	47.8	224 44.3	52.8	279 28.9	03.2	85 55.4	02.6	132 50.2	22.3
2	231	50.2	239 43.9	51.6	294 29.7	03.0	100 57.8	02.6	147 52.5	22.3
3	246	52.7	254 43.6	50.5	309 30.5	02.8	116 00.2	02.6	162 54.7	22.3
4	261	55.2	269 43.2	49.4	324 31.3	02.6	131 02.6	02.5	177 56.9	22.3
5	276	57.6	284 42.9	-4 48.3	339 32.2	-22 02.4	146 05.0	+19 02.5	192 59.2	+22 22.3
6	292	00.1	299 42.5	-4 47.2	354 33.0	-22 02.2	161 07.4	+19 02.5	208 01.4	+22 22.4
7	307	02.5	314 42.2	46.0	9 33.8	02.0	176 09.8	02.5	223 03.6	22.4
8	322	05.0	329 41.9	44.9	24 34.7	01.8	191 12.1	02.4	238 05.9	22.4
9	337	07.5	344 41.5	43.8	39 35.5	01.6	206 14.5	02.4	253 08.1	22.4
10	352	09.9	359 41.2	42.7	54 36.3	01.3	221 16.9	02.4	268 10.3	22.4
11	7	12.4	14 40.8	-4 41.6	69 37.2	-22 01.1	236 19.3	+19 02.4	283 12.6	+22 22.4
12	22	14.9	29 40.5	-4 40.4	84 38.0	-22 00.9	251 21.7	+19 02.4	298 14.8	+22 22.5
13	37	17.3	44 40.1	39.3	99 38.8	00.7	266 24.0	02.3	313 17.0	22.5
14	52	19.8	59 39.8	38.2	114 39.6	00.5	281 26.4	02.3	328 19.3	22.5
15	67	22.3	74 39.5	37.1	129 40.5	00.3	296 28.8	02.3	343 21.5	22.5
16	82	24.7	89 39.1	35.9	144 41.3	-22 00.1	311 31.2	02.3	358 23.7	22.5
17	97	27.2	104 38.8	-4 34.8	159 42.1	-21 59.8	326 33.6	+19 02.2	13 26.0	+22 22.5
18	112	29.7	119 38.4	-4 33.7	174 43.0	-21 59.6	341 36.0	+19 02.2	28 28.2	+22 22.6
19	127	32.1	134 38.1	32.6	189 43.8	59.4	356 38.3	02.2	43 30.4	22.6
20	142	34.6	149 37.7	31.5	204 44.6	59.2	11 40.7	02.2	58 32.7	22.6
21	157	37.0	164 37.4	30.3	219 45.5	59.0	26 43.1	02.1	73 34.9	22.6
22	172	39.5	179 37.1	29.2	234 46.3	58.8	41 45.5	02.1	88 37.1	22.6
23	187	42.0	194 36.7	28.1	249 47.1	58.6	56 47.9	02.1	103 39.4	22.6
24	202	44.4	209 36.4	-4 27.0	264 48.0	-21 58.3	71 50.2	+19 02.1	118 41.6	+22 22.7
Dif	—		-3	+11	+8	+2	+24	0	+22	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 9			Edad: 13 ^d 2 PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 9 20 ^h : 61 ^m 1 R°: 53 ^m						Principio del crepúsculo			Salida de Luna			Puesta de Luna		
	PMG: 12 ^h 00 ^m 1			SD: 16 ^h 5 PMG: 23 ^h 21 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	179	56.1	+9	32.4	21	53.8	+4	35.1	60 N	2	58	3	59	4	45	17 11 105	5 04 3	
1	194	56.3		33.3	36	22.7	99	18.8	58	3	13	4	08	51	10	101	02 7	
2	209	56.4		34.2	50	51.7	100	+4 02.4	56	25	16	4	56		10	97	5 01 10	
3	224	56.6		35.1	65	20.6	99	+3 46.0	54	35	23	5	00		10	94	4 59 14	
4	239	56.7		36.0	79	49.6	100	29.6	52	44	29		04		10	91	58 16	
5	254	56.9	+9	36.9	94	18.5	99	+3 13.1	50	3	52	4	34	5	08	17 10 88	4 57 18	
6	269	57.0	+9	37.8	108	47.4	99	+2 56.6	45	4	09	4	46	5	16	17 10 82	4 55 23	
7	284	57.2		38.7	123	16.3	99	40.0	40	22	4	55	23		09	78	53 28	
8	299	57.4		39.6	137	45.1	98	23.4	35	32	5	03	29		09	73	51 32	
9	314	57.5		40.5	152	14.0	99	+2 06.8	30	40		09	34		09	70	49 36	
10	329	57.7		41.3	166	42.8	98	+1 50.2	20	4	54	20	42		09	63	46 42	
11	344	57.8	+9	42.2	181	11.7	99	+1 33.5	10 N	5	04	5	29	5	50	17 09 58	4 44 47	
12	359	58.0	+9	43.1	195	40.5	98	+1 16.9	0	5	12	5	36	5	57	17 09 52	4 41 52	
13	14	58.1		44.0	210	09.3	98	+1 00.1	10 S	18	42	6	04		09	47	39 57	
14	29	58.3		44.9	224	38.0	97	+0 43.4	20	23	48	11			09	42	36 63	
15	44	58.4		45.8	239	06.8	98	26.7	30	27	55	19			08	37	33 69	
16	59	58.6		46.7	253	35.5	97	+0 09.9	35	28	5	58	23		08	33	32 72	
17	74	58.7	+9	47.6	268	04.2	97	-0 06.8	40	5	30	6	01	6	29	17 08 29	4 30 76	
18	89	58.9	+9	48.5	282	32.9	97	-0 23.6	45	5	31	6	05	6	34	17 08 25	4 27 81	
19	104	59.0		49.4	297	01.6	97	40.4	50	31	09	42			08	19	24 87	
20	119	59.2		50.3	311	30.2	96	-0 57.2	52	31	11	45			08	17	23 90	
21	134	59.3		51.2	325	58.8	96	-1 14.0	54	31	12	48			08	14	22 92	
22	149	59.5		52.1	340	27.4	96	30.8	56	31	14	52			08	11	20 96	
23	164	59.6		53.0	354	55.9	95	-1 47.6	58	31	17	6	57		08	8	18 100	
24	179	59.8	+9	53.8	9	24.4	95	-2 04.4	60 S	5	31	6	19	7	02	17 08 4	4 16 104	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 27 ^m 3		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: +0.3 PMG: 6 ^h 20 ^m		Mag: -2.3 PMG: 19 ^h 10 ^m		Mag: +0.1 PMG: 16 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	202	44.4	209	36.4	264	48.0	71	50.2	118	41.6
1	217	46.9	224	36.0	279	48.8	86	52.6	133	43.8
2	232	49.4	239	35.7	294	49.6	101	55.0	148	46.1
3	247	51.8	254	35.3	309	50.5	116	57.4	163	48.3
4	262	54.3	269	35.0	324	51.3	131	59.7	178	50.5
5	277	56.8	284	34.7	339	52.1	147	02.1	193	52.8
6	292	59.2	299	34.3	354	53.0	162	04.5	208	55.0
7	308	01.7	314	34.0	9	53.8	177	06.9	223	57.2
8	323	04.1	329	33.6	24	54.7	192	09.2	238	59.5
9	338	06.6	344	33.3	39	55.5	207	11.6	254	01.7
10	353	09.1	359	33.0	54	56.3	222	14.0	269	03.9
11	8	11.5	14	32.6	69	57.2	237	16.4	284	06.2
12	23	14.0	29	32.3	84	58.0	252	18.7	299	08.4
13	38	16.5	44	31.9	99	58.8	267	21.1	314	10.6
14	53	18.9	59	31.6	114	59.7	282	23.5	329	12.9
15	68	21.4	74	31.3	130	00.5	297	25.9	344	15.1
16	83	23.9	89	30.9	145	01.3	312	28.2	359	17.3
17	98	26.3	104	30.6	160	02.2	327	30.6	14	19.5
18	113	28.8	119	30.2	175	03.0	342	33.0	29	21.8
19	128	31.3	134	29.9	190	03.9	357	35.4	44	24.0
20	143	33.7	149	29.6	205	04.7	12	37.7	59	26.2
21	158	36.2	164	29.2	220	05.5	27	40.1	74	28.5
22	173	38.6	179	28.9	235	06.4	42	42.5	89	30.7
23	188	41.1	194	28.6	250	07.2	57	44.8	104	32.9
24	203	43.6	209	28.2	265	08.0	72	47.2	119	35.2
Dif	—		-3	+11	+8	+2	+24	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 9			Edad: 14 ^d 2 SD: 16'7 PMG: **h **m	PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'4 R°: **m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	m
0	179	59.8	+9 53.8	9	24.4	-2 04.4	60 N	19	19	20 06	21 09	18 56	108	5 07	4
1	194	59.9		54.7	23 52.9 95	21.2 168	58	13	19 57	20 53		51 104		09	8
2	210	00.1		55.6	38 21.4 95	38.0 168	56	08	48	40		47 100		11	11
3	225	00.2		56.5	52 49.8 94	-2 54.8 168	54	19 03	41	29		44 96		13	14
4	240	00.4		57.4	67 18.2 94	-3 11.6 168	52	18 59	35	20		41 92		14	17
5	255	00.5	+9 58.3	81	46.5 93	-3 28.4 168	50	18 55	19 29	20 11		18 38 90		5 15	20
6	270	00.7	+9 59.2	96	14.8 93	-3 45.1 167	45	18 46	19 17	19 54		18 32 84		5 18	25
7	285	00.9	+10 00.1	110	43.1 93	-4 01.9 168	40	39	19 07	41		27 79		21	29
8	300	01.0		01.0	125 11.3 92	18.6 167	35	33	18 59	30		22 75		23	33
9	315	01.2		01.8	139 39.5 92	35.3 167	30	28	52	21		19 71		25	37
10	330	01.3		02.7	154 07.7 92	-4 52.0 167	20	18	41	19 07		12 65		28	43
11	345	01.5	+10 03.6	168	35.8 91	-5 08.7 167	10 N	18 11	18 32	18 57		18 07 59		5 31	48
12	0	01.6	+10 04.5	183	03.9 91	-5 25.3 166	0	18 03	18 24	18 49		18 01 55		5 33	54
13	15	01.8		05.4	197 31.9 90	41.9 166	10 S	17 56	17	42		17 56 50		36	59
14	30	01.9		06.3	211 59.9 90	-5 58.5 166	20	48	11	37		51 44		39	64
15	45	02.0		07.2	226 27.8 89	-6 15.1 166	30	40	04	32		45 38		42	70
16	60	02.2		08.1	240 55.7 89	31.6 165	35	35	18 01	30		41 35		44	74
17	75	02.3	+10 08.9	255	23.6 89	-6 48.1 165	40	17 30	17 57	18 29		17 37 31		5 46	78
18	90	02.5	+10 09.8	269	51.4 88	-7 04.6 165	45	17 23	17 53	18 27		17 33 26		5 48	83
19	105	02.6		10.7	284 19.1 87	21.0 164	50	16	49	26		27 21		51	89
20	120	02.8		11.6	298 46.8 87	37.4 164	52	12	47	26		25 18		53	91
21	135	02.9		12.5	313 14.5 87	-7 53.7 163	54	09	45	26		22 16		54	95
22	150	03.1		13.4	327 42.1 86	-8 10.0 163	56	05	42	26		19 13		56	98
23	165	03.2		14.3	342 09.6 85	26.2 162	58	17 00	40	25		16 9		5 58	102
24	180	03.4	+10 15.1	356	37.1 85	-8 42.4 162	60 S	16 55	17 37	18 25		17 12 5		6 00	106
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO				
	PMG: 10 ^h 23 ^m 4		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: +0.3 PMG: 6 ^h 19 ^m		Mag: -2.2 PMG: 19 ^h 06 ^m				Mag: +0.1 PMG: 15 ^h 59 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec		hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	203	43.6	209	28.2	-3 59.9	265	08.0	-21 53.1	72	47.2	+19 01.4	119	35.2	+22 23.0	
1	218	46.0	224	27.9	58.8	280	08.9	52.9	87	49.6	01.4	134	37.4	23.0	
2	233	48.5	239	27.5	57.6	295	09.7	52.7	102	52.0	01.4	149	39.6	23.1	
3	248	51.0	254	27.2	56.5	310	10.6	52.5	117	54.3	01.4	164	41.8	23.1	
4	263	53.4	269	26.9	55.4	325	11.4	52.2	132	56.7	01.3	179	44.1	23.1	
5	278	55.9	284	26.5	-3 54.2	340	12.2	-21 52.0	147	59.1	+19 01.3	194	46.3	+22 23.1	
6	293	58.4	299	26.2	-3 53.1	355	13.1	-21 51.8	163	01.4	+19 01.3	209	48.5	+22 23.1	
7	309	00.8	314	25.8	52.0	10	13.9	51.6	178	03.8	01.3	224	50.8	23.1	
8	324	03.3	329	25.5	50.9	25	14.8	51.3	193	06.2	01.2	239	53.0	23.2	
9	339	05.7	344	25.2	49.7	40	15.6	51.1	208	08.5	01.2	254	55.2	23.2	
10	354	08.2	359	24.8	48.6	55	16.4	50.9	223	10.9	01.2	269	57.4	23.2	
11	9	10.7	14	24.5	-3 47.5	70	17.3	-21 50.7	238	13.3	+19 01.1	284	59.7	+22 23.2	
12	24	13.1	29	24.2	-3 46.3	85	18.1	-21 50.5	253	15.6	+19 01.1	300	01.9	+22 23.2	
13	39	15.6	44	23.8	45.2	100	19.0	50.2	268	18.0	01.1	315	04.1	23.2	
14	54	18.1	59	23.5	44.1	115	19.8	50.0	283	20.4	01.1	330	06.4	23.3	
15	69	20.5	74	23.2	42.9	130	20.6	49.8	298	22.7	01.0	345	08.6	23.3	
16	84	23.0	89	22.8	41.8	145	21.5	49.6	313	25.1	01.0	0	10.8	23.3	
17	99	25.5	104	22.5	-3 40.7	160	22.3	-21 49.3	328	27.5	+19 01.0	15	13.0	+22 23.3	
18	114	27.9	119	22.1	-3 39.5	175	23.2	-21 49.1	343	29.8	+19 00.9	30	15.3	+22 23.3	
19	129	30.4	134	21.8	38.4	190	24.0	48.9	358	32.2	00.9	45	17.5	23.3	
20	144	32.9	149	21.5	37.2	205	24.8	48.7	13	34.6	00.9	60	19.7	23.4	
21	159	35.3	164	21.1	36.1	220	25.7	48.4	28	36.9	00.9	75	21.9	23.4	
22	174	37.8	179	20.8	35.0	235	26.5	48.2	43	39.3	00.8	90	24.2	23.4	
23	189	40.2	194	20.5	33.8	250	27.4	48.0	58	41.7	00.8	105	26.4	23.4	
24	204	42.7	209	20.1	-3 32.7	265	28.2	-21 47.8	73	44.0	+19 00.8	120	28.6	+22 23.4	
Dif	—		-3 +11		+8 +2		+24 0				+22 0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 7				Edad: 15 ^d 2 PHE { 4 ^h : 61 ^h 4 12 ^h : 61 ^h 4 20 ^h : 61 ^h 3 R°: 55 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	03.4	+10	15.1	356	37.1		-8 42.4	60 N	2 50	3 52	4 39	20 44	111	5 11	6				
1	195	03.5		16.0	11	04.6	85	-8 58.5	58	3 05	4 02	45	35	105	17	10				
2	210	03.7		16.9	25	32.0	84	-9 14.6	56	18	10	51	27	100	22	14				
3	225	03.8		17.8	39	59.3	83	30.6	54	29	18	4 56	20	96	27	17				
4	240	04.0		18.7	54	26.6	83	-9 46.6	52	39	24	5 00	13	94	31	20				
5	255	04.1	+10	19.6	68	53.8	82	-10 02.5	50	3 47	4 30	5 04	20 08	90	5 35	23				
6	270	04.3	+10	20.4	83	21.0	82	-10 18.4	45	4 05	4 42	5 13	19 56	84	5 43	29				
7	285	04.4		21.3	97	48.1	81	34.2	40	18	4 52	20	46	79	50	33				
8	300	04.6		22.2	112	15.1	80	-10 49.9	35	29	5 00	26	37	76	5 56	37				
9	315	04.7		23.1	126	42.1	80	-11 05.5	30	38	07	32	30	72	6 02	40				
10	330	04.9		24.0	141	09.1	80	21.1	20	4 52	18	41	17	67	11	46				
11	345	05.0	+10	24.8	155	35.9	78	-11 36.6	10 N	5 03	5 28	5 49	19 06	62	6 19	51				
12	0	05.1	+10	25.7	170	02.7	78	-11 52.0	0	5 11	5 35	5 56	18 56	57	6 27	56				
13	15	05.3		26.6	184	29.5	78	-12 07.4	10 S	18	42	6 04	46	53	35	60				
14	30	05.4		27.5	198	56.2	77	22.7	20	23	49	11	35	48	43	66				
15	45	05.6		28.4	213	22.8	76	37.9	30	28	56	20	23	43	52	72				
16	60	05.7		29.2	227	49.4	76	-12 53.0	35	30	5 59	25	16	39	6 58	75				
17	75	05.9	+10	30.1	242	15.9	75	-13 08.0	40	5 31	6 03	6 30	18 08	36	7 04	80				
18	90	06.0	+10	31.0	256	42.3	74	-13 22.9	45	5 33	6 07	6 37	17 59	31	7 11	85				
19	105	06.2		31.9	271	08.7	74	37.8	50	34	12	45	48	26	20	91				
20	120	06.3		32.8	285	35.0	73	-13 52.6	52	34	14	48	43	23	24	93				
21	135	06.4		33.6	300	01.2	72	-14 07.2	54	35	16	52	38	20	29	96				
22	150	06.6		34.5	314	27.4	72	21.8	56	35	18	6 56	32	16	34	100				
23	165	06.7		35.4	328	53.5	71	36.3	58	35	21	7 01	25	12	40	104				
24	180	06.9	+10	36.3	343	19.5	70	-14 50.6	60 S	5 35	6 24	7 06	17 17	8	7 46	109				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 19 ^m 5				Mag: -3.9 PMG: 10 ^h 03 ^m				Mag: +0.2 PMG: 6 ^h 18 ^m				Mag: -2.2 PMG: 19 ^h 02 ^m				Mag: +0.1 PMG: 15 ^h 56 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	204	42.7			209	20.1	-3	32.7	265	28.2	-21	47.8	73	44.0	+19	00.8	120	28.6	+22	23.4
1	219	45.2			224	19.8		31.6	280	29.1		47.5	88	46.4		00.7	135	30.8		23.4
2	234	47.6			239	19.5		30.4	295	29.9		47.3	103	48.7		00.7	150	33.1		23.4
3	249	50.1			254	19.1		29.3	310	30.7		47.1	118	51.1		00.7	165	35.3		23.5
4	264	52.6			269	18.8		28.2	325	31.6		46.9	133	53.5		00.7	180	37.5		23.5
5	279	55.0			284	18.5	-3	27.0	340	32.4	-21	46.6	148	55.8	+19	00.6	195	39.7	+22	23.5
6	294	57.5			299	18.1	-3	25.9	355	33.3	-21	46.4	163	58.2	+19	00.6	210	42.0	+22	23.5
7	310	00.0			314	17.8		24.8	10	34.1		46.2	179	00.6		00.6	225	44.2		23.5
8	325	02.4			329	17.4		23.6	25	35.0		46.0	194	02.9		00.5	240	46.4		23.5
9	340	04.9			344	17.1		22.5	40	35.8		45.7	209	05.3		00.5	255	48.6		23.6
10	355	07.4			359	16.8		21.3	55	36.7		45.5	224	07.6		00.5	270	50.9		23.6
11	10	09.8			14	16.4	-3	20.2	70	37.5	-21	45.3	239	10.0	+19	00.5	285	53.1	+22	23.6
12	25	12.3			29	16.1	-3	19.1	85	38.3	-21	45.0	254	12.4	+19	00.4	300	55.3	+22	23.6
13	40	14.7			44	15.8		17.9	100	39.2		44.8	269	14.7		00.4	315	57.5		23.6
14	55	17.2			59	15.4		16.8	115	40.0		44.6	284	17.1		00.4	330	59.8		23.6
15	70	19.7			74	15.1		15.6	130	40.9		44.4	299	19.4		00.3	346	02.0		23.6
16	85	22.1			89	14.8		14.5	145	41.7		44.1	314	21.8		00.3	1	04.2		23.7
17	100	24.6			104	14.4	-3	13.4	160	42.6	-21	43.9	329	24.1	+19	00.3	16	06.4	+22	23.7
18	115	27.1			119	14.1	-3	12.2	175	43.4	-21	43.7	344	26.5	+19	00.2	31	08.7	+22	23.7
19	130	29.5			134	13.8		11.1	190	44.3		43.5	359	28.9		00.2	46	10.9		23.7
20	145	32.0			149	13.4		10.0	205	45.1		43.2	14	31.2		00.2	61	13.1		23.7
21	160	34.5			164	13.1		08.8	220	46.0		43.0	29	33.6		00.2	76	15.3		23.7
22	175	36.9			179	12.8		07.7	235	46.8		42.8	44	35.9		00.1	91	17.6		23.8
23	190	39.4			194	12.4		06.5	250	47.7		42.5	59	38.3		00.1	106	19.8		23.8
24	205	41.8			209	12.1	-3	05.4	265	48.5	-21	42.3	74	40.6	+19	00.1	121	22.0	+22	23.8
Dif	—				-3 +11				+8 +2				+24 0				+22 0			

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 16 ^d 2	PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 1 20 ^h : 61 ^m 0										
	PMG: 11 ^h 59 ^m 4				SD: 16 ^h 7				PMG: 1 ^h 09 ^m		R°: 58 ^m			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m	m
0	180	06.9	+10 36.3		343 19.5	-14 50.6	60 N	19 24	20 12	21 16	22 35 108		5 17	10
1	195	07.0		37.1	357 45.5	70 -15 04.9	58	18	20 02	21 00	20 102		27	15
2	210	07.2		38.0	12 11.4	69 19.1	56	12	19 53	20 46	22 07 97		36	19
3	225	07.3		38.9	26 37.3	69 33.1	54	07	45	34	21 56 94		44	23
4	240	07.5		39.8	41 03.1	68 -15 47.1	52	19 02	38	24	47 90		51	26
5	255	07.6	+10 40.6		55 28.8	67 -16 01.0	50	18 58	19 32	20 15	21 38 87		5 58	28
6	270	07.7	+10 41.5		69 54.4	66 -16 14.7	45	18 49	19 20	19 57	21 20 82		6 12	34
7	285	07.9		42.4	84 20.0	66 28.3	40	41	09	43	21 05 78		23	39
8	300	08.0		43.3	98 45.5	65 41.8	35	34	19 01	32	20 53 75		33	42
9	315	08.2		44.1	113 11.0	65 -16 55.2	30	29	18 53	23	42 72		42	45
10	330	08.3		45.0	127 36.3	63 -17 08.5	20	19	42	19 08	24 67		6 57	50
11	345	08.5	+10 45.9		142 01.7	64 -17 21.6	10 N	18 11	18 32	18 57	20 08 64		7 10	55
12	0	08.6	+10 46.8		156 26.9	62 -17 34.7	0	18 03	18 24	18 48	19 53 60		7 23	59
13	15	08.7		47.6	170 52.1	62 -17 47.6	10 S	17 55	16	41	39 56		35	63
14	30	08.9		48.5	185 17.2	61 -18 00.4	20	47	09	35	23 53		7 49	67
15	45	09.0		49.4	199 42.3	61 13.0	30	38	18 02	30	19 06 48		8 04	73
16	60	09.2		50.2	214 07.2	59 25.6	35	33	17 58	28	18 55 46		13	76
17	75	09.3	+10 51.1		228 32.2	60 -18 38.0	40	17 27	17 54	18 26	18 44 42		8 24	79
18	90	09.4	+10 52.0		242 57.0	58 -18 50.2	45	17 20	17 50	18 24	18 30 38		8 36	83
19	105	09.6		52.9	257 21.8	58 -19 02.3	50	12	45	22	14 32		51	89
20	120	09.7		53.7	271 46.5	57 14.3	52	08	43	22	18 06 30		8 57	93
21	135	09.9		54.6	286 11.2	57 26.2	54	04	40	21	17 58 27		9 05	96
22	150	10.0		55.5	300 35.8	56 37.9	56	17 00	38	21	48 23		14	99
23	165	10.1		56.3	315 00.4	56 -19 49.5	58	16 55	35	21	37 19		24	104
24	180	10.3	+10 57.2		329 24.8	54 -20 00.9	60 S	16 49	17 32	18 20	17 25 13		9 35	110

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 15 ^m 5		Mag: -3.9 PMG: 10 ^h 03 ^m		Mag: +0.2 PMG: 6 ^h 16 ^m		Mag: -2.2 PMG: 18 ^h 58 ^m		Mag: +0.1 PMG: 15 ^h 52 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	205 41.8	209 12.1	-3 05.4	265 48.5	-21 42.3	74 40.6	+19 00.1	121 22.0	+22 23.8	
1	220 44.3	224 11.8	04.3	280 49.3	42.1	89 43.0	+19 00.0	136 24.2	23.8	
2	235 46.8	239 11.4	03.1	295 50.2	41.8	104 45.3	00.0	151 26.4	23.8	
3	250 49.2	254 11.1	02.0	310 51.0	41.6	119 47.7	+19 00.0	166 28.7	23.8	
4	265 51.7	269 10.8	-3 00.8	325 51.9	41.4	134 50.1	+18 59.9	181 30.9	23.9	
5	280 54.2	284 10.4	-2 59.7	340 52.7	-21 41.2	149 52.4	+18 59.9	196 33.1	+22 23.9	
6	295 56.6	299 10.1	-2 58.5	355 53.6	-21 40.9	164 54.8	+18 59.9	211 35.3	+22 23.9	
7	310 59.1	314 09.8	57.4	10 54.4	40.7	179 57.1	59.8	226 37.6	23.9	
8	326 01.6	329 09.4	56.3	25 55.3	40.5	194 59.5	59.8	241 39.8	23.9	
9	341 04.0	344 09.1	55.1	40 56.1	40.2	210 01.8	59.8	256 42.0	23.9	
10	356 06.5	359 08.8	54.0	55 57.0	40.0	225 04.2	59.7	271 44.2	23.9	
11	11 09.0	14 08.4	-2 52.8	70 57.8	-21 39.8	240 06.5	+18 59.7	286 46.4	+22 24.0	
12	26 11.4	29 08.1	-2 51.7	85 58.7	-21 39.5	255 08.9	+18 59.7	301 48.7	+22 24.0	
13	41 13.9	44 07.8	50.5	100 59.5	39.3	270 11.2	59.7	316 50.9	24.0	
14	56 16.3	59 07.5	49.4	116 00.4	39.1	285 13.6	59.6	331 53.1	24.0	
15	71 18.8	74 07.1	48.3	131 01.2	38.8	300 15.9	59.6	346 55.3	24.0	
16	86 21.3	89 06.8	47.1	146 02.1	38.6	315 18.3	59.6	1 57.5	24.0	
17	101 23.7	104 06.5	-2 46.0	161 02.9	-21 38.4	330 20.6	+18 59.5	16 59.8	+22 24.1	
18	116 26.2	119 06.1	-2 44.8	176 03.8	-21 38.1	345 23.0	+18 59.5	32 02.0	+22 24.1	
19	131 28.7	134 05.8	43.7	191 04.6	37.9	0 25.3	59.5	47 04.2	24.1	
20	146 31.1	149 05.5	42.5	206 05.5	37.7	15 27.7	59.4	62 06.4	24.1	
21	161 33.6	164 05.1	41.4	221 06.3	37.4	30 30.0	59.4	77 08.7	24.1	
22	176 36.1	179 04.8	40.3	236 07.2	37.2	45 32.4	59.4	92 10.9	24.1	
23	191 38.5	194 04.5	39.1	251 08.0	37.0	60 34.7	59.3	107 13.1	24.2	
24	206 41.0	209 04.1	-2 38.0	266 08.9	-21 36.7	75 37.1	+18 59.3	122 15.3	+22 24.2	
Dif	—	-3	+11	+9	+2	+24	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 2				Edad: 17 ^d 2 PHE { 4 ^h : 60'8 12 ^h : 60'6 20 ^h : 60'3 PMG: 2 ^h 07 ^m R°: 61 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	10.3	+10	57.2	329	24.8	-20	00.9	60 N	2	41	3	46	4	33	*** ** *
1	195	10.4		58.1	343	49.3	55	12.2	58	2	58	3	56	40	*** ** *	5 27 17
2	210	10.6		59.0	358	13.6	53	23.3	56	3	12	4	05	46	23 44 85	5 55 29
3	225	10.7	+10	59.8	12	37.9	53	34.3	54	24		13		51	30 82	6 07 32
4	240	10.8	+11	00.7	27	02.2	53	45.2	52	34		19		4	56	17 80
5	255	11.0	+11	01.6	41	26.4	52	-20 55.9	50	3	43	4	26	5	00	23 05 79
6	270	11.1	+11	02.4	55	50.5	51	-21 06.4	45	4	01	4	38	5	09	22 42 75
7	285	11.3		03.3	70	14.6	51	16.8	40	15		49		17	23 73	7 02 46
8	300	11.4		04.2	84	38.6	50	27.0	35	26		57		24	22 08 70	15 49
9	315	11.5		05.0	99	02.6	50	37.1	30	36		5	05	29	21 54 69	27 51
10	330	11.7		05.9	113	26.5	49	47.0	20	4	50	17		39	31 66	7 47 55
11	345	11.8	+11	06.8	127	50.4	49	-21 56.8	10 N	5	01	5	26	5	48	21 12 63
12	0	11.9	+11	07.6	142	14.2	48	-22 06.4	0	5	10	5	35	5	56	20 53 62
13	15	12.1		08.5	156	37.9	47	15.8	10 S	18		42		6	04	35 59
14	30	12.2		09.4	171	01.7	48	25.1	20	24		50		12	20 16 57	8 56 67
15	45	12.4		10.2	185	25.3	46	34.2	30	29		5	57	21	19 54 53	9 17 70
16	60	12.5		11.1	199	49.0	47	43.2	35	31		6	01	27	41 52	29 73
17	75	12.6	+11	11.9	214	12.6	46	-22 52.0	40	5	33	6	05	6	32	19 26 50
18	90	12.8	+11	12.8	228	36.1	45	-23 00.6	45	5	35	6	09	6	39	19 08 47
19	105	12.9		13.7	242	59.6	45	09.0	50	37		15		48	18 46 44	9 59 79
20	120	13.0		14.5	257	23.1	45	17.3	52	38		17		51	36 41	10 20 83
21	135	13.2		15.4	271	46.5	44	25.4	54	38		19		6	56	25 38
22	150	13.3		16.3	286	09.9	44	33.4	56	39		22		7	00	18 11 36
23	165	13.4		17.1	300	33.3	44	41.2	58	39		25		05	17 56 31	10 53 92
24	180	13.6	+11	18.0	314	56.6	43	-23 48.8	60 S	5	40	6	28	7	11	17 38 25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 11 ^m 6		Mag: -3.9 PMG: 10 ^h 04 ^m		Mag: +0.2 PMG: 6 ^h 15 ^m		Mag: -2.2 PMG: 18 ^h 55 ^m		Mag: +0.1 PMG: 15 ^h 49 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	206	41.0	209	04.1	-2	38.0	266	08.9	-21	36.7
1	221	43.5	224	03.8		36.8	281	09.8		36.5
2	236	45.9	239	03.5		35.7	296	10.6		36.3
3	251	48.4	254	03.1		34.5	311	11.5		36.0
4	266	50.8	269	02.8		33.4	326	12.3		35.8
5	281	53.3	284	02.5	-2	32.2	341	13.2	-21	35.6
6	296	55.8	299	02.2	-2	31.1	356	14.0	-21	35.3
7	311	58.2	314	01.8		29.9	11	14.9		35.1
8	327	00.7	329	01.5		28.8	26	15.7		34.9
9	342	03.2	344	01.2		27.6	41	16.6		34.6
10	357	05.6	359	00.8		26.5	56	17.4		34.4
11	12	08.1	14	00.5	-2	25.4	71	18.3	-21	34.1
12	27	10.6	29	00.2	-2	24.2	86	19.1	-21	33.9
13	42	13.0	43	59.8		23.1	101	20.0		33.7
14	57	15.5	58	59.5		21.9	116	20.9		33.4
15	72	18.0	73	59.2		20.8	131	21.7		33.2
16	87	20.4	88	58.9		19.6	146	22.6		33.0
17	102	22.9	103	58.5	-2	18.5	161	23.4	-21	32.7
18	117	25.3	118	58.2	-2	17.3	176	24.3	-21	32.5
19	132	27.8	133	57.9		16.2	191	25.1		32.2
20	147	30.3	148	57.5		15.0	206	26.0		32.0
21	162	32.7	163	57.2		13.9	221	26.8		31.8
22	177	35.2	178	56.9		12.7	236	27.7		31.5
23	192	37.7	193	56.6		11.6	251	28.6		31.3
24	207	40.1	208	56.2	-2	10.4	266	29.4	-21	31.1
Dif	—		-3 +11		+9 +2		+23 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 0				Edad: 18 ^d 2 PHE { 4 ^h : 60'1 12 ^h : 59'8 20 ^h : 59'5 SD: 16'4 PMG: 3 ^h 08 ^m R°: 61 ^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	180	13.6	+11	18.0	314	56.6	-23	48.8	60 N	19 29	20 18	21 24	0 23 95	5 44 34				
1	195	13.7		18.8	329	19.9	43	-23 56.2	58	22	20 07	21 06	0 02 89	6 06 39				
2	210	13.8		19.7	343	43.1	42	-24 03.4	56	16	19 58	20 51	** ** *	24 43				
3	225	14.0		20.6	358	06.4	43	10.5	54	10	49	39	** ** *	39 46				
4	240	14.1		21.4	12	29.6	42	17.4	52	05	42	28	** ** *	6 52 48				
5	255	14.2	+11	22.3	26	52.8	42	-24 24.1	50	19 01	19 36	20 19	** ** *	7 04 49				
6	270	14.4	+11	23.1	41	15.9	41	-24 30.7	45	18 51	19 22	20 00	23 57 63	7 28 52				
7	285	14.5		24.0	55	39.1	42	37.1	40	43	11	19 46	36 62	7 48 54				
8	300	14.6		24.9	70	02.2	41	43.3	35	36	19 02	34	18 63	8 04 55				
9	315	14.8		25.7	84	25.3	41	49.3	30	30	18 55	24	23 03 62	18 57				
10	330	14.9		26.6	98	48.4	41	-24 55.1	20	20	42	19 09	22 37 62	8 42 59				
11	345	15.0	+11	27.4	113	11.5	41	-25 00.8	10 N	18 11	18 32	18 57	22 15 62	9 03 60				
12	0	15.2	+11	28.3	127	34.6	41	-25 06.3	0	18 02	18 23	18 48	21 55 61	9 23 61				
13	15	15.3		29.2	141	57.6	40	11.6	10 S	17 54	16	40	34 61	9 42 63				
14	30	15.4		30.0	156	20.7	41	16.7	20	45	08	34	21 13 59	10 03 64				
15	45	15.6		30.9	170	43.7	40	21.6	30	36	18 00	28	20 47 59	27 66				
16	60	15.7		31.7	185	06.8	41	26.4	35	30	17 56	26	33 58	42 67				
17	75	15.8	+11	32.6	199	29.8	40	-25 31.0	40	17 24	17 52	18 23	20 16 57	10 58 68				
18	90	16.0	+11	33.4	213	52.8	40	-25 35.3	45	17 17	17 47	18 21	19 55 57	11 18 70				
19	105	16.1		34.3	228	15.9	41	39.6	50	08	41	19	30 55	43 72				
20	120	16.2		35.2	242	38.9	40	43.6	52	04	39	18	17 55	11 55 73				
21	135	16.4		36.0	257	02.0	41	47.4	54	17 00	36	17	19 03 54	12 09 74				
22	150	16.5		36.9	271	25.1	41	51.1	56	16 55	33	16	18 47 52	25 76				
23	165	16.6		37.7	285	48.2	41	54.6	58	49	30	16	27 50	12 45 77				
24	180	16.8	+11	38.6	300	11.3	41	-25 57.9	60 S	16 43	17 27	18 15	18 03 47	13 09 81				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 07 ^m 7			Mag: -3.9 PMG: 10 ^h 04 ^m			Mag: +0.2 PMG: 6 ^h 14 ^m			Mag: -2.2 PMG: 18 ^h 51 ^m			Mag: +0.1 PMG: 15 ^h 45 ^m					
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	207	40.1	208	56.2	-2	10.4	266	29.4	-21	31.1	76	33.3	+18	58.5	123	08.5		
1	222	42.6	223	55.9		09.3	281	30.3		30.8	91	35.7		58.5	138	10.8		
2	237	45.1	238	55.6		08.1	296	31.1		30.6	106	38.0		58.4	153	13.0		
3	252	47.5	253	55.2		07.0	311	32.0		30.3	121	40.4		58.4	168	15.2		
4	267	50.0	268	54.9		05.8	326	32.9		30.1	136	42.7		58.3	183	17.4		
5	282	52.4	283	54.6	-2	04.7	341	33.7	-21	29.9	151	45.0	+18	58.3	198	19.6		
6	297	54.9	298	54.2	-2	03.5	356	34.6	-21	29.6	166	47.4	+18	58.3	213	21.8		
7	312	57.4	313	53.9		02.4	11	35.4		29.4	181	49.7		58.2	228	24.0		
8	327	59.8	328	53.6		01.2	26	36.3		29.1	196	52.1		58.2	243	26.3		
9	343	02.3	343	53.3	-2	00.1	41	37.1		28.9	211	54.4		58.2	258	28.5		
10	358	04.8	358	52.9	-1	58.9	56	38.0		28.7	226	56.7		58.1	273	30.7		
11	13	07.2	13	52.6	-1	57.8	71	38.9	-21	28.4	241	59.1	+18	58.1	288	32.9		
12	28	09.7	28	52.3	-1	56.6	86	39.7	-21	28.2	257	01.4	+18	58.1	303	35.1		
13	43	12.2	43	52.0		55.5	101	40.6		27.9	272	03.7		58.0	318	37.3		
14	58	14.6	58	51.6		54.3	116	41.4		27.7	287	06.1		58.0	333	39.5		
15	73	17.1	73	51.3		53.2	131	42.3		27.5	302	08.4		58.0	348	41.8		
16	88	19.6	88	51.0		52.0	146	43.2		27.2	317	10.7		57.9	3	44.0		
17	103	22.0	103	50.6	-1	50.9	161	44.0	-21	27.0	332	13.1	+18	57.9	18	46.2		
18	118	24.5	118	50.3	-1	49.7	176	44.9	-21	26.7	347	15.4	+18	57.9	33	48.4		
19	133	26.9	133	50.0		48.6	191	45.8		26.5	2	17.7		57.8	48	50.6		
20	148	29.4	148	49.7		47.4	206	46.6		26.2	17	20.1		57.8	63	52.8		
21	163	31.9	163	49.3		46.3	221	47.5		26.0	32	22.4		57.7	78	55.0		
22	178	34.3	178	49.0		45.1	236	48.3		25.8	47	24.8		57.7	93	57.3		
23	193	36.8	193	48.7		44.0	251	49.2		25.5	62	27.1		57.7	108	59.5		
24	208	39.3	208	48.3	-1	42.8	266	50.1	-21	25.3	77	29.4	+18	57.6	124	01.7		
Dif	—			-3			+12			+9			+23			+22		
													0			0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 19 ^d 2 PHE { 4 ^h : 59 ^m /2 12 ^h : 58 ^m /9 20 ^h : 58 ^m /6												
	PMG: 11 ^h 58 ^m 8			SD: 16 ^d 2 PMG: 4 ^h 09 ^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	m	h m m	m
0	180	16.8	+11 38.6	300	11.3	-25 57.9	31	60 N	2 33	3 39	4 27	1 58 65	6 18 61			
1	195	16.9	39.4	314	34.4 41	-26 01.0	30	58	2 51	50	35	31 64	6 45 62			
2	210	17.0	40.3	328	57.5 41	04.0	30	56	3 05	3 59	41	1 09 65	7 07 61			
3	225	17.2	41.1	343	20.6 41	06.7	27	54	18	4 08	46	0 52 64	25 61			
4	240	17.3	42.0	357	43.8 42	09.3	26	52	29	15	52	37 63	40 61			
5	255	17.4	+11 42.8	12	07.0 42	-26 11.7	24	50	3 38	4 21	4 56	0 24 63	7 53 62			
6	270	17.5	+11 43.7	26	30.2 42	-26 13.9	22	45	3 57	4 35	5 06	** ** *	8 20 61			
7	285	17.7	44.5	40	53.5 43	16.0	21	40	4 12	46	14	** ** *	42 61			
8	300	17.8	45.4	55	16.8 43	17.8	18	35	23	4 55	21	** ** *	8 59 61			
9	315	17.9	46.2	69	40.1 43	19.5	17	30	33	5 03	27	** ** *	9 15 61			
10	330	18.1	47.1	84	03.4 43	21.0	15	20	4 49	15	38	23 39 56	9 41 60			
11	345	18.2	+11 47.9	98	26.8 44	-26 22.3	13	10 N	5 00	5 25	5 47	23 17 57	10 03 60			
12	0	18.3	+11 48.8	112	50.2 44	-26 23.5	12	0	5 10	5 34	5 55	22 56 58	10 24 60			
13	15	18.4	49.6	127	13.7 45	24.5	10	10 S	18	42	6 04	35 59	10 45 60			
14	30	18.6	50.5	141	37.2 45	25.2	7	20	24	50	13	22 12 61	11 07 60			
15	45	18.7	51.3	156	00.7 45	25.9	7	30	30	5 58	22	21 46 62	33 59			
16	60	18.8	52.2	170	24.3 46	26.3	4	35	33	6 02	28	31 63	11 49 58			
17	75	19.0	+11 53.0	184	48.0 47	-26 26.6	3	40	5 35	6 07	6 34	21 13 64	12 06 58			
18	90	19.1	+11 53.9	199	11.7 47	-26 26.6	0	45	5 38	6 12	6 42	20 52 65	12 28 57			
19	105	19.2	54.7	213	35.4 47	26.6	0	50	40	18	51	25 66	12 55 56			
20	120	19.3	55.6	227	59.2 48	26.3	3	52	41	20	55	20 12 67	13 08 55			
21	135	19.5	56.4	242	23.1 49	25.9	4	54	41	23	6 59	19 57 68	23 55			
22	150	19.6	57.3	256	47.0 49	25.3	6	56	42	26	7 04	39 69	13 41 53			
23	165	19.7	58.1	271	11.0 50	24.5	8	58	43	29	10	19 17 72	14 02 52			
24	180	19.8	+11 59.0	285	35.0 50	-26 23.5	10	60 S	5 44	6 32	7 16	18 50 74	14 30 49			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 10 ^h 03 ^m 7		Mag: -3.9 PMG: 10 ^h 05 ^m			Mag: +0.2 PMG: 6 ^h 12 ^m			Mag: -2.2 PMG: 18 ^h 47 ^m			Mag: +0.1 PMG: 15 ^h 42 ^m				
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	208	39.3	208 48.3	-1 42.8	266 50.1	-21 25.3	77 29.4	+18 57.6	124 01.7	+22 24.9						
1	223	41.7	223 48.0	41.6	281 50.9	25.0	92 31.8	57.6	139 03.9	24.9						
2	238	44.2	238 47.7	40.5	296 51.8	24.8	107 34.1	57.6	154 06.1	24.9						
3	253	46.7	253 47.4	39.3	311 52.7	24.5	122 36.4	57.5	169 08.3	25.0						
4	268	49.1	268 47.0	38.2	326 53.5	24.3	137 38.7	57.5	184 10.5	25.0						
5	283	51.6	283 46.7	-1 37.0	341 54.4	-21 24.1	152 41.1	+18 57.4	199 12.7	+22 25.0						
6	298	54.1	298 46.4	-1 35.9	356 55.2	-21 23.8	167 43.4	+18 57.4	214 15.0	+22 25.0						
7	313	56.5	313 46.1	34.7	11 56.1	23.6	182 45.7	57.4	229 17.2	25.0						
8	328	59.0	328 45.7	33.6	26 57.0	23.3	197 48.1	57.3	244 19.4	25.0						
9	344	01.4	343 45.4	32.4	41 57.8	23.1	212 50.4	57.3	259 21.6	25.1						
10	359	03.9	358 45.1	31.3	56 58.7	22.8	227 52.7	57.3	274 23.8	25.1						
11	14	06.4	13 44.7	-1 30.1	71 59.6	-21 22.6	242 55.1	+18 57.2	289 26.0	+22 25.1						
12	29	08.8	28 44.4	-1 29.0	87 00.4	-21 22.3	257 57.4	+18 57.2	304 28.2	+22 25.1						
13	44	11.3	43 44.1	27.8	102 01.3	22.1	272 59.7	57.2	319 30.4	25.1						
14	59	13.8	58 43.8	26.6	117 02.2	21.8	288 02.1	57.1	334 32.7	25.1						
15	74	16.2	73 43.4	25.5	132 03.0	21.6	303 04.4	57.1	349 34.9	25.1						
16	89	18.7	88 43.1	24.3	147 03.9	21.4	318 06.7	57.0	4 37.1	25.2						
17	104	21.2	103 42.8	-1 23.2	162 04.8	-21 21.1	333 09.0	+18 57.0	19 39.3	+22 25.2						
18	119	23.6	118 42.5	-1 22.0	177 05.6	-21 20.9	348 11.4	+18 57.0	34 41.5	+22 25.2						
19	134	26.1	133 42.1	20.9	192 06.5	20.6	3 13.7	56.9	49 43.7	25.2						
20	149	28.6	148 41.8	19.7	207 07.4	20.4	18 16.0	56.9	64 45.9	25.2						
21	164	31.0	163 41.5	18.6	222 08.2	20.1	33 18.3	56.8	79 48.1	25.2						
22	179	33.5	178 41.1	17.4	237 09.1	19.9	48 20.7	56.8	94 50.3	25.3						
23	194	35.9	193 40.8	16.2	252 10.0	19.6	63 23.0	56.8	109 52.6	25.3						
24	209	38.4	208 40.5	-1 15.1	267 10.8	-21 19.4	78 25.3	+18 56.7	124 54.8	+22 25.3						
Dif	—		-3	+12	+9	+2	+23		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 6			Edad: 20 ^d 2 PHE { 4 ^h : 58/3 12 ^h : 58/0 20 ^h : 57/7 SD: 15°9 PMG: 5 ^h 10 ^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	19.8	+11 59.0	285	35.0	-26 23.5	60 N	19 34	20 23	21 32	3 03 35	7 19 85		
1	195	20.0	+11 59.8	299	59.1	22.4	58	27	12	21 13	2 35 40	7 47 80		
2	210	20.1	+12 00.7	314	23.3	52	56	20	20 02	20 57	2 14 42	8 08 77		
3	225	20.2	01.5	328	47.5	52	54	14	19 54	44	1 56 45	26 77		
4	240	20.3	02.3	343	11.8	53	52	09	46	33	40 47	41 72		
5	255	20.5	+12 03.2	357	36.2	54	50	19 04	19 39	20 23	1 27 48	8 55 70		
6	270	20.6	+12 04.0	12	00.7	55	45	18 54	19 25	20 03	1 00 50	9 21 68		
7	285	20.7	04.9	26	25.2	55	40	45	14	19 48	0 38 52	9 43 65		
8	300	20.8	05.7	40	49.8	56	35	38	19 04	36	21 53	10 00 64		
9	315	21.0	06.6	55	14.5	57	30	31	18 56	26	0 05 54	16 62		
10	330	21.1	07.4	69	39.2	57	20	20	43	19 10	** ** *	10 41 61		
11	345	21.2	+12 08.3	84	04.0	58	10 N	18 11	18 32	18 57	** ** *	11 03 59		
12	0	21.3	+12 09.1	98	28.9	59	0	18 02	18 23	18 48	23 54 54	11 24 57		
13	15	21.5	09.9	112	53.9	60	10 S	17 53	15	39	34 57	11 45 54		
14	30	21.6	10.8	127	19.0	61	20	44	18 07	32	23 13 59	12 07 52		
15	45	21.7	11.6	141	44.2	62	30	34	17 58	26	22 48 63	32 50		
16	60	21.8	12.5	156	09.4	62	35	28	54	23	34 64	12 47 49		
17	75	21.9	+12 13.3	170	34.8	64	40	17 21	17 49	18 20	22 17 66	13 04 47		
18	90	22.1	+12 14.1	185	00.2	64	45	17 13	17 44	18 18	21 57 69	13 25 44		
19	105	22.2	15.0	199	25.7	65	50	04	37	15	31 73	13 51 41		
20	120	22.3	15.8	213	51.3	66	52	17 00	35	14	19 75	14 03 40		
21	135	22.4	16.7	228	17.0	67	54	16 55	32	13	21 05 77	18 37		
22	150	22.6	17.5	242	42.8	68	56	50	29	12	20 48 80	34 35		
23	165	22.7	18.3	257	08.6	68	58	44	25	11	29 84	14 54 31		
24	180	22.8	+12 19.2	271	34.6	70	60 S	16 38	17 21	18 10	20 04 90	15 19 25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 59 ^m 8		Mag: -3.9 PMG: 10 ^h 06 ^m		Mag: +0.1 PMG: 6 ^h 11 ^m		Mag: -2.2 PMG: 18 ^h 43 ^m		Mag: +0.1 PMG: 15 ^h 38 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	209	38.4	208 40.5	-1 15.1	267 10.8	-21 19.4	78 25.3	+18 56.7	124 54.8	+22 25.3
1	224	40.9	223 40.2	13.9	282 11.7	19.1	93 27.6	56.7	139 57.0	25.3
2	239	43.3	238 39.8	12.8	297 12.6	18.9	108 30.0	56.7	154 59.2	25.3
3	254	45.8	253 39.5	11.6	312 13.4	18.6	123 32.3	56.6	170 01.4	25.3
4	269	48.3	268 39.2	10.5	327 14.3	18.4	138 34.6	56.6	185 03.6	25.3
5	284	50.7	283 38.9	-1 09.3	342 15.2	-21 18.1	153 36.9	+18 56.5	200 05.8	+22 25.4
6	299	53.2	298 38.5	-1 08.2	357 16.0	-21 17.9	168 39.3	+18 56.5	215 08.0	+22 25.4
7	314	55.7	313 38.2	07.0	12 16.9	17.6	183 41.6	56.5	230 10.2	25.4
8	329	58.1	328 37.9	05.8	27 17.8	17.4	198 43.9	56.4	245 12.4	25.4
9	345	00.6	343 37.6	04.7	42 18.6	17.1	213 46.2	56.4	260 14.6	25.4
10	0	03.1	358 37.2	03.5	57 19.5	16.9	228 48.6	56.3	275 16.9	25.4
11	15	05.5	13 36.9	-1 02.4	72 20.4	-21 16.7	243 50.9	+18 56.3	290 19.1	+22 25.5
12	30	08.0	28 36.6	-1 01.2	87 21.3	-21 16.4	258 53.2	+18 56.3	305 21.3	+22 25.5
13	45	10.4	43 36.3	-1 00.1	102 22.1	16.2	273 55.5	56.2	320 23.5	25.5
14	60	12.9	58 35.9	-0 58.9	117 23.0	15.9	288 57.9	56.2	335 25.7	25.5
15	75	15.4	73 35.6	57.7	132 23.9	15.7	304 00.2	56.1	350 27.9	25.5
16	90	17.8	88 35.3	56.6	147 24.7	15.4	319 02.5	56.1	5 30.1	25.5
17	105	20.3	103 34.9	-0 55.4	162 25.6	-21 15.2	334 04.8	+18 56.1	20 32.3	+22 25.5
18	120	22.8	118 34.6	-0 54.3	177 26.5	-21 14.9	349 07.1	+18 56.0	35 34.5	+22 25.6
19	135	25.2	133 34.3	53.1	192 27.4	14.7	4 09.5	56.0	50 36.7	25.6
20	150	27.7	148 34.0	51.9	207 28.2	14.4	19 11.8	55.9	65 38.9	25.6
21	165	30.2	163 33.6	50.8	222 29.1	14.1	34 14.1	55.9	80 41.1	25.6
22	180	32.6	178 33.3	49.6	237 30.0	13.9	49 16.4	55.9	95 43.3	25.6
23	195	35.1	193 33.0	48.5	252 30.8	13.6	64 18.7	55.8	110 45.6	25.6
24	210	37.5	208 32.7	-0 47.3	267 31.7	-21 13.4	79 21.1	+18 55.8	125 47.8	+22 25.6
Dif	—		-3	+12	+9	+2	+23	0	+22	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 58 ^m 4			Edad: 21 ^d 2 PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 1 20 ^h : 56 ^m 8 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	180	22.8	+12	19.2	271	34.6	-25	12.4	60 N	2 24	3 33	4 22	3 38	17	8 44	93
1	195	22.9		20.0	286	00.7 71		07.5 49	58	43	44	29	3 15	23	9 07	87
2	210	23.0		20.8	300	26.8 71	-25	02.5 50	56	2 59	3 54	36	2 56	27	25	82
3	225	23.2		21.7	314	53.1 73	-24	57.3 52	54	3 12	4 03	42	41	30	40	79
4	240	23.3		22.5	329	19.5 74		52.1 52	52	23	10	47	27	33	9 53	77
5	255	23.4	+12	23.4	343	45.9 74	-24	46.6 55	50	3 33	4 17	4 52	2 15	35	10 05	74
6	270	23.5	+12	24.2	358	12.5 76	-24	41.1 55	45	3 53	4 31	5 03	1 50	39	10 29	70
7	285	23.6		25.0	12	39.1 76		35.4 57	40	4 08	43	11	30	42	10 48	67
8	300	23.8		25.9	27	05.9 78		29.6 58	35	21	4 52	19	1 14	44	11 04	64
9	315	23.9		26.7	41	32.7 78		23.6 60	30	31	5 00	25	0 59	47	18	62
10	330	24.0		27.5	55	59.7 80		17.5 61	20	47	14	36	35	49	11 42	58
11	345	24.1	+12	28.4	70	26.7 80	-24	11.3 62	10 N	4 59	5 25	5 46	0 14	52	12 02	55
12	0	24.2	+12	29.2	84	53.9 82	-24	05.0 63	0	5 09	5 34	5 55	** ** *	**	12 21	52
13	15	24.4		30.0	99	21.2 83	-23	58.5 65	10 S	18	42	6 04	** ** *	**	39	50
14	30	24.5		30.9	113	48.5 83		51.9 66	20	25	51	13	** ** *	**	12 59	47
15	45	24.6		31.7	128	16.0 85		45.2 67	30	31	5 59	24	23 51	60	13 22	43
16	60	24.7		32.5	142	43.6 86		38.3 69	35	34	6 04	30	38	63	36	40
17	75	24.8	+12	33.4	157	11.2 86	-23	31.3 70	40	5 37	6 09	6 36	23 23	66	13 51	38
18	90	24.9	+12	34.2	171	39.0 88	-23	24.3 70	45	5 40	6 14	6 44	23 06	69	14 09	35
19	105	25.1		35.0	186	06.9 89		17.1 72	50	43	20	54	22 44	74	32	30
20	120	25.2		35.9	200	34.9 90		09.7 74	52	44	23	6 58	34	76	43	28
21	135	25.3		36.7	215	03.0 91	-23	02.3 74	54	45	26	7 03	22	79	14 55	25
22	150	25.4		37.5	229	31.2 92	-22	54.7 76	56	46	29	08	22 08	83	15 09	22
23	165	25.5		38.3	243	59.5 93		47.1 76	58	47	33	14	21 53	86	25	18
24	180	25.6	+12	39.2	258	27.9 94	-22	39.3 78	60 S	5 48	6 37	7 21	21 34	92	15 44	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 55 ^m 9		Mag: -3.9 PMG: 10 ^h 06 ^m		Mag: +0.1 PMG: 6 ^h 10 ^m		Mag: -2.2 PMG: 18 ^h 40 ^m		Mag: +0.1 PMG: 15 ^h 35 ^m									
	hG ♀		hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	210	37.5	208	32.7	-0	47.3	267	31.7	-21	13.4	79	21.1	+18	55.8	125	47.8	+22	25.6
1	225	40.0	223	32.3		46.2	282	32.6		13.1	94	23.4		55.7	140	50.0		25.7
2	240	42.5	238	32.0		45.0	297	33.5		12.9	109	25.7		55.7	155	52.2		25.7
3	255	44.9	253	31.7		43.8	312	34.3		12.6	124	28.0		55.7	170	54.4		25.7
4	270	47.4	268	31.4		42.7	327	35.2		12.4	139	30.3		55.6	185	56.6		25.7
5	285	49.9	283	31.0	-0	41.5	342	36.1	-21	12.1	154	32.6	+18	55.6	200	58.8	+22	25.7
6	300	52.3	298	30.7	-0	40.4	357	37.0	-21	11.9	169	35.0	+18	55.5	216	01.0	+22	25.7
7	315	54.8	313	30.4		39.2	12	37.8		11.6	184	37.3		55.5	231	03.2		25.8
8	330	57.3	328	30.1		38.0	27	38.7		11.4	199	39.6		55.5	246	05.4		25.8
9	345	59.7	343	29.7		36.9	42	39.6		11.1	214	41.9		55.4	261	07.6		25.8
10	1	02.2	358	29.4		35.7	57	40.5		10.9	229	44.2		55.4	276	09.8		25.8
11	16	04.7	13	29.1	-0	34.6	72	41.3	-21	10.6	244	46.5	+18	55.3	291	12.0	+22	25.8
12	31	07.1	28	28.8	-0	33.4	87	42.2	-21	10.4	259	48.8	+18	55.3	306	14.2	+22	25.8
13	46	09.6	43	28.4		32.2	102	43.1		10.1	274	51.2		55.3	321	16.4		25.8
14	61	12.0	58	28.1		31.1	117	44.0		09.9	289	53.5		55.2	336	18.6		25.9
15	76	14.5	73	27.8		29.9	132	44.8		09.6	304	55.8		55.2	351	20.8		25.9
16	91	17.0	88	27.5		28.8	147	45.7		09.4	319	58.1		55.1	6	23.1		25.9
17	106	19.4	103	27.1	-0	27.6	162	46.6	-21	09.1	335	00.4	+18	55.1	21	25.3	+22	25.9
18	121	21.9	118	26.8	-0	26.4	177	47.5	-21	08.8	350	02.7	+18	55.0	36	27.5	+22	25.9
19	136	24.4	133	26.5		25.3	192	48.4		08.6	5	05.0		55.0	51	29.7		25.9
20	151	26.8	148	26.2		24.1	207	49.2		08.3	20	07.4		55.0	66	31.9		26.0
21	166	29.3	163	25.8		23.0	222	50.1		08.1	35	09.7		54.9	81	34.1		26.0
22	181	31.8	178	25.5		21.8	237	51.0		07.8	50	12.0		54.9	96	36.3		26.0
23	196	34.2	193	25.2		20.6	252	51.9		07.6	65	14.3		54.8	111	38.5		26.0
24	211	36.7	208	24.9	-0	19.5	267	52.7	-21	07.3	80	16.6	+18	54.8	126	40.7	+22	26.0
Dif	—		-3		+12		+9		+3		+23		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 2			Edad: 22 ^d 2 PHE { 4 ^h : 56/6 12 ^h : 56/3 20 ^h : 56/1 SD: 15°4 PMG: 7 ^h 01 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	25.6	+12 39.2	258	27.9	-22 39.3	60 N	19 39	20 29	21 40	3 55 9		10 17 92	
1	195	25.8	40.0	272	56.4 ⁹⁵	31.4 ⁷⁹	58	31	17	20	38 14		34 86	
2	210	25.9	40.8	287	25.0 ⁹⁶	23.4 ⁸⁰	56	24	20 07	21 03	23 18		47 83	
3	225	26.0	41.7	301	53.7 ⁹⁷	15.3 ⁸¹	54	18	19 58	20 49	11 21		10 59 80	
4	240	26.1	42.5	316	22.5 ⁹⁸	-22 07.1 ⁸²	52	12	50	37	3 00 23		11 10 76	
5	255	26.2	+12 43.3	330	51.4 ⁹⁹	-21 58.8 ⁸³	50	19 07	19 43	20 27	2 50 26		11 19 74	
6	270	26.3	+12 44.1	345	20.4 ¹⁰⁰	-21 50.3 ⁸⁵	45	18 56	19 28	20 07	2 29 30		11 39 69	
7	285	26.5	45.0	359	49.6 ¹⁰²	41.8 ⁸⁵	40	47	16	19 51	2 12 34		11 55 65	
8	300	26.6	45.8	14	18.8 ¹⁰²	33.2 ⁸⁶	35	39	19 06	38	1 58 37		12 08 63	
9	315	26.7	46.6	28	48.1 ¹⁰³	24.5 ⁸⁷	30	33	18 58	27	46 39		20 60	
10	330	26.8	47.4	43	17.6 ¹⁰⁵	15.6 ⁸⁹	20	21	44	19 10	24 44		40 55	
11	345	26.9	+12 48.3	57	47.1 ¹⁰⁵	-21 06.7 ⁸⁹	10 N	18 11	18 32	18 58	1 06 46		12 57 51	
12	0	27.0	+12 49.1	72	16.7 ¹⁰⁶	-20 57.7 ⁹⁰	0	18 02	18 23	18 47	0 48 50		13 13 48	
13	15	27.1	49.9	86	46.5 ¹⁰⁸	48.6 ⁹¹	10 S	17 52	14	39	31 53		29 44	
14	30	27.2	50.7	101	16.3 ¹⁰⁸	39.4 ⁹²	20	43	18 05	31	0 12 57		13 46 40	
15	45	27.4	51.6	115	46.3 ¹¹⁰	30.1 ⁹³	30	32	17 56	24	** ** *		14 05 36	
16	60	27.5	52.4	130	16.3 ¹¹⁰	20.7 ⁹⁴	35	25	51	21	** ** *		16 34	
17	75	27.6	+12 53.2	144	46.5 ¹¹²	-20 11.2 ⁹⁵	40	17 18	17 46	18 18	** ** *		14 29 31	
18	90	27.7	+12 54.0	159	16.7 ¹¹²	-20 01.7 ⁹⁵	45	17 10	17 40	18 15	** ** *		14 44 27	
19	105	27.8	54.9	173	47.0 ¹¹³	-19 52.0 ⁹⁷	50	17 00	34	12	23 58 73		15 02 23	
20	120	27.9	55.7	188	17.5 ¹¹⁵	42.3 ⁹⁷	52	16 56	31	10	50 75		11 20	
21	135	28.0	56.5	202	48.0 ¹¹⁵	32.4 ⁹⁹	54	51	28	09	41 78		20 18	
22	150	28.1	57.3	217	18.6 ¹¹⁶	22.5 ⁹⁹	56	45	24	08	31 81		31 15	
23	165	28.3	58.1	231	49.4 ¹¹⁸	12.5 ¹⁰⁰	58	39	20	06	19 85		43 12	
24	180	28.4	+12 59.0	246	20.2 ¹¹⁸	-19 02.5 ¹⁰⁰	60 S	16 32	17 16	18 05	23 06 89		15 57 8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 51 ^m 9		Mag: -3.9 PMG: 10 ^h 07 ^m			Mag: +0.1 PMG: 6 ^h 08 ^m			Mag: -2.2 PMG: 18 ^h 36 ^m			Mag: +0.1 PMG: 15 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	211	36.7	208	24.9	-0 19.5	267	52.7	-21 07.3	80	16.6	+18 54.8	126	40.7	+22 26.0
1	226	39.2	223	24.5	18.3	282	53.6	07.1	95	18.9	54.7	141	42.9	26.0
2	241	41.6	238	24.2	17.2	297	54.5	06.8	110	21.2	54.7	156	45.1	26.0
3	256	44.1	253	23.9	16.0	312	55.4	06.5	125	23.5	54.7	171	47.3	26.1
4	271	46.5	268	23.6	14.8	327	56.3	06.3	140	25.8	54.6	186	49.5	26.1
5	286	49.0	283	23.2	-0 13.7	342	57.1	-21 06.0	155	28.2	+18 54.6	201	51.7	+22 26.1
6	301	51.5	298	22.9	-0 12.5	357	58.0	-21 05.8	170	30.5	+18 54.5	216	53.9	+22 26.1
7	316	53.9	313	22.6	11.3	12	58.9	05.5	185	32.8	54.5	231	56.1	26.1
8	331	56.4	328	22.3	10.2	27	59.8	05.3	200	35.1	54.4	246	58.3	26.1
9	346	58.9	343	21.9	09.0	43	00.7	05.0	215	37.4	54.4	262	00.5	26.2
10	2	01.3	358	21.6	07.9	58	01.5	04.7	230	39.7	54.4	277	02.7	26.2
11	17	03.8	13	21.3	-0 06.7	73	02.4	-21 04.5	245	42.0	+18 54.3	292	04.9	+22 26.2
12	32	06.3	28	21.0	-0 05.5	88	03.3	-21 04.2	260	44.3	+18 54.3	307	07.1	+22 26.2
13	47	08.7	43	20.6	04.4	103	04.2	04.0	275	46.6	54.2	322	09.3	26.2
14	62	11.2	58	20.3	03.2	118	05.1	03.7	290	48.9	54.2	337	11.5	26.2
15	77	13.7	73	20.0	02.1	133	06.0	03.5	305	51.2	54.1	352	13.7	26.2
16	92	16.1	88	19.7	-0 00.9	148	06.8	03.2	320	53.5	54.1	7	15.9	26.3
17	107	18.6	103	19.3	+0 00.3	163	07.7	-21 02.9	335	55.8	+18 54.1	22	18.1	+22 26.3
18	122	21.0	118	19.0	+0 01.4	178	08.6	-21 02.7	350	58.2	+18 54.0	37	20.3	+22 26.3
19	137	23.5	133	18.7	02.6	193	09.5	02.4	6	00.5	54.0	52	22.5	26.3
20	152	26.0	148	18.4	03.8	208	10.4	02.2	21	02.8	53.9	67	24.7	26.3
21	167	28.4	163	18.0	04.9	223	11.3	01.9	36	05.1	53.9	82	26.9	26.3
22	182	30.9	178	17.7	06.1	238	12.1	01.7	51	07.4	53.8	97	29.1	26.3
23	197	33.4	193	17.4	07.2	253	13.0	01.4	66	09.7	53.8	112	31.3	26.4
24	212	35.8	208	17.1	+0 08.4	268	13.9	-21 01.1	81	12.0	+18 53.8	127	33.5	+22 26.4
Dif	—		-3		+12	+9		+3	+23		0	+22		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 23 ^d 2	PHE { 4 ^h : 55 ^h 9 12 ^h : 55 ^h 6 20 ^h : 55 ^h 4	SD: 15 ^h 2		PMG: 7 ^h 50 ^m	R°: 45 ^m		Náutico	Civil	Hora	R°	Hora	R°
	hG ☉	Dec	Dif													
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	28.4	+12	59.0	246	20.2	-19 02.5	60 N	2 15	3 26	4 16	4 04	5	11 49	87	
1	195	28.5	+12	59.8	260	51.1 ¹¹⁹	-18 52.3 ¹⁰²	58	36	38	24	3 52	9	12 00	83	
2	210	28.6	+13	00.6	275	22.1 ¹²⁰	42.1 ¹⁰²	56	2 52	49	31	41	12	10	80	
3	225	28.7		01.4	289	53.2 ¹²¹	31.8 ¹⁰³	54	3 06	3 58	38	32	15	19	76	
4	240	28.8		02.2	304	24.4 ¹²²	21.4 ¹⁰⁴	52	18	4 06	43	23	18	26	74	
5	255	28.9	+13	03.1	318	55.7 ¹²³	-18 11.0 ¹⁰⁴	50	3 28	4 13	4 48	3 16	20	12 33	72	
6	270	29.0	+13	03.9	333	27.1 ¹²⁴	-18 00.4 ¹⁰⁶	45	3 49	4 28	4 59	2 59	25	12 48	67	
7	285	29.1		04.7	347	58.6 ¹²⁵	-17 49.8 ¹⁰⁶	40	4 05	40	5 09	46	28	13 00	63	
8	300	29.2		05.5	2	30.1 ¹²⁵	39.1 ¹⁰⁷	35	18	50	16	35	31	11	59	
9	315	29.4		06.3	17	01.8 ¹²⁷	28.4 ¹⁰⁷	30	29	4 58	23	25	34	20	57	
10	330	29.5		07.2	31	33.5 ¹²⁷	17.6 ¹⁰⁸	20	45	5 12	35	2 08	38	35	52	
11	345	29.6	+13	08.0	46	05.4 ¹²⁹	-17 06.7 ¹⁰⁹	10 N	4 58	5 24	5 45	1 52	43	13 48	49	
12	0	29.7	+13	08.8	60	37.3 ¹²⁹	-16 55.8 ¹⁰⁹	0	5 09	5 33	5 55	1 38	46	14 01	44	
13	15	29.8		09.6	75	09.3 ¹³⁰	44.7 ¹¹¹	10 S	18	42	6 04	24	50	13	41	
14	30	29.9		10.4	89	41.4 ¹³¹	33.7 ¹¹⁰	20	25	5 51	14	1 09	53	26	37	
15	45	30.0		11.2	104	13.6 ¹³²	22.5 ¹¹²	30	32	6 00	25	0 51	58	41	32	
16	60	30.1		12.0	118	45.8 ¹³²	-16 11.3 ¹¹²	35	36	05	31	41	61	14 50	29	
17	75	30.2	+13	12.9	133	18.2 ¹³⁴	-16 00.0 ¹¹³	40	5 39	6 11	6 38	0 29	64	15 00	26	
18	90	30.3	+13	13.7	147	50.6 ¹³⁴	-15 48.7 ¹¹³	45	5 42	6 17	6 47	0 15	68	15 11	23	
19	105	30.4		14.5	162	23.1 ¹³⁵	37.3 ¹¹⁴	50	45	23	6 57	** ** *	**	25	18	
20	120	30.5		15.3	176	55.7 ¹³⁶	25.9 ¹¹⁴	52	47	26	7 01	** ** *	**	31	16	
21	135	30.6		16.1	191	28.3 ¹³⁶	14.4 ¹¹⁵	54	48	30	07	** ** *	**	38	14	
22	150	30.8		16.9	206	01.1 ¹³⁸	-15 02.8 ¹¹⁶	56	49	33	12	** ** *	**	46	11	
23	165	30.9		17.7	220	33.9 ¹³⁸	-14 51.2 ¹¹⁶	58	51	37	18	** ** *	**	15 55	8	
24	180	31.0	+13	18.6	235	06.8 ¹³⁹	-14 39.5 ¹¹⁷	60 S	5 52	6 41	7 26	** ** *	**	16 05	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 48 ^m 0		Mag: -3.9 PMG: 10 ^h 07 ^m		Mag: +0.1 PMG: 6 ^h 07 ^m		Mag: -2.2 PMG: 18 ^h 32 ^m		Mag: +0.1 PMG: 15 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	212	35.8	208	17.1	+0	08.4	268	13.9	-21	01.1	81	12.0	+18	53.8	127	33.5	+22	26.4
1	227	38.3	223	16.7		09.6	283	14.8		00.9	96	14.3		53.7	142	35.7		26.4
2	242	40.8	238	16.4		10.7	298	15.7		00.6	111	16.6		53.7	157	37.9		26.4
3	257	43.2	253	16.1		11.9	313	16.6		00.4	126	18.9		53.6	172	40.1		26.4
4	272	45.7	268	15.8		13.1	328	17.5	-21	00.1	141	21.2		53.6	187	42.3		26.4
5	287	48.1	283	15.4	+0	14.2	343	18.3	-20	59.8	156	23.5	+18	53.5	202	44.5	+22	26.5
6	302	50.6	298	15.1	+0	15.4	358	19.2	-20	59.6	171	25.8	+18	53.5	217	46.7	+22	26.5
7	317	53.1	313	14.8		16.5	13	20.1		59.3	186	28.1		53.4	232	48.9		26.5
8	332	55.5	328	14.5		17.7	28	21.0		59.1	201	30.4		53.4	247	51.1		26.5
9	347	58.0	343	14.1		18.9	43	21.9		58.8	216	32.7		53.3	262	53.3		26.5
10	3	00.5	358	13.8		20.0	58	22.8		58.5	231	35.0		53.3	277	55.5		26.5
11	18	02.9	13	13.5	+0	21.2	73	23.7	-20	58.3	246	37.3	+18	53.3	292	57.7	+22	26.5
12	33	05.4	28	13.1	+0	22.4	88	24.5	-20	58.0	261	39.6	+18	53.2	307	59.9	+22	26.6
13	48	07.9	43	12.8		23.5	103	25.4		57.7	276	41.9		53.2	323	02.1		26.6
14	63	10.3	58	12.5		24.7	118	26.3		57.5	291	44.2		53.1	338	04.3		26.6
15	78	12.8	73	12.2		25.9	133	27.2		57.2	306	46.5		53.1	353	06.5		26.6
16	93	15.3	88	11.8		27.0	148	28.1		57.0	321	48.8		53.0	8	08.7		26.6
17	108	17.7	103	11.5	+0	28.2	163	29.0	-20	56.7	336	51.1	+18	53.0	23	10.9	+22	26.6
18	123	20.2	118	11.2	+0	29.3	178	29.9	-20	56.4	351	53.4	+18	52.9	38	13.1	+22	26.6
19	138	22.6	133	10.9		30.5	193	30.8		56.2	6	55.7		52.9	53	15.3		26.7
20	153	25.1	148	10.5		31.7	208	31.7		55.9	21	58.0		52.8	68	17.5		26.7
21	168	27.6	163	10.2		32.8	223	32.5		55.7	37	00.3		52.8	83	19.7		26.7
22	183	30.0	178	09.9		34.0	238	33.4		55.4	52	02.6		52.8	98	21.9		26.7
23	198	32.5	193	09.6		35.2	253	34.3		55.1	67	04.9		52.7	113	24.1		26.7
24	213	35.0	208	09.2	+0	36.3	268	35.2	-20	54.9	82	07.2	+18	52.7	128	26.3	+22	26.7
Dif	—		-3	+12		+9	+3			+3	+23	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 9		Edad: 24 ^d 2 PHE { 4 ^h : 55/2 12 ^h : 55/1 20 ^h : 54/9 SD: 15/1 PMG: 8 ^h 35 ^m R°: 42 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	31.0	+13	18.6	235	06.8	-14	39.5	60 N	19 44	20 35	21 49	4 09 3	13 16 83
1	195	31.1		19.4	249	39.7 ¹³⁹		27.8 ¹¹⁷	58	36	22	27	4 01 6	23 80
2	210	31.2		20.2	264	12.8 ¹⁴¹		16.0 ¹¹⁸	56	28	11	21 09	3 53 10	30 76
3	225	31.3		21.0	278	45.9 ¹⁴¹	-14	04.2 ¹¹⁸	54	22	20 02	20 54	47 12	35 74
4	240	31.4		21.8	293	19.1 ¹⁴²	-13	52.3 ¹¹⁹	52	16	19 54	42	41 14	40 72
5	255	31.5	+13	22.6	307	52.4 ¹⁴³	-13	40.4 ¹¹⁹	50	19 10	19 46	20 31	3 36 16	13 45 69
6	270	31.6	+13	23.4	322	25.7 ¹⁴³	-13	28.4 ¹²⁰	45	18 59	19 30	20 10	3 24 21	13 55 65
7	285	31.7		24.2	336	59.1 ¹⁴⁴		16.4 ¹²⁰	40	49	18	19 53	14 25	14 03 61
8	300	31.8		25.0	351	32.6 ¹⁴⁵	-13	04.4 ¹²⁰	35	41	19 08	40	3 06 28	10 58
9	315	31.9		25.8	6	06.1 ¹⁴⁵	-12	52.3 ¹²¹	30	34	18 59	29	2 59 30	17 55
10	330	32.0		26.6	20	39.7 ¹⁴⁶		40.1 ¹²²	20	22	44	19 11	46 35	27 50
11	345	32.1	+13	27.5	35	13.4 ¹⁴⁷	-12	27.9 ¹²²	10 N	18 11	18 33	18 58	2 35 39	14 37 45
12	0	32.2	+13	28.3	49	47.1 ¹⁴⁷	-12	15.7 ¹²²	0	18 01	18 23	18 47	2 24 43	14 45 42
13	15	32.3		29.1	64	20.9 ¹⁴⁸	-12	03.4 ¹²³	10 S	17 52	13	38	14 47	14 54 34
14	30	32.4		29.9	78	54.8 ¹⁴⁹	-11	51.1 ¹²³	20	41	18 04	30	2 02 51	15 03 34
15	45	32.5		30.7	93	28.7 ¹⁴⁹		38.7 ¹²⁴	30	30	17 54	23	1 49 56	13 29
16	60	32.6		31.5	108	02.7 ¹⁵⁰		26.3 ¹²⁴	35	23	49	19	42 59	19 26
17	75	32.7	+13	32.3	122	36.8 ¹⁵¹	-11	13.9 ¹²⁴	40	17 16	17 44	18 15	1 33 62	15 26 23
18	90	32.8	+13	33.1	137	10.9 ¹⁵¹	-11	01.4 ¹²⁵	45	17 07	17 37	18 12	1 23 66	15 34 19
19	105	32.9		33.9	151	45.0 ¹⁵¹	-10	48.9 ¹²⁵	50	16 57	30	08	11 70	43 15
20	120	33.0		34.7	166	19.3 ¹⁵³		36.3 ¹²⁶	52	52	27	07	1 05 73	47 13
21	135	33.1		35.5	180	53.5 ¹⁵²		23.7 ¹²⁶	54	47	24	05	0 59 75	52 11
22	150	33.2		36.3	195	27.9 ¹⁵⁴	-10	11.1 ¹²⁶	56	41	20	04	52 78	15 57 9
23	165	33.3		37.1	210	02.3 ¹⁵⁴	-9	58.5 ¹²⁶	58	34	16	02	44 81	16 03 6
24	180	33.4	+13	37.9	224	36.7 ¹⁵⁴	-9	45.8 ¹²⁷	60 S	16 27	17 11	18 00	0 35 85	16 09 3
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 44 ^m 1		Mag: -3.9 PMG: 10 ^h 08 ^m		Mag: +0.1 PMG: 6 ^h 05 ^m		Mag: -2.2 PMG: 18 ^h 29 ^m		Mag: +0.1 PMG: 15 ^h 24 ^m					
h	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
0	213 35.0	208 09.2	+0 36.3	268 35.2	-20 54.9	82 07.2	+18 52.7	128 26.3	+22 26.7					
1	228 37.4	223 08.9	37.5	283 36.1	54.6	97 09.5	52.6	143 28.5	26.7					
2	243 39.9	238 08.6	38.7	298 37.0	54.3	112 11.8	52.6	158 30.7	26.8					
3	258 42.4	253 08.3	39.8	313 37.9	54.1	127 14.1	52.5	173 32.9	26.8					
4	273 44.8	268 07.9	41.0	328 38.8	53.8	142 16.4	52.5	188 35.1	26.8					
5	288 47.3	283 07.6	+0 42.1	343 39.7	-20 53.5	157 18.7	+18 52.4	203 37.3	+22 26.8					
6	303 49.8	298 07.3	+0 43.3	358 40.6	-20 53.3	172 21.0	+18 52.4	218 39.5	+22 26.8					
7	318 52.2	313 07.0	44.5	13 41.5	53.0	187 23.3	52.3	233 41.7	26.8					
8	333 54.7	328 06.6	45.6	28 42.3	52.8	202 25.6	52.3	248 43.9	26.9					
9	348 57.1	343 06.3	46.8	43 43.2	52.5	217 27.8	52.2	263 46.1	26.9					
10	3 59.6	358 06.0	48.0	58 44.1	52.2	232 30.1	52.2	278 48.3	26.9					
11	19 02.1	13 05.7	+0 49.1	73 45.0	-20 52.0	247 32.4	+18 52.2	293 50.5	+22 26.9					
12	34 04.5	28 05.3	+0 50.3	88 45.9	-20 51.7	262 34.7	+18 52.1	308 52.7	+22 26.9					
13	49 07.0	43 05.0	51.5	103 46.8	51.4	277 37.0	52.1	323 54.9	26.9					
14	64 09.5	58 04.7	52.6	118 47.7	51.2	292 39.3	52.0	338 57.1	26.9					
15	79 11.9	73 04.4	53.8	133 48.6	50.9	307 41.6	52.0	353 59.3	27.0					
16	94 14.4	88 04.0	55.0	148 49.5	50.6	322 43.9	51.9	9 01.5	27.0					
17	109 16.9	103 03.7	+0 56.1	163 50.4	-20 50.4	337 46.2	+18 51.9	24 03.7	+22 27.0					
18	124 19.3	118 03.4	+0 57.3	178 51.3	-20 50.1	352 48.5	+18 51.8	39 05.9	+22 27.0					
19	139 21.8	133 03.1	58.4	193 52.2	49.8	7 50.8	51.8	54 08.1	27.0					
20	154 24.2	148 02.7	+0 59.6	208 53.1	49.6	22 53.1	51.7	69 10.2	27.0					
21	169 26.7	163 02.4	+1 00.8	223 54.0	49.3	37 55.4	51.7	84 12.4	27.0					
22	184 29.2	178 02.1	01.9	238 54.9	49.0	52 57.6	51.6	99 14.6	27.1					
23	199 31.6	193 01.8	03.1	253 55.8	48.8	67 59.9	51.6	114 16.8	27.1					
24	214 34.1	208 01.4	+1 04.3	268 56.7	-20 48.5	83 02.2	+18 51.5	129 19.0	+22 27.1					
Dif	—	-3	+12	+9	+3	+23	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 7			Edad: 25 ^d 2 PHE { SD: 14'9 PMG: 9 ^h 17 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	33.4	+13 37.9	224	36.7	-9 45.8		60 N	2 05	3 20	4 10	4 12	3	14 39	81
1	195	33.5	38.7	239	11.2 ¹⁵⁵	33.1 ¹²⁷		58	28	32	19	07	6	43	77
2	210	33.6	39.5	253	45.7 ¹⁵⁵	20.4 ¹²⁷		56	2 46	43	26	4 03	8	46	75
3	225	33.7	40.3	268	20.3 ¹⁵⁶	-9 07.6 ¹²⁸		54	3 00	3 53	33	3 59	10	49	72
4	240	33.8	41.1	282	55.0 ¹⁵⁷	-8 54.8 ¹²⁸		52	13	4 01	39	55	13	52	70
5	255	33.9	+13 41.9	297	29.7 ¹⁵⁷	-8 42.0 ¹²⁸		50	3 24	4 09	4 45	3 52	14	14 54	68
6	270	34.0	+13 42.7	312	04.4 ¹⁵⁷	-8 29.1 ¹²⁹		45	3 45	4 24	4 56	3 45	18	15 00	63
7	285	34.1	43.5	326	39.2 ¹⁵⁸	16.2 ¹²⁹		40	4 02	37	5 06	39	22	04	60
8	300	34.2	44.3	341	14.0 ¹⁵⁸	-8 03.3 ¹²⁹		35	15	47	14	34	25	08	56
9	315	34.3	45.1	355	48.9 ¹⁵⁹	-7 50.4 ¹²⁹		30	26	4 56	21	29	28	12	53
10	330	34.4	45.9	10	23.8 ¹⁵⁹	37.5 ¹²⁹		20	44	5 11	34	21	33	17	49
11	345	34.5	+13 46.7	24	58.8 ¹⁶⁰	-7 24.5 ¹³⁰		10 N	4 57	5 23	5 44	3 14	37	15 22	45
12	0	34.6	+13 47.5	39	33.8 ¹⁶⁰	-7 11.5 ¹³⁰		0	5 08	5 33	5 54	3 07	41	15 27	40
13	15	34.7	48.3	54	08.8 ¹⁶⁰	-6 58.5 ¹³⁰		10 S	18	43	6 04	3 01	44	32	36
14	30	34.8	49.1	68	43.9 ¹⁶¹	45.5 ¹³⁰		20	26	5 52	14	2 53	50	37	32
15	45	34.9	49.9	83	19.0 ¹⁶¹	32.4 ¹³¹		30	33	6 02	26	45	54	42	28
16	60	35.0	50.7	97	54.2 ¹⁶²	19.3 ¹³¹		35	37	07	33	41	56	45	25
17	75	35.1	+13 51.5	112	29.3 ¹⁶¹	-6 06.2 ¹³¹		40	5 41	6 12	6 40	2 35	60	15 49	22
18	90	35.2	+13 52.3	127	04.6 ¹⁶³	-5 53.1 ¹³¹		45	5 44	6 19	6 49	2 29	64	15 53	18
19	105	35.3	53.1	141	39.8 ¹⁶²	40.0 ¹³¹		50	48	26	7 00	21	69	15 58	14
20	120	35.4	53.9	156	15.1 ¹⁶³	26.9 ¹³¹		52	50	29	05	18	70	16 00	12
21	135	35.5	54.7	170	50.4 ¹⁶³	13.7 ¹³²		54	51	33	10	14	73	03	10
22	150	35.6	55.5	185	25.8 ¹⁶⁴	-5 00.6 ¹³¹		56	53	37	16	10	75	06	7
23	165	35.7	56.3	200	01.2 ¹⁶⁴	-4 47.4 ¹³²		58	55	41	23	05	78	09	5
24	180	35.8	+13 57.1	214	36.6 ¹⁶⁴	-4 34.2 ¹³²		60 S	5 56	6 46	7 30	2 00	81	16 12	2
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 9 ^h 40 ^m 1		Mag: -3.9 PMG: 10 ^h 08 ^m			Mag: +0.1 PMG: 6 ^h 04 ^m			Mag: -2.2 PMG: 18 ^h 25 ^m			Mag: +0.1 PMG: 15 ^h 20 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	214	34.1	208 01.4	+1 04.3	268 56.7	-20 48.5	83 02.2	+18 51.5	129 19.0	+22 27.1					
1	229	36.6	223 01.1	05.4	283 57.6	48.2	98 04.5	51.5	144 21.2	27.1					
2	244	39.0	238 00.8	06.6	298 58.5	48.0	113 06.8	51.4	159 23.4	27.1					
3	259	41.5	253 00.4	07.8	313 59.4	47.7	128 09.1	51.4	174 25.6	27.1					
4	274	44.0	268 00.1	08.9	329 00.2	47.4	143 11.4	51.3	189 27.8	27.1					
5	289	46.4	282 59.8	+1 10.1	344 01.1	-20 47.2	158 13.7	+18 51.3	204 30.0	+22 27.2					
6	304	48.9	297 59.5	+1 11.3	359 02.0	-20 46.9	173 16.0	+18 51.2	219 32.2	+22 27.2					
7	319	51.4	312 59.1	12.4	14 02.9	46.6	188 18.2	51.2	234 34.4	27.2					
8	334	53.8	327 58.8	13.6	29 03.8	46.4	203 20.5	51.1	249 36.6	27.2					
9	349	56.3	342 58.5	14.8	44 04.7	46.1	218 22.8	51.1	264 38.8	27.2					
10	4 58.7	357 58.2	15.9	59 05.6	45.8	233 25.1	233 25.1	51.1	279 41.0	27.2					
11	20 01.2	12 57.8	+1 17.1	74 06.5	-20 45.6	248 27.4	248 27.4	+18 51.0	294 43.2	+22 27.2					
12	35 03.7	27 57.5	+1 18.2	89 07.4	-20 45.3	263 29.7	263 29.7	+18 51.0	309 45.4	+22 27.3					
13	50 06.1	42 57.2	19.4	104 08.3	45.0	278 32.0	278 32.0	50.9	324 47.5	27.3					
14	65 08.6	57 56.9	20.6	119 09.2	44.8	293 34.3	293 34.3	50.9	339 49.7	27.3					
15	80 11.1	72 56.5	21.7	134 10.1	44.5	308 36.5	308 36.5	50.8	354 51.9	27.3					
16	95 13.5	87 56.2	22.9	149 11.0	44.2	323 38.8	323 38.8	50.8	9 54.1	27.3					
17	110 16.0	102 55.9	+1 24.1	164 11.9	-20 44.0	338 41.1	338 41.1	+18 50.7	24 56.3	+22 27.3					
18	125 18.5	117 55.6	+1 25.2	179 12.8	-20 43.7	353 43.4	353 43.4	+18 50.7	39 58.5	+22 27.4					
19	140 20.9	132 55.2	26.4	194 13.7	43.4	8 45.7	8 45.7	50.6	55 00.7	27.4					
20	155 23.4	147 54.9	27.6	209 14.6	43.1	23 48.0	23 48.0	50.6	70 02.9	27.4					
21	170 25.8	162 54.6	28.7	224 15.5	42.9	38 50.2	38 50.2	50.5	85 05.1	27.4					
22	185 28.3	177 54.2	29.9	239 16.4	42.6	53 52.5	53 52.5	50.5	100 07.3	27.4					
23	200 30.8	192 53.9	31.1	254 17.3	42.3	68 54.8	68 54.8	50.4	115 09.5	27.4					
24	215 33.2	207 53.6	+1 32.2	269 18.3	-20 42.1	83 57.1	83 57.1	+18 50.4	130 11.7	+22 27.4					
Dif	—		-3	+12	+9	+3	+23		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 5			Edad: 26 ^d 2 PHE { SD: 14'8 PMG: 9 ^h 58 ^m 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 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	
0	180	35.8	+13	57.1	214	36.6	-4 34.2	60 N	19 49	20 41	21 59	4 15	1	16 00	79			
1	195	35.9		57.9	229	12.0 ¹⁶⁴	21.0 ¹³²	58	40	28	34	13	4	00	77			
2	210	36.0		58.6	243	47.5 ¹⁶⁵	-4 07.8 ¹³²	56	32	16	15	11	7	01	74			
3	225	36.1	+13	59.4	258	23.0 ¹⁶⁵	-3 54.5 ¹³³	54	25	20 06	21 00	09	10	01	72			
4	240	36.2	+14	00.2	272	58.5 ¹⁶⁵	41.3 ¹³²	52	19	19 57	20 47	08	11	02	69			
5	255	36.3	+14	01.0	287	34.0 ¹⁶⁵	-3 28.1 ¹³²	50	19 13	19 50	20 35	4 06	14	16 02	67			
6	270	36.4	+14	01.8	302	09.6 ¹⁶⁶	-3 14.8 ¹³³	45	19 01	19 33	20 13	4 03	18	16 03	63			
7	285	36.5		02.6	316	45.2 ¹⁶⁶	-3 01.6 ¹³²	40	18 51	20	19 56	4 01	21	04	59			
8	300	36.5		03.4	331	20.8 ¹⁶⁶	-2 48.3 ¹³³	35	43	09	42	3 59	24	04	56			
9	315	36.6		04.2	345	56.4 ¹⁶⁶	35.0 ¹³³	30	35	19 00	30	57	27	05	53			
10	330	36.7		05.0	0	32.0 ¹⁶⁶	21.8 ¹³²	20	22	18 45	19 12	54	32	06	48			
11	345	36.8	+14	05.8	15	07.7 ¹⁶⁷	-2 08.5 ¹³³	10 N	18 11	18 33	18 58	3 51	36	16 07	43			
12	0	36.9	+14	06.5	29	43.4 ¹⁶⁷	-1 55.2 ¹³³	0	18 01	18 22	18 47	3 48	40	16 07	40			
13	15	37.0		07.3	44	19.1 ¹⁶⁷	41.9 ¹³³	10 S	17 51	12	37	45	44	08	36			
14	30	37.1		08.1	58	54.8 ¹⁶⁷	28.6 ¹³³	20	40	18 03	29	43	48	09	32			
15	45	37.2		08.9	73	30.5 ¹⁶⁷	15.3 ¹³³	30	28	17 53	21	39	53	10	27			
16	60	37.3		09.7	88	06.2 ¹⁶⁷	-1 02.1 ¹³²	35	21	47	17	37	56	10	25			
17	75	37.4	+14	10.5	102	42.0 ¹⁶⁸	-0 48.8 ¹³³	40	17 13	17 41	18 13	3 35	59	16 11	21			
18	90	37.5	+14	11.3	117	17.8 ¹⁶⁸	-0 35.5 ¹³³	45	17 04	17 34	18 09	3 33	62	16 11	18			
19	105	37.6		12.1	131	53.5 ¹⁶⁷	22.2 ¹³³	50	16 53	27	05	30	67	12	14			
20	120	37.6		12.8	146	29.3 ¹⁶⁸	-0 08.9 ¹³³	52	48	23	03	28	70	12	12			
21	135	37.7		13.6	161	05.1 ¹⁶⁸	+0 04.4 ¹³³	54	42	20	18 01	27	71	13	9			
22	150	37.8		14.4	175	40.9 ¹⁶⁸	17.6 ¹³²	56	36	16	17 59	25	74	13	7			
23	165	37.9		15.2	190	16.7 ¹⁶⁸	30.9 ¹³³	58	29	11	58	23	77	14	4			
24	180	38.0	+14	16.0	204	52.5 ¹⁶⁸	+0 44.2 ¹³³	60 S	16 21	17 06	17 55	3 21	80	16 14	2			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 36 ^m 2		Mag: -3.9 PMG: 10 ^h 09 ^m			Mag: 0.0 PMG: 6 ^h 02 ^m			Mag: -2.2 PMG: 18 ^h 21 ^m			Mag: +0.1 PMG: 15 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	215	33.2	207	53.6	+1	32.2	269	18.3	-20	42.1	83	57.1	+18	50.4	130	11.7	+22	27.4
1	230	35.7	222	53.3		33.4	284	19.2		41.8	98	59.4		50.3	145	13.9		27.5
2	245	38.2	237	52.9		34.6	299	20.1		41.5	114	01.7		50.3	160	16.0		27.5
3	260	40.6	252	52.6		35.7	314	21.0		41.3	129	03.9		50.2	175	18.2		27.5
4	275	43.1	267	52.3		36.9	329	21.9		41.0	144	06.2		50.2	190	20.4		27.5
5	290	45.6	282	52.0	+1	38.0	344	22.8	-20	40.7	159	08.5	+18	50.1	205	22.6	+22	27.5
6	305	48.0	297	51.6	+1	39.2	359	23.7	-20	40.4	174	10.8	+18	50.1	220	24.8	+22	27.5
7	320	50.5	312	51.3		40.4	14	24.6		40.2	189	13.1		50.0	235	27.0		27.5
8	335	53.0	327	51.0		41.5	29	25.5		39.9	204	15.3		50.0	250	29.2		27.6
9	350	55.4	342	50.6		42.7	44	26.4		39.6	219	17.6		49.9	265	31.4		27.6
10	5	57.9	357	50.3		43.9	59	27.3		39.4	234	19.9		49.9	280	33.6		27.6
11	21	00.3	12	50.0	+1	45.0	74	28.2	-20	39.1	249	22.2	+18	49.8	295	35.8	+22	27.6
12	36	02.8	27	49.7	+1	46.2	89	29.1	-20	38.8	264	24.5	+18	49.8	310	38.0	+22	27.6
13	51	05.3	42	49.3		47.4	104	30.0		38.5	279	26.7		49.7	325	40.2		27.6
14	66	07.7	57	49.0		48.5	119	30.9		38.3	294	29.0		49.7	340	42.3		27.6
15	81	10.2	72	48.7		49.7	134	31.8		38.0	309	31.3		49.6	355	44.5		27.7
16	96	12.7	87	48.4		50.9	149	32.7		37.7	324	33.6		49.6	10	46.7		27.7
17	111	15.1	102	48.0	+1	52.0	164	33.6	-20	37.5	339	35.9	+18	49.5	25	48.9	+22	27.7
18	126	17.6	117	47.7	+1	53.2	179	34.5	-20	37.2	354	38.1	+18	49.4	40	51.1	+22	27.7
19	141	20.1	132	47.4		54.4	194	35.5		36.9	9	40.4		49.4	55	53.3		27.7
20	156	22.5	147	47.0		55.5	209	36.4		36.6	24	42.7		49.3	70	55.5		27.7
21	171	25.0	162	46.7		56.7	224	37.3		36.4	39	45.0		49.3	85	57.7		27.7
22	186	27.4	177	46.4		57.9	239	38.2		36.1	54	47.2		49.2	100	59.9		27.8
23	201	29.9	192	46.1	+1	59.0	254	39.1		35.8	69	49.5		49.2	116	02.0		27.8
24	216	32.4	207	45.7	+2	00.2	269	40.0	-20	35.5	84	51.8	+18	49.1	131	04.2	+22	27.8
Dif	—		-3		+12		+9		+3		+23		-1		+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 4				Edad: 27 ^d 2 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0 PMG: 10 ^h 38 ^m R°: 40 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	38.0	+14	16.0	204	52.5	+0	44.2	60 N	1 55	3 13	4 05	4 16	3	17 19	81		
1	195	38.1		16.8	219	28.3 ¹⁶⁸	+0	57.4 ¹³²	58	2 20	27	14	17	5	17 77			
2	210	38.2		17.5	234	04.1 ¹⁶⁸	+1	10.7 ¹³³	56	39	38	22	18	8	15 74			
3	225	38.3		18.3	248	39.9 ¹⁶⁸		23.9 ¹³²	54	2 55	48	29	19	10	13 77			
4	240	38.4		19.1	263	15.8 ¹⁶⁹		37.2 ¹³³	52	3 08	3 57	35	19	12	11 69			
5	255	38.5	+14	19.9	277	51.6 ¹⁶⁸	+1	50.4 ¹³²	50	3 19	4 05	4 41	4 20	14	17 09	67		
6	270	38.5	+14	20.7	292	27.4 ¹⁶⁸	+2	03.6 ¹³²	45	3 42	4 21	4 53	4 21	18	17 06	62		
7	285	38.6		21.4	307	03.2 ¹⁶⁸		16.8 ¹³²	40	3 59	34	5 03	22	22	03 59			
8	300	38.7		22.2	321	39.0 ¹⁶⁸		30.0 ¹³²	35	4 13	45	12	23	25	17 00	56		
9	315	38.8		23.0	336	14.8 ¹⁶⁸		43.2 ¹³²	30	24	4 54	19	24	27	16 58	53		
10	330	38.9		23.8	350	50.6 ¹⁶⁸	+2	56.4 ¹³²	20	42	5 09	32	26	31	54 48			
11	345	39.0	+14	24.6	5	26.5 ¹⁶⁹	+3	09.5 ¹³¹	10 N	4 56	5 22	5 44	4 27	36	16 50	45		
12	0	39.1	+14	25.3	20	02.2 ¹⁶⁷	+3	22.7 ¹³²	0	5 08	5 33	5 54	4 28	40	16 47	40		
13	15	39.2		26.1	34	38.0 ¹⁶⁸		35.8 ¹³¹	10 S	18	43	6 04	29	44	44 36			
14	30	39.2		26.9	49	13.8 ¹⁶⁸	+3	48.9 ¹³¹	20	26	5 52	15	31	48	41 32			
15	45	39.3		27.7	63	49.6 ¹⁶⁸	+4	02.0 ¹³¹	30	34	6 03	27	32	53	37 27			
16	60	39.4		28.5	78	25.4 ¹⁶⁸		15.1 ¹³¹	35	38	08	34	33	56	35 24			
17	75	39.5	+14	29.2	93	01.1 ¹⁶⁷	+4	28.2 ¹³¹	40	5 42	6 14	6 42	4 34	59	16 32	22		
18	90	39.6	+14	30.0	107	36.9 ¹⁶⁸	+4	41.2 ¹³⁰	45	5 46	6 21	6 52	4 35	63	16 29	19		
19	105	39.7		30.8	122	12.6 ¹⁶⁷	+4	54.3 ¹³¹	50	51	29	7 03	37	67	26 14			
20	120	39.8		31.6	136	48.3 ¹⁶⁷	+5	07.3 ¹³⁰	52	53	32	08	38	69	24 12			
21	135	39.8		32.3	151	24.0 ¹⁶⁷		20.3 ¹³⁰	54	54	36	14	38	72	22 11			
22	150	39.9		33.1	165	59.7 ¹⁶⁷		33.2 ¹²⁹	56	56	40	20	39	74	20 8			
23	165	40.0		33.9	180	35.4 ¹⁶⁷		46.2 ¹³⁰	58	5 58	45	27	40	77	18 6			
24	180	40.1	+14	34.7	195	11.0 ¹⁶⁶	+5	59.1 ¹²⁹	60 S	6 01	6 50	7 35	4 41	80	16 16	2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 32 ^m 3		Mag: -3.9 PMG: 10 ^h 09 ^m		Mag: 0.0 PMG: 6 ^h 01 ^m		Mag: -2.2 PMG: 18 ^h 18 ^m		Mag: +0.1 PMG: 15 ^h 13 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	216	32.4	207	45.7	+2	00.2	269	40.0	-20	35.5
1	231	34.8	222	45.4		01.3	284	40.9		35.3
2	246	37.3	237	45.1		02.5	299	41.8		35.0
3	261	39.8	252	44.7		03.7	314	42.7		34.7
4	276	42.2	267	44.4		04.8	329	43.6		34.4
5	291	44.7	282	44.1	+2	06.0	344	44.5	-20	34.2
6	306	47.2	297	43.8	+2	07.2	359	45.5	-20	33.9
7	321	49.6	312	43.4		08.3	14	46.4		33.6
8	336	52.1	327	43.1		09.5	29	47.3		33.3
9	351	54.6	342	42.8		10.7	44	48.2		33.1
10	6	57.0	357	42.4		11.8	59	49.1		32.8
11	21	59.5	12	42.1	+2	13.0	74	50.0	-20	32.5
12	37	01.9	27	41.8	+2	14.2	89	50.9	-20	32.2
13	52	04.4	42	41.5		15.3	104	51.8		32.0
14	67	06.9	57	41.1		16.5	119	52.7		31.7
15	82	09.3	72	40.8		17.7	134	53.7		31.4
16	97	11.8	87	40.5		18.8	149	54.6		31.1
17	112	14.3	102	40.1	+2	20.0	164	55.5	-20	30.9
18	127	16.7	117	39.8	+2	21.1	179	56.4	-20	30.6
19	142	19.2	132	39.5		22.3	194	57.3		30.3
20	157	21.7	147	39.1		23.5	209	58.2		30.0
21	172	24.1	162	38.8		24.6	224	59.1		29.8
22	187	26.6	177	38.5		25.8	240	00.1		29.5
23	202	29.1	192	38.2		27.0	255	01.0		29.2
24	217	31.5	207	37.8	+2	28.1	270	01.9	-20	28.9
Dif	—		-3 +12		+9 +3		+23		-1 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 3			Edad: 28 ^d 2 PHE { 4 ^h : 54'0 12 ^h : 54'0 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	h m m	h m m	
0	180	40.1	+14	34.7	195	11.0	+5 59.1	60 N	19 54	20 47	22 09	4 19 2	18 40 82		
1	195	40.2		35.4	209	46.7 ¹⁶⁷	+6 12.0 ¹²⁹	58	45	33	21 42	22 6	34 78		
2	210	40.3		36.2	224	22.3 ¹⁶⁶	24.9 ¹²⁹	56	36	21	21	26 8	29 75		
3	225	40.3		37.0	238	57.9 ¹⁶⁶	37.7 ¹²⁸	54	29	10	21 05	29 10	24 73		
4	240	40.4		37.7	253	33.5 ¹⁶⁶	+6 50.5 ¹²⁸	52	22	20 01	20 51	31 13	20 70		
5	255	40.5	+14	38.5	268	09.0 ¹⁶⁵	+7 03.3 ¹²⁸	50	19 16	19 53	20 40	4 34 15	18 16 68		
6	270	40.6	+14	39.3	282	44.6 ¹⁶⁶	+7 16.1 ¹²⁸	45	19 04	19 36	20 16	4 39 19	18 08 64		
7	285	40.7		40.1	297	20.1 ¹⁶⁵	28.9 ¹²⁸	40	18 53	22	19 58	44 22	18 02 59		
8	300	40.8		40.8	311	55.6 ¹⁶⁵	41.6 ¹²⁷	35	44	11	44	48 25	17 56 57		
9	315	40.8		41.6	326	31.1 ¹⁶⁵	+7 54.3 ¹²⁷	30	36	19 02	32	51 29	51 54		
10	330	40.9		42.4	341	06.5 ¹⁶⁴	+8 06.9 ¹²⁶	20	23	18 46	19 13	4 57 33	42 49		
11	345	41.0	+14	43.1	355	41.9 ¹⁶⁴	+8 19.5 ¹²⁶	10 N	18 11	18 33	18 59	5 03 37	17 35 45		
12	0	41.1	+14	43.9	10	17.3 ¹⁶⁴	+8 32.1 ¹²⁶	0	18 01	18 22	18 47	5 08 41	17 27 42		
13	15	41.2		44.7	24	52.7 ¹⁶⁴	44.7 ¹²⁶	10 S	17 50	12	37	13 45	20 38		
14	30	41.3		45.4	39	28.0 ¹⁶³	+8 57.2 ¹²⁵	20	39	18 02	28	19 48	13 34		
15	45	41.3		46.2	54	03.3 ¹⁶³	+9 09.7 ¹²⁵	30	26	17 51	19	25 54	17 04 30		
16	60	41.4		47.0	68	38.6 ¹⁶³	22.2 ¹²⁵	35	19	45	15	29 56	16 59 27		
17	75	41.5	+14	47.7	83	13.9 ¹⁶³	+9 34.6 ¹²⁴	40	17 11	17 39	18 11	5 33 59	16 54 24		
18	90	41.6	+14	48.5	97	49.1 ¹⁶²	+9 47.0 ¹²⁴	45	17 01	17 32	18 06	5 38 63	16 48 20		
19	105	41.7		49.3	112	24.3 ¹⁶²	+9 59.4 ¹²⁴	50	16 49	23	02	44 67	40 16		
20	120	41.7		50.0	126	59.4 ¹⁶¹	+10 11.7 ¹²³	52	44	20	18 00	47 69	36 14		
21	135	41.8		50.8	141	34.5 ¹⁶¹	24.0 ¹²³	54	38	16	17 58	50 72	33 11		
22	150	41.9		51.6	156	09.6 ¹⁶¹	36.2 ¹²²	56	32	11	56	53 75	28 9		
23	165	42.0		52.3	170	44.7 ¹⁶¹	+10 48.4 ¹²²	58	24	07	53	5 57 77	24 6		
24	180	42.1	+14	53.1	185	19.7 ¹⁶⁰	+11 00.6 ¹²²	60 S	16 16	17 01	17 51	6 01 81	16 18 3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 28 ^m 3		Mag: -3.9 PMG: 10 ^h 10 ^m		Mag: 0.0 PMG: 6 ^h 00 ^m		Mag: -2.2 PMG: 18 ^h 14 ^m		Mag: +0.1 PMG: 15 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	217	31.5	207	37.8	+2 28.1	270	01.9	-20 28.9	85 46.3	+18 47.9
1	232	34.0	222	37.5	29.3	285	02.8	28.7	100 48.6	47.8
2	247	36.4	237	37.2	30.5	300	03.7	28.4	115 50.9	47.8
3	262	38.9	252	36.8	31.6	315	04.6	28.1	130 53.1	47.7
4	277	41.4	267	36.5	32.8	330	05.6	27.8	145 55.4	47.7
5	292	43.8	282	36.2	+2 34.0	345	06.5	-20 27.5	160 57.7	+18 47.6
6	307	46.3	297	35.8	+2 35.1	0 07.4	-20 27.3	175 59.9	+18 47.6	222 09.9
7	322	48.8	312	35.5	36.3	15 08.3	27.0	191 02.2	47.5	237 12.0
8	337	51.2	327	35.2	37.4	30 09.2	26.7	206 04.5	47.4	252 14.2
9	352	53.7	342	34.9	38.6	45 10.1	26.4	221 06.7	47.4	267 16.4
10	7 56.2	357 34.5		39.8	60 11.1	26.2	236 09.0	47.3	282 18.6	28.3
11	22 58.6	12 34.2	+2 40.9	75 12.0	-20 25.9	251 11.3	+18 47.3	297 20.8	+22 28.3	
12	38 01.1	27 33.9	+2 42.1	90 12.9	-20 25.6	266 13.5	+18 47.2	312 23.0	+22 28.3	
13	53 03.5	42 33.5	43.3	105 13.8	25.3	281 15.8	47.2	327 25.2	28.3	
14	68 06.0	57 33.2	44.4	120 14.7	25.0	296 18.1	47.1	342 27.3	28.3	
15	83 08.5	72 32.9	45.6	135 15.6	24.8	311 20.3	47.1	357 29.5	28.3	
16	98 10.9	87 32.5	46.8	150 16.6	24.5	326 22.6	47.0	12 31.7	28.4	
17	113 13.4	102 32.2	+2 47.9	165 17.5	-20 24.2	341 24.9	+18 47.0	27 33.9	+22 28.4	
18	128 15.9	117 31.9	+2 49.1	180 18.4	-20 23.9	356 27.1	+18 46.9	42 36.1	+22 28.4	
19	143 18.3	132 31.5	50.2	195 19.3	23.7	11 29.4	46.8	57 38.3	28.4	
20	158 20.8	147 31.2	51.4	210 20.3	23.4	26 31.6	46.8	72 40.4	28.4	
21	173 23.3	162 30.9	52.6	225 21.2	23.1	41 33.9	46.7	87 42.6	28.4	
22	188 25.7	177 30.6	53.7	240 22.1	22.8	56 36.2	46.7	102 44.8	28.4	
23	203 28.2	192 30.2	54.9	255 23.0	22.5	71 38.4	46.6	117 47.0	28.5	
24	218 30.7	207 29.9	+2 56.1	270 23.9	-20 22.3	86 40.7	+18 46.6	132 49.2	+22 28.5	
Dif	—		-3 +12	+9 +3		+23 -1		+22 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 1				Edad: 29 ^d 2 PHE { 4 ^h : 53 ^m 9 12 ^h : 53 ^m 9 20 ^h : 53 ^m 9 PMG: 11 ^h 59 ^m R°: 43 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	42.1	+14	53.1	185	19.7	+11	00.6	60 N	1	45	3	06	3	59	4	21	84
1	195	42.1		53.9	199	54.6 ¹⁵⁹		12.7 ¹²¹	58	2	12	21	4	09		28	7	19 52 80
2	210	42.2		54.6	214	29.6 ¹⁶⁰		24.7 ¹²⁰	56		32	33		17		34	10	44 77
3	225	42.3		55.4	229	04.5 ¹⁵⁹		36.8 ¹²¹	54	2	49	43	25			39	13	37 73
4	240	42.4		56.1	243	39.3 ¹⁵⁸	+11	48.8 ¹²⁰	52	3	02	3	53	31		44	16	30 71
5	255	42.4	+14	56.9	258	14.1 ¹⁵⁸	+12	00.7 ¹¹⁹	50	3	14	4	01	4	37	4	49	17 19 24 69
6	270	42.5	+14	57.7	272	48.9 ¹⁵⁸	+12	12.6 ¹¹⁹	45	3	38	4	18	4	50	4	58	22 19 12 64
7	285	42.6		58.4	287	23.7 ¹⁵⁸		24.5 ¹¹⁹	40	3	56		32	5	01	5	06	26 19 01 61
8	300	42.7		59.2	301	58.3 ¹⁵⁶		36.3 ¹¹⁸	35	4	10		43	10		13	29	18 53 57
9	315	42.8	+14	59.9	316	33.0 ¹⁵⁷		48.0 ¹¹⁷	30		22	4	52	18		20	30	45 55
10	330	42.8	+15	00.7	331	07.6 ¹⁵⁶	+12	59.7 ¹¹⁷	20		41	5	08	31		30	35	31 51
11	345	42.9	+15	01.5	345	42.2 ¹⁵⁶	+13	11.4 ¹¹⁷	10 N	4	56	5	21	5	43	5	40	39 18 20 47
12	0	43.0	+15	02.2	0	16.7 ¹⁵⁵	+13	23.0 ¹¹⁶	0	5	07	5	32	5	54	5	49	42 18 09 44
13	15	43.1		03.0	14	51.2 ¹⁵⁵		34.6 ¹¹⁶	10 S		18		43	6	04	5	58	46 17 58 40
14	30	43.1		03.7	29	25.6 ¹⁵⁴		46.1 ¹¹⁵	20		27	5	53	16		6	07	50 47 36
15	45	43.2		04.5	44	00.0 ¹⁵⁴	+13	57.5 ¹¹⁴	30		36	6	04	29		19	54	34 32
16	60	43.3		05.3	58	34.3 ¹⁵³	+14	08.9 ¹¹⁴	35		40		10	36		25	57	26 30
17	75	43.4	+15	06.0	73	08.6 ¹⁵³	+14	20.3 ¹¹⁴	40	5	44	6	16	6	44	6	32	61 17 18 26
18	90	43.4	+15	06.8	87	42.8 ¹⁵²	+14	31.6 ¹¹³	45	5	49	6	23	6	54	6	41	64 17 08 23
19	105	43.5		07.5	102	17.0 ¹⁵²		42.8 ¹¹²	50		53		32	7	06		51	69 16 56 19
20	120	43.6		08.3	116	51.1 ¹⁵¹	+14	54.0 ¹¹²	52		55		35	11		6	56	71 50 17
21	135	43.7		09.0	131	25.2 ¹⁵¹	+15	05.1 ¹¹¹	54	5	58		40	17		7	02	73 44 15
22	150	43.7		09.8	145	59.3 ¹⁵¹		16.2 ¹¹¹	56	6	00		44	24		08	76 37 12	
23	165	43.8		10.5	160	33.2 ¹⁴⁹		27.2 ¹¹⁰	58		02		49	31		14	80 30 9	
24	180	43.9	+15	11.3	175	07.2 ¹⁵⁰	+15	38.1 ¹⁰⁹	60 S	6	05	6	54	7	40	7	22	83 16 21 5
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 24 ^m 4		Mag: -3.9 PMG: 10 ^h 10 ^m				Mag: 0.0 PMG: 5 ^h 58 ^m				Mag: -2.1 PMG: 18 ^h 11 ^m				Mag: +0.1 PMG: 15 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	218	30.7	207	29.9	+2	56.1	270	23.9	-20	22.3	86	40.7	+18	46.6	132	49.2	+22	28.5
1	233	33.1	222	29.6		57.2	285	24.9		22.0	101	43.0		46.5	147	51.4		28.5
2	248	35.6	237	29.2		58.4	300	25.8		21.7	116	45.2		46.5	162	53.5		28.5
3	263	38.0	252	28.9	+2	59.5	315	26.7		21.4	131	47.5		46.4	177	55.7		28.5
4	278	40.5	267	28.6	+3	00.7	330	27.6		21.1	146	49.7		46.3	192	57.9		28.5
5	293	43.0	282	28.2	+3	01.9	345	28.5	-20	20.9	161	52.0	+18	46.3	208	00.1	+22	28.5
6	308	45.4	297	27.9	+3	03.0	0	29.5	-20	20.6	176	54.3	+18	46.2	223	02.3	+22	28.6
7	323	47.9	312	27.6		04.2	15	30.4		20.3	191	56.5		46.2	238	04.5		28.6
8	338	50.4	327	27.2		05.4	30	31.3		20.0	206	58.8		46.1	253	06.6		28.6
9	353	52.8	342	26.9		06.5	45	32.2		19.7	222	01.0		46.1	268	08.8		28.6
10	8	55.3	357	26.6		07.7	60	33.2		19.4	237	03.3		46.0	283	11.0		28.6
11	23	57.8	12	26.2	+3	08.8	75	34.1	-20	19.2	252	05.6	+18	45.9	298	13.2	+22	28.6
12	39	00.2	27	25.9	+3	10.0	90	35.0	-20	18.9	267	07.8	+18	45.9	313	15.4	+22	28.6
13	54	02.7	42	25.6		11.2	105	35.9		18.6	282	10.1		45.8	328	17.6		28.6
14	69	05.1	57	25.2		12.3	120	36.9		18.3	297	12.3		45.8	343	19.7		28.7
15	84	07.6	72	24.9		13.5	135	37.8		18.0	312	14.6		45.7	358	21.9		28.7
16	99	10.1	87	24.6		14.7	150	38.7		17.8	327	16.9		45.7	13	24.1		28.7
17	114	12.5	102	24.2	+3	15.8	165	39.7	-20	17.5	342	19.1	+18	45.6	28	26.3	+22	28.7
18	129	15.0	117	23.9	+3	17.0	180	40.6	-20	17.2	357	21.4	+18	45.6	43	28.5	+22	28.7
19	144	17.5	132	23.6		18.1	195	41.5		16.9	12	23.6		45.5	58	30.7		28.7
20	159	19.9	147	23.2		19.3	210	42.4		16.6	27	25.9		45.4	73	32.8		28.7
21	174	22.4	162	22.9		20.5	225	43.4		16.3	42	28.1		45.4	88	35.0		28.8
22	189	24.9	177	22.6		21.6	240	44.3		16.1	57	30.4		45.3	103	37.2		28.8
23	204	27.3	192	22.2		22.8	255	45.2		15.8	72	32.6		45.3	118	39.4		28.8
24	219	29.8	207	21.9	+3	24.0	270	46.1	-20	15.5	87	34.9	+18	45.2	133	41.6	+22	28.8
Dif	—		-3		+12		+9		+3		+23		-1		+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: 30 ^d 2 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 12 ^h 42 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	43.9	+15	11.3	175	07.2	+15	38.1	60 N	19 59	20 53	22 19	4 25 7	21 26 85
1	195	43.9		12.0	189	41.0 ¹⁴⁸		49.0 ¹⁰⁹	58	49	38	21 50	35 11	12 81
2	210	44.0		12.8	204	14.9 ¹⁴⁹	+15	59.9 ¹⁰⁹	56	40	25	28	44 14	21 01 76
3	225	44.1		13.5	218	48.6 ¹⁴⁷	+16	10.6 ¹⁰⁷	54	33	14	21 10	4 52 17	20 50 74
4	240	44.2		14.3	233	22.4 ¹⁴⁸		21.3 ¹⁰⁷	52	26	20 05	20 56	5 00 19	41 71
5	255	44.2	+15	15.0	247	56.0 ¹⁴⁶	+16	32.0 ¹⁰⁷	50	19 20	19 56	20 44	5 06 21	20 33 69
6	270	44.3	+15	15.8	262	29.6 ¹⁴⁶	+16	42.5 ¹⁰⁵	45	19 06	19 39	20 19	5 20 26	20 16 64
7	285	44.4		16.5	277	03.2 ¹⁴⁶	+16	53.0 ¹⁰⁵	40	18 55	25	20 01	32 29	20 02 61
8	300	44.5		17.3	291	36.7 ¹⁴⁵	+17	03.5 ¹⁰⁵	35	46	13	19 46	42 31	19 50 59
9	315	44.5		18.0	306	10.1 ¹⁴⁴		13.8 ¹⁰³	30	38	19 03	33	5 50 34	40 56
10	330	44.6		18.8	320	43.5 ¹⁴⁴		24.2 ¹⁰⁴	20	24	18 47	19 14	6 05 39	22 53
11	345	44.7	+15	19.5	335	16.8 ¹⁴³	+17	34.4 ¹⁰²	10 N	18 12	18 34	18 59	6 19 41	19 07 49
12	0	44.7	+15	20.3	349	50.1 ¹⁴³	+17	44.6 ¹⁰²	0	18 00	18 22	18 47	6 31 45	18 53 46
13	15	44.8		21.0	4	23.3 ¹⁴²	+17	54.6 ¹⁰⁰	10 S	17 49	11	36	44 48	38 44
14	30	44.9		21.8	18	56.4 ¹⁴¹	+18	04.7 ¹⁰¹	20	38	18 00	27	6 57 52	23 40
15	45	44.9		22.5	33	29.5 ¹⁴¹		14.6 ⁹⁹	30	24	17 49	18	7 13 56	18 06 36
16	60	45.0		23.3	48	02.5 ¹⁴⁰		24.5 ⁹⁹	35	17	43	13	22 58	17 56 34
17	75	45.1	+15	24.0	62	35.5 ¹⁴⁰	+18	34.3 ⁹⁸	40	17 08	17 36	18 08	7 33 61	17 44 32
18	90	45.2	+15	24.8	77	08.4 ¹³⁹	+18	44.0 ⁹⁷	45	16 58	17 29	18 04	7 45 64	17 31 28
19	105	45.2		25.5	91	41.2 ¹³⁸	+18	53.7 ⁹⁷	50	46	20	17 59	8 00 69	15 23
20	120	45.3		26.3	106	14.0 ¹³⁸	+19	03.3 ⁹⁶	52	40	16	56	07 71	17 07 22
21	135	45.4		27.0	120	46.7 ¹³⁷		12.8 ⁹⁵	54	34	12	54	15 74	16 59 19
22	150	45.4		27.7	135	19.4 ¹³⁷		22.2 ⁹⁴	56	27	07	52	24 77	49 16
23	165	45.5		28.5	149	51.9 ¹³⁵		31.5 ⁹³	58	20	17 02	49	34 81	39 12
24	180	45.6	+15	29.2	164	24.5 ¹³⁶	+19	40.8 ⁹³	60 S	16 11	16 57	17 46	8 45 86	16 26 8
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 20 ^m 5		Mag: -3.8 PMG: 10 ^h 11 ^m		Mag: 0.0 PMG: 5 ^h 57 ^m		Mag: -2.1 PMG: 18 ^h 07 ^m		Mag: +0.1 PMG: 15 ^h 03 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	219	29.8	207	21.9	+3	24.0	270	46.1	-20	15.5				
1	234	32.3	222	21.6		25.1	285	47.1		15.2				
2	249	34.7	237	21.2		26.3	300	48.0		14.9				
3	264	37.2	252	20.9		27.4	315	48.9		14.6				
4	279	39.6	267	20.6		28.6	330	49.9		14.4				
5	294	42.1	282	20.2	+3	29.8	345	50.8	-20	14.1				
6	309	44.6	297	19.9	+3	30.9	0	51.7	-20	13.8				
7	324	47.0	312	19.5		32.1	15	52.7		13.5				
8	339	49.5	327	19.2		33.2	30	53.6		13.2				
9	354	52.0	342	18.9		34.4	45	54.5		12.9				
10	9	54.4	357	18.5		35.6	60	55.4		12.7				
11	24	56.9	12	18.2	+3	36.7	75	56.4	-20	12.4				
12	39	59.4	27	17.9	+3	37.9	90	57.3	-20	12.1				
13	55	01.8	42	17.5		39.0	105	58.2		11.8				
14	70	04.3	57	17.2		40.2	120	59.2		11.5				
15	85	06.8	72	16.9		41.4	136	00.1		11.2				
16	100	09.2	87	16.5		42.5	151	01.0		11.0				
17	115	11.7	102	16.2	+3	43.7	166	02.0	-20	10.7				
18	130	14.1	117	15.9	+3	44.8	181	02.9	-20	10.4				
19	145	16.6	132	15.5		46.0	196	03.8		10.1				
20	160	19.1	147	15.2		47.2	211	04.8		09.8				
21	175	21.5	162	14.8		48.3	226	05.7		09.5				
22	190	24.0	177	14.5		49.5	241	06.6		09.2				
23	205	26.5	192	14.2		50.6	256	07.6		09.0				
24	220	28.9	207	13.8	+3	51.8	271	08.5	-20	08.7				
Dif	—		-3		+12		+9		+3					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9			Edad: 1 ^d 5	PHE {	SD: 14 ^h 7		4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2	R°: 49 ^m		Náutico	Civil	Hora	R°	Hora	R°	
	PMG: 11 ^h 56 ^m 9	hG ☉	Dec														hG ☾
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	45.6	+15	29.2	164	24.5	+19	40.8	60 N	1 34	3 00	3 54	4 32	11	22 51	82	
1	195	45.6		30.0	178	56.9 ¹³⁴		50.0	92	58	2 04	15	4 04	46	16	33 76	
2	210	45.7		30.7	193	29.3 ¹³⁴	+19	59.1	91	56	25	28	13	4 58	20	17 73	
3	225	45.8		31.5	208	01.7 ¹³⁴	+20	08.1	90	54	43	39	21	5 09	23	22 04 70	
4	240	45.8		32.2	222	34.0 ¹³³		17.0	89	52	2 57	48	27	19	25	21 52 68	
5	255	45.9	+15	32.9	237	06.2 ¹³²	+20	25.8	88	50	3 10	3 57	4 34	5 27	27	21 42 66	
6	270	46.0	+15	33.7	251	38.3 ¹³¹	+20	34.6	88	45	3 34	4 15	4 47	5 46	31	21 20 63	
7	285	46.0		34.4	266	10.4 ¹³¹		43.3	87	40	3 53	29	4 58	6 01	34	21 03 60	
8	300	46.1		35.2	280	42.4 ¹³⁰	+20	51.9	86	35	4 08	41	5 08	13	37	20 49 58	
9	315	46.2		35.9	295	14.4 ¹³⁰	+21	00.4	85	30	20	4 50	16	24	39	36 56	
10	330	46.2		36.6	309	46.3 ¹²⁹		08.8	84	20	40	5 07	30	6 44	42	20 15 53	
11	345	46.3	+15	37.4	324	18.1 ¹²⁸	+21	17.1	83	10 N	4 55	5 20	5 42	7 00	45	19 56 51	
12	0	46.4	+15	38.1	338	49.9 ¹²⁸	+21	25.3	82	0	5 07	5 32	5 53	7 16	48	19 39 49	
13	15	46.4		38.8	353	21.6 ¹²⁷		33.5	82	10 S	18	43	6 05	32	50	22 46	
14	30	46.5		39.6	7	53.2 ¹²⁶		41.5	80	20	27	5 54	17	7 49	53	19 03 44	
15	45	46.5		40.3	22	24.8 ¹²⁶		49.5	80	30	37	6 05	30	8 09	56	18 42 41	
16	60	46.6		41.1	36	56.3 ¹²⁵	+21	57.3	78	35	41	11	38	20	59	30 39	
17	75	46.7	+15	41.8	51	27.7 ¹²⁴	+22	05.1	78	40	5 46	6 18	6 46	8 34	61	18 16 37	
18	90	46.7	+15	42.5	65	59.1 ¹²⁴	+22	12.8	77	45	5 51	6 26	6 57	8 49	64	17 59 34	
19	105	46.8		43.3	80	30.4 ¹²³		20.4	76	50	56	35	7 09	9 09	68	38 31	
20	120	46.9		44.0	95	01.6 ¹²²		27.8	74	52	5 58	38	15	18	70	29 28	
21	135	46.9		44.7	109	32.8 ¹²²		35.2	74	54	6 01	43	21	29	72	18 26	
22	150	47.0		45.5	124	03.9 ¹²¹		42.5	73	56		03	48	28	41	75	17 05 24
23	165	47.0		46.2	138	35.0 ¹²¹		49.7	72	58	06	53	36	9 55	79	16 51 20	
24	180	47.1	+15	46.9	153	05.9 ¹¹⁹	+22	56.7	70	60 S	6 09	6 59	7 45	10 11	85	16 34 15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 16 ^m 5		Mag: -3.8		Mag: -0.1		Mag: -2.1		Mag: +0.1									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	220	28.9	207	13.8	+3	51.8	271	08.5	-20	08.7	88	29.0	+18	43.8	134	33.9	+22	29.1
1	235	31.4	222	13.5		53.0	286	09.4		08.4	103	31.2		43.7	149	36.0		29.1
2	250	33.9	237	13.2		54.1	301	10.4		08.1	118	33.4		43.7	164	38.2		29.2
3	265	36.3	252	12.8		55.3	316	11.3		07.8	133	35.7		43.6	179	40.4		29.2
4	280	38.8	267	12.5		56.4	331	12.3		07.5	148	37.9		43.6	194	42.6		29.2
5	295	41.3	282	12.1	+3	57.6	346	13.2	-20	07.2	163	40.2	+18	43.5	209	44.8	+22	29.2
6	310	43.7	297	11.8	+3	58.8	1	14.1	-20	07.0	178	42.4	+18	43.5	224	46.9	+22	29.2
7	325	46.2	312	11.5	+3	59.9	16	15.1		06.7	193	44.7		43.4	239	49.1		29.2
8	340	48.6	327	11.1	+4	01.1	31	16.0		06.4	208	46.9		43.3	254	51.3		29.2
9	355	51.1	342	10.8		02.2	46	16.9		06.1	223	49.2		43.3	269	53.5		29.3
10	10	53.6	357	10.5		03.4	61	17.9		05.8	238	51.4		43.2	284	55.6		29.3
11	25	56.0	12	10.1	+4	04.6	76	18.8	-20	05.5	253	53.7	+18	43.2	299	57.8	+22	29.3
12	40	58.5	27	09.8	+4	05.7	91	19.8	-20	05.2	268	55.9	+18	43.1	315	00.0	+22	29.3
13	56	01.0	42	09.4		06.9	106	20.7		04.9	283	58.2		43.0	330	02.2		29.3
14	71	03.4	57	09.1		08.0	121	21.6		04.7	299	00.4		43.0	345	04.4		29.3
15	86	05.9	72	08.8		09.2	136	22.6		04.4	314	02.6		42.9	0	06.5		29.3
16	101	08.4	87	08.4		10.3	151	23.5		04.1	329	04.9		42.9	15	08.7		29.3
17	116	10.8	102	08.1	+4	11.5	166	24.5	-20	03.8	344	07.1	+18	42.8	30	10.9	+22	29.4
18	131	13.3	117	07.7	+4	12.7	181	25.4	-20	03.5	359	09.4	+18	42.7	45	13.1	+22	29.4
19	146	15.7	132	07.4		13.8	196	26.3		03.2	14	11.6		42.7	60	15.2		29.4
20	161	18.2	147	07.1		15.0	211	27.3		02.9	29	13.9		42.6	75	17.4		29.4
21	176	20.7	162	06.7		16.1	226	28.2		02.6	44	16.1		42.5	90	19.6		29.4
22	191	23.1	177	06.4		17.3	241	29.2		02.4	59	18.4		42.5	105	21.8		29.4
23	206	25.6	192	06.1		18.4	256	30.1		02.1	74	20.6		42.4	120	23.9		29.4
24	221	28.1	207	05.7	+4	19.6	271	31.0	-20	01.8	89	22.8	+18	42.4	135	26.1	+22	29.5
Dif	—		-3 +12		+9 +3		+22		-1		+22				+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 2 ^d 5	PHE	4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5								
	PMG: 11 ^h 56 ^m 8													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	R°	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	180	47.1	+15 46.9	153	05.9	+22 56.7	70	60 N	20 04	20 59	22 31	4 43	20	** ** *
1	195	47.2	47.6	167	36.9 ¹²⁰	+23 03.7	69	58	19 54	44	21 58	5 02	25	23 49 67
2	210	47.2	48.4	182	07.7 ¹¹⁸	10.6	69	56	44	30	34	18	29	30 65
3	225	47.3	49.1	196	38.5 ¹¹⁸	17.4	68	54	36	19	16	32	31	14 63
4	240	47.4	49.8	211	09.2 ¹¹⁷	24.0	66	52	29	09	21 01	44	33	23 00 62
5	255	47.4	+15 50.6	225	39.9 ¹¹⁷	+23 30.6	66	50	19 23	20 00	20 48	5 54	36	22 48 61
6	270	47.5	+15 51.3	240	10.5 ¹¹⁶	+23 37.1	65	45	19 09	19 41	20 22	6 17	38	22 23 59
7	285	47.5	52.0	254	41.0 ¹¹⁵	43.4	63	40	18 57	27	20 03	35	40	22 03 58
8	300	47.6	52.8	269	11.5 ¹¹⁵	49.7	63	35	47	15	19 48	6 50	42	21 47 56
9	315	47.7	53.5	283	41.9 ¹¹⁴	+23 55.8	61	30	39	19 05	35	7 03	44	32 56
10	330	47.7	54.2	298	12.3 ¹¹⁴	+24 01.8	60	20	24	18 48	15	26	46	21 08 54
11	345	47.8	+15 54.9	312	42.6 ¹¹³	+24 07.8	60	10 N	18 12	18 34	19 00	7 45	49	20 47 53
12	0	47.8	+15 55.7	327	12.8 ¹¹²	+24 13.6	58	0	18 00	18 22	18 47	8 04	50	20 28 51
13	15	47.9	56.4	341	43.0 ¹¹²	19.3	57	10 S	17 49	18 11	36	22	52	20 08 50
14	30	48.0	57.1	356	13.1 ¹¹¹	24.8	55	20	37	17 59	26	8 42	54	19 47 49
15	45	48.0	57.8	10	43.1 ¹¹⁰	30.3	55	30	23	48	16	9 05	56	23 47
16	60	48.1	58.6	25	13.1 ¹¹⁰	35.7	54	35	15	41	11	19	57	19 09 46
17	75	48.1	+15 59.3	39	43.1 ¹¹⁰	+24 40.9	52	40	17 06	17 34	18 06	9 35	59	18 53 44
18	90	48.2	+16 00.0	54	12.9 ¹⁰⁸	+24 46.1	52	45	16 55	17 26	18 01	9 53	62	18 33 43
19	105	48.2	+16 00.7	68	42.7 ¹⁰⁸	51.1	50	50	43	17	17 56	10 17	64	18 09 40
20	120	48.3	01.5	83	12.5 ¹⁰⁸	+24 56.0	49	52	37	13	53	28	66	17 57 39
21	135	48.4	02.2	97	42.2 ¹⁰⁷	+25 00.8	48	54	30	08	51	41	68	44 37
22	150	48.4	02.9	112	11.8 ¹⁰⁶	05.4	46	56	23	17 04	48	10 56	70	29 35
23	165	48.5	03.6	126	41.4 ¹⁰⁶	10.0	46	58	15	16 58	45	11 14	73	17 11 32
24	180	48.5	+16 04.3	141	11.0 ¹⁰⁶	+25 14.4	44	60 S	16 06	16 52	17 42	11 36	78	16 49 26
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -3.8			Mag: -0.1			Mag: -2.1			Mag: +0.1		
	9 ^h 12 ^m 6		PMG: 10 ^h 12 ^m			PMG: 5 ^h 54 ^m			PMG: 18 ^h 00 ^m			PMG: 14 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	221	28.1	207	05.7	+4 19.6	271	31.0	-20 01.8	89	22.8	+18 42.4	135	26.1	+22 29.5
1	236	30.5	222	05.4	20.8	286	32.0	01.5	104	25.1	42.3	150	28.3	29.5
2	251	33.0	237	05.0	21.9	301	32.9	01.2	119	27.3	42.2	165	30.5	29.5
3	266	35.5	252	04.7	23.1	316	33.9	00.9	134	29.6	42.2	180	32.6	29.5
4	281	37.9	267	04.4	24.2	331	34.8	00.6	149	31.8	42.1	195	34.8	29.5
5	296	40.4	282	04.0	+4 25.4	346	35.8	-20 00.3	164	34.0	+18 42.1	210	37.0	+22 29.5
6	311	42.9	297	03.7	+4 26.5	1	36.7	-20 00.0	179	36.3	+18 42.0	225	39.2	+22 29.5
7	326	45.3	312	03.3	27.7	16	37.6	-19 59.8	194	38.5	41.9	240	41.3	29.5
8	341	47.8	327	03.0	28.9	31	38.6	59.5	209	40.8	41.9	255	43.5	29.6
9	356	50.2	342	02.6	30.0	46	39.5	59.2	224	43.0	41.8	270	45.7	29.6
10	11	52.7	357	02.3	31.2	61	40.5	58.9	239	45.2	41.8	285	47.9	29.6
11	26	55.2	12	02.0	+4 32.3	76	41.4	-19 58.6	254	47.5	+18 41.7	300	50.0	+22 29.6
12	41	57.6	27	01.6	+4 33.5	91	42.4	-19 58.3	269	49.7	+18 41.6	315	52.2	+22 29.6
13	57	00.1	42	01.3	34.6	106	43.3	58.0	284	52.0	41.6	330	54.4	29.6
14	72	02.6	57	00.9	35.8	121	44.3	57.7	299	54.2	41.5	345	56.6	29.6
15	87	05.0	72	00.6	36.9	136	45.2	57.4	314	56.4	41.4	0	58.7	29.6
16	102	07.5	87	00.3	38.1	151	46.2	57.2	329	58.7	41.4	16	00.9	29.7
17	117	10.0	101	59.9	+4 39.3	166	47.1	-19 56.9	345	00.9	+18 41.3	31	03.1	+22 29.7
18	132	12.4	116	59.6	+4 40.4	181	48.0	-19 56.6	0	03.1	+18 41.3	46	05.3	+22 29.7
19	147	14.9	131	59.2	41.6	196	49.0	56.3	15	05.4	41.2	61	07.4	29.7
20	162	17.4	146	58.9	42.7	211	49.9	56.0	30	07.6	41.1	76	09.6	29.7
21	177	19.8	161	58.5	43.9	226	50.9	55.7	45	09.9	41.1	91	11.8	29.7
22	192	22.3	176	58.2	45.0	241	51.8	55.4	60	12.1	41.0	106	14.0	29.7
23	207	24.7	191	57.9	46.2	256	52.8	55.1	75	14.3	40.9	121	16.1	29.8
24	222	27.2	206	57.5	+4 47.3	271	53.7	-19 54.8	90	16.6	+18 40.9	136	18.3	+22 29.8
Dif	—		-3 +12			+9 +3			+22 -1			+22 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 7			Edad: 3 ^d 5 SD: 14'9 PMG: 15 ^h 06 ^m	PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 R°: 53 ^m									
	hG ☉	Dec				Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	180	48.5	+16 04.3	141	11.0	+25 14.4	43	60 N	1 22	2 53	3 49	5 03	37	0 13 71
1	195	48.6	05.1	155	40.5 ¹⁰⁵	18.7	43	58	1 55	3 09	3 59	27	41	** ** *
2	210	48.6	05.8	170	09.9 ¹⁰⁴	22.9	42	56	2 18	23	4 08	5 47	42	** ** *
3	225	48.7	06.5	184	39.3 ¹⁰⁴	27.0	41	54	2 37	34	16	6 03	44	** ** *
4	240	48.8	07.2	199	08.6 ¹⁰³	30.9	39	52	2 52	44	24	17	45	** ** *
5	255	48.8	+16 07.9	213	37.8 ¹⁰²	+25 34.7	38	50	3 05	3 53	4 30	6 30	45	23 49 51
6	270	48.9	+16 08.7	228	07.1 ¹⁰³	+25 38.4	37	45	3 31	4 12	4 44	6 55	47	23 22 52
7	285	48.9	09.4	242	36.2 ¹⁰¹	42.0	36	40	3 50	26	4 56	7 15	49	23 01 52
8	300	49.0	10.1	257	05.3 ¹⁰¹	45.4	34	35	4 05	38	5 06	32	50	22 43 52
9	315	49.0	10.8	271	34.4 ¹⁰¹	48.8	34	30	18	4 49	14	7 47	50	28 52
10	330	49.1	11.5	286	03.4 ¹⁰⁰	52.0	32	20	38	5 06	29	8 12	51	22 02 53
11	345	49.1	+16 12.2	300	32.4 ¹⁰⁰	+25 55.0	30	10 N	4 54	5 20	5 42	8 34	51	21 40 52
12	0	49.2	+16 13.0	315	01.3 ⁹⁹	+25 58.0	30	0	5 07	5 32	5 53	8 54	52	21 19 53
13	15	49.2	13.7	329	30.2 ⁹⁹	+26 00.8	28	10 S	18	43	6 05	9 14	53	20 58 53
14	30	49.3	14.4	343	59.1 ⁹⁹	03.5	27	20	28	5 54	17	9 36	53	36 53
15	45	49.3	15.1	358	27.9 ⁹⁸	06.1	26	30	38	6 06	31	10 01	55	20 10 53
16	60	49.4	15.8	12	56.6 ⁹⁷	08.5	24	35	43	13	39	16	55	19 55 52
17	75	49.4	+16 16.5	27	25.3 ⁹⁷	+26 10.8	23	40	5 48	6 20	6 48	10 34	55	19 37 53
18	90	49.5	+16 17.2	41	54.0 ⁹⁷	+26 13.0	22	45	5 53	6 28	6 59	10 55	55	19 16 52
19	105	49.6	17.9	56	22.6 ⁹⁶	15.0	20	50	5 59	37	7 12	11 21	57	18 49 52
20	120	49.6	18.7	70	51.2 ⁹⁶	16.9	19	52	6 01	41	18	34	57	36 52
21	135	49.7	19.4	85	19.8 ⁹⁶	18.7	18	54	04	46	24	11 49	57	21 51
22	150	49.7	20.1	99	48.3 ⁹⁵	20.4	17	56	06	51	32	12 06	58	18 04 50
23	165	49.8	20.8	114	16.8 ⁹⁵	21.9	15	58	09	6 57	40	27	59	17 43 49
24	180	49.8	+16 21.5	128	45.2 ⁹⁴	+26 23.3	14	60 S	6 12	7 03	7 49	12 54	61	17 15 49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG 9 ^h 08 ^m 7		Mag: -3.8 PMG: 10 ^h 12 ^m		Mag: -0.1 PMG: 5 ^h 52 ^m		Mag: -2.1 PMG: 17 ^h 56 ^m		Mag: +0.1 PMG: 14 ^h 53 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	222	27.2	206	57.5	271	53.7	-19 54.8	90	16.6	+18 40.9	136 18.3	+22 29.8	
1	237	29.7	221	57.2	286	54.7	54.5	105	18.8	40.8	151 20.5	29.8	
2	252	32.1	236	56.8	301	55.6	54.2	120	21.0	40.8	166 22.7	29.8	
3	267	34.6	251	56.5	316	56.6	54.0	135	23.3	40.7	181 24.8	29.8	
4	282	37.1	266	56.1	331	57.5	53.7	150	25.5	40.6	196 27.0	29.8	
5	297	39.5	281	55.8	346	58.5	-19 53.4	165	27.7	+18 40.6	211 29.2	+22 29.8	
6	312	42.0	296	55.4	1	59.4	-19 53.1	180	30.0	+18 40.5	226 31.3	+22 29.9	
7	327	44.5	311	55.1	17	00.4	52.8	195	32.2	40.4	241 33.5	29.9	
8	342	46.9	326	54.8	32	01.3	52.5	210	34.4	40.4	256 35.7	29.9	
9	357	49.4	341	54.4	47	02.3	52.2	225	36.7	40.3	271 37.9	29.9	
10	12	51.9	356	54.1	62	03.2	51.9	240	38.9	40.2	286 40.0	29.9	
11	27	54.3	11	53.7	77	04.2	-19 51.6	255	41.1	+18 40.2	301 42.2	+22 29.9	
12	42	56.8	26	53.4	92	05.2	-19 51.3	270	43.4	+18 40.1	316 44.4	+22 29.9	
13	57	59.2	41	53.0	107	06.1	51.0	285	45.6	40.1	331 46.6	29.9	
14	73	01.7	56	52.7	122	07.1	50.7	300	47.8	40.0	346 48.7	30.0	
15	88	04.2	71	52.3	137	08.0	50.5	315	50.1	39.9	1 50.9	30.0	
16	103	06.6	86	52.0	152	09.0	50.2	330	52.3	39.9	16 53.1	30.0	
17	118	09.1	101	51.6	167	09.9	-19 49.9	345	54.5	+18 39.8	31 55.2	+22 30.0	
18	133	11.6	116	51.3	182	10.9	-19 49.6	0	56.8	+18 39.7	46 57.4	+22 30.0	
19	148	14.0	131	51.0	197	11.8	49.3	15	59.0	39.7	61 59.6	30.0	
20	163	16.5	146	50.6	212	12.8	49.0	31	01.2	39.6	77 01.8	30.0	
21	178	19.0	161	50.3	227	13.7	48.7	46	03.4	39.5	92 03.9	30.0	
22	193	21.4	176	49.9	242	14.7	48.4	61	05.7	39.5	107 06.1	30.1	
23	208	23.9	191	49.6	257	15.6	48.1	76	07.9	39.4	122 08.3	30.1	
24	223	26.3	206	49.2	272	16.6	-19 47.8	91	10.1	+18 39.3	137 10.4	+22 30.1	
Dif	—		-3	+12	+10	+3		+22		-1	+22		0

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9		Edad: 4 ^d 5 PHE { 4 ^h : 55°0 12 ^h : 55°2 20 ^h : 55°4 R°: 53 ^m											
	PMG: 11 ^h 56 ^m 6		SD: 15°0 PMG: 15 ^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	180	49.8	+16	21.5	128	45.2	+26	23.3	60 N	20 09	21 06	22 45	5 40 62	1 24 48
1	195	49.9		22.2	143	13.7		24.5	58	19 58	20 49	22 07	6 08 60	0 56 50
2	210	49.9		22.9	157	42.0		25.6	56	48	35	21 41	29 59	35 50
3	225	50.0		23.6	172	10.4		26.6	54	40	23	22	6 47 59	17 51
4	240	50.0		24.3	186	38.7		27.5	52	32	12	21 06	7 02 58	0 02 51
5	255	50.1	+16	25.0	201	07.0	+26	28.2	50	19 26	20 03	20 52	7 15 58	*** ** **
6	270	50.1	+16	25.7	215	35.3	+26	28.8	45	19 11	19 44	20 26	7 42 57	*** ** **
7	285	50.2		26.5	230	03.5		29.2	40	18 59	29	20 06	8 04 56	23 53 46
8	300	50.2		27.2	244	31.7		29.5	35	49	17	19 50	22 55	35 48
9	315	50.3		27.9	258	59.9		29.7	30	40	19 06	37	8 37 55	23 20 49
10	330	50.3		28.6	273	28.0		29.7	20	25	18 48	16	9 03 54	22 55 50
11	345	50.3	+16	29.3	287	56.2	+26	29.6	10 N	18 12	18 34	19 00	9 25 54	22 32 52
12	0	50.4	+16	30.0	302	24.3	+26	29.4	0	18 00	18 22	18 47	9 46 53	22 12 53
13	15	50.4		30.7	316	52.4		29.0	10 S	17 48	18 10	35	10 07 53	21 51 54
14	30	50.5		31.4	331	20.4		28.5	20	35	17 58	25	29 52	29 55
15	45	50.5		32.1	345	48.5		27.8	30	21	46	15	10 56 50	21 03 57
16	60	50.6		32.8	0	16.5		27.1	35	13	39	10	11 11 50	20 47 59
17	75	50.6	+16	33.5	14	44.5	+26	26.1	40	17 04	17 32	18 04	11 29 49	20 30 59
18	90	50.7	+16	34.2	29	12.5	+26	25.1	45	16 53	17 24	17 59	11 50 49	20 08 61
19	105	50.7		34.9	43	40.5		23.9	50	39	14	53	12 18 46	19 41 63
20	120	50.8		35.6	58	08.5		22.5	52	33	10	50	31 46	28 64
21	135	50.8		36.3	72	36.4		21.0	54	26	05	47	12 46 45	19 12 66
22	150	50.9		37.0	87	04.4		19.4	56	19	17 00	44	13 04 44	18 54 67
23	165	50.9		37.7	101	32.3		17.7	58	10	16 54	41	26 42	32 70
24	180	50.9	+16	38.4	116	00.3	+26	15.8	60 S	16 01	16 48	17 38	13 55 37	18 04 73
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 04 ^m 8		Mag: -3.8 PMG: 10 ^h 13 ^m		Mag: -0.1 PMG: 5 ^h 51 ^m		Mag: -2.1 PMG: 17 ^h 53 ^m		Mag: +0.1 PMG: 14 ^h 49 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	223	26.3	206	49.2	+5	15.0	272	16.6	-19	47.8	91	10.1	+18	39.3
1	238	28.8	221	48.9		16.1	287	17.6		47.5	106	12.4		39.3
2	253	31.3	236	48.5		17.3	302	18.5		47.2	121	14.6		39.2
3	268	33.7	251	48.2		18.4	317	19.5		46.9	136	16.8		39.2
4	283	36.2	266	47.8		19.6	332	20.4		46.6	151	19.1		39.1
5	298	38.7	281	47.5	+5	20.7	347	21.4	-19	46.3	166	21.3	+18	39.0
6	313	41.1	296	47.1	+5	21.9	2	22.3	-19	46.1	181	23.5	+18	39.0
7	328	43.6	311	46.8		23.0	17	23.3		45.8	196	25.7		38.9
8	343	46.1	326	46.4		24.2	32	24.3		45.5	211	28.0		38.8
9	358	48.5	341	46.1		25.3	47	25.2		45.2	226	30.2		38.8
10	13	51.0	356	45.7		26.5	62	26.2		44.9	241	32.4		38.7
11	28	53.5	11	45.4	+5	27.6	77	27.1	-19	44.6	256	34.6	+18	38.6
12	43	55.9	26	45.0	+5	28.8	92	28.1	-19	44.3	271	36.9	+18	38.6
13	58	58.4	41	44.7		29.9	107	29.1		44.0	286	39.1		38.5
14	74	00.8	56	44.3		31.1	122	30.0		43.7	301	41.3		38.4
15	89	03.3	71	44.0		32.2	137	31.0		43.4	316	43.5		38.4
16	104	05.8	86	43.6		33.4	152	31.9		43.1	331	45.8		38.3
17	119	08.2	101	43.3	+5	34.5	167	32.9	-19	42.8	346	48.0	+18	38.2
18	134	10.7	116	42.9	+5	35.7	182	33.9	-19	42.5	1	50.2	+18	38.2
19	149	13.2	131	42.6		36.8	197	34.8		42.2	16	52.4		38.1
20	164	15.6	146	42.2		38.0	212	35.8		41.9	31	54.7		38.0
21	179	18.1	161	41.9		39.1	227	36.7		41.6	46	56.9		38.0
22	194	20.6	176	41.5		40.3	242	37.7		41.3	61	59.1		37.9
23	209	23.0	191	41.2		41.4	257	38.7		41.0	77	01.3		37.8
24	224	25.5	206	40.8	+5	42.5	272	39.6	-19	40.7	92	03.6	+18	37.8
Dif	—		-3		+11		+10		+3		+22		-1	
													+22	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 6			Edad: 5 ^d 5 SD: 15 ^h 1 PMG: 16 ^h 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	50.9	+16	38.4	116	00.3	+26 15.8	60 N	1 08	2 47	3 43	6 42	82	2 12 29
1	195	51.0		39.1	130	28.2	89 13.7	58	1 46	3 04	3 54	7 08	77	1 46 33
2	210	51.0		39.8	144	56.1	89 11.5	56	2 11	18	4 04	28	74	25 37
3	225	51.1		40.5	159	24.0	89 09.2	54	31	30	13	7 46	71	1 08 39
4	240	51.1		41.2	173	51.9	89 06.8	52	2 47	40	20	8 00	70	0 53 41
5	255	51.2	+16	41.9	188	19.8	89 +26 04.2	50	3 01	3 49	4 27	8 13	68	0 40 42
6	270	51.2	+16	42.6	202	47.7	89 +26 01.4	45	3 27	4 09	4 42	8 39	65	0 14 44
7	285	51.3		43.3	217	15.6	89 +25 58.6	40	3 47	24	4 54	9 00	62	** ** **
8	300	51.3		43.9	231	43.5	89 55.5	35	4 03	36	5 04	17	61	** ** **
9	315	51.3		44.6	246	11.4	89 52.4	30	16	4 47	13	32	59	** ** **
10	330	51.4		45.3	260	39.3	89 49.1	20	37	5 05	28	9 57	57	23 45 47
11	345	51.4	+16	46.0	275	07.2	89 +25 45.7	10 N	4 53	5 19	5 41	10 19	55	23 24 50
12	0	51.5	+16	46.7	289	35.1	89 +25 42.1	0	5 06	5 32	5 53	10 39	53	23 05 52
13	15	51.5		47.4	304	03.0	89 38.4	10 S	18	43	6 05	11 00	51	22 45 55
14	30	51.6		48.1	318	30.9	89 34.5	20	29	5 55	18	21	49	24 58
15	45	51.6		48.8	332	58.8	89 30.6	30	39	6 07	32	11 46	47	22 00 61
16	60	51.6		49.5	347	26.7	89 26.4	35	44	14	41	12 01	45	21 46 62
17	75	51.7	+16	50.2	1	54.6	89 +25 22.2	40	5 49	6 22	6 50	12 18	43	21 29 65
18	90	51.7	+16	50.9	16	22.6	90 +25 17.8	45	5 55	6 30	7 01	12 39	40	21 09 68
19	105	51.8		51.6	30	50.5	89 13.2	50	6 01	40	15	13 04	37	20 44 72
20	120	51.8		52.2	45	18.5	90 08.5	52	04	44	21	17	35	32 73
21	135	51.8		52.9	59	46.5	90 +25 03.7	54	07	49	28	31	33	18 76
22	150	51.9		53.6	74	14.5	90 +24 58.8	56	10	6 55	36	13 48	30	20 01 80
23	165	51.9		54.3	88	42.5	90 53.7	58	13	7 00	44	14 08	26	19 42 83
24	180	52.0	+16	55.0	103	10.5	90 +24 48.5	60 S	6 16	7 07	7 54	14 32	21	19 17 90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 00 ^m 8		Mag: -3.8 PMG: 10 ^h 14 ^m		Mag: -0.1 PMG: 5 ^h 49 ^m		Mag: -2.1 PMG: 17 ^h 49 ^m		Mag: +0.1 PMG: 14 ^h 46 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	224	25.5	206	40.8	+5 42.5	272	39.6	-19 40.7	92	03.6	+18 37.8	138	02.5	+22 30.4
1	239	28.0	221	40.5	43.7	287	40.6	40.4	107	05.8	37.7	153	04.7	30.4
2	254	30.4	236	40.1	44.8	302	41.6	40.2	122	08.0	37.6	168	06.8	30.4
3	269	32.9	251	39.8	46.0	317	42.5	39.9	137	10.2	37.6	183	09.0	30.4
4	284	35.3	266	39.4	47.1	332	43.5	39.6	152	12.4	37.5	198	11.2	30.4
5	299	37.8	281	39.1	+5 48.3	347	44.5	-19 39.3	167	14.7	+18 37.4	213	13.3	+22 30.5
6	314	40.3	296	38.7	+5 49.4	2	45.4	-19 39.0	182	16.9	+18 37.4	228	15.5	+22 30.5
7	329	42.7	311	38.4	50.6	17	46.4	38.7	197	19.1	37.3	243	17.7	30.5
8	344	45.2	326	38.0	51.7	32	47.4	38.4	212	21.3	37.2	258	19.9	30.5
9	359	47.7	341	37.7	52.9	47	48.3	38.1	227	23.6	37.2	273	22.0	30.5
10	14	50.1	356	37.3	54.0	62	49.3	37.8	242	25.8	37.1	288	24.2	30.5
11	29	52.6	11	37.0	+5 55.1	77	50.3	-19 37.5	257	28.0	+18 37.0	303	26.4	+22 30.5
12	44	55.1	26	36.6	+5 56.3	92	51.2	-19 37.2	272	30.2	+18 37.0	318	28.5	+22 30.5
13	59	57.5	41	36.3	57.4	107	52.2	36.9	287	32.4	36.9	333	30.7	30.6
14	75	00.0	56	35.9	58.6	122	53.2	36.6	302	34.6	36.8	348	32.9	30.6
15	90	02.5	71	35.5	+5 59.7	137	54.1	36.3	317	36.9	36.8	3	35.0	30.6
16	105	04.9	86	35.2	+6 00.9	152	55.1	36.0	332	39.1	36.7	18	37.2	30.6
17	120	07.4	101	34.8	+6 02.0	167	56.1	-19 35.7	347	41.3	+18 36.6	33	39.4	+22 30.6
18	135	09.8	116	34.5	+6 03.2	182	57.0	-19 35.4	2	43.5	+18 36.6	48	41.5	+22 30.6
19	150	12.3	131	34.1	04.3	197	58.0	35.1	17	45.7	36.5	63	43.7	30.6
20	165	14.8	146	33.8	05.4	212	59.0	34.8	32	48.0	36.4	78	45.9	30.7
21	180	17.2	161	33.4	06.6	227	59.9	34.5	47	50.2	36.4	93	48.0	30.7
22	195	19.7	176	33.1	07.7	243	00.9	34.2	62	52.4	36.3	108	50.2	30.7
23	210	22.2	191	32.7	08.9	258	01.9	33.9	77	54.6	36.2	123	52.4	30.7
24	225	24.6	206	32.3	+6 10.0	273	02.8	-19 33.6	92	56.8	+18 36.2	138	54.5	+22 30.7
Dif	—		-4		+11	+10		+3	+22		-1	+22		0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 6 ^d 5 PHE { 4 ^h : 56 ^h /2 12 ^h : 56 ^h /5 20 ^h : 56 ^h /7 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	52.0	+16 55.0	103	10.5	+24 48.5	54	60 N	20 14	21 12	23 01	8 04 93	2 41 15		
1	195	52.0	55.7	117	38.5	90	54	58	20 02	20 54	22 16	25 87	19 21		
2	210	52.0	56.4	132	06.5	90	55	56	19 52	40	21 48	42 83	2 02 25		
3	225	52.1	57.0	146	34.6	91	56	54	44	27	27	8 57 80	1 47 28		
4	240	52.1	57.7	161	02.7	91	58	52	36	16	21 10	9 10 77	34 30		
5	255	52.1	+16 58.4	175	30.8	91	59	50	19 29	20 07	20 56	9 21 75	1 22 33		
6	270	52.2	+16 59.1	189	58.9	91	61	45	19 14	19 47	20 29	9 44 70	0 58 37		
7	285	52.2	+16 59.8	204	27.0	91	61	40	19 01	31	20 08	10 02 68	39 40		
8	300	52.3	+17 00.5	218	55.2	92	64	35	18 51	18	19 52	18 64	23 42		
9	315	52.3	01.1	233	23.4	92	64	30	42	19 07	38	31 63	0 09 44		
10	330	52.3	01.8	247	51.6	92	66	20	26	18 49	17	10 54 59	** ** *		
11	345	52.4	+17 02.5	262	19.8	92	67	10 N	18 12	18 35	19 00	11 14 55	** ** *		
12	0	52.4	+17 03.2	276	48.0	92	68	0	18 00	18 22	18 47	11 32 52	23 57 52		
13	15	52.4	03.9	291	16.3	93	70	10 S	17 48	18 10	35	11 51 49	40 55		
14	30	52.5	04.5	305	44.6	93	71	20	34	17 57	24	12 10 46	22 59		
15	45	52.5	05.2	320	12.9	93	73	30	20	45	13	33 42	23 01 63		
16	60	52.5	05.9	334	41.2	93	73	35	11	38	08	12 46 40	22 48 66		
17	75	52.6	+17 06.6	349	09.6	94	75	40	17 01	17 30	18 02	13 01 37	22 34 69		
18	90	52.6	+17 07.3	3	38.0	94	77	45	16 50	17 21	17 56	13 19 34	22 17 72		
19	105	52.7	07.9	18	06.4	94	77	50	36	11	50	41 29	21 56 77		
20	120	52.7	08.6	32	34.8	94	79	52	30	07	47	13 52 27	45 80		
21	135	52.7	09.3	47	03.3	95	80	54	23	17 02	44	14 04 24	34 82		
22	150	52.8	10.0	61	31.8	95	82	56	15	16 56	41	18 20	21 86		
23	165	52.8	10.6	76	00.3	95	82	58	16 06	50	38	34 16	21 05 90		
24	180	52.8	+17 11.3	90	28.9	96	84	60 S	15 56	16 43	17 34	14 53 11	20 47 96		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 56 ^m 9		Mag: -3.8 PMG: 10 ^h 14 ^m			Mag: -0.2 PMG: 5 ^h 47 ^m			Mag: -2.1 PMG: 17 ^h 46 ^m			Mag: +0.1 PMG: 14 ^h 42 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	225	24.6	206 32.3	+6 10.0	273 02.8	-19 33.6	92 56.8	+18 36.2	138 54.5	+22 30.7					
1	240	27.1	221 32.0	11.2	288 03.8	33.3	107 59.0	36.1	153 56.7	30.7					
2	255	29.6	236 31.6	12.3	303 04.8	33.0	123 01.3	36.0	168 58.9	30.7					
3	270	32.0	251 31.3	13.4	318 05.8	32.7	138 03.5	36.0	184 01.0	30.7					
4	285	34.5	266 30.9	14.6	333 06.7	32.4	153 05.7	35.9	199 03.2	30.8					
5	300	37.0	281 30.6	+6 15.7	348 07.7	-19 32.1	168 07.9	+18 35.8	214 05.4	+22 30.8					
6	315	39.4	296 30.2	+6 16.9	3 08.7	-19 31.8	183 10.1	+18 35.7	229 07.5	+22 30.8					
7	330	41.9	311 29.8	18.0	18 09.6	31.5	198 12.3	35.7	244 09.7	30.8					
8	345	44.3	326 29.5	19.1	33 10.6	31.2	213 14.5	35.6	259 11.8	30.8					
9	0	46.8	341 29.1	20.3	48 11.6	30.9	228 16.8	35.5	274 14.0	30.8					
10	15	49.3	356 28.8	21.4	63 12.6	30.6	243 19.0	35.5	289 16.2	30.8					
11	30	51.7	11 28.4	+6 22.6	78 13.5	-19 30.3	258 21.2	+18 35.4	304 18.3	+22 30.8					
12	45	54.2	26 28.1	+6 23.7	93 14.5	-19 30.0	273 23.4	+18 35.3	319 20.5	+22 30.9					
13	60	56.7	41 27.7	24.8	108 15.5	29.7	288 25.6	35.3	334 22.7	30.9					
14	75	59.1	56 27.3	26.0	123 16.5	29.4	303 27.8	35.2	349 24.8	30.9					
15	91	01.6	71 27.0	27.1	138 17.4	29.1	318 30.0	35.1	4 27.0	30.9					
16	106	04.1	86 26.6	28.3	153 18.4	28.8	333 32.3	35.1	19 29.2	30.9					
17	121	06.5	101 26.3	+6 29.4	168 19.4	-19 28.5	348 34.5	+18 35.0	34 31.3	+22 30.9					
18	136	09.0	116 25.9	+6 30.5	183 20.4	-19 28.2	3 36.7	+18 34.9	49 33.5	+22 30.9					
19	151	11.4	131 25.5	31.7	198 21.3	27.9	18 38.9	34.9	64 35.7	30.9					
20	166	13.9	146 25.2	32.8	213 22.3	27.6	33 41.1	34.8	79 37.8	31.0					
21	181	16.4	161 24.8	33.9	228 23.3	27.3	48 43.3	34.7	94 40.0	31.0					
22	196	18.8	176 24.5	35.1	243 24.3	27.0	63 45.5	34.6	109 42.2	31.0					
23	211	21.3	191 24.1	36.2	258 25.2	26.7	78 47.7	34.6	124 44.3	31.0					
24	226	23.8	206 23.7	+6 37.4	273 26.2	-19 26.4	93 49.9	+18 34.5	139 46.5	+22 31.0					
Dif	—		-4	+11	+10	+3	+22	-1	+22	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: 7 ^d 5 PHE { SD: 15 ^h 5 PMG: 18 ^h 37 ^m R ^o : 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	52.8	+17	11.3	90	28.9	+22	02.9	60 N	0 51	2 40	3 38	9 37	97	2 56	9		
1	195	52.9		12.0	104	57.5	+21	54.3	58	1 36	2 58	3 50	9 52	92	40	14		
2	210	52.9		12.7	119	26.1		45.7	56	2 04	3 13	4 00	10 05	88	27	17		
3	225	52.9		13.3	133	54.7		36.9	54	25	25	09	17	84	15	21		
4	240	53.0		14.0	148	23.4		28.0	52	42	36	17	27	81	2 04	24		
5	255	53.0	+17	14.7	162	52.1	+21	19.0	50	2 56	3 46	4 24	10 36	79	1 55	26		
6	270	53.0	+17	15.3	177	20.8	+21	09.8	45	3 24	4 06	4 39	10 54	74	1 35	31		
7	285	53.0		16.0	191	49.6	+21	00.6	40	3 45	21	4 51	11 10	69	19	34		
8	300	53.1		16.7	206	18.3	+20	51.2	35	4 01	34	5 02	22	67	1 05	37		
9	315	53.1		17.4	220	47.2		41.7	30	14	4 45	11	34	63	0 53	40		
10	330	53.1		18.0	235	16.0		32.0	20	36	5 03	27	11 53	58	32	45		
11	345	53.2	+17	18.7	249	44.9	+20	22.3	10 N	4 52	5 18	5 40	12 09	55	0 14	48		
12	0	53.2	+17	19.4	264	13.8	+20	12.4	0	5 06	5 31	5 53	12 24	51	**	**	**	
13	15	53.2		20.0	278	42.7	+20	02.4	10 S	18	44	6 05	40	47	**	**	**	
14	30	53.3		20.7	293	11.7	+19	52.3	20	29	5 56	19	12 56	43	**	**	**	
15	45	53.3		21.4	307	40.7		42.1	30	40	6 09	34	13 15	38	**	**	**	
16	60	53.3		22.0	322	09.7		31.7	35	45	16	42	26	35	23	54	67	
17	75	53.4	+17	22.7	336	38.8	+19	21.3	40	5 51	6 24	6 52	13 38	32	23	43	70	
18	90	53.4	+17	23.4	351	07.9	+19	10.7	45	5 57	6 32	7 04	13 53	28	23	29	75	
19	105	53.4		24.0	5	37.0	+19	00.0	50	6 04	43	18	14 10	24	13	80		
20	120	53.4		24.7	20	06.1	+18	49.2	52	07	47	24	19	21	23	05	83	
21	135	53.5		25.4	34	35.3		38.3	54	10	52	31	28	18	22	56	86	
22	150	53.5		26.0	49	04.5		27.3	56	13	6 58	39	38	15	47	89		
23	165	53.5		26.7	63	33.8		16.2	58	16	7 04	48	14 50	12	35	93		
24	180	53.5	+17	27.3	78	03.0	+18	05.0	60 S	6 20	7 11	7 59	15 04	7	22	23	97	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 53 ^m 0		Mag: -3.8 PMG: 10 ^h 15 ^m				Mag: -0.2 PMG: 5 ^h 46 ^m				Mag: -2.1 PMG: 17 ^h 42 ^m				Mag: +0.1 PMG: 14 ^h 39 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	226	23.8	206	23.7	+6	37.4	273	26.2	-19	26.4	93	49.9	+18	34.5	139	46.5	+22	31.0
1	241	26.2	221	23.4		38.5	288	27.2		26.1	108	52.2		34.4	154	48.6		31.0
2	256	28.7	236	23.0		39.6	303	28.2		25.8	123	54.4		34.4	169	50.8		31.0
3	271	31.2	251	22.7		40.8	318	29.2		25.5	138	56.6		34.3	184	53.0		31.0
4	286	33.6	266	22.3		41.9	333	30.1		25.2	153	58.8		34.2	199	55.1		31.0
5	301	36.1	281	21.9	+6	43.0	348	31.1	-19	24.9	169	01.0	+18	34.2	214	57.3	+22	31.1
6	316	38.6	296	21.6	+6	44.2	3	32.1	-19	24.6	184	03.2	+18	34.1	229	59.5	+22	31.1
7	331	41.0	311	21.2		45.3	18	33.1		24.3	199	05.4		34.0	245	01.6		31.1
8	346	43.5	326	20.9		46.4	33	34.1		24.0	214	07.6		33.9	260	03.8		31.1
9	1	45.9	341	20.5		47.6	48	35.0		23.7	229	09.8		33.9	275	06.0		31.1
10	16	48.4	356	20.1		48.7	63	36.0		23.4	244	12.0		33.8	290	08.1		31.1
11	31	50.9	11	19.8	+6	49.9	78	37.0	-19	23.1	259	14.2	+18	33.7	305	10.3	+22	31.1
12	46	53.3	26	19.4	+6	51.0	93	38.0	-19	22.8	274	16.4	+18	33.7	320	12.4	+22	31.1
13	61	55.8	41	19.0		52.1	108	39.0		22.5	289	18.7		33.6	335	14.6		31.2
14	76	58.3	56	18.7		53.3	123	39.9		22.2	304	20.9		33.5	350	16.8		31.2
15	92	00.7	71	18.3		54.4	138	40.9		21.9	319	23.1		33.4	5	18.9		31.2
16	107	03.2	86	17.9		55.5	153	41.9		21.6	334	25.3		33.4	20	21.1		31.2
17	122	05.7	101	17.6	+6	56.7	168	42.9	-19	21.3	349	27.5	+18	33.3	35	23.3	+22	31.2
18	137	08.1	116	17.2	+6	57.8	183	43.9	-19	21.0	4	29.7	+18	33.2	50	25.4	+22	31.2
19	152	10.6	131	16.9	+6	58.9	198	44.9		20.7	19	31.9		33.2	65	27.6		31.2
20	167	13.1	146	16.5	+7	00.1	213	45.8		20.4	34	34.1		33.1	80	29.7		31.2
21	182	15.5	161	16.1		01.2	228	46.8		20.1	49	36.3		33.0	95	31.9		31.3
22	197	18.0	176	15.8		02.3	243	47.8		19.8	64	38.5		32.9	110	34.1		31.3
23	212	20.4	191	15.4		03.5	258	48.8		19.5	79	40.7		32.9	125	36.2		31.3
24	227	22.9	206	15.0	+7	04.6	273	49.8	-19	19.2	94	42.9	+18	32.8	140	38.4	+22	31.3
Dif	—		-4		+11		+10		+3		+22		-1		+22		0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 8 ^d 5 PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/5 R°: 50 ^m SD: 15/7 PMG: 19 ^h 27 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	53.5	+17	27.3	78	03.0	+18	05.0	60 N	20	19	21	18	23	23	11	14	
1	195	53.6		28.0	92	32.3 ¹⁰³	+17	53.6 ¹¹⁴	58	20	07	21	00	22	26	24	94	
2	210	53.6		28.7	107	01.6 ¹⁰³		42.1 ¹¹⁵	56	19	56	20	44	21	55	33	90	
3	225	53.6		29.3	121	31.0 ¹⁰⁴		30.6 ¹¹⁵	54		47	31	33	41	87	36	18	
4	240	53.7		30.0	136	00.4 ¹⁰⁴		18.9 ¹¹⁷	52		39	20	15	48	84	28	19	
5	255	53.7	+17	30.6	150	29.8 ¹⁰⁴	+17	07.1 ¹¹⁸	50	19	32	20	10	21	00	11	55	
6	270	53.7	+17	31.3	164	59.2 ¹⁰⁴	+16	55.3 ¹¹⁸	45	19	16	19	50	20	32	12	08	
7	285	53.7		32.0	179	28.7 ¹⁰⁵		43.3 ¹²⁰	40	19	03	33	20	10	19	72	1	
8	300	53.8		32.6	193	58.1 ¹⁰⁴		31.2 ¹²¹	35	18	52	20	19	54	29	68	42	
9	315	53.8		33.3	208	27.7 ¹⁰⁶		19.0 ¹²²	30		43	19	09	40	37	65	33	
10	330	53.8		33.9	222	57.2 ¹⁰⁵	+16	06.7 ¹²³	20		27	18	50	18	12	51	59	
11	345	53.8	+17	34.6	237	26.8 ¹⁰⁶	+15	54.3 ¹²⁴	10 N	18	13	18	35	19	01	13	04	
12	0	53.9	+17	35.2	251	56.3 ¹⁰⁵	+15	41.8 ¹²⁵	0	18	00	18	22	18	47	13	15	
13	15	53.9		35.9	266	26.0 ¹⁰⁷		29.2 ¹²⁶	10 S	17	47	18	09	34	27	45	35	
14	30	53.9		36.6	280	55.6 ¹⁰⁶		16.5 ¹²⁷	20		34	17	57	23	39	41	21	
15	45	53.9		37.2	295	25.3 ¹⁰⁷	+15	03.8 ¹²⁷	30		18	43	12	13	53	36	0	
16	60	54.0		37.9	309	54.9 ¹⁰⁶	+14	50.9 ¹²⁹	35	17	09	36	06	14	01	33	**	
17	75	54.0	+17	38.5	324	24.6 ¹⁰⁷	+14	37.9 ¹³⁰	40	16	59	17	28	18	00	14	10	
18	90	54.0	+17	39.2	338	54.4 ¹⁰⁸	+14	24.8 ¹³¹	45	16	47	17	19	17	54	14	21	
19	105	54.0		39.8	353	24.1 ¹⁰⁷	+14	11.7 ¹³¹	50		33	08	47	34	19	**		
20	120	54.1		40.5	7	53.9 ¹⁰⁸	+13	58.4 ¹³³	52		27	17	03	44	40	17	**	
21	135	54.1		41.1	22	23.7 ¹⁰⁸		45.1 ¹³³	54		19	16	58	41	46	15	**	
22	150	54.1		41.8	36	53.5 ¹⁰⁸		31.7 ¹³⁴	56		11	52	38	14	53	12	**	
23	165	54.1		42.4	51	23.3 ¹⁰⁸		18.1 ¹³⁶	58	16	02	46	34	15	02	8	**	
24	180	54.1	+17	43.1	65	53.1 ¹⁰⁸	+13	04.5 ¹³⁶	60 S	15	51	16	39	17	30	15	11	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 49 ^m 0		Mag: -3.8 PMG: 10 ^h 15 ^m				Mag: -0.2 PMG: 5 ^h 44 ^m				Mag: -2.1 PMG: 17 ^h 39 ^m				Mag: +0.1 PMG: 14 ^h 35 ^m			
	hG ♈		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	227	22.9	206	15.0	+7	04.6	273	49.8	-19	19.2	94	42.9	+18	32.8	140	38.4	+22	31.3
1	242	25.4	221	14.7		05.7	288	50.8		18.9	109	45.1		32.7	155	40.5		31.3
2	257	27.8	236	14.3		06.8	303	51.7		18.6	124	47.3		32.7	170	42.7		31.3
3	272	30.3	251	13.9		08.0	318	52.7		18.3	139	49.5		32.6	185	44.9		31.3
4	287	32.8	266	13.6		09.1	333	53.7		18.0	154	51.7		32.5	200	47.0		31.3
5	302	35.2	281	13.2	+7	10.2	348	54.7	-19	17.7	169	53.9	+18	32.4	215	49.2	+22	31.4
6	317	37.7	296	12.8	+7	11.4	3	55.7	-19	17.4	184	56.1	+18	32.4	230	51.4	+22	31.4
7	332	40.2	311	12.5		12.5	18	56.7		17.1	199	58.3		32.3	245	53.5		31.4
8	347	42.6	326	12.1		13.6	33	57.7		16.8	215	00.5		32.2	260	55.7		31.4
9	2	45.1	341	11.7		14.8	48	58.7		16.5	230	02.7		32.2	275	57.8		31.4
10	17	47.5	356	11.4		15.9	63	59.6		16.2	245	04.9		32.1	291	00.0		31.4
11	32	50.0	11	11.0	+7	17.0	79	00.6	-19	15.9	260	07.1	+18	32.0	306	02.2	+22	31.4
12	47	52.5	26	10.6	+7	18.1	94	01.6	-19	15.6	275	09.3	+18	31.9	321	04.3	+22	31.4
13	62	54.9	41	10.2		19.3	109	02.6		15.3	290	11.5		31.9	336	06.5		31.5
14	77	57.4	56	09.9		20.4	124	03.6		15.0	305	13.7		31.8	351	08.6		31.5
15	92	59.9	71	09.5		21.5	139	04.6		14.7	320	15.9		31.7	6	10.8		31.5
16	108	02.3	86	09.1		22.7	154	05.6		14.4	335	18.1		31.6	21	13.0		31.5
17	123	04.8	101	08.8	+7	23.8	169	06.6	-19	14.1	350	20.3	+18	31.6	36	15.1	+22	31.5
18	138	07.3	116	08.4	+7	24.9	184	07.6	-19	13.8	5	22.5	+18	31.5	51	17.3	+22	31.5
19	153	09.7	131	08.0		26.0	199	08.6		13.5	20	24.7		31.4	66	19.4		31.5
20	168	12.2	146	07.7		27.2	214	09.5		13.2	35	26.9		31.4	81	21.6		31.5
21	183	14.7	161	07.3		28.3	229	10.5		12.9	50	29.1		31.3	96	23.8		31.5
22	198	17.1	176	06.9		29.4	244	11.5		12.6	65	31.3		31.2	111	25.9		31.6
23	213	19.6	191	06.5		30.5	259	12.5		12.3	80	33.5		31.1	126	28.1		31.6
24	228	22.0	206	06.2	+7	31.7	274	13.5	-19	12.0	95	35.7	+18	31.1	141	30.2	+22	31.6
Dif	—		-4 +11				+10 +3				+22 -1				+22 0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 9 ^d 5 PHE SD: 16 ^h 0 PMG: 20 ^h 17 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	54.1	+17	43.1	65	53.1	+13 04.5	60 N	0 29	2 34	3 33	12 52	99	3 11 4
1	195	54.2		43.7	80	23.0 ¹⁰⁹	+12 50.8 ¹³⁷	58	1 27	2 52	45	12 58	95	3 04 7
2	210	54.2		44.4	94	52.9 ¹⁰⁹	37.1 ¹³⁷	56	1 57	3 08	3 56	13 03	92	2 57 11
3	225	54.2		45.0	109	22.7 ¹⁰⁸	23.2 ¹³⁹	54	2 19	21	4 05	08 88		52 13
4	240	54.2		45.7	123	52.6 ¹⁰⁹	+12 09.3 ¹³⁹	52	37	32	13	12 85		47 16
5	255	54.2	+17	46.3	138	22.6 ¹¹⁰	+11 55.2 ¹⁴¹	50	2 52	3 42	4 21	13 16	83	2 42 19
6	270	54.3	+17	47.0	152	52.5 ¹⁰⁹	+11 41.1 ¹⁴¹	45	3 21	4 03	4 36	13 24	77	2 32 24
7	285	54.3		47.6	167	22.4 ¹⁰⁹	26.9 ¹⁴²	40	42	19	4 49	31 72		23 28
8	300	54.3		48.3	181	52.4 ¹¹⁰	+11 12.7 ¹⁴²	35	3 59	32	5 00	37 68		16 32
9	315	54.3		48.9	196	22.4 ¹¹⁰	+10 58.3 ¹⁴⁴	30	4 13	4 44	10	42 65		2 10 34
10	330	54.3		49.5	210	52.3 ¹⁰⁹	43.9 ¹⁴⁴	20	35	5 02	26	50 60		1 58 41
11	345	54.4	+17	50.2	225	22.3 ¹¹⁰	+10 29.4 ¹⁴⁵	10 N	4 52	5 18	5 40	13 58	55	1 49 45
12	0	54.4	+17	50.8	239	52.3 ¹¹⁰	+10 14.9 ¹⁴⁵	0	5 06	5 31	5 53	14 05	50	1 39 50
13	15	54.4		51.5	254	22.3 ¹¹⁰	+10 00.2 ¹⁴⁷	10 S	18	44	6 06	12 45		30 54
14	30	54.4		52.1	268	52.3 ¹¹⁰	+9 45.5 ¹⁴⁷	20	30	5 56	19	20 40		20 59
15	45	54.4		52.8	283	22.3 ¹¹⁰	30.7 ¹⁴⁸	30	41	6 10	35	29 34		08 65
16	60	54.5		53.4	297	52.3 ¹¹⁰	15.9 ¹⁴⁸	35	47	17	44	34 31		1 01 68
17	75	54.5	+17	54.0	312	22.4 ¹¹¹	+9 00.9 ¹⁵⁰	40	5 53	6 25	6 54	14 39	28	0 53 72
18	90	54.5	+17	54.7	326	52.4 ¹¹⁰	+8 46.0 ¹⁴⁹	45	5 59	6 35	7 06	14 46	23	0 44 77
19	105	54.5		55.3	341	22.4 ¹¹⁰	30.9 ¹⁵¹	50	6 06	45	20	53 18		33 82
20	120	54.5		56.0	355	52.4 ¹¹⁰	15.8 ¹⁵¹	52	09	50	27	14 57	16	28 84
21	135	54.5		56.6	10	22.5 ¹¹¹	+8 00.6 ¹⁵²	54	12	6 55	35	15 01	13	22 87
22	150	54.6		57.2	24	52.5 ¹¹⁰	+7 45.4 ¹⁵²	56	16	7 01	43	05 10		16 90
23	165	54.6		57.9	39	22.5 ¹¹⁰	30.1 ¹⁵³	58	20	08	7 52	10 7		08 95
24	180	54.6	+17	58.5	53	52.5 ¹¹⁰	+7 14.7 ¹⁵⁴	60 S	6 24	7 15	8 03	15 15	4	0 00 99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 45 ^m 1		Mag: -3.8 PMG: 10 ^h 16 ^m		Mag: -0.2 PMG: 5 ^h 43 ^m		Mag: -2.1 PMG: 17 ^h 35 ^m		Mag: +0.1 PMG: 14 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	228	22.0	206	06.2	274	13.5	95	35.7	141	30.2
1	243	24.5	221	05.8	289	14.5	+18 31.1		+22 31.6	
2	258	27.0	236	05.4	304	15.5	31.0		31.6	
3	273	29.4	251	05.1	319	16.5	30.9		31.6	
4	288	31.9	266	04.7	334	17.5	30.8		31.6	
5	303	34.4	281	04.3	349	18.5	30.7		31.6	
6	318	36.8	296	03.9	4	19.5	+18 30.6		31.7	
7	333	39.3	311	03.6	19	20.5	30.5		31.7	
8	348	41.8	326	03.2	34	21.5	30.5		31.7	
9	3	44.2	341	02.8	49	22.5	30.4		31.7	
10	18	46.7	356	02.4	64	23.5	30.3		31.7	
11	33	49.2	11	02.1	79	24.4	+18 30.2		31.7	
12	48	51.6	26	01.7	94	25.4	+18 30.2		31.7	
13	63	54.1	41	01.3	109	26.4	30.1		31.7	
14	78	56.5	56	00.9	124	27.4	30.0		31.7	
15	93	59.0	71	00.6	139	28.4	30.0		31.8	
16	109	01.5	86	00.2	154	29.4	29.9		31.8	
17	124	03.9	100	59.8	169	30.4	+18 29.8		31.8	
18	139	06.4	115	59.4	184	31.4	+18 29.7		31.8	
19	154	08.9	130	59.1	199	32.4	29.7		31.8	
20	169	11.3	145	58.7	214	33.4	29.6		31.8	
21	184	13.8	160	58.3	229	34.4	29.5		31.8	
22	199	16.3	175	57.9	244	35.4	29.4		31.8	
23	214	18.7	190	57.6	259	36.4	29.4		31.9	
24	229	21.2	205	57.2	274	37.4	+18 29.3		31.9	
Dif	—		-4	+11	+10	+3	+22	-1	+22	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: 10 ^d 5 PHE { SD: 16'2 PMG: 21 ^h 07 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	54.6	+17	58.5	53	52.5	+7 14.7	60 N	20 24	21 25	** **	14 31	101	3 15	3
1	195	54.6		59.2	68	22.5 ¹¹⁰	+6 59.3 ¹⁵⁴	58	11	21 05	22 36	33	97	11	7
2	210	54.6	+17	59.8	82	52.6 ¹¹¹	43.8 ¹⁵⁵	56	20 00	20 49	22 02	35	93	08	10
3	225	54.6	+18	00.4	97	22.6 ¹¹⁰	28.3 ¹⁵⁵	54	19 51	35	21 39	36	90	05	13
4	240	54.7		01.1	111	52.6 ¹¹⁰	+6 12.7 ¹⁵⁶	52	42	24	20	37	88	03	15
5	255	54.7	+18	01.7	126	22.6 ¹¹⁰	+5 57.0 ¹⁵⁷	50	19 34	20 13	21 05	14 39	85	3 01	17
6	270	54.7	+18	02.3	140	52.5 ¹⁰⁹	+5 41.4 ¹⁵⁶	45	19 18	19 52	20 35	14 41	80	2 56	22
7	285	54.7		03.0	155	22.5 ¹¹⁰	25.6 ¹⁵⁸	40	19 05	35	20 13	43	75	51	27
8	300	54.7		03.6	169	52.5 ¹¹⁰	+5 09.8 ¹⁵⁸	35	18 54	22	19 56	45	71	48	31
9	315	54.7		04.2	184	22.4 ¹⁰⁹	+4 54.0 ¹⁵⁸	30	44	19 10	41	47	67	44	35
10	330	54.7		04.9	198	52.3 ¹⁰⁹	38.1 ¹⁵⁹	20	28	18 51	19	50	61	39	40
11	345	54.8	+18	05.5	213	22.3 ¹¹⁰	+4 22.2 ¹⁵⁹	10 N	18 13	18 35	19 01	14 53	55	2 34	45
12	0	54.8	+18	06.1	227	52.2 ¹⁰⁹	+4 06.2 ¹⁶⁰	0	18 00	18 22	18 47	14 55	51	2 29	50
13	15	54.8		06.8	242	22.0 ¹⁰⁸	+3 50.2 ¹⁶⁰	10 S	17 47	18 09	34	14 57	46	24	55
14	30	54.8		07.4	256	51.9 ¹⁰⁹	34.2 ¹⁶⁰	20	33	17 56	22	15 00	40	19	60
15	45	54.8		08.0	271	21.8 ¹⁰⁹	18.1 ¹⁶¹	30	17	42	11	03	35	13	66
16	60	54.8		08.6	285	51.6 ¹⁰⁸	+3 02.0 ¹⁶¹	35	17 08	34	18 05	05	31	09	70
17	75	54.8	+18	09.3	300	21.4 ¹⁰⁸	+2 45.8 ¹⁶²	40	16 57	17 26	17 59	15 07	27	2 05	74
18	90	54.8	+18	09.9	314	51.2 ¹⁰⁸	+2 29.6 ¹⁶²	45	16 45	17 17	17 52	15 09	23	2 01	78
19	105	54.9		10.5	329	20.9 ¹⁰⁷	+2 13.4 ¹⁶²	50	30	06	45	11	18	1 55	84
20	120	54.9		11.2	343	50.7 ¹⁰⁸	+1 57.2 ¹⁶²	52	23	17 01	42	13	15	52	87
21	135	54.9		11.8	358	20.4 ¹⁰⁷	40.9 ¹⁶³	54	16	16 55	38	14	13	49	90
22	150	54.9		12.4	12	50.1 ¹⁰⁷	24.6 ¹⁶³	56	16 07	49	35	15	10	46	92
23	165	54.9		13.0	27	19.7 ¹⁰⁶	+1 08.2 ¹⁶⁴	58	15 58	42	31	17	7	43	95
24	180	54.9	+18	13.7	41	49.3 ¹⁰⁶	+0 51.9 ¹⁶³	60 S	15 46	16 35	17 26	15 19	3	1 39	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 8 ^h 41 ^m 2		Mag: -3.8 PMG: 10 ^h 16 ^m		Mag: -0.2 PMG: 5 ^h 41 ^m		Mag: -2.1 PMG: 17 ^h 32 ^m		Mag: +0.1 PMG: 14 ^h 28 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	229	21.2	205	57.2	274	37.4	-19	04.6	96	28.4	+18	29.3	142	22.0	+22	31.9
1	244	23.6	220	56.8	289	38.4		04.3	111	30.6		29.2	157	24.2		31.9
2	259	26.1	235	56.4	304	39.4		04.0	126	32.8		29.1	172	26.4		31.9
3	274	28.6	250	56.0	319	40.4		03.7	141	35.0		29.1	187	28.5		31.9
4	289	31.0	265	55.7	334	41.4		03.4	156	37.2		29.0	202	30.7		31.9
5	304	33.5	280	55.3	349	42.4	-19	03.1	171	39.4	+18	28.9	217	32.8	+22	31.9
6	319	36.0	295	54.9	4	43.4	-19	02.8	186	41.6	+18	28.8	232	35.0	+22	31.9
7	334	38.4	310	54.5	19	44.4		02.5	201	43.8		28.8	247	37.1		31.9
8	349	40.9	325	54.2	34	45.4		02.2	216	46.0		28.7	262	39.3		32.0
9	4	43.4	340	53.8	49	46.4		01.9	231	48.1		28.6	277	41.5		32.0
10	19	45.8	355	53.4	64	47.4		01.6	246	50.3		28.5	292	43.6		32.0
11	34	48.3	10	53.0	79	48.4	-19	01.3	261	52.5	+18	28.4	307	45.8	+22	32.0
12	49	50.8	25	52.6	94	49.4	-19	01.0	276	54.7	+18	28.4	322	47.9	+22	32.0
13	64	53.2	40	52.2	109	50.4		00.7	291	56.9		28.3	337	50.1		32.0
14	79	55.7	55	51.9	124	51.5		00.4	306	59.1		28.2	352	52.2		32.0
15	94	58.1	70	51.5	139	52.5	-19	00.1	322	01.3		28.1	7	54.4		32.0
16	110	00.6	85	51.1	154	53.5	-18	59.8	337	03.5		28.1	22	56.5		32.0
17	125	03.1	100	50.7	169	54.5	-18	59.4	352	05.7	+18	28.0	37	58.7	+22	32.1
18	140	05.5	115	50.3	184	55.5	-18	59.1	7	07.8	+18	27.9	53	00.9	+22	32.1
19	155	08.0	130	50.0	199	56.5		58.8	22	10.0		27.8	68	03.0		32.1
20	170	10.5	145	49.6	214	57.5		58.5	37	12.2		27.8	83	05.2		32.1
21	185	12.9	160	49.2	229	58.5		58.2	52	14.4		27.7	98	07.3		32.1
22	200	15.4	175	48.8	244	59.5		57.9	67	16.6		27.6	113	09.5		32.1
23	215	17.9	190	48.4	260	00.5		57.6	82	18.8		27.5	128	11.6		32.1
24	230	20.3	205	48.0	275	01.5	-18	57.3	97	21.0	+18	27.5	143	13.8	+22	32.1
Dif	—		-4	+11	+10	+3		+22	-1			+22				

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: 11 ^d 5 PHE { SD: 16'4 PMG: 21 ^h 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	54.9	+18	13.7	41	49.3	+0	51.9	60 N	**	**	2	27	3	28	16	12	105	3	18	3
1	195	54.9		14.3	56	18.9 ¹⁰⁶		35.5 ¹⁶⁴	58	1	16	2	47	41	10	101		18	7		
2	210	54.9		14.9	70	48.5 ¹⁰⁶		19.1 ¹⁶⁴	56	1	50	3	03	3	52	08	97		18	10	
3	225	54.9		15.5	85	18.0 ¹⁰⁵	+0	02.7 ¹⁶⁴	54	2	13	17	4	01	06	94		18	13		
4	240	54.9		16.1	99	47.5 ¹⁰⁵	-0	13.7 ¹⁶⁴	52		32		29	10	05	90		18	16		
5	255	55.0	+18	16.8	114	17.0 ¹⁰⁵	-0	30.2 ¹⁶⁵	50	2	48	3	39	4	18	16	04	87	3	18	18
6	270	55.0	+18	17.4	128	46.4 ¹⁰⁴	-0	46.7 ¹⁶⁵	45	3	17	4	00	4	34	16	01	81	3	18	24
7	285	55.0		18.0	143	15.8 ¹⁰⁴	-1	03.1 ¹⁶⁴	40		39		17	47	15	58	77		18	28	
8	300	55.0		18.6	157	45.2 ¹⁰⁴		19.6 ¹⁶⁵	35	3	57	31		4	58	56	73		19	31	
9	315	55.0		19.2	172	14.5 ¹⁰³		36.1 ¹⁶⁵	30	4	11	4	42	5	08	54	69		19	35	
10	330	55.0		19.9	186	43.7 ¹⁰²	-1	52.6 ¹⁶⁵	20		34	5	01	25	51	63		19	41		
11	345	55.0	+18	20.5	201	13.0 ¹⁰³	-2	09.1 ¹⁶⁵	10 N	4	51	5	17	5	39	15	48	58	3	19	46
12	0	55.0	+18	21.1	215	42.1 ¹⁰¹	-2	25.6 ¹⁶⁵	0	5	06	5	31	5	53	15	46	52	3	19	51
13	15	55.0		21.7	230	11.3 ¹⁰²		42.2 ¹⁶⁶	10 S		19		44	6	06	43	48		19	56	
14	30	55.0		22.3	244	40.4 ¹⁰¹	-2	58.7 ¹⁶⁵	20		30	5	57	20	40	43		19	62		
15	45	55.0		23.0	259	09.4 ¹⁰⁰	-3	15.2 ¹⁶⁵	30		42	6	11	36	38	36		19	68		
16	60	55.0		23.6	273	38.4 ¹⁰⁰		31.7 ¹⁶⁵	35		48		19	45	36	33		19	71		
17	75	55.0	+18	24.2	288	07.4 ¹⁰⁰	-3	48.2 ¹⁶⁵	40	5	54	6	27	6	56	15	34	29	3	19	75
18	90	55.1	+18	24.8	302	36.3 ⁹⁹	-4	04.7 ¹⁶⁵	45	6	01	6	37	7	08	15	32	24	3	19	80
19	105	55.1		25.4	317	05.1 ⁹⁸		21.2 ¹⁶⁵	50		09		48	23	29	19		19	86		
20	120	55.1		26.0	331	33.9 ⁹⁸		37.7 ¹⁶⁵	52		12		53	30	28	17		19	88		
21	135	55.1		26.6	346	02.6 ⁹⁷	-4	54.1 ¹⁶⁴	54		15	6	58	38	27	14		19	91		
22	150	55.1		27.3	0	31.3 ⁹⁷	-5	10.6 ¹⁶⁵	56		19	7	05	47	25	11		18	95		
23	165	55.1		27.9	15	00.0 ⁹⁷		27.0 ¹⁶⁴	58		23		11	7	57	24	8		18	99	
24	180	55.1	+18	28.5	29	28.5 ⁹⁵	-5	43.4 ¹⁶⁴	60 S	6	27	7	19	8	08	15	22	4	3	18	103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 37 ^m 2		Mag: -3.8 PMG: 10 ^h 17 ^m		Mag: -0.3 PMG: 5 ^h 40 ^m		Mag: -2.1 PMG: 17 ^h 28 ^m		Mag: +0.1 PMG: 14 ^h 25 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	230	20.3	205	48.0	+8	25.4	275	01.5	-18	57.3
1	245	22.8	220	47.7		26.5	290	02.5		57.0
2	260	25.2	235	47.3		27.6	305	03.5		56.7
3	275	27.7	250	46.9		28.7	320	04.5		56.4
4	290	30.2	265	46.5		29.8	335	05.5		56.1
5	305	32.6	280	46.1	+8	31.0	350	06.6	-18	55.8
6	320	35.1	295	45.7	+8	32.1	5	07.6	-18	55.5
7	335	37.6	310	45.3		33.2	20	08.6		55.2
8	350	40.0	325	45.0		34.3	35	09.6		54.8
9	5	42.5	340	44.6		35.4	50	10.6		54.5
10	20	45.0	355	44.2		36.5	65	11.6		54.2
11	35	47.4	10	43.8	+8	37.6	80	12.6	-18	53.9
12	50	49.9	25	43.4	+8	38.7	95	13.6	-18	53.6
13	65	52.4	40	43.0		39.8	110	14.6		53.3
14	80	54.8	55	42.6		40.9	125	15.7		53.0
15	95	57.3	70	42.3		42.1	140	16.7		52.7
16	110	59.7	85	41.9		43.2	155	17.7		52.4
17	126	02.2	100	41.5	+8	44.3	170	18.7	-18	52.1
18	141	04.7	115	41.1	+8	45.4	185	19.7	-18	51.8
19	156	07.1	130	40.7		46.5	200	20.7		51.5
20	171	09.6	145	40.3		47.6	215	21.7		51.2
21	186	12.1	160	39.9		48.7	230	22.7		50.8
22	201	14.5	175	39.5		49.8	245	23.8		50.5
23	216	17.0	190	39.1		50.9	260	24.8		50.2
24	231	19.5	205	38.7	+8	52.0	275	25.8	-18	49.9
Dif	—		-4		+11		+10		+3	
							+22		-1	
									+22	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8			Edad: 12 ^d 5 PHE { 4 ^h : 61 ^o 0 12 ^h : 61 ^o 1 20 ^h : 61 ^o 2 R ^o : 57 ^m														
	PMG: 11 ^h 56 ^m 3			SD: 16 ^h 6 PMG: 22 ^h 51 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	180	55.1	+18 28.5	29	28.5	-5	43.4	60 N	20 29	21 31	** **	17 57 110		3 21 5				
1	195	55.1	29.1	43	57.0	95	-5 59.8	58	15	21 11	22 48	51 104		25 8				
2	210	55.1	29.7	58	25.5	95	-6 16.2	56	20 04	20 54	22 10	45 100		28 12				
3	225	55.1	30.3	72	53.9	94	32.5	54	19 54	39	21 45	40 97		31 15				
4	240	55.1	30.9	87	22.2	93	-6 48.8	52	45	27	25	35 94		34 18				
5	255	55.1	+18 31.5	101	50.5	93	-7 05.1	50	19 37	20 17	21 09	17 31 91		3 36 21				
6	270	55.1	+18 32.1	116	18.7	92	-7 21.4	45	19 21	19 55	20 38	17 22 85		3 42 26				
7	285	55.1	32.7	130	46.9	92	37.6	40	19 07	38	20 15	15 80		46 31				
8	300	55.1	33.4	145	14.9	90	-7 53.8	35	18 55	24	19 58	09 75		50 35				
9	315	55.1	34.0	159	43.0	91	-8 09.9	30	45	19 12	43	17 03 72		3 54 38				
10	330	55.1	34.6	174	10.9	89	26.0	20	28	18 52	20	16 54 66		4 00 44				
11	345	55.1	+18 35.2	188	38.8	89	-8 42.1	10 N	18 14	18 36	19 02	16 46 60		4 05 49				
12	0	55.1	+18 35.8	203	06.6	88	-8 58.1	0	18 00	18 22	18 47	16 38 56		4 10 54				
13	15	55.1	36.4	217	34.3	87	-9 14.1	10 S	17 46	18 08	34	31 51		15 59				
14	30	55.1	37.0	232	02.0	87	30.1	20	32	17 55	22	23 46		21 64				
15	45	55.1	37.6	246	29.6	86	-9 46.0	30	16	41	10	14 40		27 70				
16	60	55.1	38.2	260	57.1	85	-10 01.8	35	17 06	33	18 04	09 36		30 74				
17	75	55.1	+18 38.8	275	24.6	85	-10 17.6	40	16 55	17 24	17 57	16 03 33		4 34 79				
18	90	55.1	+18 39.4	289	52.0	84	-10 33.3	45	16 43	17 15	17 50	15 56 29		4 39 83				
19	105	55.1	40.0	304	19.3	83	-10 49.0	50	27	17 03	42	48 23		45 89				
20	120	55.1	40.6	318	46.5	82	-11 04.6	52	20	16 58	39	45 20		47 92				
21	135	55.1	41.2	333	13.6	81	20.1	54	12	52	35	41 17		50 95				
22	150	55.1	41.8	347	40.7	81	35.6	56	16 04	46	32	36 14		53 99				
23	165	55.1	42.4	2	07.7	80	-11 51.0	58	15 53	39	27	32 10		4 57 102				
24	180	55.1	+18 43.0	16	34.6	79	-12 06.4	60 S	15 42	16 31	17 23	15 26 6		5 01 107				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 33 ^m 3		Mag: -3.8 PMG: 10 ^h 18 ^m			Mag: -0.3 PMG: 5 ^h 38 ^m			Mag: -2.1 PMG: 17 ^h 25 ^m			Mag: +0.1 PMG: 14 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	231	19.5	205	38.7	+8	52.0	275	25.8	-18	49.9	98	13.4	+18	25.6	144	05.5	+22	32.4
1	246	21.9	220	38.4		53.1	290	26.8		49.6	113	15.5		25.5	159	07.7		32.4
2	261	24.4	235	38.0		54.2	305	27.8		49.3	128	17.7		25.4	174	09.8		32.4
3	276	26.9	250	37.6		55.3	320	28.8		49.0	143	19.9		25.4	189	12.0		32.4
4	291	29.3	265	37.2		56.4	335	29.9		48.7	158	22.1		25.3	204	14.1		32.4
5	306	31.8	280	36.8	+8	57.5	350	30.9	-18	48.4	173	24.3	+18	25.2	219	16.3	+22	32.5
6	321	34.2	295	36.4	+8	58.6	5	31.9	-18	48.1	188	26.4	+18	25.1	234	18.4	+22	32.5
7	336	36.7	310	36.0	+8	59.7	20	32.9		47.8	203	28.6		25.0	249	20.6		32.5
8	351	39.2	325	35.6	+9	00.8	35	33.9		47.5	218	30.8		25.0	264	22.7		32.5
9	6	41.6	340	35.2		02.0	50	34.9		47.1	233	33.0		24.9	279	24.9		32.5
10	21	44.1	355	34.8		03.1	65	36.0		46.8	248	35.2		24.8	294	27.0		32.5
11	36	46.6	10	34.4	+9	04.2	80	37.0	-18	46.5	263	37.3	+18	24.7	309	29.2	+22	32.5
12	51	49.0	25	34.0	+9	05.3	95	38.0	-18	46.2	278	39.5	+18	24.6	324	31.3	+22	32.5
13	66	51.5	40	33.6		06.4	110	39.0		45.9	293	41.7		24.6	339	33.5		32.5
14	81	54.0	55	33.3		07.5	125	40.0		45.6	308	43.9		24.5	354	35.6		32.6
15	96	56.4	70	32.9		08.6	140	41.1		45.3	323	46.1		24.4	9	37.8		32.6
16	111	58.9	85	32.5		09.7	155	42.1		45.0	338	48.2		24.3	24	39.9		32.6
17	127	01.3	100	32.1	+9	10.8	170	43.1	-18	44.7	353	50.4	+18	24.2	39	42.1	+22	32.6
18	142	03.8	115	31.7	+9	11.9	185	44.1	-18	44.4	8	52.6	+18	24.2	54	44.2	+22	32.6
19	157	06.3	130	31.3		13.0	200	45.1		44.1	23	54.8		24.1	69	46.4		32.6
20	172	08.7	145	30.9		14.1	215	46.2		43.7	38	56.9		24.0	84	48.5		32.6
21	187	11.2	160	30.5		15.2	230	47.2		43.4	53	59.1		23.9	99	50.7		32.6
22	202	13.7	175	30.1		16.3	245	48.2		43.1	69	01.3		23.8	114	52.8		32.6
23	217	16.1	190	29.7		17.4	260	49.2		42.8	84	03.5		23.8	129	55.0		32.7
24	232	18.6	205	29.3	+9	18.5	275	50.2	-18	42.5	99	05.6	+18	23.7	144	57.2	+22	32.7
Dif	—		-4		+11		+10		+3		+22		-1		+22		0	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8				Edad: 13 ^d 5 PHE { 4 ^h : 61 [/] 3 12 ^h : 61 [/] 3 20 ^h : 61 [/] 3																
	PMG: 11 ^h 56 ^m 3				PMG: 23 ^h 48 ^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 m	m	h m m	m		
0	180	55.1	+18	43.0	16	34.6			-12	06.4		60 N	** **	2 21	3 23	19 47	113	3 26	6		
1	195	55.1		43.6	31	01.4	78			21.7	153	58	1 04	42	37	35	107	33	12		
2	210	55.1		44.2	45	28.2	78			36.9	152	56	1 42	2 58	48	25	102	40	16		
3	225	55.1		44.8	59	54.9	77		-12	52.0	151	54	2 08	3 13	3 58	17	97	46	20		
4	240	55.1		45.4	74	21.5	76		-13	07.1	151	52	27	25	4 07	09	94	52	22		
5	255	55.1	+18	46.0	88	48.0	75		-13	22.0	149	50	2 43	3 36	4 15	19 02	91	3 57	25		
6	270	55.1	+18	46.6	103	14.4	74		-13	36.9	149	45	3 14	3 57	4 32	18 47	85	4 08	31		
7	285	55.1		47.2	117	40.7	73		-13	51.7	148	40	37	4 15	45	35	80	17	35		
8	300	55.1		47.8	132	07.0	73		-14	06.5	148	35	3 55	29	4 57	24	77	25	39		
9	315	55.1		48.4	146	33.2	72			21.1	146	30	4 09	4 41	5 07	15	74	32	42		
10	330	55.1		48.9	160	59.3	71			35.6	145	20	33	5 01	24	18 00	68	44	48		
11	345	55.1	+18	49.5	175	25.3	70		-14	50.1	145	10 N	4 51	5 17	5 39	17 46	64	4 54	53		
12	0	55.1	+18	50.1	189	51.2	69		-15	04.5	144	0	5 06	5 31	5 53	17 34	59	5 04	58		
13	15	55.1		50.7	204	17.0	68			18.7	142	10 S	19	44	6 06	22	55	14	62		
14	30	55.1		51.3	218	42.8	68			32.9	142	20	31	5 58	21	17 09	50	25	67		
15	45	55.1		51.9	233	08.5	67		-15	47.0	141	30	43	6 12	37	16 54	45	37	73		
16	60	55.1		52.5	247	34.0	65		-16	00.9	139	35	49	20	47	45	43	44	77		
17	75	55.1	+18	53.1	261	59.5	65		-16	14.8	139	40	5 56	6 29	6 58	16 36	39	5 53	80		
18	90	55.1	+18	53.7	276	24.9	64		-16	28.5	137	45	6 03	6 39	7 11	16 25	34	6 02	85		
19	105	55.0		54.3	290	50.3	64			42.2	137	50	11	50	26	11	29	14	91		
20	120	55.0		54.8	305	15.5	62		-16	55.7	135	52	14	6 56	33	16 05	26	19	94		
21	135	55.0		55.4	319	40.6	61		-17	09.1	134	54	18	7 01	41	15 58	23	25	97		
22	150	55.0		56.0	334	05.7	61			22.4	133	56	22	08	7 50	50	20	32	101		
23	165	55.0		56.6	348	30.7	60			35.6	132	58	26	15	8 01	42	15	39	106		
24	180	55.0	+18	57.2	2	55.6	59		-17	48.7	131	60 S	6 31	7 23	8 12	15 32	10	6 48	111		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 8 ^h 29 ^m 4		Mag: -3.8 PMG: 10 ^h 18 ^m			Mag: -0.3 PMG: 5 ^h 36 ^m			Mag: -2.1 PMG: 17 ^h 21 ^m			Mag: +0.1 PMG: 14 ^h 18 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'		°	'	°	'	°	'	°	'					
0	232	18.6	205	29.3	+9	18.5	275	50.2	-18	42.5	99	05.6	+18	23.7	144	57.2	+22	32.7
1	247	21.1	220	28.9		19.5	290	51.3		42.2	114	07.8		23.6	159	59.3		32.7
2	262	23.5	235	28.5		20.6	305	52.3		41.9	129	10.0		23.5	175	01.5		32.7
3	277	26.0	250	28.1		21.7	320	53.3		41.6	144	12.2		23.4	190	03.6		32.7
4	292	28.5	265	27.7		22.8	335	54.3		41.3	159	14.3		23.4	205	05.8		32.7
5	307	30.9	280	27.3	+9	23.9	350	55.4	-18	41.0	174	16.5	+18	23.3	220	07.9	+22	32.7
6	322	33.4	295	26.9	+9	25.0	5	56.4	-18	40.6	189	18.7	+18	23.2	235	10.1	+22	32.7
7	337	35.8	310	26.5		26.1	20	57.4		40.3	204	20.9		23.1	250	12.2		32.7
8	352	38.3	325	26.1		27.2	35	58.4		40.0	219	23.0		23.0	265	14.4		32.8
9	7	40.8	340	25.7		28.3	50	59.5		39.7	234	25.2		23.0	280	16.5		32.8
10	22	43.2	355	25.3		29.4	66	00.5		39.4	249	27.4		22.9	295	18.7		32.8
11	37	45.7	10	24.9	+9	30.5	81	01.5	-18	39.1	264	29.5	+18	22.8	310	20.8	+22	32.8
12	52	48.2	25	24.5	+9	31.6	96	02.5	-18	38.8	279	31.7	+18	22.7	325	23.0	+22	32.8
13	67	50.6	40	24.1		32.7	111	03.6		38.5	294	33.9		22.6	340	25.1		32.8
14	82	53.1	55	23.7		33.8	126	04.6		38.2	309	36.1		22.6	355	27.3		32.8
15	97	55.6	70	23.3		34.9	141	05.6		37.9	324	38.2		22.5	10	29.4		32.8
16	112	58.0	85	22.9		36.0	156	06.7		37.5	339	40.4		22.4	25	31.6		32.8
17	128	00.5	100	22.5	+9	37.1	171	07.7	-18	37.2	354	42.6	+18	22.3	40	33.7	+22	32.8
18	143	03.0	115	22.1	+9	38.2	186	08.7	-18	36.9	9	44.7	+18	22.2	55	35.9	+22	32.9
19	158	05.4	130	21.7		39.2	201	09.7		36.6	24	46.9		22.1	70	38.0		32.9
20	173	07.9	145	21.3		40.3	216	10.8		36.3	39	49.1		22.1	85	40.2		32.9
21	188	10.3	160	20.9		41.4	231	11.8		36.0	54	51.3		22.0	100	42.3		32.9
22	203	12.8	175	20.5		42.5	246	12.8		35.7	69	53.4		21.9	115	44.5		32.9
23	218	15.3	190	20.1		43.6	261	13.9		35.4	84	55.6		21.8	130	46.6		32.9
24	233	17.7	205	19.7	+9	44.7	276	14.9	-18	35.1	99	57.8	+18	21.7	145	48.8	+22	32.9
Dif	—		-4		+11		+10		+3		+22		-1		+22		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 15 ^d 5 PHE { 4 ^h : 61 ^m 0 12 ^h : 60 ^m 8 20 ^h : 60 ^m 6 R ^o : 63 ^m												
	PMG: 11 ^h 56 ^m 4			SD: 16 ^m 6 PMG: 0 ^h 48 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.8	+19 11.1	348	28.5	-22 21.1	95	60 N	** *	2 14	3 19	23 27	84	3 45	24	
1	195	54.8	11.6	2	51.4	30.6	39	58	0 50	36	33	23 02	80	4 03	31	
2	210	54.7	12.2	17	14.3	39.9	93	56	1 34	2 54	44	22 42	78	19	36	
3	225	54.7	12.8	31	37.1	49.0	89	54	2 02	3 09	3 55	25	76	32	40	
4	240	54.7	13.4	45	59.9	-22 57.9	89	52	22	21	4 04	22 11	75	44	42	
5	255	54.7	+19 13.9	60	22.6	-23 06.7	88	50	2 39	3 32	4 12	21 59	73	4 55	44	
6	270	54.7	+19 14.5	74	45.2	-23 15.3	86	45	3 11	3 55	4 29	21 33	72	5 17	48	
7	285	54.7	15.1	89	07.8	23.7	84	40	35	4 13	43	21 13	70	35	51	
8	300	54.7	15.6	103	30.3	31.9	82	35	3 53	27	4 55	20 56	69	5 50	53	
9	315	54.6	16.2	117	52.8	40.0	81	30	4 08	4 39	5 06	41	68	6 03	55	
10	330	54.6	16.8	132	15.2	47.9	79	20	32	5 00	23	20 17	66	25	59	
11	345	54.6	+19 17.3	146	37.6	-23 55.6	77	10 N	4 50	5 16	5 39	19 56	64	6 45	61	
12	0	54.6	+19 17.9	160	59.9	-24 03.2	76	0	5 05	5 31	5 53	19 36	63	7 03	63	
13	15	54.6	18.5	175	22.2	10.5	73	10 S	19	45	6 07	19 16	62	21	66	
14	30	54.6	19.0	189	44.5	17.7	72	20	32	5 58	22	18 55	61	7 41	68	
15	45	54.5	19.6	204	06.7	24.7	70	30	44	6 13	39	31	59	8 04	70	
16	60	54.5	20.1	218	28.8	31.5	68	35	51	21	6 49	17	58	17	72	
17	75	54.5	+19 20.7	232	51.0	-24 38.1	66	40	5 58	6 31	7 00	18 01	56	8 32	75	
18	90	54.5	+19 21.3	247	13.1	-24 44.5	64	45	6 05	6 41	7 13	17 42	54	8 51	77	
19	105	54.5	21.8	261	35.1	50.8	63	50	13	53	29	18 51	51	9 14	80	
20	120	54.5	22.4	275	57.2	-24 56.9	61	52	17	6 58	36	17 07	49	25	82	
21	135	54.4	23.0	290	19.2	-25 02.7	58	54	21	7 04	45	16 53	48	38	84	
22	150	54.4	23.5	304	41.2	08.4	57	56	25	11	7 54	39	44	9 52	88	
23	165	54.4	24.1	319	03.1	13.9	55	58	29	18	8 04	21	41	10 09	92	
24	180	54.4	+19 24.6	333	25.1	-25 19.2	53	60 S	6 34	7 27	8 17	16 00	35	10 30	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 8 ^h 21 ^m 5		Mag: -3.8 PMG: 10 ^h 20 ^m		Mag: -0.3 PMG: 5 ^h 33 ^m		Mag: -2.0 PMG: 17 ^h 14 ^m		Mag: +0.1 PMG: 14 ^h 11 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'
0	234	16.9	205 09.8	+10 10.7	276 39.7	-18 27.6	100 49.8	+18 19.7	146 40.3	+22 33.2	
1	249	19.3	220 09.4	11.8	291 40.8	27.3	115 51.9	19.7	161 42.5	33.2	
2	264	21.8	235 09.0	12.9	306 41.8	27.0	130 54.1	19.6	176 44.6	33.2	
3	279	24.3	250 08.6	14.0	321 42.8	26.7	145 56.3	19.5	191 46.8	33.2	
4	294	26.7	265 08.2	15.1	336 43.9	26.3	160 58.4	19.4	206 48.9	33.2	
5	309	29.2	280 07.8	+10 16.1	351 44.9	-18 26.0	176 00.6	+18 19.3	221 51.1	+22 33.2	
6	324	31.7	295 07.4	+10 17.2	6 46.0	-18 25.7	191 02.7	+18 19.2	236 53.2	+22 33.2	
7	339	34.1	310 06.9	18.3	21 47.0	25.4	206 04.9	19.2	251 55.4	33.2	
8	354	36.6	325 06.5	19.4	36 48.1	25.1	221 07.1	19.1	266 57.5	33.2	
9	9	39.1	340 06.1	20.5	51 49.1	24.8	236 09.2	19.0	281 59.6	33.3	
10	24	41.5	355 05.7	21.5	66 50.1	24.5	251 11.4	18.9	297 01.8	33.3	
11	39	44.0	10 05.3	+10 22.6	81 51.2	-18 24.2	266 13.6	+18 18.8	312 03.9	+22 33.3	
12	54	46.4	25 04.9	+10 23.7	96 52.2	-18 23.8	281 15.7	+18 18.7	327 06.1	+22 33.3	
13	69	48.9	40 04.4	24.8	111 53.3	23.5	296 17.9	18.7	342 08.2	33.3	
14	84	51.4	55 04.0	25.8	126 54.3	23.2	311 20.0	18.6	357 10.4	33.3	
15	99	53.8	70 03.6	26.9	141 55.4	22.9	326 22.2	18.5	12 12.5	33.3	
16	114	56.3	85 03.2	28.0	156 56.4	22.6	341 24.4	18.4	27 14.7	33.3	
17	129	58.8	100 02.8	+10 29.1	171 57.4	-18 22.3	356 26.5	+18 18.3	42 16.8	+22 33.3	
18	145	01.2	115 02.4	+10 30.1	186 58.5	-18 22.0	11 28.7	+18 18.2	57 19.0	+22 33.3	
19	160	03.7	130 01.9	31.2	201 59.5	21.7	26 30.8	18.1	72 21.1	33.4	
20	175	06.2	145 01.5	32.3	217 00.6	21.4	41 33.0	18.1	87 23.3	33.4	
21	190	08.6	160 01.1	33.4	232 01.6	21.0	56 35.2	18.0	102 25.4	33.4	
22	205	11.1	175 00.7	34.4	247 02.7	20.7	71 37.3	17.9	117 27.5	33.4	
23	220	13.6	190 00.3	35.5	262 03.7	20.4	86 39.5	17.8	132 29.7	33.4	
24	235	16.0	204 59.8	+10 36.6	277 04.8	-18 20.1	101 41.6	+18 17.7	147 31.8	+22 33.4	
Dif	—		-4	+11	+10	+3	+22	-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 56 ^m 4			Edad: 16 ^d 5 PHE { 4 ^h : 60 ^m /4 12 ^h : 60 ^m /1 20 ^h : 59 ^m /8 SD: 16:5 PMG: 1 ^h 51 ^m R°: 63 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m
0	180	54.4	+19	24.6	333	25.1	–25	19.2	60 N	20 38	21 45	** **	** ** *	4 09	49
1	195	54.4		25.2	347	47.0	29	24.3	58	24	21	23 20	** ** *	34	53
2	210	54.3		25.7	2	08.9	29	29.3	56	11	21 03	22 26	** ** *	4 55	54
3	225	54.3		26.3	16	30.8	29	34.0	54	20 01	20 47	21 56	23 41	55	5 12
4	240	54.3		26.9	30	52.7	29	38.6	52	19 51	34	35	26 56	26	57
5	255	54.3	+19	27.4	45	14.6	29	–25 42.9	50	19 43	20 23	21 17	23 12	57	5 39
6	270	54.3	+19	28.0	59	36.5	29	–25 47.1	45	19 25	20 00	20 44	22 45	58	6 05
7	285	54.2		28.5	73	58.4	29	51.1	40	19 11	19 42	20	23 59		26
8	300	54.2		29.1	88	20.3	29	54.8	35	18 59	27	20 01	22 05	60	43
9	315	54.2		29.6	102	42.2	29	–25 58.4	30	48	19 14	19 46	21 49	60	6 58
10	330	54.2		30.2	117	04.0	28	–26 01.8	20	30	18 54	22	23 61		7 24
11	345	54.2	+19	30.7	131	25.9	29	–26 05.0	10 N	18 14	18 37	19 03	21 00	62	7 46
12	0	54.1	+19	31.3	145	47.9	30	–26 08.0	0	18 00	18 22	18 47	20 39	62	8 06
13	15	54.1		31.8	160	09.8	29	10.8	10 S	17 46	18 08	34	20 18	63	27
14	30	54.1		32.4	174	31.7	29	13.5	20	30	17 54	21	19 56	63	8 49
15	45	54.1		32.9	188	53.7	30	15.9	30	13	39	08	30 63		9 14
16	60	54.0		33.5	203	15.7	30	18.1	35	17 03	30	18 01	19 15	63	29
17	75	54.0	+19	34.0	217	37.7	30	–26 20.2	40	16 52	17 21	17 54	18 57	64	9 47
18	90	54.0	+19	34.6	231	59.7	30	–26 22.0	45	16 38	17 11	17 46	18 36	64	10 08
19	105	54.0		35.1	246	21.8	31	23.7	50	22	16 58	38	18 09	64	34
20	120	53.9		35.7	260	43.9	31	25.2	52	15	53	34	17 56	64	10 47
21	135	53.9		36.2	275	06.0	31	26.5	54	16 06	46	30	41 64		11 02
22	150	53.9		36.8	289	28.1	31	27.6	56	15 57	40	26	23 65		20
23	165	53.9		37.3	303	50.4	33	28.5	58	46	32	21	17 02	65	11 41
24	180	53.8	+19	37.9	318	12.6	32	–26 29.2	60 S	15 33	16 24	17 16	16 35	65	12 07

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 17 ^m 6		Mag: –3.8 PMG: 10 ^h 20 ^m		Mag: –0.4 PMG: 5 ^h 31 ^m		Mag: –2.0 PMG: 17 ^h 11 ^m		Mag: +0.1 PMG: 14 ^h 08 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	235	16.0	204	59.8	277	04.8	101	41.6	147	31.8
1	250	18.5	219	59.4	292	05.8	116	43.8	162	34.0
2	265	20.9	234	59.0	307	06.9	131	45.9	177	36.1
3	280	23.4	249	58.6	322	07.9	146	48.1	192	38.3
4	295	25.9	264	58.1	337	09.0	161	50.3	207	40.4
5	310	28.3	279	57.7	352	10.0	176	52.4	222	42.6
6	325	30.8	294	57.3	7	11.1	191	54.6	237	44.7
7	340	33.3	309	56.9	22	12.1	206	56.7	252	46.9
8	355	35.7	324	56.5	37	13.1	221	58.9	267	49.0
9	10	38.2	339	56.0	52	14.2	237	01.0	282	51.1
10	25	40.7	354	55.6	67	15.3	252	03.2	297	53.3
11	40	43.1	9	55.2	82	16.3	267	05.4	312	55.4
12	55	45.6	24	54.8	97	17.4	282	07.5	327	57.6
13	70	48.1	39	54.3	112	18.4	297	09.7	342	59.7
14	85	50.5	54	53.9	127	19.5	312	11.8	358	01.9
15	100	53.0	69	53.5	142	20.5	327	14.0	13	04.0
16	115	55.4	84	53.1	157	21.6	342	16.1	28	06.2
17	130	57.9	99	52.6	172	22.6	357	18.3	43	08.3
18	146	00.4	114	52.2	187	23.7	12	20.4	58	10.4
19	161	02.8	129	51.8	202	24.7	27	22.6	73	12.6
20	176	05.3	144	51.3	217	25.8	42	24.8	88	14.7
21	191	07.8	159	50.9	232	26.8	57	26.9	103	16.9
22	206	10.2	174	50.5	247	27.9	72	29.1	118	19.0
23	221	12.7	189	50.1	262	28.9	87	31.2	133	21.2
24	236	15.2	204	49.6	277	30.0	102	33.4	148	23.3
Dif	—		–4	+11	+11	+3	+22	–1	+21	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 17 ^d 5	PHE {	4 ^h : 59 ^m 5 12 ^h : 59 ^m 2 20 ^h : 58 ^m 9	SD: 16 ^d 3	PMG: 2 ^h 54 ^m		R°: 62 ^m							
	PMG: 11 ^h 56 ^m 4																
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	h	m
0	180	53.8	+19 37.9	318	12.6		-26 29.2	5	60 N	** **	2 08	3 14	0 51	48	4 58	79	
1	195	53.8		332	34.9	33	29.7	5	58	0 33	31	29	22	52	5 27	76	
2	210	53.8		346	57.2	33	30.0	3	56	1 26	2 50	41	0 00	53	5 49	74	
3	225	53.8		1	19.6	34	30.2	2	54	1 56	3 05	3 52	** **	**	6 08	72	
4	240	53.7		15	42.1	35	30.2	0	52	2 18	18	4 01	** **	**	23	71	
5	255	53.7	+19 40.6	30	04.6	35	-26 29.9	3	50	2 35	3 29	4 09	** **	**	6 37	69	
6	270	53.7	+19 41.1	44	27.1	35	-26 29.5	4	45	3 08	3 53	4 27	23 43	45	7 04	68	
7	285	53.7		58	49.7	36	29.0	5	40	32	4 11	42	22	47	26	66	
8	300	53.6		73	12.4	37	28.2	8	35	3 51	26	4 54	23 05	49	7 44	65	
9	315	53.6		87	35.1	37	27.2	10	30	4 07	38	5 05	22 49	52	8 00	64	
10	330	53.6		101	57.9	38	26.1	11	20	31	4 59	23	24	54	26	63	
11	345	53.6	+19 43.8	116	20.8	39	-26 24.8	13	10 N	4 50	5 16	5 38	22 02	56	8 48	62	
12	0	53.5	+19 44.3	130	43.7	39	-26 23.3	15	0	5 05	5 31	5 53	21 41	59	9 09	61	
13	15	53.5		145	06.8	41	21.6	17	10 S	19	45	6 07	21 21	60	30	59	
14	30	53.5		159	29.8	40	19.8	18	20	32	5 59	23	20 59	62	9 53	57	
15	45	53.4		173	53.0	42	17.7	21	30	45	6 14	40	33	65	10 19	56	
16	60	53.4		188	16.3	43	15.5	22	35	52	23	6 50	18	66	34	55	
17	75	53.4	+19 47.0	202	39.6	43	-26 13.2	23	40	5 59	6 32	7 02	20 01	68	10 52	53	
18	90	53.4	+19 47.6	217	03.0	44	-26 10.6	26	45	6 07	6 43	7 15	19 40	70	11 13	52	
19	105	53.3		231	26.5	45	07.9	27	50	15	6 55	31	13	73	40	49	
20	120	53.3		245	50.1	46	05.0	29	52	19	7 01	39	19 00	75	11 53	48	
21	135	53.3		260	13.7	46	-26 01.9	31	54	23	07	48	18 45	77	12 08	46	
22	150	53.2		274	37.5	48	-25 58.7	32	56	28	14	7 57	28	79	26	43	
23	165	53.2		289	01.3	48	55.3	34	58	32	22	8 08	18 07	83	12 47	40	
24	180	53.2	+19 50.7	303	25.3	50	-25 51.8	35	60 S	6 37	7 30	8 21	17 40	88	13 14	35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 8 ^h 13 ^m 6		Mag: -3.8 PMG: 10 ^h 21 ^m		Mag: -0.4 PMG: 5 ^h 30 ^m		Mag: -2.0 PMG: 17 ^h 07 ^m		Mag: +0.1 PMG: 14 ^h 04 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	236	15.2	204	49.6	+11 02.2	277	30.0	-18 12.6	102	33.4	+18 15.7	148	23.3	+22 33.6
1	251	17.6	219	49.2	03.2	292	31.0	12.3	117	35.5	15.6	163	25.5	33.7
2	266	20.1	234	48.8	04.3	307	32.1	12.0	132	37.7	15.5	178	27.6	33.7
3	281	22.6	249	48.3	05.4	322	33.2	11.7	147	39.8	15.4	193	29.7	33.7
4	296	25.0	264	47.9	06.4	337	34.2	11.3	162	42.0	15.3	208	31.9	33.7
5	311	27.5	279	47.5	+11 07.5	352	35.3	-18 11.0	177	44.1	+18 15.2	223	34.0	+22 33.7
6	326	29.9	294	47.0	+11 08.5	7	36.3	-18 10.7	192	46.3	+18 15.1	238	36.2	+22 33.7
7	341	32.4	309	46.6	09.6	22	37.4	10.4	207	48.4	15.0	253	38.3	33.7
8	356	34.9	324	46.2	10.7	37	38.4	10.1	222	50.6	15.0	268	40.5	33.7
9	11	37.3	339	45.7	11.7	52	39.5	09.8	237	52.7	14.9	283	42.6	33.7
10	26	39.8	354	45.3	12.8	67	40.6	09.5	252	54.9	14.8	298	44.7	33.7
11	41	42.3	9	44.9	+11 13.8	82	41.6	-18 09.1	267	57.0	+18 14.7	313	46.9	+22 33.7
12	56	44.7	24	44.4	+11 14.9	97	42.7	-18 08.8	282	59.2	+18 14.6	328	49.0	+22 33.8
13	71	47.2	39	44.0	15.9	112	43.7	08.5	298	01.3	14.5	343	51.2	33.8
14	86	49.7	54	43.6	17.0	127	44.8	08.2	313	03.5	14.4	358	53.3	33.8
15	101	52.1	69	43.1	18.1	142	45.9	07.9	328	05.6	14.3	13	55.5	33.8
16	116	54.6	84	42.7	19.1	157	46.9	07.6	343	07.8	14.3	28	57.6	33.8
17	131	57.1	99	42.3	+11 20.2	172	48.0	-18 07.3	358	09.9	+18 14.2	43	59.7	+22 33.8
18	146	59.5	114	41.8	+11 21.2	187	49.0	-18 07.0	13	12.1	+18 14.1	59	01.9	+22 33.8
19	162	02.0	129	41.4	22.3	202	50.1	06.6	28	14.2	14.0	74	04.0	33.8
20	177	04.4	144	41.0	23.3	217	51.2	06.3	43	16.4	13.9	89	06.2	33.8
21	192	06.9	159	40.5	24.4	232	52.2	06.0	58	18.5	13.8	104	08.3	33.8
22	207	09.4	174	40.1	25.4	247	53.3	05.7	73	20.7	13.7	119	10.5	33.9
23	222	11.8	189	39.7	26.5	262	54.4	05.4	88	22.8	13.6	134	12.6	33.9
24	237	14.3	204	39.2	+11 27.5	277	55.4	-18 05.1	103	25.0	+18 13.6	149	14.7	+22 33.9
Dif	—		-4		+11	+11		+3	+22		-1	+21		0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 18 ^d 5 PHE { 4 ^h : 58 ^m /6 12 ^h : 58 ^m /3 20 ^h : 57 ^m /9 SD: 16 ^h 0 PMG: 3 ^h 56 ^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	
0	180	53.2	+19 50.7	303	25.3	-25 51.8	38	60 N	20 42	21 51	** **	1 39 24	6 17 95	
1	195	53.1	51.3	317	49.3	50 48.0	38	58	28	27	** **	1 14 29	6 43 88	
2	210	53.1	51.8	332	13.4	51 44.1	39	56	15	21 07	22 34	0 53 34	7 03 84	
3	225	53.1	52.3	346	37.6	52 40.1	40	54	20 04	20 51	22 02	36 37	20 80	
4	240	53.1	52.9	1	02.0	54 35.9	42	52	19 54	38	21 39	22 39	34 78	
5	255	53.0	+19 53.4	15	26.4	54 -25 31.5	44	50	19 46	20 26	21 21	0 09 41	7 46 76	
6	270	53.0	+19 53.9	29	50.9	55 -25 27.0	45	45	19 27	20 02	20 47	** ** *	8 12 72	
7	285	53.0	54.4	44	15.6	57 22.3	47	40	13	19 44	22	** ** *	32 69	
8	300	52.9	55.0	58	40.3	57 17.5	48	35	19 00	29	20 03	23 54 41	8 49 67	
9	315	52.9	55.5	73	05.1	58 12.5	50	30	18 49	19 16	19 48	41 43	9 04 65	
10	330	52.9	56.0	87	30.1	60 07.4	51	20	31	18 55	23	23 18 47	29 61	
11	345	52.8	+19 56.5	101	55.1	60 -25 02.1	53	10 N	18 15	18 37	19 04	22 58 50	9 50 58	
12	0	52.8	+19 57.1	116	20.3	62 -24 56.7	54	0	18 00	18 22	18 48	22 40 53	10 10 56	
13	15	52.8	57.6	130	45.6	63 51.1	56	10 S	17 45	18 08	33	21 56	29 54	
14	30	52.7	58.1	145	10.9	63 45.4	57	20	30	17 53	20	22 01 60	10 50 51	
15	45	52.7	58.6	159	36.4	65 39.5	59	30	12	38	07	21 38 63	11 15 47	
16	60	52.7	59.2	174	02.0	66 33.5	60	35	17 02	29	18 00	24 66	29 45	
17	75	52.6	+19 59.7	188	27.8	68 -24 27.3	62	40	16 50	17 20	17 53	21 09 68	11 45 43	
18	90	52.6	+20 00.2	202	53.6	68 -24 21.0	63	45	16 37	17 09	17 45	20 50 72	12 05 39	
19	105	52.5	00.7	217	19.5	69 14.6	64	50	20	16 56	36	26 77	29 35	
20	120	52.5	01.2	231	45.6	71 08.1	65	52	12	50	32	15 79	41 33	
21	135	52.5	01.8	246	11.8	72 -24 01.4	67	54	16 03	44	28	20 02 82	12 54 30	
22	150	52.4	02.3	260	38.1	73 -23 54.5	69	56	15 53	37	23	19 47 85	13 09 27	
23	165	52.4	02.8	275	04.5	74 47.6	69	58	42	29	19	30 89	27 23	
24	180	52.4	+20 03.3	289	31.0	75 -23 40.5	71	60 S	15 29	16 20	17 13	19 08 95	13 49 17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 09 ^m 7		Mag: -3.8 PMG: 10 ^h 22 ^m			Mag: -0.4 PMG: 5 ^h 28 ^m			Mag: -2.0 PMG: 17 ^h 04 ^m			Mag: +0.1 PMG: 14 ^h 01 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	237	14.3	204	39.2	+11 27.5	277	55.4	-18 05.1	103	25.0	+18 13.6	149	14.7	+22 33.9
1	252	16.8	219	38.8	28.6	292	56.5	04.8	118	27.1	13.5	164	16.9	33.9
2	267	19.2	234	38.3	29.6	307	57.6	04.4	133	29.3	13.4	179	19.0	33.9
3	282	21.7	249	37.9	30.7	322	58.6	04.1	148	31.4	13.3	194	21.2	33.9
4	297	24.2	264	37.5	31.7	337	59.7	03.8	163	33.6	13.2	209	23.3	33.9
5	312	26.6	279	37.0	+11 32.8	353	00.7	-18 03.5	178	35.7	+18 13.1	224	25.5	+22 33.9
6	327	29.1	294	36.6	+11 33.8	8 01.8	-18 03.2	193	37.9	+18 13.0	239	27.6	+22 33.9	
7	342	31.6	309	36.1	34.9	23 02.9	02.9	208	40.0	12.9	254	29.7	33.9	
8	357	34.0	324	35.7	35.9	38 03.9	02.6	223	42.2	12.8	269	31.9	33.9	
9	12	36.5	339	35.3	37.0	53 05.0	02.3	238	44.3	12.8	284	34.0	34.0	
10	27	38.9	354	34.8	38.0	68 06.1	01.9	253	46.4	12.7	299	36.2	34.0	
11	42	41.4	9 34.4	+11 39.1	83 07.2	-18 01.6	268	48.6	+18 12.6	314	38.3	+22 34.0		
12	57	43.9	24 33.9	+11 40.1	98 08.2	-18 01.3	283	50.7	+18 12.5	329	40.4	+22 34.0		
13	72	46.3	39 33.5	41.2	113 09.3	01.0	298	52.9	12.4	344	42.6	34.0		
14	87	48.8	54 33.0	42.2	128 10.4	00.7	313	55.0	12.3	359	44.7	34.0		
15	102	51.3	69 32.6	43.3	143 11.4	00.4	328	57.2	12.2	14 46.9	34.0			
16	117	53.7	84 32.2	44.3	158 12.5	-18 00.1	343	59.3	12.1	29 49.0	34.0			
17	132	56.2	99 31.7	+11 45.4	173 13.6	-17 59.7	359	01.5	+18 12.0	44 51.2	+22 34.0			
18	147	58.7	114 31.3	+11 46.4	188 14.6	-17 59.4	14 03.6	+18 11.9	59 53.3	+22 34.0				
19	163	01.1	129 30.8	47.4	203 15.7	59.1	29 05.7	11.9	74 55.4	34.0				
20	178	03.6	144 30.4	48.5	218 16.8	58.8	44 07.9	11.8	89 57.6	34.1				
21	193	06.0	159 29.9	49.5	233 17.8	58.5	59 10.0	11.7	104 59.7	34.1				
22	208	08.5	174 29.5	50.6	248 18.9	58.2	74 12.2	11.6	120 01.9	34.1				
23	223	11.0	189 29.0	51.6	263 20.0	57.9	89 14.3	11.5	135 04.0	34.1				
24	238	13.4	204 28.6	+11 52.7	278 21.1	-17 57.5	104 16.5	+18 11.4	150 06.1	+22 34.1				
Dif	—		-4		+10	+11		+3	+21		-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 56 ^m 5				Edad: 19 ^d 5 PHE { SD: 15 ^h 7 PMG: 4 ^h 53 ^m R°: 52 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	52.4	+20	03.3	289	31.0	-23	40.5	60 N	** **	2 01	3 10	2 03	11	7 52	96	
1	195	52.3		03.8	303	57.6	76	33.3	58	** **	26	25	1 43	17	8 11	90	
2	210	52.3		04.3	318	24.4	78	26.0	56	1 18	2 45	38	27	21	27	85	
3	225	52.3		04.9	332	51.3	79	18.5	54	1 50	3 01	49	13	25	40	82	
4	240	52.2		05.4	347	18.2	79	10.9	52	2 13	15	3 58	1 01	27	8 52	79	
5	255	52.2	+20	05.9	1	45.4	82	-23	50	2 31	3 26	4 07	0 50	30	9 02	77	
6	270	52.1	+20	06.4	16	12.6	82	-22	45	3 06	3 50	4 25	0 28	34	9 24	72	
7	285	52.1		06.9	30	39.9	83	47.4	40	30	4 09	40	0 09	38	41	68	
8	300	52.1		07.4	45	07.4	85	39.4	35	3 49	24	4 53	** **	** **	9 56	65	
9	315	52.0		07.9	59	35.0	86	31.2	30	4 05	37	5 04	** **	** **	10 09	62	
10	330	52.0		08.4	74	02.7	87	22.9	20	30	4 58	22	** **	** **	30	58	
11	345	51.9	+20	08.9	88	30.5	88	-22	10 N	4 49	5 16	5 38	23	48	45	10 48	55
12	0	51.9	+20	09.5	102	58.4	89	-22	0	5 05	5 31	5 53	23	33	48	11 06	50
13	15	51.9		10.0	117	26.5	91	-21	10 S	20	5 45	6 08	17	52	23	47	
14	30	51.8		10.5	131	54.7	92	48.7	20	33	6 00	23	23	01	56	11 41	44
15	45	51.8		11.0	146	22.9	92	39.8	30	46	16	41	22	41	61	12 02	39
16	60	51.7		11.5	160	51.4	95	30.9	35	5 53	24	6 51	30	63	14	37	
17	75	51.7	+20	12.0	175	19.9	95	-21	40	6 01	6 34	7 03	22	17	67	12 28	34
18	90	51.7	+20	12.5	189	48.5	96	-21	45	6 09	6 45	7 17	22	02	70	12 44	31
19	105	51.6		13.0	204	17.3	98	-21	50	18	6 58	34	21	43	75	13 04	26
20	120	51.6		13.5	218	46.1	98	-20	52	22	7 03	42	34	77	14	23	
21	135	51.5		14.0	233	15.1	100	44.7	54	26	10	7 51	24	80	24	21	
22	150	51.5		14.5	247	44.2	101	35.2	56	30	17	8 01	21	12	84	36	18
23	165	51.5		15.0	262	13.4	102	25.6	58	35	25	12	20	59	88	13 50	14
24	180	51.4	+20	15.5	276	42.8	104	-20	60 S	6 41	7 34	8 25	20	43	93	14 06	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 05 ^m 8		Mag: -3.8 PMG: 10 ^h 22 ^m		Mag: -0.4 PMG: 5 ^h 26 ^m		Mag: -2.0 PMG: 17 ^h 00 ^m		Mag: +0.1 PMG: 13 ^h 58 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	238	13.4	204	28.6	+11	52.7	278	21.1	-17	57.5	104	16.5	+18	11.4	150	06.1	+22	34.1
1	253	15.9	219	28.1		53.7	293	22.1		57.2	119	18.6		11.3	165	08.3		34.1
2	268	18.4	234	27.7		54.7	308	23.2		56.9	134	20.7		11.2	180	10.4		34.1
3	283	20.8	249	27.3		55.8	323	24.3		56.6	149	22.9		11.1	195	12.6		34.1
4	298	23.3	264	26.8		56.8	338	25.4		56.3	164	25.0		11.0	210	14.7		34.1
5	313	25.8	279	26.4	+11	57.9	353	26.4	-17	56.0	179	27.2	+18	11.0	225	16.8	+22	34.1
6	328	28.2	294	25.9	+11	58.9	8	27.5	-17	55.7	194	29.3	+18	10.9	240	19.0	+22	34.1
7	343	30.7	309	25.5	+11	59.9	23	28.6		55.3	209	31.4		10.8	255	21.1		34.2
8	358	33.2	324	25.0	+12	01.0	38	29.7		55.0	224	33.6		10.7	270	23.3		34.2
9	13	35.6	339	24.6		02.0	53	30.7		54.7	239	35.7		10.6	285	25.4		34.2
10	28	38.1	354	24.1		03.0	68	31.8		54.4	254	37.9		10.5	300	27.5		34.2
11	43	40.5	9	23.7	+12	04.1	83	32.9	-17	54.1	269	40.0	+18	10.4	315	29.7	+22	34.2
12	58	43.0	24	23.2	+12	05.1	98	34.0	-17	53.8	284	42.2	+18	10.3	330	31.8	+22	34.2
13	73	45.5	39	22.7		06.2	113	35.0		53.5	299	44.3		10.2	345	34.0		34.2
14	88	47.9	54	22.3		07.2	128	36.1		53.2	314	46.4		10.1	0	36.1		34.2
15	103	50.4	69	21.8		08.2	143	37.2		52.8	329	48.6		10.0	15	38.2		34.2
16	118	52.9	84	21.4		09.3	158	38.3		52.5	344	50.7		10.0	30	40.4		34.2
17	133	55.3	99	20.9	+12	10.3	173	39.4	-17	52.2	359	52.8	+18	09.9	45	42.5	+22	34.2
18	148	57.8	114	20.5	+12	11.3	188	40.4	-17	51.9	14	55.0	+18	09.8	60	44.7	+22	34.3
19	164	00.3	129	20.0		12.4	203	41.5		51.6	29	57.1		09.7	75	46.8		34.3
20	179	02.7	144	19.6		13.4	218	42.6		51.3	44	59.3		09.6	90	48.9		34.3
21	194	05.2	159	19.1		14.4	233	43.7		51.0	60	01.4		09.5	105	51.1		34.3
22	209	07.7	174	18.7		15.5	248	44.8		50.6	75	03.5		09.4	120	53.2		34.3
23	224	10.1	189	18.2		16.5	263	45.8		50.3	90	05.7		09.3	135	55.3		34.3
24	239	12.6	204	17.8	+12	17.5	278	46.9	-17	50.0	105	07.8	+18	09.2	150	57.5	+22	34.3
Dif	—		-5 +10		+11 +3		+21 -1		+21 0									

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6			Edad: 20 ^d 5 PHE { SD: 15 ^h 5 PMG: 5 ^h 45 ^m 4 ^h : 56 ^m 7 12 ^h : 56 ^m 4 20 ^h : 56 ^m 2 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	51.4	+20	15.5	276	42.8	-20	15.8	60 N	20 47	21 58	** **	2 14 7	9 28 90				
1	195	51.4		16.0	291	12.2 ¹⁰⁴	-20	06.0 ⁹⁸	58	31	32	** **	2 00 11	41 86				
2	210	51.3		16.5	305	41.8 ¹⁰⁶	-19	56.2 ⁹⁸	56	18	21 12	22 44	1 48 15	9 52 83				
3	225	51.3		17.0	320	11.4 ¹⁰⁶		46.2 ¹⁰⁰	54	20 07	20 55	22 08	38 17	10 02 80				
4	240	51.2		17.5	334	41.2 ¹⁰⁸		36.1 ¹⁰¹	52	19 57	41	21 44	28 20	11 77				
5	255	51.2	+20	18.0	349	11.1 ¹⁰⁹	-19	26.0 ¹⁰¹	50	19 48	20 29	21 25	1 20 22	10 19 74				
6	270	51.2	+20	18.5	3	41.1 ¹¹⁰	-19	15.7 ¹⁰³	45	19 30	20 05	20 50	1 02 27	10 36 69				
7	285	51.1		19.0	18	11.2 ¹¹¹	-19	05.4 ¹⁰³	40	14	19 46	25	0 47 31	10 49 65				
8	300	51.1		19.5	32	41.4 ¹¹²	-18	55.0 ¹⁰⁴	35	19 02	30	20 05	35 33	11 01 62				
9	315	51.0		20.0	47	11.8 ¹¹⁴		44.5 ¹⁰⁵	30	18 50	19 17	19 49	24 36	11 59				
10	330	51.0		20.5	61	42.2 ¹¹⁴		34.0 ¹⁰⁵	20	32	18 56	24	0 05 41	28 54				
11	345	50.9	+20	21.0	76	12.7 ¹¹⁵	-18	23.4 ¹⁰⁶	10 N	18 15	18 38	19 04	** ** *	11 43 50				
12	0	50.9	+20	21.5	90	43.4 ¹¹⁷	-18	12.7 ¹⁰⁷	0	18 00	18 22	18 48	** ** *	11 56 47				
13	15	50.8		22.0	105	14.1 ¹¹⁷	-18	01.9 ¹⁰⁸	10 S	17 45	18 08	33	** ** *	12 10 43				
14	30	50.8		22.5	119	45.0 ¹¹⁹	-17	51.0 ¹⁰⁹	20	29	17 53	20	23 57 52	25 38				
15	45	50.8		23.0	134	15.9 ¹¹⁹		40.1 ¹⁰⁹	30	11	37	18 06	42 57	41 34				
16	60	50.7		23.5	148	47.0 ¹²¹		29.1 ¹¹⁰	35	17 01	28	17 59	33 61	12 51 31				
17	75	50.7	+20	24.0	163	18.2 ¹²²	-17	18.1 ¹¹⁰	40	16 49	17 18	17 51	23 24 63	13 02 28				
18	90	50.6	+20	24.5	177	49.4 ¹²²	-17	06.9 ¹¹²	45	16 35	17 07	17 43	23 12 67	13 15 24				
19	105	50.6		24.9	192	20.8 ¹²⁴	-16	55.7 ¹¹²	50	18	16 54	34	22 58 72	30 20				
20	120	50.5		25.4	206	52.2 ¹²⁴		44.5 ¹¹²	52	09	48	30	51 75	37 18				
21	135	50.5		25.9	221	23.8 ¹²⁶		33.2 ¹¹³	54	16 01	41	26	44 77	45 15				
22	150	50.4		26.4	235	55.4 ¹²⁶		21.8 ¹¹⁴	56	15 50	34	21	36 80	13 54 12				
23	165	50.4		26.9	250	27.2 ¹²⁸	-16	10.3 ¹¹⁵	58	39	26	16	27 83	14 04 9				
24	180	50.3	+20	27.4	264	59.0 ¹²⁸	-15	58.8 ¹¹⁵	60 S	15 25	16 17	17 10	22 16 88	14 16 5				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 01 ^m 8		Mag: -3.8 PMG: 10 ^h 23 ^m				Mag: -0.5 PMG: 5 ^h 24 ^m				Mag: -2.0 PMG: 16 ^h 57 ^m				Mag: +0.1 PMG: 13 ^h 54 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	239	12.6	204	17.8	+12	17.5	278	46.9	-17	50.0	105	07.8	+18	09.2	150	57.5	+22	34.3
1	254	15.0	219	17.3		18.5	293	48.0		49.7	120	10.0		09.1	165	59.6		34.3
2	269	17.5	234	16.8		19.6	308	49.1		49.4	135	12.1		09.0	181	01.8		34.3
3	284	20.0	249	16.4		20.6	323	50.2		49.1	150	14.2		08.9	196	03.9		34.3
4	299	22.4	264	15.9		21.6	338	51.3		48.8	165	16.4		08.9	211	06.0		34.3
5	314	24.9	279	15.5	+12	22.7	353	52.3	-17	48.4	180	18.5	+18	08.8	226	08.2	+22	34.4
6	329	27.4	294	15.0	+12	23.7	8	53.4	-17	48.1	195	20.6	+18	08.7	241	10.3	+22	34.4
7	344	29.8	309	14.5		24.7	23	54.5		47.8	210	22.8		08.6	256	12.5		34.4
8	359	32.3	324	14.1		25.7	38	55.6		47.5	225	24.9		08.5	271	14.6		34.4
9	14	34.8	339	13.6		26.8	53	56.7		47.2	240	27.0		08.4	286	16.7		34.4
10	29	37.2	354	13.2		27.8	68	57.8		46.9	255	29.2		08.3	301	18.9		34.4
11	44	39.7	9	12.7	+12	28.8	83	58.8	-17	46.6	270	31.3	+18	08.2	316	21.0	+22	34.4
12	59	42.2	24	12.2	+12	29.8	98	59.9	-17	46.2	285	33.4	+18	08.1	331	23.1	+22	34.4
13	74	44.6	39	11.8		30.9	114	01.0		45.9	300	35.6		08.0	346	25.3		34.4
14	89	47.1	54	11.3		31.9	129	02.1		45.6	315	37.7		07.9	1	27.4		34.4
15	104	49.5	69	10.9		32.9	144	03.2		45.3	330	39.8		07.8	16	29.6		34.4
16	119	52.0	84	10.4		33.9	159	04.3		45.0	345	42.0		07.7	31	31.7		34.4
17	134	54.5	99	09.9	+12	35.0	174	05.4	-17	44.7	0	44.1	+18	07.7	46	33.8	+22	34.5
18	149	56.9	114	09.5	+12	36.0	189	06.5	-17	44.4	15	46.3	+18	07.6	61	36.0	+22	34.5
19	164	59.4	129	09.0		37.0	204	07.5		44.0	30	48.4		07.5	76	38.1		34.5
20	180	01.9	144	08.5		38.0	219	08.6		43.7	45	50.5		07.4	91	40.2		34.5
21	195	04.3	159	08.1		39.0	234	09.7		43.4	60	52.7		07.3	106	42.4		34.5
22	210	06.8	174	07.6		40.1	249	10.8		43.1	75	54.8		07.2	121	44.5		34.5
23	225	09.3	189	07.1		41.1	264	11.9		42.8	90	56.9		07.1	136	46.7		34.5
24	240	11.7	204	06.7	+12	42.1	279	13.0	-17	42.5	105	59.0	+18	07.0	151	48.8	+22	34.5
Dif	—		-5		+10		+11		+3		+21		-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 56 ^m 7			Edad: 21 ^d 5 PHE SD: 15 ^h 3 PMG: 6 ^h 32 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	50.3	+20 27.4	264	59.0	-15 58.8	60 N	** **	1 55	3 06		2 21	3	10 58	86
1	195	50.3		279	31.0 ¹³⁰	47.3 ¹¹⁵	58	** **	2 21	21		11	7	11 07	82
2	210	50.2		294	03.0 ¹³⁰	35.6 ¹¹⁷	56	1 09	41	34		2 03	10	15	78
3	225	50.2		308	35.1 ¹³¹	24.0 ¹¹⁶	54	1 44	2 58	46		1 55	13	22	75
4	240	50.1		323	07.3 ¹³²	12.2 ¹¹⁸	52	2 09	3 12	3 56		48	16	28	73
5	255	50.1	+20 29.8	337	39.6 ¹³³	-15 00.4 ¹¹⁸	50	2 28	3 24	4 05		1 42	18	11 33	71
6	270	50.0	+20 30.3	352	12.0 ¹³⁴	-14 48.6 ¹¹⁸	45	3 03	3 48	4 23		1 29	22	11 45	66
7	285	50.0		6	44.5 ¹³⁵	36.7 ¹¹⁹	40	28	4 07	39		18	26	11 54	63
8	300	49.9		21	17.1 ¹³⁶	24.8 ¹¹⁹	35	3 48	23	4 51		08	29	12 03	59
9	315	49.9		35	49.7 ¹³⁶	12.8 ¹²⁰	30	4 04	36	5 03		1 00	32	10	56
10	330	49.8		50	22.5 ¹³⁸	-14 00.7 ¹²¹	20	29	4 58	22		0 46	36	22	51
11	345	49.8	+20 32.7	64	55.3 ¹³⁸	-13 48.6 ¹²¹	10 N	4 49	5 15	5 38		0 33	41	12 33	47
12	0	49.7	+20 33.2	79	28.2 ¹³⁹	-13 36.5 ¹²¹	0	5 05	5 31	5 53		0 21	45	12 43	43
13	15	49.7		94	01.2 ¹⁴⁰	24.3 ¹²²	10 S	20	5 46	6 08		0 09	49	12 53	39
14	30	49.6		108	34.2 ¹⁴⁰	-13 12.1 ¹²²	20	34	6 01	24		** ** *	**	13 03	35
15	45	49.6		123	07.4 ¹⁴²	-12 59.8 ¹²³	30	47	17	42		** ** *	**	15	31
16	60	49.5		137	40.6 ¹⁴²	47.5 ¹²³	35	5 55	26	6 53		** ** *	**	22	28
17	75	49.5	+20 35.6	152	13.9 ¹⁴³	-12 35.2 ¹²³	40	6 02	6 35	7 05		** ** *	**	13 30	24
18	90	49.4	+20 36.1	166	47.3 ¹⁴⁴	-12 22.8 ¹²⁴	45	6 10	6 47	7 19		** ** *	**	13 39	21
19	105	49.4		181	20.7 ¹⁴⁴	-12 10.3 ¹²⁵	50	20	7 00	36		** ** *	**	50	16
20	120	49.3		195	54.2 ¹⁴⁵	-11 57.9 ¹²⁴	52	24	06	45		** ** *	**	13 55	14
21	135	49.3		210	27.8 ¹⁴⁶	45.4 ¹²⁵	54	28	13	7 54		** ** *	**	14 00	12
22	150	49.2		225	01.5 ¹⁴⁷	32.8 ¹²⁶	56	33	20	8 04		23 56	77	06	10
23	165	49.2		239	35.2 ¹⁴⁷	20.2 ¹²⁶	58	38	28	16		50	80	13	7
24	180	49.1	+20 38.9	254	09.0 ¹⁴⁸	-11 07.6 ¹²⁶	60 S	6 44	7 37	8 29		23 44	83	14 21	3
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 57 ^m 9			Mag: -3.8 PMG: 10 ^h 24 ^m			Mag: -0.5 PMG: 5 ^h 23 ^m			Mag: -2.0 PMG: 16 ^h 54 ^m			Mag: +0.1 PMG: 13 ^h 51 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	240	11.7		204	06.7	+12 42.1	279	13.0	-17 42.5	105	59.0	+18 07.0	151	48.8	+22 34.5
1	255	14.2		219	06.2		294	14.1	42.2	121	01.2	06.9	166	50.9	34.5
2	270	16.6		234	05.8		309	15.2	41.8	136	03.3	06.8	181	53.1	34.5
3	285	19.1		249	05.3		324	16.3	41.5	151	05.4	06.7	196	55.2	34.5
4	300	21.6		264	04.8		339	17.4	41.2	166	07.6	06.6	211	57.3	34.5
5	315	24.0		279	04.3	+12 47.2	354	18.5	-17 40.9	181	09.7	+18 06.5	226	59.5	+22 34.6
6	330	26.5		294	03.9	+12 48.2	9	19.5	-17 40.6	196	11.8	+18 06.4	242	01.6	+22 34.6
7	345	29.0		309	03.4		24	20.6	40.3	211	14.0	06.3	257	03.8	34.6
8	0	31.4		324	02.9		39	21.7	40.0	226	16.1	06.3	272	05.9	34.6
9	15	33.9		339	02.5		54	22.8	39.7	241	18.2	06.2	287	08.0	34.6
10	30	36.4		354	02.0		69	23.9	39.3	256	20.4	06.1	302	10.2	34.6
11	45	38.8		9	01.5	+12 53.3	84	25.0	-17 39.0	271	22.5	+18 06.0	317	12.3	+22 34.6
12	60	41.3		24	01.1	+12 54.3	99	26.1	-17 38.7	286	24.6	+18 05.9	332	14.4	+22 34.6
13	75	43.8		39	00.6		114	27.2	38.4	301	26.7	05.8	347	16.6	34.6
14	90	46.2		54	00.1		129	28.3	38.1	316	28.9	05.7	2	18.7	34.6
15	105	48.7		68	59.6		144	29.4	37.8	331	31.0	05.6	17	20.8	34.6
16	120	51.1		83	59.2		159	30.5	37.5	346	33.1	05.5	32	23.0	34.6
17	135	53.6		98	58.7	+12 59.3	174	31.6	-17 37.1	1	35.3	+18 05.4	47	25.1	+22 34.7
18	150	56.1		113	58.2	+13 00.4	189	32.7	-17 36.8	16	37.4	+18 05.3	62	27.3	+22 34.7
19	165	58.5		128	57.8		204	33.8	36.5	31	39.5	05.2	77	29.4	34.7
20	181	01.0		143	57.3		219	34.9	36.2	46	41.6	05.1	92	31.5	34.7
21	196	03.5		158	56.8		234	36.0	35.9	61	43.8	05.0	107	33.7	34.7
22	211	05.9		173	56.3		249	37.1	35.6	76	45.9	04.9	122	35.8	34.7
23	226	08.4		188	55.9		264	38.2	35.3	91	48.0	04.8	137	37.9	34.7
24	241	10.9		203	55.4	+13 06.4	279	39.3	-17 34.9	106	50.2	+18 04.7	152	40.1	+22 34.7
Dif	—			-5 +10			+11 +3			+21 -1			+21 0		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:8			Edad: 22 ^d 5	PHE {	4 ^h : 55:2 12 ^h : 55:0 20 ^h : 54:9			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 8								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	180	49.1	+20 38.9	254	09.0	-11 07.6		60 N	20 51	22 04	** **	2 24	3	12 24	82
1	195	49.1		268	42.9 ¹⁴⁹	-10 55.0 ¹²⁶		58	35	21 37	** **	18	6	29	78
2	210	49.0	39.9	283	16.8 ¹⁴⁹	42.3 ¹²⁷		56	22	21 16	22 53	13	8	33	76
3	225	48.9	40.3	297	50.8 ¹⁵⁰	29.6 ¹²⁷		54	10	20 59	22 14	08	11	37	73
4	240	48.9	40.8	312	24.9 ¹⁵¹	16.8 ¹²⁸		52	20 00	44	21 49	04	13	41	71
5	255	48.8	+20 41.3	326	59.0 ¹⁵¹	-10 04.1 ¹²⁷		50	19 51	20 32	21 29	2 00	15	12 44	69
6	270	48.8	+20 41.7	341	33.2 ¹⁵²	-9 51.3 ¹²⁸		45	19 32	20 07	20 53	1 51	19	12 51	64
7	285	48.7	42.2	356	07.4 ¹⁵²	38.4 ¹²⁹		40	16	19 48	27	44	23	12 57	60
8	300	48.7	42.7	10	41.7 ¹⁵³	25.6 ¹²⁸		35	19 03	32	20 07	37	26	13 02	57
9	315	48.6	43.1	25	16.1 ¹⁵⁴	-9 12.7 ¹²⁹		30	18 52	19 18	19 51	32	29	06	54
10	330	48.6	43.6	39	50.5 ¹⁵⁴	-8 59.8 ¹²⁹		20	32	18 56	25	22	34	13	50
11	345	48.5	+20 44.1	54	25.0 ¹⁵⁵	-8 46.8 ¹³⁰		10 N	18 16	18 38	19 05	1 14	38	13 20	45
12	0	48.4	+20 44.5	68	59.5 ¹⁵⁵	-8 33.9 ¹²⁹		0	18 00	18 22	18 48	1 06	42	13 26	41
13	15	48.4	45.0	83	34.1 ¹⁵⁶	20.9 ¹³⁰		10 S	17 45	18 07	33	0 58	45	32	37
14	30	48.3	45.5	98	08.7 ¹⁵⁶	-8 07.9 ¹³⁰		20	29	17 52	19	49	50	38	33
15	45	48.3	45.9	112	43.4 ¹⁵⁷	-7 54.9 ¹³⁰		30	10	36	18 05	39	55	46	28
16	60	48.2	46.4	127	18.2 ¹⁵⁸	41.8 ¹³¹		35	17 00	27	17 58	34	57	50	25
17	75	48.2	+20 46.9	141	53.0 ¹⁵⁸	-7 28.8 ¹³⁰		40	16 47	17 17	17 50	0 27	61	13 54	22
18	90	48.1	+20 47.3	156	27.8 ¹⁵⁸	-7 15.7 ¹³¹		45	16 33	17 06	17 42	0 20	64	14 00	18
19	105	48.0	47.8	171	02.7 ¹⁵⁹	-7 02.6 ¹³¹		50	15	16 52	32	10	70	06	14
20	120	48.0	48.2	185	37.6 ¹⁵⁹	-6 49.5 ¹³¹		52	16 07	46	28	06	72	09	12
21	135	47.9	48.7	200	12.6 ¹⁶⁰	36.3 ¹³²		54	15 58	39	24	0 01	74	12	10
22	150	47.9	49.2	214	47.6 ¹⁶⁰	23.2 ¹³¹		56	48	32	19	** ** *	**	16	8
23	165	47.8	49.6	229	22.7 ¹⁶¹	-6 10.0 ¹³²		58	36	23	14	** ** *	**	20	5
24	180	47.8	+20 50.1	243	57.8 ¹⁶¹	-5 56.8 ¹³²		60 S	15 22	16 14	17 08	** ** *	**	14 24	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 54 ^m 0		Mag: -3.8 PMG: 10 ^h 25 ^m		Mag: -0.5 PMG: 5 ^h 21 ^m		Mag: -2.0 PMG: 16 ^h 50 ^m		Mag: +0.1 PMG: 13 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	10.9	203 55.4	+13 06.4	279 39.3	-17 34.9	106 50.2	+18 04.7	152 40.1	+22 34.7
1	256	13.3	218 54.9	07.4	294 40.4	34.6	121 52.3	04.7	167 42.2	34.7
2	271	15.8	233 54.4	08.4	309 41.5	34.3	136 54.4	04.6	182 44.3	34.7
3	286	18.3	248 54.0	09.4	324 42.6	34.0	151 56.5	04.5	197 46.5	34.7
4	301	20.7	263 53.5	10.4	339 43.7	33.7	166 58.7	04.4	212 48.6	34.7
5	316	23.2	278 53.0	+13 11.4	354 44.8	-17 33.4	182 00.8	+18 04.3	227 50.7	+22 34.8
6	331	25.6	293 52.5	+13 12.4	9 45.9	-17 33.1	197 02.9	+18 04.2	242 52.9	+22 34.8
7	346	28.1	308 52.0	13.4	24 47.0	32.8	212 05.0	04.1	257 55.0	34.8
8	1	30.6	323 51.6	14.4	39 48.1	32.4	227 07.2	04.0	272 57.2	34.8
9	16	33.0	338 51.1	15.4	54 49.2	32.1	242 09.3	03.9	287 59.3	34.8
10	31	35.5	353 50.6	16.4	69 50.3	31.8	257 11.4	03.8	303 01.4	34.8
11	46	38.0	8 50.1	+13 17.4	84 51.4	-17 31.5	272 13.5	+18 03.7	318 03.6	+22 34.8
12	61	40.4	23 49.6	+13 18.4	99 52.5	-17 31.2	287 15.7	+18 03.6	333 05.7	+22 34.8
13	76	42.9	38 49.2	19.4	114 53.6	30.9	302 17.8	03.5	348 07.8	34.8
14	91	45.4	53 48.7	20.4	129 54.7	30.6	317 19.9	03.4	3 10.0	34.8
15	106	47.8	68 48.2	21.4	144 55.8	30.2	332 22.0	03.3	18 12.1	34.8
16	121	50.3	83 47.7	22.4	159 57.0	29.9	347 24.2	03.2	33 14.2	34.8
17	136	52.7	98 47.2	+13 23.4	174 58.1	-17 29.6	2 26.3	+18 03.1	48 16.4	+22 34.9
18	151	55.2	113 46.8	+13 24.4	189 59.2	-17 29.3	17 28.4	+18 03.0	63 18.5	+22 34.9
19	166	57.7	128 46.3	25.4	205 00.3	29.0	32 30.5	02.9	78 20.6	34.9
20	182	00.1	143 45.8	26.4	220 01.4	28.7	47 32.7	02.8	93 22.8	34.9
21	197	02.6	158 45.3	27.4	235 02.5	28.4	62 34.8	02.7	108 24.9	34.9
22	212	05.1	173 44.8	28.4	250 03.6	28.0	77 36.9	02.6	123 27.0	34.9
23	227	07.5	188 44.3	29.4	265 04.7	27.7	92 39.0	02.5	138 29.2	34.9
24	242	10.0	203 43.8	+13 30.4	280 05.8	-17 27.4	107 41.2	+18 02.4	153 31.3	+22 34.9
Dif	—		-5	+10	+11	+3	+21	-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 56 ^m 9				Edad: 23 ^d 5 PHE SD: 14 ^h 9 PMG: 7 ^h 57 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	47.8	+20	50.1	243	57.8	-5	56.8	60 N	** **	1 49	3 02	2 27	2	13 46	80				
1	195	47.7		50.5	258	32.9 ¹⁶¹		43.6 ¹³²	58	** **	2 16	18	24	5	47 77					
2	210	47.6		51.0	273	08.1 ¹⁶²		30.4 ¹³²	56	1 00	37	31	21	8	49 74					
3	225	47.6		51.5	287	43.3 ¹⁶²		17.2 ¹³²	54	1 39	2 54	43	19	9	50 72					
4	240	47.5		51.9	302	18.6 ¹⁶³	-5	04.0 ¹³²	52	2 04	3 09	3 53	17	11	52 69					
5	255	47.5	+20	52.4	316	53.9 ¹⁶³	-4	50.7 ¹³³	50	2 24	3 21	4 02	2 15	13	13 53	67				
6	270	47.4	+20	52.8	331	29.2 ¹⁶³	-4	37.5 ¹³²	45	3 01	3 46	4 22	2 10	18	13 55	63				
7	285	47.3		53.3	346	04.6 ¹⁶⁴		24.2 ¹³³	40	26	4 06	37	07	21	57 59					
8	300	47.3		53.7	0	40.0 ¹⁶⁴	-4	10.9 ¹³³	35	3 47	22	4 50	03	25	13 59	55				
9	315	47.2		54.2	15	15.4 ¹⁶⁴	-3	57.7 ¹³²	30	4 03	35	5 02	2 01	27	14 00	53				
10	330	47.1		54.6	29	50.8 ¹⁶⁴		44.4 ¹³³	20	29	4 57	21	1 56	32	03 48					
11	345	47.1	+20	55.1	44	26.3 ¹⁶⁵	-3	31.1 ¹³³	10 N	4 49	5 15	5 38	1 52	36	14 05	44				
12	0	47.0	+20	55.5	59	01.8 ¹⁶⁵	-3	17.8 ¹³³	0	5 05	5 31	5 53	1 48	40	14 07	40				
13	15	47.0		56.0	73	37.4 ¹⁶⁶	-3	04.5 ¹³³	10 S	20	5 46	6 09	43	45	09 36					
14	30	46.9		56.4	88	12.9 ¹⁶⁵	-2	51.2 ¹³³	20	34	6 01	25	39	49	11 32					
15	45	46.8		56.9	102	48.5 ¹⁶⁶		37.9 ¹³³	30	48	18	44	34	54	14 27					
16	60	46.8		57.3	117	24.1 ¹⁶⁶		24.5 ¹³⁴	35	5 56	27	6 54	31	57	15 24					
17	75	46.7	+20	57.8	131	59.8 ¹⁶⁷	-2	11.2 ¹³³	40	6 04	6 37	7 07	1 28	60	14 16	22				
18	90	46.7	+20	58.2	146	35.4 ¹⁶⁶	-1	57.9 ¹³³	45	6 12	6 48	7 21	1 24	63	14 18	18				
19	105	46.6		58.7	161	11.1 ¹⁶⁷		44.6 ¹³³	50	22	7 02	39	20	67	20 14					
20	120	46.5		59.1	175	46.8 ¹⁶⁷		31.3 ¹³³	52	26	08	47	18	69	21 12					
21	135	46.5	+20	59.6	190	22.5 ¹⁶⁷		18.0 ¹³³	54	31	15	7 57	15	72	22 10					
22	150	46.4	+21	00.0	204	58.2 ¹⁶⁷	-1	04.6 ¹³⁴	56	35	23	8 07	13	74	24 7					
23	165	46.3	+21	00.4	219	33.9 ¹⁶⁷	-0	51.3 ¹³³	58	41	31	19	10	77	25 5					
24	180	46.3	+21	00.9	234	09.7 ¹⁶⁸	-0	38.0 ¹³³	60 S	6 47	7 41	8 33	1 07	80	14 26	2				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 50 ^m 0				Mag: -3.8 PMG: 10 ^h 25 ^m				Mag: -0.5 PMG: 5 ^h 19 ^m				Mag: -2.0 PMG: 16 ^h 47 ^m				Mag: +0.1 PMG: 13 ^h 44 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	242	10.0			203	43.8	+13	30.4	280	05.8	-17	27.4	107	41.2	+18	02.4	153	31.3	+22	34.9
1	257	12.5			218	43.4		31.4	295	06.9		27.1	122	43.3		02.4	168	33.4		34.9
2	272	14.9			233	42.9		32.4	310	08.0		26.8	137	45.4		02.3	183	35.6		34.9
3	287	17.4			248	42.4		33.4	325	09.2		26.5	152	47.5		02.2	198	37.7		34.9
4	302	19.9			263	41.9		34.4	340	10.3		26.2	167	49.6		02.1	213	39.8		34.9
5	317	22.3			278	41.4	+13	35.4	355	11.4	-17	25.9	182	51.8	+18	02.0	228	42.0	+22	34.9
6	332	24.8			293	40.9	+13	36.4	10	12.5	-17	25.5	197	53.9	+18	01.9	243	44.1	+22	35.0
7	347	27.2			308	40.4		37.4	25	13.6		25.2	212	56.0		01.8	258	46.2		35.0
8	2	29.7			323	39.9		38.3	40	14.7		24.9	227	58.1		01.7	273	48.4		35.0
9	17	32.2			338	39.5		39.3	55	15.8		24.6	243	00.2		01.6	288	50.5		35.0
10	32	34.6			353	39.0		40.3	70	16.9		24.3	258	02.4		01.5	303	52.6		35.0
11	47	37.1			8	38.5	+13	41.3	85	18.1	-17	24.0	273	04.5	+18	01.4	318	54.8	+22	35.0
12	62	39.6			23	38.0	+13	42.3	100	19.2	-17	23.7	288	06.6	+18	01.3	333	56.9	+22	35.0
13	77	42.0			38	37.5		43.3	115	20.3		23.4	303	08.7		01.2	348	59.0		35.0
14	92	44.5			53	37.0		44.3	130	21.4		23.0	318	10.8		01.1	4	01.2		35.0
15	107	47.0			68	36.5		45.3	145	22.5		22.7	333	13.0		01.0	19	03.3		35.0
16	122	49.4			83	36.0		46.2	160	23.6		22.4	348	15.1		00.9	34	05.4		35.0
17	137	51.9			98	35.5	+13	47.2	175	24.8	-17	22.1	3	17.2	+18	00.8	49	07.6	+22	35.0
18	152	54.3			113	35.0	+13	48.2	190	25.9	-17	21.8	18	19.3	+18	00.7	64	09.7	+22	35.0
19	167	56.8			128	34.5		49.2	205	27.0		21.5	33	21.4		00.6	79	11.8		35.1
20	182	59.3			143	34.0		50.2	220	28.1		21.2	48	23.6		00.5	94	14.0		35.1
21	198	01.7			158	33.6		51.2	235	29.2		20.9	63	25.7		00.4	109	16.1		35.1
22	213	04.2			173	33.1		52.1	250	30.3		20.5	78	27.8		00.3	124	18.2		35.1
23	228	06.7			188	32.6		53.1	265	31.5		20.2	93	29.9		00.2	139	20.4		35.1
24	243	09.1			203	32.1	+13	54.1	280	32.6	-17	19.9	108	32.0	+18	00.1	154	22.5	+22	35.1
Dif	—				-5 +10				+11 +3				+21 -1				+21 0			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8		Edad: 24 ^d 5 PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2						Civil		Náutico		Hora R°					
	PMG: 11 ^h 57 ^m 0		SD: 14°8		PMG: 8 ^h 37 ^m R°: 40 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	180	46.3	+21	00.9	234	09.7	-0 38.0	60 N	20 55	22 11	** ** *	2 29	2	15 06	80			
1	195	46.2		01.3	248	45.5 ¹⁶⁸	24.7 ¹³³	58	39	21 42	** ** *	29	4	04	77			
2	210	46.1		01.8	263	21.3 ¹⁶⁸	-0 11.4 ¹³³	56	25	20	23 04	29	7	03	74			
3	225	46.1		02.2	277	57.0 ¹⁶⁷	+0 01.9 ¹³³	54	13	21 02	22 20	28	10	02	7			
4	240	46.0		02.7	292	32.9 ¹⁶⁹	15.2 ¹³³	52	20 03	20 48	21 53	28	12	01	69			
5	255	45.9	+21	03.1	307	08.7 ¹⁶⁸	+0 28.5 ¹³³	50	19 53	20 35	21 33	2 28	14	15 00	67			
6	270	45.9	+21	03.5	321	44.5 ¹⁶⁸	+0 41.7 ¹³²	45	19 34	20 09	20 56	2 28	18	14 58	62			
7	285	45.8		04.0	336	20.3 ¹⁶⁸	+0 55.0 ¹³³	40	18	19 49	29	28	21	56	59			
8	300	45.7		04.4	350	56.2 ¹⁶⁹	+1 08.3 ¹³³	35	19 04	33	20 09	28	24	54	56			
9	315	45.7		04.9	5	32.0 ¹⁶⁸	21.5 ¹³²	30	18 53	19 20	19 52	28	27	53	53			
10	330	45.6		05.3	20	07.8 ¹⁶⁸	34.8 ¹³³	20	33	18 57	26	28	32	51	48			
11	345	45.5	+21	05.7	34	43.7 ¹⁶⁹	+1 48.0 ¹³²	10 N	18 16	18 39	19 06	2 28	36	14 49	44			
12	0	45.5	+21	06.2	49	19.5 ¹⁶⁸	+2 01.2 ¹³²	0	18 01	18 23	18 49	2 28	39	14 47	40			
13	15	45.4		06.6	63	55.4 ¹⁶⁹	14.5 ¹³³	10 S	17 45	18 07	33	28	43	45	36			
14	30	45.3		07.0	78	31.2 ¹⁶⁸	27.7 ¹³²	20	28	17 52	19	28	47	43	32			
15	45	45.3		07.5	93	07.1 ¹⁶⁹	40.9 ¹³²	30	17 10	35	18 05	28	52	41	27			
16	60	45.2		07.9	107	42.9 ¹⁶⁸	+2 54.0 ¹³¹	35	16 59	26	17 57	28	55	39	25			
17	75	45.1	+21	08.3	122	18.8 ¹⁶⁹	+3 07.2 ¹³²	40	16 46	17 16	17 49	2 28	58	14 38	21			
18	90	45.1	+21	08.8	136	54.6 ¹⁶⁸	+3 20.3 ¹³¹	45	16 31	17 04	17 41	2 27	63	14 36	18			
19	105	45.0		09.2	151	30.5 ¹⁶⁹	33.5 ¹³²	50	13	16 50	31	27	67	34	14			
20	120	44.9		09.6	166	06.3 ¹⁶⁸	46.6 ¹³¹	52	16 05	44	26	27	69	33	12			
21	135	44.9		10.1	180	42.1 ¹⁶⁸	+3 59.7 ¹³¹	54	15 56	37	22	27	72	32	10			
22	150	44.8		10.5	195	17.9 ¹⁶⁸	+4 12.8 ¹³¹	56	45	29	17	27	74	31	7			
23	165	44.7		10.9	209	53.7 ¹⁶⁸	25.8 ¹³⁰	58	33	21	11	27	77	30	4			
24	180	44.7	+21	11.3	224	29.5 ¹⁶⁸	+4 38.9 ¹³¹	60 S	15 18	16 11	17 05	2 27	80	14 28	2			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 46 ^m 1		Mag: -3.8 PMG: 10 ^h 26 ^m			Mag: -0.5 PMG: 5 ^h 17 ^m			Mag: -2.0 PMG: 16 ^h 44 ^m			Mag: +0.1 PMG: 13 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	243	09.1	203	32.1	+13	54.1	280	32.6	-17	19.9	108	32.0	+18	00.1	154	22.5	+22	35.1
1	258	11.6	218	31.6		55.1	295	33.7		19.6	123	34.1	+18	00.0	169	24.6		35.1
2	273	14.1	233	31.1		56.1	310	34.8		19.3	138	36.3	+17	59.9	184	26.8		35.1
3	288	16.5	248	30.6		57.0	325	35.9		19.0	153	38.4		59.8	199	28.9		35.1
4	303	19.0	263	30.1		58.0	340	37.1		18.7	168	40.5		59.7	214	31.0		35.1
5	318	21.5	278	29.6	+13	59.0	355	38.2	-17	18.4	183	42.6	+17	59.6	229	33.2	+22	35.1
6	333	23.9	293	29.1	+14	00.0	10	39.3	-17	18.0	198	44.7	+17	59.5	244	35.3	+22	35.1
7	348	26.4	308	28.6	+14	01.0	25	40.4		17.7	213	46.8		59.4	259	37.4		35.1
8	3	28.8	323	28.1		01.9	40	41.6		17.4	228	49.0		59.3	274	39.6		35.1
9	18	31.3	338	27.6		02.9	55	42.7		17.1	243	51.1		59.2	289	41.7		35.2
10	33	33.8	353	27.1		03.9	70	43.8		16.8	258	53.2		59.1	304	43.8		35.2
11	48	36.2	8	26.6	+14	04.9	85	44.9	-17	16.5	273	55.3	+17	59.0	319	46.0	+22	35.2
12	63	38.7	23	26.1	+14	05.8	100	46.1	-17	16.2	288	57.4	+17	58.9	334	48.1	+22	35.2
13	78	41.2	38	25.6		06.8	115	47.2		15.9	303	59.5		58.8	349	50.2		35.2
14	93	43.6	53	25.1		07.8	130	48.3		15.5	319	01.6		58.7	4	52.4		35.2
15	108	46.1	68	24.6		08.8	145	49.4		15.2	334	03.8		58.6	19	54.5		35.2
16	123	48.6	83	24.1		09.7	160	50.6		14.9	349	05.9		58.5	34	56.6		35.2
17	138	51.0	98	23.6	+14	10.7	175	51.7	-17	14.6	4	08.0	+17	58.4	49	58.8	+22	35.2
18	153	53.5	113	23.1	+14	11.7	190	52.8	-17	14.3	19	10.1	+17	58.3	65	00.9	+22	35.2
19	168	56.0	128	22.6		12.6	205	53.9		14.0	34	12.2		58.2	80	03.0		35.2
20	183	58.4	143	22.1		13.6	220	55.1		13.7	49	14.3		58.1	95	05.1		35.2
21	199	00.9	158	21.6		14.6	235	56.2		13.4	64	16.4		58.0	110	07.3		35.2
22	214	03.3	173	21.1		15.5	250	57.3		13.0	79	18.6		57.9	125	09.4		35.3
23	229	05.8	188	20.5		16.5	265	58.5		12.7	94	20.7		57.8	140	11.5		35.3
24	244	08.3	203	20.0	+14	17.5	280	59.6	-17	12.4	109	22.8	+17	57.7	155	13.7	+22	35.3
Dif	—		-5		+10		+11		+3		+21		-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 1				Edad: 25 ^d 5 PHE SD: 14 ^h 7 PMG: 9 ^h 17 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	44.7	+21	11.3	224	29.5	+4	38.9	60 N	** **	1 42	2 58	2 31	2	16 26	81	
1	195	44.6		11.8	239	05.3 ¹⁶⁸	+4	51.9 ¹³⁰	58	** **	2 12	3 15	33	6	21	78	
2	210	44.5		12.2	253	41.1 ¹⁶⁸	+5	04.9 ¹³⁰	56	0 50	34	29	36	8	17	74	
3	225	44.4		12.6	268	16.8 ¹⁶⁷		17.9 ¹³⁰	54	1 33	2 51	41	38	10	13	72	
4	240	44.4		13.0	282	52.6 ¹⁶⁸		30.9 ¹³⁰	52	2 00	3 06	3 51	40	12	10	69	
5	255	44.3	+21	13.5	297	28.3 ¹⁶⁷	+5	43.8 ¹²⁹	50	2 21	3 19	4 00	2 42	14	16 07	67	
6	270	44.2	+21	13.9	312	04.0 ¹⁶⁷	+5	56.7 ¹²⁹	45	2 58	3 44	4 20	2 46	19	16 00	63	
7	285	44.2		14.3	326	39.7 ¹⁶⁷	+6	09.6 ¹²⁹	40	3 25	4 04	36	49	22	15 55	59	
8	300	44.1		14.7	341	15.4 ¹⁶⁷		22.5 ¹²⁹	35	3 45	21	4 49	52	25	50	56	
9	315	44.0		15.2	355	51.1 ¹⁶⁷		35.3 ¹²⁸	30	4 02	34	5 01	2 55	28	46	53	
10	330	43.9		15.6	10	26.7 ¹⁶⁶	+6	48.2 ¹²⁹	20	28	4 57	21	3 00	32	39	49	
11	345	43.9	+21	16.0	25	02.3 ¹⁶⁶	+7	01.0 ¹²⁸	10 N	4 48	5 15	5 38	3 04	36	15 33	44	
12	0	43.8	+21	16.4	39	37.9 ¹⁶⁶	+7	13.7 ¹²⁷	0	5 05	5 31	5 53	3 07	41	15 27	41	
13	15	43.7		16.8	54	13.5 ¹⁶⁶		26.5 ¹²⁸	10 S	21	5 47	6 09	11	45	21	37	
14	30	43.7		17.3	68	49.0 ¹⁶⁵		39.2 ¹²⁷	20	35	6 02	26	15	49	15	33	
15	45	43.6		17.7	83	24.6 ¹⁶⁶	+7	51.9 ¹²⁷	30	49	19	45	20	53	08	28	
16	60	43.5		18.1	98	00.1 ¹⁶⁵	+8	04.5 ¹²⁶	35	5 57	28	6 56	23	56	15 04	26	
17	75	43.4	+21	18.5	112	35.6 ¹⁶⁵	+8	17.1 ¹²⁶	40	6 05	6 38	7 08	3 26	59	14 59	23	
18	90	43.4	+21	18.9	127	11.0 ¹⁶⁴	+8	29.7 ¹²⁶	45	6 14	6 50	7 23	3 30	63	14 54	19	
19	105	43.3		19.4	141	46.4 ¹⁶⁴		42.3 ¹²⁶	50	24	7 04	41	34	68	48	15	
20	120	43.2		19.8	156	21.8 ¹⁶⁴	+8	54.8 ¹²⁵	52	28	11	50	36	70	45	13	
21	135	43.1		20.2	170	57.2 ¹⁶⁴	+9	07.3 ¹²⁵	54	33	18	7 59	39	71	42	11	
22	150	43.1		20.6	185	32.5 ¹⁶³		19.8 ¹²⁵	56	38	25	8 10	41	74	38	9	
23	165	43.0		21.0	200	07.8 ¹⁶³		32.2 ¹²⁴	58	43	34	22	44	77	34	6	
24	180	42.9	+21	21.4	214	43.1 ¹⁶³	+9	44.6 ¹²⁴	60 S	6 50	7 44	8 37	3 47	80	14 30	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 42 ^m 2		Mag: -3.8 PMG: 10 ^h 27 ^m		Mag: -0.6 PMG: 5 ^h 16 ^m		Mag: -2.0 PMG: 16 ^h 40 ^m		Mag: +0.1 PMG: 13 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	244	08.3	203	20.0	+14	17.5	280	59.6	+17	57.7
1	259	10.7	218	19.5		18.4	296	00.7		57.6
2	274	13.2	233	19.0		19.4	311	01.8		57.5
3	289	15.7	248	18.5		20.4	326	03.0		57.4
4	304	18.1	263	18.0		21.3	341	04.1		57.3
5	319	20.6	278	17.5	+14	22.3	356	05.2	-17	10.9
6	334	23.1	293	17.0	+14	23.3	11	06.4	-17	10.6
7	349	25.5	308	16.5		24.2	26	07.5		10.2
8	4	28.0	323	16.0		25.2	41	08.6		09.9
9	19	30.4	338	15.5		26.2	56	09.8		09.6
10	34	32.9	353	15.0		27.1	71	10.9		09.3
11	49	35.4	8	14.4	+14	28.1	86	12.0	-17	09.0
12	64	37.8	23	13.9	+14	29.0	101	13.2	-17	08.7
13	79	40.3	38	13.4		30.0	116	14.3		08.4
14	94	42.8	53	12.9		31.0	131	15.4		08.1
15	109	45.2	68	12.4		31.9	146	16.6		07.7
16	124	47.7	83	11.9		32.9	161	17.7		07.4
17	139	50.2	98	11.4	+14	33.8	176	18.9	-17	07.1
18	154	52.6	113	10.9	+14	34.8	191	20.0	-17	06.8
19	169	55.1	128	10.3		35.8	206	21.1		06.5
20	184	57.6	143	09.8		36.7	221	22.3		06.2
21	200	00.0	158	09.3		37.7	236	23.4		05.9
22	215	02.5	173	08.8		38.6	251	24.6		05.6
23	230	04.9	188	08.3		39.6	266	25.7		05.3
24	245	07.4	203	07.8	+14	40.5	281	26.8	-17	04.9
Dif	—		-5		+10		+11		+3	

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: 26 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 9 ^h 58 ^m R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	180	42.9	+21	21.4	214	43.1	+9	44.6	60 N	20 59	22 18	** **	2 33 3	17 47 83				
1	195	42.8		21.8	229	18.3 ¹⁶²	+9	56.9 ¹²³	58	42	21 47	** **	39 6	39 79				
2	210	42.8		22.2	243	53.5 ¹⁶²	+10	09.3 ¹²⁴	56	28	24	23 16	44 9	31 77				
3	225	42.7		22.7	258	28.7 ¹⁶²		21.5 ¹²²	54	16	21 06	22 26	48 12	25 74				
4	240	42.6		23.1	273	03.8 ¹⁶¹		33.8 ¹²³	52	20 05	20 51	21 58	52 15	19 71				
5	255	42.5	+21	23.5	287	38.9 ¹⁶¹	+10	46.0 ¹²²	50	19 56	20 38	21 36	2 56 17	17 14 69				
6	270	42.5	+21	23.9	302	14.0 ¹⁶¹	+10	58.1 ¹²¹	45	19 36	20 11	20 58	3 05 20	17 03 64				
7	285	42.4		24.3	316	49.0 ¹⁶⁰	+11	10.3 ¹²²	40	19	19 51	31	11 25	16 54 60				
8	300	42.3		24.7	331	24.0 ¹⁶⁰		22.3 ¹²⁰	35	19 06	35	20 10	17 28	46 58				
9	315	42.2		25.1	345	58.9 ¹⁵⁹		34.4 ¹²¹	30	18 54	19 21	19 53	23 29	39 55				
10	330	42.2		25.5	0	33.8 ¹⁵⁹		46.4 ¹²⁰	20	34	18 58	27	32 34	28 50				
11	345	42.1	+21	25.9	15	08.7 ¹⁵⁹	+11	58.3 ¹¹⁹	10 N	18 17	18 40	19 06	3 40 38	16 17 47				
12	0	42.0	+21	26.3	29	43.5 ¹⁵⁸	+12	10.2 ¹¹⁹	0	18 01	18 23	18 49	3 48 42	16 08 43				
13	15	41.9		26.7	44	18.2 ¹⁵⁷		22.1 ¹¹⁹	10 S	17 45	18 07	33	3 56 45	15 58 39				
14	30	41.9		27.1	58	53.0 ¹⁵⁸		33.9 ¹¹⁸	20	28	17 52	19	4 04 49	48 35				
15	45	41.8		27.5	73	27.7 ¹⁵⁷		45.7 ¹¹⁸	30	17 09	35	18 04	13 54	36 32				
16	60	41.7		27.9	88	02.3 ¹⁵⁶	+12	57.4 ¹¹⁷	35	16 58	25	17 57	19 57	30 28				
17	75	41.6	+21	28.3	102	36.9 ¹⁵⁶	+13	09.1 ¹¹⁷	40	16 45	17 15	17 48	4 25 60	15 22 26				
18	90	41.5	+21	28.7	117	11.4 ¹⁵⁵	+13	20.7 ¹¹⁶	45	16 30	17 03	17 39	4 33 63	15 13 23				
19	105	41.5		29.1	131	45.9 ¹⁵⁵		32.3 ¹¹⁶	50	12	16 49	29	42 68	15 03 18				
20	120	41.4		29.5	146	20.4 ¹⁵⁵		43.8 ¹¹⁵	52	16 03	42	25	46 70	14 58 16				
21	135	41.3		29.9	160	54.8 ¹⁵⁴	+13	55.3 ¹¹⁵	54	15 53	35	20	50 73	53 13				
22	150	41.2		30.3	175	29.1 ¹⁵³	+14	06.7 ¹¹⁴	56	42	27	15	4 55 76	47 11				
23	165	41.1		30.7	190	03.4 ¹⁵³		18.1 ¹¹⁴	58	30	19	09	5 01 79	40 8				
24	180	41.1	+21	31.1	204	37.7 ¹⁵³	+14	29.4 ¹¹³	60 S	15 15	16 09	17 03	5 07 83	14 33 4				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 38 ^m 3		Mag: -3.8 PMG: 10 ^h 28 ^m			Mag: -0.6 PMG: 5 ^h 14 ^m			Mag: -2.0 PMG: 16 ^h 37 ^m			Mag: +0.1 PMG: 13 ^h 34 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	245	07.4	203	07.8	+14	40.5	281	26.8	-17	04.9	110	13.4	+17	55.3	156	04.8	+22	35.4
1	260	09.9	218	07.2		41.5	296	28.0		04.6	125	15.5		55.2	171	06.9		35.4
2	275	12.3	233	06.7		42.4	311	29.1		04.3	140	17.6		55.1	186	09.1		35.4
3	290	14.8	248	06.2		43.4	326	30.3		04.0	155	19.8		55.0	201	11.2		35.5
4	305	17.3	263	05.7		44.3	341	31.4		03.7	170	21.9		54.9	216	13.3		35.5
5	320	19.7	278	05.2	+14	45.3	356	32.5	-17	03.4	185	24.0	+17	54.8	231	15.5	+22	35.5
6	335	22.2	293	04.7	+14	46.2	11	33.7	-17	03.1	200	26.1	+17	54.7	246	17.6	+22	35.5
7	350	24.7	308	04.1		47.2	26	34.8		02.8	215	28.2		54.6	261	19.7		35.5
8	5	27.1	323	03.6		48.1	41	36.0		02.5	230	30.3		54.5	276	21.8		35.5
9	20	29.6	338	03.1		49.1	56	37.1		02.2	245	32.4		54.4	291	24.0		35.5
10	35	32.1	353	02.6		50.0	71	38.3		01.8	260	34.5		54.3	306	26.1		35.5
11	50	34.5	8	02.0	+14	51.0	86	39.4	-17	01.5	275	36.6	+17	54.2	321	28.2	+22	35.5
12	65	37.0	23	01.5	+14	51.9	101	40.5	-17	01.2	290	38.7	+17	54.1	336	30.4	+22	35.5
13	80	39.4	38	01.0		52.9	116	41.7		00.9	305	40.8		54.0	351	32.5		35.5
14	95	41.9	53	00.5		53.8	131	42.8		00.6	320	42.9		53.9	6	34.6		35.5
15	110	44.4	68	00.0		54.8	146	44.0	-17	00.3	335	45.0		53.8	21	36.7		35.5
16	125	46.8	82	59.4		55.7	161	45.1	-17	00.0	350	47.1		53.7	36	38.9		35.5
17	140	49.3	97	58.9	+14	56.6	176	46.3	-16	59.7	5	49.2	+17	53.6	51	41.0	+22	35.5
18	155	51.8	112	58.4	+14	57.6	191	47.4	-16	59.4	20	51.3	+17	53.5	66	43.1	+22	35.6
19	170	54.2	127	57.9		58.5	206	48.6		59.1	35	53.4		53.4	81	45.3		35.6
20	185	56.7	142	57.3	+14	59.5	221	49.7		58.7	50	55.5		53.3	96	47.4		35.6
21	200	59.2	157	56.8	+15	00.4	236	50.9		58.4	65	57.6		53.2	111	49.5		35.6
22	216	01.6	172	56.3		01.3	251	52.0		58.1	80	59.8		53.1	126	51.6		35.6
23	231	04.1	187	55.8		02.3	266	53.2		57.8	96	01.9		53.0	141	53.8		35.6
24	246	06.5	202	55.2	+15	03.2	281	54.3	-16	57.5	111	04.0	+17	52.9	156	55.9	+22	35.6
Dif	—		-5 +9			+11 +3			+21 -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 3				Edad: 27 ^d 5 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 1 Rº: 45 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	180	41.1	+21	31.1	204	37.7	+14	29.4	60 N	** **	1 36	2 55	2 36	6	19 10	86				
1	195	41.0		31.5	219	11.9 ¹⁵²		40.6 ¹¹²	58	** *	2 07	3 12	45	10	18 58	81				
2	210	40.9		31.9	233	46.0 ¹⁵¹	+14	51.8 ¹¹²	56	0 38	30	26	2 53	13	48	77				
3	225	40.8		32.3	248	20.1 ¹⁵¹	+15	03.0 ¹¹²	54	1 28	2 48	38	3 00	16	39	73				
4	240	40.7		32.7	262	54.1 ¹⁵⁰		14.1 ¹¹¹	52	1 56	3 03	49	07	17	30	72				
5	255	40.7	+21	33.1	277	28.1 ¹⁵⁰	+15	25.1 ¹¹⁰	50	2 18	3 17	3 59	3 13	19	18 23	69				
6	270	40.6	+21	33.5	292	02.0 ¹⁴⁹	+15	36.1 ¹¹⁰	45	2 56	3 43	4 19	3 25	24	18 07	65				
7	285	40.5		33.9	306	35.9 ¹⁴⁹		47.0 ¹⁰⁹	40	3 23	4 03	35	36	27	17 54	62				
8	300	40.4		34.3	321	09.7 ¹⁴⁸	+15	57.8 ¹⁰⁸	35	3 44	20	4 49	45	30	44	58				
9	315	40.3		34.7	335	43.5 ¹⁴⁸	+16	08.6 ¹⁰⁸	30	4 01	33	5 00	3 52	33	34	56				
10	330	40.3		35.1	350	17.2 ¹⁴⁷		19.4 ¹⁰⁸	20	28	4 56	20	4 06	37	18	52				
11	345	40.2	+21	35.5	4	50.8 ¹⁴⁶	+16	30.0 ¹⁰⁶	10 N	4 48	5 15	5 38	4 18	41	17 04	48				
12	0	40.1	+21	35.9	19	24.4 ¹⁴⁶	+16	40.6 ¹⁰⁶	0	5 06	5 31	5 54	4 30	44	16 51	45				
13	15	40.0		36.2	33	57.9 ¹⁴⁵	+16	51.2 ¹⁰⁶	10 S	21	5 47	6 10	41	48	37	43				
14	30	39.9		36.6	48	31.4 ¹⁴⁵	+17	01.6 ¹⁰⁴	20	36	6 03	27	4 53	52	23	39				
15	45	39.9		37.0	63	04.8 ¹⁴⁴		12.0 ¹⁰⁴	30	50	20	46	5 07	56	16 08	34				
16	60	39.8		37.4	77	38.2 ¹⁴⁴		22.4 ¹⁰⁴	35	5 58	29	6 57	16	58	15 58	33				
17	75	39.7	+21	37.8	92	11.4 ¹⁴²	+17	32.7 ¹⁰³	40	6 06	6 40	7 10	5 25	61	15 48	30				
18	90	39.6	+21	38.2	106	44.7 ¹⁴³	+17	42.9 ¹⁰²	45	6 15	6 52	7 25	5 36	65	15 36	26				
19	105	39.5		38.6	121	17.8 ¹⁴¹	+17	53.0 ¹⁰¹	50	26	7 06	43	50	69	21	22				
20	120	39.4		38.9	135	50.9 ¹⁴¹	+18	03.0 ¹⁰⁰	52	30	13	7 52	5 56	72	14	20				
21	135	39.4		39.3	150	23.9 ¹⁴⁰		13.0 ¹⁰⁰	54	35	20	8 02	6 03	74	15 06	18				
22	150	39.3		39.7	164	56.9 ¹⁴⁰		22.9 ⁹⁹	56	40	28	13	11	77	14 58	14				
23	165	39.2		40.1	179	29.8 ¹³⁹		32.8 ⁹⁹	58	46	37	26	20	80	48	11				
24	180	39.1	+21	40.5	194	02.7 ¹³⁹	+18	42.6 ⁹⁸	60 S	6 52	7 47	8 41	6 30	85	14 37	7				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 34 ^m 3				Mag: -3.8 PMG: 10 ^h 29 ^m				Mag: -0.6 PMG: 5 ^h 12 ^m				Mag: -2.0 PMG: 16 ^h 33 ^m				Mag: +0.1 PMG: 13 ^h 30 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	246	06.5	202	55.2	+15	03.2	281	54.3	-16	57.5	111	04.0	+17	52.9	156	55.9	+22	35.6		
1	261	09.0	217	54.7		04.2	296	55.5		57.2	126	06.1		52.8	171	58.0		35.6		
2	276	11.5	232	54.2		05.1	311	56.6		56.9	141	08.2		52.7	187	00.2		35.6		
3	291	13.9	247	53.6		06.0	326	57.8		56.6	156	10.3		52.6	202	02.3		35.6		
4	306	16.4	262	53.1		07.0	341	58.9		56.3	171	12.4		52.5	217	04.4		35.6		
5	321	18.9	277	52.6	+15	07.9	357	00.1	-16	56.0	186	14.5	+17	52.4	232	06.5	+22	35.6		
6	336	21.3	292	52.1	+15	08.8	12	01.2	-16	55.6	201	16.6	+17	52.3	247	08.7	+22	35.6		
7	351	23.8	307	51.5		09.8	27	02.4		55.3	216	18.7		52.2	262	10.8		35.6		
8	6	26.3	322	51.0		10.7	42	03.6		55.0	231	20.8		52.1	277	12.9		35.6		
9	21	28.7	337	50.5		11.6	57	04.7		54.7	246	22.9		51.9	292	15.1		35.6		
10	36	31.2	352	49.9		12.6	72	05.9		54.4	261	25.0		51.8	307	17.2		35.7		
11	51	33.7	7	49.4	+15	13.5	87	07.0	-16	54.1	276	27.1	+17	51.7	322	19.3	+22	35.7		
12	66	36.1	22	48.9	+15	14.4	102	08.2	-16	53.8	291	29.2	+17	51.6	337	21.4	+22	35.7		
13	81	38.6	37	48.3		15.4	117	09.3		53.5	306	31.3		51.5	352	23.6		35.7		
14	96	41.0	52	47.8		16.3	132	10.5		53.2	321	33.4		51.4	7	25.7		35.7		
15	111	43.5	67	47.3		17.2	147	11.6		52.9	336	35.5		51.3	22	27.8		35.7		
16	126	46.0	82	46.7		18.2	162	12.8		52.6	351	37.6		51.2	37	30.0		35.7		
17	141	48.4	97	46.2	+15	19.1	177	14.0	-16	52.2	6	39.7	+17	51.1	52	32.1	+22	35.7		
18	156	50.9	112	45.7	+15	20.0	192	15.1	-16	51.9	21	41.8	+17	51.0	67	34.2	+22	35.7		
19	171	53.4	127	45.1		20.9	207	16.3		51.6	36	43.9		50.9	82	36.3		35.7		
20	186	55.8	142	44.6		21.9	222	17.4		51.3	51	46.0		50.8	97	38.5		35.7		
21	201	58.3	157	44.0		22.8	237	18.6		51.0	66	48.1		50.7	112	40.6		35.7		
22	217	00.8	172	43.5		23.7	252	19.8		50.7	81	50.2		50.6	127	42.7		35.7		
23	232	03.2	187	43.0		24.6	267	20.9		50.4	96	52.3		50.5	142	44.8		35.7		
24	247	05.7	202	42.4	+15	25.6	282	22.1	-16	50.1	111	54.4	+17	50.4	157	47.0	+22	35.7		
Dif	—				-5 +9				+12 +3				+21 -1				+21 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 28 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 R°: 47 ^m											
	PMG: 11 ^h 57 ^m 5			SD: 14 ^h 7 PMG: 11 ^h 25 ^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	39.1	+21 40.5	194	02.7	+18 42.6	60 N	21 03	22 24	** **	2 42	9	20 36	84	
1	195	39.0		208	35.4 ¹³⁷	+18 52.2	58	20 46	21 52	** **	2 55	14	19 79		
2	210	38.9		223	08.2 ¹³⁸	+19 01.9	56	31	28	23 33	3 06	17	20 05	75	
3	225	38.8		237	40.8 ¹³⁶		54	19	21 09	22 32	16	20	19 52	73	
4	240	38.8		252	13.4 ¹³⁶	20.9	52	20 08	20 54	22 02	24	23	42	69	
5	255	38.7	+21 42.4	266	45.9 ¹³⁵	+19 30.2	50	19 58	20 40	21 40	3 32	25	19 32	68	
6	270	38.6	+21 42.8	281	18.4 ¹³⁵	+19 39.6	45	19 37	20 14	21 01	3 49	29	19 12	64	
7	285	38.5		295	50.7 ¹³³	48.8	40	21	19 53	20 33	4 03	33	18 56	61	
8	300	38.4		310	23.1 ¹³⁴	+19 57.9	35	19 07	36	20 12	15	35	42	59	
9	315	38.3		324	55.3 ¹³²	+20 07.0	30	18 55	19 22	19 55	25	38	30	57	
10	330	38.2		339	27.5 ¹³²	15.9	20	35	18 59	28	43	41	18 10	53	
11	345	38.2	+21 44.6	353	59.6 ¹³¹	+20 24.8	10 N	18 17	18 40	19 07	4 59	44	17 52	51	
12	0	38.1	+21 45.0	8	31.7 ¹³¹	+20 33.6	0	18 01	18 23	18 49	5 14	47	17 36	48	
13	15	38.0		23	03.6 ¹²⁹	42.4	10 S	17 45	18 08	34	29	49	20	45	
14	30	37.9		37	35.5 ¹²⁹	51.0	20	28	17 52	19	5 45	52	17 02	43	
15	45	37.8		52	07.4 ¹²⁹	+20 59.5	30	17 08	34	18 04	6 03	57	16 42	40	
16	60	37.7		66	39.2 ¹²⁸	+21 08.0	35	16 57	25	17 56	14	59	31	37	
17	75	37.6	+21 46.9	81	10.9 ¹²⁷	+21 16.4	40	16 44	17 14	17 48	6 26	62	16 18	35	
18	90	37.6	+21 47.2	95	42.5 ¹²⁶	+21 24.6	45	16 29	17 02	17 38	6 41	65	16 02	32	
19	105	37.5		110	14.1 ¹²⁶	32.8	50	10	16 47	28	6 59	69	15 43	28	
20	120	37.4		124	45.6 ¹²⁵	40.9	52	16 01	41	23	7 08	71	34	26	
21	135	37.3		139	17.0 ¹²⁴	48.9	54	15 51	33	19	17	74	24	23	
22	150	37.2		153	48.4 ¹²⁴	+21 56.8	56	40	25	13	28	77	15	12	
23	165	37.1		168	19.7 ¹²³	+22 04.6	58	27	16	07	40	81	14	59	
24	180	37.0	+21 49.4	182	50.9 ¹²²	+22 12.3	60 S	15 12	16 06	17 01	7 55	86	14 44	12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 30 ^m 4		Mag: -3.8 PMG: 10 ^h 30 ^m			Mag: -0.6 PMG: 5 ^h 10 ^m			Mag: -2.0 PMG: 16 ^h 30 ^m			Mag: +0.1 PMG: 13 ^h 27 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	°	°	'	°	°	°	'	
0	247	05.7	202 42.4	+15 25.6		282 22.1	-16 50.1	111 54.4	+17 50.4		157 47.0	+22 35.7			
1	262	08.2	217 41.9	26.5		297 23.2	49.8	126 56.5	50.3		172 49.1	35.7			
2	277	10.6	232 41.4	27.4		312 24.4	49.5	141 58.6	50.2		187 51.2	35.8			
3	292	13.1	247 40.8	28.3		327 25.6	49.2	157 00.7	50.1		202 53.4	35.8			
4	307	15.5	262 40.3	29.3		342 26.7	48.9	172 02.8	50.0		217 55.5	35.8			
5	322	18.0	277 39.7	+15 30.2		357 27.9	-16 48.5	187 04.9	+17 49.9		232 57.6	+22 35.8			
6	337	20.5	292 39.2	+15 31.1		12 29.1	-16 48.2	202 07.0	+17 49.8		247 59.7	+22 35.8			
7	352	22.9	307 38.7	32.0		27 30.2	47.9	217 09.1	49.7		263 01.9	35.8			
8	7	25.4	322 38.1	32.9		42 31.4	47.6	232 11.2	49.6		278 04.0	35.8			
9	22	27.9	337 37.6	33.9		57 32.6	47.3	247 13.3	49.4		293 06.1	35.8			
10	37	30.3	352 37.0	34.8		72 33.7	47.0	262 15.4	49.3		308 08.2	35.8			
11	52	32.8	7 36.5	+15 35.7		87 34.9	-16 46.7	277 17.4	+17 49.2		323 10.4	+22 35.8			
12	67	35.3	22 35.9	+15 36.6		102 36.1	-16 46.4	292 19.5	+17 49.1		338 12.5	+22 35.8			
13	82	37.7	37 35.4	37.5		117 37.2	46.1	307 21.6	49.0		353 14.6	35.8			
14	97	40.2	52 34.8	38.4		132 38.4	45.8	322 23.7	48.9		8 16.7	35.8			
15	112	42.6	67 34.3	39.3		147 39.6	45.5	337 25.8	48.8		23 18.9	35.8			
16	127	45.1	82 33.8	40.3		162 40.7	45.2	352 27.9	48.7		38 21.0	35.8			
17	142	47.6	97 33.2	+15 41.2		177 41.9	-16 44.9	7 30.0	+17 48.6		53 23.1	+22 35.8			
18	157	50.0	112 32.7	+15 42.1		192 43.1	-16 44.6	22 32.1	+17 48.5		68 25.3	+22 35.9			
19	172	52.5	127 32.1	43.0		207 44.2	44.2	37 34.2	48.4		83 27.4	35.9			
20	187	55.0	142 31.6	43.9		222 45.4	43.9	52 36.3	48.3		98 29.5	35.9			
21	202	57.4	157 31.0	44.8		237 46.6	43.6	67 38.4	48.2		113 31.6	35.9			
22	217	59.9	172 30.5	45.7		252 47.7	43.3	82 40.5	48.1		128 33.8	35.9			
23	233	02.4	187 29.9	46.6		267 48.9	43.0	97 42.6	48.0		143 35.9	35.9			
24	248	04.8	202 29.4	+15 47.5		282 50.1	-16 42.7	112 44.7	+17 47.9		158 38.0	+22 35.9			
Dif	—		-5		+9	+12		+3		+21		-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 6			Edad: 29 ^d 5 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5 PMG: 12 ^h 12 ^m Rº: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	37.0	+21 49.4	182	50.9	+22 12.3	77	60 N	1 30	2 51	2 51	17	22 00	76	
1	195	36.9	49.8	197	22.1 ¹²²	20.0	77	58	2 03	3 09	3 09	21	21 38	71	
2	210	36.8	50.2	211	53.2 ¹²¹	27.5	75	56	0 22	27	24	23	20 68		
3	225	36.8	50.5	226	24.2 ¹²⁰	34.9	74	54	1 22	2 46	36	36	29	21 05	66
4	240	36.7	50.9	240	55.2 ¹²⁰	42.2	73	52	1 53	3 01	47	47	31	20 51	65
5	255	36.6	+21 51.3	255	26.1 ¹¹⁹	+22 49.4	72	50	2 15	3 15	3 57	3 57	33	20 40	63
6	270	36.5	+21 51.6	269	56.9 ¹¹⁸	+22 56.6	72	45	2 54	3 41	4 17	4 18	37	20 16	61
7	285	36.4	52.0	284	27.6 ¹¹⁷	+23 03.6	70	40	3 22	4 02	34	36	38	19 57	59
8	300	36.3	52.3	298	58.3 ¹¹⁷	10.5	69	35	3 43	19	4 48	4 50	41	41	57
9	315	36.2	52.7	313	29.0 ¹¹⁷	17.3	68	30	4 00	33	5 00	5 03	42	27	56
10	330	36.1	53.1	327	59.5 ¹¹⁵	24.0	67	20	27	4 56	20	24	45	19 03	55
11	345	36.0	+21 53.4	342	30.0 ¹¹⁵	+23 30.6	66	10 N	4 48	5 15	5 38	5 43	48	18 43	53
12	0	35.9	+21 53.8	357	00.4 ¹¹⁴	+23 37.1	65	0	5 06	5 32	5 54	6 01	49	18 24	51
13	15	35.9	54.1	11	30.8 ¹¹⁴	43.5	64	10 S	21	5 48	6 10	18	52	18 05	50
14	30	35.8	54.5	26	01.1 ¹¹³	49.8	63	20	36	6 04	27	6 37	54	17 45	48
15	45	35.7	54.9	40	31.3 ¹¹²	+23 55.9	61	30	51	21	47	7 00	56	22	45
16	60	35.6	55.2	55	01.5 ¹¹²	+24 02.0	61	35	5 59	31	6 58	13	58	17 08	44
17	75	35.5	+21 55.6	69	31.6 ¹¹¹	+24 07.9	59	40	6 08	6 41	7 11	7 28	60	16 53	42
18	90	35.4	+21 55.9	84	01.6 ¹¹⁰	+24 13.8	59	45	6 17	6 54	7 27	7 46	62	16 34	40
19	105	35.3	56.3	98	31.6 ¹¹⁰	19.5	57	50	27	7 08	46	8 08	66	11	37
20	120	35.2	56.6	113	01.5 ¹⁰⁹	25.1	56	52	32	15	7 55	19	67	16 00	35
21	135	35.1	57.0	127	31.4 ¹⁰⁹	30.6	55	54	37	22	8 04	31	70	15 47	34
22	150	35.0	57.3	142	01.2 ¹⁰⁸	36.0	54	56	42	30	16	8 45	73	33	31
23	165	34.9	57.7	156	30.9 ¹⁰⁷	41.2	52	58	48	39	29	9 01	77	15 16	27
24	180	34.8	+21 58.0	171	00.6 ¹⁰⁷	+24 46.4	52	60 S	6 55	7 50	8 44	9 21	82	14 56	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 26 ^m 5		Mag: -3.8 PMG: 10 ^h 30 ^m		Mag: -0.7 PMG: 5 ^h 08 ^m		Mag: -2.0 PMG: 16 ^h 27 ^m		Mag: +0.1 PMG: 13 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	248	04.8	202 29.4	+15 47.5	282 50.1	-16 42.7	112 44.7	+17 47.9	158 38.0	+22 35.9
1	263	07.3	217 28.8	48.5	297 51.3	42.4	127 46.8	47.8	173 40.1	35.9
2	278	09.8	232 28.3	49.4	312 52.4	42.1	142 48.9	47.7	188 42.3	35.9
3	293	12.2	247 27.7	50.3	327 53.6	41.8	157 51.0	47.5	203 44.4	35.9
4	308	14.7	262 27.2	51.2	342 54.8	41.5	172 53.1	47.4	218 46.5	35.9
5	323	17.1	277 26.6	+15 52.1	357 56.0	-16 41.2	187 55.2	+17 47.3	233 48.6	+22 35.9
6	338	19.6	292 26.1	+15 53.0	12 57.1	-16 40.9	202 57.2	+17 47.2	248 50.8	+22 35.9
7	353	22.1	307 25.5	53.9	27 58.3	40.6	217 59.3	47.1	263 52.9	35.9
8	8	24.5	322 25.0	54.8	42 59.5	40.3	233 01.4	47.0	278 55.0	35.9
9	23	27.0	337 24.4	55.7	58 00.7	40.0	248 03.5	46.9	293 57.1	35.9
10	38	29.5	352 23.9	56.6	73 01.8	39.6	263 05.6	46.8	308 59.3	35.9
11	53	31.9	7 23.3	+15 57.5	88 03.0	-16 39.3	278 07.7	+17 46.7	324 01.4	+22 36.0
12	68	34.4	22 22.7	+15 58.4	103 04.2	-16 39.0	293 09.8	+17 46.6	339 03.5	+22 36.0
13	83	36.9	37 22.2	+15 59.3	118 05.4	38.7	308 11.9	46.5	354 05.6	36.0
14	98	39.3	52 21.6	+16 00.2	133 06.6	38.4	323 14.0	46.4	9 07.8	36.0
15	113	41.8	67 21.1	01.1	148 07.7	38.1	338 16.1	46.3	24 09.9	36.0
16	128	44.3	82 20.5	02.0	163 08.9	37.8	353 18.2	46.2	39 12.0	36.0
17	143	46.7	97 20.0	+16 02.9	178 10.1	-16 37.5	8 20.3	+17 46.1	54 14.1	+22 36.0
18	158	49.2	112 19.4	+16 03.8	193 11.3	-16 37.2	23 22.3	+17 46.0	69 16.3	+22 36.0
19	173	51.6	127 18.9	04.7	208 12.5	36.9	38 24.4	45.8	84 18.4	36.0
20	188	54.1	142 18.3	05.6	223 13.6	36.6	53 26.5	45.7	99 20.5	36.0
21	203	56.6	157 17.7	06.5	238 14.8	36.3	68 28.6	45.6	114 22.6	36.0
22	218	59.0	172 17.2	07.4	253 16.0	36.0	83 30.7	45.5	129 24.8	36.0
23	234	01.5	187 16.6	08.2	268 17.2	35.7	98 32.8	45.4	144 26.9	36.0
24	249	04.0	202 16.1	+16 09.1	283 18.4	-16 35.4	113 34.9	+17 45.3	159 29.0	+22 36.0

Dif	—	-6	+9	+12	+3	+21	-1	+21

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 8			Edad: 30 ^d 5 PHE { 4 ^h : 54 ^m /6 12 ^h : 54 ^m /7 20 ^h : 54 ^m /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	
0	180	34.8	+21 58.0	171	00.6	+24 46.4	50	60 N	21 07	22 31	** **	3 08 31		23 16 56	
1	195	34.7	58.4	185	30.2 ¹⁰⁶	51.4	50	58	20 49	21 56	** **	30 36		22 49 56	
2	210	34.7	58.7	199	59.7 ¹⁰⁵	+24 56.3	49	56	34	32	** **	3 49 38		28 56	
3	225	34.6	59.1	214	29.2 ¹⁰⁵	+25 01.1	48	54	21	21 12	22 38	4 05 40		22 11 55	
4	240	34.5	59.4	228	58.7 ¹⁰⁵	05.8	47	52	10	20 56	22 06	18 41		21 56 55	
5	255	34.4	+21 59.8	243	28.1 ¹⁰⁴	+25 10.4	46	50	20 00	20 43	21 43	4 30 43		21 43 55	
6	270	34.3	+22 00.1	257	57.4 ¹⁰³	+25 14.8	44	45	19 39	20 15	21 03	4 55 44		21 17 54	
7	285	34.2	00.5	272	26.7 ¹⁰³	19.1	43	40	22	19 55	20 35	5 14 46		20 56 54	
8	300	34.1	00.8	286	55.9 ¹⁰²	23.3	42	35	19 08	38	20 13	31 47		38 54	
9	315	34.0	01.2	301	25.1 ¹⁰²	27.4	41	30	18 56	23	19 56	5 45 48		20 23 54	
10	330	33.9	01.5	315	54.2 ¹⁰¹	31.3	39	20	36	19 00	29	6 09 50		19 58 53	
11	345	33.8	+22 01.8	330	23.2 ¹⁰⁰	+25 35.2	39	10 N	18 18	18 41	19 07	6 31 50		19 36 53	
12	0	33.7	+22 02.2	344	52.2 ¹⁰⁰	+25 38.8	36	0	18 01	18 24	18 50	6 50 52		19 15 53	
13	15	33.6	02.5	359	21.2 ¹⁰⁰	42.4	36	10 S	17 45	18 08	34	7 10 53		18 55 52	
14	30	33.5	02.9	13	50.1 ⁹⁹	45.9	35	20	28	17 51	19	31 55		33 51	
15	45	33.4	03.2	28	19.0 ⁹⁹	49.2	33	30	17 08	34	18 04	7 56 56		18 07 51	
16	60	33.3	03.5	42	47.8 ⁹⁸	52.4	32	35	16 56	24	17 55	8 11 56		17 52 51	
17	75	33.2	+22 03.9	57	16.6 ⁹⁸	+25 55.4	30	40	16 43	17 13	17 47	8 28 57		17 35 50	
18	90	33.1	+22 04.2	71	45.3 ⁹⁷	+25 58.4	30	45	16 28	17 01	17 38	8 48 58		17 14 50	
19	105	33.0	04.6	86	14.0 ⁹⁷	+26 01.2	28	50	09	16 46	27	9 14 60		16 48 48	
20	120	32.9	04.9	100	42.6 ⁹⁶	03.9	27	52	16 00	39	22	26 61		35 48	
21	135	32.8	05.2	115	11.2 ⁹⁶	06.4	25	54	15 49	32	17	41 61		21 47	
22	150	32.7	05.6	129	39.8 ⁹⁶	08.8	24	56	38	24	12	9 58 62		16 04 45	
23	165	32.6	05.9	144	08.3 ⁹⁵	11.1	23	58	25	14	17 06	10 18 64		15 43 44	
24	180	32.6	+22 06.2	158	36.7 ⁹⁴	+26 13.2	21	60 S	15 09	16 04	16 59	10 43 68		15 18 41	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 22 ^m 5		Mag: -3.8 PMG: 10 ^h 31 ^m		Mag: -0.7 PMG: 5 ^h 06 ^m		Mag: -2.0 PMG: 16 ^h 23 ^m		Mag: +0.1 PMG: 13 ^h 20 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	249	04.0	202 16.1	+16 09.1	283 18.4	-16 35.4	113 34.9	+17 45.3	159 29.0	+22 36.0					
1	264	06.4	217 15.5	10.0	298 19.6	35.1	128 37.0	45.2	174 31.1	36.0					
2	279	08.9	232 14.9	10.9	313 20.7	34.8	143 39.1	45.1	189 33.3	36.0					
3	294	11.4	247 14.4	11.8	328 21.9	34.5	158 41.2	45.0	204 35.4	36.0					
4	309	13.8	262 13.8	12.7	343 23.1	34.2	173 43.2	44.9	219 37.5	36.0					
5	324	16.3	277 13.2	+16 13.6	358 24.3	-16 33.8	188 45.3	+17 44.8	234 39.6	+22 36.0					
6	339	18.8	292 12.7	+16 14.5	13 25.5	-16 33.5	203 47.4	+17 44.7	249 41.8	+22 36.1					
7	354	21.2	307 12.1	15.4	28 26.7	33.2	218 49.5	44.6	264 43.9	36.1					
8	9	23.7	322 11.6	16.3	43 27.9	32.9	233 51.6	44.4	279 46.0	36.1					
9	24	26.1	337 11.0	17.1	58 29.0	32.6	248 53.7	44.3	294 48.1	36.1					
10	39	28.6	352 10.4	18.0	73 30.2	32.3	263 55.8	44.2	309 50.3	36.1					
11	54	31.1	7 09.9	+16 18.9	88 31.4	-16 32.0	278 57.9	+17 44.1	324 52.4	+22 36.1					
12	69	33.5	22 09.3	+16 19.8	103 32.6	-16 31.7	294 00.0	+17 44.0	339 54.5	+22 36.1					
13	84	36.0	37 08.7	20.7	118 33.8	31.4	309 02.0	43.9	354 56.6	36.1					
14	99	38.5	52 08.2	21.6	133 35.0	31.1	324 04.1	43.8	9 58.8	36.1					
15	114	40.9	67 07.6	22.4	148 36.2	30.8	339 06.2	43.7	25 00.9	36.1					
16	129	43.4	82 07.0	23.3	163 37.4	30.5	354 08.3	43.6	40 03.0	36.1					
17	144	45.9	97 06.5	+16 24.2	178 38.6	-16 30.2	9 10.4	+17 43.5	55 05.1	+22 36.1					
18	159	48.3	112 05.9	+16 25.1	193 39.8	-16 29.9	24 12.5	+17 43.4	70 07.3	+22 36.1					
19	174	50.8	127 05.3	26.0	208 40.9	29.6	39 14.6	43.3	85 09.4	36.1					
20	189	53.3	142 04.7	26.8	223 42.1	29.3	54 16.6	43.1	100 11.5	36.1					
21	204	55.7	157 04.2	27.7	238 43.3	29.0	69 18.7	43.0	115 13.6	36.1					
22	219	58.2	172 03.6	28.6	253 44.5	28.7	84 20.8	42.9	130 15.8	36.1					
23	235	00.6	187 03.0	29.5	268 45.7	28.4	99 22.9	42.8	145 17.9	36.1					
24	250	03.1	202 02.5	+16 30.3	283 46.9	-16 28.1	114 25.0	+17 42.7	160 20.0	+22 36.1					
Dif	—	-6	+9		+12	+3	+21	-1	+21						

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 11 ^h 57 ^m 9				Edad: 1 ^d 8 PHE { SD: 14'9 PMG: 13 ^h 55 ^m R°: 53 ^m 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'2															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	32.6	+22	06.2	158	36.7	+26	13.2	21	60 N	** **	1 24	2 48	3 39	54	** **	**			
1	195	32.5		06.6	173	05.2	95	15.3	21	58	** **	1 59	3 06	4 06	54	23 45	38			
2	210	32.4		06.9	187	33.6	94	17.1	18	56	** **	2 24	21	27	54	24 40				
3	225	32.3		07.2	202	02.0	94	18.9	18	54	1 17	43	34	45	54	23 06	44			
4	240	32.2		07.6	216	30.3	93	20.5	16	52	1 49	2 59	46	4 59	55	22 51	44			
5	255	32.1	+22	07.9	230	58.6	93	+26	22.0	15	50	2 12	3 13	5 13	54	22 38	45			
6	270	32.0	+22	08.2	245	26.8	92	+26	23.4	14	45	2 52	3 40	4 16	5 39	54	22 11	47		
7	285	31.9		08.6	259	55.1	93	24.6	12	40	3 20	4 01	33	6 00	54	21 50	48			
8	300	31.8		08.9	274	23.3	92	25.6	10	35	42	18	47	18	54	32	49			
9	315	31.7		09.2	288	51.5	92	26.6	10	30	3 59	32	4 59	33	54	21 17	50			
10	330	31.6		09.5	303	19.6	91	27.4	8	20	4 27	4 56	5 20	6 59	54	20 51	51			
11	345	31.5	+22	09.9	317	47.7	91	+26	28.1	7	10 N	4 48	5 15	5 38	7 21	54	20 29	52		
12	0	31.4	+22	10.2	332	15.8	91	+26	28.6	5	0	5 06	5 32	5 54	7 42	53	20 08	53		
13	15	31.3		10.5	346	43.9	91	29.0	4	10 S	22	5 48	6 11	8 03	53	19 47	54			
14	30	31.2		10.8	1	12.0	91	29.3	3	20	37	6 04	28	26	52	19 24	56			
15	45	31.1		11.2	15	40.0	90	29.4	1	30	5 52	22	6 48	8 52	52	18 58	57			
16	60	31.0		11.5	30	08.0	90	29.4	0	35	6 00	32	7 00	9 07	52	43	57			
17	75	30.9	+22	11.8	44	36.0	90	+26	29.2	2	40	6 09	6 43	7 13	9 25	51	18 25	58		
18	90	30.8	+22	12.1	59	04.0	90	+26	28.9	3	45	6 18	6 55	7 28	9 46	51	18 04	58		
19	105	30.7		12.5	73	31.9	89	28.5	4	50	29	7 10	48	10 14	50	17 36	60			
20	120	30.6		12.8	87	59.9	90	27.9	6	52	34	17	7 57	27	49	23	60			
21	135	30.5		13.1	102	27.8	89	27.2	7	54	39	24	8 07	10 42	49	17 08	61			
22	150	30.4		13.4	116	55.7	89	26.4	8	56	44	33	18	11 00	48	16 49	63			
23	165	30.3		13.7	131	23.6	89	25.4	10	58	50	42	32	22	47	16 27	64			
24	180	30.2	+22	14.1	145	51.5	89	+26	24.3	11	60 S	6 57	7 52	8 47	11 51	44	15 59	66		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 18 ^m 6				Mag: -3.8 PMG: 10 ^h 32 ^m				Mag: -0.7 PMG: 5 ^h 04 ^m				Mag: -2.0 PMG: 16 ^h 20 ^m				Mag: +0.1 PMG: 13 ^h 17 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	03.1	202	02.5	+16	30.3	283	46.9	-16	28.1	114	25.0	+17	42.7	160	20.0	+22	36.1		
1	265	05.6	217	01.9		31.2	298	48.1		27.8	129	27.1		42.6	175	22.1		36.2		
2	280	08.0	232	01.3		32.1	313	49.3		27.5	144	29.2		42.5	190	24.2		36.2		
3	295	10.5	247	00.7		33.0	328	50.5		27.2	159	31.2		42.4	205	26.4		36.2		
4	310	13.0	262	00.2		33.8	343	51.7		26.9	174	33.3		42.3	220	28.5		36.2		
5	325	15.4	276	59.6	+16	34.7	358	52.9	-16	26.6	189	35.4	+17	42.2	235	30.6	+22	36.2		
6	340	17.9	291	59.0	+16	35.6	13	54.1	-16	26.3	204	37.5	+17	42.1	250	32.7	+22	36.2		
7	355	20.4	306	58.4		36.5	28	55.3		26.0	219	39.6		41.9	265	34.9		36.2		
8	10	22.8	321	57.9		37.3	43	56.5		25.7	234	41.7		41.8	280	37.0		36.2		
9	25	25.3	336	57.3		38.2	58	57.7		25.4	249	43.7		41.7	295	39.1		36.2		
10	40	27.8	351	56.7		39.1	73	58.9		25.0	264	45.8		41.6	310	41.2		36.2		
11	55	30.2	6	56.1	+16	39.9	89	00.1	-16	24.7	279	47.9	+17	41.5	325	43.4	+22	36.2		
12	70	32.7	21	55.6	+16	40.8	104	01.3	-16	24.4	294	50.0	+17	41.4	340	45.5	+22	36.2		
13	85	35.1	36	55.0		41.7	119	02.5		24.1	309	52.1		41.3	355	47.6		36.2		
14	100	37.6	51	54.4		42.5	134	03.7		23.8	324	54.2		41.2	10	49.7		36.2		
15	115	40.1	66	53.8		43.4	149	04.9		23.5	339	56.2		41.1	25	51.9		36.2		
16	130	42.5	81	53.3		44.3	164	06.1		23.2	354	58.3		41.0	40	54.0		36.2		
17	145	45.0	96	52.7	+16	45.1	179	07.3	-16	22.9	10	00.4	+17	40.8	55	56.1	+22	36.2		
18	160	47.5	111	52.1	+16	46.0	194	08.5	-16	22.6	25	02.5	+17	40.7	70	58.2	+22	36.2		
19	175	49.9	126	51.5		46.8	209	09.7		22.3	40	04.6		40.6	86	00.3		36.2		
20	190	52.4	141	50.9		47.7	224	10.9		22.0	55	06.7		40.5	101	02.5		36.2		
21	205	54.9	156	50.4		48.6	239	12.1		21.7	70	08.7		40.4	116	04.6		36.3		
22	220	57.3	171	49.8		49.4	254	13.3		21.4	85	10.8		40.3	131	06.7		36.3		
23	235	59.8	186	49.2		50.3	269	14.5		21.1	100	12.9		40.2	146	08.8		36.3		
24	251	02.2	201	48.6	+16	51.1	284	15.7	-16	20.8	115	15.0	+17	40.1	161	11.0	+22	36.3		
Dif	—				-6 +9				+12 +3				+21 -1				+21 0			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 1				Edad: 2 ^d 8 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 5 20 ^h : 55 ^h 7 PMG: 14 ^h 48 ^m R°: 53 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	180	30.2	+22	14.1	145	51.5	+26	24.3	60 N	21 10	22 37	** **	4 33 77	0 12 34						
1	195	30.1		14.4	160	19.4 89		23.0 13	58	20 52	22 01	** **	5 00 72	** ** *						
2	210	30.0		14.7	174	47.3 89		21.6 14	56	37	21 35	** **	21 70	** ** *						
3	225	29.9		15.0	189	15.1 88		20.1 15	54	23	21 15	22 44	39 67	23 49 30						
4	240	29.8		15.3	203	43.0 89		18.4 17	52	12	20 59	22 10	5 54 66	35 33						
5	255	29.7	+22	15.6	218	10.9 89	+26	16.6 18	50	20 02	20 45	21 47	6 07 64	23 23 35						
6	270	29.6	+22	15.9	232	38.7 88	+26	14.6 20	45	19 41	20 17	21 05	6 33 63	22 58 39						
7	285	29.5		16.3	247	06.6 89		12.5 21	40	24	19 56	20 37	6 54 61	38 42						
8	300	29.4		16.6	261	34.5 89		10.2 23	35	19 10	39	20 15	7 12 59	21 44						
9	315	29.3		16.9	276	02.3 88		07.9 23	30	18 57	24	19 57	27 58	22 07 45						
10	330	29.1		17.2	290	30.2 89		05.4 25	20	36	19 01	30	7 53 56	21 42 48						
11	345	29.0	+22	17.5	304	58.1 89	+26	02.7 27	10 N	18 18	18 41	19 08	8 15 54	21 21 51						
12	0	28.9	+22	17.8	319	25.9 88	+25	59.9 28	0	18 02	18 24	18 50	8 35 54	21 01 53						
13	15	28.8		18.1	333	53.8 89		57.0 29	10 S	17 45	18 08	34	8 56 52	20 41 55						
14	30	28.7		18.4	348	21.7 89		53.9 31	20	28	17 51	19	9 18 50	20 20 57						
15	45	28.6		18.7	2	49.6 89		50.7 32	30	17 08	34	18 03	44 47	19 55 59						
16	60	28.5		19.0	17	17.5 89		47.3 34	35	16 56	24	17 55	9 59 46	40 61						
17	75	28.4	+22	19.4	31	45.4 89	+25	43.8 35	40	16 42	17 13	17 46	10 16 45	19 23 63						
18	90	28.3	+22	19.7	46	13.3 89	+25	40.2 36	45	16 27	17 00	17 37	10 37 43	19 02 66						
19	105	28.2		20.0	60	41.3 90		36.4 38	50	16 07	16 45	26	11 04 39	18 36 69						
20	120	28.1		20.3	75	09.2 89		32.5 39	52	15 58	38	21	16 39	23 71						
21	135	28.0		20.6	89	37.2 90		28.5 40	54	48	31	16	31 36	18 09 73						
22	150	27.9		20.9	104	05.1 89		24.3 42	56	36	22	10	11 48 34	17 52 76						
23	165	27.8		21.2	118	33.1 90		20.0 43	58	23	13	17 04	12 09 30	31 80						
24	180	27.7	+22	21.5	133	01.2 91	+25	15.5 45	60 S	15 07	16 02	16 57	12 35 25	17 05 85						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 14 ^m 7				Mag: -3.8 PMG: 10 ^h 33 ^m				Mag: -0.7 PMG: 5 ^h 03 ^m				Mag: -1.9 PMG: 16 ^h 17 ^m				Mag: +0.1 PMG: 13 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	251	02.2	201	48.6	+16	51.1	284	15.7	-16	20.8	115	15.0	+17	40.1	161	11.0	+22	36.3		
1	266	04.7	216	48.0		52.0	299	16.9		20.5	130	17.1		40.0	176	13.1		36.3		
2	281	07.2	231	47.4		52.9	314	18.1		20.2	145	19.1		39.9	191	15.2		36.3		
3	296	09.6	246	46.9		53.7	329	19.4		19.9	160	21.2		39.7	206	17.3		36.3		
4	311	12.1	261	46.3		54.6	344	20.6		19.6	175	23.3		39.6	221	19.4		36.3		
5	326	14.6	276	45.7	+16	55.4	359	21.8	-16	19.3	190	25.4	+17	39.5	236	21.6	+22	36.3		
6	341	17.0	291	45.1	+16	56.3	14	23.0	-16	19.0	205	27.5	+17	39.4	251	23.7	+22	36.3		
7	356	19.5	306	44.5		57.1	29	24.2		18.7	220	29.5		39.3	266	25.8		36.3		
8	11	22.0	321	43.9		58.0	44	25.4		18.4	235	31.6		39.2	281	27.9		36.3		
9	26	24.4	336	43.3		58.8	59	26.6		18.1	250	33.7		39.1	296	30.1		36.3		
10	41	26.9	351	42.7	+16	59.7	74	27.8		17.8	265	35.8		39.0	311	32.2		36.3		
11	56	29.4	6	42.2	+17	00.5	89	29.0	-16	17.5	280	37.9	+17	38.9	326	34.3	+22	36.3		
12	71	31.8	21	41.6	+17	01.4	104	30.2	-16	17.2	295	39.9	+17	38.7	341	36.4	+22	36.3		
13	86	34.3	36	41.0		02.2	119	31.5		16.9	310	42.0		38.6	356	38.6		36.3		
14	101	36.7	51	40.4		03.1	134	32.7		16.6	325	44.1		38.5	11	40.7		36.3		
15	116	39.2	66	39.8		03.9	149	33.9		16.3	340	46.2		38.4	26	42.8		36.3		
16	131	41.7	81	39.2		04.8	164	35.1		16.0	355	48.3		38.3	41	44.9		36.3		
17	146	44.1	96	38.6	+17	05.6	179	36.3	-16	15.7	10	50.3	+17	38.2	56	47.0	+22	36.3		
18	161	46.6	111	38.0	+17	06.5	194	37.5	-16	15.4	25	52.4	+17	38.1	71	49.2	+22	36.4		
19	176	49.1	126	37.4		07.3	209	38.7		15.1	40	54.5		38.0	86	51.3		36.4		
20	191	51.5	141	36.8		08.2	224	40.0		14.8	55	56.6		37.9	101	53.4		36.4		
21	206	54.0	156	36.3		09.0	239	41.2		14.5	70	58.6		37.7	116	55.5		36.4		
22	221	56.5	171	35.7		09.8	254	42.4		14.2	86	00.7		37.6	131	57.6		36.4		
23	236	58.9	186	35.1		10.7	269	43.6		13.9	101	02.8		37.5	146	59.8		36.4		
24	252	01.4	201	34.5	+17	11.5	284	44.8	-16	13.6	116	04.9	+17	37.4	162	01.9	+22	36.4		
Dif	—		-6		+8		+12		+3		+21		-1		+21		0			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 58 ^m 2			Edad: 3 ^d 8	PHE { 4 ^h : 55/9 12 ^h : 56/0 20 ^h : 56/2 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	180	27.7	+22 21.5	133	01.2	+25 15.5	46	60 N	** **	1 19	2 46	5 50	90	0 46	19	
1	195	27.6		147	29.2	10.9	46	58	** **	1 55	3 04	6 12	85	23	24	
2	210	27.5		161	57.2	06.2	47	56	** **	2 21	19	31	80	0 04	28	
3	225	27.4		176	25.3	+25 01.4	48	54	1 12	41	33	6 46	77	** ** *	**	
4	240	27.3		190	53.4	+24 56.4	50	52	1 46	2 57	44	7 00	74	** ** *	**	
5	255	27.2	+22 23.0	205	21.5	+24 51.2	52	50	2 10	3 11	3 54	7 11	73	23 58	27	
6	270	27.1	+22 23.3	219	49.7	+24 46.0	52	45	2 51	3 39	4 15	7 36	68	23 37	32	
7	285	27.0		234	17.8	40.6	54	40	3 19	4 00	32	7 55	65	20	35	
8	300	26.9		248	46.0	35.0	56	35	41	17	47	8 11	63	23 05	38	
9	315	26.7		263	14.3	29.4	56	30	3 59	32	4 59	25	61	22 52	41	
10	330	26.6		277	42.5	23.6	58	20	4 27	4 55	5 20	8 49	58	30	45	
11	345	26.5	+22 24.8	292	10.8	+24 17.6	60	10 N	4 48	5 15	5 38	9 09	55	22 12	48	
12	0	26.4	+22 25.0	306	39.1	+24 11.6	60	0	5 06	5 32	5 55	9 29	52	21 54	51	
13	15	26.3		321	07.4	+24 05.4	62	10 S	22	5 49	6 11	9 48	49	36	54	
14	30	26.2		335	35.8	+23 59.0	64	20	38	6 05	29	10 08	46	21 17	57	
15	45	26.1		350	04.2	52.6	64	30	5 53	23	6 49	31	43	20 54	62	
16	60	26.0		4	32.6	46.0	66	35	6 01	33	7 01	10 45	41	41	64	
17	75	25.9	+22 26.5	19	01.0	+23 39.3	67	40	6 10	6 44	7 14	11 01	38	20 26	67	
18	90	25.8	+22 26.8	33	29.5	+23 32.4	69	45	6 20	6 57	7 30	11 20	35	20 08	70	
19	105	25.7		47	58.0	25.5	69	50	31	7 12	49	43	31	19 45	75	
20	120	25.6		62	26.6	18.3	72	52	36	19	7 59	11 55	28	34	77	
21	135	25.5		76	55.2	11.1	72	54	41	26	8 09	12 07	27	22	80	
22	150	25.4		91	23.8	+23 03.8	73	56	46	35	21	22	23	19 08	83	
23	165	25.2		105	52.5	+22 56.3	75	58	53	44	34	12 39	19	18 51	87	
24	180	25.1	+22 28.5	120	21.2	+22 48.7	76	60 S	6 59	7 55	8 50	13 00	13	18 30	94	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 10 ^m 7		Mag: -3.8 PMG: 10 ^h 34 ^m			Mag: -0.8 PMG: 5 ^h 01 ^m			Mag: -1.9 PMG: 16 ^h 13 ^m			Mag: +0.1 PMG: 13 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	252	01.4	201	34.5	+17 11.5	284	44.8	-16 13.6	116	04.9	+17 37.4	162	01.9	+22 36.4	
1	267	03.9	216	33.9	12.4	299	46.0	13.3	131	06.9	37.3	177	04.0	36.4	
2	282	06.3	231	33.3	13.2	314	47.3	13.0	146	09.0	37.2	192	06.1	36.4	
3	297	08.8	246	32.7	14.0	329	48.5	12.7	161	11.1	37.1	207	08.3	36.4	
4	312	11.2	261	32.1	14.9	344	49.7	12.4	176	13.2	37.0	222	10.4	36.4	
5	327	13.7	276	31.5	+17 15.7	359	50.9	-16 12.1	191	15.3	+17 36.8	237	12.5	+22 36.4	
6	342	16.2	291	30.9	+17 16.6	14	52.1	-16 11.8	206	17.3	+17 36.7	252	14.6	+22 36.4	
7	357	18.6	306	30.3	17.4	29	53.4	11.5	221	19.4	36.6	267	16.7	36.4	
8	12	21.1	321	29.7	18.2	44	54.6	11.3	236	21.5	36.5	282	18.9	36.4	
9	27	23.6	336	29.1	19.1	59	55.8	11.0	251	23.6	36.4	297	21.0	36.4	
10	42	26.0	351	28.5	19.9	74	57.0	10.7	266	25.6	36.3	312	23.1	36.4	
11	57	28.5	6	27.9	+17 20.7	89	58.3	-16 10.4	281	27.7	+17 36.2	327	25.2	+22 36.4	
12	72	31.0	21	27.3	+17 21.6	104	59.5	-16 10.1	296	29.8	+17 36.1	342	27.3	+22 36.4	
13	87	33.4	36	26.7	22.4	120	00.7	09.8	311	31.9	35.9	357	29.5	36.4	
14	102	35.9	51	26.1	23.2	135	01.9	09.5	326	33.9	35.8	12	31.6	36.4	
15	117	38.4	66	25.5	24.0	150	03.2	09.2	341	36.0	35.7	27	33.7	36.4	
16	132	40.8	81	24.9	24.9	165	04.4	08.9	356	38.1	35.6	42	35.8	36.4	
17	147	43.3	96	24.3	+17 25.7	180	05.6	-16 08.6	11	40.2	+17 35.5	57	38.0	+22 36.5	
18	162	45.7	111	23.7	+17 26.5	195	06.8	-16 08.3	26	42.2	+17 35.4	72	40.1	+22 36.5	
19	177	48.2	126	23.1	27.4	210	08.1	08.0	41	44.3	35.3	87	42.2	36.5	
20	192	50.7	141	22.5	28.2	225	09.3	07.7	56	46.4	35.2	102	44.3	36.5	
21	207	53.1	156	21.9	29.0	240	10.5	07.4	71	48.4	35.0	117	46.4	36.5	
22	222	55.6	171	21.3	29.8	255	11.7	07.1	86	50.5	34.9	132	48.6	36.5	
23	237	58.1	186	20.7	30.7	270	13.0	06.8	101	52.6	34.8	147	50.7	36.5	
24	253	00.5	201	20.1	+17 31.5	285	14.2	-16 06.5	116	54.7	+17 34.7	162	52.8	+22 36.5	
Dif	—		-6		+8	+12		+3	+21		-1	+21		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 4 ^d 8	PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8										
	PMG: 11 ^h 58 ^m 4					SD: 15'3 PMG: 16 ^h 33 ^m			Rº: 50 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	25.1	+22 28.5	120	21.2	+22 48.7	78	60 N	21 13	22 43	** **	7 20 94	1 05 10		
1	195	25.0	28.8	134	49.9	40.9	78	58	20 55	22 05	** **	37 89	0 47 15		
2	210	24.9	29.1	149	18.7	33.1	80	56	39	21 38	** **	7 51 85	32 20		
3	225	24.8	29.4	163	47.5	25.1	81	54	26	18	22 50	8 03 82	19 23		
4	240	24.7	29.7	178	16.3	17.0	81	52	14	21 01	22 14	14 79	0 08 25		
5	255	24.6	+22 29.9	192	45.2	+22 08.8	82	50	20 04	20 47	21 50	8 24 77	** ** *		
6	270	24.5	+22 30.2	207	14.1	+22 00.4	84	45	19 42	20 19	21 07	8 44 72	** ** *		
7	285	24.4	30.5	221	43.1	+21 52.0	84	40	25	19 58	20 38	9 00 68	23 55 31		
8	300	24.3	30.8	236	12.1	43.4	86	35	19 11	40	20 16	14 65	43 34		
9	315	24.2	31.1	250	41.1	34.7	87	30	18 58	25	19 58	26 62	33 37		
10	330	24.0	31.3	265	10.2	25.9	88	20	37	19 02	30	9 47 57	15 42		
11	345	23.9	+22 31.6	279	39.3	+21 16.9	90	10 N	18 19	18 42	19 09	10 04 54	23 00 45		
12	0	23.8	+22 31.9	294	08.5	+21 07.9	90	0	18 02	18 24	18 51	10 21 50	22 45 49		
13	15	23.7	32.2	308	37.7	+20 58.7	92	10 S	17 45	18 08	34	37 47	30 53		
14	30	23.6	32.4	323	06.9	49.4	93	20	28	17 51	19	10 54 43	22 14 58		
15	45	23.5	32.7	337	36.2	40.0	94	30	17 07	33	18 03	11 14 39	21 56 62		
16	60	23.4	33.0	352	05.5	30.5	95	35	16 55	23	17 55	26 36	45 65		
17	75	23.3	+22 33.3	6	34.8	+20 20.9	96	40	16 42	17 12	17 46	11 39 33	21 33 68		
18	90	23.2	+22 33.5	21	04.2	+20 11.1	98	45	16 26	16 59	17 36	11 55 29	21 18 73		
19	105	23.1	33.8	35	33.7	+20 01.3	98	50	16 06	44	25	12 14 25	21 00 78		
20	120	22.9	34.1	50	03.1	+19 51.3	100	52	15 57	37	20	23 22	20 51 81		
21	135	22.8	34.4	64	32.7	41.2	101	54	46	29	15	34 19	42 83		
22	150	22.7	34.6	79	02.2	31.0	102	56	35	21	09	45 16	31 86		
23	165	22.6	34.9	93	31.8	20.7	103	58	21	11	17 03	12 58 12	18 91		
24	180	22.5	+22 35.2	108	01.4	+19 10.3	104	60 S	15 05	16 00	16 56	13 13 8	20 04 95		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 06 ^m 8		Mag: -3.8 PMG: 10 ^h 35 ^m		Mag: -0.8 PMG: 4 ^h 59 ^m		Mag: -1.9 PMG: 16 ^h 10 ^m		Mag: +0.1 PMG: 13 ^h 07 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	253	00.5	201 20.1	+17 31.5	285 14.2	-16 06.5	116 54.7	+17 34.7	162 52.8	
1	268	03.0	216 19.5	32.3	300 15.4	06.2	131 56.7	34.6	177 54.9	
2	283	05.5	231 18.9	33.1	315 16.7	05.9	146 58.8	34.5	192 57.0	
3	298	07.9	246 18.2	33.9	330 17.9	05.6	162 00.9	34.4	207 59.2	
4	313	10.4	261 17.6	34.8	345 19.1	05.3	177 03.0	34.3	223 01.3	
5	328	12.9	276 17.0	+17 35.6	0 20.4	-16 05.0	192 05.0	+17 34.1	238 03.4	
6	343	15.3	291 16.4	+17 36.4	15 21.6	-16 04.7	207 07.1	+17 34.0	253 05.5	
7	358	17.8	306 15.8	37.2	30 22.8	04.4	222 09.2	33.9	268 07.6	
8	13	20.2	321 15.2	38.0	45 24.1	04.1	237 11.2	33.8	283 09.8	
9	28	22.7	336 14.6	38.9	60 25.3	03.8	252 13.3	33.7	298 11.9	
10	43	25.2	351 14.0	39.7	75 26.5	03.5	267 15.4	33.6	313 14.0	
11	58	27.6	6 13.4	+17 40.5	90 27.8	-16 03.3	282 17.5	+17 33.5	328 16.1	
12	73	30.1	21 12.8	+17 41.3	105 29.0	-16 03.0	297 19.5	+17 33.3	343 18.2	
13	88	32.6	36 12.1	42.1	120 30.2	02.7	312 21.6	33.2	358 20.4	
14	103	35.0	51 11.5	42.9	135 31.5	02.4	327 23.7	33.1	13 22.5	
15	118	37.5	66 10.9	43.7	150 32.7	02.1	342 25.7	33.0	28 24.6	
16	133	40.0	81 10.3	44.5	165 34.0	01.8	357 27.8	32.9	43 26.7	
17	148	42.4	96 09.7	+17 45.4	180 35.2	-16 01.5	12 29.9	+17 32.8	58 28.8	
18	163	44.9	111 09.1	+17 46.2	195 36.4	-16 01.2	27 31.9	+17 32.7	73 31.0	
19	178	47.3	126 08.5	47.0	210 37.7	00.9	42 34.0	32.5	88 33.1	
20	193	49.8	141 07.9	47.8	225 38.9	00.6	57 36.1	32.4	103 35.2	
21	208	52.3	156 07.2	48.6	240 40.1	-16 00.3	72 38.2	32.3	118 37.3	
22	223	54.7	171 06.6	49.4	255 41.4	-16 00.0	87 40.2	32.2	133 39.4	
23	238	57.2	186 06.0	50.2	270 42.6	-15 59.7	102 42.3	32.1	148 41.6	
24	253	59.7	201 05.4	+17 51.0	285 43.9	-15 59.4	117 44.4	+17 32.0	163 43.7	
Dif	—	—	-6	+8	+12	+3	+21	-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 6			Edad: 5 ^d 8 SD: 15 ^h 5 PMG: 17 ^h 23 ^m	PHE { 4 ^h : 57/1 12 ^h : 57/3 20 ^h : 57/5 Rº: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	22.5	+22 35.2	108	01.4	+19 10.3	60 N	** **	1 13	2 43	8 54	95	1 15	6	
1	195	22.4	35.4	122	31.1 ¹⁰⁷	+18 59.8 ¹⁰⁵	58	** **	1 52	3 02	9 06	91	1 02	11	
2	210	22.3	35.7	137	00.8 ¹⁰⁷	49.2 ¹⁰⁶	56	** **	2 18	18	16	87	0 52	14	
3	225	22.2	36.0	151	30.6 ¹⁰⁸	38.5 ¹⁰⁷	54	1 07	39	31	25	84	42	17	
4	240	22.0	36.2	166	00.4 ¹⁰⁸	27.7 ¹⁰⁸	52	1 43	2 55	43	33	81	33	20	
5	255	21.9	+22 36.5	180	30.2 ¹⁰⁸	+18 16.8 ¹⁰⁹	50	2 07	3 10	3 53	9 41	78	0 25	22	
6	270	21.8	+22 36.8	195	00.1 ¹⁰⁹	+18 05.7 ¹¹¹	45	2 49	3 38	4 14	9 56	73	0 09	27	
7	285	21.7	37.0	209	30.0 ¹⁰⁹	+17 54.6 ¹¹¹	40	3 18	3 59	32	10 08	69	** **	**	
8	300	21.6	37.3	223	59.9 ¹⁰⁹	43.4 ¹¹²	35	41	4 17	46	19	66	** **	**	
9	315	21.5	37.5	238	29.9 ¹¹⁰	32.0 ¹¹⁴	30	3 58	31	4 59	28	63	** **	**	
10	330	21.4	37.8	252	59.9 ¹¹⁰	20.6 ¹¹⁴	20	4 26	4 55	5 20	44	58	23 57	39	
11	345	21.3	+22 38.1	267	30.0 ¹¹¹	+17 09.1 ¹¹⁵	10 N	4 48	5 15	5 38	10 58	53	23 45	44	
12	0	21.1	+22 38.3	282	00.1 ¹¹¹	+16 57.5 ¹¹⁶	0	5 06	5 33	5 55	11 11	49	23 34	49	
13	15	21.0	38.6	296	30.2 ¹¹¹	45.8 ¹¹⁷	10 S	23	5 49	6 12	24	45	23	53	
14	30	20.9	38.9	311	00.4 ¹¹²	33.9 ¹¹⁹	20	38	6 06	30	37	41	23 12	57	
15	45	20.8	39.1	325	30.6 ¹¹²	22.0 ¹¹⁹	30	5 54	24	6 50	11 53	35	22 58	63	
16	60	20.7	39.4	340	00.8 ¹¹²	+16 10.0 ¹²⁰	35	6 02	34	7 02	12 02	32	50	66	
17	75	20.6	+22 39.6	354	31.1 ¹¹³	+15 57.9 ¹²¹	40	6 11	6 45	7 15	12 12	29	22 41	70	
18	90	20.5	+22 39.9	9	01.4 ¹¹³	+15 45.7 ¹²²	45	6 21	6 58	7 31	12 24	25	22 31	73	
19	105	20.4	40.1	23	31.7 ¹¹³	33.5 ¹²²	50	32	7 13	7 51	39	20	18	79	
20	120	20.2	40.4	38	02.1 ¹¹⁴	21.1 ¹²⁴	52	37	20	8 01	45	18	12	81	
21	135	20.1	40.6	52	32.5 ¹¹⁴	+15 08.6 ¹²⁵	54	42	28	11	12 53	15	22 05	84	
22	150	20.0	40.9	67	02.9 ¹¹⁴	+14 56.1 ¹²⁵	56	48	37	23	13 01	12	21 57	88	
23	165	19.9	41.2	81	33.4 ¹¹⁵	43.5 ¹²⁶	58	6 54	46	37	10	9	49	91	
24	180	19.8	+22 41.4	96	03.9 ¹¹⁵	+14 30.8 ¹²⁷	60 S	7 01	7 57	8 53	13 21	5	21 39	95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 02 ^m 9		Mag: -3.8 PMG: 10 ^h 36 ^m		Mag: -0.8 PMG: 4 ^h 57 ^m		Mag: -1.9 PMG: 16 ^h 07 ^m		Mag: +0.1 PMG: 13 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	253	59.7	201	05.4	+17	51.0	285	43.9	-15	59.4	117	44.4	+17	32.0	163	43.7	+22	36.6
1	269	02.1	216	04.8		51.8	300	45.1		59.1	132	46.4		31.9	178	45.8		36.6
2	284	04.6	231	04.1		52.6	315	46.4		58.8	147	48.5		31.7	193	47.9		36.6
3	299	07.1	246	03.5		53.4	330	47.6		58.5	162	50.6		31.6	208	50.0		36.6
4	314	09.5	261	02.9		54.2	345	48.8		58.3	177	52.6		31.5	223	52.2		36.6
5	329	12.0	276	02.3	+17	55.0	0	50.1	-15	58.0	192	54.7	+17	31.4	238	54.3	+22	36.6
6	344	14.5	291	01.7	+17	55.8	15	51.3	-15	57.7	207	56.8	+17	31.3	253	56.4	+22	36.6
7	359	16.9	306	01.1		56.6	30	52.6		57.4	222	58.8		31.2	268	58.5		36.6
8	14	19.4	321	00.4		57.4	45	53.8		57.1	238	00.9		31.0	284	00.6		36.6
9	29	21.8	335	59.8		58.2	60	55.1		56.8	253	03.0		30.9	299	02.8		36.6
10	44	24.3	350	59.2		59.0	75	56.3		56.5	268	05.0		30.8	314	04.9		36.6
11	59	26.8	5	58.6	+17	59.8	90	57.6	-15	56.2	283	07.1	+17	30.7	329	07.0	+22	36.6
12	74	29.2	20	57.9	+18	00.6	105	58.8	-15	55.9	298	09.2	+17	30.6	344	09.1	+22	36.6
13	89	31.7	35	57.3		01.4	121	00.1		55.6	313	11.2		30.5	359	11.2		36.6
14	104	34.2	50	56.7		02.2	136	01.3		55.3	328	13.3		30.4	14	13.4		36.6
15	119	36.6	65	56.1		03.0	151	02.6		55.0	343	15.4		30.2	29	15.5		36.6
16	134	39.1	80	55.4		03.8	166	03.8		54.7	358	17.4		30.1	44	17.6		36.6
17	149	41.6	95	54.8	+18	04.6	181	05.1	-15	54.5	13	19.5	+17	30.0	59	19.7	+22	36.6
18	164	44.0	110	54.2	+18	05.3	196	06.3	-15	54.2	28	21.6	+17	29.9	74	21.8	+22	36.6
19	179	46.5	125	53.6		06.1	211	07.6		53.9	43	23.6		29.8	89	24.0		36.6
20	194	49.0	140	52.9		06.9	226	08.8		53.6	58	25.7		29.7	104	26.1		36.7
21	209	51.4	155	52.3		07.7	241	10.1		53.3	73	27.8		29.5	119	28.2		36.7
22	224	53.9	170	51.7		08.5	256	11.3		53.0	88	29.8		29.4	134	30.3		36.7
23	239	56.3	185	51.1		09.3	271	12.6		52.7	103	31.9		29.3	149	32.4		36.7
24	254	58.8	200	50.4	+18	10.1	286	13.8	-15	52.4	118	34.0	+17	29.2	164	34.6	+22	36.7
Dif	—		-6	+8		+12	+3			+21	-1			+21				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 6 ^d 8	PHE { 4 ^h : 57/8 12 ^h : 58/0 20 ^h : 58/2	SD: 15 ^h 7			R°: 48 ^m						
	PMG: 11 ^h 58 ^m 8					PMG: 18 ^h 11 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	19.8	+22 41.4	96	03.9	+14 30.8		60 N	21 16	22 49	** **	10 29 96	1 21 4		
1	195	19.7	41.7	110	34.4 ¹¹⁵	18.0 ¹²⁸		58	20 57	22 08	** **	37 91	13 8		
2	210	19.6	41.9	125	05.0 ¹¹⁶	+14 05.1 ¹²⁹		56	41	21 41	** **	43 88	1 06 11		
3	225	19.4	42.2	139	35.5 ¹¹⁵	+13 52.1 ¹³⁰		54	28	21	22 55	49 85	0 59 14		
4	240	19.3	42.4	154	06.2 ¹¹⁷	39.1 ¹³⁰		52	16	21 04	22 18	54 82	53 16		
5	255	19.2	+22 42.7	168	36.8 ¹¹⁶	+13 25.9 ¹³²		50	20 05	20 49	21 52	10 59 79	0 47 19		
6	270	19.1	+22 42.9	183	07.4 ¹¹⁶	+13 12.7 ¹³²		45	19 44	20 21	21 09	11 09 74	0 36 23		
7	285	19.0	43.2	197	38.1 ¹¹⁷	+12 59.4 ¹³³		40	26	19 59	20 40	17 70	26 27		
8	300	18.9	43.4	212	08.8 ¹¹⁷	46.1 ¹³³		35	19 12	41	18	25 66	17 31		
9	315	18.7	43.6	226	39.6 ¹¹⁸	32.6 ¹³⁵		30	18 59	26	20 00	31 63	0 10 34		
10	330	18.6	43.9	241	10.3 ¹¹⁷	19.1 ¹³⁵		20	38	19 02	19 31	42 57	** ** *		
11	345	18.5	+22 44.1	255	41.1 ¹¹⁸	+12 05.5 ¹³⁶		10 N	18 19	18 42	19 09	11 51 52	** ** *		
12	0	18.4	+22 44.4	270	11.9 ¹¹⁸	+11 51.8 ¹³⁷		0	18 02	18 25	18 51	12 00 48	** ** *		
13	15	18.3	44.6	284	42.7 ¹¹⁸	38.1 ¹³⁷		10 S	17 46	18 08	34	09 43	** ** *		
14	30	18.2	44.9	299	13.6 ¹¹⁹	24.3 ¹³⁸		20	28	17 51	19	18 39	** ** *		
15	45	18.0	45.1	313	44.4 ¹¹⁸	+11 10.4 ¹³⁹		30	17 07	33	18 03	28 34	** ** *		
16	60	17.9	45.3	328	15.3 ¹¹⁹	+10 56.5 ¹³⁹		35	16 55	23	17 55	34 31	23 56 67		
17	75	17.8	+22 45.6	342	46.2 ¹¹⁹	+10 42.4 ¹⁴¹		40	16 41	17 12	17 46	12 41 27	23 51 70		
18	90	17.7	+22 45.8	357	17.1 ¹¹⁹	+10 28.3 ¹⁴¹		45	16 25	16 59	17 36	12 49 23	23 44 75		
19	105	17.6	46.1	11	48.0 ¹¹⁹	+10 14.2 ¹⁴¹		50	16 05	43	24	12 59 18	37 80		
20	120	17.5	46.3	26	19.0 ¹²⁰	+10 00.0 ¹⁴²		52	15 56	36	19	13 03 16	33 83		
21	135	17.3	46.5	40	49.9 ¹¹⁹	+9 45.7 ¹⁴³		54	45	28	14	08 13	29 85		
22	150	17.2	46.8	55	20.9 ¹²⁰	31.3 ¹⁴⁴		56	33	20	08	13 11	25 88		
23	165	17.1	47.0	69	51.8 ¹¹⁹	16.9 ¹⁴⁴		58	19	16 10	17 02	19 7	20 92		
24	180	17.0	+22 47.3	84	22.8 ¹²⁰	+9 02.5 ¹⁴⁴		60 S	15 03	15 59	16 55	13 26 4	23 14 96		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 58 ^m 9		Mag: -3.8 PMG: 10 ^h 37 ^m			Mag: -0.8 PMG: 4 ^h 55 ^m			Mag: -1.9 PMG: 16 ^h 04 ^m			Mag: +0.1 PMG: 13 ^h 00 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	254	58.8	200	50.4	+18	10.1	286	13.8	-15	52.4	118	34.0	+17	29.2	
1	270	01.3	215	49.8		10.9	301	15.1		52.1	133	36.0		29.1	
2	285	03.7	230	49.2		11.6	316	16.3		51.8	148	38.1		29.0	
3	300	06.2	245	48.5		12.4	331	17.6		51.6	163	40.2		28.8	
4	315	08.7	260	47.9		13.2	346	18.9		51.3	178	42.2		28.7	
5	330	11.1	275	47.3	+18	14.0	1	20.1	-15	51.0	193	44.3	+17	28.6	
6	345	13.6	290	46.6	+18	14.8	16	21.4	-15	50.7	208	46.3	+17	28.5	
7	0	16.1	305	46.0		15.5	31	22.6		50.4	223	48.4		28.4	
8	15	18.5	320	45.4		16.3	46	23.9		50.1	238	50.5		28.3	
9	30	21.0	335	44.8		17.1	61	25.1		49.8	253	52.5		28.1	
10	45	23.4	350	44.1		17.9	76	26.4		49.5	268	54.6		28.0	
11	60	25.9	5	43.5	+18	18.7	91	27.7	-15	49.2	283	56.7	+17	27.9	
12	75	28.4	20	42.9	+18	19.4	106	28.9	-15	48.9	298	58.7	+17	27.8	
13	90	30.8	35	42.2		20.2	121	30.2		48.7	314	00.8		27.7	
14	105	33.3	50	41.6		21.0	136	31.4		48.4	329	02.8		27.6	
15	120	35.8	65	40.9		21.8	151	32.7		48.1	344	04.9		27.4	
16	135	38.2	80	40.3		22.5	166	34.0		47.8	359	07.0		27.3	
17	150	40.7	95	39.7	+18	23.3	181	35.2	-15	47.5	14	09.0	+17	27.2	
18	165	43.2	110	39.0	+18	24.1	196	36.5	-15	47.2	29	11.1	+17	27.1	
19	180	45.6	125	38.4		24.8	211	37.8		46.9	44	13.2		27.0	
20	195	48.1	140	37.8		25.6	226	39.0		46.6	59	15.2		26.9	
21	210	50.6	155	37.1		26.4	241	40.3		46.3	74	17.3		26.7	
22	225	53.0	170	36.5		27.1	256	41.6		46.1	89	19.3		26.6	
23	240	55.5	185	35.8		27.9	271	42.8		45.8	104	21.4		26.5	
24	255	57.9	200	35.2	+18	28.7	286	44.1	-15	45.5	119	23.5	+17	26.4	
Dif	—		-6 +8			+13 +3			+21 -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: 7 ^d 8 SD: 15 ^h 9 PMG: 18 ^h 59 ^m	PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 7 20 ^h : 59 ^m 0 R°: 49 ^m										
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	17.0	+22 47.3	84	22.8	+9 02.5	60 N	** *	1 08	2 41	12 05	96	1 25	4	
1	195	16.9	47.5	98	53.8 ¹²⁰	+8 47.9 ¹⁴⁶	58	** *	1 49	3 00	08 93	21	6		
2	210	16.8	47.7	113	24.8 ¹²⁰	33.3 ¹⁴⁶	56	** *	2 16	16	11 89	17	9		
3	225	16.6	48.0	127	55.8 ¹²⁰	18.7 ¹⁴⁶	54	1 02	37	30	14 86	13	1		
4	240	16.5	48.2	142	26.8 ¹²⁰	+8 04.0 ¹⁴⁷	52	1 40	2 54	42	16 84	09	15		
5	255	16.4	+22 48.4	156	57.9 ¹²¹	+7 49.2 ¹⁴⁸	50	2 05	3 08	3 52	12 18	81	1 06	17	
6	270	16.3	+22 48.7	171	28.9 ¹²⁰	+7 34.4 ¹⁴⁸	45	2 48	3 37	4 14	12 23	76	0 59	22	
7	285	16.2	48.9	185	59.9 ¹²⁰	19.5 ¹⁴⁹	40	3 18	3 59	31	27 71	53	27		
8	300	16.1	49.1	200	30.9 ¹²⁰	+7 04.6 ¹⁴⁹	35	40	4 16	46	31 67	48	30		
9	315	15.9	49.3	215	02.0 ¹²¹	+6 49.6 ¹⁵⁰	30	3 58	31	4 58	34 64	44	33		
10	330	15.8	49.6	229	33.0 ¹²⁰	34.6 ¹⁵⁰	20	4 26	4 55	5 20	39 58	36	39		
11	345	15.7	+22 49.8	244	04.0 ¹²⁰	+6 19.6 ¹⁵⁰	10 N	4 48	5 15	5 38	12 43	53	0 29	44	
12	0	15.6	+22 50.0	258	35.0 ¹²⁰	+6 04.4 ¹⁵²	0	5 07	5 33	5 55	12 48	48	0 23	48	
13	15	15.5	50.3	273	06.1 ¹²¹	+5 49.3 ¹⁵¹	10 S	23	5 50	6 12	52 44	16	53		
14	30	15.3	50.5	287	37.1 ¹²⁰	34.1 ¹⁵²	20	39	6 06	30	12 57	38	09	57	
15	45	15.2	50.7	302	08.1 ¹²⁰	18.8 ¹⁵³	30	5 55	25	6 51	13 02	33	0 01	63	
16	60	15.1	50.9	316	39.1 ¹²⁰	+5 03.5 ¹⁵³	35	6 03	35	7 03	05 30	** *	** *		
17	75	15.0	+22 51.2	331	10.1 ¹²⁰	+4 48.2 ¹⁵³	40	6 12	6 46	7 17	13 08	26	** *	** *	
18	90	14.9	+22 51.4	345	41.1 ¹²⁰	+4 32.8 ¹⁵⁴	45	6 22	6 59	7 33	13 12	22	** *	** *	
19	105	14.7	51.6	0	12.0 ¹¹⁹	17.4 ¹⁵⁴	50	34	7 15	7 53	17 17	** *	** *		
20	120	14.6	51.8	14	43.0 ¹²⁰	+4 01.9 ¹⁵⁵	52	39	22	8 02	19 14	** *	** *		
21	135	14.5	52.0	29	13.9 ¹¹⁹	+3 46.4 ¹⁵⁵	54	44	30	13	21 12	** *	** *		
22	150	14.4	52.3	43	44.9 ¹²⁰	30.9 ¹⁵⁵	56	50	39	25	24 9	** *	** *		
23	165	14.3	52.5	58	15.8 ¹¹⁹	+3 15.4 ¹⁵⁵	58	6 56	48	39	26 7	** *	** *		
24	180	14.1	+22 52.7	72	46.7 ¹¹⁹	+2 59.8 ¹⁵⁶	60 S	7 03	7 59	8 56	13 30	3	** *	** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 6 ^h 55 ^m 0		Mag: -3.8 PMG: 10 ^h 38 ^m			Mag: -0.9 PMG: 4 ^h 53 ^m			Mag: -1.9 PMG: 16 ^h 00 ^m			Mag: +0.1 PMG: 12 ^h 56 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	255	57.9	200	35.2	+18 28.7	286	44.1	-15 45.5	119	23.5	+17 26.4	165	25.4	+22 36.7	
1	271	00.4	215	34.6	29.4	301	45.4	45.2	134	25.5	26.3	180	27.5	36.7	
2	286	02.9	230	33.9	30.2	316	46.6	44.9	149	27.6	26.2	195	29.6	36.7	
3	301	05.3	245	33.3	31.0	331	47.9	44.6	164	29.6	26.0	210	31.8	36.8	
4	316	07.8	260	32.6	31.7	346	49.2	44.3	179	31.7	25.9	225	33.9	36.8	
5	331	10.3	275	32.0	+18 32.5	1	50.4	-15 44.0	194	33.8	+17 25.8	240	36.0	+22 36.8	
6	346	12.7	290	31.4	+18 33.3	16	51.7	-15 43.8	209	35.8	+17 25.7	255	38.1	+22 36.8	
7	1	15.2	305	30.7	34.0	31	53.0	43.5	224	37.9	25.6	270	40.2	36.8	
8	16	17.7	320	30.1	34.8	46	54.2	43.2	239	39.9	25.4	285	42.3	36.8	
9	31	20.1	335	29.4	35.5	61	55.5	42.9	254	42.0	25.3	300	44.5	36.8	
10	46	22.6	350	28.8	36.3	76	56.8	42.6	269	44.1	25.2	315	46.6	36.8	
11	61	25.1	5	28.1	+18 37.0	91	58.1	-15 42.3	284	46.1	+17 25.1	330	48.7	+22 36.8	
12	76	27.5	20	27.5	+18 37.8	106	59.3	-15 42.0	299	48.2	+17 25.0	345	50.8	+22 36.8	
13	91	30.0	35	26.8	38.6	122	00.6	41.8	314	50.2	24.9	0	52.9	36.8	
14	106	32.4	50	26.2	39.3	137	01.9	41.5	329	52.3	24.7	15	55.1	36.8	
15	121	34.9	65	25.5	40.1	152	03.1	41.2	344	54.4	24.6	30	57.2	36.8	
16	136	37.4	80	24.9	40.8	167	04.4	40.9	359	56.4	24.5	45	59.3	36.8	
17	151	39.8	95	24.2	+18 41.6	182	05.7	-15 40.6	14	58.5	+17 24.4	61	01.4	+22 36.8	
18	166	42.3	110	23.6	+18 42.3	197	07.0	-15 40.3	30	00.5	+17 24.3	76	03.5	+22 36.8	
19	181	44.8	125	23.0	43.1	212	08.3	40.0	45	02.6	24.1	91	05.6	36.8	
20	196	47.2	140	22.3	43.8	227	09.5	39.8	60	04.6	24.0	106	07.8	36.8	
21	211	49.7	155	21.7	44.6	242	10.8	39.5	75	06.7	23.9	121	09.9	36.8	
22	226	52.2	170	21.0	45.3	257	12.1	39.2	90	08.8	23.8	136	12.0	36.8	
23	241	54.6	185	20.4	46.1	272	13.4	38.9	105	10.8	23.7	151	14.1	36.8	
24	256	57.1	200	19.7	+18 46.8	287	14.6	-15 38.6	120	12.9	+17 23.5	166	16.2	+22 36.8	
Dif	—		-6 +8			+13 +3			+21 -1			+21 0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 8 ^d 8	PHE { 4 ^h : 59 ^h /2 12 ^h : 59 ^h /4 20 ^h : 59 ^h /7 R°: 50 ^m									
	PMG: 11 ^h 59 ^m 2													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	14.1	+22 52.7	72	46.7	+2 59.8		60 N	21 19	22 55	** **	13 41 99	1 29 3	
1	195	14.0	52.9	87	17.6 ¹¹⁹	44.2 ¹⁵⁶		58	20 59	22 12	** **	41 95	27 7	3
2	210	13.9	53.1	101	48.4 ¹¹⁸	28.5 ¹⁵⁷		56	43	21 44	** **	40 92	26 10	
3	225	13.8	53.3	116	19.3 ¹¹⁹	+2 12.8 ¹⁵⁷		54	29	23	23 00	40 89	25 12	
4	240	13.7	53.6	130	50.1 ¹¹⁸	+1 57.1 ¹⁵⁷		52	18	21 06	22 21	40 86	24 15	
5	255	13.5	+22 53.8	145	20.9 ¹¹⁸	+1 41.4 ¹⁵⁷		50	20 07	20 51	21 55	13 39 84	1 23 17	
6	270	13.4	+22 54.0	159	51.7 ¹¹⁸	+1 25.6 ¹⁵⁸		45	19 45	20 22	21 11	13 39 78	1 21 22	
7	285	13.3	54.2	174	22.4 ¹¹⁷	+1 09.8 ¹⁵⁸		40	28	20 00	20 41	38 73	20 26	
8	300	13.2	54.4	188	53.2 ¹¹⁸	+0 54.0 ¹⁵⁸		35	13	19 42	19	38 69	18 30	
9	315	13.1	54.6	203	23.9 ¹¹⁷	38.2 ¹⁵⁸		30	19 00	27	20 01	38 65	17 33	
10	330	12.9	54.8	217	54.5 ¹¹⁶	22.4 ¹⁵⁸		20	18 39	19 03	19 32	37 60	15 38	
11	345	12.8	+22 55.1	232	25.2 ¹¹⁷	+0 06.5 ¹⁵⁹		10 N	18 20	18 43	19 10	13 36 55	1 13 43	
12	0	12.7	+22 55.3	246	55.8 ¹¹⁶	-0 09.4 ¹⁵⁹		0	18 03	18 25	18 51	13 36 50	1 11 48	
13	15	12.6	55.5	261	26.3 ¹¹⁵	25.3 ¹⁵⁹		10 S	17 46	18 09	35	36 45	09 53	
14	30	12.5	55.7	275	56.9 ¹¹⁶	41.2 ¹⁵⁹		20	28	17 52	19	35 40	06 59	59
15	45	12.3	55.9	290	27.4 ¹¹⁵	-0 57.1 ¹⁵⁹		30	17 07	33	18 03	35 34	04 65	
16	60	12.2	56.1	304	57.9 ¹¹⁵	-1 13.0 ¹⁵⁹		35	16 55	23	17 54	35 30	03 68	
17	75	12.1	+22 56.3	319	28.3 ¹¹⁴	-1 29.0 ¹⁶⁰		40	16 41	17 11	17 45	13 34 27	1 01 72	
18	90	12.0	+22 56.5	333	58.7 ¹¹⁴	-1 44.9 ¹⁵⁹		45	16 25	16 58	17 35	13 34 23	0 59 76	
19	105	11.8	56.7	348	29.0 ¹¹³	-2 00.9 ¹⁶⁰		50	16 05	43	24	34 17	57 82	
20	120	11.7	56.9	2	59.3 ¹¹³	16.8 ¹⁵⁹		52	15 55	35	19	33 16	56 84	
21	135	11.6	57.1	17	29.6 ¹¹³	32.8 ¹⁶⁰		54	44	28	13	33 13	54 88	
22	150	11.5	57.3	31	59.8 ¹¹²	-2 48.8 ¹⁶⁰		56	32	19	07	33 10	53 90	
23	165	11.4	57.5	46	30.0 ¹¹²	-3 04.7 ¹⁵⁹		58	18	16 09	17 01	33 7	52 93	
24	180	11.2	+22 57.7	61	00.1 ¹¹¹	-3 20.7 ¹⁶⁰		60 S	15 01	15 58	16 54	13 33 3	0 50 97	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 51 ^m 1		Mag: -3.8 PMG: 10 ^h 39 ^m		Mag: -0.9 PMG: 4 ^h 51 ^m		Mag: -1.9 PMG: 15 ^h 57 ^m		Mag: 0.0 PMG: 12 ^h 53 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	256	57.1	200 19.7	+18 46.8	287 14.6	-15 38.6	120 12.9	+17 23.5	166 16.2	+22 36.8				
1	271	59.5	215 19.0	47.6	302 15.9	38.3	135 14.9	23.4	181 18.3	36.8				
2	287	02.0	230 18.4	48.3	317 17.2	38.1	150 17.0	23.3	196 20.5	36.8				
3	302	04.5	245 17.7	49.0	332 18.5	37.8	165 19.0	23.2	211 22.6	36.8				
4	317	06.9	260 17.1	49.8	347 19.8	37.5	180 21.1	23.1	226 24.7	36.8				
5	332	09.4	275 16.4	+18 50.5	2 21.0	-15 37.2	195 23.2	+17 22.9	241 26.8	+22 36.8				
6	347	11.9	290 15.8	+18 51.3	17 22.3	-15 36.9	210 25.2	+17 22.8	256 28.9	+22 36.8				
7	2	14.3	305 15.1	52.0	32 23.6	36.6	225 27.3	22.7	271 31.1	36.8				
8	17	16.8	320 14.5	52.7	47 24.9	36.4	240 29.3	22.6	286 33.2	36.8				
9	32	19.3	335 13.8	53.5	62 26.2	36.1	255 31.4	22.5	301 35.3	36.8				
10	47	21.7	350 13.2	54.2	77 27.5	35.8	270 33.4	22.4	316 37.4	36.8				
11	62	24.2	5 12.5	+18 55.0	92 28.7	-15 35.5	285 35.5	+17 22.2	331 39.5	+22 36.8				
12	77	26.7	20 11.8	+18 55.7	107 30.0	-15 35.2	300 37.5	+17 22.1	346 41.6	+22 36.8				
13	92	29.1	35 11.2	56.4	122 31.3	34.9	315 39.6	22.0	1 43.8	36.8				
14	107	31.6	50 10.5	57.2	137 32.6	34.7	330 41.7	21.9	16 45.9	36.8				
15	122	34.0	65 09.9	57.9	152 33.9	34.4	345 43.7	21.8	31 48.0	36.8				
16	137	36.5	80 09.2	58.6	167 35.2	34.1	0 45.8	21.6	46 50.1	36.8				
17	152	39.0	95 08.6	+18 59.4	182 36.5	-15 33.8	15 47.8	+17 21.5	61 52.2	+22 36.9				
18	167	41.4	110 07.9	+19 00.1	197 37.8	-15 33.5	30 49.9	+17 21.4	76 54.3	+22 36.9				
19	182	43.9	125 07.2	00.8	212 39.0	33.2	45 51.9	21.3	91 56.5	36.9				
20	197	46.4	140 06.6	01.5	227 40.3	33.0	60 54.0	21.2	106 58.6	36.9				
21	212	48.8	155 05.9	02.3	242 41.6	32.7	75 56.0	21.0	122 00.7	36.9				
22	227	51.3	170 05.2	03.0	257 42.9	32.4	90 58.1	20.9	137 02.8	36.9				
23	242	53.8	185 04.6	03.7	272 44.2	32.1	106 00.1	20.8	152 04.9	36.9				
24	257	56.2	200 03.9	+19 04.5	287 45.5	-15 31.8	121 02.2	+17 20.7	167 07.0	+22 36.9				
Dif	—	—	-7	+7	+13	+3	+21	-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 3				Edad: 9 ^d 8 PHE { 4 ^h : 59 ^m 9 12 ^h : 60 ^m 1 20 ^h : 60 ^m 3 PMG: 20 ^h 38 ^m R°: 53 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	11.2	+22	57.7	61	00.1	-3	20.7	60 N	** **	1 03	2 39	15 20	105		1 32	3			
1	195	11.1		57.9	75	30.2		36.7	58	** **	1 47	2 59	16 100			34	7			
2	210	11.0		58.1	90	00.2		52.6	56	** **	2 14	3 15	12 96			36	10			
3	225	10.9		58.3	104	30.2		08.6	54	0 58	35	29	09 92			37	14			
4	240	10.7		58.5	119	00.2		24.5	52	1 38	2 53	41	06 89			39	16			
5	255	10.6	+22	58.7	133	30.0		40.4	50	2 04	3 07	3 51	15 03	86		1 40	19			
6	270	10.5	+22	58.9	147	59.9		56.4	45	2 47	3 36	4 13	14 57	80		1 43	24			
7	285	10.4		59.1	162	29.6		12.3	40	3 17	3 58	31	51 76			46	28			
8	300	10.3		59.3	176	59.3		28.2	35	40	4 16	46	47 72			48	32			
9	315	10.1		59.5	191	29.0		44.0	30	3 58	31	4 58	43 69			50	35			
10	330	10.0		59.7	205	58.6		59.9	20	4 26	4 55	5 20	37 62			53	41			
11	345	09.9	+22	59.9	220	28.1		15.7	10 N	4 48	5 15	5 38	14 31	57		1 56	47			
12	0	09.8	+23	00.1	234	57.6		31.6	0	5 07	5 33	5 56	14 26	52		1 59	51			
13	15	09.6		00.3	249	27.0		47.4	10 S	24	5 50	6 13	21 47			2 02	56			
14	30	09.5		00.5	263	56.3		03.1	20	40	6 07	31	15 43			05	61			
15	45	09.4		00.7	278	25.6		18.9	30	5 56	25	6 52	09 37			09	67			
16	60	09.3		00.9	292	54.8		34.6	35	6 04	36	7 04	05 34			11	70			
17	75	09.1	+23	01.1	307	24.0		50.3	40	6 13	6 47	7 18	14 01	30		2 13	74			
18	90	09.0	+23	01.3	321	53.1		06.0	45	6 23	7 00	7 34	13 57	25		2 15	79			
19	105	08.9		01.4	336	22.1		21.6	50	35	16	7 54	51 20			19	84			
20	120	08.8		01.6	350	51.0		37.2	52	40	23	8 04	49 17			20	87			
21	135	08.6		01.8	5	19.9		52.7	54	45	31	15	46 15			22	90			
22	150	08.5		02.0	19	48.7		08.3	56	51	40	27	43 12			23	94			
23	165	08.4		02.2	34	17.4		23.7	58	6 58	7 50	41	40 8			25	97			
24	180	08.3	+23	02.4	48	46.0		39.2	60 S	7 05	8 01	8 58	13 36	5		2 27	102			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 47 ^m 1				Mag: -3.8 PMG: 10 ^h 40 ^m				Mag: -0.9 PMG: 4 ^h 49 ^m				Mag: -1.9 PMG: 15 ^h 54 ^m				Mag: 0.0 PMG: 12 ^h 50 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	257	56.2	200	03.9	+19	04.5	287	45.5	-15	31.8	121	02.2	+17	20.7	167	07.0	+22	36.9		
1	272	58.7	215	03.3		05.2	302	46.8		31.6	136	04.3		20.5	182	09.2		36.9		
2	288	01.2	230	02.6		05.9	317	48.1		31.3	151	06.3		20.4	197	11.3		36.9		
3	303	03.6	245	01.9		06.6	332	49.4		31.0	166	08.4		20.3	212	13.4		36.9		
4	318	06.1	260	01.3		07.3	347	50.7		30.7	181	10.4		20.2	227	15.5		36.9		
5	333	08.5	275	00.6	+19	08.1	2	52.0	-15	30.4	196	12.5	+17	20.1	242	17.6	+22	36.9		
6	348	11.0	289	59.9	+19	08.8	17	53.3	-15	30.2	211	14.5	+17	19.9	257	19.7	+22	36.9		
7	3	13.5	304	59.3		09.5	32	54.6		29.9	226	16.6		19.8	272	21.9		36.9		
8	18	15.9	319	58.6		10.2	47	55.9		29.6	241	18.6		19.7	287	24.0		36.9		
9	33	18.4	334	57.9		10.9	62	57.2		29.3	256	20.7		19.6	302	26.1		36.9		
10	48	20.9	349	57.3		11.7	77	58.5		29.0	271	22.7		19.5	317	28.2		36.9		
11	63	23.3	4	56.6	+19	12.4	92	59.7	-15	28.8	286	24.8	+17	19.3	332	30.3	+22	36.9		
12	78	25.8	19	55.9	+19	13.1	108	01.0	-15	28.5	301	26.8	+17	19.2	347	32.4	+22	36.9		
13	93	28.3	34	55.3		13.8	123	02.3		28.2	316	28.9		19.1	2	34.6		36.9		
14	108	30.7	49	54.6		14.5	138	03.6		27.9	331	30.9		19.0	17	36.7		36.9		
15	123	33.2	64	53.9		15.2	153	04.9		27.6	346	33.0		18.9	32	38.8		36.9		
16	138	35.6	79	53.3		15.9	168	06.2		27.4	1	35.0		18.7	47	40.9		36.9		
17	153	38.1	94	52.6	+19	16.7	183	07.5	-15	27.1	16	37.1	+17	18.6	62	43.0	+22	36.9		
18	168	40.6	109	51.9	+19	17.4	198	08.9	-15	26.8	31	39.1	+17	18.5	77	45.1	+22	36.9		
19	183	43.0	124	51.2		18.1	213	10.2		26.5	46	41.2		18.4	92	47.3		36.9		
20	198	45.5	139	50.6		18.8	228	11.5		26.2	61	43.2		18.2	107	49.4		36.9		
21	213	48.0	154	49.9		19.5	243	12.8		26.0	76	45.3		18.1	122	51.5		36.9		
22	228	50.4	169	49.2		20.2	258	14.1		25.7	91	47.3		18.0	137	53.6		36.9		
23	243	52.9	184	48.5		20.9	273	15.4		25.4	106	49.4		17.9	152	55.7		36.9		
24	258	55.4	199	47.9	+19	21.6	288	16.7	-15	25.1	121	51.4	+17	17.8	167	57.8	+22	36.9		
Dif	—				-7 +7				+13 +3				+21 -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 5			Edad: 10 ^d 8 PHE SD: 16'4 PMG: 21 ^h 31 ^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	180	08.3	+23 02.4	48	46.0	-9 39.2	154	60 N	21 21	23 00	** **	17 05 109	1 35 5		
1	195	08.1	02.6	63	14.6	-9 54.6	154	58	21 01	22 15	** **	16 56 103	41 9		
2	210	08.0	02.7	77	43.1	-10 09.9	153	56	20 45	21 46	** **	48 99	46 13		
3	225	07.9	02.9	92	11.5	25.2	153	54	31	25	23 05	41 95	51 16		
4	240	07.8	03.1	106	39.8	40.5	153	52	19	21 07	22 23	35 92	55 19		
5	255	07.6	+23 03.3	121	08.1	-10 55.7	152	50	20 08	20 53	21 57	16 29 89	1 59 22		
6	270	07.5	+23 03.5	135	36.2	-11 10.8	151	45	19 46	20 23	21 13	16 17 83	2 07 27		
7	285	07.4	03.7	150	04.3	25.9	151	40	29	20 01	20 43	16 07 79	14 32		
8	300	07.3	03.8	164	32.3	40.9	150	35	14	19 43	20	15 59 75	20 35		
9	315	07.1	04.0	179	00.2	-11 55.9	150	30	19 01	28	20 02	52 71	25 39		
10	330	07.0	04.2	193	28.1	-12 10.8	149	20	18 39	19 04	19 33	39 66	34 45		
11	345	06.9	+23 04.4	207	55.8	-12 25.7	149	10 N	18 21	18 44	19 11	15 28 61	2 43 49		
12	0	06.8	+23 04.5	222	23.5	-12 40.4	147	0	18 03	18 26	18 52	15 18 57	2 50 54		
13	15	06.6	04.7	236	51.1	-12 55.2	148	10 S	17 46	18 09	35	15 08 52	2 58 59		
14	30	06.5	04.9	251	18.5	-13 09.8	146	20	28	17 52	19	14 58 47	3 06 64		
15	45	06.4	05.1	265	45.9	24.4	146	30	17 07	33	18 03	46 41	16 69		
16	60	06.3	05.2	280	13.2	38.9	145	35	16 55	23	17 54	39 38	21 73		
17	75	06.1	+23 05.4	294	40.4	-13 53.3	144	40	16 41	17 11	17 45	14 31 35	3 27 77		
18	90	06.0	+23 05.6	309	07.6	-14 07.7	144	45	16 24	16 58	17 35	14 22 30	3 34 82		
19	105	05.9	05.8	323	34.6	21.9	142	50	16 04	42	24	11 25	43 88		
20	120	05.8	05.9	338	01.5	36.1	142	52	15 54	35	18	06 22	47 91		
21	135	05.6	06.1	352	28.4	-14 50.2	141	54	43	27	13	14 01 19	52 94		
22	150	05.5	06.3	6	55.1	-15 04.2	140	56	31	18	07	13 55 16	3 57 97		
23	165	05.4	06.4	21	21.8	18.2	140	58	17	16 08	17 00	48 12	4 02 102		
24	180	05.3	+23 06.6	35	48.4	-15 32.0	138	60 S	15 00	15 57	16 53	13 41 7	4 09 106		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 43 ^m 2		Mag: -3.8 PMG: 10 ^h 41 ^m		Mag: -0.9 PMG: 4 ^h 46 ^m		Mag: -1.9 PMG: 15 ^h 50 ^m		Mag: 0.0 PMG: 12 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	258	55.4	199 47.9	+19 21.6	288 16.7	-15 25.1	121 51.4	+17 17.8	167 57.8	+22 36.9
1	273	57.8	214 47.2	22.3	303 18.0	24.9	136 53.5	17.6	183 00.0	36.9
2	289	00.3	229 46.5	23.0	318 19.3	24.6	151 55.5	17.5	198 02.1	36.9
3	304	02.8	244 45.8	23.7	333 20.6	24.3	166 57.6	17.4	213 04.2	36.9
4	319	05.2	259 45.2	24.4	348 21.9	24.0	181 59.6	17.3	228 06.3	36.9
5	334	07.7	274 44.5	+19 25.1	3 23.2	-15 23.8	197 01.7	+17 17.1	243 08.4	+22 36.9
6	349	10.1	289 43.8	+19 25.8	18 24.5	-15 23.5	212 03.7	+17 17.0	258 10.5	+22 36.9
7	4	12.6	304 43.1	26.5	33 25.8	23.2	227 05.8	16.9	273 12.7	36.9
8	19	15.1	319 42.5	27.2	48 27.1	22.9	242 07.8	16.8	288 14.8	36.9
9	34	17.5	334 41.8	27.9	63 28.4	22.6	257 09.9	16.7	303 16.9	36.9
10	49	20.0	349 41.1	28.6	78 29.8	22.4	272 11.9	16.5	318 19.0	36.9
11	64	22.5	4 40.4	+19 29.3	93 31.1	-15 22.1	287 14.0	+17 16.4	333 21.1	+22 36.9
12	79	24.9	19 39.7	+19 30.0	108 32.4	-15 21.8	302 16.0	+17 16.3	348 23.2	+22 36.9
13	94	27.4	34 39.1	30.7	123 33.7	21.5	317 18.1	16.2	3 25.3	36.9
14	109	29.9	49 38.4	31.4	138 35.0	21.3	332 20.1	16.0	18 27.5	36.9
15	124	32.3	64 37.7	32.1	153 36.3	21.0	347 22.2	15.9	33 29.6	36.9
16	139	34.8	79 37.0	32.8	168 37.6	20.7	2 24.2	15.8	48 31.7	36.9
17	154	37.3	94 36.3	+19 33.5	183 38.9	-15 20.4	17 26.3	+17 15.7	63 33.8	+22 36.9
18	169	39.7	109 35.7	+19 34.1	198 40.3	-15 20.2	32 28.3	+17 15.6	78 35.9	+22 36.9
19	184	42.2	124 35.0	34.8	213 41.6	19.9	47 30.4	15.4	93 38.0	37.0
20	199	44.6	139 34.3	35.5	228 42.9	19.6	62 32.4	15.3	108 40.2	37.0
21	214	47.1	154 33.6	36.2	243 44.2	19.3	77 34.4	15.2	123 42.3	37.0
22	229	49.6	169 32.9	36.9	258 45.5	19.1	92 36.5	15.1	138 44.4	37.0
23	244	52.0	184 32.2	37.6	273 46.8	18.8	107 38.5	14.9	153 46.5	37.0
24	259	54.5	199 31.6	+19 38.3	288 48.2	-15 18.5	122 40.6	+17 14.8	168 48.6	+22 37.0
Dif	—		-7	+7	+13	+3	+20	-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 8				Edad: 11 ^d 8 PHE { SD: 16 ^h 5 PMG: 22 ^h 29 ^m													
					R ^o : 61 ^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	05.3	+23	06.6	35	48.4	-15	32.0	60 N	** **	0 59	2 38	18 54	111	1 40	9		
1	195	05.1		06.8	50	14.8	74	45.8 ¹³⁸	58	** **	1 44	2 58	39	104	50	15		
2	210	05.0		06.9	64	41.2	74	-15 59.4 ¹³⁶	56	** **	2 13	3 14	27	99	1 59	19		
3	225	04.9		07.1	79	07.5	73	-16 13.0 ¹³⁶	54	0 54	34	28	16	95	2 07	22		
4	240	04.8		07.3	93	33.6	71	26.5 ¹³⁵	52	1 36	2 52	40	18 07	91	14	25		
5	255	04.6	+23	07.4	107	59.7	71	-16 39.8 ¹³³	50	2 02	3 07	3 51	17 58	89	2 21	27		
6	270	04.5	+23	07.6	122	25.7	70	-16 53.1 ¹³³	45	2 46	3 36	4 13	17 40	83	2 34	34		
7	285	04.4		07.8	136	51.6	69	-17 06.3 ¹³²	40	3 16	3 58	31	26	79	46	38		
8	300	04.2		07.9	151	17.4	68	19.3 ¹³⁰	35	39	4 16	45	14	75	2 55	42		
9	315	04.1		08.1	165	43.1	67	32.3 ¹³⁰	30	3 58	31	4 58	17 03	73	3 04	45		
10	330	04.0		08.2	180	08.7	66	45.1 ¹²⁸	20	4 26	4 56	5 20	16 45	68	19	50		
11	345	03.9	+23	08.4	194	34.2	65	-17 57.8 ¹²⁷	10 N	4 49	5 16	5 39	16 29	64	3 32	54		
12	0	03.7	+23	08.6	208	59.6	64	-18 10.5 ¹²⁷	0	5 07	5 34	5 56	16 15	60	3 44	59		
13	15	03.6		08.7	223	24.9	63	23.0 ¹²⁵	10 S	24	5 51	6 13	16 00	57	3 57	62		
14	30	03.5		08.9	237	50.1	62	35.3 ¹²³	20	40	6 08	32	15 45	53	4 10	67		
15	45	03.4		09.0	252	15.2	61	47.6 ¹²³	30	5 56	26	6 53	27	48	25	73		
16	60	03.2		09.2	266	40.2	60	-18 59.7 ¹²¹	35	6 05	37	7 05	17	45	34	76		
17	75	03.1	+23	09.4	281	05.1	59	-19 11.7 ¹²⁰	40	6 14	6 48	7 19	15 06	42	4 44	79		
18	90	03.0	+23	09.5	295	29.9	58	-19 23.6 ¹¹⁹	45	6 24	7 02	7 35	14 52	38	4 56	84		
19	105	02.8		09.7	309	54.6	57	35.4 ¹¹⁸	50	36	17	7 56	36	33	5 11	89		
20	120	02.7		09.8	324	19.2	56	47.0 ¹¹⁶	52	41	25	8 05	28	30	18	92		
21	135	02.6		10.0	338	43.8	56	-19 58.5 ¹¹⁵	54	47	33	16	20	27	26	95		
22	150	02.5		10.1	353	08.2	54	-20 09.9 ¹¹⁴	56	53	42	29	11	23	34	99		
23	165	02.3		10.3	7	32.5	53	21.1 ¹¹²	58	6 59	7 52	8 43	14 00	19	44	104		
24	180	02.2	+23	10.4	21	56.8	53	-20 32.2 ¹¹¹	60 S	7 07	8 03	9 00	13 48	13	5 55	110		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 39 ^m 3		Mag: -3.8 PMG: 10 ^h 42 ^m		Mag: -0.9 PMG: 4 ^h 44 ^m		Mag: -1.9 PMG: 15 ^h 47 ^m		Mag: 0.0 PMG: 12 ^h 43 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	259	54.5	199	31.6	+19	38.3	288	48.2	-15	18.5	122	40.6	+17	14.8	168	48.6	+22	37.0
1	274	57.0	214	30.9		38.9	303	49.5		18.2	137	42.6		14.7	183	50.7		37.0
2	289	59.4	229	30.2		39.6	318	50.8		18.0	152	44.7		14.6	198	52.9		37.0
3	305	01.9	244	29.5		40.3	333	52.1		17.7	167	46.7		14.4	213	55.0		37.0
4	320	04.4	259	28.8		41.0	348	53.4		17.4	182	48.8		14.3	228	57.1		37.0
5	335	06.8	274	28.1	+19	41.7	3	54.8	-15	17.2	197	50.8	+17	14.2	243	59.2	+22	37.0
6	350	09.3	289	27.4	+19	42.3	18	56.1	-15	16.9	212	52.9	+17	14.1	259	01.3	+22	37.0
7	5	11.7	304	26.7		43.0	33	57.4		16.6	227	54.9		14.0	274	03.4		37.0
8	20	14.2	319	26.1		43.7	48	58.7		16.3	242	56.9		13.8	289	05.5		37.0
9	35	16.7	334	25.4		44.4	64	00.0		16.1	257	59.0		13.7	304	07.7		37.0
10	50	19.1	349	24.7		45.0	79	01.4		15.8	273	01.0		13.6	319	09.8		37.0
11	65	21.6	4	24.0	+19	45.7	94	02.7	-15	15.5	288	03.1	+17	13.5	334	11.9	+22	37.0
12	80	24.1	19	23.3	+19	46.4	109	04.0	-15	15.2	303	05.1	+17	13.3	349	14.0	+22	37.0
13	95	26.5	34	22.6		47.1	124	05.3		15.0	318	07.2		13.2	4	16.1		37.0
14	110	29.0	49	21.9		47.7	139	06.7		14.7	333	09.2		13.1	19	18.2		37.0
15	125	31.5	64	21.2		48.4	154	08.0		14.4	348	11.3		13.0	34	20.4		37.0
16	140	33.9	79	20.5		49.1	169	09.3		14.2	3	13.3		12.8	49	22.5		37.0
17	155	36.4	94	19.8	+19	49.7	184	10.7	-15	13.9	18	15.3	+17	12.7	64	24.6	+22	37.0
18	170	38.9	109	19.1	+19	50.4	199	12.0	-15	13.6	33	17.4	+17	12.6	79	26.7	+22	37.0
19	185	41.3	124	18.4		51.1	214	13.3		13.4	48	19.4		12.5	94	28.8		37.0
20	200	43.8	139	17.7		51.7	229	14.6		13.1	63	21.5		12.3	109	30.9		37.0
21	215	46.2	154	17.1		52.4	244	16.0		12.8	78	23.5		12.2	124	33.0		37.0
22	230	48.7	169	16.4		53.1	259	17.3		12.5	93	25.6		12.1	139	35.2		37.0
23	245	51.2	184	15.7		53.7	274	18.6		12.3	108	27.6		12.0	154	37.3		37.0
24	260	53.6	199	15.0	+19	54.4	289	20.0	-15	12.0	123	29.6	+17	11.8	169	39.4	+22	37.0
Dif	—		-7		+7		+13		+3		+20		-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 00 ^m 0				Edad: 12 ^d 8 PHE { 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'7 R°: 64 ^m															
	hG ☉		Dec		hG ☾		Dif				Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	02.2	+23	10.4	21	56.8	–20	32.2	60 N	21 23	23 05	** **	20 45	98	1 49	17				
1	195	02.1		10.6	36	20.9	51	43.1	58	21 03	22 17	** **	23 92		2 05	23				
2	210	01.9		10.7	50	45.0	51	–20	54.0	56	20 47	21 48	** **	20 06	88	18	28			
3	225	01.8		10.9	65	08.9	49	–21	04.6	54	33	27	23 09	19 51	85	29	32			
4	240	01.7		11.0	79	32.8	49	15.1	52	20	21 09	22 26	38 83	39	35					
5	255	01.6	+23	11.2	93	56.6	48	–21	25.5	50	20 10	20 54	21 59	19 27	81	2 48	38			
6	270	01.4	+23	11.3	108	20.3	47	–21	35.7	45	19 47	20 25	21 14	19 03	78	3 08	42			
7	285	01.3		11.5	122	43.9	46	45.8	40	30	20 02	20 44	18 45	75	24	46				
8	300	01.2		11.6	137	07.4	45	–21	55.7	35	15	19 44	21	29	73	37	49			
9	315	01.0		11.8	151	30.9	45	–22	05.5	30	19 02	29	20 02	18 16	71	3 49	51			
10	330	00.9		11.9	165	54.2	43	15.1	20	18 40	19 04	19 34	17 53	68	4 09	55				
11	345	00.8	+23	12.0	180	17.5	43	–22	24.5	10 N	18 21	18 44	19 11	17 33	66	4 26	59			
12	0	00.7	+23	12.2	194	40.7	42	–22	33.8	0	18 04	18 26	18 52	17 15	63	4 43	62			
13	15	00.5		12.3	209	03.8	41	43.0	10 S	17 46	18 09	35	16 57	61	4 59	65				
14	30	00.4		12.5	223	26.8	40	–22	51.9	20	28	17 52	19	38 58	5 17	68				
15	45	00.3		12.6	237	49.7	39	–23	00.7	30	17 07	33	18 03	15 56	38 72					
16	60	00.1		12.8	252	12.6	39	09.4	35	16 55	23	17 54	16 02	54	5 50	74				
17	75	00.0	+23	12.9	266	35.4	38	–23	17.8	40	16 41	17 11	17 45	15 48	51	6 03	78			
18	89	59.9	+23	13.0	280	58.1	37	–23	26.1	45	16 24	16 58	17 35	15 30	48	6 20	81			
19	104	59.7		13.2	295	20.8	37	34.3	82	50	16 04	42	23	15 09	44	40 86				
20	119	59.6		13.3	309	43.4	36	42.2	79	52	15 54	35	18	14 58	42	6 50	88			
21	134	59.5		13.4	324	05.9	35	50.0	78	54	43	26	13	47 39	7 01	91				
22	149	59.4		13.6	338	28.3	34	–23	57.6	76	30	18	07	34 36	13 95					
23	164	59.2		13.7	352	50.7	34	–24	05.1	75	15 16	16 07	17 00	19 31	28 99					
24	179	59.1	+23	13.8	7	13.0	33	–24	12.3	72	60 S	14 59	15 56	16 52	14 01	25	7 45	106		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 6 ^h 35 ^m 3		Mag: –3.8 PMG: 10 ^h 44 ^m				Mag: –1.0 PMG: 4 ^h 42 ^m				Mag: –1.9 PMG: 15 ^h 44 ^m				Mag: 0.0 PMG: 12 ^h 40 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	260	53.6	199	15.0	+19	54.4	289	20.0	–15	12.0	123	29.6	+17	11.8	169	39.4	+22	37.0		
1	275	56.1	214	14.3		55.1	304	21.3		11.7	138	31.7		11.7	184	41.5		37.0		
2	290	58.6	229	13.6		55.7	319	22.6		11.5	153	33.7		11.6	199	43.6		37.0		
3	306	01.0	244	12.9		56.4	334	24.0		11.2	168	35.8		11.5	214	45.7		37.0		
4	321	03.5	259	12.2		57.0	349	25.3		10.9	183	37.8		11.3	229	47.8		37.0		
5	336	06.0	274	11.5	+19	57.7	4	26.6	–15	10.7	198	39.9	+17	11.2	244	50.0	+22	37.0		
6	351	08.4	289	10.8	+19	58.3	19	28.0	–15	10.4	213	41.9	+17	11.1	259	52.1	+22	37.0		
7	6	10.9	304	10.1		59.0	34	29.3		10.1	228	43.9		11.0	274	54.2		37.0		
8	21	13.4	319	09.4	+19	59.7	49	30.6		09.8	243	46.0		10.8	289	56.3		37.0		
9	36	15.8	334	08.7	+20	00.3	64	32.0		09.6	258	48.0		10.7	304	58.4		37.0		
10	51	18.3	349	08.0		01.0	79	33.3		09.3	273	50.1		10.6	320	00.5		37.0		
11	66	20.7	4	07.3	+20	01.6	94	34.6	–15	09.0	288	52.1	+17	10.5	335	02.7	+22	37.0		
12	81	23.2	19	06.6	+20	02.3	109	36.0	–15	08.8	303	54.1	+17	10.3	350	04.8	+22	37.0		
13	96	25.7	34	05.9		02.9	124	37.3		08.5	318	56.2		10.2	5	06.9		37.0		
14	111	28.1	49	05.2		03.6	139	38.7		08.2	333	58.2		10.1	20	09.0		37.0		
15	126	30.6	64	04.5		04.2	154	40.0		08.0	349	00.3		10.0	35	11.1		37.0		
16	141	33.1	79	03.8		04.9	169	41.3		07.7	4	02.3		09.8	50	13.2		37.0		
17	156	35.5	94	03.0	+20	05.5	184	42.7	–15	07.4	19	04.3	+17	09.7	65	15.3	+22	37.0		
18	171	38.0	109	02.3	+20	06.2	199	44.0	–15	07.2	34	06.4	+17	09.6	80	17.5	+22	37.0		
19	186	40.5	124	01.6		06.8	214	45.4		06.9	49	08.4		09.5	95	19.6		37.0		
20	201	42.9	139	00.9		07.4	229	46.7		06.6	64	10.5		09.3	110	21.7		37.0		
21	216	45.4	154	00.2		08.1	244	48.1		06.4	79	12.5		09.2	125	23.8		37.0		
22	231	47.9	168	59.5		08.7	259	49.4		06.1	94	14.5		09.1	140	25.9		37.0		
23	246	50.3	183	58.8		09.4	274	50.7		05.8	109	16.6		09.0	155	28.0		37.0		
24	261	52.8	198	58.1	+20	10.0	289	52.1	–15	05.6	124	18.6	+17	08.8	170	30.1	+22	37.0		
Dif	—		–7		+7		+13		+3		+20		–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 00 ^m 2			Edad: 13 ^d 8 PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'4 R°: *** PMG: *** **m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	59.1	+23	13.8	7	13.0	-24	12.3	60 N	** **	0 55	2 37	22 23	68		2 06	35	
1	194	59.0		14.0	21	35.3	33	19.4	58	** **	1 43	2 57	21 55	68		28	41	
2	209	58.8		14.1	35	57.5	32	26.3	56	** **	2 12	3 13	34	67		2 46	45	
3	224	58.7		14.2	50	19.7	32	33.0	54	0 51	33	27	16	67		3 01	48	
4	239	58.6		14.4	64	41.8	31	39.6	52	1 34	2 51	40	21 01	67		14	50	
5	254	58.4	+23	14.5	79	03.8	30	-24 45.9	50	2 01	3 06	3 50	20 48	66		3 26	51	
6	269	58.3	+23	14.6	93	25.8	30	-24 52.1	45	2 46	3 35	4 13	20 21	66		3 50	54	
7	284	58.2		14.8	107	47.8	30	-24 58.1	40	3 16	3 58	31	20 00	65		4 10	56	
8	299	58.1		14.9	122	09.7	29	-25 03.9	35	39	4 16	45	19 42	65		26	58	
9	314	57.9		15.0	136	31.5	28	09.5	30	3 58	31	4 58	27	65		4 40	59	
10	329	57.8		15.1	150	53.4	29	14.9	20	4 27	4 56	5 20	19 01	65		5 04	61	
11	344	57.7	+23	15.3	165	15.1	27	-25 20.1	10 N	4 49	5 16	5 39	18 39	64		5 25	63	
12	359	57.5	+23	15.4	179	36.9	28	-25 25.2	0	5 08	5 34	5 56	18 18	64		5 45	64	
13	14	57.4		15.5	193	58.6	27	30.0	10 S	25	5 51	6 14	17 58	63		6 04	66	
14	29	57.3		15.6	208	20.3	27	34.7	20	41	6 08	32	36	63		25	67	
15	44	57.1		15.8	222	42.0	27	39.2	30	5 57	27	6 53	17 11	62		6 50	68	
16	59	57.0		15.9	237	03.6	26	43.5	35	6 06	37	7 06	16 56	61		7 04	70	
17	74	56.9	+23	16.0	251	25.2	26	-25 47.5	40	6 15	6 49	7 20	16 39	61		7 21	71	
18	89	56.7	+23	16.1	265	46.8	26	-25 51.4	45	6 25	7 02	7 36	16 18	60		7 41	72	
19	104	56.6		16.3	280	08.4	26	55.1	50	37	18	7 57	15 53	58		8 06	74	
20	119	56.5		16.4	294	30.0	26	-25 58.6	52	42	26	8 07	40	58		18	75	
21	134	56.4		16.5	308	51.6	26	-26 02.0	54	48	34	18	26	57		32	77	
22	149	56.2		16.6	323	13.1	25	05.1	56	6 54	43	30	15 10	55		8 48	78	
23	164	56.1		16.7	337	34.7	26	08.0	58	7 01	7 53	8 45	14 50	53		9 07	81	
24	179	56.0	+23	16.8	351	56.2	25	-26 10.7	60 S	7 08	8 05	9 02	14 26	50		9 31	85	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 6 ^h 31 ^m 4			Mag: -3.8 PMG: 10 ^h 45 ^m			Mag: -1.0 PMG: 4 ^h 40 ^m			Mag: -1.9 PMG: 15 ^h 41 ^m			Mag: 0.0 PMG: 12 ^h 36 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	261	52.8	198	58.1	+20	10.0	289	52.1	-15	05.6	124	18.6	+17	08.8	170	30.1	+22	37.0
1	276	55.2	213	57.4		10.6	304	53.4		05.3	139	20.7		08.7	185	32.3		37.0
2	291	57.7	228	56.7		11.3	319	54.8		05.0	154	22.7		08.6	200	34.4		37.0
3	307	00.2	243	56.0		11.9	334	56.1		04.8	169	24.7		08.4	215	36.5		37.0
4	322	02.6	258	55.3		12.6	349	57.5		04.5	184	26.8		08.3	230	38.6		37.0
5	337	05.1	273	54.6	+20	13.2	4	58.8	-15	04.2	199	28.8	+17	08.2	245	40.7	+22	37.0
6	352	07.6	288	53.8	+20	13.8	20	00.2	-15	04.0	214	30.9	+17	08.1	260	42.8	+22	37.0
7	7	10.0	303	53.1		14.5	35	01.5		03.7	229	32.9		07.9	275	44.9		37.0
8	22	12.5	318	52.4		15.1	50	02.9		03.5	244	34.9		07.8	290	47.1		37.0
9	37	15.0	333	51.7		15.7	65	04.2		03.2	259	37.0		07.7	305	49.2		37.0
10	52	17.4	348	51.0		16.3	80	05.6		02.9	274	39.0		07.6	320	51.3		37.0
11	67	19.9	3	50.3	+20	17.0	95	06.9	-15	02.7	289	41.0	+17	07.4	335	53.4	+22	37.0
12	82	22.4	18	49.6	+20	17.6	110	08.3	-15	02.4	304	43.1	+17	07.3	350	55.5	+22	37.0
13	97	24.8	33	48.9		18.2	125	09.6		02.1	319	45.1		07.2	5	57.6		37.0
14	112	27.3	48	48.1		18.9	140	11.0		01.9	334	47.2		07.1	20	59.7		37.0
15	127	29.7	63	47.4		19.5	155	12.3		01.6	349	49.2		06.9	36	01.9		37.0
16	142	32.2	78	46.7		20.1	170	13.7		01.3	4	51.2		06.8	51	04.0		37.0
17	157	34.7	93	46.0	+20	20.7	185	15.1	-15	01.1	19	53.3	+17	06.7	66	06.1	+22	37.0
18	172	37.1	108	45.3	+20	21.4	200	16.4	-15	00.8	34	55.3	+17	06.5	81	08.2	+22	37.0
19	187	39.6	123	44.6		22.0	215	17.8		00.6	49	57.3		06.4	96	10.3		37.0
20	202	42.1	138	43.9		22.6	230	19.1	-15	00.3	64	59.4		06.3	111	12.4		37.0
21	217	44.5	153	43.1		23.2	245	20.5	-15	00.0	80	01.4		06.2	126	14.5		37.0
22	232	47.0	168	42.4		23.8	260	21.8	-14	59.8	95	03.5		06.0	141	16.7		37.0
23	247	49.5	183	41.7		24.5	275	23.2		59.5	110	05.5		05.9	156	18.8		37.0
24	262	51.9	198	41.0	+20	25.1	290	24.6	-14	59.2	125	07.5	+17	05.8	171	20.9	+22	37.0
Dif	—			-7 +6			+14 +3			+20 -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 00 ^m 4			Edad: 14 ^d 8 PHE { 4 ^h : 60'2 12 ^h : 60'0 20 ^h : 59'7 SD: 16:4 PMG: 0 ^h 34 ^m R°: 63 ^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	56.0	+23 16.8	351	56.2	-26 10.7	26	60 N	21 25	23 09	** **	23 31 34	2 41 66	
1	194	55.8	17.0	6	17.8	13.3	26	58	21 05	22 20	** **	23 03 40	3 09 66	
2	209	55.7	17.1	20	39.3	15.6	23	56	20 48	21 50	** **	22 41 43	31 66	
3	224	55.6	17.2	35	00.9	17.8	22	54	34	28	23 13	23 46	3 49 65	
4	239	55.4	17.3	49	22.5	19.7	19	52	22	21 10	22 28	22 08 48	4 04 66	
5	254	55.3	+23 17.4	63	44.1	-26 21.5	18	50	20 11	20 55	22 00	21 54 50	4 17 66	
6	269	55.2	+23 17.5	78	05.7	-26 23.0	15	45	19 48	20 26	21 15	21 27 52	4 44 66	
7	284	55.0	17.6	92	27.3	24.4	14	40	30	20 03	20 45	21 05 55	5 06 65	
8	299	54.9	17.8	106	48.9	25.6	12	35	15	19 45	22	20 47 56	24 65	
9	314	54.8	17.9	121	10.6	26.5	9	30	19 02	30	20 03	32 57	5 39 65	
10	329	54.6	18.0	135	32.3	27.3	8	20	18 40	19 05	19 34	20 06 59	6 05 65	
11	344	54.5	+23 18.1	149	54.0	-26 27.9	6	10 N	18 22	18 45	19 12	19 43 61	6 28 64	
12	359	54.4	+23 18.2	164	15.7	-26 28.3	4	0	18 04	18 27	18 53	19 22 62	6 49 63	
13	14	54.2	18.3	178	37.5	28.5	2	10 S	17 47	18 10	36	19 01 63	7 10 63	
14	29	54.1	18.4	192	59.3	28.5	0	20	28	17 52	20	18 39 64	32 63	
15	44	54.0	18.5	207	21.2	28.3	2	30	17 07	33	18 03	18 13 66	7 58 62	
16	59	53.9	18.6	221	43.1	28.0	3	35	16 55	23	17 55	17 57 67	8 14 61	
17	74	53.7	+23 18.7	236	05.1	-26 27.4	6	40	16 41	17 11	17 45	17 40 68	8 32 60	
18	89	53.6	+23 18.8	250	27.1	-26 26.6	8	45	16 24	16 58	17 35	17 18 70	8 53 60	
19	104	53.5	18.9	264	49.1	25.7	9	50	16 03	42	23	16 51 71	9 20 58	
20	119	53.3	19.0	279	11.2	24.6	11	52	15 54	34	18	38 72	33 58	
21	134	53.2	19.1	293	33.4	23.3	13	54	42	26	12	23 73	9 49 56	
22	149	53.1	19.2	307	55.6	21.7	16	56	30	17	06	16 05 75	10 06 56	
23	164	52.9	19.3	322	17.9	20.1	16	58	15 15	16 07	17 00	15 43 77	28 53	
24	179	52.8	+23 19.4	336	40.3	-26 18.2	19	60 S	14 58	15 55	16 52	15 16 80	10 56 50	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 27 ^m 5		Mag: -3.8 PMG: 10 ^h 46 ^m		Mag: -1.0 PMG: 4 ^h 38 ^m		Mag: -1.9 PMG: 15 ^h 37 ^m		Mag: 0.0 PMG: 12 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	262	51.9	198 41.0	+20 25.1	290 24.6	-14 59.2	125 07.5	+17 05.8	171 20.9	+22 37.0
1	277	54.4	213 40.3	25.7	305 25.9	59.0	140 09.6	05.7	186 23.0	37.0
2	292	56.9	228 39.5	26.3	320 27.3	58.7	155 11.6	05.5	201 25.1	37.0
3	307	59.3	243 38.8	26.9	335 28.6	58.5	170 13.6	05.4	216 27.2	37.0
4	323	01.8	258 38.1	27.5	350 30.0	58.2	185 15.7	05.3	231 29.3	37.0
5	338	04.2	273 37.4	+20 28.1	5 31.4	-14 57.9	200 17.7	+17 05.1	246 31.5	+22 37.0
6	353	06.7	288 36.7	+20 28.8	20 32.7	-14 57.7	215 19.7	+17 05.0	261 33.6	+22 37.0
7	8	09.2	303 35.9	29.4	35 34.1	57.4	230 21.8	04.9	276 35.7	37.0
8	23	11.6	318 35.2	30.0	50 35.5	57.2	245 23.8	04.8	291 37.8	37.0
9	38	14.1	333 34.5	30.6	65 36.8	56.9	260 25.8	04.6	306 39.9	37.0
10	53	16.6	348 33.8	31.2	80 38.2	56.6	275 27.9	04.5	321 42.0	37.0
11	68	19.0	3 33.0	+20 31.8	95 39.6	-14 56.4	290 29.9	+17 04.4	336 44.1	+22 37.0
12	83	21.5	18 32.3	+20 32.4	110 40.9	-14 56.1	305 31.9	+17 04.3	351 46.3	+22 37.0
13	98	24.0	33 31.6	33.0	125 42.3	55.9	320 34.0	04.1	6 48.4	37.0
14	113	26.4	48 30.9	33.6	140 43.7	55.6	335 36.0	04.0	21 50.5	37.0
15	128	28.9	63 30.2	34.2	155 45.0	55.3	350 38.0	03.9	36 52.6	37.0
16	143	31.4	78 29.4	34.8	170 46.4	55.1	5 40.1	03.7	51 54.7	37.0
17	158	33.8	93 28.7	+20 35.4	185 47.8	-14 54.8	20 42.1	+17 03.6	66 56.8	+22 37.0
18	173	36.3	108 28.0	+20 36.0	200 49.1	-14 54.6	35 44.1	+17 03.5	81 58.9	+22 37.0
19	188	38.7	123 27.2	36.6	215 50.5	54.3	50 46.2	03.4	97 01.0	37.0
20	203	41.2	138 26.5	37.2	230 51.9	54.1	65 48.2	03.2	112 03.2	37.0
21	218	43.7	153 25.8	37.8	245 53.3	53.8	80 50.2	03.1	127 05.3	37.0
22	233	46.1	168 25.1	38.4	260 54.6	53.5	95 52.3	03.0	142 07.4	37.0
23	248	48.6	183 24.3	39.0	275 56.0	53.3	110 54.3	02.8	157 09.5	37.0
24	263	51.1	198 23.6	+20 39.6	290 57.4	-14 53.0	125 56.3	+17 02.7	172 11.6	+22 37.0
Dif	—		-7	+6	+14	+3	+20	-1	+21	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 15 ^d 8 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 2 20 ^h : 58 ^m 9						Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 00 ^m 6			SD: 16 ^d 2 PMG: 1 ^h 37 ^m R°: 61 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	m	h	m	m	
0	179	52.8	+23	19.4	336	40.3	-26	18.2	21	58	0 52	2 36	23 43	22	4 15	86	3 47	92
1	194	52.7		19.5	351	02.7	34	16.1	21	58	1 41	2 56	23 43	22	4 15	86	3 47	92
2	209	52.5		19.6	5	25.2	35	13.9	22	56	2 11	3 13	24 27		37	82		
3	224	52.4		19.7	19	47.7	35	11.5	24	54	0 48	33	23 09	30	4 54	80		
4	239	52.3		19.8	34	10.4	37	08.9	26	52	1 33	2 51	22 56	33	5 10	77		
5	254	52.1	+23	19.9	48	33.1	37	-26	06.1	28	2 00	3 06	22 44	35	5 23	75		
6	269	52.0	+23	20.0	62	55.9	38	-26	03.1	30	2 46	3 35	22 19	40	5 50	72		
7	284	51.9		20.1	77	18.7	38	-26	00.0	31	3 16	3 58	22 00	43	6 11	70		
8	299	51.7		20.2	91	41.7	40	-25	56.7	33	39	4 16	21 43	46	29	68		
9	314	51.6		20.3	106	04.7	40		53.2	35	3 58	31	29 48		6 44	66		
10	329	51.5		20.4	120	27.8	41		49.5	37	4 27	4 56	21 05	51	7 10	63		
11	344	51.3	+23	20.5	134	51.1	43	-25	45.7	38	4 49	5 16	20 44	54	7 32	61		
12	359	51.2	+23	20.6	149	14.4	43	-25	41.7	40	5 08	5 34	20 24	57	7 52	60		
13	14	51.1		20.7	163	37.8	44		37.5	42	25	5 51	20 04	60	8 13	57		
14	29	50.9		20.8	178	01.2	44		33.2	43	41	6 09	19 43	63	8 35	55		
15	44	50.8		20.9	192	24.8	46		28.7	45	5 58	28	19 66		9 00	52		
16	59	50.7		21.0	206	48.5	47		24.0	47	6 06	38	19 04	68	15	51		
17	74	50.5	+23	21.0	221	12.3	48	-25	19.2	48	6 16	6 50	18 48	70	9 32	49		
18	89	50.4	+23	21.1	235	36.2	49	-25	14.2	50	6 26	7 03	18 28	73	9 53	46		
19	104	50.3		21.2	250	00.1	49		09.0	52	38	19	18 02	78	10 18	43		
20	119	50.1		21.3	264	24.2	51	-25	03.7	53	43	27	17 50	80	31	40		
21	134	50.0		21.4	278	48.4	52	-24	58.2	55	49	35	36 83		10 45	38		
22	149	49.9		21.5	293	12.7	53		52.6	56	6 55	44	20 86		11 02	35		
23	164	49.7		21.6	307	37.1	54		46.8	58	7 02	7 54	17 00	90	21	31		
24	179	49.6	+23	21.6	322	01.6	55	-24	40.9	59	7 09	8 06	16 36	96	11 46	25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 23 ^m 5		Mag: -3.8 PMG: 10 ^h 47 ^m		Mag: -1.1 PMG: 4 ^h 36 ^m		Mag: -1.9 PMG: 15 ^h 34 ^m		Mag: 0.0 PMG: 12 ^h 29 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	°	'	°	°	'	°	°	'							
0	263	51.1	198	23.6	+20	290	57.4	-14	53.0	125	56.3	+17	02.7	172	11.6	+22	37.0	
1	278	53.5	213	22.9		305	58.7		52.8	140	58.4		02.6	187	13.7		37.0	
2	293	56.0	228	22.1		321	00.1		52.5	156	00.4		02.5	202	15.8		37.0	
3	308	58.5	243	21.4		336	01.5		52.3	171	02.4		02.3	217	18.0		37.0	
4	324	00.9	258	20.7		351	02.9		52.0	186	04.5		02.2	232	20.1		37.0	
5	339	03.4	273	19.9	+20	6	04.3	-14	51.7	201	06.5	+17	02.1	247	22.2	+22	37.0	
6	354	05.9	288	19.2	+20	21	05.6	-14	51.5	216	08.5	+17	01.9	262	24.3	+22	37.0	
7	9	08.3	303	18.5		36	07.0		51.2	231	10.6		01.8	277	26.4		37.0	
8	24	10.8	318	17.8		44.3	51	08.4	51.0	246	12.6		01.7	292	28.5		37.0	
9	39	13.2	333	17.0		44.9	66	09.8	50.7	261	14.6		01.5	307	30.6		37.0	
10	54	15.7	348	16.3		45.5	81	11.1	50.5	276	16.7		01.4	322	32.8		37.0	
11	69	18.2	3	15.6	+20	46.1	96	12.5	-14	50.2	291	18.7	+17	01.3	337	34.9	+22	37.0
12	84	20.6	18	14.8	+20	46.7	111	13.9	-14	50.0	306	20.7	+17	01.2	352	37.0	+22	37.0
13	99	23.1	33	14.1		47.2	126	15.3		49.7	321	22.8		01.0	7	39.1		37.0
14	114	25.6	48	13.3		47.8	141	16.7		49.4	336	24.8		00.9	22	41.2		37.0
15	129	28.0	63	12.6		48.4	156	18.1		49.2	351	26.8		00.8	37	43.3		37.0
16	144	30.5	78	11.9		49.0	171	19.4		48.9	6	28.8		00.6	52	45.4		37.0
17	159	33.0	93	11.1	+20	49.6	186	20.8	-14	48.7	21	30.9	+17	00.5	67	47.5	+22	37.0
18	174	35.4	108	10.4	+20	50.1	201	22.2	-14	48.4	36	32.9	+17	00.4	82	49.7	+22	37.0
19	189	37.9	123	09.7		50.7	216	23.6		48.2	51	34.9		00.3	97	51.8		37.0
20	204	40.3	138	08.9		51.3	231	25.0		47.9	66	37.0	+17	00.1	112	53.9		37.0
21	219	42.8	153	08.2		51.9	246	26.4		47.7	81	39.0	+17	00.0	127	56.0		37.0
22	234	45.3	168	07.4		52.4	261	27.8		47.4	96	41.0	+16	59.9	142	58.1		37.0
23	249	47.7	183	06.7		53.0	276	29.1		47.2	111	43.1		59.7	158	00.2		37.0
24	264	50.2	198	06.0	+20	53.6	291	30.5	-14	46.9	126	45.1	+16	59.6	173	02.3	+22	37.0
Dif	—		-7		+6	+14		+3			+20		-1		+21		0	

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 16 ^d 8 PHE { 4 ^h : 58 ^m 6 12 ^h : 58 ^m 3 20 ^h : 58 ^m 0							Civil			Náutico		Hora R°	
	PMG: 12 ^h 00 ^m 8			SD: 16 ^h 0 PMG: 2 ^h 38 ^m R°: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	49.6	+23	21.6	322	01.6	-24	40.9	60 N	21 26	23 12	** **	0 05	17	5	19	
1	194	49.5		21.7	336	26.3		34.8	58	21 06	22 21	** **	** **	**	41	93	
2	209	49.3		21.8	350	51.0		28.6	56	20 49	21 52	** **	23 51	18	5	59	
3	224	49.2		21.9	5	15.9		22.2	54	35	29	23 16	39	21	6	14	
4	239	49.1		22.0	19	40.8		15.7	52	22	21 11	22 29	29	23	27	81	
5	254	48.9	+23	22.0	34	05.9	-24	09.0	50	20 12	20 56	22 02	23 19	26	6	38	
6	269	48.8	+23	22.1	48	31.1	-24	02.2	45	19 49	20 27	21 16	22 59	31	7	02	
7	284	48.7		22.2	62	56.4	-23	55.2	40	31	20 04	20 46	43	34	21	71	
8	299	48.5		22.3	77	21.8		48.2	35	16	19 46	22	29	38	37	68	
9	314	48.4		22.3	91	47.4		40.9	30	19 03	30	20 04	22 17	40	7	50	
10	329	48.3		22.4	106	13.1		33.6	20	18 41	19 06	19 35	21 56	45	8	13	
11	344	48.1	+23	22.5	120	38.8	-23	26.1	10 N	18 22	18 45	19 12	21 38	49	8	33	
12	359	48.0	+23	22.6	135	04.7	-23	18.4	0	18 04	18 27	18 53	21 21	52	8	52	
13	14	47.9		22.6	149	30.8		10.7	10 S	17 47	18 10	36	21 04	56	9	10	
14	29	47.7		22.7	163	56.9	-23	02.8	20	29	17 53	20	20 46	59	30	48	
15	44	47.6		22.8	178	23.2	-22	54.8	30	17 07	34	18 04	25	64	9	52	
16	59	47.4		22.9	192	49.6		46.6	35	16 55	23	17 55	20 12	67	10	06	
17	74	47.3	+23	22.9	207	16.1	-22	38.3	40	16 41	17 11	17 45	19 58	70	10	21	
18	89	47.2	+23	23.0	221	42.7	-22	30.0	45	16 24	16 58	17 35	19 41	74	10	39	
19	104	47.0		23.1	236	09.5		21.4	50	16 03	42	23	20	78	11	01	
20	119	46.9		23.1	250	36.3		12.8	52	15 53	34	18	19 10	81	11	28	
21	134	46.8		23.2	265	03.3	-22	04.1	54	42	26	12	18 59	83	23	25	
22	149	46.6		23.3	279	30.4	-21	55.2	56	30	17	17 06	46	87	37	22	
23	164	46.5		23.3	293	57.7		46.2	58	15 15	16 07	16 59	30	92	11	52	
24	179	46.4	+23	23.4	308	25.1	-21	37.2	60 S	14 58	15 55	16 52	18 12	98	12	11	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 19 ^m 6		Mag: -3.8 PMG: 10 ^h 48 ^m				Mag: -1.1 PMG: 4 ^h 34 ^m				Mag: -1.9 PMG: 15 ^h 31 ^m				Mag: 0.0 PMG: 12 ^h 26 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	264	50.2	198	06.0	+20	53.6	291	30.5	-14	46.9	126	45.1	+16	59.6	173	02.3		
1	279	52.7	213	05.2		54.2	306	31.9		46.7	141	47.1		59.5	188	04.5		
2	294	55.1	228	04.5		54.7	321	33.3		46.4	156	49.1		59.3	203	06.6		
3	309	57.6	243	03.7		55.3	336	34.7		46.2	171	51.2		59.2	218	08.7		
4	325	00.1	258	03.0		55.9	351	36.1		45.9	186	53.2		59.1	233	10.8		
5	340	02.5	273	02.3	+20	56.4	6	37.5	-14	45.7	201	55.2	+16	59.0	248	12.9		
6	355	05.0	288	01.5	+20	57.0	21	38.9	-14	45.4	216	57.3	+16	58.8	263	15.0		
7	10	07.5	303	00.8		57.6	36	40.3		45.2	231	59.3		58.7	278	17.1		
8	25	09.9	318	00.0		58.1	51	41.7		44.9	247	01.3		58.6	293	19.2		
9	40	12.4	332	59.3		58.7	66	43.1		44.7	262	03.3		58.4	308	21.4		
10	55	14.8	347	58.5		59.2	81	44.5		44.4	277	05.4		58.3	323	23.5		
11	70	17.3	2	57.8	+20	59.8	96	45.9	-14	44.2	292	07.4	+16	58.2	338	25.6		
12	85	19.8	17	57.1	+21	00.4	111	47.3	-14	43.9	307	09.4	+16	58.0	353	27.7		
13	100	22.2	32	56.3		00.9	126	48.6		43.7	322	11.5		57.9	8	29.8		
14	115	24.7	47	55.6		01.5	141	50.0		43.4	337	13.5		57.8	23	31.9		
15	130	27.2	62	54.8		02.0	156	51.4		43.2	352	15.5		57.6	38	34.0		
16	145	29.6	77	54.1		02.6	171	52.8		42.9	7	17.5		57.5	53	36.1		
17	160	32.1	92	53.3	+21	03.1	186	54.2	-14	42.7	22	19.6	+16	57.4	68	38.3		
18	175	34.6	107	52.6	+21	03.7	201	55.6	-14	42.4	37	21.6	+16	57.3	83	40.4		
19	190	37.0	122	51.8		04.2	216	57.0		42.2	52	23.6		57.1	98	42.5		
20	205	39.5	137	51.1		04.8	231	58.4		41.9	67	25.6		57.0	113	44.6		
21	220	42.0	152	50.3		05.3	246	59.8		41.7	82	27.7		56.9	128	46.7		
22	235	44.4	167	49.6		05.9	262	01.3		41.4	97	29.7		56.7	143	48.8		
23	250	46.9	182	48.8		06.4	277	02.7		41.2	112	31.7		56.6	158	50.9		
24	265	49.3	197	48.1	+21	07.0	292	04.1	-14	40.9	127	33.7	+16	56.5	173	53.1		
Dif	—		-7 +6				+14 +2				+20		-1		+21			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 8 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 4 20 ^h : 57 ^m 1												
	PMG: 12 ^h 01 ^m 0			SD: 15 ^h 8 PMG: 3 ^h 34 ^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	46.4	+23	23.4	308	25.1	-21	37.2	60 N	** *	0 50	2 36	0 22	8	6 58	96
1	194	46.2		23.5	322	52.5		28.0	58	** *	1 40	2 56	0 05	14	7 14	90
2	209	46.1		23.5	337	20.1		18.7	56	** *	2 10	3 13	** *	** *		27 86
3	224	46.0		23.6	351	47.9	-21	09.3	54	0 46	32	27	** *	** *		38 83
4	239	45.8		23.7	6	15.7	-20	59.7	52	1 32	2 50	39	23 52	18	48	81
5	254	45.7	+23	23.7	20	43.7	-20	50.1	50	2 00	3 06	3 50	23 45	20	7 57	78
6	269	45.6	+23	23.8	35	11.8	-20	40.4	45	2 46	3 35	4 13	23 30	24	8 16	73
7	284	45.4		23.8	49	40.0		30.6	40	3 16	3 58	31	17	29	32	68
8	299	45.3		23.9	64	08.4		20.7	35	39	4 16	46	23 07	31	45	65
9	314	45.2		24.0	78	36.8		10.7	30	3 58	31	4 59	22 57	35	8 56	62
10	329	45.0		24.0	93	05.4	-20	00.6	20	4 27	4 56	5 21	41	39	9 15	57
11	344	44.9	+23	24.1	107	34.1	-19	50.4	10 N	4 50	5 17	5 40	22 27	43	9 31	54
12	359	44.8	+23	24.1	122	02.9	-19	40.1	0	5 09	5 35	5 57	22 13	47	9 47	49
13	14	44.6		24.2	136	31.9		29.7	10 S	26	5 52	6 15	22 00	51	10 02	46
14	29	44.5		24.3	151	00.9		19.2	20	42	6 09	33	21 45	56	18	42
15	44	44.3		24.3	165	30.1	-19	08.7	30	5 58	28	6 55	29	60	37	37
16	59	44.2		24.4	179	59.4	-18	58.0	35	6 07	39	7 07	19	63	47	35
17	74	44.1	+23	24.4	194	28.8	-18	47.3	40	6 16	6 50	7 21	21 08	66	10 59	32
18	89	43.9	+23	24.5	208	58.3	-18	36.5	45	6 27	7 04	7 38	20 55	70	11 14	27
19	104	43.8		24.5	223	28.0		25.6	50	39	20	7 59	38	76	31	23
20	119	43.7		24.6	237	57.7		14.6	52	44	28	8 08	31	78	39	21
21	134	43.5		24.6	252	27.6	-18	03.6	54	49	36	20	22	81	48	18
22	149	43.4		24.7	266	57.5	-17	52.5	56	6 56	45	32	13	84	11 59	14
23	164	43.3		24.7	281	27.6		41.3	58	7 02	7 55	8 47	20 02	88	12 10	11
24	179	43.1	+23	24.8	295	57.8	-17	30.0	60 S	7 10	8 07	9 04	19 50	92	12 24	6

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 15 ^m 7		Mag: -3.8 PMG: 10 ^h 49 ^m			Mag: -1.1 PMG: 4 ^h 31 ^m			Mag: -1.9 PMG: 15 ^h 28 ^m			Mag: 0.0 PMG: 12 ^h 23 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	265	49.3	197	48.1	+21	292	04.1	-14	307	33.7	+16	173	53.1	+22
1	280	51.8	212	47.3		307	05.5		142	35.8		188	55.2	
2	295	54.3	227	46.6		322	06.9		157	37.8		203	57.3	
3	310	56.7	242	45.8		337	08.3		172	39.8		218	59.4	
4	325	59.2	257	45.1		352	09.7		187	41.9		234	01.5	
5	341	01.7	272	44.3	+21	7	11.1	-14	202	43.9	+16	249	03.6	+22
6	356	04.1	287	43.6	+21	22	12.5	-14	217	45.9	+16	264	05.7	+22
7	11	06.6	302	42.8		37	13.9		232	47.9		279	07.8	
8	26	09.1	317	42.1		52	15.3		247	50.0		294	10.0	
9	41	11.5	332	41.3		67	16.7		262	52.0		309	12.1	
10	56	14.0	347	40.6		82	18.1		277	54.0		324	14.2	
11	71	16.5	2	39.8	+21	97	19.5	-14	292	56.0	+16	339	16.3	+22
12	86	18.9	17	39.0	+21	112	21.0	-14	307	58.1	+16	354	18.4	+22
13	101	21.4	32	38.3		127	22.4		323	00.1		9	20.5	
14	116	23.8	47	37.5		142	23.8		338	02.1		24	22.6	
15	131	26.3	62	36.8		157	25.2		353	04.1		39	24.7	
16	146	28.8	77	36.0		172	26.6		8	06.1		54	26.9	
17	161	31.2	92	35.3	+21	187	28.0	-14	23	08.2	+16	69	29.0	+22
18	176	33.7	107	34.5	+21	202	29.4	-14	38	10.2	+16	84	31.1	+22
19	191	36.2	122	33.7		217	30.9		53	12.2		99	33.2	
20	206	38.6	137	33.0		232	32.3		68	14.2		114	35.3	
21	221	41.1	152	32.2		247	33.7		83	16.3		129	37.4	
22	236	43.6	167	31.5		262	35.1		98	18.3		144	39.5	
23	251	46.0	182	30.7		277	36.5		113	20.3		159	41.6	
24	266	48.5	197	29.9	+21	292	38.0	-14	128	22.3	+16	174	43.8	+22
Dif	—		-8		+5	+14		+2	+20		-1	+21		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7		Edad: 18 ^d 8 PHE		SD: 15 ^h 5											
	PMG: 12 ^h 01 ^m 2	PMG: 4 ^h 25 ^m	R°: 46 ^m	hG ☉	Dec	hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	43.1	+23 24.8	295	57.8	-17 30.0	60 N	21 27	23 14	** **	0 30 5	8 34 90				
1	194	43.0	24.8	310	28.2 ¹¹⁴	18.7 ¹¹³	58	21 07	22 22	** **	19 8	44 86				
2	209	42.9	24.9	324	58.6 ¹¹⁴	-17 07.3 ¹¹⁴	56	20 50	21 52	** **	09 12	8 53 83				
3	224	42.7	24.9	339	29.1 ¹¹⁵	-16 55.8 ¹¹⁵	54	36	30	23 18	0 00 15	9 01 80				
4	239	42.6	25.0	353	59.7 ¹¹⁶	44.3 ¹¹⁵	52	23	21 12	22 31	** **	09 76				
5	254	42.5	+23 25.0	8	30.5 ¹¹⁸	-16 32.7 ¹¹⁶	50	20 12	20 57	22 03	** **	9 15 74				
6	269	42.3	+23 25.0	23	01.3 ¹¹⁸	-16 21.0 ¹¹⁷	45	19 50	20 27	21 17	23 54 21	9 29 69				
7	284	42.2	25.1	37	32.3 ¹²⁰	-16 09.3 ¹¹⁷	40	32	20 05	20 46	46 24	40 65				
8	299	42.0	25.1	52	03.3 ¹²⁰	-15 57.5 ¹¹⁸	35	17	19 46	23	38 28	50 61				
9	314	41.9	25.2	66	34.5 ¹²²	45.6 ¹¹⁹	30	19 04	31	20 04	32 30	9 58 59				
10	329	41.8	25.2	81	05.8 ¹²³	33.7 ¹¹⁹	20	18 42	19 06	19 35	20 35	10 12 54				
11	344	41.6	+23 25.3	95	37.1 ¹²³	-15 21.7 ¹²⁰	10 N	18 23	18 46	19 13	23 10 40	10 25 49				
12	359	41.5	+23 25.3	110	08.6 ¹²⁵	-15 09.7 ¹²⁰	0	18 05	18 27	18 54	23 00 44	10 36 46				
13	14	41.4	25.3	124	40.2 ¹²⁶	-14 57.6 ¹²¹	10 S	17 47	18 10	37	22 51 48	10 48 41				
14	29	41.2	25.4	139	11.8 ¹²⁶	45.5 ¹²¹	20	29	17 53	20	41 52	11 00 37				
15	44	41.1	25.4	153	43.6 ¹²⁸	33.3 ¹²²	30	17 08	34	18 04	29 57	14 32				
16	59	41.0	25.5	168	15.4 ¹²⁸	21.0 ¹²³	35	16 55	23	17 55	22 60	22 29				
17	74	40.8	+23 25.5	182	47.4 ¹³⁰	-14 08.8 ¹²²	40	16 41	17 12	17 46	22 14 64	11 31 26				
18	89	40.7	+23 25.5	197	19.4 ¹³⁰	-13 56.4 ¹²⁴	45	16 24	16 58	17 35	22 05 67	11 41 23				
19	104	40.6	25.6	211	51.5 ¹³¹	44.0 ¹²⁴	50	16 03	42	24	21 54 72	11 54 18				
20	119	40.4	25.6	226	23.8 ¹³³	31.6 ¹²⁴	52	15 54	35	18	49 74	12 00 16				
21	134	40.3	25.6	240	56.1 ¹³³	19.1 ¹²⁵	54	42	26	13	43 77	06 14				
22	149	40.1	25.7	255	28.5 ¹³⁴	-13 06.6 ¹²⁵	56	30	17	06	37 80	13 11				
23	164	40.0	25.7	270	01.0 ¹³⁵	-12 54.0 ¹²⁶	58	15 15	16 07	17 00	30 83	21 8				
24	179	39.9	+23 25.7	284	33.6 ¹³⁶	-12 41.4 ¹²⁶	60 S	14 57	15 55	16 52	21 22 86	12 30 4				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 11 ^m 7	Mag: -3.8 PMG: 10 ^h 51 ^m	Mag: -1.1 PMG: 4 ^h 29 ^m	Mag: -1.9 PMG: 15 ^h 24 ^m	Mag: 0.0 PMG: 12 ^h 19 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	266	48.5	197 29.9	+21 19.8	292 38.0	-14 35.1	128 22.3	+16 53.3	174 43.8	+22 37.0
1	281	51.0	212 29.2	20.3	307 39.4	34.8	143 24.4	53.2	189 45.9	37.0
2	296	53.4	227 28.4	20.9	322 40.8	34.6	158 26.4	53.0	204 48.0	37.0
3	311	55.9	242 27.7	21.4	337 42.2	34.3	173 28.4	52.9	219 50.1	37.0
4	326	58.3	257 26.9	21.9	352 43.6	34.1	188 30.4	52.8	234 52.2	37.0
5	342	00.8	272 26.1	+21 22.4	7 45.1	-14 33.9	203 32.4	+16 52.6	249 54.3	+22 37.0
6	357	03.3	287 25.4	+21 22.9	22 46.5	-14 33.6	218 34.5	+16 52.5	264 56.4	+22 37.0
7	12	05.7	302 24.6	23.5	37 47.9	33.4	233 36.5	52.4	279 58.5	37.0
8	27	08.2	317 23.8	24.0	52 49.3	33.1	248 38.5	52.2	295 00.7	37.0
9	42	10.7	332 23.1	24.5	67 50.8	32.9	263 40.5	52.1	310 02.8	37.0
10	57	13.1	347 22.3	25.0	82 52.2	32.7	278 42.6	52.0	325 04.9	37.0
11	72	15.6	2 21.6	+21 25.5	97 53.6	-14 32.4	293 44.6	+16 51.8	340 07.0	+22 37.0
12	87	18.1	17 20.8	+21 26.0	112 55.0	-14 32.2	308 46.6	+16 51.7	355 09.1	+22 37.0
13	102	20.5	32 20.0	26.5	127 56.5	31.9	323 48.6	51.6	10 11.2	37.0
14	117	23.0	47 19.3	27.0	142 57.9	31.7	338 50.6	51.4	25 13.3	37.0
15	132	25.4	62 18.5	27.6	157 59.3	31.5	353 52.7	51.3	40 15.4	37.0
16	147	27.9	77 17.7	28.1	173 00.8	31.2	8 54.7	51.2	55 17.6	37.0
17	162	30.4	92 17.0	+21 28.6	188 02.2	-14 31.0	23 56.7	+16 51.0	70 19.7	+22 37.0
18	177	32.8	107 16.2	+21 29.1	203 03.6	-14 30.7	38 58.7	+16 50.9	85 21.8	+22 37.0
19	192	35.3	122 15.4	29.6	218 05.1	30.5	54 00.7	50.8	100 23.9	37.0
20	207	37.8	137 14.6	30.1	233 06.5	30.3	69 02.8	50.6	115 26.0	37.0
21	222	40.2	152 13.9	30.6	248 07.9	30.0	84 04.8	50.5	130 28.1	37.0
22	237	42.7	167 13.1	31.1	263 09.4	29.8	99 06.8	50.4	145 30.2	37.0
23	252	45.2	182 12.3	31.6	278 10.8	29.6	114 08.8	50.2	160 32.3	37.0
24	267	47.6	197 11.6	+21 32.1	293 12.2	-14 29.3	129 10.8	+16 50.1	175 34.5	+22 37.0
Dif	—	-8	+5	+14	+2	+20	-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 01 ^m 5 ^s				Edad: 19 ^d 8 ^h PHE { SD: 15 ^h 3 ^m PMG: 5 ^h 11 ^m R°: 43 ^m 4 ^h : 56 ^m 0 ^s 12 ^h : 55 ^m 8 ^s 20 ^h : 55 ^m 5 ^s													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	39.9	+23	25.7	284	33.6	-12	41.4	60 N	** **	0 49	2 35	0 35	3	10 04	84		
1	194	39.7		25.8	299	06.2 ¹³⁶		28.8 ¹²⁶	58	** **	1 40	2 56	27	7	10 81			
2	209	39.6		25.8	313	39.0 ¹³⁸		16.1 ¹²⁷	56	** **	2 10	3 13	21	9	16 78			
3	224	39.5		25.8	328	11.8 ¹³⁸	-12	03.4 ¹²⁷	54	0 45	33	27	15	12	21 75			
4	239	39.3		25.8	342	44.7 ¹³⁹	-11	50.6 ¹²⁸	52	1 32	2 51	39	10	14	25 73			
5	254	39.2	+23	25.9	357	17.7 ¹⁴⁰	-11	37.8 ¹²⁸	50	2 00	3 06	3 50	0 05	16	10 29	71		
6	269	39.1	+23	25.9	11	50.8 ¹⁴¹	-11	25.0 ¹²⁸	45	2 46	3 35	4 13	** **	**	10 38	66		
7	284	38.9		25.9	26	23.9 ¹⁴¹	-11	12.1 ¹²⁹	40	3 16	3 58	31	** **	**	45	62		
8	299	38.8		25.9	40	57.2 ¹⁴³	-10	59.2 ¹²⁹	35	40	4 16	46	** **	**	51	59		
9	314	38.7		26.0	55	30.5 ¹⁴³		46.3 ¹²⁹	30	3 58	32	4 59	** **	**	10 57	56		
10	329	38.5		26.0	70	03.8 ¹⁴³		33.3 ¹³⁰	20	4 27	4 57	5 21	23	55	11 06	51		
11	344	38.4	+23	26.0	84	37.3 ¹⁴⁵	-10	20.4 ¹²⁹	10 N	4 50	5 17	5 40	23	50	11 14	47		
12	359	38.2	+23	26.0	99	10.8 ¹⁴⁵	-10	07.3 ¹³¹	0	5 09	5 35	5 58	23	44	11 22	42		
13	14	38.1		26.1	113	44.4 ¹⁴⁶	-9	54.3 ¹³⁰	10 S	26	5 52	6 15	39	45	29 39			
14	29	38.0		26.1	128	18.1 ¹⁴⁷		41.2 ¹³¹	20	42	6 10	34	33	49	37 34			
15	44	37.8		26.1	142	51.8 ¹⁴⁷		28.1 ¹³¹	30	5 59	29	6 55	26	55	46 29			
16	59	37.7		26.1	157	25.6 ¹⁴⁸		15.0 ¹³¹	35	6 08	39	7 07	22	58	51 27			
17	74	37.6	+23	26.1	171	59.5 ¹⁴⁹	-9	01.9 ¹³¹	40	6 17	6 51	7 22	23	18	11 57	23		
18	89	37.4	+23	26.2	186	33.4 ¹⁴⁹	-8	48.7 ¹³²	45	6 27	7 05	7 38	23	12	12 04	19		
19	104	37.3		26.2	201	07.4 ¹⁵⁰		35.5 ¹³²	50	39	21	7 59	06	69	12 15			
20	119	37.2		26.2	215	41.5 ¹⁵¹		22.3 ¹³²	52	44	28	8 09	03	72	16 13			
21	134	37.0		26.2	230	15.6 ¹⁵¹	-8	09.1 ¹³²	54	50	36	20	23	00	20 11			
22	149	36.9		26.2	244	49.8 ¹⁵²	-7	55.8 ¹³³	56	6 56	46	33	22	57	24 9			
23	164	36.8		26.2	259	24.0 ¹⁵²		42.5 ¹³³	58	7 03	7 56	8 48	53	79	29 6			
24	179	36.6	+23	26.3	273	58.3 ¹⁵³	-7	29.3 ¹³²	60 S	7 11	8 08	9 05	22	48	12 34	3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 07 ^m 8 ^s		Mag: -3.8 PMG: 10 ^h 52 ^m		Mag: -1.2 PMG: 4 ^h 27 ^m		Mag: -1.9 PMG: 15 ^h 21 ^m		Mag: 0.0 PMG: 12 ^h 16 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	267	47.6	197	11.6	+21	32.1	293	12.2	-14	29.3
1	282	50.1	212	10.8		32.6	308	13.7		29.1
2	297	52.6	227	10.0		33.1	323	15.1		28.8
3	312	55.0	242	09.3		33.6	338	16.5		28.6
4	327	57.5	257	08.5		34.1	353	18.0		28.4
5	342	59.9	272	07.7	+21	34.6	8	19.4	-14	28.1
6	358	02.4	287	06.9	+21	35.0	23	20.9	-14	27.9
7	13	04.9	302	06.2		35.5	38	22.3		27.7
8	28	07.3	317	05.4		36.0	53	23.7		27.4
9	43	09.8	332	04.6		36.5	68	25.2		27.2
10	58	12.3	347	03.8		37.0	83	26.6		27.0
11	73	14.7	2	03.1	+21	37.5	98	28.1	-14	26.7
12	88	17.2	17	02.3	+21	38.0	113	29.5	-14	26.5
13	103	19.7	32	01.5		38.5	128	31.0		26.3
14	118	22.1	47	00.7		39.0	143	32.4		26.0
15	133	24.6	62	00.0		39.4	158	33.9		25.8
16	148	27.1	76	59.2		39.9	173	35.3		25.6
17	163	29.5	91	58.4	+21	40.4	188	36.7	-14	25.3
18	178	32.0	106	57.6	+21	40.9	203	38.2	-14	25.1
19	193	34.4	121	56.9		41.4	218	39.6		24.9
20	208	36.9	136	56.1		41.8	233	41.1		24.6
21	223	39.4	151	55.3		42.3	248	42.5		24.4
22	238	41.8	166	54.5		42.8	263	44.0		24.2
23	253	44.3	181	53.7		43.3	278	45.4		23.9
24	268	46.8	196	53.0	+21	43.7	293	46.9	-14	23.7
Dif	—		-8		+5		+14		+2	

+20		-1		+21		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 20 ^d 8 PHE	SD: 15 ^h 1					Final del crepúsculo	Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 01 ^m 7					PMG: 5 ^h 54 ^m						R°: 41 ^m						
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	179	36.6	+23	26.3	273	58.3	-7	29.3	60 N	21 28	23 15	** ** *	0 38 2		11 28 82			
1	194	36.5		26.3	288	32.7 ¹⁵⁴		15.9 ¹³⁴	58	21 07	22 23	** ** *	34 5		31 78			
2	209	36.3		26.3	303	07.1 ¹⁵⁴	-7	02.6 ¹³³	56	20 50	21 53	** ** *	30 8		34 75			
3	224	36.2		26.3	317	41.6 ¹⁵⁵	-6	49.3 ¹³³	54	36	31	23 19	27 10		36 77			
4	239	36.1		26.3	332	16.1 ¹⁵⁵		36.0 ¹³³	52	24	21 13	22 31	24 12		38 70			
5	254	35.9	+23	26.3	346	50.7 ¹⁵⁶	-6	22.6 ¹³⁴	50	20 13	20 58	22 03	0 21 14		11 40 68			
6	269	35.8	+23	26.3	1	25.3 ¹⁵⁶	-6	09.2 ¹³⁴	45	19 50	20 28	21 18	0 15 19		11 44 64			
7	284	35.7		26.3	16	00.0 ¹⁵⁷	-5	55.8 ¹³⁴	40	32	20 05	20 47	10 22		47 60			
8	299	35.5		26.3	30	34.7 ¹⁵⁷		42.4 ¹³⁴	35	17	19 47	24	06 25		50 57			
9	314	35.4		26.4	45	09.5 ¹⁵⁸		29.0 ¹³⁴	30	19 04	32	20 05	0 02 28		53 53			
10	329	35.3		26.4	59	44.3 ¹⁵⁸		15.6 ¹³⁴	20	18 42	19 07	19 36	** ** **		11 57 49			
11	344	35.1	+23	26.4	74	19.1 ¹⁵⁸	-5	02.2 ¹³⁴	10 N	18 23	18 46	19 13	** ** **		12 01 44			
12	359	35.0	+23	26.4	88	54.0 ¹⁵⁹	-4	48.8 ¹³⁴	0	18 05	18 28	18 54	** ** **		12 04 41			
13	14	34.8		26.4	103	29.0 ¹⁶⁰		35.3 ¹³⁵	10 S	17 48	18 11	37	** ** **		08 36			
14	29	34.7		26.4	118	03.9 ¹⁵⁹		21.9 ¹³⁴	20	29	17 53	21	** ** **		11 33			
15	44	34.6		26.4	132	39.0 ¹⁶¹	-4	08.4 ¹³⁵	30	17 08	34	18 04	** ** **		15 28			
16	59	34.4		26.4	147	14.0 ¹⁶⁰	-3	55.0 ¹³⁴	35	16 56	24	17 56	** ** **		18 25			
17	74	34.3	+23	26.4	161	49.1 ¹⁶¹	-3	41.5 ¹³⁵	40	16 41	17 12	17 46	** ** **		12 20 22			
18	89	34.2	+23	26.4	176	24.3 ¹⁶²	-3	28.1 ¹³⁴	45	16 25	16 58	17 36	** ** **		12 23 19			
19	104	34.0		26.4	190	59.4 ¹⁶¹		14.6 ¹³⁵	50	16 04	42	24	** ** **		27 14			
20	119	33.9		26.4	205	34.6 ¹⁶²	-3	01.2 ¹³⁴	52	15 54	35	19	** ** **		29 12			
21	134	33.8		26.4	220	09.9 ¹⁶³	-2	47.7 ¹³⁵	54	43	27	13	** ** **		31 9			
22	149	33.6		26.4	234	45.1 ¹⁶²		34.2 ¹³⁵	56	30	18	07	** ** **		33 7			
23	164	33.5		26.4	249	20.4 ¹⁶³		20.8 ¹³⁴	58	15 15	16 07	17 00	** ** **		35 5			
24	179	33.4	+23	26.4	263	55.8 ¹⁶⁴	-2	07.3 ¹³⁵	60 S	14 58	15 56	16 52	** ** **		12 37 2			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 03 ^m 9		Mag: -3.8 PMG: 10 ^h 53 ^m				Mag: -1.2 PMG: 4 ^h 24 ^m				Mag: -1.9 PMG: 15 ^h 18 ^m				Mag: 0.0 PMG: 12 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	268	46.8	196	53.0	+21	43.7	293	46.9	-14	23.7	129	59.3	+16	46.9	176	25.1	+22	36.9
1	283	49.2	211	52.2		44.2	308	48.4		23.5	145	01.3		46.7	191	27.3		36.9
2	298	51.7	226	51.4		44.7	323	49.8		23.3	160	03.3		46.6	206	29.4		36.9
3	313	54.2	241	50.6		45.2	338	51.3		23.0	175	05.3		46.5	221	31.5		36.9
4	328	56.6	256	49.8		45.6	353	52.7		22.8	190	07.4		46.3	236	33.6		36.9
5	343	59.1	271	49.1	+21	46.1	8	54.2	-14	22.6	205	09.4	+16	46.2	251	35.7	+22	36.9
6	359	01.5	286	48.3	+21	46.6	23	55.6	-14	22.3	220	11.4	+16	46.1	266	37.8	+22	36.9
7	14	04.0	301	47.5		47.0	38	57.1		22.1	235	13.4		45.9	281	39.9		36.9
8	29	06.5	316	46.7		47.5	53	58.5		21.9	250	15.4		45.8	296	42.0		36.9
9	44	08.9	331	45.9		48.0	69	00.0		21.7	265	17.4		45.7	311	44.2		36.9
10	59	11.4	346	45.1		48.4	84	01.5		21.4	280	19.4		45.5	326	46.3		36.9
11	74	13.9	1	44.4	+21	48.9	99	02.9	-14	21.2	295	21.5	+16	45.4	341	48.4	+22	36.9
12	89	16.3	16	43.6	+21	49.3	114	04.4	-14	21.0	310	23.5	+16	45.2	356	50.5	+22	36.9
13	104	18.8	31	42.8		49.8	129	05.8		20.7	325	25.5		45.1	11	52.6		36.9
14	119	21.3	46	42.0		50.3	144	07.3		20.5	340	27.5		45.0	26	54.7		36.9
15	134	23.7	61	41.2		50.7	159	08.8		20.3	355	29.5		44.8	41	56.8		36.9
16	149	26.2	76	40.4		51.2	174	10.2		20.1	10	31.5		44.7	56	58.9		36.9
17	164	28.7	91	39.7	+21	51.6	189	11.7	-14	19.8	25	33.6	+16	44.6	72	01.1	+22	36.9
18	179	31.1	106	38.9	+21	52.1	204	13.2	-14	19.6	40	35.6	+16	44.4	87	03.2	+22	36.9
19	194	33.6	121	38.1		52.5	219	14.6		19.4	55	37.6		44.3	102	05.3		36.9
20	209	36.0	136	37.3		53.0	234	16.1		19.2	70	39.6		44.2	117	07.4		36.9
21	224	38.5	151	36.5		53.4	249	17.6		18.9	85	41.6		44.0	132	09.5		36.9
22	239	41.0	166	35.7		53.9	264	19.0		18.7	100	43.6		43.9	147	11.6		36.9
23	254	43.4	181	34.9		54.3	279	20.5		18.5	115	45.6		43.7	162	13.7		36.9
24	269	45.9	196	34.1	+21	54.8	294	22.0	-14	18.3	130	47.7	+16	43.6	177	15.8	+22	36.9
Dif	—		-8		+5		+15		+2		+20		-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 9			Edad: 21 ^d 8 PHE { 4 ^h : 54'8 12 ^h : 54'6 20 ^h : 54'5 SD: 14'9 PMG: 6 ^h 35 ^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	33.4	+23	26.4	263	55.8	-2	07.3	60 N	** *	0 49	2 36	0 40	2	12 50	80		
1	194	33.2		26.4	278	31.1 ¹⁶³	-1	53.8 ¹³⁵	58	** *	1 40	2 56	39	5	49	77		
2	209	33.1		26.4	293	06.5 ¹⁶⁴		40.4 ¹³⁴	56	** *	2 10	3 13	38	7	49	74		
3	224	32.9		26.4	307	41.9 ¹⁶⁴		26.9 ¹³⁵	54	0 45	33	27	37	10	49	71		
4	239	32.8		26.4	322	17.3 ¹⁶⁴	-1	13.5 ¹³⁴	52	1 32	2 51	40	36	12	48	70		
5	254	32.7	+23	26.4	336	52.8 ¹⁶⁵	-1	00.0 ¹³⁵	50	2 00	3 06	3 51	0 35	14	12 48	67		
6	269	32.5	+23	26.4	351	28.3 ¹⁶⁵	-0	46.6 ¹³⁴	45	2 46	3 36	4 13	0 34	18	12 48	62		
7	284	32.4		26.3	6	03.8 ¹⁶⁵		33.2 ¹³⁴	40	3 17	3 58	31	32	22	47	59		
8	299	32.3		26.3	20	39.3 ¹⁶⁵		19.7 ¹³⁵	35	40	4 17	46	31	25	47	56		
9	314	32.1		26.3	35	14.8 ¹⁶⁵	-0	06.3 ¹³⁴	30	3 59	32	4 59	30	27	46	54		
10	329	32.0		26.3	49	50.4 ¹⁶⁶	+0	07.1 ¹³⁴	20	4 28	4 57	5 22	28	32	46	48		
11	344	31.9	+23	26.3	64	25.9 ¹⁶⁵	+0	20.5 ¹³⁴	10 N	4 50	5 18	5 41	0 27	36	12 45	44		
12	359	31.7	+23	26.3	79	01.5 ¹⁶⁶	+0	33.9 ¹³⁴	0	5 09	5 36	5 58	0 25	41	12 45	40		
13	14	31.6		26.3	93	37.1 ¹⁶⁶	+0	47.3 ¹³⁴	10 S	26	5 53	6 16	24	44	44	36		
14	29	31.5		26.3	108	12.7 ¹⁶⁶	+1	00.6 ¹³³	20	43	6 10	34	22	49	44	32		
15	44	31.3		26.3	122	48.4 ¹⁶⁷		14.0 ¹³⁴	30	5 59	29	6 55	21	53	43	27		
16	59	31.2		26.2	137	24.0 ¹⁶⁶		27.3 ¹³³	35	6 08	40	7 08	20	56	43	24		
17	74	31.0	+23	26.2	151	59.6 ¹⁶⁶	+1	40.7 ¹³⁴	40	6 17	6 52	7 22	0 18	60	12 42	22		
18	89	30.9	+23	26.2	166	35.3 ¹⁶⁷	+1	54.0 ¹³³	45	6 28	7 05	7 39	0 17	63	12 42	18		
19	104	30.8		26.2	181	10.9 ¹⁶⁶	+2	07.3 ¹³³	50	40	21	8 00	15	68	41	14		
20	119	30.6		26.2	195	46.6 ¹⁶⁷		20.6 ¹³³	52	45	29	10	15	69	41	12		
21	134	30.5		26.2	210	22.3 ¹⁶⁷		33.9 ¹³³	54	51	37	21	14	72	40	10		
22	149	30.4		26.1	224	58.0 ¹⁶⁷	+2	47.1 ¹³²	56	6 57	46	33	13	75	40	8		
23	164	30.2		26.1	239	33.6 ¹⁶⁶	+3	00.4 ¹³³	58	7 04	7 56	8 48	12	77	40	5		
24	179	30.1	+23	26.1	254	09.3 ¹⁶⁷	+3	13.6 ¹³²	60 S	7 11	8 08	9 06	0 11	80	12 39	2		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 6 ^h 00 ^m 0			Mag: -3.8 PMG: 10 ^h 54 ^m			Mag: -1.2 PMG: 4 ^h 22 ^m			Mag: -1.9 PMG: 15 ^h 15 ^m			Mag: 0.0 PMG: 12 ^h 09 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	269	45.9	196	34.1	+21	54.8	294	22.0	-14	18.3	130	47.7	+16	43.6	177	15.8	+22	36.9
1	284	48.4	211	33.3		55.2	309	23.4		18.0	145	49.7		43.5	192	18.0		36.9
2	299	50.8	226	32.6		55.7	324	24.9		17.8	160	51.7		43.3	207	20.1		36.9
3	314	53.3	241	31.8		56.1	339	26.4		17.6	175	53.7		43.2	222	22.2		36.9
4	329	55.8	256	31.0		56.6	354	27.9		17.4	190	55.7		43.1	237	24.3		36.9
5	344	58.2	271	30.2	+21	57.0	9	29.3	-14	17.1	205	57.7	+16	42.9	252	26.4	+22	36.9
6	0	00.7	286	29.4	+21	57.5	24	30.8	-14	16.9	220	59.7	+16	42.8	267	28.5	+22	36.9
7	15	03.1	301	28.6		57.9	39	32.3		16.7	236	01.7		42.7	282	30.6		36.9
8	30	05.6	316	27.8		58.3	54	33.7		16.5	251	03.8		42.5	297	32.7		36.9
9	45	08.1	331	27.0		58.8	69	35.2		16.2	266	05.8		42.4	312	34.8		36.9
10	60	10.5	346	26.2		59.2	84	36.7		16.0	281	07.8		42.2	327	37.0		36.9
11	75	13.0	1	25.4	+21	59.7	99	38.2	-14	15.8	296	09.8	+16	42.1	342	39.1	+22	36.9
12	90	15.5	16	24.6	+22	00.1	114	39.7	-14	15.6	311	11.8	+16	42.0	357	41.2	+22	36.9
13	105	17.9	31	23.8		00.5	129	41.1		15.4	326	13.8		41.8	12	43.3		36.9
14	120	20.4	46	23.1		01.0	144	42.6		15.1	341	15.8		41.7	27	45.4		36.9
15	135	22.9	61	22.3		01.4	159	44.1		14.9	356	17.8		41.6	42	47.5		36.9
16	150	25.3	76	21.5		01.8	174	45.6		14.7	11	19.9		41.4	57	49.6		36.9
17	165	27.8	91	20.7	+22	02.3	189	47.1	-14	14.5	26	21.9	+16	41.3	72	51.7	+22	36.9
18	180	30.3	106	19.9	+22	02.7	204	48.5	-14	14.3	41	23.9	+16	41.1	87	53.9	+22	36.9
19	195	32.7	121	19.1		03.1	219	50.0		14.0	56	25.9		41.0	102	56.0		36.9
20	210	35.2	136	18.3		03.5	234	51.5		13.8	71	27.9		40.9	117	58.1		36.8
21	225	37.6	151	17.5		04.0	249	53.0		13.6	86	29.9		40.7	133	00.2		36.8
22	240	40.1	166	16.7		04.4	264	54.5		13.4	101	31.9		40.6	148	02.3		36.8
23	255	42.6	181	15.9		04.8	279	56.0		13.2	116	33.9		40.5	163	04.4		36.8
24	270	45.0	196	15.1	+22	05.2	294	57.4	-14	12.9	131	36.0	+16	40.3	178	06.5	+22	36.8
Dif	—			-8 +4			+15 +2			+20 -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 02 ^m 1			Edad: 22 ^d 8 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 SD: 14'8 PMG: 7 ^h 15 ^m R°: 41 ^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	30.1	+23 26.1	254	09.3	+3 13.6	60 N	21 28	23 14	** **	0 42	2	14 10	81	
1	194	30.0	26.1	268	45.0 ¹⁶⁷	26.8 ¹³²	58	21 07	22 23	** **	44	5	06	78	
2	209	29.8	26.1	283	20.7 ¹⁶⁷	40.0 ¹³²	56	20 51	21 53	** **	45	8	03	75	
3	224	29.7	26.0	297	56.3 ¹⁶⁶	+3 53.2 ¹³²	54	36	31	23 18	47	10	14	00	72
4	239	29.6	26.0	312	32.0 ¹⁶⁷	+4 06.3 ¹³¹	52	24	21 13	22 31	48	12	13	58	69
5	254	29.4	+23 26.0	327	07.7 ¹⁶⁷	+4 19.5 ¹³²	50	20 13	20 58	22 03	0 49	14	13	55	68
6	269	29.3	+23 26.0	341	43.4 ¹⁶⁷	+4 32.6 ¹³¹	45	19 51	20 28	21 18	0 52	18	13	50	63
7	284	29.1	25.9	356	19.0 ¹⁶⁶	45.7 ¹³¹	40	33	20 05	20 47	54	22	46	59	
8	299	29.0	25.9	10	54.7 ¹⁶⁷	+4 58.7 ¹³⁰	35	17	19 47	24	56	25	43	56	
9	314	28.9	25.9	25	30.3 ¹⁶⁶	+5 11.8 ¹³¹	30	19 04	32	20 05	0 57	28	40	53	
10	329	28.7	25.9	40	06.0 ¹⁶⁷	24.8 ¹³⁰	20	18 42	19 07	19 36	1 00	33	34	49	
11	344	28.6	+23 25.8	54	41.6 ¹⁶⁶	+5 37.8 ¹³⁰	10 N	18 23	18 46	19 14	1 03	36	13	29	45
12	359	28.5	+23 25.8	69	17.2 ¹⁶⁶	+5 50.8 ¹³⁰	0	18 06	18 28	18 55	1 06	40	13	25	40
13	14	28.3	25.8	83	52.8 ¹⁶⁶	+6 03.7 ¹²⁹	10 S	17 48	18 11	38	08	44	20	37	
14	29	28.2	25.7	98	28.4 ¹⁶⁶	16.6 ¹²⁹	20	30	17 54	21	11	48	16	32	
15	44	28.1	25.7	113	04.0 ¹⁶⁶	29.5 ¹²⁹	30	17 09	35	18 05	14	53	10	28	
16	59	27.9	25.7	127	39.5 ¹⁶⁵	42.4 ¹²⁹	35	16 56	24	17 56	16	56	07	26	
17	74	27.8	+23 25.6	142	15.1 ¹⁶⁶	+6 55.2 ¹²⁸	40	16 42	17 13	17 47	1 18	59	13	04	22
18	89	27.7	+23 25.6	156	50.6 ¹⁶⁵	+7 08.0 ¹²⁸	45	16 25	16 59	17 36	1 20	63	13	00	18
19	104	27.5	25.6	171	26.1 ¹⁶⁵	20.8 ¹²⁸	50	16 04	43	24	23	67	12	55	14
20	119	27.4	25.5	186	01.6 ¹⁶⁵	33.6 ¹²⁸	52	15 54	35	19	24	70	53	12	
21	134	27.3	25.5	200	37.1 ¹⁶⁵	46.3 ¹²⁷	54	43	27	13	26	71	50	11	
22	149	27.1	25.5	215	12.5 ¹⁶⁴	+7 59.0 ¹²⁷	56	31	18	07	28	74	48	8	
23	164	27.0	25.4	229	47.9 ¹⁶⁴	+8 11.6 ¹²⁶	58	15 16	16 08	17 00	29	77	45	5	
24	179	26.8	+23 25.4	244	23.3 ¹⁶⁴	+8 24.3 ¹²⁷	60 S	14 58	15 56	16 53	1 31	81	12	41	3
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 56 ^m 0		Mag: -3.8 PMG: 10 ^h 56 ^m		Mag: -1.2 PMG: 4 ^h 20 ^m		Mag: -1.9 PMG: 15 ^h 12 ^m		Mag: 0.0 PMG: 12 ^h 06 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	270	45.0	196	15.1	294	57.4	131	36.0	178	06.5					
1	285	47.5	211	14.3	309	58.9	146	38.0	193	08.6					
2	300	50.0	226	13.5	325	00.4	161	40.0	208	10.7					
3	315	52.4	241	12.7	340	01.9	176	42.0	223	12.9					
4	330	54.9	256	11.9	355	03.4	191	44.0	238	15.0					
5	345	57.4	271	11.1	10	04.9	206	46.0	253	17.1					
6	0	59.8	286	10.3	25	06.4	221	48.0	268	19.2					
7	16	02.3	301	09.5	40	07.9	236	50.0	283	21.3					
8	31	04.8	316	08.7	55	09.4	251	52.0	298	23.4					
9	46	07.2	331	07.9	70	10.9	266	54.0	313	25.5					
10	61	09.7	346	07.1	85	12.4	281	56.1	328	27.6					
11	76	12.1	1	06.3	100	13.9	296	58.1	343	29.8					
12	91	14.6	16	05.5	115	15.3	312	00.1	358	31.9					
13	106	17.1	31	04.7	130	16.8	327	02.1	13	34.0					
14	121	19.5	46	03.9	145	18.3	342	04.1	28	36.1					
15	136	22.0	61	03.1	160	19.8	357	06.1	43	38.2					
16	151	24.5	76	02.3	175	21.3	12	08.1	58	40.3					
17	166	26.9	91	01.5	190	22.8	27	10.1	73	42.4					
18	181	29.4	106	00.7	205	24.3	42	12.1	88	44.5					
19	196	31.9	120	59.9	220	25.8	57	14.1	103	46.6					
20	211	34.3	135	59.1	235	27.3	72	16.1	118	48.8					
21	226	36.8	150	58.3	250	28.8	87	18.2	133	50.9					
22	241	39.2	165	57.5	265	30.3	102	20.2	148	53.0					
23	256	41.7	180	56.6	280	31.8	117	22.2	163	55.1					
24	271	44.2	195	55.8	295	33.4	132	24.2	178	57.2					
Dif	—		-8	+4	+15	+2	+20	-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 3				Edad: 23 ^d 8 PHE { SD: 14 ^h 8 PMG: 7 ^h 56 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	26.8	+23	25.4	244	23.3	+8	24.3	60 N	** **	0 50	2 36	0 44	3	15	31	82	
1	194	26.7		25.4	258	58.7 ¹⁶⁴		36.9 ¹²⁶	58	** **	1 41	2 57	49	6		24	79	
2	209	26.6		25.3	273	34.1 ¹⁶⁴	+8	49.4 ¹²⁵	56	** **	2 11	3 14	53	9	18	75		
3	224	26.4		25.3	288	09.4 ¹⁶³	+9	01.9 ¹²⁵	54	0 46	33	28	0 57	11	12	73		
4	239	26.3		25.2	302	44.7 ¹⁶³		14.4 ¹²⁵	52	1 33	2 51	40	1 00	14		07	71	
5	254	26.2	+23	25.2	317	20.0 ¹⁶³	+9	26.9 ¹²⁵	50	2 01	3 07	3 51	1 03	16	15	03	68	
6	269	26.0	+23	25.2	331	55.2 ¹⁶²	+9	39.3 ¹²⁴	45	2 47	3 36	4 14	1 10	20	14	53	64	
7	284	25.9		25.1	346	30.4 ¹⁶²	+9	51.7 ¹²⁴	40	3 17	3 59	32	16	23		45	61	
8	299	25.8		25.1	1	05.6 ¹⁶²	+10	04.0 ¹²³	35	40	4 17	4 47	21	26		39	57	
9	314	25.6		25.0	15	40.8 ¹⁶²		16.3 ¹²³	30	3 59	33	5 00	25	29		33	54	
10	329	25.5		25.0	30	15.9 ¹⁶¹		28.6 ¹²³	20	4 28	4 57	22	33	33		23	49	
11	344	25.4	+23	24.9	44	51.0 ¹⁶¹	+10	40.8 ¹²²	10 N	4 51	5 18	5 41	1 39	38	14	14	46	
12	359	25.2	+23	24.9	59	26.0 ¹⁶⁰	+10	53.0 ¹²²	0	5 10	5 36	5 59	1 46	41	14	05	43	
13	14	25.1		24.8	74	01.0 ¹⁶⁰	+11	05.1 ¹²¹	10 S	27	5 53	6 16	52	45	13	57	39	
14	29	25.0		24.8	88	36.0 ¹⁶⁰		17.2 ¹²¹	20	5 43	6 11	35	1 59	49		48	35	
15	44	24.8		24.7	103	10.9 ¹⁵⁹		29.2 ¹²⁰	30	6 00	29	6 56	2 07	54		38	30	
16	59	24.7		24.7	117	45.8 ¹⁵⁹		41.2 ¹²⁰	35	08	40	7 08	12	56		33	27	
17	74	24.6	+23	24.6	132	20.7 ¹⁵⁹	+11	53.2 ¹²⁰	40	6 18	6 52	7 22	2 17	59	13	26	25	
18	89	24.4	+23	24.6	146	55.5 ¹⁵⁸	+12	05.1 ¹¹⁹	45	6 28	7 05	7 39	2 23	63	13	18	22	
19	104	24.3		24.5	161	30.3 ¹⁵⁸		17.0 ¹¹⁹	50	40	22	8 00	30	68		09	17	
20	119	24.2		24.5	176	05.0 ¹⁵⁷		28.8 ¹¹⁸	52	45	29	10	34	70		05	15	
21	134	24.0		24.4	190	39.7 ¹⁵⁷		40.6 ¹¹⁸	54	51	37	21	37	73	13	01	12	
22	149	23.9		24.4	205	14.4 ¹⁵⁷	+12	52.3 ¹¹⁷	56	6 57	46	34	42	75	12	56	10	
23	164	23.8		24.3	219	49.0 ¹⁵⁶	+13	04.0 ¹¹⁷	58	7 04	7 57	8 48	46	79		50	7	
24	179	23.6	+23	24.3	234	23.5 ¹⁵⁵	+13	15.7 ¹¹⁷	60 S	7 11	8 08	9 06	2 52	81	12	44	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 52 ^m 1		Mag: -3.8 PMG: 10 ^h 57 ^m		Mag: -1.3 PMG: 4 ^h 17 ^m		Mag: -1.8 PMG: 15 ^h 08 ^m		Mag: 0.0 PMG: 12 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	271	44.2	195	55.8	+22	15.1	295	33.4	+16	37.0
1	286	46.6	210	55.0		15.5	310	34.9		36.9
2	301	49.1	225	54.2		15.9	325	36.4		36.7
3	316	51.6	240	53.4		16.3	340	37.9		36.6
4	331	54.0	255	52.6		16.7	355	39.4		36.4
5	346	56.5	270	51.8	+22	17.0	10	40.9	+16	36.3
6	1	59.0	285	51.0	+22	17.4	25	42.4	+16	36.2
7	17	01.4	300	50.2		17.8	40	43.9		36.0
8	32	03.9	315	49.4		18.2	55	45.4		35.9
9	47	06.4	330	48.6		18.6	70	46.9		35.7
10	62	08.8	345	47.8		19.0	85	48.4		35.6
11	77	11.3	0	47.0	+22	19.4	100	50.0	+16	35.5
12	92	13.7	15	46.1	+22	19.8	115	51.5	+16	35.3
13	107	16.2	30	45.3		20.1	130	53.0		35.2
14	122	18.7	45	44.5		20.5	145	54.5		35.0
15	137	21.1	60	43.7		20.9	160	56.0		34.9
16	152	23.6	75	42.9		21.3	175	57.5		34.8
17	167	26.1	90	42.1	+22	21.7	190	59.0	+16	34.6
18	182	28.5	105	41.3	+22	22.0	206	00.6	+16	34.5
19	197	31.0	120	40.5		22.4	221	02.1		34.3
20	212	33.5	135	39.6		22.8	236	03.6		34.2
21	227	35.9	150	38.8		23.2	251	05.1		34.1
22	242	38.4	165	38.0		23.5	266	06.6		33.9
23	257	40.9	180	37.2		23.9	281	08.2		33.8
24	272	43.3	195	36.4	+22	24.3	296	09.7	+16	33.6
Dif	—		-8		+4		+15		+2	

+20		-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 8 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1												
	PMG: 12 ^h 02 ^m 5			SD: 14 ^h 7 PMG: 8 ^h 37 ^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	23.6	+23	24.3		234	23.5	+13	15.7	60 N	21 28	23 13	** **	0 47 5	16 53 85	
1	194	23.5		24.2		248	58.0 ¹⁵⁵		27.3 ¹¹⁶	58	21 07	22 23	** **	0 55 8	43 80	
2	209	23.3		24.2		263	32.5 ¹⁵⁵		38.8 ¹¹⁵	56	20 51	21 53	** **	1 02 11	33 77	
3	224	23.2		24.1		278	06.9 ¹⁵⁴	+13	50.3 ¹¹⁵	54	36	31	23 17	08 14	25 77	
4	239	23.1		24.1		292	41.3 ¹⁵⁴	+14	01.7 ¹¹⁴	52	24	21 13	22 31	14 16	18 71	
5	254	22.9	+23	24.0		307	15.6 ¹⁵³	+14	13.1 ¹¹⁴	50	20 13	20 58	22 03	1 19 18	16 11 69	
6	269	22.8	+23	23.9		321	49.9 ¹⁵³	+14	24.4 ¹¹³	45	19 51	20 28	21 18	1 30 22	15 57 65	
7	284	22.7		23.9		336	24.1 ¹⁵²		35.7 ¹¹³	40	33	20 06	20 47	39 26	46 61	
8	299	22.5		23.8		350	58.3 ¹⁵²		46.9 ¹¹²	35	18	19 47	24	47 29	36 58	
9	314	22.4		23.8		5	32.4 ¹⁵¹	+14	58.0 ¹¹¹	30	19 05	32	20 06	1 54 32	27 56	
10	329	22.3		23.7		20	06.4 ¹⁵⁰	+15	09.1 ¹¹¹	20	18 43	19 07	19 37	2 06 36	12 52	
11	344	22.1	+23	23.6		34	40.4 ¹⁵⁰	+15	20.2 ¹¹¹	10 N	18 24	18 47	19 14	2 17 40	15 00 47	
12	359	22.0	+23	23.6		49	14.4 ¹⁵⁰	+15	31.2 ¹¹⁰	0	18 06	18 29	18 55	2 27 43	14 48 44	
13	14	21.9		23.5		63	48.3 ¹⁴⁹		42.1 ¹⁰⁹	10 S	17 49	18 12	38	37 47	36 41	
14	29	21.7		23.4		78	22.1 ¹⁴⁸	+15	52.9 ¹⁰⁸	20	30	17 54	22	2 48 51	23 38	
15	44	21.6		23.4		92	55.9 ¹⁴⁸	+16	03.8 ¹⁰⁹	30	17 09	35	18 05	3 01 55	08 34	
16	59	21.5		23.3		107	29.6 ¹⁴⁷		14.5 ¹⁰⁷	35	16 57	25	17 57	08 58	14 00 31	
17	74	21.3	+23	23.2		122	03.3 ¹⁴⁷	+16	25.2 ¹⁰⁷	40	16 43	17 13	17 47	3 16 61	13 51 28	
18	89	21.2	+23	23.2		136	36.9 ¹⁴⁶	+16	35.8 ¹⁰⁶	45	16 26	17 00	17 37	3 26 65	13 40 24	
19	104	21.1		23.1		151	10.5 ¹⁴⁶		46.3 ¹⁰⁵	50	16 05	16 43	25	38 69	26 21	
20	119	20.9		23.0		165	44.0 ¹⁴⁵	+16	56.8 ¹⁰⁵	52	15 55	36	20	44 71	20 18	
21	134	20.8		23.0		180	17.4 ¹⁴⁴	+17	07.2 ¹⁰⁴	54	44	28	14	50 74	13 16	
22	149	20.7		22.9		194	50.8 ¹⁴⁴		17.6 ¹⁰⁴	56	31	19	08	3 57 76	13 06 13	
23	164	20.5		22.8		209	24.1 ¹⁴³		27.9 ¹⁰³	58	15 17	16 09	17 01	4 05 80	12 57 10	
24	179	20.4	+23	22.8		223	57.3 ¹⁴²	+17	38.1 ¹⁰²	60 S	14 59	15 57	16 54	4 13 85	12 47 6	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 5 ^h 48 ^m 2		Mag: -3.8 PMG: 10 ^h 58 ^m		Mag: -1.3 PMG: 4 ^h 15 ^m		Mag: -1.8 PMG: 15 ^h 05 ^m		Mag: 0.0 PMG: 11 ^h 59 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	272	43.3	195	36.4	+22	24.3	296	09.7	-14	02.8	133	12.3	+16	33.6	179	47.9
1	287	45.8	210	35.6		24.7	311	11.2		02.6	148	14.3		33.5	194	50.0
2	302	48.2	225	34.8		25.0	326	12.7		02.4	163	16.4		33.4	209	52.1
3	317	50.7	240	33.9		25.4	341	14.3		02.2	178	18.4		33.2	224	54.2
4	332	53.2	255	33.1		25.8	356	15.8		01.9	193	20.4		33.1	239	56.3
5	347	55.6	270	32.3	+22	26.1	11	17.3	-14	01.7	208	22.4	+16	32.9	254	58.5
6	2	58.1	285	31.5	+22	26.5	26	18.8	-14	01.5	223	24.4	+16	32.8	270	00.6
7	18	00.6	300	30.7		26.8	41	20.4		01.3	238	26.4		32.7	285	02.7
8	33	03.0	315	29.9		27.2	56	21.9		01.1	253	28.4		32.5	300	04.8
9	48	05.5	330	29.1		27.6	71	23.4		00.9	268	30.4		32.4	315	06.9
10	63	08.0	345	28.2		27.9	86	25.0		00.7	283	32.4		32.2	330	09.0
11	78	10.4	0	27.4	+22	28.3	101	26.5	-14	00.5	298	34.4	+16	32.1	345	11.1
12	93	12.9	15	26.6	+22	28.6	116	28.0	-14	00.3	313	36.4	+16	32.0	0	13.2
13	108	15.3	30	25.8		29.0	131	29.6	-14	00.1	328	38.4		31.8	15	15.4
14	123	17.8	45	25.0		29.4	146	31.1	-13	59.9	343	40.4		31.7	30	17.5
15	138	20.3	60	24.1		29.7	161	32.6		59.7	358	42.4		31.5	45	19.6
16	153	22.7	75	23.3		30.1	176	34.2		59.5	13	44.4		31.4	60	21.7
17	168	25.2	90	22.5	+22	30.4	191	35.7	-13	59.3	28	46.4	+16	31.2	75	23.8
18	183	27.7	105	21.7	+22	30.8	206	37.2	-13	59.1	43	48.4	+16	31.1	90	25.9
19	198	30.1	120	20.9		31.1	221	38.8		58.9	58	50.4		31.0	105	28.0
20	213	32.6	135	20.0		31.5	236	40.3		58.7	73	52.4		30.8	120	30.1
21	228	35.1	150	19.2		31.8	251	41.8		58.5	88	54.4		30.7	135	32.2
22	243	37.5	165	18.4		32.2	266	43.4		58.3	103	56.4		30.5	150	34.4
23	258	40.0	180	17.6		32.5	281	44.9		58.1	118	58.4		30.4	165	36.5
24	273	42.5	195	16.8	+22	32.9	296	46.5	-13	57.9	134	00.4	+16	30.3	180	38.6
Dif	—		-8		+4		+15		+2		+20		-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 02 ^m 7				Edad: 25 ^d 8 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /3 PMG: 9 ^h 21 ^m R°: 47 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	20.4	+23	22.8	223	57.3	+17	38.1	60 N	** *	0 52	2 37	0 52	7	18 18	86	
1	194	20.3		22.7	238	30.5 ¹⁴²		48.2 ¹⁰¹	58	** *	1 42	2 58	1 03	12	18 03	80	
2	209	20.1		22.6	253	03.6 ¹⁴¹	+17	58.3 ¹⁰¹	56	** *	2 12	3 15	13	16	17 50	77	
3	224	20.0		22.5	267	36.7 ¹⁴¹	+18	08.3 ¹⁰⁰	54	0 48	34	29	22	18	39	73	
4	239	19.9		22.5	282	09.7 ¹⁴⁰		18.3 ¹⁰⁰	52	1 34	2 52	41	30	21	29	71	
5	254	19.7	+23	22.4	296	42.6 ¹³⁹	+18	28.1 ⁹⁸	50	2 02	3 07	3 52	1 37	23	17 20	69	
6	269	19.6	+23	22.3	311	15.4 ¹³⁸	+18	37.9 ⁹⁸	45	2 47	3 37	4 15	1 52	28	17 02	64	
7	284	19.5		22.2	325	48.2 ¹³⁸		47.6 ⁹⁷	40	3 18	4 00	33	2 05	31	16 47	61	
8	299	19.3		22.2	340	21.0 ¹³⁸	+18	57.3 ⁹⁷	35	3 41	18	4 48	16	33	34	59	
9	314	19.2		22.1	354	53.6 ¹³⁶	+19	06.8 ⁹⁵	30	4 00	33	5 01	26	35	23	56	
10	329	19.1		22.0	9	26.2 ¹³⁶		16.3 ⁹⁵	20	29	4 58	23	42	40	16 04	53	
11	344	18.9	+23	21.9	23	58.7 ¹³⁵	+19	25.7 ⁹⁴	10 N	4 51	5 18	5 42	2 57	42	15 47	51	
12	359	18.8	+23	21.8	38	31.2 ¹³⁵	+19	35.0 ⁹³	0	5 10	5 37	5 59	3 10	46	15 32	47	
13	14	18.7		21.8	53	03.6 ¹³⁴		44.3 ⁹³	10 S	27	5 54	6 16	24	49	17	44	
14	29	18.6		21.7	67	35.9 ¹³³	+19	53.5 ⁹²	20	5 43	6 11	35	39	52	15 01	41	
15	44	18.4		21.6	82	08.1 ¹³²	+20	02.5 ⁹⁰	30	6 00	30	6 56	3 56	56	14 42	38	
16	59	18.3		21.5	96	40.3 ¹³²		11.6 ⁹¹	35	09	40	7 09	4 06	58	31	36	
17	74	18.2	+23	21.4	111	12.4 ¹³¹	+20	20.5 ⁸⁹	40	6 18	6 52	7 23	4 17	61	14 19	33	
18	89	18.0	+23	21.3	125	44.5 ¹³¹	+20	29.3 ⁸⁸	45	6 28	7 06	7 39	4 31	64	14 04	30	
19	104	17.9		21.3	140	16.4 ¹²⁹		38.1 ⁸⁸	50	40	22	8 00	47	69	13 47	26	
20	119	17.8		21.2	154	48.3 ¹²⁹		46.7 ⁸⁶	52	45	29	10	4 55	71	38	24	
21	134	17.6		21.1	169	20.2 ¹²⁹	+20	55.3 ⁸⁶	54	51	37	21	5 04	74	29	21	
22	149	17.5		21.0	183	51.9 ¹²⁷	+21	03.8 ⁸⁵	56	6 57	46	34	13	78	19	18	
23	164	17.4		20.9	198	23.6 ¹²⁷		12.2 ⁸⁴	58	7 04	7 57	8 48	25	81	13 07	14	
24	179	17.2	+23	20.8	212	55.2 ¹²⁶	+21	20.5 ⁸³	60 S	7 11	8 08	9 06	5 38	86	12 53	10	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 44 ^m 2		Mag: -3.8 PMG: 10 ^h 59 ^m		Mag: -1.3 PMG: 4 ^h 12 ^m		Mag: -1.8 PMG: 15 ^h 02 ^m		Mag: 0.0 PMG: 11 ^h 56 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	273	42.5	195	16.8	+22	32.9	296	46.5	-13	57.9	134	00.4	+16	30.3	180	38.6	+22	36.6
1	288	44.9	210	15.9		33.2	311	48.0		57.7	149	02.4		30.1	195	40.7		36.6
2	303	47.4	225	15.1		33.5	326	49.5		57.5	164	04.4		30.0	210	42.8		36.6
3	318	49.8	240	14.3		33.9	341	51.1		57.3	179	06.4		29.8	225	44.9		36.6
4	333	52.3	255	13.5		34.2	356	52.6		57.1	194	08.4		29.7	240	47.0		36.6
5	348	54.8	270	12.6	+22	34.6	11	54.2	-13	56.9	209	10.5	+16	29.5	255	49.1	+22	36.6
6	3	57.2	285	11.8	+22	34.9	26	55.7	-13	56.7	224	12.5	+16	29.4	270	51.3	+22	36.6
7	18	59.7	300	11.0		35.2	41	57.3		56.5	239	14.5		29.3	285	53.4		36.6
8	34	02.2	315	10.2		35.6	56	58.8		56.3	254	16.5		29.1	300	55.5		36.6
9	49	04.6	330	09.3		35.9	72	00.4		56.2	269	18.5		29.0	315	57.6		36.6
10	64	07.1	345	08.5		36.2	87	01.9		56.0	284	20.5		28.8	330	59.7		36.6
11	79	09.6	0	07.7	+22	36.6	102	03.5	-13	55.8	299	22.5	+16	28.7	346	01.8	+22	36.6
12	94	12.0	15	06.9	+22	36.9	117	05.0	-13	55.6	314	24.5	+16	28.6	1	03.9	+22	36.6
13	109	14.5	30	06.0		37.2	132	06.6		55.4	329	26.5		28.4	16	06.0		36.6
14	124	17.0	45	05.2		37.6	147	08.1		55.2	344	28.5		28.3	31	08.1		36.6
15	139	19.4	60	04.4		37.9	162	09.7		55.0	359	30.5		28.1	46	10.3		36.6
16	154	21.9	75	03.6		38.2	177	11.2		54.8	14	32.5		28.0	61	12.4		36.6
17	169	24.3	90	02.7	+22	38.5	192	12.8	-13	54.6	29	34.5	+16	27.8	76	14.5	+22	36.6
18	184	26.8	105	01.9	+22	38.9	207	14.3	-13	54.4	44	36.5	+16	27.7	91	16.6	+22	36.6
19	199	29.3	120	01.1		39.2	222	15.9		54.2	59	38.5		27.6	106	18.7		36.5
20	214	31.7	135	00.3		39.5	237	17.5		54.0	74	40.5		27.4	121	20.8		36.5
21	229	34.2	149	59.4		39.8	252	19.0		53.8	89	42.5		27.3	136	22.9		36.5
22	244	36.7	164	58.6		40.2	267	20.6		53.6	104	44.5		27.1	151	25.0		36.5
23	259	39.1	179	57.8		40.5	282	22.1		53.4	119	46.5		27.0	166	27.2		36.5
24	274	41.6	194	56.9	+22	40.8	297	23.7	-13	53.3	134	48.5	+16	26.8	181	29.3	+22	36.5
Dif	—		-8		+3		+16		+2		+20		-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: 26 ^d 8 PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6 R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	179	17.2	+23	20.8	212	55.2	+21	20.5	60 N	21 27	23 11	** **	0 59	14	19 44	80
1	194	17.1		20.7	227	26.8 ¹²⁶		28.7 ⁸²	58	21 07	22 22	** **	1 15	19	23	75
2	209	17.0		20.6	241	58.2 ¹²⁴		36.8 ⁸¹	56	20 50	21 53	** **	29	22	19 07	71
3	224	16.8		20.5	256	29.6 ¹²⁴		44.9 ⁸¹	54	36	31	23 15	40	26	18 52	67
4	239	16.7		20.5	271	00.9 ¹²³	+21	52.8 ⁷⁹	52	24	21 13	22 30	1 51	28	40	67
5	254	16.6	+23	20.4	285	32.2 ¹²³	+22	00.7 ⁷⁹	50	20 13	20 58	22 03	2 00	30	18 29	65
6	269	16.4	+23	20.3	300	03.4 ¹²²	+22	08.4 ⁷⁷	45	19 51	20 28	21 18	2 20	33	18 06	63
7	284	16.3		20.2	314	34.5 ¹²¹		16.1 ⁷⁵	40	33	20 06	20 47	36	36	17 48	60
8	299	16.2		20.1	329	05.5 ¹²⁰		23.6 ⁷⁵	35	18	19 48	24	2 49	39	33	58
9	314	16.0		20.0	343	36.5 ¹²⁰		31.1 ⁷⁵	30	19 05	32	20 06	3 01	41	17 19	57
10	329	15.9		19.9	358	07.4 ¹¹⁹		38.5 ⁷⁴	20	18 43	19 08	19 37	22	44	16 57	54
11	344	15.8	+23	19.8	12	38.2 ¹¹⁸	+22	45.7 ⁷²	10 N	18 24	18 47	19 14	3 39	47	16 38	52
12	359	15.7	+23	19.7	27	09.0 ¹¹⁸	+22	52.9 ⁷⁰	0	18 07	18 29	18 55	3 56	49	16 19	51
13	14	15.5		19.6	41	39.7 ¹¹⁷	+22	59.9 ⁷⁰	10 S	17 49	18 12	38	4 13	51	16 01	49
14	29	15.4		19.5	56	10.3 ¹¹⁶	+23	06.9 ⁶⁹	20	31	17 55	22	31	54	15 42	46
15	44	15.3		19.4	70	40.8 ¹¹⁵		13.8 ⁶⁷	30	17 10	36	18 06	4 52	57	20	44
16	59	15.1		19.3	85	11.3 ¹¹⁵		20.5 ⁶⁷	35	16 57	26	17 57	5 04	59	15 07	42
17	74	15.0	+23	19.2	99	41.7 ¹¹⁴	+23	27.2 ⁶⁷	40	16 43	17 14	17 48	5 18	62	14 52	40
18	89	14.9	+23	19.1	114	12.0 ¹¹³	+23	33.7 ⁶⁵	45	16 27	17 00	17 38	5 35	64	14 34	38
19	104	14.7		19.0	128	42.3 ¹¹³		40.1 ⁶⁴	50	16 06	16 44	26	5 56	68	13	34
20	119	14.6		18.9	143	12.5 ¹¹²		46.4 ⁶³	52	15 56	37	21	6 06	70	14 02	32
21	134	14.5		18.8	157	42.6 ¹¹¹		52.7 ⁶³	54	45	29	15	18	72	13 50	30
22	149	14.3		18.7	172	12.6 ¹¹⁰	+23	58.8 ⁶¹	56	32	20	09	31	75	37	27
23	164	14.2		18.6	186	42.6 ¹¹⁰	+24	04.8 ⁶⁰	58	18	16 10	17 02	6 46	79	21	24
24	179	14.1	+23	18.5	201	12.5 ¹⁰⁹	+24	10.6 ⁵⁸	60 S	15 00	15 58	16 55	7 04	84	13 03	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 40 ^m 3		Mag: -3.8 PMG: 11 ^h 01 ^m		Mag: -1.3 PMG: 4 ^h 10 ^m		Mag: -1.8 PMG: 14 ^h 59 ^m		Mag: 0.0 PMG: 11 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	274	41.6	194	56.9	+22	40.8	297	23.7	-13	53.3
1	289	44.1	209	56.1		41.1	312	25.3		53.1
2	304	46.5	224	55.3		41.4	327	26.8		52.9
3	319	49.0	239	54.5		41.7	342	28.4		52.7
4	334	51.5	254	53.6		42.0	357	29.9		52.5
5	349	53.9	269	52.8	+22	42.4	12	31.5	-13	52.3
6	4	56.4	284	52.0	+22	42.7	27	33.1	-13	52.1
7	19	58.8	299	51.1		43.0	42	34.6		51.9
8	35	01.3	314	50.3		43.3	57	36.2		51.7
9	50	03.8	329	49.5		43.6	72	37.8		51.5
10	65	06.2	344	48.6		43.9	87	39.3		51.4
11	80	08.7	359	47.8	+22	44.2	102	40.9	-13	51.2
12	95	11.2	14	47.0	+22	44.5	117	42.5	-13	51.0
13	110	13.6	29	46.1		44.8	132	44.1		50.8
14	125	16.1	44	45.3		45.1	147	45.6		50.6
15	140	18.6	59	44.5		45.4	162	47.2		50.4
16	155	21.0	74	43.6		45.7	177	48.8		50.2
17	170	23.5	89	42.8	+22	46.0	192	50.3	-13	50.0
18	185	26.0	104	42.0	+22	46.3	207	51.9	-13	49.9
19	200	28.4	119	41.1		46.6	222	53.5		49.7
20	215	30.9	134	40.3		46.9	237	55.1		49.5
21	230	33.3	149	39.5		47.2	252	56.7		49.3
22	245	35.8	164	38.6		47.5	267	58.2		49.1
23	260	38.3	179	37.8		47.8	282	59.8		48.9
24	275	40.7	194	37.0	+22	48.1	298	01.4	-13	48.8
Dif	—		-8		+3		+16		+2	
							+20		-1	
									+21	
									0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 27 ^d 8	PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9	SD: 14 ^h 9		PMG: 10 ^h 57 ^m	R°: 53 ^m		Hora	R°	Hora	R°				
	hG ☉	Dec													hG ☾	Dif	Dec	Dif
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	14.1	+23	18.5	201	12.5	+24	10.6	58	60 N	** **	0 56	2 39	1 13	26	21 04	64	
1	194	14.0		18.4	215	42.4	109	16.4	58	58	** **	1 44	2 59	34	31	20 38	62	
2	209	13.8		18.3	230	12.2	108	22.1	57	56	** **	2 14	3 16	1 51	34	18	61	
3	224	13.7		18.1	244	41.9	107	27.6	55	54	0 51	36	30	2 06	36	20 01	60	
4	239	13.6		18.0	259	11.5	106	33.0	54	52	1 36	2 53	42	19	38	19 47	59	
5	254	13.4	+23	17.9	273	41.1	106	+24	38.3	53	2 03	3 08	3 53	2 30	39	19 34	59	
6	269	13.3	+23	17.8	288	10.6	105	+24	43.5	52	2 48	3 38	4 15	2 53	43	19 09	57	
7	284	13.2		17.7	302	40.1	105		48.6	51	3 19	4 00	33	3 12	44	18 48	57	
8	299	13.0		17.6	317	09.5	104		53.6	50	3 42	19	4 48	28	46	31	56	
9	314	12.9		17.5	331	38.8	103	+24	58.4	48	4 00	34	5 01	3 42	47	18 16	56	
10	329	12.8		17.4	346	08.0	102	+25	03.1	47	29	4 59	23	4 06	48	17 51	55	
11	344	12.7	+23	17.3	0	37.2	102	+25	07.7	46	10 N	4 52	5 19	5 42	4 26	50	17 30	53
12	359	12.5	+23	17.1	15	06.4	102	+25	12.2	45	0	5 11	5 37	5 59	4 45	52	17 10	52
13	14	12.4		17.0	29	35.5	101		16.6	44	10 S	28	5 54	6 17	5 04	53	16 50	52
14	29	12.3		16.9	44	04.5	100		20.8	42	20	5 44	6 11	35	25	55	28	51
15	44	12.1		16.8	58	33.5	100		24.9	41	30	6 00	30	6 56	5 49	56	16 04	49
16	59	12.0		16.7	73	02.4	99		28.9	40	35	09	41	7 09	6 03	58	15 49	49
17	74	11.9	+23	16.6	87	31.2	98	+25	32.7	38	40	6 18	6 52	7 23	6 20	58	15 32	48
18	89	11.8	+23	16.4	102	00.0	98	+25	36.5	38	45	6 28	7 06	7 39	6 39	61	15 12	47
19	104	11.6		16.3	116	28.7	97		40.1	36	50	40	22	8 00	7 04	63	14 47	44
20	119	11.5		16.2	130	57.4	97		43.5	34	52	45	29	10	16	64	34	44
21	134	11.4		16.1	145	26.1	97		46.9	34	54	51	37	21	30	65	20	43
22	149	11.2		16.0	159	54.6	95		50.1	32	56	6 57	46	33	7 46	67	14 04	41
23	164	11.1		15.8	174	23.2	96		53.2	31	58	7 04	7 56	8 48	8 05	69	13 45	38
24	179	11.0	+23	15.7	188	51.7	95	+25	56.2	30	60 S	7 11	8 08	9 05	8 28	74	13 21	34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 36 ^m 4		Mag: -3.8 PMG: 11 ^h 02 ^m		Mag: -1.4 PMG: 4 ^h 07 ^m		Mag: -1.8 PMG: 14 ^h 56 ^m		Mag: 0.0 PMG: 11 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	275	40.7	194	37.0	+22	48.1	298	01.4	-13	48.8
1	290	43.2	209	36.1		48.4	313	03.0		48.6
2	305	45.7	224	35.3		48.7	328	04.6		48.4
3	320	48.1	239	34.5		48.9	343	06.1		48.2
4	335	50.6	254	33.6		49.2	358	07.7		48.0
5	350	53.1	269	32.8	+22	49.5	13	09.3	-13	47.8
6	5	55.5	284	31.9	+22	49.8	28	10.9	-13	47.7
7	20	58.0	299	31.1		50.1	43	12.5		47.5
8	36	00.4	314	30.3		50.4	58	14.1		47.3
9	51	02.9	329	29.4		50.6	73	15.6		47.1
10	66	05.4	344	28.6		50.9	88	17.2		46.9
11	81	07.8	359	27.8	+22	51.2	103	18.8	-13	46.7
12	96	10.3	14	26.9	+22	51.5	118	20.4	-13	46.6
13	111	12.8	29	26.1		51.8	133	22.0		46.4
14	126	15.2	44	25.2		52.0	148	23.6		46.2
15	141	17.7	59	24.4		52.3	163	25.2		46.0
16	156	20.2	74	23.6		52.6	178	26.8		45.9
17	171	22.6	89	22.7	+22	52.8	193	28.4	-13	45.7
18	186	25.1	104	21.9	+22	53.1	208	30.0	-13	45.5
19	201	27.6	119	21.0		53.4	223	31.6		45.3
20	216	30.0	134	20.2		53.7	238	33.2		45.1
21	231	32.5	149	19.4		53.9	253	34.8		45.0
22	246	34.9	164	18.5		54.2	268	36.4		44.8
23	261	37.4	179	17.7		54.5	283	38.0		44.6
24	276	39.9	194	16.8	+22	54.7	298	39.6	-13	44.4
Dif	—		-8		+3		+16		+2	
								+20		-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 03 ^m 4				Edad: 28 ^d 8 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 2 20 ^h : 55 ^m 3 R°: 53 ^m												
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	11.0	+23	15.7	188	51.7	+25	56.2	60 N	21 27	23 07	** **	1 39 46	22 08 41			
1	194	10.9		15.6	203	20.1	+25	59.0	58	21 06	22 21	** **	2 05 48	21 40 44			
2	209	10.7		15.5	217	48.5	+26	01.7	56	20 50	21 52	** **	25 49	19 46			
3	224	10.6		15.3	232	16.8		04.3	54	36	30	23 12	42 50	21 01 46			
4	239	10.5		15.2	246	45.1		06.7	52	24	21 12	22 29	2 57 50	20 46 48			
5	254	10.3	+23	15.1	261	13.3	+26	09.0	50	20 13	20 57	22 02	3 09 51	20 33 49			
6	269	10.2	+23	15.0	275	41.5	+26	11.2	45	19 51	20 28	21 17	3 36 51	20 06 50			
7	284	10.1		14.8	290	09.7		13.2	40	33	20 06	20 47	3 56 52	19 45 50			
8	299	10.0		14.7	304	37.8		15.1	35	18	19 48	24	4 14 52	27 51			
9	314	09.8		14.6	319	05.9		16.9	30	19 05	33	20 06	29 52	19 12 52			
10	329	09.7		14.4	333	33.9		18.5	20	18 43	19 08	19 37	4 54 53	18 46 52			
11	344	09.6	+23	14.3	348	01.9	+26	20.0	10 N	18 24	18 48	19 15	5 16 54	18 23 54			
12	359	09.5	+23	14.2	2	29.9	+26	21.3	0	18 07	18 30	18 56	5 37 53	18 02 54			
13	14	09.3		14.0	16	57.8		22.5	10 S	17 50	18 13	39	5 57 54	17 42 54			
14	29	09.2		13.9	31	25.7		23.6	20	31	17 55	23	6 20 53	17 19 55			
15	44	09.1		13.8	45	53.6		24.5	30	17 10	37	18 07	6 45 54	16 53 55			
16	59	08.9		13.6	60	21.4		25.4	35	16 58	26	17 58	7 01 54	38 55			
17	74	08.8	+23	13.5	74	49.2	+26	26.0	40	16 44	17 15	17 49	7 18 54	16 20 56			
18	89	08.7	+23	13.4	89	17.0	+26	26.5	45	16 27	17 01	17 38	7 40 54	15 59 56			
19	104	08.6		13.2	103	44.7		26.9	50	16 07	16 45	27	8 07 53	31 57			
20	119	08.4		13.1	118	12.5		27.2	52	15 57	38	22	20 54	18 57			
21	134	08.3		13.0	132	40.2		27.3	54	46	30	16	35 54	15 03 57			
22	149	08.2		12.8	147	07.8		27.2	56	34	21	10	8 53 53	14 45 58			
23	164	08.1		12.7	161	35.5		27.0	58	19	16 11	17 03	9 14 54	14 23 58			
24	179	07.9	+23	12.5	176	03.1	+26	26.7	60 S	15 02	15 59	16 56	9 42 53	13 55 59			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 32 ^m 4		Mag: -3.8 PMG: 11 ^h 03 ^m				Mag: -1.4 PMG: 4 ^h 05 ^m				Mag: -1.8 PMG: 14 ^h 52 ^m				Mag: 0.0 PMG: 11 ^h 46 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	276	39.9	194	16.8	+22	54.7	298	39.6	-13	44.4	136	24.3	+16	19.9	183	10.6	+22	36.3
1	291	42.3	209	16.0		55.0	313	41.2		44.3	151	26.3		19.8	198	12.8		36.3
2	306	44.8	224	15.2		55.2	328	42.8		44.1	166	28.3		19.6	213	14.9		36.3
3	321	47.3	239	14.3		55.5	343	44.4		43.9	181	30.3		19.5	228	17.0		36.3
4	336	49.7	254	13.5		55.8	358	46.0		43.7	196	32.3		19.3	243	19.1		36.3
5	351	52.2	269	12.6	+22	56.0	13	47.6	-13	43.6	211	34.3	+16	19.2	258	21.2	+22	36.3
6	6	54.7	284	11.8	+22	56.3	28	49.2	-13	43.4	226	36.3	+16	19.1	273	23.3	+22	36.3
7	21	57.1	299	10.9		56.5	43	50.8		43.2	241	38.3		18.9	288	25.4		36.3
8	36	59.6	314	10.1		56.8	58	52.4		43.0	256	40.3		18.8	303	27.5		36.3
9	52	02.1	329	09.3		57.0	73	54.0		42.9	271	42.3		18.6	318	29.7		36.3
10	67	04.5	344	08.4		57.3	88	55.6		42.7	286	44.3		18.5	333	31.8		36.3
11	82	07.0	359	07.6	+22	57.5	103	57.2	-13	42.5	301	46.3	+16	18.3	348	33.9	+22	36.3
12	97	09.4	14	06.7	+22	57.8	118	58.8	-13	42.3	316	48.3	+16	18.2	3	36.0	+22	36.3
13	112	11.9	29	05.9		58.0	134	00.4		42.2	331	50.3		18.0	18	38.1		36.3
14	127	14.4	44	05.0		58.3	149	02.0		42.0	346	52.3		17.9	33	40.2		36.3
15	142	16.8	59	04.2		58.5	164	03.7		41.8	1	54.3		17.7	48	42.3		36.3
16	157	19.3	74	03.3		58.8	179	05.3		41.7	16	56.2		17.6	63	44.4		36.2
17	172	21.8	89	02.5	+22	59.0	194	06.9	-13	41.5	31	58.2	+16	17.5	78	46.6	+22	36.2
18	187	24.2	104	01.6	+22	59.3	209	08.5	-13	41.3	47	00.2	+16	17.3	93	48.7	+22	36.2
19	202	26.7	119	00.8		59.5	224	10.1		41.1	62	02.2		17.2	108	50.8		36.2
20	217	29.2	134	00.0	+22	59.7	239	11.7		41.0	77	04.2		17.0	123	52.9		36.2
21	232	31.6	148	59.1	+23	00.0	254	13.4		40.8	92	06.2		16.9	138	55.0		36.2
22	247	34.1	163	58.3	+23	00.2	269	15.0		40.6	107	08.2		16.7	153	57.1		36.2
23	262	36.6	178	57.4		00.5	284	16.6		40.5	122	10.2		16.6	168	59.2		36.2
24	277	39.0	193	56.6	+23	00.7	299	18.2	-13	40.3	137	12.2	+16	16.4	184	01.3	+22	36.2
Dif	—		-8		+2		+16		+2		+20		-1		+21			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 0 ^d 2	PHE {	SD: 15 ^h 1		4 ^h : 55 ^s 5 12 ^h : 55 ^s 6 20 ^h : 55 ^s 8	Rº: 54 ^m		Náutico	Civil	Hora	Rº	Hora	Rº
	PMG: 12 ^h 03 ^m 6	hG ☉	Dec													
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	07.9	+23	12.5	176	03.1	+26	26.7	60 N	** *	1 00	2 41	2 25	72	22 49	23
1	194	07.8		12.4	190	30.7		26.3	58	** *	1 46	3 01	2 53	68	24	28
2	209	07.7		12.3	204	58.3		25.7	56	** *	2 15	17	3 14	66	22 05	31
3	224	07.6		12.1	219	25.9		24.9	54	0 55	37	31	32	65	21 48	35
4	239	07.4		12.0	233	53.5		24.0	52	1 38	2 55	43	3 47	64	34	37
5	254	07.3	+23	11.8	248	21.0	+26	23.0	50	2 05	3 10	3 54	4 00	63	21 22	38
6	269	07.2	+23	11.7	262	48.6	+26	21.8	45	2 50	3 39	4 16	4 27	61	20 56	42
7	284	07.1		11.5	277	16.1		20.5	40	3 20	4 01	34	4 48	60	35	44
8	299	06.9		11.4	291	43.6		19.1	35	3 43	19	4 49	5 06	59	18	46
9	314	06.8		11.2	306	11.1		17.5	30	4 01	34	5 02	21	58	20 04	47
10	329	06.7		11.1	320	38.6		15.7	20	30	4 59	24	5 47	56	19 38	50
11	344	06.6	+23	11.0	335	06.1	+26	13.8	10 N	4 52	5 19	5 42	6 10	55	19 17	51
12	359	06.4	+23	10.8	349	33.6	+26	11.8	0	5 11	5 37	6 00	6 30	54	18 56	54
13	14	06.3		10.7	4	01.1		09.6	10 S	28	5 54	17	6 51	53	36	55
14	29	06.2		10.5	18	28.6		07.3	20	5 44	6 12	36	7 13	52	18 14	57
15	44	06.1		10.4	32	56.1		04.9	30	6 00	30	6 57	39	50	17 48	60
16	59	05.9		10.2	47	23.6	+26	02.3	35	09	41	7 09	7 55	48	33	61
17	74	05.8	+23	10.1	61	51.1	+25	59.5	40	6 18	6 52	7 23	8 12	48	17 16	62
18	89	05.7	+23	09.9	76	18.6	+25	56.7	45	6 28	7 06	7 39	8 34	45	16 55	64
19	104	05.6		09.7	90	46.1		53.6	50	40	21	8 00	9 00	44	28	68
20	119	05.4		09.6	105	13.6		50.5	52	45	29	10	14	42	15	69
21	134	05.3		09.4	119	41.1		47.2	54	51	37	21	29	40	16 00	71
22	149	05.2		09.3	134	08.7		43.7	56	6 57	46	33	9 46	39	15 43	73
23	164	05.1		09.1	148	36.2		40.1	58	7 04	7 56	8 47	10 08	35	15 21	77
24	179	04.9	+23	09.0	163	03.8	+25	36.4	60 S	7 11	8 07	9 05	10 35	30	14 54	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 28 ^m 5		Mag: -3.8 PMG: 11 ^h 05 ^m		Mag: -1.4 PMG: 4 ^h 02 ^m		Mag: -1.8 PMG: 14 ^h 49 ^m		Mag: 0.0 PMG: 11 ^h 42 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	277	39.0	193	56.6	+23	00.7	299	18.2	-13	40.3	137	12.2	+16	16.4	184	01.3	+22	36.2
1	292	41.5	208	55.7		00.9	314	19.8		40.1	152	14.2		16.3	199	03.5		36.2
2	307	43.9	223	54.9		01.2	329	21.5		40.0	167	16.2		16.1	214	05.6		36.2
3	322	46.4	238	54.0		01.4	344	23.1		39.8	182	18.2		16.0	229	07.7		36.2
4	337	48.9	253	53.2		01.6	359	24.7		39.6	197	20.2		15.8	244	09.8		36.2
5	352	51.3	268	52.3	+23	01.9	14	26.3	-13	39.5	212	22.2	+16	15.7	259	11.9	+22	36.2
6	7	53.8	283	51.5	+23	02.1	29	28.0	-13	39.3	227	24.1	+16	15.5	274	14.0	+22	36.2
7	22	56.3	298	50.6		02.3	44	29.6		39.1	242	26.1		15.4	289	16.1		36.2
8	37	58.7	313	49.8		02.5	59	31.2		39.0	257	28.1		15.3	304	18.2		36.2
9	53	01.2	328	48.9		02.8	74	32.8		38.8	272	30.1		15.1	319	20.4		36.2
10	68	03.7	343	48.1		03.0	89	34.5		38.6	287	32.1		15.0	334	22.5		36.2
11	83	06.1	358	47.2	+23	03.2	104	36.1	-13	38.5	302	34.1	+16	14.8	349	24.6	+22	36.2
12	98	08.6	13	46.4	+23	03.4	119	37.7	-13	38.3	317	36.1	+16	14.7	4	26.7	+22	36.1
13	113	11.1	28	45.5		03.7	134	39.4		38.1	332	38.1		14.5	19	28.8		36.1
14	128	13.5	43	44.7		03.9	149	41.0		38.0	347	40.1		14.4	34	30.9		36.1
15	143	16.0	58	43.8		04.1	164	42.6		37.8	2	42.1		14.2	49	33.0		36.1
16	158	18.4	73	43.0		04.3	179	44.3		37.6	17	44.1		14.1	64	35.1		36.1
17	173	20.9	88	42.1	+23	04.5	194	45.9	-13	37.5	32	46.0	+16	13.9	79	37.3	+22	36.1
18	188	23.4	103	41.3	+23	04.7	209	47.5	-13	37.3	47	48.0	+16	13.8	94	39.4	+22	36.1
19	203	25.8	118	40.4		05.0	224	49.2		37.2	62	50.0		13.6	109	41.5		36.1
20	218	28.3	133	39.6		05.2	239	50.8		37.0	77	52.0		13.5	124	43.6		36.1
21	233	30.8	148	38.7		05.4	254	52.4		36.8	92	54.0		13.3	139	45.7		36.1
22	248	33.2	163	37.9		05.6	269	54.1		36.7	107	56.0		13.2	154	47.8		36.1
23	263	35.7	178	37.0		05.8	284	55.7		36.5	122	58.0		13.0	169	49.9		36.1
24	278	38.2	193	36.2	+23	06.0	299	57.4	-13	36.4	138	00.0	+16	12.9	184	52.0	+22	36.1
Dif	—		-9 +2		+16 +2		+20 -1		+21 0									

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 1 ^d 2	PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/3	SD: 15/2			R°: 53 ^m							
	PMG: 12 ^h 03 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	179	04.9	+23 09.0	163	03.8	+25 36.4	39	60 N	21 25	23 04	** **	3 37 88	23 12 12			
1	194	04.8	08.8	177	31.3	32.5	85	58	21 05	22 19	** **	4 01 82	22 52 18			
2	209	04.7	08.7	191	58.9	28.5	40	56	20 49	21 50	** **	20 79	36 22			
3	224	04.6	08.5	206	26.5	24.4	41	54	35	29	23 09	37 75	23 24			
4	239	04.4	08.3	220	54.1	20.1	43	52	23	21 11	22 27	4 51 73	11 27			
5	254	04.3	+23 08.2	235	21.8	+25 15.6	45	50	20 13	20 57	22 01	5 03 71	22 00 30			
6	269	04.2	+23 08.0	249	49.4	+25 11.1	45	45	19 50	20 28	21 17	5 28 68	21 38 34			
7	284	04.1	07.8	264	17.1	06.4	47	40	33	20 05	20 47	5 48 65	19 38			
8	299	04.0	07.7	278	44.8	+25 01.5	49	35	18	19 48	24	6 05 62	21 04 40			
9	314	03.8	07.5	293	12.5	+24 56.5	50	30	19 05	33	20 06	19 61	20 51 42			
10	329	03.7	07.4	307	40.3	51.4	51	20	18 43	19 08	19 37	6 43 58	28 46			
11	344	03.6	+23 07.2	322	08.0	+24 46.1	53	10 N	18 25	18 48	19 15	7 05 55	20 08 50			
12	359	03.5	+23 07.0	336	35.8	+24 40.7	55	0	18 07	18 30	18 56	7 24 53	19 50 52			
13	14	03.3	06.9	351	03.7	35.2	57	10 S	17 50	18 13	39	7 44 50	31 55			
14	29	03.2	06.7	5	31.5	29.5	57	20	32	17 56	23	8 05 48	19 11 58			
15	44	03.1	06.5	19	59.4	23.7	58	30	17 11	37	18 07	29 45	18 48 62			
16	59	03.0	06.4	34	27.3	17.8	59	35	16 59	27	17 59	8 43 43	34 64			
17	74	02.9	+23 06.2	48	55.3	+24 11.7	61	40	16 45	17 15	17 49	9 00 40	18 18 67			
18	89	02.7	+23 06.0	63	23.2	+24 05.5	62	45	16 28	17 02	17 39	9 19 38	17 59 70			
19	104	02.6	05.9	77	51.3	+23 59.1	64	50	16 08	16 46	28	44 34	36 74			
20	119	02.5	05.7	92	19.3	52.7	64	52	15 58	39	23	9 56 31	24 77			
21	134	02.4	05.5	106	47.4	46.0	67	54	47	31	17	10 09 29	17 11 79			
22	149	02.2	05.3	121	15.5	39.3	67	56	35	22	11	25 26	16 56 82			
23	164	02.1	05.2	135	43.6	32.4	69	58	21	12	17 04	10 43 22	38 87			
24	179	02.0	+23 05.0	150	11.8	+23 25.4	70	60 S	15 04	16 01	16 57	11 05 17	16 16 92			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 5 ^h 24 ^m 6		Mag: -3.8 PMG: 11 ^h 06 ^m		Mag: -1.5 PMG: 4 ^h 00 ^m		Mag: -1.8 PMG: 14 ^h 46 ^m		Mag: 0.0 PMG: 11 ^h 39 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	278	38.2	193	36.2	+23 06.0	299 57.4	-13 36.4	138 00.0	+16 12.9	184 52.0	+22 36.1
1	293	40.6	208	35.3	06.2	314 59.0	36.2	153 02.0	12.8	199 54.2	36.1
2	308	43.1	223	34.5	06.4	330 00.6	36.0	168 04.0	12.6	214 56.3	36.1
3	323	45.6	238	33.6	06.6	345 02.3	35.9	183 05.9	12.5	229 58.4	36.1
4	338	48.0	253	32.8	06.8	0 03.9	35.7	198 07.9	12.3	245 00.5	36.1
5	353	50.5	268	31.9	+23 07.0	15 05.6	-13 35.6	213 09.9	+16 12.2	260 02.6	+22 36.1
6	8	52.9	283	31.0	+23 07.2	30 07.2	-13 35.4	228 11.9	+16 12.0	275 04.7	+22 36.1
7	23	55.4	298	30.2	07.4	45 08.9	35.2	243 13.9	11.9	290 06.8	36.0
8	38	57.9	313	29.3	07.6	60 10.5	35.1	258 15.9	11.7	305 08.9	36.0
9	54	00.3	328	28.5	07.8	75 12.2	34.9	273 17.9	11.6	320 11.1	36.0
10	69	02.8	343	27.6	08.0	90 13.8	34.8	288 19.9	11.4	335 13.2	36.0
11	84	05.3	358	26.8	+23 08.2	105 15.5	-13 34.6	303 21.9	+16 11.3	350 15.3	+22 36.0
12	99	07.7	13	25.9	+23 08.4	120 17.1	-13 34.5	318 23.9	+16 11.1	5 17.4	+22 36.0
13	114	10.2	28	25.1	08.6	135 18.8	34.3	333 25.8	11.0	20 19.5	36.0
14	129	12.7	43	24.2	08.8	150 20.4	34.1	348 27.8	10.8	35 21.6	36.0
15	144	15.1	58	23.4	09.0	165 22.1	34.0	3 29.8	10.7	50 23.7	36.0
16	159	17.6	73	22.5	09.2	180 23.7	33.8	18 31.8	10.5	65 25.8	36.0
17	174	20.0	88	21.6	+23 09.4	195 25.4	-13 33.7	33 33.8	+16 10.4	80 28.0	+22 36.0
18	189	22.5	103	20.8	+23 09.6	210 27.0	-13 33.5	48 35.8	+16 10.2	95 30.1	+22 36.0
19	204	25.0	118	19.9	09.7	225 28.7	33.4	63 37.8	10.1	110 32.2	36.0
20	219	27.4	133	19.1	09.9	240 30.4	33.2	78 39.8	09.9	125 34.3	36.0
21	234	29.9	148	18.2	10.1	255 32.0	33.1	93 41.7	09.8	140 36.4	36.0
22	249	32.4	163	17.4	10.3	270 33.7	32.9	108 43.7	09.6	155 38.5	36.0
23	264	34.8	178	16.5	10.5	285 35.3	32.8	123 45.7	09.5	170 40.6	36.0
24	279	37.3	193	15.6	+23 10.7	300 37.0	-13 32.6	138 47.7	+16 09.3	185 42.7	+22 36.0
Dif	—		-9	+2		+17	+2	+20	-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: 2 ^d 2 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 R°: 50 ^m SD: 15'3 PMG: 14 ^h 30 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	02.0	+23 05.0	150	11.8	+23 25.4	60 N	** **	1 04	2 43	5 05	94	23 24	7	
1	194	01.9	04.8	164	40.1	18.3	58	** *	1 49	3 02	23 89		23 10	12	
2	209	01.8	04.6	179	08.3	11.0	56	** *	2 17	19	39 85		22 58	15	
3	224	01.6	04.5	193	36.6	+23 03.7	54	0 59	39	33	5 52	82	47	19	
4	239	01.5	04.3	208	05.0	+22 56.1	52	1 40	2 56	45	6 04	78	38	21	
5	254	01.4	+23 04.1	222	33.4	+22 48.5	50	2 07	3 11	3 55	6 14	76	22 30	23	
6	269	01.3	+23 03.9	237	01.8	+22 40.7	45	2 51	3 40	4 17	6 36	71	22 12	28	
7	284	01.2	03.8	251	30.3	32.8	40	3 21	4 02	35	6 53	68	21 57	32	
8	299	01.0	03.6	265	58.8	24.8	35	3 44	20	4 50	7 07	65	44	35	
9	314	00.9	03.4	280	27.3	16.7	30	4 02	4 35	5 03	20 62		33 38		
10	329	00.8	03.2	294	55.9	+22 08.4	20	31	5 00	24	7 41	58	21 14	43	
11	344	00.7	+23 03.0	309	24.6	+22 00.0	10 N	4 53	5 20	5 43	8 00	54	20 58	46	
12	359	00.6	+23 02.8	323	53.2	+21 51.5	0	5 12	5 38	6 00	8 17	51	20 42	50	
13	14	00.4	02.7	338	22.0	42.9	10 S	28	5 55	17	34	48	26	54	
14	29	00.3	02.5	352	50.8	34.1	20	5 44	6 12	36	8 53	44	20 09	58	
15	44	00.2	02.3	7	19.6	25.3	30	6 00	30	6 57	9 14	40	19 50	62	
16	59	00.1	02.1	21	48.4	16.3	35	09	41	7 09	26	38	38	65	
17	74	00.0	+23 01.9	36	17.4	+21 07.2	40	6 18	6 52	7 23	9 40	35	19 25	68	
18	88	59.8	+23 01.7	50	46.3	+20 58.0	45	6 28	7 05	7 39	9 57	31	19 09	73	
19	103	59.7	01.6	65	15.3	48.6	50	40	21	7 59	10 18	26	18 50	77	
20	118	59.6	01.4	79	44.4	39.2	52	45	28	8 09	27	24	41	80	
21	133	59.5	01.2	94	13.5	29.6	54	50	36	20	38	21	30	83	
22	148	59.4	01.0	108	42.6	19.9	56	6 56	45	32	10 51	18	18	87	
23	163	59.3	00.8	123	11.8	10.1	58	7 03	7 55	8 47	11 05	14	18 05	90	
24	178	59.1	+23 00.6	137	41.1	+20 00.2	60 S	7 10	8 07	9 03	11 22	9	17 48	96	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 20 ^m 6			Mag: -3.9 PMG: 11 ^h 08 ^m			Mag: -1.5 PMG: 3 ^h 57 ^m			Mag: -1.8 PMG: 14 ^h 43 ^m			Mag: 0.0 PMG: 11 ^h 36 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	279	37.3	193	15.6	+23 10.7	300	37.0	-13 32.6	138	47.7	+16 09.3	185	42.7	+22 36.0	
1	294	39.8	208	14.8	10.8	315	38.7	32.4	153	49.7	09.2	200	44.9	35.9	
2	309	42.2	223	13.9	11.0	330	40.3	32.3	168	51.7	09.0	215	47.0	35.9	
3	324	44.7	238	13.1	11.2	345	42.0	32.1	183	53.7	08.9	230	49.1	35.9	
4	339	47.2	253	12.2	11.4	0	43.7	32.0	198	55.7	08.7	245	51.2	35.9	
5	354	49.6	268	11.4	+23 11.5	15	45.3	-13 31.8	213	57.6	+16 08.6	260	53.3	+22 35.9	
6	9	52.1	283	10.5	+23 11.7	30	47.0	-13 31.7	228	59.6	+16 08.5	275	55.4	+22 35.9	
7	24	54.5	298	09.6	11.9	45	48.7	31.5	244	01.6	08.3	290	57.5	35.9	
8	39	57.0	313	08.8	12.1	60	50.3	31.4	259	03.6	08.2	305	59.7	35.9	
9	54	59.5	328	07.9	12.2	75	52.0	31.2	274	05.6	08.0	321	01.8	35.9	
10	70	01.9	343	07.1	12.4	90	53.7	31.1	289	07.6	07.9	336	03.9	35.9	
11	85	04.4	358	06.2	+23 12.6	105	55.3	-13 30.9	304	09.6	+16 07.7	351	06.0	+22 35.9	
12	100	06.9	13	05.4	+23 12.7	120	57.0	-13 30.8	319	11.6	+16 07.6	6	08.1	+22 35.9	
13	115	09.3	28	04.5	12.9	135	58.7	30.7	334	13.5	07.4	21	10.2	35.9	
14	130	11.8	43	03.6	13.1	151	00.4	30.5	349	15.5	07.3	36	12.3	35.9	
15	145	14.3	58	02.8	13.2	166	02.0	30.4	4	17.5	07.1	51	14.4	35.9	
16	160	16.7	73	01.9	13.4	181	03.7	30.2	19	19.5	07.0	66	16.6	35.9	
17	175	19.2	88	01.1	+23 13.5	196	05.4	-13 30.1	34	21.5	+16 06.8	81	18.7	+22 35.9	
18	190	21.7	103	00.2	+23 13.7	211	07.1	-13 29.9	49	23.5	+16 06.7	96	20.8	+22 35.8	
19	205	24.1	117	59.3	13.9	226	08.8	29.8	64	25.5	06.5	111	22.9	35.8	
20	220	26.6	132	58.5	14.0	241	10.4	29.6	79	27.4	06.4	126	25.0	35.8	
21	235	29.0	147	57.6	14.2	256	12.1	29.5	94	29.4	06.2	141	27.1	35.8	
22	250	31.5	162	56.8	14.3	271	13.8	29.3	109	31.4	06.1	156	29.2	35.8	
23	265	34.0	177	55.9	14.5	286	15.5	29.2	124	33.4	05.9	171	31.4	35.8	
24	280	36.4	192	55.0	+23 14.6	301	17.2	-13 29.0	139	35.4	+16 05.8	186	33.5	+22 35.8	
Dif	—		-9	+2		+17	+1		+20	-1		+21	0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 3 ^d 2	PHE { 4 ^h : 56/9 12 ^h : 57/1 20 ^h : 57/3 R°: 49 ^m													
	PMG: 12 ^h 04 ^m 2	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	59.1	+23 00.6	137	41.1	+20 00.2		60 N	21 24	22 59	** **	6 39 95	23 31 5					
1	193	59.0	00.4	152	10.4 ¹⁰³	+19 50.2 ¹⁰⁰		58	21 04	22 16	** **	6 52 91	22 8					
2	208	58.9	+23 00.2	166	39.7 ¹⁰³	40.1 ¹⁰¹		56	20 48	21 49	** **	7 04 86	13 12					
3	223	58.8	+23 00.0	181	09.1 ¹⁰⁴	29.9 ¹⁰²		54	34	28	23 05	14 83	23 06 14					
4	238	58.7	+22 59.8	195	38.5 ¹⁰⁴	19.6 ¹⁰³		52	23	21 10	22 25	22 81	22 59 17					
5	253	58.6	+22 59.6	210	08.0 ¹⁰⁵	+19 09.1 ¹⁰⁵		50	20 12	20 56	22 00	7 30 78	22 53 19					
6	268	58.4	+22 59.4	224	37.5 ¹⁰⁵	+18 58.6 ¹⁰⁵		45	19 50	20 27	21 16	7 47 73	22 40 24					
7	283	58.3	59.3	239	07.1 ¹⁰⁶	47.9 ¹⁰⁷		40	33	20 05	20 46	8 01 68	29 28					
8	298	58.2	59.1	253	36.7 ¹⁰⁶	37.2 ¹⁰⁷		35	18	19 47	24	12 66	19 32					
9	313	58.1	58.9	268	06.4 ¹⁰⁷	26.3 ¹⁰⁹		30	19 05	32	20 06	22 63	22 11 35					
10	328	58.0	58.7	282	36.1 ¹⁰⁷	15.4 ¹⁰⁹		20	18 44	19 08	19 37	39 58	21 57 40					
11	343	57.9	+22 58.5	297	05.9 ¹⁰⁸	+18 04.3 ¹¹¹		10 N	18 25	18 48	19 15	8 54 54	21 44 44					
12	358	57.7	+22 58.3	311	35.7 ¹⁰⁸	+17 53.2 ¹¹¹		0	18 08	18 30	18 56	9 08 50	21 32 48					
13	13	57.6	58.1	326	05.6 ¹⁰⁹	41.9 ¹¹³		10 S	17 51	18 14	40	22 46	20 53					
14	28	57.5	57.9	340	35.5 ¹⁰⁹	30.6 ¹¹³		20	33	17 57	24	37 41	21 07 57					
15	43	57.4	57.7	355	05.4 ¹⁰⁹	19.1 ¹¹⁵		30	12	38	18 08	9 54 36	20 52 62					
16	58	57.3	57.5	9	35.4 ¹¹⁰	+17 07.6 ¹¹⁵		35	17 00	28	17 59	10 04 33	43 66					
17	73	57.2	+22 57.3	24	05.5 ¹¹¹	+16 55.9 ¹¹⁷		40	16 46	17 16	17 50	10 15 30	20 33 69					
18	88	57.0	+22 57.1	38	35.6 ¹¹¹	+16 44.2 ¹¹⁷		45	16 30	17 03	17 40	10 28 26	20 22 73					
19	103	56.9	56.9	53	05.7 ¹¹¹	32.4 ¹¹⁸		50	09	16 48	29	44 21	07 79					
20	118	56.8	56.6	67	35.9 ¹¹²	20.5 ¹¹⁹		52	16 00	40	24	51 19	20 01 80					
21	133	56.7	56.4	82	06.1 ¹¹²	+16 08.5 ¹²⁰		54	15 49	32	18	10 59 17	19 53 84					
22	148	56.6	56.2	96	36.4 ¹¹³	+15 56.4 ¹²¹		56	37	24	12	11 09 13	45 86					
23	163	56.5	56.0	111	06.7 ¹¹³	44.2 ¹²²		58	23	14	17 06	19 9	35 91					
24	178	56.3	+22 55.8	125	37.0 ¹¹³	+15 31.9 ¹²³		60 S	15 06	16 02	16 59	11 31 5	19 24 95					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 16 ^m 7		Mag: -3.9 PMG: 11 ^h 09 ^m		Mag: -1.5 PMG: 3 ^h 54 ^m		Mag: -1.8 PMG: 14 ^h 40 ^m		Mag: 0.0 PMG: 11 ^h 32 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	°	°	°	°	°	°	°	°									
0	280	36.4	192 55.0	301 17.2	-13 29.0	139 35.4	+16 05.8	186 33.5	+22 35.8									
1	295	38.9	207 54.2	316 18.9	28.9	154 37.4	05.6	201 35.6	35.8									
2	310	41.4	222 53.3	331 20.5	28.8	169 39.4	05.5	216 37.7	35.8									
3	325	43.8	237 52.4	346 22.2	28.6	184 41.3	05.3	231 39.8	35.8									
4	340	46.3	252 51.6	1 23.9	28.5	199 43.3	05.2	246 41.9	35.8									
5	355	48.8	267 50.7	+23 15.4	16 25.6	-13 28.3	214 45.3	+16 05.0	261 44.0	+22 35.8								
6	10	51.2	282 49.9	+23 15.5	31 27.3	-13 28.2	229 47.3	+16 04.9	276 46.1	+22 35.8								
7	25	53.7	297 49.0	15.7	46 29.0	28.1	244 49.3	04.7	291 48.3	35.8								
8	40	56.2	312 48.1	15.8	61 30.7	27.9	259 51.3	04.6	306 50.4	35.8								
9	55	58.6	327 47.3	16.0	76 32.4	27.8	274 53.3	04.4	321 52.5	35.8								
10	71	01.1	342 46.4	16.1	91 34.1	27.6	289 55.2	04.3	336 54.6	35.8								
11	86	03.5	357 45.5	+23 16.2	106 35.7	-13 27.5	304 57.2	+16 04.1	351 56.7	+22 35.7								
12	101	06.0	12 44.7	+23 16.4	121 37.4	-13 27.3	319 59.2	+16 04.0	6 58.8	+22 35.7								
13	116	08.5	27 43.8	16.5	136 39.1	27.2	335 01.2	03.8	22 00.9	35.7								
14	131	10.9	42 43.0	16.6	151 40.8	27.1	350 03.2	03.7	37 03.1	35.7								
15	146	13.4	57 42.1	16.8	166 42.5	26.9	5 05.2	03.5	52 05.2	35.7								
16	161	15.9	72 41.2	16.9	181 44.2	26.8	20 07.1	03.4	67 07.3	35.7								
17	176	18.3	87 40.4	+23 17.0	196 45.9	-13 26.7	35 09.1	+16 03.2	82 09.4	+22 35.7								
18	191	20.8	102 39.5	+23 17.2	211 47.6	-13 26.5	50 11.1	+16 03.1	97 11.5	+22 35.7								
19	206	23.3	117 38.6	17.3	226 49.3	26.4	65 13.1	02.9	112 13.6	35.7								
20	221	25.7	132 37.8	17.4	241 51.0	26.2	80 15.1	02.8	127 15.7	35.7								
21	236	28.2	147 36.9	17.6	256 52.7	26.1	95 17.1	02.6	142 17.9	35.7								
22	251	30.6	162 36.1	17.7	271 54.4	26.0	110 19.0	02.5	157 20.0	35.7								
23	266	33.1	177 35.2	17.8	286 56.1	25.8	125 21.0	02.3	172 22.1	35.7								
24	281	35.6	192 34.3	+23 17.9	301 57.8	-13 25.7	140 23.0	+16 02.2	187 24.2	+22 35.7								
Dif	—	-9	+1	+17	+1	+20	-2	+21	0									

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 4 ^d 2	PHE {	SD: 15 ^h 6		R°: 48 ^m	R°		R°				
	PMG: 12 ^h 04 ^m 3					PMG: 16 ^h 09 ^m			R°: 48 ^m		R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	m	h	m	m
0	178	56.3	+22 55.8	125	37.0	+15 31.9	60 N	** **	1 10	2 45	8 14	95	23 36	3	
1	193	56.2	55.6	140	07.4 ¹¹⁴	19.6 ¹²³	58	** **	1 52	3 04	23 90		30 7		
2	208	56.1	55.4	154	37.9 ¹¹⁵	+15 07.1 ¹²⁵	56	** **	2 20	21	30 87		25 10		
3	223	56.0	55.2	169	08.3 ¹¹⁴	+14 54.6 ¹²⁵	54	1 04	41	34	37 84		20 1		
4	238	55.9	55.0	183	38.8 ¹¹⁵	42.0 ¹²⁶	52	1 43	2 58	46	43 81		16 15		
5	253	55.8	+22 54.8	198	09.4 ¹¹⁶	+14 29.3 ¹²⁷	50	2 09	3 13	3 57	8 48	79	23 12	18	
6	268	55.7	+22 54.6	212	40.0 ¹¹⁶	+14 16.6 ¹²⁷	45	2 53	3 42	4 19	9 00	73	23 04	22	
7	283	55.6	54.4	227	10.6 ¹¹⁶	+14 03.7 ¹²⁹	40	3 22	4 04	36	09 69		22 57	26	
8	298	55.4	54.1	241	41.3 ¹¹⁷	+13 50.8 ¹²⁹	35	3 45	21	4 51	18 65		51 30		
9	313	55.3	53.9	256	12.0 ¹¹⁷	37.8 ¹³⁰	30	4 03	4 36	5 03	25 62		46 33		
10	328	55.2	53.7	270	42.8 ¹¹⁸	24.7 ¹³¹	20	31	5 01	25	37 57		37 38		
11	343	55.1	+22 53.5	285	13.5 ¹¹⁷	+13 11.6 ¹³¹	10 N	4 54	5 21	5 44	9 48	52	22 28	43	
12	358	55.0	+22 53.3	299	44.4 ¹¹⁹	+12 58.3 ¹³³	0	5 12	5 38	6 01	9 58	47	22 20	48	
13	13	54.9	53.1	314	15.2 ¹¹⁸	45.0 ¹³³	10 S	29	5 55	18	10 08	43	13 51		
14	28	54.8	52.8	328	46.1 ¹¹⁹	31.7 ¹³³	20	5 44	6 12	36	18 39		22 04	57	
15	43	54.6	52.6	343	17.0 ¹¹⁹	18.2 ¹³⁵	30	6 00	30	6 56	30 34		21 54	63	
16	58	54.5	52.4	357	48.0 ¹²⁰	+12 04.7 ¹³⁵	35	09	41	7 09	37 31		49 65		
17	73	54.4	+22 52.2	12	19.0 ¹²⁰	+11 51.1 ¹³⁶	40	6 18	6 52	7 22	10 45	27	21 42	69	
18	88	54.3	+22 52.0	26	50.0 ¹²⁰	+11 37.5 ¹³⁶	45	6 28	7 05	7 39	10 54	23	21 35	73	
19	103	54.2	51.8	41	21.0 ¹²⁰	23.8 ¹³⁷	50	39	21	7 59	11 05	18	26 78		
20	118	54.1	51.5	55	52.1 ¹²¹	+11 10.0 ¹³⁸	52	44	28	8 08	10 16		21 81		
21	133	54.0	51.3	70	23.2 ¹²¹	+10 56.2 ¹³⁸	54	50	36	19	16 13		17 83		
22	148	53.9	51.1	84	54.3 ¹²¹	42.2 ¹⁴⁰	56	6 56	45	31	22 10		11 87		
23	163	53.8	50.9	99	25.5 ¹²²	28.3 ¹³⁹	58	7 02	7 54	8 45	28 8		21 06	90	
24	178	53.6	+22 50.6	113	56.7 ¹²²	+10 14.3 ¹⁴⁰	60 S	7 09	8 06	9 02	11 36	4	20 59	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 12 ^m 8		Mag: -3.9 PMG: 11 ^h 10 ^m		Mag: -1.5 PMG: 3 ^h 52 ^m		Mag: -1.8 PMG: 14 ^h 37 ^m		Mag: 0.0 PMG: 11 ^h 29 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	'	°	'								
0	281	35.6	192	34.3	+23	301	57.8	-13	25.7	140	23.0	+16	02.2	187	24.2	+22	35.7	
1	296	38.0	207	33.5		316	59.6		25.6	155	25.0		02.0	202	26.3		35.7	
2	311	40.5	222	32.6		332	01.3		25.4	170	27.0		01.8	217	28.4		35.7	
3	326	43.0	237	31.7		347	03.0		25.3	185	29.0		01.7	232	30.5		35.6	
4	341	45.4	252	30.9		2	04.7		25.2	200	30.9		01.5	247	32.7		35.6	
5	356	47.9	267	30.0	+23	17	06.4	-13	25.0	215	32.9	+16	01.4	262	34.8	+22	35.6	
6	11	50.4	282	29.1	+23	32	08.1	-13	24.9	230	34.9	+16	01.2	277	36.9	+22	35.6	
7	26	52.8	297	28.3		47	09.8		24.8	245	36.9		01.1	292	39.0		35.6	
8	41	55.3	312	27.4		62	11.5		24.6	260	38.9		00.9	307	41.1		35.6	
9	56	57.8	327	26.5		77	13.2		24.5	275	40.9		00.8	322	43.2		35.6	
10	72	00.2	342	25.7		92	15.0		24.4	290	42.8		00.6	337	45.3		35.6	
11	87	02.7	357	24.8	+23	192	16.7	-13	24.2	305	44.8	+16	00.5	352	47.5	+22	35.6	
12	102	05.1	12	23.9	+23	193	122	18.4	-13	24.1	320	46.8	+16	00.3	7	49.6	+22	35.6
13	117	07.6	27	23.1		194	137	20.1		24.0	335	48.8	+16	00.2	22	51.7		35.6
14	132	10.1	42	22.2		196	152	21.8		23.8	350	50.8	+16	00.0	37	53.8		35.6
15	147	12.5	57	21.3		197	167	23.5		23.7	5	52.7	+15	59.9	52	55.9		35.6
16	162	15.0	72	20.5		198	182	25.3		23.6	20	54.7		59.7	67	58.0		35.6
17	177	17.5	87	19.6	+23	199	197	27.0	-13	23.5	35	56.7	+15	59.6	83	00.1	+22	35.6
18	192	19.9	102	18.7	+23	200	212	28.7	-13	23.3	50	58.7	+15	59.4	98	02.3	+22	35.5
19	207	22.4	117	17.9		201	227	30.4		23.2	66	00.7		59.3	113	04.4		35.5
20	222	24.9	132	17.0		202	242	32.2		23.1	81	02.7		59.1	128	06.5		35.5
21	237	27.3	147	16.1		203	257	33.9		22.9	96	04.6		59.0	143	08.6		35.5
22	252	29.8	162	15.3		204	272	35.6		22.8	111	06.6		58.8	158	10.7		35.5
23	267	32.3	177	14.4		205	287	37.3		22.7	126	08.6		58.7	173	12.8		35.5
24	282	34.7	192	13.5	+23	206	302	39.1	-13	22.6	141	10.6	+15	58.5	188	14.9	+22	35.5
Dif	—		-9		+1	+17		+1	+20		-2		+21					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 5 ^d 2	PHE { 4 ^h : 58 ^h /0 12 ^h : 58 ^h /2 20 ^h : 58 ^h /3 R°: 47 ^m	Civil			Náutico		Hora		R°			
	PMG: 12 ^h 04 ^m 5	hG ☉	Dec			hG ☾			Dif	Dec	Dif	h m	h m	h m	h m	m
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	m
0	178	53.6	+22 50.6	113	56.7	+10 14.3		60 N	21 22	22 54	** **		9 49 94	23 39 3		
1	193	53.5	50.4	128	27.9 ¹²²	+10 00.2 ¹⁴¹		58	21 03	22 14	** **		53 90	37 6		
2	208	53.4	50.2	142	59.1 ¹²²	+9 46.0 ¹⁴²		56	20 47	21 47	** **		9 57 87	35 9		
3	223	53.3	50.0	157	30.3 ¹²²	31.8 ¹⁴²		54	33	26	23 00		10 01 84	33 12		
4	238	53.2	49.7	172	01.6 ¹²³	17.6 ¹⁴²		52	22	21 09	22 23		04 81	31 14		
5	253	53.1	+22 49.5	186	32.9 ¹²³	+9 03.2 ¹⁴⁴		50	20 11	20 55	21 58		10 07 79	23 30 16		
6	268	53.0	+22 49.3	201	04.2 ¹²³	+8 48.9 ¹⁴³		45	19 49	20 26	21 15		10 13 74	23 26 22		
7	283	52.9	49.0	215	35.6 ¹²⁴	34.4 ¹⁴⁵		40	32	20 05	20 46		18 70	23 26		
8	298	52.8	48.8	230	06.9 ¹²³	20.0 ¹⁴⁴		35	18	19 47	23		23 65	21 29		
9	313	52.6	48.6	244	38.3 ¹²⁴	+8 05.5 ¹⁴⁵		30	19 05	32	20 05		27 62	19 32		
10	328	52.5	48.4	259	09.7 ¹²⁴	+7 50.9 ¹⁴⁶		20	18 44	19 08	19 37		34 56	15 37		
11	343	52.4	+22 48.1	273	41.1 ¹²⁴	+7 36.3 ¹⁴⁶		10 N	18 25	18 48	19 15		10 40 51	23 11 43		
12	358	52.3	+22 47.9	288	12.5 ¹²⁴	+7 21.6 ¹⁴⁷		0	18 08	18 31	18 57		10 45 48	23 08 47		
13	13	52.2	47.7	302	43.9 ¹²⁴	+7 06.9 ¹⁴⁷		10 S	17 51	18 14	40		51 43	04 52		
14	28	52.1	47.4	317	15.3 ¹²⁴	+6 52.1 ¹⁴⁸		20	33	17 57	25		10 57 38	23 01 57		
15	43	52.0	47.2	331	46.8 ¹²⁵	37.3 ¹⁴⁸		30	13	39	09		11 04 32	22 57 62		
16	58	51.9	47.0	346	18.3 ¹²⁵	22.5 ¹⁴⁸		35	17 01	29	18 00		08 29	54 66		
17	73	51.8	+22 46.7	0	49.7 ¹²⁴	+6 07.6 ¹⁴⁹		40	16 47	17 17	17 51		11 12 26	22 51 70		
18	88	51.7	+22 46.5	15	21.2 ¹²⁵	+5 52.7 ¹⁴⁹		45	16 31	17 04	17 41		11 17 22	22 48 74		
19	103	51.6	46.3	29	52.7 ¹²⁵	37.7 ¹⁵⁰		50	11	16 49	30		23 17	44 80		
20	118	51.4	46.0	44	24.2 ¹²⁵	22.7 ¹⁵⁰		52	16 01	42	25		26 14	42 82		
21	133	51.3	45.8	58	55.7 ¹²⁵	+5 07.7 ¹⁵⁰		54	15 51	34	20		29 12	40 85		
22	148	51.2	45.5	73	27.1 ¹²⁴	+4 52.6 ¹⁵¹		56	39	25	14		32 10	38 88		
23	163	51.1	45.3	87	58.6 ¹²⁵	37.5 ¹⁵¹		58	25	15	07		36 6	36 91		
24	178	51.0	+22 45.1	102	30.1 ¹²⁵	+4 22.3 ¹⁵²		60 S	15 08	16 04	17 00		11 40 3	22 33 95		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: -1.6		Mag: -1.8		Mag: 0.0	
	5 ^h 08 ^m 8		PMG: 11 ^h 12 ^m		PMG: 3 ^h 49 ^m		PMG: 14 ^h 33 ^m		PMG: 11 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	282	34.7	192	13.5	302	39.1	141	10.6	188	14.9
1	297	37.2	207	12.7	317	40.8	156	12.6	203	17.1
2	312	39.6	222	11.8	332	42.5	171	14.5	218	19.2
3	327	42.1	237	10.9	347	44.3	186	16.5	233	21.3
4	342	44.6	252	10.1	2	46.0	201	18.5	248	23.4
5	357	47.0	267	09.2	17	47.7	216	20.5	263	25.5
6	12	49.5	282	08.3	32	49.5	231	22.5	278	27.6
7	27	52.0	297	07.5	47	51.2	246	24.4	293	29.7
8	42	54.4	312	06.6	62	52.9	261	26.4	308	31.9
9	57	56.9	327	05.7	77	54.7	276	28.4	323	34.0
10	72	59.4	342	04.9	92	56.4	291	30.4	338	36.1
11	88	01.8	357	04.0	107	58.1	306	32.4	353	38.2
12	103	04.3	12	03.1	122	59.9	321	34.3	8	40.3
13	118	06.7	27	02.3	138	01.6	336	36.3	23	42.4
14	133	09.2	42	01.4	153	03.4	351	38.3	38	44.5
15	148	11.7	57	00.5	168	05.1	6	40.3	53	46.7
16	163	14.1	71	59.6	183	06.8	21	42.3	68	48.8
17	178	16.6	86	58.8	198	08.6	36	44.2	83	50.9
18	193	19.1	101	57.9	213	10.3	51	46.2	98	53.0
19	208	21.5	116	57.0	228	12.1	66	48.2	113	55.1
20	223	24.0	131	56.2	243	13.8	81	50.2	128	57.2
21	238	26.5	146	55.3	258	15.6	96	52.2	143	59.3
22	253	28.9	161	54.4	273	17.3	111	54.1	159	01.5
23	268	31.4	176	53.6	288	19.1	126	56.1	174	03.6
24	283	33.9	191	52.7	303	20.8	141	58.1	189	05.7
Dif	—		-9	+1	+17	+1	+20	-2	+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 04 ^m 7				Edad: 6 ^d 2 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 7 20 ^h : 58 ^m 8 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	178	51.0	+22	45.1	102	30.1	+4	22.3	60 N	** **	1 15	2 48	11 23	95	23 42	3				
1	193	50.9		44.8	117	01.6 ¹²⁵	+4	07.2 ¹⁵¹	58	** **	1 56	3 07		23 92		43	7			
2	208	50.8		44.6	131	33.1 ¹²⁵	+3	52.0 ¹⁵²	56	** **	2 23		23	24 88		44	10			
3	223	50.7		44.3	146	04.6 ¹²⁵		36.7 ¹⁵³	54	1 09	2 43		36	25 85		45	12			
4	238	50.6		44.1	160	36.1 ¹²⁵		21.5 ¹⁵²	52	1 47	3 00		48	25 83		45	15			
5	253	50.5	+22	43.8	175	07.6 ¹²⁵	+3	06.2 ¹⁵³	50	2 12	3 15	3 58	11 26	80	23 46	17				
6	268	50.4	+22	43.6	189	39.1 ¹²⁵	+2	50.9 ¹⁵³	45	2 54	3 43	4 20	11 27	75	23 48	22				
7	283	50.3		43.4	204	10.5 ¹²⁴		35.5 ¹⁵⁴	40	3 24	4 05		37	28 70		49	26			
8	298	50.2		43.1	218	42.0 ¹²⁵		20.2 ¹⁵³	35	3 46		22	4 52	28 67		50	30			
9	313	50.1		42.9	233	13.4 ¹²⁴	+2	04.8 ¹⁵⁴	30	4 04	4 37	5 04	29 63	51 33						
10	328	50.0		42.6	247	44.9 ¹²⁵	+1	49.4 ¹⁵⁴	20		32	5 01		26	30 58		52 39			
11	343	49.8	+22	42.4	262	16.3 ¹²⁴	+1	33.9 ¹⁵⁵	10 N	4 54	5 21	5 44	11 31	53	23 54	44				
12	358	49.7	+22	42.1	276	47.7 ¹²⁴	+1	18.5 ¹⁵⁴	0	5 13	5 39	6 01	11 33	47	23 55	49				
13	13	49.6		41.9	291	19.1 ¹²⁴	+1	03.0 ¹⁵⁵	10 S		29	5 55		18	34 43		56 54			
14	28	49.5		41.6	305	50.5 ¹²⁴	+0	47.6 ¹⁵⁴	20	5 45	6 12		36	35 38		58 58				
15	43	49.4		41.4	320	21.8 ¹²³		32.1 ¹⁵⁵	30	6 00		30	6 56	36 33	23 59	64				
16	58	49.3		41.1	334	53.2 ¹²⁴		16.6 ¹⁵⁵	35		09	40	7 08	37 29	** ** *	**				
17	73	49.2	+22	40.9	349	24.5 ¹²³	+0	01.1 ¹⁵⁵	40	6 18	6 52		7 22	11 38	25	** ** *	**			
18	88	49.1	+22	40.6	3	55.8 ¹²³	-0	14.5 ¹⁵⁶	45	6 28	7 05		7 38	11 39	21	** ** *	**			
19	103	49.0		40.4	18	27.1 ¹²³		30.0 ¹⁵⁵	50		39	20	7 58	40 16		** ** *	**			
20	118	48.9		40.1	32	58.3 ¹²²	-0	45.6 ¹⁵⁶	52		44		27	8 07	40 15	** ** *	**			
21	133	48.8		39.8	47	29.6 ¹²³	-1	01.1 ¹⁵⁵	54		49	35		18	41 12	** ** *	**			
22	148	48.7		39.6	62	00.8 ¹²²		16.7 ¹⁵⁶	56		6 55	44		30	42 9	** ** *	**			
23	163	48.6		39.3	76	31.9 ¹²¹		32.2 ¹⁵⁵	58		7 01	7 53	8 44	42 7	** ** *	**	**			
24	178	48.5	+22	39.1	91	03.1 ¹²²	-1	47.8 ¹⁵⁶	60 S	7 08	8 04	9 00	11 43	3	** ** *	**	**			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 04 ^m 9				Mag: -3.9 PMG: 11 ^h 13 ^m				Mag: -1.6 PMG: 3 ^h 46 ^m				Mag: -1.8 PMG: 14 ^h 30 ^m				Mag: 0.0 PMG: 11 ^h 22 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	283	33.9	191	52.7	+23	22.5	303	20.8	-13	19.6	141	58.1	+15	54.9	189	05.7	+22	35.3		
1	298	36.3	206	51.8		22.6	318	22.6		19.5	157	00.1		54.7	204	07.8		35.3		
2	313	38.8	221	51.0		22.6	333	24.3		19.4	172	02.1		54.5	219	09.9		35.3		
3	328	41.2	236	50.1		22.7	348	26.1		19.3	187	04.0		54.4	234	12.0		35.3		
4	343	43.7	251	49.2		22.8	3	27.8		19.2	202	06.0		54.2	249	14.2		35.3		
5	358	46.2	266	48.3	+23	22.8	18	29.6	-13	19.0	217	08.0	+15	54.1	264	16.3	+22	35.3		
6	13	48.6	281	47.5	+23	22.9	33	31.3	-13	18.9	232	10.0	+15	53.9	279	18.4	+22	35.3		
7	28	51.1	296	46.6		22.9	48	33.1		18.8	247	12.0		53.8	294	20.5		35.3		
8	43	53.6	311	45.7		23.0	63	34.9		18.7	262	13.9		53.6	309	22.6		35.3		
9	58	56.0	326	44.9		23.1	78	36.6		18.6	277	15.9		53.5	324	24.7		35.3		
10	73	58.5	341	44.0		23.1	93	38.4		18.5	292	17.9		53.3	339	26.8		35.3		
11	89	01.0	356	43.1	+23	23.2	108	40.1	-13	18.4	307	19.9	+15	53.2	354	29.0	+22	35.3		
12	104	03.4	11	42.3	+23	23.2	123	41.9	-13	18.2	322	21.8	+15	53.0	9	31.1	+22	35.3		
13	119	05.9	26	41.4		23.3	138	43.7		18.1	337	23.8		52.9	24	33.2		35.2		
14	134	08.4	41	40.5		23.3	153	45.4		18.0	352	25.8		52.7	39	35.3		35.2		
15	149	10.8	56	39.6		23.4	168	47.2		17.9	7	27.8		52.5	54	37.4		35.2		
16	164	13.3	71	38.8		23.4	183	49.0		17.8	22	29.8		52.4	69	39.5		35.2		
17	179	15.7	86	37.9	+23	23.5	198	50.7	-13	17.7	37	31.7	+15	52.2	84	41.7	+22	35.2		
18	194	18.2	101	37.0	+23	23.5	213	52.5	-13	17.6	52	33.7	+15	52.1	99	43.8	+22	35.2		
19	209	20.7	116	36.2		23.6	228	54.3		17.5	67	35.7		51.9	114	45.9		35.2		
20	224	23.1	131	35.3		23.6	243	56.0		17.4	82	37.7		51.8	129	48.0		35.2		
21	239	25.6	146	34.4		23.6	258	57.8		17.2	97	39.6		51.6	144	50.1		35.2		
22	254	28.1	161	33.5		23.7	273	59.6		17.1	112	41.6		51.5	159	52.2		35.2		
23	269	30.5	176	32.7		23.7	289	01.4		17.0	127	43.6		51.3	174	54.3		35.2		
24	284	33.0	191	31.8	+23	23.8	304	03.1	-13	16.9	142	45.6	+15	51.2	189	56.5	+22	35.2		
Dif	—				-9 +1				+18 +1				+20 -2				+21 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 7 ^d 2	PHE { 4 ^h : 59/0 12 ^h : 59/1 20 ^h : 59/3									
	PMG: 12 ^h 04 ^m 9					SD: 16 ^h 0			PMG: 18 ^h 32 ^m		R°: 50 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	48.5	+22 39.1	91	03.1	-1 47.8	155	60 N	21 20	22 49	** **	12 58 99	23 45 5	
1	193	48.4	38.8	105	34.2 ¹²¹	-2 03.3 ¹⁵⁵	155	58	21 01	22 11	** **	55 95	50 8	
2	208	48.3	38.6	120	05.3 ¹²¹	18.9 ¹⁵⁶	156	56	20 45	21 45	** **	52 92	54 11	
3	223	48.2	38.3	134	36.4 ¹²¹	34.5 ¹⁵⁶	156	54	32	24	22 56	50 88	23 57 15	
4	238	48.1	38.0	149	07.4 ¹²⁰	-2 50.0 ¹⁵⁵	155	52	20	21 08	22 20	48 85	** **	
5	253	48.0	+22 37.8	163	38.4 ¹²⁰	-3 05.6 ¹⁵⁶	156	50	20 10	20 54	21 56	12 46 83	** **	
6	268	47.9	+22 37.5	178	09.3 ¹¹⁹	-3 21.1 ¹⁵⁵	155	45	19 49	20 25	21 14	12 42 77	** **	
7	283	47.8	37.3	192	40.2 ¹¹⁹	36.7 ¹⁵⁶	156	40	32	20 04	20 45	38 73	** **	
8	298	47.7	37.0	207	11.1 ¹¹⁹	-3 52.2 ¹⁵⁵	155	35	17	19 47	23	35 69	** **	
9	313	47.6	36.7	221	41.9 ¹¹⁸	-4 07.8 ¹⁵⁶	156	30	19 05	32	20 05	32 66	** **	
10	328	47.5	36.5	236	12.7 ¹¹⁸	23.3 ¹⁵⁵	155	20	18 44	19 08	19 37	28 59	** **	
11	343	47.4	+22 36.2	250	43.5 ¹¹⁸	-4 38.8 ¹⁵⁵	155	10 N	18 25	18 48	19 15	12 24 54	** **	
12	358	47.3	+22 35.9	265	14.2 ¹¹⁷	-4 54.3 ¹⁵⁵	155	0	18 08	18 31	18 57	12 20 50	** **	
13	13	47.2	35.7	279	44.8 ¹¹⁶	-5 09.7 ¹⁵⁴	154	10 S	17 52	18 14	41	17 45	** **	
14	28	47.1	35.4	294	15.4 ¹¹⁶	25.2 ¹⁵⁵	155	20	34	17 58	25	13 40	** **	
15	43	47.0	35.1	308	46.0 ¹¹⁶	40.7 ¹⁵⁵	155	30	14	40	09	09 34	** **	
16	58	46.9	34.9	323	16.5 ¹¹⁵	-5 56.1 ¹⁵⁴	154	35	17 02	30	18 01	06 31	0 00 68	
17	73	46.8	+22 34.6	337	47.0 ¹¹⁵	-6 11.5 ¹⁵⁴	154	40	16 48	17 18	17 52	12 03 28	0 01 71	
18	88	46.7	+22 34.3	352	17.4 ¹¹⁴	-6 26.9 ¹⁵⁴	154	45	16 32	17 06	17 43	12 00 24	0 02 76	
19	103	46.6	34.1	6	47.8 ¹¹⁴	42.2 ¹⁵³	153	50	12	16 50	31	11 56 19	04 81	
20	118	46.5	33.8	21	18.1 ¹¹³	-6 57.5 ¹⁵³	153	52	16 03	43	27	55 16	04 84	
21	133	46.4	33.5	35	48.3 ¹¹²	-7 12.8 ¹⁵³	153	54	15 53	36	21	53 13	05 86	
22	148	46.3	33.3	50	18.5 ¹¹²	28.1 ¹⁵³	153	56	41	27	16	51 10	06 89	
23	163	46.2	33.0	64	48.7 ¹¹²	43.4 ¹⁵³	153	58	27	17	09	49 7	07 93	
24	178	46.1	+22 32.7	79	18.8 ¹¹¹	-7 58.6 ¹⁵²	152	60 S	15 11	16 06	17 02	11 46 4	0 08 96	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 5 ^h 01 ^m 0		Mag: -3.9 PMG: 11 ^h 15 ^m			Mag: -1.6 PMG: 3 ^h 43 ^m			Mag: -1.8 PMG: 14 ^h 27 ^m		Mag: +0.1 PMG: 11 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	284	33.0	191 31.8	+23 23.8	304 03.1	-13 16.9	16.9	142 45.6	+15 51.2	189 56.5	+22 35.2			
1	299	35.5	206 30.9	23.8	319 04.9	16.8	16.8	157 47.6	51.0	204 58.6	35.2			
2	314	37.9	221 30.1	23.8	334 06.7	16.7	16.7	172 49.5	50.9	220 00.7	35.2			
3	329	40.4	236 29.2	23.9	349 08.5	16.6	16.6	187 51.5	50.7	235 02.8	35.1			
4	344	42.8	251 28.3	23.9	4 10.2	16.5	16.5	202 53.5	50.5	250 04.9	35.1			
5	359	45.3	266 27.4	+23 23.9	19 12.0	-13 16.4	16.4	217 55.5	+15 50.4	265 07.0	+22 35.1			
6	14	47.8	281 26.6	+23 24.0	34 13.8	-13 16.3	16.3	232 57.4	+15 50.2	280 09.2	+22 35.1			
7	29	50.2	296 25.7	24.0	49 15.6	16.2	16.2	247 59.4	50.1	295 11.3	35.1			
8	44	52.7	311 24.8	24.0	64 17.4	16.1	16.1	263 01.4	49.9	310 13.4	35.1			
9	59	55.2	326 24.0	24.1	79 19.1	16.0	16.0	278 03.4	49.8	325 15.5	35.1			
10	74	57.6	341 23.1	24.1	94 20.9	15.9	15.9	293 05.3	49.6	340 17.6	35.1			
11	90	00.1	356 22.2	+23 24.1	109 22.7	-13 15.7	15.7	308 07.3	+15 49.5	355 19.7	+22 35.1			
12	105	02.6	11 21.3	+23 24.1	124 24.5	-13 15.6	15.6	323 09.3	+15 49.3	10 21.8	+22 35.1			
13	120	05.0	26 20.5	24.2	139 26.3	15.5	15.5	338 11.3	49.2	25 24.0	35.1			
14	135	07.5	41 19.6	24.2	154 28.1	15.4	15.4	353 13.2	49.0	40 26.1	35.1			
15	150	10.0	56 18.7	24.2	169 29.9	15.3	15.3	8 15.2	48.8	55 28.2	35.1			
16	165	12.4	71 17.9	24.2	184 31.6	15.2	15.2	23 17.2	48.7	70 30.3	35.0			
17	180	14.9	86 17.0	+23 24.2	199 33.4	-13 15.1	15.1	38 19.2	+15 48.5	85 32.4	+22 35.0			
18	195	17.3	101 16.1	+23 24.2	214 35.2	-13 15.0	15.0	53 21.1	+15 48.4	100 34.5	+22 35.0			
19	210	19.8	116 15.2	24.3	229 37.0	14.9	14.9	68 23.1	48.2	115 36.7	35.0			
20	225	22.3	131 14.4	24.3	244 38.8	14.8	14.8	83 25.1	48.1	130 38.8	35.0			
21	240	24.7	146 13.5	24.3	259 40.6	14.7	14.7	98 27.1	47.9	145 40.9	35.0			
22	255	27.2	161 12.6	24.3	274 42.4	14.6	14.6	113 29.1	47.8	160 43.0	35.0			
23	270	29.7	176 11.7	24.3	289 44.2	14.5	14.5	128 31.0	47.6	175 45.1	35.0			
24	285	32.1	191 10.9	+23 24.3	304 46.0	-13 14.4	14.4	143 33.0	+15 47.4	190 47.2	+22 35.0			
Dif	—		-9	0	+18	+1		+20	-2	+21	0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 8 ^d 2	PHE { 4 ^h : 59 ^h /4 12 ^h : 59 ^h /6 20 ^h : 59 ^h /7	R°: 54 ^m		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 12 ^h 05 ^m 0													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	46.1	+22 32.7	79	18.8	-7 58.6	152	60 N	** **	1 21	2 51	14 37 104	23 50 6	
1	193	46.0	32.4	93	48.8	-8 13.8	152	58	** **	2 00	3 09	30 99	23 58 11	
2	208	45.9	32.2	108	18.7	28.9	151	56	** **	26	25	24 94	** * *	**
3	223	45.8	31.9	122	48.6	44.0	151	54	1 15	2 46	38	18 91	** * *	**
4	238	45.7	31.6	137	18.5	-8 59.1	151	52	1 50	3 02	3 50	13 88	0 00 18	
5	253	45.6	+22 31.3	151	48.2	-9 14.1	150	50	2 14	3 17	4 00	14 09 85	0 03 20	
6	268	45.5	+22 31.1	166	17.9	-9 29.1	150	45	2 56	3 45	4 21	13 59 79	0 10 25	
7	283	45.4	30.8	180	47.6	44.1	150	40	3 25	4 06	38	51 75	15 29	
8	298	45.3	30.5	195	17.1	-9 59.0	149	35	3 47	23	4 53	44 71	20 33	
9	313	45.2	30.2	209	46.6	-10 13.9	149	30	4 05	4 38	5 05	38 68	24 36	
10	328	45.1	29.9	224	16.1	28.7	148	20	33	5 02	26	27 63	31 42	
11	343	45.0	+22 29.7	238	45.4	-10 43.4	147	10 N	4 55	5 22	5 45	13 18 58	0 38 46	
12	358	44.9	+22 29.4	253	14.7	-10 58.2	148	0	5 13	5 39	6 01	13 10 53	0 44 51	
13	13	44.8	29.1	267	43.9	-11 12.8	146	10 S	29	5 55	18	13 02 48	50 55	
14	28	44.7	28.8	282	13.0	27.4	146	20	5 45	6 12	36	12 53 44	0 56 61	
15	43	44.6	28.5	296	42.1	42.0	146	30	6 00	30	6 56	43 38	1 03 67	
16	58	44.5	28.2	311	11.1	-11 56.5	145	35	09	40	7 08	37 35	08 69	
17	73	44.4	+22 28.0	325	40.0	-12 10.9	144	40	6 17	6 51	7 21	12 31 31	1 12 74	
18	88	44.3	+22 27.7	340	08.8	-12 25.3	144	45	6 27	7 04	7 37	12 24 27	1 18 78	
19	103	44.2	27.4	354	37.6	39.6	143	50	38	19	7 57	15 22	25 84	
20	118	44.1	27.1	9	06.2	-12 53.9	143	52	43	26	8 06	11 19	28 86	
21	133	44.0	26.8	23	34.8	-13 08.1	142	54	48	34	17	06 17	31 90	
22	148	43.9	26.5	38	03.3	22.2	141	56	6 54	42	29	12 01 14	35 93	
23	163	43.8	26.2	52	31.7	36.3	141	58	7 00	7 52	42	11 56 10	40 96	
24	178	43.7	+22 25.9	67	00.1	-13 50.3	140	60 S	7 07	8 03	8 58	11 50 6	1 44 101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 57 ^m 0		Mag: -3.9 PMG: 11 ^h 16 ^m		Mag: -1.7 PMG: 3 ^h 40 ^m		Mag: -1.8 PMG: 14 ^h 24 ^m		Mag: +0.1 PMG: 11 ^h 15 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	285	32.1	191	10.9	+23 24.3	304	46.0	-13 14.4	143	33.0	+15 47.4	190	47.2	+22 35.0
1	300	34.6	206	10.0	24.3	319	47.8	14.3	158	35.0	47.3	205	49.4	35.0
2	315	37.1	221	09.1	24.3	334	49.6	14.2	173	37.0	47.1	220	51.5	35.0
3	330	39.5	236	08.3	24.3	349	51.4	14.1	188	38.9	47.0	235	53.6	35.0
4	345	42.0	251	07.4	24.4	4	53.2	14.0	203	40.9	46.8	250	55.7	35.0
5	0	44.5	266	06.5	+23 24.4	19	55.0	-13 13.9	218	42.9	+15 46.7	265	57.8	+22 34.9
6	15	46.9	281	05.6	+23 24.4	34	56.8	-13 13.8	233	44.9	+15 46.5	280	59.9	+22 34.9
7	30	49.4	296	04.8	24.4	49	58.6	13.7	248	46.8	46.4	296	02.1	34.9
8	45	51.8	311	03.9	24.4	65	00.4	13.6	263	48.8	46.2	311	04.2	34.9
9	60	54.3	326	03.0	24.4	80	02.2	13.5	278	50.8	46.0	326	06.3	34.9
10	75	56.8	341	02.1	24.4	95	04.0	13.4	293	52.7	45.9	341	08.4	34.9
11	90	59.2	356	01.3	+23 24.4	110	05.8	-13 13.4	308	54.7	+15 45.7	356	10.5	+22 34.9
12	106	01.7	11	00.4	+23 24.4	125	07.6	-13 13.3	323	56.7	+15 45.6	11	12.6	+22 34.9
13	121	04.2	25	59.5	24.3	140	09.4	13.2	338	58.7	45.4	26	14.8	34.9
14	136	06.6	40	58.7	24.3	155	11.3	13.1	354	00.6	45.3	41	16.9	34.9
15	151	09.1	55	57.8	24.3	170	13.1	13.0	9	02.6	45.1	56	19.0	34.9
16	166	11.6	70	56.9	24.3	185	14.9	12.9	24	04.6	45.0	71	21.1	34.9
17	181	14.0	85	56.0	+23 24.3	200	16.7	-13 12.8	39	06.6	+15 44.8	86	23.2	+22 34.8
18	196	16.5	100	55.2	+23 24.3	215	18.5	-13 12.7	54	08.5	+15 44.6	101	25.3	+22 34.8
19	211	18.9	115	54.3	24.3	230	20.3	12.6	69	10.5	44.5	116	27.5	34.8
20	226	21.4	130	53.4	24.3	245	22.1	12.5	84	12.5	44.3	131	29.6	34.8
21	241	23.9	145	52.5	24.3	260	24.0	12.4	99	14.5	44.2	146	31.7	34.8
22	256	26.3	160	51.7	24.2	275	25.8	12.3	114	16.4	44.0	161	33.8	34.8
23	271	28.8	175	50.8	24.2	290	27.6	12.2	129	18.4	43.9	176	35.9	34.8
24	286	31.3	190	49.9	+23 24.2	305	29.4	-13 12.1	144	20.4	+15 43.7	191	38.0	+22 34.8
Dif	—		-9	0		+18	+1		+20	-2		+21	0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 9 ^d 2	PHE	4 ^h : 59 ^m 8 12 ^h : 59 ^m 9 20 ^h : 59 ^m 9 R°: 58 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 2								Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	43.7	+22 25.9	67	00.1	−13 50.3	92	60 N	21 17	22 43	** **	16 21 107	23 56 12		
1	193	43.6	25.7	81	28.3	−14 04.2	139	58	20 59	22 07	** **	16 09 101	** ** *	**	
2	208	43.5	25.4	95	56.5	18.0	138	56	44	21 42	** **	15 58 97	0 05 15		
3	223	43.4	25.1	110	24.6	31.8	138	54	30	22	22 51	49 93	12 18		
4	238	43.3	24.8	124	52.5	45.5	137	52	19	21 06	22 17	41 89	18 21		
5	253	43.2	+22 24.5	139	20.4	−14 59.1	136	50	20 09	20 52	21 53	15 34 86	0 23 24		
6	268	43.2	+22 24.2	153	48.3	−15 12.6	135	45	19 48	20 24	21 12	15 18 81	0 35 29		
7	283	43.1	23.9	168	16.0	26.0	134	40	31	20 03	20 44	15 06 76	44 34		
8	298	43.0	23.6	182	43.6	39.4	134	35	17	19 46	22	14 55 73	0 53 37		
9	313	42.9	23.3	197	11.1	−15 52.7	133	30	19 04	32	20 04	46 70	1 00 41		
10	328	42.8	23.0	211	38.6	−16 05.9	132	20	18 43	19 08	19 37	30 65	13 46		
11	343	42.7	+22 22.7	226	06.0	−16 19.0	131	10 N	18 25	18 48	19 15	14 16 61	1 24 51		
12	358	42.6	+22 22.4	240	33.2	−16 32.0	130	0	18 09	18 31	18 57	14 03 57	1 35 54		
13	13	42.5	22.1	255	00.4	44.9	129	10 S	17 52	18 15	41	13 50 53	45 59		
14	28	42.4	21.8	269	27.5	−16 57.7	128	20	35	17 58	26	37 48	1 57 63		
15	43	42.3	21.5	283	54.5	−17 10.4	127	30	15	41	10	21 44	2 10 69		
16	58	42.2	21.2	298	21.3	23.0	126	35	17 03	31	18 02	12 41	17 73		
17	73	42.1	+22 20.9	312	48.1	−17 35.5	125	40	16 49	17 20	17 53	13 02 38	2 26 76		
18	88	42.0	+22 20.6	327	14.8	−17 47.9	124	45	16 34	17 07	17 44	12 51 33	2 36 81		
19	103	41.9	20.3	341	41.4	−18 00.3	124	50	14	16 52	33	37 28	49 86		
20	118	41.9	20.0	356	07.9	12.5	122	52	16 05	45	28	30 25	2 54 89		
21	133	41.8	19.7	10	34.4	24.6	121	54	15 55	37	23	23 22	3 01 92		
22	148	41.7	19.4	25	00.7	36.5	119	56	43	29	17	15 19	08 96		
23	163	41.6	19.1	39	26.9	−18 48.4	119	58	29	20	11	12 06 15	16 100		
24	178	41.5	+22 18.8	53	53.0	−19 00.2	118	60 S	15 14	16 09	17 04	11 56 9	3 25 106		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 53 ^m 1		Mag: −3.9 PMG: 11 ^h 17 ^m		Mag: −1.7 PMG: 3 ^h 38 ^m		Mag: −1.8 PMG: 14 ^h 21 ^m		Mag: +0.1 PMG: 11 ^h 12 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	286	31.3	190 49.9	+23 24.2	305 29.4	−13 12.1	144 20.4	+15 43.7	191 38.0						
1	301	33.7	205 49.0	24.2	320 31.2	12.1	159 22.4	43.5	206 40.2						
2	316	36.2	220 48.2	24.2	335 33.1	12.0	174 24.3	43.4	221 42.3						
3	331	38.7	235 47.3	24.1	350 34.9	11.9	189 26.3	43.2	236 44.4						
4	346	41.1	250 46.4	24.1	5 36.7	11.8	204 28.3	43.1	251 46.5						
5	1	43.6	265 45.6	+23 24.1	20 38.5	−13 11.7	219 30.2	+15 42.9	266 48.6						
6	16	46.1	280 44.7	+23 24.1	35 40.4	−13 11.6	234 32.2	+15 42.8	281 50.7						
7	31	48.5	295 43.8	24.0	50 42.2	11.5	249 34.2	42.6	296 52.9						
8	46	51.0	310 42.9	24.0	65 44.0	11.4	264 36.2	42.4	311 55.0						
9	61	53.4	325 42.1	24.0	80 45.9	11.3	279 38.1	42.3	326 57.1						
10	76	55.9	340 41.2	24.0	95 47.7	11.3	294 40.1	42.1	341 59.2						
11	91	58.4	355 40.3	+23 23.9	110 49.5	−13 11.2	309 42.1	+15 42.0	357 01.3						
12	107	00.8	10 39.4	+23 23.9	125 51.4	−13 11.1	324 44.1	+15 41.8	12 03.4						
13	122	03.3	25 38.6	23.9	140 53.2	11.0	339 46.0	41.7	27 05.6						
14	137	05.8	40 37.7	23.8	155 55.0	10.9	354 48.0	41.5	42 07.7						
15	152	08.2	55 36.8	23.8	170 56.9	10.8	9 50.0	41.4	57 09.8						
16	167	10.7	70 36.0	23.7	185 58.7	10.8	24 51.9	41.2	72 11.9						
17	182	13.2	85 35.1	+23 23.7	201 00.5	−13 10.7	39 53.9	+15 41.0	87 14.0						
18	197	15.6	100 34.2	+23 23.7	216 02.4	−13 10.6	54 55.9	+15 40.9	102 16.2						
19	212	18.1	115 33.3	23.6	231 04.2	10.5	69 57.9	40.7	117 18.3						
20	227	20.6	130 32.5	23.6	246 06.1	10.4	84 59.8	40.6	132 20.4						
21	242	23.0	145 31.6	23.5	261 07.9	10.3	100 01.8	40.4	147 22.5						
22	257	25.5	160 30.7	23.5	276 09.7	10.3	115 03.8	40.3	162 24.6						
23	272	27.9	175 29.8	23.4	291 11.6	10.2	130 05.7	40.1	177 26.7						
24	287	30.4	190 29.0	+23 23.4	306 13.4	−13 10.1	145 07.7	+15 39.9	192 28.9						
Dif	—	—	−9	0	+18	+1	+20	−2	+21	0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 10 ^d 2	PHE {	4 ^h : 60 ^o 0 12 ^h : 60 ^o 0 20 ^h : 60 ^o 1	SD: 16 ^h 3	PMG: 21 ^h 14 ^m		R ^o : 61 ^m	Náutico		Civil	Hora	R ^o	Hora	R ^o
	hG ☉	Dec															
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	41.5	+22	18.8	53	53.0	-19	00.2	60 N	** **	1 27	2 54	18 08	104	** **	** **	
1	193	41.4		18.5	68	19.0	70	11.8	58	** **	2 04	3 12	17 50	97		0 09	
2	208	41.3		18.2	82	45.0	70	23.4	56	** **	29	27	35	92		20	
3	223	41.2		17.9	97	10.8	68	34.8	54	1 20	2 49	40	22	88		30	
4	238	41.1		17.6	111	36.5	67	46.1	52	1 54	3 05	3 52	10	86		39	
5	253	41.0	+22	17.3	126	02.2	67	57.2	50	2 17	3 19	4 02	17 00	83		0 47	
6	268	41.0	+22	16.9	140	27.7	65	08.3	45	2 58	3 46	4 23	16 39	79		1 04	
7	283	40.9		16.6	154	53.2	65	19.2	40	3 27	4 08	40	22	75		18	
8	298	40.8		16.3	169	18.5	63	30.0	35	3 49	25	4 54	16 08	73		30	
9	313	40.7		16.0	183	43.8	63	40.6	30	4 06	4 39	5 06	15 56	70		41	
10	328	40.6		15.7	198	09.0	62	51.1	20	34	5 03	27	35	66		1 59	
11	343	40.5	+22	15.4	212	34.0	60	01.5	10 N	4 55	5 22	5 45	15 17	63		2 15	
12	358	40.4	+22	15.1	226	59.0	60	11.8	0	5 13	5 39	6 02	15 00	60		2 29	
13	13	40.3		14.8	241	23.9	59	21.9	10 S	29	5 56	18	14	43	58		2 44
14	28	40.2		14.4	255	48.7	58	31.9	20	5 45	6 12	36	25	55		3 00	
15	43	40.2		14.1	270	13.4	57	41.8	30	6 00	30	6 56	14 05	51		19	
16	58	40.1		13.8	284	38.0	56	51.5	35	08	40	7 07	13 53	49		30	
17	73	40.0	+22	13.5	299	02.5	55	01.0	40	6 17	6 51	7 21	13 40	46		3 42	
18	88	39.9	+22	13.2	313	27.0	55	10.4	45	6 26	7 03	7 36	13 24	42		3 57	
19	103	39.8		12.9	327	51.3	53	19.7	50	37	18	7 56	13 05	37		4 15	
20	118	39.7		12.5	342	15.6	53	28.8	52	42	25	8 05	12 55	36		23	
21	133	39.6		12.2	356	39.7	51	37.8	54	47	33	15	45	33		33	
22	148	39.5		11.9	11	03.8	51	46.6	56	53	41	27	34	28		44	
23	163	39.5		11.6	25	27.8	50	55.3	58	6 59	7 50	40	21	24		4 56	
24	178	39.4	+22	11.3	39	51.7	49	23	60 S	7 06	8 01	8 56	12 05	18		5 11	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 4 ^h 49 ^m 2		Mag: -3.9 PMG: 11 ^h 19 ^m			Mag: -1.7 PMG: 3 ^h 35 ^m			Mag: -1.8 PMG: 14 ^h 18 ^m			Mag: +0.1 PMG: 11 ^h 09 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	287	30.4	190	29.0	+23	23.4	306	13.4	-13	10.1	145	07.7	+15	39.9			
1	302	32.9	205	28.1		23.4	321	15.3		10.0	160	09.7		39.8			
2	317	35.3	220	27.2		23.3	336	17.1		09.9	175	11.7		39.6			
3	332	37.8	235	26.3		23.3	351	19.0		09.9	190	13.6		39.5			
4	347	40.3	250	25.5		23.2	6	20.8		09.8	205	15.6		39.3			
5	2	42.7	265	24.6	+23	23.1	21	22.7	-13	09.7	220	17.6	+15	39.1			
6	17	45.2	280	23.7	+23	23.1	36	24.5	-13	09.6	235	19.5	+15	39.0			
7	32	47.7	295	22.9		23.0	51	26.4		09.5	250	21.5		38.8			
8	47	50.1	310	22.0		23.0	66	28.2		09.5	265	23.5		38.7			
9	62	52.6	325	21.1		22.9	81	30.1		09.4	280	25.5		38.5			
10	77	55.0	340	20.2		22.9	96	31.9		09.3	295	27.4		38.4			
11	92	57.5	355	19.4	+23	22.8	111	33.8	-13	09.2	310	29.4	+15	38.2			
12	108	00.0	10	18.5	+23	22.7	126	35.7	-13	09.2	325	31.4	+15	38.0			
13	123	02.4	25	17.6		22.7	141	37.5		09.1	340	33.3		37.9			
14	138	04.9	40	16.7		22.6	156	39.4		09.0	355	35.3		37.7			
15	153	07.4	55	15.9		22.5	171	41.2		08.9	10	37.3		37.6			
16	168	09.8	70	15.0		22.5	186	43.1		08.9	25	39.3		37.4			
17	183	12.3	85	14.1	+23	22.4	201	45.0	-13	08.8	40	41.2	+15	37.3			
18	198	14.8	100	13.3	+23	22.3	216	46.8	-13	08.7	55	43.2	+15	37.1			
19	213	17.2	115	12.4		22.3	231	48.7		08.6	70	45.2		36.9			
20	228	19.7	130	11.5		22.2	246	50.6		08.6	85	47.1		36.8			
21	243	22.2	145	10.6		22.1	261	52.4		08.5	100	49.1		36.6			
22	258	24.6	160	09.8		22.1	276	54.3		08.4	115	51.1		36.5			
23	273	27.1	175	08.9		22.0	291	56.2		08.3	130	53.0		36.3			
24	288	29.5	190	08.0	+23	21.9	306	58.0	-13	08.3	145	55.0	+15	36.1			
Dif	—		-9			-1	+19			+1	+20			-2	+21		
															0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 11 ^d 2	PHE {	4 ^h : 60'0 12 ^h : 60'0 20 ^h : 60'0 R°: 64 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 4								Civil			Náutico		Hora	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	39.4	+22	11.3	39	51.7	-23	03.8	60 N	21	14	22	38	19	52
1	193	39.3		10.9	54	15.5	48	12.1	58	20	56	22	03	27	78
2	208	39.2		10.6	68	39.3	48	20.3	56	41	21	39		19	07
3	223	39.1		10.3	83	03.0	47	28.4	54	29	20	22	45	18	50
4	238	39.0		10.0	97	26.6	46	36.3	52	17	21	04	22	14	36
5	253	38.9	+22	09.6	111	50.1	45	-23	50	20	08	20	50	18	23
6	268	38.9	+22	09.3	126	13.5	44	-23	45	19	47	20	23	17	58
7	283	38.8		09.0	140	36.9	44	-23	40	30	20	02	20	43	37
8	298	38.7		08.7	155	00.2	43	-24	35	16	19	45		21	68
9	313	38.6		08.3	169	23.4	42	13.2	30	19	04	31	20	04	17
10	328	38.5		08.0	183	46.5	41	20.1	20	18	43	19	08	19	36
11	343	38.4	+22	07.7	198	09.6	41	-24	10 N	18	26	18	48	16	20
12	358	38.4	+22	07.4	212	32.6	40	-24	0	18	09	18	31	16	00
13	13	38.3		07.0	226	55.6	40	39.7	10 S	17	53	18	15	15	41
14	28	38.2		06.7	241	18.5	39	45.9	20	35	17	59	26	15	20
15	43	38.1		06.4	255	41.3	38	51.9	30	16		42	11	14	56
16	58	38.0		06.0	270	04.1	38	-24	35	17	04	32	18	03	42
17	73	37.9	+22	05.7	284	26.8	37	-25	40	16	51	17	21	17	55
18	88	37.9	+22	05.4	298	49.5	37	-25	45	16	35	17	08	17	45
19	103	37.8		05.0	313	12.1	36	14.3	50	16		16	54	35	13
20	118	37.7		04.7	327	34.7	36	19.4	52	16	07	47	30	31	49
21	133	37.6		04.4	341	57.2	35	24.4	54	15	57	39	25	18	47
22	148	37.5		04.0	356	19.7	35	29.1	56	45		31	19	13	02
23	163	37.5		03.7	10	42.1	34	33.7	58	32		22	13	12	45
24	178	37.4	+22	03.4	25	04.5	34	-25	60 S	15	17	16	11	17	07

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 45 ^m 2		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: -1.7 PMG: 3 ^h 32 ^m		Mag: -1.8 PMG: 14 ^h 14 ^m		Mag: +0.1 PMG: 11 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	288	29.5	190	08.0	+23	21.9	306	58.0	-13	08.3
1	303	32.0	205	07.1		21.8	321	59.9		08.2
2	318	34.5	220	06.3		21.7	337	01.8		08.1
3	333	36.9	235	05.4		21.7	352	03.7		08.1
4	348	39.4	250	04.5		21.6	7	05.5		08.0
5	3	41.9	265	03.7	+23	21.5	22	07.4	-13	07.9
6	18	44.3	280	02.8	+23	21.4	37	09.3	-13	07.9
7	33	46.8	295	01.9		21.3	52	11.2		07.8
8	48	49.3	310	01.0		21.3	67	13.0		07.7
9	63	51.7	325	00.2		21.2	82	14.9		07.6
10	78	54.2	339	59.3		21.1	97	16.8		07.6
11	93	56.7	354	58.4	+23	21.0	112	18.7	-13	07.5
12	108	59.1	9	57.5	+23	20.9	127	20.6	-13	07.4
13	124	01.6	24	56.7		20.8	142	22.4		07.4
14	139	04.0	39	55.8		20.7	157	24.3		07.3
15	154	06.5	54	54.9		20.6	172	26.2		07.2
16	169	09.0	69	54.1		20.5	187	28.1		07.2
17	184	11.4	84	53.2	+23	20.4	202	30.0	-13	07.1
18	199	13.9	99	52.3	+23	20.3	217	31.9	-13	07.1
19	214	16.4	114	51.4		20.2	232	33.8		07.0
20	229	18.8	129	50.6		20.1	247	35.7		06.9
21	244	21.3	144	49.7		20.0	262	37.6		06.9
22	259	23.8	159	48.8		19.9	277	39.4		06.8
23	274	26.2	174	48.0		19.8	292	41.3		06.7
24	289	28.7	189	47.1	+23	19.7	307	43.2	-13	06.7
Dif	—		-9		-1		+19		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 12 ^d 2	PHE {	SD: 16 ^h 3	SD: 23 ^h 19 ^m	4 ^h : 59 ^m /9 12 ^h : 59 ^m /8 20 ^h : 59 ^m /7 Rº: 62 ^m						Hora	Rº	Hora	Rº	
	hG ☉	Dec																hG ☾
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	37.4	+22	03.4	25	04.5	-25	38.1	60 N	** **	1 34	2 57	21 14	49	0 33	50		
1	193	37.3		03.0	39	26.8		42.4	58	** **	2 08	3 15	20 45	52	0 58	54		
2	208	37.2		02.7	53	49.1		46.4	56	** **	32	30	23 54		1 19	55		
3	223	37.1		02.3	68	11.4		50.3	54	1 26	2 51	43	20 05	55		36	56	
4	238	37.0		02.0	82	33.7		53.9	52	1 58	3 07	3 54	19 49	57	1 50	58		
5	253	37.0	+22	01.7	96	55.9	-25	57.4	50	2 21	3 21	4 04	19 36	57	2 03	58		
6	268	36.9	+22	01.3	111	18.1	-26	00.7	45	3 01	3 48	4 24	19 08	59	2 29	60		
7	283	36.8		01.0	125	40.3		03.8	40	29	4 09	41	18 47	59	2 50	60		
8	298	36.7		00.6	140	02.4		06.7	35	3 50	26	4 55	29 60		3 07	61		
9	313	36.6	+22	00.3	154	24.6		09.5	30	4 07	4 40	5 07	18 13	61	22	62		
10	328	36.6	+21	59.9	168	46.7		12.0	20	35	5 04	28	17 47	62	3 48	62		
11	343	36.5	+21	59.6	183	08.8	-26	14.4	10 N	4 56	5 23	5 46	17 24	63	4 10	63		
12	358	36.4	+21	59.3	197	30.9	-26	16.5	0	5 14	5 40	6 02	17 03	63	4 30	64		
13	13	36.3		58.9	211	53.0		18.5	10 S	30	5 56	18	16 42	64	4 51	63		
14	28	36.3		58.6	226	15.1		20.3	20	5 45	6 12	36	16 20	64	5 13	64		
15	43	36.2		58.2	240	37.1		21.9	30	6 00	29	6 55	15 54	64		38	65	
16	58	36.1		57.9	254	59.2		23.3	14	35	08	39	39 64		5 53	65		
17	73	36.0	+21	57.5	269	21.3	-26	24.5	40	6 16	6 50	7 20	15 21	65	6 11	65		
18	88	35.9	+21	57.2	283	43.4	-26	25.5	45	6 26	7 02	7 35	15 00	65	6 32	65		
19	103	35.9		56.8	298	05.5		26.4	50	36	17	7 54	14 33	65	6 59	65		
20	118	35.8		56.5	312	27.6		27.0	5	41	24	8 03	20 65		7 11	66		
21	133	35.7		56.1	326	49.7		27.5	54	46	31	13	14 05	66		26	66	
22	148	35.6		55.8	341	11.9		27.8	56	51	39	25	13 48	65	7 44	65		
23	163	35.6		55.4	355	34.1		27.8	58	6 57	48	38	26 66		8 05	65		
24	178	35.5	+21	55.1	9	56.3	-26	27.7	60 S	7 04	7 59	8 53	13 00	66	8 31	66		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 4 ^h 41 ^m 3		Mag: -3.9 PMG: 11 ^h 22 ^m			Mag: -1.8 PMG: 3 ^h 29 ^m			Mag: -1.8 PMG: 14 ^h 11 ^m			Mag: +0.1 PMG: 11 ^h 02 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	289	28.7	189	47.1	+23	19.7	307	43.2	-13	06.7	146	42.3	+15	32.3				
1	304	31.2	204	46.2		19.6	322	45.1		06.6	161	44.2		32.2				
2	319	33.6	219	45.3		19.5	337	47.0		06.6	176	46.2		32.0				
3	334	36.1	234	44.5		19.4	352	48.9		06.5	191	48.2		31.8				
4	349	38.5	249	43.6		19.3	7	50.8		06.4	206	50.1		31.7				
5	4	41.0	264	42.7	+23	19.2	22	52.7	-13	06.4	221	52.1	+15	31.5				
6	19	43.5	279	41.9	+23	19.1	37	54.6	-13	06.3	236	54.1	+15	31.4				
7	34	45.9	294	41.0		19.0	52	56.5		06.3	251	56.0		31.2				
8	49	48.4	309	40.1		18.8	67	58.4		06.2	266	58.0		31.0				
9	64	50.9	324	39.2		18.7	83	00.3		06.1	282	00.0		30.9				
10	79	53.3	339	38.4		18.6	98	02.2		06.1	297	01.9		30.7				
11	94	55.8	354	37.5	+23	18.5	113	04.2	-13	06.0	312	03.9	+15	30.6				
12	109	58.3	9	36.6	+23	18.4	128	06.1	-13	06.0	327	05.9	+15	30.4				
13	125	00.7	24	35.8		18.2	143	08.0		05.9	342	07.8		30.2				
14	140	03.2	39	34.9		18.1	158	09.9		05.9	357	09.8		30.1				
15	155	05.7	54	34.0		18.0	173	11.8		05.8	12	11.8		29.9				
16	170	08.1	69	33.1		17.9	188	13.7		05.7	27	13.7		29.8				
17	185	10.6	84	32.3	+23	17.8	203	15.6	-13	05.7	42	15.7	+15	29.6				
18	200	13.0	99	31.4	+23	17.6	218	17.5	-13	05.6	57	17.7	+15	29.4				
19	215	15.5	114	30.5		17.5	233	19.4		05.6	72	19.6		29.3				
20	230	18.0	129	29.7		17.4	248	21.4		05.5	87	21.6		29.1				
21	245	20.4	144	28.8		17.2	263	23.3		05.5	102	23.6		29.0				
22	260	22.9	159	27.9		17.1	278	25.2		05.4	117	25.5		28.8				
23	275	25.4	174	27.1		17.0	293	27.1		05.4	132	27.5		28.6				
24	290	27.8	189	26.2	+23	16.8	308	29.0	-13	05.3	147	29.5	+15	28.5				
Dif	—		-9		-1		+19		+1		+20		-2		+21			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7			Edad: 13 ^d 2 PHE { 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'2												
	PMG: 12 ^h 05 ^m 7			PMG: **h **m R°: **m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	° ' "	° ' "		° ' "		° ' "		°	h m	h m	h m		h m m	h m m		
0	178 35.5	+21 55.1		9 56.3		-26 27.7		60 N	21 11	22 32	** **	22 03	23	1 23	82	
1	193 35.4		54.7	24 18.5	32	27.4	3	58	20 54	21 59	** **	21 37	30	1 52	78	
2	208 35.3		54.4	38 40.7	32	27.0	4	56		36	23 38		17 34	2 14	76	
3	223 35.3		54.0	53 03.0	33	26.3	7	54		27	17 22		40 37	32	74	
4	238 35.2		53.6	67 25.3	33	25.4	9	52		16	21 02	22 10	20 46	39	2 48	72
5	253 35.1	+21 53.3		81 47.6	33	-26 24.4	10	50	20 06	20 48	21 48	20 33	42	3 01	72	
6	268 35.0	+21 52.9		96 10.0	34	-26 23.2	12	45	19 46	20 22	21 09	20 07	46	3 29	69	
7	283 35.0		52.6	110 32.4	34	21.7	15	40		29	20 01	20 41	19 46	49	3 50	68
8	298 34.9		52.2	124 54.9	35	20.1	16	35		15	19 44		29 50	4 08	67	
9	313 34.8		51.9	139 17.4	35	18.4	17	30	19 03	30	20 03	19 14	52	24	66	
10	328 34.7		51.5	153 40.0	36	16.4	20	20	18 43	19 07	19 36	18 49	55	4 50	64	
11	343 34.7	+21 51.1		168 02.6	36	-26 14.2	22	10 N	18 26	18 48	19 15	18 27	57	5 13	62	
12	358 34.6	+21 50.8		182 25.2	36	-26 11.9	23	0	18 09	18 32	18 57	18 06	60	5 34	61	
13	13 34.5		50.4	196 48.0	38	09.4	25	10 S	17 53	16	42	17 46	61	5 54	61	
14	28 34.4		50.1	211 10.7	37	06.7	27	20		36	18 00	27	17 24	64	6 17	59
15	43 34.4		49.7	225 33.6	39	03.8	29	30		17	17 43	12	16 58	67	43	57
16	58 34.3		49.3	239 56.5	39	-26 00.8	30	35	17 05		33	18 04	43	68	6 58	56
17	73 34.2	+21 49.0		254 19.5	40	-25 57.5	33	40	16 52	17 22	17 56	16 26	70	7 16	54	
18	88 34.1	+21 48.6		268 42.5	40	-25 54.1	34	45	16 37	17 10	17 47	16 05	72	7 37	52	
19	103 34.1		48.2	283 05.6	41	50.6	35	50		18	16 55	36	15 38	76	8 04	49
20	118 34.0		47.9	297 28.8	42	46.8	38	52	16 09		49	32	25	78	17	48
21	133 33.9		47.5	311 52.0	42	42.9	39	54	15 59		41	27	15 11	79	32	46
22	148 33.9		47.1	326 15.4	44	38.8	41	56		48	33	21	14 53	83	8 49	44
23	163 33.8		46.8	340 38.8	44	34.5	43	58		35	24	15	32	86	9 10	41
24	178 33.7	+21 46.4		355 02.2	44	-25 30.1	44	60 S	15 20	16 14	17 09	14 06	91	9 37	35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 37 ^m 4		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: -1.8 PMG: 3 ^h 26 ^m		Mag: -1.8 PMG: 14 ^h 08 ^m		Mag: +0.1 PMG: 10 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "
0	290 27.8		189 26.2	+23 16.8	308 29.0	-13 05.3	147 29.5	+15 28.5	195 01.4	+22 33.9
1	305 30.3		204 25.3	16.7	323 31.0	05.3	162 31.4	28.3	210 03.5	33.9
2	320 32.8		219 24.4	16.6	338 32.9	05.2	177 33.4	28.2	225 05.7	33.9
3	335 35.2		234 23.6	16.4	353 34.8	05.2	192 35.4	28.0	240 07.8	33.9
4	350 37.7		249 22.7	16.3	8 36.7	05.1	207 37.3	27.8	255 09.9	33.9
5	5 40.2		264 21.8	+23 16.2	23 38.7	-13 05.1	222 39.3	+15 27.7	270 12.0	+22 33.9
6	20 42.6		279 21.0	+23 16.0	38 40.6	-13 05.0	237 41.3	+15 27.5	285 14.1	+22 33.9
7	35 45.1		294 20.1	15.9	53 42.5	05.0	252 43.2	27.4	300 16.3	33.9
8	50 47.5		309 19.2	15.7	68 44.5	04.9	267 45.2	27.2	315 18.4	33.9
9	65 50.0		324 18.4	15.6	83 46.4	04.9	282 47.2	27.0	330 20.5	33.9
10	80 52.5		339 17.5	15.4	98 48.3	04.8	297 49.1	26.9	345 22.6	33.9
11	95 54.9		354 16.6	+23 15.3	113 50.2	-13 04.8	312 51.1	+15 26.7	0 24.7	+22 33.8
12	110 57.4		9 15.8	+23 15.2	128 52.2	-13 04.7	327 53.1	+15 26.6	15 26.9	+22 33.8
13	125 59.9		24 14.9	15.0	143 54.1	04.7	342 55.0	26.4	30 29.0	33.8
14	141 02.3		39 14.0	14.9	158 56.1	04.6	357 57.0	26.2	45 31.1	33.8
15	156 04.8		54 13.1	14.7	173 58.0	04.6	12 59.0	26.1	60 33.2	33.8
16	171 07.3		69 12.3	14.6	188 59.9	04.5	28 00.9	25.9	75 35.3	33.8
17	186 09.7		84 11.4	+23 14.4	204 01.9	-13 04.5	43 02.9	+15 25.8	90 37.5	+22 33.8
18	201 12.2		99 10.5	+23 14.2	219 03.8	-13 04.5	58 04.9	+15 25.6	105 39.6	+22 33.8
19	216 14.7		114 09.7	14.1	234 05.8	04.4	73 06.8	25.4	120 41.7	33.8
20	231 17.1		129 08.8	13.9	249 07.7	04.4	88 08.8	25.3	135 43.8	33.8
21	246 19.6		144 07.9	13.8	264 09.6	04.3	103 10.7	25.1	150 45.9	33.7
22	261 22.0		159 07.1	13.6	279 11.6	04.3	118 12.7	24.9	165 48.1	33.7
23	276 24.5		174 06.2	13.5	294 13.5	04.2	133 14.7	24.8	180 50.2	33.7
24	291 27.0		189 05.3	+23 13.3	309 15.5	-13 04.2	148 16.6	+15 24.6	195 52.3	+22 33.7
Dif	—		-9	-1	+19	0	+20	-2	+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 8			Edad: 14 ^d 2 PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 8 20 ^h : 58 ^m 5 R ^o : 58 ^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	33.7	+21	46.4	355	02.2	-25	30.1	60 N	** *	1 40	3 01	22 26	11	2 45	98
1	193	33.6		46.0	9	25.8	46	25.5	58	** *	2 12	18	22 07	17	3 10	92
2	208	33.6		45.7	23	49.5	47	20.7	56	0 34	36	33	21 51	21	30	87
3	223	33.5		45.3	38	13.2	47	15.8	54	1 32	2 55	45	37 25		3 46	84
4	238	33.4		44.9	52	37.0	48	10.7	52	2 02	3 10	3 56	25 28		4 00	81
5	253	33.4	+21	44.5	67	01.0	50	-25 05.4	50	2 24	3 23	4 06	21 15	30	4 13	79
6	268	33.3	+21	44.2	81	25.0	50	-25 00.0	45	3 03	3 50	4 26	20 53	35	4 38	75
7	283	33.2		43.8	95	49.1	51	-24 54.4	40	30	4 11	43	35 38		4 58	72
8	298	33.1		43.4	110	13.2	51	48.7	35	3 52	27	4 56	19 42		5 15	69
9	313	33.1		43.1	124	37.5	53	42.8	30	4 09	4 41	5 08	20 06	44	30	67
10	328	33.0		42.7	139	01.9	54	36.7	20	36	5 04	29	19 44	48	5 54	64
11	343	32.9	+21	42.3	153	26.4	55	-24 30.5	10 N	4 57	5 23	5 46	19 24	52	6 15	61
12	358	32.9	+21	41.9	167	51.0	56	-24 24.1	0	5 14	5 40	6 02	19 06	55	6 35	58
13	13	32.8		41.5	182	15.7	57	17.6	10 S	30	5 56	18	18 47	59	6 55	55
14	28	32.7		41.2	196	40.5	58	11.0	20	44	6 12	35	28 62		7 16	51
15	43	32.7		40.8	211	05.4	59	-24 04.2	30	5 59	29	6 55	18 05	66	40	48
16	58	32.6		40.4	225	30.4	60	-23 57.2	35	6 07	38	7 06	17 51	69	7 54	46
17	73	32.5	+21	40.0	239	55.5	61	-23 50.1	40	6 15	6 49	7 19	17 36	71	8 10	43
18	88	32.5	+21	39.7	254	20.7	62	-23 42.9	45	6 25	7 01	7 34	17 17	75	8 29	40
19	103	32.4		39.3	268	46.0	63	35.5	50	35	16	7 53	16 54	80	8 53	36
20	118	32.3		38.9	283	11.4	64	28.0	52	40	22	8 02	43 82		9 05	33
21	133	32.3		38.5	297	36.9	65	20.3	54	44	29	12	30 85		18 31	
22	148	32.2		38.1	312	02.6	67	12.5	56	50	37	23	16 16	88	33	27
23	163	32.1		37.7	326	28.3	67	-23 04.6	58	6 56	46	36	15 58	94	9 51	23
24	178	32.1	+21	37.4	340	54.2	69	-22 56.5	60 S	7 02	7 57	8 51	15 37	100	10 12	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 33 ^m 5		Mag: -3.9 PMG: 11 ^h 24 ^m		Mag: -1.8 PMG: 3 ^h 23 ^m		Mag: -1.8 PMG: 14 ^h 05 ^m		Mag: +0.1 PMG: 10 ^h 55 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	291	27.0	189	05.3	+23	13.3	309	15.5	-13	04.2	148	16.6	+15	24.6	195	52.3	+22	33.7
1	306	29.4	204	04.5		13.1	324	17.4		04.2	163	18.6		24.5	210	54.4		33.7
2	321	31.9	219	03.6		13.0	339	19.4		04.1	178	20.6		24.3	225	56.6		33.7
3	336	34.4	234	02.7		12.8	354	21.3		04.1	193	22.5		24.1	240	58.7		33.7
4	351	36.8	249	01.9		12.6	9	23.3		04.0	208	24.5		24.0	256	00.8		33.7
5	6	39.3	264	01.0	+23	12.5	24	25.2	-13	04.0	223	26.5	+15	23.8	271	02.9	+22	33.7
6	21	41.8	279	00.1	+23	12.3	39	27.2	-13	04.0	238	28.4	+15	23.7	286	05.0	+22	33.7
7	36	44.2	293	59.3		12.1	54	29.1		03.9	253	30.4		23.5	301	07.2		33.7
8	51	46.7	308	58.4		12.0	69	31.1		03.9	268	32.4		23.3	316	09.3		33.6
9	66	49.2	323	57.5		11.8	84	33.1		03.8	283	34.3		23.2	331	11.4		33.6
10	81	51.6	338	56.7		11.6	99	35.0		03.8	298	36.3		23.0	346	13.5		33.6
11	96	54.1	353	55.8	+23	11.4	114	37.0	-13	03.8	313	38.2	+15	22.8	1	15.6	+22	33.6
12	111	56.5	8	54.9	+23	11.3	129	38.9	-13	03.7	328	40.2	+15	22.7	16	17.8	+22	33.6
13	126	59.0	23	54.1		11.1	144	40.9		03.7	343	42.2		22.5	31	19.9		33.6
14	142	01.5	38	53.2		10.9	159	42.9		03.7	358	44.1		22.4	46	22.0		33.6
15	157	03.9	53	52.3		10.7	174	44.8		03.6	13	46.1		22.2	61	24.1		33.6
16	172	06.4	68	51.5		10.5	189	46.8		03.6	28	48.1		22.0	76	26.3		33.6
17	187	08.9	83	50.6	+23	10.4	204	48.8	-13	03.6	43	50.0	+15	21.9	91	28.4	+22	33.6
18	202	11.3	98	49.7	+23	10.2	219	50.7	-13	03.5	58	52.0	+15	21.7	106	30.5	+22	33.5
19	217	13.8	113	48.9		10.0	234	52.7		03.5	73	54.0		21.5	121	32.6		33.5
20	232	16.3	128	48.0		09.8	249	54.7		03.5	88	55.9		21.4	136	34.7		33.5
21	247	18.7	143	47.1		09.6	264	56.6		03.4	103	57.9		21.2	151	36.9		33.5
22	262	21.2	158	46.3		09.4	279	58.6		03.4	118	59.8		21.1	166	39.0		33.5
23	277	23.6	173	45.4		09.2	295	00.6		03.4	134	01.8		20.9	181	41.1		33.5
24	292	26.1	188	44.5	+23	09.0	310	02.6	-13	03.3	149	03.8	+15	20.7	196	43.2	+22	33.5
Dif	—		-9		-2		+20		0		+20		-2		+21			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 2	PHE { 4 ^h : 58 ^h /3 12 ^h : 58 ^h /1 20 ^h : 57 ^h /8									
	PMG: 12 ^h 05 ^m 9					SD: 15 ^h 9			PMG: 1 ^h 19 ^m		R°: 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	32.1	+21 37.4	340	54.2	-22 56.5	82	60 N	21 08	22 26	** **	22 37 7	4 23 100	
1	193	32.0	37.0	355	20.2	70 48.3	82	58	20 51	21 55	** **	24 11	42 93	
2	208	31.9	36.6	9	46.3	71 40.0	83	56	37	33	23 23	12 15	4 57 89	
3	223	31.9	36.2	24	12.5	72 31.6	84	54	25	21 14	22 35	22 02 18	5 10 86	
4	238	31.8	35.8	38	38.8	73 23.0	86	52	14	20 59	22 06	21 53 20	21 83	
5	253	31.7	+21 35.4	53	05.2	74 -22 14.3	87	50	20 04	20 46	21 45	21 45 23	5 32 80	
6	268	31.7	+21 35.0	67	31.8	76 -22 05.5	88	45	19 44	20 20	21 07	21 28 27	5 53 75	
7	283	31.6	34.7	81	58.4	76 -21 56.5	90	40	28	20 00	20 40	13 32	6 10 71	
8	298	31.5	34.3	96	25.2	78 47.5	90	35	15	19 43	19	21 01 35	24 68	
9	313	31.5	33.9	110	52.1	79 38.3	92	30	19 03	30	20 02	20 50 38	37 64	
10	328	31.4	33.5	125	19.1	80 29.0	93	20	18 43	19 07	19 36	32 42	6 58 60	
11	343	31.3	+21 33.1	139	46.3	82 -21 19.6	94	10 N	18 26	18 48	19 15	20 16 46	7 16 56	
12	358	31.3	+21 32.7	154	13.5	82 -21 10.0	96	0	18 10	18 32	18 58	20 01 50	7 33 52	
13	13	31.2	32.3	168	40.9	84 -21 00.4	96	10 S	17 54	16	42	19 46 54	7 50 49	
14	28	31.1	31.9	183	08.3	84 -20 50.7	97	20	37	18 00	28	30 58	8 07 46	
15	43	31.1	31.5	197	35.9	86 40.8	99	30	18	17 43	13	11 63	28 41	
16	58	31.0	31.1	212	03.6	87 30.9	99	35	17 06	34	18 05	19 00 66	40 38	
17	73	31.0	+21 30.7	226	31.5	89 -20 20.8	101	40	16 54	17 24	17 57	18 47 70	8 53 35	
18	88	30.9	+21 30.3	240	59.4	89 -20 10.7	101	45	16 39	17 12	17 48	18 32 74	9 09 31	
19	103	30.8	29.9	255	27.5	91 -20 00.4	103	50	20	16 57	38	14 78	29 26	
20	118	30.8	29.6	269	55.6	91 -19 50.0	104	52	11	51	33	18 05 81	38 24	
21	133	30.7	29.2	284	23.9	93 39.6	104	54	16 02	44	29	17 55 84	9 49 21	
22	148	30.6	28.8	298	52.3	94 29.0	106	56	15 51	36	23	44 88	10 00 18	
23	163	30.6	28.4	313	20.8	95 18.4	106	58	38	27	18	32 91	14 14	
24	178	30.5	+21 28.0	327	49.5	97 -19 07.7	107	60 S	15 23	16 17	17 11	17 17 96	10 29 9	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 4 ^h 29 ^m 5		Mag: -3.9 PMG: 11 ^h 26 ^m			Mag: -1.9 PMG: 3 ^h 19 ^m			Mag: -1.8 PMG: 14 ^h 02 ^m			Mag: +0.1 PMG: 10 ^h 52 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	292	26.1	188 44.5	+23 09.0	310 02.6	-13 03.3	149 03.8	+15 20.7	196 43.2	+22 33.5				
1	307	28.6	203 43.7	08.9	325 04.5	03.3	164 05.7	20.6	211 45.3	33.5				
2	322	31.0	218 42.8	08.7	340 06.5	03.3	179 07.7	20.4	226 47.5	33.5				
3	337	33.5	233 41.9	08.5	355 08.5	03.2	194 09.7	20.2	241 49.6	33.5				
4	352	36.0	248 41.1	08.3	10 10.5	03.2	209 11.6	20.1	256 51.7	33.4				
5	7	38.4	263 40.2	+23 08.1	25 12.4	-13 03.2	224 13.6	+15 19.9	271 53.8	+22 33.4				
6	22	40.9	278 39.3	+23 07.9	40 14.4	-13 03.1	239 15.6	+15 19.8	286 56.0	+22 33.4				
7	37	43.4	293 38.5	07.7	55 16.4	03.1	254 17.5	19.6	301 58.1	33.4				
8	52	45.8	308 37.6	07.5	70 18.4	03.1	269 19.5	19.4	317 00.2	33.4				
9	67	48.3	323 36.8	07.3	85 20.4	03.1	284 21.4	19.3	332 02.3	33.4				
10	82	50.8	338 35.9	07.1	100 22.4	03.0	299 23.4	19.1	347 04.4	33.4				
11	97	53.2	353 35.0	+23 06.9	115 24.3	-13 03.0	314 25.4	+15 18.9	2 06.6	+22 33.4				
12	112	55.7	8 34.2	+23 06.7	130 26.3	-13 03.0	329 27.3	+15 18.8	17 08.7	+22 33.4				
13	127	58.1	23 33.3	06.5	145 28.3	03.0	344 29.3	18.6	32 10.8	33.4				
14	143	00.6	38 32.4	06.3	160 30.3	02.9	359 31.3	18.5	47 12.9	33.3				
15	158	03.1	53 31.6	06.0	175 32.3	02.9	14 33.2	18.3	62 15.1	33.3				
16	173	05.5	68 30.7	05.8	190 34.3	02.9	29 35.2	18.1	77 17.2	33.3				
17	188	08.0	83 29.8	+23 05.6	205 36.3	-13 02.9	44 37.1	+15 18.0	92 19.3	+22 33.3				
18	203	10.5	98 29.0	+23 05.4	220 38.3	-13 02.8	59 39.1	+15 17.8	107 21.4	+22 33.3				
19	218	12.9	113 28.1	05.2	235 40.3	02.8	74 41.1	17.6	122 23.6	33.3				
20	233	15.4	128 27.3	05.0	250 42.3	02.8	89 43.0	17.5	137 25.7	33.3				
21	248	17.9	143 26.4	04.8	265 44.3	02.8	104 45.0	17.3	152 27.8	33.3				
22	263	20.3	158 25.5	04.6	280 46.3	02.7	119 46.9	17.2	167 29.9	33.3				
23	278	22.8	173 24.7	04.3	295 48.3	02.7	134 48.9	17.0	182 32.0	33.3				
24	293	25.3	188 23.8	+23 04.1	310 50.3	-13 02.7	149 50.9	+15 16.8	197 34.2	+22 33.2				
Dif	—		-9	-2	+20	0	+20	-2	+21	0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15:7 PMG: 12 ^h 06 ^m 0			Edad: 16 ^d 2 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/0 SD: 15:7 PMG: 2 ^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	30.5	+21 28.0	327	49.5	-19 07.7	60 N	** **	1 47	3 05	22 44	3	6 03	94		
1	193	30.5		342	18.2	97 -18 56.8	58	** **	2 17	21	35	7	15	90		
2	208	30.4		356	47.1	99 45.9	56	0 49	40	36	27	10	26	86		
3	223	30.3		11	16.0	99 34.9	54	1 38	2 58	48	20	13	36	82		
4	238	30.3		25	45.1	101 23.8	52	2 06	3 13	3 58	13	16	44	80		
5	253	30.2	+21 26.0	40	14.3	102 -18 12.7	50	2 27	3 26	4 08	22 08	17	6 52	77		
6	268	30.2	+21 25.6	54	43.6	103 -18 01.4	45	3 05	3 52	4 28	21 55	23	7 08	72		
7	283	30.1		69	13.1	105 -17 50.1	40	32	4 12	44	45	26	21	68		
8	298	30.0		83	42.6	105 38.7	35	3 53	29	4 58	36	30	32	64		
9	313	30.0		98	12.2	106 27.2	30	4 10	4 42	5 09	28	33	41	62		
10	328	29.9		112	42.0	108 15.6	20	37	5 05	29	14	38	7 58	56		
11	343	29.9	+21 23.5	127	11.8	108 -17 04.0	10 N	4 57	5 24	5 46	21 02	42	8 12	52		
12	358	29.8	+21 23.1	141	41.8	110 -16 52.3	0	5 14	5 40	6 02	20 51	46	8 25	49		
13	13	29.7		156	11.9	111 40.5	10 S	30	5 56	18	40	50	39	44		
14	28	29.7		170	42.1	112 28.7	20	44	6 11	35	28	54	8 53	40		
15	43	29.6		185	12.3	112 16.7	30	5 59	28	6 54	14	60	9 09	35		
16	58	29.6		199	42.7	114 -16 04.8	35	6 06	38	7 05	20 06	62	18	32		
17	73	29.5	+21 21.1	214	13.2	115 -15 52.7	40	6 15	6 48	7 18	19 57	66	9 28	29		
18	88	29.5	+21 20.7	228	43.8	116 -15 40.6	45	6 24	7 00	7 33	19 46	70	9 40	25		
19	103	29.4		243	14.5	117 28.4	50	34	14	7 51	32	76	9 55	20		
20	118	29.3		257	45.3	118 16.2	52	38	21	8 00	26	78	10 02	18		
21	133	29.3		272	16.2	119 -15 03.9	54	43	28	09	19	81	10	15		
22	148	29.2		286	47.2	120 -14 51.5	56	48	35	20	12	83	18	12		
23	163	29.2		301	18.3	121 39.1	58	6 54	44	33	19 03	87	28	9		
24	178	29.1	+21 18.2	315	49.5	122 -14 26.7	60 S	7 00	7 54	8 47	18 53	91	10 38	6		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 25 ^m 6		Mag: -3.9 PMG: 11 ^h 27 ^m		Mag: -1.9 PMG: 3 ^h 16 ^m		Mag: -1.8 PMG: 13 ^h 59 ^m		Mag: +0.1 PMG: 10 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	293	25.3	188	23.8	+23 04.1	310	50.3	-13 02.7	149	50.9	+15 16.8	197	34.2	+22 33.2
1	308	27.7	203	23.0	03.9	325	52.3	02.7	164	52.8	16.7	212	36.3	33.2
2	323	30.2	218	22.1	03.7	340	54.3	02.7	179	54.8	16.5	227	38.4	33.2
3	338	32.6	233	21.2	03.5	355	56.3	02.6	194	56.8	16.3	242	40.5	33.2
4	353	35.1	248	20.4	03.2	10	58.3	02.6	209	58.7	16.2	257	42.7	33.2
5	8	37.6	263	19.5	+23 03.0	26	00.3	-13 02.6	225	00.7	+15 16.0	272	44.8	+22 33.2
6	23	40.0	278	18.6	+23 02.8	41	02.3	-13 02.6	240	02.6	+15 15.8	287	46.9	+22 33.2
7	38	42.5	293	17.8	02.6	56	04.3	02.6	255	04.6	15.7	302	49.0	33.2
8	53	45.0	308	16.9	02.3	71	06.3	02.5	270	06.6	15.5	317	51.2	33.2
9	68	47.4	323	16.1	02.1	86	08.3	02.5	285	08.5	15.4	332	53.3	33.1
10	83	49.9	338	15.2	01.9	101	10.4	02.5	300	10.5	15.2	347	55.4	33.1
11	98	52.4	353	14.3	+23 01.6	116	12.4	-13 02.5	315	12.4	+15 15.0	2	57.5	+22 33.1
12	113	54.8	8	13.5	+23 01.4	131	14.4	-13 02.5	330	14.4	+15 14.9	17	59.6	+22 33.1
13	128	57.3	23	12.6	01.2	146	16.4	02.5	345	16.4	14.7	33	01.8	33.1
14	143	59.8	38	11.8	00.9	161	18.4	02.4	0	18.3	14.5	48	03.9	33.1
15	159	02.2	53	10.9	00.7	176	20.4	02.4	15	20.3	14.4	63	06.0	33.1
16	174	04.7	68	10.0	00.5	191	22.5	02.4	30	22.2	14.2	78	08.1	33.1
17	189	07.1	83	09.2	+23 00.2	206	24.5	-13 02.4	45	24.2	+15 14.0	93	10.3	+22 33.1
18	204	09.6	98	08.3	+23 00.0	221	26.5	-13 02.4	60	26.2	+15 13.9	108	12.4	+22 33.1
19	219	12.1	113	07.5	+22 59.7	236	28.5	02.4	75	28.1	13.7	123	14.5	33.0
20	234	14.5	128	06.6	59.5	251	30.6	02.4	90	30.1	13.6	138	16.6	33.0
21	249	17.0	143	05.7	59.3	266	32.6	02.4	105	32.0	13.4	153	18.8	33.0
22	264	19.5	158	04.9	59.0	281	34.6	02.3	120	34.0	13.2	168	20.9	33.0
23	279	21.9	173	04.0	58.8	296	36.6	02.3	135	36.0	13.1	183	23.0	33.0
24	294	24.4	188	03.2	+22 58.5	311	38.7	-13 02.3	150	37.9	+15 12.9	198	25.1	+22 33.0
Dif	—		-9		-2	+20		0	+20		-2	+21		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 2 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 5 20 ^h : 56 ^m 2										
	PMG: 12 ^h 06 ^m 1			SD: 15 ^h 5 PMG: 3 ^h 03 ^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	29.1	+21 18.2	315	49.5	-14 26.7	125	60 N	21 04	22 20	** ** *	22 47	3	7 37 89
1	193	29.1	17.8	330	20.8 ¹²³	14.2 ¹²⁵	125	58	20 48	21 51	** ** *	42	6	45 85
2	208	29.0	17.4	344	52.2 ¹²⁴	-14 01.6 ¹²⁶	126	56	34	29	23 12	37	9	52 81
3	223	29.0	16.9	359	23.7 ¹²⁵	-13 49.0 ¹²⁶	127	54	22	21 11	22 29	33	11	7 58 76
4	238	28.9	16.5	13	55.3 ¹²⁶	36.3 ¹²⁷	127	52	12	20 57	22 02	29	13	8 04 76
5	253	28.8	+21 16.1	28	26.9 ¹²⁶	-13 23.6 ¹²⁷	127	50	20 02	20 44	21 42	22 25	16	8 09 74
6	268	28.8	+21 15.7	42	58.7 ¹²⁸	-13 10.8 ¹²⁸	128	45	19 43	20 18	21 05	22 18	19	8 20 68
7	283	28.7	15.3	57	30.5 ¹²⁸	-12 58.0 ¹²⁸	128	40	27	19 59	20 38	11	24	29 64
8	298	28.7	14.9	72	02.5 ¹³⁰	45.2 ¹²⁸	128	35	14	42	18	06	26	36 61
9	313	28.6	14.4	86	34.5 ¹³⁰	32.3 ¹²⁹	129	30	19 02	29	20 01	22 01	29	43 58
10	328	28.6	14.0	101	06.6 ¹³¹	19.3 ¹³⁰	130	20	18 42	19 06	19 35	21 52	34	8 54 53
11	343	28.5	+21 13.6	115	38.8 ¹³²	-12 06.3 ¹³⁰	130	10 N	18 25	18 48	19 15	21 44	39	9 04 49
12	358	28.5	+21 13.2	130	11.1 ¹³³	-11 53.3 ¹³⁰	130	0	18 10	18 32	18 58	21 37	43	9 14 44
13	13	28.4	12.7	144	43.5 ¹³⁴	40.3 ¹³⁰	130	10 S	17 54	17	43	30	47	23 40
14	28	28.4	12.3	159	16.0 ¹³⁵	27.2 ¹³¹	131	20	38	18 01	28	22	52	33 36
15	43	28.3	11.9	173	48.5 ¹³⁵	14.1 ¹³¹	131	30	19	17 44	14	14	56	44 31
16	58	28.3	11.5	188	21.1 ¹³⁶	-11 00.9 ¹³²	132	35	17 08	35	18 06	08	60	50 28
17	73	28.2	+21 11.1	202	53.8 ¹³⁷	-10 47.7 ¹³²	132	40	16 55	17 25	17 58	21 03	63	9 57 25
18	88	28.1	+21 10.6	217	26.6 ¹³⁸	-10 34.5 ¹³²	132	45	16 40	17 13	17 50	20 56	67	10 05 22
19	103	28.1	10.2	231	59.4 ¹³⁸	21.2 ¹³³	133	50	22	16 59	40	48	72	15 17
20	118	28.0	09.8	246	32.4 ¹⁴⁰	-10 07.9 ¹³³	133	52	14	53	35	44	74	20 14
21	133	28.0	09.3	261	05.4 ¹⁴⁰	-9 54.6 ¹³³	133	54	16 04	46	31	40	76	25 12
22	148	27.9	08.9	275	38.5 ¹⁴¹	41.3 ¹³³	133	56	15 53	38	26	35	79	30 10
23	163	27.9	08.5	290	11.6 ¹⁴¹	27.9 ¹³⁴	134	58	41	30	20	30	82	37 6
24	178	27.8	+21 08.1	304	44.9 ¹⁴³	-9 14.5 ¹³⁴	134	60 S	15 27	16 20	17 14	20 24	86	10 44 3
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 21 ^m 7		Mag: -3.9 PMG: 11 ^h 28 ^m			Mag: -1.9 PMG: 3 ^h 13 ^m			Mag: -1.8 PMG: 13 ^h 56 ^m			Mag: +0.1 PMG: 10 ^h 45 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	294	24.4	188	03.2	+22 58.5	311	38.7	-13 02.3	150	37.9	+15 12.9	198	25.1	+22 33.0
1	309	26.9	203	02.3	58.3	326	40.7	02.3	165	39.9	12.7	213	27.3	33.0
2	324	29.3	218	01.5	58.0	341	42.7	02.3	180	41.8	12.6	228	29.4	33.0
3	339	31.8	233	00.6	57.8	356	44.8	02.3	195	43.8	12.4	243	31.5	33.0
4	354	34.2	247	59.7	57.5	11	46.8	02.3	210	45.8	12.2	258	33.6	32.9
5	9	36.7	262	58.9	+22 57.3	26	48.8	-13 02.3	225	47.7	+15 12.1	273	35.8	+22 32.9
6	24	39.2	277	58.0	+22 57.0	41	50.9	-13 02.3	240	49.7	+15 11.9	288	37.9	+22 32.9
7	39	41.6	292	57.2	56.8	56	52.9	02.3	255	51.6	11.7	303	40.0	32.9
8	54	44.1	307	56.3	56.5	71	54.9	02.3	270	53.6	11.6	318	42.1	32.9
9	69	46.6	322	55.5	56.2	86	57.0	02.2	285	55.6	11.4	333	44.2	32.9
10	84	49.0	337	54.6	56.0	101	59.0	02.2	300	57.5	11.2	348	46.4	32.9
11	99	51.5	352	53.7	+22 55.7	117	01.1	-13 02.2	315	59.5	+15 11.1	3	48.5	+22 32.9
12	114	54.0	7	52.9	+22 55.5	132	03.1	-13 02.2	331	01.4	+15 10.9	18	50.6	+22 32.9
13	129	56.4	22	52.0	55.2	147	05.2	02.2	346	03.4	10.8	33	52.7	32.9
14	144	58.9	37	51.2	54.9	162	07.2	02.2	1	05.4	10.6	48	54.9	32.8
15	160	01.4	52	50.3	54.7	177	09.3	02.2	16	07.3	10.4	63	57.0	32.8
16	175	03.8	67	49.5	54.4	192	11.3	02.2	31	09.3	10.3	78	59.1	32.8
17	190	06.3	82	48.6	+22 54.1	207	13.3	-13 02.2	46	11.2	+15 10.1	94	01.2	+22 32.8
18	205	08.7	97	47.8	+22 53.9	222	15.4	-13 02.2	61	13.2	+15 09.9	109	03.4	+22 32.8
19	220	11.2	112	46.9	53.6	237	17.5	02.2	76	15.2	09.8	124	05.5	32.8
20	235	13.7	127	46.0	53.3	252	19.5	02.2	91	17.1	09.6	139	07.6	32.8
21	250	16.1	142	45.2	53.1	267	21.6	02.2	106	19.1	09.4	154	09.7	32.8
22	265	18.6	157	44.3	52.8	282	23.6	02.2	121	21.0	09.3	169	11.9	32.8
23	280	21.1	172	43.5	52.5	297	25.7	02.2	136	23.0	09.1	184	14.0	32.7
24	295	23.5	187	42.6	+22 52.2	312	27.7	-13 02.2	151	25.0	+15 08.9	199	16.1	+22 32.7
Dif	—		-9 -3			+20 0			+20 -2			+21 0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 18 ^d 2 PHE { 4 ^h : 56 ^m 0 12 ^h : 55 ^m 8 20 ^h : 55 ^m 6										
	PMG: 12 ^h 06 ^m 2			SD: 15 ^h 3 PMG: 3 ^h 48 ^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	27.8	+21 08.1	304	44.9	-9 14.5	60 N	** **	1 53	3 08	22 50	2	9 06	84
1	193	27.8		319	18.2 ¹⁴³	-9 01.1 ¹³⁴	58	** **	2 22	25	48	5	10	80
2	208	27.7		333	51.5 ¹⁴³	-8 47.7 ¹³⁴	56	1 01	2 44	39	46	7	13	78
3	223	27.7		348	25.0 ¹⁴⁵	34.2 ¹³⁵	54	1 44	3 01	3 51	44	10	17	75
4	238	27.6		2	58.5 ¹⁴⁵	20.7 ¹³⁵	52	2 10	16	4 01	42	12	20	72
5	253	27.6	+21 05.9	17	32.0 ¹⁴⁵	-8 07.2 ¹³⁵	50	2 31	3 29	4 10	22 41	14	9 23	70
6	268	27.5	+21 05.5	32	05.7 ¹⁴⁷	-7 53.7 ¹³⁵	45	3 08	3 54	4 30	22 37	19	9 28	66
7	283	27.5		46	39.4 ¹⁴⁷	40.1 ¹³⁶	40	34	4 14	46	35	22	33	62
8	298	27.4		61	13.1 ¹⁴⁷	26.6 ¹³⁵	35	3 55	30	4 59	32	25	37	59
9	313	27.4		75	46.9 ¹⁴⁸	-7 13.0 ¹³⁶	30	4 11	4 44	5 10	30	28	41	56
10	328	27.3		90	20.8 ¹⁴⁹	-6 59.4 ¹³⁶	20	37	5 06	30	26	33	47	51
11	343	27.3	+21 03.3	104	54.8 ¹⁵⁰	-6 45.8 ¹³⁶	10 N	4 58	5 24	5 47	22 23	37	9 53	46
12	358	27.2	+21 02.9	119	28.8 ¹⁵⁰	-6 32.2 ¹³⁶	0	5 15	5 40	6 03	22 20	41	9 58	42
13	13	27.2		134	02.8 ¹⁵⁰	18.6 ¹³⁶	10 S	30	5 56	18	17	45	10 03	38
14	28	27.2		148	36.9 ¹⁵¹	-6 04.9 ¹³⁷	20	44	6 11	35	14	50	09	33
15	43	27.1		163	11.1 ¹⁵²	-5 51.3 ¹³⁶	30	5 58	28	6 53	10	55	15	28
16	58	27.1		177	45.3 ¹⁵²	37.6 ¹³⁷	35	6 06	37	7 04	08	58	18	26
17	73	27.0	+21 00.7	192	19.6 ¹⁵³	-5 24.0 ¹³⁶	40	6 14	6 47	7 17	22 06	61	10 22	23
18	88	27.0	+21 00.2	206	53.9 ¹⁵³	-5 10.3 ¹³⁷	45	6 22	6 59	7 31	22 03	65	10 27	18
19	103	26.9	+20 59.8	221	28.3 ¹⁵⁴	-4 56.6 ¹³⁷	50	32	7 12	49	22 00	69	32	14
20	118	26.9		236	02.7 ¹⁵⁴	42.9 ¹³⁷	52	36	19	7 58	21 58	71	34	13
21	133	26.8		250	37.1 ¹⁵⁴	29.2 ¹³⁷	54	41	26	8 07	56	74	37	10
22	148	26.8		265	11.7 ¹⁵⁶	15.5 ¹³⁷	56	46	33	18	54	77	40	8
23	163	26.7		279	46.2 ¹⁵⁵	-4 01.8 ¹³⁷	58	52	42	30	52	79	43	6
24	178	26.7	+20 57.6	294	20.8 ¹⁵⁶	-3 48.1 ¹³⁷	60 S	6 58	7 51	8 44	21 50	82	10 47	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 17 ^m 7		Mag: -3.9 PMG: 11 ^h 30 ^m		Mag: -1.9 PMG: 3 ^h 10 ^m		Mag: -1.8 PMG: 13 ^h 53 ^m		Mag: +0.1 PMG: 10 ^h 41 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	°	°	'	°	°	'	
0	295	23.5	187	42.6	+22 52.2	312	27.7	-13 02.2	151	25.0	+15 08.9	199	16.1	+22 32.7
1	310	26.0	202	41.8	52.0	327	29.8	02.2	166	26.9	08.8	214	18.2	32.7
2	325	28.5	217	40.9	51.7	342	31.9	02.2	181	28.9	08.6	229	20.4	32.7
3	340	30.9	232	40.1	51.4	357	33.9	02.2	196	30.8	08.4	244	22.5	32.7
4	355	33.4	247	39.2	51.1	12	36.0	02.2	211	32.8	08.3	259	24.6	32.7
5	10	35.9	262	38.4	+22 50.8	27	38.0	-13 02.2	226	34.7	+15 08.1	274	26.7	+22 32.7
6	25	38.3	277	37.5	+22 50.6	42	40.1	-13 02.2	241	36.7	+15 07.9	289	28.9	+22 32.7
7	40	40.8	292	36.7	50.3	57	42.2	02.2	256	38.7	07.8	304	31.0	32.7
8	55	43.2	307	35.8	50.0	72	44.2	02.2	271	40.6	07.6	319	33.1	32.6
9	70	45.7	322	35.0	49.7	87	46.3	02.2	286	42.6	07.4	334	35.2	32.6
10	85	48.2	337	34.1	49.4	102	48.4	02.2	301	44.5	07.3	349	37.4	32.6
11	100	50.6	352	33.2	+22 49.1	117	50.5	-13 02.2	316	46.5	+15 07.1	4	39.5	+22 32.6
12	115	53.1	7	32.4	+22 48.8	132	52.5	-13 02.2	331	48.5	+15 07.0	19	41.6	+22 32.6
13	130	55.6	22	31.5	48.5	147	54.6	02.2	346	50.4	06.8	34	43.8	32.6
14	145	58.0	37	30.7	48.3	162	56.7	02.2	1	52.4	06.6	49	45.9	32.6
15	161	00.5	52	29.8	48.0	177	58.7	02.2	16	54.3	06.5	64	48.0	32.6
16	176	03.0	67	29.0	47.7	193	00.8	02.3	31	56.3	06.3	79	50.1	32.6
17	191	05.4	82	28.1	+22 47.4	208	02.9	-13 02.3	46	58.2	+15 06.1	94	52.3	+22 32.5
18	206	07.9	97	27.3	+22 47.1	223	05.0	-13 02.3	62	00.2	+15 06.0	109	54.4	+22 32.5
19	221	10.3	112	26.4	46.8	238	07.1	02.3	77	02.2	05.8	124	56.5	32.5
20	236	12.8	127	25.6	46.5	253	09.1	02.3	92	04.1	05.6	139	58.6	32.5
21	251	15.3	142	24.7	46.2	268	11.2	02.3	107	06.1	05.5	155	00.8	32.5
22	266	17.7	157	23.9	45.9	283	13.3	02.3	122	08.0	05.3	170	02.9	32.5
23	281	20.2	172	23.0	45.6	298	15.4	02.3	137	10.0	05.1	185	05.0	32.5
24	296	22.7	187	22.2	+22 45.3	313	17.5	-13 02.3	152	11.9	+15 05.0	200	07.1	+22 32.5
Dif	—		-9 -3		+21 0		+20 -2		+21 0		+21 0		+21 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 19 ^d 2	PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 2 20 ^h : 55 ^m 0	SD: 15 ^h 1			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 06 ^m 3					PMG: 4 ^h 30 ^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	h m m	
0	178	26.7	+20 57.6	294	20.8	-3 48.1		60 N	21 01	22 13	** **	22 52 2		10 30 81	
1	193	26.6		308	55.4 ¹⁵⁶		34.4 ¹³⁷	58	20 45	21 46	** **	53 4		30 79	
2	208	26.6	56.7	323	30.1 ¹⁵⁷		20.7 ¹³⁷	56	31	25	23 02	53 8		31 76	
3	223	26.6	56.2	338	04.8 ¹⁵⁷	-3 07.0 ¹³⁷		54	20	21 08	22 23	54 10		32 73	
4	238	26.5	55.8	352	39.6 ¹⁵⁸	-2 53.3 ¹³⁷		52	09	20 54	21 58	54 12		32 71	
5	253	26.5	+20 55.3	7	14.4 ¹⁵⁸	-2 39.6 ¹³⁷		50	20 00	20 42	21 38	22 55 14		10 33 69	
6	268	26.4	+20 54.9	21	49.2 ¹⁵⁸	-2 25.9 ¹³⁷		45	19 41	20 17	21 02	22 56 18		10 34 64	
7	283	26.4	54.4	36	24.1 ¹⁵⁹	-2 12.2 ¹³⁷		40	26	19 57	20 36	57 21		35 60	
8	298	26.3	54.0	50	59.0 ¹⁵⁹	-1 58.5 ¹³⁷		35	13	41	16	57 25		36 57	
9	313	26.3	53.6	65	33.9 ¹⁵⁹		44.9 ¹³⁶	30	19 01	28	20 00	58 28		37 54	
10	328	26.3	53.1	80	08.9 ¹⁶⁰		31.2 ¹³⁷	20	18 42	19 06	19 34	22 59 33		38 49	
11	343	26.2	+20 52.7	94	43.9 ¹⁶⁰	-1 17.5 ¹³⁷		10 N	18 25	18 48	19 14	23 00 37		10 39 45	
12	358	26.2	+20 52.2	109	18.9 ¹⁶⁰	-1 03.8 ¹³⁷		0	18 10	18 32	18 58	23 01 41		10 40 41	
13	13	26.1	51.7	123	54.0 ¹⁶¹	-0 50.2 ¹³⁶		10 S	17 55	17	43	02 45		41 37	
14	28	26.1	51.3	138	29.1 ¹⁶¹		36.5 ¹³⁷	20	38	18 02	29	04 48		42 33	
15	43	26.0	50.8	153	04.2 ¹⁶¹		22.9 ¹³⁶	30	20	17 46	15	05 54		43 28	
16	58	26.0	50.4	167	39.3 ¹⁶¹	-0 09.2 ¹³⁷		35	17 09	36	07	06 56		44 25	
17	73	26.0	+20 49.9	182	14.5 ¹⁶²	+0 04.4 ¹³⁶		40	16 57	17 26	18 00	23 07 59		10 45 21	
18	88	25.9	+20 49.5	196	49.6 ¹⁶¹	+0 18.0 ¹³⁶		45	16 42	17 15	17 51	23 08 63		10 45 19	
19	103	25.9	49.0	211	24.8 ¹⁶²		31.6 ¹³⁶	50	25	17 01	42	09 68		46 14	
20	118	25.8	48.6	226	00.1 ¹⁶³		45.2 ¹³⁶	52	16	16 55	37	09 70		47 12	
21	133	25.8	48.1	240	35.3 ¹⁶²	+0 58.7 ¹³⁵		54	16 07	48	33	10 72		47 10	
22	148	25.8	47.7	255	10.6 ¹⁶³	+1 12.3 ¹³⁶		56	15 56	41	28	11 75		48 7	
23	163	25.7	47.2	269	45.8 ¹⁶²		25.8 ¹³⁵	58	44	32	23	11 78		49 4	
24	178	25.7	+20 46.7	284	21.1 ¹⁶³	+1 39.4 ¹³⁶		60 S	15 31	16 23	17 17	23 12 81		10 49 2	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 4 ^h 13 ^m 8		Mag: -3.9 PMG: 11 ^h 31 ^m			Mag: -2.0 PMG: 3 ^h 06 ^m			Mag: -1.8 PMG: 13 ^h 49 ^m			Mag: +0.1 PMG: 10 ^h 38 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	
0	296	22.7	187	22.2	+22 45.3	313	17.5	-13 02.3	152	11.9	+15 05.0	200	07.1	+22 32.5	
1	311	25.1	202	21.3	45.0	328	19.6	02.3	167	13.9	04.8	215	09.3	32.5	
2	326	27.6	217	20.5	44.7	343	21.7	02.3	182	15.9	04.6	230	11.4	32.4	
3	341	30.1	232	19.6	44.4	358	23.8	02.4	197	17.8	04.5	245	13.5	32.4	
4	356	32.5	247	18.8	44.0	13	25.9	02.4	212	19.8	04.3	260	15.6	32.4	
5	11	35.0	262	17.9	+22 43.7	28	27.9	-13 02.4	227	21.7	+15 04.1	275	17.8	+22 32.4	
6	26	37.5	277	17.1	+22 43.4	43	30.0	-13 02.4	242	23.7	+15 04.0	290	19.9	+22 32.4	
7	41	39.9	292	16.3	43.1	58	32.1	02.4	257	25.6	03.8	305	22.0	32.4	
8	56	42.4	307	15.4	42.8	73	34.2	02.4	272	27.6	03.6	320	24.1	32.4	
9	71	44.8	322	14.6	42.5	88	36.3	02.4	287	29.6	03.5	335	26.3	32.4	
10	86	47.3	337	13.7	42.2	103	38.4	02.5	302	31.5	03.3	350	28.4	32.4	
11	101	49.8	352	12.9	+22 41.9	118	40.5	-13 02.5	317	33.5	+15 03.1	5	30.5	+22 32.3	
12	116	52.2	7	12.0	+22 41.5	133	42.6	-13 02.5	332	35.4	+15 03.0	20	32.7	+22 32.3	
13	131	54.7	22	11.2	41.2	148	44.7	02.5	347	37.4	02.8	35	34.8	32.3	
14	146	57.2	37	10.3	40.9	163	46.8	02.5	2	39.3	02.6	50	36.9	32.3	
15	161	59.6	52	09.5	40.6	178	48.9	02.5	17	41.3	02.5	65	39.0	32.3	
16	177	02.1	67	08.6	40.3	193	51.1	02.6	32	43.3	02.3	80	41.2	32.3	
17	192	04.6	82	07.8	+22 39.9	208	53.2	-13 02.6	47	45.2	+15 02.1	95	43.3	+22 32.3	
18	207	07.0	97	06.9	+22 39.6	223	55.3	-13 02.6	62	47.2	+15 02.0	110	45.4	+22 32.3	
19	222	09.5	112	06.1	39.3	238	57.4	02.6	77	49.1	01.8	125	47.5	32.3	
20	237	11.9	127	05.3	39.0	253	59.5	02.6	92	51.1	01.6	140	49.7	32.2	
21	252	14.4	142	04.4	38.6	269	01.6	02.7	107	53.0	01.5	155	51.8	32.2	
22	267	16.9	157	03.6	38.3	284	03.7	02.7	122	55.0	01.3	170	53.9	32.2	
23	282	19.3	172	02.7	38.0	299	05.8	02.7	137	56.9	01.1	185	56.1	32.2	
24	297	21.8	187	01.9	+22 37.6	314	08.0	-13 02.7	152	58.9	+15 01.0	200	58.2	+22 32.2	
Dif	—		-8 -3			+21 0			+20 -2		+21 0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 20 ^d 2	PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6									
	PMG: 12 ^h 06 ^m 3					PMG: 5 ^h 11 ^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	178	25.7	+20 46.7	284	21.1	+1 39.4	60 N	** **	2 00	3 13	22 54	2	11 51	81
1	193	25.6	46.3	298	56.4 ¹⁶³	+1 52.9 ¹³⁵	58	** **	27	28	22 57	6	49	78
2	208	25.6	45.8	313	31.7 ¹⁶³	+2 06.4 ¹³⁵	56	1 11	2 48	42	23 01	8	47	75
3	223	25.6	45.4	328	07.1 ¹⁶⁴	19.9 ¹³⁵	54	1 50	3 05	3 53	04 10		45	72
4	238	25.5	44.9	342	42.4 ¹⁶³	33.3 ¹³⁴	52	2 15	19	4 04	06 13		43	70
5	253	25.5	+20 44.4	357	17.8 ¹⁶⁴	+2 46.8 ¹³⁵	50	2 35	3 31	4 13	23 09	15	11 42	68
6	268	25.4	+20 44.0	11	53.1 ¹⁶³	+3 00.2 ¹³⁴	45	3 11	3 56	4 32	23 14	19	11 38	64
7	283	25.4	43.5	26	28.5 ¹⁶⁴	13.6 ¹³⁴	40	36	4 16	4 47	18 23		35	60
8	298	25.4	43.0	41	03.8 ¹⁶³	26.9 ¹³³	35	3 56	32	5 00	22 26		33	56
9	313	25.3	42.6	55	39.2 ¹⁶⁴	40.3 ¹³⁴	30	4 13	4 45	12	26 28		31	53
10	328	25.3	42.1	70	14.6 ¹⁶⁴	+3 53.6 ¹³³	20	38	5 07	31	32 33		27	49
11	343	25.2	+20 41.6	84	50.0 ¹⁶⁴	+4 06.9 ¹³³	10 N	4 58	5 25	5 47	23 37	37	11 24	44
12	358	25.2	+20 41.2	99	25.4 ¹⁶⁴	+4 20.2 ¹³³	0	5 15	5 41	6 03	23 42	41	11 21	40
13	13	25.2	40.7	114	00.8 ¹⁶⁴	33.5 ¹³³	10 S	30	5 56	18	47 45		18	37
14	28	25.1	40.2	128	36.2 ¹⁶⁴	46.7 ¹³²	20	44	6 11	34	52 49		15	32
15	43	25.1	39.8	143	11.5 ¹⁶³	+4 59.9 ¹³²	30	5 58	27	6 53	23 59	53	11	28
16	58	25.1	39.3	157	46.9 ¹⁶⁴	+5 13.1 ¹³²	35	6 05	36	7 03	** ** *		09	25
17	73	25.0	+20 38.8	172	22.3 ¹⁶⁴	+5 26.3 ¹³²	40	6 13	6 46	7 15	** ** *		11 06	23
18	88	25.0	+20 38.4	186	57.7 ¹⁶⁴	+5 39.4 ¹³¹	45	6 21	6 57	7 30	** ** *		11 04	18
19	103	25.0	37.9	201	33.1 ¹⁶⁴	+5 52.5 ¹³¹	50	30	7 11	47	** ** *		11 00	15
20	118	24.9	37.4	216	08.4 ¹⁶³	+6 05.6 ¹³¹	52	35	17	7 56	** ** *		10 59	12
21	133	24.9	37.0	230	43.8 ¹⁶⁴	18.6 ¹³⁰	54	39	24	8 05	** ** *		57	10
22	148	24.9	36.5	245	19.1 ¹⁶³	31.7 ¹³¹	56	44	31	15	** ** *		55	8
23	163	24.8	36.0	259	54.5 ¹⁶⁴	44.6 ¹²⁹	58	49	39	27	** ** *		53	6
24	178	24.8	+20 35.5	274	29.8 ¹⁶³	+6 57.6 ¹³⁰	60 S	6 55	7 49	8 41	** ** *		10 51	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 09 ^m 9		Mag: -3.9 PMG: 11 ^h 33 ^m		Mag: -2.0 PMG: 3 ^h 03 ^m		Mag: -1.8 PMG: 13 ^h 46 ^m		Mag: +0.1 PMG: 10 ^h 35 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	297	21.8	187	01.9	+22 37.6	314	08.0	-13 02.7	152	58.9	+15 01.0	200	58.2	+22 32.2
1	312	24.3	202	01.0	37.3	329	10.1	02.7	168	00.9	00.8	216	00.3	32.2
2	327	26.7	217	00.2	37.0	344	12.2	02.8	183	02.8	00.6	231	02.4	32.2
3	342	29.2	231	59.3	36.6	359	14.3	02.8	198	04.8	00.5	246	04.6	32.2
4	357	31.7	246	58.5	36.3	14	16.4	02.8	213	06.7	00.3	261	06.7	32.2
5	12	34.1	261	57.7	+22 36.0	29	18.6	-13 02.8	228	08.7	+15 00.1	276	08.8	+22 32.1
6	27	36.6	276	56.8	+22 35.6	44	20.7	-13 02.9	243	10.6	+15 00.0	291	10.9	+22 32.1
7	42	39.1	291	56.0	35.3	59	22.8	02.9	258	12.6	+14 59.8	306	13.1	32.1
8	57	41.5	306	55.1	34.9	74	24.9	02.9	273	14.5	59.6	321	15.2	32.1
9	72	44.0	321	54.3	34.6	89	27.1	02.9	288	16.5	59.5	336	17.3	32.1
10	87	46.4	336	53.5	34.3	104	29.2	03.0	303	18.5	59.3	351	19.5	32.1
11	102	48.9	351	52.6	+22 33.9	119	31.3	-13 03.0	318	20.4	+14 59.1	6	21.6	+22 32.1
12	117	51.4	6	51.8	+22 33.6	134	33.5	-13 03.0	333	22.4	+14 59.0	21	23.7	+22 32.1
13	132	53.8	21	50.9	33.2	149	35.6	03.0	348	24.3	58.8	36	25.8	32.0
14	147	56.3	36	50.1	32.9	164	37.7	03.1	3	26.3	58.6	51	28.0	32.0
15	162	58.8	51	49.2	32.5	179	39.9	03.1	18	28.2	58.5	66	30.1	32.0
16	178	01.2	66	48.4	32.2	194	42.0	03.1	33	30.2	58.3	81	32.2	32.0
17	193	03.7	81	47.6	+22 31.8	209	44.1	-13 03.1	48	32.1	+14 58.1	96	34.4	+22 32.0
18	208	06.2	96	46.7	+22 31.5	224	46.3	-13 03.2	63	34.1	+14 57.9	111	36.5	+22 32.0
19	223	08.6	111	45.9	31.1	239	48.4	03.2	78	36.1	57.8	126	38.6	32.0
20	238	11.1	126	45.1	30.8	254	50.6	03.2	93	38.0	57.6	141	40.7	32.0
21	253	13.6	141	44.2	30.4	269	52.7	03.3	108	40.0	57.4	156	42.9	32.0
22	268	16.0	156	43.4	30.1	284	54.8	03.3	123	41.9	57.3	171	45.0	31.9
23	283	18.5	171	42.5	29.7	299	57.0	03.3	138	43.9	57.1	186	47.1	31.9
24	298	20.9	186	41.7	+22 29.3	314	59.1	-13 03.4	153	45.8	+14 56.9	201	49.3	+22 31.9
Dif	—		-8 -3		+21 0		+20 -2		+21 0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 21 ^d 2	PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3									
	PMG: 12 ^h 06 ^m 4					SD: 14 ^h 8			PMG: 5 ^h 52 ^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	h m	h m
0	178	24.8	+20 35.5	274	29.8	+6 57.6	60 N	20 57	22 07	** **	22 56	4	13 12	83
1	193	24.8	35.1	289	05.1 ¹⁶³	+7 10.5 ¹²⁹	58	41	21 41	** **	23 03	7	07 78	
2	208	24.7	34.6	303	40.4 ¹⁶³	23.4 ¹²⁹	56	28	21	22 52	09 10	13 02	75	
3	223	24.7	34.1	318	15.7 ¹⁶³	36.3 ¹²⁹	54	17	21 05	22 18	14 13	12 57	73	
4	238	24.7	33.6	332	51.0 ¹⁶³	+7 49.1 ¹²⁸	52	20 07	20 51	21 54	19 15	53 71		
5	253	24.6	+20 33.2	347	26.2 ¹⁶²	+8 01.9 ¹²⁸	50	19 58	20 39	21 35	23 24	17	12 50	68
6	268	24.6	+20 32.7	2	01.5 ¹⁶³	+8 14.6 ¹²⁷	45	19 39	20 14	21 00	23 33	22	12 42	63
7	283	24.6	32.2	16	36.7 ¹⁶²	27.3 ¹²⁷	40	24	19 55	20 34	41 25	35	60	
8	298	24.5	31.7	31	11.9 ¹⁶²	40.0 ¹²⁷	35	11	40	20 15	48 28	29	57	
9	313	24.5	31.3	45	47.1 ¹⁶²	+8 52.6 ¹²⁶	30	19 00	27	19 59	23 54	31	24 55	
10	328	24.5	30.8	60	22.3 ¹⁶²	+9 05.3 ¹²⁷	20	18 41	19 05	34	** **	**	16 49	
11	343	24.4	+20 30.3	74	57.4 ¹⁶¹	+9 17.8 ¹²⁵	10 N	18 25	18 48	19 14	** **	**	12 08	46
12	358	24.4	+20 29.8	89	32.5 ¹⁶¹	+9 30.3 ¹²⁵	0	18 10	18 32	18 58	** **	**	12 01	42
13	13	24.4	29.3	104	07.6 ¹⁶¹	42.8 ¹²⁵	10 S	17 55	17	43	** **	**	11 55	37
14	28	24.3	28.9	118	42.7 ¹⁶¹	+9 55.3 ¹²⁵	20	39	18 02	29	** **	**	47 34	
15	43	24.3	28.4	133	17.7 ¹⁶⁰	+10 07.7 ¹²⁴	30	21	17 47	16	** **	**	39 29	
16	58	24.3	27.9	147	52.7 ¹⁶⁰	20.0 ¹²³	35	17 10	38	09	0 02	57	34 27	
17	73	24.2	+20 27.4	162	27.7 ¹⁶⁰	+10 32.4 ¹²⁴	40	16 58	17 28	18 01	0 06	60	11 29	23
18	88	24.2	+20 26.9	177	02.7 ¹⁶⁰	+10 44.6 ¹²²	45	16 44	17 17	17 53	0 11	63	11 22	20
19	103	24.2	26.4	191	37.6 ¹⁵⁹	+10 56.9 ¹²³	50	27	17 03	44	17 68	15	16	
20	118	24.2	26.0	206	12.5 ¹⁵⁹	+11 09.1 ¹²²	52	19	16 57	40	19 71	11	14	
21	133	24.1	25.5	220	47.4 ¹⁵⁹	21.2 ¹²¹	54	10	51	35	22 73	07	12	
22	148	24.1	25.0	235	22.2 ¹⁵⁸	33.3 ¹²¹	56	16 00	44	30	26 75	11 03	9	
23	163	24.1	24.5	249	57.0 ¹⁵⁸	45.4 ¹²¹	58	15 48	35	25	29 78	10 59	6	
24	178	24.0	+20 24.0	264	31.8 ¹⁵⁸	+11 57.4 ¹²⁰	60 S	15 34	16 26	17 20	0 33	82	10 53	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 05 ^m 9		Mag: -3.9 PMG: 11 ^h 34 ^m			Mag: -2.0 PMG: 3 ^h 00 ^m			Mag: -1.8 PMG: 13 ^h 43 ^m			Mag: +0.1 PMG: 10 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	298	20.9	186	41.7	+22 29.3	314	59.1	-13 03.4	153	45.8	+14 56.9	201	49.3	+22 31.9
1	313	23.4	201	40.9	29.0	330	01.3	03.4	168	47.8	56.8	216	51.4	31.9
2	328	25.9	216	40.0	28.6	345	03.4	03.4	183	49.7	56.6	231	53.5	31.9
3	343	28.3	231	39.2	28.3	0	05.6	03.5	198	51.7	56.4	246	55.6	31.9
4	358	30.8	246	38.3	27.9	15	07.7	03.5	213	53.6	56.3	261	57.8	31.9
5	13	33.3	261	37.5	+22 27.5	30	09.9	-13 03.5	228	55.6	+14 56.1	276	59.9	+22 31.9
6	28	35.7	276	36.7	+22 27.2	45	12.0	-13 03.6	243	57.6	+14 55.9	292	02.0	+22 31.8
7	43	38.2	291	35.8	26.8	60	14.2	03.6	258	59.5	55.8	307	04.2	31.8
8	58	40.7	306	35.0	26.4	75	16.4	03.6	274	01.5	55.6	322	06.3	31.8
9	73	43.1	321	34.2	26.1	90	18.5	03.7	289	03.4	55.4	337	08.4	31.8
10	88	45.6	336	33.3	25.7	105	20.7	03.7	304	05.4	55.3	352	10.5	31.8
11	103	48.0	351	32.5	+22 25.3	120	22.8	-13 03.7	319	07.3	+14 55.1	7	12.7	+22 31.8
12	118	50.5	6	31.7	+22 24.9	135	25.0	-13 03.8	334	09.3	+14 54.9	22	14.8	+22 31.8
13	133	53.0	21	30.8	24.6	150	27.2	03.8	349	11.2	54.8	37	16.9	31.8
14	148	55.4	36	30.0	24.2	165	29.3	03.9	4	13.2	54.6	52	19.1	31.8
15	163	57.9	51	29.2	23.8	180	31.5	03.9	19	15.1	54.4	67	21.2	31.7
16	179	00.4	66	28.3	23.4	195	33.7	03.9	34	17.1	54.2	82	23.3	31.7
17	194	02.8	81	27.5	+22 23.1	210	35.8	-13 04.0	49	19.0	+14 54.1	97	25.4	+22 31.7
18	209	05.3	96	26.7	+22 22.7	225	38.0	-13 04.0	64	21.0	+14 53.9	112	27.6	+22 31.7
19	224	07.8	111	25.8	22.3	240	40.2	04.1	79	23.0	53.7	127	29.7	31.7
20	239	10.2	126	25.0	21.9	255	42.3	04.1	94	24.9	53.6	142	31.8	31.7
21	254	12.7	141	24.2	21.5	270	44.5	04.1	109	26.9	53.4	157	34.0	31.7
22	269	15.2	156	23.3	21.2	285	46.7	04.2	124	28.8	53.2	172	36.1	31.7
23	284	17.6	171	22.5	20.8	300	48.9	04.2	139	30.8	53.1	187	38.2	31.6
24	299	20.1	186	21.7	+22 20.4	315	51.0	-13 04.3	154	32.7	+14 52.9	202	40.4	+22 31.6
Dif	—		-8	-4		+22	0		+20	-2		+21	0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 4				Edad: 22 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 322 50.5 ¹⁵⁷ PMG: 6 ^h 33 ^m R°: 43 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	24.0	+20	24.0	264	31.8	+11	57.4	60 N	** **	2 06	3 17	23 00	7	14 35	84	
1	193	24.0		23.5	279	06.5 ¹⁵⁷	+12	09.3 ¹¹⁹	58	** **	32	32	10 11		25 80		
2	208	24.0		23.0	293	41.2 ¹⁵⁷		21.3 ¹²⁰	56	1 21	2 52	45	19 14		17 77		
3	223	24.0		22.5	308	15.8 ¹⁵⁶		33.1 ¹¹⁸	54	1 56	3 08	3 56	27 17		10 74		
4	238	23.9		22.0	322	50.5 ¹⁵⁷		44.9 ¹¹⁸	52	2 20	22	4 06	34 19	14	04 71		
5	253	23.9	+20	21.6	337	25.0 ¹⁵⁵	+12	56.7 ¹¹⁸	50	2 38	3 34	4 15	23 41	21	13 58	69	
6	268	23.9	+20	21.1	351	59.6 ¹⁵⁶	+13	08.4 ¹¹⁷	45	3 13	3 59	4 34	23 55	25	13 45	65	
7	283	23.8		20.6	6	34.1 ¹⁵⁵		20.1 ¹¹⁷	40	39	4 18	4 49	** **	**	35 61		
8	298	23.8		20.1	21	08.5 ¹⁵⁴		31.7 ¹¹⁶	35	3 58	33	5 02	** **	**	26 58		
9	313	23.8		19.6	35	42.9 ¹⁵⁴		43.2 ¹¹⁵	30	4 14	4 46	13	** **	**	19 55		
10	328	23.8		19.1	50	17.3 ¹⁵⁴	+13	54.7 ¹¹⁵	20	39	5 08	32	0 05	35	13 05	51	
11	343	23.7	+20	18.6	64	51.6 ¹⁵³	+14	06.2 ¹¹⁵	10 N	4 59	5 25	5 48	0 14	39	12 54	47	
12	358	23.7	+20	18.1	79	25.9 ¹⁵³	+14	17.6 ¹¹⁴	0	5 15	5 41	6 03	0 23	42	12 43	44	
13	13	23.7		17.6	94	00.1 ¹⁵²		28.9 ¹¹³	10 S	30	5 55	18	32 46		32 41		
14	28	23.7		17.1	108	34.3 ¹⁵²		40.2 ¹¹³	20	43	6 10	34	41 50		21 36		
15	43	23.6		16.6	123	08.4 ¹⁵¹	+14	51.4 ¹¹²	30	5 57	26	6 52	52 55		08 32		
16	58	23.6		16.1	137	42.5 ¹⁵¹	+15	02.5 ¹¹¹	35	6 04	35	7 02	0 59	57	12 01	29	
17	73	23.6	+20	15.6	152	16.6 ¹⁵¹	+15	13.7 ¹¹²	40	6 11	6 45	7 14	1 06	60	11 52	27	
18	88	23.6	+20	15.1	166	50.6 ¹⁵⁰	+15	24.7 ¹¹⁰	45	6 20	6 56	7 28	1 14	64	11 42	24	
19	103	23.5		14.6	181	24.5 ¹⁴⁹		35.7 ¹¹⁰	50	29	7 09	45	25 68		31 18		
20	118	23.5		14.1	195	58.4 ¹⁴⁹		46.6 ¹⁰⁹	52	33	15	7 53	30 70		25 17		
21	133	23.5		13.6	210	32.2 ¹⁴⁸	+15	57.5 ¹⁰⁹	54	37	21	8 02	35 73		19 14		
22	148	23.5		13.1	225	06.0 ¹⁴⁸	+16	08.3 ¹⁰⁸	56	42	28	12	41 76		12 12		
23	163	23.4		12.6	239	39.7 ¹⁴⁷		19.0 ¹⁰⁷	58	47	36	24	47 80		11 05	8	
24	178	23.4	+20	12.1	254	13.4 ¹⁴⁷	+16	29.7 ¹⁰⁷	60 S	6 52	7 45	8 37	1 55	83	10 57	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 02 ^m 0		Mag: -3.9 PMG: 11 ^h 35 ^m		Mag: -2.1 PMG: 2 ^h 56 ^m		Mag: -1.8 PMG: 13 ^h 40 ^m		Mag: +0.1 PMG: 10 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	299	20.1	186	21.7	+22	20.4	315	51.0	-13	04.3	154	32.7	+14	52.9	202	40.4	+22	31.6
1	314	22.5	201	20.8		20.0	330	53.2		04.3	169	34.7		52.7	217	42.5		31.6
2	329	25.0	216	20.0		19.6	345	55.4		04.4	184	36.6		52.6	232	44.6		31.6
3	344	27.5	231	19.2		19.2	0	57.6		04.4	199	38.6		52.4	247	46.7		31.6
4	359	29.9	246	18.3		18.8	15	59.8		04.5	214	40.5		52.2	262	48.9		31.6
5	14	32.4	261	17.5	+22	18.4	31	01.9	-13	04.5	229	42.5	+14	52.1	277	51.0	+22	31.6
6	29	34.9	276	16.7	+22	18.0	46	04.1	-13	04.5	244	44.4	+14	51.9	292	53.1	+22	31.6
7	44	37.3	291	15.8		17.6	61	06.3		04.6	259	46.4		51.7	307	55.3		31.5
8	59	39.8	306	15.0		17.2	76	08.5		04.6	274	48.3		51.5	322	57.4		31.5
9	74	42.3	321	14.2		16.9	91	10.7		04.7	289	50.3		51.4	337	59.5		31.5
10	89	44.7	336	13.4		16.5	106	12.9		04.7	304	52.3		51.2	353	01.7		31.5
11	104	47.2	351	12.5	+22	16.1	121	15.1	-13	04.8	319	54.2	+14	51.0	8	03.8	+22	31.5
12	119	49.7	6	11.7	+22	15.7	136	17.3	-13	04.8	334	56.2	+14	50.9	23	05.9	+22	31.5
13	134	52.1	21	10.9		15.3	151	19.5		04.9	349	58.1		50.7	38	08.0		31.5
14	149	54.6	36	10.0		14.9	166	21.7		04.9	5	00.1		50.5	53	10.2		31.5
15	164	57.0	51	09.2		14.4	181	23.9		05.0	20	02.0		50.4	68	12.3		31.5
16	179	59.5	66	08.4		14.0	196	26.1		05.0	35	04.0		50.2	83	14.4		31.4
17	195	02.0	81	07.6	+22	13.6	211	28.3	-13	05.1	50	05.9	+14	50.0	98	16.6	+22	31.4
18	210	04.4	96	06.7	+22	13.2	226	30.5	-13	05.1	65	07.9	+14	49.9	113	18.7	+22	31.4
19	225	06.9	111	05.9		12.8	241	32.7		05.2	80	09.8		49.7	128	20.8		31.4
20	240	09.4	126	05.1		12.4	256	34.9		05.2	95	11.8		49.5	143	23.0		31.4
21	255	11.8	141	04.3		12.0	271	37.1		05.3	110	13.7		49.3	158	25.1		31.4
22	270	14.3	156	03.4		11.6	286	39.3		05.3	125	15.7		49.2	173	27.2		31.4
23	285	16.8	171	02.6		11.2	301	41.5		05.4	140	17.6		49.0	188	29.4		31.4
24	300	19.2	186	01.8	+22	10.8	316	43.7	-13	05.4	155	19.6	+14	48.8	203	31.5	+22	31.3
Dif	—		-8		-4		+22		0		+20		-2		+21			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 23 ^d 2 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /3 20 ^h : 54 ^m /3												
	PMG: 12 ^h 06 ^m 5				SD: 14 ^h 8 PMG: 7 ^h 16 ^m R°: 46 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	178	23.4	+20	12.1	254	13.4	+16	29.7	60 N	20 52	22 01	** **	23 07	11	15 59	86	
1	193	23.4		11.6	268	47.0 ¹⁴⁶		40.3 ¹⁰⁶	58	38	21 36	** **	21 16		45 81		
2	208	23.4		11.1	283	20.5 ¹⁴⁵	+16	50.8 ¹⁰⁵	56	25	17	22 44	33 20	34 77			
3	223	23.4		10.6	297	54.0 ¹⁴⁵	+17	01.3 ¹⁰⁵	54	14	21 01	22 12	44 22	24 77			
4	238	23.3		10.1	312	27.5 ¹⁴⁵		11.7 ¹⁰⁴	52	20 04	20 48	21 49	23 53	25 71			
5	253	23.3	+20	09.6	327	00.9 ¹⁴⁴	+17	22.0 ¹⁰³	50	19 56	20 36	21 31	** **	** **	15 07	69	
6	268	23.3	+20	09.1	341	34.2 ¹⁴³	+17	32.3 ¹⁰³	45	19 37	20 12	20 57	** **	** **	14 50	64	
7	283	23.3		08.6	356	07.4 ¹⁴²		42.5 ¹⁰²	40	23	19 54	32	0 06	29 36	61		
8	298	23.3		08.1	10	40.6 ¹⁴²	+17	52.6 ¹⁰¹	35	19 10	39	20 13	16 32	24 58			
9	313	23.2		07.6	25	13.8 ¹⁴²	+18	02.7 ¹⁰¹	30	18 59	26	19 58	25 34	14 14	56		
10	328	23.2		07.1	39	46.9 ¹⁴¹		12.7 ¹⁰⁰	20	41	19 05	33	40 38	13 56	53		
11	343	23.2	+20	06.6	54	19.9 ¹⁴⁰	+18	22.6 ⁹⁹	10 N	18 25	18 47	19 14	0 53	42 13	41 49		
12	358	23.2	+20	06.1	68	52.8 ¹³⁹	+18	32.4 ⁹⁸	0	18 10	18 32	18 58	1 05	45 13	27 46		
13	13	23.1		05.5	83	25.7 ¹³⁹		42.2 ⁹⁸	10 S	17 55	18	43	18 48	13 13	43		
14	28	23.1		05.0	97	58.6 ¹³⁹	+18	51.9 ⁹⁷	20	40	18 03	30	31 52	12 57	40		
15	43	23.1		04.5	112	31.3 ¹³⁷	+19	01.5 ⁹⁶	30	22	17 48	17	47 56	40 36			
16	58	23.1		04.0	127	04.0 ¹³⁷		11.0 ⁹⁵	35	12	39	10	1 56	58 30	34		
17	73	23.1	+20	03.5	141	36.7 ¹³⁷	+19	20.5 ⁹⁵	40	17 00	17 29	18 02	2 06	61 12	19 31		
18	88	23.1	+20	03.0	156	09.2 ¹³⁵	+19	29.9 ⁹⁴	45	16 46	17 19	17 55	2 18	65 12	06 27		
19	103	23.0		02.5	170	41.7 ¹³⁵		39.2 ⁹³	50	29	06	46	33 70	11 49	24		
20	118	23.0		02.0	185	14.2 ¹³⁵		48.4 ⁹²	52	21	17 00	42	40 72	42 21			
21	133	23.0		01.4	199	46.5 ¹³³	+19	57.5 ⁹¹	54	13	16 53	38	48 74	33 19			
22	148	23.0		00.9	214	18.8 ¹³³	+20	06.6 ⁹¹	56	16 03	46	33	2 57	77 24	16		
23	163	23.0	+20	00.4	228	51.1 ¹³³		15.6 ⁹⁰	58	15 52	39	28	3 07	81 13	13		
24	178	23.0	+19	59.9	243	23.2 ¹³¹	+20	24.5 ⁸⁹	60 S	15 38	16 30	17 23	3 18	86 11	01 8		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 58 ^m 1		Mag: -3.9 PMG: 11 ^h 37 ^m				Mag: -2.1 PMG: 2 ^h 53 ^m				Mag: -1.8 PMG: 13 ^h 37 ^m				Mag: +0.1 PMG: 10 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	300	19.2	186	01.8	+22	10.8	316	43.7	-13	05.4	155	19.6	+14	48.8	203	31.5	+22	31.3
1	315	21.7	201	01.0		10.3	331	45.9		05.5	170	21.5		48.7	218	33.6		31.3
2	330	24.1	216	00.1		09.9	346	48.1		05.6	185	23.5		48.5	233	35.7		31.3
3	345	26.6	230	59.3		09.5	1	50.3		05.6	200	25.4		48.3	248	37.9		31.3
4	0	29.1	245	58.5		09.1	16	52.5		05.7	215	27.4		48.2	263	40.0		31.3
5	15	31.5	260	57.7	+22	08.7	31	54.7	-13	05.7	230	29.3	+14	48.0	278	42.1	+22	31.3
6	30	34.0	275	56.8	+22	08.3	46	57.0	-13	05.8	245	31.3	+14	47.8	293	44.3	+22	31.3
7	45	36.5	290	56.0		07.8	61	59.2		05.8	260	33.3		47.6	308	46.4		31.3
8	60	38.9	305	55.2		07.4	77	01.4		05.9	275	35.2		47.5	323	48.5		31.2
9	75	41.4	320	54.4		07.0	92	03.6		06.0	290	37.2		47.3	338	50.7		31.2
10	90	43.9	335	53.5		06.6	107	05.8		06.0	305	39.1		47.1	353	52.8		31.2
11	105	46.3	350	52.7	+22	06.1	122	08.1	-13	06.1	320	41.1	+14	47.0	8	54.9	+22	31.2
12	120	48.8	5	51.9	+22	05.7	137	10.3	-13	06.1	335	43.0	+14	46.8	23	57.1	+22	31.2
13	135	51.3	20	51.1		05.3	152	12.5		06.2	350	45.0		46.6	38	59.2		31.2
14	150	53.7	35	50.3		04.9	167	14.7		06.3	5	46.9		46.5	54	01.3		31.2
15	165	56.2	50	49.4		04.4	182	17.0		06.3	20	48.9		46.3	69	03.5		31.2
16	180	58.6	65	48.6		04.0	197	19.2		06.4	35	50.8		46.1	84	05.6		31.1
17	196	01.1	80	47.8	+22	03.6	212	21.4	-13	06.4	50	52.8	+14	45.9	99	07.7	+22	31.1
18	211	03.6	95	47.0	+22	03.1	227	23.7	-13	06.5	65	54.7	+14	45.8	114	09.9	+22	31.1
19	226	06.0	110	46.2		02.7	242	25.9		06.6	80	56.7		45.6	129	12.0		31.1
20	241	08.5	125	45.3		02.3	257	28.1		06.6	95	58.6		45.4	144	14.1		31.1
21	256	11.0	140	44.5		01.8	272	30.4		06.7	111	00.6		45.3	159	16.3		31.1
22	271	13.4	155	43.7		01.4	287	32.6		06.7	126	02.5		45.1	174	18.4		31.1
23	286	15.9	170	42.9		00.9	302	34.8		06.8	141	04.5		44.9	189	20.5		31.1
24	301	18.4	185	42.1	+22	00.5	317	37.1	-13	06.9	156	06.4	+14	44.7	204	22.6	+22	31.0
Dif	—		-8		-4		+22		-1		+20		-2		+21			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 24 ^d 2	PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6									
	PMG: 12 ^h 06 ^m 5					SD: 14 ^h 8		PMG: 8 ^h 02 ^m			R°: 48 ^m			
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	178	23.0	+19 59.9	243	23.2	+20 24.5	60 N	** **	2 13	3 21	23 18	20	17 25	83
1	193	22.9	59.4	257	55.3 ¹³¹	33.3 ⁸⁸	58	** **	37	36	37	25	17 06	78
2	208	22.9	58.9	272	27.3 ¹³⁰	42.0 ⁸⁷	56	1 30	2 56	49	23 53	29	16 51	74
3	223	22.9	58.3	286	59.3 ¹³⁰	50.6 ⁸⁶	54	2 01	3 12	3 59	** **	**	37	71
4	238	22.9	57.8	301	31.2 ¹²⁹	+20 59.2 ⁸⁶	52	24	26	4 09	** **	**	26	69
5	253	22.9	+19 57.3	316	03.0 ¹²⁸	+21 07.6 ⁸⁴	50	2 42	3 37	4 18	0 02	27	16 16	67
6	268	22.9	+19 56.8	330	34.7 ¹²⁷	+21 16.0 ⁸⁴	45	3 16	4 01	4 36	0 20	31	15 54	64
7	283	22.8	56.3	345	06.4 ¹²⁷	24.3 ⁸³	40	3 41	20	4 51	35	34	37	61
8	298	22.8	55.8	359	38.0 ¹²⁶	32.5 ⁸²	35	4 00	35	5 03	48	36	22	59
9	313	22.8	55.2	14	09.5 ¹²⁵	40.6 ⁸¹	30	16	4 47	14	0 59	38	15 10	57
10	328	22.8	54.7	28	41.0 ¹²⁵	48.6 ⁸⁰	20	40	5 08	32	1 18	42	14 49	54
11	343	22.8	+19 54.2	43	12.3 ¹²³	+21 56.5 ⁷⁹	10 N	4 59	5 26	5 48	1 35	45	14 30	52
12	358	22.8	+19 53.7	57	43.7 ¹²⁴	+22 04.3 ⁷⁸	0	5 15	5 41	6 03	1 50	48	14 13	49
13	13	22.8	53.1	72	14.9 ¹²²	12.0 ⁷⁷	10 S	30	5 55	18	2 06	51	13 56	47
14	28	22.7	52.6	86	46.1 ¹²²	19.7 ⁷⁷	20	43	6 10	33	23	53	37	45
15	43	22.7	52.1	101	17.2 ¹²¹	27.2 ⁷⁵	30	5 56	25	6 51	43	56	16	42
16	58	22.7	51.6	115	48.2 ¹²⁰	34.6 ⁷⁴	35	6 03	34	7 01	2 54	59	13 04	40
17	73	22.7	+19 51.0	130	19.1 ¹¹⁹	+22 42.0 ⁷⁴	40	6 10	6 43	7 13	3 07	62	12 50	37
18	88	22.7	+19 50.5	144	50.0 ¹¹⁹	+22 49.2 ⁷²	45	6 18	6 54	7 26	3 23	65	12 33	35
19	103	22.7	50.0	159	20.8 ¹¹⁸	+22 56.4 ⁷²	50	27	7 07	43	43	68	13	31
20	118	22.7	49.5	173	51.6 ¹¹⁸	+23 03.4 ⁷⁰	52	31	12	51	3 52	70	12 03	29
21	133	22.7	48.9	188	22.2 ¹¹⁶	10.3 ⁶⁹	54	35	19	7 59	4 02	73	11 52	27
22	148	22.6	48.4	202	52.8 ¹¹⁶	17.2 ⁶⁹	56	39	26	8 09	14	76	40	24
23	163	22.6	47.9	217	23.3 ¹¹⁵	23.9 ⁶⁷	58	44	33	20	28	80	26	19
24	178	22.6	+19 47.3	231	53.8 ¹¹⁵	+23 30.5 ⁶⁶	60 S	6 49	7 42	8 33	4 44	86	11 09	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 54 ^m 1		Mag: -3.9 PMG: 11 ^h 38 ^m		Mag: -2.1 PMG: 2 ^h 49 ^m		Mag: -1.8 PMG: 13 ^h 34 ^m		Mag: +0.1 PMG: 10 ^h 21 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	301	18.4	185	42.1	+22	00.5	317	37.1	-13	06.9	156	06.4	+14	44.7	204	22.6	+22	31.0
1	316	20.8	200	41.2	+22	00.1	332	39.3		06.9	171	08.4		44.6	219	24.8		31.0
2	331	23.3	215	40.4	+21	59.6	347	41.6		07.0	186	10.3		44.4	234	26.9		31.0
3	346	25.8	230	39.6		59.2	2	43.8		07.1	201	12.3		44.2	249	29.0		31.0
4	1	28.2	245	38.8		58.7	17	46.1		07.1	216	14.2		44.1	264	31.2		31.0
5	16	30.7	260	38.0	+21	58.3	32	48.3	-13	07.2	231	16.2	+14	43.9	279	33.3	+22	31.0
6	31	33.1	275	37.2	+21	57.8	47	50.5	-13	07.3	246	18.1	+14	43.7	294	35.4	+22	31.0
7	46	35.6	290	36.3		57.4	62	52.8		07.3	261	20.1		43.6	309	37.6		31.0
8	61	38.1	305	35.5		56.9	77	55.0		07.4	276	22.0		43.4	324	39.7		30.9
9	76	40.5	320	34.7		56.5	92	57.3		07.5	291	24.0		43.2	339	41.8		30.9
10	91	43.0	335	33.9		56.0	107	59.6		07.6	306	25.9		43.0	354	44.0		30.9
11	106	45.5	350	33.1	+21	55.6	123	01.8	-13	07.6	321	27.9	+14	42.9	9	46.1	+22	30.9
12	121	47.9	5	32.3	+21	55.1	138	04.1	-13	07.7	336	29.8	+14	42.7	24	48.2	+22	30.9
13	136	50.4	20	31.5		54.7	153	06.3		07.8	351	31.8		42.5	39	50.4		30.9
14	151	52.9	35	30.6		54.2	168	08.6		07.8	6	33.7		42.4	54	52.5		30.9
15	166	55.3	50	29.8		53.7	183	10.8		07.9	21	35.7		42.2	69	54.6		30.9
16	181	57.8	65	29.0		53.3	198	13.1		08.0	36	37.6		42.0	84	56.8		30.8
17	197	00.3	80	28.2	+21	52.8	213	15.4	-13	08.1	51	39.6	+14	41.8	99	58.9	+22	30.8
18	212	02.7	95	27.4	+21	52.4	228	17.6	-13	08.1	66	41.5	+14	41.7	115	01.0	+22	30.8
19	227	05.2	110	26.6		51.9	243	19.9		08.2	81	43.5		41.5	130	03.2		30.8
20	242	07.6	125	25.8		51.4	258	22.2		08.3	96	45.4		41.3	145	05.3		30.8
21	257	10.1	140	25.0		51.0	273	24.4		08.3	111	47.4		41.2	160	07.4		30.8
22	272	12.6	155	24.1		50.5	288	26.7		08.4	126	49.3		41.0	175	09.6		30.8
23	287	15.0	170	23.3		50.0	303	29.0		08.5	141	51.3		40.8	190	11.7		30.8
24	302	17.5	185	22.5	+21	49.6	318	31.2	-13	08.6	156	53.2	+14	40.6	205	13.8	+22	30.7
Dif	—		-8		-5		+23		-1		+20		-2		+21			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 25 ^d 2 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9					Civil			Náutico		Hora R°	
	PMG: 12 ^h 06 ^m 5			PMG: 8 ^h 50 ^m	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	178	22.6	+19 47.3	231	53.8	+23 30.5	65	60 N	20 48	21 54	** **	23 38 38	18 48 71		
1	193	22.6	46.8	246	24.1 ¹¹³	37.0	65	58	34	31	23 28	** ** *	24 67		
2	208	22.6	46.3	260	54.4 ¹¹³	43.4	64	56	22	21 13	22 35	** ** *	18 05 65		
3	223	22.6	45.8	275	24.7 ¹¹³	49.7	63	54	11	20 58	22 06	0 06 32	17 48 64		
4	238	22.6	45.2	289	54.8 ¹¹¹	+23 55.9	62	52	20 02	45	21 44	18 34	35 62		
5	253	22.6	+19 44.7	304	24.9 ¹¹¹	+24 02.0	61	50	19 53	20 33	21 27	0 29 35	17 23 61		
6	268	22.6	+19 44.2	318	54.9 ¹¹⁰	+24 08.0	60	45	19 35	20 10	20 54	0 51 39	16 58 59		
7	283	22.6	43.6	333	24.9 ¹¹⁰	13.8	58	40	21	19 52	30	1 09 41	38 58		
8	298	22.5	43.1	347	54.8 ¹⁰⁹	19.6	58	35	19 09	37	20 12	24 43	21 57		
9	313	22.5	42.6	2	24.6 ¹⁰⁸	25.2	56	30	18 58	25	19 56	1 37 45	16 07 56		
10	328	22.5	42.0	16	54.3 ¹⁰⁷	30.7	55	20	40	19 04	32	2 00 47	15 43 54		
11	343	22.5	+19 41.5	31	24.0 ¹⁰⁷	+24 36.1	54	10 N	18 25	18 47	19 13	2 20 49	15 22 53		
12	358	22.5	+19 40.9	45	53.6 ¹⁰⁶	+24 41.4	53	0	18 10	18 32	18 58	2 38 51	15 02 52		
13	13	22.5	40.4	60	23.1 ¹⁰⁵	46.6	52	10 S	17 56	18	44	2 57 52	14 43 50		
14	28	22.5	39.9	74	52.6 ¹⁰⁵	51.7	51	20	40	18 04	31	3 16 55	14 22 49		
15	43	22.5	39.3	89	22.0 ¹⁰⁴	+24 56.6	49	30	23	17 49	18	39 57	13 58 47		
16	58	22.5	38.8	103	51.3 ¹⁰³	+25 01.4	48	35	13	40	11	3 53 58	44 46		
17	73	22.5	+19 38.3	118	20.6 ¹⁰³	+25 06.1	47	40	17 02	17 31	18 04	4 09 60	13 27 45		
18	88	22.5	+19 37.7	132	49.8 ¹⁰²	+25 10.7	46	45	16 48	17 20	17 56	4 28 62	13 08 43		
19	103	22.5	37.2	147	18.9 ¹⁰¹	15.2	45	50	32	08	48	4 51 65	12 44 40		
20	118	22.5	36.6	161	48.0 ¹⁰¹	19.5	43	52	24	17 02	44	5 02 67	32 39		
21	133	22.4	36.1	176	17.0 ¹⁰⁰	23.7	42	54	16	16 56	40	15 69	19 37		
22	148	22.4	35.5	190	45.9 ⁹⁹	27.8	41	56	16 06	49	36	30 71	12 04 35		
23	163	22.4	35.0	205	14.8 ⁹⁹	31.8	40	58	15 55	42	31	5 48 74	11 45 33		
24	178	22.4	+19 34.5	219	43.6 ⁹⁸	+25 35.7	39	60 S	15 43	16 33	17 26	6 10 79	11 23 28		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG		Mag: -3.9		Mag: -2.1		Mag: -1.8		Mag: +0.1		
	3 ^h 50 ^m 2		PMG: 11 ^h 39 ^m		PMG: 2 ^h 45 ^m		PMG: 13 ^h 31 ^m		PMG: 10 ^h 18 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	302	17.5	185	22.5	+21 49.6	318 31.2	-13 08.6	156 53.2	+14 40.6	205 13.8	+22 30.7
1	317	20.0	200	21.7	49.1	333 33.5	08.6	171 55.2	40.5	220 16.0	30.7
2	332	22.4	215	20.9	48.6	348 35.8	08.7	186 57.1	40.3	235 18.1	30.7
3	347	24.9	230	20.1	48.2	3 38.1	08.8	201 59.1	40.1	250 20.3	30.7
4	2	27.4	245	19.3	47.7	18 40.3	08.9	217 01.0	40.0	265 22.4	30.7
5	17	29.8	260	18.5	+21 47.2	33 42.6	-13 09.0	232 03.0	+14 39.8	280 24.5	+22 30.7
6	32	32.3	275	17.7	+21 46.8	48 44.9	-13 09.0	247 04.9	+14 39.6	295 26.7	+22 30.7
7	47	34.7	290	16.9	46.3	63 47.2	09.1	262 06.9	39.4	310 28.8	30.6
8	62	37.2	305	16.1	45.8	78 49.5	09.2	277 08.8	39.3	325 30.9	30.6
9	77	39.7	320	15.2	45.3	93 51.7	09.3	292 10.8	39.1	340 33.1	30.6
10	92	42.1	335	14.4	44.8	108 54.0	09.4	307 12.7	38.9	355 35.2	30.6
11	107	44.6	350	13.6	+21 44.4	123 56.3	-13 09.4	322 14.7	+14 38.8	10 37.3	+22 30.6
12	122	47.1	5	12.8	+21 43.9	138 58.6	-13 09.5	337 16.6	+14 38.6	25 39.5	+22 30.6
13	137	49.5	20	12.0	43.4	154 00.9	09.6	352 18.6	38.4	40 41.6	30.6
14	152	52.0	35	11.2	42.9	169 03.2	09.7	7 20.5	38.2	55 43.7	30.6
15	167	54.5	50	10.4	42.4	184 05.5	09.8	22 22.5	38.1	70 45.9	30.5
16	182	56.9	65	09.6	42.0	199 07.8	09.8	37 24.4	37.9	85 48.0	30.5
17	197	59.4	80	08.8	+21 41.5	214 10.1	-13 09.9	52 26.4	+14 37.7	100 50.1	+22 30.5
18	213	01.9	95	08.0	+21 41.0	229 12.3	-13 10.0	67 28.3	+14 37.6	115 52.3	+22 30.5
19	228	04.3	110	07.2	40.5	244 14.6	10.1	82 30.3	37.4	130 54.4	30.5
20	243	06.8	125	06.4	40.0	259 16.9	10.2	97 32.2	37.2	145 56.5	30.5
21	258	09.2	140	05.6	39.5	274 19.2	10.3	112 34.2	37.0	160 58.7	30.5
22	273	11.7	155	04.8	39.0	289 21.5	10.4	127 36.1	36.9	176 00.8	30.5
23	288	14.2	170	04.0	38.5	304 23.8	10.4	142 38.1	36.7	191 02.9	30.4
24	303	16.6	185	03.2	+21 38.0	319 26.2	-13 10.5	157 40.0	+14 36.5	206 05.1	+22 30.4

Dif	—	-8	-5	+23	-1	+19	-2	+21

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: 26 ^d 2 PHE { SD: 15'0 PMG: 9 ^h 41 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif										
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	22.4	+19	34.5	219	43.6	+25	35.7	60 N	** **	2 19	3 26	** **	** **	19 59	50	
1	193	22.4		33.9	234	12.4	98	39.4	58	0 46	2 42	40	0 02	42	31	51	
2	208	22.4		33.4	248	41.1	97	43.0	56	1 38	3 01	3 52	22	43	19 10	52	
3	223	22.4		32.8	263	09.7	96	46.4	54	2 07	16	4 03	38	45	18 52	52	
4	238	22.4		32.3	277	38.3	96	49.8	52	29	29	12	0 52	46	37	53	
5	253	22.4	+19	31.7	292	06.8	95	+25 53.0	50	2 46	3 40	4 20	1 04	47	18 24	53	
6	268	22.4	+19	31.2	306	35.3	95	+25 56.0	45	3 19	4 03	4 38	1 30	48	17 57	53	
7	283	22.4		30.6	321	03.7	94	+25 59.0	40	3 43	21	4 52	1 50	50	36	53	
8	298	22.4		30.1	335	32.1	94	+26 01.8	35	4 02	36	5 05	2 07	50	18	54	
9	313	22.4		29.5	350	00.4	93	04.5	30	17	4 49	15	22	51	17 03	54	
10	328	22.4		29.0	4	28.6	92	07.0	20	4 41	5 09	33	2 47	52	16 37	54	
11	343	22.4	+19	28.4	18	56.8	92	+26 09.4	10 N	5 00	5 26	5 49	3 09	52	16 15	54	
12	358	22.4	+19	27.9	33	25.0	92	+26 11.7	0	5 16	5 41	6 03	3 29	53	15 54	54	
13	13	22.4		27.3	47	53.1	91	13.9	10 S	29	5 55	17	3 49	54	33	54	
14	28	22.4		26.8	62	21.2	91	15.9	20	42	6 09	32	4 11	54	15 11	54	
15	43	22.4		26.2	76	49.2	90	17.8	30	5 55	24	6 50	36	55	14 45	54	
16	58	22.4		25.7	91	17.1	89	19.5	35	6 02	32	7 00	4 51	56	30	54	
17	73	22.4	+19	25.1	105	45.0	89	+26 21.1	40	6 09	6 42	7 11	5 09	56	14 12	54	
18	88	22.4	+19	24.6	120	12.9	89	+26 22.6	45	6 16	6 52	7 24	5 30	56	13 51	53	
19	103	22.4		24.0	134	40.8	89	23.9	50	25	7 04	40	5 56	58	24	53	
20	118	22.4		23.5	149	08.5	87	25.1	52	28	10	48	6 09	58	13 11	53	
21	133	22.4		22.9	163	36.3	88	26.2	54	32	16	7 56	24	58	12 56	53	
22	148	22.4		22.4	178	04.0	87	27.1	56	37	23	8 06	6 41	59	39	52	
23	163	22.4		21.8	192	31.7	87	27.8	58	41	30	17	7 02	60	12 18	51	
24	178	22.4	+19	21.3	206	59.3	86	+26 28.5	60 S	6 46	7 39	8 29	7 29	62	11 51	49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 46 ^m 3		Mag: -3.9 PMG: 11 ^h 40 ^m		Mag: -2.2 PMG: 2 ^h 42 ^m		Mag: -1.8 PMG: 13 ^h 28 ^m		Mag: +0.1 PMG: 10 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	303	16.6	185	03.2	+21	38.0	319	26.2	-13	10.5	157	40.0	+14	36.5	206	05.1	+22	30.4
1	318	19.1	200	02.4		37.5	334	28.5		10.6	172	42.0		36.3	221	07.2		30.4
2	333	21.6	215	01.6		37.0	349	30.8		10.7	187	43.9		36.2	236	09.4		30.4
3	348	24.0	230	00.8		36.5	4	33.1		10.8	202	45.9		36.0	251	11.5		30.4
4	3	26.5	245	00.0		36.0	19	35.4		10.9	217	47.8		35.8	266	13.6		30.4
5	18	29.0	259	59.2	+21	35.5	34	37.7	-13	11.0	232	49.8	+14	35.7	281	15.8	+22	30.4
6	33	31.4	274	58.4	+21	35.0	49	40.0	-13	11.1	247	51.7	+14	35.5	296	17.9	+22	30.3
7	48	33.9	289	57.6		34.5	64	42.3		11.1	262	53.7		35.3	311	20.0		30.3
8	63	36.4	304	56.8		34.0	79	44.6		11.2	277	55.6		35.1	326	22.2		30.3
9	78	38.8	319	56.0		33.5	94	46.9		11.3	292	57.6		35.0	341	24.3		30.3
10	93	41.3	334	55.2		33.0	109	49.3		11.4	307	59.5		34.8	356	26.4		30.3
11	108	43.7	349	54.4	+21	32.5	124	51.6	-13	11.5	323	01.5	+14	34.6	11	28.6	+22	30.3
12	123	46.2	4	53.6	+21	32.0	139	53.9	-13	11.6	338	03.4	+14	34.4	26	30.7	+22	30.3
13	138	48.7	19	52.8		31.5	154	56.2		11.7	353	05.4		34.3	41	32.8		30.3
14	153	51.1	34	52.0		31.0	169	58.5		11.8	8	07.3		34.1	56	35.0		30.2
15	168	53.6	49	51.2		30.5	185	00.9		11.9	23	09.3		33.9	71	37.1		30.2
16	183	56.1	64	50.4		30.0	200	03.2		12.0	38	11.2		33.8	86	39.3		30.2
17	198	58.5	79	49.6	+21	29.5	215	05.5	-13	12.1	53	13.1	+14	33.6	101	41.4	+22	30.2
18	214	01.0	94	48.8	+21	29.0	230	07.8	-13	12.2	68	15.1	+14	33.4	116	43.5	+22	30.2
19	229	03.5	109	48.0		28.4	245	10.2		12.3	83	17.0		33.2	131	45.7		30.2
20	244	05.9	124	47.2		27.9	260	12.5		12.4	98	19.0		33.1	146	47.8		30.2
21	259	08.4	139	46.4		27.4	275	14.8		12.4	113	20.9		32.9	161	49.9		30.2
22	274	10.9	154	45.6		26.9	290	17.2		12.5	128	22.9		32.7	176	52.1		30.1
23	289	13.3	169	44.8		26.4	305	19.5		12.6	143	24.8		32.5	191	54.2		30.1
24	304	15.8	184	44.0	+21	25.8	320	21.8	-13	12.7	158	26.8	+14	32.4	206	56.3	+22	30.1
Dif	—		-8		-5		+23		-1		+19		-2		+21			

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: 27 ^d 2 PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /7 SD: 15 ^h 1 20 ^h : 55 ^m /9 PMG: 10 ^h 35 ^m R°: 54 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	22.4	+19	21.3	206	59.3	+26	28.5	60 N	20 43	21 48	** **	0 16 63	20 49 28		
1	193	22.4		20.7	221	26.9		29.0	58	30	26	23 11	0 44 61	22 34		
2	208	22.4		20.1	235	54.5		29.3	56	18	21 08	22 28	1 05 61	20 02 36		
3	223	22.4		19.6	250	22.0		29.5	54	20 08	20 54	22 00	23 60	19 44 39		
4	238	22.4		19.0	264	49.5		29.6	52	19 59	41	21 40	38 60	30 40		
5	253	22.4	+19	18.5	279	17.0	+26	29.5	50	19 50	20 30	21 23	1 51 59	19 17 42		
6	268	22.4	+19	17.9	293	44.5	+26	29.3	45	19 33	20 08	20 51	2 18 58	18 50 45		
7	283	22.4		17.3	308	11.9		28.9	40	19	19 50	28	40 57	29 47		
8	298	22.4		16.8	322	39.3		28.4	35	19 07	35	20 10	2 57 57	18 12 48		
9	313	22.4		16.2	337	06.7		27.8	30	18 57	23	19 55	3 13 56	17 57 49		
10	328	22.4		15.7	351	34.0		27.0	20	39	19 03	31	3 39 55	31 51		
11	343	22.4	+19	15.1	6	01.3	+26	26.1	10 N	18 24	18 47	19 13	4 01 55	17 09 53		
12	358	22.4	+19	14.5	20	28.7	+26	25.0	0	18 10	18 32	18 57	4 22 54	16 48 54		
13	13	22.4		14.0	34	55.9		23.7	10 S	17 56	18	44	4 43 54	27 56		
14	28	22.4		13.4	49	23.2		22.4	20	41	18 04	31	5 05 53	16 05 57		
15	43	22.4		12.8	63	50.5		20.9	30	24	17 50	19	31 52	15 39 59		
16	58	22.4		12.3	78	17.7		19.2	35	15	42	12	5 47 51	24 60		
17	73	22.5	+19	11.7	92	45.0	+26	17.4	40	17 03	17 33	18 05	6 05 50	15 06 61		
18	88	22.5	+19	11.1	107	12.2	+26	15.4	45	16 50	17 22	17 58	6 26 50	14 44 63		
19	103	22.5		10.6	121	39.4		13.3	50	34	10	50	6 54 47	17 65		
20	118	22.5		10.0	136	06.6		11.1	52	27	17 05	46	7 07 47	14 04 66		
21	133	22.5		09.4	150	33.8		08.7	54	19	16 59	43	22 46	13 49 67		
22	148	22.5		08.9	165	01.0		06.2	56	16 09	52	38	7 40 44	31 69		
23	163	22.5		08.3	179	28.1		03.5	58	15 59	45	34	8 02 42	13 09 71		
24	178	22.5	+19	07.7	193	55.3	+26	00.7	60 S	15 47	16 37	17 29	8 31 37	12 40 76		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 3 ^h 42 ^m 3		Mag: -3.9 PMG: 11 ^h 42 ^m		Mag: -2.2 PMG: 2 ^h 38 ^m		Mag: -1.7 PMG: 13 ^h 24 ^m		Mag: +0.1 PMG: 10 ^h 11 ^m							
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	304	15.8	184	44.0	+21	25.8	320	21.8	-13	12.7	158	26.8	+14	32.4	206	56.3
1	319	18.2	199	43.2		25.3	335	24.2		12.8	173	28.7		32.2	221	58.5
2	334	20.7	214	42.4		24.8	350	26.5		12.9	188	30.7		32.0	237	00.6
3	349	23.2	229	41.6		24.3	5	28.9		13.0	203	32.6		31.9	252	02.8
4	4	25.6	244	40.8		23.8	20	31.2		13.1	218	34.6		31.7	267	04.9
5	19	28.1	259	40.1	+21	23.2	35	33.5	-13	13.2	233	36.5	+14	31.5	282	07.0
6	34	30.6	274	39.3	+21	22.7	50	35.9	-13	13.3	248	38.5	+14	31.3	297	09.2
7	49	33.0	289	38.5		22.2	65	38.2		13.4	263	40.4		31.2	312	11.3
8	64	35.5	304	37.7		21.6	80	40.6		13.5	278	42.4		31.0	327	13.4
9	79	38.0	319	36.9		21.1	95	42.9		13.6	293	44.3		30.8	342	15.6
10	94	40.4	334	36.1		20.6	110	45.3		13.7	308	46.3		30.6	357	17.7
11	109	42.9	349	35.3	+21	20.1	125	47.6	-13	13.8	323	48.2	+14	30.5	12	19.9
12	124	45.4	4	34.5	+21	19.5	140	50.0	-13	13.9	338	50.2	+14	30.3	27	22.0
13	139	47.8	19	33.7		19.0	155	52.3		14.0	353	52.1		30.1	42	24.1
14	154	50.3	34	32.9		18.5	170	54.7		14.1	8	54.0		29.9	57	26.3
15	169	52.7	49	32.2		17.9	185	57.0		14.3	23	56.0		29.8	72	28.4
16	184	55.2	64	31.4		17.4	200	59.4		14.4	38	57.9		29.6	87	30.5
17	199	57.7	79	30.6	+21	16.8	216	01.8	-13	14.5	53	59.9	+14	29.4	102	32.7
18	215	00.1	94	29.8	+21	16.3	231	04.1	-13	14.6	69	01.8	+14	29.3	117	34.8
19	230	02.6	109	29.0		15.8	246	06.5		14.7	84	03.8		29.1	132	37.0
20	245	05.1	124	28.2		15.2	261	08.8		14.8	99	05.7		28.9	147	39.1
21	260	07.5	139	27.4		14.7	276	11.2		14.9	114	07.7		28.7	162	41.2
22	275	10.0	154	26.6		14.1	291	13.6		15.0	129	09.6		28.6	177	43.4
23	290	12.5	169	25.9		13.6	306	15.9		15.1	144	11.6		28.4	192	45.5
24	305	14.9	184	25.1	+21	13.0	321	18.3	-13	15.2	159	13.5	+14	28.2	207	47.7
Dif	—		-8		-5		+24		-1		+19		-2		+21	

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: 28 ^d 2 PHE { SD: 15'3 PMG: 11 ^h 29 ^m 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'5 R°: 54 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.5	+19	07.7	193	55.3	+26	00.7	60 N	** *	2	26	3	30	1	19	85
1	193	22.5		07.1	208	22.5	+25	57.7	58	1	03	2	48	44	1	45	80
2	208	22.5		06.6	222	49.7		54.6	56	1	46	3	05	3	56	2	06
3	223	22.5		06.0	237	16.9		51.3	54	2	13	20	4	06	23	73	23
4	238	22.5		05.4	251	44.0		47.9	52		34	32	15	38	71	20	10
5	253	22.5	+19	04.9	266	11.2	+25	44.4	50	2	50	3	43	4	23	2	50
6	268	22.5	+19	04.3	280	38.4	+25	40.7	45	3	22	4	06	4	40	3	16
7	283	22.6		03.7	295	05.6		36.8	40	3	45	23	4	54	37	64	16
8	298	22.6		03.1	309	32.8		32.8	35	4	04	38	5	06	3	54	63
9	313	22.6		02.6	324	00.0		28.7	30		19	4	50	16	4	09	61
10	328	22.6		02.0	338	27.3		24.4	20	4	42	5	10	34	34	59	22
11	343	22.6	+19	01.4	352	54.5	+25	20.0	10 N	5	00	5	27	5	49	4	56
12	358	22.6	+19	00.8	7	21.7	+25	15.4	0	5	16	5	41	6	03	5	16
13	13	22.6	+19	00.3	21	49.0		10.7	10 S		29	5	55	17	37	52	23
14	28	22.6	+18	59.7	36	16.3		05.9	20	42	6	08	32	5	58	50	17
15	43	22.6		59.1	50	43.6	+25	00.9	30	5	54	23	48	6	23	47	16
16	58	22.7		58.5	65	10.9	+24	55.7	35	6	00	31	6	58	38	46	24
17	73	22.7	+18	57.9	79	38.2	+24	50.5	40	6	07	6	40	7	09	6	55
18	88	22.7	+18	57.4	94	05.6	+24	45.0	45	6	14	6	50	7	22	7	16
19	103	22.7		56.8	108	33.0		39.5	50	22	7	02	38	41	37	22	74
20	118	22.7		56.2	123	00.4		33.8	52	26		07	45	7	54	35	15
21	133	22.7		55.6	137	27.8		27.9	54	30	13	7	53	8	08	33	14
22	148	22.7		55.0	151	55.2		21.9	56	34	20	8	02	24	30	40	81
23	163	22.7		54.5	166	22.7		15.8	58	38	27	13		8	44	26	14
24	178	22.8	+18	53.9	180	50.2	+24	09.6	60 S	6	43	7	35	8	25	9	08
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 3 ^h 38 ^m 4			Mag: -3.9 PMG: 11 ^h 43 ^m			Mag: -2.2 PMG: 2 ^h 34 ^m			Mag: -1.7 PMG: 13 ^h 21 ^m			Mag: +0.1 PMG: 10 ^h 07 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	305	14.9	184	25.1	+21	13.0	321	18.3	-13	15.2	159	13.5	+14	28.2	207	47.7	
1	320	17.4	199	24.3		12.5	336	20.7		15.3	174	15.5		28.0	222	49.8	
2	335	19.8	214	23.5		11.9	351	23.0		15.4	189	17.4		27.9	237	51.9	
3	350	22.3	229	22.7		11.4	6	25.4		15.5	204	19.4		27.7	252	54.1	
4	5	24.8	244	21.9		10.8	21	27.8		15.6	219	21.3		27.5	267	56.2	
5	20	27.2	259	21.2	+21	10.3	36	30.2	-13	15.8	234	23.3	+14	27.3	282	58.3	
6	35	29.7	274	20.4	+21	09.7	51	32.5	-13	15.9	249	25.2	+14	27.2	298	00.5	
7	50	32.2	289	19.6		09.2	66	34.9		16.0	264	27.1		27.0	313	02.6	
8	65	34.6	304	18.8		08.6	81	37.3		16.1	279	29.1		26.8	328	04.8	
9	80	37.1	319	18.0		08.1	96	39.7		16.2	294	31.0		26.6	343	06.9	
10	95	39.6	334	17.2		07.5	111	42.1		16.3	309	33.0		26.5	358	09.0	
11	110	42.0	349	16.5	+21	07.0	126	44.5	-13	16.4	324	34.9	+14	26.3	13	11.2	
12	125	44.5	4	15.7	+21	06.4	141	46.8	-13	16.5	339	36.9	+14	26.1	28	13.3	
13	140	47.0	19	14.9		05.8	156	49.2		16.6	354	38.8		25.9	43	15.5	
14	155	49.4	34	14.1		05.3	171	51.6		16.8	9	40.8		25.8	58	17.6	
15	170	51.9	49	13.3		04.7	186	54.0		16.9	24	42.7		25.6	73	19.7	
16	185	54.3	64	12.6		04.2	201	56.4		17.0	39	44.7		25.4	88	21.9	
17	200	56.8	79	11.8	+21	03.6	216	58.8	-13	17.1	54	46.6	+14	25.2	103	24.0	
18	215	59.3	94	11.0	+21	03.0	232	01.2	-13	17.2	69	48.6	+14	25.1	118	26.2	
19	231	01.7	109	10.2		02.5	247	03.6		17.3	84	50.5		24.9	133	28.3	
20	246	04.2	124	09.4		01.9	262	06.0		17.5	99	52.5		24.7	148	30.4	
21	261	06.7	139	08.7		01.3	277	08.4		17.6	114	54.4		24.5	163	32.6	
22	276	09.1	154	07.9		00.8	292	10.8		17.7	129	56.3		24.4	178	34.7	
23	291	11.6	169	07.1	+21	00.2	307	13.2		17.8	144	58.3		24.2	193	36.9	
24	306	14.1	184	06.3	+20	59.6	322	15.6	-13	17.9	160	00.2	+14	24.0	208	39.0	
Dif	—		-8		-6		+24		-1		+19		-2		+21		

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: 29 ^d 2 PHE { 4 ^h : 56'7 12 ^h : 56'8 20 ^h : 57'0 R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	
0	178	22.8	+18	53.9	180	50.2	+24 09.6	60 N	20 39	21 41	** **	2 44	95	
1	193	22.8		53.3	195	17.8	+24 03.2	58	26	21	22 57	3 05	89	
2	208	22.8		52.7	209	45.3	+23 56.6	56	14	21 04	22 20	22	85	
3	223	22.8		52.1	224	12.9	49.9	54	20 04	20 50	21 55	36	82	
4	238	22.8		51.5	238	40.5	43.1	52	19 56	37	35	3 49	79	
5	253	22.8	+18	50.9	253	08.2	+23 36.2	50	19 48	20 27	21 19	4 00	76	
6	268	22.8	+18	50.4	267	35.9	+23 29.1	45	19 31	20 05	20 48	4 23	72	
7	283	22.9		49.8	282	03.6	21.9	40	17	19 48	26	41	69	
8	298	22.9		49.2	296	31.4	14.5	35	19 06	34	20 08	4 57	65	
9	313	22.9		48.6	310	59.1	+23 07.0	30	18 56	22	19 53	5 10	63	
10	328	22.9		48.0	325	27.0	+22 59.4	20	39	19 02	30	33	59	
11	343	22.9	+18	47.4	339	54.8	+22 51.7	10 N	18 24	18 46	19 12	5 52	56	
12	358	22.9	+18	46.8	354	22.8	+22 43.8	0	18 10	18 32	18 57	6 11	52	
13	13	23.0		46.2	8	50.7	35.8	10 S	17 56	18	44	29	49	
14	28	23.0		45.6	23	18.7	27.6	20	42	18 05	32	6 48	46	
15	43	23.0		45.1	37	46.7	19.4	30	25	17 51	20	7 10	43	
16	58	23.0		44.5	52	14.8	11.0	35	16	43	14	24	39	
17	73	23.0	+18	43.9	66	42.9	+22 02.4	40	17 05	17 34	18 07	7 39	37	
18	88	23.0	+18	43.3	81	11.0	+21 53.8	45	16 52	17 24	18 00	7 56	34	
19	103	23.1		42.7	95	39.2	45.0	50	37	13	17 52	8 18	29	
20	118	23.1		42.1	110	07.5	36.1	52	30	07	49	29	26	
21	133	23.1		41.5	124	35.7	27.1	54	22	17 02	45	41	23	
22	148	23.1		40.9	139	04.1	17.9	56	13	16 55	41	8 54	21	
23	163	23.1		40.3	153	32.4	+21 08.6	58	16 03	48	37	9 10	16	
24	178	23.2	+18	39.7	168	00.8	+20 59.3	60 S	15 51	16 40	17 32	9 29	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 34 ^m 5		Mag: -3.9 PMG: 11 ^h 44 ^m		Mag: -2.3 PMG: 2 ^h 31 ^m		Mag: -1.7 PMG: 13 ^h 18 ^m		Mag: +0.1 PMG: 10 ^h 04 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	306	14.1	184	06.3	+20	59.6	322	15.6	-13	17.9
1	321	16.5	199	05.6		59.0	337	18.0		18.0
2	336	19.0	214	04.8		58.5	352	20.4		18.2
3	351	21.5	229	04.0		57.9	7	22.8		18.3
4	6	23.9	244	03.2		57.3	22	25.2		18.4
5	21	26.4	259	02.5	+20	56.7	37	27.6	-13	18.5
6	36	28.8	274	01.7	+20	56.2	52	30.0	-13	18.6
7	51	31.3	289	00.9		55.6	67	32.4		18.8
8	66	33.8	304	00.1		55.0	82	34.8		18.9
9	81	36.2	318	59.4		54.4	97	37.2		19.0
10	96	38.7	333	58.6		53.8	112	39.6		19.1
11	111	41.2	348	57.8	+20	53.3	127	42.1	-13	19.3
12	126	43.6	3	57.1	+20	52.7	142	44.5	-13	19.4
13	141	46.1	18	56.3		52.1	157	46.9		19.5
14	156	48.6	33	55.5		51.5	172	49.3		19.6
15	171	51.0	48	54.7		50.9	187	51.7		19.7
16	186	53.5	63	54.0		50.3	202	54.2		19.9
17	201	56.0	78	53.2	+20	49.7	217	56.6	-13	20.0
18	216	58.4	93	52.4	+20	49.1	232	59.0	-13	20.1
19	232	00.9	108	51.7		48.6	248	01.4		20.3
20	247	03.3	123	50.9		48.0	263	03.9		20.4
21	262	05.8	138	50.1		47.4	278	06.3		20.5
22	277	08.3	153	49.4		46.8	293	08.7		20.6
23	292	10.7	168	48.6		46.2	308	11.2		20.8
24	307	13.2	183	47.8	+20	45.6	323	13.6	-13	20.9
Dif	—		-8		-6		+24		-1	

+19		-2		+21	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4			Edad: 0 ^d 7 PHE { SD: 15 ^h 6 PMG: 13 ^h 16 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	23.2	+18	39.7	168	00.8	+20	59.3	60 N	** *	2	32	3	35	4	19	97
1	193	23.2		39.1	182	29.3	95	49.7	58	1	16	2	53		34	92	30
2	208	23.2		38.5	196	57.8	95	40.1	56	1	54	3	10	3	59	47	88
3	223	23.2		37.9	211	26.4	96	30.4	54	2	19	24	4	09	4	58	85
4	238	23.2		37.3	225	55.0	96	20.5	52		38	36	18	5	08	81	21
5	253	23.3	+18	36.7	240	23.6	96	+20	50	2	54	3	47	4	26	5	16
6	268	23.3	+18	36.1	254	52.3	97	+20	45	3	25	4	08	4	42	5	35
7	283	23.3		35.5	269	21.1	98	+19	40	3	48	25	4	56	5	50	70
8	298	23.3		34.9	283	49.8	97	39.8	35	4	05	39	5	07	6	02	67
9	313	23.4		34.3	298	18.7	99	29.4	30		20	4	51	17	13	64	20
10	328	23.4		33.7	312	47.6	99	18.9	20	4	43	5	11	35	32	59	19
11	343	23.4	+18	33.1	327	16.5	99	+19	10 N	5	01	5	27	5	49	6	48
12	358	23.4	+18	32.5	341	45.5	100	+18	0	5	16	5	41	6	03	7	03
13	13	23.4		31.9	356	14.5	100	46.5	10 S		29	5	54		16	18	47
14	28	23.5		31.3	10	43.6	101	35.5	20	41	6	08	31		34	43	19
15	43	23.5		30.7	25	12.7	101	24.5	30		53	22	47	7	53	38	18
16	58	23.5		30.1	39	41.9	102	13.3	35	5	59	30	6	57	8	03	36
17	73	23.5	+18	29.5	54	11.1	102	+18	40	6	06	6	38	7	07	8	16
18	88	23.6	+18	28.9	68	40.4	103	+17	45	6	12	6	48	7	20	8	30
19	103	23.6		28.3	83	09.7	103	39.0	50		20	6	59	35	47	23	17
20	118	23.6		27.7	97	39.1	104	27.4	52	24	7	05	42	8	55	21	46
21	133	23.6		27.1	112	08.5	104	15.7	54	27		10	50	9	04	18	38
22	148	23.7		26.5	126	38.0	105	+17	56	31	17	7	59	15	14		28
23	163	23.7		25.9	141	07.5	105	+16	58	35	24	8	09	26	11		18
24	178	23.7	+18	25.2	155	37.1	106	+16	60 S	6	40	7	31	8	20	9	40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 30 ^m 5		Mag: -3.9 PMG: 11 ^h 45 ^m		Mag: -2.3 PMG: 2 ^h 27 ^m		Mag: -1.7 PMG: 13 ^h 15 ^m		Mag: +0.1 PMG: 10 ^h 01 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	307	13.2	183	47.8	+20	45.6	323	13.6	-13	20.9
1	322	15.7	198	47.1		45.0	338	16.0		21.0
2	337	18.1	213	46.3		44.4	353	18.5		21.1
3	352	20.6	228	45.5		43.8	8	20.9		21.3
4	7	23.1	243	44.8		43.2	23	23.3		21.4
5	22	25.5	258	44.0	+20	42.6	38	25.8	-13	21.5
6	37	28.0	273	43.2	+20	42.0	53	28.2	-13	21.7
7	52	30.5	288	42.5		41.4	68	30.7		21.8
8	67	32.9	303	41.7		40.8	83	33.1		21.9
9	82	35.4	318	41.0		40.2	98	35.6		22.1
10	97	37.8	333	40.2		39.6	113	38.0		22.2
11	112	40.3	348	39.4	+20	38.9	128	40.5	-13	22.3
12	127	42.8	3	38.7	+20	38.3	143	42.9	-13	22.5
13	142	45.2	18	37.9		37.7	158	45.4		22.6
14	157	47.7	33	37.1		37.1	173	47.8		22.7
15	172	50.2	48	36.4		36.5	188	50.3		22.9
16	187	52.6	63	35.6		35.9	203	52.7		23.0
17	202	55.1	78	34.9	+20	35.3	218	55.2	-13	23.1
18	217	57.6	93	34.1	+20	34.7	233	57.6	-13	23.3
19	233	00.0	108	33.3		34.0	249	00.1		23.4
20	248	02.5	123	32.6		33.4	264	02.6		23.5
21	263	04.9	138	31.8		32.8	279	05.0		23.7
22	278	07.4	153	31.1		32.2	294	07.5		23.8
23	293	09.9	168	30.3		31.6	309	09.9		24.0
24	308	12.3	183	29.6	+20	30.9	324	12.4	-13	24.1
Dif	—		-8		-6		+25		-1	
							+19		-2	
									+21	

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: 1 ^d .7 PHE { SD: 15'7 PMG: 14 ^h 06 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	178	23.7	+18	25.2	155	37.1	+16	40.0	60 N	20 34	21 35	** **	5 56	97	21 46	3		
1	193	23.7		24.6	170	06.7 ¹⁰⁶		27.9 ¹²¹	58	21	21 15	22 46	6 06	92	39	7		
2	208	23.8		24.0	184	36.3 ¹⁰⁶		15.7 ¹²²	56	10	20 59	22 12	15	88	33	10		
3	223	23.8		23.4	199	06.0 ¹⁰⁷	+16	03.5 ¹²²	54	20 01	46	21 49	23	85	28	13		
4	238	23.8		22.8	213	35.8 ¹⁰⁸	+15	51.1 ¹²⁴	52	19 52	34	30	29	83	23	15		
5	253	23.9	+18	22.2	228	05.6 ¹⁰⁸	+15	38.6 ¹²⁵	50	19 45	20 24	21 15	6 36	79	21 18	18		
6	268	23.9	+18	21.6	242	35.4 ¹⁰⁸	+15	26.1 ¹²⁵	45	19 29	20 02	20 45	6 49	74	21 08	23		
7	283	23.9		21.0	257	05.3 ¹⁰⁹		13.4 ¹²⁷	40	15	19 46	23	7 00	70	21 00	27		
8	298	23.9		20.4	271	35.2 ¹⁰⁹	+15	00.7 ¹²⁷	35	19 04	32	20 06	09	66	20 53	31		
9	313	24.0		19.7	286	05.2 ¹¹⁰	+14	47.9 ¹²⁸	30	18 54	20	19 51	17	63	47	34		
10	328	24.0		19.1	300	35.2 ¹¹⁰		35.0 ¹²⁹	20	38	19 01	29	31	58	36	39		
11	343	24.0	+18	18.5	315	05.3 ¹¹¹	+14	22.0 ¹³⁰	10 N	18 23	18 45	19 11	7 43	53	20 27	43		
12	358	24.1	+18	17.9	329	35.4 ¹¹¹	+14	09.0 ¹³⁰	0	18 10	18 32	18 57	7 54	49	20 17	49		
13	13	24.1		17.3	344	05.6 ¹¹²	+13	55.8 ¹³²	10 S	17 57	19	44	8 05	45	20 08	53		
14	28	24.1		16.7	358	35.8 ¹¹²		42.6 ¹³²	20	43	18 06	32	17	40	19 59	57		
15	43	24.1		16.1	13	06.0 ¹¹²		29.3 ¹³³	30	27	17 52	21	31	34	47	63		
16	58	24.2		15.4	27	36.3 ¹¹³		16.0 ¹³³	35	17	44	15	39	31	41	66		
17	73	24.2	+18	14.8	42	06.6 ¹¹³	+13	02.5 ¹³⁵	40	17 07	17 36	18 09	8 47	29	19 33	70		
18	88	24.2	+18	14.2	56	36.9 ¹¹³	+12	49.0 ¹³⁵	45	16 55	17 26	18 02	8 58	24	19 24	75		
19	103	24.3		13.6	71	07.3 ¹¹⁴		35.4 ¹³⁶	50	40	15	17 54	9 10	19	14	79		
20	118	24.3		13.0	85	37.8 ¹¹⁵		21.7 ¹³⁷	52	33	10	51	16	17	09	82		
21	133	24.3		12.3	100	08.2 ¹¹⁴	+12	08.0 ¹³⁷	54	25	17 05	48	22	14	19 03	85		
22	148	24.4		11.7	114	38.7 ¹¹⁵	+11	54.2 ¹³⁸	56	16	16 58	44	29	11	18 57	88		
23	163	24.4		11.1	129	09.3 ¹¹⁶		40.3 ¹³⁹	58	16 07	52	40	37	8	50	92		
24	178	24.4	+18	10.5	143	39.9 ¹¹⁶	+11	26.4 ¹³⁹	60 S	15 55	16 44	17 36	9 46	4	18 42	96		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 3 ^h 26 ^m .6		Mag: -3.9 PMG: 11 ^h 47 ^m			Mag: -2.3 PMG: 2 ^h 23 ^m			Mag: -1.7 PMG: 13 ^h 12 ^m				Mag: +0.1 PMG: 9 ^h 57 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	308	12.3	183	29.6	+20	30.9	324	12.4	-13	24.1	161	33.6	+14	15.6	210	21.8	+22	28.8
1	323	14.8	198	28.8		30.3	339	14.9		24.2	176	35.5		15.4	225	24.0		28.8
2	338	17.3	213	28.0		29.7	354	17.3		24.4	191	37.5		15.3	240	26.1		28.8
3	353	19.7	228	27.3		29.1	9	19.8		24.5	206	39.4		15.1	255	28.2		28.8
4	8	22.2	243	26.5		28.5	24	22.3		24.6	221	41.4		14.9	270	30.4		28.7
5	23	24.7	258	25.8	+20	27.8	39	24.8	-13	24.8	236	43.3	+14	14.7	285	32.5	+22	28.7
6	38	27.1	273	25.0	+20	27.2	54	27.2	-13	24.9	251	45.3	+14	14.5	300	34.7	+22	28.7
7	53	29.6	288	24.3		26.6	69	29.7		25.1	266	47.2		14.4	315	36.8		28.7
8	68	32.1	303	23.5		25.9	84	32.2		25.2	281	49.2		14.2	330	39.0		28.7
9	83	34.5	318	22.8		25.3	99	34.7		25.4	296	51.1		14.0	345	41.1		28.7
10	98	37.0	333	22.0		24.7	114	37.2		25.5	311	53.0		13.8	0	43.2		28.7
11	113	39.4	348	21.3	+20	24.0	129	39.6	-13	25.6	326	55.0	+14	13.7	15	45.4	+22	28.6
12	128	41.9	3	20.5	+20	23.4	144	42.1	-13	25.8	341	56.9	+14	13.5	30	47.5	+22	28.6
13	143	44.4	18	19.8		22.8	159	44.6		25.9	356	58.9		13.3	45	49.7		28.6
14	158	46.8	33	19.0		22.1	174	47.1		26.1	12	00.8		13.1	60	51.8		28.6
15	173	49.3	48	18.3		21.5	189	49.6		26.2	27	02.8		13.0	75	54.0		28.6
16	188	51.8	63	17.5		20.9	204	52.1		26.4	42	04.7		12.8	90	56.1		28.6
17	203	54.2	78	16.8	+20	20.2	219	54.5	-13	26.5	57	06.7	+14	12.6	105	58.3	+22	28.6
18	218	56.7	93	16.0	+20	19.6	234	57.0	-13	26.6	72	08.6	+14	12.4	121	00.4	+22	28.5
19	233	59.2	108	15.3		18.9	249	59.5		26.8	87	10.5		12.3	136	02.6		28.5
20	249	01.6	123	14.5		18.3	265	02.0		26.9	102	12.5		12.1	151	04.7		28.5
21	264	04.1	138	13.8		17.7	280	04.5		27.1	117	14.4		11.9	166	06.8		28.5
22	279	06.6	153	13.0		17.0	295	07.0		27.2	132	16.4		11.7	181	09.0		28.5
23	294	09.0	168	12.3		16.4	310	09.5		27.4	147	18.3		11.5	196	11.1		28.5
24	309	11.5	183	11.5	+20	15.7	325	12.0	-13	27.5	162	20.3	+14	11.4	211	13.3	+22	28.5
Dif	—		-8		-6		+25		-1		+19		-2		+21		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 3				Edad: 2 ^d 7 PHE { 4 ^h : 58'2 12 ^h : 58'3 20 ^h : 58'4 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	178	24.4	+18	10.5	143	39.9	+11	26.4	60 N	**	**	2	38	3	39	7	33
1	193	24.5		09.9	158	10.5 ¹¹⁶	+11	12.4 ¹⁴⁰	58	1	28	2	58	3	52	38	92
2	208	24.5		09.2	172	41.1 ¹¹⁶	+10	58.3 ¹⁴¹	56	2	01	3	14	4	03	43	88
3	223	24.5		08.6	187	11.8 ¹¹⁷		44.2 ¹⁴¹	54	25	28	12		48	85	41	12
4	238	24.6		08.0	201	42.5 ¹¹⁷		30.0 ¹⁴²	52	43	39	21		52	82	38	15
5	253	24.6	+18	07.4	216	13.3 ¹¹⁸	+10	15.7 ¹⁴³	50	2	59	3	50	4	29	7	55
6	268	24.6	+18	06.7	230	44.1 ¹¹⁸	+10	01.4 ¹⁴³	45	3	28	4	11	4	45	8	03
7	283	24.7		06.1	245	14.9 ¹¹⁸	+9	47.0 ¹⁴⁴	40	3	50	27		4	58	10	70
8	298	24.7		05.5	259	45.7 ¹¹⁸		32.6 ¹⁴⁴	35	4	07	41	5	09		15	67
9	313	24.7		04.9	274	16.6 ¹¹⁹		18.1 ¹⁴⁵	30	22	4	53	19		20	63	21
10	328	24.8		04.2	288	47.5 ¹¹⁹	+9	03.6 ¹⁴⁵	20	4	44	5	12	35		29	57
11	343	24.8	+18	03.6	303	18.4 ¹¹⁹	+8	49.0 ¹⁴⁶	10 N	5	01	5	27	5	50	8	36
12	358	24.8	+18	03.0	317	49.3 ¹¹⁹	+8	34.4 ¹⁴⁶	0	5	16	5	41	6	03	8	43
13	13	24.9		02.4	332	20.3 ¹²⁰		19.7 ¹⁴⁷	10 S	28	5	54	16			50	43
14	28	24.9		01.7	346	51.3 ¹²⁰	+8	04.9 ¹⁴⁸	20	40	6	07	30			8	57
15	43	25.0		01.1	1	22.3 ¹²⁰	+7	50.2 ¹⁴⁷	30	52	21	46				9	05
16	58	25.0	+18	00.5	15	53.4 ¹²¹		35.3 ¹⁴⁹	35	5	58	28	6	55		10	30
17	73	25.0	+17	59.8	30	24.4 ¹²⁰	+7	20.4 ¹⁴⁹	40	6	04	6	36	7	05	9	16
18	88	25.1	+17	59.2	44	55.5 ¹²¹	+7	05.5 ¹⁴⁹	45	6	10	6	46	7	17	9	22
19	103	25.1		58.6	59	26.6 ¹²¹	+6	50.6 ¹⁴⁹	50	18	6	57	32			29	17
20	118	25.1		57.9	73	57.8 ¹²²		35.6 ¹⁵⁰	52	21	7	02	39			33	14
21	133	25.2		57.3	88	28.9 ¹²¹		20.5 ¹⁵¹	54	24	7	07	47			36	13
22	148	25.2		56.7	103	00.1 ¹²²	+6	05.4 ¹⁵¹	56	28	13	7	55			40	10
23	163	25.3		56.0	117	31.2 ¹²¹	+5	50.3 ¹⁵¹	58	32	20	8	05			45	7
24	178	25.3	+17	55.4	132	02.4 ¹²²	+5	35.1 ¹⁵²	60 S	6	36	7	27	8	16	9	50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 22 ^m 7		Mag: -3.9 PMG: 11 ^h 48 ^m		Mag: -2.3 PMG: 2 ^h 19 ^m		Mag: -1.7 PMG: 13 ^h 09 ^m		Mag: +0.1 PMG: 9 ^h 54 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	309	11.5	183	11.5	325	12.0	162	20.3	211	13.3
1	324	13.9	198	10.8	340	14.5	177	22.2	226	15.4
2	339	16.4	213	10.0	355	17.0	192	24.1	241	17.6
3	354	18.9	228	09.3	10	19.5	207	26.1	256	19.7
4	9	21.3	243	08.5	25	22.0	222	28.0	271	21.9
5	24	23.8	258	07.8	40	24.5	237	30.0	286	24.0
6	39	26.3	273	07.0	55	27.0	252	31.9	301	26.2
7	54	28.7	288	06.3	70	29.5	267	33.9	316	28.3
8	69	31.2	303	05.6	85	32.1	282	35.8	331	30.4
9	84	33.7	318	04.8	100	34.6	297	37.8	346	32.6
10	99	36.1	333	04.1	115	37.1	312	39.7	1	34.7
11	114	38.6	348	03.3	130	39.6	327	41.6	16	36.9
12	129	41.0	3	02.6	145	42.1	342	43.6	31	39.0
13	144	43.5	18	01.8	160	44.6	357	45.5	46	41.2
14	159	46.0	33	01.1	175	47.1	12	47.5	61	43.3
15	174	48.4	48	00.4	190	49.7	27	49.4	76	45.5
16	189	50.9	62	59.6	205	52.2	42	51.4	91	47.6
17	204	53.4	77	58.9	220	54.7	57	53.3	106	49.8
18	219	55.8	92	58.1	235	57.2	72	55.2	121	51.9
19	234	58.3	107	57.4	250	59.8	87	57.2	136	54.1
20	250	00.8	122	56.7	266	02.3	102	59.1	151	56.2
21	265	03.2	137	55.9	281	04.8	118	01.1	166	58.3
22	280	05.7	152	55.2	296	07.3	133	03.0	182	00.5
23	295	08.2	167	54.5	311	09.9	148	05.0	197	02.6
24	310	10.6	182	53.7	326	12.4	163	06.9	212	04.8
Dif	—		-7	-7	+25	-2	+19	-2	+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 7	PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8 R°: 48 ^m										
	PMG: 12 ^h 06 ^m 3	hG ☉	Dec			hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	25.3	+17	55.4	132	02.4	+5 35.1	60 N	20 29	21 28	** **	9 08 95	21 52 3		
1	193	25.3		54.8	146	33.6 ¹²²	20.0 ¹⁵¹	58	17	21 10	22 35	10 91	52 7		
2	208	25.4		54.1	161	04.8 ¹²²	+5 04.7 ¹⁵³	56	20 06	20 54	22 05	11 88	52 10		
3	223	25.4		53.5	175	36.1 ¹²³	+4 49.5 ¹⁵²	54	19 57	41	21 43	13 85	53 12		
4	238	25.5		52.9	190	07.3 ¹²²	34.2 ¹⁵³	52	49	30	25	14 82	53 14		
5	253	25.5	+17	52.2	204	38.5 ¹²²	+4 18.9 ¹⁵³	50	19 42	20 20	21 10	9 15 80	21 53 16		
6	268	25.5	+17	51.6	219	09.8 ¹²³	+4 03.5 ¹⁵⁴	45	19 26	20 00	20 42	9 18 74	21 53 21		
7	283	25.6		51.0	233	41.0 ¹²²	+3 48.2 ¹⁵³	40	13	19 43	20	20 70	53 26		
8	298	25.6		50.3	248	12.3 ¹²³	32.8 ¹⁵⁴	35	19 02	30	20 04	22 66	53 29		
9	313	25.7		49.7	262	43.6 ¹²³	17.4 ¹⁵⁴	30	18 53	19	19 50	23 63	53 33		
10	328	25.7		49.1	277	14.9 ¹²³	+3 01.9 ¹⁵⁵	20	37	19 00	28	26 57	53 38		
11	343	25.8	+17	48.4	291	46.1 ¹²²	+2 46.5 ¹⁵⁴	10 N	18 23	18 45	19 11	9 28 53	21 53 43		
12	358	25.8	+17	47.8	306	17.4 ¹²³	+2 31.0 ¹⁵⁵	0	18 10	18 31	18 57	9 31 47	21 53 48		
13	13	25.8		47.1	320	48.7 ¹²³	+2 15.5 ¹⁵⁵	10 S	17 57	19	44	33 43	53 53		
14	28	25.9		46.5	335	20.0 ¹²³	+1 59.9 ¹⁵⁶	20	43	18 06	33	35 38	53 58		
15	43	25.9		45.9	349	51.2 ¹²²	44.4 ¹⁵⁵	30	28	17 53	22	38 33	53 64		
16	58	26.0		45.2	4	22.5 ¹²³	28.9 ¹⁵⁵	35	19	46	16	40 29	53 67		
17	73	26.0	+17	44.6	18	53.8 ¹²³	+1 13.3 ¹⁵⁶	40	17 09	17 38	18 10	9 42 25	21 53 71		
18	88	26.1	+17	43.9	33	25.1 ¹²³	+0 57.7 ¹⁵⁶	45	16 57	17 28	18 04	9 44 21	21 53 75		
19	103	26.1		43.3	47	56.3 ¹²²	42.1 ¹⁵⁶	50	42	18	17 57	46 17	53 81		
20	118	26.1		42.6	62	27.6 ¹²³	26.6 ¹⁵⁵	52	36	13	54	47 15	53 83		
21	133	26.2		42.0	76	58.8 ¹²²	+0 10.9 ¹⁵⁷	54	28	07	50	49 11	53 86		
22	148	26.2		41.3	91	30.0 ¹²²	-0 04.7 ¹⁵⁶	56	20	17 02	47	50 9	53 89		
23	163	26.3		40.7	106	01.3 ¹²³	20.3 ¹⁵⁶	58	11	16 55	43	52 6	53 92		
24	178	26.3	+17	40.1	120	32.5 ¹²²	-0 35.9 ¹⁵⁶	60 S	16 00	16 48	17 39	9 53 3	21 53 96		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 18 ^m 7		Mag: -3.9 PMG: 11 ^h 49 ^m		Mag: -2.4 PMG: 2 ^h 15 ^m		Mag: -1.7 PMG: 13 ^h 06 ^m		Mag: +0.1 PMG: 9 ^h 50 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'					
0	310	10.6	182 53.7	+19 59.9	326 12.4	-13 31.2	163 06.9	+14 07.1	212 04.8	+22 28.1					
1	325	13.1	197 53.0	59.2	341 14.9	31.3	178 08.8	06.9	227 06.9	28.1					
2	340	15.5	212 52.3	58.6	356 17.5	31.5	193 10.8	06.8	242 09.1	28.1					
3	355	18.0	227 51.5	57.9	11 20.0	31.7	208 12.7	06.6	257 11.2	28.1					
4	10	20.5	242 50.8	57.2	26 22.5	31.8	223 14.7	06.4	272 13.4	28.0					
5	25	22.9	257 50.0	+19 56.5	41 25.1	-13 32.0	238 16.6	+14 06.2	287 15.5	+22 28.0					
6	40	25.4	272 49.3	+19 55.9	56 27.6	-13 32.1	253 18.6	+14 06.1	302 17.7	+22 28.0					
7	55	27.9	287 48.6	55.2	71 30.2	32.3	268 20.5	05.9	317 19.8	28.0					
8	70	30.3	302 47.8	54.5	86 32.7	32.5	283 22.4	05.7	332 22.0	28.0					
9	85	32.8	317 47.1	53.8	101 35.2	32.6	298 24.4	05.5	347 24.1	28.0					
10	100	35.3	332 46.4	53.2	116 37.8	32.8	313 26.3	05.3	2 26.3	28.0					
11	115	37.7	347 45.7	+19 52.5	131 40.3	-13 32.9	328 28.3	+14 05.2	17 28.4	+22 27.9					
12	130	40.2	2 44.9	+19 51.8	146 42.9	-13 33.1	343 30.2	+14 05.0	32 30.6	+22 27.9					
13	145	42.6	17 44.2	51.1	161 45.4	33.3	358 32.2	04.8	47 32.7	27.9					
14	160	45.1	32 43.5	50.4	176 48.0	33.4	13 34.1	04.6	62 34.9	27.9					
15	175	47.6	47 42.7	49.7	191 50.5	33.6	28 36.0	04.5	77 37.0	27.9					
16	190	50.0	62 42.0	49.1	206 53.1	33.8	43 38.0	04.3	92 39.2	27.9					
17	205	52.5	77 41.3	+19 48.4	221 55.6	-13 33.9	58 39.9	+14 04.1	107 41.3	+22 27.9					
18	220	55.0	92 40.5	+19 47.7	236 58.2	-13 34.1	73 41.9	+14 03.9	122 43.5	+22 27.8					
19	235	57.4	107 39.8	47.0	252 00.8	34.2	88 43.8	03.7	137 45.6	27.8					
20	250	59.9	122 39.1	46.3	267 03.3	34.4	103 45.8	03.6	152 47.7	27.8					
21	266	02.4	137 38.4	45.6	282 05.9	34.6	118 47.7	03.4	167 49.9	27.8					
22	281	04.8	152 37.6	44.9	297 08.4	34.7	133 49.6	03.2	182 52.0	27.8					
23	296	07.3	167 36.9	44.2	312 11.0	34.9	148 51.6	03.0	197 54.2	27.8					
24	311	09.8	182 36.2	+19 43.5	327 13.6	-13 35.1	163 53.5	+14 02.8	212 56.3	+22 27.8					
Dif	—	-7	-7	+25	-2	+19	-2	+21	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: 4 ^d 7 PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 0 PMG: 16 ^h 30 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	26.3	+17	40.1	120	32.5	-0	35.9	60 N	0 42	2 45	3 44	10 43	98	21 55	4
1	193	26.4		39.4	135	03.7 ¹²²	-0	51.5 ¹⁵⁶	58	1 38	3 03	3 56	41	94	21 59	7
2	208	26.4		38.8	149	34.8 ¹²¹	-1	07.1 ¹⁵⁶	56	2 08	19	4 07	39	90	22 02	10
3	223	26.5		38.1	164	06.0 ¹²²		22.8 ¹⁵⁷	54	30	32	16	38	87	05	13
4	238	26.5		37.5	178	37.1 ¹²¹		38.4 ¹⁵⁶	52	2 48	43	24	36	84	07	16
5	253	26.6	+17	36.8	193	08.3 ¹²²	-1	54.0 ¹⁵⁶	50	3 03	3 53	4 31	10 35	82	22 09	19
6	268	26.6	+17	36.2	207	39.4 ¹²¹	-2	09.6 ¹⁵⁶	45	3 31	4 13	4 47	10 32	76	22 14	24
7	283	26.7		35.5	222	10.5 ¹²¹		25.2 ¹⁵⁶	40	3 52	29	5 00	30	71	19	28
8	298	26.7		34.9	236	41.5 ¹²⁰		40.8 ¹⁵⁶	35	4 09	43	10	28	68	22	32
9	313	26.7		34.2	251	12.6 ¹²¹	-2	56.4 ¹⁵⁶	30	23	4 54	20	26	65	26	34
10	328	26.8		33.6	265	43.6 ¹²⁰	-3	12.0 ¹⁵⁶	20	4 45	5 13	36	23	59	31	41
11	343	26.8	+17	32.9	280	14.6 ¹²⁰	-3	27.6 ¹⁵⁶	10 N	5 02	5 28	5 50	10 21	53	22 36	46
12	358	26.9	+17	32.3	294	45.6 ¹²⁰	-3	43.1 ¹⁵⁵	0	5 16	5 41	6 03	10 18	49	22 41	50
13	13	26.9		31.6	309	16.5 ¹¹⁹	-3	58.7 ¹⁵⁶	10 S	28	5 54	15	16	44	46	54
14	28	27.0		31.0	323	47.4 ¹¹⁹	-4	14.2 ¹⁵⁵	20	39	6 06	29	13	40	51	59
15	43	27.0		30.3	338	18.3 ¹¹⁹		29.7 ¹⁵⁵	30	50	19	44	11	33	22 57	65
16	58	27.1		29.7	352	49.1 ¹¹⁸	-4	45.2 ¹⁵⁵	35	5 56	26	6 53	09	30	23 00	68
17	73	27.1	+17	29.0	7	20.0 ¹¹⁹	-5	00.7 ¹⁵⁵	40	6 02	6 34	7 03	10 07	27	23 04	72
18	88	27.2	+17	28.4	21	50.7 ¹¹⁷	-5	16.1 ¹⁵⁴	45	6 08	6 44	7 15	10 05	23	23 08	77
19	103	27.2		27.7	36	21.5 ¹¹⁸		31.5 ¹⁵⁴	50	15	54	29	03	17	14	82
20	118	27.3		27.0	50	52.2 ¹¹⁷	-5	47.0 ¹⁵⁵	52	18	6 59	36	02	15	16	85
21	133	27.3		26.4	65	22.9 ¹¹⁷	-6	02.3 ¹⁵³	54	21	7 04	43	10 00	13	19	87
22	148	27.4		25.7	79	53.5 ¹¹⁶		17.7 ¹⁵⁴	56	25	10	7 51	9 59	10	22	91
23	163	27.5		25.1	94	24.1 ¹¹⁶		33.0 ¹⁵³	58	28	16	8 01	58	6	25	95
24	178	27.5	+17	24.4	108	54.7 ¹¹⁶	-6	48.3 ¹⁵³	60 S	6 32	7 23	8 11	9 56	3	23 29	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 14 ^m 8		Mag: -3.9 PMG: 11 ^h 50 ^m		Mag: -2.4 PMG: 2 ^h 11 ^m		Mag: -1.7 PMG: 13 ^h 03 ^m		Mag: +0.1 PMG: 9 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	311	09.8	182	36.2	+19	43.5	327	13.6	-13	35.1	163	53.5	+14	02.8	212	56.3	+22	27.8
1	326	12.2	197	35.5		42.8	342	16.1		35.2	178	55.5		02.7	227	58.5		27.7
2	341	14.7	212	34.7		42.1	357	18.7		35.4	193	57.4		02.5	243	00.6		27.7
3	356	17.1	227	34.0		41.4	372	21.3		35.6	208	59.4		02.3	258	02.8		27.7
4	11	19.6	242	33.3		40.7	27	23.8		35.7	224	01.3		02.1	273	04.9		27.7
5	26	22.1	257	32.6	+19	40.0	42	26.4	-13	35.9	239	03.2	+14	02.0	288	07.1	+22	27.7
6	41	24.5	272	31.8	+19	39.3	57	29.0	-13	36.1	254	05.2	+14	01.8	303	09.2	+22	27.7
7	56	27.0	287	31.1		38.6	72	31.5		36.2	269	07.1		01.6	318	11.4		27.6
8	71	29.5	302	30.4		37.9	87	34.1		36.4	284	09.1		01.4	333	13.5		27.6
9	86	31.9	317	29.7		37.2	102	36.7		36.6	299	11.0		01.2	348	15.7		27.6
10	101	34.4	332	28.9		36.5	117	39.3		36.7	314	13.0		01.1	3	17.8		27.6
11	116	36.9	347	28.2	+19	35.8	132	41.8	-13	36.9	329	14.9	+14	00.9	18	20.0	+22	27.6
12	131	39.3	2	27.5	+19	35.1	147	44.4	-13	37.1	344	16.8	+14	00.7	33	22.1	+22	27.6
13	146	41.8	17	26.8		34.4	162	47.0		37.3	359	18.8		00.5	48	24.3		27.6
14	161	44.3	32	26.1		33.7	177	49.6		37.4	14	20.7		00.3	63	26.4		27.5
15	176	46.7	47	25.3		33.0	192	52.2		37.6	29	22.7	+14	00.2	78	28.6		27.5
16	191	49.2	62	24.6		32.3	207	54.8		37.8	44	24.6	+14	00.0	93	30.7		27.5
17	206	51.6	77	23.9	+19	31.6	222	57.3	-13	37.9	59	26.5	+13	59.8	108	32.9	+22	27.5
18	221	54.1	92	23.2	+19	30.9	237	59.9	-13	38.1	74	28.5	+13	59.6	123	35.0	+22	27.5
19	236	56.6	107	22.5		30.2	253	02.5		38.3	89	30.4		59.5	138	37.2		27.5
20	251	59.0	122	21.8		29.5	268	05.1		38.5	104	32.4		59.3	153	39.3		27.5
21	267	01.5	137	21.0		28.7	283	07.7		38.6	119	34.3		59.1	168	41.5		27.4
22	282	04.0	152	20.3		28.0	298	10.3		38.8	134	36.3		58.9	183	43.6		27.4
23	297	06.4	167	19.6		27.3	313	12.9		39.0	149	38.2		58.7	198	45.8		27.4
24	312	08.9	182	18.9	+19	26.6	328	15.5	-13	39.2	164	40.1	+13	58.6	213	47.9	+22	27.4
Dif	—		-7		-7		+26		-2		+19		-2		+22			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1				Edad: 5 ^d 7 PHE { 4 ^h : 59 ^h :1 12 ^h : 59 ^h :2 20 ^h : 59 ^h :2 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	178	27.5	+17	24.4	108	54.7	-6	48.3	60 N	20 24	21 22	23 10	12 21 100	21 59 5				
1	193	27.6		23.8	123	25.2 ¹¹⁵	-7	03.6 ¹⁵³	58	12	21 04	22 25	15 96	22 06 10				
2	208	27.6		23.1	137	55.6 ¹¹⁴		18.8 ¹⁵²	56	20 02	20 49	21 58	09 93	12 14				
3	223	27.7		22.4	152	26.1 ¹¹⁵		34.0 ¹⁵²	54	19 53	37	37	05 89	18 17				
4	238	27.7		21.8	166	56.4 ¹¹³	-7	49.2 ¹⁵²	52	46	26	20	12 00 86	23 20				
5	253	27.8	+17	21.1	181	26.8 ¹¹⁴	-8	04.3 ¹⁵¹	50	19 38	20 16	21 06	11 57 83	22 28 22				
6	268	27.8	+17	20.5	195	57.1 ¹¹³	-8	19.4 ¹⁵¹	45	19 23	19 57	20 38	11 48 78	22 38 27				
7	283	27.9		19.8	210	27.3 ¹¹²		34.5 ¹⁵¹	40	11	41	18	41 74	47 31				
8	298	27.9		19.1	224	57.5 ¹¹²	-8	49.5 ¹⁵⁰	35	19 01	28	20 01	36 69	22 54 35				
9	313	28.0		18.5	239	27.6 ¹¹¹	-9	04.4 ¹⁴⁹	30	18 51	19 17	19 48	31 66	23 00 39				
10	328	28.0		17.8	253	57.7 ¹¹¹		19.4 ¹⁵⁰	20	36	18 59	27	22 60	12 43				
11	343	28.1	+17	17.2	268	27.7 ¹¹⁰	-9	34.2 ¹⁴⁸	10 N	18 22	18 44	19 10	11 14 56	23 22 48				
12	358	28.2	+17	16.5	282	57.7 ¹¹⁰	-9	49.1 ¹⁴⁹	0	18 10	18 31	18 56	11 07 51	23 31 52				
13	13	28.2		15.8	297	27.6 ¹⁰⁹	-10	03.9 ¹⁴⁸	10 S	17 57	19	44	11 00 46	40 57				
14	28	28.3		15.2	311	57.5 ¹⁰⁹		18.6 ¹⁴⁷	20	44	18 07	33	10 53 41	23 50 62				
15	43	28.3		14.5	326	27.3 ¹⁰⁸		33.3 ¹⁴⁷	30	29	17 54	23	44 36	*** ** *				
16	58	28.4		13.8	340	57.0 ¹⁰⁷	-10	47.9 ¹⁴⁶	35	20	47	17	39 33	*** ** *				
17	73	28.4	+17	13.2	355	26.7 ¹⁰⁷	-11	02.5 ¹⁴⁶	40	17 11	17 39	18 12	10 34 29	*** ** *				
18	88	28.5	+17	12.5	9	56.4 ¹⁰⁷	-11	17.0 ¹⁴⁵	45	16 59	17 30	18 06	10 28 25	*** ** *				
19	103	28.6		11.8	24	25.9 ¹⁰⁵		31.5 ¹⁴⁵	50	45	20	17 59	20 20	*** ** *				
20	118	28.6		11.2	38	55.4 ¹⁰⁵	-11	45.9 ¹⁴⁴	52	39	16	56	17 18	*** ** *				
21	133	28.7		10.5	53	24.9 ¹⁰⁵	-12	00.2 ¹⁴³	54	32	10	53	13 15	*** ** *				
22	148	28.7		09.8	67	54.2 ¹⁰³		14.5 ¹⁴³	56	24	17 05	50	09 12	*** ** *				
23	163	28.8		09.2	82	23.5 ¹⁰³		28.7 ¹⁴²	58	15	16 59	47	10 04 9	*** ** *				
24	178	28.8	+17	08.5	96	52.8 ¹⁰³	-12	42.9 ¹⁴²	60 S	16 04	16 52	17 43	9 59 5	*** ** *				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 10 ^m 9		Mag: -3.9 PMG: 11 ^h 51 ^m				Mag: -2.4 PMG: 2 ^h 07 ^m				Mag: -1.7 PMG: 13 ^h 00 ^m				Mag: +0.1 PMG: 9 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	08.9	182	18.9	+19	26.6	328	15.5	-13	39.2	164	40.1	+13	58.6	213	47.9	+22	27.4
1	327	11.4	197	18.2		25.9	343	18.1		39.3	179	42.1		58.4	228	50.1		27.4
2	342	13.8	212	17.5		25.1	358	20.7		39.5	194	44.0		58.2	243	52.2		27.4
3	357	16.3	227	16.8		24.4	13	23.3		39.7	209	46.0		58.0	258	54.4		27.3
4	12	18.7	242	16.0		23.7	28	25.9		39.9	224	47.9		57.8	273	56.6		27.3
5	27	21.2	257	15.3	+19	23.0	43	28.5	-13	40.0	239	49.9	+13	57.7	288	58.7	+22	27.3
6	42	23.7	272	14.6	+19	22.3	58	31.1	-13	40.2	254	51.8	+13	57.5	304	00.9	+22	27.3
7	57	26.1	287	13.9		21.5	73	33.7		40.4	269	53.7		57.3	319	03.0		27.3
8	72	28.6	302	13.2		20.8	88	36.3		40.6	284	55.7		57.1	334	05.2		27.3
9	87	31.1	317	12.5		20.1	103	38.9		40.7	299	57.6		57.0	349	07.3		27.3
10	102	33.5	332	11.8		19.4	118	41.5		40.9	314	59.6		56.8	4	09.5		27.2
11	117	36.0	347	11.1	+19	18.6	133	44.1	-13	41.1	330	01.5	+13	56.6	19	11.6	+22	27.2
12	132	38.5	2	10.3	+19	17.9	148	46.7	-13	41.3	345	03.4	+13	56.4	34	13.8	+22	27.2
13	147	40.9	17	09.6		17.2	163	49.4		41.5	0	05.4		56.2	49	15.9		27.2
14	162	43.4	32	08.9		16.4	178	52.0		41.6	15	07.3		56.1	64	18.1		27.2
15	177	45.9	47	08.2		15.7	193	54.6		41.8	30	09.3		55.9	79	20.2		27.2
16	192	48.3	62	07.5		15.0	208	57.2		42.0	45	11.2		55.7	94	22.4		27.2
17	207	50.8	77	06.8	+19	14.2	223	59.8	-13	42.2	60	13.2	+13	55.5	109	24.5	+22	27.1
18	222	53.2	92	06.1	+19	13.5	239	02.4	-13	42.3	75	15.1	+13	55.3	124	26.7	+22	27.1
19	237	55.7	107	05.4		12.8	254	05.1		42.5	90	17.0		55.2	139	28.8		27.1
20	252	58.2	122	04.7		12.0	269	07.7		42.7	105	19.0		55.0	154	31.0		27.1
21	268	00.6	137	04.0		11.3	284	10.3		42.9	120	20.9		54.8	169	33.1		27.1
22	283	03.1	152	03.3		10.6	299	12.9		43.1	135	22.9		54.6	184	35.3		27.1
23	298	05.6	167	02.6		09.8	314	15.6		43.3	150	24.8		54.4	199	37.4		27.0
24	313	08.0	182	01.9	+19	09.1	329	18.2	-13	43.4	165	26.7	+13	54.3	214	39.6	+22	27.0
Dif	—		-7		-7		+26		-2		+19		-2		+22			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 06 ^m 0			Edad: 6 ^d 7 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 R°: 55 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	28.8	+17 08.5	96	52.8	-12 42.9	60 N	1 03	2 51	3 49	14 01	105	22 04	10	
1	193	28.9	07.8	111	22.0	-12 56.9	58	1 48	3 09	4 00	13 51	99	16 15		
2	208	29.0	07.1	125	51.1	-13 11.0	56	2 15	23	10	42 94		26 19		
3	223	29.0	06.5	140	20.1	24.9	54	36	36	19	34 90		35 22		
4	238	29.1	05.8	154	49.1	38.8	52	2 53	47	27	26 88		43 25		
5	253	29.1	+17 05.1	169	18.0	-13 52.6	50	3 07	3 56	4 34	13 20	84	22 50	28	
6	268	29.2	+17 04.5	183	46.8	-14 06.3	45	3 34	4 16	4 49	13 06	79	23 05	34	
7	283	29.3	03.8	198	15.5	20.0	40	3 55	32	5 02	12 55	74	18 38		
8	298	29.3	03.1	212	44.2	33.6	35	4 11	44	12	45 71		29 41		
9	313	29.4	02.4	227	12.8	-14 47.1	30	25	4 55	21	37 67		39 43		
10	328	29.4	01.8	241	41.3	-15 00.5	20	4 46	5 13	37	22 63		23 55	49	
11	343	29.5	+17 01.1	256	09.8	-15 13.8	10 N	5 02	5 28	5 50	12 10	58	** ** *	**	
12	358	29.6	+17 00.4	270	38.2	-15 27.1	0	5 16	5 41	6 03	11 58	54	** ** *	**	
13	13	29.6	+16 59.7	285	06.5	40.2	10 S	28	5 53	15	46 51		** ** *	**	
14	28	29.7	59.1	299	34.7	-15 53.3	20	39	6 05	28	34 46		** ** *	**	
15	43	29.8	58.4	314	02.8	-16 06.3	30	49	18	43	20 41		0 02	67	
16	58	29.8	57.7	328	30.9	19.2	35	5 54	25	6 51	12 38		08 71		
17	73	29.9	+16 57.0	342	58.9	-16 32.0	40	6 00	6 32	7 01	11 03	35	0 16	74	
18	88	29.9	+16 56.4	357	26.8	-16 44.7	45	6 06	6 41	7 12	10 53	30	0 25	78	
19	103	30.0	55.7	11	54.6	-16 57.4	50	12	51	26	40 25		36 84		
20	118	30.1	55.0	26	22.3	-17 09.9	52	15	6 56	32	35 22		41 86		
21	133	30.1	54.3	40	50.0	22.3	54	18	7 01	39	28 20		46 90		
22	148	30.2	53.6	55	17.5	34.6	56	21	06	47	21 16		0 53	93	
23	163	30.3	53.0	69	45.0	46.9	58	25	12	7 56	13 12		1 00	97	
24	178	30.3	+16 52.3	84	12.4	-17 59.0	60 S	6 28	7 19	8 06	10 04	8	1 08	102	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 07 ^m 0		Mag: -3.9 PMG: 11 ^h 52 ^m		Mag: -2.5 PMG: 2 ^h 02 ^m		Mag: -1.7 PMG: 12 ^h 57 ^m		Mag: +0.1 PMG: 9 ^h 40 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	°	'	°	°	°	'	
0	313	08.0	182	01.9	+19 09.1	329 18.2	-13 43.4	165 26.7	+13 54.3	214 39.6	+22 27.0
1	328	10.5	197	01.2	08.3	344 20.8	43.6	180 28.7	54.1	229 41.7	27.0
2	343	13.0	212	00.5	07.6	359 23.4	43.8	195 30.6	53.9	244 43.9	27.0
3	358	15.4	226	59.8	06.9	14 26.1	44.0	210 32.6	53.7	259 46.1	27.0
4	13	17.9	241	59.1	06.1	29 28.7	44.2	225 34.5	53.5	274 48.2	27.0
5	28	20.3	256	58.4	+19 05.4	44 31.3	-13 44.4	240 36.4	+13 53.4	289 50.4	+22 27.0
6	43	22.8	271	57.7	+19 04.6	59 34.0	-13 44.5	255 38.4	+13 53.2	304 52.5	+22 26.9
7	58	25.3	286	56.9	03.9	74 36.6	44.7	270 40.3	53.0	319 54.7	26.9
8	73	27.7	301	56.2	03.1	89 39.2	44.9	285 42.3	52.8	334 56.8	26.9
9	88	30.2	316	55.5	02.4	104 41.9	45.1	300 44.2	52.6	349 59.0	26.9
10	103	32.7	331	54.8	01.6	119 44.5	45.3	315 46.2	52.5	5 01.1	26.9
11	118	35.1	346	54.1	+19 00.9	134 47.2	-13 45.5	330 48.1	+13 52.3	20 03.3	+22 26.9
12	133	37.6	1	53.5	+19 00.1	149 49.8	-13 45.6	345 50.0	+13 52.1	35 05.4	+22 26.8
13	148	40.1	16	52.8	+18 59.4	164 52.5	45.8	0 52.0	51.9	50 07.6	26.8
14	163	42.5	31	52.1	58.6	179 55.1	46.0	15 53.9	51.7	65 09.7	26.8
15	178	45.0	46	51.4	57.9	194 57.7	46.2	30 55.9	51.6	80 11.9	26.8
16	193	47.5	61	50.7	57.1	210 00.4	46.4	45 57.8	51.4	95 14.1	26.8
17	208	49.9	76	50.0	+18 56.4	225 03.0	-13 46.6	60 59.7	+13 51.2	110 16.2	+22 26.8
18	223	52.4	91	49.3	+18 55.6	240 05.7	-13 46.8	76 01.7	+13 51.0	125 18.4	+22 26.8
19	238	54.8	106	48.6	54.8	255 08.3	47.0	91 03.6	50.8	140 20.5	26.7
20	253	57.3	121	47.9	54.1	270 11.0	47.1	106 05.6	50.7	155 22.7	26.7
21	268	59.8	136	47.2	53.3	285 13.7	47.3	121 07.5	50.5	170 24.8	26.7
22	284	02.2	151	46.5	52.6	300 16.3	47.5	136 09.4	50.3	185 27.0	26.7
23	299	04.7	166	45.8	51.8	315 19.0	47.7	151 11.4	50.1	200 29.1	26.7
24	314	07.2	181	45.1	+18 51.0	330 21.6	-13 47.9	166 13.3	+13 49.9	215 31.3	+22 26.7
Dif	—		-7	-8		+26	-2	+19	-2	+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 9			Edad: 7 ^d 7 PHE { 4 ^h : 59 ^m /3 12 ^h : 59 ^m /4 20 ^h : 59 ^m /4 PMG: 19 ^h 06 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	30.3	+16 52.3	84	12.4	-17 59.0	84	60 N	20 19	21 15	22 54	15 46 103	22 14 18	
1	193	30.4	51.6	98	39.8	-18 11.0	120	58	20 08	20 58	22 16	30 96	31 24	
2	208	30.5	50.9	113	07.0	22.9	119	56	19 58	44	21 51	16 92	45 29	
3	223	30.5	50.2	127	34.2	34.7	118	54	50	32	31	15 04 88	22 57 33	
4	238	30.6	49.6	142	01.2	46.4	117	52	42	22	15	14 54 85	23 08 36	
5	253	30.7	+16 48.9	156	28.2	-18 58.0	116	50	19 35	20 13	21 02	14 44 83	23 18 38	
6	268	30.7	+16 48.2	170	55.1	-19 09.5	115	45	19 21	19 54	20 35	14 25 78	23 39 42	
7	283	30.8	47.5	185	21.9	20.9	114	40	19 09	39	20 15	14 09 74	23 56 45	
8	298	30.9	46.8	199	48.7	32.1	112	35	18 59	26	19 59	13 56 71	*** **	
9	313	30.9	46.1	214	15.3	43.2	111	30	50	19 15	46	44 69	*** **	
10	328	31.0	45.5	228	41.9	-19 54.3	111	20	35	18 58	25	25 64	*** **	
11	343	31.1	+16 44.8	243	08.4	-20 05.2	109	10 N	18 22	18 44	19 09	13 08 61	0 10 52	
12	358	31.1	+16 44.1	257	34.8	-20 15.9	107	0	18 09	18 31	18 56	12 52 58	0 23 56	
13	13	31.2	43.4	272	01.1	26.6	107	10 S	17 57	19	44	37 54	37 60	
14	28	31.3	42.7	286	27.3	37.1	105	20	45	18 08	34	20 51	0 52 64	
15	43	31.3	42.0	300	53.4	47.5	104	30	30	17 55	24	12 01 47	1 09 68	
16	58	31.4	41.3	315	19.5	-20 57.8	103	35	22	48	19	11 50 45	19 71	
17	73	31.5	+16 40.6	329	45.5	-21 07.9	101	40	17 12	17 41	18 13	11 38 41	1 30 74	
18	88	31.6	+16 40.0	344	11.3	-21 17.9	100	45	17 01	17 33	18 08	11 23 38	1 43 79	
19	103	31.6	39.3	358	37.1	27.8	99	50	16 48	23	18 02	11 05 33	2 00 84	
20	118	31.7	38.6	13	02.9	37.6	98	52	42	18	17 59	10 57 30	07 87	
21	133	31.8	37.9	27	28.5	47.2	96	54	35	14	56	48 27	16 90	
22	148	31.8	37.2	41	54.1	-21 56.7	95	56	27	08	53	37 24	26 93	
23	163	31.9	36.5	56	19.5	-22 06.0	93	58	19	17 02	50	25 20	37 98	
24	178	32.0	+16 35.8	70	44.9	-22 15.2	92	60 S	16 09	16 56	17 46	10 12 13	2 50 104	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 03 ^m 0		Mag: -3.9 PMG: 11 ^h 54 ^m			Mag: -2.5 PMG: 1 ^h 58 ^m			Mag: -1.7 PMG: 12 ^h 53 ^m			Mag: +0.1 PMG: 9 ^h 37 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	314	07.2	181 45.1	+18 51.0	330 21.6	-13 47.9	166 13.3	+13 49.9	215 31.3	+22 26.7				
1	329	09.6	196 44.4	50.3	345 24.3	48.1	181 15.3	49.8	230 33.4	26.6				
2	344	12.1	211 43.7	49.5	0 26.9	48.3	196 17.2	49.6	245 35.6	26.6				
3	359	14.6	226 43.0	48.7	15 29.6	48.5	211 19.2	49.4	260 37.8	26.6				
4	14	17.0	241 42.3	48.0	30 32.3	48.7	226 21.1	49.2	275 39.9	26.6				
5	29	19.5	256 41.6	+18 47.2	45 34.9	-13 48.9	241 23.0	+13 49.0	290 42.1	+22 26.6				
6	44	22.0	271 41.0	+18 46.4	60 37.6	-13 49.1	256 25.0	+13 48.9	305 44.2	+22 26.6				
7	59	24.4	286 40.3	45.7	75 40.3	49.2	271 26.9	48.7	320 46.4	26.6				
8	74	26.9	301 39.6	44.9	90 42.9	49.4	286 28.9	48.5	335 48.5	26.5				
9	89	29.3	316 38.9	44.1	105 45.6	49.6	301 30.8	48.3	350 50.7	26.5				
10	104	31.8	331 38.2	43.4	120 48.3	49.8	316 32.7	48.1	5 52.8	26.5				
11	119	34.3	346 37.5	+18 42.6	135 51.0	-13 50.0	331 34.7	+13 48.0	20 55.0	+22 26.5				
12	134	36.7	1 36.8	+18 41.8	150 53.6	-13 50.2	346 36.6	+13 47.8	35 57.2	+22 26.5				
13	149	39.2	16 36.1	41.0	165 56.3	50.4	1 38.6	47.6	50 59.3	26.5				
14	164	41.7	31 35.4	40.3	180 59.0	50.6	16 40.5	47.4	66 01.5	26.4				
15	179	44.1	46 34.8	39.5	196 01.7	50.8	31 42.4	47.2	81 03.6	26.4				
16	194	46.6	61 34.1	38.7	211 04.3	51.0	46 44.4	47.1	96 05.8	26.4				
17	209	49.1	76 33.4	+18 37.9	226 07.0	-13 51.2	61 46.3	+13 46.9	111 07.9	+22 26.4				
18	224	51.5	91 32.7	+18 37.2	241 09.7	-13 51.4	76 48.3	+13 46.7	126 10.1	+22 26.4				
19	239	54.0	106 32.0	36.4	256 12.4	51.6	91 50.2	46.5	141 12.3	26.4				
20	254	56.5	121 31.3	35.6	271 15.1	51.8	106 52.1	46.3	156 14.4	26.4				
21	269	58.9	136 30.7	34.8	286 17.8	52.0	121 54.1	46.2	171 16.6	26.3				
22	285	01.4	151 30.0	34.0	301 20.4	52.2	136 56.0	46.0	186 18.7	26.3				
23	300	03.8	166 29.3	33.2	316 23.1	52.4	151 58.0	45.8	201 20.9	26.3				
24	315	06.3	181 28.6	+18 32.5	331 25.8	-13 52.5	166 59.9	+13 45.6	216 23.0	+22 26.3				
Dif	—		-7	-8	+27	-2	+19	-2	+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 05 ^m 8			Edad: 8 ^d 7 PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 3 20 ^h : 59 ^h 3 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	178	32.0	+16	35.8	70	44.9	-22	15.2	60 N	1 19	2 57	3 54	17 29	90		22 32	37
1	193	32.1		35.1	85	10.2		24.2	58	1 57	3 14	4 05	17 06	85		22 55	43
2	208	32.1		34.4	99	35.5		33.2	56	2 22		14	16 48	81		23 14	46
3	223	32.2		33.7	114	00.6		41.9	54		41	23		32	79		30 48
4	238	32.3		33.0	128	25.7		50.6	52	2 57	50	30		19	76		44 50
5	253	32.3	+16	32.3	142	50.7	-22	59.1	50	3 11	3 59	4 37	16 07	75		23 56	51
6	268	32.4	+16	31.7	157	15.6	-23	07.4	45	3 37	4 19	4 52	15 43	72	**	**	**
7	283	32.5		31.0	171	40.5		15.6	40	3 57	34	5 03		23	70	**	**
8	298	32.6		30.3	186	05.2		23.6	35	4 13	46	13	15 07	68		0 10	48
9	313	32.6		29.6	200	29.9		31.5	30		26	22	14 53	67		22	51
10	328	32.7		28.9	214	54.6		39.2	20	4 47	5 14	37		29	65	0 44	53
11	343	32.8	+16	28.2	229	19.1	-23	46.8	10 N	5 03	5 28	5 50	14 09	63		1 02	57
12	358	32.9	+16	27.5	243	43.6	-23	54.2	0	5 16	5 41	6 02	13 50	61		1 19	60
13	13	32.9		26.8	258	08.0	-24	01.5	10 S		27	5 52		31	59	37	62
14	28	33.0		26.1	272	32.3		08.6	20		38	6 04	27	13 11	57	1 56	64
15	43	33.1		25.4	286	56.6		15.5	30		48	16	41	12 48	54	2 17	68
16	58	33.2		24.7	301	20.8		22.3	35		53	23	49	35	52	30	70
17	73	33.2	+16	24.0	315	45.0	-24	29.0	40	5 58	6 30	6 59	12 19	51		2 44	73
18	88	33.3	+16	23.3	330	09.1	-24	35.4	45	6 04	6 39	7 10	12 01	48		3 02	75
19	103	33.4		22.6	344	33.1		41.7	50		10	48	23	11 38	45	24	79
20	118	33.5		21.9	358	57.1		47.9	52		12	53	29	27	43	34	82
21	133	33.5		21.2	13	21.0		53.8	54	15	6 57	36	15	40		46	84
22	148	33.6		20.5	27	44.8	-24	59.7	56	18	7 02	43	11 01	37		3 59	88
23	163	33.7		19.8	42	08.6	-25	05.3	58	21	08	7 52	10 45	33		4 15	92
24	178	33.8	+16	19.1	56	32.3	-25	10.8	60 S	6 24	7 15	8 01	10 25	27		4 34	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 2 ^h 59 ^m 1		Mag: -4.0 PMG: 11 ^h 55 ^m		Mag: -2.5 PMG: 1 ^h 54 ^m		Mag: -1.7 PMG: 12 ^h 50 ^m		Mag: +0.1 PMG: 9 ^h 33 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	315	06.3	181	28.6	+18 32.5	331	25.8	-13 52.5	166	59.9	+13 45.6	216	23.0	+22 26.3	
1	330	08.8	196	27.9		346	28.5	52.7	182	01.8	45.4	231	25.2	26.3	
2	345	11.2	211	27.2		1	31.2	52.9	197	03.8	45.2	246	27.4	26.3	
3	0	13.7	226	26.6		16	33.9	53.1	212	05.7	45.1	261	29.5	26.2	
4	15	16.2	241	25.9		31	36.6	53.3	227	07.7	44.9	276	31.7	26.2	
5	30	18.6	256	25.2	+18 28.5	46	39.3	-13 53.5	242	09.6	+13 44.7	291	33.8	+22 26.2	
6	45	21.1	271	24.5	+18 27.7	61	42.0	-13 53.7	257	11.5	+13 44.5	306	36.0	+22 26.2	
7	60	23.6	286	23.8		76	44.7	53.9	272	13.5	44.3	321	38.1	26.2	
8	75	26.0	301	23.2		91	47.4	54.1	287	15.4	44.2	336	40.3	26.2	
9	90	28.5	316	22.5		106	50.1	54.3	302	17.4	44.0	351	42.5	26.2	
10	105	30.9	331	21.8		121	52.8	54.5	317	19.3	43.8	6	44.6	26.1	
11	120	33.4	346	21.1	+18 23.8	136	55.5	-13 54.7	332	21.3	+13 43.6	21	46.8	+22 26.1	
12	135	35.9	1	20.5	+18 23.0	151	58.2	-13 54.9	347	23.2	+13 43.4	36	48.9	+22 26.1	
13	150	38.3	16	19.8		167	00.9	55.1	2	25.1	43.3	51	51.1	26.1	
14	165	40.8	31	19.1		182	03.6	55.3	17	27.1	43.1	66	53.2	26.1	
15	180	43.3	46	18.4		197	06.3	55.5	32	29.0	42.9	81	55.4	26.1	
16	195	45.7	61	17.8		212	09.0	55.7	47	31.0	42.7	96	57.6	26.0	
17	210	48.2	76	17.1	+18 19.0	227	11.7	-13 55.9	62	32.9	+13 42.5	111	59.7	+22 26.0	
18	225	50.7	91	16.4	+18 18.2	242	14.4	-13 56.1	77	34.8	+13 42.4	127	01.9	+22 26.0	
19	240	53.1	106	15.7		257	17.2	56.3	92	36.8	42.2	142	04.0	26.0	
20	255	55.6	121	15.1		272	19.9	56.5	107	38.7	42.0	157	06.2	26.0	
21	270	58.1	136	14.4		287	22.6	56.7	122	40.7	41.8	172	08.4	26.0	
22	286	00.5	151	13.7		302	25.3	56.9	137	42.6	41.6	187	10.5	25.9	
23	301	03.0	166	13.0		317	28.0	57.2	152	44.5	41.4	202	12.7	25.9	
24	316	05.4	181	12.4	+18 13.4	332	30.7	-13 57.4	167	46.5	+13 41.3	217	14.8	+22 25.9	
Dif	—		-7		-8	+27		-2	+19		-2	+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 7			Edad: 9 ^d 7 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/1 R°: 62 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	33.8	+16	19.1	56	32.3	-25	10.8	60 N	20 14	21 09	22 40	18 59 60	23 09 69
1	193	33.9		18.4	70	56.0	47	16.1	58	20 03	20 53	22 07	31 61	23 38 67
2	208	33.9		17.7	85	19.7	47	21.2	56	19 54	39	21 43	18 09 61	** ** *
3	223	34.0		17.0	99	43.3	46	26.2	54	46	28	25	17 51 61	** ** *
4	238	34.1		16.3	114	06.8	45	30.9	52	38	18	21 10	35 62	** ** *
5	253	34.2	+16	15.6	128	30.3	45	-25 35.6	50	19 32	20 09	20 57	17 22 62	** ** *
6	268	34.3	+16	14.9	142	53.8	45	-25 40.0	45	19 18	19 51	20 31	16 55 62	0 21 54
7	283	34.3		14.1	157	17.2	44	44.3	40	19 06	36	20 12	33 62	41 56
8	298	34.4		13.4	171	40.5	43	48.4	35	18 57	24	19 57	15 62	0 58 57
9	313	34.5		12.7	186	03.9	44	52.3	30	48	19 14	44	16 00 62	1 13 57
10	328	34.6		12.0	200	27.2	43	56.0	20	33	18 57	24	15 34 62	37 59
11	343	34.7	+16	11.3	214	50.5	43	-25 59.6	10 N	18 21	18 43	19 08	15 12 61	1 59 60
12	358	34.7	+16	10.6	229	13.7	42	-26 03.0	0	18 09	18 31	18 56	14 51 61	2 19 61
13	13	34.8		09.9	243	36.9	42	06.2	10 S	17 58	19	45	30 61	2 39 62
14	28	34.9		09.2	258	00.1	42	09.2	20	45	18 08	34	14 08 61	3 00 64
15	43	35.0		08.5	272	23.3	42	12.1	30	31	17 56	25	13 42 61	25 65
16	58	35.1		07.8	286	46.4	41	14.8	35	23	50	20	27 60	40 65
17	73	35.1	+16	07.1	301	09.5	41	-26 17.3	40	17 14	17 43	18 15	13 10 60	3 57 66
18	88	35.2	+16	06.4	315	32.6	41	-26 19.6	45	17 04	17 35	18 10	12 49 59	4 17 68
19	103	35.3		05.6	329	55.7	41	21.7	50	16 51	25	04	23 58	43 69
20	118	35.4		04.9	344	18.8	41	23.7	52	45	21	18 02	12 10 58	4 56 69
21	133	35.5		04.2	358	41.9	41	25.4	54	38	17	17 59	11 55 58	5 10 71
22	148	35.6		03.5	13	04.9	40	27.0	56	31	12	56	38 57	27 71
23	163	35.6		02.8	27	28.0	41	28.5	58	23	06	53	11 18 55	5 47 73
24	178	35.7	+16	02.1	41	51.0	40	-26 29.7	60 S	16 13	17 00	17 50	10 52 53	6 12 76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 55 ^m 2		Mag: -4.0 PMG: 11 ^h 56 ^m		Mag: -2.5 PMG: 1 ^h 50 ^m		Mag: -1.7 PMG: 12 ^h 47 ^m		Mag: +0.1 PMG: 9 ^h 30 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	316	05.4	181	12.4	332	30.7	-13	57.4	167	46.5
1	331	07.9	196	11.7	347	33.5		57.6	182	48.4
2	346	10.4	211	11.0	2	36.2		57.8	197	50.4
3	1	12.8	226	10.4	17	38.9		58.0	212	52.3
4	16	15.3	241	09.7	32	41.6		58.2	227	54.2
5	31	17.8	256	09.0	47	44.4	-13	58.4	242	56.2
6	46	20.2	271	08.4	62	47.1	-13	58.6	257	58.1
7	61	22.7	286	07.7	77	49.8		58.8	273	00.1
8	76	25.2	301	07.0	92	52.6		59.0	288	02.0
9	91	27.6	316	06.4	107	55.3		59.2	303	03.9
10	106	30.1	331	05.7	122	58.0		59.4	318	05.9
11	121	32.6	346	05.0	138	00.7	-13	59.6	333	07.8
12	136	35.0	1	04.4	153	03.5	-13	59.8	348	09.8
13	151	37.5	16	03.7	168	06.2	-14	00.0	3	11.7
14	166	39.9	31	03.0	183	09.0	-14	00.2	18	13.6
15	181	42.4	46	02.4	198	11.7		00.4	33	15.6
16	196	44.9	61	01.7	213	14.4		00.6	48	17.5
17	211	47.3	76	01.0	228	17.2	-14	00.9	63	19.5
18	226	49.8	91	00.4	243	19.9	-14	01.1	78	21.4
19	241	52.3	105	59.7	258	22.7		01.3	93	23.3
20	256	54.7	120	59.1	273	25.4		01.5	108	25.3
21	271	57.2	135	58.4	288	28.2		01.7	123	27.2
22	286	59.7	150	57.7	303	30.9		01.9	138	29.2
23	302	02.1	165	57.1	318	33.6		02.1	153	31.1
24	317	04.6	180	56.4	333	36.4	-14	02.3	168	33.0
Dif	—		-7		-8		+27		-2	
									+19	
									-2	
									+22	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 5			Edad: 10 ^d 7 PHE { 4 ^h : 59/0 12 ^h : 58/9 20 ^h : 58/8 Rº: 59 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	178	35.7	+16	02.1	41	51.0	-26	29.7	10	60 N	1 32	3 03	3 59	19 59	31	***	***	***	***
1	193	35.8		01.4	56	14.1		30.7	9	58	2 05	19	4 09		32 36	***	***	***	***
2	208	35.9	+16	00.6	70	37.1		31.6	7	56		28 33	18	19 10	40		0 00	67	
3	223	36.0	+15	59.9	85	00.2		32.3	5	54	2 47	44	26	18 52	43		18	66	
4	238	36.1		59.2	99	23.3		32.8	3	52	3 02	3 54	33		37 45		34	66	
5	253	36.2	+15	58.5	113	46.3		33.1	2	50	3 15	4 03	4 40	18 24	46		0 47	66	
6	268	36.2	+15	57.8	128	09.4		33.3	0	45	3 40	4 21	4 54	17 57	49		1 15	64	
7	283	36.3		57.1	142	32.5		33.3	3	40	4 00	36	5 05		35 52		37	64	
8	298	36.4		56.4	156	55.6		33.0	4	35		15 48	15		17 54		1 55	63	
9	313	36.5		55.6	171	18.7		32.6	5	30		27 48	23	17 02	54		2 10	63	
10	328	36.6		54.9	185	41.9		32.1	8	20	4 47	5 15	38	16 36	56		36	63	
11	343	36.7	+15	54.2	200	05.0		31.3	9	10 N	5 03	5 29	5 50	16 13	59		2 59	62	
12	358	36.8	+15	53.5	214	28.2		30.4	11	0	5 16	5 41	6 02	15 52	60		3 20	61	
13	13	36.9		52.8	228	51.4		29.3	13	10 S		5 52	14		31 62		3 41	61	
14	28	36.9		52.0	243	14.7		28.0	15	20		37 60	26	15 09	63		4 04	59	
15	43	37.0		51.3	257	38.0		26.5	16	30		46 15	40	14 43	65		30	59	
16	58	37.1		50.6	272	01.3		24.9	19	35		51 21	47		27 66		4 45	58	
17	73	37.2	+15	49.9	286	24.6		23.0	20	40	5 56	6 28	6 56	14 10	67		5 03	57	
18	88	37.3	+15	49.2	300	48.0		21.0	21	45	6 01	6 36	7 07	13 48	69		5 25	56	
19	103	37.4		48.4	315	11.5		18.9	24	50		07 45	20		21 71		5 52	54	
20	118	37.5		47.7	329	34.9		16.5	25	52		09 49	25	13 08	72		6 05	54	
21	133	37.6		47.0	343	58.5		14.0	27	54		11 54	32	12 53	73		21	52	
22	148	37.7		46.3	358	22.0		11.3	29	56		14 65	39		35 75		6 38	51	
23	163	37.7		45.5	12	45.6		08.4	30	58		17 70	47	12 13	78		7 00	49	
24	178	37.8	+15	44.8	27	09.3		05.4		60 S	6 20	7 10	7 56	11 45	82		7 28	45	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 51 ^m 2			Mag: -4.0 PMG: 11 ^h 57 ^m			Mag: -2.6 PMG: 1 ^h 45 ^m			Mag: -1.7 PMG: 12 ^h 44 ^m			Mag: +0.1 PMG: 9 ^h 26 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	317	04.6	180	56.4	+17	53.7	333	36.4	-14	02.3	168	33.0	+13	36.9	218	06.7	+22	25.5	
1	332	07.1	195	55.8		52.9	348	39.2		02.5	183	35.0		36.7	233	08.8		25.5	
2	347	09.5	210	55.1		52.1	3	41.9		02.7	198	36.9		36.5	248	11.0		25.5	
3	2	12.0	225	54.4		51.3	18	44.7		02.9	213	38.9		36.4	263	13.2		25.5	
4	17	14.4	240	53.8		50.4	33	47.4		03.2	228	40.8		36.2	278	15.3		25.5	
5	32	16.9	255	53.1	+17	49.6	48	50.2	-14	03.4	243	42.7	+13	36.0	293	17.5	+22	25.5	
6	47	19.4	270	52.5	+17	48.8	63	52.9	-14	03.6	258	44.7	+13	35.8	308	19.7	+22	25.4	
7	62	21.8	285	51.8		47.9	78	55.7		03.8	273	46.6		35.6	323	21.8		25.4	
8	77	24.3	300	51.2		47.1	93	58.4		04.0	288	48.6		35.4	338	24.0		25.4	
9	92	26.8	315	50.5		46.3	109	01.2		04.2	303	50.5		35.3	353	26.1		25.4	
10	107	29.2	330	49.8		45.4	124	04.0		04.4	318	52.4		35.1	8	28.3		25.4	
11	122	31.7	345	49.2	+17	44.6	139	06.7	-14	04.6	333	54.4	+13	34.9	23	30.5	+22	25.4	
12	137	34.2	0	48.5	+17	43.8	154	09.5	-14	04.8	348	56.3	+13	34.7	38	32.6	+22	25.3	
13	152	36.6	15	47.9		42.9	169	12.3		05.1	3	58.3		34.5	53	34.8		25.3	
14	167	39.1	30	47.2		42.1	184	15.0		05.3	19	00.2		34.4	68	37.0		25.3	
15	182	41.6	45	46.6		41.2	199	17.8		05.5	34	02.1		34.2	83	39.1		25.3	
16	197	44.0	60	45.9		40.4	214	20.6		05.7	49	04.1		34.0	98	41.3		25.3	
17	212	46.5	75	45.3	+17	39.6	229	23.3	-14	05.9	64	06.0	+13	33.8	113	43.4	+22	25.3	
18	227	48.9	90	44.6	+17	38.7	244	26.1	-14	06.1	79	08.0	+13	33.6	128	45.6	+22	25.3	
19	242	51.4	105	44.0		37.9	259	28.9		06.3	94	09.9		33.4	143	47.8		25.2	
20	257	53.9	120	43.3		37.0	274	31.7		06.5	109	11.8		33.3	158	49.9		25.2	
21	272	56.3	135	42.7		36.2	289	34.4		06.8	124	13.8		33.1	173	52.1		25.2	
22	287	58.8	150	42.0		35.3	304	37.2		07.0	139	15.7		32.9	188	54.3		25.2	
23	303	01.3	165	41.4		34.5	319	40.0		07.2	154	17.6		32.7	203	56.4		25.2	
24	318	03.7	180	40.7	+17	33.6	334	42.8	-14	07.4	169	19.6	+13	32.5	218	58.6	+22	25.2	
Dif	—			-7 -8			+28 -2			+19 -2			-2			+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 4			Edad: 11 ^d 7 PHE { 4 ^h : 58 ^h 7 12 ^h : 58 ^h 5 20 ^h : 58 ^h 4 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	178	37.8	+15	44.8	27	09.3	-26	05.4	60 N	20 08	21 02	22 28	20 30 15	0 18 93	
1	193	37.9		44.1	41	33.0	-26	02.1	58	19 58	20 47	21 58	20 08 21	0 45 87	
2	208	38.0		43.4	55	56.8	-25	58.7	56		49	34	19 50 26	1 07 83	
3	223	38.1		42.6	70	20.6		55.2	54	42	23	19	35 29	25 79	
4	238	38.2		41.9	84	44.5		51.5	52	35	14	21 05	22 32	40 77	
5	253	38.3	+15	41.2	99	08.5	-25	47.6	50	19 28	20 05	20 52	19 10 34	1 53 75	
6	268	38.4	+15	40.5	113	32.5	-25	43.5	45	19 15	19 47	20 28	18 46 39	2 19 73	
7	283	38.5		39.7	127	56.6		39.3	42	19 04	33	20 09	27 42	41 69	
8	298	38.6		39.0	142	20.7		34.9	44	18 55	22	19 54	18 11 44	2 58 68	
9	313	38.7		38.3	156	44.9		30.3	46		46	19 12	42	17 56 47	
10	328	38.8		37.6	171	09.2		25.6	47	32	18 55	23	32 51	3 39 63	
11	343	38.8	+15	36.8	185	33.6	-25	20.7	49	10 N	18 20	18 42	19 08	4 01 60	
12	358	38.9	+15	36.1	199	58.0	-25	15.7	50	0	18 09	18 30	18 55	16 52 57	
13	13	39.0		35.4	214	22.5		10.5	52	10 S	17 58	19	45	33 59	
14	28	39.1		34.6	228	47.1	-25	05.1	54	20	46	18 09	35	16 12 62	
15	43	39.2		33.9	243	11.8	-24	59.6	55	30	32	17 57	26	15 48 65	
16	58	39.3		33.2	257	36.5		53.9	57	35	25	51	21	33 68	
17	73	39.4	+15	32.4	272	01.3	-24	48.1	58	40	17 16	17 44	18 17	15 17 70	
18	88	39.5	+15	31.7	286	26.3	-24	42.1	60	45	17 06	17 37	18 12	14 57 74	
19	103	39.6		31.0	300	51.2		36.0	61	50	16 54	28	06	32 78	
20	118	39.7		30.3	315	16.3		29.7	63	52		48	24	20 80	
21	133	39.8		29.5	329	41.5		23.3	64	54	42	20	18 02	14 06 83	
22	148	39.9		28.8	344	06.8		16.7	66	56	35	15	17 59	13 50 87	
23	163	40.0		28.1	358	32.1		10.0	67	58	27	10	57	31 91	
24	178	40.1	+15	27.3	12	57.5	-24	03.1	69	60 S	16 18	17 04	17 54	13 07 97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 47 ^m 3		Mag: -4.0 PMG: 11 ^h 58 ^m		Mag: -2.6 PMG: 1 ^h 41 ^m		Mag: -1.7 PMG: 12 ^h 41 ^m		Mag: +0.1 PMG: 9 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	318	03.7	180	40.7	334	42.8	169	19.6	218	58.6
1	333	06.2	195	40.1	349	45.5	184	21.5	234	00.7
2	348	08.7	210	39.4	4	48.3	199	23.5	249	02.9
3	3	11.1	225	38.8	19	51.1	214	25.4	264	05.1
4	18	13.6	240	38.1	34	53.9	229	27.3	279	07.2
5	33	16.1	255	37.5	49	56.7	244	29.3	294	09.4
6	48	18.5	270	36.9	64	59.5	259	31.2	309	11.6
7	63	21.0	285	36.2	80	02.2	274	33.2	324	13.7
8	78	23.4	300	35.6	95	05.0	289	35.1	339	15.9
9	93	25.9	315	34.9	110	07.8	304	37.0	354	18.1
10	108	28.4	330	34.3	125	10.6	319	39.0	9	20.2
11	123	30.8	345	33.6	140	13.4	334	40.9	24	22.4
12	138	33.3	0	33.0	155	16.2	349	42.9	39	24.6
13	153	35.8	15	32.3	170	19.0	4	44.8	54	26.7
14	168	38.2	30	31.7	185	21.8	19	46.7	69	28.9
15	183	40.7	45	31.1	200	24.6	34	48.7	84	31.1
16	198	43.2	60	30.4	215	27.4	49	50.6	99	33.2
17	213	45.6	75	29.8	230	30.2	64	52.6	114	35.4
18	228	48.1	90	29.1	245	33.0	79	54.5	129	37.5
19	243	50.5	105	28.5	260	35.8	94	56.4	144	39.7
20	258	53.0	120	27.9	275	38.6	109	58.4	159	41.9
21	273	55.5	135	27.2	290	41.4	125	00.3	174	44.0
22	288	57.9	150	26.6	305	44.2	140	02.3	189	46.2
23	304	00.4	165	25.9	320	47.0	155	04.2	204	48.4
24	319	02.9	180	25.3	335	49.8	170	06.1	219	50.5
Dif	—		-6		-9		+19		+22	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 12 ^d 7	PHE {	SD: 15 ^h 9	R ^o : **m	Principio del crepúsculo		Salida de Luna	Hora R ^o		Hora R ^o				
	PMG: 12 ^h 05 ^m 2							PMG: **h **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	40.1	+15 27.3	12	57.5	-24 03.1	70	60 N	1 44	3 09	4 03	20 45	7	1 51	100		
1	193	40.2	26.6	27	23.1	-23 56.1	72	58	2 13	24	13	29 13		2 12	94		
2	208	40.3	25.8	41	48.7	48.9	73	56	35	37	22	16 16		30	88		
3	223	40.4	25.1	56	14.4	41.6	74	54	2 52	48	30	20 04	20	44	85		
4	238	40.5	24.4	70	40.2	34.2	76	52	3 07	3 58	37	19 54	22	2 57	82		
5	253	40.6	+15 23.6	85	06.1	-23 26.6	77	50	3 19	4 06	4 43	19 44	25	3 08	80		
6	268	40.7	+15 22.9	99	32.1	-23 18.9	79	45	3 43	4 24	4 56	19 25	30	3 32	74		
7	283	40.8	22.2	113	58.2	11.0	80	40	4 02	38	5 07	19 09	34	3 50	71		
8	298	40.9	21.4	128	24.4	-23 03.0	81	35	17	49	17	18 55	37	4 06	68		
9	313	41.0	20.7	142	50.7	-22 54.9	82	30	29	4 59	25	43 40		19	66		
10	328	41.1	19.9	157	17.1	46.7	84	20	4 48	5 15	39	23 45		4 42	61		
11	343	41.2	+15 19.2	171	43.6	-22 38.3	85	10 N	5 03	5 29	5 51	18 05	49	5 01	58		
12	358	41.3	+15 18.5	186	10.2	-22 29.8	86	0	5 15	5 40	6 02	17 49	52	5 20	54		
13	13	41.4	17.7	200	36.9	21.2	87	10 S	26	5 51	13	32 56		38	51		
14	28	41.5	17.0	215	03.7	12.4	88	20	36	6 02	25	17 14	60	5 57	48		
15	43	41.6	16.3	229	30.6	-22 03.5	89	30	45	13	38	16 53	65	6 19	44		
16	58	41.7	15.5	243	57.6	-21 54.6	90	35	49	19	45	41 67		32	41		
17	73	41.8	+15 14.8	258	24.7	-21 45.4	91	40	5 54	6 26	6 54	16 27	71	6 47	38		
18	88	41.9	+15 14.0	272	51.9	-21 36.2	92	45	5 58	6 33	7 04	16 11	74	7 05	34		
19	103	42.0	13.3	287	19.2	26.9	93	50	6 04	42	16	15 50	80	26	30		
20	118	42.1	12.5	301	46.6	17.4	94	52	06	46	22	40 82		37	27		
21	133	42.2	11.8	316	14.1	-21 07.8	95	54	08	50	28	29 85		7 48	24		
22	148	42.3	11.1	330	41.7	-20 58.1	96	56	10	6 55	35	17 88		8 01	21		
23	163	42.4	10.3	345	09.5	48.3	97	58	13	7 00	42	15 02	93	17	16		
24	178	42.5	+15 09.6	359	37.3	-20 38.4	98	60 S	6 16	7 05	7 51	14 44	99	8 35	11		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG 2 ^h 43 ^m 4		Mag: -4.0 PMG: 11 ^h 59 ^m		Mag: -2.6 PMG: 1 ^h 36 ^m		Mag: -1.7 PMG: 12 ^h 38 ^m		Mag: +0.1 PMG: 9 ^h 19 ^m				
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄				
h	°	'	°	'	°	'	°	'	°	'			
0	319	02.9	180 25.3	+17 13.0	335	49.8	-14 12.6	170 06.1	+13 28.1	219 50.5	+22 24.8		
1	334	05.3	195 24.7	12.2	350	52.6	12.8	185 08.1	28.0	234 52.7	24.8		
2	349	07.8	210 24.0	11.3	5	55.4	13.1	200 10.0	27.8	249 54.9	24.7		
3	4	10.3	225 23.4	10.4	20	58.3	13.3	215 12.0	27.6	264 57.0	24.7		
4	19	12.7	240 22.8	09.5	36	01.1	13.5	230 13.9	27.4	279 59.2	24.7		
5	34	15.2	255 22.1	+17 08.7	51	03.9	-14 13.7	245 15.8	+13 27.2	295 01.4	+22 24.7		
6	49	17.7	270 21.5	+17 07.8	66	06.7	-14 14.0	260 17.8	+13 27.0	310 03.5	+22 24.7		
7	64	20.1	285 20.9	06.9	81	09.5	14.2	275 19.7	26.9	325 05.7	24.7		
8	79	22.6	300 20.2	06.0	96	12.3	14.4	290 21.6	26.7	340 07.9	24.6		
9	94	25.0	315 19.6	05.2	111	15.1	14.6	305 23.6	26.5	355 10.0	24.6		
10	109	27.5	330 19.0	04.3	126	18.0	14.8	320 25.5	26.3	10 12.2	24.6		
11	124	30.0	345 18.3	+17 03.4	141	20.8	-14 15.1	335 27.5	+13 26.1	25 14.4	+22 24.6		
12	139	32.4	0 17.7	+17 02.5	156	23.6	-14 15.3	350 29.4	+13 25.9	40 16.5	+22 24.6		
13	154	34.9	15 17.1	01.7	171	26.4	15.5	5 31.3	25.8	55 18.7	24.6		
14	169	37.4	30 16.4	+17 00.8	186	29.3	15.7	20 33.3	25.6	70 20.9	24.6		
15	184	39.8	45 15.8	+16 59.9	201	32.1	16.0	35 35.2	25.4	85 23.0	24.5		
16	199	42.3	60 15.2	59.0	216	34.9	16.2	50 37.2	25.2	100 25.2	24.5		
17	214	44.8	75 14.6	+16 58.1	231	37.7	-14 16.4	65 39.1	+13 25.0	115 27.4	+22 24.5		
18	229	47.2	90 13.9	+16 57.3	246	40.6	-14 16.6	80 41.0	+13 24.8	130 29.5	+22 24.5		
19	244	49.7	105 13.3	56.4	261	43.4	16.8	95 43.0	24.7	145 31.7	24.5		
20	259	52.2	120 12.7	55.5	276	46.2	17.1	110 44.9	24.5	160 33.9	24.5		
21	274	54.6	135 12.0	54.6	291	49.1	17.3	125 46.9	24.3	175 36.0	24.4		
22	289	57.1	150 11.4	53.7	306	51.9	17.5	140 48.8	24.1	190 38.2	24.4		
23	304	59.5	165 10.8	52.8	321	54.7	17.7	155 50.7	23.9	205 40.4	24.4		
24	320	02.0	180 10.2	+16 51.9	336	57.6	-14 18.0	170 52.7	+13 23.7	220 42.5	+22 24.4		
Dif	—		-6	-9	+28		-2	+19		-2	+22		0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 13 ^d 7 PHE	SD: 15 ^h 7									
	PMG: 12 ^h 05 ^m 1				PMG: 0 ^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	h m m
0	178	42.5	+15 09.6	359	37.3	-20 38.4	89	60 N	20 03	20 55	22 17	20 52 5	3 31 97	
1	193	42.6	08.8	14	05.2	28.4	100	58	19 53	41	21 50	42 8	46 92	
2	208	42.7	08.1	28	33.3	18.3	101	56	45	29	30	32 12	3 58 88	
3	223	42.8	07.3	43	01.4	08.1	102	54	37	19	13	24 14	4 09 85	
4	238	42.9	06.6	57	29.7	57.7	104	52	31	09	21 00	16 17	19 82	
5	253	43.0	+15 05.8	71	58.0	47.3	104	50	19 25	20 01	20 48	20 09 20	4 28 79	
6	268	43.1	+15 05.1	86	26.5	36.8	105	45	19 12	19 44	20 24	19 55 24	4 46 74	
7	283	43.2	04.3	100	55.1	26.2	106	40	19 01	31	20 06	43 28	5 01 70	
8	298	43.3	03.6	115	23.7	15.4	108	35	18 52	19	19 52	32 32	14 66	
9	313	43.4	02.8	129	52.5	04.6	108	30	44	19 10	40	23 35	25 63	
10	328	43.5	02.1	144	21.4	53.7	109	20	31	18 54	21	19 08 39	43 58	
11	343	43.6	+15 01.3	158	50.3	42.7	110	10 N	18 19	18 41	19 07	18 54 44	5 59 54	
12	358	43.7	+15 00.6	173	19.4	31.6	111	0	18 08	18 30	18 55	18 41 48	6 14 50	
13	13	43.8	+14 59.8	187	48.6	20.5	111	10 S	17 58	19	45	28 52	29 46	
14	28	43.9	59.1	202	17.9	09.2	113	20	46	18 09	35	18 14 56	6 45 42	
15	43	44.0	58.3	216	47.3	57.9	113	30	34	17 58	27	17 58 61	7 03 37	
16	58	44.1	57.6	231	16.8	46.4	115	35	26	52	22	48 65	13 35	
17	73	44.3	+14 56.8	245	46.4	34.9	115	40	17 18	17 46	18 18	17 38 68	7 25 31	
18	88	44.4	+14 56.1	260	16.0	23.3	116	45	17 08	17 39	18 14	17 25 72	7 39 27	
19	103	44.5	55.3	274	45.8	11.7	116	50	16 56	31	09	10 77	7 56 22	
20	118	44.6	54.6	289	15.7	59.9	118	52	51	27	07	17 02 80	8 04 20	
21	133	44.7	53.8	303	45.7	48.1	118	54	45	23	05	16 54 83	12 18	
22	148	44.8	53.1	318	15.8	36.2	119	56	38	18	03	45 86	22 14	
23	163	44.9	52.3	332	46.0	24.3	119	58	31	14	18 00	35 89	33 11	
24	178	45.0	+14 51.6	347	16.3	12.2	121	60 S	16 23	17 08	17 58	16 23 94	8 46 7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 2 ^h 39 ^m 4		Mag: -4.0 PMG: 12 ^h 00 ^m		Mag: -2.6 PMG: 1 ^h 32 ^m		Mag: -1.7 PMG: 12 ^h 35 ^m		Mag: +0.1 PMG: 9 ^h 16 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	320	02.0	180	10.2	+16 51.9	336 57.6	-14 18.0	170 52.7	+13 23.7	220 42.5	+22 24.4
1	335	04.5	195	09.5	51.0	352 00.4	18.2	185 54.6	23.6	235 44.7	24.4
2	350	06.9	210	08.9	50.2	7 03.2	18.4	200 56.6	23.4	250 46.9	24.4
3	5	09.4	225	08.3	49.3	22 06.1	18.6	215 58.5	23.2	265 49.1	24.3
4	20	11.9	240	07.7	48.4	37 08.9	18.9	231 00.4	23.0	280 51.2	24.3
5	35	14.3	255	07.0	+16 47.5	52 11.8	-14 19.1	246 02.4	+13 22.8	295 53.4	+22 24.3
6	50	16.8	270	06.4	+16 46.6	67 14.6	-14 19.3	261 04.3	+13 22.6	310 55.6	+22 24.3
7	65	19.3	285	05.8	45.7	82 17.4	19.5	276 06.3	22.5	325 57.7	24.3
8	80	21.7	300	05.2	44.8	97 20.3	19.8	291 08.2	22.3	340 59.9	24.3
9	95	24.2	315	04.6	43.9	112 23.1	20.0	306 10.1	22.1	356 02.1	24.2
10	110	26.7	330	03.9	43.0	127 26.0	20.2	321 12.1	21.9	11 04.2	24.2
11	125	29.1	345	03.3	+16 42.1	142 28.8	-14 20.4	336 14.0	+13 21.7	26 06.4	+22 24.2
12	140	31.6	0 02.7	+16 41.2	157 31.7	-14 20.7	351 15.9	+13 21.5	41 08.6	+22 24.2	
13	155	34.0	15 02.1	40.3	172 34.5	20.9	6 17.9	21.4	56 10.7	24.2	
14	170	36.5	30 01.5	39.4	187 37.4	21.1	21 19.8	21.2	71 12.9	24.2	
15	185	39.0	45 00.8	38.5	202 40.2	21.3	36 21.8	21.0	86 15.1	24.1	
16	200	41.4	60 00.2	37.6	217 43.1	21.6	51 23.7	20.8	101 17.3	24.1	
17	215	43.9	74 59.6	+16 36.7	232 46.0	-14 21.8	66 25.6	+13 20.6	116 19.4	+22 24.1	
18	230	46.4	89 59.0	+16 35.8	247 48.8	-14 22.0	81 27.6	+13 20.4	131 21.6	+22 24.1	
19	245	48.8	104 58.4	34.9	262 51.7	22.3	96 29.5	20.3	146 23.8	24.1	
20	260	51.3	119 57.8	34.0	277 54.5	22.5	111 31.5	20.1	161 25.9	24.1	
21	275	53.8	134 57.1	33.1	292 57.4	22.7	126 33.4	19.9	176 28.1	24.0	
22	290	56.2	149 56.5	32.2	308 00.2	22.9	141 35.3	19.7	191 30.3	24.0	
23	305	58.7	164 55.9	31.3	323 03.1	23.2	156 37.3	19.5	206 32.4	24.0	
24	321	01.1	179 55.3	+16 30.4	338 06.0	-14 23.4	171 39.2	+13 19.3	221 34.6	+22 24.0	
Dif	—		-6	-9	+29	-2	+19	-2	+22	0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 04 ^m 9				Edad: 14 ^d 7 PHE { 4 ^h : 57'0 12 ^h : 56'8 20 ^h : 56'6 SD: 15'6 PMG: 0 ^h 53 ^m R°: 47 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	45.0	+14	51.6	347	16.3	-16	12.2	60 N	1 54	3 15	4 08	20 57	2	5 08	92	
1	193	45.1		50.8	1	46.6 ¹¹³	-16	00.1 ¹²¹	58	2 21	30	18	50	6	18	87	
2	208	45.2		50.1	16	17.1 ¹¹⁵	-15	47.9 ¹²²	56	41	42	26	44	9	26	84	
3	223	45.3		49.3	30	47.7 ¹¹⁶		35.7 ¹²²	54	2 57	3 52	33	38	12	34	8	
4	238	45.4		48.6	45	18.3 ¹¹⁶		23.4 ¹²³	52	3 11	4 01	40	33	15	41	78	
5	253	45.5	+14	47.8	59	49.1 ¹¹⁸	-15	11.0 ¹²⁴	50	3 23	4 09	4 46	20 29	16	5 47	76	
6	268	45.7	+14	47.0	74	19.9 ¹¹⁸	-14	58.6 ¹²⁴	45	3 46	4 26	4 59	20 19	21	6 00	71	
7	283	45.8		46.3	88	50.9 ¹²⁰		46.1 ¹²⁵	40	4 04	40	5 09	11	25	11	66	
8	298	45.9		45.5	103	21.9 ¹²⁰		33.5 ¹²⁶	35	19	4 51	18	20 04	28	20	63	
9	313	46.0		44.8	117	53.0 ¹²¹		20.9 ¹²⁶	30	30	5 01	26	19 58	31	28	60	
10	328	46.1		44.0	132	24.2 ¹²²	-14	08.3 ¹²⁶	20	4 49	16	39	47	36	41	55	
11	343	46.2	+14	43.2	146	55.5 ¹²³	-13	55.6 ¹²⁷	10 N	5 04	5 29	5 51	19 38	40	6 53	51	
12	358	46.3	+14	42.5	161	26.9 ¹²⁴	-13	42.8 ¹²⁸	0	5 15	5 40	6 02	19 29	44	7 04	46	
13	13	46.4		41.7	175	58.4 ¹²⁵		30.0 ¹²⁸	10 S	25	5 50	12	20	49	15	42	
14	28	46.5		41.0	190	30.0 ¹²⁶		17.1 ¹²⁹	20	34	6 01	23	19 10	54	27	37	
15	43	46.7		40.2	205	01.6 ¹²⁶	-13	04.2 ¹²⁹	30	43	11	36	18 59	59	40	33	
16	58	46.8		39.4	219	33.3 ¹²⁷	-12	51.2 ¹³⁰	35	47	17	43	53	61	48	29	
17	73	46.9	+14	38.7	234	05.1 ¹²⁸	-12	38.2 ¹³⁰	40	5 51	6 23	6 51	18 46	65	7 56	27	
18	88	47.0	+14	37.9	248	37.0 ¹²⁹	-12	25.1 ¹³¹	45	5 56	6 30	7 01	18 37	69	8 06	23	
19	103	47.1		37.2	263	09.0 ¹³⁰	-12	12.0 ¹³¹	50	6 00	39	13	27	74	18	18	
20	118	47.2		36.4	277	41.1 ¹³¹	-11	58.8 ¹³²	52	02	42	18	22	76	24	15	
21	133	47.3		35.6	292	13.2 ¹³¹		45.6 ¹³²	54	04	46	24	17	79	30	13	
22	148	47.4		34.9	306	45.4 ¹³²		32.4 ¹³²	56	06	51	30	11	82	36	11	
23	163	47.6		34.1	321	17.7 ¹³³		19.1 ¹³³	58	09	6 55	38	18 04	85	44	7	
24	178	47.7	+14	33.3	335	50.1 ¹³⁴	-11	05.8 ¹³³	60 S	6 11	7 01	7 46	17 57	89	8 53	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 35 ^m 5		Mag: -4.0 PMG: 12 ^h 01 ^m		Mag: -2.7 PMG: 1 ^h 27 ^m		Mag: -1.7 PMG: 12 ^h 32 ^m		Mag: +0.1 PMG: 9 ^h 12 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	321	01.1	179	55.3	+16	30.4	338	06.0	-14	23.4	171	39.2	+13	19.3	221	34.6	+22	24.0
1	336	03.6	194	54.7		29.5	353	08.8		23.6	186	41.2		19.1	236	36.8		24.0
2	351	06.1	209	54.1		28.6	8	11.7		23.9	201	43.1		19.0	251	39.0		24.0
3	6	08.5	224	53.4		27.7	23	14.6		24.1	216	45.0		18.8	266	41.1		24.0
4	21	11.0	239	52.8		26.7	38	17.4		24.3	231	47.0		18.6	281	43.3		23.9
5	36	13.5	254	52.2	+16	25.8	53	20.3	-14	24.5	246	48.9	+13	18.4	296	45.5	+22	23.9
6	51	15.9	269	51.6	+16	24.9	68	23.2	-14	24.8	261	50.8	+13	18.2	311	47.6	+22	23.9
7	66	18.4	284	51.0		24.0	83	26.0		25.0	276	52.8		18.0	326	49.8		23.9
8	81	20.9	299	50.4		23.1	98	28.9		25.2	291	54.7		17.9	341	52.0		23.9
9	96	23.3	314	49.8		22.2	113	31.8		25.5	306	56.7		17.7	356	54.1		23.9
10	111	25.8	329	49.2		21.3	128	34.7		25.7	321	58.6		17.5	11	56.3		23.8
11	126	28.3	344	48.6	+16	20.3	143	37.5	-14	25.9	337	00.5	+13	17.3	26	58.5	+22	23.8
12	141	30.7	359	48.0	+16	19.4	158	40.4	-14	26.1	352	02.5	+13	17.1	42	00.7	+22	23.8
13	156	33.2	14	47.3		18.5	173	43.3		26.4	7	04.4		16.9	57	02.8		23.8
14	171	35.6	29	46.7		17.6	188	46.2		26.6	22	06.4		16.8	72	05.0		23.8
15	186	38.1	44	46.1		16.7	203	49.1		26.8	37	08.3		16.6	87	07.2		23.8
16	201	40.6	59	45.5		15.8	218	51.9		27.1	52	10.2		16.4	102	09.4		23.7
17	216	43.0	74	44.9	+16	14.8	233	54.8	-14	27.3	67	12.2	+13	16.2	117	11.5	+22	23.7
18	231	45.5	89	44.3	+16	13.9	248	57.7	-14	27.5	82	14.1	+13	16.0	132	13.7	+22	23.7
19	246	48.0	104	43.7		13.0	264	00.6		27.8	97	16.1		15.8	147	15.9		23.7
20	261	50.4	119	43.1		12.1	279	03.5		28.0	112	18.0		15.6	162	18.0		23.7
21	276	52.9	134	42.5		11.1	294	06.4		28.2	127	19.9		15.5	177	20.2		23.7
22	291	55.4	149	41.9		10.2	309	09.3		28.5	142	21.9		15.3	192	22.4		23.6
23	306	57.8	164	41.3		9.3	324	12.1		28.7	157	23.8		15.1	207	24.6		23.6
24	322	00.3	179	40.7	+16	08.4	339	15.0	-14	28.9	172	25.7	+13	14.9	222	26.7	+22	23.6
Dif	—		-6		-9		+29		-2		+19		-2		+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 04 ^m 7			Edad: 15 ^d 7 PHE { 4 ^h : 56 ^m 4 12 ^h : 56 ^m 2 20 ^h : 56 ^m 0 PMG: 1 ^h 40 ^m R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	178	47.7	+14	33.3	335	50.1	-11	05.8	60 N	19 57	20 49	22 06	20 59 2	6 40 87				
1	193	47.8		32.6	350	22.6 ¹³⁵	-10	52.5 ¹³³	58	48	35	21 42	56 5	45 84				
2	208	47.9		31.8	4	55.1 ¹³⁵		39.1 ¹³⁴	56	40	24	23	53 8	50 81				
3	223	48.0		31.0	19	27.7 ¹³⁶		25.6 ¹³⁵	54	33	14	21 07	50 10	55 77				
4	238	48.1		30.3	34	00.4 ¹³⁷	-10	12.2 ¹³⁴	52	27	20 05	20 54	48 12	6 59 75				
5	253	48.2	+14	29.5	48	33.1 ¹³⁷	-9	58.7 ¹³⁵	50	19 21	19 57	20 43	20 45 15	7 03 72				
6	268	48.4	+14	28.8	63	05.9 ¹³⁸	-9	45.2 ¹³⁵	45	19 09	19 41	20 20	20 40 19	7 11 67				
7	283	48.5		28.0	77	38.8 ¹³⁹		31.6 ¹³⁶	40	18 59	28	20 03	36 22	17 64				
8	298	48.6		27.2	92	11.8 ¹⁴⁰		18.1 ¹³⁵	35	50	17	19 49	32 26	23 60				
9	313	48.7		26.4	106	44.8 ¹⁴⁰	-9	04.5 ¹³⁶	30	43	19 08	38	29 29	28 57				
10	328	48.8		25.7	121	17.9 ¹⁴¹	-8	50.9 ¹³⁶	20	30	18 53	20	23 34	36 52				
11	343	48.9	+14	24.9	135	51.0 ¹⁴¹	-8	37.2 ¹³⁷	10 N	18 18	18 40	19 06	20 18 38	7 44 47				
12	358	49.1	+14	24.1	150	24.2 ¹⁴²	-8	23.5 ¹³⁷	0	18 08	18 29	18 54	20 13 43	7 50 44				
13	13	49.2		23.4	164	57.5 ¹⁴³	-8	09.8 ¹³⁷	10 S	17 58	19	44	09 46	7 57 39				
14	28	49.3		22.6	179	30.9 ¹⁴⁴	-7	56.1 ¹³⁷	20	47	18 10	36	20 04 50	8 04 35				
15	43	49.4		21.8	194	04.3 ¹⁴⁴		42.4 ¹³⁷	30	35	17 59	28	19 58 56	13 29				
16	58	49.5		21.1	208	37.7 ¹⁴⁴		28.6 ¹³⁸	35	28	54	24	54 59	17 27				
17	73	49.6	+14	20.3	223	11.3 ¹⁴⁶	-7	14.8 ¹³⁸	40	17 20	17 48	18 20	19 51 62	8 23 23				
18	88	49.8	+14	19.5	237	44.8 ¹⁴⁵	-7	01.1 ¹³⁷	45	17 10	17 41	18 16	19 46 67	8 29 19				
19	103	49.9		18.7	252	18.5 ¹⁴⁷	-6	47.2 ¹³⁹	50	16 59	33	11	41 71	36 15				
20	118	50.0		18.0	266	52.2 ¹⁴⁷		33.4 ¹³⁸	52	54	30	10	38 74	39 13				
21	133	50.1		17.2	281	25.9 ¹⁴⁷		19.6 ¹³⁸	54	49	26	08	36 75	43 11				
22	148	50.2		16.4	295	59.8 ¹⁴⁹	-6	05.7 ¹³⁹	56	42	22	06	33 78	47 8				
23	163	50.4		15.7	310	33.6 ¹⁴⁸	-5	51.9 ¹³⁸	58	35	17	04	29 82	51 6				
24	178	50.5	+14	14.9	325	07.5 ¹⁴⁹	-5	38.0 ¹³⁹	60 S	16 27	17 12	18 02	19 26 84	8 56 3				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 2 ^h 31 ^m 6		Mag: -4.0 PMG: 12 ^h 02 ^m			Mag: -2.7 PMG: 1 ^h 23 ^m			Mag: -1.7 PMG: 12 ^h 29 ^m				Mag: +0.1 PMG: 9 ^h 09 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	'	°	°	'	°	'	'	°	'	°	'	
0	322	00.3	179	40.7	+16	08.4	339	15.0	-14	28.9	172	25.7	+13	14.9	222	26.7	+22	23.6
1	337	02.8	194	40.1		07.4	354	17.9		29.1	187	27.7		14.7	237	28.9		23.6
2	352	05.2	209	39.5		06.5	9	20.8		29.4	202	29.6		14.5	252	31.1		23.6
3	7	07.7	224	38.9		05.6	24	23.7		29.6	217	31.6		14.4	267	33.3		23.6
4	22	10.1	239	38.3		04.7	39	26.6		29.8	232	33.5		14.2	282	35.4		23.5
5	37	12.6	254	37.7	+16	03.7	54	29.5	-14	30.1	247	35.4	+13	14.0	297	37.6	+22	23.5
6	52	15.1	269	37.1	+16	02.8	69	32.4	-14	30.3	262	37.4	+13	13.8	312	39.8	+22	23.5
7	67	17.5	284	36.5		01.9	84	35.3		30.5	277	39.3		13.6	327	41.9		23.5
8	82	20.0	299	35.9	+16	00.9	99	38.2		30.8	292	41.3		13.4	342	44.1		23.5
9	97	22.5	314	35.3	+16	00.0	114	41.1		31.0	307	43.2		13.2	357	46.3		23.5
10	112	24.9	329	34.7	+15	59.1	129	44.0		31.2	322	45.1		13.1	12	48.5		23.4
11	127	27.4	344	34.1	+15	58.1	144	46.9	-14	31.5	337	47.1	+13	12.9	27	50.6	+22	23.4
12	142	29.9	359	33.5	+15	57.2	159	49.8	-14	31.7	352	49.0	+13	12.7	42	52.8	+22	23.4
13	157	32.3	14	32.9		56.3	174	52.7		31.9	7	51.0		12.5	57	55.0		23.4
14	172	34.8	29	32.3		55.3	189	55.6		32.2	22	52.9		12.3	72	57.2		23.4
15	187	37.2	44	31.7		54.4	204	58.5		32.4	37	54.8		12.1	87	59.3		23.4
16	202	39.7	59	31.1		53.4	220	01.4		32.6	52	56.8		12.0	103	01.5		23.3
17	217	42.2	74	30.5	+15	52.5	235	04.3	-14	32.9	67	58.7	+13	11.8	118	03.7	+22	23.3
18	232	44.6	89	29.9	+15	51.6	250	07.2	-14	33.1	83	00.6	+13	11.6	133	05.9	+22	23.3
19	247	47.1	104	29.3		50.6	265	10.1		33.3	98	02.6		11.4	148	08.0		23.3
20	262	49.6	119	28.7		49.7	280	13.1		33.6	113	04.5		11.2	163	10.2		23.3
21	277	52.0	134	28.1		48.7	295	16.0		33.8	128	06.5		11.0	178	12.4		23.3
22	292	54.5	149	27.5		47.8	310	18.9		34.0	143	08.4		10.8	193	14.6		23.2
23	307	57.0	164	26.9		46.8	325	21.8		34.3	158	10.3		10.7	208	16.7		23.2
24	322	59.4	179	26.3	+15	45.9	340	24.7	-14	34.5	173	12.3	+13	10.5	223	18.9	+22	23.2
Dif	—		-6		-9		+29		-2		+19		-2		+22		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 12 ^h 04 ^m 5				Edad: 16 ^d 7 PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/4 PMG: 2 ^h 24 ^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	178	50.5	+14	14.9	325	07.5	-5	38.0	60 N	2 04	3 21	4 13	21 01	2	8 07	83				
1	193	50.6		14.1	339	41.5 ¹⁵⁰		24.1 ¹³⁹	58	28	35	22	01	5	09	80				
2	208	50.7		13.3	354	15.5 ¹⁵⁰	-5	10.2 ¹³⁹	56	2 47	46	30	01	7	11	77				
3	223	50.8		12.6	8	49.6 ¹⁵¹	-4	56.3 ¹³⁹	54	3 03	3 56	37	00	10	12	75				
4	238	51.0		11.8	23	23.7 ¹⁵¹		42.4 ¹³⁹	52	16	4 05	43	00	12	14	72				
5	253	51.1	+14	11.0	37	57.8 ¹⁵¹	-4	28.5 ¹³⁹	50	3 27	4 13	4 49	21 00	14	8 15	70				
6	268	51.2	+14	10.2	52	32.0 ¹⁵²	-4	14.6 ¹³⁹	45	3 49	4 29	5 01	20 59	18	8 18	66				
7	283	51.3		09.5	67	06.3 ¹⁵³	-4	00.7 ¹³⁹	40	4 07	42	11	58	22	21	62				
8	298	51.4		08.7	81	40.6 ¹⁵³	-3	46.7 ¹⁴⁰	35	20	4 53	20	58	25	23	58				
9	313	51.6		07.9	96	14.9 ¹⁵³		32.8 ¹³⁹	30	32	5 02	27	58	27	25	55				
10	328	51.7		07.1	110	49.3 ¹⁵⁴		18.9 ¹³⁹	20	4 50	17	40	57	33	28	51				
11	343	51.8	+14	06.3	125	23.7 ¹⁵⁴	-3	05.0 ¹³⁹	10 N	5 04	5 29	5 51	20 56	37	8 31	46				
12	358	51.9	+14	05.6	139	58.1 ¹⁵⁴	-2	51.0 ¹⁴⁰	0	5 15	5 40	6 01	20 56	41	8 34	41				
13	13	52.1		04.8	154	32.6 ¹⁵⁵		37.1 ¹³⁹	10 S	25	50	11	55	45	36	38				
14	28	52.2		04.0	169	07.1 ¹⁵⁵		23.2 ¹³⁹	20	33	5 59	22	54	50	39	33				
15	43	52.3		03.2	183	41.7 ¹⁵⁶	-2	09.3 ¹³⁹	30	41	6 09	34	54	54	42	29				
16	58	52.4		02.5	198	16.3 ¹⁵⁶	-1	55.3 ¹⁴⁰	35	45	15	41	53	58	44	25				
17	73	52.5	+14	01.7	212	50.9 ¹⁵⁶	-1	41.4 ¹³⁹	40	5 49	6 21	6 49	20 53	61	8 46	22				
18	88	52.7	+14	00.9	227	25.6 ¹⁵⁷	-1	27.5 ¹³⁹	45	5 53	6 28	6 58	20 53	64	8 48	19				
19	103	52.8	+14	00.1	242	00.3 ¹⁵⁷	-1	13.6 ¹³⁹	50	57	35	7 09	52	69	51	14				
20	118	52.9	+13	59.3	256	35.0 ¹⁵⁷	-0	59.7 ¹³⁹	52	5 59	39	14	52	71	52	13				
21	133	53.0		58.5	271	09.7 ¹⁵⁷		45.8 ¹³⁹	54	6 01	42	20	51	74	54	10				
22	148	53.2		57.8	285	44.5 ¹⁵⁸		32.0 ¹³⁸	56	02	46	26	51	77	55	8				
23	163	53.3		57.0	300	19.3 ¹⁵⁸		18.1 ¹³⁹	58	04	51	33	51	79	57	5				
24	178	53.4	+13	56.2	314	54.1 ¹⁵⁸	-0	04.2 ¹³⁹	60 S	6 07	6 56	7 41	20 50	83	8 59	2				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 27 ^m 6				Mag: -4.0 PMG: 12 ^h 03 ^m				Mag: -2.7 PMG: 1 ^h 18 ^m				Mag: -1.7 PMG: 12 ^h 26 ^m				Mag: +0.1 PMG: 9 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	322	59.4	179	26.3	+15	45.9	340	24.7	-14	34.5	173	12.3	+13	10.5	223	18.9	+22	23.2		
1	338	01.9	194	25.7		45.0	355	27.6		34.7	188	14.2		10.3	238	21.1		23.2		
2	353	04.4	209	25.2		44.0	10	30.6		35.0	203	16.2		10.1	253	23.3		23.2		
3	8	06.8	224	24.6		43.1	25	33.5		35.2	218	18.1		09.9	268	25.4		23.2		
4	23	09.3	239	24.0		42.1	40	36.4		35.4	233	20.0		09.7	283	27.6		23.1		
5	38	11.7	254	23.4	+15	41.2	55	39.3	-14	35.7	248	22.0	+13	09.6	298	29.8	+22	23.1		
6	53	14.2	269	22.8	+15	40.2	70	42.2	-14	35.9	263	23.9	+13	09.4	313	32.0	+22	23.1		
7	68	16.7	284	22.2		39.3	85	45.2		36.1	278	25.9		09.2	328	34.1		23.1		
8	83	19.1	299	21.6		38.3	100	48.1		36.4	293	27.8		09.0	343	36.3		23.1		
9	98	21.6	314	21.0		37.4	115	51.0		36.6	308	29.7		08.8	358	38.5		23.1		
10	113	24.1	329	20.4		36.4	130	53.9		36.9	323	31.7		08.6	13	40.7		23.0		
11	128	26.5	344	19.9	+15	35.5	145	56.9	-14	37.1	338	33.6	+13	08.4	28	42.8	+22	23.0		
12	143	29.0	359	19.3	+15	34.5	160	59.8	-14	37.3	353	35.5	+13	08.3	43	45.0	+22	23.0		
13	158	31.5	14	18.7		33.6	176	02.7		37.6	8	37.5		08.1	58	47.2		23.0		
14	173	33.9	29	18.1		32.6	191	05.6		37.8	23	39.4		07.9	73	49.4		23.0		
15	188	36.4	44	17.5		31.6	206	08.6		38.0	38	41.4		07.7	88	51.6		23.0		
16	203	38.8	59	16.9		30.7	221	11.5		38.3	53	43.3		07.5	103	53.7		23.0		
17	218	41.3	74	16.3	+15	29.7	236	14.4	-14	38.5	68	45.2	+13	07.3	118	55.9	+22	22.9		
18	233	43.8	89	15.8	+15	28.8	251	17.4	-14	38.7	83	47.2	+13	07.1	133	58.1	+22	22.9		
19	248	46.2	104	15.2		27.8	266	20.3		39.0	98	49.1		07.0	149	00.3		22.9		
20	263	48.7	119	14.6		26.9	281	23.3		39.2	113	51.1		06.8	164	02.4		22.9		
21	278	51.2	134	14.0		25.9	296	26.2		39.4	128	53.0		06.6	179	04.6		22.9		
22	293	53.6	149	13.4		24.9	311	29.1		39.7	143	54.9		06.4	194	06.8		22.9		
23	308	56.1	164	12.8		24.0	326	32.1		39.9	158	56.9		06.2	209	09.0		22.8		
24	323	58.6	179	12.3	+15	23.0	341	35.0	-14	40.2	173	58.8	+13	06.0	224	11.1	+22	22.8		
Dif	—		-6		-10		+29		-2		+19		-2		+22					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 7 PHE	SD: 15 ^h 1				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 3				PMG: 3 ^h 06 ^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	178	53.4	+13 56.2	314	54.1	-0 04.2	60 N	19 52	20 42	21 56	21 03	2	9 30	82	
1	193	53.5	55.4	329	29.0 ¹⁵⁹	+0 09.6 ¹³⁸	58	43	30	34	06	5	29	79	
2	208	53.7	54.6	344	03.9 ¹⁵⁹	23.4 ¹³⁸	56	35	19	16	08	8	28	76	
3	223	53.8	53.8	358	38.8 ¹⁵⁹	37.2 ¹³⁸	54	29	09	21 01	10	10	27	73	
4	238	53.9	53.1	13	13.7 ¹⁵⁹	+0 51.1 ¹³⁹	52	23	20 01	20 49	12	12	26	71	
5	253	54.0	+13 52.3	27	48.6 ¹⁵⁹	+1 04.8 ¹³⁷	50	19 17	19 53	20 38	21 14	14	9 25	69	
6	268	54.2	+13 51.5	42	23.6 ¹⁶⁰	+1 18.6 ¹³⁸	45	19 06	19 37	20 17	21 17	19	9 24	64	
7	283	54.3	50.7	56	58.6 ¹⁶⁰	32.4 ¹³⁸	40	18 56	25	20 00	20	23	23	60	
8	298	54.4	49.9	71	33.6 ¹⁶⁰	46.1 ¹³⁷	35	48	15	19 47	23	25	21	58	
9	313	54.6	49.1	86	08.6 ¹⁶⁰	+1 59.8 ¹³⁷	30	41	19 06	35	25	29	20	55	
10	328	54.7	48.3	100	43.6 ¹⁶⁰	+2 13.5 ¹³⁷	20	28	18 51	18	30	32	19	49	
11	343	54.8	+13 47.6	115	18.6 ¹⁶⁰	+2 27.2 ¹³⁷	10 N	18 18	18 39	19 05	21 33	37	9 17	45	
12	358	54.9	+13 46.8	129	53.7 ¹⁶¹	+2 40.9 ¹³⁷	0	18 08	18 29	18 54	21 37	41	9 15	41	
13	13	55.1	46.0	144	28.8 ¹⁶¹	+2 54.5 ¹³⁶	10 S	17 58	19	44	40	45	14	37	
14	28	55.2	45.2	159	03.8 ¹⁶⁰	+3 08.1 ¹³⁶	20	48	10	36	44	49	12	33	
15	43	55.3	44.4	173	38.9 ¹⁶¹	21.7 ¹³⁶	30	36	18 00	29	48	55	11	27	
16	58	55.4	43.6	188	14.0 ¹⁶¹	35.3 ¹³⁶	35	29	17 55	25	51	57	09	26	
17	73	55.6	+13 42.8	202	49.1 ¹⁶¹	+3 48.9 ¹³⁶	40	17 22	17 50	18 21	21 54	60	9 08	22	
18	88	55.7	+13 42.0	217	24.2 ¹⁶¹	+4 02.4 ¹³⁵	45	17 13	17 43	18 18	21 57	64	9 07	18	
19	103	55.8	41.2	231	59.3 ¹⁶¹	15.9 ¹³⁵	50	17 02	36	14	22 01	69	05	14	
20	118	56.0	40.5	246	34.5 ¹⁶²	29.4 ¹³⁵	52	16 57	33	12	03	71	05	12	
21	133	56.1	39.7	261	09.6 ¹⁶¹	42.8 ¹³⁴	54	52	29	11	05	73	04	10	
22	148	56.2	38.9	275	44.7 ¹⁶¹	+4 56.3 ¹³⁵	56	46	25	09	08	75	03	7	
23	163	56.4	38.1	290	19.8 ¹⁶¹	+5 09.7 ¹³⁴	58	39	21	07	10	79	02	5	
24	178	56.5	+13 37.3	304	55.0 ¹⁶²	+5 23.0 ¹³³	60 S	16 32	17 16	18 06	22 13	82	9 01	2	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 23 ^m 7		Mag: -4.0 PMG: 12 ^h 04 ^m			Mag: -2.7 PMG: 1 ^h 13 ^m			Mag: -1.7 PMG: 12 ^h 22 ^m			Mag: +0.1 PMG: 9 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	
0	323	58.6	179	12.3	+15 23.0	341	35.0	-14 40.2	173	58.8	+13 06.0	224	11.1	+22 22.8	
1	339	01.0	194	11.7	22.0	356	38.0	40.4	189	00.7	05.8	239	13.3	22.8	
2	354	03.5	209	11.1	21.1	11	40.9	40.6	204	02.7	05.7	254	15.5	22.8	
3	9	06.0	224	10.5	20.1	26	43.8	40.9	219	04.6	05.5	269	17.7	22.8	
4	24	08.4	239	09.9	19.1	41	46.8	41.1	234	06.6	05.3	284	19.9	22.8	
5	39	10.9	254	09.4	+15 18.2	56	49.7	-14 41.3	249	08.5	+13 05.1	299	22.0	+22 22.7	
6	54	13.3	269	08.8	+15 17.2	71	52.7	-14 41.6	264	10.4	+13 04.9	314	24.2	+22 22.7	
7	69	15.8	284	08.2	16.2	86	55.6	41.8	279	12.4	04.7	329	26.4	22.7	
8	84	18.3	299	07.6	15.3	101	58.6	42.0	294	14.3	04.5	344	28.6	22.7	
9	99	20.7	314	07.0	14.3	117	01.5	42.3	309	16.3	04.4	359	30.8	22.7	
10	114	23.2	329	06.5	13.3	132	04.5	42.5	324	18.2	04.2	14	32.9	22.7	
11	129	25.7	344	05.9	+15 12.4	147	07.4	-14 42.8	339	20.1	+13 04.0	29	35.1	+22 22.6	
12	144	28.1	359	05.3	+15 11.4	162	10.4	-14 43.0	354	22.1	+13 03.8	44	37.3	+22 22.6	
13	159	30.6	14	04.7	10.4	177	13.3	43.2	9	24.0	03.6	59	39.5	22.6	
14	174	33.1	29	04.2	09.5	192	16.3	43.5	24	26.0	03.4	74	41.6	22.6	
15	189	35.5	44	03.6	08.5	207	19.2	43.7	39	27.9	03.2	89	43.8	22.6	
16	204	38.0	59	03.0	07.5	222	22.2	43.9	54	29.8	03.1	104	46.0	22.6	
17	219	40.4	74	02.4	+15 06.5	237	25.2	-14 44.2	69	31.8	+13 02.9	119	48.2	+22 22.5	
18	234	42.9	89	01.9	+15 05.6	252	28.1	-14 44.4	84	33.7	+13 02.7	134	50.4	+22 22.5	
19	249	45.4	104	01.3	04.6	267	31.1	44.6	99	35.6	02.5	149	52.5	22.5	
20	264	47.8	119	00.7	03.6	282	34.0	44.9	114	37.6	02.3	164	54.7	22.5	
21	279	50.3	134	00.2	02.6	297	37.0	45.1	129	39.5	02.1	179	56.9	22.5	
22	294	52.8	148	59.6	01.6	312	40.0	45.4	144	41.5	01.9	194	59.1	22.5	
23	309	55.2	163	59.0	+15 00.7	327	42.9	45.6	159	43.4	01.8	210	01.3	22.4	
24	324	57.7	178	58.4	+14 59.7	342	45.9	-14 45.8	174	45.3	+13 01.6	225	03.4	+22 22.4	
Dif	—		-6	-10		+30	-2		+19	-2		+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 1			Edad: 18 ^d 7 PHE { SD: 14 ^h 9 PMG: 3 ^h 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	56.5	+13	37.3	304	55.0	+5	23.0	60 N	2	13	3	27	4	18	21	05	
1	193	56.6		36.5	319	30.1 ¹⁶¹		36.4 ¹³⁴	58		35	40		26		11	6	
2	208	56.7		35.7	334	05.2 ¹⁶¹	+5	49.7 ¹³³	56	2	53	3	51		34	16	9	
3	223	56.9		34.9	348	40.3 ¹⁶¹	+6	02.9 ¹³²	54	3	08	4	00		40	20	12	
4	238	57.0		34.1	3	15.4 ¹⁶¹		16.2 ¹³³	52		20		09		46	24	14	
5	253	57.1	+13	33.3	17	50.5 ¹⁶¹	+6	29.4 ¹³²	50	3	31	4	16	4	52	21	28	
6	268	57.3	+13	32.5	32	25.6 ¹⁶¹	+6	42.6 ¹³²	45	3	52	4	32	5	03	21	36	
7	283	57.4		31.7	47	00.7 ¹⁶¹	+6	55.7 ¹³¹	40	4	09		44		13	43	24	
8	298	57.5		30.9	61	35.8 ¹⁶¹	+7	08.8 ¹³¹	35		22	4	54	21		48	28	
9	313	57.7		30.1	76	10.9 ¹⁶¹		21.9 ¹³¹	30		33	5	03	28		21	54	
10	328	57.8		29.3	90	46.0 ¹⁶¹		35.0 ¹³¹	20	4	51		18	40		22	02	
11	343	57.9	+13	28.5	105	21.0 ¹⁶⁰	+7	48.0 ¹³⁰	10 N	5	04	5	29	5	51	22	10	
12	358	58.1	+13	27.8	119	56.1 ¹⁶¹	+8	00.9 ¹²⁹	0	5	15	5	39	6	01	22	18	
13	13	58.2		27.0	134	31.1 ¹⁶⁰		13.9 ¹³⁰	10 S		24		49	10		25	46	
14	28	58.3		26.2	149	06.2 ¹⁶¹		26.8 ¹²⁹	20		32	5	58	21		33	50	
15	43	58.5		25.4	163	41.2 ¹⁶⁰		39.6 ¹²⁸	30		39	6	08	32		43	54	
16	58	58.6		24.6	178	16.2 ¹⁶⁰	+8	52.4 ¹²⁸	35		43		13	39		48	57	
17	73	58.7	+13	23.8	192	51.1 ¹⁵⁹	+9	05.2 ¹²⁸	40	5	47	6	18	6	46	22	54	
18	88	58.9	+13	23.0	207	26.1 ¹⁶⁰	+9	17.9 ¹²⁷	45	5	50	6	25	6	55	23	01	
19	103	59.0		22.2	222	01.0 ¹⁵⁹		30.6 ¹²⁷	50		54	32		7	05	10	69	
20	118	59.1		21.4	236	35.9 ¹⁵⁹		43.3 ¹²⁷	52		55	35		10		14	71	
21	133	59.3		20.6	251	10.8 ¹⁵⁹	+9	55.9 ¹²⁶	54		57	38		15		18	74	
22	148	59.4		19.8	265	45.7 ¹⁵⁹	+10	08.4 ¹²⁵	56	5	58		42	21		23	77	
23	163	59.5		19.0	280	20.6 ¹⁵⁹		20.9 ¹²⁵	58	6	00		46	28		29	79	
24	178	59.7	+13	18.2	294	55.4 ¹⁵⁸	+10	33.4 ¹²⁵	60 S	6	02	6	51	7	35	23	35	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 19 ^m 8		Mag: -4.0 PMG: 12 ^h 05 ^m				Mag: -2.7 PMG: 1 ^h 09 ^m				Mag: -1.7 PMG: 12 ^h 19 ^m				Mag: +0.1 PMG: 8 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	324	57.7	178	58.4	+14	59.7	342	45.9	-14	45.8	174	45.3	+13	01.6	225	03.4	+22	22.4
1	340	00.2	193	57.9		58.7	357	48.8		46.1	189	47.3		01.4	240	05.6		22.4
2	355	02.6	208	57.3		57.7	12	51.8		46.3	204	49.2		01.2	255	07.8		22.4
3	10	05.1	223	56.7		56.7	27	54.8		46.5	219	51.2		01.0	270	10.0		22.4
4	25	07.6	238	56.2		55.8	42	57.7		46.8	234	53.1		00.8	285	12.2		22.4
5	40	10.0	253	55.6	+14	54.8	58	00.7	-14	47.0	249	55.0	+13	00.6	300	14.3	+22	22.3
6	55	12.5	268	55.0	+14	53.8	73	03.7	-14	47.3	264	57.0	+13	00.5	315	16.5	+22	22.3
7	70	14.9	283	54.5		52.8	88	06.7		47.5	279	58.9		00.3	330	18.7		22.3
8	85	17.4	298	53.9		51.8	103	09.6		47.7	295	00.8	+13	00.1	345	20.9		22.3
9	100	19.9	313	53.3		50.8	118	12.6		48.0	310	02.8	+12	59.9	0	23.1		22.3
10	115	22.3	328	52.8		49.8	133	15.6		48.2	325	04.7		59.7	15	25.3		22.3
11	130	24.8	343	52.2	+14	48.9	148	18.6	-14	48.4	340	06.7	+12	59.5	30	27.4	+22	22.2
12	145	27.3	358	51.6	+14	47.9	163	21.5	-14	48.7	355	08.6	+12	59.3	45	29.6	+22	22.2
13	160	29.7	13	51.1		46.9	178	24.5		48.9	10	10.5		59.2	60	31.8		22.2
14	175	32.2	28	50.5		45.9	193	27.5		49.2	25	12.5		59.0	75	34.0		22.2
15	190	34.7	43	49.9		44.9	208	30.5		49.4	40	14.4		58.8	90	36.2		22.2
16	205	37.1	58	49.4		43.9	223	33.4		49.6	55	16.4		58.6	105	38.3		22.2
17	220	39.6	73	48.8	+14	42.9	238	36.4	-14	49.9	70	18.3	+12	58.4	120	40.5	+22	22.1
18	235	42.1	88	48.2	+14	41.9	253	39.4	-14	50.1	85	20.2	+12	58.2	135	42.7	+22	22.1
19	250	44.5	103	47.7		40.9	268	42.4		50.3	100	22.2		58.0	150	44.9		22.1
20	265	47.0	118	47.1		39.9	283	45.4		50.6	115	24.1		57.9	165	47.1		22.1
21	280	49.4	133	46.6		38.9	298	48.3		50.8	130	26.1		57.7	180	49.3		22.1
22	295	51.9	148	46.0		37.9	313	51.3		51.1	145	28.0		57.5	195	51.4		22.1
23	310	54.4	163	45.4		36.9	328	54.3		51.3	160	29.9		57.3	210	53.6		22.0
24	325	56.8	178	44.9	+14	35.9	343	57.3	-14	51.5	175	31.9	+12	57.1	225	55.8	+22	22.0
Dif	—		-6		-10		+30		-2		+19		-2		+22			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8			Edad: 19 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3														
	PMG: 12 ^h 03 ^m 9			SD: 14'8 PMG: 4 ^h 28 ^m R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	178	59.7	+13	18.2	294	55.4	+10	33.4	60 N	19 46	20 36	21 47	21 09 4	12 15 84				
1	193	59.8		17.4	309	30.2 ¹⁵⁸		45.8 ¹²⁴	58	38	24	26	17 9	07 80				
2	208	59.9		16.6	324	05.0 ¹⁵⁸	+10	58.2 ¹²⁴	56	31	13	21 10	25 12	12 00 76				
3	224	00.1		15.8	338	39.7 ¹⁵⁷	+11	10.6 ¹²⁴	54	24	20 04	20 56	32 15	11 54 73				
4	239	00.2		15.0	353	14.5 ¹⁵⁸		22.8 ¹²²	52	19	19 56	44	38 18	48 71				
5	254	00.4	+13	14.2	7	49.2 ¹⁵⁷	+11	35.1 ¹²³	50	19 14	19 49	20 34	21 44 19	11 43 69				
6	269	00.5	+13	13.3	22	23.8 ¹⁵⁶	+11	47.3 ¹²²	45	19 02	19 34	20 13	21 56 24	11 32 65				
7	284	00.6		12.5	36	58.5 ¹⁵⁷	+11	59.4 ¹²¹	40	18 53	22	19 57	22 07 27	23 61				
8	299	00.8		11.7	51	33.1 ¹⁵⁶	+12	11.5 ¹²¹	35	45	12	44	16 29	16 57				
9	314	00.9		10.9	66	07.7 ¹⁵⁶		23.5 ¹²⁰	30	39	19 04	33	23 33	11 09 55				
10	329	01.0		10.1	80	42.2 ¹⁵⁵		35.5 ¹²⁰	20	27	18 50	16	37 37	10 57 51				
11	344	01.2	+13	09.3	95	16.7 ¹⁵⁵	+12	47.4 ¹¹⁹	10 N	18 17	18 38	19 04	22 49 40	10 47 47				
12	359	01.3	+13	08.5	109	51.2 ¹⁵⁵	+12	59.3 ¹¹⁹	0	18 07	18 28	18 53	23 00 44	10 38 43				
13	14	01.5		07.7	124	25.6 ¹⁵⁴	+13	11.2 ¹¹⁹	10 S	17 58	19	44	11 47	29 39				
14	29	01.6		06.9	139	00.0 ¹⁵⁴		22.9 ¹¹⁷	20	48	11	37	23 51	19 35				
15	44	01.7		06.1	153	34.4 ¹⁵⁴		34.6 ¹¹⁷	30	37	18 02	30	37 55	07 31				
16	59	01.9		05.3	168	08.7 ¹⁵³		46.3 ¹¹⁷	35	31	17 57	26	45 58	10 01 28				
17	74	02.0	+13	04.5	182	43.0 ¹⁵³	+13	57.9 ¹¹⁶	40	17 23	17 51	18 23	23 55 60	9 53 26				
18	89	02.1	+13	03.7	197	17.3 ¹⁵³	+14	09.5 ¹¹⁶	45	17 15	17 45	18 20	*** ** *	9 45 22				
19	104	02.3		02.9	211	51.5 ¹⁵²		20.9 ¹¹⁴	50	05	39	17	*** ** *	35 17				
20	119	02.4		02.1	226	25.7 ¹⁵²		32.4 ¹¹⁵	52	17 00	36	15	*** ** *	30 15				
21	134	02.6		01.3	240	59.8 ¹⁵¹		43.7 ¹¹³	54	16 55	32	14	*** ** *	25 13				
22	149	02.7	+13	00.4	255	33.9 ¹⁵¹	+14	55.1 ¹¹⁴	56	50	29	13	*** ** *	19 10				
23	164	02.8	+12	59.6	270	07.9 ¹⁵⁰	+15	06.3 ¹¹²	58	43	25	11	*** ** *	12 8				
24	179	03.0	+12	58.8	284	41.9 ¹⁵⁰	+15	17.5 ¹¹²	60 S	16 36	17 21	18 10	*** ** *	9 05 4				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 2 ^h 15 ^m 8		Mag: -4.0 PMG: 12 ^h 05 ^m			Mag: -2.8 PMG: 1 ^h 04 ^m			Mag: -1.7 PMG: 12 ^h 16 ^m				Mag: +0.1 PMG: 8 ^h 55 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	325	56.8	178	44.9	+14	35.9	343	57.3	-14	51.5	175	31.9	+12	57.1	225	55.8	+22	22.0
1	340	59.3	193	44.3		34.9	359	00.3		51.8	190	33.8		56.9	240	58.0		22.0
2	356	01.8	208	43.8		34.0	14	03.3		52.0	205	35.7		56.7	256	00.2		22.0
3	11	04.2	223	43.2		33.0	29	06.3		52.2	220	37.7		56.5	271	02.3		22.0
4	26	06.7	238	42.6		32.0	44	09.3		52.5	235	39.6		56.4	286	04.5		22.0
5	41	09.2	253	42.1	+14	31.0	59	12.3	-14	52.7	250	41.6	+12	56.2	301	06.7	+22	21.9
6	56	11.6	268	41.5	+14	30.0	74	15.2	-14	53.0	265	43.5	+12	56.0	316	08.9	+22	21.9
7	71	14.1	283	41.0		28.9	89	18.2		53.2	280	45.4		55.8	331	11.1		21.9
8	86	16.5	298	40.4		27.9	104	21.2		53.4	295	47.4		55.6	346	13.3		21.9
9	101	19.0	313	39.9		26.9	119	24.2		53.7	310	49.3		55.4	1	15.5		21.9
10	116	21.5	328	39.3		25.9	134	27.2		53.9	325	51.3		55.2	16	17.6		21.9
11	131	23.9	343	38.7	+14	24.9	149	30.2	-14	54.1	340	53.2	+12	55.1	31	19.8	+22	21.8
12	146	26.4	358	38.2	+14	23.9	164	33.2	-14	54.4	355	55.1	+12	54.9	46	22.0	+22	21.8
13	161	28.9	13	37.6		22.9	179	36.2		54.6	10	57.1		54.7	61	24.2		21.8
14	176	31.3	28	37.1		21.9	194	39.2		54.9	25	59.0		54.5	76	26.4		21.8
15	191	33.8	43	36.5		20.9	209	42.2		55.1	41	00.9		54.3	91	28.6		21.8
16	206	36.3	58	36.0		19.9	224	45.2		55.3	56	02.9		54.1	106	30.7		21.7
17	221	38.7	73	35.4	+14	18.9	239	48.2	-14	55.6	71	04.8	+12	53.9	121	32.9	+22	21.7
18	236	41.2	88	34.9	+14	17.9	254	51.2	-14	55.8	86	06.8	+12	53.8	136	35.1	+22	21.7
19	251	43.7	103	34.3		16.9	269	54.2		56.0	101	08.7		53.6	151	37.3		21.7
20	266	46.1	118	33.8		15.9	284	57.2		56.3	116	10.6		53.4	166	39.5		21.7
21	281	48.6	133	33.2		14.8	300	00.2		56.5	131	12.6		53.2	181	41.7		21.7
22	296	51.0	148	32.7		13.8	315	03.2		56.8	146	14.5		53.0	196	43.8		21.6
23	311	53.5	163	32.1		12.8	330	06.2		57.0	161	16.5		52.8	211	46.0		21.6
24	326	56.0	178	31.6	+14	11.8	345	09.3	-14	57.2	176	18.4	+12	52.6	226	48.2	+22	21.6
Dif	—		-6		-10		+30		-2		+19		-2		+22		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 03 ^m 7			Edad: 20 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 5 ^h 10 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	179	03.0	+12 58.8	284	41.9	+15 17.5	60 N	2 21	3 33	4 23	21 13	9	13 39	85				
1	194	03.1		299	15.9 ¹⁵⁰	28.6 ¹¹¹	58	42	45	31	26 13		27 81					
2	209	03.3		313	49.8 ¹⁴⁹	39.7 ¹¹¹	56	2 59	3 55	38	37 17		16 77					
3	224	03.4		328	23.6 ¹⁴⁸	+15 50.7 ¹¹⁰	54	3 13	4 04	44	47 19		13 07	74				
4	239	03.5		342	57.5 ¹⁴⁹	+16 01.6 ¹⁰⁹	52	24	12	50	21 56	22	12 59	72				
5	254	03.7	+12 54.8	357	31.2 ¹⁴⁷	+16 12.5 ¹⁰⁹	50	3 35	4 19	4 55	22 03	24	12 52	69				
6	269	03.8	+12 54.0	12	04.9 ¹⁴⁷	+16 23.3 ¹⁰⁸	45	3 55	4 34	5 06	22 20	28	12 37	64				
7	284	04.0		26	38.6 ¹⁴⁷	34.0 ¹⁰⁷	40	4 11	46	15	34 31		24 61					
8	299	04.1		41	12.2 ¹⁴⁶	44.7 ¹⁰⁷	35	24	4 56	23	45 35		13 58					
9	314	04.3		55	45.8 ¹⁴⁶	+16 55.3 ¹⁰⁶	30	35	5 04	29	22 56	36	12 04	56				
10	329	04.4		70	19.3 ¹⁴⁵	+17 05.8 ¹⁰⁵	20	4 51	18	41	23 14	40	11 48	51				
11	344	04.5	+12 49.9	84	52.8 ¹⁴⁵	+17 16.3 ¹⁰⁵	10 N	5 04	5 29	5 51	23 29	44	11 34	48				
12	359	04.7	+12 49.1	99	26.2 ¹⁴⁴	+17 26.7 ¹⁰⁴	0	5 14	5 39	6 00	23 44	46	11 21	45				
13	14	04.8		113	59.5 ¹⁴³	37.0 ¹⁰³	10 S	23	48	10	23 58	50	11 08	42				
14	29	05.0		128	32.8 ¹⁴³	47.3 ¹⁰³	20	31	5 57	19	** ** *		10 54	38				
15	44	05.1		143	06.1 ¹⁴³	+17 57.5 ¹⁰²	30	38	6 06	30	** ** *		38 35					
16	59	05.3		157	39.3 ¹⁴²	+18 07.6 ¹⁰¹	35	41	10	36	** ** *		29 32					
17	74	05.4	+12 45.0	172	12.4 ¹⁴¹	+18 17.6 ¹⁰⁰	40	5 44	6 16	6 43	** ** *		10 19	29				
18	89	05.6	+12 44.2	186	45.5 ¹⁴¹	+18 27.6 ¹⁰⁰	45	5 47	6 21	6 52	0 05	65	10 07	25				
19	104	05.7		201	18.5 ¹⁴⁰	37.5 ⁹⁹	50	50	28	7 02	19 69		9 52	21				
20	119	05.8		215	51.5 ¹⁴⁰	47.3 ⁹⁸	52	52	31	06	25 71		45 19					
21	134	06.0		230	24.4 ¹³⁹	+18 57.0 ⁹⁷	54	53	34	11	32 74		38 16					
22	149	06.1		244	57.2 ¹³⁸	+19 06.7 ⁹⁷	56	54	38	17	40 77		29 14					
23	164	06.3		259	30.0 ¹³⁸	16.2 ⁹⁵	58	55	41	23	48 81		20 10					
24	179	06.4	+12 39.3	274	02.7 ¹³⁷	+19 25.7 ⁹⁵	60 S	5 57	6 46	7 30	0 58	86	9 09	6				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 2 ^h 11 ^m 9			Mag: -4.0 PMG: 12 ^h 06 ^m			Mag: -2.8 PMG: 0 ^h 59 ^m			Mag: -1.7 PMG: 12 ^h 13 ^m			Mag: +0.1 PMG: 8 ^h 51 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	326	56.0		178	31.6	+14 11.8	345	09.3	-14 57.2	176	18.4	+12 52.6	226	48.2	+22 21.6			
1	341	58.4		193	31.0		0 12.3		57.5	191	20.3		241	50.4		21.6		
2	357	00.9		208	30.5		15 15.3		57.7	206	22.3		256	52.6		21.6		
3	12	03.4		223	29.9		30 18.3		57.9	221	24.2		271	54.8		21.6		
4	27	05.8		238	29.4		45 21.3		58.2	236	26.2		286	57.0		21.5		
5	42	08.3		253	28.8	+14 06.7	60 24.3	-14 58.4		251	28.1	+12 51.7	301	59.1	+22 21.5			
6	57	10.8		268	28.3	+14 05.7	75 27.3	-14 58.7		266	30.0	+12 51.5	317	01.3	+22 21.5			
7	72	13.2		283	27.7		90 30.3		58.9	281	32.0		332	03.5		21.5		
8	87	15.7		298	27.2		105 33.3		59.1	296	33.9		347	05.7		21.5		
9	102	18.2		313	26.6		120 36.4		59.4	311	35.8		2 07.9			21.5		
10	117	20.6		328	26.1		135 39.4		59.6	326	37.8		17 10.1			21.4		
11	132	23.1		343	25.6	+14 00.6	150 42.4	-14 59.8		341	39.7	+12 50.6	32 12.3	+22 21.4				
12	147	25.5		358	25.0	+13 59.6	165 45.4	-15 00.1		356	41.7	+12 50.4	47 14.5	+22 21.4				
13	162	28.0		13 24.5		58.6	180 48.4		00.3	11 43.6		50.2	62 16.6			21.4		
14	177	30.5		28 23.9		57.5	195 51.5		00.6	26 45.5		50.0	77 18.8			21.4		
15	192	32.9		43 23.4		56.5	210 54.5		00.8	41 47.5		49.8	92 21.0			21.4		
16	207	35.4		58 22.8		55.5	225 57.5		01.0	56 49.4		49.6	107 23.2			21.3		
17	222	37.9		73 22.3	+13 54.5		241 00.5	-15 01.3		71 51.4	+12 49.5		122 25.4	+22 21.3				
18	237	40.3		88 21.8	+13 53.4		256 03.5	-15 01.5		86 53.3	+12 49.3		137 27.6	+22 21.3				
19	252	42.8		103 21.2		52.4	271 06.6		01.7	101 55.2		49.1	152 29.8			21.3		
20	267	45.3		118 20.7		51.4	286 09.6		02.0	116 57.2		48.9	167 32.0			21.3		
21	282	47.7		133 20.1		50.4	301 12.6		02.2	131 59.1		48.7	182 34.1			21.3		
22	297	50.2		148 19.6		49.3	316 15.6		02.5	147 01.1		48.5	197 36.3			21.2		
23	312	52.6		163 19.1		48.3	331 18.7		02.7	162 03.0		48.3	212 38.5			21.2		
24	327	55.1		178 18.5	+13 47.3		346 21.7	-15 02.9		177 04.9	+12 48.1		227 40.7	+22 21.2				
Dif	—			-5 -10			+30 -2			+19 -2			+22 0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 03 ^m 5			Edad: 21 ^d 7 PHE { SD: 14'8 PMG: 5 ^h 55 ^m { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 R°: 47 ^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	06.4	+12	39.3	274	02.7	+19	25.7	60 N	19 40	20 29	21 38	21 22	15		15 04	85	
1	194	06.6		38.5	288	35.4 ¹³⁷		35.1 ⁹⁴	58	33	18	19	39	21		14 48	79	
2	209	06.7		37.6	303	08.0 ¹³⁶		44.5 ⁹⁴	56	26	20 08	21 03	21 54	24		33	76	
3	224	06.9		36.8	317	40.5 ¹³⁵	+19	53.7 ⁹²	54	20	19 59	20 50	22 06	28		21	77	
4	239	07.0		36.0	332	13.0 ¹³⁵	+20	02.9 ⁹²	52	15	52	39	18	29		11	69	
5	254	07.1	+12	35.2	346	45.4 ¹³⁴	+20	12.0 ⁹¹	50	19 10	19 45	20 29	22 27	32		14 01	68	
6	269	07.3	+12	34.4	1	17.7 ¹³³	+20	21.0 ⁹⁰	45	18 59	19 30	20 09	22 48	36		13 41	64	
7	284	07.4		33.5	15	50.0 ¹³³		29.9 ⁸⁹	40	50	19	19 53	23 05	38		25	61	
8	299	07.6		32.7	30	22.2 ¹³²		38.8 ⁸⁹	35	43	09	41	20	40		11	59	
9	314	07.7		31.9	44	54.4 ¹³²		47.5 ⁸⁷	30	37	19 01	31	32	42		13 00	56	
10	329	07.9		31.1	59	26.5 ¹³¹	+20	56.2 ⁸⁷	20	25	18 48	15	23 54	44		12 39	54	
11	344	08.0	+12	30.3	73	58.5 ¹³⁰	+21	04.8 ⁸⁶	10 N	18 16	18 37	19 02	** ** *	**		12 22	50	
12	359	08.2	+12	29.4	88	30.5 ¹³⁰	+21	13.2 ⁸⁴	0	18 07	18 28	18 53	** ** *	**		12 06	48	
13	14	08.3		28.6	103	02.4 ¹²⁹		21.6 ⁸⁴	10 S	17 58	19	44	** ** *	**		11 50	45	
14	29	08.5		27.8	117	34.2 ¹²⁸		29.9 ⁸³	20	49	11	37	0 14	53		32	43	
15	44	08.6		27.0	132	06.0 ¹²⁸		38.2 ⁸³	30	38	18 03	31	32	57		13	38	
16	59	08.8		26.1	146	37.7 ¹²⁷		46.3 ⁸¹	35	32	17 58	28	43	59		11 01	37	
17	74	08.9	+12	25.3	161	09.3 ¹²⁶	+21	54.3 ⁸⁰	40	17 25	17 53	18 25	0 55	62		10 48	34	
18	89	09.1	+12	24.5	175	40.9 ¹²⁶	+22	02.3 ⁸⁰	45	17 17	17 48	18 22	1 10	65		10 32	32	
19	104	09.2		23.7	190	12.3 ¹²⁴		10.1 ⁷⁸	50	08	41	19	28	69		13	28	
20	119	09.4		22.8	204	43.8 ¹²⁵		17.8 ⁷⁷	52	17 04	39	18	36	72		10 04	26	
21	134	09.5		22.0	219	15.1 ¹²³		25.5 ⁷⁷	54	16 59	36	17	46	74		9 54	23	
22	149	09.7		21.2	233	46.4 ¹²³		33.1 ⁷⁶	56	54	32	16	1 57	77		43	20	
23	164	09.8		20.4	248	17.6 ¹²²		40.5 ⁷⁴	58	48	29	15	2 09	81		30	16	
24	179	10.0	+12	19.5	262	48.8 ¹²²	+22	47.9 ⁷⁴	60 S	16 41	17 25	18 14	2 24	86		9 15	11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 2 ^h 08 ^m 0		Mag: -4.0 PMG: 12 ^h 07 ^m			Mag: -2.8 PMG: 0 ^h 54 ^m			Mag: -1.7 PMG: 12 ^h 10 ^m			Mag: +0.1 PMG: 8 ^h 48 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	327	55.1	178	18.5	+13	47.3	346	21.7	-15	02.9	177	04.9	+12	48.1	227	40.7	+22	21.2
1	342	57.6	193	18.0		46.2	1	24.7		03.2	192	06.9		48.0	242	42.9		21.2
2	358	00.0	208	17.4		45.2	16	27.8		03.4	207	08.8		47.8	257	45.1		21.2
3	13	02.5	223	16.9		44.2	31	30.8		03.6	222	10.7		47.6	272	47.3		21.2
4	28	05.0	238	16.4		43.2	46	33.8		03.9	237	12.7		47.4	287	49.5		21.1
5	43	07.4	253	15.8	+13	42.1	61	36.8	-15	04.1	252	14.6	+12	47.2	302	51.6	+22	21.1
6	58	09.9	268	15.3	+13	41.1	76	39.9	-15	04.3	267	16.6	+12	47.0	317	53.8	+22	21.1
7	73	12.4	283	14.8		40.1	91	42.9		04.6	282	18.5		46.8	332	56.0		21.1
8	88	14.8	298	14.2		39.0	106	45.9		04.8	297	20.4		46.6	347	58.2		21.1
9	103	17.3	313	13.7		38.0	121	49.0		05.0	312	22.4		46.5	3	00.4		21.1
10	118	19.8	328	13.1		36.9	136	52.0		05.3	327	24.3		46.3	18	02.6		21.0
11	133	22.2	343	12.6	+13	35.9	151	55.1	-15	05.5	342	26.3	+12	46.1	33	04.8	+22	21.0
12	148	24.7	358	12.1	+13	34.9	166	58.1	-15	05.8	357	28.2	+12	45.9	48	07.0	+22	21.0
13	163	27.1	13	11.5		33.8	182	01.1		06.0	12	30.1		45.7	63	09.2		21.0
14	178	29.6	28	11.0		32.8	197	04.2		06.2	27	32.1		45.5	78	11.3		21.0
15	193	32.1	43	10.5		31.8	212	07.2		06.5	42	34.0		45.3	93	13.5		21.0
16	208	34.5	58	09.9		30.7	227	10.2		06.7	57	36.0		45.1	108	15.7		20.9
17	223	37.0	73	09.4	+13	29.7	242	13.3	-15	06.9	72	37.9	+12	45.0	123	17.9	+22	20.9
18	238	39.5	88	08.9	+13	28.6	257	16.3	-15	07.2	87	39.8	+12	44.8	138	20.1	+22	20.9
19	253	41.9	103	08.4		27.6	272	19.4		07.4	102	41.8		44.6	153	22.3		20.9
20	268	44.4	118	07.8		26.6	287	22.4		07.6	117	43.7		44.4	168	24.5		20.9
21	283	46.9	133	07.3		25.5	302	25.5		07.9	132	45.6		44.2	183	26.7		20.9
22	298	49.3	148	06.8		24.5	317	28.5		08.1	147	47.6		44.0	198	28.9		20.8
23	313	51.8	163	06.2		23.4	332	31.5		08.3	162	49.5		43.8	213	31.1		20.8
24	328	54.3	178	05.7	+13	22.4	347	34.6	-15	08.6	177	51.5	+12	43.6	228	33.3	+22	20.8
Dif	—		-5		-10		+30		-2		+19		-2		+22			0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 03 ^m 2				Edad: 22 ^d 7 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 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	179	10.0	+12	19.5	262	48.8	+22	47.9	72	60 N	2 30	3 38	4 27	21 37	29	16 29	77		
1	194	10.1		18.7	277	19.9 ¹²¹	+22	55.1	72	58	2 49	3 50	35	22 00	34	16 07	72		
2	209	10.3		17.9	291	50.9 ¹²⁰	+23	02.3	71	56	3 05	4 00	42	18 37		15 49	69		
3	224	10.4		17.0	306	21.8 ¹¹⁹		09.4	71	54	18	08	48	34 39		34	67		
4	239	10.6		16.2	320	52.7 ¹¹⁹		16.3	69	52	29	16	53	47 41		20	66		
5	254	10.7	+12	15.4	335	23.5 ¹¹⁸	+23	23.2	69	50	3 39	4 23	4 58	22 59	42	15 09	64		
6	269	10.9	+12	14.6	349	54.3 ¹¹⁸	+23	29.9	67	45	3 58	4 37	5 08	23 24	44	14 45	61		
7	284	11.0		13.7	4	24.9 ¹¹⁶		36.6	67	40	4 14	48	17	23 43	46	26	59		
8	299	11.2		12.9	18	55.5 ¹¹⁶		43.1	65	35	26	4 58	24	** ** *		14 10	57		
9	314	11.3		12.1	33	26.1 ¹¹⁶		49.5	64	30	36	5 06	31	** ** *		13 56	56		
10	329	11.5		11.2	47	56.5 ¹¹⁴	+23	55.9	64	20	4 52	19	42	** ** *		33	54		
11	344	11.6	+12	10.4	62	26.9 ¹¹⁴	+24	02.1	62	10 N	5 04	5 29	5 51	0 13	47	13 12	53		
12	359	11.8	+12	09.6	76	57.3 ¹¹⁴	+24	08.2	61	0	5 14	5 39	6 00	0 30	49	12 54	50		
13	14	11.9		08.8	91	27.5 ¹¹²		14.2	60	10 S	22	47	09	0 48	51	35	49		
14	29	12.1		07.9	105	57.7 ¹¹²		20.1	59	20	29	5 55	18	1 07	54	12 15	47		
15	44	12.2		07.1	120	27.8 ¹¹¹		25.9	58	30	36	6 04	28	29 56		11 51	45		
16	59	12.4		06.3	134	57.9 ¹¹¹		31.6	57	35	39	08	34	42 58		38	43		
17	74	12.6	+12	05.4	149	27.9 ¹¹⁰	+24	37.1	55	40	5 41	6 13	6 41	1 57	60	11 22	42		
18	89	12.7	+12	04.6	163	57.8 ¹⁰⁹	+24	42.6	55	45	5 44	6 18	6 48	2 15	62	11 04	39		
19	104	12.9		03.8	178	27.7 ¹⁰⁹		47.9	53	50	47	24	6 58	37 66		10 41	36		
20	119	13.0		02.9	192	57.5 ¹⁰⁸		53.1	52	52	48	27	7 02	2 48	68	30	34		
21	134	13.2		02.1	207	27.2 ¹⁰⁷	+24	58.2	51	54	49	30	07	3 00	70	17	32		
22	149	13.3		01.3	221	56.8 ¹⁰⁶	+25	03.2	50	56	50	33	12	14 73		10 03	29		
23	164	13.5	+12	00.4	236	26.4 ¹⁰⁶		08.1	49	58	51	37	18	30 77		9 46	26		
24	179	13.6	+11	59.6	250	56.0 ¹⁰⁶	+25	12.8	47	60 S	5 52	6 40	7 24	3 50	83	9 26	20		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 04 ^m 0		Mag: -4.0 PMG: 12 ^h 08 ^m				Mag: -2.8 PMG: 0 ^h 50 ^m				Mag: -1.7 PMG: 12 ^h 07 ^m				Mag: +0.1 PMG: 8 ^h 45 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	328	54.3	178	05.7	+13	22.4	347	34.6	-15	08.6	177	51.5	+12	43.6	228	33.3	+22	20.8
1	343	56.7	193	05.2		21.3	2	37.6		08.8	192	53.4		43.5	243	35.4		20.8
2	358	59.2	208	04.6		20.3	17	40.7		09.0	207	55.3		43.3	258	37.6		20.8
3	14	01.6	223	04.1		19.2	32	43.7		09.3	222	57.3		43.1	273	39.8		20.8
4	29	04.1	238	03.6		18.2	47	46.8		09.5	237	59.2		42.9	288	42.0		20.7
5	44	06.6	253	03.1	+13	17.1	62	49.8	-15	09.8	253	01.2	+12	42.7	303	44.2	+22	20.7
6	59	09.0	268	02.5	+13	16.1	77	52.9	-15	10.0	268	03.1	+12	42.5	318	46.4	+22	20.7
7	74	11.5	283	02.0		15.0	92	55.9		10.2	283	05.0		42.3	333	48.6		20.7
8	89	14.0	298	01.5		14.0	107	59.0		10.5	298	07.0		42.1	348	50.8		20.7
9	104	16.4	313	01.0		12.9	123	02.0		10.7	313	08.9		42.0	3	53.0		20.7
10	119	18.9	328	00.4		11.9	138	05.1		10.9	328	10.9		41.8	18	55.2		20.6
11	134	21.4	342	59.9	+13	10.8	153	08.1	-15	11.2	343	12.8	+12	41.6	33	57.4	+22	20.6
12	149	23.8	357	59.4	+13	09.8	168	11.2	-15	11.4	358	14.7	+12	41.4	48	59.5	+22	20.6
13	164	26.3	12	58.9		08.7	183	14.3		11.6	13	16.7		41.2	64	01.7		20.6
14	179	28.7	27	58.3		07.7	198	17.3		11.9	28	18.6		41.0	79	03.9		20.6
15	194	31.2	42	57.8		06.6	213	20.4		12.1	43	20.6		40.8	94	06.1		20.6
16	209	33.7	57	57.3		05.6	228	23.4		12.3	58	22.5		40.6	109	08.3		20.5
17	224	36.1	72	56.8	+13	04.5	243	26.5	-15	12.6	73	24.4	+12	40.5	124	10.5	+22	20.5
18	239	38.6	87	56.3	+13	03.5	258	29.5	-15	12.8	88	26.4	+12	40.3	139	12.7	+22	20.5
19	254	41.1	102	55.7		02.4	273	32.6		13.0	103	28.3		40.1	154	14.9		20.5
20	269	43.5	117	55.2		01.3	288	35.7		13.3	118	30.2		39.9	169	17.1		20.5
21	284	46.0	132	54.7	+13	00.3	303	38.7		13.5	133	32.2		39.7	184	19.3		20.5
22	299	48.5	147	54.2	+12	59.2	318	41.8		13.7	148	34.1		39.5	199	21.5		20.4
23	314	50.9	162	53.7		58.2	333	44.8		13.9	163	36.1		39.3	214	23.7		20.4
24	329	53.4	177	53.1	+12	57.1	348	47.9	-15	14.2	178	38.0	+12	39.1	229	25.9	+22	20.4
Dif	—		-5		-11		+31		-2		+19		-2		+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 23 ^d 7 PHE { 4 ^h : 54 ^h 8 12 ^h : 55 ^h 0 20 ^h : 55 ^h 1					Civil			Náutico		Hora R°	
	PMG: 12 ^h 03 ^m 0			PMG: 7 ^h 32 ^m R°: 52 ^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	179	13.6	+11 59.6	250	56.0	+25 12.8	47	60 N	19 34	20 23	21 29	22 06 53	17 46 59		
1	194	13.8	58.8	265	25.4 ¹⁰⁴	17.5	47	58	27	12	21 11	34 53	17 19 58		
2	209	13.9	57.9	279	54.8 ¹⁰⁴	22.0	45	56	21	20 02	20 56	22 55 53	16 58 57		
3	224	14.1	57.1	294	24.2 ¹⁰⁴	26.4	44	54	15	19 54	44	23 13 53	41 56		
4	239	14.3	56.2	308	53.4 ¹⁰²	30.6	42	52	10	47	33	28 53	26 56		
5	254	14.4	+11 55.4	323	22.7 ¹⁰³	+25 34.8	42	50	19 06	19 41	20 24	23 41 54	16 13 56		
6	269	14.6	+11 54.6	337	51.8 ¹⁰¹	+25 38.8	40	45	18 56	19 27	20 05	** ** *	15 46 56		
7	284	14.7	53.7	352	20.9 ¹⁰¹	42.7	39	40	48	16	19 50	** ** *	25 55		
8	299	14.9	52.9	6	49.9 ¹⁰⁰	46.5	38	35	41	19 07	38	0 00 47	15 07 55		
9	314	15.0	52.1	21	18.9 ¹⁰⁰	50.1	36	30	34	18 59	29	14 48	14 52 55		
10	329	15.2	51.2	35	47.8 ⁹⁹	53.7	36	20	24	47	13	0 38 50	27 54		
11	344	15.4	+11 50.4	50	16.7 ⁹⁹	+25 57.1	34	10 N	18 15	18 36	19 01	1 00 50	14 05 53		
12	359	15.5	+11 49.5	64	45.5 ⁹⁸	+26 00.3	32	0	18 06	18 27	18 52	1 19 52	13 44 53		
13	14	15.7	48.7	79	14.2 ⁹⁷	03.5	32	10 S	17 58	19	44	1 39 53	24 52		
14	29	15.8	47.9	93	42.9 ⁹⁷	06.5	30	20	49	12	37	2 01 54	13 02 51		
15	44	16.0	47.0	108	11.5 ⁹⁶	09.4	29	30	39	18 04	32	25 56	12 36 51		
16	59	16.1	46.2	122	40.1 ⁹⁶	12.1	27	35	34	17 59	29	40 57	21 51		
17	74	16.3	+11 45.3	137	08.6 ⁹⁵	+26 14.8	27	40	17 27	17 55	18 27	2 57 57	12 04 50		
18	89	16.5	+11 44.5	151	37.0 ⁹⁴	+26 17.3	25	45	17 20	17 50	18 24	3 17 59	11 43 49		
19	104	16.6	43.7	166	05.4 ⁹⁴	19.6	23	50	11	44	22	43 61	17 47		
20	119	16.8	42.8	180	33.8 ⁹⁴	21.9	23	52	07	42	21	3 56 61	11 04 47		
21	134	16.9	42.0	195	02.1 ⁹³	24.0	21	54	17 02	39	20	4 10 63	10 49 46		
22	149	17.1	41.1	209	30.4 ⁹³	25.9	19	56	16 57	36	19	27 64	32 45		
23	164	17.2	40.3	223	58.6 ⁹²	27.7	18	58	52	33	19	4 47 66	10 12 42		
24	179	17.4	+11 39.5	238	26.7 ⁹¹	+26 29.4	17	60 S	16 46	17 29	18 18	5 13 70	9 46 39		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 2 ^h 00 ^m 1		Mag: -4.0 PMG: 12 ^h 09 ^m		Mag: -2.8 PMG: 0 ^h 45 ^m		Mag: -1.7 PMG: 12 ^h 04 ^m		Mag: +0.2 PMG: 8 ^h 41 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	329	53.4	177	53.1	348	47.9	178	38.0	229	25.9					
1	344	55.9	192	52.6	3	51.0	193	39.9	244	28.1					
2	359	58.3	207	52.1	18	54.0	208	41.9	259	30.3					
3	15	00.8	222	51.6	33	57.1	223	43.8	274	32.4					
4	30	03.2	237	51.1	49	00.2	238	45.8	289	34.6					
5	45	05.7	252	50.5	+12 51.8	64 03.2	-15 15.3	253 47.7	+12 38.2	304 36.8					
6	60	08.2	267	50.0	+12 50.7	79 06.3	-15 15.6	268 49.6	+12 38.0	319 39.0					
7	75	10.6	282	49.5	49.7	94 09.4	15.8	283 51.6	37.8	334 41.2					
8	90	13.1	297	49.0	48.6	109 12.4	16.0	298 53.5	37.6	349 43.4					
9	105	15.6	312	48.5	47.5	124 15.5	16.3	313 55.5	37.5	4 45.6					
10	120	18.0	327	48.0	46.5	139 18.6	16.5	328 57.4	37.3	19 47.8					
11	135	20.5	342	47.5	+12 45.4	154 21.6	-15 16.7	343 59.3	+12 37.1	34 50.0					
12	150	23.0	357	46.9	+12 44.3	169 24.7	-15 17.0	359 01.3	+12 36.9	49 52.2					
13	165	25.4	12 46.4	43.3	184 27.8	17.2	17.2	14 03.2	36.7	64 54.4					
14	180	27.9	27 45.9	42.2	199 30.9	17.4	17.4	29 05.2	36.5	79 56.6					
15	195	30.4	42 45.4	41.1	214 33.9	17.6	17.6	44 07.1	36.3	94 58.8					
16	210	32.8	57 44.9	40.1	229 37.0	17.9	17.9	59 09.0	36.1	110 01.0					
17	225	35.3	72 44.4	+12 39.0	244 40.1	-15 18.1	74 11.0	+12 36.0		125 03.2					
18	240	37.7	87 43.9	+12 37.9	259 43.1	-15 18.3	89 12.9	+12 35.8		140 05.4					
19	255	40.2	102 43.4	36.8	274 46.2	18.6	104 14.9	35.6		155 07.6					
20	270	42.7	117 42.8	35.8	289 49.3	18.8	119 16.8	35.4		170 09.8					
21	285	45.1	132 42.3	34.7	304 52.4	19.0	134 18.7	35.2		185 12.0					
22	300	47.6	147 41.8	33.6	319 55.4	19.3	149 20.7	35.0		200 14.2					
23	315	50.1	162 41.3	32.5	334 58.5	19.5	164 22.6	34.8		215 16.3					
24	330	52.5	177 40.8	+12 31.5	350 01.6	-15 19.7	179 24.6	+12 34.6		230 18.5					
Dif	—	-5	-11	+31	-2	+19	-2	+22							

ALMANAQUE NÁUTICO PERSEIS

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 02 ^m 4				Edad: 25 ^d 7 PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/4 PMG: 0 ^h 18 ^m R°: 55 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m	m	
0	179	21.3	+11	19.1	225	31.2	+26	28.3	60 N	19 29	20 16	21 20	** ** *	**	19 20	19	
1	194	21.5		18.3	239	58.5		26.4	58	22	20 06	21 04	** ** *	**	18 57	24	
2	209	21.6		17.4	254	25.9		24.5	56	16	19 57	20 50	** ** *	**	37	29	
3	224	21.8		16.6	268	53.2		22.3	54	11	49	38	0 06	69	21	32	
4	239	21.9		15.7	283	20.4		20.1	52	06	42	28	21	68	18	07	
5	254	22.1	+11	14.9	297	47.7	+26	17.6	50	19 02	19 36	20 19	0 35	66	17 55	36	
6	269	22.3	+11	14.0	312	15.0	+26	15.1	45	18 52	19 23	20 01	1 02	63	17 30	40	
7	284	22.4		13.2	326	42.2		12.4	40	45	13	19 47	23	62	17 10	42	
8	299	22.6		12.3	341	09.5		09.5	35	38	19 04	35	41	60	16 53	45	
9	314	22.8		11.5	355	36.7		06.5	30	32	18 57	26	1 56	59	38	47	
10	329	22.9		10.6	10	03.9		03.4	20	22	45	11	2 22	57	16 13	50	
11	344	23.1	+11	09.8	24	31.2	+26	00.1	10 N	18 14	18 35	19 00	2 44	56	15 51	53	
12	359	23.3	+11	08.9	38	58.4	+25	56.6	0	18 06	18 27	18 51	3 05	55	15 31	54	
13	14	23.4		08.0	53	25.6		53.0	10 S	17 58	19	44	26	53	15 11	56	
14	29	23.6		07.2	67	52.8		49.3	20	50	12	38	3 48	51	14 49	59	
15	44	23.8		06.3	82	20.0		45.4	30	40	05	33	4 14	49	24	61	
16	59	23.9		05.5	96	47.2		41.4	35	35	18 01	30	29	48	14 09	63	
17	74	24.1	+11	04.6	111	14.4	+25	37.2	40	17 29	17 57	18 28	4 47	46	13 52	65	
18	89	24.3	+11	03.8	125	41.7	+25	32.9	45	17 22	17 52	18 26	5 08	44	13 31	67	
19	104	24.4		02.9	140	08.9		28.4	50	14	47	25	35	41	13 04	71	
20	119	24.6		02.1	154	36.1		23.8	52	10	45	24	5 48	40	12 51	73	
21	134	24.8		01.2	169	03.3		19.1	54	06	42	23	6 03	38	36	75	
22	149	24.9	+11	00.3	183	30.6		14.2	56	17 01	40	23	21	35	12 19	78	
23	164	25.1	+10	59.5	197	57.8		09.1	58	16 56	37	22	6 42	31	11 58	82	
24	179	25.3	+10	58.6	212	25.1	+25	03.9	60 S	16 50	17 33	18 22	7 09	26	11 31	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 52 ^m 2		Mag: -4.0 PMG: 12 ^h 10 ^m		Mag: -2.9 PMG: 0 ^h 35 ^m		Mag: -1.7 PMG: 11 ^h 58 ^m		Mag: +0.2 PMG: 8 ^h 34 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	331	51.7	177	28.7	+12	05.5	351	15.6	-15	25.1
1	346	54.1	192	28.2		04.4	6	18.7		25.4
2	1	56.6	207	27.7		03.3	21	21.8		25.6
3	16	59.1	222	27.2		02.2	36	24.9		25.8
4	32	01.5	237	26.7		01.1	51	28.0		26.0
5	47	04.0	252	26.2	+12	00.1	66	31.1	-15	26.3
6	62	06.5	267	25.7	+11	59.0	81	34.2	-15	26.5
7	77	08.9	282	25.2		57.9	96	37.3		26.7
8	92	11.4	297	24.7		56.8	111	40.4		26.9
9	107	13.8	312	24.2		55.7	126	43.5		27.2
10	122	16.3	327	23.7		54.6	141	46.6		27.4
11	137	18.8	342	23.2	+11	53.5	156	49.7	-15	27.6
12	152	21.2	357	22.7	+11	52.4	171	52.8	-15	27.8
13	167	23.7	12	22.2		51.3	186	55.9		28.1
14	182	26.2	27	21.7		50.2	201	59.0		28.3
15	197	28.6	42	21.3		49.1	217	02.1		28.5
16	212	31.1	57	20.8		48.0	232	05.2		28.7
17	227	33.6	72	20.3	+11	46.9	247	08.3	-15	28.9
18	242	36.0	87	19.8	+11	45.8	262	11.4	-15	29.2
19	257	38.5	102	19.3		44.7	277	14.5		29.4
20	272	41.0	117	18.8		43.6	292	17.6		29.6
21	287	43.4	132	18.3		42.5	307	20.7		29.8
22	302	45.9	147	17.8		41.4	322	23.8		30.0
23	317	48.3	162	17.3		40.3	337	26.9		30.3
24	332	50.8	177	16.8	+11	39.2	352	30.0	-15	30.5
Dif	—		-5		-11		+31		-2	
							+19		-2	
									+22	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 2			Edad: 26 ^d 7 PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'1 PMG: 10 ^h 13 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	25.3	+10 58.6	212	25.1	+25 03.9	60 N	2 45	3 50	4 37		0 17	93	19 39	11
1	194	25.4		226	52.4	+24 58.6	58	3 02	4 00	44		40	87	21	16
2	209	25.6		241	19.7	53.1	56	16	08	49		0 59	83	19 06	20
3	224	25.8		255	47.0	47.5	54	27	16	55		1 15	80	18 53	23
4	239	26.0		270	14.3	41.7	52	37	23	4 59		29	77	42	25
5	254	26.1	+10 54.3	284	41.6	+24 35.8	50	3 46	4 29	5 04		1 41	74	18 31	29
6	269	26.3	+10 53.5	299	08.9	+24 29.8	45	4 04	4 42	5 13		2 05	71	18 10	33
7	284	26.5		313	36.3	23.6	40	18	4 52	21		25	67	17 52	37
8	299	26.6		328	03.7	17.2	35	30	5 01	27		41	65	38	39
9	314	26.8		342	31.1	10.7	30	39	08	33		2 55	63	25	42
10	329	27.0		356	58.5	+24 04.1	20	4 54	20	43		3 19	60	17 03	46
11	344	27.1	+10 49.2	11	26.0	+23 57.4	10 N	5 05	5 30	5 51		3 40	57	16 44	49
12	359	27.3	+10 48.3	25	53.5	+23 50.5	0	5 13	5 38	5 59		4 00	53	16 25	54
13	14	27.5		40	20.9	43.4	10 S	21	45	6 07		19	51	16 07	57
14	29	27.7		54	48.5	36.2	20	27	5 52	15		4 39	49	15 48	60
15	44	27.8		69	16.0	28.9	30	32	6 00	24		5 03	45	25	64
16	59	28.0		83	43.6	21.5	35	34	03	29		17	42	15 12	66
17	74	28.2	+10 44.0	98	11.2	+23 13.9	40	5 36	6 07	6 35		5 33	40	14 57	69
18	89	28.3	+10 43.1	112	38.8	+23 06.1	45	5 38	6 12	6 42		5 52	37	14 38	73
19	104	28.5		127	06.5	+22 58.3	50	39	17	50		6 16	32	15	78
20	119	28.7		141	34.2	50.3	52	40	19	54		28	30	14 04	80
21	134	28.9		156	01.9	42.1	54	40	21	6 58		41	27	13 51	83
22	149	29.0		170	29.6	33.9	56	41	24	7 02		6 56	23	37	86
23	164	29.2		184	57.4	25.5	58	41	27	07		7 13	20	13 20	91
24	179	29.4	+10 38.0	199	25.2	+22 16.9	60 S	5 42	6 30	7 13		7 35	13	12 59	97
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 48 ^m 3			Mag: -4.0 PMG: 12 ^h 11 ^m			Mag: -2.9 PMG: 0 ^h 30 ^m			Mag: -1.7 PMG: 11 ^h 55 ^m			Mag: +0.2 PMG: 8 ^h 30 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	332	50.8		177	16.8	+11 39.2	352	30.0	-15 30.5	180	57.7	+12 25.6	232	04.1	+22 19.2
1	347	53.3		192	16.3	38.1	7	33.1	30.7	195	59.6	25.4	247	06.3	19.2
2	2	55.7		207	15.8	37.0	22	36.2	30.9	211	01.6	25.2	262	08.5	19.1
3	17	58.2		222	15.4	35.9	37	39.3	31.1	226	03.5	25.0	277	10.7	19.1
4	33	00.7		237	14.9	34.8	52	42.4	31.4	241	05.4	24.8	292	12.9	19.1
5	48	03.1		252	14.4	+11 33.7	67	45.5	-15 31.6	256	07.4	+12 24.6	307	15.1	+22 19.1
6	63	05.6		267	13.9	+11 32.6	82	48.6	-15 31.8	271	09.3	+12 24.4	322	17.3	+22 19.1
7	78	08.1		282	13.4	31.5	97	51.7	32.0	286	11.3	24.3	337	19.5	19.1
8	93	10.5		297	12.9	30.4	112	54.8	32.2	301	13.2	24.1	352	21.7	19.0
9	108	13.0		312	12.4	29.3	127	57.9	32.4	316	15.1	23.9	7	23.9	19.0
10	123	15.5		327	11.9	28.2	143	01.0	32.7	331	17.1	23.7	22	26.1	19.0
11	138	17.9		342	11.5	+11 27.0	158	04.1	-15 32.9	346	19.0	+12 23.5	37	28.3	+22 19.0
12	153	20.4		357	11.0	+11 25.9	173	07.2	-15 33.1	1	21.0	+12 23.3	52	30.5	+22 19.0
13	168	22.8		12	10.5	24.8	188	10.3	33.3	16	22.9	23.1	67	32.8	19.0
14	183	25.3		27	10.0	23.7	203	13.4	33.5	31	24.8	22.9	82	35.0	18.9
15	198	27.8		42	09.5	22.6	218	16.5	33.7	46	26.8	22.7	97	37.2	18.9
16	213	30.2		57	09.0	21.5	233	19.7	34.0	61	28.7	22.6	112	39.4	18.9
17	228	32.7		72	08.5	+11 20.4	248	22.8	-15 34.2	76	30.7	+12 22.4	127	41.6	+22 18.9
18	243	35.2		87	08.1	+11 19.3	263	25.9	-15 34.4	91	32.6	+12 22.2	142	43.8	+22 18.9
19	258	37.6		102	07.6	18.2	278	29.0	34.6	106	34.5	22.0	157	46.0	18.9
20	273	40.1		117	07.1	17.0	293	32.1	34.8	121	36.5	21.8	172	48.2	18.8
21	288	42.6		132	06.6	15.9	308	35.2	35.0	136	38.4	21.6	187	50.4	18.8
22	303	45.0		147	06.1	14.8	323	38.3	35.2	151	40.4	21.4	202	52.6	18.8
23	318	47.5		162	05.7	13.7	338	41.4	35.5	166	42.3	21.2	217	54.8	18.8
24	333	50.0		177	05.2	+11 12.6	353	44.5	-15 35.7	181	44.2	+12 21.0	232	57.0	+22 18.8
Dif	—		-5	-11		+31	-2		+19	-2		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 01 ^m 9			Edad: 27 ^d 7 PHE { 4 ^h : 57'3 12 ^h : 57'6 20 ^h : 57'8 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	
0	179	29.4	+10	38.0	199	25.2	+22	16.9	60 N	19 23	20 09	21 12	1 50	99	19 50	6		
1	194	29.5		37.1	213	53.1	+22	08.2	58	17	20 00	20 56	2 07	94	37	10		
2	209	29.7		36.2	228	21.0	+21	59.4	56	11	19 52	43	22	89	26	14		
3	224	29.9		35.4	242	48.9		50.5	54	06	44	32	35	85	16	17		
4	239	30.1		34.5	257	16.8		41.4	52	19 02	38	23	46	82	07	21		
5	254	30.2	+10	33.6	271	44.8	+21	32.3	50	18 58	19 32	20 14	2 55	80	19 00	22		
6	269	30.4	+10	32.8	286	12.9	+21	22.9	45	18 49	19 20	19 57	3 16	74	18 43	27		
7	284	30.6		31.9	300	40.9		13.5	40	42	10	43	32	71	29	32		
8	299	30.8		31.0	315	09.0	+21	03.9	35	35	19 02	33	46	68	17	35		
9	314	30.9		30.2	329	37.2	+20	54.2	30	30	18 55	24	3 58	65	18 07	38		
10	329	31.1		29.3	344	05.3		44.4	20	21	43	19 10	4 19	60	17 49	43		
11	344	31.3	+10	28.4	358	33.5	+20	34.4	10 N	18 13	18 34	18 59	4 37	56	17 33	48		
12	359	31.5	+10	27.5	13	01.8	+20	24.4	0	18 05	18 26	18 51	4 53	53	17 19	51		
13	14	31.6		26.7	27	30.1		14.2	10 S	17 58	19	44	5 10	48	17 04	55		
14	29	31.8		25.8	41	58.4	+20	03.9	20	50	12	38	28	44	16 48	59		
15	44	32.0		24.9	56	26.8	+19	53.4	30	41	06	34	48	40	29	65		
16	59	32.2		24.1	70	55.2		42.9	35	37	18 02	32	5 59	38	18	68		
17	74	32.3	+10	23.2	85	23.7	+19	32.2	40	17 31	17 58	18 30	6 13	34	16 06	71		
18	89	32.5	+10	22.3	99	52.2	+19	21.4	45	17 24	17 54	18 28	6 29	30	15 51	76		
19	104	32.7		21.5	114	20.7	+19	10.5	50	17	50	27	48	25	33	81		
20	119	32.9		20.6	128	49.3	+18	59.5	52	13	48	27	6 58	22	24	84		
21	134	33.0		19.7	143	17.9		48.3	54	09	45	27	7 08	20	14	87		
22	149	33.2		18.8	157	46.6		37.1	56	05	43	26	19	17	15 03	91		
23	164	33.4		18.0	172	15.3		25.7	58	17 00	41	26	33	12	14 51	94		
24	179	33.6	+10	17.1	186	44.0	+18	14.3	60 S	16 55	17 38	18 26	7 48	8	14 36	100		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 1 ^h 44 ^m 4		Mag: -4.0 PMG: 12 ^h 12 ^m			Mag: -2.9 PMG: 0 ^h 25 ^m			Mag: -1.7 PMG: 11 ^h 52 ^m				Mag: +0.2 PMG: 8 ^h 27 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	333	50.0	177	05.2	+11	12.6	353	44.5	-15	35.7	181	44.2	+12	21.0	232	57.0	+22	18.8
1	348	52.4	192	04.7		11.5	8	47.6		35.9	196	46.2		20.9	247	59.2		18.8
2	3	54.9	207	04.2		10.4	23	50.8		36.1	211	48.1		20.7	263	01.4		18.7
3	18	57.3	222	03.7		09.2	38	53.9		36.3	226	50.1		20.5	278	03.6		18.7
4	33	59.8	237	03.2		08.1	53	57.0		36.5	241	52.0		20.3	293	05.8		18.7
5	49	02.3	252	02.8	+11	07.0	69	00.1	-15	36.7	256	53.9	+12	20.1	308	08.0	+22	18.7
6	64	04.7	267	02.3	+11	05.9	84	03.2	-15	37.0	271	55.9	+12	19.9	323	10.2	+22	18.7
7	79	07.2	282	01.8		04.8	99	06.3		37.2	286	57.8		19.7	338	12.4		18.7
8	94	09.7	297	01.3		03.6	114	09.4		37.4	301	59.8		19.5	353	14.6		18.6
9	109	12.1	312	00.9		02.5	129	12.6		37.6	317	01.7		19.3	8	16.9		18.6
10	124	14.6	327	00.4		01.4	144	15.7		37.8	332	03.7		19.2	23	19.1		18.6
11	139	17.1	341	59.9	+11	00.3	159	18.8	-15	38.0	347	05.6	+12	19.0	38	21.3	+22	18.6
12	154	19.5	356	59.4	+10	59.2	174	21.9	-15	38.2	2	07.5	+12	18.8	53	23.5	+22	18.6
13	169	22.0	11	58.9		58.0	189	25.0		38.4	17	09.5		18.6	68	25.7		18.6
14	184	24.4	26	58.5		56.9	204	28.1		38.6	32	11.4		18.4	83	27.9		18.5
15	199	26.9	41	58.0		55.8	219	31.3		38.9	47	13.4		18.2	98	30.1		18.5
16	214	29.4	56	57.5		54.7	234	34.4		39.1	62	15.3		18.0	113	32.3		18.5
17	229	31.8	71	57.0	+10	53.6	249	37.5	-15	39.3	77	17.2	+12	17.8	128	34.5	+22	18.5
18	244	34.3	86	56.6	+10	52.4	264	40.6	-15	39.5	92	19.2	+12	17.6	143	36.7	+22	18.5
19	259	36.8	101	56.1		51.3	279	43.7		39.7	107	21.1		17.5	158	38.9		18.5
20	274	39.2	116	55.6		50.2	294	46.8		39.9	122	23.1		17.3	173	41.1		18.4
21	289	41.7	131	55.1		49.0	309	50.0		40.1	137	25.0		17.1	188	43.3		18.4
22	304	44.2	146	54.7		47.9	324	53.1		40.3	152	26.9		16.9	203	45.5		18.4
23	319	46.6	161	54.2		46.8	339	56.2		40.5	167	28.9		16.7	218	47.8		18.4
24	334	49.1	176	53.7	+10	45.7	354	59.3	-15	40.7	182	30.8	+12	16.5	233	50.0	+22	18.4
Dif	—		-5		-11		+31		-2		+19		-2		+22		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 12 ^h 01 ^m 6				Edad: 28 ^d 7 PHE { 4 ^h : 58°0 12 ^h : 58°2 20 ^h : 58°4 R°: 50 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	33.6	+10	17.1	186	44.0	+18	14.3	60 N	2 52	3 55	4 42	3 29	99	19 56	4				
1	194	33.7		16.2	201	12.8 98	+18	02.7 116	58	3 08	4 05	48	41	94	47	8				
2	209	33.9		15.4	215	41.6 98	+17	51.0 117	56	21	13	53	3 51	90	40	1				
3	224	34.1		14.5	230	10.5 99		39.2 118	54	32	20	4 58	4 00	87	33	14				
4	239	34.3		13.6	244	39.4 99		27.3 119	52	42	27	5 03	5 03	84	28	16				
5	254	34.4	+10	12.7	259	08.4 100	+17	15.3 120	50	3 50	4 32	5 07	4 15	82	19 22	19				
6	269	34.6	+10	11.9	273	37.4 100	+17	03.2 121	45	4 07	4 45	5 15	4 30	77	19 10	25				
7	284	34.8		11.0	288	06.4 100	+16	51.0 122	40	21	4 54	22	43	72	19 01	28				
8	299	35.0		10.1	302	35.5 101		38.6 124	35	31	5 02	29	4 54	68	18 52	32				
9	314	35.2		09.2	317	04.6 101		26.2 124	30	40	09	34	5 03	65	45	35				
10	329	35.3		08.4	331	33.7 101		13.7 125	20	4 54	21	43	19	59	32	40				
11	344	35.5	+10	07.5	346	02.9 102	+16	01.1 126	10 N	5 05	5 30	5 51	5 33	55	18 21	45				
12	359	35.7	+10	06.6	0	32.2 103	+15	48.4 127	0	5 13	5 37	5 58	5 46	50	18 10	50				
13	14	35.9		05.7	15	01.5 103		35.6 128	10 S	20	44	6 06	5 58	47	17 59	54				
14	29	36.0		04.9	29	30.8 103		22.7 129	20	25	51	13	6 12	42	47	60				
15	44	36.2		04.0	44	00.1 103	+15	09.7 130	30	30	5 57	22	28	36	34	65				
16	59	36.4		03.1	58	29.5 104	+14	56.6 131	35	31	6 01	26	37	33	26	68				
17	74	36.6	+10	02.2	72	59.0 105	+14	43.4 132	40	5 33	6 05	6 32	6 47	30	17 17	72				
18	89	36.8	+10	01.4	87	28.5 105	+14	30.1 133	45	5 34	6 08	6 38	6 59	26	17 07	76				
19	104	36.9	+10	00.5	101	58.0 105		16.8 133	50	35	13	46	7 13	21	16 54	82				
20	119	37.1	+9	59.6	116	27.5 105	+14	03.3 135	52	36	15	49	20	18	48	84				
21	134	37.3		58.7	130	57.1 106	+13	49.8 135	54	36	17	53	28	15	41	87				
22	149	37.5		57.9	145	26.7 106		36.2 136	56	36	19	6 57	36	12	34	90				
23	164	37.7		57.0	159	56.4 107		22.5 137	58	36	22	7 02	45	9	25	95				
24	179	37.8	+9	56.1	174	26.1 107	+13	08.7 138	60 S	5 36	6 24	7 07	7 56	4	16 16	98				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 1 ^h 40 ^m 5				Mag: -4.0 PMG: 12 ^h 13 ^m				Mag: -2.9 PMG: 0 ^h 20 ^m				Mag: -1.7 PMG: 11 ^h 48 ^m				Mag: +0.2 PMG: 8 ^h 23 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	334	49.1	176	53.7	+10	45.7	354	59.3	-15	40.7	182	30.8	+12	16.5	233	50.0	+22	18.4		
1	349	51.6	191	53.3		44.5	10	02.4		40.9	197	32.8		16.3	248	52.2		18.3		
2	4	54.0	206	52.8		43.4	25	05.6		41.1	212	34.7		16.1	263	54.4		18.3		
3	19	56.5	221	52.3		42.3	40	08.7		41.3	227	36.6		15.9	278	56.6		18.3		
4	34	58.9	236	51.8		41.2	55	11.8		41.6	242	38.6		15.7	293	58.8		18.3		
5	50	01.4	251	51.4	+10	40.0	70	14.9	-15	41.8	257	40.5	+12	15.6	309	01.0	+22	18.3		
6	65	03.9	266	50.9	+10	38.9	85	18.0	-15	42.0	272	42.5	+12	15.4	324	03.2	+22	18.3		
7	80	06.3	281	50.4		37.8	100	21.2		42.2	287	44.4		15.2	339	05.4		18.2		
8	95	08.8	296	50.0		36.6	115	24.3		42.4	302	46.4		15.0	354	07.6		18.2		
9	110	11.3	311	49.5		35.5	130	27.4		42.6	317	48.3		14.8	9	09.8		18.2		
10	125	13.7	326	49.0		34.4	145	30.5		42.8	332	50.2		14.6	24	12.1		18.2		
11	140	16.2	341	48.6	+10	33.2	160	33.6	-15	43.0	347	52.2	+12	14.4	39	14.3	+22	18.2		
12	155	18.7	356	48.1	+10	32.1	175	36.8	-15	43.2	2	54.1	+12	14.2	54	16.5	+22	18.2		
13	170	21.1	11	47.6		31.0	190	39.9		43.4	17	56.1		14.0	69	18.7		18.1		
14	185	23.6	26	47.2		29.8	205	43.0		43.6	32	58.0		13.9	84	20.9		18.1		
15	200	26.1	41	46.7		28.7	220	46.1		43.8	47	59.9		13.7	99	23.1		18.1		
16	215	28.5	56	46.2		27.6	235	49.3		44.0	63	01.9		13.5	114	25.3		18.1		
17	230	31.0	71	45.8	+10	26.4	250	52.4	-15	44.2	78	03.8	+12	13.3	129	27.5	+22	18.1		
18	245	33.4	86	45.3	+10	25.3	265	55.5	-15	44.4	93	05.8	+12	13.1	144	29.7	+22	18.1		
19	260	35.9	101	44.8		24.1	280	58.6		44.6	108	07.7		12.9	159	31.9		18.0		
20	275	38.4	116	44.4		23.0	296	01.7		44.8	123	09.7		12.7	174	34.2		18.0		
21	290	40.8	131	43.9		21.9	311	04.9		45.0	138	11.6		12.5	189	36.4		18.0		
22	305	43.3	146	43.4		20.7	326	08.0		45.2	153	13.5		12.3	204	38.6		18.0		
23	320	45.8	161	43.0		19.6	341	11.1		45.4	168	15.5		12.2	219	40.8		18.0		
24	335	48.2	176	42.5	+10	18.5	356	14.2	-15	45.6	183	17.4	+12	12.0	234	43.0	+22	18.0		
Dif	—				-5 -11				+31 -2				+19 -2				+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 01 ^m 3			Edad: 29 ^d 7 PHE { 4 ^h : 58 ^m 6 12 ^h : 58 ^m 8 20 ^h : 58 ^m 9 PMG: 12 ^h 48 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	37.8	+9 56.1	174	26.1	+13 08.7		60 N	19 17	20 03	21 04	5 08 98	20 00 2		
1	194	38.0		188	55.8 ¹⁰⁷	+12 54.8 ¹³⁹		58	11	19 54	20 49	15 94	19 55 6		
2	209	38.2		203	25.6 ¹⁰⁸	40.9 ¹³⁹		56	06		46	37	21 91	51 9	
3	224	38.4		217	55.4 ¹⁰⁸	26.9 ¹⁴⁰		54	19 01	39	27	27 87	47 17		
4	239	38.6		232	25.3 ¹⁰⁹	+12 12.8 ¹⁴¹		52	18 57	33	17	32 85	44 15		
5	254	38.7	+9 51.7	246	55.1 ¹⁰⁸	+11 58.6 ¹⁴²		50	18 53	19 28	20 09	5 37 82	19 41 17		
6	269	38.9	+9 50.8	261	25.0 ¹⁰⁹	+11 44.3 ¹⁴³		45	18 45	19 16	19 53	5 47 76	19 35 22		
7	284	39.1		275	55.0 ¹¹⁰	30.0 ¹⁴³		40	39	19 07	40	5 55 72	29 26		
8	299	39.3		290	24.9 ¹⁰⁹	15.6 ¹⁴⁴		35	33	18 59	30	6 02 68	24 30		
9	314	39.5		304	54.9 ¹¹⁰	+11 01.2 ¹⁴⁴		30	28	52	21	08 64	20 33		
10	329	39.7		319	25.0 ¹¹¹	+10 46.7 ¹⁴⁵		20	19	42	19 08	18 59	12 40		
11	344	39.8	+9 46.4	333	55.0 ¹¹⁰	+10 32.1 ¹⁴⁶		10 N	18 12	18 33	18 58	6 28 53	19 06 44		
12	359	40.0	+9 45.5	348	25.1 ¹¹¹	+10 17.4 ¹⁴⁷		0	18 05	18 26	18 50	6 36 49	19 00 48		
13	14	40.2		2	55.2 ¹¹¹	+10 02.7 ¹⁴⁷		10 S	17 58	19	44	45 44	18 53 54		
14	29	40.4		17	25.4 ¹¹²	+9 47.9 ¹⁴⁸		20	51	13	39	6 54 39	47 58		
15	44	40.6		31	55.6 ¹¹²	33.1 ¹⁴⁸		30	43	07	35	7 04 34	39 64		
16	59	40.8		46	25.8 ¹¹²	18.2 ¹⁴⁹		35	38	04	33	10 31	34 68		
17	74	40.9	+9 41.1	60	56.0 ¹¹²	+9 03.2 ¹⁵⁰		40	17 33	18 00	18 32	7 17 27	18 29 72		
18	89	41.1	+9 40.2	75	26.2 ¹¹²	+8 48.2 ¹⁵⁰		45	17 27	17 57	18 31	7 25 22	18 23 76		
19	104	41.3		89	56.5 ¹¹³	33.1 ¹⁵¹		50	20	53	30	34 18	16 82		
20	119	41.5		104	26.8 ¹¹³	18.0 ¹⁵¹		52	16	51	30	38 16	12 85		
21	134	41.7		118	57.1 ¹¹³	+8 02.8 ¹⁵²		54	13	49	30	43 13	08 88		
22	149	41.9		133	27.4 ¹¹³	+7 47.5 ¹⁵³		56	09	47	30	48 10	04 91		
23	164	42.0		147	57.8 ¹¹⁴	32.3 ¹⁵²		58	04	45	30	7 54 7	18 00 94		
24	179	42.2	+9 34.9	162	28.2 ¹¹⁴	+7 16.9 ¹⁵⁴		60 S	17 00	17 42	18 30	8 00 3	17 54 98		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 36 ^m 5			Mag: -4.0 PMG: 12 ^h 14 ^m			Mag: -2.9 PMG: 0 ^h 15 ^m			Mag: -1.7 PMG: 11 ^h 45 ^m			Mag: +0.2 PMG: 8 ^h 20 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♃	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	'	°	°	'		
0	335	48.2		176	42.5	+10 18.5	356	14.2	-15 45.6	183 17.4	+12 12.0	234 43.0	+22 18.0		
1	350	50.7		191	42.0		11	17.4	45.8	198 19.4		249 45.2	17.9		
2	5	53.2		206	41.6		26	20.5	46.0	213 21.3		264 47.4	17.9		
3	20	55.6		221	41.1		41	23.6	46.2	228 23.2		279 49.6	17.9		
4	35	58.1		236	40.6		56	26.7	46.4	243 25.2		294 51.8	17.9		
5	51	00.5		251	40.2	+10 12.7	71	29.9	-15 46.6	258 27.1	+12 11.0	309 54.1	+22 17.9		
6	66	03.0		266	39.7	+10 11.6	86	33.0	-15 46.8	273 29.1	+12 10.8	324 56.3	+22 17.9		
7	81	05.5		281	39.3		101	36.1	47.0	288 31.0		339 58.5	17.8		
8	96	07.9		296	38.8		116	39.2	47.2	303 32.9		355 00.7	17.8		
9	111	10.4		311	38.3		131	42.4	47.4	318 34.9		10 02.9	17.8		
10	126	12.9		326	37.9		146	45.5	47.6	333 36.8		25 05.1	17.8		
11	141	15.3		341	37.4	+10 05.9	161	48.6	-15 47.8	348 38.8	+12 09.9	40 07.3	+22 17.8		
12	156	17.8		356	37.0	+10 04.7	176	51.8	-15 48.0	3	40.7	+12 09.7	55 09.5	+22 17.8	
13	171	20.3		11	36.5		191	54.9	48.2	18 42.7		70 11.8	17.7		
14	186	22.7		26	36.0		206	58.0	48.4	33 44.6		85 14.0	17.7		
15	201	25.2		41	35.6		222	01.1	48.6	48 46.5		100 16.2	17.7		
16	216	27.7		56	35.1	+10 00.2	237	04.3	48.8	63 48.5		115 18.4	17.7		
17	231	30.1		71	34.7	+9 59.0	252	07.4	-15 49.0	78 50.4	+12 08.7	130 20.6	+22 17.7		
18	246	32.6		86	34.2	+9 57.9	267	10.5	-15 49.2	93 52.4	+12 08.5	145 22.8	+22 17.7		
19	261	35.0		101	33.7		282	13.6	49.3	108 54.3		160 25.0	17.6		
20	276	37.5		116	33.3		297	16.8	49.5	123 56.3		175 27.3	17.6		
21	291	40.0		131	32.8		312	19.9	49.7	138 58.2		190 29.5	17.6		
22	306	42.4		146	32.4		327	23.0	49.9	154 00.1		205 31.7	17.6		
23	321	44.9		161	31.9		342	26.2	50.1	169 02.1		220 33.9	17.6		
24	336	47.4		176	31.5	+9 51.0	357	29.3	-15 50.3	184 04.0	+12 07.4	235 36.1	+22 17.6		
Dif	—			-5 -11			+31 -2			+19 -2			+22 0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 01 ^m 0			Edad: 1 ^d 3 PHE { 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/3 Rº: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	42.2	+9	34.9	162	28.2	+7 16.9	60 N	2 59	4 00	4 47	6 46	98	20 02	3
1	194	42.4		34.0	176	58.6 ¹¹⁴	+7 01.6 ¹⁵³	58	3 14	09	52	49 94		01	6
2	209	42.6		33.2	191	29.0 ¹¹⁴	+6 46.1 ¹⁵⁵	56	26	17	4 57	52 90		00	10
3	224	42.8		32.3	205	59.4 ¹¹⁴	30.7 ¹⁵⁴	54	37	24	5 02	54 88		20 00	12
4	239	43.0		31.4	220	29.9 ¹¹⁵	+6 15.2 ¹⁵⁵	52	46	30	06	57 84		19 59	14
5	254	43.1	+9	30.5	235	00.3 ¹¹⁴	+5 59.6 ¹⁵⁶	50	3 54	4 36	5 10	6 59	82	19 58	17
6	269	43.3	+9	29.6	249	30.8 ¹¹⁵	+5 44.0 ¹⁵⁶	45	4 10	4 47	5 18	7 03	77	19 57	22
7	284	43.5		28.7	264	01.3 ¹¹⁵	28.4 ¹⁵⁶	40	23	4 56	24	07 72		55	27
8	299	43.7		27.8	278	31.8 ¹¹⁵	+5 12.7 ¹⁵⁷	35	33	5 04	30	10 68		54	30
9	314	43.9		27.0	293	02.3 ¹¹⁵	+4 57.0 ¹⁵⁷	30	42	11	35	12 65		53	33
10	329	44.1		26.1	307	32.8 ¹¹⁵	41.3 ¹⁵⁷	20	4 55	21	44	17 59		52	38
11	344	44.3	+9	25.2	322	03.3 ¹¹⁵	+4 25.5 ¹⁵⁸	10 N	5 05	5 30	5 51	7 21	54	19 50	44
12	359	44.4	+9	24.3	336	33.9 ¹¹⁶	+4 09.7 ¹⁵⁸	0	5 12	5 37	5 58	7 25	49	19 48	49
13	14	44.6		23.4	351	04.4 ¹¹⁵	+3 53.9 ¹⁵⁸	10 S	19	43	6 04	29 44		47	54
14	29	44.8		22.5	5	35.0 ¹¹⁶	38.1 ¹⁵⁸	20	23	49	11	33 39		45	59
15	44	45.0		21.6	20	05.5 ¹¹⁵	22.2 ¹⁵⁹	30	27	55	19	38 33		43	65
16	59	45.2		20.7	34	36.1 ¹¹⁶	+3 06.3 ¹⁵⁹	35	29	5 58	24	41 30		42	69
17	74	45.4	+9	19.8	49	06.7 ¹¹⁶	+2 50.4 ¹⁵⁹	40	5 30	6 02	6 29	7 44	26	19 41	72
18	89	45.6	+9	19.0	63	37.2 ¹¹⁵	+2 34.4 ¹⁶⁰	45	5 31	6 05	6 35	7 47	22	19 39	77
19	104	45.8		18.1	78	07.8 ¹¹⁶	18.5 ¹⁵⁹	50	32	09	42	52 16		38	82
20	119	45.9		17.2	92	38.4 ¹¹⁶	+2 02.5 ¹⁶⁰	52	32	11	45	54 14		37	85
21	134	46.1		16.3	107	08.9 ¹¹⁵	+1 46.5 ¹⁶⁰	54	32	13	48	56 12		36	87
22	149	46.3		15.4	121	39.5 ¹¹⁶	30.5 ¹⁶⁰	56	32	14	52	7 58	9	35	91
23	164	46.5		14.5	136	10.1 ¹¹⁶	+1 14.4 ¹⁶¹	58	31	17	6 57	8 01	6	34	94
24	179	46.7	+9	13.6	150	40.6 ¹¹⁵	+0 58.4 ¹⁶⁰	60 S	5 31	6 19	7 01	8 03	3	19 32	98
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 32 ^m 6			Mag: -4.0 PMG: 12 ^h 14 ^m			Mag: -2.9 PMG: 0 ^h 10 ^m			Mag: -1.7 PMG: 11 ^h 42 ^m			Mag: +0.2 PMG: 8 ^h 16 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	336	47.4		176	31.5	+9 51.0	357	29.3	-15 50.3	184	04.0	+12 07.4	235	36.1	+22 17.6
1	351	49.8		191	31.0	49.8	12	32.4	50.5	199	06.0	07.2	250	38.3	17.5
2	6	52.3		206	30.5	48.7	27	35.5	50.7	214	07.9	07.0	265	40.5	17.5
3	21	54.8		221	30.1	47.5	42	38.7	50.9	229	09.8	06.8	280	42.8	17.5
4	36	57.2		236	29.6	46.4	57	41.8	51.1	244	11.8	06.7	295	45.0	17.5
5	51	59.7		251	29.2	+9 45.2	72	44.9	-15 51.3	259	13.7	+12 06.5	310	47.2	+22 17.5
6	67	02.1		266	28.7	+9 44.0	87	48.0	-15 51.5	274	15.7	+12 06.3	325	49.4	+22 17.5
7	82	04.6		281	28.3	42.9	102	51.2	51.6	289	17.6	06.1	340	51.6	17.4
8	97	07.1		296	27.8	41.7	117	54.3	51.8	304	19.6	05.9	355	53.8	17.4
9	112	09.5		311	27.4	40.6	132	57.4	52.0	319	21.5	05.7	10	56.0	17.4
10	127	12.0		326	26.9	39.4	148	00.6	52.2	334	23.4	05.5	25	58.3	17.4
11	142	14.5		341	26.5	+9 38.3	163	03.7	-15 52.4	349	25.4	+12 05.3	41	00.5	+22 17.4
12	157	16.9		356	26.0	+9 37.1	178	06.8	-15 52.6	4	27.3	+12 05.1	56	02.7	+22 17.4
13	172	19.4		11	25.6	36.0	193	09.9	52.8	19	29.3	04.9	71	04.9	17.3
14	187	21.9		26	25.1	34.8	208	13.1	53.0	34	31.2	04.8	86	07.1	17.3
15	202	24.3		41	24.7	33.6	223	16.2	53.1	49	33.2	04.6	101	09.3	17.3
16	217	26.8		56	24.2	32.5	238	19.3	53.3	64	35.1	04.4	116	11.6	17.3
17	232	29.3		71	23.8	+9 31.3	253	22.5	-15 53.5	79	37.0	+12 04.2	131	13.8	+22 17.3
18	247	31.7		86	23.3	+9 30.2	268	25.6	-15 53.7	94	39.0	+12 04.0	146	16.0	+22 17.3
19	262	34.2		101	22.9	29.0	283	28.7	53.9	109	40.9	03.8	161	18.2	17.2
20	277	36.6		116	22.4	27.8	298	31.8	54.1	124	42.9	03.6	176	20.4	17.2
21	292	39.1		131	22.0	26.7	313	35.0	54.3	139	44.8	03.4	191	22.6	17.2
22	307	41.6		146	21.5	25.5	328	38.1	54.4	154	46.8	03.2	206	24.9	17.2
23	322	44.0		161	21.1	24.4	343	41.2	54.6	169	48.7	03.0	221	27.1	17.2
24	337	46.5		176	20.6	+9 23.2	358	44.4	-15 54.8	184	50.6	+12 02.9	236	29.3	+22 17.2
Dif	—			-5	-12		+31	-2		+19	-2		+22		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 2 ^d 3	PHE	SD: 16 ^h 2			SD: 14 ^h 26 ^m	R ^o : 49 ^m						
	PMG: 12 ^h 00 ^m 7															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	179	46.7	+9 13.6	150	40.6	+0 58.4		60 N	19 11	19 56	20 56	8 24 99		20 05 3		
1	194	46.9		165	11.2 ¹¹⁶	42.3 ¹⁶¹		58	06	48	42	23 95		07 7		
2	209	47.1	11.8	179	41.7 ¹¹⁵	26.3 ¹⁶⁰		56	19 01	41	31	22 92		10 10		
3	224	47.3	10.9	194	12.3 ¹¹⁶	+0 10.2 ¹⁶¹		54	18 57	34	21	22 88		12 12		
4	239	47.4	10.0	208	42.8 ¹¹⁵	-0 05.9 ¹⁶¹		52	53	28	12	21 86		13 16		
5	254	47.6	+9 09.1	223	13.3 ¹¹⁵	-0 21.9 ¹⁶⁰		50	18 49	19 23	20 05	8 21 83		20 15 18		
6	269	47.8	+9 08.3	237	43.8 ¹¹⁵	-0 38.0 ¹⁶¹		45	18 42	19 12	19 49	8 20 77		20 19 23		
7	284	48.0	07.4	252	14.4 ¹¹⁶	-0 54.1 ¹⁶¹		40	35	19 03	37	19 72		22 27		
8	299	48.2	06.5	266	44.8 ¹¹⁴	-1 10.2 ¹⁶¹		35	30	18 56	27	18 69		24 31		
9	314	48.4	05.6	281	15.3 ¹¹⁵	26.3 ¹⁶¹		30	25	50	19	17 66		26 35		
10	329	48.6	04.7	295	45.8 ¹¹⁵	42.3 ¹⁶⁰		20	17	40	19 06	16 59		30 41		
11	344	48.8	+9 03.8	310	16.2 ¹¹⁴	-1 58.4 ¹⁶¹		10 N	18 10	18 32	18 57	8 15 54		20 34 45		
12	359	49.0	+9 02.9	324	46.7 ¹¹⁵	-2 14.5 ¹⁶¹		0	18 04	18 25	18 49	8 14 49		20 37 50		
13	14	49.2	02.0	339	17.1 ¹¹⁴	30.5 ¹⁶⁰		10 S	17 58	19	44	13 45		41 54		
14	29	49.3	01.1	353	47.5 ¹¹⁴	-2 46.6 ¹⁶¹		20	51	13	39	12 40		44 60		
15	44	49.5	+9 00.2	8	17.8 ¹¹³	-3 02.6 ¹⁶⁰		30	44	08	36	11 34		48 66		
16	59	49.7	+8 59.3	22	48.2 ¹¹⁴	18.6 ¹⁶⁰		35	39	05	34	11 30		51 69		
17	74	49.9	+8 58.4	37	18.5 ¹¹³	-3 34.6 ¹⁶⁰		40	17 35	18 02	18 33	8 10 27		20 53 73		
18	89	50.1	+8 57.5	51	48.8 ¹¹³	-3 50.6 ¹⁶⁰		45	17 29	17 59	18 33	8 09 23		20 56 78		
19	104	50.3	56.6	66	19.1 ¹¹³	-4 06.6 ¹⁶⁰		50	23	55	33	08 18		21 00 83		
20	119	50.5	55.7	80	49.3 ¹¹²	22.6 ¹⁶⁰		52	20	54	33	08 15		02 86		
21	134	50.7	54.8	95	19.6 ¹¹³	38.5 ¹⁵⁹		54	16	52	33	08 12		03 90		
22	149	50.9	53.9	109	49.8 ¹¹²	-4 54.4 ¹⁵⁹		56	13	50	34	07 10		06 92		
23	164	51.1	53.0	124	19.9 ¹¹¹	-5 10.3 ¹⁵⁹		58	09	49	34	07 6		08 96		
24	179	51.3	+8 52.1	138	50.1 ¹¹²	-5 26.2 ¹⁵⁹		60 S	17 04	17 47	18 35	8 06 3		21 10 100		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag: -4.0			Mag: -2.9			Mag: -1.7			Mag: +0.2				
	1 ^h 28 ^m 7		PMG: 12 ^h 15 ^m			PMG: 0 ^h 05 ^m			PMG: 11 ^h 39 ^m			PMG: 8 ^h 13 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	337	46.5	176	20.6	+9 23.2	358	44.4	-15 54.8	184	50.6	+12 02.9	236	29.3	+22 17.2		
1	352	49.0	191	20.2	22.0	13	47.5	55.0	199	52.6	02.7	251	31.5	17.1		
2	7	51.4	206	19.7	20.9	28	50.6	55.2	214	54.5	02.5	266	33.7	17.1		
3	22	53.9	221	19.3	19.7	43	53.8	55.3	229	56.5	02.3	281	35.9	17.1		
4	37	56.4	236	18.8	18.5	58	56.9	55.5	244	58.4	02.1	296	38.2	17.1		
5	52	58.8	251	18.4	+9 17.4	74	00.0	-15 55.7	260	00.4	+12 01.9	311	40.4	+22 17.1		
6	68	01.3	266	17.9	+9 16.2	89	03.1	-15 55.9	275	02.3	+12 01.7	326	42.6	+22 17.1		
7	83	03.7	281	17.5	15.0	104	06.3	56.1	290	04.2	01.5	341	44.8	17.0		
8	98	06.2	296	17.0	13.9	119	09.4	56.3	305	06.2	01.3	356	47.0	17.0		
9	113	08.7	311	16.6	12.7	134	12.5	56.4	320	08.1	01.1	11	49.3	17.0		
10	128	11.1	326	16.2	11.6	149	15.7	56.6	335	10.1	01.0	26	51.5	17.0		
11	143	13.6	341	15.7	+9 10.4	164	18.8	-15 56.8	350	12.0	+12 00.8	41	53.7	+22 17.0		
12	158	16.1	356	15.3	+9 09.2	179	21.9	-15 57.0	5	14.0	+12 00.6	56	55.9	+22 16.9		
13	173	18.5	11	14.8	08.0	194	25.0	57.1	20	15.9	00.4	71	58.1	16.9		
14	188	21.0	26	14.4	06.9	209	28.2	57.3	35	17.8	+12 00.2	87	00.4	16.9		
15	203	23.5	41	13.9	05.7	224	31.3	57.5	50	19.8	+12 00.0	102	02.6	16.9		
16	218	25.9	56	13.5	04.5	239	34.4	57.7	65	21.7	+11 59.8	117	04.8	16.9		
17	233	28.4	71	13.1	+9 03.4	254	37.6	-15 57.9	80	23.7	+11 59.6	132	07.0	+22 16.9		
18	248	30.9	86	12.6	+9 02.2	269	40.7	-15 58.0	95	25.6	+11 59.4	147	09.2	+22 16.8		
19	263	33.3	101	12.2	+9 01.0	284	43.8	58.2	110	27.6	59.2	162	11.5	16.8		
20	278	35.8	116	11.7	+8 59.9	299	46.9	58.4	125	29.5	59.1	177	13.7	16.8		
21	293	38.2	131	11.3	58.7	314	50.1	58.6	140	31.4	58.9	192	15.9	16.8		
22	308	40.7	146	10.8	57.5	329	53.2	58.7	155	33.4	58.7	207	18.1	16.8		
23	323	43.2	161	10.4	56.3	344	56.3	58.9	170	35.3	58.5	222	20.3	16.8		
24	338	45.6	176	10.0	+8 55.2	359	59.5	-15 59.1	185	37.3	+11 58.3	237	22.6	+22 16.7		
Dif	—		-4		-12	+31		-2	+19		-2	+22		0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 00 ^m 4			Edad: 3 ^d 3 PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/6 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	51.3	+8 52.1	138	50.1	-5 26.2	60 N	3 06	4 06	4 51	10 03	102	20 08	5		
1	194	51.4		153	20.2 ¹¹¹	42.0 ¹⁵⁸	58	20	14	4 57	9 58	97	14	9		
2	209	51.6		167	50.3 ¹¹¹	-5 57.8 ¹⁵⁸	56	31	21	5 01	54	93	20	12		
3	224	51.8		182	20.3 ¹¹⁰	-6 13.6 ¹⁵⁸	54	41	28	05	50	90	24	16		
4	239	52.0		196	50.3 ¹¹⁰	29.3 ¹⁵⁷	52	50	34	09	47	87	29	18		
5	254	52.2	+8 47.7	211	20.3 ¹¹⁰	-6 45.0 ¹⁵⁷	50	3 57	4 39	5 13	9 44	84	20 33	21		
6	269	52.4	+8 46.8	225	50.2 ¹⁰⁹	-7 00.7 ¹⁵⁷	45	4 13	4 50	5 20	9 37	79	20 42	26		
7	284	52.6		240	20.1 ¹⁰⁹	16.4 ¹⁵⁷	40	25	4 58	26	31	74	49	31		
8	299	52.8		254	50.0 ¹⁰⁹	32.0 ¹⁵⁶	35	35	5 06	32	27	70	20 55	35		
9	314	53.0		269	19.8 ¹⁰⁸	-7 47.5 ¹⁵⁵	30	43	12	36	23	66	21 01	37		
10	329	53.2		283	49.6 ¹⁰⁸	-8 03.0 ¹⁵⁵	20	4 55	22	44	15	61	11	43		
11	344	53.4	+8 42.3	298	19.3 ¹⁰⁷	-8 18.5 ¹⁵⁵	10 N	5 05	5 30	5 51	9 09	56	21 19	48		
12	359	53.6	+8 41.4	312	49.0 ¹⁰⁷	-8 34.0 ¹⁵⁵	0	5 12	5 36	5 57	9 03	51	21 27	53		
13	14	53.8		327	18.7 ¹⁰⁷	-8 49.4 ¹⁵⁴	10 S	18	42	6 03	8 58	46	35	57		
14	29	54.0		341	48.3 ¹⁰⁶	-9 04.7 ¹⁵³	20	22	48	10	52	41	44	62		
15	44	54.1		356	17.9 ¹⁰⁶	20.0 ¹⁵³	30	25	53	17	45	36	21 54	67		
16	59	54.3		10	47.4 ¹⁰⁵	35.2 ¹⁵²	35	26	56	21	41	33	22 00	71		
17	74	54.5	+8 36.9	25	16.8 ¹⁰⁴	-9 50.4 ¹⁵²	40	5 27	5 59	6 26	8 37	28	22 06	75		
18	89	54.7	+8 35.9	39	46.3 ¹⁰⁵	-10 05.5 ¹⁵¹	45	5 28	6 02	6 31	8 32	24	22 14	79		
19	104	54.9		54	15.6 ¹⁰³	20.6 ¹⁵¹	50	28	05	38	26	19	23	85		
20	119	55.1		68	44.9 ¹⁰³	35.7 ¹⁵¹	52	27	06	40	23	17	28	87		
21	134	55.3		83	14.2 ¹⁰³	-10 50.6 ¹⁴⁹	54	27	08	44	20	14	33	90		
22	149	55.5		97	43.4 ¹⁰²	-11 05.5 ¹⁴⁹	56	27	10	47	17	11	38	94		
23	164	55.7		112	12.6 ¹⁰²	20.4 ¹⁴⁹	58	26	11	51	13	8	44	98		
24	179	55.9	+8 30.5	126	41.7 ¹⁰¹	-11 35.1 ¹⁴⁷	60 S	5 25	6 13	6 55	8 09	4	22 50	103		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 1 ^h 24 ^m 7			Mag: -3.9 PMG: 12 ^h 16 ^m			Mag: -2.9 PMG: 0 ^h 00 ^m			Mag: -1.7 PMG: 11 ^h 36 ^m			Mag: +0.1 PMG: 8 ^h 09 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	338	45.6	176	10.0	+8 55.2	359	59.5	-15 59.1	185	37.3	+11 58.3	237	22.6	+22 16.7		
1	353	48.1	191	09.5		15	02.6	59.2	200	39.2	58.1	252	24.8	16.7		
2	8	50.6	206	09.1		30	05.7	59.4	215	41.2	57.9	267	27.0	16.7		
3	23	53.0	221	08.6		45	08.8	59.6	230	43.1	57.7	282	29.2	16.7		
4	38	55.5	236	08.2		60	12.0	59.8	245	45.1	57.5	297	31.4	16.7		
5	53	58.0	251	07.8	+8 49.3	75	15.1	-15 59.9	260	47.0	+11 57.3	312	33.7	+22 16.7		
6	69	00.4	266	07.3	+8 48.1	90	18.2	-16 00.1	275	48.9	+11 57.2	327	35.9	+22 16.6		
7	84	02.9	281	06.9		105	21.3	00.3	290	50.9	57.0	342	38.1	16.6		
8	99	05.3	296	06.5		120	24.5	00.4	305	52.8	56.8	357	40.3	16.6		
9	114	07.8	311	06.0		135	27.6	00.6	320	54.8	56.6	12	42.6	16.6		
10	129	10.3	326	05.6		150	30.7	00.8	335	56.7	56.4	27	44.8	16.6		
11	144	12.7	341	05.1	+8 42.3	165	33.9	-16 01.0	350	58.7	+11 56.2	42	47.0	+22 16.6		
12	159	15.2	356	04.7	+8 41.1	180	37.0	-16 01.1	6	00.6	+11 56.0	57	49.2	+22 16.5		
13	174	17.7	11	04.3		195	40.1	01.3	21	02.5	55.8	72	51.4	16.5		
14	189	20.1	26	03.8		210	43.2	01.5	36	04.5	55.6	87	53.7	16.5		
15	204	22.6	41	03.4		225	46.4	01.6	51	06.4	55.4	102	55.9	16.5		
16	219	25.1	56	03.0		240	49.5	01.8	66	08.4	55.3	117	58.1	16.5		
17	234	27.5	71	02.5	+8 35.2	255	52.6	-16 02.0	81	10.3	+11 55.1	133	00.3	+22 16.5		
18	249	30.0	86	02.1	+8 34.0	270	55.7	-16 02.1	96	12.3	+11 54.9	148	02.6	+22 16.4		
19	264	32.5	101	01.7		285	58.9	02.3	111	14.2	54.7	163	04.8	16.4		
20	279	34.9	116	01.2		301	02.0	02.5	126	16.2	54.5	178	07.0	16.4		
21	294	37.4	131	00.8		316	05.1	02.6	141	18.1	54.3	193	09.2	16.4		
22	309	39.8	146	00.4		331	08.2	02.8	156	20.0	54.1	208	11.5	16.4		
23	324	42.3	160	59.9		346	11.4	02.9	171	22.0	53.9	223	13.7	16.4		
24	339	44.8	175	59.5	+8 26.9	1	14.5	-16 03.1	186	23.9	+11 53.7	238	15.9	+22 16.3		
Dif	—		-4	-12		-8969	-2		+19	-2		+22	0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00 ^m 1			Edad: 4 ^d 3 PHE { 4 ^h : 59'6 12 ^h : 59'6 20 ^h : 59'5 R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	55.9	+8 30.5	126	41.7	-11 35.1	101	60 N	19 05	19 50	20 48	11 45 105	20 13 7		
1	194	56.1		141	10.8	-11 49.8	147	58	19 00	42	35	35 100	23 12		
2	209	56.3		155	39.8	-12 04.5	147	56	18 56	35	24	27 95	32 17		
3	224	56.5		170	08.7		146	54	52	29	15	20 91	40 20		
4	239	56.7		184	37.6		145	52	48	24	07	14 88	47 24		
5	254	56.9	+8 26.0	199	06.4	-12 48.0	144	50	18 45	19 19	20 00	11 08 85	20 54 26		
6	269	57.1	+8 25.1	213	35.2	-13 02.4	144	45	18 38	19 08	19 45	10 56 79	21 08 31		
7	284	57.3		228	03.9		143	40	32	19 00	33	45 75	20 35		
8	299	57.5		242	32.5		142	35	27	18 53	24	37 71	30 39		
9	314	57.7		257	01.1		141	30	23	47	16	29 68	38 42		
10	329	57.9		271	29.6	-13 59.1	141	20	16	38	19 04	16 63	21 54 47		
11	344	58.1	+8 20.6	285	58.1	-14 13.0	139	10 N	18 09	18 31	18 55	10 05 58	22 07 51		
12	359	58.3	+8 19.7	300	26.5	-14 26.9	139	0	18 03	18 24	18 49	9 54 54	22 20 55		
13	14	58.4		314	54.8		138	10 S	17 58	19	43	44 50	32 59		
14	29	58.6		329	23.1	-14 54.5	138	20	52	14	39	33 45	22 46 63		
15	44	58.8		343	51.3	-15 08.1	136	30	45	09	37	21 39	23 01 69		
16	59	59.0		358	19.4		135	35	41	06	36	14 36	11 71		
17	74	59.2	+8 15.1	12	47.5	-15 35.1	135	40	17 37	18 04	18 35	9 05 33	23 21 75		
18	89	59.4	+8 14.2	27	15.5	-15 48.5	134	45	17 32	18 01	18 35	8 56 29	23 33 79		
19	104	59.6		41	43.4	-16 01.7	132	50	26	17 58	36	45 23	48 85		
20	119	59.8		56	11.3		132	52	23	57	36	40 20	23 55 88		
21	135	00.0		70	39.1		131	54	20	56	36	34 18	** ** *		
22	150	00.2		85	06.8		130	56	17	54	37	28 14	** ** *		
23	165	00.4		99	34.4	-16 53.8	128	58	13	53	38	21 10	** ** *		
24	180	00.6	+8 08.8	114	02.0	-17 06.6	128	60 S	17 09	17 51	18 39	8 13 6	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 20 ^m 8		Mag: -3.9 PMG: 12 ^h 16 ^m			Mag: -2.9 PMG: 23 ^h 50 ^m			Mag: -1.7 PMG: 11 ^h 33 ^m			Mag: +0.1 PMG: 8 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	339	44.8	175	59.5	+8 26.9		1 14.5	-16 03.1	186	23.9	+11 53.7	238	15.9	+22 16.3	
1	354	47.2	190	59.1		25.7	16 17.6	03.3	201	25.9		53.5	253	18.1	
2	9	49.7	205	58.6		24.5	31 20.7	03.4	216	27.8		53.4	268	20.3	
3	24	52.2	220	58.2		23.4	46 23.9	03.6	231	29.8		53.2	283	22.6	
4	39	54.6	235	57.8		22.2	61 27.0	03.8	246	31.7		53.0	298	24.8	
5	54	57.1	250	57.3	+8 21.0		76 30.1	-16 03.9	261	33.6	+11 52.8		313	27.0	
6	69	59.6	265	56.9	+8 19.8		91 33.2	-16 04.1	276	35.6	+11 52.6		328	29.2	
7	85	02.0	280	56.5		18.6	106 36.4	04.2	291	37.5		52.4	343	31.5	
8	100	04.5	295	56.0		17.4	121 39.5	04.4	306	39.5		52.2	358	33.7	
9	115	07.0	310	55.6		16.3	136 42.6	04.6	321	41.4		52.0	13	35.9	
10	130	09.4	325	55.2		15.1	151 45.7	04.7	336	43.4		51.8	28	38.2	
11	145	11.9	340	54.7	+8 13.9		166 48.9	-16 04.9	351	45.3	+11 51.6		43	40.4	
12	160	14.3	355	54.3	+8 12.7		181 52.0	-16 05.0	6	47.3	+11 51.5		58	42.6	
13	175	16.8	10	53.9		11.5	196 55.1	05.2	21	49.2		51.3	73	44.8	
14	190	19.3	25	53.5		10.3	211 58.2	05.3	36	51.1		51.1	88	47.1	
15	205	21.7	40	53.0		09.1	227 01.3	05.5	51	53.1		50.9	103	49.3	
16	220	24.2	55	52.6		07.9	242 04.5	05.7	66	55.0		50.7	118	51.5	
17	235	26.7	70	52.2	+8 06.8		257 07.6	-16 05.8	81	57.0	+11 50.5		133	53.7	
18	250	29.1	85	51.7	+8 05.6		272 10.7	-16 06.0	96	58.9	+11 50.3		148	56.0	
19	265	31.6	100	51.3		04.4	287 13.8	06.1	112	00.9		50.1	163	58.2	
20	280	34.1	115	50.9		03.2	302 17.0	06.3	127	02.8		49.9	179	00.4	
21	295	36.5	130	50.5		02.0	317 20.1	06.4	142	04.8		49.7	194	02.6	
22	310	39.0	145	50.0	+8 00.8		332 23.2	06.6	157	06.7		49.5	209	04.9	
23	325	41.4	160	49.6	+7 59.6		347 26.3	06.7	172	08.7		49.4	224	07.1	
24	340	43.9	175	49.2	+7 58.4		2 29.4	-16 06.9	187	10.6	+11 49.2		239	09.3	
Dif	—		-4		-12		+31	-2	+19		-2		+22		

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 5 ^d 3	PHE {	{ 4 ^h : 59 ^m 5 12 ^h : 59 ^m 4 20 ^h : 59 ^m 3				R°: 58 ^m			Hora R°		Hora R°	
	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	00.6	+8 08.8	114	02.0	-17 06.6		60 N	3 13	4 11	4 56	13 30	105	20 20	14	
1	195	00.8		128	29.5	85	19.3	127	58	26	19	5 01	15 98	35	21	
2	210	01.0		142	57.0	85	31.9	126	56	36	26	05	13 02	94	20 49	25
3	225	01.2		157	24.3	83	44.3	124	54	46	32	09	12 51	90	21 00	29
4	240	01.4		171	51.6	83	-17 56.7	124	52	3 54	37	13	42 86		11	32
5	255	01.6	+8 04.2	186	18.9	83	-18 08.9	122	50	4 01	4 42	5 16	12 33	84	21 20	34
6	270	01.8	+8 03.3	200	46.0	81	-18 21.1	122	45	4 16	4 52	5 22	12 15	78	21 39	40
7	285	02.0		215	13.1	81	33.1	120	40	27	5 00	28	12 00	75	21 55	43
8	300	02.2		229	40.1	80	45.0	119	35	37	07	33	11 48	71	22 09	45
9	315	02.4	+8 00.6	244	07.1	80	-18 56.8	118	30	44	13	37	37 69		20	48
10	330	02.6	+7 59.7	258	33.9	78	-19 08.5	117	20	4 56	22	44	19 64		41	52
11	345	02.8	+7 58.8	273	00.7	78	-19 20.0	115	10 N	5 05	5 30	5 51	11 03	60	22 58	55
12	0	03.0	+7 57.9	287	27.4	77	-19 31.5	115	0	5 11	5 36	5 57	10 48	57	23 15	58
13	15	03.2		301	54.1	77	42.8	113	10 S	16	41	6 02	34 53		31	62
14	30	03.4		316	20.7	76	-19 54.0	112	20	20	46	08	18 49		23 49	65
15	45	03.6		330	47.2	75	-20 05.1	111	30	23	51	15	10 00	45	***	***
16	60	03.8		345	13.6	74	16.1	110	35	24	53	18	9 50	42	***	***
17	75	04.0	+7 53.3	359	39.9	73	-20 26.9	108	40	5 24	5 56	6 23	9 38	39	***	***
18	90	04.2	+7 52.4	14	06.2	73	-20 37.6	107	45	5 24	5 58	6 28	9 25	35	***	***
19	105	04.4		28	32.4	72	48.1	105	50	24	6 01	33	08 30		***	***
20	120	04.6		42	58.6	72	-20 58.6	105	52	23	02	36	9 00	28	***	***
21	135	04.8		57	24.6	70	-21 08.9	103	54	23	03	39	8 52	24	0 03	91
22	150	05.0		71	50.6	70	19.1	102	56	22	05	42	42 21		12	94
23	165	05.2		86	16.6	70	29.1	100	58	21	06	46	31 17		22	99
24	180	05.4	+7 46.9	100	42.4	68	-21 39.0	99	60 S	5 20	6 08	6 50	8 19	11	0 33	105

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 16 ^m 9		Mag: -3.9 PMG: 12 ^h 17 ^m		Mag: -2.8 PMG: 23 ^h 45 ^m		Mag: -1.7 PMG: 11 ^h 30 ^m		Mag: +0.1 PMG: 8 ^h 02 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	340	43.9	175	49.2	+7 58.4	2 29.4	-16 06.9	187	10.6	+11 49.2	239	09.3	+22 15.9			
1	355	46.4	190	48.8		17 32.6	07.0	202	12.5		254	11.6	15.9			
2	10	48.8	205	48.3		32 35.7	07.2	217	14.5		269	13.8	15.9			
3	25	51.3	220	47.9		47 38.8	07.3	232	16.4		284	16.0	15.9			
4	40	53.8	235	47.5		62 41.9	07.5	247	18.4		299	18.2	15.9			
5	55	56.2	250	47.1	+7 52.5	77 45.0	-16 07.6	262	20.3	+11 48.2	314	20.5	+22 15.9			
6	70	58.7	265	46.6	+7 51.3	92 48.2	-16 07.8	277	22.3	+11 48.0	329	22.7	+22 15.8			
7	86	01.2	280	46.2		107 51.3	07.9	292	24.2		344	24.9	15.8			
8	101	03.6	295	45.8		122 54.4	08.1	307	26.2		359	27.1	15.8			
9	116	06.1	310	45.4		137 57.5	08.2	322	28.1		14 29.4		15.8			
10	131	08.6	325	44.9		153 00.6	08.4	337	30.0		29 31.6		15.8			
11	146	11.0	340	44.5	+7 45.3	168 03.7	-16 08.5	352	32.0	+11 47.1	44 33.8	+22 15.8				
12	161	13.5	355	44.1	+7 44.1	183 06.9	-16 08.7	7 33.9	+11 46.9		59 36.1	+22 15.7				
13	176	15.9	10	43.7		198 10.0	08.8	22 35.9		46.7	74 38.3	15.7				
14	191	18.4	25	43.3		213 13.1	09.0	37 37.8		46.5	89 40.5	15.7				
15	206	20.9	40	42.8		228 16.2	09.1	52 39.8		46.3	104 42.8	15.7				
16	221	23.3	55	42.4		243 19.3	09.3	67 41.7		46.1	119 45.0	15.7				
17	236	25.8	70	42.0	+7 38.1	258 22.4	-16 09.4	82 43.7	+11 45.9		134 47.2	+22 15.7				
18	251	28.3	85	41.6	+7 36.9	273 25.6	-16 09.5	97 45.6	+11 45.7		149 49.4	+22 15.6				
19	266	30.7	100	41.1		288 28.7	09.7	112 47.6		45.6	164 51.7	15.6				
20	281	33.2	115	40.7		303 31.8	09.8	127 49.5		45.4	179 53.9	15.6				
21	296	35.7	130	40.3		318 34.9	10.0	142 51.4		45.2	194 56.1	15.6				
22	311	38.1	145	39.9		333 38.0	10.1	157 53.4		45.0	209 58.4	15.6				
23	326	40.6	160	39.5		348 41.1	10.3	172 55.3		44.8	225 00.6	15.6				
24	341	43.1	175	39.0	+7 29.7	3 44.2	-16 10.4	187 57.3	+11 44.6		240 02.8	+22 15.5				
Dif	—		-4		-12	+31		-1	+19		-2		+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 5			Edad: 6 ^d 3 PHE { SD: 16'2 PMG: 17 ^h 59 ^m 4 ^h : 59'3 12 ^h : 59'2 20 ^h : 59'1 R°: 60 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	05.4	+7 46.9	100	42.4	-21 39.0	68	60 N	18 59	19 43	20 40	15 15 95	20 34 29	20 34 29
1	195	05.6	46.0	115	08.2	48.8	98	58	54	36	28	14 53 89	20 56 36	20 56 36
2	210	05.8	45.1	129	33.9	-21 58.4	96	56	51	30	18	36 84	21 14 40	21 14 40
3	225	06.0	44.2	143	59.6	-22 07.9	95	54	47	24	09	21 81	29 43	29 43
4	240	06.2	43.3	158	25.1	17.2	93	52	44	19	20 02	14 08 79	43 44	43 44
5	255	06.4	+7 42.3	172	50.6	-22 26.4	92	50	18 41	19 14	19 55	13 57 77	21 54 47	21 54 47
6	270	06.6	+7 41.4	187	16.1	-22 35.5	91	45	18 34	19 05	19 41	13 33 74	22 19 49	22 19 49
7	285	06.8	40.5	201	41.5	44.4	89	40	29	18 57	30	13 15 71	38 52	38 52
8	300	07.0	39.6	216	06.8	-22 53.2	88	35	25	50	21	12 59 69	22 54 54	22 54 54
9	315	07.2	38.7	230	32.0	-23 01.8	86	30	21	45	14	46 67	23 08 55	23 08 55
10	330	07.5	37.8	244	57.2	10.3	85	20	14	36	19 02	23 64	33 56	33 56
11	345	07.7	+7 36.9	259	22.3	-23 18.6	83	10 N	18 08	18 29	18 54	12 03 62	23 53 59	23 53 59
12	0	07.9	+7 35.9	273	47.4	-23 26.8	82	0	18 03	18 24	18 48	11 45 59	*** ** *	*** ** *
13	15	08.1	35.0	288	12.4	34.8	80	10 S	17 57	19	43	27 57	*** ** *	*** ** *
14	30	08.3	34.1	302	37.3	42.6	78	20	52	14	40	11 07 55	*** ** *	*** ** *
15	45	08.5	33.2	317	02.2	50.4	78	30	46	10	38	10 45 52	0 10 68	0 10 68
16	60	08.7	32.3	331	27.0	-23 57.9	75	35	42	08	37	32 50	22 70	22 70
17	75	08.9	+7 31.3	345	51.7	-24 05.3	74	40	17 38	18 06	18 37	10 17 48	0 36 73	0 36 73
18	90	09.1	+7 30.4	0	16.4	-24 12.5	72	45	17 34	18 03	18 37	10 00 44	0 52 77	0 52 77
19	105	09.3	29.5	14	41.1	19.6	71	50	29	01	38	9 38 40	1 13 81	1 13 81
20	120	09.5	28.6	29	05.7	26.6	70	52	26	18 00	39	28 38	23 83	23 83
21	135	09.7	27.7	43	30.2	33.3	67	54	23	17 59	40	16 36	34 86	34 86
22	150	09.9	26.8	57	54.7	39.9	66	56	20	58	41	9 03 32	1 46 90	1 46 90
23	165	10.1	25.8	72	19.1	46.4	65	58	17	57	42	8 48 27	2 01 95	2 01 95
24	180	10.3	+7 24.9	86	43.5	-24 52.6	62	60 S	17 13	17 55	18 44	8 30 21	2 18 102	2 18 102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 1 ^h 12 ^m 9		Mag: -3.9 PMG: 12 ^h 18 ^m		Mag: -2.8 PMG: 23 ^h 40 ^m		Mag: -1.7 PMG: 11 ^h 27 ^m		Mag: +0.1 PMG: 7 ^h 59 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	341	43.1	175	39.0	+7 29.7	3 44.2	-16 10.4	187 57.3	+11 44.6	240 02.8	+22 15.5						
1	356	45.5	190	38.6	28.5	18 47.4	10.5	202 59.2	44.4	255 05.1	15.5						
2	11	48.0	205	38.2	27.3	33 50.5	10.7	218 01.2	44.2	270 07.3	15.5						
3	26	50.4	220	37.8	26.1	48 53.6	10.8	233 03.1	44.0	285 09.5	15.5						
4	41	52.9	235	37.4	24.9	63 56.7	11.0	248 05.1	43.8	300 11.7	15.5						
5	56	55.4	250	37.0	+7 23.7	78 59.8	-16 11.1	263 07.0	+11 43.6	315 14.0	+22 15.5						
6	71	57.8	265	36.5	+7 22.5	94 02.9	-16 11.2	278 09.0	+11 43.5	330 16.2	+22 15.4						
7	87	00.3	280	36.1	21.3	109 06.0	11.4	293 10.9	43.3	345 18.4	15.4						
8	102	02.8	295	35.7	20.1	124 09.1	11.5	308 12.9	43.1	0 20.7	15.4						
9	117	05.2	310	35.3	18.9	139 12.2	11.6	323 14.8	42.9	15 22.9	15.4						
10	132	07.7	325	34.9	17.7	154 15.4	11.8	338 16.7	42.7	30 25.1	15.4						
11	147	10.2	340	34.5	+7 16.5	169 18.5	-16 11.9	353 18.7	+11 42.5	45 27.4	+22 15.4						
12	162	12.6	355	34.0	+7 15.3	184 21.6	-16 12.1	8 20.6	+11 42.3	60 29.6	+22 15.3						
13	177	15.1	10	33.6	14.1	199 24.7	12.2	23 22.6	42.1	75 31.8	15.3						
14	192	17.6	25	33.2	12.9	214 27.8	12.3	38 24.5	41.9	90 34.1	15.3						
15	207	20.0	40	32.8	11.6	229 30.9	12.5	53 26.5	41.7	105 36.3	15.3						
16	222	22.5	55	32.4	10.4	244 34.0	12.6	68 28.4	41.6	120 38.5	15.3						
17	237	24.9	70	32.0	+7 09.2	259 37.1	-16 12.7	83 30.4	+11 41.4	135 40.8	+22 15.3						
18	252	27.4	85	31.5	+7 08.0	274 40.2	-16 12.9	98 32.3	+11 41.2	150 43.0	+22 15.2						
19	267	29.9	100	31.1	06.8	289 43.3	13.0	113 34.3	41.0	165 45.2	15.2						
20	282	32.3	115	30.7	05.6	304 46.4	13.1	128 36.2	40.8	180 47.5	15.2						
21	297	34.8	130	30.3	04.4	319 49.5	13.3	143 38.2	40.6	195 49.7	15.2						
22	312	37.3	145	29.9	03.2	334 52.6	13.4	158 40.1	40.4	210 51.9	15.2						
23	327	39.7	160	29.5	02.0	349 55.7	13.5	173 42.0	40.2	225 54.2	15.2						
24	342	42.2	175	29.1	+7 00.8	4 58.8	-16 13.6	188 44.0	+11 40.0	240 56.4	+22 15.1						
Dif	—		-4		-12	+31		-1		+19		-2		+22		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 1			Edad: 7 ^d 3 PHE { 4 ^h : 59 ^h 0 12 ^h : 58 ^h 9 20 ^h : 58 ^h 7 R°: 60 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	10.3	+7 24.9	86	43.5	-24 52.6	60 N	3 19	4 16	5 01	16 50	69	21 03	58
1	195	10.5		101	07.8	-24 58.8	58	31	24	05	22 68		32 58	
2	210	10.7	23.1	115	32.1	-25 04.7	56	41	30	09	16 00	67	21 54	59
3	225	10.9	22.2	129	56.4	10.5	54	50	36	13	15 42	66	22 12	59
4	240	11.1	21.2	144	20.6	16.1	52	3 58	41	16	27 66		27 60	
5	255	11.3	+7 20.3	158	44.7	-25 21.6	50	4 05	4 45	5 19	15 14	65	22 41	60
6	270	11.5	+7 19.4	173	08.8	-25 26.8	45	4 19	4 55	5 25	14 47	64	23 08	60
7	285	11.7	18.5	187	32.9	32.0	40	29	5 02	30	26 63		30 60	
8	300	11.9	17.6	201	57.0	36.9	35	38	09	34	14 08	63	23 48	60
9	315	12.2	16.6	216	21.0	41.7	30	45	14	38	13 53	62	** ** *	**
10	330	12.4	15.7	230	45.0	46.3	20	4 57	23	45	27 62		** ** *	**
11	345	12.6	+7 14.8	245	08.9	-25 50.7	10 N	5 05	5 29	5 51	13 05	61	** ** *	**
12	0	12.8	+7 13.9	259	32.8	-25 55.0	0	5 11	5 35	5 56	12 44	61	0 13	60
13	15	13.0	13.0	273	56.7	-25 59.1	10 S	15	40	6 01	24 59		33 61	
14	30	13.2	12.0	288	20.6	-26 03.0	20	19	44	06	12 02	59	0 54	63
15	45	13.4	11.1	302	44.4	06.7	30	21	48	12	11 37	57	1 18	65
16	60	13.6	10.2	317	08.2	10.3	35	21	50	16	22 57		32 67	
17	75	13.8	+7 09.3	331	32.0	-26 13.7	40	5 21	5 52	6 20	11 05	56	1 49	68
18	90	14.0	+7 08.3	345	55.8	-26 16.9	45	5 21	5 55	6 24	10 44	55	2 09	69
19	105	14.2	07.4	0	19.5	20.0	50	19	57	29	18 53		34 72	
20	120	14.4	06.5	14	43.3	22.9	52	19	58	32	10 06	52	2 46	73
21	135	14.6	05.6	29	07.0	25.6	54	18	5 59	34	9 52	51	3 00	74
22	150	14.8	04.7	43	30.7	28.1	56	17	6 00	37	35 49		16 77	
23	165	15.0	03.7	57	54.4	30.4	58	16	01	40	9 15	47	3 36	79
24	180	15.3	+7 02.8	72	18.1	-26 32.6	60 S	5 14	6 02	6 44	8 51	42	4 00	83
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 09 ^m 0		Mag: -3.9 PMG: 12 ^h 18 ^m			Mag: -2.8 PMG: 23 ^h 35 ^m			Mag: -1.7 PMG: 11 ^h 24 ^m			Mag: +0.1 PMG: 7 ^h 55 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	342	42.2	175 29.1	+7 00.8	4 58.8	-16 13.6	188 44.0	+11 40.0	240 56.4	+22 15.1				
1	357	44.7	190 28.6	+6 59.6	20 01.9	13.8	203 45.9	39.8	255 58.6	15.1				
2	12	47.1	205 28.2	58.4	35 05.1	13.9	218 47.9	39.7	271 00.9	15.1				
3	27	49.6	220 27.8	57.2	50 08.2	14.0	233 49.8	39.5	286 03.1	15.1				
4	42	52.0	235 27.4	55.9	65 11.3	14.2	248 51.8	39.3	301 05.3	15.1				
5	57	54.5	250 27.0	+6 54.7	80 14.4	-16 14.3	263 53.7	+11 39.1	316 07.6	+22 15.1				
6	72	57.0	265 26.6	+6 53.5	95 17.5	-16 14.4	278 55.7	+11 38.9	331 09.8	+22 15.0				
7	87	59.4	280 26.2	52.3	110 20.6	14.5	293 57.6	38.7	346 12.1	15.0				
8	103	01.9	295 25.8	51.1	125 23.7	14.7	308 59.6	38.5	1 14.3	15.0				
9	118	04.4	310 25.4	49.9	140 26.8	14.8	324 01.5	38.3	16 16.5	15.0				
10	133	06.8	325 24.9	48.7	155 29.9	14.9	339 03.5	38.1	31 18.8	15.0				
11	148	09.3	340 24.5	+6 47.5	170 33.0	-16 15.0	354 05.4	+11 37.9	46 21.0	+22 15.0				
12	163	11.8	355 24.1	+6 46.2	185 36.1	-16 15.1	9 07.4	+11 37.7	61 23.2	+22 15.0				
13	178	14.2	10 23.7	45.0	200 39.2	15.3	24 09.3	37.6	76 25.5	14.9				
14	193	16.7	25 23.3	43.8	215 42.3	15.4	39 11.3	37.4	91 27.7	14.9				
15	208	19.2	40 22.9	42.6	230 45.4	15.5	54 13.2	37.2	106 29.9	14.9				
16	223	21.6	55 22.5	41.4	245 48.5	15.6	69 15.1	37.0	121 32.2	14.9				
17	238	24.1	70 22.1	+6 40.2	260 51.6	-16 15.8	84 17.1	+11 36.8	136 34.4	+22 14.9				
18	253	26.5	85 21.7	+6 39.0	275 54.6	-16 15.9	99 19.0	+11 36.6	151 36.6	+22 14.9				
19	268	29.0	100 21.3	37.7	290 57.7	16.0	114 21.0	36.4	166 38.9	14.8				
20	283	31.5	115 20.9	36.5	306 00.8	16.1	129 22.9	36.2	181 41.1	14.8				
21	298	33.9	130 20.4	35.3	321 03.9	16.2	144 24.9	36.0	196 43.4	14.8				
22	313	36.4	145 20.0	34.1	336 07.0	16.4	159 26.8	35.8	211 45.6	14.8				
23	328	38.9	160 19.6	32.9	351 10.1	16.5	174 28.8	35.7	226 47.8	14.8				
24	343	41.3	175 19.2	+6 31.7	6 13.2	-16 16.6	189 30.7	+11 35.5	241 50.1	+22 14.8				
Dif	—		-4	-12	+31	-1	+19	-2	+22	0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 8 ^d 3	PHE { 4 ^h : 58/6 12 ^h : 58/5 20 ^h : 58/4	PMG: 11 ^h 58 ^m 8			R°: 59 ^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	180	15.3	+7	02.8	72	18.1	-26	32.6	60 N	18 53	19 37	20 33	17 59 37	22 01 86
1	195	15.5		01.9	86	41.8		34.6	58	49	30	22	30 42	30 81
2	210	15.7	+7	01.0	101	05.5		36.4	56	45	24	12	17 07 45	22 53 77
3	225	15.9	+7	00.0	115	29.2		38.1	54	42	19	20 04	16 48 48	23 11 75
4	240	16.1	+6	59.1	129	52.9		39.5	52	39	14	19 56	33 48	27 73
5	255	16.3	+6	58.2	144	16.6		40.8	50	18 36	19 10	19 50	16 19 50	23 41 71
6	270	16.5	+6	57.3	158	40.3		41.9	45	18 31	19 01	19 37	15 51 52	*** ** *
7	285	16.7		56.3	173	04.0		42.9	40	26	18 54	26	29 54	*** ** *
8	300	16.9		55.4	187	27.7		43.7	35	22	48	18	15 11 55	*** ** *
9	315	17.1		54.5	201	51.4		44.2	30	18	43	11	14 55 56	0 03 61
10	330	17.3		53.6	216	15.2		44.7	20	12	34	19 00	29 57	29 61
11	345	17.5	+6	52.6	230	38.9		44.9	10 N	18 07	18 28	18 53	14 06 58	0 52 60
12	0	17.7	+6	51.7	245	02.7		45.0	0	18 02	18 23	18 47	13 45 59	1 13 60
13	15	18.0		50.8	259	26.5		44.8	10 S	17 57	18	43	23 61	34 60
14	30	18.2		49.9	273	50.3		44.6	20	52	15	40	13 01 61	1 57 60
15	45	18.4		48.9	288	14.1		44.1	30	47	11	39	12 34 63	2 23 60
16	60	18.6		48.0	302	38.0		43.5	35	44	09	38	19 63	39 59
17	75	18.8	+6	47.1	317	01.9		42.6	40	17 40	18 07	18 39	12 01 64	2 57 58
18	90	19.0	+6	46.1	331	25.8		41.7	45	17 36	18 06	18 40	11 39 65	3 18 59
19	105	19.2		45.2	345	49.8		40.5	50	31	04	41	11 11 67	46 57
20	120	19.4		44.3	0	13.7		39.2	52	29	03	42	10 58 67	3 59 57
21	135	19.6		43.4	14	37.8		37.7	54	27	02	43	43 67	4 14 57
22	150	19.8		42.4	29	01.8		36.0	56	24	02	45	24 69	33 56
23	165	20.1		41.5	43	25.9		34.2	58	21	01	46	10 02 70	4 55 55
24	180	20.3	+6	40.6	57	50.0		32.1	60 S	17 18	18 00	18 48	9 33 73	5 23 53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 1 ^h 05 ^m 1		Mag: -3.9 PMG: 12 ^h 19 ^m		Mag: -2.8 PMG: 23 ^h 30 ^m		Mag: -1.7 PMG: 11 ^h 20 ^m		Mag: +0.1 PMG: 7 ^h 51 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	343	41.3	175	19.2	+6	31.7	6 13.2	-16	16.6	189	30.7	+11	35.5	241	50.1	+22	14.8
1	358	43.8	190	18.8		30.4	21 16.3		16.7	204	32.7		35.3	256	52.3		14.7
2	13	46.3	205	18.4		29.2	36 19.4		16.8	219	34.6		35.1	271	54.5		14.7
3	28	48.7	220	18.0		28.0	51 22.5		16.9	234	36.6		34.9	286	56.8		14.7
4	43	51.2	235	17.6		26.8	66 25.6		17.0	249	38.5		34.7	301	59.0		14.7
5	58	53.7	250	17.2	+6	25.6	81 28.7	-16	17.2	264	40.5	+11	34.5	317	01.3	+22	14.7
6	73	56.1	265	16.8	+6	24.4	96 31.8	-16	17.3	279	42.4	+11	34.3	332	03.5	+22	14.7
7	88	58.6	280	16.4		23.1	111 34.9		17.4	294	44.4		34.1	347	05.7		14.6
8	104	01.0	295	16.0		21.9	126 37.9		17.5	309	46.3		33.9	2	08.0		14.6
9	119	03.5	310	15.6		20.7	141 41.0		17.6	324	48.3		33.7	17	10.2		14.6
10	134	06.0	325	15.2		19.5	156 44.1		17.7	339	50.2		33.6	32	12.5		14.6
11	149	08.4	340	14.8	+6	18.3	171 47.2	-16	17.8	354	52.2	+11	33.4	47	14.7	+22	14.6
12	164	10.9	355	14.4	+6	17.0	186 50.3	-16	17.9	9	54.1	+11	33.2	62	16.9	+22	14.6
13	179	13.4		13.9		15.8	201 53.4		18.1	24	56.0		33.0	77	19.2		14.5
14	194	15.8	25	13.5		14.6	216 56.5		18.2	39	58.0		32.8	92	21.4		14.5
15	209	18.3	40	13.1		13.4	231 59.6		18.3	54	59.9		32.6	107	23.7		14.5
16	224	20.8	55	12.7		12.2	247 02.6		18.4	70	01.9		32.4	122	25.9		14.5
17	239	23.2	70	12.3	+6	10.9	262 05.7	-16	18.5	85	03.8	+11	32.2	137	28.1	+22	14.5
18	254	25.7	85	11.9	+6	09.7	277 08.8	-16	18.6	100	05.8	+11	32.0	152	30.4	+22	14.5
19	269	28.2	100	11.5		08.5	292 11.9		18.7	115	07.7		31.8	167	32.6		14.4
20	284	30.6	115	11.1		07.3	307 15.0		18.8	130	09.7		31.7	182	34.9		14.4
21	299	33.1	130	10.7		06.0	322 18.1		18.9	145	11.6		31.5	197	37.1		14.4
22	314	35.5	145	10.3		04.8	337 21.2		19.0	160	13.6		31.3	212	39.3		14.4
23	329	38.0	160	09.9		03.6	352 24.2		19.1	175	15.5		31.1	227	41.6		14.4
24	344	40.5	175	09.5	+6	02.4	7 27.3	-16	19.2	190	17.5	+11	30.9	242	43.8	+22	14.4
Dif	—		-4	-12		+31	-1		+19	-2		+22	0				

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15'9			Edad: 9 ^d 3	PHE {	4 ^h : 58'2		SD: 15'9	12 ^h : 58'1									PMG: 20 ^h 58 ^m	20 ^h : 58'0		R°: 56 ^m			
	PMG: 11 ^h 58 ^m 5																							
	hG ☉	Dec		hG ☾		Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°							
h	°	'	°	'		°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m	
0	180	20.3	+6	40.6	57	50.0	-26	32.1	21	60 N	3	25	4	21	5	05	18	36	18	23	27	97		
1	195	20.5		39.7	72	14.2	52	30.0	21	58		37		28	09		18	12	24	23	51	91		
2	210	20.7		38.7	86	38.4	52	27.6	25	56		46		34	13		17	52	29	**	**	**		
3	225	20.9		37.8	101	02.7	53	25.1	25	54		3	54	39	16		36	32	**	**	**	**		
4	240	21.1		36.9	115	27.0	53	22.4	27	52		4	02	44	19		21	35	**	**	**	**		
5	255	21.3	+6	35.9	129	51.4	54	-26	19.5	29	50		4	08	4	48	5	22	17	09	37	**	**	**
6	270	21.5	+6	35.0	144	15.8	54	-26	16.5	30	45		4	21	4	57	5	27	16	43	41	0	08	69
7	285	21.7		34.1	158	40.3	55	13.3	32	40		32		5	04	32		23	44		30	67		
8	300	21.9		33.1	173	04.8	55	10.0	33	35		40		10	36		16	06	46	0	48	65		
9	315	22.2		32.2	187	29.4	56	06.5	35	30		47		15	39		15	51	49	1	04	63		
10	330	22.4		31.3	201	54.1	57	-26	02.8	37	20		4	57	23	45		26	52		30	62		
11	345	22.6	+6	30.4	216	18.8	57	-25	58.9	39	10 N		5	05	5	29	5	50	15	04	55	1	52	60
12	0	22.8	+6	29.4	230	43.6	58	-25	54.9	40	0		5	10	5	34	5	55	14	44	57	2	13	59
13	15	23.0		28.5	245	08.4	58	50.8	41	10 S		14		39	6	00		24	59		34	57		
14	30	23.2		27.6	259	33.3	59	46.4	44	20		17		43	05		14	02	62	2	57	54		
15	45	23.4		26.6	273	58.3	60	42.0	44	30		18		46	10		13	37	64	3	23	52		
16	60	23.6		25.7	288	23.3	60	37.3	47	35		18		48	13		22	66		38	51			
17	75	23.8	+6	24.8	302	48.4	61	-25	32.5	48	40		5	18	5	49	6	16	13	05	68	3	55	49
18	90	24.1	+6	23.8	317	13.6	62	-25	27.6	49	45		5	17	5	51	6	20	12	44	71	4	17	46
19	105	24.3		22.9	331	38.8	62	22.5	51	50		15		53	25		18	75		43	44			
20	120	24.5		22.0	346	04.1	63	17.2	53	52		14		53	27		12	05	77	4	56	42		
21	135	24.7		21.0	0	29.5	64	11.8	54	54		13		54	29		11	50	80	5	11	40		
22	150	24.9		20.1	14	55.0	65	06.3	55	56		12		55	32		33	82		29	36			
23	165	25.1		19.2	29	20.6	66	-25	00.5	58	58		10		55	35		11	12	87	5	50	32	
24	180	25.3	+6	18.2	43	46.2	66	-24	54.7	58	60 S		5	08	5	56	6	38	10	46	93	6	16	27

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 1 ^h 01 ^m 1		Mag: -3.9 PMG: 12 ^h 20 ^m			Mag: -2.8 PMG: 23 ^h 25 ^m			Mag: -1.7 PMG: 11 ^h 17 ^m			Mag: +0.1 PMG: 7 ^h 48 ^m										
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	344	40.5	175	09.5	+6	02.4	7	27.3	-16	19.2	190	17.5	+11	30.9	242	43.8	+22	14.4				
1	359	42.9	190	09.1	+6	01.1	22	30.4		19.3	205	19.4		30.7	257	46.1		14.3				
2	14	45.4	205	08.7	+5	59.9	37	33.5		19.4	220	21.4		30.5	272	48.3		14.3				
3	29	47.9	220	08.3		58.7	52	36.6		19.5	235	23.3		30.3	287	50.5		14.3				
4	44	50.3	235	07.9		57.5	67	39.6		19.6	250	25.3		30.1	302	52.8		14.3				
5	59	52.8	250	07.5	+5	56.2	82	42.7	-16	19.8	265	27.2	+11	29.9	317	55.0	+22	14.3				
6	74	55.3	265	07.1	+5	55.0	97	45.8	-16	19.9	280	29.2	+11	29.7	332	57.3	+22	14.3				
7	89	57.7	280	06.7		53.8	112	48.9		20.0	295	31.1		29.6	347	59.5		14.2				
8	105	00.2	295	06.3		52.6	127	51.9		20.1	310	33.1		29.4	3	01.8		14.2				
9	120	02.7	310	05.9		51.3	142	55.0		20.2	325	35.0		29.2	18	04.0		14.2				
10	135	05.1	325	05.5		50.1	157	58.1		20.3	340	37.0		29.0	33	06.2		14.2				
11	150	07.6	340	05.1	+5	48.9	173	01.2	-16	20.3	355	38.9	+11	28.8	48	08.5	+22	14.2				
12	165	10.0	355	04.7	+5	47.7	188	04.2	-16	20.4	10	40.9	+11	28.6	63	10.7	+22	14.2				
13	180	12.5	10	04.3		46.4	203	07.3		20.5	25	42.8		28.4	78	13.0		14.2				
14	195	15.0	25	03.9		45.2	218	10.4		20.6	40	44.8		28.2	93	15.2		14.1				
15	210	17.4	40	03.5		44.0	233	13.5		20.7	55	46.7		28.0	108	17.5		14.1				
16	225	19.9	55	03.1		42.7	248	16.5		20.8	70	48.7		27.8	123	19.7		14.1				
17	240	22.4	70	02.7	+5	41.5	263	19.6	-16	20.9	85	50.6	+11	27.7	138	21.9	+22	14.1				
18	255	24.8	85	02.3	+5	40.3	278	22.7	-16	21.0	100	52.6	+11	27.5	153	24.2	+22	14.1				
19	270	27.3	100	01.9		39.0	293	25.7		21.1	115	54.5		27.3	168	26.4		14.1				
20	285	29.8	115	01.5		37.8	308	28.8		21.2	130	56.5		27.1	183	28.7		14.0				
21	300	32.2	130	01.1		36.6	323	31.9		21.3	145	58.4		26.9	198	30.9		14.0				
22	315	34.7	145	00.7		35.4	338	35.0		21.4	161	00.4		26.7	213	33.2		14.0				
23	330	37.1	160	00.3		34.1	353	38.0		21.5	176	02.3		26.5	228	35.4		14.0				
24	345	39.6	174	59.9	+5	32.9	8	41.1	-16	21.6	191	04.3	+11	26.3	243	37.7	+22	14.0				
Dif	—		-4		-12		+31		-1		+19		-2		+22							

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 1			Edad: 10 ^d 3 PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'5 PMG: 21 ^h 54 ^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	h m m	
0	180	25.3	+6	18.2	43	46.2	-24 54.7	60 N	18 47	19 30	20 25	18 54 8	** ** *	** ** *	
1	195	25.5			58	11.9	48.7	58	43	24	15	36 14	** ** *	** ** *	
2	210	25.8			72	37.7	42.5	56	40	18	20 06	21 18	0 10	86	
3	225	26.0			87	03.6	36.2	54	37	14	19 58	18 08 21	26	83	
4	240	26.2			101	29.5	29.8	52	35	09	51	17 56 25	40	80	
5	255	26.4	+6	13.6	115	55.6	-24 23.2	50	18 32	19 05	19 45	17 46 27	0 52	78	
6	270	26.6	+6	12.6	130	21.7	-24 16.5	45	18 27	18 57	19 33	17 24 32	1 17	73	
7	285	26.8			144	47.9	09.6	40	23	50	23	17 07 36	37	69	
8	300	27.0			159	14.2	-24 02.6	35	19	45	15	16 52 39	1 53	67	
9	315	27.2			173	40.6	-23 55.5	30	16	40	19 08	40 41	2 07	65	
10	330	27.5			188	07.1	48.2	20	10	33	18 59	16 18 45	32	60	
11	345	27.7	+6	08.0	202	33.6	-23 40.8	10 N	18 06	18 27	18 51	15 59 49	2 52	58	
12	0	27.9	+6	07.0	217	00.3	-23 33.2	0	18 01	18 22	18 46	15 41 52	3 12	54	
13	15	28.1			231	27.0	25.6	10 S	17 57	18	43	23 56	31	52	
14	30	28.3			245	53.9	17.8	20	53	15	40	15 04 59	3 51	49	
15	45	28.5			260	20.8	09.8	30	48	12	40	14 41 64	4 15	45	
16	60	28.7			274	47.8	-23 01.8	35	45	11	40	28 67	29	42	
17	75	29.0	+6	02.4	289	14.9	-22 53.6	40	17 42	18 09	18 41	14 13 70	4 44	40	
18	90	29.2	+6	01.4	303	42.1	-22 45.3	45	17 39	18 08	18 42	13 55 73	5 03	37	
19	105	29.4	+6	00.5	318	09.4	36.8	50	34	07	44	33 78	27	31	
20	120	29.6	+5	59.6	332	36.8	28.3	52	32	06	45	22 81	38	29	
21	135	29.8			347	04.3	19.6	54	30	06	47	13 10 83	5 51	26	
22	150	30.0			1	31.9	10.8	56	28	05	48	12 55 88	6 05	23	
23	165	30.2			15	59.5	-22 01.8	58	26	05	50	39 92	22	19	
24	180	30.5	+5	55.8	30	27.3	-21 52.8	60 S	17 23	18 04	18 53	12 19 98	6 43	13	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 57 ^m 2		Mag: -3.9 PMG: 12 ^h 20 ^m			Mag: -2.8 PMG: 23 ^h 20 ^m			Mag: -1.7 PMG: 11 ^h 14 ^m			Mag: +0.1 PMG: 7 ^h 44 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	345	39.6	174	59.9	+5	32.9	8	41.1	-16	21.6	191	04.3	+11	26.3	
1	0	42.1	189	59.5			23	44.2		21.7	206	06.2		26.1	
2	15	44.5	204	59.1		30.4	38	47.2		21.8	221	08.2		25.9	
3	30	47.0	219	58.8		29.2	53	50.3		21.9	236	10.1		25.7	
4	45	49.5	234	58.4		28.0	68	53.4		21.9	251	12.1		25.6	
5	60	51.9	249	58.0	+5	26.7	83	56.4	-16	22.0	266	14.0	+11	25.4	
6	75	54.4	264	57.6	+5	25.5	98	59.5	-16	22.1	281	16.0	+11	25.2	
7	90	56.9	279	57.2		24.3	114	02.5		22.2	296	17.9		25.0	
8	105	59.3	294	56.8		23.0	129	05.6		22.3	311	19.8		24.8	
9	121	01.8	309	56.4		21.8	144	08.7		22.4	326	21.8		24.6	
10	136	04.3	324	56.0		20.6	159	11.7		22.5	341	23.7		24.4	
11	151	06.7	339	55.6	+5	19.3	174	14.8	-16	22.6	356	25.7	+11	24.2	
12	166	09.2	354	55.2	+5	18.1	189	17.8	-16	22.6	11	27.6	+11	24.0	
13	181	11.6	9	54.8		16.9	204	20.9		22.7	26	29.6		23.8	
14	196	14.1	24	54.4		15.6	219	24.0		22.8	41	31.5		23.7	
15	211	16.6	39	54.0		14.4	234	27.0		22.9	56	33.5		23.5	
16	226	19.0	54	53.6		13.2	249	30.1		23.0	71	35.4		23.3	
17	241	21.5	69	53.2	+5	11.9	264	33.1	-16	23.1	86	37.4	+11	23.1	
18	256	24.0	84	52.8	+5	10.7	279	36.2	-16	23.1	101	39.3	+11	22.9	
19	271	26.4	99	52.4		09.5	294	39.2		23.2	116	41.3		22.7	
20	286	28.9	114	52.0		08.2	309	42.3		23.3	131	43.3		22.5	
21	301	31.4	129	51.7		07.0	324	45.4		23.4	146	45.2		22.3	
22	316	33.8	144	51.3		05.7	339	48.4		23.5	161	47.2		22.1	
23	331	36.3	159	50.9		04.5	354	51.5		23.5	176	49.1		21.9	
24	346	38.8	174	50.5	+5	03.3	9	54.5	-16	23.6	191	51.1	+11	21.8	
Dif	—		-4		-12		+31		-1		+19		-2		
															0

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 8			Edad: 11 ^d 3 PHE { SD: 15'6 PMG: 22 ^h 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	30.5	+5 55.8	30	27.3	-21 52.8	60 N	3 32	4 27	5 10	19 02	5	1 05	97	
1	195	30.7		44	55.2 89	43.6 92	58	42	33	14	18 50	9	22	92	
2	210	30.9		59	23.1 89	34.4 92	56	51	38	17	39 13		36	88	
3	225	31.1		73	51.2 91	25.0 94	54	3 59	43	20	29 16		1 49	84	
4	240	31.3		88	19.3 91	15.5 95	52	4 06	48	22	21 18		2 00	81	
5	255	31.5	+5 51.1	102	47.6 93	-21 05.9 96	50	4 12	4 52	5 25	18 13	21	2 10	78	
6	270	31.7	+5 50.2	117	15.9 93	-20 56.2 97	45	4 24	5 00	5 30	17 56	26	2 30	73	
7	285	32.0		131	44.4 95	46.4 98	40	34	06	34	43 29		2 46	70	
8	300	32.2		146	12.9 95	36.5 99	35	42	12	37	31 33		3 00	66	
9	315	32.4		160	41.5 96	26.4 101	30	48	16	40	21 36		12	63	
10	330	32.6		175	10.3 98	16.3 101	20	4 58	24	46	17 03	41	32	59	
11	345	32.8	+5 45.5	189	39.1 98	-20 06.1 102	10 N	5 05	5 29	5 50	16 48	45	3 50	54	
12	0	33.0	+5 44.6	204	08.0 99	-19 55.7 104	0	5 10	5 34	5 55	16 33	49	4 06	51	
13	15	33.3		218	37.0 100	45.3 104	10 S	13	38	5 59	19 52		23	47	
14	30	33.5		233	06.1 101	34.8 105	20	15	41	6 03	16 03	57	4 40	43	
15	45	33.7		247	35.3 102	24.2 106	30	16	44	08	15 45	62	5 00	38	
16	60	33.9		262	04.6 103	13.5 107	35	16	45	10	35 64		11	36	
17	75	34.1	+5 39.9	276	34.0 104	-19 02.7 108	40	5 15	5 46	6 13	15 23	68	5 24	33	
18	90	34.3	+5 38.9	291	03.5 105	-18 51.8 109	45	5 13	5 47	6 17	15 08	73	5 40	28	
19	105	34.5		305	33.1 106	40.8 110	50	11	48	21	14 51	77	5 58	24	
20	120	34.8		320	02.8 107	29.7 111	52	10	49	22	43 79		6 07	22	
21	135	35.0		334	32.6 108	18.5 112	54	08	49	24	33 83		17	19	
22	150	35.2		349	02.4 108	-18 07.3 112	56	07	50	27	23 86		28	16	
23	165	35.4		3 32.4 110	-17 56.0 113		58	05	50	29	14 11	90	41	12	
24	180	35.6	+5 33.3	18 02.4 110	-17 44.6 114		60 S	5 02	5 50	6 32	13 57	95	6 56	7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 53 ^m 3		Mag: -3.9 PMG: 12 ^h 21 ^m		Mag: -2.7 PMG: 23 ^h 16 ^m		Mag: -1.7 PMG: 11 ^h 11 ^m		Mag: +0.1 PMG: 7 ^h 41 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	346	38.8	174	50.5	+5 03.3	9 54.5	-16 23.6	191 51.1	+11 21.8	244 31.6	+22 13.6
1	1	41.2	189	50.1	02.0	24 57.6	23.7	206 53.0	21.6	259 33.8	13.6
2	16	43.7	204	49.7	+5 00.8	40 00.6	23.8	221 55.0	21.4	274 36.1	13.6
3	31	46.1	219	49.3	+4 59.6	55 03.7	23.8	236 56.9	21.2	289 38.3	13.5
4	46	48.6	234	48.9	58.3	70 06.7	23.9	251 58.9	21.0	304 40.6	13.5
5	61	51.1	249	48.5	+4 57.1	85 09.8	-16 24.0	267 00.8	+11 20.8	319 42.8	+22 13.5
6	76	53.5	264	48.1	+4 55.8	100 12.8	-16 24.1	282 02.8	+11 20.6	334 45.1	+22 13.5
7	91	56.0	279	47.7	54.6	115 15.9	24.1	297 04.7	20.4	349 47.3	13.5
8	106	58.5	294	47.3	53.4	130 18.9	24.2	312 06.7	20.2	4 49.6	13.5
9	122	00.9	309	47.0	52.1	145 21.9	24.3	327 08.6	20.0	19 51.8	13.4
10	137	03.4	324	46.6	50.9	160 25.0	24.4	342 10.6	19.8	34 54.1	13.4
11	152	05.9	339	46.2	+4 49.6	175 28.0	-16 24.4	357 12.5	+11 19.7	49 56.3	+22 13.4
12	167	08.3	354	45.8	+4 48.4	190 31.1	-16 24.5	12 14.5	+11 19.5	64 58.6	+22 13.4
13	182	10.8	9 45.4	47.2	205 34.1	24.6	27 16.4	19.3		80 00.8	13.4
14	197	13.2	24 45.0	45.9	220 37.2	24.7	42 18.4	19.1		95 03.1	13.4
15	212	15.7	39 44.6	44.7	235 40.2	24.7	57 20.3	18.9		110 05.3	13.4
16	227	18.2	54 44.2	43.4	250 43.2	24.8	72 22.3	18.7		125 07.6	13.3
17	242	20.6	69 43.8	+4 42.2	265 46.3	-16 24.9	87 24.2	+11 18.5		140 09.8	+22 13.3
18	257	23.1	84 43.5	+4 41.0	280 49.3	-16 24.9	102 26.2	+11 18.3		155 12.1	+22 13.3
19	272	25.6	99 43.1	39.7	295 52.4	25.0	117 28.1	18.1		170 14.3	13.3
20	287	28.0	114 42.7	38.5	310 55.4	25.1	132 30.1	17.9		185 16.6	13.3
21	302	30.5	129 42.3	37.2	325 58.4	25.1	147 32.0	17.8		200 18.8	13.3
22	317	33.0	144 41.9	36.0	341 01.5	25.2	162 34.0	17.6		215 21.1	13.2
23	332	35.4	159 41.5	34.7	356 04.5	25.3	177 35.9	17.4		230 23.3	13.2
24	347	37.9	174 41.1	+4 33.5	11 07.5	-16 25.3	192 37.9	+11 17.2		245 25.6	+22 13.2
Dif	—		-4	-12	+30	-1	+20	-2		+23	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9		Edad: 12 ^d 3		PHE { 4 ^h : 56'8 12 ^h : 56'7 20 ^h : 56'5				Civil		Náutico		Hora R°	
	PMG: 11 ^h 57 ^m 5		SD: 15°5		PMG: 23 ^h 33 ^m	R°: 45 ^m								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	35.6	+5 33.3		18 02.4	-17 44.6	60 N	18 41	19 24	20 18	19 07	3	2 42	93
1	195	35.8		32.3	32 32.5 ¹¹¹	33.1 ¹¹⁵	58	38	18	08	18 59	6	2 54	89
2	210	36.1		31.4	47 02.8 ¹¹³	21.5 ¹¹⁶	56	35	13	20 00	52	9	3 04	85
3	225	36.3		30.5	61 33.1 ¹¹³	-17 09.8 ¹¹⁷	54	32	08	19 52	45	12	13	82
4	240	36.5		29.5	76 03.5 ¹¹⁴	-16 58.1 ¹¹⁷	52	30	04	46	39	15	21	79
5	255	36.7	+5 28.6		90 34.0 ¹¹⁵	-16 46.3 ¹¹⁸	50	18 28	19 01	19 40	18 34	17	3 28	76
6	270	36.9	+5 27.6		105 04.6 ¹¹⁶	-16 34.4 ¹¹⁹	45	18 23	18 53	19 28	18 22	22	3 43	71
7	285	37.1		26.7	119 35.3 ¹¹⁷	22.5 ¹¹⁹	40	19	47	19	12	26	3 56	67
8	300	37.4		25.7	134 06.0 ¹¹⁷	-16 10.5 ¹²⁰	35	16	42	12	18 04	29	4 06	64
9	315	37.6		24.8	148 36.9 ¹¹⁹	-15 58.4 ¹²¹	30	13	38	19 06	17 57	31	15	61
10	330	37.8		23.9	163 07.8 ¹¹⁹	46.2 ¹²²	20	09	31	18 57	44	37	31	55
11	345	38.0	+5 22.9		177 38.8 ¹²⁰	-15 34.0 ¹²²	10 N	18 04	18 26	18 50	17 33	41	4 44	52
12	0	38.2	+5 22.0		192 09.9 ¹²¹	-15 21.7 ¹²³	0	18 01	18 21	18 46	17 22	45	4 57	47
13	15	38.4		21.0	206 41.1 ¹²²	-15 09.3 ¹²⁴	10 S	17 57	18	43	11	50	5 10	43
14	30	38.7		20.1	221 12.4 ¹²³	-14 56.9 ¹²⁴	20	53	15	41	17 00	54	23	39
15	45	38.9		19.1	235 43.8 ¹²⁴	44.4 ¹²⁵	30	49	13	41	16 47	59	38	34
16	60	39.1		18.2	250 15.2 ¹²⁴	31.9 ¹²⁵	35	47	12	41	39	63	47	31
17	75	39.3	+5 17.3		264 46.7 ¹²⁵	-14 19.3 ¹²⁶	40	17 44	18 11	18 42	16 31	65	5 57	27
18	90	39.5	+5 16.3		279 18.3 ¹²⁶	-14 06.6 ¹²⁷	45	17 41	18 10	18 44	16 21	69	6 08	24
19	105	39.8		15.4	293 50.0 ¹²⁷	-13 53.9 ¹²⁷	50	37	10	47	08	75	22	19
20	120	40.0		14.4	308 21.8 ¹²⁸	41.2 ¹²⁷	52	36	09	48	16 02	78	29	16
21	135	40.2		13.5	322 53.6 ¹²⁸	28.3 ¹²⁹	54	34	09	50	15 56	80	36	14
22	150	40.4		12.5	337 25.5 ¹²⁹	15.5 ¹²⁸	56	32	09	52	49	83	44	11
23	165	40.6		11.6	351 57.5 ¹³⁰	-13 02.5 ¹³⁰	58	30	09	54	41	86	6 53	8
24	180	40.8	+5 10.7		6 29.6 ¹³¹	-12 49.6 ¹²⁹	60 S	17 27	18 09	18 57	15 32	90	7 03	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: -2.7		Mag: -1.7		Mag: +0.1	
	0 ^h 49 ^m 3		PMG: 12 ^h 22 ^m		PMG: 23 ^h 11 ^m		PMG: 11 ^h 08 ^m		PMG: 7 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	347	37.9	174 41.1	+4 33.5	11 07.5	-16 25.3	192 37.9	+11 17.2	245 25.6	+22 13.2
1	2	40.4	189 40.7	32.3	26 10.6	25.4	207 39.8	17.0	260 27.8	13.2
2	17	42.8	204 40.4	31.0	41 13.6	25.5	222 41.8	16.8	275 30.1	13.2
3	32	45.3	219 40.0	29.8	56 16.6	25.5	237 43.7	16.6	290 32.3	13.2
4	47	47.7	234 39.6	28.5	71 19.7	25.6	252 45.7	16.4	305 34.6	13.1
5	62	50.2	249 39.2	+4 27.3	86 22.7	-16 25.6	267 47.6	+11 16.2	320 36.8	+22 13.1
6	77	52.7	264 38.8	+4 26.0	101 25.7	-16 25.7	282 49.6	+11 16.0	335 39.1	+22 13.1
7	92	55.1	279 38.4	24.8	116 28.8	25.8	297 51.5	15.9	350 41.3	13.1
8	107	57.6	294 38.0	23.5	131 31.8	25.8	312 53.5	15.7	5 43.6	13.1
9	123	00.1	309 37.6	22.3	146 34.8	25.9	327 55.4	15.5	20 45.9	13.1
10	138	02.5	324 37.3	21.1	161 37.8	25.9	342 57.4	15.3	35 48.1	13.1
11	153	05.0	339 36.9	+4 19.8	176 40.9	-16 26.0	357 59.3	+11 15.1	50 50.4	+22 13.0
12	168	07.5	354 36.5	+4 18.6	191 43.9	-16 26.1	13 01.3	+11 14.9	65 52.6	+22 13.0
13	183	09.9	9 36.1	17.3	206 46.9	26.1	28 03.3	14.7	80 54.9	13.0
14	198	12.4	24 35.7	16.1	221 49.9	26.2	43 05.2	14.5	95 57.1	13.0
15	213	14.9	39 35.3	14.8	236 53.0	26.2	58 07.2	14.3	110 59.4	13.0
16	228	17.3	54 34.9	13.6	251 56.0	26.3	73 09.1	14.1	126 01.6	13.0
17	243	19.8	69 34.6	+4 12.3	266 59.0	-16 26.3	88 11.1	+11 13.9	141 03.9	+22 12.9
18	258	22.2	84 34.2	+4 11.1	282 02.0	-16 26.4	103 13.0	+11 13.8	156 06.1	+22 12.9
19	273	24.7	99 33.8	09.8	297 05.1	26.5	118 15.0	13.6	171 08.4	12.9
20	288	27.2	114 33.4	08.6	312 08.1	26.5	133 16.9	13.4	186 10.7	12.9
21	303	29.6	129 33.0	07.3	327 11.1	26.6	148 18.9	13.2	201 12.9	12.9
22	318	32.1	144 32.6	06.1	342 14.1	26.6	163 20.8	13.0	216 15.2	12.9
23	333	34.6	159 32.3	04.8	357 17.1	26.7	178 22.8	12.8	231 17.4	12.8
24	348	37.0	174 31.9	+4 03.6	12 20.1	-16 26.7	193 24.7	+11 12.6	246 19.7	+22 12.8
Dif	—		-4	-12	+30	-1	+20	-2	+23	0

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 1			Edad: 13 ^d 3 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 2 20 ^h : 56 ^m 0 R°: ***												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	40.8	+5	10.7	6	29.6	-12	49.6	60 N	3 37	4 32	5 15	19 10	2	4 15	89
1	195	41.1		09.7	21	01.7 ¹³¹		36.5 ¹³¹	58	47	37	18		05	5	23 84
2	210	41.3		08.8	35	33.9 ¹³²		23.5 ¹³⁰	56	3 56	43	21	19 01	8		29 81
3	225	41.5		07.8	50	06.2 ¹³³	-12	10.3 ¹³²	54	4 03	47	23	18 57	11		35 78
4	240	41.7		06.9	64	38.6 ¹³⁴	-11	57.2 ¹³¹	52		09	51	26	54	12	40 76
5	255	41.9	+5	05.9	79	11.0 ¹³⁴	-11	44.0 ¹³²	50	4 15	4 55	5 28	18 51	14	4 44	74
6	270	42.2	+5	05.0	93	43.5 ¹³⁵	-11	30.7 ¹³³	45	4 27	5 02	5 32	18 44	19	4 54	69
7	285	42.4		04.0	108	16.1 ¹³⁶		17.4 ¹³³	40		36	08	36	38	23	5 03 64
8	300	42.6		03.1	122	48.7 ¹³⁶	-11	04.1 ¹³³	35		43	13	39	33	26	10 61
9	315	42.8		02.1	137	21.4 ¹³⁷	-10	50.7 ¹³⁴	30		49	17	42	28	30	16 58
10	330	43.0		01.2	151	54.2 ¹³⁸		37.3 ¹³⁴	20	4 58	24	46	21	34		26 53
11	345	43.2	+5	00.3	166	27.0 ¹³⁸	-10	23.8 ¹³⁵	10 N	5 05	5 29	5 50	18 14	39	5 36	48
12	0	43.5	+4	59.3	181	00.0 ¹⁴⁰	-10	10.4 ¹³⁴	0	5 09	5 33	5 54	18 07	43	5 44	44
13	15	43.7		58.4	195	32.9 ¹³⁹	-9	56.8 ¹³⁶	10 S		12	36	5 57	18 01	47	5 53 40
14	30	43.9		57.4	210	06.0 ¹⁴¹		43.3 ¹³⁵	20		13	39	6 01	17 54	52	6 02 35
15	45	44.1		56.5	224	39.1 ¹⁴¹		29.7 ¹³⁶	30		13	41	05	46	57	12 30
16	60	44.3		55.5	239	12.2 ¹⁴¹		16.1 ¹³⁶	35		13	42	07	42	60	18 27
17	75	44.6	+4	54.6	253	45.4 ¹⁴²	-9	02.5 ¹³⁶	40	5 12	5 43	6 10	17 36	64	6 24	24
18	90	44.8	+4	53.6	268	18.7 ¹⁴³	-8	48.8 ¹³⁷	45	5 10	5 44	6 13	17 30	68	6 32	20
19	105	45.0		52.7	282	52.0 ¹⁴³		35.1 ¹³⁷	50		07	44	16	23	72	41 16
20	120	45.2		51.7	297	25.4 ¹⁴⁴		21.4 ¹³⁷	52		05	44	18	20	74	45 14
21	135	45.4		50.8	311	58.9 ¹⁴⁵	-8	07.6 ¹³⁸	54		03	44	20	16	77	50 11
22	150	45.7		49.8	326	32.4 ¹⁴⁵	-7	53.8 ¹³⁸	56	5 01	44	21	12	80		6 55 9
23	165	45.9		48.9	341	06.0 ¹⁴⁶		40.1 ¹³⁷	58	4 59	44	24	07	83	7 01	5
24	180	46.1	+4	47.9	355	39.6 ¹⁴⁶	-7	26.2 ¹³⁹	60 S	4 56	5 44	6 26	17 02	86	7 07	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 0 ^h 45 ^m 4		Mag: -3.9 PMG: 12 ^h 22 ^m		Mag: -2.7 PMG: 23 ^h 06 ^m		Mag: -1.7 PMG: 11 ^h 05 ^m		Mag: +0.1 PMG: 7 ^h 34 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	348	37.0	174	31.9	+4	03.6	12	20.1	-16	26.7	193	24.7	+11	12.6	246	19.7	+22	12.8
1	3	39.5	189	31.5		02.3	27	23.2		26.8	208	26.7		12.4	261	21.9		12.8
2	18	42.0	204	31.1	+4	01.1	42	26.2		26.8	223	28.6		12.2	276	24.2		12.8
3	33	44.4	219	30.7	+3	59.8	57	29.2		26.9	238	30.6		12.0	291	26.4		12.8
4	48	46.9	234	30.3		58.6	72	32.2		26.9	253	32.5		11.9	306	28.7		12.8
5	63	49.3	249	30.0	+3	57.3	87	35.2	-16	27.0	268	34.5	+11	11.7	321	31.0	+22	12.8
6	78	51.8	264	29.6	+3	56.1	102	38.2	-16	27.0	283	36.4	+11	11.5	336	33.2	+22	12.7
7	93	54.3	279	29.2		54.8	117	41.2		27.1	298	38.4		11.3	351	35.5		12.7
8	108	56.7	294	28.8		53.6	132	44.2		27.1	313	40.3		11.1	6	37.7		12.7
9	123	59.2	309	28.4		52.3	147	47.3		27.2	328	42.3		10.9	21	40.0		12.7
10	139	01.7	324	28.0		51.1	162	50.3		27.2	343	44.3		10.7	36	42.2		12.7
11	154	04.1	339	27.7	+3	49.8	177	53.3	-16	27.2	358	46.2	+11	10.5	51	44.5	+22	12.7
12	169	06.6	354	27.3	+3	48.6	192	56.3	-16	27.3	13	48.2	+11	10.3	66	46.8	+22	12.6
13	184	09.1	9	26.9		47.3	207	59.3		27.3	28	50.1		10.1	81	49.0		12.6
14	199	11.5	24	26.5		46.1	223	02.3		27.4	43	52.1		10.0	96	51.3		12.6
15	214	14.0	39	26.1		44.8	238	05.3		27.4	58	54.0		09.8	111	53.5		12.6
16	229	16.5	54	25.7		43.6	253	08.3		27.5	73	56.0		09.6	126	55.8		12.6
17	244	18.9	69	25.4	+3	42.3	268	11.3	-16	27.5	88	57.9	+11	09.4	141	58.0	+22	12.6
18	259	21.4	84	25.0	+3	41.1	283	14.3	-16	27.5	103	59.9	+11	09.2	157	00.3	+22	12.6
19	274	23.8	99	24.6		39.8	298	17.3		27.6	119	01.8		09.0	172	02.6		12.5
20	289	26.3	114	24.2		38.6	313	20.3		27.6	134	03.8		08.8	187	04.8		12.5
21	304	28.8	129	23.8		37.3	328	23.3		27.7	149	05.7		08.6	202	07.1		12.5
22	319	31.2	144	23.5		36.1	343	26.3		27.7	164	07.7		08.4	217	09.3		12.5
23	334	33.7	159	23.1		34.8	358	29.3		27.7	179	09.6		08.2	232	11.6		12.5
24	349	36.2	174	22.7	+3	33.6	13	32.3	-16	27.8	194	11.6	+11	08.1	247	13.9	+22	12.5
Dif	—		-4		-13		+30		0		+20		-2		+23		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 14 ^d 3	PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/5									
	PMG: 11 ^h 56 ^m 8					SD: 15°2			PMG: 0 ^h 18 ^m		R°: 42 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	46.1	+4 47.9	355	39.6	-7 26.2		60 N	18 35	19 18	20 11	19 12 2	5 44 85	
1	195	46.3		10	13.2 ¹⁴⁶	-7 12.4 ¹³⁸		58	32	12	20 02	10 5	47 82	
2	210	46.5	46.0	24	47.0 ¹⁴⁸	-6 58.5 ¹³⁹		56	30	07	19 54	09 7	50 79	
3	225	46.8	45.1	39	20.7 ¹⁴⁷	44.7 ¹³⁸		54	27	03	47	08 9	53 76	
4	240	47.0	44.2	53	54.5 ¹⁴⁸	30.8 ¹³⁹		52	25	19 00	41	06 12	56 73	
5	255	47.2	+4 43.2	68	28.4 ¹⁴⁹	-6 16.9 ¹³⁹		50	18 23	18 56	19 35	19 05 14	5 58 71	
6	270	47.4	+4 42.3	83	02.3 ¹⁴⁹	-6 02.9 ¹⁴⁰		45	18 19	18 49	19 24	19 03 18	6 03 66	
7	285	47.6	41.3	97	36.3 ¹⁵⁰	-5 49.0 ¹³⁹		40	16	43	16	19 01 22	07 63	
8	300	47.9	40.4	112	10.3 ¹⁵⁰	35.0 ¹⁴⁰		35	13	39	09	18 59 25	11 59	
9	315	48.1	39.4	126	44.3 ¹⁵⁰	21.1 ¹³⁹		30	11	35	19 03	58 28	14 56	
10	330	48.3	38.5	141	18.4 ¹⁵¹	-5 07.1 ¹⁴⁰		20	07	29	18 55	55 33	19 51	
11	345	48.5	+4 37.5	155	52.6 ¹⁵²	-4 53.1 ¹⁴⁰		10 N	18 03	18 24	18 49	18 53 37	6 24 46	
12	0	48.7	+4 36.6	170	26.8 ¹⁵²	-4 39.1 ¹⁴⁰		0	18 00	18 21	18 45	18 50 42	6 28 42	
13	15	49.0	35.6	185	01.0 ¹⁵²	25.1 ¹⁴⁰		10 S	17 57	18	42	48 46	33 37	
14	30	49.2	34.7	199	35.2 ¹⁵²	-4 11.1 ¹⁴⁰		20	54	16	41	46 50	37 34	
15	45	49.4	33.7	214	09.5 ¹⁵³	-3 57.1 ¹⁴⁰		30	50	14	42	43 55	42 29	
16	60	49.6	32.8	228	43.9 ¹⁵⁴	43.0 ¹⁴¹		35	48	13	43	42 58	45 26	
17	75	49.8	+4 31.8	243	18.2 ¹⁵³	-3 29.0 ¹⁴⁰		40	17 46	18 13	18 44	18 40 61	6 48 23	
18	90	50.1	+4 30.9	257	52.6 ¹⁵⁴	-3 15.0 ¹⁴⁰		45	17 43	18 13	18 47	18 38 65	6 52 19	
19	105	50.3	29.9	272	27.1 ¹⁵⁵	-3 00.9 ¹⁴¹		50	40	13	50	35 71	57 14	
20	120	50.5	29.0	287	01.6 ¹⁵⁵	-2 46.9 ¹⁴⁰		52	39	13	52	34 73	6 59 12	
21	135	50.7	28.0	301	36.1 ¹⁵⁵	32.9 ¹⁴⁰		54	37	13	54	33 75	7 01 10	
22	150	50.9	27.1	316	10.6 ¹⁵⁵	18.8 ¹⁴¹		56	36	13	56	32 77	04 7	
23	165	51.2	26.1	330	45.2 ¹⁵⁶	-2 04.8 ¹⁴⁰		58	34	13	18 59	30 80	06 5	
24	180	51.4	+4 25.2	345	19.8 ¹⁵⁶	-1 50.7 ¹⁴¹		60 S	17 32	18 13	19 02	18 28 84	7 09 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 41 ^m 5		Mag: -3.9 PMG: 12 ^h 23 ^m		Mag: -2.7 PMG: 23 ^h 01 ^m		Mag: -1.7 PMG: 11 ^h 02 ^m		Mag: +0.1 PMG: 7 ^h 30 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	349	36.2	174	22.7	+3 33.6	13 32.3	-16 27.8	194 11.6	+11 08.1	247 13.9	+22 12.5
1	4	38.6	189	22.3	32.3	28 35.3	27.8	209 13.6	07.9	262 16.1	12.4
2	19	41.1	204	21.9	31.1	43 38.3	27.9	224 15.5	07.7	277 18.4	12.4
3	34	43.6	219	21.6	29.8	58 41.3	27.9	239 17.5	07.5	292 20.6	12.4
4	49	46.0	234	21.2	28.5	73 44.3	27.9	254 19.4	07.3	307 22.9	12.4
5	64	48.5	249	20.8	+3 27.3	88 47.3	-16 28.0	269 21.4	+11 07.1	322 25.2	+22 12.4
6	79	50.9	264	20.4	+3 26.0	103 50.2	-16 28.0	284 23.3	+11 06.9	337 27.4	+22 12.4
7	94	53.4	279	20.0	24.8	118 53.2	28.0	299 25.3	06.7	352 29.7	12.4
8	109	55.9	294	19.7	23.5	133 56.2	28.1	314 27.2	06.5	7 31.9	12.3
9	124	58.3	309	19.3	22.3	148 59.2	28.1	329 29.2	06.3	22 34.2	12.3
10	140	00.8	324	18.9	21.0	164 02.2	28.1	344 31.1	06.2	37 36.5	12.3
11	155	03.3	339	18.5	+3 19.8	179 05.2	-16 28.2	359 33.1	+11 06.0	52 38.7	+22 12.3
12	170	05.7	354	18.1	+3 18.5	194 08.2	-16 28.2	14 35.1	+11 05.8	67 41.0	+22 12.3
13	185	08.2	9 17.8	17.3	17.3	209 11.2	28.2	29 37.0	05.6	82 43.2	12.3
14	200	10.7	24 17.4	16.0	16.0	224 14.1	28.2	44 39.0	05.4	97 45.5	12.2
15	215	13.1	39 17.0	14.7	14.7	239 17.1	28.3	59 40.9	05.2	112 47.8	12.2
16	230	15.6	54 16.6	13.5	13.5	254 20.1	28.3	74 42.9	05.0	127 50.0	12.2
17	245	18.1	69 16.2	+3 12.2	12.2	269 23.1	-16 28.3	89 44.8	+11 04.8	142 52.3	+22 12.2
18	260	20.5	84 15.9	+3 11.0	11.0	284 26.1	-16 28.4	104 46.8	+11 04.6	157 54.5	+22 12.2
19	275	23.0	99 15.5	09.7	09.7	299 29.0	28.4	119 48.7	04.4	172 56.8	12.2
20	290	25.4	114 15.1	08.5	08.5	314 32.0	28.4	134 50.7	04.2	187 59.1	12.2
21	305	27.9	129 14.7	07.2	07.2	329 35.0	28.4	149 52.6	04.1	203 01.3	12.1
22	320	30.4	144 14.4	05.9	05.9	344 38.0	28.5	164 54.6	03.9	218 03.6	12.1
23	335	32.8	159 14.0	04.7	04.7	359 41.0	28.5	179 56.6	03.7	233 05.9	12.1
24	350	35.3	174 13.6	+3 03.4	03.4	14 43.9	-16 28.5	194 58.5	+11 03.5	248 08.1	+22 12.1
Dif	—		-4	-13		+30	0	+20	-2	+23	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 4			Edad: 15 ^d 3 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 2 20 ^h : 55 ^m 0 SD: 15 ^h 1 PMG: 1 ^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
0	180	51.4	+4	25.2	345	19.8	-1	50.7	60 N	3	43	4	37	5	20	19	14
1	195	51.6		24.2	359	54.4 ¹⁵⁶		36.7 ¹⁴⁰	58	3	52		42		22	15	5
2	210	51.8		23.2	14	29.1 ¹⁵⁷		22.7 ¹⁴⁰	56	4	00		47		25	16	7
3	225	52.0		22.3	29	03.7 ¹⁵⁶		-1 08.7 ¹⁴⁰	54		07		51		27	17	10
4	240	52.3		21.3	43	38.4 ¹⁵⁷		-0 54.6 ¹⁴¹	52		13		54		29	18	12
5	255	52.5	+4	20.4	58	13.2 ¹⁵⁸		-0 40.6 ¹⁴⁰	50	4	18	4	58	5	31	19	19
6	270	52.7	+4	19.4	72	47.9 ¹⁵⁷		-0 26.6 ¹⁴⁰	45	4	29	5	05	5	34	19	21
7	285	52.9		18.5	87	22.7 ¹⁵⁸		-0 12.6 ¹⁴⁰	40		38		10		38	23	22
8	300	53.1		17.5	101	57.5 ¹⁵⁸		+0 01.4 ¹⁴⁰	35		45		15		40	24	25
9	315	53.4		16.6	116	32.3 ¹⁵⁸		15.3 ¹³⁹	30		50		19		43	26	27
10	330	53.6		15.6	131	07.2 ¹⁵⁹		29.3 ¹⁴⁰	20	4	59		25		47	28	33
11	345	53.8	+4	14.7	145	42.0 ¹⁵⁸		+0 43.3 ¹⁴⁰	10 N	5	04	5	29	5	50	19	30
12	0	54.0	+4	13.7	160	16.9 ¹⁵⁹		+0 57.2 ¹³⁹	0	5	08	5	32	5	53	19	32
13	15	54.3		12.8	174	51.8 ¹⁵⁹		+1 11.1 ¹³⁹	10 S		11		35		56	34	45
14	30	54.5		11.8	189	26.7 ¹⁵⁹		25.0 ¹³⁹	20		12		37	5	59	36	50
15	45	54.7		10.9	204	01.6 ¹⁵⁹		38.9 ¹³⁹	30		11		39	6	03	38	55
16	60	54.9		09.9	218	36.6 ¹⁶⁰		+1 52.8 ¹³⁹	35		10		39		05	40	57
17	75	55.1	+4	09.0	233	11.5 ¹⁵⁹		+2 06.7 ¹³⁹	40	5	08	5	40	6	07	19	41
18	90	55.4	+4	08.0	247	46.5 ¹⁶⁰		+2 20.5 ¹³⁸	45	5	06	5	40	6	09	19	43
19	105	55.6		07.1	262	21.4 ¹⁵⁹		34.4 ¹³⁹	50		02		40		12	46	69
20	120	55.8		06.1	276	56.4 ¹⁶⁰		+2 48.2 ¹³⁸	52	5	01		40		13	47	71
21	135	56.0		05.1	291	31.4 ¹⁶⁰		+3 02.0 ¹³⁸	54	4	59		39		15	48	74
22	150	56.2		04.2	306	06.4 ¹⁶⁰		15.7 ¹³⁷	56		56		39		16	49	77
23	165	56.5		03.2	320	41.4 ¹⁶⁰		29.5 ¹³⁸	58		53		39		18	50	80
24	180	56.7	+4	02.3	335	16.4 ¹⁶⁰		+3 43.2 ¹³⁷	60 S	4	50	5	38	6	20	19	52

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 0 ^h 37 ^m 5		Mag: -3.9 PMG: 12 ^h 23 ^m			Mag: -2.6 PMG: 22 ^h 57 ^m			Mag: -1.7 PMG: 10 ^h 59 ^m			Mag: +0.1 PMG: 7 ^h 26 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	350	35.3	174	13.6	+3 03.4	14	43.9	-16 28.5	194	58.5	+11 03.5	248	08.1	+22 12.1
1	5	37.8	189	13.2	02.2	29	46.9	28.5	210	00.5	03.3	263	10.4	12.1
2	20	40.2	204	12.8	+3 00.9	44	49.9	28.6	225	02.4	03.1	278	12.7	12.1
3	35	42.7	219	12.5	+2 59.6	59	52.9	28.6	240	04.4	02.9	293	14.9	12.0
4	50	45.2	234	12.1	58.4	74	55.8	28.6	255	06.3	02.7	308	17.2	12.0
5	65	47.6	249	11.7	+2 57.1	89	58.8	-16 28.6	270	08.3	+11 02.5	323	19.4	+22 12.0
6	80	50.1	264	11.3	+2 55.9	105	01.8	-16 28.6	285	10.2	+11 02.3	338	21.7	+22 12.0
7	95	52.5	279	11.0	54.6	120	04.7	28.7	300	12.2	02.2	353	24.0	12.0
8	110	55.0	294	10.6	53.4	135	07.7	28.7	315	14.1	02.0	8	26.2	12.0
9	125	57.5	309	10.2	52.1	150	10.7	28.7	330	16.1	01.8	23	28.5	12.0
10	140	59.9	324	09.8	50.8	165	13.6	28.7	345	18.1	01.6	38	30.8	11.9
11	156	02.4	339	09.5	+2 49.6	180	16.6	-16 28.7	0	20.0	+11 01.4	53	33.0	+22 11.9
12	171	04.9	354	09.1	+2 48.3	195	19.6	-16 28.8	15	22.0	+11 01.2	68	35.3	+22 11.9
13	186	07.3	9	08.7	47.1	210	22.5	28.8	30	23.9	01.0	83	37.6	11.9
14	201	09.8	24	08.3	45.8	225	25.5	28.8	45	25.9	00.8	98	39.8	11.9
15	216	12.3	39	08.0	44.5	240	28.5	28.8	60	27.8	00.6	113	42.1	11.9
16	231	14.7	54	07.6	43.3	255	31.4	28.8	75	29.8	00.4	128	44.4	11.8
17	246	17.2	69	07.2	+2 42.0	270	34.4	-16 28.8	90	31.8	+11 00.3	143	46.6	+22 11.8
18	261	19.7	84	06.8	+2 40.8	285	37.3	-16 28.8	105	33.7	+11 00.1	158	48.9	+22 11.8
19	276	22.1	99	06.4	39.5	300	40.3	28.9	120	35.7	+10 59.9	173	51.2	11.8
20	291	24.6	114	06.1	38.2	315	43.2	28.9	135	37.6	59.7	188	53.4	11.8
21	306	27.0	129	05.7	37.0	330	46.2	28.9	150	39.6	59.5	203	55.7	11.8
22	321	29.5	144	05.3	35.7	345	49.2	28.9	165	41.5	59.3	218	58.0	11.8
23	336	32.0	159	04.9	34.4	0	52.1	28.9	180	43.5	59.1	234	00.2	11.7
24	351	34.4	174	04.6	+2 33.2	15	55.1	-16 28.9	195	45.4	+10 58.9	249	02.5	+22 11.7
Dif	—		-4 -13		+30 0				+20 -2				+23 0	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9			Edad: 16 ^d 3 PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'6												
	PMG: 11 ^h 56 ^m 0			SD: 15°0 PMG: 1 ^h 42 ^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	180	56.7	+4 02.3	335	16.4	+3 43.2		60 N	18 29	19 11	20 04	19 15 2		8 32 83		
1	195	56.9	01.3	349	51.4 ¹⁶⁰	+3 56.9 ¹³⁷		58	26	06	19 55	20 5		29 79		
2	210	57.1	+4 00.4	4	26.5 ¹⁶¹	+4 10.6 ¹³⁷		56	24	19 02	48	23 9		26 76		
3	225	57.4	+3 59.4	19	01.5 ¹⁶⁰	24.2 ¹³⁶		54	22	18 58	41	27 11		23 74		
4	240	57.6	58.5	33	36.5 ¹⁶⁰	37.9 ¹³⁷		52	21	55	36	30 13		21 71		
5	255	57.8	+3 57.5	48	11.5 ¹⁶⁰	+4 51.5 ¹³⁶		50	18 19	18 52	19 31	19 33 15		8 19 69		
6	270	58.0	+3 56.6	62	46.6 ¹⁶¹	+5 05.0 ¹³⁵		45	18 16	18 45	19 20	19 39 20		8 15 64		
7	285	58.2	55.6	77	21.6 ¹⁶⁰	18.6 ¹³⁶		40	13	40	12	45 23		11 60		
8	300	58.5	54.6	91	56.6 ¹⁶⁰	32.1 ¹³⁵		35	11	36	06	49 27		08 57		
9	315	58.7	53.7	106	31.6 ¹⁶⁰	45.6 ¹³⁵		30	08	32	19 01	19 53 29		05 54		
10	330	58.9	52.7	121	06.6 ¹⁶⁰	+5 59.0 ¹³⁴		20	05	27	18 53	20 01 33		8 00 49		
11	345	59.1	+3 51.8	135	41.7 ¹⁶¹	+6 12.5 ¹³⁵		10 N	18 02	18 23	18 48	20 07 38		7 56 45		
12	0	59.4	+3 50.8	150	16.7 ¹⁶⁰	+6 25.9 ¹³⁴		0	17 59	18 20	18 44	20 13 42		7 52 41		
13	15	59.6	49.9	164	51.7 ¹⁶⁰	39.2 ¹³³		10 S	57	18	42	19 46		48 37		
14	30	59.8	48.9	179	26.7 ¹⁶⁰	+6 52.5 ¹³³		20	54	16	42	26 49		43 33		
15	46	00.0	48.0	194	01.6 ¹⁵⁹	+7 05.8 ¹³³		30	51	15	43	33 55		39 28		
16	61	00.2	47.0	208	36.6 ¹⁶⁰	19.1 ¹³³		35	50	15	44	37 58		36 25		
17	76	00.5	+3 46.0	223	11.6 ¹⁶⁰	+7 32.3 ¹³²		40	17 48	18 15	18 46	20 42 61		7 33 22		
18	91	00.7	+3 45.1	237	46.5 ¹⁵⁹	+7 45.5 ¹³²		45	17 46	18 15	18 49	20 48 64		7 29 19		
19	106	00.9	44.1	252	21.5 ¹⁶⁰	+7 58.6 ¹³¹		50	43	15	53	55 69		25 14		
20	121	01.1	43.2	266	56.4 ¹⁵⁹	+8 11.8 ¹³²		52	42	16	55	20 58 72		23 12		
21	136	01.4	42.2	281	31.3 ¹⁵⁹	24.8 ¹³⁰		54	41	16	18 57	21 02 74		21 10		
22	151	01.6	41.3	296	06.2 ¹⁵⁹	37.9 ¹³¹		56	40	17	19 00	06 76		18 8		
23	166	01.8	40.3	310	41.1 ¹⁵⁹	+8 50.9 ¹³⁰		58	38	17	03	10 80		16 5		
24	181	02.0	+3 39.3	325	16.0 ¹⁵⁹	+9 03.8 ¹²⁹		60 S	17 37	18 18	19 07	21 15 83		7 13 2		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 33 ^m 6		Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: -2.6 PMG: 22 ^h 52 ^m			Mag: -1.7 PMG: 10 ^h 56 ^m			Mag: +0.1 PMG: 7 ^h 23 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	351	34.4	174	04.6	+2 33.2	15 55.1	-16 28.9		195	45.4	+10 58.9	249	02.5	+22 11.7		
1	6	36.9	189	04.2	31.9	30 58.0	28.9		210	47.4	58.7	264	04.8	11.7		
2	21	39.4	204	03.8	30.7	46 01.0	28.9		225	49.4	58.6	279	07.0	11.7		
3	36	41.8	219	03.4	29.4	61 03.9	28.9		240	51.3	58.4	294	09.3	11.7		
4	51	44.3	234	03.1	28.1	76 06.9	28.9		255	53.3	58.2	309	11.6	11.7		
5	66	46.8	249	02.7	+2 26.9	91 09.8	-16 29.0		270	55.2	+10 58.0	324	13.8	+22 11.7		
6	81	49.2	264	02.3	+2 25.6	106 12.8	-16 29.0		285	57.2	+10 57.8	339	16.1	+22 11.6		
7	96	51.7	279	01.9	24.3	121 15.7	29.0		300	59.1	57.6	354	18.4	11.6		
8	111	54.2	294	01.6	23.1	136 18.7	29.0		316	01.1	57.4	9	20.6	11.6		
9	126	56.6	309	01.2	21.8	151 21.6	29.0		331	03.1	57.2	24	22.9	11.6		
10	141	59.1	324	00.8	20.6	166 24.5	29.0		346	05.0	57.0	39	25.2	11.6		
11	157	01.5	339	00.5	+2 19.3	181 27.5	-16 29.0		1	07.0	+10 56.8	54	27.4	+22 11.6		
12	172	04.0	354	00.1	+2 18.0	196 30.4	-16 29.0		16	08.9	+10 56.7	69	29.7	+22 11.5		
13	187	06.5	8	59.7	16.8	211 33.4	29.0		31	10.9	56.5	84	32.0	11.5		
14	202	08.9	23	59.3	15.5	226 36.3	29.0		46	12.8	56.3	99	34.2	11.5		
15	217	11.4	38	59.0	14.2	241 39.2	29.0		61	14.8	56.1	114	36.5	11.5		
16	232	13.9	53	58.6	13.0	256 42.2	29.0		76	16.7	55.9	129	38.8	11.5		
17	247	16.3	68	58.2	+2 11.7	271 45.1	-16 29.0		91	18.7	+10 55.7	144	41.0	+22 11.5		
18	262	18.8	83	57.8	+2 10.4	286 48.1	-16 29.0		106	20.7	+10 55.5	159	43.3	+22 11.5		
19	277	21.3	98	57.5	09.2	301 51.0	29.0		121	22.6	55.3	174	45.6	11.4		
20	292	23.7	113	57.1	07.9	316 53.9	29.0		136	24.6	55.1	189	47.9	11.4		
21	307	26.2	128	56.7	06.7	331 56.9	29.0		151	26.5	54.9	204	50.1	11.4		
22	322	28.6	143	56.3	05.4	346 59.8	29.0		166	28.5	54.8	219	52.4	11.4		
23	337	31.1	158	56.0	04.1	2	02.7	29.0	181	30.4	54.6	234	54.7	11.4		
24	352	33.6	173	55.6	+2 02.9	17 05.6	-16 29.0		196	32.4	+10 54.4	249	56.9	+22 11.4		
Dif	—		-4		-13	+29		0	+20		-2	+23				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9			Edad: 17 ^d 3 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'4													
	PMG: 11 ^h 55 ^m 7			SD: 14'9 PMG: 2 ^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	181	02.0	+3 39.3	325	16.0	+9 03.8	60 N	3 49	4 42	5 24	19 17	4	9 55	84			
1	196	02.2	38.4	339	50.8 ¹⁵⁸	16.7 ¹²⁹	58	3 57	47	27	25	7	48	80			
2	211	02.5	37.4	354	25.7 ¹⁵⁹	29.6 ¹²⁹	56	4 05	51	29	32	10	42	77			
3	226	02.7	36.5	9	00.5 ¹⁵⁸	42.4 ¹²⁸	54	11	55	30	38	13	37	74			
4	241	02.9	35.5	23	35.3 ¹⁵⁸	+9 55.2 ¹²⁸	52	17	4 58	32	43	16	32	72			
5	256	03.1	+3 34.6	38	10.1 ¹⁵⁸	+10 07.9 ¹²⁷	50	4 22	5 01	5 34	19 48	18	9 28	69			
6	271	03.4	+3 33.6	52	44.8 ¹⁵⁷	+10 20.6 ¹²⁷	45	4 32	5 07	5 37	19 59	22	9 19	65			
7	286	03.6	32.6	67	19.6 ¹⁵⁸	33.3 ¹²⁷	40	40	12	39	20 08	26	11	61			
8	301	03.8	31.7	81	54.3 ¹⁵⁷	45.9 ¹²⁶	35	46	16	42	16	28	9 05	58			
9	316	04.0	30.7	96	28.9 ¹⁵⁶	+10 58.4 ¹²⁵	30	52	20	44	22	32	8 59	55			
10	331	04.2	29.8	111	03.6 ¹⁵⁷	+11 10.9 ¹²⁵	20	4 59	25	47	34	36	49	51			
11	346	04.5	+3 28.8	125	38.2 ¹⁵⁶	+11 23.4 ¹²⁵	10 N	5 04	5 29	5 50	20 45	39	8 41	46			
12	1	04.7	+3 27.8	140	12.8 ¹⁵⁶	+11 35.8 ¹²⁴	0	5 08	5 32	5 52	20 55	43	8 33	42			
13	16	04.9	26.9	154	47.4 ¹⁵⁶	+11 48.1 ¹²³	10 S	10	34	55	21 05	46	25	39			
14	31	05.1	25.9	169	22.0 ¹⁵⁶	+12 00.4 ¹²³	20	10	35	5 57	15	51	16	35			
15	46	05.4	25.0	183	56.5 ¹⁵⁵	12.7 ¹²³	30	09	36	6 00	28	55	07	30			
16	61	05.6	24.0	198	31.0 ¹⁵⁵	24.9 ¹²²	35	07	36	02	35	58	8 01	28			
17	76	05.8	+3 23.1	213	05.5 ¹⁵⁵	+12 37.0 ¹²¹	40	5 05	5 36	6 03	21 43	61	7 55	24			
18	91	06.0	+3 22.1	227	39.9 ¹⁵⁴	+12 49.1 ¹²¹	45	5 02	5 36	6 05	21 52	65	7 48	20			
19	106	06.2	21.1	242	14.3 ¹⁵⁴	+13 01.1 ¹²⁰	50	4 58	35	08	22 04	70	39	16			
20	121	06.5	20.2	256	48.7 ¹⁵⁴	13.1 ¹²⁰	52	56	35	09	10	71	35	14			
21	136	06.7	19.2	271	23.0 ¹⁵³	25.0 ¹¹⁹	54	54	35	10	16	74	31	12			
22	151	06.9	18.3	285	57.3 ¹⁵³	36.9 ¹¹⁹	56	51	34	11	22	78	26	9			
23	166	07.1	17.3	300	31.5 ¹⁵²	+13 48.7 ¹¹⁸	58	48	33	12	30	81	21	6			
24	181	07.4	+3 16.3	315	05.8 ¹⁵³	+14 00.5 ¹¹⁸	60 S	4 44	5 32	6 14	22 38	85	7 15	2			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 29 ^m 7		Mag: -3.9 PMG: 12 ^h 25 ^m		Mag: -2.6 PMG: 22 ^h 47 ^m		Mag: -1.7 PMG: 10 ^h 52 ^m		Mag: +0.1 PMG: 7 ^h 19 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'
0	352	33.6	173 55.6	+2 02.9	17 05.6	-16 29.0	196 32.4	+10 54.4	249 56.9	+22 11.4	
1	7	36.0	188 55.2	01.6	32 08.6	29.0	211 34.4	54.2	264 59.2	11.4	
2	22	38.5	203 54.9	+2 00.3	47 11.5	29.0	226 36.3	54.0	280 01.5	11.3	
3	37	41.0	218 54.5	+1 59.1	62 14.4	29.0	241 38.3	53.8	295 03.8	11.3	
4	52	43.4	233 54.1	57.8	77 17.4	29.0	256 40.2	53.6	310 06.0	11.3	
5	67	45.9	248 53.7	+1 56.5	92 20.3	-16 29.0	271 42.2	+10 53.4	325 08.3	+22 11.3	
6	82	48.4	263 53.4	+1 55.3	107 23.2	-16 28.9	286 44.2	+10 53.2	340 10.6	+22 11.3	
7	97	50.8	278 53.0	54.0	122 26.1	28.9	301 46.1	53.0	355 12.8	11.3	
8	112	53.3	293 52.6	52.7	137 29.0	28.9	316 48.1	52.9	10 15.1	11.2	
9	127	55.8	308 52.2	51.5	152 32.0	28.9	331 50.0	52.7	25 17.4	11.2	
10	142	58.2	323 51.9	50.2	167 34.9	28.9	346 52.0	52.5	40 19.7	11.2	
11	158	00.7	338 51.5	+1 48.9	182 37.8	-16 28.9	1 53.9	+10 52.3	55 21.9	+22 11.2	
12	173	03.1	353 51.1	+1 47.7	197 40.7	-16 28.9	16 55.9	+10 52.1	70 24.2	+22 11.2	
13	188	05.6	8 50.8	46.4	212 43.6	28.9	31 57.9	51.9	85 26.5	11.2	
14	203	08.1	23 50.4	45.1	227 46.5	28.9	46 59.8	51.7	100 28.7	11.2	
15	218	10.5	38 50.0	43.9	242 49.5	28.9	62 01.8	51.5	115 31.0	11.1	
16	233	13.0	53 49.6	42.6	257 52.4	28.8	77 03.7	51.3	130 33.3	11.1	
17	248	15.5	68 49.3	+1 41.3	272 55.3	-16 28.8	92 05.7	+10 51.1	145 35.6	+22 11.1	
18	263	17.9	83 48.9	+1 40.1	287 58.2	-16 28.8	107 07.6	+10 51.0	160 37.8	+22 11.1	
19	278	20.4	98 48.5	38.8	303 01.1	28.8	122 09.6	50.8	175 40.1	11.1	
20	293	22.9	113 48.2	37.5	318 04.0	28.8	137 11.6	50.6	190 42.4	11.1	
21	308	25.3	128 47.8	36.3	333 06.9	28.8	152 13.5	50.4	205 44.7	11.1	
22	323	27.8	143 47.4	35.0	348 09.8	28.7	167 15.5	50.2	220 46.9	11.0	
23	338	30.2	158 47.0	33.7	3 12.7	28.7	182 17.4	50.0	235 49.2	11.0	
24	353	32.7	173 46.7	+1 32.5	18 15.6	-16 28.7	197 19.4	+10 49.8	250 51.5	+22 11.0	
Dif	—		-4	-13	+29		0	+20	-2	+23	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 18 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2					Civil			R°		R°	
	PMG: 11 ^h 55 ^m 3			SD: 14'8 PMG: 3 ^h 05 ^m R°: 44 ^m					Náutico			Hora		Hora	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	07.4	+3 16.3	315	05.8	+14 00.5	60 N	18 23	19 05	19 57	19 21 6	11 19 85			
1	196	07.6	15.4	329	40.0 ¹⁵²	12.2 ¹¹⁷	58	21	19 00	49	32 11	11 08 81			
2	211	07.8	14.4	344	14.1 ¹⁵¹	23.8 ¹¹⁶	56	19	18 56	42	42 14	10 59 78			
3	226	08.0	13.5	358	48.2 ¹⁵¹	35.4 ¹¹⁶	54	17	53	36	51 17	51 74			
4	241	08.3	12.5	13	22.3 ¹⁵¹	46.9 ¹¹⁵	52	16	50	31	19 59 19	44 72			
5	256	08.5	+3 11.5	27	56.3 ¹⁵⁰	+14 58.3 ¹¹⁴	50	18 15	18 47	19 26	20 06 22	10 37 70			
6	271	08.7	+3 10.6	42	30.3 ¹⁵⁰	+15 09.7 ¹¹⁴	45	18 12	18 41	19 16	20 21 26	10 24 64			
7	286	08.9	09.6	57	04.3 ¹⁵⁰	21.1 ¹¹⁴	40	10	37	09	34 29	12 61			
8	301	09.1	08.6	71	38.2 ¹⁴⁹	32.3 ¹¹²	35	08	33	19 03	44 33	10 03 58			
9	316	09.4	07.7	86	12.1 ¹⁴⁹	43.5 ¹¹²	30	06	30	18 58	20 54 34	9 54 56			
10	331	09.6	06.7	100	45.9 ¹⁴⁸	+15 54.6 ¹¹¹	20	03	25	51	21 10 39	40 51			
11	346	09.8	+3 05.8	115	19.7 ¹⁴⁸	+16 05.7 ¹¹¹	10 N	18 01	18 22	18 46	21 24 42	9 27 48			
12	1	10.0	+3 04.8	129	53.4 ¹⁴⁷	+16 16.7 ¹¹⁰	0	17 59	18 19	18 43	21 38 45	9 15 44			
13	16	10.3	03.8	144	27.1 ¹⁴⁷	27.6 ¹⁰⁹	10 S	57	18	42	21 51 49	9 04 40			
14	31	10.5	02.9	159	00.8 ¹⁴⁷	38.5 ¹⁰⁹	20	54	16	42	22 06 52	8 51 37			
15	46	10.7	01.9	173	34.4 ¹⁴⁶	+16 49.3 ¹⁰⁸	30	52	16	44	23 56	37 33			
16	61	10.9	+3 01.0	188	07.9 ¹⁴⁵	+17 00.0 ¹⁰⁷	35	51	16	46	33 58	29 30			
17	76	11.2	+3 00.0	202	41.4 ¹⁴⁵	+17 10.7 ¹⁰⁷	40	17 50	18 17	18 48	22 44 61	8 19 28			
18	91	11.4	+2 59.0	217	14.9 ¹⁴⁵	+17 21.3 ¹⁰⁶	45	17 48	18 17	18 51	22 57 65	8 08 24			
19	106	11.6	58.1	231	48.3 ¹⁴⁴	31.8 ¹⁰⁵	50	46	18	56	23 14 69	7 55 20			
20	121	11.8	57.1	246	21.6 ¹⁴³	42.2 ¹⁰⁴	52	45	19	58	21 72	49 17			
21	136	12.0	56.2	260	54.9 ¹⁴³	+17 52.6 ¹⁰⁴	54	44	20	19 01	30 74	43 14			
22	151	12.3	55.2	275	28.2 ¹⁴³	+18 02.8 ¹⁰²	56	43	21	04	40 77	35 12			
23	166	12.5	54.2	290	01.4 ¹⁴²	13.1 ¹⁰³	58	42	21	07	23 51 81	27 8			
24	181	12.7	+2 53.3	304	34.6 ¹⁴²	+18 23.2 ¹⁰¹	60 S	17 41	18 23	19 11	** ** *	7 17 5			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO			
	PMG: 0 ^h 25 ^m 7		Mag: -3.9 PMG: 12 ^h 25 ^m		Mag: -2.6 PMG: 22 ^h 43 ^m		Mag: -1.7 PMG: 10 ^h 49 ^m			Mag: +0.1 PMG: 7 ^h 15 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	°	'	°	°	'	°	'	°	°	'		
0	353	32.7	173	46.7	+1 32.5	18 15.6	-16 28.7	197	19.4	+10 49.8	250	51.5	+22 11.0
1	8	35.2	188	46.3	31.2	33 18.5	28.7	212	21.4	49.6	265	53.8	11.0
2	23	37.6	203	45.9	29.9	48 21.5	28.7	227	23.3	49.4	280	56.0	11.0
3	38	40.1	218	45.6	28.7	63 24.4	28.7	242	25.3	49.3	295	58.3	11.0
4	53	42.6	233	45.2	27.4	78 27.3	28.6	257	27.2	49.1	311	00.6	10.9
5	68	45.0	248	44.8	+1 26.1	93 30.2	-16 28.6	272	29.2	+10 48.9	326	02.9	+22 10.9
6	83	47.5	263	44.4	+1 24.9	108 33.1	-16 28.6	287	31.2	+10 48.7	341	05.1	+22 10.9
7	98	50.0	278	44.1	23.6	123 35.9	28.6	302	33.1	48.5	356	07.4	10.9
8	113	52.4	293	43.7	22.3	138 38.8	28.5	317	35.1	48.3	11	09.7	10.9
9	128	54.9	308	43.3	21.0	153 41.7	28.5	332	37.0	48.1	26	12.0	10.9
10	143	57.4	323	43.0	19.8	168 44.6	28.5	347	39.0	47.9	41	14.2	10.9
11	158	59.8	338	42.6	+1 18.5	183 47.5	-16 28.5	2	40.9	+10 47.7	56	16.5	+22 10.8
12	174	02.3	353	42.2	+1 17.2	198 50.4	-16 28.5	17	42.9	+10 47.5	71	18.8	+22 10.8
13	189	04.7	8	41.8	16.0	213 53.3	28.4	32	44.9	47.4	86	21.1	10.8
14	204	07.2	23	41.5	14.7	228 56.2	28.4	47	46.8	47.2	101	23.3	10.8
15	219	09.7	38	41.1	13.4	243 59.1	28.4	62	48.8	47.0	116	25.6	10.8
16	234	12.1	53	40.7	12.2	259 02.0	28.3	77	50.7	46.8	131	27.9	10.8
17	249	14.6	68	40.4	+1 10.9	274 04.9	-16 28.3	92	52.7	+10 46.6	146	30.2	+22 10.8
18	264	17.1	83	40.0	+1 09.6	289 07.8	-16 28.3	107	54.7	+10 46.4	161	32.5	+22 10.7
19	279	19.5	98	39.6	08.3	304 10.6	28.3	122	56.6	46.2	176	34.7	10.7
20	294	22.0	113	39.2	07.1	319 13.5	28.2	137	58.6	46.0	191	37.0	10.7
21	309	24.5	128	38.9	05.8	334 16.4	28.2	153	00.5	45.8	206	39.3	10.7
22	324	26.9	143	38.5	04.5	349 19.3	28.2	168	02.5	45.7	221	41.6	10.7
23	339	29.4	158	38.1	03.3	4	22.2	183	04.5	45.5	236	43.8	10.7
24	354	31.9	173	37.8	+1 02.0	19 25.0	-16 28.1	198	06.4	+10 45.3	251	46.1	+22 10.7
Dif	—	—	-4	-13		+29	0	+20	-2		+23	0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 19 ^d 3 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2												
	PMG: 11 ^h 55 ^m 0			SD: 14 ^h 8 PMG: 3 ^h 49 ^m R°: 45 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	m	h m	m
0	181	12.7	+2 53.3	304	34.6	+18 23.2	101	58	60 N	3 55	4 47	5 29	19 27	11	12 44	86
1	196	12.9		319	07.7 ¹⁴¹		33.3	58		4 03	51	31	43	16	29	81
2	211	13.2		333	40.7 ¹⁴⁰		43.2	56		09	55	32	19 56	21	17	76
3	226	13.4		348	13.7 ¹⁴⁰	+18 53.2	100	54		15	4 58	34	20 08	23	12 05	74
4	241	13.6		2	46.7 ¹⁴⁰	+19 03.0	98	52		20	5 01	35	18	26	11 56	70
5	256	13.8	+2 48.5	17	19.6 ¹³⁹	+19 12.7	97	50		4 25	5 04	5 37	20 28	27	11 47	68
6	271	14.1	+2 47.5	31	52.4 ¹³⁸	+19 22.4	97	45		4 35	5 10	5 39	20 47	32	11 28	65
7	286	14.3		46	25.2 ¹³⁸		32.0	40		42	14	41	21 03	35	13	61
8	301	14.5		60	57.9 ¹³⁷		41.5	35		48	18	43	17	37	11 01	58
9	316	14.7		75	30.6 ¹³⁷	+19 50.9	94	30		4 53	21	45	28	40	10 50	56
10	331	14.9		90	03.2 ¹³⁶	+20 00.3	94	20		5 00	25	47	21 49	42	31	52
11	346	15.2	+2 42.7	104	35.7 ¹³⁵	+20 09.5	92	10 N		5 04	5 29	5 50	22 06	46	10 15	49
12	1	15.4	+2 41.7	119	08.2 ¹³⁵	+20 18.7	92	0		5 07	5 31	5 52	22 23	48	9 59	47
13	16	15.6		133	40.7 ¹³⁵		27.8	10 S		08	33	54	40	50	44	44
14	31	15.8		148	13.0 ¹³³		36.8	20		08	34	56	22 58	53	28	41
15	46	16.1		162	45.4 ¹³⁴		45.7	30		06	34	58	23 19	56	9 10	36
16	61	16.3		177	17.6 ¹³²	+20 54.5	88	35		04	34	5 59	31	58	8 59	34
17	76	16.5	+2 36.9	191	49.8 ¹³²	+21 03.2	87	40		5 02	5 33	6 00	23 45	61	8 47	32
18	91	16.7	+2 35.9	206	22.0 ¹³²	+21 11.9	87	45		4 58	5 32	6 02	** ** *	**	8 32	29
19	106	17.0		220	54.1 ¹³¹		20.4	50		54	31	03	** ** *	**	15	24
20	121	17.2		235	26.1 ¹³⁰		28.9	52		51	30	04	** ** *	**	8 06	23
21	136	17.4		249	58.1 ¹³⁰		37.3	54		48	30	05	** ** *	**	7 57	20
22	151	17.6		264	30.0 ¹²⁹		45.6	56		45	29	06	** ** *	**	47	17
23	166	17.9		279	01.8 ¹²⁸	+21 53.8	82	58		42	28	07	** ** *	**	35	13
24	181	18.1	+2 30.1	293	33.6 ¹²⁸	+22 01.9	81	60 S		4 38	5 26	6 08	0 03	87	7 22	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 21 ^m 8		Mag: -3.9 PMG: 12 ^h 26 ^m		Mag: -2.5 PMG: 22 ^h 38 ^m		Mag: -1.7 PMG: 10 ^h 46 ^m		Mag: +0.1 PMG: 7 ^h 12 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'
0	354	31.9	173 37.8	+1 02.0	19 25.0	-16 28.1	198 06.4	+10 45.3	251 46.1	+22 10.7	
1	9	34.3	188 37.4	+1 00.7	34 27.9	28.1	213 08.4	45.1	266 48.4	10.6	
2	24	36.8	203 37.0	+0 59.5	49 30.8	28.0	228 10.3	44.9	281 50.7	10.6	
3	39	39.2	218 36.7	58.2	64 33.7	28.0	243 12.3	44.7	296 53.0	10.6	
4	54	41.7	233 36.3	56.9	79 36.6	28.0	258 14.3	44.5	311 55.2	10.6	
5	69	44.2	248 35.9	+0 55.6	94 39.4	-16 27.9	273 16.2	+10 44.3	326 57.5	+22 10.6	
6	84	46.6	263 35.5	+0 54.4	109 42.3	-16 27.9	288 18.2	+10 44.1	341 59.8	+22 10.6	
7	99	49.1	278 35.2	53.1	124 45.2	27.9	303 20.1	43.9	357 02.1	10.6	
8	114	51.6	293 34.8	51.8	139 48.0	27.8	318 22.1	43.8	12 04.4	10.5	
9	129	54.0	308 34.4	50.6	154 50.9	27.8	333 24.1	43.6	27 06.6	10.5	
10	144	56.5	323 34.1	49.3	169 53.8	27.8	348 26.0	43.4	42 08.9	10.5	
11	159	59.0	338 33.7	+0 48.0	184 56.6	-16 27.7	3 28.0	+10 43.2	57 11.2	+22 10.5	
12	175	01.4	353 33.3	+0 46.7	199 59.5	-16 27.7	18 30.0	+10 43.0	72 13.5	+22 10.5	
13	190	03.9	8 33.0	45.5	215 02.4	27.6	33 31.9	42.8	87 15.8	10.5	
14	205	06.3	23 32.6	44.2	230 05.2	27.6	48 33.9	42.6	102 18.0	10.5	
15	220	08.8	38 32.2	42.9	245 08.1	27.6	63 35.8	42.4	117 20.3	10.4	
16	235	11.3	53 31.8	41.7	260 11.0	27.5	78 37.8	42.2	132 22.6	10.4	
17	250	13.7	68 31.5	+0 40.4	275 13.8	-16 27.5	93 39.8	+10 42.1	147 24.9	+22 10.4	
18	265	16.2	83 31.1	+0 39.1	290 16.7	-16 27.4	108 41.7	+10 41.9	162 27.2	+22 10.4	
19	280	18.7	98 30.7	37.8	305 19.5	27.4	123 43.7	41.7	177 29.4	10.4	
20	295	21.1	113 30.4	36.6	320 22.4	27.4	138 45.6	41.5	192 31.7	10.4	
21	310	23.6	128 30.0	35.3	335 25.3	27.3	153 47.6	41.3	207 34.0	10.4	
22	325	26.1	143 29.6	34.0	350 28.1	27.3	168 49.6	41.1	222 36.3	10.3	
23	340	28.5	158 29.3	32.8	5 31.0	27.2	183 51.5	40.9	237 38.6	10.3	
24	355	31.0	173 28.9	+0 31.5	20 33.8	-16 27.2	198 53.5	+10 40.7	252 40.9	+22 10.3	
Dif	—		-4	-13	+29	0	+20	-2	+23	0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 54 ^m 6			Edad: 20 ^d 3 PHE { SD: 14'8 PMG: 4 ^h 34 ^m											
				R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	181	18.1	+2 30.1	293	33.6	+22 01.9		60 N	18 17	18 59	19 50	19 38 22		14 10 82	
1	196	18.3		308	05.3 ¹²⁷	09.9	80	58	15	55	42	19 59 27		13 50 76	
2	211	18.5	28.2	322	37.0 ¹²⁷	17.8	79	56	14	51	36	20 17 30		33 72	
3	226	18.7	27.2	337	08.6 ¹²⁶	25.6	78	54	12	48	30	31 33		19 66	
4	241	19.0	26.3	351	40.1 ¹²⁵	33.3	77	52	11	45	26	44 35		13 06 67	
5	256	19.2	+2 25.3	6	11.6 ¹²⁵	+22 40.9	76	50	18 10	18 43	19 21	20 55 37		12 55 66	
6	271	19.4	+2 24.3	20	43.0 ¹²⁴	+22 48.4	75	45	18 08	18 37	19 12	21 19 40		12 33 62	
7	286	19.6	23.4	35	14.3 ¹²³	+22 55.8	74	40	06	33	05	38 42		12 14 60	
8	301	19.9	22.4	49	45.6 ¹²³	+23 03.2	74	35	05	30	19 00	21 54 43		11 59 58	
9	316	20.1	21.5	64	16.9 ¹²³	10.4	72	30	03	27	18 55	22 08 44		46 56	
10	331	20.3	20.5	78	48.0 ¹²¹	17.5	71	20	18 01	23	49	31 47		23 54	
11	346	20.5	+2 19.5	93	19.1 ¹²¹	+23 24.5	70	10 N	17 59	18 20	18 45	22 52 48		11 04 51	
12	1	20.8	+2 18.6	107	50.2 ¹²¹	+23 31.4	69	0	17 58	18 19	18 43	23 11 50		10 46 49	
13	16	21.0	17.6	122	21.2 ¹²⁰	38.2	68	10 S	56	17	42	30 52		28 47	
14	31	21.2	16.6	136	52.1 ¹¹⁹	44.9	67	20	55	17	42	23 51 54		10 09 44	
15	46	21.4	15.7	151	22.9 ¹¹⁸	51.5	66	30	53	17	45	** ** *		9 46 42	
16	61	21.6	14.7	165	53.7 ¹¹⁸	+23 58.0	65	35	52	18	47	** ** *		33 41	
17	76	21.9	+2 13.7	180	24.5 ¹¹⁸	+24 04.4	64	40	17 51	18 18	18 50	** ** *		9 19 38	
18	91	22.1	+2 12.8	194	55.1 ¹¹⁶	+24 10.7	63	45	17 50	18 20	18 54	0 02 63		9 01 35	
19	106	22.3	11.8	209	25.7 ¹¹⁶	16.9	62	50	49	21	18 59	23 67		8 39 32	
20	121	22.5	10.8	223	56.3 ¹¹⁶	22.9	60	52	49	22	19 02	33 69		29 30	
21	136	22.8	09.9	238	26.8 ¹¹⁵	28.9	60	54	48	23	05	44 72		17 27	
22	151	23.0	08.9	252	57.2 ¹¹⁴	34.7	58	56	47	24	08	0 57 75		8 04 24	
23	166	23.2	07.9	267	27.6 ¹¹⁴	40.5	58	58	47	26	12	1 12 79		7 48 21	
24	181	23.4	+2 07.0	281	57.9 ¹¹³	+24 46.1	56	60 S	17 46	18 27	19 16	1 30 85		7 30 14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 17 ^m 9		Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: -2.5 PMG: 22 ^h 33 ^m			Mag: -1.7 PMG: 10 ^h 43 ^m			Mag: +0.1 PMG: 7 ^h 08 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	355	31.0	173 28.9	+0 31.5	20 33.8	-16 27.2	198 53.5	+10 40.7	252 40.9	+22 10.3					
1	10	33.5	188 28.5	30.2	35 36.7	27.1	213 55.4	40.5	267 43.1	10.3					
2	25	35.9	203 28.2	28.9	50 39.5	27.1	228 57.4	40.4	282 45.4	10.3					
3	40	38.4	218 27.8	27.7	65 42.4	27.0	243 59.4	40.2	297 47.7	10.3					
4	55	40.8	233 27.4	26.4	80 45.2	27.0	259 01.3	40.0	312 50.0	10.3					
5	70	43.3	248 27.0	+0 25.1	95 48.1	-16 26.9	274 03.3	+10 39.8	327 52.3	+22 10.2					
6	85	45.8	263 26.7	+0 23.8	110 50.9	-16 26.9	289 05.3	+10 39.6	342 54.6	+22 10.2					
7	100	48.2	278 26.3	22.6	125 53.8	26.8	304 07.2	39.4	357 56.8	10.2					
8	115	50.7	293 25.9	21.3	140 56.6	26.8	319 09.2	39.2	372 59.1	10.2					
9	130	53.2	308 25.6	20.0	155 59.4	26.7	334 11.1	39.0	387 01.4	10.2					
10	145	55.6	323 25.2	18.8	171 02.3	26.7	349 13.1	38.8	403 03.7	10.2					
11	160	58.1	338 24.8	+0 17.5	186 05.1	-16 26.6	4 15.1	+10 38.7	58 06.0	+22 10.2					
12	176	00.6	353 24.5	+0 16.2	201 08.0	-16 26.6	19 17.0	+10 38.5	73 08.3	+22 10.1					
13	191	03.0	8 24.1	14.9	216 10.8	26.5	34 19.0	38.3	88 10.5	10.1					
14	206	05.5	23 23.7	13.7	231 13.6	26.5	49 21.0	38.1	103 12.8	10.1					
15	221	08.0	38 23.3	12.4	246 16.5	26.4	64 22.9	37.9	118 15.1	10.1					
16	236	10.4	53 23.0	11.1	261 19.3	26.4	79 24.9	37.7	133 17.4	10.1					
17	251	12.9	68 22.6	+0 09.8	276 22.1	-16 26.3	94 26.8	+10 37.5	148 19.7	+22 10.1					
18	266	15.3	83 22.2	+0 08.6	291 25.0	-16 26.2	109 28.8	+10 37.3	163 22.0	+22 10.1					
19	281	17.8	98 21.9	07.3	306 27.8	26.2	124 30.8	37.1	178 24.3	10.0					
20	296	20.3	113 21.5	06.0	321 30.6	26.1	139 32.7	36.9	193 26.5	10.0					
21	311	22.7	128 21.1	04.8	336 33.5	26.1	154 34.7	36.8	208 28.8	10.0					
22	326	25.2	143 20.8	03.5	351 36.3	26.0	169 36.7	36.6	223 31.1	10.0					
23	341	27.7	158 20.4	02.2	6 39.1	26.0	184 38.6	36.4	238 33.4	10.0					
24	356	30.1	173 20.0	+0 00.9	21 41.9	-16 25.9	199 40.6	+10 36.2	253 35.7	+22 10.0					
Dif	—		-4	-13	+28	+1	+20	-2	+23	0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 54 ^m 3			Edad: 21 ^d 3 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 7 PMG: 5 ^h 23 ^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	181	23.4	+2	07.0	281	57.9	+24	46.1	55	60 N	4 00	4 52	5 34	20 00	41	15 32	67
1	196	23.7		06.0	296	28.1 ¹¹²		51.6	55	58	07	55	35	26	44	15 06	64
2	211	23.9		05.0	310	58.3 ¹¹²	+24	57.0	54	56	14	4 59	36	20 47	46	14 45	62
3	226	24.1		04.1	325	28.4 ¹¹¹	+25	02.3	53	54	19	5 02	38	21 04	47	28	61
4	241	24.3		03.1	339	58.5 ¹¹¹		07.4	51	52	24	05	39	19	48	13	60
5	256	24.5	+2	02.1	354	28.5 ¹¹⁰	+25	12.5	51	50	4 28	5 07	5 39	21 32	48	14 01	59
6	271	24.8	+2	01.2	8	58.4 ¹⁰⁹	+25	17.4	49	45	4 37	5 12	5 42	21 59	49	13 35	57
7	286	25.0	+2	00.2	23	28.3 ¹⁰⁹		22.2	48	40	44	16	43	22 20	50	13 14	56
8	301	25.2	+1	59.2	37	58.1 ¹⁰⁸		26.9	47	35	50	19	45	37	51	12 57	55
9	316	25.4		58.3	52	27.9 ¹⁰⁸		31.5	46	30	4 54	22	46	22 52	51	42	55
10	331	25.7		57.3	66	57.6 ¹⁰⁷		36.0	45	20	5 00	26	48	23 18	52	12 17	53
11	346	25.9	+1	56.3	81	27.3 ¹⁰⁷	+25	40.3	43	10 N	5 04	5 29	5 50	23 40	52	11 55	53
12	1	26.1	+1	55.4	95	56.9 ¹⁰⁶	+25	44.5	42	0	5 06	5 30	5 51	** ** *	**	11 35	51
13	16	26.3		54.4	110	26.4 ¹⁰⁵		48.6	41	10 S	07	31	52	** ** *	**	11 15	50
14	31	26.6		53.4	124	55.9 ¹⁰⁵		52.6	40	20	06	32	54	** ** *	**	10 53	49
15	46	26.8		52.5	139	25.3 ¹⁰⁴	+25	56.5	39	30	04	31	55	0 15	56	28	48
16	61	27.0		51.5	153	54.7 ¹⁰⁴	+26	00.2	37	35	5 01	31	56	29	57	10 14	46
17	76	27.2	+1	50.5	168	24.0 ¹⁰³	+26	03.8	36	40	4 58	5 30	5 57	0 46	58	9 57	45
18	91	27.4	+1	49.5	182	53.3 ¹⁰³	+26	07.3	35	45	4 54	5 29	5 58	1 05	61	9 36	44
19	106	27.7		48.6	197	22.5 ¹⁰²		10.7	34	50	49	27	59	30	63	9 11	42
20	121	27.9		47.6	211	51.7 ¹⁰²		13.9	32	52	46	26	5 59	42	64	8 59	40
21	136	28.1		46.6	226	20.8 ¹⁰¹		17.0	31	54	43	25	6 00	1 56	66	44	40
22	151	28.3		45.7	240	49.9 ¹⁰¹		20.0	30	56	40	23	00	2 12	68	28	37
23	166	28.6		44.7	255	18.9 ¹⁰⁰		22.9	29	58	36	22	01	31	72	8 09	34
24	181	28.8	+1	43.7	269	47.9 ¹⁰⁰	+26	25.6	27	60 S	4 31	5 20	6 02	2 55	77	7 44	29

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 0 ^h 14 ^m 0		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: -2.5 PMG: 22 ^h 29 ^m		Mag: -1.7 PMG: 10 ^h 40 ^m		Mag: +0.1 PMG: 7 ^h 05 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	356	30.1	173	20.0	+0 00.9	21	41.9	-16 25.9	199	40.6	+10 36.2	253	35.7	+22 10.0	
1	11	32.6	188	19.7	-0 00.3	36	44.8	25.8	214	42.5	36.0	268	38.0	10.0	
2	26	35.1	203	19.3	01.6	51	47.6	25.8	229	44.5	35.8	283	40.3	09.9	
3	41	37.5	218	18.9	02.9	66	50.4	25.7	244	46.5	35.6	298	42.5	09.9	
4	56	40.0	233	18.5	04.2	81	53.2	25.7	259	48.4	35.4	313	44.8	09.9	
5	71	42.4	248	18.2	-0 05.4	96	56.1	-16 25.6	274	50.4	+10 35.2	328	47.1	+22 09.9	
6	86	44.9	263	17.8	-0 06.7	111	58.9	-16 25.5	289	52.4	+10 35.1	343	49.4	+22 09.9	
7	101	47.4	278	17.4	08.0	127	01.7	25.5	304	54.3	34.9	358	51.7	09.9	
8	116	49.8	293	17.1	09.3	142	04.5	25.4	319	56.3	34.7	13	54.0	09.9	
9	131	52.3	308	16.7	10.5	157	07.3	25.3	334	58.2	34.5	28	56.3	09.8	
10	146	54.8	323	16.3	11.8	172	10.1	25.3	350	00.2	34.3	43	58.6	09.8	
11	161	57.2	338	16.0	-0 13.1	187	12.9	-16 25.2	5	02.2	+10 34.1	59	00.8	+22 09.8	
12	176	59.7	353	15.6	-0 14.4	202	15.8	-16 25.1	20	04.1	+10 33.9	74	03.1	+22 09.8	
13	192	02.2	8	15.2	15.6	217	18.6	25.1	35	06.1	33.7	89	05.4	09.8	
14	207	04.6	23	14.9	16.9	232	21.4	25.0	50	08.1	33.5	104	07.7	09.8	
15	222	07.1	38	14.5	18.2	247	24.2	24.9	65	10.0	33.4	119	10.0	09.8	
16	237	09.6	53	14.1	19.5	262	27.0	24.9	80	12.0	33.2	134	12.3	09.7	
17	252	12.0	68	13.7	-0 20.7	277	29.8	-16 24.8	95	14.0	+10 33.0	149	14.6	+22 09.7	
18	267	14.5	83	13.4	-0 22.0	292	32.6	-16 24.7	110	15.9	+10 32.8	164	16.9	+22 09.7	
19	282	16.9	98	13.0	23.3	307	35.4	24.7	125	17.9	32.6	179	19.2	09.7	
20	297	19.4	113	12.6	24.6	322	38.2	24.6	140	19.8	32.4	194	21.4	09.7	
21	312	21.9	128	12.3	25.8	337	41.0	24.5	155	21.8	32.2	209	23.7	09.7	
22	327	24.3	143	11.9	27.1	352	43.8	24.4	170	23.8	32.0	224	26.0	09.7	
23	342	26.8	158	11.5	28.4	7	46.6	24.4	185	25.7	31.9	239	28.3	09.6	
24	357	29.3	173	11.2	-0 29.6	22	49.4	-16 24.3	200	27.7	+10 31.7	254	30.6	+22 09.6	
Dif	—		-4		-13	+28		+1	+20		-2	+23		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 53 ^m 9		Edad: 22 ^d 3 PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'2 SD: 14'9 PMG: 6 ^h 14 ^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	h m	m	h m	m
0	181	28.8	+1 43.7	269	47.9	+26 25.6	26	60 N	18 10	18 52	19 43	20 41	67	16 39	44
1	196	29.0		284	16.8	28.2	26	58	09	49	36	21 10	64	16 10	46
2	211	29.2		298	45.7	30.7	25	56	08	46	30		33 62	15 47	48
3	226	29.5		313	14.5	33.0	23	54	07	43	25	21 51	62	29	48
4	241	29.7		327	43.3	35.2	22	52	07	40	21	22 07	60	13	49
5	256	29.9	+1 38.9	342	12.0	37.3	21	50	18 06	18 38	19 16	22 20	60	15 00	49
6	271	30.1	+1 37.9	356	40.7	39.3	20	45	18 04	18 34	19 08	22 48	59	14 32	51
7	286	30.3		11 09.3	41.1	41.1	18	40	03	30	19 02	23 10	57	14 10	51
8	301	30.6		25 37.9	42.8	42.8	17	35	02	27	18 57	28 57		13 52	52
9	316	30.8		40 06.5	44.3	44.3	15	30	18 01	25	53	23 43	57	37	52
10	331	31.0		54 35.0	45.8	45.8	15	20	17 59	21	47	*** ** *	**	13 10	53
11	346	31.2	+1 33.1	69 03.5	47.0	47.0	12	10 N	17 58	18 19	18 44	*** ** *	**	12 48	52
12	1 31.5	+1 32.1		83 31.9	48.2	48.2	12	0	17 57	18 18	18 42	0 01	53	12 26	53
13	16 31.7	31.1		98 00.3	49.2	49.2	10	10 S	56	17	42	22 53		12 05	53
14	31 31.9	30.2		112 28.7	50.1	50.1	9	20	55	17	43	0 45	53	11 42	54
15	46 32.1	29.2		126 57.0	50.8	50.8	7	30	54	18	46	1 11	53	16	54
16	61 32.3	28.2		141 25.3	51.4	51.4	6	35	54	19	49	26	54	11 00	54
17	76 32.6	+1 27.3		155 53.6	51.9	51.9	5	40	17 53	18 20	18 52	1 44	54	10 42	54
18	91 32.8	+1 26.3		170 21.8	52.3	52.3	4	45	17 53	18 22	18 56	2 06	54	10 20	54
19	106 33.0	25.3		184 50.0	52.5	52.5	2	50	52	24	19 02	33 55		9 53	54
20	121 33.2	24.4		199 18.2	52.5	52.5	0	52	52	26	05	2 46	55	39	54
21	136 33.5	23.4		213 46.3	52.4	52.4	1	54	52	27	08	3 02	55	24	54
22	151 33.7	22.4		228 14.4	52.2	52.2	2	56	51	28	12	20	56	9	05
23	166 33.9	21.4		242 42.5	51.9	51.9	3	58	51	30	16	3 43	55	8 43	53
24	181 34.1	+1 20.5		257 10.5	51.4	51.4	5	60 S	17 51	18 32	19 21	4 12	56	8 13	54
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 0 ^h 10 ^m 0		Mag: -3.9 PMG: 12 ^h 28 ^m		Mag: -2.5 PMG: 22 ^h 25 ^m		Mag: -1.7 PMG: 10 ^h 37 ^m		Mag: +0.1 PMG: 7 ^h 01 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♊	Dec	hG ♎	Dec				
h	°	°	°	°	°	°	°	°	°	°	°				
0	357	29.3	173 11.2	-0 29.6	22 49.4	-16 24.3	200 27.7	+10 31.7	254 30.6	+22 09.6					
1	12	31.7	188 10.8	30.9	37 52.2	24.2	215 29.7	31.5	269 32.9	09.6					
2	27	34.2	203 10.4	32.2	52 55.0	24.1	230 31.6	31.3	284 35.2	09.6					
3	42	36.7	218 10.1	33.5	67 57.8	24.1	245 33.6	31.1	299 37.5	09.6					
4	57	39.1	233 09.7	34.7	83 00.6	24.0	260 35.6	30.9	314 39.8	09.6					
5	72	41.6	248 09.3	-0 36.0	98 03.4	-16 23.9	275 37.5	+10 30.7	329 42.1	+22 09.6					
6	87	44.1	263 08.9	-0 37.3	113 06.2	-16 23.8	290 39.5	+10 30.5	344 44.4	+22 09.6					
7	102	46.5	278 08.6	38.6	128 08.9	23.8	305 41.5	30.3	359 46.6	09.5					
8	117	49.0	293 08.2	39.8	143 11.7	23.7	320 43.4	30.2	14 48.9	09.5					
9	132	51.4	308 07.8	41.1	158 14.5	23.6	335 45.4	30.0	29 51.2	09.5					
10	147	53.9	323 07.5	42.4	173 17.3	23.5	350 47.4	29.8	44 53.5	09.5					
11	162	56.4	338 07.1	-0 43.7	188 20.1	-16 23.4	5 49.3	+10 29.6	59 55.8	+22 09.5					
12	177	58.8	353 06.7	-0 44.9	203 22.9	-16 23.4	20 51.3	+10 29.4	74 58.1	+22 09.5					
13	193	01.3	8 06.4	46.2	218 25.6	23.3	35 53.2	29.2	90 00.4	09.5					
14	208	03.8	23 06.0	47.5	233 28.4	23.2	50 55.2	29.0	105 02.7	09.4					
15	223	06.2	38 05.6	48.8	248 31.2	23.1	65 57.2	28.8	120 05.0	09.4					
16	238	08.7	53 05.2	50.0	263 34.0	23.0	80 59.1	28.6	135 07.3	09.4					
17	253	11.2	68 04.9	-0 51.3	278 36.8	-16 23.0	96 01.1	+10 28.5	150 09.6	+22 09.4					
18	268	13.6	83 04.5	-0 52.6	293 39.5	-16 22.9	111 03.1	+10 28.3	165 11.9	+22 09.4					
19	283	16.1	98 04.1	53.9	308 42.3	22.8	126 05.0	28.1	180 14.2	09.4					
20	298	18.6	113 03.8	55.1	323 45.1	22.7	141 07.0	27.9	195 16.5	09.4					
21	313	21.0	128 03.4	56.4	338 47.9	22.6	156 09.0	27.7	210 18.7	09.3					
22	328	23.5	143 03.0	57.7	353 50.6	22.5	171 10.9	27.5	225 21.0	09.3					
23	343	25.9	158 02.7	-0 59.0	8 53.4	22.4	186 12.9	27.3	240 23.3	09.3					
24	358	28.4	173 02.3	-1 00.2	23 56.2	-16 22.4	201 14.9	+10 27.1	255 25.6	+22 09.3					
Dif	—	-4	-13		+28	+1	+20	-2	+23	0					

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 24 ^d 3 PHE { 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'6											
	PMG: 11 ^h 53 ^m 2			SD: 15°2 PMG: 8 ^h 00 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	181	39.4	+0 57.2	244	18.1	+25 57.1	41	60 N	18 04	18 46	19 36	23 16 97	17 46 13		
1	196	39.7	56.2	258	45.8	53.0	41	58	04	43	30	36 91	25 19		
2	211	39.9	55.2	273	13.5	48.8	42	56	03	40	24	23 53 87	17 08 23		
3	226	40.1	54.3	287	41.2	44.5	43	54	02	38	20	*** ** *	16 53 26		
4	241	40.3	53.3	302	08.9	40.0	45	52	02	36	16	*** ** *	40 29		
5	256	40.6	+0 52.3	316	36.6	+25 35.4	46	50	18 01	18 34	19 12	*** ** *	16 29 31		
6	271	40.8	+0 51.3	331	04.3	+25 30.7	47	45	18 00	18 30	19 04	*** ** *	16 05 36		
7	286	41.0	50.4	345	32.0	25.8	49	40	18 00	27	18 58	0 07 65	15 46 39		
8	301	41.2	49.4	359	59.7	20.7	51	35	17 59	24	54	25 62	30 42		
9	316	41.4	48.4	14	27.5	15.5	52	30	58	22	50	0 40 60	15 17 43		
10	331	41.7	47.5	28	55.2	10.2	53	20	58	20	45	1 05 58	14 53 47		
11	346	41.9	+0 46.5	43	22.9	+25 04.7	55	10 N	17 57	18 18	18 42	1 27 55	14 32 50		
12	1	42.1	+0 45.5	57	50.7	+24 59.1	56	0	17 56	18 17	18 41	1 47 54	14 13 53		
13	16	42.3	44.5	72	18.5	53.4	57	10 S	56	17	41	2 07 52	13 53 56		
14	31	42.5	43.6	86	46.3	47.5	59	20	56	18	43	29 49	33 58		
15	46	42.8	42.6	101	14.1	41.4	61	30	55	19	47	2 54 46	13 08 63		
16	61	43.0	41.6	115	41.9	35.3	61	35	55	21	50	3 09 44	12 54 64		
17	76	43.2	+0 40.7	130	09.7	+24 28.9	64	40	17 55	18 22	18 54	3 26 42	12 37 67		
18	91	43.4	+0 39.7	144	37.5	+24 22.5	64	45	17 55	18 24	18 59	3 47 39	12 17 71		
19	106	43.6	38.7	159	05.4	15.9	66	50	55	27	19 05	4 12 36	11 52 75		
20	121	43.9	37.7	173	33.2	09.2	67	52	55	29	09	25 33	40 77		
21	136	44.1	36.8	188	01.1	+24 02.3	69	54	55	30	12	39 31	26 80		
22	151	44.3	35.8	202	29.0	+23 55.3	70	56	55	32	16	4 56 27	11 10 83		
23	166	44.5	34.8	216	57.0	48.1	72	58	55	34	21	5 15 23	10 51 87		
24	181	44.7	+0 33.8	231	24.9	+23 40.8	73	60 S	17 55	18 37	19 27	5 40 17	10 26 94		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 02 ^m 2		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: -2.4 PMG: 22 ^h 16 ^m		Mag: -1.7 PMG: 10 ^h 30 ^m		Mag: +0.1 PMG: 6 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	359	27.5	172	53.4	-1	30.8	25	02.2	-16	20.1	202	02.1	+10	22.6	256	20.8	+22	09.0
1	14	30.0	187	53.0		32.1	40	05.0		20.0	217	04.0		22.4	271	23.1		09.0
2	29	32.5	202	52.7		33.4	55	07.7		19.9	232	06.0		22.2	286	25.4		09.0
3	44	34.9	217	52.3		34.7	70	10.4		19.8	247	08.0		22.1	301	27.7		08.9
4	59	37.4	232	51.9		35.9	85	13.2		19.7	262	09.9		21.9	316	30.0		08.9
5	74	39.9	247	51.5	-1	37.2	100	15.9	-16	19.6	277	11.9	+10	21.7	331	32.3	+22	08.9
6	89	42.3	262	51.2	-1	38.5	115	18.6	-16	19.5	292	13.9	+10	21.5	346	34.6	+22	08.9
7	104	44.8	277	50.8		39.8	130	21.4		19.4	307	15.8		21.3	1	36.9		08.9
8	119	47.3	292	50.4		41.0	145	24.1		19.3	322	17.8		21.1	16	39.2		08.9
9	134	49.7	307	50.1		42.3	160	26.8		19.2	337	19.8		20.9	31	41.5		08.9
10	149	52.2	322	49.7		43.6	175	29.5		19.0	352	21.8		20.7	46	43.8		08.9
11	164	54.7	337	49.3	-1	44.9	190	32.3	-16	18.9	7	23.7	+10	20.6	61	46.1	+22	08.8
12	179	57.1	352	48.9	-1	46.1	205	35.0	-16	18.8	22	25.7	+10	20.4	76	48.4	+22	08.8
13	194	59.6	7	48.6		47.4	220	37.7		18.7	37	27.7		20.2	91	50.7		08.8
14	210	02.0	22	48.2		48.7	235	40.4		18.6	52	29.6		20.0	106	53.0		08.8
15	225	04.5	37	47.8		50.0	250	43.1		18.5	67	31.6		19.8	121	55.3		08.8
16	240	07.0	52	47.5		51.2	265	45.9		18.4	82	33.6		19.6	136	57.6		08.8
17	255	09.4	67	47.1	-1	52.5	280	48.6	-16	18.3	97	35.5	+10	19.4	151	59.9	+22	08.8
18	270	11.9	82	46.7	-1	53.8	295	51.3	-16	18.2	112	37.5	+10	19.2	167	02.2	+22	08.7
19	285	14.4	97	46.3		55.1	310	54.0		18.1	127	39.5		19.1	182	04.5		08.7
20	300	16.8	112	46.0		56.3	325	56.7		18.0	142	41.4		18.9	197	06.8		08.7
21	315	19.3	127	45.6		57.6	340	59.4		17.8	157	43.4		18.7	212	09.1		08.7
22	330	21.8	142	45.2	-1	58.9	356	02.1		17.7	172	45.4		18.5	227	11.4		08.7
23	345	24.2	157	44.8	-2	00.2	11	04.9		17.6	187	47.3		18.3	242	13.7		08.7
24	0	26.7	172	44.5	-2	01.4	26	07.6	-16	17.5	202	49.3	+10	18.1	257	16.0	+22	08.7
Dif	—		-4	-13		+27	+1			+20	-2				+23			0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 52 ^m 8			Edad: 25 ^d 3 PHE { 4 ^h : 56 ^m 8 12 ^h : 57 ^m 1 20 ^h : 57 ^m 4 PMG: 8 ^h 53 ^m R ^o : 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	44.7	+0 33.8	231	24.9	+23 40.8	74	60 N	4 11	5 01	5 43	** ** *	** ** *	17 59	7	
1	196	45.0		245	52.9	33.4	74	58	17	04	44	** ** *	** ** *	44	12	
2	211	45.2		260	20.8	25.9	75	56	22	07	44	** ** *	** ** *	31	15	
3	226	45.4		274	48.9	18.2	77	54	27	09	45	0 07	83	19	19	
4	241	45.6		289	16.9	10.3	79	52	31	11	45	20	80	09	22	
5	256	45.9	+0 29.0	303	44.9	+23 02.4	79	50	4 35	5 13	5 46	0 31	77	17 00	24	
6	271	46.1	+0 28.0	318	13.0	+22 54.3	81	45	4 43	5 17	5 46	0 54	72	16 41	29	
7	286	46.3		332	41.1	46.0	83	40	48	20	47	1 12	69	25	34	
8	301	46.5		347	09.2	37.7	83	35	53	22	48	27	66	12	36	
9	316	46.7		1 37.4	92	29.2	85	30	4 56	24	48	1 40	64	16 00	40	
10	331	47.0		16 05.6	92	20.5	87	20	5 01	27	49	2 03	59	15 40	44	
11	346	47.2	+0 23.2	30 33.8	92	+22 11.8	87	10 N	5 04	5 28	5 49	2 22	56	15 22	49	
12	1 47.4	+0 22.2		45 02.0	92	+22 02.9	89	0	5 05	5 29	5 50	2 41	52	15 06	52	
13	16 47.6			59 30.2	92	+21 53.8	91	10 S	05	29	50	2 59	49	14 49	56	
14	31 47.8			73 58.5	93	44.7	91	20	5 03	28	50	3 18	46	31	60	
15	46 48.1			88 26.8	93	35.4	93	30	4 59	26	50	40	42	14 11	64	
16	61 48.3			102 55.2	94	26.0	94	35	56	25	50	3 53	39	13 58	68	
17	76 48.5	+0 17.3		117 23.6	94	+21 16.4	96	40	4 52	5 23	5 50	4 08	36	13 44	71	
18	91 48.7	+0 16.3		131 52.0	94	+21 06.8	96	45	4 47	5 21	5 50	4 26	32	13 28	74	
19	106 48.9			146 20.4	94	+20 57.0	98	50	40	18	50	48	27	13 07	80	
20	121 49.1			160 48.8	94	47.0	100	52	37	16	50	4 58	25	12 57	82	
21	136 49.4			175 17.3	95	37.0	100	54	33	15	50	5 10	22	46	85	
22	151 49.6			189 45.8	95	26.8	102	56	29	13	50	23	19	33	89	
23	166 49.8			204 14.4	96	16.5	103	58	24	11	50	38	15	18	94	
24	181 50.0	+0 10.5		218 43.0	96	+20 06.1	104	60 S	4 18	5 08	5 50	5 57	9	12 00	99	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			Dif	
	PMG 23 ^h 54 ^m 3		Mag: -3.9 PMG: 12 ^h 29 ^m			Mag: -2.4 PMG: 22 ^h 12 ^m			Mag: -1.8 PMG: 10 ^h 27 ^m			Mag: +0.1 PMG: 6 ^h 50 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	0	26.7	172	44.5	-2 01.4	26	07.6	-16 17.5	202	49.3	+10 18.1	257	16.0	+22 08.7		
1	15	29.2	187	44.1	02.7	41	10.3	17.4	217	51.3	17.9	272	18.3	08.7		
2	30	31.6	202	43.7	04.0	56	13.0	17.3	232	53.3	17.7	287	20.6	08.6		
3	45	34.1	217	43.4	05.2	71	15.7	17.1	247	55.2	17.5	302	22.9	08.6		
4	60	36.5	232	43.0	06.5	86	18.4	17.0	262	57.2	17.4	317	25.2	08.6		
5	75	39.0	247	42.6	-2 07.8	101	21.1	-16 16.9	277	59.2	+10 17.2	332	27.5	+22 08.6		
6	90	41.5	262	42.2	-2 09.1	116	23.8	-16 16.8	293	01.1	+10 17.0	347	29.8	+22 08.6		
7	105	43.9	277	41.9	10.3	131	26.5	16.7	308	03.1	16.8	2	32.1	08.6		
8	120	46.4	292	41.5	11.6	146	29.2	16.6	323	05.1	16.6	17	34.4	08.6		
9	135	48.9	307	41.1	12.9	161	31.9	16.4	338	07.0	16.4	32	36.7	08.6		
10	150	51.3	322	40.7	14.2	176	34.6	16.3	353	09.0	16.2	47	39.0	08.5		
11	165	53.8	337	40.4	-2 15.4	191	37.3	-16 16.2	8	11.0	+10 16.0	62	41.3	+22 08.5		
12	180	56.3	352	40.0	-2 16.7	206	40.0	-16 16.1	23	12.9	+10 15.9	77	43.6	+22 08.5		
13	195	58.7	7	39.6	18.0	221	42.7	16.0	38	14.9	15.7	92	45.9	08.5		
14	211	01.2	22	39.2	19.3	236	45.3	15.8	53	16.9	15.5	107	48.2	08.5		
15	226	03.6	37	38.9	20.5	251	48.0	15.7	68	18.9	15.3	122	50.5	08.5		
16	241	06.1	52	38.5	21.8	266	50.7	15.6	83	20.8	15.1	137	52.8	08.5		
17	256	08.6	67	38.1	-2 23.1	281	53.4	-16 15.5	98	22.8	+10 14.9	152	55.2	+22 08.5		
18	271	11.0	82	37.8	-2 24.4	296	56.1	-16 15.3	113	24.8	+10 14.7	167	57.5	+22 08.4		
19	286	13.5	97	37.4	25.6	311	58.8	15.2	128	26.7	14.5	182	59.8	08.4		
20	301	16.0	112	37.0	26.9	327	01.5	15.1	143	28.7	14.4	198	02.1	08.4		
21	316	18.4	127	36.6	28.2	342	04.1	15.0	158	30.7	14.2	213	04.4	08.4		
22	331	20.9	142	36.3	29.4	357	06.8	14.8	173	32.7	14.0	228	06.7	08.4		
23	346	23.4	157	35.9	30.7	12	09.5	14.7	188	34.6	13.8	243	09.0	08.4		
24	1	25.8	172	35.5	-2 32.0	27	12.2	-16 14.6	203	36.6	+10 13.6	258	11.3	+22 08.4		
Dif	—		-4 -13		+27 +1		+20 -2		+23 0		+23 0		+23 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 5			Edad: 26 ^d 3 PHE { SD: 15'7 PMG: 9 ^h 45 ^m					4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'3 R°: 51 ^m			Hora		R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	181	50.0	+0	218	43.0	+20	06.1	60 N	17	58	18	40	0	53	99
1	196	50.2		233	11.6	+19	55.6 ¹⁰⁵	58	58	37	24		1	07	95
2	211	50.5		247	40.2		44.9 ¹⁰⁷	56	58	35	19		20	90	46
3	226	50.7		262	08.9		34.1 ¹⁰⁸	54	57	33	14		30	87	38
4	241	50.9		276	37.6		23.2 ¹⁰⁹	52	57	31	11		40	84	31
5	256	51.1	+0	291	06.3	+19	12.2 ¹¹⁰	50	17	57	18	29	1	48	82
6	271	51.3	+0	305	35.1	+19	01.1 ¹¹¹	45	17	57	18	26	2	06	76
7	286	51.6		320	03.9	+18	49.8 ¹¹³	40	56	23	18	55	21	71	16
8	301	51.8		334	32.7		38.4 ¹¹⁴	35	56	21	51		33	68	48
9	316	52.0		349	01.6		26.9 ¹¹⁵	30	56	20	48		2	44	65
10	331	52.2	+0	3	30.5		15.3 ¹¹⁶	20	56	18	43		3	02	60
11	346	52.4	-0	17	59.4	+18	03.6 ¹¹⁷	10 N	17	56	18	17	3	18	56
12	1	52.7	-0	32	28.4 ¹⁰⁰	+17	51.8 ¹¹⁸	0	17	56	18	16	3	33	51
13	16	52.9		46	57.4 ¹⁰⁰		39.9 ¹¹⁹	10 S	56	17	41		3	48	47
14	31	53.1		61	26.4 ¹⁰⁰		27.8 ¹²¹	20	56	18	44		4	04	42
15	46	53.3		75	55.4 ¹⁰⁰		15.7 ¹²¹	30	57	20	48		22	37	15
16	61	53.5		90	24.5 ¹⁰¹	+17	03.4 ¹²³	35	57	22	52		32	35	15
17	76	53.7	-0	104	53.6 ¹⁰¹	+16	51.1 ¹²³	40	17	57	18	24	4	44	31
18	91	54.0	-0	119	22.8 ¹⁰²	+16	38.6 ¹²⁵	45	17	58	18	27	4	58	27
19	106	54.2		133	51.9 ¹⁰¹		26.0 ¹²⁶	50	58	30	09		5	15	22
20	121	54.4		148	21.1 ¹⁰²		13.3 ¹²⁷	52	58	32	12		23	19	19
21	136	54.6		162	50.4 ¹⁰³	+16	00.5 ¹²⁸	54	59	34	16		32	16	11
22	151	54.8		177	19.6 ¹⁰²	+15	47.7 ¹²⁸	56	59	36	21		42	13	14
23	166	55.1		191	48.9 ¹⁰³		34.7 ¹³⁰	58	17	59	39	26	5	53	9
24	181	55.3	-0	206	18.2 ¹⁰³	+15	21.6 ¹³¹	60 S	18	00	18	42	6	06	5
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 50 ^m 4		Mag: -3.9 PMG: 12 ^h 30 ^m			Mag: -2.3 PMG: 22 ^h 07 ^m			Mag: -1.8 PMG: 10 ^h 24 ^m			Mag: +0.1 PMG: 6 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°
0	1	25.8	172	35.5	-2	27	12.2	-16	203	36.6	+10	258	11.3	+22	08.4
1	16	28.3	187	35.1		42	14.8		218	38.6		273	13.6		08.3
2	31	30.8	202	34.8		57	17.5		233	40.5		288	15.9		08.3
3	46	33.2	217	34.4		72	20.2		248	42.5		303	18.2		08.3
4	61	35.7	232	34.0		87	22.9		263	44.5		318	20.5		08.3
5	76	38.1	247	33.6	-2	102	25.5	-16	278	46.4	+10	333	22.8	+22	08.3
6	91	40.6	262	33.3	-2	117	28.2	-16	293	48.4	+10	348	25.1	+22	08.3
7	106	43.1	277	32.9		132	30.9		308	50.4		3	27.5		08.3
8	121	45.5	292	32.5		147	33.5		323	52.4		18	29.8		08.3
9	136	48.0	307	32.1		162	36.2		338	54.3		33	32.1		08.2
10	151	50.5	322	31.8		177	38.9		353	56.3		48	34.4		08.2
11	166	52.9	337	31.4	-2	192	41.5	-16	8	58.3	+10	63	36.7	+22	08.2
12	181	55.4	352	31.0	-2	207	44.2	-16	24	00.2	+10	78	39.0	+22	08.2
13	196	57.9	7	30.6		222	46.9		39	02.2		93	41.3		08.2
14	212	00.3	22	30.3		237	49.5		54	04.2		108	43.6		08.2
15	227	02.8	37	29.9		252	52.2		69	06.2		123	45.9		08.2
16	242	05.3	52	29.5		267	54.8		84	08.1		138	48.2		08.2
17	257	07.7	67	29.1	-2	282	57.5	-16	99	10.1	+10	153	50.6	+22	08.1
18	272	10.2	82	28.7	-2	298	00.1	-16	114	12.1	+10	168	52.9	+22	08.1
19	287	12.6	97	28.4		313	02.8		129	14.1		183	55.2		08.1
20	302	15.1	112	28.0		328	05.4		144	16.0		198	57.5		08.1
21	317	17.6	127	27.6	-2	343	08.1		159	18.0		213	59.8		08.1
22	332	20.0	142	27.2	-3	358	10.7		174	20.0		229	02.1		08.1
23	347	22.5	157	26.9	-3	13	13.4		189	21.9		244	04.4		08.1
24	2	25.0	172	26.5	-3	28	16.0	-16	204	23.9	+10	259	06.7	+22	08.1
Dif	—		-4		-13	+27		+1	+20		-2		+23		0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 28 ^d 3	PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 5 20 ^h : 59 ^m 7										
	PMG: 11 ^h 51 ^m 8					SD: 16 ^h 1			PMG: 11 ^h 26 ^m			R°: 50 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	182	00.5	-0 36.2	194	09.4	+9 40.9		60 N	17 52	18 34	19 23	4 12 100		18 13 2	
1	197	00.7	37.2	208	39.3 ¹⁰⁹	25.7 ¹⁵²		58	52	31	18	17 96		10 6	
2	212	00.9	38.2	223	09.2 ¹⁰⁹	+9 10.5 ¹⁵²		56	52	29	13	22 92		08 9	
3	227	01.1	39.2	237	39.1 ¹⁰⁹	+8 55.2 ¹⁵³		54	52	28	09	26 89		06 12	
4	242	01.3	40.1	252	09.0 ¹⁰⁹	39.8 ¹⁵⁴		52	53	26	06	29 86		04 15	
5	257	01.6	-0 41.1	266	38.9 ¹⁰⁹	+8 24.4 ¹⁵⁴		50	17 53	18 25	19 03	4 32 84		18 02 17	
6	272	01.8	-0 42.1	281	08.9 ¹¹⁰	+8 08.9 ¹⁵⁵		45	17 53	18 22	18 56	4 39 78		17 59 22	
7	287	02.0	43.1	295	38.8 ¹⁰⁹	+7 53.4 ¹⁵⁵		40	53	20	52	45 73		55 27	
8	302	02.2	44.0	310	08.8 ¹¹⁰	37.8 ¹⁵⁶		35	53	18	48	50 69		52 31	
9	317	02.4	45.0	324	38.8 ¹¹⁰	22.1 ¹⁵⁷		30	53	17	45	4 54 66		50 34	
10	332	02.6	46.0	339	08.8 ¹¹⁰	+7 06.4 ¹⁵⁷		20	54	16	41	5 02 60		46 39	
11	347	02.9	-0 47.0	353	38.8 ¹¹⁰	+6 50.6 ¹⁵⁸		10 N	17 54	18 15	18 40	5 08 55		17 42 45	
12	2	03.1	-0 47.9	8	08.7 ¹⁰⁹	+6 34.8 ¹⁵⁸		0	17 55	18 16	18 40	5 15 49		17 38 50	
13	17	03.3	48.9	22	38.7 ¹¹⁰	19.0 ¹⁵⁸		10 S	56	17	41	21 44		34 55	
14	32	03.5	49.9	37	08.8 ¹¹¹	+6 03.1 ¹⁵⁹		20	57	19	44	27 40		30 60	
15	47	03.7	50.9	51	38.8 ¹¹⁰	+5 47.1 ¹⁶⁰		30	58	22	49	35 33		26 66	
16	62	03.9	51.8	66	08.8 ¹¹⁰	31.1 ¹⁶⁰		35	58	24	53	39 30		23 70	
17	77	04.1	-0 52.8	80	38.8 ¹¹⁰	+5 15.1 ¹⁶⁰		40	17 59	18 26	18 58	5 44 26		17 20 74	
18	92	04.4	-0 53.8	95	08.8 ¹¹⁰	+4 59.0 ¹⁶¹		45	18 00	18 29	19 04	5 49 22		17 16 79	
19	107	04.6	54.8	109	38.8 ¹¹⁰	42.8 ¹⁶²		50	01	34	12	56 17		12 84	
20	122	04.8	55.7	124	08.8 ¹¹⁰	26.7 ¹⁶¹		52	02	36	16	5 59 14		10 87	
21	137	05.0	56.7	138	38.8 ¹¹⁰	+4 10.5 ¹⁶²		54	02	38	20	6 02 12		08 89	
22	152	05.2	57.7	153	08.8 ¹¹⁰	+3 54.2 ¹⁶³		56	03	40	25	06 9		05 93	
23	167	05.4	58.7	167	38.8 ¹¹⁰	38.0 ¹⁶²		58	04	43	31	10 6		17 03 96	
24	182	05.7	-0 59.6	182	08.8 ¹¹⁰	+3 21.7 ¹⁶³		60 S	18 05	18 46	19 37	6 14 3		16 59 101	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 42 ^m 5		Mag: -3.9 PMG: 12 ^h 31 ^m			Mag: -2.3 PMG: 21 ^h 59 ^m			Mag: -1.8 PMG: 10 ^h 18 ^m			Mag: +0.1 PMG: 6 ^h 39 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	3	24.1	172	17.4	-3 33.0		29	19.1	-16 07.8		205	11.3	+10 04.6		
1	18	26.6	187	17.0	34.3		44	21.7	07.6		220	13.3	04.5		
2	33	29.0	202	16.6	35.5		59	24.3	07.5		235	15.2	04.3		
3	48	31.5	217	16.3	36.8		74	27.0	07.3		250	17.2	04.1		
4	63	34.0	232	15.9	38.1		89	29.6	07.2		265	19.2	03.9		
5	78	36.4	247	15.5	-3 39.3		104	32.2	-16 07.0		280	21.2	+10 03.7		
6	93	38.9	262	15.1	-3 40.6		119	34.8	-16 06.9		295	23.1	+10 03.5		
7	108	41.3	277	14.7	41.9		134	37.4	06.7		310	25.1	03.3		
8	123	43.8	292	14.4	43.2		149	40.0	06.5		325	27.1	03.2		
9	138	46.3	307	14.0	44.4		164	42.6	06.4		340	29.1	03.0		
10	153	48.7	322	13.6	45.7		179	45.2	06.2		355	31.0	02.8		
11	168	51.2	337	13.2	-3 47.0		194	47.8	-16 06.1		10	33.0	+10 02.6		
12	183	53.7	352	12.8	-3 48.2		209	50.4	-16 05.9		25	35.0	+10 02.4		
13	198	56.1	7	12.5	49.5		224	53.0	05.7		40	37.0	02.2		
14	213	58.6	22	12.1	50.8		239	55.6	05.6		55	38.9	02.0		
15	229	01.1	37	11.7	52.0		254	58.2	05.4		70	40.9	01.8		
16	244	03.5	52	11.3	53.3		270	00.8	05.2		85	42.9	01.7		
17	259	06.0	67	10.9	-3 54.6		285	03.4	-16 05.1		100	44.9	+10 01.5		
18	274	08.5	82	10.6	-3 55.8		300	05.9	-16 04.9		115	46.8	+10 01.3		
19	289	10.9	97	10.2	57.1		315	08.5	04.8		130	48.8	01.1		
20	304	13.4	112	09.8	58.4		330	11.1	04.6		145	50.8	00.9		
21	319	15.8	127	09.4	-3 59.6		345	13.7	04.4		160	52.8	00.7		
22	334	18.3	142	09.0	-4 00.9		0	16.3	04.3		175	54.7	00.5		
23	349	20.8	157	08.6	02.2		15	18.9	04.1		190	56.7	00.4		
24	4	23.2	172	08.3	-4 03.4		30	21.5	-16 03.9		205	58.7	+10 00.2		
Dif	—		-4 -13			+26 +2			+20 -2			+23 0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 51 ^m 5			Edad: 29 ^d 3 PHE { 4 ^h : 59 ^m 9 12 ^h : 60 ^m 1 20 ^h : 60 ^m 2 Rº: 51 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m
0	182	05.7	-0 59.6	182	08.8	+3 21.7	60 N	4 21	5 11	5 52	5 52	102	18 15	3
1	197	05.9	-1 00.6	196	38.8 ¹¹⁰	+3 05.3 ¹⁶⁴	58	27	13	52	53	98	16	6
2	212	06.1	01.6	211	08.8 ¹¹⁰	+2 49.0 ¹⁶³	56	31	15	52	54	94	17	10
3	227	06.3	02.5	225	38.8 ¹¹⁰	32.6 ¹⁶⁴	54	35	17	52	55	90	18	12
4	242	06.5	03.5	240	08.7 ¹⁰⁹	+2 16.1 ¹⁶⁵	52	38	18	52	55	88	19	15
5	257	06.7	-1 04.5	254	38.7 ¹¹⁰	+1 59.7 ¹⁶⁴	50	4 41	5 19	5 52	5 56	85	18 19	18
6	272	06.9	-1 05.5	269	08.6 ¹⁰⁹	+1 43.2 ¹⁶⁵	45	4 48	5 22	5 51	5 57	80	18 21	22
7	287	07.2	06.4	283	38.5 ¹⁰⁹	26.8 ¹⁶⁴	40	52	24	51	58	75	22	27
8	302	07.4	07.4	298	08.5 ¹¹⁰	+1 10.3 ¹⁶⁵	35	56	25	51	5 59	71	23	31
9	317	07.6	08.4	312	38.4 ¹⁰⁹	+0 53.7 ¹⁶⁶	30	4 59	26	50	6 00	67	24	34
10	332	07.8	09.4	327	08.2 ¹⁰⁸	37.2 ¹⁶⁵	20	5 02	28	50	02	60	25	41
11	347	08.0	-1 10.3	341	38.1 ¹⁰⁹	+0 20.6 ¹⁶⁶	10 N	5 04	5 28	5 49	6 03	55	18 27	45
12	2	08.2	-1 11.3	356	08.0 ¹⁰⁹	+0 04.1 ¹⁶⁵	0	5 04	5 28	5 48	6 04	50	18 28	51
13	17	08.4	12.3	10	37.8 ¹⁰⁸	-0 12.5 ¹⁶⁶	10 S	5 02	26	47	05	46	29	56
14	32	08.7	13.3	25	07.6 ¹⁰⁸	29.1 ¹⁶⁶	20	4 59	24	46	07	40	30	62
15	47	08.9	14.2	39	37.4 ¹⁰⁸	-0 45.7 ¹⁶⁶	30	53	21	45	08	34	32	67
16	62	09.1	15.2	54	07.2 ¹⁰⁸	-1 02.2 ¹⁶⁵	35	50	19	44	09	31	33	71
17	77	09.3	-1 16.2	68	36.9 ¹⁰⁷	-1 18.8 ¹⁶⁶	40	4 45	5 17	5 44	6 10	27	18 34	75
18	92	09.5	-1 17.2	83	06.7 ¹⁰⁸	-1 35.4 ¹⁶⁶	45	4 39	5 13	5 42	6 11	23	18 35	80
19	107	09.7	18.1	97	36.4 ¹⁰⁷	-1 52.0 ¹⁶⁶	50	31	09	41	13	17	36	86
20	122	09.9	19.1	112	06.0 ¹⁰⁶	-2 08.6 ¹⁶⁶	52	27	07	41	13	15	37	88
21	137	10.1	20.1	126	35.7 ¹⁰⁷	25.2 ¹⁶⁶	54	22	05	40	14	12	37	92
22	152	10.4	21.1	141	05.3 ¹⁰⁶	41.8 ¹⁶⁶	56	17	5 02	39	15	9	38	95
23	167	10.6	22.0	155	34.9 ¹⁰⁶	-2 58.4 ¹⁶⁶	58	12	4 59	38	16	6	39	98
24	182	10.8	-1 23.0	170	04.5 ¹⁰⁶	-3 15.0 ¹⁶⁶	60 S	4 05	4 56	5 37	6 17	2	18 40	102
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 38 ^m 6		Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: -2.2 PMG: 21 ^h 55 ^m			Mag: -1.8 PMG: 10 ^h 15 ^m			Mag: +0.1 PMG: 6 ^h 35 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	4	23.2	172	08.3	-4 03.4	30 21.5	-16 03.9	205 58.7	+10 00.2	260 57.9	+22 07.5			
1	19	25.7	187	07.9	04.7	45 24.0	03.8	221 00.7	+10 00.0	276 00.2	07.5			
2	34	28.2	202	07.5	06.0	60 26.6	03.6	236 02.6	+9 59.8	291 02.5	07.5			
3	49	30.6	217	07.1	07.2	75 29.2	03.4	251 04.6	59.6	306 04.9	07.4			
4	64	33.1	232	06.7	08.5	90 31.8	03.2	266 06.6	59.4	321 07.2	07.4			
5	79	35.6	247	06.3	-4 09.8	105 34.3	-16 03.1	281 08.6	+9 59.2	336 09.5	+22 07.4			
6	94	38.0	262	06.0	-4 11.0	120 36.9	-16 02.9	296 10.6	+9 59.1	351 11.8	+22 07.4			
7	109	40.5	277	05.6	12.3	135 39.5	02.7	311 12.5	58.9	6 14.1	07.4			
8	124	42.9	292	05.2	13.6	150 42.1	02.6	326 14.5	58.7	21 16.5	07.4			
9	139	45.4	307	04.8	14.8	165 44.6	02.4	341 16.5	58.5	36 18.8	07.4			
10	154	47.9	322	04.4	16.1	180 47.2	02.2	356 18.5	58.3	51 21.1	07.4			
11	169	50.3	337	04.0	-4 17.3	195 49.8	-16 02.0	11 20.4	+9 58.1	66 23.4	+22 07.3			
12	184	52.8	352	03.6	-4 18.6	210 52.3	-16 01.9	26 22.4	+9 57.9	81 25.8	+22 07.3			
13	199	55.3	7 03.3	19.9	19.9	225 54.9	01.7	41 24.4	57.8	96 28.1	07.3			
14	214	57.7	22 02.9	21.1	21.1	240 57.5	01.5	56 26.4	57.6	111 30.4	07.3			
15	230	00.2	37 02.5	22.4	22.4	256 00.0	01.3	71 28.3	57.4	126 32.7	07.3			
16	245	02.7	52 02.1	23.7	23.7	271 02.6	01.2	86 30.3	57.2	141 35.0	07.3			
17	260	05.1	67 01.7	-4 24.9	24.9	286 05.1	-16 01.0	101 32.3	+9 57.0	156 37.4	+22 07.3			
18	275	07.6	82 01.3	-4 26.2	26.2	301 07.7	-16 00.8	116 34.3	+9 56.8	171 39.7	+22 07.3			
19	290	10.1	97 01.0	27.5	27.5	316 10.3	00.6	131 36.3	56.6	186 42.0	07.3			
20	305	12.5	112 00.6	28.7	28.7	331 12.8	00.5	146 38.2	56.5	201 44.3	07.2			
21	320	15.0	127 00.2	30.0	30.0	346 15.4	00.3	161 40.2	56.3	216 46.7	07.2			
22	335	17.4	141 59.8	31.3	31.3	1 17.9	-16 00.1	176 42.2	56.1	231 49.0	07.2			
23	350	19.9	156 59.4	32.5	32.5	16 20.5	-15 59.9	191 44.2	55.9	246 51.3	07.2			
24	5	22.4	171 59.0	-4 33.8	33.8	31 23.0	-15 59.7	206 46.1	+9 55.7	261 53.6	+22 07.2			
Dif	—		-4	-13	+26	+2	+20	-2	+23	0				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 51 ^m 1			Edad: 30 ^d 3 PHE { 4 ^h : 60'3 12 ^h : 60'4 20 ^h : 60'4 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	182	10.8	-1 23.0	170	04.5	-3 15.0		60 N	17 46	18 27	19 17	7 34 104	18 18	3	
1	197	11.0		184	34.0 ¹⁰⁵	31.5 ¹⁶⁵		58	47	26	12	31 99	22	8	
2	212	11.2	25.0	199	03.5 ¹⁰⁵	-3 48.1 ¹⁶⁶		56	47	24	08	28 96	27	11	
3	227	11.4	25.9	213	33.0 ¹⁰⁵	-4 04.6 ¹⁶⁵		54	47	23	04	25 93	30	15	
4	242	11.6	26.9	228	02.4 ¹⁰⁴	21.1 ¹⁶⁵		52	48	21	19 01	23 90	34	17	
5	257	11.8	-1 27.9	242	31.8 ¹⁰⁴	-4 37.6 ¹⁶⁵		50	17 48	18 20	18 58	7 21 87	18 37	20	
6	272	12.1	-1 28.9	257	01.2 ¹⁰⁴	-4 54.1 ¹⁶⁵		45	17 49	18 18	18 52	7 17 80	18 43	26	
7	287	12.3	29.8	271	30.5 ¹⁰³	-5 10.5 ¹⁶⁴		40	50	17	48	13 76	49	30	
8	302	12.5	30.8	285	59.8 ¹⁰³	27.0 ¹⁶⁵		35	50	16	45	10 72	54	34	
9	317	12.7	31.8	300	29.0 ¹⁰²	43.4 ¹⁶⁴		30	51	15	43	07 68	18 58	37	
10	332	12.9	32.7	314	58.2 ¹⁰²	-5 59.8 ¹⁶⁴		20	52	14	40	7 02 62	19 06	43	
11	347	13.1	-1 33.7	329	27.4 ¹⁰²	-6 16.1 ¹⁶³		10 N	17 53	18 14	18 39	6 58 57	19 12	49	
12	2	13.3	-1 34.7	343	56.5 ¹⁰¹	-6 32.4 ¹⁶³		0	17 54	18 15	18 39	6 54 52	19 19	53	
13	17	13.5	35.7	358	25.6 ¹⁰¹	-6 48.7 ¹⁶³		10 S	56	17	41	51 47	25	58	
14	32	13.8	36.6	12	54.6 ¹⁰⁰	-7 05.0 ¹⁶³		20	57	19	45	47 41	32	63	
15	47	14.0	37.6	27	23.6 ¹⁰⁰	21.2 ¹⁶²		30	17 59	23	51	42 36	39	69	
16	62	14.2	38.6	41	52.6 ¹⁰⁰	37.3 ¹⁶¹		35	18 00	25	18 55	40 32	44	72	
17	77	14.4	-1 39.6	56	21.5 ⁹⁹	-7 53.5 ¹⁶²		40	18 01	18 28	19 00	6 37 28	19 49	77	
18	92	14.6	-1 40.5	70	50.3 ⁹⁸	-8 09.6 ¹⁶¹		45	18 02	18 32	19 07	6 34 24	19 55	81	
19	107	14.8	41.5	85	19.1 ⁹⁸	25.6 ¹⁶⁰		50	04	37	15	30 18	20 02	87	
20	122	15.0	42.5	99	47.9 ⁹⁸	41.6 ¹⁶⁰		52	05	39	19	28 16	05	90	
21	137	15.2	43.5	114	16.6 ⁹⁷	-8 57.6 ¹⁶⁰		54	06	41	24	26 13	09	93	
22	152	15.4	44.4	128	45.2 ⁹⁶	-9 13.5 ¹⁵⁹		56	07	44	29	24 10	13	97	
23	167	15.7	45.4	143	13.8 ⁹⁶	29.3 ¹⁵⁸		58	08	48	35	22 7	17	101	
24	182	15.9	-1 46.4	157	42.3 ⁹⁵	-9 45.1 ¹⁵⁸		60 S	18 09	18 51	19 42	6 19 3	20 22	106	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 23 ^h 34 ^m 6		Mag: -3.9 PMG: 12 ^h 32 ^m		Mag: -2.2 PMG: 21 ^h 51 ^m		Mag: -1.8 PMG: 10 ^h 12 ^m			Mag: +0.1 PMG: 6 ^h 31 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	°	'	°	'	°	'	°	'		
0	5	22.4	171	59.0	-4 33.8	31	23.0	-15 59.7	206	46.1	+9 55.7	261	53.6	+22 07.2
1	20	24.8	186	58.6	35.0	46	25.6	59.6	221	48.1	55.5	276	56.0	07.2
2	35	27.3	201	58.2	36.3	61	28.1	59.4	236	50.1	55.3	291	58.3	07.2
3	50	29.8	216	57.9	37.6	76	30.6	59.2	251	52.1	55.2	307	00.6	07.2
4	65	32.2	231	57.5	38.8	91	33.2	59.0	266	54.1	55.0	322	02.9	07.2
5	80	34.7	246	57.1	-4 40.1	106	35.7	-15 58.8	281	56.0	+9 54.8	337	05.3	+22 07.1
6	95	37.2	261	56.7	-4 41.4	121	38.3	-15 58.6	296	58.0	+9 54.6	352	07.6	+22 07.1
7	110	39.6	276	56.3	42.6	136	40.8	58.5	312	00.0	54.4	7	09.9	07.1
8	125	42.1	291	55.9	43.9	151	43.4	58.3	327	02.0	54.2	22	12.2	07.1
9	140	44.5	306	55.5	45.1	166	45.9	58.1	342	04.0	54.0	37	14.6	07.1
10	155	47.0	321	55.1	46.4	181	48.4	57.9	357	05.9	53.9	52	16.9	07.1
11	170	49.5	336	54.8	-4 47.7	196	51.0	-15 57.7	12	07.9	+9 53.7	67	19.2	+22 07.1
12	185	51.9	351	54.4	-4 48.9	211	53.5	-15 57.5	27	09.9	+9 53.5	82	21.5	+22 07.1
13	200	54.4	6	54.0	50.2	226	56.0	57.3	42	11.9	53.3	97	23.9	07.0
14	215	56.9	21	53.6	51.4	241	58.6	57.2	57	13.8	53.1	112	26.2	07.0
15	230	59.3	36	53.2	52.7	257	01.1	57.0	72	15.8	52.9	127	28.5	07.0
16	246	01.8	51	52.8	54.0	272	03.6	56.8	87	17.8	52.8	142	30.9	07.0
17	261	04.3	66	52.4	-4 55.2	287	06.1	-15 56.6	102	19.8	+9 52.6	157	33.2	+22 07.0
18	276	06.7	81	52.0	-4 56.5	302	08.7	-15 56.4	117	21.8	+9 52.4	172	35.5	+22 07.0
19	291	09.2	96	51.6	57.7	317	11.2	56.2	132	23.7	52.2	187	37.8	07.0
20	306	11.7	111	51.3	-4 59.0	332	13.7	56.0	147	25.7	52.0	202	40.2	07.0
21	321	14.1	126	50.9	-5 00.3	347	16.2	55.8	162	27.7	51.8	217	42.5	07.0
22	336	16.6	141	50.5	01.5	2	18.8	55.6	177	29.7	51.6	232	44.8	06.9
23	351	19.0	156	50.1	02.8	17	21.3	55.4	192	31.7	51.5	247	47.2	06.9
24	6	21.5	171	49.7	-5 04.0	32	23.8	-15 55.3	207	33.6	+9 51.3	262	49.5	+22 06.9
Dif	—		-4	-13		+25	+2		+20	-2		+23	0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 8			Edad: 1 ^d 9 PHE { 4 ^h : 60'4 12 ^h : 60'4 20 ^h : 60'4 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	182	15.9	-1	46.4	157	42.3	-9	45.1	60 N	4 26	5 16	5 57	9 18	108	18 21
1	197	16.1		47.4	172	10.8	95	-10 00.9	58	31	17	57	10 103		30 11
2	212	16.3		48.3	186	39.3	95	16.6	56	35	19	56	9 04	98	38 15
3	227	16.5		49.3	201	07.6	93	32.2	54	39	20	55	8 58	94	45 18
4	242	16.7		50.3	215	35.9	93	-10 47.8	52	42	21	55	53	91	51 22
5	257	16.9	-1	51.2	230	04.2	93	-11 03.3	50	4 45	5 22	5 55	8 48	88	18 57
6	272	17.1	-1	52.2	244	32.4	92	-11 18.7	45	4 50	5 24	5 54	8 37	83	19 09
7	287	17.3		53.2	259	00.6	92	34.1	40	54	26	53	29	77	19 34
8	302	17.5		54.2	273	28.6	90	-11 49.4	35	4 57	27	52	22	73	28 38
9	317	17.8		55.1	287	56.7	91	-12 04.6	30	5 00	27	51	15	70	35 42
10	332	18.0		56.1	302	24.6	89	19.8	20	02	28	50	8 04	65	19 49
11	347	18.2	-1	57.1	316	52.5	89	-12 34.9	10 N	5 03	5 28	5 49	7 55	59	20 01
12	2	18.4	-1	58.1	331	20.4	89	-12 49.9	0	5 03	5 27	5 48	7 46	55	20 12
13	17	18.6	-1	59.0	345	48.1	87	-13 04.9	10 S	5 01	25	46	38	49	23 60
14	32	18.8	-2	00.0	0	15.8	87	19.7	20	4 57	23	45	28	45	35 65
15	47	19.0	-2	01.0	14	43.5	87	34.5	30	51	19	43	18	39	48 71
16	62	19.2		02.0	29	11.1	86	-13 49.2	35	47	16	42	12	36	20 56
17	77	19.4	-2	02.9	43	38.6	85	-14 03.8	40	4 41	5 13	5 40	7 05	32	21 06
18	92	19.6	-2	03.9	58	06.0	84	-14 18.3	45	4 35	5 09	5 39	6 58	27	21 16
19	107	19.8		04.9	72	33.4	84	32.7	50	26	04	37	48	22	29 88
20	122	20.1		05.9	87	00.7	83	-14 47.1	52	22	5 02	36	44	19	35 91
21	137	20.3		06.8	101	27.9	82	-15 01.3	54	17	4 59	35	39	17	42 95
22	152	20.5		07.8	115	55.1	82	15.5	56	12	57	34	34	13	50 98
23	167	20.7		08.8	130	22.2	81	29.6	58	4 05	53	33	29	9	21 58
24	182	20.9	-2	09.7	144	49.2	80	-15 43.5	60 S	3 58	4 49	5 31	6 22	5	22 08

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 30 ^m 7		Mag: -3.9 PMG: 12 ^h 33 ^m		Mag: -2.2 PMG: 21 ^h 47 ^m		Mag: -1.8 PMG: 10 ^h 08 ^m		Mag: +0.1 PMG: 6 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	21.5	171	49.7	-5	04.0	207	33.6	+9	51.3
1	21	24.0	186	49.3		05.3	222	35.6		51.1
2	36	26.4	201	48.9		06.6	237	37.6		50.9
3	51	28.9	216	48.5		07.8	252	39.6		50.7
4	66	31.4	231	48.1		09.1	267	41.6		50.5
5	81	33.8	246	47.7	-5	10.3	282	43.6	+9	50.3
6	96	36.3	261	47.3	-5	11.6	297	45.5	+9	50.2
7	111	38.8	276	47.0		12.9	312	47.5		50.0
8	126	41.2	291	46.6		14.1	327	49.5		49.8
9	141	43.7	306	46.2		15.4	342	51.5		49.6
10	156	46.2	321	45.8		16.6	357	53.5		49.4
11	171	48.6	336	45.4	-5	17.9	12	55.4	+9	49.2
12	186	51.1	351	45.0	-5	19.1	27	57.4	+9	49.1
13	201	53.5	6	44.6		20.4	42	59.4		48.9
14	216	56.0	21	44.2		21.7	58	01.4		48.7
15	231	58.5	36	43.8		22.9	73	03.4		48.5
16	247	00.9	51	43.4		24.2	88	05.3		48.3
17	262	03.4	66	43.0	-5	25.4	103	07.3	+9	48.1
18	277	05.9	81	42.6	-5	26.7	118	09.3	+9	47.9
19	292	08.3	96	42.2		27.9	133	11.3		47.8
20	307	10.8	111	41.8		29.2	148	13.3		47.6
21	322	13.3	126	41.4		30.4	163	15.3		47.4
22	337	15.7	141	41.1		31.7	178	17.2		47.2
23	352	18.2	156	40.7		33.0	193	19.2		47.0
24	7	20.6	171	40.3	-5	34.2	208	21.2	+9	46.8
Dif	—		-4		-13		+25		+2	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 4			Edad: 2 ^d 9 PHE { 4 ^h : 60'3 12 ^h : 60'3 20 ^h : 60'2 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	20.9	-2 09.7	144	49.2	-15 43.5	80	60 N	17 40	18 21	19 10	11 06 110	18 27 11	18 27 11		
1	197	21.1	10.7	159	16.2	-15 57.4	139	58	41	20	06	10 53 103	41 17	41 17		
2	212	21.3	11.7	173	43.1	-16 11.1	137	56	42	19	02	42 98	18 53 22	18 53 22		
3	227	21.5	12.7	188	09.9	24.8	137	54	43	18	59	32 94	19 03 26	19 03 26		
4	242	21.7	13.6	202	36.7	38.4	136	52	43	17	56	24 90	13 29	13 29		
5	257	21.9	-2 14.6	217	03.4	-16 51.8	134	50	17 44	18 16	18 54	10 16 87	19 21 32	19 21 32		
6	272	22.1	-2 15.6	231	30.0	-17 05.1	133	45	17 45	18 14	18 49	10 00 81	19 39 37	19 39 37		
7	287	22.3	16.6	245	56.5	18.4	133	40	46	13	45	9 46 78	19 53 42	19 53 42		
8	302	22.6	17.5	260	23.0	31.5	131	35	48	13	42	35 74	20 06 44	20 06 44		
9	317	22.8	18.5	274	49.4	44.5	130	30	49	12	40	25 71	17 47	17 47		
10	332	23.0	19.5	289	15.7	-17 57.4	129	20	50	12	38	9 09 65	36 51	36 51		
11	347	23.2	-2 20.4	303	42.0	-18 10.1	127	10 N	17 52	18 13	18 37	8 54 61	20 52 55	20 52 55		
12	2	23.4	-2 21.4	318	08.1	-18 22.8	127	0	17 54	18 14	18 38	8 41 57	21 08 58	21 08 58		
13	17	23.6	22.4	332	34.3	35.3	125	10 S	55	16	41	27 54	23 62	23 62		
14	32	23.8	23.4	347	00.3	-18 47.7	124	20	17 57	20	45	8 13 49	40 66	40 66		
15	47	24.0	24.3	1	26.3	-19 00.0	123	30	18 00	24	52	7 57 44	21 59 70	21 59 70		
16	62	24.2	25.3	15	52.2	-19 12.2	122	35	01	27	18 56	48 41	22 10 73	22 10 73		
17	77	24.4	-2 26.3	30	18.0	-19 24.2	120	40	18 03	18 30	19 02	7 37 38	22 23 76	22 23 76		
18	92	24.6	-2 27.3	44	43.7	-19 36.1	119	45	18 05	18 34	19 09	7 25 34	22 38 81	22 38 81		
19	107	24.8	28.2	59	09.4	47.9	118	50	07	40	19	10 28	22 57 86	22 57 86		
20	122	25.0	29.2	73	35.0	-19 59.6	117	52	08	42	23	7 03 26	23 06 88	23 06 88		
21	137	25.2	30.2	88	00.6	-20 11.1	115	54	10	45	28	6 56 22	17 91	17 91		
22	152	25.5	31.1	102	26.0	22.4	113	56	11	48	34	47 19	28 95	28 95		
23	167	25.7	32.1	116	51.4	33.7	113	58	12	52	40	38 14	41 100	41 100		
24	182	25.9	-2 33.1	131	16.8	-20 44.8	111	60 S	18 14	18 56	19 48	6 27 9	23 57 107	23 57 107		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 23 ^h 26 ^m 8		Mag: -3.9 PMG: 12 ^h 34 ^m		Mag: -2.2 PMG: 21 ^h 43 ^m		Mag: -1.8 PMG: 10 ^h 05 ^m		Mag: +0.1 PMG: 6 ^h 24 ^m							
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	7	20.6	171 40.3	-5 34.2	33 23.8	-15 50.5	208 21.2	+9 46.8	263 45.4	+22 06.7						
1	22	23.1	186 39.9	35.5	48 26.3	50.3	223 23.2	46.7	278 47.8	06.6						
2	37	25.6	201 39.5	36.7	63 28.7	50.1	238 25.2	46.5	293 50.1	06.6						
3	52	28.0	216 39.1	38.0	78 31.2	49.8	253 27.1	46.3	308 52.4	06.6						
4	67	30.5	231 38.7	39.2	93 33.7	49.6	268 29.1	46.1	323 54.8	06.6						
5	82	33.0	246 38.3	-5 40.5	108 36.2	-15 49.4	283 31.1	+9 45.9	338 57.1	+22 06.6						
6	97	35.4	261 37.9	-5 41.7	123 38.7	-15 49.2	298 33.1	+9 45.7	353 59.4	+22 06.6						
7	112	37.9	276 37.5	43.0	138 41.1	49.0	313 35.1	45.5	9 01.8	06.6						
8	127	40.4	291 37.1	44.2	153 43.6	48.8	328 37.1	45.4	24 04.1	06.6						
9	142	42.8	306 36.7	45.5	168 46.1	48.6	343 39.0	45.2	39 06.5	06.6						
10	157	45.3	321 36.3	46.8	183 48.5	48.4	358 41.0	45.0	54 08.8	06.6						
11	172	47.8	336 35.9	-5 48.0	198 51.0	-15 48.2	13 43.0	+9 44.8	69 11.1	+22 06.5						
12	187	50.2	351 35.5	-5 49.3	213 53.5	-15 48.0	28 45.0	+9 44.6	84 13.5	+22 06.5						
13	202	52.7	6 35.1	50.5	228 55.9	47.7	43 47.0	44.4	99 15.8	06.5						
14	217	55.1	21 34.7	51.8	243 58.4	47.5	58 49.0	44.3	114 18.1	06.5						
15	232	57.6	36 34.3	53.0	259 00.9	47.3	73 50.9	44.1	129 20.5	06.5						
16	248	00.1	51 33.9	54.3	274 03.3	47.1	88 52.9	43.9	144 22.8	06.5						
17	263	02.5	66 33.5	-5 55.5	289 05.8	-15 46.9	103 54.9	+9 43.7	159 25.1	+22 06.5						
18	278	05.0	81 33.1	-5 56.8	304 08.3	-15 46.7	118 56.9	+9 43.5	174 27.5	+22 06.5						
19	293	07.5	96 32.7	58.0	319 10.7	46.5	133 58.9	43.3	189 29.8	06.5						
20	308	09.9	111 32.3	-5 59.3	334 13.2	46.2	149 00.9	43.2	204 32.2	06.4						
21	323	12.4	126 31.9	-6 00.5	349 15.6	46.0	164 02.8	43.0	219 34.5	06.4						
22	338	14.9	141 31.5	01.8	4 18.1	45.8	179 04.8	42.8	234 36.8	06.4						
23	353	17.3	156 31.1	03.0	19 20.5	45.6	194 06.8	42.6	249 39.2	06.4						
24	8	19.8	171 30.7	-6 04.3	34 23.0	-15 45.4	209 08.8	+9 42.4	264 41.5	+22 06.4						
Dif	—	—	-4	-13	+25	+2	+20	-2	+23	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 1			Edad: 3 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'7 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	25.9	-2	33.1	131	16.8	-20 44.8	60 N	4 31	5 20	6 02	12 56	103	18 38	23
1	197	26.1		34.1	145	42.0	62 -20 55.7	58	36	22	01	36	96	18 58	30
2	212	26.3		35.0	160	07.2	62 -21 06.6	56	39	23	6 00	20	91	19 15	35
3	227	26.5		36.0	174	32.3	61 17.3	54	43	24	5 59	12	06	87	29
4	242	26.7		37.0	188	57.4	61 27.8	52	45	25	58	11	54	84	42
5	257	26.9	-2	37.9	203	22.4	60 -21 38.2	50	4 48	5 25	5 58	11	43	82	19 53
6	272	27.1	-2	38.9	217	47.3	59 -21 48.4	45	4 53	5 27	5 56	11	21	78	20 16
7	287	27.3		39.9	232	12.2	59 -21 58.5	40	56	28	55	11	04	74	35
8	302	27.5		40.9	246	37.0	58 -22 08.5	35	4 59	28	54	10	49	71	20 50
9	317	27.7		41.8	261	01.7	57 18.3	30	5 01	29	52	36	69	21	04
10	332	27.9		42.8	275	26.4	57 27.9	20	03	28	50	10	14	66	27
11	347	28.1	-2	43.8	289	51.0	56 -22 37.4	10 N	5 03	5 28	5 49	9	55	63	21
12	2	28.3	-2	44.7	304	15.5	55 -22 46.7	0	5 02	5 26	5 47	9	38	60	22
13	17	28.5		45.7	318	40.0	55 -22 55.9	10 S	5 00	24	45	21	57		25
14	32	28.7		46.7	333	04.4	54 -23 04.9	20	4 55	21	43	9	02	54	22
15	47	28.9		47.7	347	28.8	54 13.8	30	48	16	40	8	41	51	23
16	62	29.2		48.6	1	53.1	53 22.5	35	44	13	39	29	48		23
17	77	29.4	-2	49.6	16	17.4	53 -23 31.1	40	4 38	5 10	5 37	8	15	45	23
18	92	29.6	-2	50.6	30	41.6	52 -23 39.5	45	4 31	5 05	5 35	7	59	41	23
19	107	29.8		51.5	45	05.7	51 47.7	50	21	5 00	32	38	37		**
20	122	30.0		52.5	59	29.8	51 -23 55.7	52	17	4 57	31	29	34		**
21	137	30.2		53.5	73	53.9	51 -24 03.6	54	12	54	30	18	32		**
22	152	30.4		54.5	88	17.9	50 11.4	56	4 06	51	29	7	06	28	**
23	167	30.6		55.4	102	41.8	49 18.9	58	3 59	47	27	6	52	23	**
24	182	30.8	-2	56.4	117	05.7	49 -24 26.3	60 S	3 51	4 43	5 25	6	36	16	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 22 ^m 8		Mag: -3.9 PMG: 12 ^h 34 ^m		Mag: -2.1 PMG: 21 ^h 39 ^m		Mag: -1.8 PMG: 10 ^h 02 ^m		Mag: +0.1 PMG: 6 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	8	19.8	171	30.7	-6	04.3	209	08.8	+9	42.4
1	23	22.3	186	30.3		05.5	224	10.8		42.2
2	38	24.7	201	29.9		06.8	239	12.8		42.1
3	53	27.2	216	29.5		08.0	254	14.8		41.9
4	68	29.6	231	29.1		09.3	269	16.7		41.7
5	83	32.1	246	28.7	-6	10.5	284	18.7	+9	41.5
6	98	34.6	261	28.3	-6	11.8	299	20.7	+9	41.3
7	113	37.0	276	27.9		13.0	314	22.7		41.1
8	128	39.5	291	27.5		14.3	329	24.7		40.9
9	143	42.0	306	27.1		15.5	344	26.7		40.8
10	158	44.4	321	26.7		16.8	359	28.6		40.6
11	173	46.9	336	26.3	-6	18.0	14	30.6	+9	40.4
12	188	49.4	351	25.9	-6	19.3	29	32.6	+9	40.2
13	203	51.8	6	25.5		20.5	44	34.6		40.0
14	218	54.3	21	25.1		21.7	59	36.6		39.8
15	233	56.7	36	24.7		23.0	74	38.6		39.7
16	248	59.2	51	24.3		24.2	89	40.6		39.5
17	264	01.7	66	23.9	-6	25.5	104	42.5	+9	39.3
18	279	04.1	81	23.5	-6	26.7	119	44.5	+9	39.1
19	294	06.6	96	23.1		28.0	134	46.5		38.9
20	309	09.1	111	22.7		29.2	149	48.5		38.7
21	324	11.5	126	22.3		30.5	164	50.5		38.6
22	339	14.0	141	21.9		31.7	179	52.5		38.4
23	354	16.5	156	21.5		33.0	194	54.5		38.2
24	9	18.9	171	21.1	-6	34.2	209	56.5	+9	38.0
Dif	—		-4	-12		+24	+20	-2		+23

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 4 ^d 9	PHE {	4 ^h : 59'6 12 ^h : 59'4 20 ^h : 59'2								
	PMG: 11 ^h 49 ^m 8													
	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	182	30.8	-2	56.4	117	05.7	-24	26.3	60 N	17 34	18 15	19 04	14 39	80
1	197	31.0		57.4	131	29.6	49	33.6	58	35	14	19 00	14 12	76
2	212	31.2		58.3	145	53.4	48	40.6	56	37	13	18 57	13 51	73
3	227	31.4	-2	59.3	160	17.1	47	47.5	54	38	13	54	33	72
4	242	31.6	-3	00.3	174	40.9	48	54.2	52	39	12	51	18	71
5	257	31.8	-3	01.3	189	04.6	47	-25 00.8	50	17 40	18 12	18 49	13 05	70
6	272	32.0	-3	02.2	203	28.2	46	-25 07.1	45	17 42	18 11	18 45	12 39	68
7	287	32.2		03.2	217	51.8	46	13.3	40	43	10	42	18	67
8	302	32.4		04.2	232	15.4	46	19.4	35	45	10	39	12	00
9	317	32.6		05.1	246	39.0	46	25.2	30	46	10	38	11	45
10	332	32.8		06.1	261	02.5	45	30.9	20	49	11	36	11	20
11	347	33.0	-3	07.1	275	26.0	45	-25 36.4	10 N	17 51	18 12	18 36	10 58	63
12	2	33.2	-3	08.0	289	49.4	44	-25 41.7	0	17 53	18 14	18 38	10 38	61
13	17	33.4		09.0	304	12.9	45	46.8	10 S	55	16	41	10	18
14	32	33.6		10.0	318	36.3	44	51.8	20	17 58	20	46	9	56
15	47	33.8		11.0	332	59.7	44	-25 56.6	30	18 01	25	53	32	56
16	62	34.0		11.9	347	23.0	43	-26 01.2	35	03	28	18 58	17	56
17	77	34.2	-3	12.9	1	46.4	44	-26 05.6	40	18 05	18 32	19 04	9	00
18	92	34.4	-3	13.9	16	09.7	43	-26 09.9	45	18 07	18 37	19 12	8	40
19	107	34.6		14.8	30	33.0	43	14.0	50	10	43	22	15	50
20	122	34.8		15.8	44	56.4	44	17.8	52	12	46	27	8	03
21	137	35.0		16.8	59	19.7	43	21.6	54	13	49	32	7	50
22	152	35.2		17.7	73	42.9	42	25.1	56	15	53	38	34	44
23	167	35.4		18.7	88	06.2	43	28.4	58	17	18 57	46	7	15
24	182	35.6	-3	19.7	102	29.5	43	-26 31.6	60 S	18 19	19 01	19 54	6	52
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 23 ^h 18 ^m 9		Mag: -3.9 PMG: 12 ^h 35 ^m			Mag: -2.1 PMG: 21 ^h 35 ^m			Mag: -1.8 PMG: 9 ^h 59 ^m			Mag: +0.1 PMG: 6 ^h 17 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	9	18.9	171	21.1	-6	34.2	35	21.4	-15	40.0	209	56.5	+9	38.0
1	24	21.4	186	20.7		35.4	50	23.8		39.8	224	58.4		37.8
2	39	23.9	201	20.3		36.7	65	26.2		39.5	240	00.4		37.6
3	54	26.3	216	19.8		37.9	80	28.7		39.3	255	02.4		37.5
4	69	28.8	231	19.4		39.2	95	31.1		39.1	270	04.4		37.3
5	84	31.2	246	19.0	-6	40.4	110	33.5	-15	38.8	285	06.4	+9	37.1
6	99	33.7	261	18.6	-6	41.7	125	35.9	-15	38.6	300	08.4	+9	36.9
7	114	36.2	276	18.2		42.9	140	38.3		38.4	315	10.4		36.7
8	129	38.6	291	17.8		44.2	155	40.7		38.1	330	12.3		36.5
9	144	41.1	306	17.4		45.4	170	43.1		37.9	345	14.3		36.4
10	159	43.6	321	17.0		46.6	185	45.5		37.7	0	16.3		36.2
11	174	46.0	336	16.6	-6	47.9	200	47.9	-15	37.4	15	18.3	+9	36.0
12	189	48.5	351	16.2	-6	49.1	215	50.3	-15	37.2	30	20.3	+9	35.8
13	204	51.0	6	15.8		50.4	230	52.7		37.0	45	22.3		35.6
14	219	53.4	21	15.4		51.6	245	55.1		36.7	60	24.3		35.5
15	234	55.9	36	15.0		52.8	260	57.5		36.5	75	26.3		35.3
16	249	58.4	51	14.5		54.1	275	59.9		36.3	90	28.2		35.1
17	265	00.8	66	14.1	-6	55.3	291	02.3	-15	36.0	105	30.2	+9	34.9
18	280	03.3	81	13.7	-6	56.6	306	04.7	-15	35.8	120	32.2	+9	34.7
19	295	05.7	96	13.3		57.8	321	07.1		35.5	135	34.2		34.5
20	310	08.2	111	12.9	-6	59.0	336	09.5		35.3	150	36.2		34.4
21	325	10.7	126	12.5	-7	00.3	351	11.9		35.1	165	38.2		34.2
22	340	13.1	141	12.1		01.5	6	14.3		34.8	180	40.2		34.0
23	355	15.6	156	11.7		02.8	21	16.7		34.6	195	42.2		33.8
24	10	18.1	171	11.3	-7	04.0	36	19.1	-15	34.3	210	44.2	+9	33.6
Dif	—		-4		-12		+24		+2		+20		-2	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 49 ^m 5			Edad: 5 ^d 9 PHE { 4 ^h : 59'0 12 ^h : 58'8 20 ^h : 58'6 R°: 59 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	182	35.6	-3	19.7	102	29.5	-26	31.6	60 N	4	36	5	25	6	07	15	59	45
1	197	35.8		20.6	116	52.8		34.6	58		40		26		05		28	49
2	212	36.0		21.6	131	16.1		37.4	56		44		27		04		15	04
3	227	36.2		22.6	145	39.4		40.0	54		46		28		03		14	45
4	242	36.4		23.6	160	02.7		42.5	52		49		28		02		29	54
5	257	36.6	-3	24.5	174	25.9	-26	44.7	50	4	51	5	28	6	01	14	15	55
6	272	36.8	-3	25.5	188	49.2	-26	46.8	45	4	55	5	29	5	59	13	47	56
7	287	37.0		26.5	203	12.6		48.7	40	4	58		30		57		25	57
8	302	37.2		27.4	217	35.9		50.4	35	5	00		30		55		13	06
9	317	37.4		28.4	231	59.2		52.0	30		02		30		54		12	50
10	332	37.6		29.4	246	22.6		53.3	20		03		29		51		24	59
11	347	37.8	-3	30.3	260	46.0	-26	54.5	10 N	5	03	5	28	5	49	12	01	59
12	2	38.0	-3	31.3	275	09.4	-26	55.5	0	5	01	5	26	5	46	11	39	60
13	17	38.2		32.3	289	32.8		56.3	10 S	4	58		23		44		11	18
14	32	38.4		33.2	303	56.2		57.0	20		53		19		41		10	55
15	47	38.6		34.2	318	19.7		57.4	30		46		14		38		28	62
16	62	38.8		35.2	332	43.2		57.7	35		41		11		36		10	13
17	77	39.0	-3	36.1	347	06.8	-26	57.8	40	4	34	5	07	5	34	9	55	62
18	92	39.2	-3	37.1	1	30.3	-26	57.7	45	4	27	5	02	5	31	9	33	62
19	107	39.4		38.1	15	53.9		57.5	50		17	4	55	28		9	05	
20	122	39.6		39.1	30	17.6		57.1	52		12		53	27		8	51	
21	137	39.8		40.0	44	41.3		56.5	54		06		49	25		36	63	
22	152	40.0		41.0	59	05.0		55.7	56		4	00	46	23		8	18	
23	167	40.2		42.0	73	28.8		54.7	58		3	53	41	21		7	55	
24	182	40.4	-3	42.9	87	52.6	-26	53.6	60 S	3	44	4	37	5	19	7	26	65

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 15 ^m 0		Mag: -3.9 PMG: 12 ^h 36 ^m		Mag: -2.1 PMG: 21 ^h 31 ^m		Mag: -1.8 PMG: 9 ^h 56 ^m		Mag: +0.1 PMG: 6 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	10	18.1	171	11.3	-7	04.0	36	19.1	-15	34.3
1	25	20.5	186	10.9		05.2	51	21.4		34.1
2	40	23.0	201	10.4		06.5	66	23.8		33.9
3	55	25.5	216	10.0		07.7	81	26.2		33.6
4	70	27.9	231	09.6		09.0	96	28.6		33.4
5	85	30.4	246	09.2	-7	10.2	111	31.0	-15	33.1
6	100	32.9	261	08.8	-7	11.4	126	33.3	-15	32.9
7	115	35.3	276	08.4		12.7	141	35.7		32.6
8	130	37.8	291	08.0		13.9	156	38.1		32.4
9	145	40.2	306	07.6		15.1	171	40.5		32.1
10	160	42.7	321	07.1		16.4	186	42.8		31.9
11	175	45.2	336	06.7	-7	17.6	201	45.2	-15	31.6
12	190	47.6	351	06.3	-7	18.8	216	47.6	-15	31.4
13	205	50.1	6	05.9		20.1	231	50.0		31.2
14	220	52.6	21	05.5		21.3	246	52.3		30.9
15	235	55.0	36	05.1		22.6	261	54.7		30.7
16	250	57.5	51	04.7		23.8	276	57.1		30.4
17	266	00.0	66	04.2	-7	25.0	291	59.4	-15	30.2
18	281	02.4	81	03.8	-7	26.3	307	01.8	-15	29.9
19	296	04.9	96	03.4		27.5	322	04.1		29.7
20	311	07.4	111	03.0		28.7	337	06.5		29.4
21	326	09.8	126	02.6		30.0	352	08.9		29.2
22	341	12.3	141	02.2		31.2	7	11.2		28.9
23	356	14.7	156	01.8		32.4	22	13.6		28.6
24	11	17.2	171	01.3	-7	33.7	37	15.9	-15	28.4
Dif	—		-4		-12		+24		+2	
							+20		-2	
									+23	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0			Edad: 6 ^d 9	PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 58'0													
	PMG: 11 ^h 49 ^m 2																	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	182	40.4	-3	42.9	87	52.6	-26 53.6	60 N	17 28	18 09	18 58	16 44 21	21 08 97					
1	197	40.6		43.9	102	16.4	48 52.3	58	30	09	54	16 17 27	35 89					
2	212	40.8		44.9	116	40.3	49 50.8	56	31	08	51	15 56 32	21 56 84					
3	227	41.0		45.8	131	04.3	50 49.1	54	33	08	49	38 35	22 13 81					
4	242	41.2		46.8	145	28.3	50 47.3	52	34	08	47	23 38	28 78					
5	257	41.4	-3	47.8	159	52.4	51 -26 45.3	50	17 35	18 07	18 45	15 10 40	22 41 76					
6	272	41.6	-3	48.7	174	16.5	51 -26 43.2	45	17 38	18 07	18 41	14 43 44	23 07 72					
7	287	41.8		49.7	188	40.7	52 40.8	40	40	07	38	22 46	28 69					
8	302	42.0		50.7	203	04.9	52 38.3	35	42	07	36	14 04 48	23 45 67					
9	317	42.2		51.6	217	29.2	53 35.6	30	44	08	35	13 49 50	*** **					
10	332	42.4		52.6	231	53.6	54 32.8	20	47	09	34	23 53	*** **					
11	347	42.6	-3	53.6	246	18.0	54 -26 29.8	10 N	17 50	18 11	18 35	13 00 55	*** **					
12	2	42.8	-3	54.5	260	42.5	55 -26 26.6	0	17 52	18 13	18 37	12 39 58	0 08 59					
13	17	43.0		55.5	275	07.1	56 23.3	10 S	55	16	41	12 18 60	30 57					
14	32	43.2		56.5	289	31.8	57 19.8	20	17 58	21	46	11 56 61	0 52 57					
15	47	43.4		57.4	303	56.5	57 16.1	30	18 02	26	18 54	30 64	1 19 54					
16	62	43.6		58.4	318	21.2	57 12.3	35	04	30	19 00	11 15 65	35 53					
17	77	43.8	-3	59.4	332	46.1	59 -26 08.3	40	18 07	18 34	19 06	10 57 67	1 53 51					
18	92	44.0	-4	00.3	347	11.0	59 -26 04.2	45	18 10	18 40	19 15	10 35 70	2 14 50					
19	107	44.1		01.3	1	36.0	60 -25 59.9	50	13	46	25	10 08 73	42 47					
20	122	44.3		02.3	16	01.1	61 55.4	52	15	49	31	9 55 74	2 55 46					
21	137	44.5		03.2	30	26.3	62 50.8	54	17	53	36	39 77	3 11 44					
22	152	44.7		04.2	44	51.5	62 46.1	56	19	18 57	43	9 21 79	29 41					
23	167	44.9		05.2	59	16.9	64 41.1	58	21	19 01	19 51	8 59 83	3 51 38					
24	182	45.1	-4	06.1	73	42.3	64 -25 36.1	60 S	18 24	19 06	20 00	8 31 89	4 20 32					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 11 ^m 0		Mag: -3.9 PMG: 12 ^h 36 ^m			Mag: -2.0 PMG: 21 ^h 28 ^m			Mag: -1.8 PMG: 9 ^h 53 ^m			Mag: +0.1 PMG: 6 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	11	17.2	171	01.3	-7	33.7	37	15.9	-15	28.4	211	31.9	+9	29.2	267	30.3	+22	05.7
1	26	19.7	186	00.9		34.9	52	18.3		28.1	226	33.9		29.1	282	32.7		05.7
2	41	22.1	201	00.5		36.1	67	20.6		27.9	241	35.9		28.9	297	35.1		05.7
3	56	24.6	216	00.1		37.3	82	23.0		27.6	256	37.9		28.7	312	37.4		05.7
4	71	27.1	230	59.7		38.6	97	25.3		27.4	271	39.9		28.5	327	39.8		05.6
5	86	29.5	245	59.2	-7	39.8	112	27.7	-15	27.1	286	41.9	+9	28.3	342	42.1	+22	05.6
6	101	32.0	260	58.8	-7	41.0	127	30.0	-15	26.9	301	43.9	+9	28.2	357	44.5	+22	05.6
7	116	34.5	275	58.4		42.3	142	32.4		26.6	316	45.8		28.0	12	46.8		05.6
8	131	36.9	290	58.0		43.5	157	34.7		26.4	331	47.8		27.8	27	49.2		05.6
9	146	39.4	305	57.6		44.7	172	37.1		26.1	346	49.8		27.6	42	51.5		05.6
10	161	41.8	320	57.2		46.0	187	39.4		25.8	1	51.8		27.4	57	53.9		05.6
11	176	44.3	335	56.7	-7	47.2	202	41.7	-15	25.6	16	53.8	+9	27.3	72	56.2	+22	05.6
12	191	46.8	350	56.3	-7	48.4	217	44.1	-15	25.3	31	55.8	+9	27.1	87	58.6	+22	05.6
13	206	49.2	5	55.9		49.6	232	46.4		25.1	46	57.8		26.9	103	00.9		05.6
14	221	51.7	20	55.5		50.9	247	48.7		24.8	61	59.8		26.7	118	03.3		05.6
15	236	54.2	35	55.0		52.1	262	51.1		24.5	77	01.8		26.5	133	05.6		05.5
16	251	56.6	50	54.6		53.3	277	53.4		24.3	92	03.8		26.3	148	08.0		05.5
17	266	59.1	65	54.2	-7	54.6	292	55.7	-15	24.0	107	05.8	+9	26.2	163	10.4	+22	05.5
18	282	01.6	80	53.8	-7	55.8	307	58.1	-15	23.8	122	07.8	+9	26.0	178	12.7	+22	05.5
19	297	04.0	95	53.4		57.0	323	00.4		23.5	137	09.8		25.8	193	15.1		05.5
20	312	06.5	110	52.9		58.2	338	02.7		23.2	152	11.7		25.6	208	17.4		05.5
21	327	09.0	125	52.5	-7	59.5	353	05.1		23.0	167	13.7		25.4	223	19.8		05.5
22	342	11.4	140	52.1	-8	00.7	8	07.4		22.7	182	15.7		25.3	238	22.1		05.5
23	357	13.9	155	51.7		01.9	23	09.7		22.4	197	17.7		25.1	253	24.5		05.5
24	12	16.3	170	51.2	-8	03.1	38	12.0	-15	22.2	212	19.7	+9	24.9	268	26.8	+22	05.5
Dif	—		-4		-12		+23		+3		+20		-2		+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: 7 ^d 9 PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'4 R°: 52 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m					
0	182	45.1	-4	06.1	73	42.3	-25	36.1	52	60 N	4	41	5	30	6	11	17	05	9	22	45	97	
1	197	45.3		07.1	88	07.8	65	30.9	52	58		45		30	10			16	44	16	23	04	92
2	212	45.5		08.1	102	33.4	66	25.5	54	56		48		31	08			28	20		20		87
3	227	45.7		09.0	116	59.0	66	20.0	55	54		50		31	06			13	24		34		84
4	242	45.9		10.0	131	24.8	68	14.3	57	52		52		31	05			16	01	26	46		81
5	257	46.1	-4	10.9	145	50.6	68	-25	08.5	58	50	4	54	5	32	6	04	15	50	29	23	57	78
6	272	46.3	-4	11.9	160	16.6	70	-25	02.5	60	45	4	58	5	32	6	01	15	27	33	**	**	**
7	287	46.5		12.9	174	42.6	70	-24	56.4	61	40	5	00		32	5	59	15	08	37	**	**	**
8	302	46.7		13.8	189	08.7	71		50.2	62	35	02		31	57			14	52	41	**	**	**
9	317	46.9		14.8	203	34.9	72		43.8	64	30	03		31	55			39	42		0	00	64
10	332	47.1		15.8	218	01.2	73		37.3	65	20	04		29	51			14	16	46	25		61
11	347	47.3	-4	16.7	232	27.6	74	-24	30.6	67	10 N	5	03	5	27	5	48	13	55	51	0	47	58
12	2	47.4	-4	17.7	246	54.1	75	-24	23.8	68	0	5	01	5	25	5	46	13	37	53	1	07	56
13	17	47.6		18.7	261	20.7	76		16.9	69	10 S	4	57		22	43		13	18	56		27	53
14	32	47.8		19.6	275	47.3	76		09.8	71	20	51		17	39			12	57	60	1	49	49
15	47	48.0		20.6	290	14.1	78	-24	02.6	72	30	43		11	35			34	63		2	13	47
16	62	48.2		21.6	304	41.0	79	-23	55.3	73	35	38		08	33			20	66		28		44
17	77	48.4	-4	22.5	319	07.9	79	-23	47.8	75	40	4	31	5	03	5	30	12	04	69	2	44	42
18	92	48.6	-4	23.5	333	35.0	81	-23	40.2	76	45	4	23	4	58	5	27	11	45	72	3	04	39
19	107	48.8		24.5	348	02.1	81		32.5	77	50	12		51	24			21	77		29		34
20	122	49.0		25.4	2	29.4	83		24.6	79	52	07		48	22			11	09	80	41		32
21	137	49.2		26.4	16	56.7	83		16.7	79	54	4	01	44	20			10	56	82	3	55	29
22	152	49.4		27.3	31	24.2	85		08.6	81	56	3	54	40	18			40	86		4	10	26
23	167	49.6		28.3	45	51.7	85	-23	00.3	83	58	46		36	16			22	91		29		21
24	182	49.7	-4	29.3	60	19.4	87	-22	52.0	83	60 S	3	37	4	30	5	13	10	00	97	4	52	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 07 ^m 1		Mag: -3.9 PMG: 12 ^h 37 ^m		Mag: -2.0 PMG: 21 ^h 24 ^m		Mag: -1.8 PMG: 9 ^h 49 ^m		Mag: +0.1 PMG: 6 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	12	16.3	170	51.2	-8	03.1	38	12.0	-15	22.2	212	19.7	+9	24.9	268	26.8	+22	05.5
1	27	18.8	185	50.8		04.4	53	14.4		21.9	227	21.7		24.7	283	29.2		05.5
2	42	21.3	200	50.4		05.6	68	16.7		21.7	242	23.7		24.5	298	31.6		05.4
3	57	23.7	215	50.0		06.8	83	19.0		21.4	257	25.7		24.3	313	33.9		05.4
4	72	26.2	230	49.6		08.0	98	21.3		21.1	272	27.7		24.2	328	36.3		05.4
5	87	28.7	245	49.1	-8	09.3	113	23.6	-15	20.9	287	29.7	+9	24.0	343	38.6	+22	05.4
6	102	31.1	260	48.7	-8	10.5	128	25.9	-15	20.6	302	31.7	+9	23.8	358	41.0	+22	05.4
7	117	33.6	275	48.3		11.7	143	28.3		20.3	317	33.7		23.6	13	43.3		05.4
8	132	36.1	290	47.9		12.9	158	30.6		20.1	332	35.7		23.4	28	45.7		05.4
9	147	38.5	305	47.4		14.2	173	32.9		19.8	347	37.7		23.3	43	48.1		05.4
10	162	41.0	320	47.0		15.4	188	35.2		19.5	2	39.7		23.1	58	50.4		05.4
11	177	43.5	335	46.6	-8	16.6	203	37.5	-15	19.2	17	41.7	+9	22.9	73	52.8	+22	05.4
12	192	45.9	350	46.1	-8	17.8	218	39.8	-15	19.0	32	43.6	+9	22.7	88	55.1	+22	05.4
13	207	48.4	5	45.7		19.0	233	42.1		18.7	47	45.6		22.5	103	57.5		05.3
14	222	50.8	20	45.3		20.3	248	44.4		18.4	62	47.6		22.4	118	59.9		05.3
15	237	53.3	35	44.9		21.5	263	46.7		18.2	77	49.6		22.2	134	02.2		05.3
16	252	55.8	50	44.4		22.7	278	49.0		17.9	92	51.6		22.0	149	04.6		05.3
17	267	58.2	65	44.0	-8	23.9	293	51.3	-15	17.6	107	53.6	+9	21.8	164	06.9	+22	05.3
18	283	00.7	80	43.6	-8	25.1	308	53.6	-15	17.3	122	55.6	+9	21.6	179	09.3	+22	05.3
19	298	03.2	95	43.2		26.4	323	55.9		17.1	137	57.6		21.5	194	11.7		05.3
20	313	05.6	110	42.7		27.6	338	58.2		16.8	152	59.6		21.3	209	14.0		05.3
21	328	08.1	125	42.3		28.8	354	00.5		16.5	168	01.6		21.1	224	16.4		05.3
22	343	10.6	140	41.9		30.0	9	02.8		16.3	183	03.6		20.9	239	18.7		05.3
23	358	13.0	155	41.4		31.2	24	05.1		16.0	198	05.6		20.7	254	21.1		05.3
24	13	15.5	170	41.0	-8	32.5	39	07.4	-15	15.7	213	07.6	+9	20.6	269	23.5	+22	05.3
Dif	—		-4		-12		+23		+3		+20		-2		+24			

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: 8 ^d 9 PHE { SD: 15:6 PMG: 20 ^h 42 ^m 4 ^h : 57/2 12 ^h : 57/0 20 ^h : 56/8 Rº: 48 ^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	182	49.7	-4	29.3	60	19.4	-22	52.0	60 N	17 22	18 03	18 52	17 14 5	*** ** *		
1	197	49.9		30.2	74	47.1	87	43.5	85	58	24	03	49	17 00 10	*** ** *	
2	212	50.1		31.2	89	15.0	89	35.0	85	56	26	03	46	16 48 13	*** ** *	
3	227	50.3		32.2	103	42.9	89	26.3	87	54	28	03	44	37 17	*** ** *	
4	242	50.5		33.1	118	10.9	90	17.4	89	52	29	03	42	27 20	*** ** *	
5	257	50.7	-4	34.1	132	39.1	92	-22	08.5	89	50	17 31	18 03	18 40	16 19 22	*** ** *
6	272	50.9	-4	35.0	147	07.3	92	-21	59.5	90	45	17 34	18 03	18 37	16 00 27	0 19 73
7	287	51.1		36.0	161	35.7	94		50.3	92	40	37	04	35	15 45 31	37 68
8	302	51.3		37.0	176	04.1	94		41.1	92	35	39	04	34	33 34	0 52 65
9	317	51.5		37.9	190	32.6	95		31.7	94	30	41	05	33	21 37	1 04 63
10	332	51.7		38.9	205	01.3	97		22.2	95	20	45	07	33	15 02 42	26 59
11	347	51.8	-4	39.9	219	30.0	97	-21	12.7	95	10 N	17 48	18 10	18 34	14 46 45	1 45 55
12	2	52.0	-4	40.8	233	58.9	99	-21	03.0	97	0	17 52	18 13	18 37	14 30 49	2 03 51
13	17	52.2		41.8	248	27.8	99	-20	53.2	98	10 S	55	16	41	14 14 53	20 48
14	32	52.4		42.7	262	56.8	100		43.3	99	20	17 59	21	47	13 57 57	2 38 44
15	47	52.6		43.7	277	25.9	101		33.3	100	30	18 03	27	18 56	37 62	3 00 39
16	62	52.8		44.7	291	55.2	103		23.2	101	35	06	31	19 02	26 64	12 37
17	77	53.0	-4	45.6	306	24.5	103	-20	13.0	102	40	18 09	18 36	19 09	13 13 68	3 26 34
18	92	53.2	-4	46.6	320	53.9	104	-20	02.8	102	45	18 12	18 42	19 18	12 57 72	3 43 30
19	107	53.4		47.6	335	23.4	105	-19	52.4	104	50	17	49	29	38 77	4 03 26
20	122	53.5		48.5	349	53.1	107		41.9	105	52	19	53	34	29 79	13 23
21	137	53.7		49.5	4	22.8	107		31.4	105	54	21	18 57	41	18 83	24 20
22	152	53.9		50.4	18	52.6	108		20.7	107	56	23	19 01	48	12 06 86	36 17
23	167	54.1		51.4	33	22.5	109	-19	10.0	107	58	26	06	19 56	11 53 90	4 50 13
24	182	54.3	-4	52.4	47	52.5	110	-18	59.2	108	60 S	18 29	19 12	20 05	11 37 95	5 07 8
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 03 ^m 2		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: -2.0 PMG: 21 ^h 20 ^m		Mag: -1.8 PMG: 9 ^h 46 ^m		Mag: +0.1 PMG: 6 ^h 01 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	13	15.5	170	41.0	-8	32.5	39	07.4	-15	15.7						
1	28	18.0	185	40.6		33.7	54	09.7		15.4						
2	43	20.4	200	40.1		34.9	69	12.0		15.1						
3	58	22.9	215	39.7		36.1	84	14.3		14.9						
4	73	25.3	230	39.3		37.3	99	16.5		14.6						
5	88	27.8	245	38.8	-8	38.5	114	18.8	-15	14.3						
6	103	30.3	260	38.4	-8	39.8	129	21.1	-15	14.0						
7	118	32.7	275	38.0		41.0	144	23.4		13.8						
8	133	35.2	290	37.6		42.2	159	25.7		13.5						
9	148	37.7	305	37.1		43.4	174	28.0		13.2						
10	163	40.1	320	36.7		44.6	189	30.2		12.9						
11	178	42.6	335	36.3	-8	45.8	204	32.5	-15	12.6						
12	193	45.1	350	35.8	-8	47.0	219	34.8	-15	12.4						
13	208	47.5	5	35.4		48.3	234	37.1		12.1						
14	223	50.0	20	34.9		49.5	249	39.3		11.8						
15	238	52.4	35	34.5		50.7	264	41.6		11.5						
16	253	54.9	50	34.1		51.9	279	43.9		11.2						
17	268	57.4	65	33.6	-8	53.1	294	46.1	-15	11.0						
18	283	59.8	80	33.2	-8	54.3	309	48.4	-15	10.7						
19	299	02.3	95	32.8		55.5	324	50.7		10.4						
20	314	04.8	110	32.3		56.7	339	52.9		10.1						
21	329	07.2	125	31.9		57.9	354	55.2		09.8						
22	344	09.7	140	31.5	-8	59.2	9	57.5		09.5						
23	359	12.2	155	31.0	-9	00.4	24	59.7		09.2						
24	14	14.6	170	30.6	-9	01.6	40	02.0	-15	09.0						
Dif	—		-4	-12		+23	+3	+20		-2						
										+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: 9 ^d 9 PHE { SD: 15'4 PMG: 21 ^h 30 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	182	54.3	-4	52.4	47	52.5	-18	59.2	60 N	4 46	5 35	6 16	17 19	3	0 22 94
1	197	54.5		53.3	62	22.6 ¹¹¹		48.2 ¹¹⁰	58	49	35	14	10	6	36 89
2	212	54.7		54.3	76	52.7 ¹¹¹		37.2 ¹¹⁰	56	52	35	12	17 01	10	47 85
3	227	54.9		55.2	91	23.0 ¹¹³		26.2 ¹¹⁰	54	54	35	10	16 54	12	0 58 81
4	242	55.0		56.2	105	53.4 ¹¹⁴		15.0 ¹¹²	52	56	35	08	47 15	1	07 78
5	257	55.2	-4	57.2	120	23.8 ¹¹⁴	-18	03.8 ¹¹²	50	4 57	5 35	6 07	16 41	17	1 15 76
6	272	55.4	-4	58.1	134	54.4 ¹¹⁶	-17	52.4 ¹¹⁴	45	5 00	5 34	6 04	16 27	22	1 32 71
7	287	55.6	-4	59.1	149	25.0 ¹¹⁶		41.0 ¹¹⁴	40	02	34	6 01	16	26	45 67
8	302	55.8	-5	00.0	163	55.8 ¹¹⁸		29.5 ¹¹⁵	35	04	33	5 58	16 07	29	1 57 64
9	317	56.0	-5	01.0	178	26.6 ¹¹⁸		18.0 ¹¹⁵	30	04	32	56	15 58	32	2 07 61
10	332	56.2		02.0	192	57.5 ¹¹⁹	-17	06.4 ¹¹⁶	20	04	30	52	44	37	25 55
11	347	56.3	-5	02.9	207	28.5 ¹²⁰	-16	54.7 ¹¹⁷	10 N	5 03	5 27	5 48	15 31	41	2 40 51
12	2	56.5	-5	03.9	221	59.6 ¹²¹	-16	42.9 ¹¹⁸	0	5 00	5 24	5 45	15 19	45	2 54 47
13	17	56.7		04.8	236	30.8 ¹²²		31.0 ¹¹⁹	10 S	4 56	20	41	15 07	49	3 08 43
14	32	56.9		05.8	251	02.0 ¹²²		19.1 ¹¹⁹	20	50	15	38	14 54	54	22 40
15	47	57.1		06.8	265	33.4 ¹²⁴	-16	07.1 ¹²⁰	30	41	09	33	39	59	39 35
16	62	57.3		07.7	280	04.8 ¹²⁴	-15	55.1 ¹²⁰	35	35	05	30	30	63	3 49 31
17	77	57.5	-5	08.7	294	36.3 ¹²⁵	-15	43.0 ¹²¹	40	4 28	5 00	5 27	14 21	65	4 00 28
18	92	57.6	-5	09.6	309	07.9 ¹²⁶	-15	30.8 ¹²²	45	4 19	4 54	5 24	14 09	70	4 13 24
19	107	57.8		10.6	323	39.6 ¹²⁷		18.5 ¹²³	50	07	47	19	13 55	74	29 19
20	122	58.0		11.6	338	11.3 ¹²⁷	-15	06.2 ¹²³	52	4 01	43	17	48	77	36 17
21	137	58.2		12.5	352	43.1 ¹²⁸	-14	53.9 ¹²³	54	3 55	39	15	41	80	44 15
22	152	58.4		13.5	7	15.1 ¹³⁰		41.4 ¹²⁵	56	48	35	13	32	83	4 53 12
23	167	58.6		14.4	21	47.1 ¹³⁰		29.0 ¹²⁴	58	40	30	10	23	87	5 03 8
24	182	58.7	-5	15.4	36	19.1 ¹³⁰	-14	16.4 ¹²⁶	60 S	3 30	4 24	5 07	13 12	91	5 15 4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 59 ^m 2		Mag: -3.9 PMG: 12 ^h 38 ^m			Mag: -1.9 PMG: 21 ^h 17 ^m			Mag: -1.8 PMG: 9 ^h 43 ^m			Mag: +0.1 PMG: 5 ^h 58 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	14	14.6	170	30.6	-9	01.6	40	02.0	-15	09.0	213	55.5	+9	16.2	
1	29	17.1	185	30.1		02.8	55	04.3		08.7	228	57.5		16.0	
2	44	19.6	200	29.7		04.0	70	06.5		08.4	243	59.5		15.9	
3	59	22.0	215	29.3		05.2	85	08.8		08.1	259	01.5		15.7	
4	74	24.5	230	28.8		06.4	100	11.0		07.8	274	03.5		15.5	
5	89	26.9	245	28.4	-9	07.6	115	13.3	-15	07.5	289	05.5	+9	15.3	
6	104	29.4	260	28.0	-9	08.8	130	15.5	-15	07.2	304	07.5	+9	15.2	
7	119	31.9	275	27.5		10.0	145	17.8		06.9	319	09.5		15.0	
8	134	34.3	290	27.1		11.2	160	20.0		06.7	334	11.5		14.8	
9	149	36.8	305	26.6		12.4	175	22.3		06.4	349	13.5		14.6	
10	164	39.3	320	26.2		13.7	190	24.5		06.1	4	15.5		14.4	
11	179	41.7	335	25.8	-9	14.9	205	26.8	-15	05.8	19	17.5	+9	14.3	
12	194	44.2	350	25.3	-9	16.1	220	29.0	-15	05.5	34	19.5	+9	14.1	
13	209	46.7	5	24.9		17.3	235	31.3		05.2	49	21.5		13.9	
14	224	49.1	20	24.4		18.5	250	33.5		04.9	64	23.5		13.7	
15	239	51.6	35	24.0		19.7	265	35.8		04.6	79	25.5		13.5	
16	254	54.1	50	23.5		20.9	280	38.0		04.3	94	27.5		13.4	
17	269	56.5	65	23.1	-9	22.1	295	40.2	-15	04.0	109	29.5	+9	13.2	
18	284	59.0	80	22.7	-9	23.3	310	42.5	-15	03.7	124	31.5	+9	13.0	
19	300	01.4	95	22.2		24.5	325	44.7		03.4	139	33.5		12.8	
20	315	03.9	110	21.8		25.7	340	46.9		03.2	154	35.5		12.6	
21	330	06.4	125	21.3		26.9	355	49.2		02.9	169	37.5		12.5	
22	345	08.8	140	20.9		28.1	10	51.4		02.6	184	39.5		12.3	
23	0	11.3	155	20.4		29.3	25	53.6		02.3	199	41.5		12.1	
24	15	13.8	170	20.0	-9	30.5	40	55.9	-15	02.0	214	43.5	+9	11.9	
Dif	—		-4		-12		+22		+3		+20		-2		+24

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: 10 ^d 9 PHE { 4 ^h : 56'1 12 ^h : 56'0 20 ^h : 55'8 R°: 42 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	182	58.7	-5	15.4	36	19.1	-14	16.4	60 N	17 16	17 57	18 46	17 22	2 1 56 89				
1	197	58.9		16.3	50	51.3 ¹³²	-14	03.8 ¹²⁶	58	19	58	43	16	5 2 05 85				
2	212	59.1		17.3	65	23.5 ¹³²	-13	51.2 ¹²⁶	56	21	58	41	11	8 12 82				
3	227	59.3		18.3	79	55.8 ¹³³		38.5 ¹²⁷	54	23	58	39	06	11 19 79				
4	242	59.5		19.2	94	28.2 ¹³⁴		25.7 ¹²⁸	52	25	58	37	17	02 13 25 76				
5	257	59.7	-5	20.2	109	00.6 ¹³⁴	-13	12.9 ¹²⁸	50	17 27	17 59	18 36	16	58 15 2 31 73				
6	272	59.8	-5	21.1	123	33.1 ¹³⁵	-13	00.0 ¹²⁹	45	17 30	18 00	18 34	16	49 20 2 43 68				
7	288	00.0		22.1	138	05.7 ¹³⁶	-12	47.1 ¹²⁹	40	34	01	32	42	23 2 52 65				
8	303	00.2		23.1	152	38.4 ¹³⁷		34.2 ¹²⁹	35	36	02	31	36	26 3 01 61				
9	318	00.4		24.0	167	11.1 ¹³⁷		21.2 ¹³⁰	30	39	03	31	30	30 08 58				
10	333	00.6		25.0	181	43.9 ¹³⁸	-12	08.1 ¹³¹	20	43	05	31	21	34 20 53				
11	348	00.8	-5	25.9	196	16.8 ¹³⁹	-11	55.0 ¹³¹	10 N	17 47	18 08	18 33	16	12 39 3 31 48				
12	3	00.9	-5	26.9	210	49.7 ¹³⁹	-11	41.9 ¹³¹	0	17 51	18 12	18 36	16	04 43 3 41 44				
13	18	01.1		27.8	225	22.7 ¹⁴⁰		28.7 ¹³²	10 S	17 55	16	41	15	56 48 3 51 40				
14	33	01.3		28.8	239	55.8 ¹⁴¹		15.5 ¹³²	20	18 00	22	48	48	52 4 02 35				
15	48	01.5		29.7	254	28.9 ¹⁴¹	-11	02.3 ¹³²	30	05	29	18 57	38	57 14 30				
16	63	01.7		30.7	269	02.1 ¹⁴²	-10	49.0 ¹³³	35	08	33	19 03	33	59 20 28				
17	78	01.8	-5	31.7	283	35.4 ¹⁴³	-10	35.6 ¹³⁴	40	18 11	18 38	19 11	15	26 63 4 28 25				
18	93	02.0	-5	32.6	298	08.7 ¹⁴³	-10	22.3 ¹³³	45	18 15	18 45	19 20	15	19 67 4 37 21				
19	108	02.2		33.6	312	42.0 ¹⁴³	-10	08.8 ¹³⁵	50	20	53	33	09	73 48 16				
20	123	02.4		34.5	327	15.5 ¹⁴⁵	-9	55.4 ¹³⁴	52	22	18 57	38	05	75 53 14				
21	138	02.6		35.5	341	49.0 ¹⁴⁵		41.9 ¹³⁵	54	24	19 01	45	15	01 77 4 59 11				
22	153	02.7		36.4	356	22.5 ¹⁴⁵		28.4 ¹³⁵	56	27	05	19 53	14	55 80 5 05 8				
23	168	02.9		37.4	10	56.1 ¹⁴⁶		14.9 ¹³⁵	58	30	11	20 01	50	83 11 6				
24	183	03.1	-5	38.4	25	29.8 ¹⁴⁷	-9	01.3 ¹³⁶	60 S	18 33	19 17	20 12	14	43 87 5 19 2				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 55 ^m 3		Mag: -3.9 PMG: 12 ^h 39 ^m			Mag: -1.9 PMG: 21 ^h 13 ^m			Mag: -1.8 PMG: 9 ^h 40 ^m			Mag: +0.1 PMG: 5 ^h 54 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	15	13.8	170	20.0	-9	30.5	40	55.9	-15	02.0	214	43.5	+9	11.9	271	17.0	+22	04.9
1	30	16.2	185	19.5		31.7	55	58.1		01.7	229	45.5		11.7	286	19.4		04.9
2	45	18.7	200	19.1		32.9	71	00.3		01.4	244	47.5		11.6	301	21.8		04.8
3	60	21.2	215	18.7		34.1	86	02.6		01.1	259	49.5		11.4	316	24.1		04.8
4	75	23.6	230	18.2		35.3	101	04.8		00.8	274	51.5		11.2	331	26.5		04.8
5	90	26.1	245	17.8	-9	36.5	116	07.0	-15	00.5	289	53.5	+9	11.0	346	28.9	+22	04.8
6	105	28.5	260	17.3	-9	37.7	131	09.2	-15	00.2	304	55.5	+9	10.9	1	31.3	+22	04.8
7	120	31.0	275	16.9		38.9	146	11.4	-14	59.9	319	57.5		10.7	16	33.6		04.8
8	135	33.5	290	16.4		40.1	161	13.7		59.6	334	59.5		10.5	31	36.0		04.8
9	150	35.9	305	16.0		41.3	176	15.9		59.3	350	01.5		10.3	46	38.4		04.8
10	165	38.4	320	15.5		42.5	191	18.1		59.0	5	03.5		10.1	61	40.7		04.8
11	180	40.9	335	15.1	-9	43.7	206	20.3	-14	58.7	20	05.5	+9	10.0	76	43.1	+22	04.8
12	195	43.3	350	14.6	-9	44.9	221	22.5	-14	58.4	35	07.5	+9	09.8	91	45.5	+22	04.8
13	210	45.8	5	14.2		46.1	236	24.7		58.1	50	09.5		09.6	106	47.9		04.8
14	225	48.3	20	13.7		47.3	251	27.0		57.8	65	11.5		09.4	121	50.2		04.8
15	240	50.7	35	13.3		48.5	266	29.2		57.5	80	13.5		09.2	136	52.6		04.7
16	255	53.2	50	12.8		49.7	281	31.4		57.2	95	15.5		09.1	151	55.0		04.7
17	270	55.7	65	12.4	-9	50.9	296	33.6	-14	56.9	110	17.5	+9	08.9	166	57.4	+22	04.7
18	285	58.1	80	11.9	-9	52.1	311	35.8	-14	56.6	125	19.5	+9	08.7	181	59.7	+22	04.7
19	301	00.6	95	11.5		53.3	326	38.0		56.3	140	21.5		08.5	197	02.1		04.7
20	316	03.0	110	11.0		54.4	341	40.2		56.0	155	23.5		08.4	212	04.5		04.7
21	331	05.5	125	10.6		55.6	356	42.4		55.6	170	25.5		08.2	227	06.9		04.7
22	346	08.0	140	10.1		56.8	11	44.6		55.3	185	27.5		08.0	242	09.2		04.7
23	1	10.4	155	09.7		58.0	26	46.8		55.0	200	29.5		07.8	257	11.6		04.7
24	16	12.9	170	09.2	-9	59.2	41	49.0	-14	54.7	215	31.5	+9	07.6	272	14.0	+22	04.7
Dif	—		-4		-12		+22		+3		+20		-2		+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 7			Edad: 11 ^d 9 PHE { 4 ^h : 55'6 12 ^h : 55'5 20 ^h : 55'4 R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	183	03.1	-5 38.4	25	29.8	-9 01.3	60 N	4 51	5 39	6 21	17 24	1	3 25	85
1	198	03.3	39.3	40	03.5 ¹⁴⁷	-8 47.7 ¹³⁶	58	54	39	18	21	4	30	82
2	213	03.5	40.3	54	37.3 ¹⁴⁸	34.1 ¹³⁶	56	56	39	16	19	7	34	79
3	228	03.6	41.2	69	11.1 ¹⁴⁸	20.5 ¹³⁶	54	57	38	14	17	9	38	76
4	243	03.8	42.2	83	44.9 ¹⁴⁸	-8 06.8 ¹³⁷	52	4 59	38	12	15	11	41	74
5	258	04.0	-5 43.1	98	18.9 ¹⁵⁰	-7 53.1 ¹³⁷	50	5 00	5 38	6 10	17 13	13	3 44	72
6	273	04.2	-5 44.1	112	52.8 ¹⁴⁹	-7 39.3 ¹³⁸	45	5 03	5 37	6 06	17 09	18	3 51	67
7	288	04.4	45.0	127	26.9 ¹⁵¹	25.6 ¹³⁷	40	04	36	03	05	22	3 57	62
8	303	04.5	46.0	142	00.9 ¹⁵⁰	-7 11.8 ¹³⁸	35	05	34	6 00	02	25	4 02	59
9	318	04.7	46.9	156	35.0 ¹⁵¹	-6 58.0 ¹³⁸	30	05	33	5 57	17 00	28	06	56
10	333	04.9	47.9	171	09.2 ¹⁵²	44.2 ¹³⁸	20	05	30	53	16 55	33	13	51
11	348	05.1	-5 48.9	185	43.4 ¹⁵²	-6 30.4 ¹³⁸	10 N	5 03	5 27	5 48	16 51	37	4 19	47
12	3	05.2	-5 49.8	200	17.6 ¹⁵²	-6 16.5 ¹³⁹	0	4 59	5 24	5 44	16 47	42	4 25	42
13	18	05.4	50.8	214	51.9 ¹⁵³	-6 02.7 ¹³⁸	10 S	55	19	40	44	45	31	38
14	33	05.6	51.7	229	26.2 ¹⁵³	-5 48.8 ¹³⁹	20	48	14	36	40	50	37	34
15	48	05.8	52.7	244	00.6 ¹⁵⁴	34.9 ¹³⁹	30	38	06	31	35	55	44	29
16	63	05.9	53.6	258	35.0 ¹⁵⁴	21.0 ¹³⁹	35	32	5 02	28	32	59	48	26
17	78	06.1	-5 54.6	273	09.5 ¹⁵⁵	-5 07.1 ¹³⁹	40	4 24	4 57	5 24	16 29	62	4 53	22
18	93	06.3	-5 55.5	287	43.9 ¹⁵⁴	-4 53.1 ¹⁴⁰	45	4 15	4 50	5 20	16 26	66	4 58	19
19	108	06.5	56.5	302	18.4 ¹⁵⁵	39.2 ¹³⁹	50	4 02	42	15	22	70	5 04	14
20	123	06.7	57.4	316	53.0 ¹⁵⁶	25.2 ¹⁴⁰	52	3 56	38	13	20	72	07	12
21	138	06.8	58.4	331	27.6 ¹⁵⁶	-4 11.3 ¹³⁹	54	50	34	10	18	75	10	10
22	153	07.0	-5 59.3	346	02.2 ¹⁵⁶	-3 57.3 ¹⁴⁰	56	42	29	07	15	78	13	8
23	168	07.2	-6 00.3	0	36.9 ¹⁵⁷	43.3 ¹⁴⁰	58	33	24	04	13	80	17	5
24	183	07.4	-6 01.2	15	11.5 ¹⁵⁶	-3 29.3 ¹⁴⁰	60 S	3 23	4 18	5 01	16 10	84	5 21	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 22 ^h 51 ^m 4		Mag: -3.9 PMG: 12 ^h 40 ^m		Mag: -1.9 PMG: 21 ^h 10 ^m		Mag: -1.8 PMG: 9 ^h 37 ^m		Mag: +0.1 PMG: 5 ^h 50 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	16	12.9	170	09.2	-9	59.2	41	49.0	-14	54.7	215	31.5	+9	07.6	272	14.0	+22	04.7	
1	31	15.4	185	08.8	-10	00.4	56	51.2		54.4	230	33.5		07.5	287	16.4		04.7	
2	46	17.8	200	08.3		01.6	71	53.4		54.1	245	35.5		07.3	302	18.7		04.7	
3	61	20.3	215	07.8		02.8	86	55.6		53.8	260	37.5		07.1	317	21.1		04.7	
4	76	22.8	230	07.4		04.0	101	57.8		53.5	275	39.5		06.9	332	23.5		04.6	
5	91	25.2	245	06.9	-10	05.2	117	00.0	-14	53.2	290	41.5	+9	06.7	347	25.9	+22	04.6	
6	106	27.7	260	06.5	-10	06.4	132	02.2	-14	52.9	305	43.6	+9	06.6	2	28.2	+22	04.6	
7	121	30.1	275	06.0		07.5	147	04.4		52.6	320	45.6		06.4	17	30.6		04.6	
8	136	32.6	290	05.6		08.7	162	06.6		52.3	335	47.6		06.2	32	33.0		04.6	
9	151	35.1	305	05.1		09.9	177	08.8		52.0	350	49.6		06.0	47	35.4		04.6	
10	166	37.5	320	04.7		11.1	192	11.0		51.6	5	51.6		05.9	62	37.7		04.6	
11	181	40.0	335	04.2	-10	12.3	207	13.1	-14	51.3	20	53.6	+9	05.7	77	40.1	+22	04.6	
12	196	42.5	350	03.7	-10	13.5	222	15.3	-14	51.0	35	55.6	+9	05.5	92	42.5	+22	04.6	
13	211	44.9	5	03.3		14.7	237	17.5		50.7	50	57.6		05.3	107	44.9		04.6	
14	226	47.4	20	02.8		15.9	252	19.7		50.4	65	59.6		05.1	122	47.2		04.6	
15	241	49.9	35	02.4		17.0	267	21.9		50.1	81	01.6		05.0	137	49.6		04.6	
16	256	52.3	50	01.9		18.2	282	24.1		49.8	96	03.6		04.8	152	52.0		04.6	
17	271	54.8	65	01.4	-10	19.4	297	26.2	-14	49.5	111	05.6	+9	04.6	167	54.4	+22	04.6	
18	286	57.3	80	01.0	-10	20.6	312	28.4	-14	49.1	126	07.6	+9	04.4	182	56.8	+22	04.5	
19	301	59.7	95	00.5		21.8	327	30.6		48.8	141	09.6		04.3	197	59.1		04.5	
20	317	02.2	110	00.1		23.0	342	32.8		48.5	156	11.6		04.1	213	01.5		04.5	
21	332	04.6	124	59.6		24.2	357	34.9		48.2	171	13.6		03.9	228	03.9		04.5	
22	347	07.1	139	59.1		25.3	12	37.1		47.9	186	15.6		03.7	243	06.3		04.5	
23	2	09.6	154	58.7		26.5	27	39.3		47.6	201	17.6		03.6	258	08.7		04.5	
24	17	12.0	169	58.2	-10	27.7	42	41.5	-14	47.3	216	19.6	+9	03.4	273	11.0	+22	04.5	
Dif	—		-5	-12		+22	+3			+20	-2				+24				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 47 ^m 4			Edad: 12 ^d 9 PHE { 4 ^h : 55:2 12 ^h : 55:1 20 ^h : 55:0 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	183	07.4	-6 01.2	15	11.5	-3 29.3	60 N	17 10	17 52	18 40	17 25 1	4 50 83					
1	198	07.5	02.2	29	46.2 ¹⁵⁷	15.3 ¹⁴⁰	58	13	52	38	25 5	52 79					
2	213	07.7	03.1	44	21.0 ¹⁵⁸	-3 01.3 ¹⁴⁰	56	16	53	36	26 7	53 77					
3	228	07.9	04.1	58	55.8 ¹⁵⁸	-2 47.3 ¹⁴⁰	54	18	53	34	26 9	54 74					
4	243	08.1	05.0	73	30.6 ¹⁵⁸	33.3 ¹⁴⁰	52	20	54	33	26 12	55 72					
5	258	08.2	-6 06.0	88	05.4 ¹⁵⁸	-2 19.3 ¹⁴⁰	50	17 22	17 55	18 32	17 26 14	4 56 70					
6	273	08.4	-6 06.9	102	40.2 ¹⁵⁸	-2 05.3 ¹⁴⁰	45	17 27	17 56	18 30	17 27 17	4 58 65					
7	288	08.6	07.9	117	15.1 ¹⁵⁹	-1 51.3 ¹⁴⁰	40	30	58	29	27 21	4 59 61					
8	303	08.7	08.8	131	50.0 ¹⁵⁹	37.3 ¹⁴⁰	35	34	17 59	28	27 25	5 01 57					
9	318	08.9	09.8	146	24.9 ¹⁵⁹	23.2 ¹⁴¹	30	37	18 01	28	28 27	02 55					
10	333	09.1	10.8	160	59.8 ¹⁵⁹	-1 09.2 ¹⁴⁰	20	42	04	29	28 32	04 50					
11	348	09.3	-6 11.7	175	34.8 ¹⁶⁰	-0 55.2 ¹⁴⁰	10 N	17 46	18 07	18 32	17 28 37	5 06 45					
12	3	09.4	-6 12.7	190	09.8 ¹⁶⁰	-0 41.2 ¹⁴⁰	0	17 51	18 11	18 36	17 29 41	5 07 42					
13	18	09.6	13.6	204	44.8 ¹⁶⁰	27.2 ¹⁴⁰	10 S	17 55	16	41	29 45	09 37					
14	33	09.8	14.6	219	19.8 ¹⁶⁰	-0 13.3 ¹³⁹	20	18 00	22	48	30 49	11 32					
15	48	10.0	15.5	233	54.8 ¹⁶⁰	+0 00.7 ¹⁴⁰	30	06	30	18 58	30 55	13 27					
16	63	10.1	16.5	248	29.9 ¹⁶¹	14.7 ¹⁴⁰	35	09	35	19 05	31 57	14 25					
17	78	10.3	-6 17.4	263	04.9 ¹⁶⁰	+0 28.7 ¹⁴⁰	40	18 13	18 41	19 13	17 31 61	5 15 22					
18	93	10.5	-6 18.4	277	40.0 ¹⁶¹	+0 42.6 ¹³⁹	45	18 17	18 47	19 23	17 32 64	5 17 17					
19	108	10.6	19.3	292	15.1 ¹⁶¹	+0 56.6 ¹⁴⁰	50	23	18 56	36	32 69	18 14					
20	123	10.8	20.2	306	50.2 ¹⁶¹	+1 10.5 ¹³⁹	52	25	19 00	43	32 72	19 11					
21	138	11.0	21.2	321	25.3 ¹⁶¹	24.4 ¹³⁹	54	28	05	50	33 73	20 9					
22	153	11.2	22.1	336	00.4 ¹⁶¹	38.3 ¹³⁹	56	31	10	19 58	33 76	21 7					
23	168	11.3	23.1	350	35.5 ¹⁶¹	+1 52.2 ¹³⁹	58	35	16	20 07	33 80	22 4					
24	183	11.5	-6 24.0	5	10.7 ¹⁶²	+2 06.1 ¹³⁹	60 S	18 38	19 22	20 18	17 34 82	5 23 1					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 47 ^m 5		Mag: -3.9 PMG: 12 ^h 41 ^m		Mag: -1.9 PMG: 21 ^h 06 ^m		Mag: -1.8 PMG: 9 ^h 33 ^m		Mag: +0.1 PMG: 5 ^h 46 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	17	12.0	169	58.2	-10	27.7	42	41.5	-14	47.3	216	19.6	+9	03.4	273	11.0	+22	04.5
1	32	14.5	184	57.8		28.9	57	43.6		46.9	231	21.6		03.2	288	13.4		04.5
2	47	17.0	199	57.3		30.1	72	45.8		46.6	246	23.6		03.0	303	15.8		04.5
3	62	19.4	214	56.8		31.2	87	48.0		46.3	261	25.6		02.8	318	18.2		04.5
4	77	21.9	229	56.4		32.4	102	50.1		46.0	276	27.7		02.7	333	20.6		04.5
5	92	24.4	244	55.9	-10	33.6	117	52.3	-14	45.7	291	29.7	+9	02.5	348	22.9	+22	04.5
6	107	26.8	259	55.4	-10	34.8	132	54.5	-14	45.3	306	31.7	+9	02.3	3	25.3	+22	04.5
7	122	29.3	274	55.0		36.0	147	56.6		45.0	321	33.7		02.1	18	27.7		04.5
8	137	31.7	289	54.5		37.1	162	58.8		44.7	336	35.7		02.0	33	30.1		04.4
9	152	34.2	304	54.1		38.3	178	00.9		44.4	351	37.7		01.8	48	32.5		04.4
10	167	36.7	319	53.6		39.5	193	03.1		44.1	6	39.7		01.6	63	34.9		04.4
11	182	39.1	334	53.1	-10	40.7	208	05.3	-14	43.7	21	41.7	+9	01.4	78	37.2	+22	04.4
12	197	41.6	349	52.7	-10	41.9	223	07.4	-14	43.4	36	43.7	+9	01.2	93	39.6	+22	04.4
13	212	44.1	4	52.2		43.0	238	09.6		43.1	51	45.7		01.1	108	42.0		04.4
14	227	46.5	19	51.7		44.2	253	11.7		42.8	66	47.7		00.9	123	44.4		04.4
15	242	49.0	34	51.3		45.4	268	13.9		42.5	81	49.7		00.7	138	46.8		04.4
16	257	51.5	49	50.8		46.6	283	16.0		42.1	96	51.7		00.5	153	49.1		04.4
17	272	53.9	64	50.3	-10	47.7	298	18.2	-14	41.8	111	53.7	+9	00.4	168	51.5	+22	04.4
18	287	56.4	79	49.8	-10	48.9	313	20.3	-14	41.5	126	55.7	+9	00.2	183	53.9	+22	04.4
19	302	58.9	94	49.4		50.1	328	22.5		41.2	141	57.8	+9	00.0	198	56.3		04.4
20	318	01.3	109	48.9		51.3	343	24.6		40.8	156	59.8	+8	59.8	213	58.7		04.4
21	333	03.8	124	48.4		52.4	358	26.8		40.5	172	01.8		59.7	229	01.1		04.4
22	348	06.2	139	48.0		53.6	13	28.9		40.2	187	03.8		59.5	244	03.5		04.4
23	3	08.7	154	47.5		54.8	28	31.1		39.9	202	05.8		59.3	259	05.8		04.3
24	18	11.2	169	47.0	-10	55.9	43	33.2	-14	39.5	217	07.8	+8	59.1	274	08.2	+22	04.3
Dif	—		-5		-12		+22		+3		+20		-2		+24			

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: 13 ^d 9 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 R°: ***												
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	m	
0	183	11.5	-6	24.0	5	10.7	+2	06.1	4	56	5	44	6	26	17	26
1	198	11.7		25.0	19	45.8 ¹⁶¹		20.0 ¹³⁹	5	58	43	23		30	4	11
2	213	11.8		25.9	34	20.9 ¹⁶¹		33.8 ¹³⁸	5	00	43	20		33	7	10
3	228	12.0		26.9	48	56.1 ¹⁶²	+2	47.7 ¹³⁹	5	01	42	17		35	10	08
4	243	12.2		27.8	63	31.2 ¹⁶¹	+3	01.5 ¹³⁸	5	02	41	15		38	12	07
5	258	12.3	-6	28.8	78	06.4 ¹⁶²	+3	15.3 ¹³⁸	5	03	5	41	6	13	17	40
6	273	12.5	-6	29.7	92	41.6 ¹⁶²	+3	29.1 ¹³⁸	5	05	5	39	6	09	17	44
7	288	12.7		30.7	107	16.7 ¹⁶¹		42.8 ¹³⁷	5	06	38	05		48	23	6
8	303	12.9		31.6	121	51.9 ¹⁶²	+3	56.6 ¹³⁸	5	07	36	6	01	52	25	5
9	318	13.0		32.6	136	27.0 ¹⁶¹	+4	10.3 ¹³⁷	5	07	34	5	58	17	55	28
10	333	13.2		33.5	151	02.2 ¹⁶²		24.0 ¹³⁷	5	05	31	53		18	00	34
11	348	13.4	-6	34.5	165	37.4 ¹⁶²	+4	37.6 ¹³⁶	5	03	5	27	5	48	18	05
12	3	13.5	-6	35.4	180	12.5 ¹⁶¹	+4	51.3 ¹³⁷	4	59	5	23	5	44	18	10
13	18	13.7		36.4	194	47.7 ¹⁶²	+5	04.9 ¹³⁶	5	53	18	39		14	46	46
14	33	13.9		37.3	209	22.8 ¹⁶¹		18.5 ¹³⁶	5	46	12	34		19	50	43
15	48	14.0		38.3	223	57.9 ¹⁶¹		32.1 ¹³⁶	5	36	5	04	28		25	54
16	63	14.2		39.2	238	33.1 ¹⁶²		45.6 ¹³⁵	5	29	4	59	25		28	58
17	78	14.4	-6	40.1	253	08.2 ¹⁶¹	+5	59.1 ¹³⁵	4	21	4	53	5	21	18	32
18	93	14.5	-6	41.1	267	43.3 ¹⁶¹	+6	12.6 ¹³⁵	4	11	4	46	5	16	18	36
19	108	14.7		42.0	282	18.4 ¹⁶¹		26.1 ¹³⁵	3	58	38	11		41	70	32
20	123	14.9		43.0	296	53.5 ¹⁶¹		39.5 ¹³⁴	5	51	33	08		44	71	30
21	138	15.0		43.9	311	28.6 ¹⁶¹	+6	52.9 ¹³⁴	5	44	29	05		46	74	29
22	153	15.2		44.9	326	03.7 ¹⁶¹	+7	06.2 ¹³³	5	36	24	5	02	49	77	28
23	168	15.4		45.8	340	38.7 ¹⁶⁰		19.6 ¹³⁴	5	27	18	4	59	53	79	26
24	183	15.5	-6	46.8	355	13.8 ¹⁶¹	+7	32.8 ¹³²	3	16	4	11	4	55	18	56
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 43 ^m 5		Mag: -3.9 PMG: 12 ^h 41 ^m			Mag: -1.8 PMG: 21 ^h 03 ^m			Mag: -1.8 PMG: 9 ^h 30 ^m			Mag: +0.1 PMG: 5 ^h 43 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	18	11.2	169	47.0	-10	55.9	43	33.2	-14	39.5	217	07.8	+8	59.1	274	
1	33	13.6	184	46.6		57.1	58	35.3		39.2	232	09.8		59.0	289	
2	48	16.1	199	46.1		58.3	73	37.5		38.9	247	11.8		58.8	304	
3	63	18.6	214	45.6	-10	59.5	88	39.6		38.6	262	13.8		58.6	319	
4	78	21.0	229	45.1	-11	00.6	103	41.8		38.2	277	15.8		58.4	334	
5	93	23.5	244	44.7	-11	01.8	118	43.9	-14	37.9	292	17.8	+8	58.2	349	
6	108	26.0	259	44.2	-11	03.0	133	46.0	-14	37.6	307	19.8	+8	58.1	4	
7	123	28.4	274	43.7		04.1	148	48.2		37.2	322	21.9		57.9	19	
8	138	30.9	289	43.3		05.3	163	50.3		36.9	337	23.9		57.7	34	
9	153	33.3	304	42.8		06.5	178	52.4		36.6	352	25.9		57.5	49	
10	168	35.8	319	42.3		07.6	193	54.6		36.3	7	27.9		57.4	64	
11	183	38.3	334	41.8	-11	08.8	208	56.7	-14	35.9	22	29.9	+8	57.2	79	
12	198	40.7	349	41.4	-11	10.0	223	58.8	-14	35.6	37	31.9	+8	57.0	94	
13	213	43.2	4	40.9		11.1	239	00.9		35.3	52	33.9		56.8	109	
14	228	45.7	19	40.4		12.3	254	03.1		34.9	67	35.9		56.7	124	
15	243	48.1	34	39.9		13.5	269	05.2		34.6	82	37.9		56.5	139	
16	258	50.6	49	39.4		14.6	284	07.3		34.3	97	39.9		56.3	154	
17	273	53.1	64	39.0	-11	15.8	299	09.4	-14	33.9	112	41.9	+8	56.1	169	
18	288	55.5	79	38.5	-11	17.0	314	11.5	-14	33.6	127	44.0	+8	56.0	184	
19	303	58.0	94	38.0		18.1	329	13.7		33.3	142	46.0		55.8	199	
20	319	00.5	109	37.5		19.3	344	15.8		32.9	157	48.0		55.6	214	
21	334	02.9	124	37.1		20.5	359	17.9		32.6	172	50.0		55.4	229	
22	349	05.4	139	36.6		21.6	14	20.0		32.3	187	52.0		55.3	245	
23	4	07.8	154	36.1		22.8	29	22.1		31.9	202	54.0		55.1	260	
24	19	10.3	169	35.6	-11	23.9	44	24.2	-14	31.6	217	56.0	+8	54.9	275	
Dif	—		-5	-12			+21	+3			+20	-2		+24		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 14 ^d 9 PHE { 4 ^h : 54:5 12 ^h : 54:4 20 ^h : 54:3					Civil			R°		R°	
	PMG: 11 ^h 46 ^m 8			PMG: 0 ^h 20 ^m R°: 41 ^m					Náutico			Hora		Hora	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	15.5	-6 46.8	355	13.8	+7 32.8	60 N	17 04	17 46	18 34	17 28 3	7 36 84			
1	198	15.7	47.7	9	48.8 ¹⁶⁰	46.1 ¹³³	58	08	47	32	34 7	31 80			
2	213	15.9	48.7	24	23.8 ¹⁶⁰	+7 59.3 ¹³²	56	11	48	31	40 9	26 77			
3	228	16.0	49.6	38	58.8 ¹⁶⁰	+8 12.5 ¹³²	54	13	49	30	45 12	22 74			
4	243	16.2	50.5	53	33.8 ¹⁶⁰	25.7 ¹³²	52	16	50	29	50 14	18 72			
5	258	16.4	-6 51.5	68	08.7 ¹⁵⁹	+8 38.8 ¹³¹	50	17 18	17 50	18 28	17 54 16	7 15 69			
6	273	16.5	-6 52.4	82	43.7 ¹⁶⁰	+8 51.8 ¹³⁰	45	17 23	17 53	18 26	18 03 21	7 07 65			
7	288	16.7	53.4	97	18.6 ¹⁵⁹	+9 04.9 ¹³¹	40	27	54	26	11 24	7 01 61			
8	303	16.8	54.3	111	53.5 ¹⁵⁹	17.9 ¹³⁰	35	31	56	26	17 28	6 56 57			
9	318	17.0	55.3	126	28.4 ¹⁵⁹	30.8 ¹²⁹	30	34	17 58	26	23 31	51 55			
10	333	17.2	56.2	141	03.2 ¹⁵⁸	43.7 ¹²⁹	20	40	18 02	28	34 34	43 50			
11	348	17.3	-6 57.2	155	38.1 ¹⁵⁹	+9 56.6 ¹²⁹	10 N	17 45	18 06	18 31	18 43 38	6 36 46			
12	3	17.5	-6 58.1	170	12.9 ¹⁵⁸	+10 09.4 ¹²⁸	0	17 50	18 11	18 35	18 51 43	6 30 41			
13	18	17.7	-6 59.0	184	47.7 ¹⁵⁸	22.2 ¹²⁸	10 S	17 55	16	41	19 00 46	23 38			
14	33	17.8	-7 00.0	199	22.4 ¹⁵⁷	34.9 ¹²⁷	20	18 01	23	18 49	09 50	16 34			
15	48	18.0	-7 00.9	213	57.2 ¹⁵⁸	+10 47.6 ¹²⁷	30	07	31	19 00	19 55	08 29			
16	63	18.2	01.9	228	31.9 ¹⁵⁷	+11 00.3 ¹²⁷	35	11	37	07	26 57	6 04 26			
17	78	18.3	-7 02.8	243	06.6 ¹⁵⁷	+11 12.9 ¹²⁶	40	18 15	18 43	19 16	19 33 61	5 58 24			
18	93	18.5	-7 03.8	257	41.2 ¹⁵⁶	+11 25.4 ¹²⁵	45	18 20	18 50	19 26	19 41 65	5 53 19			
19	108	18.6	04.7	272	15.8 ¹⁵⁶	37.9 ¹²⁵	50	26	18 59	40	51 69	45 16			
20	123	18.8	05.6	286	50.4 ¹⁵⁶	+11 50.4 ¹²⁵	52	29	19 04	47	19 55 72	42 13			
21	138	19.0	06.6	301	25.0 ¹⁵⁶	+12 02.8 ¹²⁴	54	32	09	19 54	20 00 75	39 10			
22	153	19.1	07.5	315	59.5 ¹⁵⁵	15.1 ¹²³	56	35	14	20 03	06 78	35 8			
23	168	19.3	08.5	330	34.0 ¹⁵⁵	27.4 ¹²³	58	39	20	13	12 81	30 6			
24	183	19.4	-7 09.4	345	08.5 ¹⁵⁵	+12 39.7 ¹²³	60 S	18 43	19 28	20 24	20 20 85	5 26 2			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 39 ^m 6		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: -1.8 PMG: 20 ^h 59 ^m		Mag: -1.8 PMG: 9 ^h 27 ^m		Mag: +0.1 PMG: 5 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	10.3	169	35.6	-11	23.9	44	24.2	-14	31.6
1	34	12.8	184	35.1		25.1	59	26.4		31.3
2	49	15.2	199	34.7		26.3	74	28.5		30.9
3	64	17.7	214	34.2		27.4	89	30.6		30.6
4	79	20.2	229	33.7		28.6	104	32.7		30.3
5	94	22.6	244	33.2	-11	29.7	119	34.8	-14	29.9
6	109	25.1	259	32.7	-11	30.9	134	36.9	-14	29.6
7	124	27.6	274	32.3		32.1	149	39.0		29.2
8	139	30.0	289	31.8		33.2	164	41.1		28.9
9	154	32.5	304	31.3		34.4	179	43.2		28.6
10	169	35.0	319	30.8		35.5	194	45.3		28.2
11	184	37.4	334	30.3	-11	36.7	209	47.4	-14	27.9
12	199	39.9	349	29.8	-11	37.8	224	49.5	-14	27.5
13	214	42.3	4	29.3		39.0	239	51.6		27.2
14	229	44.8	19	28.9		40.2	254	53.7		26.9
15	244	47.3	34	28.4		41.3	269	55.8		26.5
16	259	49.7	49	27.9		42.5	284	57.9		26.2
17	274	52.2	64	27.4	-11	43.6	300	00.0	-14	25.8
18	289	54.7	79	26.9	-11	44.8	315	02.1	-14	25.5
19	304	57.1	94	26.4		45.9	330	04.2		25.2
20	319	59.6	109	25.9		47.1	345	06.3		24.8
21	335	02.1	124	25.5		48.2	0	08.4		24.5
22	350	04.5	139	25.0		49.4	15	10.5		24.1
23	5	07.0	154	24.5		50.5	30	12.5		23.8
24	20	09.4	169	24.0	-11	51.7	45	14.6	-14	23.4
Dif	—		-5	-12		+21	+3	+20		-2

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG: 11 ^h 46 ^m 6			Edad: 15 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 SD: 14'8 PMG: 1 ^h 01 ^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	19.4	-7	09.4	345	08.5	+12	39.7	60 N	5 01	5 49	6 31	17 31	4	9 00	86					
1	198	19.6		10.3	359	42.9 ¹⁵⁴	+12	51.8 ¹²¹	58	02	48	27	41	8	8 51	81					
2	213	19.8		11.3	14	17.3 ¹⁵⁴	+13	04.0 ¹²²	56	04	47	24	49	12	43	78					
3	228	19.9		12.2	28	51.7 ¹⁵⁴		16.1 ¹²¹	54	05	46	21	17 57	15	36	75					
4	243	20.1		13.2	43	26.0 ¹⁵³		28.1 ¹²⁰	52	06	45	19	18 04	18	30	72					
5	258	20.2	-7	14.1	58	00.3 ¹⁵³	+13	40.1 ¹²⁰	50	5 06	5 44	6 16	18 10	20	8 24	70					
6	273	20.4	-7	15.0	72	34.6 ¹⁵³	+13	52.0 ¹¹⁹	45	5 08	5 42	6 11	18 24	24	8 12	65					
7	288	20.6		16.0	87	08.8 ¹⁵²	+14	03.8 ¹¹⁸	40	08	40	07	35	28	8 02	61					
8	303	20.7		16.9	101	43.0 ¹⁵²		15.6 ¹¹⁸	35	08	38	03	45	31	7 53	59					
9	318	20.9		17.9	116	17.1 ¹⁵¹		27.4 ¹¹⁸	30	08	36	6 00	18 54	33	46	55					
10	333	21.0		18.8	130	51.2 ¹⁵¹		39.0 ¹¹⁶	20	06	32	5 54	19 08	38	33	51					
11	348	21.2	-7	19.7	145	25.3 ¹⁵¹	+14	50.6 ¹¹⁶	10 N	5 03	5 27	5 48	19 21	41	7 22	47					
12	3	21.4	-7	20.7	159	59.3 ¹⁵⁰	+15	02.2 ¹¹⁶	0	4 58	5 22	5 43	19 34	44	7 11	44					
13	18	21.5		21.6	174	33.3 ¹⁵⁰		13.7 ¹¹⁵	10 S	52	17	38	46	48	7 01	40					
14	33	21.7		22.6	189	07.2 ¹⁴⁹		25.1 ¹¹⁴	20	44	10	32	19 59	52	6 50	36					
15	48	21.8		23.5	203	41.1 ¹⁴⁹		36.5 ¹¹⁴	30	33	5 02	26	20 14	56	37	32					
16	63	22.0		24.4	218	14.9 ¹⁴⁸		47.8 ¹¹³	35	26	4 56	22	23	59	30	29					
17	78	22.1	-7	25.4	232	48.7 ¹⁴⁸	+15	59.0 ¹¹²	40	4 17	4 50	5 18	20 34	61	6 22	26					
18	93	22.3	-7	26.3	247	22.5 ¹⁴⁸	+16	10.2 ¹¹²	45	4 07	4 43	5 13	20 46	65	6 12	22					
19	108	22.5		27.2	261	56.2 ¹⁴⁷		21.3 ¹¹¹	50	3 53	33	07	21 00	70	6 01	17					
20	123	22.6		28.2	276	29.9 ¹⁴⁷		32.3 ¹¹⁰	52	46	29	04	07 72		5 55	16					
21	138	22.8		29.1	291	03.5 ¹⁴⁶		43.2 ¹⁰⁹	54	38	24	5 01	15 75		49	14					
22	153	22.9		30.1	305	37.1 ¹⁴⁶	+16	54.1 ¹⁰⁹	56	30	18	4 57	24 77		43	10					
23	168	23.1		31.0	320	10.6 ¹⁴⁵	+17	05.0 ¹⁰⁹	58	20	12	53	33 82		36	7					
24	183	23.2	-7	31.9	334	44.1 ¹⁴⁵	+17	15.7 ¹⁰⁷	60 S	3 08	4 05	4 49	21 45	86	5 28	3					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 22 ^h 35 ^m 7			Mag: -3.9 PMG: 12 ^h 43 ^m			Mag: -1.8 PMG: 20 ^h 56 ^m			Mag: -1.8 PMG: 9 ^h 24 ^m			Mag: 0.0 PMG: 5 ^h 35 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	20	09.4	169	24.0	-11	51.7	45	14.6	-14	23.4	218	44.3	+8	50.7	276	02.9	+22	04.0			
1	35	11.9	184	23.5		52.8	60	16.7		23.1	233	46.3		50.5	291	05.3		04.0			
2	50	14.4	199	23.0		54.0	75	18.8		22.7	248	48.3		50.3	306	07.7		04.0			
3	65	16.8	214	22.5		55.1	90	20.9		22.4	263	50.3		50.2	321	10.1		04.0			
4	80	19.3	229	22.0		56.3	105	23.0		22.1	278	52.4		50.0	336	12.5		04.0			
5	95	21.8	244	21.5	-11	57.4	120	25.0	-14	21.7	293	54.4	+8	49.8	351	14.9	+22	04.0			
6	110	24.2	259	21.0	-11	58.6	135	27.1	-14	21.4	308	56.4	+8	49.7	6	17.3	+22	04.0			
7	125	26.7	274	20.5	-11	59.7	150	29.2		21.0	323	58.4		49.5	21	19.7		04.0			
8	140	29.2	289	20.1	-12	00.9	165	31.3		20.7	339	00.4		49.3	36	22.1		04.0			
9	155	31.6	304	19.6		02.0	180	33.3		20.3	354	02.4		49.1	51	24.5		04.0			
10	170	34.1	319	19.1		03.1	195	35.4		20.0	9	04.4		49.0	66	26.9		04.0			
11	185	36.6	334	18.6	-12	04.3	210	37.5	-14	19.6	24	06.5	+8	48.8	81	29.3	+22	04.0			
12	200	39.0	349	18.1	-12	05.4	225	39.6	-14	19.3	39	08.5	+8	48.6	96	31.7	+22	04.0			
13	215	41.5	4	17.6		06.6	240	41.6		18.9	54	10.5		48.4	111	34.1		04.0			
14	230	43.9	19	17.1		07.7	255	43.7		18.6	69	12.5		48.3	126	36.5		04.0			
15	245	46.4	34	16.6		08.9	270	45.8		18.2	84	14.5		48.1	141	38.9		04.0			
16	260	48.9	49	16.1		10.0	285	47.8		17.9	99	16.5		47.9	156	41.3		04.0			
17	275	51.3	64	15.6	-12	11.2	300	49.9	-14	17.5	114	18.5	+8	47.7	171	43.7	+22	03.9			
18	290	53.8	79	15.1	-12	12.3	315	52.0	-14	17.2	129	20.6	+8	47.6	186	46.1	+22	03.9			
19	305	56.3	94	14.6		13.4	330	54.0		16.8	144	22.6		47.4	201	48.5		03.9			
20	320	58.7	109	14.1		14.6	345	56.1		16.5	159	24.6		47.2	216	50.9		03.9			
21	336	01.2	124	13.6		15.7	0	58.2		16.1	174	26.6		47.0	231	53.3		03.9			
22	351	03.7	139	13.1		16.9	16	00.2		15.8	189	28.6		46.9	246	55.7		03.9			
23	6	06.1	154	12.6		18.0	31	02.3		15.4	204	30.6		46.7	261	58.0		03.9			
24	21	08.6	169	12.1	-12	19.1	46	04.3	-14	15.1	219	32.7	+8	46.5	277	00.4	+22	03.9			
Dif	—			-5			+21			+3			+20			-2			+24		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 46 ^m 3			Edad: 16 ^d 9 PHE { SD: 14 ^h 7 PMG: 1 ^h 44 ^m R°: 45 ^m 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	m	h m	m
0	183	23.2	-7 31.9	334	44.1	+17 15.7	60 N	16 58	17 40	18 28	17 35	9	10 26	86
1	198	23.4	32.9	349	17.5 ¹⁴⁴	26.4 ¹⁰⁷	58	17 02	42	27	17 49	14	12	82
2	213	23.5	33.8	3	50.9 ¹⁴⁴	37.0 ¹⁰⁶	56	06	43	26	18 01	18	10 01	77
3	228	23.7	34.7	18	24.3 ¹⁴⁴	47.5 ¹⁰⁵	54	09	44	25	12 20		9 51	74
4	243	23.9	35.7	32	57.5 ¹⁴²	+17 58.0 ¹⁰⁵	52	11	45	24	22 22		42	71
5	258	24.0	-7 36.6	47	30.8 ¹⁴³	+18 08.3 ¹⁰³	50	17 14	17 46	18 24	18 30	25	9 34	69
6	273	24.2	-7 37.6	62	04.0 ¹⁴²	+18 18.6 ¹⁰³	45	17 20	17 49	18 23	18 48	29	9 17	65
7	288	24.3	38.5	76	37.1 ¹⁴¹	28.9 ¹⁰³	40	24	51	23	19 03	33	9 03	61
8	303	24.5	39.4	91	10.2 ¹⁴¹	39.0 ¹⁰¹	35	28	54	23	16 35		8 52	58
9	318	24.6	40.4	105	43.2 ¹⁴⁰	49.1 ¹⁰¹	30	32	17 56	24	27 37		41	56
10	333	24.8	41.3	120	16.2 ¹⁴⁰	+18 59.1 ¹⁰⁰	20	38	18 01	26	19 46	41	24	52
11	348	24.9	-7 42.2	134	49.1 ¹³⁹	+19 09.0 ⁹⁹	10 N	17 44	18 05	18 30	20 02	44	8 09	49
12	3	25.1	-7 43.2	149	22.0 ¹³⁹	+19 18.8 ⁹⁸	0	17 50	18 10	18 35	20 18	47	7 55	45
13	18	25.2	44.1	163	54.8 ¹³⁸	28.6 ⁹⁸	10 S	17 55	16	41	34 49		41	42
14	33	25.4	45.0	178	27.6 ¹³⁸	38.2 ⁹⁶	20	18 01	24	18 50	20 51	52	26	39
15	48	25.5	46.0	193	00.3 ¹³⁷	47.8 ⁹⁶	30	08	33	19 01	21 10	57	7 09	35
16	63	25.7	46.9	207	33.0 ¹³⁷	+19 57.3 ⁹⁵	35	12	38	09	22 58		6 59	33
17	78	25.8	-7 47.8	222	05.6 ¹³⁶	+20 06.7 ⁹⁴	40	18 17	18 45	19 18	21 35	61	6 48	30
18	93	26.0	-7 48.8	236	38.1 ¹³⁵	+20 16.1 ⁹⁴	45	18 23	18 53	19 29	21 51	64	6 34	27
19	108	26.1	49.7	251	10.6 ¹³⁵	25.3 ⁹²	50	29	19 03	44	22 10	69	18	22
20	123	26.3	50.6	265	43.1 ¹³⁵	34.5 ⁹²	52	32	08	51	19 71		11	20
21	138	26.4	51.6	280	15.4 ¹³³	43.6 ⁹¹	54	36	13	19 59	30 73		6 03	17
22	153	26.6	52.5	294	47.8 ¹³⁴	+20 52.5 ⁸⁹	56	39	19	20 08	41 77		5 53	15
23	168	26.7	53.4	309	20.0 ¹³²	+21 01.4 ⁸⁹	58	44	25	19	22 55	81	43	10
24	183	26.9	-7 54.4	323	52.3 ¹³³	+21 10.2 ⁸⁸	60 S	18 48	19 33	20 31	23 11	87	5 31	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 22 ^h 31 ^m 7		Mag: -3.9 PMG: 12 ^h 44 ^m		Mag: -1.7 PMG: 20 ^h 53 ^m		Mag: -1.8 PMG: 9 ^h 21 ^m		Mag: 0.0 PMG: 5 ^h 31 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	21	08.6	169	12.1	-12 19.1	46 04.3	-14 15.1	219 32.7	+8 46.5	277 00.4	+22 03.9
1	36	11.0	184	11.6	20.3	61 06.4	14.7	234 34.7	46.3	292 02.8	03.9
2	51	13.5	199	11.1	21.4	76 08.5	14.3	249 36.7	46.2	307 05.2	03.9
3	66	16.0	214	10.6	22.5	91 10.5	14.0	264 38.7	46.0	322 07.6	03.9
4	81	18.4	229	10.1	23.7	106 12.6	13.6	279 40.7	45.8	337 10.0	03.9
5	96	20.9	244	09.6	-12 24.8	121 14.6	-14 13.3	294 42.7	+8 45.6	352 12.4	+22 03.9
6	111	23.4	259	09.1	-12 25.9	136 16.7	-14 12.9	309 44.8	+8 45.5	7 14.8	+22 03.9
7	126	25.8	274	08.6	27.1	151 18.7	12.6	324 46.8	45.3	22 17.2	03.9
8	141	28.3	289	08.1	28.2	166 20.8	12.2	339 48.8	45.1	37 19.6	03.9
9	156	30.8	304	07.6	29.4	181 22.8	11.9	354 50.8	45.0	52 22.1	03.9
10	171	33.2	319	07.1	30.5	196 24.9	11.5	9 52.8	44.8	67 24.5	03.9
11	186	35.7	334	06.6	-12 31.6	211 26.9	-14 11.1	24 54.8	+8 44.6	82 26.9	+22 03.8
12	201	38.2	349	06.1	-12 32.7	226 28.9	-14 10.8	39 56.9	+8 44.4	97 29.3	+22 03.8
13	216	40.6	4	05.6	33.9	241 31.0	10.4	54 58.9	44.3	112 31.7	03.8
14	231	43.1	19	05.1	35.0	256 33.0	10.1	70 00.9	44.1	127 34.1	03.8
15	246	45.5	34	04.6	36.1	271 35.1	09.7	85 02.9	43.9	142 36.5	03.8
16	261	48.0	49	04.1	37.3	286 37.1	09.3	100 04.9	43.7	157 38.9	03.8
17	276	50.5	64	03.6	-12 38.4	301 39.2	-14 09.0	115 06.9	+8 43.6	172 41.3	+22 03.8
18	291	52.9	79	03.1	-12 39.5	316 41.2	-14 08.6	130 09.0	+8 43.4	187 43.7	+22 03.8
19	306	55.4	94	02.5	40.7	331 43.2	08.3	145 11.0	43.2	202 46.1	03.8
20	321	57.9	109	02.0	41.8	346 45.3	07.9	160 13.0	43.0	217 48.5	03.8
21	337	00.3	124	01.5	42.9	1 47.3	07.5	175 15.0	42.9	232 50.9	03.8
22	352	02.8	139	01.0	44.0	16 49.3	07.2	190 17.0	42.7	247 53.3	03.8
23	7	05.3	154	00.5	45.2	31 51.4	06.8	205 19.1	42.5	262 55.7	03.8
24	22	07.7	169	00.0	-12 46.3	46 53.4	-14 06.5	220 21.1	+8 42.4	277 58.1	+22 03.8
Dif	—		-5 -11		+20 +4		+20 -2		+24 0		

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: 17 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1 PMG: 2 ^h 29 ^m R°: 48 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	183	26.9	-7	54.4	323	52.3	+21	10.2	60 N	5	05	5	54	6	36	17	44		
1	198	27.0		55.3	338	24.4 ¹³¹		18.9 ⁸⁷	58	07	52	32	18	03	21		34		
2	213	27.2		56.2	352	56.5 ¹³¹		27.6 ⁸⁵	56	08	51	28		19	25		18		
3	228	27.3		57.2	7	28.6 ¹³¹		36.1 ⁸⁷	54	08	49	25		32	29	11	05		
4	243	27.5		58.1	22	00.6 ¹³⁰		44.5 ⁸⁴	52	09	48	22		44	31	10	53		
5	258	27.6	-7	59.0	36	32.5 ¹²⁹	+21	52.9 ⁸⁴	50	5	09	5	47	6	19	18	55		
6	273	27.8	-8	00.0	51	04.4 ¹²⁹	+22	01.1 ⁸²	45	5	10	5	44	6	14	19	17		
7	288	27.9	-8	00.9	65	36.2 ¹²⁸		09.3 ⁸⁰	40	10	42	09		36	38	10	04		
8	303	28.1		01.8	80	08.0 ¹²⁸		17.3 ⁸⁰	35	10	39	05		19	51	40	9		
9	318	28.2		02.8	94	39.7 ¹²⁷		25.3 ⁸⁰	30	09	37	6	01	20	04	42	37		
10	333	28.4		03.7	109	11.3 ¹²⁶		33.2 ⁷⁹	20	06	32	5	54	27	45	9	16		
11	348	28.5	-8	04.6	123	42.9 ¹²⁶	+22	40.9 ⁷⁷	10 N	5	03	5	27	5	48	20	46		
12	3	28.7	-8	05.5	138	14.4 ¹²⁵	+22	48.6 ⁷⁶	0	4	58	5	22	5	43	21	05		
13	18	28.8		06.5	152	45.9 ¹²⁵	+22	56.2 ⁷⁷	10 S	51	16	37		23	51		23		
14	33	29.0		07.4	167	17.3 ¹²⁴	+23	03.6 ⁷⁴	20	42	5	09	31	21	43	54	8		
15	48	29.1		08.3	181	48.7 ¹²⁴		11.0 ⁷³	30	31	4	59	24	22	07	55	7		
16	63	29.3		09.3	196	20.0 ¹²³		18.3 ⁷³	35	23	54	19		20	57		32		
17	78	29.4	-8	10.2	210	51.2 ¹²²	+23	25.4 ⁷¹	40	4	14	4	47	5	15	22	36		
18	93	29.6	-8	11.1	225	22.4 ¹²²	+23	32.5 ⁷¹	45	4	03	4	39	5	09	22	55		
19	108	29.7		12.1	239	53.5 ¹²¹		39.5 ⁷⁰	50	3	48	29	5	02	23	19	64		
20	123	29.8		13.0	254	24.6 ¹²¹		46.3 ⁶⁸	52	41	24	4	59		30	66			
21	138	30.0		13.9	268	55.6 ¹²⁰		53.1 ⁶⁸	54	33	19	56		43	69		20		
22	153	30.1		14.8	283	26.6 ¹²⁰	+23	59.7 ⁶⁶	56	24	13	52		23	58	72	6		
23	168	30.3		15.8	297	57.5 ¹¹⁹	+24	06.2 ⁶⁵	58	13	4	06	48	**	**	**	5		
24	183	30.4	-8	16.7	312	28.4 ¹¹⁹	+24	12.6 ⁶⁴	60 S	3	00	3	58	4	43	**	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 27 ^m 8		Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: -1.7 PMG: 20 ^h 50 ^m			Mag: -1.8 PMG: 9 ^h 17 ^m			Mag: 0.0 PMG: 5 ^h 27 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	22	07.7	169	00.0	-12	46.3	46	53.4	-14	06.5	220	21.1	+8	42.4	277	58.1	+22	03.8	
1	37	10.2	183	59.5		47.4	61	55.4		06.1	235	23.1		42.2	293	00.5		03.8	
2	52	12.7	198	59.0		48.5	76	57.5		05.7	250	25.1		42.0	308	02.9		03.8	
3	67	15.1	213	58.5		49.7	91	59.5		05.4	265	27.1		41.8	323	05.3		03.8	
4	82	17.6	228	58.0		50.8	107	01.5		05.0	280	29.2		41.7	338	07.7		03.8	
5	97	20.0	243	57.4	-12	51.9	122	03.5	-14	04.6	295	31.2	+8	41.5	353	10.1	+22	03.8	
6	112	22.5	258	56.9	-12	53.0	137	05.6	-14	04.3	310	33.2	+8	41.3	8	12.5	+22	03.8	
7	127	25.0	273	56.4		54.2	152	07.6		03.9	325	35.2		41.1	23	14.9		03.8	
8	142	27.4	288	55.9		55.3	167	09.6		03.5	340	37.2		41.0	38	17.3		03.7	
9	157	29.9	303	55.4		56.4	182	11.6		03.2	355	39.2		40.8	53	19.7		03.7	
10	172	32.4	318	54.9		57.5	197	13.7		02.8	10	41.3		40.6	68	22.1		03.7	
11	187	34.8	333	54.4	-12	58.6	212	15.7	-14	02.4	25	43.3	+8	40.5	83	24.5	+22	03.7	
12	202	37.3	348	53.9	-12	59.8	227	17.7	-14	02.1	40	45.3	+8	40.3	98	27.0	+22	03.7	
13	217	39.8	3	53.3	-13	00.9	242	19.7		01.7	55	47.3		40.1	113	29.4		03.7	
14	232	42.2	18	52.8		02.0	257	21.7		01.3	70	49.3		39.9	128	31.8		03.7	
15	247	44.7	33	52.3		03.1	272	23.7		01.0	85	51.4		39.8	143	34.2		03.7	
16	262	47.2	48	51.8		04.2	287	25.8		00.6	100	53.4		39.6	158	36.6		03.7	
17	277	49.6	63	51.3	-13	05.4	302	27.8	-14	00.2	115	55.4	+8	39.4	173	39.0	+22	03.7	
18	292	52.1	78	50.8	-13	06.5	317	29.8	-13	59.9	130	57.4	+8	39.3	188	41.4	+22	03.7	
19	307	54.5	93	50.2		07.6	332	31.8		59.5	145	59.5		39.1	203	43.8		03.7	
20	322	57.0	108	49.7		08.7	347	33.8		59.1	161	01.5		38.9	218	46.2		03.7	
21	337	59.5	123	49.2		09.8	2	35.8		58.8	176	03.5		38.7	233	48.6		03.7	
22	353	01.9	138	48.7		10.9	17	37.8		58.4	191	05.5		38.6	248	51.0		03.7	
23	8	04.4	153	48.2		12.0	32	39.8		58.0	206	07.5		38.4	263	53.4		03.7	
24	23	06.9	168	47.6	-13	13.2	47	41.8	-13	57.7	221	09.6	+8	38.2	278	55.8	+22	03.7	
Dif	—		-5			-11	+20			+4			+20			-2		+24	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/0 PMG: 11 ^h 45 ^m 9			Edad: 18 ^d 9 PHE { SD: 14/7 PMG: 3 ^h 17 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	183	30.4	-8	16.7	312	28.4	+24	12.6	60 N	16 52	17 35	18 23	17 59	31	13 17 74	
1	198	30.6		17.6	326	59.2 ¹¹⁸		19.0	58	16 57	36	22	18 24	36	12 52 70	
2	213	30.7		18.5	341	29.9 ¹¹⁷		25.2	62	17 01	38	21	18 44	39	33 66	
3	228	30.9		19.5	356	00.6 ¹¹⁷		31.3	61	04	40	20	19 01	40	16 65	
4	243	31.0		20.4	10	31.2 ¹¹⁶		37.3	60	07	41	20	15	42	12 02 63	
5	258	31.1	-8	21.3	25	01.8 ¹¹⁶	+24	43.1	58	17 10	17 42	18 20	19 28	43	11 50 61	
6	273	31.3	-8	22.3	39	32.3 ¹¹⁵	+24	48.9	58	17 16	17 46	18 20	19 54	44	11 25 59	
7	288	31.4		23.2	54	02.8 ¹¹⁵	+24	54.6	57	21	49	20	20 14	46	11 05 57	
8	303	31.6		24.1	68	33.2 ¹¹⁴	+25	00.1	55	26	51	21	31	48	10 48 56	
9	318	31.7		25.0	83	03.5 ¹¹³		05.5	54	30	54	22	20 46	48	34 54	
10	333	31.8		26.0	97	33.8 ¹¹³		10.8	53	37	17 59	25	21 12	49	10 09 53	
11	348	32.0	-8	26.9	112	04.1 ¹¹³	+25	16.0	52	17 43	18 04	18 29	21 33	51	9 48 52	
12	3	32.1	-8	27.8	126	34.3 ¹¹²	+25	21.1	51	17 49	18 10	18 34	21 54	51	9 28 50	
13	18	32.3		28.7	141	04.4 ¹¹¹		26.1	50	17 55	17	41	22 14	52	9 09 48	
14	33	32.4		29.7	155	34.5 ¹¹¹		30.9	48	18 02	24	18 51	22 37	52	8 48 47	
15	48	32.6		30.6	170	04.6 ¹¹¹		35.7	48	10	34	19 03	23 02	54	24 45	
16	63	32.7		31.5	184	34.6 ¹¹⁰		40.3	46	14	40	11	17	55	8 09 44	
17	78	32.8	-8	32.4	199	04.5 ¹⁰⁹	+25	44.8	45	18 19	18 47	19 20	23 35	55	7 53 42	
18	93	33.0	-8	33.4	213	34.4 ¹⁰⁹	+25	49.2	44	18 25	18 56	19 32	23 56	57	7 33 40	
19	108	33.1		34.3	228	04.3 ¹⁰⁹		53.4	42	32	19 06	48	** ** *	**	7 09 37	
20	123	33.3		35.2	242	34.1 ¹⁰⁸	+25	57.5	41	36	11	19 55	** ** *	**	6 57 36	
21	138	33.4		36.1	257	03.8 ¹⁰⁷	+26	01.6	41	54	40	17	20 04	**	44 33	
22	153	33.5		37.1	271	33.5 ¹⁰⁷		05.5	39	56	44	23	13	**	28 31	
23	168	33.7		38.0	286	03.2 ¹⁰⁷		09.2	37	58	48	30	25	0	16 75	
24	183	33.8	-8	38.9	300	32.8 ¹⁰⁶	+26	12.9	37	60 S	18 53	19 39	20 38	0	38 81	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 23 ^m 9		Mag: -3.9 PMG: 12 ^h 45 ^m			Mag: -1.7 PMG: 20 ^h 46 ^m			Mag: -1.8 PMG: 9 ^h 14 ^m			Mag: 0.0 PMG: 5 ^h 23 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	23	06.9	168	47.6	-13	13.2	47	41.8	-13	57.7	221	09.6	+8	38.2		
1	38	09.3	183	47.1		14.3	62	43.8		57.3	236	11.6		38.0		
2	53	11.8	198	46.6		15.4	77	45.8		56.9	251	13.6		37.9		
3	68	14.3	213	46.1		16.5	92	47.8		56.5	266	15.6		37.7		
4	83	16.7	228	45.6		17.6	107	49.8		56.2	281	17.6		37.5		
5	98	19.2	243	45.0	-13	18.7	122	51.8	-13	55.8	296	19.7	+8	37.4		
6	113	21.6	258	44.5	-13	19.8	137	53.8	-13	55.4	311	21.7	+8	37.2		
7	128	24.1	273	44.0		20.9	152	55.8		55.1	326	23.7		37.0		
8	143	26.6	288	43.5		22.0	167	57.8		54.7	341	25.7		36.8		
9	158	29.0	303	42.9		23.2	182	59.8		54.3	356	27.8		36.7		
10	173	31.5	318	42.4		24.3	198	01.8		53.9	11	29.8		36.5		
11	188	34.0	333	41.9	-13	25.4	213	03.8	-13	53.6	26	31.8	+8	36.3		
12	203	36.4	348	41.4	-13	26.5	228	05.8	-13	53.2	41	33.8	+8	36.2		
13	218	38.9	3	40.8		27.6	243	07.8		52.8	56	35.9		36.0		
14	233	41.4	18	40.3		28.7	258	09.8		52.4	71	37.9		35.8		
15	248	43.8	33	39.8		29.8	273	11.8		52.1	86	39.9		35.6		
16	263	46.3	48	39.3		30.9	288	13.8		51.7	101	41.9		35.5		
17	278	48.8	63	38.7	-13	32.0	303	15.7	-13	51.3	116	43.9	+8	35.3		
18	293	51.2	78	38.2	-13	33.1	318	17.7	-13	50.9	131	46.0	+8	35.1		
19	308	53.7	93	37.7		34.2	333	19.7		50.5	146	48.0		35.0		
20	323	56.1	108	37.1		35.3	348	21.7		50.2	161	50.0		34.8		
21	338	58.6	123	36.6		36.4	3	23.7		49.8	176	52.0		34.6		
22	354	01.1	138	36.1		37.5	18	25.7		49.4	191	54.1		34.4		
23	9	03.5	153	35.6		38.6	33	27.6		49.0	206	56.1		34.3		
24	24	06.0	168	35.0	-13	39.7	48	29.6	-13	48.7	221	58.1	+8	34.1		
Dif	—		-5		-11		+20		+4		+20		-2		+24	

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: 19 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'5 20 ^h : 54'6 PMG: 4 ^h 06 ^m R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	33.8	-8	38.9	300	32.8	+26	12.9	35	60 N	5	10	5	58	6	41	18	30
1	198	33.9		39.8	315	02.4		106	16.4	58	11		56	36		19	00	
2	213	34.1		40.8	329	31.9		105	19.8	56	12		55	32		23	55	
3	228	34.2		41.7	344	01.4		105	23.1	54	12		53	29		41	55	
4	243	34.4		42.6	358	30.8		104	26.2	52	12		51	26		19	57	
5	258	34.5	-8	43.5	13	00.2	+26	104	29.3	50	5	13	5	50	6	23	20	11
6	273	34.6	-8	44.4	27	29.6	+26	104	32.2	45	5	13	5	47	6	16	20	38
7	288	34.8		45.4	41	58.9		103	34.9	40	12		44	11		21	00	
8	303	34.9		46.3	56	28.2		103	37.6	35	11		41	06		19	53	
9	318	35.0		47.2	70	57.4		102	40.1	30	10		38	6	02	21	34	
10	333	35.2		48.1	85	26.6		102	42.5	20	07		33	5	55	22	01	
11	348	35.3	-8	49.0	99	55.7	+26	101	44.8	10 N	5	03	5	48	5	48	22	24
12	3	35.4	-8	50.0	114	24.9	+26	102	46.9	0	4	57	5	42	5	42	22	45
13	18	35.6		50.9	128	54.0		101	48.9	10 S	50		15	36		23	06	
14	33	35.7		51.8	143	23.0		100	50.8	20	41		5	07	29	29	52	
15	48	35.8		52.7	157	52.0		100	52.5	30	28	4	57	21		23	56	
16	63	36.0		53.6	172	21.0		100	54.2	35	20		51	17		**	**	
17	78	36.1	-8	54.6	186	50.0	+26	100	55.6	40	4	11	4	44	5	12	**	**
18	93	36.2	-8	55.5	201	18.9	+26	99	57.0	45	3	59	4	35	5	06	**	**
19	108	36.4		56.4	215	47.8		99	58.2	50	43		24	4	58	0	23	
20	123	36.5		57.3	230	16.6	+26	98	59.3	52	36		19	55		36	59	
21	138	36.6		58.2	244	45.4	+27	98	00.3	54	27		14	51		0	52	
22	153	36.8	-8	59.2	259	14.2		98	01.1	56	17		07	47		1	10	
23	168	36.9	-9	00.1	273	43.0		98	01.8	58	3	06	4	00	42		31	
24	183	37.0	-9	01.0	288	11.8	+27	98	02.4	60 S	2	53	3	52	4	37	1	59
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 22 ^h 19 ^m 9		Mag: -3.9 PMG: 12 ^h 46 ^m				Mag: -1.6 PMG: 20 ^h 43 ^m				Mag: -1.8 PMG: 9 ^h 11 ^m				Mag: 0.0 PMG: 5 ^h 20 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	24	06.0	168	35.0	-13	39.7	48	29.6	-13	48.7	221	58.1	+8	34.1	279	53.7	+22	03.6
1	39	08.5	183	34.5		40.8	63	31.6		48.3	237	00.1		33.9	294	56.1		03.6
2	54	10.9	198	34.0		41.9	78	33.6		47.9	252	02.2		33.8	309	58.6		03.6
3	69	13.4	213	33.4		43.0	93	35.5		47.5	267	04.2		33.6	325	01.0		03.6
4	84	15.9	228	32.9		44.1	108	37.5		47.1	282	06.2		33.4	340	03.4		03.6
5	99	18.3	243	32.4	-13	45.2	123	39.5	-13	46.8	297	08.2	+8	33.3	355	05.8	+22	03.6
6	114	20.8	258	31.8	-13	46.3	138	41.5	-13	46.4	312	10.3	+8	33.1	10	08.2	+22	03.5
7	129	23.3	273	31.3		47.4	153	43.4		46.0	327	12.3		32.9	25	10.6		03.5
8	144	25.7	288	30.8		48.5	168	45.4		45.6	342	14.3		32.7	40	13.0		03.5
9	159	28.2	303	30.2		49.6	183	47.4		45.2	357	16.3		32.6	55	15.5		03.5
10	174	30.6	318	29.7		50.7	198	49.3		44.8	12	18.4		32.4	70	17.9		03.5
11	189	33.1	333	29.1	-13	51.8	213	51.3	-13	44.5	27	20.4	+8	32.2	85	20.3	+22	03.5
12	204	35.6	348	28.6	-13	52.9	228	53.3	-13	44.1	42	22.4	+8	32.1	100	22.7	+22	03.5
13	219	38.0	3	28.1		53.9	243	55.2		43.7	57	24.4		31.9	115	25.1		03.5
14	234	40.5	18	27.5		55.0	258	57.2		43.3	72	26.5		31.7	130	27.5		03.5
15	249	43.0	33	27.0		56.1	273	59.2		42.9	87	28.5		31.5	145	30.0		03.5
16	264	45.4	48	26.5		57.2	289	01.1		42.5	102	30.5		31.4	160	32.4		03.5
17	279	47.9	63	25.9	-13	58.3	304	03.1	-13	42.2	117	32.5	+8	31.2	175	34.8	+22	03.5
18	294	50.4	78	25.4	-13	59.4	319	05.1	-13	41.8	132	34.6	+8	31.0	190	37.2	+22	03.5
19	309	52.8	93	24.8	-14	00.5	334	07.0		41.4	147	36.6		30.9	205	39.6		03.5
20	324	55.3	108	24.3		01.6	349	09.0		41.0	162	38.6		30.7	220	42.0		03.5
21	339	57.8	123	23.8		02.7	4	10.9		40.6	177	40.7		30.5	235	44.5		03.5
22	355	00.2	138	23.2		03.8	19	12.9		40.2	192	42.7		30.4	250	46.9		03.5
23	10	02.7	153	22.7		04.8	34	14.8		39.8	207	44.7		30.2	265	49.3		03.5
24	25	05.1	168	22.1	-14	05.9	49	16.8	-13	39.4	222	46.7	+8	30.0	280	51.7	+22	03.5
Dif	—		-5		-11		+20		+4		+20		-2		+24			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0		Edad: 20 ^d 9		PHE { 4 ^h : 54/7 12 ^h : 54/9 20 ^h : 55/1										
	PMG: 11 ^h 45 ^m 4		SD: 14:9			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	m	h m	m	
0	183	37.0	-9	01.0	288	11.8	+27 02.4	60 N	16 47	17 29	18 17	19 26 79	15 24 29		
1	198	37.2		01.9	302	40.5	97 02.8	58	51	31	17	19 55 74	14 54 35		
2	213	37.3		02.8	317	09.2	97 03.1	56	56	33	16	20 18 70	32 38		
3	228	37.4		03.7	331	37.9	97 03.2	54	16 59	35	16	36 68	14 13 40		
4	243	37.6		04.7	346	06.5	96 03.3	52	17 03	37	16	20 51 67	13 58 41		
5	258	37.7	-9	05.6	0	35.1	96 +27 03.1	50	17 06	17 38	18 16	21 05 65	13 44 43		
6	273	37.8	-9	06.5	15	03.8	97 +27 02.9	45	17 13	17 42	18 16	21 32 63	13 17 44		
7	288	38.0		07.4	29	32.3	95 02.5	40	18	46	17	21 54 61	12 55 46		
8	303	38.1		08.3	44	00.9	96 02.0	35	23	49	18	22 12 59	37 47		
9	318	38.2		09.2	58	29.5	96 01.3	30	28	52	20	27 58	12 21 48		
10	333	38.4		10.2	72	58.0	95 +27 00.6	20	35	17 58	23	22 54 55	11 54 50		
11	348	38.5	-9	11.1	87	26.5	95 +26 59.6	10 N	17 42	18 03	18 28	23 16 54	11 31 52		
12	3	38.6	-9	12.0	101	55.0	95 +26 58.6	0	17 49	18 10	18 34	23 37 53	11 10 52		
13	18	38.7		12.9	116	23.5	95 57.4	10 S	17 55	17	42	23 58 51	10 49 53		
14	33	38.9		13.8	130	52.0	95 56.0	20	18 03	25	18 51	** ** *	10 26 54		
15	48	39.0		14.7	145	20.5	95 54.6	30	11	35	19 04	** ** *	9 59 56		
16	63	39.1		15.7	159	48.9	94 53.0	35	16	42	13	0 12 50	43 57		
17	78	39.3	-9	16.6	174	17.4	95 +26 51.2	40	18 21	18 49	19 23	0 30 50	9 25 57		
18	93	39.4	-9	17.5	188	45.8	94 +26 49.3	45	18 28	18 58	19 35	0 53 49	9 03 58		
19	108	39.5		18.4	203	14.2	94 47.3	50	36	19 10	52	1 21 48	8 35 59		
20	123	39.6		19.3	217	42.7	95 45.2	52	39	15	19 59	35 47	21 60		
21	138	39.8		20.2	232	11.1	94 42.9	54	43	21	20 08	1 51 46	8 05 61		
22	153	39.9		21.1	246	39.5	94 40.4	56	48	28	19	2 10 45	7 46 63		
23	168	40.0		22.0	261	07.9	94 37.9	58	53	36	31	2 33 44	7 22 65		
24	183	40.1	-9	23.0	275	36.3	94 +26 35.2	60 S	18 58	19 44	20 45	3 04 40	6 51 69		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 16 ^m 0		Mag: -3.9 PMG: 12 ^h 47 ^m		Mag: -1.6 PMG: 20 ^h 40 ^m		Mag: -1.8 PMG: 9 ^h 08 ^m		Mag: 0.0 PMG: 5 ^h 16 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	25	05.1	168	22.1	-14	05.9	49	16.8	-13	39.4				
1	40	07.6	183	21.6		07.0	64	18.8		39.1				
2	55	10.1	198	21.0		08.1	79	20.7		38.7				
3	70	12.5	213	20.5		09.2	94	22.7		38.3				
4	85	15.0	228	20.0		10.3	109	24.6		37.9				
5	100	17.5	243	19.4	-14	11.3	124	26.6	-13	37.5				
6	115	19.9	258	18.9	-14	12.4	139	28.5	-13	37.1				
7	130	22.4	273	18.3		13.5	154	30.4		36.7				
8	145	24.9	288	17.8		14.6	169	32.4		36.3				
9	160	27.3	303	17.2		15.7	184	34.3		35.9				
10	175	29.8	318	16.7		16.7	199	36.3		35.6				
11	190	32.2	333	16.1	-14	17.8	214	38.2	-13	35.2				
12	205	34.7	348	15.6	-14	18.9	229	40.2	-13	34.8				
13	220	37.2	3	15.0		20.0	244	42.1		34.4				
14	235	39.6	18	14.5		21.1	259	44.0		34.0				
15	250	42.1	33	13.9		22.1	274	46.0		33.6				
16	265	44.6	48	13.4		23.2	289	47.9		33.2				
17	280	47.0	63	12.8	-14	24.3	304	49.9	-13	32.8				
18	295	49.5	78	12.3	-14	25.4	319	51.8	-13	32.4				
19	310	52.0	93	11.7		26.4	334	53.7		32.0				
20	325	54.4	108	11.2		27.5	349	55.7		31.6				
21	340	56.9	123	10.6		28.6	4	57.6		31.2				
22	355	59.4	138	10.1		29.7	19	59.5		30.8				
23	11	01.8	153	09.5		30.7	35	01.4		30.4				
24	26	04.3	168	09.0	-14	31.8	50	03.4	-13	30.1				
Dif	—		-5	-11		+19	+4		+20	-2		+24		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 21 ^d 9	PHE { 4 ^h : 55 ^h /3 12 ^h : 55 ^h /5 20 ^h : 55 ^h /7									
	PMG: 11 ^h 45 ^m 2					SD: 15 ^h 0		PMG: 5 ^h 50 ^m			R°: 52 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	183	40.1	-9	275	36.3	+26	35.2	5	15	6	03	6	46	20 45 93
1	198	40.3		290	04.7		32.3	15	6	01	41		21 09 86	15 53 15
2	213	40.4		304	33.1		29.3	15	5	59	36		28 82	29 21
3	228	40.5		319	01.5		26.2	16		57	33		44 78	15 10 25
4	243	40.6		333	29.9		23.0	16		55	29		21 58 75	14 53 29
5	258	40.8	-9	347	58.3	+26	19.6	5	16	5	53	6	26	39 32
6	273	40.9	-9	2	26.7	+26	16.0	5	15	5	49	6	19	14 27 33
7	288	41.0		16	55.1		12.4	5	15	4	46	13		22 35 69
8	303	41.1		31	23.5		08.6	14		46	13		22 55 65	13 41 38
9	318	41.3		45	51.9		04.6	13		42	08		23 11 63	24 43
10	333	41.4		60	20.3	+26	00.6	11		39	6	03	25 61	13 09 45
11	348	41.5	-9	74	48.8	+25	56.3	08		33	5	56	23 49 58	12 44 48
12	3	41.6	-9	89	17.2	+25	52.0	5	03	5	27	5	49	12 23 49
13	18	41.7		103	45.7		47.5	4	57	5	21	5	42	** ** *
14	33	41.9		118	14.1		42.9	49		14	35		** ** *	12 02 52
15	48	42.0		132	42.6		38.1	39		5	05	28	0	21 49
16	63	42.1		147	11.0		33.2	26		4	55	19	0	47 46
17	78	42.2	-9	161	39.5	+25	28.2	17		48	14		1	02 45
18	93	42.4	-9	176	08.0	+25	23.0	4	07	4	41	5	09	40 61
19	108	42.5		190	36.5		17.7	3	55	4	32	5	02	10 22 63
20	123	42.6		205	05.1		12.3	3	55	4	32	5	02	1
21	138	42.7		219	33.6		06.7	38		20	4	54	2	09 38
22	153	42.8		234	02.1	+25	01.0	30		15	50		22	36
23	168	43.0		248	30.7	+24	55.1	21		09	46		37	34
24	183	43.1	-9	262	59.3	+24	49.1	3	11	4	02	42	2	55 31
								2	59	3	54	37	3	17 27
								2	45	3	45	4	3	44 21
														8 00 87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 12 ^m 1		Mag: -3.8 PMG: 12 ^h 48 ^m		Mag: -1.6 PMG: 20 ^h 37 ^m		Mag: -1.8 PMG: 9 ^h 04 ^m		Mag: 0.0 PMG: 5 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	26	04.3	168	09.0	-14	31.8	223	35.4	+8	26.0
1	41	06.7	183	08.4		32.9	238	37.5		25.8
2	56	09.2	198	07.9		33.9	253	39.5		25.6
3	71	11.7	213	07.3		35.0	268	41.5		25.4
4	86	14.1	228	06.8		36.1	283	43.6		25.3
5	101	16.6	243	06.2	-14	37.1	298	45.6	+8	25.1
6	116	19.1	258	05.6	-14	38.2	313	47.6	+8	24.9
7	131	21.5	273	05.1		39.3	328	49.7		24.8
8	146	24.0	288	04.5		40.3	343	51.7		24.6
9	161	26.5	303	04.0		41.4	358	53.7		24.4
10	176	28.9	318	03.4		42.5	13	55.7		24.3
11	191	31.4	333	02.9	-14	43.5	28	57.8	+8	24.1
12	206	33.9	348	02.3	-14	44.6	43	59.8	+8	23.9
13	221	36.3	3	01.7		45.7	59	01.8		23.8
14	236	38.8	18	01.2		46.7	74	03.9		23.6
15	251	41.2	33	00.6		47.8	89	05.9		23.4
16	266	43.7	48	00.0		48.9	104	07.9		23.3
17	281	46.2	62	59.5	-14	49.9	119	10.0	+8	23.1
18	296	48.6	77	58.9	-14	51.0	134	12.0	+8	22.9
19	311	51.1	92	58.4		52.0	149	14.0		22.8
20	326	53.6	107	57.8		53.1	164	16.1		22.6
21	341	56.0	122	57.2		54.2	179	18.1		22.4
22	356	58.5	137	56.7		55.2	194	20.1		22.3
23	12	01.0	152	56.1		56.3	209	22.2		22.1
24	27	03.4	167	55.5	-14	57.3	224	24.2	+8	21.9
Dif	—		-6	-11		+19	+4	+20		-2
										+24
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 22 ^d 9	PHE { 4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'5											
	PMG: 11 ^h 45 ^m 0					SD: 15'2			PMG: 6 ^h 42 ^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	m	h m m	m	
0	183	43.1	-9 44.8	262	59.3	+24 49.1	61	60 N	16 41	17 24	18 12	22 18 97	16 08 8			
1	198	43.2	45.7	277	27.9	43.0	61	58	46	26	12	35 92	15 50 14			
2	213	43.3	46.6	291	56.5	36.8	62	56	51	29	12	22 50 87	35 18			
3	228	43.4	47.5	306	25.2	30.4	64	54	55	31	12	23 02 84	22 21			
4	243	43.5	48.4	320	53.8	23.9	65	52	16 58	33	12	13 81	11 23			
5	258	43.7	-9 49.3	335	22.5	+24 17.3	66	50	17 02	17 35	18 12	23 23 78	15 00 26			
6	273	43.8	-9 50.2	349	51.2	+24 10.5	68	45	17 09	17 39	18 13	23 44 73	14 39 31			
7	288	43.9	51.1	4	19.9	+24 03.6	69	40	15	43	14	** ** *	21 35			
8	303	44.0	52.0	18	48.6	+23 56.5	71	35	21	46	16	** ** *	14 07 37			
9	318	44.1	52.9	33	17.4	49.3	72	30	26	50	18	** ** *	13 54 40			
10	333	44.3	53.8	47	46.2	42.0	73	20	34	17 56	22	** ** *	32 44			
11	348	44.4	-9 54.8	62	15.0	+23 34.6	74	10 N	17 41	18 03	18 27	0 10 55	13 12 48			
12	3	44.5	-9 55.7	76	43.8	+23 27.0	76	0	17 48	18 09	18 34	0 30 51	12 54 51			
13	18	44.6	56.6	91	12.7	19.4	76	10 S	17 56	17	42	0 49 49	36 55			
14	33	44.7	57.5	105	41.5	11.5	79	20	18 03	26	18 52	1 10 45	12 17 58			
15	48	44.8	58.4	120	10.4	+23 03.6	79	30	12	37	19 06	33 43	11 54 62			
16	63	44.9	-9 59.3	134	39.4	+22 55.5	81	35	18	44	15	1 47 40	41 64			
17	78	45.1	-10 00.2	149	08.3	+22 47.3	82	40	18 24	18 52	19 25	2 03 38	11 25 68			
18	93	45.2	-10 01.1	163	37.3	+22 39.0	83	45	18 31	19 01	19 39	2 23 34	11 07 71			
19	108	45.3	02.0	178	06.3	30.5	85	50	39	13	19 56	47 29	10 44 76			
20	123	45.4	02.9	192	35.3	21.9	86	52	43	19	20 04	2 58 27	33 78			
21	138	45.5	03.8	207	04.4	13.2	87	54	47	25	13	3 11 24	20 82			
22	153	45.6	04.7	221	33.4	+22 04.4	88	56	52	33	24	26 21	10 06 85			
23	168	45.7	05.6	236	02.5	+21 55.4	90	58	18 57	41	37	3 44 16	9 48 90			
24	183	45.9	-10 06.5	250	31.7	+21 46.3	91	60 S	19 04	19 50	20 52	4 05 11	9 27 96			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 08 ^m 1		Mag: -3.8 PMG: 12 ^h 49 ^m			Mag: -1.5 PMG: 20 ^h 34 ^m			Mag: -1.8 PMG: 9 ^h 01 ^m			Mag: 0.0 PMG: 5 ^h 08 ^m				
	hG ♈		hG ♎	Dec		hG ♂	Dec		hG ♊	Dec		hG ♏	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'
0	27	03.4	167	55.5	-14 57.3	50	49.4	-13 20.5	224	24.2	+8 21.9	282	48.1	+22 03.3		
1	42	05.9	182	55.0	58.4	65	51.3	20.1	239	26.2	21.8	297	50.5	03.3		
2	57	08.4	197	54.4	-14 59.4	80	53.2	19.7	254	28.3	21.6	312	52.9	03.3		
3	72	10.8	212	53.8	-15 00.5	95	55.1	19.3	269	30.3	21.4	327	55.4	03.3		
4	87	13.3	227	53.3	01.5	110	57.0	18.9	284	32.3	21.2	342	57.8	03.3		
5	102	15.7	242	52.7	-15 02.6	125	58.9	-13 18.4	299	34.4	+8 21.1	358	00.2	+22 03.3		
6	117	18.2	257	52.1	-15 03.6	141	00.8	-13 18.0	314	36.4	+8 20.9	13	02.6	+22 03.3		
7	132	20.7	272	51.6	04.7	156	02.7	17.6	329	38.4	20.7	28	05.1	03.3		
8	147	23.1	287	51.0	05.7	171	04.6	17.2	344	40.5	20.6	43	07.5	03.3		
9	162	25.6	302	50.4	06.8	186	06.5	16.8	359	42.5	20.4	58	09.9	03.3		
10	177	28.1	317	49.9	07.8	201	08.3	16.4	14	44.5	20.2	73	12.4	03.3		
11	192	30.5	332	49.3	-15 08.9	216	10.2	-13 16.0	29	46.6	+8 20.1	88	14.8	+22 03.3		
12	207	33.0	347	48.7	-15 09.9	231	12.1	-13 15.6	44	48.6	+8 19.9	103	17.2	+22 03.3		
13	222	35.5	2 48.1	11.0	11.0	246	14.0	15.2	59	50.6	19.7	118	19.7	03.3		
14	237	37.9	17 47.6	12.0	12.0	261	15.9	14.8	74	52.7	19.6	133	22.1	03.3		
15	252	40.4	32 47.0	13.1	13.1	276	17.8	14.4	89	54.7	19.4	148	24.5	03.3		
16	267	42.8	47 46.4	14.1	14.1	291	19.7	14.0	104	56.8	19.2	163	27.0	03.3		
17	282	45.3	62 45.9	-15 15.2	15.2	306	21.6	-13 13.6	119	58.8	+8 19.1	178	29.4	+22 03.3		
18	297	47.8	77 45.3	-15 16.2	16.2	321	23.5	-13 13.2	135	00.8	+8 18.9	193	31.8	+22 03.3		
19	312	50.2	92 44.7	17.3	17.3	336	25.4	12.7	150	02.9	18.7	208	34.3	03.3		
20	327	52.7	107 44.1	18.3	18.3	351	27.2	12.3	165	04.9	18.6	223	36.7	03.3		
21	342	55.2	122 43.6	19.4	19.4	6 29.1	11.9	11.9	180	06.9	18.4	238	39.1	03.3		
22	357	57.6	137 43.0	20.4	20.4	21 31.0	11.5	11.5	195	09.0	18.2	253	41.6	03.3		
23	13	00.1	152 42.4	21.4	21.4	36 32.9	11.1	11.1	210	11.0	18.1	268	44.0	03.3		
24	28	02.6	167 41.8	-15 22.5	22.5	51 34.8	-13 10.7	10.7	225	13.0	+8 17.9	283	46.4	+22 03.3		
Dif	—		-6		-10	+19		+4	+20		-2	+24		0		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 44 ^m 9			Edad: 23 ^d 9 PHE { 4 ^h : 56'8 12 ^h : 57'1 20 ^h : 57'4 SD: 15'4 PMG: 7 ^h 33 ^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	m	
0	183	45.9	-10	06.5	250	31.7	+21	46.3	60 N	5	19	6	08	6	51	23	55	98
1	198	46.0		07.4	265	00.8		37.1	58	19	05		45			**	**	**
2	213	46.1		08.3	279	30.0		27.8	56	19	03		41			**	**	**
3	228	46.2		09.2	293	59.2		18.3	54	19	6	00	36			**	**	**
4	243	46.3		10.1	308	28.5	+21	08.7	52	19	5	58	33			**	**	**
5	258	46.4	-10	11.0	322	57.7	+20	59.0	50	5	19	5	56	6	29	**	**	**
6	273	46.5	-10	11.9	337	27.0	+20	49.2	45	5	18	5	52	6	22	**	**	**
7	288	46.6		12.8	351	56.3		39.3	40	16	48		15			0	00	69
8	303	46.7		13.7	6	25.7		29.2	35	15	44		10			14	66	
9	318	46.9		14.6	20	55.1		19.1	30	13	41		6	05		26	63	
10	333	47.0		15.5	35	24.5	+20	08.8	20	08	34		5	56		0	47	58
11	348	47.1	-10	16.4	49	53.9	+19	58.4	10 N	5	03	5	27	5	49	1	05	54
12	3	47.2	-10	17.3	64	23.3	+19	47.8	0	4	56	5	21	5	42	1	21	51
13	18	47.3		18.2	78	52.8		37.2	10 S	48	13		34			38	47	
14	33	47.4		19.1	93	22.3		26.4	20	37	5	04	26			1	55	43
15	48	47.5		20.0	107	51.9		15.6	30	24	4	53	17			2	16	38
16	63	47.6		20.9	122	21.4	+19	04.6	35	15	46		12			27	36	
17	78	47.7	-10	21.8	136	51.0	+18	53.5	40	4	04	4	38	5	06	2	41	32
18	93	47.8	-10	22.7	151	20.7	+18	42.3	45	3	51	4	28	4	59	2	57	28
19	108	47.9		23.6	165	50.3		31.0	50	34	16		50			3	16	23
20	123	48.0		24.4	180	20.0		19.5	52	25	10		46			25	21	
21	138	48.2		25.3	194	49.7	+18	08.0	54	16	4	04	42			35	19	
22	153	48.3		26.2	209	19.4	+17	56.3	56	3	05	3	56	37		3	47	15
23	168	48.4		27.1	223	49.1		44.6	58	2	52	48	31			4	00	11
24	183	48.5	-10	28.0	238	18.9	+17	32.7	60 S	2	37	3	39	4	25	4	16	6

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 04 ^m 2		Mag: -3.8 PMG: 12 ^h 50 ^m			Mag: -1.5 PMG: 20 ^h 31 ^m			Mag: -1.8 PMG: 8 ^h 58 ^m			Mag: 0.0 PMG: 5 ^h 04 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	28	02.6	167	41.8	-15	22.5	51	34.8	-13	05.7	225	13.0	+8	17.9		
1	43	05.0	182	41.2		23.5	66	36.6		10.3	240	15.1		17.7		
2	58	07.5	197	40.7		24.6	81	38.5		09.9	255	17.1		17.6		
3	73	10.0	212	40.1		25.6	96	40.4		09.5	270	19.2		17.4		
4	88	12.4	227	39.5		26.6	111	42.3		09.0	285	21.2		17.2		
5	103	14.9	242	38.9	-15	27.7	126	44.2	-13	08.6	300	23.2	+8	17.1		
6	118	17.3	257	38.3	-15	28.7	141	46.0	-13	08.2	315	25.3	+8	16.9		
7	133	19.8	272	37.8		29.7	156	47.9		07.8	330	27.3		16.7		
8	148	22.3	287	37.2		30.8	171	49.8		07.4	345	29.3		16.6		
9	163	24.7	302	36.6		31.8	186	51.6		07.0	0	31.4		16.4		
10	178	27.2	317	36.0		32.8	201	53.5		06.6	15	33.4		16.2		
11	193	29.7	332	35.4	-15	33.9	216	55.4	-13	06.2	30	35.5	+8	16.1		
12	208	32.1	347	34.9	-15	34.9	231	57.3	-13	05.7	45	37.5	+8	15.9		
13	223	34.6	2	34.3		35.9	246	59.1		05.3	60	39.5		15.7		
14	238	37.1	17	33.7		37.0	262	01.0		04.9	75	41.6		15.6		
15	253	39.5	32	33.1		38.0	277	02.9		04.5	90	43.6		15.4		
16	268	42.0	47	32.5		39.0	292	04.7		04.1	105	45.6		15.3		
17	283	44.5	62	31.9	-15	40.1	307	06.6	-13	03.7	120	47.7	+8	15.1		
18	298	46.9	77	31.3	-15	41.1	322	08.4	-13	03.2	135	49.7	+8	14.9		
19	313	49.4	92	30.8		42.1	337	10.3		02.8	150	51.8		14.8		
20	328	51.8	107	30.2		43.1	352	12.2		02.4	165	53.8		14.6		
21	343	54.3	122	29.6		44.2	7	14.0		02.0	180	55.8		14.4		
22	358	56.8	137	29.0		45.2	22	15.9		01.6	195	57.9		14.3		
23	13	59.2	152	28.4		46.2	37	17.7		01.2	210	59.9		14.1		
24	29	01.7	167	27.8	-15	47.2	52	19.6	-13	00.7	226	02.0	+8	13.9		
Dif	—		-6		-10		+19		+4		+20		-2		+24	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16:1 PMG: 11 ^h 44 ^m 7				Edad: 24 ^d 9 PHE { SD: 15:7 PMG: 8 ^h 24 ^m						4 ^h : 57' 7 12 ^h : 58' 0 20 ^h : 58' 3 R°: 49 ^m											
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora		R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	48.5	-10	28.0	238	18.9	+17	32.7	60 N	16	35	17	18	18	06	**	**	**	16	21	3	
1	198	48.6		28.9	252	48.7 ¹⁰⁸		20.7 ¹²⁰	58	41	21	07		0	07	93		13	7			
2	213	48.7		29.8	267	18.5 ¹⁰⁸	+17	08.7 ¹²⁰	56	46	24	07			17	90		16	06	10		
3	228	48.8		30.7	281	48.4 ¹⁰⁹	+16	56.5 ¹²²	54	50	26	07			26	86		15	59	13		
4	243	48.9		31.6	296	18.3 ¹⁰⁹		44.2 ¹²³	52	54	29	08			34	83		53	16			
5	258	49.0	-10	32.5	310	48.2 ¹⁰⁹	+16	31.8 ¹²⁴	50	16	58	17	31	18	08	0	41	81	15	48	18	
6	273	49.1	-10	33.4	325	18.1 ¹⁰⁹	+16	19.3 ¹²⁵	45	17	06	17	36	18	10	0	57	75	15	36	23	
7	288	49.2		34.3	339	48.0 ¹⁰⁹	+16	06.7 ¹²⁶	40	13	40	12		1	09	71		26	28			
8	303	49.3		35.2	354	18.0 ¹¹⁰	+15	54.0 ¹²⁷	35	18	44	13			20	67		18	31			
9	318	49.4		36.1	8	48.0 ¹¹⁰		41.2 ¹²⁸	30	23	48	16			29	64		15	10	35		
10	333	49.5		37.0	23	18.0 ¹¹⁰		28.4 ¹²⁸	20	32	17	55	21		45	58		14	58	39		
11	348	49.6	-10	37.9	37	48.0 ¹¹⁰	+15	15.4 ¹³⁰	10 N	17	40	18	02	18	26	1	59	54	14	46	45	
12	3	49.7	-10	38.7	52	18.0 ¹¹⁰	+15	02.3 ¹³¹	0	17	48	18	09	18	34	2	12	49	14	35	50	
13	18	49.8		39.6	66	48.1 ¹¹¹	+14	49.1 ¹³²	10 S	17	56	17	42		25	45		25	53			
14	33	49.9		40.5	81	18.2 ¹¹¹		35.8 ¹³³	20	18	04	27	18	53		38	41		13	59		
15	48	50.0		41.4	95	48.3 ¹¹¹		22.5 ¹³³	30	14	38	19	08		2	54	35		14	00	64	
16	63	50.1		42.3	110	18.4 ¹¹¹	+14	09.0 ¹³⁵	35	19	46	17			3	03	32		13	52	67	
17	78	50.2	-10	43.2	124	48.5 ¹¹¹	+13	55.4 ¹³⁶	40	18	26	18	54	19	28	3	13	29		13	43	71
18	93	50.3	-10	44.1	139	18.7 ¹¹²	+13	41.8 ¹³⁶	45	18	33	19	04	19	42	3	25	25		13	32	76
19	108	50.4		45.0	153	48.9 ¹¹²		28.1 ¹³⁷	50	42	17	20	00			39	20		19	82		
20	123	50.5		45.9	168	19.1 ¹¹²		14.2 ¹³⁹	52	47	23	08			46	17		13	84			
21	138	50.6		46.8	182	49.3 ¹¹²	+13	00.3 ¹³⁹	54	51	30	18			3	54	14		13	07	87	
22	153	50.7		47.6	197	19.5 ¹¹²	+12	46.3 ¹⁴⁰	56	18	56	37	30		4	02	11		12	59	91	
23	168	50.8		48.5	211	49.7 ¹¹²		32.3 ¹⁴⁰	58	19	02	46	20	44		11	8		51	94		
24	183	50.9	-10	49.4	226	19.9 ¹¹²	+12	18.1 ¹⁴²	60 S	19	09	19	56	21	00	4	22	3		12	41	99
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 22 ^h 00 ^m 3				Mag: -3.8 PMG: 12 ^h 51 ^m				Mag: -1.5 PMG: 20 ^h 28 ^m				Mag: -1.8 PMG: 8 ^h 55 ^m				Mag: 0.0 PMG: 5 ^h 00 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	29	01.7	167	27.8	-15	47.2	52	19.6	-13	00.7	226	02.0	+8	13.9	284	44.9	+22	03.2				
1	44	04.2	182	27.2		48.3	67	21.5	-13	00.3	241	04.0		13.8	299	47.3		03.2				
2	59	06.6	197	26.6		49.3	82	23.3	-12	59.9	256	06.0		13.6	314	49.8		03.2				
3	74	09.1	212	26.0		50.3	97	25.2		59.5	271	08.1		13.4	329	52.2		03.2				
4	89	11.6	227	25.4		51.3	112	27.0		59.1	286	10.1		13.3	344	54.6		03.2				
5	104	14.0	242	24.9	-15	52.4	127	28.9	-12	58.6	301	12.2	+8	13.1	359	57.1	+22	03.2				
6	119	16.5	257	24.3	-15	53.4	142	30.7	-12	58.2	316	14.2	+8	12.9	14	59.5	+22	03.2				
7	134	18.9	272	23.7		54.4	157	32.6		57.8	331	16.2		12.8	30	02.0		03.2				
8	149	21.4	287	23.1		55.4	172	34.4		57.4	346	18.3		12.6	45	04.4		03.2				
9	164	23.9	302	22.5		56.4	187	36.3		57.0	1	20.3		12.4	60	06.9		03.2				
10	179	26.3	317	21.9		57.5	202	38.1		56.5	16	22.4		12.3	75	09.3		03.2				
11	194	28.8	332	21.3	-15	58.5	217	40.0	-12	56.1	31	24.4	+8	12.1	90	11.7	+22	03.2				
12	209	31.3	347	20.7	-15	59.5	232	41.8	-12	55.7	46	26.5	+8	11.9	105	14.2	+22	03.2				
13	224	33.7	2	20.1	-16	00.5	247	43.7		55.3	61	28.5		11.8	120	16.6		03.2				
14	239	36.2	17	19.5		01.5	262	45.5		54.9	76	30.5		11.6	135	19.1		03.2				
15	254	38.7	32	18.9		02.5	277	47.3		54.4	91	32.6		11.5	150	21.5		03.2				
16	269	41.1	47	18.3		03.5	292	49.2		54.0	106	34.6		11.3	165	23.9		03.2				
17	284	43.6	62	17.7	-16	04.6	307	51.0	-12	53.6	121	36.7	+8	11.1	180	26.4	+22	03.2				
18	299	46.1	77	17.1	-16	05.6	322	52.9	-12	53.2	136	38.7	+8	11.0	195	28.8	+22	03.2				
19	314	48.5	92	16.5		06.6	337	54.7		52.7	151	40.7		10.8	210	31.3		03.2				
20	329	51.0	107	15.9		07.6	352	56.5		52.3	166	42.8		10.6	225	33.7		03.2				
21	344	53.4	122	15.3		08.6	7	58.4		51.9	181	44.8		10.5	240	36.2		03.2				
22	359	55.9	137	14.7		09.6	23	00.2		51.5	196	46.9		10.3	255	38.6		03.2				
23	14	58.4	152	14.1		10.6	38	02.0		51.0	211	48.9		10.1	270	41.0		03.2				
24	30	00.8	167	13.5	-16	11.6	53	03.9	-12	50.6	226	51.0	+8	10.0	285	43.5	+22	03.2				
Dif	—		-6		-10		+18		+4		+20		-2		+24		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: 25 ^d 9 PHE { 4 ^h : 58'7 12 ^h : 59'0 20 ^h : 59'3 SD: 15'9 PMG: 9 ^h 13 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	50.9	-10	49.4	226	19.9	+12	18.1	60 N	5	24	6	56	1	33	99
1	198	51.0		50.3	240	50.2 ¹¹³	+12	03.8 ¹⁴³	58	24	09	50	40	95	20	5
2	213	51.1		51.2	255	20.5 ¹¹³	+11	49.5 ¹⁴³	56	23	06	45	47	91	16	8
3	228	51.2		52.1	269	50.7 ¹¹²		35.1 ¹⁴⁴	54	23	04	40	52	88	12	12
4	243	51.3		53.0	284	21.0 ¹¹³		20.6 ¹⁴⁵	52	22	6	02	36	1	57	85
5	258	51.4	-10	53.9	298	51.3 ¹¹³	+11	06.0 ¹⁴⁶	50	5	22	5	59	6	32	2
6	273	51.5	-10	54.7	313	21.6 ¹¹³	+10	51.4 ¹⁴⁶	45	5	20	5	54	6	24	2
7	288	51.6		55.6	327	51.9 ¹¹³		36.7 ¹⁴⁷	40	18		50	17	20	72	15
8	303	51.7		56.5	342	22.2 ¹¹³		21.8 ¹⁴⁹	35	16		46	11	27	68	59
9	318	51.8		57.4	356	52.5 ¹¹³	+10	07.0 ¹⁴⁸	30	14		42	6	33	65	45
10	333	51.9		58.3	11	22.9 ¹¹⁴	+9	52.0 ¹⁵⁰	20	09		35	5	57	43	37
11	348	52.0	-10	59.2	25	53.2 ¹¹³	+9	37.0 ¹⁵⁰	10 N	5	03	5	28	2	53	54
12	3	52.1	-11	00.1	40	23.5 ¹¹³	+9	21.9 ¹⁵¹	0	4	56	5	20	3	01	49
13	18	52.2		00.9	54	53.9 ¹¹⁴	+9	06.8 ¹⁵¹	10 S	47		12	33	10	44	18
14	33	52.3		01.8	69	24.2 ¹¹³	+8	51.5 ¹⁵³	20	36		5	02	19	39	12
15	48	52.4		02.7	83	54.5 ¹¹³		36.2 ¹⁵³	30	21		4	50	29	34	15
16	63	52.5		03.6	98	24.9 ¹¹⁴		20.9 ¹⁵³	35	12		43	09	35	31	14
17	78	52.6	-11	04.5	112	55.2 ¹¹³	+8	05.4 ¹⁵⁵	40	4	01	4	35	3	42	27
18	93	52.6	-11	05.4	127	25.5 ¹¹³	+7	50.0 ¹⁵⁴	45	3	47	4	24	3	50	22
19	108	52.7		06.2	141	55.9 ¹¹⁴		34.4 ¹⁵⁶	50	29		12	46	3	59	17
20	123	52.8		07.1	156	26.2 ¹¹³		18.8 ¹⁵⁶	52	20		4	05	4	03	15
21	138	52.9		08.0	170	56.5 ¹¹³	+7	03.1 ¹⁵⁷	54	3	10	3	59	08	12	34
22	153	53.0		08.9	185	26.8 ¹¹³	+6	47.4 ¹⁵⁷	56	2	58		51	13	9	30
23	168	53.1		09.8	199	57.1 ¹¹³		31.6 ¹⁵⁸	58	45		42	26	19	6	25
24	183	53.2	-11	10.7	214	27.4 ¹¹³	+6	15.8 ¹⁵⁸	60 S	2	28	3	32	4	25	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 56 ^m 3		Mag: -3.8 PMG: 12 ^h 52 ^m		Mag: -1.5 PMG: 20 ^h 25 ^m		Mag: -1.8 PMG: 8 ^h 51 ^m		Mag: 0.0 PMG: 4 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	00.8	167	13.5	-16	11.6	226	51.0	+8	10.0
1	45	03.3	182	12.9		12.6	241	53.0		09.8
2	60	05.8	197	12.3		13.6	256	55.0		09.6
3	75	08.2	212	11.7		14.6	271	57.1		09.5
4	90	10.7	227	11.1		15.6	286	59.1		09.3
5	105	13.2	242	10.5	-16	16.6	302	01.2	+8	09.2
6	120	15.6	257	09.9	-16	17.7	317	03.2	+8	09.0
7	135	18.1	272	09.3		18.7	332	05.3		08.8
8	150	20.6	287	08.7		19.7	347	07.3		08.7
9	165	23.0	302	08.1		20.7	2	09.4		08.5
10	180	25.5	317	07.5		21.7	17	11.4		08.3
11	195	27.9	332	06.9	-16	22.7	32	13.4	+8	08.2
12	210	30.4	347	06.2	-16	23.7	47	15.5	+8	08.0
13	225	32.9	2	05.6		24.7	62	17.5		07.8
14	240	35.3	17	05.0		25.7	77	19.6		07.7
15	255	37.8	32	04.4		26.6	92	21.6		07.5
16	270	40.3	47	03.8		27.6	107	23.7		07.4
17	285	42.7	62	03.2	-16	28.6	122	25.7	+8	07.2
18	300	45.2	77	02.6	-16	29.6	137	27.8	+8	07.0
19	315	47.7	92	02.0		30.6	152	29.8		06.9
20	330	50.1	107	01.4		31.6	167	31.9		06.7
21	345	52.6	122	00.7		32.6	182	33.9		06.5
22	0	55.0	137	00.1		33.6	197	35.9		06.4
23	15	57.5	151	59.5		34.6	212	38.0		06.2
24	31	00.0	166	58.9	-16	35.6	227	40.0	+8	06.1
Dif	—		-6		-10		+18		+20	
									-2	
									+24	
									0	

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: 26 ^d 9 PHE { 4 ^h : 59'6 12 ^h : 59'8 20 ^h : 60'1 PMG: 10 ^h 02 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	53.2	-11 10.7	214	27.4	+6 15.8		60 N	16 30	17 13	18 01	3 12 101	16 26 2	
1	198	53.3		228	57.7 ¹¹³	+5 59.9 ¹⁵⁹		58	36	16	02	15 97	25 6	
2	213	53.4	12.4	243	28.0 ¹¹³	43.9 ¹⁶⁰		56	41	19	03	18 93	24 9	
3	228	53.5	13.3	257	58.2 ¹¹²	27.9 ¹⁶⁰		54	46	22	03	20 90	24 12	
4	243	53.6	14.2	272	28.5 ¹¹³	+5 11.9 ¹⁶⁰		52	50	25	04	22 87	23 14	
5	258	53.7	-11 15.1	286	58.7 ¹¹²	+4 55.8 ¹⁶¹		50	16 54	17 27	18 05	3 24 85	16 22 17	
6	273	53.7	-11 15.9	301	29.0 ¹¹³	+4 39.7 ¹⁶¹		45	17 03	17 33	18 07	3 28 79	16 21 22	
7	288	53.8	16.8	315	59.2 ¹¹²	23.5 ¹⁶²		40	10	37	09	32 74	20 27	
8	303	53.9	17.7	330	29.4 ¹¹²	+4 07.3 ¹⁶²		35	16	42	11	35 70	19 31	
9	318	54.0	18.6	344	59.5 ¹¹¹	+3 51.0 ¹⁶³		30	21	46	14	38 66	18 34	
10	333	54.1	19.5	359	29.7 ¹¹²	34.7 ¹⁶³		20	31	17 53	19	42 61	17 40	
11	348	54.2	-11 20.3	13	59.8 ¹¹¹	+3 18.4 ¹⁶³		10 N	17 40	18 01	18 26	3 47 54	16 15 45	
12	3	54.3	-11 21.2	28	30.0 ¹¹²	+3 02.0 ¹⁶⁴		0	17 48	18 09	18 33	3 50 50	16 14 50	
13	18	54.4	22.1	43	00.1 ¹¹¹	+2 45.6 ¹⁶⁴		10 S	17 56	17	43	54 45	12 56	
14	33	54.5	23.0	57	30.1 ¹¹⁰	29.1 ¹⁶⁵		20	18 05	28	18 54	3 58 40	11 61	
15	48	54.5	23.8	72	00.2 ¹¹¹	+2 12.6 ¹⁶⁵		30	15	40	19 09	4 03 33	09 67	
16	63	54.6	24.7	86	30.2 ¹¹⁰	+1 56.1 ¹⁶⁵		35	21	47	19	06 30	08 71	
17	78	54.7	-11 25.6	101	00.2 ¹¹⁰	+1 39.6 ¹⁶⁵		40	18 28	18 56	19 31	4 09 26	16 07 75	
18	93	54.8	-11 26.5	115	30.2 ¹¹⁰	+1 23.0 ¹⁶⁶		45	18 36	19 07	19 45	4 12 22	16 06 79	
19	108	54.9	27.3	130	00.1 ¹⁰⁹	+1 06.4 ¹⁶⁶		50	46	21	20 04	16 17	04 85	
20	123	55.0	28.2	144	30.0 ¹⁰⁹	+0 49.8 ¹⁶⁶		52	50	27	13	18 14	03 88	
21	138	55.1	29.1	158	59.9 ¹⁰⁹	33.1 ¹⁶⁷		54	18 55	34	24	20 12	02 91	
22	153	55.1	30.0	173	29.7 ¹⁰⁸	+0 16.4 ¹⁶⁷		56	19 01	42	36	22 9	01 95	
23	168	55.2	30.8	187	59.6 ¹⁰⁹	-0 00.2 ¹⁶⁶		58	07	19 51	20 50	25 6	16 00 98	
24	183	55.3	-11 31.7	202	29.3 ¹⁰⁷	-0 16.9 ¹⁶⁷		60 S	19 14	20 02	21 08	4 28 2	15 59 102	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 52 ^m 4		Mag: -3.8 PMG: 12 ^h 53 ^m		Mag: -1.4 PMG: 20 ^h 22 ^m		Mag: -1.8 PMG: 8 ^h 48 ^m		Mag: 0.0 PMG: 4 ^h 52 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	31	00.0	166 58.9	-16 35.6	53 47.6	-12 40.3	227 40.0	+8 06.1	286 42.2	+22 03.2				
1	46	02.4	181 58.3	36.6	68 49.4	39.9	242 42.1	05.9	301 44.6	03.2				
2	61	04.9	196 57.7	37.6	83 51.2	39.4	257 44.1	05.7	316 47.1	03.2				
3	76	07.4	211 57.1	38.6	98 53.0	39.0	272 46.2	05.6	331 49.5	03.2				
4	91	09.8	226 56.4	39.5	113 54.8	38.6	287 48.2	05.4	346 52.0	03.2				
5	106	12.3	241 55.8	-16 40.5	128 56.6	-12 38.1	302 50.3	+8 05.2	1 54.4	+22 03.2				
6	121	14.8	256 55.2	-16 41.5	143 58.5	-12 37.7	317 52.3	+8 05.1	16 56.9	+22 03.2				
7	136	17.2	271 54.6	42.5	159 00.3	37.3	332 54.4	04.9	31 59.3	03.2				
8	151	19.7	286 54.0	43.5	174 02.1	36.8	347 56.4	04.8	47 01.8	03.2				
9	166	22.2	301 53.4	44.5	189 03.9	36.4	2 58.5	04.6	62 04.2	03.2				
10	181	24.6	316 52.7	45.5	204 05.7	36.0	18 00.5	04.4	77 06.7	03.2				
11	196	27.1	331 52.1	-16 46.4	219 07.5	-12 35.5	33 02.6	+8 04.3	92 09.2	+22 03.2				
12	211	29.5	346 51.5	-16 47.4	234 09.3	-12 35.1	48 04.6	+8 04.1	107 11.6	+22 03.2				
13	226	32.0	1 50.9	48.4	249 11.1	34.6	63 06.7	03.9	122 14.1	03.2				
14	241	34.5	16 50.3	49.4	264 12.9	34.2	78 08.7	03.8	137 16.5	03.2				
15	256	36.9	31 49.6	50.4	279 14.7	33.8	93 10.7	03.6	152 19.0	03.2				
16	271	39.4	46 49.0	51.3	294 16.5	33.3	108 12.8	03.5	167 21.4	03.2				
17	286	41.9	61 48.4	-16 52.3	309 18.3	-12 32.9	123 14.8	+8 03.3	182 23.9	+22 03.2				
18	301	44.3	76 47.8	-16 53.3	324 20.1	-12 32.5	138 16.9	+8 03.1	197 26.3	+22 03.2				
19	316	46.8	91 47.1	54.3	339 21.8	32.0	153 18.9	03.0	212 28.8	03.2				
20	331	49.3	106 46.5	55.2	354 23.6	31.6	168 21.0	02.8	227 31.2	03.2				
21	346	51.7	121 45.9	56.2	9 25.4	31.1	183 23.0	02.6	242 33.7	03.2				
22	1	54.2	136 45.3	57.2	24 27.2	30.7	198 25.1	02.5	257 36.1	03.2				
23	16	56.6	151 44.6	58.2	39 29.0	30.3	213 27.1	02.3	272 38.6	03.2				
24	31	59.1	166 44.0	-16 59.1	54 30.8	-12 29.8	228 29.2	+8 02.2	287 41.0	+22 03.2				
Dif	—		-6	-10	+18	+4	+20	-2	+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 2			Edad: 27 ^d 9 PHE { SD: 16'4 PMG: 10 ^h 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	55.3	-11	31.7	202	29.3	-0	16.9	60 N	5 29	6 17	7 01	4 53	104	16 28	3
1	198	55.4		32.6	216	59.1 ¹⁰⁸		33.7 ¹⁶⁸	58	28	14	6 54	52	100	31	6
2	213	55.5		33.5	231	28.8 ¹⁰⁷	-0	50.4 ¹⁶⁷	56	27	10	49	51	96	33	10
3	228	55.6		34.3	245	58.5 ¹⁰⁷	-1	07.1 ¹⁶⁷	54	26	08	44	50	93	36	13
4	243	55.6		35.2	260	28.1 ¹⁰⁶		23.9 ¹⁶⁸	52	26	05	40	49	90	37	16
5	258	55.7	-11	36.1	274	57.7 ¹⁰⁶	-1	40.7 ¹⁶⁸	50	5 25	6 02	6 36	4 49	87	16 39	19
6	273	55.8	-11	37.0	289	27.2 ¹⁰⁵	-1	57.4 ¹⁶⁷	45	5 23	5 57	6 27	4 47	81	16 43	24
7	288	55.9		37.8	303	56.8 ¹⁰⁶	-2	14.2 ¹⁶⁸	40	20	52	20	46	76	47	28
8	303	56.0		38.7	318	26.2 ¹⁰⁴		31.0 ¹⁶⁸	35	18	47	13	45	72	50	32
9	318	56.1		39.6	332	55.7 ¹⁰⁵	-2	47.8 ¹⁶⁸	30	15	43	6 08	44	68	52	36
10	333	56.1		40.5	347	25.0 ¹⁰³	-3	04.6 ¹⁶⁸	20	10	35	5 58	43	62	16 57	42
11	348	56.2	-11	41.3	1	54.4 ¹⁰⁴	-3	21.3 ¹⁶⁷	10 N	5 03	5 28	5 49	4 41	57	17 00	48
12	3	56.3	-11	42.2	16	23.6 ¹⁰²	-3	38.1 ¹⁶⁸	0	4 55	5 20	5 41	4 40	52	17 04	53
13	18	56.4		43.1	30	52.9 ¹⁰³	-3	54.9 ¹⁶⁸	10 S	46	11	33	39	46	08	58
14	33	56.5		43.9	45	22.1 ¹⁰²	-4	11.7 ¹⁶⁸	20	34	5 01	23	38	41	12	63
15	48	56.5		44.8	59	51.2 ¹⁰¹		28.4 ¹⁶⁷	30	19	4 48	13	36	35	16	70
16	63	56.6		45.7	74	20.3 ¹⁰¹	-4	45.2 ¹⁶⁸	35	4 09	41	07	36	31	19	73
17	78	56.7	-11	46.5	88	49.3 ¹⁰⁰	-5	01.9 ¹⁶⁷	40	3 58	4 32	5 00	4 35	27	17 22	77
18	93	56.8	-11	47.4	103	18.3 ¹⁰⁰	-5	18.6 ¹⁶⁷	45	3 43	4 21	4 52	4 34	23	17 25	83
19	108	56.9		48.3	117	47.2 ⁹⁹		35.3 ¹⁶⁷	50	24	07	42	33	17	29	89
20	123	56.9		49.1	132	16.1 ⁹⁹	-5	52.0 ¹⁶⁷	52	15	4 01	38	32	15	31	91
21	138	57.0		50.0	146	44.9 ⁹⁸	-6	08.6 ¹⁶⁶	54	3 04	3 54	33	32	12	33	95
22	153	57.1		50.9	161	13.6 ⁹⁷		25.3 ¹⁶⁷	56	2 52	46	27	31	10	36	97
23	168	57.2		51.8	175	42.3 ⁹⁷		41.9 ¹⁶⁶	58	37	36	21	31	6	38	102
24	183	57.2	-11	52.6	190	10.9 ⁹⁶	-6	58.4 ¹⁶⁵	60 S	2 20	3 26	4 14	4 30	2	17 41	106

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 48 ^m 5		Mag: -3.8 PMG: 12 ^h 54 ^m		Mag: -1.4 PMG: 20 ^h 20 ^m		Mag: -1.9 PMG: 8 ^h 45 ^m		Mag: 0.0 PMG: 4 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	31	59.1	166	44.0	-16	59.1	228	29.2	+8	02.2
1	47	01.6	181	43.4	-17	00.1	243	31.2		02.0
2	62	04.0	196	42.7		01.1	258	33.3		01.8
3	77	06.5	211	42.1		02.0	273	35.3		01.7
4	92	09.0	226	41.5		03.0	288	37.4		01.5
5	107	11.4	241	40.9	-17	04.0	303	39.4	+8	01.4
6	122	13.9	256	40.2	-17	05.0	318	41.5	+8	01.2
7	137	16.4	271	39.6		05.9	333	43.5		01.0
8	152	18.8	286	39.0		06.9	348	45.6		00.9
9	167	21.3	301	38.3		07.9	3	47.6		00.7
10	182	23.8	316	37.7		08.8	18	49.7		00.5
11	197	26.2	331	37.1	-17	09.8	33	51.7	+8	00.4
12	212	28.7	346	36.4	-17	10.7	48	53.8	+8	00.2
13	227	31.1	1	35.8		11.7	63	55.9	+8	00.1
14	242	33.6	16	35.2		12.7	78	57.9	+7	59.9
15	257	36.1	31	34.5		13.6	94	00.0		59.7
16	272	38.5	46	33.9		14.6	109	02.0		59.6
17	287	41.0	61	33.3	-17	15.5	124	04.1	+7	59.4
18	302	43.5	76	32.6	-17	16.5	139	06.1	+7	59.3
19	317	45.9	91	32.0		17.5	154	08.2		59.1
20	332	48.4	106	31.4		18.4	169	10.2		58.9
21	347	50.9	121	30.7		19.4	184	12.3		58.8
22	2	53.3	136	30.1		20.3	199	14.3		58.6
23	17	55.8	151	29.4		21.3	214	16.4		58.5
24	32	58.2	166	28.8	-17	22.2	229	18.4	+7	58.3
Dif	—		-6		-10		+18		+21	
									-2	
									+25	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1			Edad: 28 ^d 9 PHE { 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'1 R°: 55 ^m													
	PMG: 11 ^h 44 ^m 1			SD: 16'6 PMG: 11 ^h 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m		
0	183	57.2	-11 52.6	190	10.9	-6 58.4	96	60 N	16 24	17 08	17 56	6 37	109	16 31	4		
1	198	57.3	53.5	204	39.5	-7 15.0	166	58	31	11	57	32	104	37	9		
2	213	57.4	54.4	219	08.0	31.5	165	56	36	15	58	27	100	43	13		
3	228	57.5	55.2	233	36.4	-7 48.0	165	54	41	18	17 59	23	96	49	16		
4	243	57.5	56.1	248	04.8	-8 04.4	164	52	46	21	18 00	19	93	53	20		
5	258	57.6	-11 56.9	262	33.1	-8 20.8	164	50	16 50	17 24	18 01	6 16	90	16 58	22		
6	273	57.7	-11 57.8	277	01.3	-8 37.2	164	45	16 59	17 29	18 04	6 08	84	17 07	28		
7	288	57.8	58.7	291	29.5	-8 53.6	164	40	17 07	35	06	6 02	79	15	33		
8	303	57.8	-11 59.5	305	57.6	-9 09.8	162	35	14	40	09	5 57	75	22	37		
9	318	57.9	-12 00.4	320	25.7	26.1	163	30	20	44	12	52	71	28	40		
10	333	58.0	01.3	334	53.6	42.3	162	20	30	17 52	18	45	64	39	46		
11	348	58.1	-12 02.1	349	21.5	-9 58.4	161	10 N	17 39	18 00	18 25	5 38	59	17 48	51		
12	3 58.1	-12 03.0	3 49.3	88	-10 14.5	30.5	161	0	17 48	18 09	18 33	5 32	54	17 57	56		
13	18 58.2	03.9	18 17.1	88	30.5	46.5	160	10 S	17 56	18	43	25	50	18 06	60		
14	33 58.3	04.7	32 44.7	86	-10 46.5	18.3	159	20	18 06	28	18 55	19	44	15	66		
15	48 58.4	05.6	47 12.3	86	-11 02.4	18.3	159	30	17	41	19 11	11	38	26	72		
16	63 58.4	06.4	61 39.9	86	18.3	18.3	159	35	23	49	21	07	35	32	76		
17	78 58.5	-12 07.3	76 07.3	84	-11 34.1	18.3	158	40	18 30	18 59	19 33	5 02	31	18 39	80		
18	93 58.6	-12 08.2	90 34.7	84	-11 49.8	05.5	157	45	18 39	19 10	19 48	4 57	26	18 48	84		
19	108 58.6	09.0	105 02.0	83	-12 05.5	21.1	157	50	49	24	20 08	50	21	18 58	91		
20	123 58.7	09.9	119 29.2	82	21.1	36.6	156	52	54	31	18	47	18	19 02	94		
21	138 58.8	10.8	133 56.3	81	36.6	12	155	54	18 59	38	29	44	15	08	97		
22	153 58.9	11.6	148 23.4	81	-12 52.1	12	155	56	19 05	47	42	41	11	13	102		
23	168 58.9	12.5	162 50.3	79	-13 07.5	12	154	58	12	19 57	20 57	37	8	20	106		
24	183 59.0	-12 13.3	177 17.2	79	-13 22.8	12	153	60 S	19 19	20 08	21 16	4 32	4	19 27	112		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 44 ^m 5		Mag: -3.8 PMG: 12 ^h 55 ^m		Mag: -1.4 PMG: 20 ^h 17 ^m		Mag: -1.9 PMG: 8 ^h 42 ^m		Mag: 0.0 PMG: 4 ^h 45 ^m	
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	32	58.2	166 28.8	-17 22.2	55 13.5	-12 19.2	229 18.4	+7 58.3	288 40.0	+22 03.2
1	48	00.7	181 28.2	23.2	70 15.2	18.7	244 20.5	58.1	303 42.4	03.2
2	63	03.2	196 27.5	24.1	85 17.0	18.3	259 22.5	58.0	318 44.9	03.2
3	78	05.6	211 26.9	25.1	100 18.8	17.8	274 24.6	57.8	333 47.4	03.2
4	93	08.1	226 26.2	26.1	115 20.5	17.4	289 26.6	57.7	348 49.8	03.2
5	108	10.6	241 25.6	-17 27.0	130 22.3	-12 16.9	304 28.7	+7 57.5	3 52.3	+22 03.2
6	123	13.0	256 24.9	-17 28.0	145 24.1	-12 16.5	319 30.8	+7 57.3	18 54.7	+22 03.2
7	138	15.5	271 24.3	28.9	160 25.8	16.0	334 32.8	57.2	33 57.2	03.2
8	153	18.0	286 23.7	29.8	175 27.6	15.6	349 34.9	57.0	48 59.7	03.2
9	168	20.4	301 23.0	30.8	190 29.3	15.1	4 36.9	56.9	64 02.1	03.2
10	183	22.9	316 22.4	31.7	205 31.1	14.7	19 39.0	56.7	79 04.6	03.2
11	198	25.4	331 21.7	-17 32.7	220 32.8	-12 14.2	34 41.0	+7 56.5	94 07.1	+22 03.2
12	213	27.8	346 21.1	-17 33.6	235 34.6	-12 13.8	49 43.1	+7 56.4	109 09.5	+22 03.2
13	228	30.3	1 20.4	34.6	250 36.4	13.3	64 45.1	56.2	124 12.0	03.2
14	243	32.7	16 19.8	35.5	265 38.1	12.9	79 47.2	56.1	139 14.4	03.2
15	258	35.2	31 19.1	36.5	280 39.9	12.4	94 49.2	55.9	154 16.9	03.2
16	273	37.7	46 18.5	37.4	295 41.6	12.0	109 51.3	55.7	169 19.4	03.2
17	288	40.1	61 17.8	-17 38.3	310 43.4	-12 11.5	124 53.4	+7 55.6	184 21.8	+22 03.2
18	303	42.6	76 17.2	-17 39.3	325 45.1	-12 11.1	139 55.4	+7 55.4	199 24.3	+22 03.2
19	318	45.1	91 16.5	40.2	340 46.9	10.6	154 57.5	55.3	214 26.8	03.2
20	333	47.5	106 15.9	41.2	355 48.6	10.2	169 59.5	55.1	229 29.2	03.2
21	348	50.0	121 15.2	42.1	10 50.4	09.7	185 01.6	54.9	244 31.7	03.2
22	3 52.5	136 14.6	43.0	25 52.1	09.3	200 03.6	54.8	54.6	259 34.1	03.2
23	18 54.9	151 13.9	44.0	40 53.9	08.8	215 05.7	54.6	54.5	274 36.6	03.2
24	33 57.4	166 13.3	-17 44.9	55 55.6	-12 08.3	230 07.8	+7 54.5		289 39.1	+22 03.2
Dif	—	-6	-9	+18	+5	+21	-2	+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 0			Edad: 0 ^d 5 PHE { SD: 16'6 PMG: 12 ^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	183	59.0	-12 13.3	177	17.2	-13 22.8		60 N	5 33	6 22	7 06	8 26	114	16 35	8	
1	198	59.1	14.2	191	44.0	78 38.0	152	58	32	18	6 59	16	107	46	14	
2	213	59.1	15.0	206	10.7	77 -13 53.1	151	56	31	14	53	8 07	102	16 56	19	
3	228	59.2	15.9	220	37.4	77 -14 08.2	151	54	30	11	48	7 59	98	17 05	22	
4	243	59.3	16.8	235	03.9	75 23.1	149	52	29	08	43	52	94	13	26	
5	258	59.3	-12 17.6	249	30.4	75 -14 38.0	149	50	5 28	6 06	6 39	7 46	91	17 20	29	
6	273	59.4	-12 18.5	263	56.8	74 -14 52.8	148	45	5 25	5 59	6 30	7 32	85	17 35	35	
7	288	59.5	19.3	278	23.1	73 -15 07.5	147	40	22	54	22	21	80	48	39	
8	303	59.5	20.2	292	49.3	72 22.1	146	35	19	49	15	12	76	17 59	43	
9	318	59.6	21.1	307	15.5	72 36.6	145	30	17	45	6 09	7 03	73	18 08	46	
10	333	59.7	21.9	321	41.5	70 -15 51.0	144	20	10	36	5 59	6 49	68	25	51	
11	348	59.7	-12 22.8	336	07.5	70 -16 05.3	143	10 N	5 03	5 28	5 49	6 37	63	18 39	56	
12	3 59.8	-12 23.6	350 33.3	68 -16 19.5	142	0	4 55	5 19	5 41	6 26	58	18 53	60			
13	18 59.9	24.5	4 59.1	68 33.6	141	10 S	45	5 10	32	15 53	19 06	64				
14	33 59.9	25.3	19 24.8	67 -16 47.6	140	20	33	4 59	22	6 03	48	21 68				
15	49 00.0	26.2	33 50.4	66 -17 01.4	138	30	17	46	11	5 49	43	38 73				
16	64 00.1	27.0	48 16.0	66 15.2	138	35	4 07	38	5 05	42 39	48 76					
17	79 00.1	-12 27.9	62 41.4	64 -17 28.8	136	40	3 54	4 29	4 57	5 33 36	19 59 80					
18	94 00.2	-12 28.7	77 06.8	64 -17 42.4	136	45	3 39	4 17	4 49	5 23 31	20 12 85					
19	109 00.3	29.6	91 32.0	62 -17 55.8	134	50	19	4 03	38	11 25	29 90					
20	124 00.3	30.4	105 57.2	62 -18 09.1	133	52	3 10	3 56	34	5 05 23	36 94					
21	139 00.4	31.3	120 22.3	61 22.2	131	54	2 58	49	28	4 59 19	45 97					
22	154 00.4	32.2	134 47.3	60 35.3	131	56	45	40	22	52 16	20 55 101					
23	169 00.5	33.0	149 12.2	59 -18 48.2	129	58	30	31	16	45 11	21 06 106					
24	184 00.6	-12 33.9	163 37.0	58 -19 01.0	128	60 S	2 11	3 19	4 08	4 36 6	21 19 113					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 40 ^m 6		Mag: -3.8 PMG: 12 ^h 56 ^m		Mag: -1.3 PMG: 20 ^h 14 ^m		Mag: -1.9 PMG: 8 ^h 38 ^m		Mag: 0.0 PMG: 4 ^h 41 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	33	57.4	166	13.3	55	55.6	230	07.8	289	39.1
1	48	59.9	181	12.6	70	57.4	245	09.8	304	41.5
2	64	02.3	196	12.0	85	59.1	260	11.9	319	44.0
3	79	04.8	211	11.3	101	00.8	275	13.9	334	46.5
4	94	07.2	226	10.7	116	02.6	290	16.0	349	48.9
5	109	09.7	241	10.0	131	04.3	305	18.0	4	51.4
6	124	12.2	256	09.4	146	06.1	320	20.1	19	53.9
7	139	14.6	271	08.7	161	07.8	335	22.2	34	56.3
8	154	17.1	286	08.0	176	09.6	350	24.2	49	58.8
9	169	19.6	301	07.4	191	11.3	5	26.3	65	01.3
10	184	22.0	316	06.7	206	13.0	20	28.3	80	03.7
11	199	24.5	331	06.1	221	14.8	35	30.4	95	06.2
12	214	27.0	346	05.4	236	16.5	50	32.4	110	08.7
13	229	29.4	1	04.7	251	18.2	65	34.5	125	11.1
14	244	31.9	16	04.1	266	20.0	80	36.6	140	13.6
15	259	34.3	31	03.4	281	21.7	95	38.6	155	16.1
16	274	36.8	46	02.8	296	23.4	110	40.7	170	18.5
17	289	39.3	61	02.1	311	25.2	125	42.7	185	21.0
18	304	41.7	76	01.4	326	26.9	140	44.8	200	23.5
19	319	44.2	91	00.8	341	28.6	155	46.9	215	25.9
20	334	46.7	106	00.1	356	30.4	170	48.9	230	28.4
21	349	49.1	120	59.5	11	32.1	185	51.0	245	30.9
22	4	51.6	135	58.8	26	33.8	200	53.0	260	33.3
23	19	54.1	150	58.1	41	35.5	215	55.1	275	35.8
24	34	56.5	165	57.5	56	37.3	230	57.2	290	38.3
Dif	—		-7	-9	+17	+5	+21	-2	+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: 1 ^d 5 PHE { 4 ^h : 61'1 12 ^h : 61'0 20 ^h : 60'9 R°: 62 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	184	00.6	-12	33.9	163	37.0	-19	01.0	60 N	16 19	17 03	17 51	10 20 112	16 43 17
1	199	00.6		34.7	178	01.8	58	13.7 ¹²⁷	58	26	07	53	10 03 105	17 00 25
2	214	00.7		35.6	192	26.4	56	26.2 ¹²⁵	56	32	10	54	9 49 99	15 30
3	229	00.8		36.4	206	51.0	56	38.6 ¹²⁴	54	37	14	55	37 95	28 33
4	244	00.8		37.3	221	15.5	55	-19 50.8 ¹²²	52	42	17	57	26 92	39 37
5	259	00.9	-12	38.1	235	39.9	54	-20 03.0 ¹²²	50	16 47	17 20	17 58	9 17 89	17 49 39
6	274	00.9	-12	39.0	250	04.2	53	-20 14.9 ¹¹⁹	45	16 56	17 27	18 01	8 57 84	18 10 44
7	289	01.0		39.8	264	28.5	53	26.8 ¹¹⁹	40	17 04	32	04	41 80	27 48
8	304	01.1		40.7	278	52.6	51	38.5 ¹¹⁷	35	11	37	07	28 76	42 50
9	319	01.1		41.5	293	16.7	51	-20 50.0 ¹¹⁵	30	18	42	10	8 16 74	18 54 53
10	334	01.2		42.4	307	40.7	50	-21 01.4 ¹¹⁴	20	29	17 51	17	7 57 68	19 16 57
11	349	01.2	-12	43.2	322	04.6	49	-21 12.7 ¹¹³	10 N	17 38	18 00	18 25	7 40 64	19 35 60
12	4	01.3	-12	44.0	336	28.5	49	-21 23.8 ¹¹¹	0	17 47	18 09	18 33	7 24 61	19 53 62
13	19	01.3		44.9	350	52.2	47	34.7 ¹⁰⁹	10 S	17 57	18	43	7 08 58	20 10 66
14	34	01.4		45.7	5	15.9	47	45.5 ¹⁰⁸	20	18 07	29	18 56	6 51 54	29 69
15	49	01.5		46.6	19	39.5	46	-21 56.1 ¹⁰⁶	30	18	43	19 13	32 50	20 51 72
16	64	01.5		47.4	34	03.0	45	-22 06.6 ¹⁰⁵	35	25	18 51	23	21 47	21 04 74
17	79	01.6	-12	48.3	48	26.5	45	-22 16.9 ¹⁰³	40	18 33	19 01	19 36	6 09 43	21 19 77
18	94	01.6	-12	49.1	62	49.8	43	-22 27.1 ¹⁰²	45	18 42	19 13	19 52	5 54 39	21 37 80
19	109	01.7		50.0	77	13.2	44	37.1 ¹⁰⁰	50	52	28	20 12	36 34	21 59 85
20	124	01.7		50.8	91	36.4	42	46.9 ⁹⁸	52	18 58	35	23	28 31	22 10 87
21	139	01.8		51.7	105	59.6	42	-22 56.5 ⁹⁶	54	19 03	43	34	18 28	22 90
22	154	01.8		52.5	120	22.7	41	-23 06.0 ⁹⁵	56	09	19 52	20 48	5 08 24	36 93
23	169	01.9		53.3	134	45.7	40	15.4 ⁹⁴	58	16	20 02	21 05	4 56 19	22 52 99
24	184	02.0	-12	54.2	149	08.7	40	-23 24.5 ⁹¹	60 S	19 24	20 14	21 25	4 42 13	23 12 106
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 36 ^m 7		Mag: -3.8 PMG: 12 ^h 57 ^m		Mag: -1.3 PMG: 20 ^h 11 ^m		Mag: -1.9 PMG: 8 ^h 35 ^m		Mag: 0.0 PMG: 4 ^h 37 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	34	56.5	165	57.5	56	37.3	230	57.2	290	38.3				
1	49	59.0	180	56.8	71	39.0	245	59.2	305	40.7				
2	65	01.5	195	56.1	86	40.7	261	01.3	320	43.2				
3	80	03.9	210	55.5	101	42.4	276	03.3	335	45.7				
4	95	06.4	225	54.8	116	44.2	291	05.4	350	48.1				
5	110	08.8	240	54.1	131	45.9	306	07.5	5	50.6				
6	125	11.3	255	53.5	146	47.6	321	09.5	20	53.1				
7	140	13.8	270	52.8	161	49.3	336	11.6	35	55.6				
8	155	16.2	285	52.1	176	51.0	351	13.7	50	58.0				
9	170	18.7	300	51.4	191	52.8	6	15.7	66	00.5				
10	185	21.2	315	50.8	206	54.5	21	17.8	81	03.0				
11	200	23.6	330	50.1	221	56.2	36	19.8	96	05.4				
12	215	26.1	345	49.4	236	57.9	51	21.9	111	07.9				
13	230	28.6	0	48.8	251	59.6	66	24.0	126	10.4				
14	245	31.0	15	48.1	267	01.3	81	26.0	141	12.9				
15	260	33.5	30	47.4	282	03.0	96	28.1	156	15.3				
16	275	36.0	45	46.7	297	04.8	111	30.1	171	17.8				
17	290	38.4	60	46.1	312	06.5	126	32.2	186	20.3				
18	305	40.9	75	45.4	327	08.2	141	34.3	201	22.7				
19	320	43.3	90	44.7	342	09.9	156	36.3	216	25.2				
20	335	45.8	105	44.0	357	11.6	171	38.4	231	27.7				
21	350	48.3	120	43.4	12	13.3	186	40.5	246	30.2				
22	5	50.7	135	42.7	27	15.0	201	42.5	261	32.6				
23	20	53.2	150	42.0	42	16.7	216	44.6	276	35.1				
24	35	55.7	165	41.3	57	18.4	231	46.7	291	37.6				
Dif	—		-7		+17		+21		+25					

UT	SOL			● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 2 ^d 5 PHE { 4 ^h : 60'7 12 ^h : 60'6 20 ^h : 60'4 R°: 64 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m		
0	184	02.0	-12	54.2	149	08.7	-23	24.5	90	60 N	5 38	6 27	7 11	12 12	96	17 00	37	
1	199	02.0		55.0	163	31.6	39	33.5	90	58	36	22	7 04	11 48	89	25	43	
2	214	02.1		55.9	177	54.4	38	42.3	88	56	35	18	6 57	28	85	17 45	47	
3	229	02.1		56.7	192	17.2	38	51.0	87	54	33	15	52	11 12	82	18 01	50	
4	244	02.2		57.6	206	39.9	37	-23	59.4	84	52	32	12	47	10 58	80	16	51
5	259	02.2	-12	58.4	221	02.6	37	-24	07.7	83	50	5 31	6 09	6 42	10 46	78	18 28	53
6	274	02.3	-12	59.2	235	25.2	36	-24	15.8	81	45	5 28	6 02	6 32	10 21	75	18 54	56
7	289	02.3	-13	00.1	249	47.7	35	23.7	79	40	24	5 56	24	10 01	73	19 15	57	
8	304	02.4		00.9	264	10.2	35	31.5	78	35	21	51	17	9 44	71	32	59	
9	319	02.4		01.8	278	32.7	35	39.0	75	30	18	46	6 10	30	69	19 47	60	
10	334	02.5		02.6	292	55.1	34	46.4	74	20	11	37	5 59	9 05	68	20 13	61	
11	349	02.5	-13	03.4	307	17.5	34	-24	53.6	72	10 N	5 03	5 28	5 50	8 44	66	20 35	62
12	4	02.6	-13	04.3	321	39.8	33	-25	00.6	70	0	4 55	5 19	5 40	8 25	63	20 55	64
13	19	02.6		05.1	336	02.1	33	07.5	69	10 S	44	5 09	31	8 06	61	21 16	64	
14	34	02.7		06.0	350	24.3	32	14.1	66	20	31	4 58	21	7 45	59	21 38	65	
15	49	02.7		06.8	4	46.5	32	20.5	64	30	15	44	09	22	56	22 03	67	
16	64	02.8		07.6	19	08.7	32	26.8	63	35	4 04	36	5 02	7 08	55	18	68	
17	79	02.8	-13	08.5	33	30.8	31	-25	32.9	61	40	3 51	4 26	4 55	6 52	53	22 36	68
18	94	02.9	-13	09.3	47	52.9	31	-25	38.8	59	45	3 35	4 14	4 46	6 33	50	22 57	70
19	109	02.9		10.1	62	15.0	31	44.5	57	50	15	3 59	35	6 10	46	23 24	71	
20	124	03.0		11.0	76	37.0	30	50.0	55	52	3 04	52	29	5 59	44	37	72	
21	139	03.0		11.8	90	59.0	30	-25	55.3	53	54	2 53	44	24	46	41	23 52	72
22	154	03.1		12.6	105	21.0	30	-26	00.4	51	56	39	35	17	32	38	*** ** *	
23	169	03.1		13.5	119	43.0	30	05.3	49	58	22	25	10	5 15	33	*** ** *		
24	184	03.2	-13	14.3	134	05.0	30	-26	10.1	48	60 S	2 02	3 13	4 02	4 55	26	*** ** *	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 32 ^m 7		Mag: -3.8 PMG: 12 ^h 58 ^m				Mag: -1.3 PMG: 20 ^h 08 ^m				Mag: -1.9 PMG: 8 ^h 32 ^m				Mag: 0.0 PMG: 4 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	35	55.7	165	41.3	-18	28.8	57	18.4	-11	46.2	231	46.7	+7	46.9	291	37.6	+22	03.2
1	50	58.1	180	40.6		29.7	72	20.1		45.8	246	48.7		46.8	306	40.1		03.2
2	66	00.6	195	40.0		30.6	87	21.8		45.3	261	50.8		46.6	321	42.5		03.2
3	81	03.1	210	39.3		31.5	102	23.5		44.8	276	52.9		46.4	336	45.0		03.2
4	96	05.5	225	38.6		32.4	117	25.2		44.3	291	54.9		46.3	351	47.5		03.2
5	111	08.0	240	37.9	-18	33.3	132	26.9	-11	43.9	306	57.0	+7	46.1	6	50.0	+22	03.2
6	126	10.5	255	37.2	-18	34.2	147	28.6	-11	43.4	321	59.0	+7	46.0	21	52.4	+22	03.2
7	141	12.9	270	36.6		35.1	162	30.3		42.9	337	01.1		45.8	36	54.9		03.2
8	156	15.4	285	35.9		36.0	177	32.0		42.5	352	03.2		45.7	51	57.4		03.2
9	171	17.8	300	35.2		36.8	192	33.7		42.0	7	05.2		45.5	66	59.9		03.2
10	186	20.3	315	34.5		37.7	207	35.4		41.5	22	07.3		45.3	82	02.3		03.2
11	201	22.8	330	33.8	-18	38.6	222	37.1	-11	41.1	37	09.4	+7	45.2	97	04.8	+22	03.2
12	216	25.2	345	33.1	-18	39.5	237	38.8	-11	40.6	52	11.4	+7	45.0	112	07.3	+22	03.3
13	231	27.7	0	32.5		40.4	252	40.5		40.1	67	13.5		44.9	127	09.8		03.3
14	246	30.2	15	31.8		41.3	267	42.2		39.6	82	15.6		44.7	142	12.2		03.3
15	261	32.6	30	31.1		42.2	282	43.9		39.2	97	17.6		44.6	157	14.7		03.3
16	276	35.1	45	30.4		43.0	297	45.6		38.7	112	19.7		44.4	172	17.2		03.3
17	291	37.6	60	29.7	-18	43.9	312	47.3	-11	38.2	127	21.8	+7	44.3	187	19.7	+22	03.3
18	306	40.0	75	29.0	-18	44.8	327	49.0	-11	37.8	142	23.8	+7	44.1	202	22.2	+22	03.3
19	321	42.5	90	28.3		45.7	342	50.7		37.3	157	25.9		44.0	217	24.6		03.3
20	336	44.9	105	27.6		46.6	357	52.3		36.8	172	28.0		43.8	232	27.1		03.3
21	351	47.4	120	27.0		47.4	12	54.0		36.3	187	30.0		43.6	247	29.6		03.3
22	6	49.9	135	26.3		48.3	27	55.7		35.9	202	32.1		43.5	262	32.1		03.3
23	21	52.3	150	25.6		49.2	42	57.4		35.4	217	34.2		43.3	277	34.5		03.3
24	36	54.8	165	24.9	-18	50.1	57	59.1	-11	34.9	232	36.2	+7	43.2	292	37.0	+22	03.3
Dif	—		-7		-9		+17		+5		+21		-2		+25			

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 8			Edad: 3 ^d 5 PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 9 20 ^h : 59 ^h 7 R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	184	03.2	-13	14.3	134	05.0	-26	10.1	60 N	16 13	16 58	17 47	13 48 59	17 37 72	
1	199	03.2		15.2	148	27.0	30	14.6	58	21	17 02	48	13 17 60	18 08 70	
2	214	03.3		16.0	162	48.9	29	19.0	56	27	06	50	12 53 62	32 69	
3	229	03.3		16.8	177	10.8	29	23.1	54	33	10	51	34 62	18 51 68	
4	244	03.3		17.7	191	32.8	30	27.1	52	38	13	53	18 62	19 07 68	
5	259	03.4	-13	18.5	205	54.7	29	-26 30.9	50	16 43	17 17	17 54	12 04 63	19 21 67	
6	274	03.4	-13	19.3	220	16.6	29	-26 34.4	45	16 53	17 24	17 58	11 36 63	19 50 66	
7	289	03.5		20.2	234	38.5	29	37.8	40	17 02	30	18 02	11 14 62	20 12 66	
8	304	03.5		21.0	249	00.4	29	41.0	35	09	35	05	10 55 63	31 65	
9	319	03.6		21.8	263	22.4	30	44.0	30	16	40	09	39 63	20 47 64	
10	334	03.6		22.6	277	44.3	29	46.8	20	27	50	16	10 13 63	21 14 63	
11	349	03.7	-13	23.5	292	06.3	30	-26 49.4	10 N	17 38	17 59	18 24	9 50 63	21 37 63	
12	4	03.7	-13	24.3	306	28.2	29	-26 51.8	0	17 47	18 08	18 33	9 28 63	21 59 61	
13	19	03.7		25.1	320	50.2	30	54.0	10 S	17 57	19	44	9 07 63	22 20 61	
14	34	03.8		26.0	335	12.2	30	56.0	20	18 07	30	18 57	8 44 63	22 43 60	
15	49	03.8		26.8	349	34.2	30	57.8	18	20	45	19 14	18 62	23 10 59	
16	64	03.9		27.6	3	56.3	31	-26 59.4	35	27	18 53	25	8 03 61	26 58	
17	79	03.9	-13	28.5	18	18.3	30	-27 00.9	40	18 35	19 04	19 39	7 45 61	23 44 58	
18	94	04.0	-13	29.3	32	40.4	31	-27 02.1	45	18 44	19 16	19 55	7 23 61	** ** *	
19	109	04.0		30.1	47	02.6	32	03.2	50	18 56	32	20 17	6 56 60	** ** *	
20	124	04.0		30.9	61	24.7	31	04.0	8	52	19 01	39	43 59	** ** *	
21	139	04.1		31.8	75	47.0	33	04.7	7	54	07	47	40	** ** *	
22	154	04.1		32.6	90	09.2	32	05.1	4	56	14	19 57	20 54	0 09 74	
23	169	04.1		33.4	104	31.5	33	05.4	3	58	21	20 08	21 12	5 48 57	
24	184	04.2	-13	34.2	118	53.8	33	-27 05.5	1	60 S	19 30	20 20	21 34	5 21 54	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 28 ^m 8		Mag: -3.8 PMG: 12 ^h 59 ^m			Mag: -1.3 PMG: 20 ^h 06 ^m			Mag: -1.9 PMG: 8 ^h 28 ^m			Mag: 0.0 PMG: 4 ^h 29 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	36	54.8	165	24.9	-18	50.1	57	59.1	-11	34.9	232	36.2	+7	43.2	
1	51	57.3	180	24.2		50.9	73	00.8		34.4	247	38.3		43.0	
2	66	59.7	195	23.5		51.8	88	02.5		34.0	262	40.4		42.9	
3	82	02.2	210	22.8		52.7	103	04.1		33.5	277	42.4		42.7	
4	97	04.7	225	22.1		53.6	118	05.8		33.0	292	44.5		42.6	
5	112	07.1	240	21.4	-18	54.4	133	07.5	-11	32.5	307	46.6	+7	42.4	
6	127	09.6	255	20.7	-18	55.3	148	09.2	-11	32.1	322	48.7	+7	42.2	
7	142	12.1	270	20.0		56.2	163	10.9		31.6	337	50.7		42.1	
8	157	14.5	285	19.3		57.0	178	12.5		31.1	352	52.8		41.9	
9	172	17.0	300	18.6		57.9	193	14.2		30.6	7	54.9		41.8	
10	187	19.4	315	17.9		58.8	208	15.9		30.2	22	56.9		41.6	
11	202	21.9	330	17.2	-18	59.6	223	17.6	-11	29.7	37	59.0	+7	41.5	
12	217	24.4	345	16.5	-19	00.5	238	19.3	-11	29.2	53	01.1	+7	41.3	
13	232	26.8	0	15.9		01.4	253	20.9		28.7	68	03.1		41.2	
14	247	29.3	15	15.2		02.2	268	22.6		28.3	83	05.2		41.0	
15	262	31.8	30	14.5		03.1	283	24.3		27.8	98	07.3		40.9	
16	277	34.2	45	13.8		03.9	298	25.9		27.3	113	09.4		40.7	
17	292	36.7	60	13.1	-19	04.8	313	27.6	-11	26.8	128	11.4	+7	40.6	
18	307	39.2	75	12.4	-19	05.7	328	29.3	-11	26.3	143	13.5	+7	40.4	
19	322	41.6	90	11.7		06.5	343	31.0		25.9	158	15.6		40.2	
20	337	44.1	105	10.9		07.4	358	32.6		25.4	173	17.6		40.1	
21	352	46.6	120	10.2		08.2	13	34.3		24.9	188	19.7		39.9	
22	7	49.0	135	09.5		09.1	28	36.0		24.4	203	21.8		39.8	
23	22	51.5	150	08.8		09.9	43	37.6		23.9	218	23.8		39.6	
24	37	53.9	165	08.1	-19	10.8	58	39.3	-11	23.5	233	25.9	+7	39.5	
Dif	—		-7			-9	+17			+5	+21		-2		
															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: 4 ^d 5 PHE { SD: 16'2 PMG: 16 ^h 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	04.2	-13	34.2	118	53.8	-27	05.5	60 N	5	42	6	31	7	16	14	47
1	199	04.2		35.1	133	16.2	34	05.4	58	40	27	08			14	17	
2	214	04.3		35.9	147	38.6	34	05.1	56	39	22	7	02		13	55	
3	229	04.3		36.7	162	01.1	35	04.6	54	37	19	6	56		36	41	
4	244	04.3		37.5	176	23.6	35	04.0	52	35	15	50			20	44	
5	259	04.4	-13	38.4	190	46.2	36	-27	50	34	6	12	6	46	13	07	
6	274	04.4	-13	39.2	205	08.8	36	-27	45	30	6	05	6	35	12	39	
7	289	04.5		40.0	219	31.6	38	-27	40	26	5	58	26		12	16	
8	304	04.5		40.8	233	54.3	37	-26	35	23	53	19			11	58	
9	319	04.5		41.7	248	17.2	39		30	19	47	12			42	55	
10	334	04.6		42.5	262	40.1	39		20	12	38	6	00		11	16	
11	349	04.6	-13	43.3	277	03.0	39	-26	10 N	5	04	5	50		10	53	
12	4	04.6	-13	44.1	291	26.1	41	-26	0	4	54	5	40		10	31	
13	19	04.7		44.9	305	49.2	41		10 S	43	5	09	30		10	10	
14	34	04.7		45.8	320	12.4	42		20	30	4	57	20		9	47	
15	49	04.7		46.6	334	35.6	42		30	13	42	07			20	65	
16	64	04.8		47.4	348	59.0	44		35	4	02	34	5	00	9	04	
17	79	04.8	-13	48.2	3	22.4	44	-26	40	3	48	4	23	4	52	8	46
18	94	04.8	-13	49.0	17	45.9	45	-26	45	3	32	4	11	4	43	8	24
19	109	04.9		49.9	32	09.5	46		50	3	10	3	55	31	7	56	72
20	124	04.9		50.7	46	33.2	47		52	2	59	48	25		42	74	0
21	139	04.9		51.5	60	56.9	47		54	47	39	20			26	75	1
22	154	05.0		52.3	75	20.8	49		56	32	30	13			7	08	77
23	169	05.0		53.1	89	44.7	49		58	2	15	19	4	05	6	45	80
24	184	05.0	-13	53.9	104	08.8	51	-26	60 S	1	52	3	06	3	57	6	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 24 ^m 9		Mag: -3.8 PMG: 13 ^h 00 ^m		Mag: -1.2 PMG: 20 ^h 03 ^m		Mag: -1.9 PMG: 8 ^h 25 ^m		Mag: 0.0 PMG: 4 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	37	53.9	165	08.1	-19	10.8	58	39.3	-11	23.5
1	52	56.4	180	07.4		11.7	73	41.0		23.0
2	67	58.9	195	06.7		12.5	88	42.6		22.5
3	83	01.3	210	06.0		13.4	103	44.3		22.0
4	98	03.8	225	05.3		14.2	118	46.0		21.5
5	113	06.3	240	04.6	-19	15.1	133	47.6	-11	21.1
6	128	08.7	255	03.9	-19	15.9	148	49.3	-11	20.6
7	143	11.2	270	03.2		16.7	163	50.9		20.1
8	158	13.7	285	02.5		17.6	178	52.6		19.6
9	173	16.1	300	01.8		18.4	193	54.3		19.1
10	188	18.6	315	01.1		19.3	208	55.9		18.6
11	203	21.1	330	00.4	-19	20.1	223	57.6	-11	18.2
12	218	23.5	344	59.6	-19	21.0	238	59.2	-11	17.7
13	233	26.0	359	58.9		21.8	254	00.9		17.2
14	248	28.4	14	58.2		22.7	269	02.5		16.7
15	263	30.9	29	57.5		23.5	284	04.2		16.2
16	278	33.4	44	56.8		24.3	299	05.8		15.7
17	293	35.8	59	56.1	-19	25.2	314	07.5	-11	15.3
18	308	38.3	74	55.4	-19	26.0	329	09.2	-11	14.8
19	323	40.8	89	54.7		26.8	344	10.8		14.3
20	338	43.2	104	53.9		27.7	359	12.5		13.8
21	353	45.7	119	53.2		28.5	14	14.1		13.3
22	8	48.2	134	52.5		29.4	29	15.8		12.8
23	23	50.6	149	51.8		30.2	44	17.4		12.3
24	38	53.1	164	51.1	-19	31.0	59	19.1	-11	11.9
Dif	—		-7		-8		+17		+5	
									+21	
									-2	
									+25	
									0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 5 ^d 5	PHE {	4 ^h : 58 ^h /6 12 ^h : 58 ^h /3 20 ^h : 58 ^h /0 R°: 54 ^m									
	PMG: 11 ^h 43 ^m 6														
	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	05.0	-13	53.9	104	08.8	-26 12.7	60 N	16 08	16 53	17 42	15 14 12	20 24 100		
1	199	05.1		54.8	118	32.9	51 08.4	43 58	16	16 58	44	14 51 19	20 46 94		
2	214	05.1		55.6	132	57.1	52 -26 03.8	46 56	23	17 02	46	33 23	21 04 89		
3	229	05.1		56.4	147	21.5	54 -25 59.1	47 54	29	06	48	17 27	20 84		
4	244	05.1		57.2	161	45.9	54 54.3	48 52	34	10	50	14 04 30	33 81		
5	259	05.2	-13	58.0	176	10.4	55 -25 49.2	51 50	16 39	17 13	17 51	13 52 32	21 44 79		
6	274	05.2	-13	58.8	190	35.0	56 -25 44.1	51 45	16 50	17 21	17 55	13 27 37	22 08 74		
7	289	05.2	-13	59.7	204	59.8	58 38.7	54 40	16 59	27	17 59	13 07 41	27 70		
8	304	05.3	-14	00.5	219	24.6	58 33.3	54 35	17 07	33	18 03	12 51 43	43 67		
9	319	05.3		01.3	233	49.5	59 27.6	57 30	14	39	07	37 45	22 57 64		
10	334	05.3		02.1	248	14.6	61 21.8	58 20	26	49	15	12 12 49	23 20 60		
11	349	05.3	-14	02.9	262	39.7	61 -25 15.9	59 10 N	17 37	17 59	18 24	11 51 52	23 40 56		
12	4	05.4	-14	03.7	277	05.0	63 -25 09.8	61 0	17 47	18 08	18 33	11 31 56	23 58 53		
13	19	05.4		04.5	291	30.3	63 -25 03.6	62 10 S	17 57	19	44	11 11 59	** ** *		
14	34	05.4		05.3	305	55.8	65 -24 57.2	64 20	18 08	31	18 58	10 50 61	** ** *		
15	49	05.4		06.1	320	21.3	65 50.7	65 30	21	46	19 16	25 65	0 09 50		
16	64	05.5		07.0	334	47.0	67 44.0	67 35	29	18 55	28	10 11 67	24 48		
17	79	05.5	-14	07.8	349	12.8	68 -24 37.2	68 40	18 37	19 06	19 41	9 54 70	0 42 45		
18	94	05.5	-14	08.6	3	38.7	69 -24 30.2	70 45	18 47	19 19	19 59	9 34 73	1 02 43		
19	109	05.5		09.4	18	04.7	70 23.1	71 50	18 59	35	20 21	9 08 78	29 38		
20	124	05.6		10.2	32	30.9	72 15.9	72 52	19 05	43	32	8 56 80	41 37		
21	139	05.6		11.0	46	57.1	72 08.6	73 54	11	19 52	20 45	41 83	1 56 34		
22	154	05.6		11.8	61	23.5	74 -24 01.1	75 56	18	20 02	21 01	25 86	2 13 30		
23	169	05.6		12.6	75	49.9	74 -23 53.5	76 58	26	13	20	8 05 91	33 26		
24	184	05.7	-14	13.4	90	16.5	76 -23 45.7	78 60 S	19 35	20 27	21 44	7 40 98	2 59 19		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO							
	PMG: 21 ^h 21 ^m 0		Mag: -3.8 PMG: 13 ^h 01 ^m		Mag: -1.2 PMG: 20 ^h 01 ^m		Mag: -1.9 PMG: 8 ^h 22 ^m			Mag: -0.1 PMG: 4 ^h 21 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'					
0	38	53.1	164	51.1	-19	31.0	59	19.1	-11	11.9	234	15.7	+7 35.8	294	36.3	+22 03.4	
1	53	55.6	179	50.4		31.9	74	20.7		11.4	249	17.8		35.7	309	38.8	03.4
2	68	58.0	194	49.6		32.7	89	22.3		10.9	264	19.8		35.5	324	41.2	03.4
3	84	00.5	209	48.9		33.5	104	24.0		10.4	279	21.9		35.4	339	43.7	03.4
4	99	02.9	224	48.2		34.3	119	25.6		09.9	294	24.0		35.2	354	46.2	03.4
5	114	05.4	239	47.5	-19	35.2	134	27.3	-11	09.4	309	26.1	+7	35.1	9	48.7	+22 03.4
6	129	07.9	254	46.8	-19	36.0	149	28.9	-11	08.9	324	28.1	+7	34.9	24	51.2	+22 03.4
7	144	10.3	269	46.0		36.8	164	30.6		08.4	339	30.2		34.8	39	53.7	03.4
8	159	12.8	284	45.3		37.6	179	32.2		08.0	354	32.3		34.6	54	56.2	03.4
9	174	15.3	299	44.6		38.5	194	33.8		07.5	9	34.4		34.5	69	58.7	03.4
10	189	17.7	314	43.9		39.3	209	35.5		07.0	24	36.4		34.3	85	01.2	03.4
11	204	20.2	329	43.2	-19	40.1	224	37.1	-11	06.5	39	38.5	+7	34.2	100	03.7	+22 03.4
12	219	22.7	344	42.4	-19	40.9	239	38.8	-11	06.0	54	40.6	+7	34.0	115	06.2	+22 03.4
13	234	25.1	359	41.7		41.8	254	40.4		05.5	69	42.7		33.9	130	08.6	03.4
14	249	27.6	14	41.0		42.6	269	42.0		05.0	84	44.8		33.7	145	11.1	03.4
15	264	30.1	29	40.3		43.4	284	43.7		04.5	99	46.8		33.6	160	13.6	03.5
16	279	32.5	44	39.5		44.2	299	45.3		04.0	114	48.9		33.4	175	16.1	03.5
17	294	35.0	59	38.8	-19	45.0	314	46.9	-11	03.5	129	51.0	+7	33.3	190	18.6	+22 03.5
18	309	37.4	74	38.1	-19	45.8	329	48.6	-11	03.1	144	53.1	+7	33.1	205	21.1	+22 03.5
19	324	39.9	89	37.4		46.7	344	50.2		02.6	159	55.2		33.0	220	23.6	03.5
20	339	42.4	104	36.6		47.5	359	51.8		02.1	174	57.2		32.8	235	26.1	03.5
21	354	44.8	119	35.9		48.3	14	53.5		01.6	189	59.3		32.7	250	28.6	03.5
22	9	47.3	134	35.2		49.1	29	55.1		01.1	205	01.4		32.5	265	31.1	03.5
23	24	49.8	149	34.4		49.9	44	56.7		00.6	220	03.5		32.4	280	33.6	03.5
24	39	52.2	164	33.7	-19	50.7	59	58.4	-11	00.1	235	05.5	+7	32.2	295	36.1	+22 03.5
Dif	—		-7		-8		+16		+5		+21		-2		+25		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: 6 ^d 5 PHE { 4 ^h : 57/7 12 ^h : 57/5 20 ^h : 57/2 R°: 50 ^m SD: 15/8 PMG: 18 ^h 39 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	184	05.7	-14	13.4	90	16.5	-23	45.7	60 N	5	46	6	36	7	21	15 26 6
1	199	05.7		14.2	104	43.2	77	37.8	58	44	31	13	15	10	11	20 90
2	214	05.7		15.0	119	10.0	78	29.8	56	42	26	06	14	56	15	33 86
3	229	05.7		15.8	133	36.9	79	21.7	54	40	22	7	00	44	19	44 83
4	244	05.8		16.7	148	04.0	81	13.4	52	39	18	6	54	34	21	22 54 80
5	259	05.8	-14	17.5	162	31.1	81	-23 05.0	50	5	37	6	15	14	24	24 23 03 77
6	274	05.8	-14	18.3	176	58.4	83	-22 56.5	45	5	32	6	07	14	04	29 23 22 72
7	289	05.8		19.1	191	25.8	84	47.9	40	28	6	00	28	13	48	32 37 68
8	304	05.8		19.9	205	53.3	85	39.2	35	24	5	54	21	34	36	23 50 64
9	319	05.9		20.7	220	20.9	86	30.3	30	21	49	13	22	39		** ** *
10	334	05.9		21.5	234	48.6	87	21.4	20	12	39	6	01	13	01	43 ** ** *
11	349	05.9	-14	22.3	249	16.5	89	-22 12.3	10 N	5	04	5	29	12	43	47 ** ** *
12	4	05.9	-14	23.1	263	44.4	89	-22 03.1	0	4	54	5	19	12	27	50 ** ** *
13	19	05.9		23.9	278	12.5	91	-21 53.8	10 S	43	5	08	30	12	10	54 0 17 49
14	34	05.9		24.7	292	40.7	92	44.4	20	29	4	56	19	11	51	59 36 46
15	49	06.0		25.5	307	09.0	93	34.9	30	4	11	41	5	30	63	0 59 42
16	64	06.0		26.3	321	37.4	94	25.3	35	3	59	31	4	18	66	1 12 39
17	79	06.0	-14	27.1	336	05.9	95	-21 15.5	40	3	45	4	21	11	04	69 1 27 37
18	94	06.0	-14	27.9	350	34.5	96	-21 05.7	45	3	28	4	08	10	47	73 1 45 33
19	109	06.0		28.7	5	03.3	98	-20 55.8	50	3	05	3	51	26	78	2 07 28
20	124	06.1		29.5	19	32.1	98	45.8	52	2	54	43	22	16	80	18 25
21	139	06.1		30.3	34	01.1	100	35.6	54	41	35	15	15	10	04	84 30 22
22	154	06.1		31.1	48	30.2	101	25.4	56	26	25	08	08	9	51	87 43 19
23	169	06.1		31.9	62	59.4	102	15.1	58	2	07	13	4	36	92	2 59 15
24	184	06.1	-14	32.7	77	28.7	103	-20 04.7	60 S	1	42	3	00	9	18	97 3 18 9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 17 ^m 0		Mag: -3.8 PMG: 13 ^h 02 ^m		Mag: -1.2 PMG: 19 ^h 58 ^m		Mag: -1.9 PMG: 8 ^h 18 ^m		Mag: -0.1 PMG: 4 ^h 17 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	39	52.2	164	33.7	-19	50.7	235	05.5	+7	32.2
1	54	54.7	179	33.0		51.5	250	07.6		32.1
2	69	57.2	194	32.3		52.3	265	09.7		31.9
3	84	59.6	209	31.5		53.1	280	11.8		31.8
4	100	02.1	224	30.8		53.9	295	13.9		31.6
5	115	04.5	239	30.1	-19	54.7	310	15.9	+7	31.5
6	130	07.0	254	29.3	-19	55.6	325	18.0	+7	31.3
7	145	09.5	269	28.6		56.4	340	20.1		31.2
8	160	11.9	284	27.9		57.2	355	22.2		31.0
9	175	14.4	299	27.1		58.0	10	24.3		30.9
10	190	16.9	314	26.4		58.8	25	26.3		30.7
11	205	19.3	329	25.7	-19	59.6	40	28.4	+7	30.6
12	220	21.8	344	24.9	-20	00.4	55	30.5	+7	30.4
13	235	24.3	359	24.2		01.2	70	32.6		30.3
14	250	26.7	14	23.4		02.0	85	34.7		30.1
15	265	29.2	29	22.7		02.7	100	36.8		30.0
16	280	31.7	44	22.0		03.5	115	38.8		29.8
17	295	34.1	59	21.2	-20	04.3	130	40.9	+7	29.7
18	310	36.6	74	20.5	-20	05.1	145	43.0	+7	29.5
19	325	39.0	89	19.8		05.9	160	45.1		29.4
20	340	41.5	104	19.0		06.7	175	47.2		29.2
21	355	44.0	119	18.3		07.5	190	49.3		29.1
22	10	46.4	134	17.5		08.3	205	51.3		28.9
23	25	48.9	149	16.8		09.1	220	53.4		28.8
24	40	51.4	164	16.0	-20	09.9	235	55.5	+7	28.6
Dif	—		-7		-8		+16		+21	
									-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 6			Edad: 7 ^d 5 PHE { 4 ^h : 57:0 12 ^h : 56:7 20 ^h : 56:5 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m m	m
0	184	06.1	-14	32.7	77	28.7	-20	04.7	60 N	16 03	16 48	17 37	15 32	3	23 40 90
1	199	06.1		33.5	91	58.1 ¹⁰⁴	-19	54.2 ¹⁰⁵	58	11	53	40	21	7	50 86
2	214	06.1		34.3	106	27.6 ¹⁰⁵		43.6 ¹⁰⁶	56	18	16 58	42	11	11	23 59 82
3	229	06.2		35.1	120	57.2 ¹⁰⁶		32.9 ¹⁰⁷	54	25	17 02	44	15 03	13	** ** *
4	244	06.2		35.9	135	27.0 ¹⁰⁸		22.2 ¹⁰⁷	52	31	06	46	14 55	16	** ** *
5	259	06.2	-14	36.7	149	56.8 ¹⁰⁸	-19	11.3 ¹⁰⁹	50	16 36	17 10	17 48	14 48	18	** ** *
6	274	06.2	-14	37.5	164	26.8 ¹¹⁰	-19	00.4 ¹⁰⁹	45	16 47	17 18	17 53	14 33	23	** ** *
7	289	06.2		38.2	178	56.8 ¹¹⁰	-18	49.4 ¹¹⁰	40	16 57	25	17 57	20	27	** ** *
8	304	06.2		39.0	193	27.0 ¹¹²		38.3 ¹¹¹	35	17 05	31	18 01	10	30	** ** *
9	319	06.2		39.8	207	57.2 ¹¹²		27.1 ¹¹²	30	13	37	06	14 01	33	0 01 61
10	334	06.2		40.6	222	27.6 ¹¹⁴		15.8 ¹¹³	20	25	48	14	13 44	39	20 56
11	349	06.3	-14	41.4	236	58.1 ¹¹⁵	-18	04.5 ¹¹³	10 N	17 36	17 58	18 23	13 30	43	0 36 52
12	4	06.3	-14	42.2	251	28.6 ¹¹⁵	-17	53.1 ¹¹⁴	0	17 47	18 08	18 33	13 17	47	0 51 49
13	19	06.3		43.0	265	59.3 ¹¹⁷		41.6 ¹¹⁵	10 S	17 58	20	45	13 04	50	1 06 45
14	34	06.3		43.8	280	30.1 ¹¹⁸		30.0 ¹¹⁶	20	18 09	32	18 59	12 50	54	22 41
15	49	06.3		44.6	295	00.9 ¹¹⁸		18.4 ¹¹⁶	30	23	48	19 18	33	60	41 36
16	64	06.3		45.4	309	31.9 ¹²⁰	-17	06.7 ¹¹⁷	35	30	18 57	30	24	62	1 51 33
17	79	06.3	-14	46.2	324	02.9 ¹²⁰	-16	54.9 ¹¹⁸	40	18 39	19 09	19 44	12 13	66	2 04 29
18	94	06.3	-14	47.0	338	34.1 ¹²²	-16	43.1 ¹¹⁸	45	18 50	19 22	20 02	12 00	70	2 18 25
19	109	06.3		47.8	353	05.3 ¹²²		31.2 ¹¹⁹	50	19 03	39	26	11 44	75	35 21
20	124	06.3		48.5	7	36.7 ¹²⁴		19.2 ¹²⁰	52	09	47	37	36	78	43 19
21	139	06.3		49.3	22	08.1 ¹²⁴	-16	07.2 ¹²⁰	54	15	19 56	20 51	28	81	2 52 16
22	154	06.4		50.1	36	39.7 ¹²⁶	-15	55.1 ¹²¹	56	23	20 07	21 08	18	84	3 02 13
23	169	06.4		50.9	51	11.3 ¹²⁶		42.9 ¹²²	58	31	19	28	11 08	88	14 9
24	184	06.4	-14	51.7	65	43.0 ¹²⁷	-15	30.7 ¹²²	60 S	19 40	20 33	21 55	10 55	93	3 27 4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 13 ^m 1		Mag: -3.8 PMG: 13 ^h 04 ^m		Mag: -1.1 PMG: 19 ^h 55 ^m		Mag: -1.9 PMG: 8 ^h 15 ^m		Mag: -0.1 PMG: 4 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	40	51.4	164	16.0	60	37.2	235	55.5	296	36.0
1	55	53.8	179	15.3	75	38.9	250	57.6	311	38.5
2	70	56.3	194	14.6	90	40.5	265	59.7	326	41.0
3	85	58.8	209	13.8	105	42.1	281	01.8	341	43.5
4	101	01.2	224	13.1	120	43.7	296	03.8	356	46.0
5	116	03.7	239	12.3	135	45.3	311	05.9	11	48.5
6	131	06.2	254	11.6	150	46.9	326	08.0	26	51.0
7	146	08.6	269	10.8	165	48.5	341	10.1	41	53.5
8	161	11.1	284	10.1	180	50.1	356	12.2	56	56.0
9	176	13.5	299	09.3	195	51.7	11	14.3	71	58.5
10	191	16.0	314	08.6	210	53.3	26	16.3	87	01.0
11	206	18.5	329	07.8	225	54.9	41	18.4	102	03.5
12	221	20.9	344	07.1	240	56.5	56	20.5	117	06.0
13	236	23.4	359	06.3	255	58.1	71	22.6	132	08.5
14	251	25.9	14	05.6	270	59.7	86	24.7	147	11.0
15	266	28.3	29	04.9	286	01.3	101	26.8	162	13.5
16	281	30.8	44	04.1	301	02.9	116	28.9	177	16.0
17	296	33.3	59	03.3	316	04.5	131	30.9	192	18.5
18	311	35.7	74	02.6	331	06.1	146	33.0	207	21.0
19	326	38.2	89	01.8	346	07.7	161	35.1	222	23.5
20	341	40.6	104	01.1	1	09.3	176	37.2	237	26.0
21	356	43.1	119	00.3	16	10.9	191	39.3	252	28.5
22	11	45.6	133	59.6	31	12.5	206	41.4	267	31.0
23	26	48.0	148	58.8	46	14.1	221	43.5	282	33.5
24	41	50.5	163	58.1	61	15.7	236	45.6	297	36.0
Dif	—		-7		+16		+21		+25	

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: 8 ^d 5 SD: 15'4 PMG: 20 ^h 14 ^m												
				PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'9 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	184	06.4	-14	51.7	65	43.0	-15	30.7	60 N	5 51	6 41	7 26	15 35	2	***	***
1	199	06.4		52.5	80	14.8 ¹²⁸		18.4 ¹²³	58	48	35	18	28	5	***	***
2	214	06.4		53.3	94	46.7 ¹²⁹	-15	06.1 ¹²³	56	46	30	10	22	8	***	***
3	229	06.4		54.1	109	18.7 ¹³⁰	-14	53.7 ¹²⁴	54	44	26	7	04	16	10	0 07
4	244	06.4		54.8	123	50.7 ¹³⁰		41.2 ¹²⁵	52	42	22	6	58	11	13	14
5	259	06.4	-14	55.6	138	22.9 ¹³²	-14	28.7 ¹²⁵	50	5 40	6 18	6 52	15 06	15	0 20	74
6	274	06.4	-14	56.4	152	55.1 ¹³²	-14	16.2 ¹²⁵	45	5 35	6 10	6 40	14 56	20	0 34	69
7	289	06.4		57.2	167	27.4 ¹³³	-14	03.6 ¹²⁶	40	30	6 03	31	47	24	45	64
8	304	06.4		58.0	181	59.8 ¹³⁴	-13	50.9 ¹²⁷	35	26	5 56	22	40	27	0 54	61
9	319	06.4		58.8	196	32.3 ¹³⁵		38.2 ¹²⁷	30	22	50	15	34	30	1 02	59
10	334	06.4	-14	59.5	211	04.8 ¹³⁵		25.4 ¹²⁸	20	13	39	6 02	23	34	16	54
11	349	06.4	-15	00.3	225	37.5 ¹³⁷	-13	12.6 ¹²⁸	10 N	5 04	5 29	5 51	14 13	39	1 28	49
12	4	06.4	-15	01.1	240	10.2 ¹³⁷	-12	59.7 ¹²⁹	0	4 54	5 19	5 40	14 04	43	1 40	45
13	19	06.4		01.9	254	43.0 ¹³⁸		46.8 ¹²⁹	10 S	42	5 07	29	13 54	48	1 51	41
14	34	06.4		02.7	269	15.8 ¹³⁸		33.9 ¹²⁹	20	27	4 55	18	44	52	2 03	36
15	49	06.4		03.5	283	48.8 ¹⁴⁰		20.9 ¹³⁰	30	4 09	39	5 04	33	57	17	31
16	64	06.4		04.2	298	21.8 ¹⁴⁰	-12	07.9 ¹³⁰	35	3 57	29	4 56	26	60	24	29
17	79	06.4	-15	05.0	312	54.9 ¹⁴¹	-11	54.8 ¹³¹	40	3 42	4 18	4 47	13 19	63	2 33	25
18	94	06.4	-15	05.8	327	28.0 ¹⁴¹	-11	41.7 ¹³¹	45	3 24	4 04	4 37	13 10	67	2 43	22
19	109	06.4		06.6	342	01.3 ¹⁴³		28.5 ¹³²	50	3 01	3 47	24	12 59	73	2 56	16
20	124	06.4		07.4	356	34.6 ¹⁴³		15.4 ¹³¹	52	2 49	39	18	54	75	3 02	14
21	139	06.4		08.1	11	07.9 ¹⁴³	-11	02.1 ¹³³	54	35	30	11	49	77	08	12
22	154	06.4		08.9	25	41.3 ¹⁴⁴	-10	48.9 ¹³²	56	2 19	19	4 04	42	81	15	9
23	169	06.4		09.7	40	14.8 ¹⁴⁵		35.6 ¹³³	58	1 59	3 07	3 55	36	83	23	6
24	184	06.4	-15	10.5	54	48.4 ¹⁴⁶	-10	22.2 ¹³⁴	60 S	1 32	2 53	3 46	12 28	87	3 31	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 09 ^m 2		Mag: -3.8 PMG: 13 ^h 05 ^m		Mag: -1.1 PMG: 19 ^h 53 ^m		Mag: -1.9 PMG: 8 ^h 12 ^m		Mag: -0.1 PMG: 4 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	41	50.5	163	58.1	-20	28.5	61	15.7	-10	36.2
1	56	53.0	178	57.3		29.2	76	17.3		35.7
2	71	55.4	193	56.6		30.0	91	18.9		35.2
3	86	57.9	208	55.8		30.8	106	20.5		34.7
4	102	00.4	223	55.1		31.5	121	22.1		34.2
5	117	02.8	238	54.3	-20	32.3	136	23.7	-10	33.7
6	132	05.3	253	53.5	-20	33.0	151	25.3	-10	33.1
7	147	07.8	268	52.8		33.8	166	26.9		32.6
8	162	10.2	283	52.0		34.5	181	28.5		32.1
9	177	12.7	298	51.3		35.3	196	30.0		31.6
10	192	15.1	313	50.5		36.1	211	31.6		31.1
11	207	17.6	328	49.7	-20	36.8	226	33.2	-10	30.6
12	222	20.1	343	49.0	-20	37.6	241	34.8	-10	30.1
13	237	22.5	358	48.2		38.3	256	36.4		29.6
14	252	25.0	13	47.5		39.1	271	38.0		29.1
15	267	27.5	28	46.7		39.8	286	39.6		28.6
16	282	29.9	43	45.9		40.6	301	41.1		28.1
17	297	32.4	58	45.2	-20	41.3	316	42.7	-10	27.6
18	312	34.9	73	44.4	-20	42.0	331	44.3	-10	27.1
19	327	37.3	88	43.6		42.8	346	45.9		26.6
20	342	39.8	103	42.9		43.5	1	47.5		26.0
21	357	42.3	118	42.1		44.3	16	49.1		25.5
22	12	44.7	133	41.3		45.0	31	50.6		25.0
23	27	47.2	148	40.6		45.8	46	52.2		24.5
24	42	49.6	163	39.8	-20	46.5	61	53.8	-10	24.0
Dif	—		-8		-8		+16		+5	
							+21		-1	
									+25	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 9 ^d 5 PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /5 20 ^h : 55 ^m /3 R°: 41 ^m											
	PMG: 11 ^h 43 ^m 6		SD: 15 ^m 2 PMG: 20 ^h 57 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	184	06.4	-15	10.5	54	48.4	-10 22.2	60 N	15 58	16 43	17 33	15 37 1	1 10 85	
1	199	06.4		11.2	69	22.0 ¹⁴⁶	-10 08.9 ¹³³	58	16 06	49	36	33 4	16 82	
2	214	06.4		12.0	83	55.7 ¹⁴⁷	-9 55.5 ¹³⁴	56	14	54	38	30 6	21 79	
3	229	06.4		12.8	98	29.5 ¹⁴⁸	42.1 ¹³⁴	54	21	16 59	41	26 10	26 76	
4	244	06.4		13.6	113	03.3 ¹⁴⁸	28.6 ¹³⁵	52	27	17 03	43	24 11	30 74	
5	259	06.4	-15	14.3	127	37.1 ¹⁴⁸	-9 15.1 ¹³⁵	50	16 33	17 07	17 45	15 21 14	1 34 72	
6	274	06.4	-15	15.1	142	11.1 ¹⁵⁰	-9 01.6 ¹³⁵	45	16 45	17 16	17 50	15 16 18	1 43 66	
7	289	06.4		15.9	156	45.0 ¹⁴⁹	-8 48.1 ¹³⁵	40	16 55	23	17 55	11 22	49 63	
8	304	06.4		16.7	171	19.1 ¹⁵¹	34.5 ¹³⁶	35	17 03	30	18 00	07 25	1 55 59	
9	319	06.4		17.4	185	53.2 ¹⁵¹	20.9 ¹³⁶	30	11	36	04	15 04 27	2 01 56	
10	334	06.4		18.2	200	27.3 ¹⁵¹	-8 07.3 ¹³⁶	20	24	47	13	14 57 33	10 50	
11	349	06.4	-15	19.0	215	01.5 ¹⁵²	-7 53.7 ¹³⁶	10 N	17 36	17 58	18 23	14 52 37	2 17 47	
12	4	06.4	-15	19.8	229	35.7 ¹⁵²	-7 40.0 ¹³⁷	0	17 47	18 08	18 33	14 47 41	2 25 42	
13	19	06.4		20.5	244	10.0 ¹⁵³	26.3 ¹³⁷	10 S	17 58	20	18 46	42 45	32 38	
14	34	06.4		21.3	258	44.4 ¹⁵⁴	-7 12.6 ¹³⁷	20	18 10	33	19 01	36 50	39 34	
15	49	06.4		22.1	273	18.8 ¹⁵⁴	-6 58.9 ¹³⁷	30	24	18 50	20	30 55	48 29	
16	64	06.3		22.8	287	53.2 ¹⁵⁴	45.2 ¹³⁷	35	32	19 00	32	26 58	53 26	
17	79	06.3	-15	23.6	302	27.7 ¹⁵⁵	-6 31.4 ¹³⁸	40	18 42	19 11	19 47	14 22 62	2 58 23	
18	94	06.3	-15	24.4	317	02.2 ¹⁵⁵	-6 17.7 ¹³⁷	45	18 53	19 25	20 06	14 17 66	3 05 19	
19	109	06.3		25.1	331	36.8 ¹⁵⁶	-6 03.9 ¹³⁸	50	19 06	43	30	12 70	12 15	
20	124	06.3		25.9	346	11.4 ¹⁵⁶	-5 50.1 ¹³⁸	52	12	19 51	43	09 72	16 12	
21	139	06.3		26.7	0	46.1 ¹⁵⁷	36.3 ¹³⁸	54	19	20 01	20 57	06 75	20 10	
22	154	06.3		27.5	15	20.8 ¹⁵⁷	22.4 ¹³⁹	56	27	12	21 14	14 03 77	24 8	
23	169	06.3		28.2	29	55.5 ¹⁵⁷	-5 08.6 ¹³⁸	58	36	25	21 36	13 59 81	29 4	
24	184	06.3	-15	29.0	44	30.3 ¹⁵⁸	-4 54.7 ¹³⁹	60 S	19 46	20 40	22 06	13 55 84	3 34 2	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 05 ^m 2		Mag: -3.8 PMG: 13 ^h 06 ^m		Mag: -1.1 PMG: 19 ^h 50 ^m		Mag: -1.9 PMG: 8 ^h 08 ^m		Mag: -0.1 PMG: 4 ^h 05 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	42	49.6	163	39.8	-20	46.5	61	53.8	-10	24.0				
1	57	52.1	178	39.0		47.2	76	55.4		23.5				
2	72	54.6	193	38.3		48.0	91	56.9		23.0				
3	87	57.0	208	37.5		48.7	106	58.5		22.5				
4	102	59.5	223	36.7		49.5	122	00.1		22.0				
5	118	02.0	238	36.0	-20	50.2	137	01.7	-10	21.5				
6	133	04.4	253	35.2	-20	50.9	152	03.2	-10	20.9				
7	148	06.9	268	34.4		51.7	167	04.8		20.4				
8	163	09.4	283	33.7		52.4	182	06.4		19.9				
9	178	11.8	298	32.9		53.1	197	08.0		19.4				
10	193	14.3	313	32.1		53.9	212	09.5		18.9				
11	208	16.7	328	31.3	-20	54.6	227	11.1	-10	18.4				
12	223	19.2	343	30.6	-20	55.3	242	12.7	-10	17.9				
13	238	21.7	358	29.8		56.0	257	14.3		17.4				
14	253	24.1	13	29.0		56.8	272	15.8		16.9				
15	268	26.6	28	28.2		57.5	287	17.4		16.3				
16	283	29.1	43	27.5		58.2	302	19.0		15.8				
17	298	31.5	58	26.7	-20	58.9	317	20.5	-10	15.3				
18	313	34.0	73	25.9	-20	59.7	332	22.1	-10	14.8				
19	328	36.5	88	25.1	-21	00.4	347	23.7		14.3				
20	343	38.9	103	24.4		01.1	2	25.2		13.8				
21	358	41.4	118	23.6		01.8	17	26.8		13.3				
22	13	43.9	133	22.8		02.5	32	28.3		12.7				
23	28	46.3	148	22.0		03.3	47	29.9		12.2				
24	43	48.8	163	21.2	-21	04.0	62	31.5	-10	11.7				
Dif	—		-8		-7		+16		+5		+21	-1	+25	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16 ^h 1			Edad: 10 ^d 5 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /0 20 ^h : 54 ^m /9 R°: 40 ^m														
	PMG: 11 ^h 43 ^m 6			SD: 15 ^h 0 PMG: 21 ^h 38 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	
0	184	06.3	-15 29.0	44	30.3	-4 54.7	58	55	60 N	5 55	6 45	7 31	15 38	1	2 35	83		
1	199	06.3	29.8	59	05.1 ¹⁵⁸	40.9 ¹³⁸	58	52	58	52	39	22	37	4	38	80		
2	214	06.3	30.5	73	39.9 ¹⁵⁸	27.0 ¹³⁹	56	50	56	50	34	14	36	7	40	77		
3	229	06.2	31.3	88	14.8 ¹⁵⁹	-4 13.1 ¹³⁹	54	47	54	47	29	07	36	9	42	74		
4	244	06.2	32.0	102	49.7 ¹⁵⁹	-3 59.2 ¹³⁹	52	45	52	45	25	7 01	35	11	44	72		
5	259	06.2	-15 32.8	117	24.6 ¹⁵⁹	-3 45.3 ¹³⁹	50	5 43	50	5 43	6 21	6 55	15 35	13	2 46	69		
6	274	06.2	-15 33.6	131	59.6 ¹⁶⁰	-3 31.4 ¹³⁹	45	5 37	45	5 37	6 12	6 43	15 34	17	2 49	65		
7	289	06.2	34.3	146	34.6 ¹⁶⁰	17.5 ¹³⁹	40	33	40	33	6 05	33	33	21	52	61		
8	304	06.2	35.1	161	09.6 ¹⁶⁰	-3 03.6 ¹³⁹	35	28	35	28	5 58	24	32	24	54	58		
9	319	06.2	35.9	175	44.7 ¹⁶¹	-2 49.7 ¹³⁹	30	23	30	23	52	17	31	27	2 57	54		
10	334	06.2	36.6	190	19.8 ¹⁶¹	35.8 ¹³⁹	20	14	20	14	40	6 03	30	32	3 00	50		
11	349	06.1	-15 37.4	204	54.9 ¹⁶¹	-2 21.9 ¹³⁹	10 N	5 04	10 N	5 04	5 30	5 51	15 29	37	3 04	45		
12	4	06.1	-15 38.2	219	30.0 ¹⁶¹	-2 07.9 ¹⁴⁰	0	4 54	0	4 54	5 19	5 40	15 28	41	3 07	41		
13	19	06.1	38.9	234	05.2 ¹⁶²	-1 54.0 ¹³⁹	10 S	41	10 S	41	5 07	29	27	45	10	37		
14	34	06.1	39.7	248	40.4 ¹⁶²	40.1 ¹³⁹	20	26	20	26	4 54	17	26	49	13	32		
15	49	06.1	40.4	263	15.6 ¹⁶²	26.2 ¹³⁹	30	4 07	30	4 07	37	5 03	25	54	17	27		
16	64	06.1	41.2	277	50.8 ¹⁶²	-1 12.3 ¹³⁹	35	3 55	35	3 55	27	4 54	24	57	19	24		
17	79	06.0	-15 42.0	292	26.0 ¹⁶²	-0 58.4 ¹³⁹	40	3 40	40	3 40	4 16	4 45	15 24	60	3 21	21		
18	94	06.0	-15 42.7	307	01.3 ¹⁶³	-0 44.4 ¹⁴⁰	45	3 21	45	3 21	4 01	4 34	15 23	64	3 24	17		
19	109	06.0	43.5	321	36.6 ¹⁶³	30.5 ¹³⁹	50	2 56	50	2 56	3 44	20	22	69	27	13		
20	124	06.0	44.2	336	11.9 ¹⁶³	16.6 ¹³⁹	52	44	52	44	35	14	21	71	28	12		
21	139	06.0	45.0	350	47.2 ¹⁶³	-0 02.7 ¹³⁹	54	30	54	30	25	4 07	21	73	30	9		
22	154	06.0	45.7	5	22.5 ¹⁶³	+0 11.1 ¹³⁸	56	2 12	56	2 12	14	3 59	20	76	32	6		
23	169	05.9	46.5	19	57.8 ¹⁶³	25.0 ¹³⁹	58	1 50	58	1 50	3 02	51	20	79	33	4		
24	184	05.9	-15 47.3	34	33.2 ¹⁶⁴	+0 38.9 ¹³⁹	60 S	1 21	60 S	1 21	2 47	3 41	15 19	82	3 36	1		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 01 ^m 3		Mag: -3.8 PMG: 13 ^h 07 ^m			Mag: -1.1 PMG: 19 ^h 48 ^m			Mag: -1.9 PMG: 8 ^h 05 ^m			Mag: -0.1 PMG: 4 ^h 01 ^m		
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	43	48.8	163 21.2	-21 04.0	62 31.5	-10 11.7	238 25.9	+7 18.1	299 36.5	+22 03.9				
1	58	51.2	178 20.5	04.7	77 33.0	11.2	253 28.0	18.0	314 39.0	03.9				
2	73	53.7	193 19.7	05.4	92 34.6	10.7	268 30.1	17.8	329 41.5	03.9				
3	88	56.2	208 18.9	06.1	107 36.2	10.2	283 32.2	17.7	344 44.0	03.9				
4	103	58.6	223 18.1	06.8	122 37.7	09.7	298 34.3	17.5	359 46.5	04.0				
5	119	01.1	238 17.3	-21 07.5	137 39.3	-10 09.1	313 36.4	+7 17.4	14 49.0	+22 04.0				
6	134	03.6	253 16.6	-21 08.2	152 40.8	-10 08.6	328 38.5	+7 17.2	29 51.6	+22 04.0				
7	149	06.0	268 15.8	08.9	167 42.4	08.1	343 40.6	17.1	44 54.1	04.0				
8	164	08.5	283 15.0	09.7	182 44.0	07.6	358 42.7	17.0	59 56.6	04.0				
9	179	11.0	298 14.2	10.4	197 45.5	07.1	13 44.8	16.8	74 59.1	04.0				
10	194	13.4	313 13.4	11.1	212 47.1	06.6	28 46.9	16.7	90 01.6	04.0				
11	209	15.9	328 12.6	-21 11.8	227 48.6	-10 06.0	43 49.0	+7 16.5	105 04.1	+22 04.0				
12	224	18.3	343 11.9	-21 12.5	242 50.2	-10 05.5	58 51.1	+7 16.4	120 06.6	+22 04.0				
13	239	20.8	358 11.1	13.2	257 51.7	05.0	73 53.2	16.2	135 09.2	04.0				
14	254	23.3	13 10.3	13.9	272 53.3	04.5	88 55.3	16.1	150 11.7	04.0				
15	269	25.7	28 09.5	14.6	287 54.8	04.0	103 57.4	16.0	165 14.2	04.0				
16	284	28.2	43 08.7	15.3	302 56.4	03.4	118 59.5	15.8	180 16.7	04.0				
17	299	30.7	58 07.9	-21 16.0	317 57.9	-10 02.9	134 01.6	+7 15.7	195 19.2	+22 04.0				
18	314	33.1	73 07.1	-21 16.7	332 59.5	-10 02.4	149 03.7	+7 15.5	210 21.7	+22 04.0				
19	329	35.6	88 06.3	17.4	348 01.0	01.9	164 05.8	15.4	225 24.3	04.0				
20	344	38.1	103 05.6	18.1	3 02.6	01.4	179 07.9	15.2	240 26.8	04.0				
21	359	40.5	118 04.8	18.8	18 04.1	00.8	194 10.0	15.1	255 29.3	04.1				
22	14	43.0	133 04.0	19.5	33 05.7	-10 00.3	209 12.1	15.0	270 31.8	04.1				
23	29	45.5	148 03.2	20.1	48 07.2	-9 59.8	224 14.2	14.8	285 34.3	04.1				
24	44	47.9	163 02.4	-21 20.8	63 08.8	-9 59.3	239 16.3	+7 14.7	300 36.9	+22 04.1				
Dif	—		-8	-7	+16		+5	+21	-1	+25		0		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1		Edad: 11 ^d 5	PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5	SD: 14 ^h 9				Final del crepúsculo		Salida de Luna		Puesta de Luna						
	PMG: 11 ^h 43 ^m 6				PMG: 22 ^h 18 ^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	m	h m m	m					
0	184	05.9	-15	47.3	34	33.2	+0 38.9	60 N	15 53	16 39	17 29	15 39 1	3 58 83						
1	199	05.9		48.0	49	08.5 ¹⁶³	+0 52.8 ¹³⁹	58	16 02	45	32	41 4	58 78						
2	214	05.9		48.8	63	43.9 ¹⁶⁴	+1 06.6 ¹³⁸	56	10	50	35	43 7	57 76						
3	229	05.9		49.5	78	19.3 ¹⁶⁴	20.5 ¹³⁹	54	17	16 55	37	45 9	56 73						
4	244	05.8		50.3	92	54.6 ¹⁶³	34.3 ¹³⁸	52	24	17 00	40	46 12	56 70						
5	259	05.8	-15	51.0	107	30.0 ¹⁶⁴	+1 48.1 ¹³⁸	50	16 29	17 04	17 42	15 48 14	3 55 69						
6	274	05.8	-15	51.8	122	05.4 ¹⁶⁴	+2 01.9 ¹³⁸	45	16 42	17 13	17 48	15 51 18	3 54 64						
7	289	05.8		52.5	136	40.8 ¹⁶⁴	15.7 ¹³⁸	40	16 53	21	53	54 22	53 60						
8	304	05.8		53.3	151	16.2 ¹⁶⁴	29.5 ¹³⁸	35	17 02	28	17 58	56 25	52 57						
9	319	05.7		54.0	165	51.7 ¹⁶⁵	43.2 ¹³⁷	30	10	34	18 03	15 58 28	51 54						
10	334	05.7		54.8	180	27.1 ¹⁶⁴	+2 57.0 ¹³⁸	20	23	46	13	16 02 33	50 49						
11	349	05.7	-15	55.5	195	02.5 ¹⁶⁴	+3 10.7 ¹³⁷	10 N	17 36	17 57	18 23	16 06 36	3 49 44						
12	4	05.7	-15	56.3	209	37.9 ¹⁶⁴	+3 24.4 ¹³⁷	0	17 47	18 09	18 34	16 09 40	3 48 40						
13	19	05.7		57.0	224	13.3 ¹⁶⁴	38.1 ¹³⁷	10 S	17 59	21	18 46	12 45	47 36						
14	34	05.6		57.8	238	48.7 ¹⁶⁴	+3 51.8 ¹³⁷	20	18 11	35	19 02	15 49	45 32						
15	49	05.6		58.5	253	24.1 ¹⁶⁴	+4 05.4 ¹³⁶	30	26	18 51	22	19 54	44 27						
16	64	05.6	-15	59.3	267	59.5 ¹⁶⁴	19.1 ¹³⁷	35	34	19 02	35	21 57	43 25						
17	79	05.6	-16	00.0	282	34.9 ¹⁶⁴	+4 32.7 ¹³⁶	40	18 44	19 14	19 50	16 24 60	3 42 22						
18	94	05.5	-16	00.8	297	10.3 ¹⁶⁴	+4 46.3 ¹³⁶	45	18 56	19 28	20 09	16 27 64	3 41 18						
19	109	05.5		01.5	311	45.7 ¹⁶⁴	+4 59.8 ¹³⁵	50	19 09	47	35	31 68	40 13						
20	124	05.5		02.3	326	21.1 ¹⁶⁴	+5 13.4 ¹³⁶	52	16	19 56	20 48	32 71	40 11						
21	139	05.5		03.0	340	56.4 ¹⁶³	26.9 ¹³⁵	54	23	20 06	21 03	34 74	39 9						
22	154	05.4		03.8	355	31.8 ¹⁶⁴	40.4 ¹³⁵	56	31	17	21	36 76	38 7						
23	169	05.4		04.5	10	07.1 ¹⁶³	+5 53.8 ¹³⁴	58	41	31	21 45	39 79	37 5						
24	184	05.4	-16	05.3	24	42.5 ¹⁶⁴	+6 07.3 ¹³⁵	60 S	19 51	20 46	22 18	16 41 83	3 37 1						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 20 ^h 57 ^m 4		Mag: -3.8 PMG: 13 ^h 09 ^m			Mag: -1.0 PMG: 19 ^h 45 ^m			Mag: -1.9 PMG: 8 ^h 02 ^m			Mag: -0.1 PMG: 3 ^h 57 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	44	47.9	163	02.4	-21	20.8	63	08.8	-9	59.3	239	16.3	+7	14.7	300	36.9	+22	04.1	
1	59	50.4	178	01.6		21.5	78	10.3		58.8	254	18.4		14.5	315	39.4		04.1	
2	74	52.8	193	00.8		22.2	93	11.9		58.2	269	20.5		14.4	330	41.9		04.1	
3	89	55.3	208	00.0		22.9	108	13.4		57.7	284	22.6		14.2	345	44.4		04.1	
4	104	57.8	222	59.2		23.6	123	15.0		57.2	299	24.7		14.1	0	46.9		04.1	
5	120	00.2	237	58.4	-21	24.3	138	16.5	-9	56.7	314	26.8	+7	14.0	15	49.5	+22	04.1	
6	135	02.7	252	57.6	-21	25.0	153	18.0	-9	56.2	329	28.9	+7	13.8	30	52.0	+22	04.1	
7	150	05.2	267	56.8		25.6	168	19.6		55.6	344	31.0		13.7	45	54.5		04.1	
8	165	07.6	282	56.0		26.3	183	21.1		55.1	359	33.1		13.5	60	57.0		04.1	
9	180	10.1	297	55.2		27.0	198	22.7		54.6	14	35.2		13.4	75	59.5		04.1	
10	195	12.6	312	54.4		27.7	213	24.2		54.1	29	37.3		13.3	91	02.1		04.1	
11	210	15.0	327	53.6	-21	28.4	228	25.8	-9	53.6	44	39.4	+7	13.1	106	04.6	+22	04.1	
12	225	17.5	342	52.9	-21	29.1	243	27.3	-9	53.0	59	41.5	+7	13.0	121	07.1	+22	04.1	
13	240	20.0	357	52.1		29.7	258	28.8		52.5	74	43.6		12.8	136	09.6		04.1	
14	255	22.4	12	51.3		30.4	273	30.4		52.0	89	45.7		12.7	151	12.1		04.2	
15	270	24.9	27	50.5		31.1	288	31.9		51.5	104	47.8		12.6	166	14.7		04.2	
16	285	27.3	42	49.7		31.8	303	33.4		50.9	119	49.9		12.4	181	17.2		04.2	
17	300	29.8	57	48.9	-21	32.4	318	35.0	-9	50.4	134	52.0	+7	12.3	196	19.7	+22	04.2	
18	315	32.3	72	48.1	-21	33.1	333	36.5	-9	49.9	149	54.1	+7	12.1	211	22.2	+22	04.2	
19	330	34.7	87	47.3		33.8	348	38.1		49.4	164	56.2		12.0	226	24.8		04.2	
20	345	37.2	102	46.5		34.4	3	39.6		48.8	179	58.3		11.9	241	27.3		04.2	
21	0	39.7	117	45.7		35.1	18	41.1		48.3	195	00.4		11.7	256	29.8		04.2	
22	15	42.1	132	44.9		35.8	33	42.7		47.8	210	02.5		11.6	271	32.3		04.2	
23	30	44.6	147	44.0		36.4	48	44.2		47.3	225	04.6		11.4	286	34.8		04.2	
24	45	47.1	162	43.2	-21	37.1	63	45.7	-9	46.7	240	06.7	+7	11.3	301	37.4	+22	04.2	
Dif	—		-8			-7	+15			+5	+21		-1		+25			0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16'1			Edad: 12 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3 R°: 43 ^m													
	PMG: 11 ^h 43 ^m 7			SD: 14'8 PMG: 22 ^h 59 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	m	
0	184	05.4	-16 05.3	24	42.5	+6 07.3			60 N	5 59	6 50	7 36	15 40	2	5 21	83	
1	199	05.3	06.0	39	17.8 ¹⁶³	20.7 ¹³⁴			58	56	44	27	45	6	16	80	
2	214	05.3	06.7	53	53.1 ¹⁶³	34.1 ¹³⁴			56	53	38	19	50	8	13	76	
3	229	05.3	07.5	68	28.4 ¹⁶³	+6 47.4 ¹³³			54	51	33	11	54	11	09	74	
4	244	05.3	08.2	83	03.7 ¹⁶³	+7 00.7 ¹³³			52	48	28	7 05	15 58	13	06	72	
5	259	05.2	-16 09.0	97	38.9 ¹⁶²	+7 14.0 ¹³³			50	5 46	6 24	6 59	16 02	15	5 04	69	
6	274	05.2	-16 09.7	112	14.2 ¹⁶³	+7 27.3 ¹³³			45	5 40	6 15	6 46	16 09	20	4 58	64	
7	289	05.2	10.5	126	49.4 ¹⁶²	40.5 ¹³²			40	35	07	35	16	23	53	61	
8	304	05.1	11.2	141	24.6 ¹⁶²	+7 53.7 ¹³²			35	30	6 00	26	21	27	49	57	
9	319	05.1	11.9	155	59.8 ¹⁶²	+8 06.9 ¹³²			30	25	5 53	18	26	29	45	55	
10	334	05.1	12.7	170	35.0 ¹⁶²	20.0 ¹³¹			20	15	41	6 04	35	34	39	49	
11	349	05.0	-16 13.4	185	10.1 ¹⁶¹	+8 33.1 ¹³¹			10 N	5 05	5 30	5 52	16 42	38	4 33	45	
12	4	05.0	-16 14.2	199	45.3 ¹⁶²	+8 46.1 ¹³⁰			0	4 54	5 19	5 40	16 49	42	4 28	41	
13	19	05.0	14.9	214	20.4 ¹⁶¹	+8 59.1 ¹³⁰			10 S	41	5 06	28	16 57	45	23	37	
14	34	05.0	15.6	228	55.5 ¹⁶¹	+9 12.1 ¹³⁰			20	25	4 53	16	17 04	50	17	34	
15	49	04.9	16.4	243	30.5 ¹⁶⁰	25.1 ¹³⁰			30	4 05	36	5 01	13	55	11	29	
16	64	04.9	17.1	258	05.5 ¹⁶⁰	38.0 ¹²⁹			35	3 52	25	4 53	18	58	08	25	
17	79	04.9	-16 17.8	272	40.6 ¹⁶¹	+9 50.8 ¹²⁸			40	3 37	4 13	4 43	17 24	61	4 04	22	
18	94	04.8	-16 18.6	287	15.5 ¹⁵⁹	+10 03.6 ¹²⁸			45	3 18	3 58	4 31	17 31	65	3 59	19	
19	109	04.8	19.3	301	50.5 ¹⁶⁰	16.4 ¹²⁸			50	2 52	40	17	39	70	53	15	
20	124	04.8	20.1	316	25.4 ¹⁵⁹	29.2 ¹²⁸			52	39	31	11	43	72	51	12	
21	139	04.7	20.8	331	00.3 ¹⁵⁹	41.8 ¹²⁶			54	24	21	4 03	48	74	48	10	
22	154	04.7	21.5	345	35.2 ¹⁵⁹	+10 54.5 ¹²⁷			56	2 05	3 09	3 55	52	77	45	8	
23	169	04.6	22.3	0	10.0 ¹⁵⁸	+11 07.1 ¹²⁶			58	1 42	2 56	46	17 58	80	42	4	
24	184	04.6	-16 23.0	14	44.8 ¹⁵⁸	+11 19.6 ¹²⁵			60 S	1 08	2 40	3 35	18 04	84	3 38	1	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 20 ^h 53 ^m 4		Mag: -3.8 PMG: 13 ^h 10 ^m			Mag: -1.0 PMG: 19 ^h 43 ^m			Mag: -1.9 PMG: 7 ^h 58 ^m			Mag: -0.1 PMG: 3 ^h 53 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	45	47.1	162 43.2	-21	37.1		63	45.7	-9 46.7	240	06.7	+7 11.3	301	37.4	+22	04.2	
1	60	49.5	177 42.4		37.8		78	47.3	46.2	255	08.8	11.1	316	39.9		04.2	
2	75	52.0	192 41.6		38.4		93	48.8	45.7	270	10.9	11.0	331	42.4		04.2	
3	90	54.4	207 40.8		39.1		108	50.3	45.2	285	13.1	10.9	346	44.9		04.2	
4	105	56.9	222 40.0		39.8		123	51.8	44.6	300	15.2	10.7	1	47.5		04.2	
5	120	59.4	237 39.2	-21	40.4		138	53.4	-9 44.1	315	17.3	+7 10.6	16	50.0	+22	04.3	
6	136	01.8	252 38.4	-21	41.1		153	54.9	-9 43.6	330	19.4	+7 10.4	31	52.5	+22	04.3	
7	151	04.3	267 37.6		41.7		168	56.4	43.1	345	21.5	10.3	46	55.0		04.3	
8	166	06.8	282 36.8		42.4		183	58.0	42.5	0	23.6	10.2	61	57.6		04.3	
9	181	09.2	297 36.0		43.1		198	59.5	42.0	15	25.7	10.0	77	00.1		04.3	
10	196	11.7	312 35.2		43.7		214	01.0	41.5	30	27.8	09.9	92	02.6		04.3	
11	211	14.2	327 34.4	-21	44.4		229	02.5	-9 40.9	45	29.9	+7 09.8	107	05.1	+22	04.3	
12	226	16.6	342 33.6	-21	45.0		244	04.1	-9 40.4	60	32.0	+7 09.6	122	07.7	+22	04.3	
13	241	19.1	357 32.8		45.7		259	05.6	39.9	75	34.1	09.5	137	10.2		04.3	
14	256	21.6	12 31.9		46.3		274	07.1	39.4	90	36.2	09.3	152	12.7		04.3	
15	271	24.0	27 31.1		47.0		289	08.6	38.8	105	38.3	09.2	167	15.2		04.3	
16	286	26.5	42 30.3		47.6		304	10.1	38.3	120	40.4	09.1	182	17.8		04.3	
17	301	28.9	57 29.5	-21	48.3		319	11.7	-9 37.8	135	42.5	+7 08.9	197	20.3	+22	04.3	
18	316	31.4	72 28.7	-21	48.9		334	13.2	-9 37.3	150	44.6	+7 08.8	212	22.8	+22	04.3	
19	331	33.9	87 27.9		49.6		349	14.7	36.7	165	46.8	08.6	227	25.4		04.3	
20	346	36.3	102 27.1		50.2		4	16.2	36.2	180	48.9	08.5	242	27.9		04.4	
21	1	38.8	117 26.3		50.9		19	17.7	35.7	195	51.0	08.4	257	30.4		04.4	
22	16	41.3	132 25.5		51.5		34	19.3	35.1	210	53.1	08.2	272	32.9		04.4	
23	31	43.7	147 24.6		52.1		49	20.8	34.6	225	55.2	08.1	287	35.5		04.4	
24	46	46.2	162 23.8	-21	52.8		64	22.3	-9 34.1	240	57.3	+7 07.9	302	38.0	+22	04.4	
Dif	—		-8			-7	+15			+5	+21		-1	+25			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 13 ^d 5 PHE { 4 ^h : 54'/2 12 ^h : 54'/1 20 ^h : 54'/1 R°: 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	h m	m
0	184	04.6	-16	23.0	14	44.8	+11 19.6	60 N	15 48	16 34	17 25	15 42	4	6	44	85	
1	199	04.6		23.7	29	19.6 ¹⁵⁸	32.2 ¹²⁶	58	15 57	41	28	51	7	36	81		
2	214	04.5		24.5	43	54.3 ¹⁵⁷	44.6 ¹²⁴	56	16 06	47	31	15 58	11	29	78		
3	229	04.5		25.2	58	29.0 ¹⁵⁷	+11 57.0 ¹²⁴	54	13	52	34	16 05	14	23	75		
4	244	04.5		25.9	73	03.7 ¹⁵⁷	+12 09.4 ¹²⁴	52	20	16 57	37	11	16	18	72		
5	259	04.4	-16	26.6	87	38.3 ¹⁵⁶	+12 21.7 ¹²³	50	16 26	17 01	17 40	16 17	18	6	13	69	
6	274	04.4	-16	27.4	102	12.9 ¹⁵⁶	+12 34.0 ¹²³	45	16 40	17 11	17 46	16 29	23	6	02	65	
7	289	04.3		28.1	116	47.4 ¹⁵⁵	46.2 ¹²²	40	16 51	19	51	39	26	5	54	61	
8	304	04.3		28.8	131	22.0 ¹⁵⁶	+12 58.4 ¹²²	35	17 00	26	17 57	48	29	46	58		
9	319	04.3		29.6	145	56.4 ¹⁵⁴	+13 10.5 ¹²¹	30	08	33	18 02	16 55	32	40	55		
10	334	04.2		30.3	160	30.9 ¹⁵⁵	22.5 ¹²⁰	20	23	45	12	17 09	36	28	51		
11	349	04.2	-16	31.0	175	05.3 ¹⁵⁴	+13 34.5 ¹²⁰	10 N	17 35	17 57	18 22	17 20	40	5	18	47	
12	4	04.2	-16	31.8	189	39.7 ¹⁵⁴	+13 46.5 ¹²⁰	0	17 47	18 09	18 34	17 31	44	5	09	43	
13	19	04.1		32.5	204	14.0 ¹⁵³	+13 58.4 ¹¹⁹	10 S	17 59	21	18 47	42	48	5	00	39	
14	34	04.1		33.2	218	48.3 ¹⁵³	+14 10.2 ¹¹⁸	20	18 12	36	19 03	17 54	51	4	51	35	
15	49	04.0		33.9	233	22.5 ¹⁵²	22.0 ¹¹⁸	30	27	18 53	24	18 08	55	40	30		
16	64	04.0		34.7	247	56.7 ¹⁵²	33.7 ¹¹⁷	35	36	19 04	37	16	58	33	28		
17	79	03.9	-16	35.4	262	30.8 ¹⁵¹	+14 45.3 ¹¹⁶	40	18 46	19 16	19 53	18 25	61	4	26	25	
18	94	03.9	-16	36.1	277	04.9 ¹⁵¹	+14 56.9 ¹¹⁶	45	18 58	19 31	20 13	18 36	65	4	18	21	
19	109	03.9		36.8	291	39.0 ¹⁵¹	+15 08.5 ¹¹⁶	50	19 13	19 51	39	49	70	08	16		
20	124	03.8		37.6	306	13.0 ¹⁵⁰	20.0 ¹¹⁵	52	20	20 00	20 53	18 55	72	4	03	15	
21	139	03.8		38.3	320	47.0 ¹⁵⁰	31.4 ¹¹⁴	54	27	10	21 09	19 02	74	3	58	12	
22	154	03.7		39.0	335	20.9 ¹⁴⁹	42.7 ¹¹³	56	36	22	29	09	78	53	9		
23	169	03.7		39.7	349	54.8 ¹⁴⁹	+15 54.0 ¹¹³	58	45	36	21 54	18	81	46	6		
24	184	03.6	-16	40.4	4	28.6 ¹⁴⁸	+16 05.2 ¹¹²	60 S	19 57	20 53	22 33	19 28	86	3	39	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 49 ^m 5		Mag: -3.8 PMG: 13 ^h 11 ^m		Mag: -1.0 PMG: 19 ^h 41 ^m		Mag: -1.9 PMG: 7 ^h 55 ^m		Mag: -0.1 PMG: 3 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	46	46.2	162	23.8	-21	52.8	64	22.3	-9	34.1
1	61	48.7	177	23.0		53.4	79	23.8		33.5
2	76	51.1	192	22.2		54.1	94	25.3		33.0
3	91	53.6	207	21.4		54.7	109	26.9		32.5
4	106	56.0	222	20.6		55.3	124	28.4		31.9
5	121	58.5	237	19.7	-21	56.0	139	29.9	-9	31.4
6	137	01.0	252	18.9	-21	56.6	154	31.4	-9	30.9
7	152	03.4	267	18.1		57.2	169	32.9		30.4
8	167	05.9	282	17.3		57.9	184	34.4		29.8
9	182	08.4	297	16.5		58.5	199	35.9		29.3
10	197	10.8	312	15.6		59.1	214	37.4		28.8
11	212	13.3	327	14.8	-21	59.8	229	39.0	-9	28.2
12	227	15.8	342	14.0	-22	00.4	244	40.5	-9	27.7
13	242	18.2	357	13.2		01.0	259	42.0		27.2
14	257	20.7	12	12.4		01.6	274	43.5		26.6
15	272	23.2	27	11.5		02.3	289	45.0		26.1
16	287	25.6	42	10.7		02.9	304	46.5		25.6
17	302	28.1	57	09.9	-22	03.5	319	48.0	-9	25.0
18	317	30.5	72	09.1	-22	04.1	334	49.5	-9	24.5
19	332	33.0	87	08.3		04.7	349	51.0		24.0
20	347	35.5	102	07.4		05.4	4	52.5		23.4
21	2	37.9	117	06.6		06.0	19	54.0		22.9
22	17	40.4	132	05.8		06.6	34	55.5		22.4
23	32	42.9	147	05.0		07.2	49	57.0		21.8
24	47	45.3	162	04.1	-22	07.8	64	58.5	-9	21.3
Dif	—		-8		-6		+15		+5	
							+21		-1	
									+25	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 14 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0										
	PMG: 11 ^h 43 ^m 8			SD: 14'7 PMG: ***h ***m R°: ***m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	184	03.6	-16	4	28.6	+16	05.2	60 N	6 04	6 54	7 42	15 46	6	8 09 86
1	199	03.6		19	02.4 ¹⁴⁸		16.4 ¹¹²	58	6 00	48	32	15 58	12	7 57 82
2	214	03.6		33	36.1 ¹⁴⁷		27.5 ¹¹¹	56	5 57	42	23	16 09	15	47 77
3	229	03.5		48	09.8 ¹⁴⁷		38.5 ¹¹⁰	54	54	37	15	19 18		38 74
4	244	03.5		62	43.5 ¹⁴⁷	+16	49.4 ¹⁰⁹	52	51	32	08	27 21		30 72
5	259	03.4	-16	77	17.0 ¹⁴⁵	+17	00.3 ¹⁰⁹	50	5 49	6 27	7 02	16 35	23	7 22 70
6	274	03.4	-16	91	50.6 ¹⁴⁶	+17	11.1 ¹⁰⁸	45	5 42	6 17	6 49	16 52	27	7 07 65
7	289	03.3		106	24.1 ¹⁴⁵		21.9 ¹⁰⁸	40	37	09	38	17 05	31	6 55 61
8	304	03.3		120	57.5 ¹⁴⁴		32.5 ¹⁰⁶	35	31	6 02	28	17 33		44 58
9	319	03.2		135	30.9 ¹⁴⁴		43.1 ¹⁰⁶	30	26	5 55	20	27 36		35 56
10	334	03.2		150	04.2 ¹⁴³	+17	53.7 ¹⁰⁶	20	16	42	6 05	17 45	40	19 51
11	349	03.1	-16	164	37.5 ¹⁴³	+18	04.1 ¹⁰⁴	10 N	5 05	5 31	5 52	18 00	43	6 05 48
12	4	03.1	-16	179	10.7 ¹⁴²	+18	14.5 ¹⁰⁴	0	4 54	5 19	5 40	18 15	46	5 52 45
13	19	03.0		193	43.8 ¹⁴¹		24.8 ¹⁰³	10 S	40	5 06	28	30 49		39 42
14	34	03.0		208	17.0 ¹⁴²		35.0 ¹⁰²	20	24	4 52	15	18 45	53	26 37
15	49	02.9		222	50.0 ¹⁴⁰		45.2 ¹⁰²	30	4 03	34	5 00	19 03	57	10 34
16	64	02.9		237	23.0 ¹⁴⁰	+18	55.2 ¹⁰⁰	35	3 50	23	4 51	14 59		5 01 31
17	79	02.8	-16	251	56.0 ¹⁴⁰	+19	05.2 ¹⁰⁰	40	3 34	4 11	4 41	19 26	62	4 51 28
18	94	02.8	-16	266	28.9 ¹³⁹	+19	15.1 ⁹⁹	45	3 14	3 56	4 29	19 41	65	4 39 25
19	109	02.7		281	01.7 ¹³⁸		25.0 ⁹⁹	50	2 48	36	14	19 59	69	24 21
20	124	02.7		295	34.5 ¹³⁸		34.7 ⁹⁷	52	34	27	07	20 07	72	18 18
21	139	02.6		310	07.2 ¹³⁷		44.4 ⁹⁷	54	2 18	17	4 00	16 75		10 16
22	154	02.6		324	39.9 ¹³⁷	+19	54.0 ⁹⁶	56	1 58	3 05	3 51	27 78		4 02 12
23	169	02.5		339	12.5 ¹³⁶	+20	03.5 ⁹⁵	58	1 33	2 50	41	39 82		3 52 9
24	184	02.5	-16	353	45.0 ¹³⁵	+20	12.9 ⁹⁴	60 S	0 54	2 33	3 30	20 54	87	3 42 4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 20 ^h 45 ^m 6		Mag: -3.8 PMG: 13 ^h 12 ^m		Mag: -1.0 PMG: 19 ^h 38 ^m		Mag: -1.9 PMG: 7 ^h 52 ^m		Mag: -0.1 PMG: 3 ^h 45 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	47	45.3	162	04.1	-22	07.8	241	47.9	+7	04.6		
1	62	47.8	177	03.3		08.4	256	50.1		04.5		
2	77	50.3	192	02.5		09.0	271	52.2		04.4		
3	92	52.7	207	01.6		09.7	286	54.3		04.2		
4	107	55.2	222	00.8		10.3	301	56.4		04.1		
5	122	57.7	237	00.0	-22	10.9	316	58.5	+7	04.0		
6	138	00.1	251	59.2	-22	11.5	332	00.6	+7	03.8		
7	153	02.6	266	58.3		12.1	347	02.7		03.7		
8	168	05.0	281	57.5		12.7	2	04.9		03.6		
9	183	07.5	296	56.7		13.3	17	07.0		03.4		
10	198	10.0	311	55.8		13.9	32	09.1		03.3		
11	213	12.4	326	55.0	-22	14.5	47	11.2	+7	03.1		
12	228	14.9	341	54.2	-22	15.1	62	13.3	+7	03.0		
13	243	17.4	356	53.3		15.7	77	15.4		02.9		
14	258	19.8	11	52.5		16.3	92	17.5		02.7		
15	273	22.3	26	51.7		16.9	107	19.7		02.6		
16	288	24.8	41	50.8		17.5	122	21.8		02.5		
17	303	27.2	56	50.0	-22	18.1	137	23.9	+7	02.3		
18	318	29.7	71	49.2	-22	18.7	152	26.0	+7	02.2		
19	333	32.2	86	48.3		19.3	167	28.1		02.1		
20	348	34.6	101	47.5		19.9	182	30.2		01.9		
21	3	37.1	116	46.7		20.5	197	32.4		01.8		
22	18	39.5	131	45.8		21.1	212	34.5		01.7		
23	33	42.0	146	45.0		21.6	227	36.6		01.5		
24	48	44.5	161	44.2	-22	22.2	242	38.7	+7	01.4		
Dif	—		-8	-6		+15	+5	+21	-1		+25	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 15 ^d 5 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 9			SD: 14 ^h 7					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	h m	m	
0	184	02.5	-16 57.6	353	45.0	+20 12.9	93	60 N	15 43	16 30	17 21	15 52 13	9 35 87		
1	199	02.4	58.3	8	17.5 ¹³⁵	22.2	93	58	15 53	37	25	16 10 18	19 80		
2	214	02.4	59.0	22	50.0 ¹³⁵	31.5	93	56	16 02	43	28	24 22	9 04 77		
3	229	02.3	-16 59.8	37	22.4 ¹³⁴	40.6	91	54	10	49	31	37 25	8 52 73		
4	244	02.2	-17 00.5	51	54.7 ¹³³	49.7	91	52	17	54	34	48 28	42 70		
5	259	02.2	-17 01.2	66	27.0 ¹³³	+20 58.7	90	50	16 23	16 58	17 37	16 58 30	8 32 68		
6	274	02.1	-17 01.9	80	59.2 ¹³²	+21 07.6	89	45	16 37	17 08	17 44	17 19 34	8 12 64		
7	289	02.1	02.6	95	31.3 ¹³¹	16.4	88	40	49	17	50	36 36	7 56 61		
8	304	02.0	03.3	110	03.4 ¹³¹	25.1	87	35	16 58	25	17 55	17 50 39	42 59		
9	319	02.0	04.0	124	35.5 ¹³¹	33.7	86	30	17 07	32	18 01	18 03 40	31 56		
10	334	01.9	04.7	139	07.4 ¹²⁹	42.2	85	20	22	45	11	25 43	7 10 53		
11	349	01.8	-17 05.4	153	39.4 ¹³⁰	+21 50.6	84	10 N	17 35	17 57	18 22	18 43 46	6 53 50		
12	4	01.8	-17 06.1	168	11.2 ¹²⁸	+21 59.0	84	0	17 47	18 09	18 34	19 01 48	6 37 47		
13	19	01.7	06.8	182	43.0 ¹²⁸	+22 07.2	82	10 S	18 00	22	18 48	19 50	21 44		
14	34	01.7	07.5	197	14.8 ¹²⁸	15.4	82	20	13	37	19 04	19 38 53	6 03 42		
15	49	01.6	08.2	211	46.5 ¹²⁷	23.4	80	30	29	18 55	26	20 00 56	5 44 38		
16	64	01.6	08.9	226	18.1 ¹²⁶	31.4	80	35	38	19 06	39	13 58	32 36		
17	79	01.5	-17 09.6	240	49.7 ¹²⁶	+22 39.2	78	40	18 49	19 19	19 56	20 28 60	5 19 33		
18	94	01.4	-17 10.3	255	21.2 ¹²⁵	+22 47.0	78	45	19 01	19 35	20 16	20 46 62	5 04 30		
19	109	01.4	11.0	269	52.6 ¹²⁴	+22 54.6	76	50	16	19 54	44	21 08 66	4 45 25		
20	124	01.3	11.7	284	24.0 ¹²⁴	+23 02.2	76	52	23	20 04	20 58	19 68	36 23		
21	139	01.3	12.4	298	55.4 ¹²⁴	09.6	74	54	31	15	21 15	31 71	26 21		
22	154	01.2	13.1	313	26.6 ¹²²	17.0	74	56	40	27	21 36	21 45 74	14 18		
23	169	01.1	13.8	327	57.9 ¹²³	24.2	72	58	19 50	20 42	22 04	22 01 79	4 01 14		
24	184	01.1	-17 14.5	342	29.0 ¹²¹	+23 31.4	72	60 S	20 02	21 00	22 50	22 21 85	3 46 9		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 41 ^m 6		Mag: -3.8 PMG: 13 ^h 14 ^m			Mag: -0.9 PMG: 19 ^h 36 ^m			Mag: -1.9 PMG: 7 ^h 48 ^m			Mag: -0.1 PMG: 3 ^h 41 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	48	44.5	161	44.2	-22 22.2	65	34.4	-9 08.4	242	38.7	+7 01.4	304	39.6	+22 04.7	
1	63	46.9	176	43.3	22.8	80	35.9	07.8	257	40.8	01.2	319	42.1	04.7	
2	78	49.4	191	42.5	23.4	95	37.4	07.3	272	42.9	01.1	334	44.7	04.8	
3	93	51.9	206	41.6	24.0	110	38.9	06.8	287	45.1	01.0	349	47.2	04.8	
4	108	54.3	221	40.8	24.6	125	40.4	06.2	302	47.2	00.8	4	49.7	04.8	
5	123	56.8	236	40.0	-22 25.2	140	41.9	-9 05.7	317	49.3	+7 00.7	19	52.3	+22 04.8	
6	138	59.3	251	39.1	-22 25.7	155	43.4	-9 05.1	332	51.4	+7 00.6	34	54.8	+22 04.8	
7	154	01.7	266	38.3	26.3	170	44.9	04.6	347	53.5	00.4	49	57.4	04.8	
8	169	04.2	281	37.4	26.9	185	46.3	04.1	2	55.6	00.3	64	59.9	04.8	
9	184	06.6	296	36.6	27.5	200	47.8	03.5	17	57.8	+7 00.2	80	02.4	04.8	
10	199	09.1	311	35.8	28.1	215	49.3	03.0	32	59.9	+7 00.0	95	05.0	04.8	
11	214	11.6	326	34.9	-22 28.6	230	50.8	-9 02.4	48	02.0	+6 59.9	110	07.5	+22 04.8	
12	229	14.0	341	34.1	-22 29.2	245	52.3	-9 01.9	63	04.1	+6 59.8	125	10.1	+22 04.8	
13	244	16.5	356	33.2	29.8	260	53.8	01.3	78	06.2	59.6	140	12.6	04.8	
14	259	19.0	11	32.4	30.4	275	55.2	00.8	93	08.4	59.5	155	15.1	04.8	
15	274	21.4	26	31.5	30.9	290	56.7	-9 00.3	108	10.5	59.4	170	17.7	04.9	
16	289	23.9	41	30.7	31.5	305	58.2	-8 59.7	123	12.6	59.2	185	20.2	04.9	
17	304	26.4	56	29.9	-22 32.1	320	59.7	-8 59.2	138	14.7	+6 59.1	200	22.8	+22 04.9	
18	319	28.8	71	29.0	-22 32.6	336	01.2	-8 58.6	153	16.8	+6 59.0	215	25.3	+22 04.9	
19	334	31.3	86	28.2	33.2	351	02.6	58.1	168	19.0	58.8	230	27.9	04.9	
20	349	33.8	101	27.3	33.8	6	04.1	57.5	183	21.1	58.7	245	30.4	04.9	
21	4	36.2	116	26.5	34.3	21	05.6	57.0	198	23.2	58.6	260	32.9	04.9	
22	19	38.7	131	25.6	34.9	36	07.1	56.5	213	25.3	58.4	275	35.5	04.9	
23	34	41.1	146	24.8	35.4	51	08.6	55.9	228	27.5	58.3	290	38.0	04.9	
24	49	43.6	161	23.9	-22 36.0	66	10.0	-8 55.4	243	29.6	+6 58.2	305	40.6	+22 04.9	
Dif	—		-8		-6	+15		+5	+21		-1	+25		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 0				Edad: 16 ^d 5 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:1 SD: 14:7 PMG: 1 ^h 12 ^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	184	01.1	-17	14.5	342	29.0	+23	31.4	60 N	6 08	6 59	7 47	16 05	24		11 02	79	
1	199	01.0		15.2	357	00.2 ¹²²		38.4 ⁷⁰	58	04	52	36	28	30		10 39	73	
2	214	00.9		15.9	11	31.2 ¹²⁰		45.3 ⁶⁹	56	6 01	46	27	16 46	34		21	70	
3	229	00.9		16.6	26	02.2 ¹²⁰		52.2 ⁶⁹	54	5 57	40	19	17 02	36		10 05	68	
4	244	00.8		17.3	40	33.2 ¹²⁰	+23	58.9 ⁶⁷	52	54	35	12	16	37		9 52	65	
5	259	00.7	-17	18.0	55	04.1 ¹¹⁹	+24	05.5 ⁶⁶	50	5 51	6 30	7 05	17 28	39		9 40	64	
6	274	00.7	-17	18.7	69	34.9 ¹¹⁸	+24	12.0 ⁶⁵	45	5 45	6 20	6 51	17 53	41		9 16	61	
7	289	00.6		19.4	84	05.7 ¹¹⁸		18.4 ⁶⁴	40	39	11	40	18 12	44		8 57	58	
8	304	00.6		20.1	98	36.4 ¹¹⁷		24.7 ⁶³	35	33	6 03	30	29	45		41	57	
9	319	00.5		20.8	113	07.1 ¹¹⁷		30.9 ⁶²	30	28	5 56	21	18 43	46		27	55	
10	334	00.4		21.5	127	37.7 ¹¹⁶		36.9 ⁶⁰	20	17	43	6 06	19 08	48		8 03	54	
11	349	00.4	-17	22.2	142	08.3 ¹¹⁶	+24	42.9 ⁶⁰	10 N	5 06	5 31	5 53	19 29	49		7 43	51	
12	4	00.3	-17	22.9	156	38.8 ¹¹⁵	+24	48.7 ⁵⁸	0	4 54	5 19	5 40	19 49	51		7 24	49	
13	19	00.2		23.5	171	09.2 ¹¹⁴	+24	54.5 ⁵⁸	10 S	40	5 06	28	20 09	52		7 05	48	
14	34	00.2		24.2	185	39.6 ¹¹⁴	+25	00.1 ⁵⁶	20	23	4 51	5 14	31	53		6 45	45	
15	49	00.1		24.9	200	10.0 ¹¹⁴		05.6 ⁵⁵	30	4 02	33	4 58	20 56	54		22	43	
16	64	00.0		25.6	214	40.3 ¹¹³		11.0 ⁵⁴	35	3 48	22	49	21 11	55		6 08	42	
17	78	59.9	-17	26.3	229	10.6 ¹¹³	+25	16.3 ⁵³	40	3 32	4 09	4 39	21 28	56		5 52	40	
18	93	59.9	-17	27.0	243	40.8 ¹¹²	+25	21.4 ⁵¹	45	3 11	3 53	4 26	21 48	59		5 34	37	
19	108	59.8		27.7	258	10.9 ¹¹¹		26.5 ⁵¹	50	2 43	33	11	22 14	61		5 10	34	
20	123	59.7		28.4	272	41.0 ¹¹¹		31.4 ⁴⁹	52	29	23	4 04	27	62		4 59	32	
21	138	59.7		29.1	287	11.1 ¹¹¹		36.2 ⁴⁸	54	2 12	12	3 56	42	63		47	30	
22	153	59.6		29.7	301	41.1 ¹¹⁰		40.9 ⁴⁷	56	1 51	3 00	47	22 59	65		32	27	
23	168	59.5		30.4	316	11.1 ¹¹⁰		45.4 ⁴⁵	58	1 23	2 45	37	23 20	67		4 15	23	
24	183	59.5	-17	31.1	330	41.0 ¹⁰⁹	+25	49.9 ⁴⁵	60 S	0 37	2 27	3 25	23 46	72		3 55	17	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 37 ^m 7		Mag: -3.8 PMG: 13 ^h 15 ^m				Mag: -0.9 PMG: 19 ^h 33 ^m				Mag: -1.9 PMG: 7 ^h 45 ^m				Mag: -0.1 PMG: 3 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	49	43.6	161	23.9	-22	36.0	66	10.0	-8	55.4	243	29.6	+6	58.2	305	40.6	+22	04.9
1	64	46.1	176	23.1		36.6	81	11.5		54.8	258	31.7		58.0	320	43.1		04.9
2	79	48.5	191	22.2		37.1	96	13.0		54.3	273	33.8		57.9	335	45.7		04.9
3	94	51.0	206	21.4		37.7	111	14.5		53.7	288	35.9		57.8	350	48.2		05.0
4	109	53.5	221	20.5		38.2	126	15.9		53.2	303	38.1		57.6	5	50.7		05.0
5	124	55.9	236	19.7	-22	38.8	141	17.4	-8	52.6	318	40.2	+6	57.5	20	53.3	+22	05.0
6	139	58.4	251	18.8	-22	39.4	156	18.9	-8	52.1	333	42.3	+6	57.4	35	55.8	+22	05.0
7	155	00.9	266	18.0		39.9	171	20.3		51.6	348	44.4		57.2	50	58.4		05.0
8	170	03.3	281	17.1		40.5	186	21.8		51.0	3	46.6		57.1	66	00.9		05.0
9	185	05.8	296	16.3		41.0	201	23.3		50.5	18	48.7		57.0	81	03.5		05.0
10	200	08.3	311	15.4		41.6	216	24.8		49.9	33	50.8		56.8	96	06.0		05.0
11	215	10.7	326	14.6	-22	42.1	231	26.2	-8	49.4	48	52.9	+6	56.7	111	08.6	+22	05.0
12	230	13.2	341	13.7	-22	42.7	246	27.7	-8	48.8	63	55.0	+6	56.6	126	11.1	+22	05.0
13	245	15.6	356	12.9		43.2	261	29.2		48.3	78	57.2		56.4	141	13.6		05.0
14	260	18.1	11	12.0		43.7	276	30.6		47.7	93	59.3		56.3	156	16.2		05.0
15	275	20.6	26	11.2		44.3	291	32.1		47.2	109	01.4		56.2	171	18.7		05.1
16	290	23.0	41	10.3		44.8	306	33.6		46.6	124	03.5		56.1	186	21.3		05.1
17	305	25.5	56	09.5	-22	45.4	321	35.0	-8	46.1	139	05.7	+6	55.9	201	23.8	+22	05.1
18	320	28.0	71	08.6	-22	45.9	336	36.5	-8	45.5	154	07.8	+6	55.8	216	26.4	+22	05.1
19	335	30.4	86	07.7		46.5	351	38.0		45.0	169	09.9		55.7	231	28.9		05.1
20	350	32.9	101	06.9		47.0	6	39.4		44.4	184	12.0		55.5	246	31.5		05.1
21	5	35.4	116	06.0		47.5	21	40.9		43.9	199	14.2		55.4	261	34.0		05.1
22	20	37.8	131	05.2		48.1	36	42.4		43.3	214	16.3		55.3	276	36.6		05.1
23	35	40.3	146	04.3		48.6	51	43.8		42.8	229	18.4		55.1	291	39.1		05.1
24	50	42.8	161	03.5	-22	49.1	66	45.3	-8	42.3	244	20.6	+6	55.0	306	41.7	+22	05.1
Dif	—		-9		-5		+15		+5		+21		-1		+25			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2				Edad: 17 ^d 5 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:2													
	PMG: 11 ^h 44 ^m 1				SD: 14:7 PMG: 2 ^h 01 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	183	59.5	-17	31.1	330	41.0	+25	49.9	60 N	15 38	16 26	17 17	16 29 46		12 21 61			
1	198	59.4		31.8	345	10.9 ¹⁰⁹		54.2 ⁴³	58	49	33	21	16 58 47		11 52 59			
2	213	59.3		32.5	359	40.7 ¹⁰⁸	+25	58.4 ⁴²	56	15 58	40	25	17 20 48		31 57			
3	228	59.2		33.2	14	10.5 ¹⁰⁸	+26	02.5 ⁴¹	54	16 06	46	28	38 49		11 13 56			
4	243	59.2		33.8	28	40.2 ¹⁰⁷		06.5 ⁴⁰	52	14	51	32	17 53 50		10 57 57			
5	258	59.1	-17	34.5	43	09.9 ¹⁰⁷	+26	10.3 ³⁸	50	16 21	16 56	17 35	18 07 50		10 44 56			
6	273	59.0	-17	35.2	57	39.6 ¹⁰⁷	+26	14.0 ³⁷	45	16 35	17 06	17 42	18 34 51		10 17 55			
7	288	58.9		35.9	72	09.2 ¹⁰⁶		17.6 ³⁶	40	47	15	48	18 56 51		9 55 55			
8	303	58.9		36.6	86	38.8 ¹⁰⁶		21.1 ³⁵	35	16 57	24	17 54	19 14 51		38 53			
9	318	58.8		37.3	101	08.4 ¹⁰⁶		24.4 ³³	30	17 06	31	18 00	29 51		9 22 54			
10	333	58.7		37.9	115	37.9 ¹⁰⁵		27.7 ³³	20	21	44	11	19 56 51		8 57 52			
11	348	58.6	-17	38.6	130	07.3 ¹⁰⁴	+26	30.7 ³⁰	10 N	17 35	17 57	18 22	20 18 52		8 34 52			
12	3	58.6	-17	39.3	144	36.8 ¹⁰⁵	+26	33.7 ³⁰	0	17 48	18 09	18 35	20 40 51		8 13 52			
13	18	58.5		40.0	159	06.2 ¹⁰⁴		36.6 ²⁹	10 S	18 01	23	18 49	21 01 52		7 53 50			
14	33	58.4		40.7	173	35.5 ¹⁰³		39.3 ²⁷	20	15	38	19 06	24 51		30 50			
15	48	58.3		41.3	188	04.9 ¹⁰⁴		41.9 ²⁶	30	31	18 57	28	21 50 52		7 05 48			
16	63	58.3		42.0	202	34.1 ¹⁰²		44.3 ²⁴	35	40	19 08	42	22 06 52		6 50 47			
17	78	58.2	-17	42.7	217	03.4 ¹⁰³	+26	46.7 ²⁴	40	18 51	19 21	19 59	22 24 52		6 32 47			
18	93	58.1	-17	43.4	231	32.6 ¹⁰²	+26	48.9 ²²	45	19 04	19 38	20 20	22 47 51		6 11 46			
19	108	58.0		44.0	246	01.8 ¹⁰²		50.9 ²⁰	50	20	19 58	20 49	23 15 51		5 44 44			
20	123	58.0		44.7	260	31.0 ¹⁰²		52.9 ²⁰	52	27	20 08	21 04	29 50		31 44			
21	138	57.9		45.4	275	00.2 ¹⁰²		54.7 ¹⁸	54	35	20	21	23 45 50		5 17 42			
22	153	57.8		46.1	289	29.3 ¹⁰¹		56.4 ¹⁷	56	45	33	21 44	** ** *		4 59 41			
23	168	57.7		46.7	303	58.4 ¹⁰¹		57.9 ¹⁵	58	19 55	20 48	22 15	** ** *		38 38			
24	183	57.6	-17	47.4	318	27.4 ¹⁰⁰	+26	59.4 ¹⁵	60 S	20 07	21 07	23 15	** ** *		4 12 33			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 33 ^m 8		Mag: -3.8 PMG: 13 ^h 17 ^m				Mag: -0.9 PMG: 19 ^h 31 ^m				Mag: -1.9 PMG: 7 ^h 42 ^m				Mag: -0.1 PMG: 3 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	50	42.8	161	03.5	-22	49.1	66	45.3	-8	42.3	244	20.6	+6	55.0	306	41.7	+22	05.1
1	65	45.2	176	02.6		49.7	81	46.8		41.7	259	22.7		54.9	321	44.2		05.1
2	80	47.7	191	01.7		50.2	96	48.2		41.2	274	24.8		54.7	336	46.7		05.2
3	95	50.1	206	00.9		50.7	111	49.7		40.6	289	26.9		54.6	351	49.3		05.2
4	110	52.6	221	00.0		51.3	126	51.1		40.1	304	29.1		54.5	6	51.8		05.2
5	125	55.1	235	59.2	-22	51.8	141	52.6	-8	39.5	319	31.2	+6	54.3	21	54.4	+22	05.2
6	140	57.5	250	58.3	-22	52.3	156	54.1	-8	39.0	334	33.3	+6	54.2	36	56.9	+22	05.2
7	156	00.0	265	57.4		52.8	171	55.5		38.4	349	35.4		54.1	51	59.5		05.2
8	171	02.5	280	56.6		53.4	186	57.0		37.9	4	37.6		54.0	67	02.0		05.2
9	186	04.9	295	55.7		53.9	201	58.4		37.3	19	39.7		53.8	82	04.6		05.2
10	201	07.4	310	54.9		54.4	216	59.9		36.8	34	41.8		53.7	97	07.1		05.2
11	216	09.9	325	54.0	-22	54.9	232	01.4	-8	36.2	49	44.0	+6	53.6	112	09.7	+22	05.2
12	231	12.3	340	53.1	-22	55.4	247	02.8	-8	35.7	64	46.1	+6	53.4	127	12.2	+22	05.2
13	246	14.8	355	52.3		56.0	262	04.3		35.1	79	48.2		53.3	142	14.8		05.3
14	261	17.2	10	51.4		56.5	277	05.7		34.5	94	50.3		53.2	157	17.3		05.3
15	276	19.7	25	50.5		57.0	292	07.2		34.0	109	52.5		53.0	172	19.9		05.3
16	291	22.2	40	49.7		57.5	307	08.6		33.4	124	54.6		52.9	187	22.4		05.3
17	306	24.6	55	48.8	-22	58.0	322	10.1	-8	32.9	139	56.7	+6	52.8	202	25.0	+22	05.3
18	321	27.1	70	47.9	-22	58.5	337	11.5	-8	32.3	154	58.9	+6	52.7	217	27.5	+22	05.3
19	336	29.6	85	47.1		59.1	352	13.0		31.8	170	01.0		52.5	232	30.1		05.3
20	351	32.0	100	46.2	-22	59.6	7	14.4		31.2	185	03.1		52.4	247	32.6		05.3
21	6	34.5	115	45.3	-23	00.1	22	15.9		30.7	200	05.2		52.3	262	35.2		05.3
22	21	37.0	130	44.5		00.6	37	17.4		30.1	215	07.4		52.1	277	37.7		05.3
23	36	39.4	145	43.6		01.1	52	18.8		29.6	230	09.5		52.0	292	40.3		05.3
24	51	41.9	160	42.7	-23	01.6	67	20.3	-8	29.0	245	11.6	+6	51.9	307	42.9	+22	05.4
Dif	—		-9		-5		+15		+6		+21		-1		+25		0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 18 ^d 5 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'6													
	PMG: 11 ^h 44 ^m 2			SD: 14'8 PMG: 2 ^h 52 ^m R ^o : 52 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m		h m m		
0	183	57.6	-17 47.4	318	27.4	+26 59.4			60 N	6 12	7 03	7 52	17 15 71	13 22 36			
1	198	57.6	48.1	332	56.5	+27 00.7	13		58	08	6 56	41	17 45 67	12 51 41			
2	213	57.5	48.8	347	25.5	01.8	11		56	04	50	31	18 08 65	28 43			
3	228	57.4	49.4	1	54.5	02.9	9		54	6 01	44	23	27 63	12 09 44			
4	243	57.3	50.1	16	23.5	03.8	9		52	5 57	38	15	43 62	11 54 45			
5	258	57.2	-17 50.8	30	52.4	+27 04.5	7		50	5 54	6 33	7 09	18 57 60	11 40 46			
6	273	57.1	-17 51.4	45	21.4	+27 05.2	7		45	5 47	6 23	6 54	19 25 58	11 12 47			
7	288	57.1	52.1	59	50.3	05.7	5		40	41	13	42	19 47 57	10 50 48			
8	303	57.0	52.8	74	19.2	06.0	3		35	35	6 05	32	20 05 56	31 49			
9	318	56.9	53.4	88	48.1	06.3	3		30	29	5 58	23	20 56	10 16 49			
10	333	56.8	54.1	103	17.0	06.4	1		20	18	44	6 07	20 47 54	9 49 50			
11	348	56.7	-17 54.8	117	45.8	+27 06.3	1		10 N	5 06	5 32	5 54	21 10 53	9 26 51			
12	3	56.6	-17 55.4	132	14.7	+27 06.2	1		0	4 54	5 19	5 41	21 31 52	9 05 51			
13	18	56.6	56.1	146	43.5	05.9	3		10 S	39	5 05	28	21 53 50	8 43 52			
14	33	56.5	56.8	161	12.3	05.5	4		20	22	4 50	5 14	22 15 50	8 20 53			
15	48	56.4	57.4	175	41.1	04.9	6		30	4 00	31	4 57	42 47	7 53 54			
16	63	56.3	58.1	190	09.9	04.2	7		35	3 46	20	48	22 58 46	37 54			
17	78	56.2	-17 58.8	204	38.7	+27 03.4	8		40	3 29	4 07	4 37	23 16 45	7 19 54			
18	93	56.1	-17 59.4	219	07.5	+27 02.4	10		45	3 08	3 50	4 24	23 38 43	6 57 55			
19	108	56.0	-18 00.1	233	36.3	01.3	11		50	2 39	30	08	** ** *	28 56			
20	123	56.0	00.8	248	05.1	+27 00.1	12		52	24	20	4 01	** ** *	6 15 55			
21	138	55.9	01.4	262	33.9	+26 58.7	14		54	2 06	3 08	3 52	** ** *	5 59 56			
22	153	55.8	02.1	277	02.6	57.2	15		56	1 44	2 55	43	0 04 50	40 56			
23	168	55.7	02.7	291	31.4	55.6	16		58	1 13	39	32	27 50	5 16 58			
24	183	55.6	-18 03.4	306	00.2	+26 53.8	18		60 S	0 12	2 21	3 20	0 58 48	4 45 59			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 29 ^m 8			Mag: -3.8 PMG: 13 ^h 18 ^m			Mag: -0.8 PMG: 19 ^h 29 ^m			Mag: -1.9 PMG: 7 ^h 38 ^m			Mag: -0.1 PMG: 3 ^h 29 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	51	41.9	160 42.7	-23 01.6	67 20.3	-8 29.0	245 11.6	+6 51.9	307 42.9	+22 05.4							
1	66	44.4	175 41.9	02.1	82 21.7	28.5	260 13.8	51.7	322 45.4	05.4							
2	81	46.8	190 41.0	02.6	97 23.2	27.9	275 15.9	51.6	337 48.0	05.4							
3	96	49.3	205 40.1	03.1	112 24.6	27.4	290 18.0	51.5	352 50.5	05.4							
4	111	51.7	220 39.3	03.6	127 26.0	26.8	305 20.2	51.4	7 53.1	05.4							
5	126	54.2	235 38.4	-23 04.1	142 27.5	-8 26.3	320 22.3	+6 51.2	22 55.6	+22 05.4							
6	141	56.7	250 37.5	-23 04.6	157 28.9	-8 25.7	335 24.4	+6 51.1	37 58.2	+22 05.4							
7	156	59.1	265 36.6	05.1	172 30.4	25.1	350 26.6	51.0	53 00.7	05.4							
8	172	01.6	280 35.8	05.6	187 31.8	24.6	5 28.7	50.8	68 03.3	05.4							
9	187	04.1	295 34.9	06.1	202 33.3	24.0	20 30.8	50.7	83 05.8	05.4							
10	202	06.5	310 34.0	06.6	217 34.7	23.5	35 33.0	50.6	98 08.4	05.4							
11	217	09.0	325 33.2	-23 07.1	232 36.2	-8 22.9	50 35.1	+6 50.5	113 10.9	+22 05.5							
12	232	11.5	340 32.3	-23 07.6	247 37.6	-8 22.4	65 37.2	+6 50.3	128 13.5	+22 05.5							
13	247	13.9	355 31.4	08.1	262 39.1	21.8	80 39.4	50.2	143 16.0	05.5							
14	262	16.4	10 30.5	08.6	277 40.5	21.3	95 41.5	50.1	158 18.6	05.5							
15	277	18.9	25 29.7	09.0	292 41.9	20.7	110 43.6	49.9	173 21.2	05.5							
16	292	21.3	40 28.8	09.5	307 43.4	20.1	125 45.8	49.8	188 23.7	05.5							
17	307	23.8	55 27.9	-23 10.0	322 44.8	-8 19.6	140 47.9	+6 49.7	203 26.3	+22 05.5							
18	322	26.2	70 27.0	-23 10.5	337 46.3	-8 19.0	155 50.0	+6 49.6	218 28.8	+22 05.5							
19	337	28.7	85 26.2	11.0	352 47.7	18.5	170 52.2	49.4	233 31.4	05.5							
20	352	31.2	100 25.3	11.5	7 49.2	17.9	185 54.3	49.3	248 33.9	05.5							
21	7	33.6	115 24.4	11.9	22 50.6	17.4	200 56.4	49.2	263 36.5	05.5							
22	22	36.1	130 23.5	12.4	37 52.0	16.8	215 58.6	49.1	278 39.0	05.6							
23	37	38.6	145 22.7	12.9	52 53.5	16.3	231 00.7	48.9	293 41.6	05.6							
24	52	41.0	160 21.8	-23 13.4	67 54.9	-8 15.7	246 02.8	+6 48.8	308 44.2	+22 05.6							
Dif	—		-9	-5	+14		+6	+21	-1	+26		0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 19 ^d 5	PHE {	4 ^h : 54:7 12 ^h : 54:8 20 ^h : 55:0			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 44 ^m 4								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	183	55.6	-18 03.4	306	00.2	+26 53.8	19	60 N	15 34	16 22	17 14	18 26 87		13 58 19	
1	198	55.5	04.1	320	29.0	51.9	20	58	45	30	18	18 52 81		32 25	
2	213	55.4	04.7	334	57.7	49.9	22	56	15 55	37	22	19 13 77		13 11 29	
3	228	55.3	05.4	349	26.5	47.7	23	54	16 03	43	26	30 73		12 53 32	
4	243	55.2	06.0	3	55.3	45.4	24	52	11	48	29	45 71		39 34	
5	258	55.1	-18 06.7	18	24.1	+26 43.0	26	50	16 18	16 53	17 32	19 57 69		12 26 36	
6	273	55.1	-18 07.3	32	52.9	+26 40.4	27	45	16 33	17 04	17 40	20 23 66		11 59 39	
7	288	55.0	08.0	47	21.7	37.7	29	40	45	14	46	20 44 63		38 42	
8	303	54.9	08.7	61	50.5	34.8	29	35	16 55	22	53	21 01 61		20 44	
9	318	54.8	09.3	76	19.3	31.9	31	30	17 05	30	17 59	16 59		11 05 45	
10	333	54.7	10.0	90	48.1	28.8	33	20	21	44	18 10	21 41 56		10 39 48	
11	348	54.6	-18 10.6	105	17.0	+26 25.5	35	10 N	17 35	17 57	18 22	22 03 53		10 17 50	
12	3	54.5	-18 11.3	119	45.8	+26 22.1	37	0	17 48	18 10	18 35	22 23 51		9 56 51	
13	18	54.4	11.9	134	14.7	18.6	38	10 S	18 01	24	18 50	22 43 48		35 53	
14	33	54.3	12.6	148	43.5	15.0	39	20	16	39	19 07	23 05 45		9 13 55	
15	48	54.2	13.2	163	12.4	11.2	40	30	32	18 58	30	29 43		8 47 57	
16	63	54.1	13.9	177	41.3	07.3	41	35	42	19 10	19 44	23 44 41		31 59	
17	78	54.0	-18 14.5	192	10.3	+26 03.3	42	40	18 53	19 24	20 01	** ** *		8 13 60	
18	93	53.9	-18 15.2	206	39.2	+25 59.1	43	45	19 07	19 41	20 24	** ** *		7 52 62	
19	108	53.8	15.8	221	08.1	54.8	44	50	23	20 02	20 53	0 06 40		24 65	
20	123	53.7	16.5	235	37.1	50.4	46	52	31	12	21 09	19 40		7 10 67	
21	138	53.6	17.1	250	06.1	45.8	47	54	39	24	28	35 38		6 55 69	
22	153	53.5	17.8	264	35.1	41.1	48	56	19 49	38	21 52	0 54 35		36 72	
23	168	53.4	18.4	279	04.1	36.3	49	58	20 00	20 54	22 26	1 17 31		6 14 75	
24	183	53.3	-18 19.1	293	33.2	+25 31.4		60 S	20 13	21 14	** ** *	1 46 26		5 44 81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 20 ^h 25 ^m 9		Mag: -3.8 PMG: 13 ^h 19 ^m		Mag: -0.8 PMG: 19 ^h 26 ^m		Mag: -2.0 PMG: 7 ^h 35 ^m		Mag: -0.1 PMG: 3 ^h 24 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	52	41.0	160	21.8	-23	13.4	67	54.9	-8	15.7	246	02.8	+6	48.8	308	44.2	+22	05.6	
1	67	43.5	175	20.9		13.9	82	56.3		15.1	261	05.0		48.7	323	46.7		05.6	
2	82	46.0	190	20.0		14.3	97	57.8		14.6	276	07.1		48.5	338	49.3		05.6	
3	97	48.4	205	19.1		14.8	112	59.2		14.0	291	09.2		48.4	353	51.8		05.6	
4	112	50.9	220	18.3		15.3	128	00.7		13.5	306	11.4		48.3	8	54.4		05.6	
5	127	53.4	235	17.4	-23	15.8	143	02.1	-8	12.9	321	13.5	+6	48.2	23	56.9	+22	05.6	
6	142	55.8	250	16.5	-23	16.2	158	03.5	-8	12.3	336	15.7	+6	48.0	38	59.5	+22	05.6	
7	157	58.3	265	15.6		16.7	173	05.0		11.8	351	17.8		47.9	54	02.1		05.6	
8	173	00.7	280	14.7		17.2	188	06.4		11.2	6	19.9		47.8	69	04.6		05.7	
9	188	03.2	295	13.9		17.6	203	07.8		10.7	21	22.1		47.7	84	07.2		05.7	
10	203	05.7	310	13.0		18.1	218	09.3		10.1	36	24.2		47.5	99	09.7		05.7	
11	218	08.1	325	12.1	-23	18.6	233	10.7	-8	09.6	51	26.3	+6	47.4	114	12.3	+22	05.7	
12	233	10.6	340	11.2	-23	19.0	248	12.1	-8	09.0	66	28.5	+6	47.3	129	14.9	+22	05.7	
13	248	13.1	355	10.3		19.5	263	13.6		08.4	81	30.6		47.1	144	17.4		05.7	
14	263	15.5	10	09.5		20.0	278	15.0		07.9	96	32.8		47.0	159	20.0		05.7	
15	278	18.0	25	08.6		20.4	293	16.4		07.3	111	34.9		46.9	174	22.5		05.7	
16	293	20.5	40	07.7		20.9	308	17.9		06.8	126	37.0		46.8	189	25.1		05.7	
17	308	22.9	55	06.8	-23	21.3	323	19.3	-8	06.2	141	39.2	+6	46.6	204	27.7	+22	05.7	
18	323	25.4	70	05.9	-23	21.8	338	20.7	-8	05.6	156	41.3	+6	46.5	219	30.2	+22	05.8	
19	338	27.9	85	05.0		22.2	353	22.1		05.1	171	43.4		46.4	234	32.8		05.8	
20	353	30.3	100	04.1		22.7	8	23.6		04.5	186	45.6		46.3	249	35.3		05.8	
21	8	32.8	115	03.3		23.1	23	25.0		03.9	201	47.7		46.1	264	37.9		05.8	
22	23	35.2	130	02.4		23.6	38	26.4		03.4	216	49.9		46.0	279	40.5		05.8	
23	38	37.7	145	01.5		24.1	53	27.9		02.8	231	52.0		45.9	294	43.0		05.8	
24	53	40.2	160	00.6	-23	24.5	68	29.3	-8	02.3	246	54.1	+6	45.8	309	45.6	+22	05.8	
Dif	—		-9		-5		+14		+6		+21		-1		+26				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 20 ^d 5	PHE { 4 ^h : 55'2 12 ^h : 55'4 20 ^h : 55'6	SD: 15'0	PMG: 4 ^h 35 ^m	R°: 51 ^m		Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec	hG ☾														Dif	Dec
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	53.3	-18	19.1	293	33.2	+25	31.4	51	60 N	6	16	7	08	7	57	19	53
1	198	53.2		19.7	308	02.2		26.3	51	58		12	7	00	45		20	13
2	213	53.1		20.4	322	31.3		21.1	52	56		08	6	53	36		30	83
3	228	53.0		21.0	337	00.5		15.7	54	54		04		47	27		43	80
4	243	52.9		21.7	351	29.6		10.2	55	52		6	00	42	19		20	56
5	258	52.8	-18	22.3	5	58.8	+25	04.6	56	50		5	57	6	36	7	12	21
6	273	52.7	-18	22.9	20	28.0	+24	58.9	57	45		5	50	6	25	6	57	21
7	288	52.6		23.6	34	57.2		53.1	58	40		43		16	45		21	47
8	303	52.5		24.2	49	26.4		47.1	60	35		36	6	07	34		22	02
9	318	52.4		24.9	63	55.7		41.0	61	30		30	5	59	25		15	60
10	333	52.3		25.5	78	25.0		34.7	63	20		19		45	6	09	37	56
11	348	52.2	-18	26.2	92	54.3	+24	28.4	63	10 N		5	07	5	32	5	54	22
12	3	52.1	-18	26.8	107	23.7	+24	21.9	65	0		4	54	5	19	5	41	23
13	18	52.0		27.4	121	53.0		15.3	66	10 S		39		5	05	27		31
14	33	51.9		28.1	136	22.4		08.5	68	20		4	22	4	49	5	13	23
15	48	51.8		28.7	150	51.9	+24	01.6	69	30		3	59	30	4	56	***	***
16	63	51.7		29.3	165	21.4	+23	54.7	69	35		45		18	46		***	***
17	78	51.6	-18	30.0	179	50.9	+23	47.5	72	40		3	27	4	05	4	35	0
18	93	51.5	-18	30.6	194	20.4	+23	40.3	72	45		3	05	3	48	4	22	0
19	108	51.4		31.3	208	50.0		33.0	73	50		2	35	26	4	05		46
20	123	51.3		31.9	223	19.5		25.5	75	52		19		16	3	58		0
21	138	51.2		32.5	237	49.2		17.9	76	54		2	01	3	04	49		1
22	153	51.1		33.2	252	18.8		10.2	77	56		1	36	2	50	39		29
23	168	51.0		33.8	266	48.5	+23	02.3	79	58		1	02	34	28		1	48
24	183	50.9	-18	34.4	281	18.2	+22	54.3	80	60 S		**	**	2	14	3	15	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 22 ^m 0		Mag: -3.8 PMG: 13 ^h 21 ^m		Mag: -0.8 PMG: 19 ^h 24 ^m		Mag: -2.0 PMG: 7 ^h 31 ^m		Mag: -0.1 PMG: 3 ^h 20 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec
h	°	'	°	'	°	'	°	'	°	'
0	53	40.2	160	00.6	-23	24.5	68	29.3	-8	02.3
1	68	42.6	174	59.7		24.9	83	30.7		01.7
2	83	45.1	189	58.8		25.4	98	32.1		01.1
3	98	47.6	204	57.9		25.8	113	33.6	-8	00.6
4	113	50.0	219	57.1		26.3	128	35.0	-8	00.0
5	128	52.5	234	56.2	-23	26.7	143	36.4	-7	59.5
6	143	55.0	249	55.3	-23	27.2	158	37.8	-7	58.9
7	158	57.4	264	54.4		27.6	173	39.2		58.3
8	173	59.9	279	53.5		28.1	188	40.7		57.8
9	189	02.3	294	52.6		28.5	203	42.1		57.2
10	204	04.8	309	51.7		28.9	218	43.5		56.6
11	219	07.3	324	50.8	-23	29.4	233	44.9	-7	56.1
12	234	09.7	339	49.9	-23	29.8	248	46.4	-7	55.5
13	249	12.2	354	49.0		30.2	263	47.8		54.9
14	264	14.7	9	48.1		30.7	278	49.2		54.4
15	279	17.1	24	47.3		31.1	293	50.6		53.8
16	294	19.6	39	46.4		31.5	308	52.0		53.3
17	309	22.1	54	45.5	-23	32.0	323	53.4	-7	52.7
18	324	24.5	69	44.6	-23	32.4	338	54.9	-7	52.1
19	339	27.0	84	43.7		32.8	353	56.3		51.6
20	354	29.5	99	42.8		33.2	8	57.7		51.0
21	9	31.9	114	41.9		33.7	23	59.1		50.4
22	24	34.4	129	41.0		34.1	39	00.5		49.9
23	39	36.8	144	40.1		34.5	54	01.9		49.3
24	54	39.3	159	39.2	-23	34.9	69	03.4	-7	48.7
Dif	—		-9		-4		+14		+6	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2		Edad: 21 ^d 5 PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 0 20 ^h : 56 ^m 3													
	PMG: 11 ^h 44 ^m 7		SD: 15 ^h 2 PMG: 5 ^h 26 ^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	m		
0	183	50.9	-18	34.4	281	18.2	+22 54.3	60 N	15 29	16 19	17 10	21 26 95	14 27	5		
1	198	50.8		35.1	295	48.0 ¹⁰⁸	46.3 ⁸⁰	58	41	26	15	41 89	14 12	10		
2	213	50.7		35.7	310	17.8 ¹⁰⁸	38.1 ⁸²	56	15 51	34	19	21 53 85	13 59	14		
3	228	50.6		36.3	324	47.6 ¹⁰⁸	29.7 ⁸⁴	54	16 00	40	23	22 03 83	48	17		
4	243	50.4		37.0	339	17.5 ¹⁰⁹	21.3 ⁸⁴	52	08	46	27	12 80	38	20		
5	258	50.3	-18	37.6	353	47.4 ¹⁰⁹	+22 12.8 ⁸⁵	50	16 15	16 51	17 30	22 21 77	13 29	22		
6	273	50.2	-18	38.2	8	17.3 ¹⁰⁹	+22 04.1 ⁸⁷	45	16 31	17 02	17 38	22 38 72	13 11	27		
7	288	50.1		38.8	22	47.2 ¹⁰⁹	+21 55.3 ⁸⁸	40	43	12	45	22 52 68	12 55	31		
8	303	50.0		39.5	37	17.2 ¹¹⁰	46.4 ⁸⁹	35	16 54	21	52	23 05 64	42	34		
9	318	49.9		40.1	51	47.2 ¹¹⁰	37.4 ⁹⁰	30	17 04	29	17 58	15 61	31	36		
10	333	49.8		40.7	66	17.3 ¹¹¹	28.2 ⁹²	20	20	43	18 10	33 56	12 11	41		
11	348	49.7	-18	41.4	80	47.4 ¹¹¹	+21 19.0 ⁹²	10 N	17 35	17 57	18 22	23 49 52	11 54	45		
12	3	49.6	-18	42.0	95	17.5 ¹¹¹	+21 09.6 ⁹⁴	0	17 48	18 10	18 35	** ** *	11 38	48		
13	18	49.4		42.6	109	47.7 ¹¹²	+21 00.2 ⁹⁴	10 S	18 02	24	18 50	** ** *	21	53		
14	33	49.3		43.2	124	17.9 ¹¹²	+20 50.6 ⁹⁶	20	17	18 41	19 09	** ** *	11 04	56		
15	48	49.2		43.9	138	48.1 ¹¹²	40.9 ⁹⁷	30	34	19 00	32	0 12 39	10 44	60		
16	63	49.1		44.5	153	18.3 ¹¹²	31.1 ⁹⁸	35	44	12	19 46	25 36	32	63		
17	78	49.0	-18	45.1	167	48.6 ¹¹³	+20 21.2 ⁹⁹	40	18 56	19 26	20 04	0 39 34	10 18	67		
18	93	48.9	-18	45.7	182	19.0 ¹¹⁴	+20 11.1 ¹⁰¹	45	19 10	19 44	20 27	0 57 29	10 02	70		
19	108	48.8		46.4	196	49.3 ¹¹³	+20 01.0 ¹⁰¹	50	26	20 06	20 58	1 18 25	9 41	76		
20	123	48.7		47.0	211	19.7 ¹¹⁴	+19 50.8 ¹⁰²	52	34	16	21 14	28 22	32	78		
21	138	48.5		47.6	225	50.1 ¹¹⁴	40.4 ¹⁰⁴	54	43	29	21 34	40 19	21	81		
22	153	48.4		48.2	240	20.6 ¹¹⁵	30.0 ¹⁰⁴	56	19 53	20 43	22 00	1 53 16	9 08	85		
23	168	48.3		48.8	254	51.1 ¹¹⁵	19.4 ¹⁰⁶	58	20 05	21 00	22 39	2 08 12	8 54	89		
24	183	48.2	-18	49.5	269	21.6 ¹¹⁵	+19 08.7 ¹⁰⁷	60 S	20 18	21 21	** ** *	2 25 7	8 37	94		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 20 ^h 18 ^m 0		Mag: -3.8 PMG: 13 ^h 22 ^m		Mag: -0.8 PMG: 19 ^h 22 ^m		Mag: -2.0 PMG: 7 ^h 28 ^m		Mag: -0.2 PMG: 3 ^h 16 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	54	39.3	159	39.2	-23	34.9	69	03.4	-7	48.7	247	45.6	+6	42.8		
1	69	41.8	174	38.3		35.3	84	04.8		48.2	262	47.7		42.7		
2	84	44.2	189	37.4		35.8	99	06.2		47.6	277	49.9		42.5		
3	99	46.7	204	36.5		36.2	114	07.6		47.0	292	52.0		42.4		
4	114	49.2	219	35.6		36.6	129	09.0		46.5	307	54.2		42.3		
5	129	51.6	234	34.7	-23	37.0	144	10.4	-7	45.9	322	56.3	+6	42.2		
6	144	54.1	249	33.8	-23	37.4	159	11.8	-7	45.3	337	58.5	+6	42.0		
7	159	56.6	264	32.9		37.8	174	13.2		44.8	353	00.6		41.9		
8	174	59.0	279	32.0		38.2	189	14.7		44.2	8	02.7		41.8		
9	190	01.5	294	31.1		38.7	204	16.1		43.6	23	04.9		41.7		
10	205	04.0	309	30.2		39.1	219	17.5		43.1	38	07.0		41.6		
11	220	06.4	324	29.3	-23	39.5	234	18.9	-7	42.5	53	09.2	+6	41.4		
12	235	08.9	339	28.4	-23	39.9	249	20.3	-7	41.9	68	11.3	+6	41.3		
13	250	11.3	354	27.5		40.3	264	21.7		41.4	83	13.5		41.2		
14	265	13.8	9	26.6		40.7	279	23.1		40.8	98	15.6		41.1		
15	280	16.3	24	25.7		41.1	294	24.5		40.2	113	17.8		40.9		
16	295	18.7	39	24.8		41.5	309	25.9		39.7	128	19.9		40.8		
17	310	21.2	54	23.9	-23	41.9	324	27.3	-7	39.1	143	22.1	+6	40.7		
18	325	23.7	69	23.0	-23	42.3	339	28.7	-7	38.5	158	24.2	+6	40.6		
19	340	26.1	84	22.1		42.7	354	30.1		38.0	173	26.4		40.5		
20	355	28.6	99	21.2		43.1	9	31.5		37.4	188	28.5		40.3		
21	10	31.1	114	20.3		43.5	24	33.0		36.8	203	30.7		40.2		
22	25	33.5	129	19.4		43.9	39	34.4		36.2	218	32.8		40.1		
23	40	36.0	144	18.5		44.3	54	35.8		35.7	233	35.0		40.0		
24	55	38.5	159	17.6	-23	44.7	69	37.2	-7	35.1	248	37.1	+6	39.8		
Dif	—		-9		-4		+14		+6		+21		-1		+26	
															0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 22 ^d 5	PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'1	R ^o : 48 ^m		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 11 ^h 44 ^m 9													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m
0	183	48.2	-18 49.5	269	21.6	+19 08.7		60 N	6 20	7 12	8 02	23 01 95	14 32	3
1	198	48.1	50.1	283	52.1 ¹¹⁵	+18 58.0 ¹⁰⁷		58	15	7 04	7 50	10 91	22	7
2	213	48.0	50.7	298	22.7 ¹¹⁶	47.1 ¹⁰⁹		56	11	6 57	40	18 88	13	10
3	228	47.8	51.3	312	53.3 ¹¹⁶	36.1 ¹¹⁰		54	07	51	31	26 84	14 05	14
4	243	47.7	51.9	327	24.0 ¹¹⁷	25.0 ¹¹¹		52	03	45	22	32 81	13 58	16
5	258	47.6	-18 52.5	341	54.6 ¹¹⁶	+18 13.9 ¹¹¹		50	6 00	6 39	7 15	23 38 78	13 51	19
6	273	47.5	-18 53.2	356	25.3 ¹¹⁷	+18 02.6 ¹¹³		45	5 52	6 28	7 00	23 50 73	13 38	23
7	288	47.4	53.8	10	56.1 ¹¹⁸	+17 51.2 ¹¹⁴		40	45	18	6 47	** ** *	26	27
8	303	47.2	54.4	25	26.8 ¹¹⁷	39.7 ¹¹⁵		35	38	09	36	** ** *	16	31
9	318	47.1	55.0	39	57.6 ¹¹⁸	28.1 ¹¹⁶		30	32	6 01	26	** ** *	13 07	34
10	333	47.0	55.6	54	28.4 ¹¹⁸	16.4 ¹¹⁷		20	20	5 46	6 10	** ** *	12 52	39
11	348	46.9	-18 56.2	68	59.3 ¹¹⁹	+17 04.7 ¹¹⁷		10 N	5 07	5 33	5 55	** ** *	12 39	43
12	3	46.8	-18 56.8	83	30.1 ¹¹⁸	+16 52.8 ¹¹⁹		0	4 54	5 19	5 41	0 03 48	12 26	48
13	18	46.6	57.5	98	01.0 ¹¹⁹	40.8 ¹²⁰		10 S	39	5 05	27	18 44	14	52
14	33	46.5	58.1	112	32.0 ¹²⁰	28.8 ¹²⁰		20	4 21	4 49	5 12	33 40	12 00	56
15	48	46.4	58.7	127	02.9 ¹¹⁹	16.6 ¹²²		30	3 58	29	4 55	0 51 35	11 44	62
16	63	46.3	59.3	141	33.9 ¹²⁰	+16 04.4 ¹²²		35	43	17	45	1 01 32	35	65
17	78	46.2	-18 59.9	156	04.9 ¹²⁰	+15 52.0 ¹²⁴		40	3 25	4 03	4 33	1 13 28	11 25	68
18	93	46.0	-19 00.5	170	35.9 ¹²⁰	+15 39.6 ¹²⁴		45	3 02	3 45	4 20	1 26 25	11 12	73
19	108	45.9	01.1	185	06.9 ¹²⁰	27.0 ¹²⁶		50	2 31	23	4 03	43 20	10 57	78
20	123	45.8	01.7	199	38.0 ¹²¹	14.4 ¹²⁶		52	2 15	13	3 55	50 18	50	80
21	138	45.7	02.3	214	09.1 ¹²¹	+15 01.7 ¹²⁷		54	1 55	3 00	46	1 59 15	42	83
22	153	45.5	02.9	228	40.2 ¹²¹	+14 48.9 ¹²⁸		56	1 29	2 46	36	2 09 12	33	87
23	168	45.4	03.5	243	11.3 ¹²¹	36.0 ¹²⁹		58	0 50	29	24	20 8	23	90
24	183	45.3	-19 04.2	257	42.5 ¹²²	+14 23.1 ¹²⁹		60 S	** ** *	2 08	3 11	2 32 4	10 11	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 20 ^h 14 ^m 1		Mag: -3.8 PMG: 13 ^h 24 ^m		Mag: -0.7 PMG: 19 ^h 20 ^m		Mag: -2.0 PMG: 7 ^h 24 ^m		Mag: -0.2 PMG: 3 ^h 12 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	55	38.5	159	17.6	-23	44.7	69	37.2	-7	35.1	248	37.1	+6	39.8	311	48.8	+22	06.3	
1	70	40.9	174	16.7		45.0	84	38.6		34.5	263	39.3		39.7	326	51.3		06.3	
2	85	43.4	189	15.8		45.4	99	40.0		34.0	278	41.4		39.6	341	53.9		06.3	
3	100	45.8	204	14.9		45.8	114	41.4		33.4	293	43.6		39.5	356	56.5		06.4	
4	115	48.3	219	14.0		46.2	129	42.8		32.8	308	45.7		39.4	11	59.0		06.4	
5	130	50.8	234	13.1	-23	46.6	144	44.2	-7	32.3	323	47.9	+6	39.2	27	01.6	+22	06.4	
6	145	53.2	249	12.2	-23	47.0	159	45.6	-7	31.7	338	50.0	+6	39.1	42	04.2	+22	06.4	
7	160	55.7	264	11.3		47.4	174	47.0		31.1	353	52.2		39.0	57	06.8		06.4	
8	175	58.2	279	10.4		47.7	189	48.4		30.5	8	54.3		38.9	72	09.3		06.4	
9	191	00.6	294	09.5		48.1	204	49.8		30.0	23	56.5		38.8	87	11.9		06.4	
10	206	03.1	309	08.6		48.5	219	51.2		29.4	38	58.6		38.6	102	14.5		06.4	
11	221	05.6	324	07.7	-23	48.9	234	52.6	-7	28.8	54	00.8	+6	38.5	117	17.0	+22	06.4	
12	236	08.0	339	06.8	-23	49.3	249	54.0	-7	28.3	69	02.9	+6	38.4	132	19.6	+22	06.5	
13	251	10.5	354	05.8		49.6	264	55.4		27.7	84	05.1		38.3	147	22.2		06.5	
14	266	12.9	9	04.9		50.0	279	56.8		27.1	99	07.2		38.2	162	24.8		06.5	
15	281	15.4	24	04.0		50.4	294	58.2		26.5	114	09.4		38.0	177	27.3		06.5	
16	296	17.9	39	03.1		50.8	309	59.5		26.0	129	11.6		37.9	192	29.9		06.5	
17	311	20.3	54	02.2	-23	51.1	325	00.9	-7	25.4	144	13.7	+6	37.8	207	32.5	+22	06.5	
18	326	22.8	69	01.3	-23	51.5	340	02.3	-7	24.8	159	15.9	+6	37.7	222	35.1	+22	06.5	
19	341	25.3	84	00.4		51.9	355	03.7		24.3	174	18.0		37.6	237	37.6		06.5	
20	356	27.7	98	59.5		52.2	10	05.1		23.7	189	20.2		37.4	252	40.2		06.5	
21	11	30.2	113	58.6		52.6	25	06.5		23.1	204	22.3		37.3	267	42.8		06.6	
22	26	32.7	128	57.7		53.0	40	07.9		22.5	219	24.5		37.2	282	45.4		06.6	
23	41	35.1	143	56.8		53.3	55	09.3		22.0	234	26.6		37.1	297	47.9		06.6	
24	56	37.6	158	55.8	-23	53.7	70	10.7	-7	21.4	249	28.8	+6	37.0	312	50.5	+22	06.6	
Dif	—		-9		-4		+14		+6		+22		-1		+26				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 23 ^d 5 PHE { 4 ^h : 57°4 12 ^h : 57°8 20 ^h : 58°1										
	PMG: 11 ^h 45 ^m 1			SD: 15°6 PMG: 7 ^h 03 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	45.3	-19 04.2	257	42.5	+14 23.1		60 N	15 25	16 15	17 07	** ** *	14 35	2
1	198	45.2	04.8	272	13.6 ¹²¹	+14 10.0 ¹³¹		58	37	23	12	** ** *	29	6
2	213	45.0	05.4	286	44.8 ¹²²	+13 56.9 ¹³¹		56	48	31	17	** ** *	23	9
3	228	44.9	06.0	301	16.0 ¹²²	43.6 ¹³³		54	15 57	37	21	** ** *	19	11
4	243	44.8	06.6	315	47.2 ¹²²	30.3 ¹³³		52	16 05	43	25	** ** *	14	14
5	258	44.7	-19 07.2	330	18.4 ¹²²	+13 16.9 ¹³⁴		50	16 13	16 49	17 28	** ** *	14 10	16
6	273	44.5	-19 07.8	344	49.7 ¹²³	+13 03.5 ¹³⁴		45	16 29	17 01	17 36	** ** *	14 01	21
7	288	44.4	08.4	359	21.0 ¹²³	+12 49.9 ¹³⁶		40	42	11	44	0 00	69	13 53 26
8	303	44.3	09.0	13	52.2 ¹²²	36.3 ¹³⁶		35	16 53	20	51	09 65	47	29
9	318	44.2	09.6	28	23.5 ¹²³	22.6 ¹³⁷		30	17 03	28	17 57	16 63	41	33
10	333	44.0	10.2	42	54.8 ¹²³	+12 08.8 ¹³⁸		20	20	43	18 10	29 57	31	38
11	348	43.9	-19 10.8	57	26.1 ¹²³	+11 54.9 ¹³⁹		10 N	17 35	17 57	18 22	0 41	52	13 22 43
12	3	43.8	-19 11.4	71	57.4 ¹²³	+11 41.0 ¹³⁹		0	17 49	18 11	18 36	0 51	48	13 14 47
13	18	43.6	12.0	86	28.8 ¹²⁴	26.9 ¹⁴¹		10 S	18 03	25	18 51	1 02	43	13 06 51
14	33	43.5	12.6	101	00.1 ¹²³	+11 12.8 ¹⁴¹		20	18	18 42	19 10	13 38	12	56 57
15	48	43.4	13.2	115	31.4 ¹²³	+10 58.7 ¹⁴¹		30	36	19 02	34	26 33	46	63
16	63	43.2	13.8	130	02.8 ¹²⁴	44.4 ¹⁴³		35	46	14	19 49	33 30	40	66
17	78	43.1	-19 14.4	144	34.1 ¹²³	+10 30.1 ¹⁴³		40	18 58	19 29	20 07	1 41	27	12 33 70
18	93	43.0	-19 15.0	159	05.5 ¹²⁴	+10 15.7 ¹⁴⁴		45	19 12	19 47	20 31	1 51	22	12 25 74
19	108	42.8	15.5	173	36.8 ¹²³	+10 01.3 ¹⁴⁴		50	30	20 09	21 03	2 03	17	15 79
20	123	42.7	16.1	188	08.2 ¹²⁴	+9 46.7 ¹⁴⁶		52	38	21	20	08 15	10	82
21	138	42.6	16.7	202	39.6 ¹²⁴	32.2 ¹⁴⁵		54	47	33	21 41	14 12	05	85
22	153	42.5	17.3	217	10.9 ¹²³	17.5 ¹⁴⁷		56	19 57	20 48	22 09	21 9	12	00 88
23	168	42.3	17.9	231	42.3 ¹²⁴	+9 02.8 ¹⁴⁷		58	20 09	21 06	22 55	28 6	11	53 92
24	183	42.2	-19 18.5	246	13.6 ¹²³	+8 48.0 ¹⁴⁸		60 S	20 23	21 29	** ** *	2 36	3	11 46 96
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 10 ^m 2		Mag: -3.8 PMG: 13 ^h 25 ^m			Mag: -0.7 PMG: 19 ^h 18 ^m			Mag: -2.0 PMG: 7 ^h 21 ^m			Mag: -0.2 PMG: 3 ^h 08 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	56	37.6	158 55.8	-23 53.7	70 10.7	-7 21.4	249 28.8	+6 37.0	312 50.5	+22 06.6	312 50.5	+22 06.6	312 50.5	+22 06.6
1	71	40.1	173 54.9	54.1	85 12.1	20.8	264 30.9	36.8	327 53.1		327 53.1	06.6	327 53.1	06.6
2	86	42.5	188 54.0	54.4	100 13.5	20.2	279 33.1	36.7	342 55.7		342 55.7	06.6	342 55.7	06.6
3	101	45.0	203 53.1	54.8	115 14.9	19.7	294 35.3	36.6	357 58.2		357 58.2	06.6	357 58.2	06.6
4	116	47.4	218 52.2	55.1	130 16.3	19.1	309 37.4	36.5	13 00.8		13 00.8	06.6	13 00.8	06.6
5	131	49.9	233 51.3	-23 55.5	145 17.6	-7 18.5	324 39.6	+6 36.4	28 03.4	+22 06.6	28 03.4	+22 06.6	28 03.4	+22 06.6
6	146	52.4	248 50.4	-23 55.8	160 19.0	-7 17.9	339 41.7	+6 36.2	43 06.0	+22 06.7	43 06.0	+22 06.7	43 06.0	+22 06.7
7	161	54.8	263 49.5	56.2	175 20.4	17.4	354 43.9	36.1	58 08.5	06.7	58 08.5	06.7	58 08.5	06.7
8	176	57.3	278 48.5	56.5	190 21.8	16.8	9 46.0	36.0	73 11.1	06.7	73 11.1	06.7	73 11.1	06.7
9	191	59.8	293 47.6	56.9	205 23.2	16.2	24 48.2	35.9	88 13.7	06.7	88 13.7	06.7	88 13.7	06.7
10	207	02.2	308 46.7	57.2	220 24.6	15.6	39 50.4	35.8	103 16.3	06.7	103 16.3	06.7	103 16.3	06.7
11	222	04.7	323 45.8	-23 57.6	235 26.0	-7 15.1	54 52.5	+6 35.7	118 18.8	+22 06.7	118 18.8	+22 06.7	118 18.8	+22 06.7
12	237	07.2	338 44.9	-23 57.9	250 27.4	-7 14.5	69 54.7	+6 35.5	133 21.4	+22 06.7	133 21.4	+22 06.7	133 21.4	+22 06.7
13	252	09.6	353 44.0	58.3	265 28.7	13.9	84 56.8	35.4	148 24.0	06.7	148 24.0	06.7	148 24.0	06.7
14	267	12.1	8 43.1	58.6	280 30.1	13.3	99 59.0	35.3	163 26.6	06.8	163 26.6	06.8	163 26.6	06.8
15	282	14.6	23 42.1	59.0	295 31.5	12.8	115 01.1	35.2	178 29.2	06.8	178 29.2	06.8	178 29.2	06.8
16	297	17.0	38 41.2	59.3	310 32.9	12.2	130 03.3	35.1	193 31.7	06.8	193 31.7	06.8	193 31.7	06.8
17	312	19.5	53 40.3	-23 59.7	325 34.3	-7 11.6	145 05.5	+6 34.9	208 34.3	+22 06.8	208 34.3	+22 06.8	208 34.3	+22 06.8
18	327	21.9	68 39.4	-24 00.0	340 35.7	-7 11.0	160 07.6	+6 34.8	223 36.9	+22 06.8	223 36.9	+22 06.8	223 36.9	+22 06.8
19	342	24.4	83 38.5	-24 00.3	355 37.1	10.5	175 09.8	34.7	238 39.5	06.8	238 39.5	06.8	238 39.5	06.8
20	357	26.9	98 37.6	00.7	10 38.4	09.9	190 11.9	34.6	253 42.1	06.8	253 42.1	06.8	253 42.1	06.8
21	12	29.3	113 36.6	01.0	25 39.8	09.3	205 14.1	34.5	268 44.6	06.8	268 44.6	06.8	268 44.6	06.8
22	27	31.8	128 35.7	01.3	40 41.2	08.7	220 16.3	34.4	283 47.2	06.8	283 47.2	06.8	283 47.2	06.8
23	42	34.3	143 34.8	01.7	55 42.6	08.2	235 18.4	34.2	298 49.8	06.9	298 49.8	06.9	298 49.8	06.9
24	57	36.7	158 33.9	-24 02.0	70 44.0	-7 07.6	250 20.6	+6 34.1	313 52.4	+22 06.9	313 52.4	+22 06.9	313 52.4	+22 06.9
Dif	—	—	-9	-3	+14	+6	+22	-1	+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 3			Edad: 24 ^d 5 PHE { 4 ^h : 58'4 12 ^h : 58'7 20 ^h : 59'0 SD: 15'9 PMG: 7 ^h 50 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	42.2	-19	18.5	246	13.6	+8	48.0	60 N	6 24	7 16	8 07	0 36	97	14 37	2		
1	198	42.0		19.1	260	45.0 ¹²⁴		33.1 ¹⁴⁹	58	19	08	7 54	41	93	35	5		
2	213	41.9		19.7	275	16.4 ¹²⁴		18.2 ¹⁴⁹	56	14	7 01	44	46	89	32	9		
3	228	41.8		20.3	289	47.7 ¹²³	+8	03.2 ¹⁵⁰	54	10	6 54	34	50	86	30	11		
4	243	41.6		20.9	304	19.0 ¹²³	+7	48.2 ¹⁵⁰	52	06	48	26	53	83	28	14		
5	258	41.5	-19	21.5	318	50.4 ¹²⁴	+7	33.1 ¹⁵¹	50	6 03	6 42	7 18	0 56	81	14 26	16		
6	273	41.4	-19	22.0	333	21.7 ¹²³	+7	17.9 ¹⁵²	45	5 54	6 30	7 02	1 03	76	14 22	22		
7	288	41.2		22.6	347	53.0 ¹²³	+7	02.7 ¹⁵²	40	47	20	6 49	09	71	19	25		
8	303	41.1		23.2	2	24.3 ¹²³	+6	47.5 ¹⁵²	35	40	11	38	14	67	16	29		
9	318	41.0		23.8	16	55.6 ¹²³		32.1 ¹⁵⁴	30	33	6 02	28	19	63	14	32		
10	333	40.8		24.4	31	26.9 ¹²³		16.8 ¹⁵³	20	21	5 48	6 11	26	58	09	38		
11	348	40.7	-19	25.0	45	58.2 ¹²³	+6	01.3 ¹⁵⁵	10 N	5 08	5 34	5 56	1 33	52	14 05	43		
12	3	40.5	-19	25.6	60	29.4 ¹²²	+5	45.8 ¹⁵⁵	0	4 54	5 20	5 42	1 39	47	14 01	48		
13	18	40.4		26.1	75	00.7 ¹²³		30.3 ¹⁵⁵	10 S	39	5 05	27	45	43	13 57	53		
14	33	40.3		26.7	89	31.9 ¹²²	+5	14.7 ¹⁵⁶	20	4 20	4 48	5 12	51	38	53	59		
15	48	40.1		27.3	104	03.1 ¹²²	+4	59.1 ¹⁵⁶	30	3 56	28	4 54	1 59	32	49	64		
16	63	40.0		27.9	118	34.3 ¹²²		43.4 ¹⁵⁷	35	41	16	44	2 03	29	46	67		
17	78	39.9	-19	28.5	133	05.4 ¹²¹	+4	27.7 ¹⁵⁷	40	3 23	4 01	4 32	2 08	25	13 43	71		
18	93	39.7	-19	29.1	147	36.6 ¹²²	+4	11.9 ¹⁵⁸	45	2 59	3 43	4 18	2 13	22	13 39	76		
19	108	39.6		29.6	162	07.7 ¹²¹	+3	56.1 ¹⁵⁸	50	27	20	4 00	20	16	34	82		
20	123	39.4		30.2	176	38.8 ¹²¹		40.3 ¹⁵⁸	52	2 10	3 09	3 52	23	14	32	85		
21	138	39.3		30.8	191	09.8 ¹²⁰		24.4 ¹⁵⁹	54	1 49	2 56	43	26	12	30	87		
22	153	39.1		31.4	205	40.9 ¹²¹	+3	08.4 ¹⁶⁰	56	1 21	42	32	30	9	28	90		
23	168	39.0		31.9	220	11.9 ¹²⁰	+2	52.5 ¹⁵⁹	58	0 35	24	20	34	6	25	93		
24	183	38.9	-19	32.5	234	42.8 ¹¹⁹	+2	36.5 ¹⁶⁰	60 S	** **	2 01	3 06	2 39	2	13 22	97		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 06 ^m 2		Mag: -3.9 PMG: 13 ^h 27 ^m				Mag: -0.7 PMG: 19 ^h 15 ^m				Mag: -2.0 PMG: 7 ^h 18 ^m				Mag: -0.2 PMG: 3 ^h 04 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	57	36.7	158	33.9	-24	02.0	70	44.0	-7	07.6	250	20.6	+6	34.1	313	52.4	+22	06.9
1	72	39.2	173	33.0		02.3	85	45.3		07.0	265	22.7		34.0	328	54.9		06.9
2	87	41.7	188	32.0		02.7	100	46.7		06.4	280	24.9		33.9	343	57.5		06.9
3	102	44.1	203	31.1		03.0	115	48.1		05.8	295	27.1		33.8	359	00.1		06.9
4	117	46.6	218	30.2		03.3	130	49.5		05.3	310	29.2		33.7	14	02.7		06.9
5	132	49.0	233	29.3	-24	03.7	145	50.9	-7	04.7	325	31.4	+6	33.5	29	05.3	+22	06.9
6	147	51.5	248	28.4	-24	04.0	160	52.2	-7	04.1	340	33.5	+6	33.4	44	07.8	+22	06.9
7	162	54.0	263	27.5		04.3	175	53.6		03.5	355	35.7		33.3	59	10.4		07.0
8	177	56.4	278	26.5		04.6	190	55.0		03.0	10	37.9		33.2	74	13.0		07.0
9	192	58.9	293	25.6		04.9	205	56.4		02.4	25	40.0		33.1	89	15.6		07.0
10	208	01.4	308	24.7		05.3	220	57.7		01.8	40	42.2		33.0	104	18.2		07.0
11	223	03.8	323	23.8	-24	05.6	235	59.1	-7	01.2	55	44.3	+6	32.8	119	20.8	+22	07.0
12	238	06.3	338	22.8	-24	05.9	251	00.5	-7	00.6	70	46.5	+6	32.7	134	23.3	+22	07.0
13	253	08.8	353	21.9		06.2	266	01.9	-7	00.1	85	48.7		32.6	149	25.9		07.0
14	268	11.2	8	21.0		06.5	281	03.2	-6	59.5	100	50.8		32.5	164	28.5		07.0
15	283	13.7	23	20.1		06.8	296	04.6		58.9	115	53.0		32.4	179	31.1		07.0
16	298	16.2	38	19.2		07.2	311	06.0		58.3	130	55.2		32.3	194	33.7		07.1
17	313	18.6	53	18.2	-24	07.5	326	07.4	-6	57.7	145	57.3	+6	32.2	209	36.2	+22	07.1
18	328	21.1	68	17.3	-24	07.8	341	08.7	-6	57.2	160	59.5	+6	32.0	224	38.8	+22	07.1
19	343	23.5	83	16.4		08.1	356	10.1		56.6	176	01.7		31.9	239	41.4		07.1
20	358	26.0	98	15.5		08.4	11	11.5		56.0	191	03.8		31.8	254	44.0		07.1
21	13	28.5	113	14.5		08.7	26	12.9		55.4	206	06.0		31.7	269	46.6		07.1
22	28	30.9	128	13.6		09.0	41	14.2		54.8	221	08.2		31.6	284	49.2		07.1
23	43	33.4	143	12.7		09.3	56	15.6		54.3	236	10.3		31.5	299	51.7		07.1
24	58	35.9	158	11.8	-24	09.6	71	17.0	-6	53.7	251	12.5	+6	31.3	314	54.3	+22	07.2
Dif	—		-9		-3		+14		+6		+22		-1		+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 5			Edad: 25 ^d 5 PHE { 4 ^h : 59:3 12 ^h : 59:6 20 ^h : 59:9 PMG: 8 ^h 38 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	183	38.9	-19	32.5	234	42.8	+2	36.5	60 N	15 21	16 12	17 04	2 13 99	14 39 2				
1	198	38.7		33.1	249	13.8 ¹²⁰		20.4 ¹⁶¹	58	34	20	10	14 95	40 6				
2	213	38.6		33.7	263	44.7 ¹¹⁹	+2	04.3 ¹⁶¹	56	45	28	14	15 92	41 9				
3	228	38.4		34.3	278	15.6 ¹¹⁹	+1	48.2 ¹⁶¹	54	15 54	35	19	16 88	41 12				
4	243	38.3		34.8	292	46.4 ¹¹⁸		32.1 ¹⁶¹	52	16 03	41	23	16 86	42 14				
5	258	38.1	-19	35.4	307	17.3 ¹¹⁹	+1	15.9 ¹⁶²	50	16 11	16 47	17 26	2 17 83	14 42 17				
6	273	38.0	-19	36.0	321	48.0 ¹¹⁷	+0	59.7 ¹⁶²	45	16 27	16 59	17 35	2 19 77	14 44 22				
7	288	37.9		36.5	336	18.8 ¹¹⁸		43.5 ¹⁶²	40	40	17 10	43	20 73	44 27				
8	303	37.7		37.1	350	49.5 ¹¹⁷		27.2 ¹⁶³	35	16 52	19	50	21 69	45 31				
9	318	37.6		37.7	5	20.1 ¹¹⁶	+0	11.0 ¹⁶²	30	17 02	28	17 57	22 65	46 34				
10	333	37.4		38.3	19	50.7 ¹¹⁶	-0	05.3 ¹⁶³	20	19	43	18 10	24 59	47 40				
11	348	37.3	-19	38.8	34	21.3 ¹¹⁶	-0	21.7 ¹⁶⁴	10 N	17 35	17 57	18 23	2 25 54	14 48 46				
12	3	37.1	-19	39.4	48	51.8 ¹¹⁵	-0	38.0 ¹⁶³	0	17 49	18 11	18 37	2 26 50	14 49 51				
13	18	37.0		40.0	63	22.3 ¹¹⁵	-0	54.4 ¹⁶⁴	10 S	18 04	26	18 52	28 44	50 56				
14	33	36.8		40.5	77	52.8 ¹¹⁵	-1	10.7 ¹⁶³	20	19	18 43	19 11	29 39	52 60				
15	48	36.7		41.1	92	23.2 ¹¹⁴		27.1 ¹⁶⁴	30	38	19 04	36	31 33	53 67				
16	63	36.5		41.7	106	53.5 ¹¹³	-1	43.5 ¹⁶⁴	35	18 48	17	19 51	32 30	53 71				
17	78	36.4	-19	42.2	121	23.8 ¹¹³	-2	00.0 ¹⁶⁵	40	19 00	19 32	20 10	2 33 26	14 54 75				
18	93	36.2	-19	42.8	135	54.0 ¹¹²	-2	16.4 ¹⁶⁴	45	19 15	19 50	20 34	2 35 21	14 55 79				
19	108	36.1		43.4	150	24.2 ¹¹²		32.8 ¹⁶⁴	50	33	20 13	21 08	36 17	56 85				
20	123	35.9		43.9	164	54.3 ¹¹¹	-2	49.3 ¹⁶⁵	52	41	25	25	37 14	57 87				
21	138	35.8		44.5	179	24.4 ¹¹¹	-3	05.7 ¹⁶⁴	54	19 51	38	21 47	38 11	57 91				
22	153	35.6		45.1	193	54.4 ¹¹⁰		22.2 ¹⁶⁵	56	20 02	20 53	22 18	39 8	58 94				
23	168	35.5		45.6	208	24.3 ¹⁰⁹		38.6 ¹⁶⁴	58	14	21 12	23 16	40 5	58 98				
24	183	35.3	-19	46.2	222	54.2 ¹⁰⁹	-3	55.1 ¹⁶⁵	60 S	20 28	21 36	** **	2 41 2	14 59 102				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 02 ^m 3			Mag: -3.9 PMG: 13 ^h 28 ^m			Mag: -0.7 PMG: 19 ^h 13 ^m			Mag: -2.0 PMG: 7 ^h 14 ^m			Mag: -0.2 PMG: 3 ^h 00 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	58	35.9	158	11.8	-24	09.6	71	17.0	-6	53.7	251	12.5	+6	31.3	314	54.3	+22	07.2
1	73	38.3	173	10.8		09.9	86	18.3		53.1	266	14.6		31.2	329	56.9		07.2
2	88	40.8	188	09.9		10.2	101	19.7		52.5	281	16.8		31.1	344	59.5		07.2
3	103	43.3	203	09.0		10.5	116	21.1		51.9	296	19.0		31.0	0	02.1		07.2
4	118	45.7	218	08.1		10.8	131	22.4		51.4	311	21.1		30.9	15	04.7		07.2
5	133	48.2	233	07.1	-24	11.1	146	23.8	-6	50.8	326	23.3	+6	30.8	30	07.3	+22	07.2
6	148	50.6	248	06.2	-24	11.4	161	25.2	-6	50.2	341	25.5	+6	30.7	45	09.8	+22	07.2
7	163	53.1	263	05.3		11.7	176	26.6		49.6	356	27.6		30.5	60	12.4		07.2
8	178	55.6	278	04.4		12.0	191	27.9		49.0	11	29.8		30.4	75	15.0		07.3
9	193	58.0	293	03.4		12.3	206	29.3		48.4	26	32.0		30.3	90	17.6		07.3
10	209	00.5	308	02.5		12.6	221	30.6		47.9	41	34.1		30.2	105	20.2		07.3
11	224	03.0	323	01.6	-24	12.9	236	32.0	-6	47.3	56	36.3	+6	30.1	120	22.8	+22	07.3
12	239	05.4	338	00.7	-24	13.1	251	33.4	-6	46.7	71	38.5	+6	30.0	135	25.4	+22	07.3
13	254	07.9	352	59.7		13.4	266	34.7		46.1	86	40.6		29.9	150	27.9		07.3
14	269	10.4	7	58.8		13.7	281	36.1		45.5	101	42.8		29.7	165	30.5		07.3
15	284	12.8	22	57.9		14.0	296	37.5		44.9	116	45.0		29.6	180	33.1		07.3
16	299	15.3	37	56.9		14.3	311	38.8		44.4	131	47.2		29.5	195	35.7		07.4
17	314	17.8	52	56.0	-24	14.6	326	40.2	-6	43.8	146	49.3	+6	29.4	210	38.3	+22	07.4
18	329	20.2	67	55.1	-24	14.8	341	41.6	-6	43.2	161	51.5	+6	29.3	225	40.9	+22	07.4
19	344	22.7	82	54.2		15.1	356	42.9		42.6	176	53.7		29.2	240	43.5		07.4
20	359	25.1	97	53.2		15.4	11	44.3		42.0	191	55.8		29.1	255	46.0		07.4
21	14	27.6	112	52.3		15.7	26	45.6		41.4	206	58.0		29.0	270	48.6		07.4
22	29	30.1	127	51.4		15.9	41	47.0		40.9	222	00.2		28.8	285	51.2		07.4
23	44	32.5	142	50.4		16.2	56	48.4		40.3	237	02.3		28.7	300	53.8		07.4
24	59	35.0	157	49.5	-24	16.5	71	49.7	-6	39.7	252	04.5	+6	28.6	315	56.4	+22	07.5
Dif	—		-9		-3		+14		+6		+22		-1		+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 8			Edad: 26 ^d 5 PHE { SD: 16'4 PMG: 9 ^h 28 ^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	35.3	-19	46.2	222	54.2	-3	55.1	60 N	6 28	7 21	8 12	3 52	105	14 41	3	
1	198	35.2		46.7	237	24.1	-4	11.5	58	23	12	7 59	49	101	46	7	
2	213	35.0		47.3	251	53.8		28.0	56	18	7 04	48	47	96	50	10	
3	228	34.9		47.9	266	23.5	-4	44.5	54	13	6 57	38	44	94	53	14	
4	243	34.7		48.4	280	53.2	-5	00.9	52	09	51	29	42	90	56	17	
5	258	34.6	-19	49.0	295	22.8	-5	17.3	50	6 05	6 45	7 22	3 40	88	14 59	20	
6	273	34.4	-19	49.5	309	52.3	-5	33.8	45	5 57	6 33	7 05	3 36	82	15 06	25	
7	288	34.3		50.1	324	21.7	-5	50.2	40	49	22	6 51	33	76	11	30	
8	303	34.1		50.7	338	51.1	-6	06.6	35	42	13	40	30	72	16	34	
9	318	34.0		51.2	353	20.4		23.0	30	35	6 04	30	27	69	20	38	
10	333	33.8		51.8	7	49.6		39.3	20	22	5 49	6 12	23	62	27	44	
11	348	33.6	-19	52.3	22	18.7	-6	55.7	10 N	5 09	5 34	5 57	3 19	57	15 34	48	
12	3	33.5	-19	52.9	36	47.8	-7	12.0	0	4 55	5 20	5 42	3 16	52	15 40	53	
13	18	33.3		53.4	51	16.8		28.3	10 S	39	5 05	28	12	47	46	58	
14	33	33.2		54.0	65	45.7	-7	44.6	20	4 20	4 48	5 12	08	42	15 52	64	
15	48	33.0		54.5	80	14.6	-8	00.9	30	3 55	27	4 53	04	36	16 00	70	
16	63	32.9		55.1	94	43.3		17.1	35	40	4 14	43	3 02	32	04	74	
17	78	32.7	-19	55.6	109	12.0	-8	33.3	40	3 21	3 59	4 30	2 59	29	16 09	78	
18	93	32.5	-19	56.2	123	40.6	-8	49.4	45	2 57	3 41	4 16	2 56	24	16 14	83	
19	108	32.4		56.7	138	09.1	-9	05.6	50	23	18	3 58	53	18	21	89	
20	123	32.2		57.3	152	37.5		21.7	52	2 06	3 06	49	51	16	24	92	
21	138	32.1		57.8	167	05.9		37.7	54	1 43	2 53	40	49	13	28	95	
22	153	31.9		58.4	181	34.1	-9	53.7	56	1 13	37	29	47	10	32	99	
23	168	31.8		58.9	196	02.3	-10	09.7	58	0 14	2 19	17	45	7	36	103	
24	183	31.6	-19	59.5	210	30.4	-10	25.6	60 S	** **	1 55	3 02	2 43	2	16 41	108	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 19 ^h 58 ^m 4			Mag: -3.9 PMG: 13 ^h 30 ^m			Mag: -0.6 PMG: 19 ^h 11 ^m			Mag: -2.0 PMG: 7 ^h 11 ^m			Mag: -0.2 PMG: 2 ^h 56 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	59	35.0	157	49.5	-24	16.5	71	49.7	-6	39.7	252	04.5	+6	28.6	315	56.4	+22 07.5
1	74	37.5	172	48.6		16.8	86	51.1		39.1	267	06.7		28.5	330	59.0	07.5
2	89	39.9	187	47.6		17.0	101	52.4		38.5	282	08.9		28.4	346	01.6	07.5
3	104	42.4	202	46.7		17.3	116	53.8		37.9	297	11.0		28.3	1	04.2	07.5
4	119	44.9	217	45.8		17.6	131	55.2		37.3	312	13.2		28.2	16	06.8	07.5
5	134	47.3	232	44.8	-24	17.8	146	56.5	-6	36.8	327	15.4	+6	28.1	31	09.3	+22 07.5
6	149	49.8	247	43.9	-24	18.1	161	57.9	-6	36.2	342	17.5	+6	27.9	46	11.9	+22 07.5
7	164	52.3	262	43.0		18.4	176	59.2		35.6	357	19.7		27.8	61	14.5	07.5
8	179	54.7	277	42.1		18.6	192	00.6		35.0	12	21.9		27.7	76	17.1	07.6
9	194	57.2	292	41.1		18.9	207	01.9		34.4	27	24.1		27.6	91	19.7	07.6
10	209	59.6	307	40.2		19.1	222	03.3		33.8	42	26.2		27.5	106	22.3	07.6
11	225	02.1	322	39.3	-24	19.4	237	04.7	-6	33.2	57	28.4	+6	27.4	121	24.9	+22 07.6
12	240	04.6	337	38.3	-24	19.7	252	06.0	-6	32.7	72	30.6	+6	27.3	136	27.5	+22 07.6
13	255	07.0	352	37.4		19.9	267	07.4		32.1	87	32.8		27.2	151	30.1	07.6
14	270	09.5	7	36.5		20.2	282	08.7		31.5	102	34.9		27.0	166	32.7	07.6
15	285	12.0	22	35.5		20.4	297	10.1		30.9	117	37.1		26.9	181	35.2	07.6
16	300	14.4	37	34.6		20.7	312	11.4		30.3	132	39.3		26.8	196	37.8	07.7
17	315	16.9	52	33.6	-24	20.9	327	12.8	-6	29.7	147	41.4	+6	26.7	211	40.4	+22 07.7
18	330	19.4	67	32.7	-24	21.2	342	14.1	-6	29.1	162	43.6	+6	26.6	226	43.0	+22 07.7
19	345	21.8	82	31.8		21.4	357	15.5		28.6	177	45.8		26.5	241	45.6	07.7
20	0	24.3	97	30.8		21.7	12	16.8		28.0	192	48.0		26.4	256	48.2	07.7
21	15	26.7	112	29.9		21.9	27	18.2		27.4	207	50.1		26.3	271	50.8	07.7
22	30	29.2	127	29.0		22.2	42	19.5		26.8	222	52.3		26.2	286	53.4	07.7
23	45	31.7	142	28.0		22.4	57	20.9		26.2	237	54.5		26.0	301	56.0	07.7
24	60	34.1	157	27.1	-24	22.6	72	22.2	-6	25.6	252	56.7	+6	25.9	316	58.6	+22 07.8
Dif	—			-9 -3			+14 +6			+22 -1			+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 0			Edad: 27 ^d 5 PHE { 4 ^h : 60/9 12 ^h : 61/1 20 ^h : 61/2 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	m	
0	183	31.6	-19 59.5	210	30.4	-10 25.6		60 N	15 17	16 09	17 02	5 37 112	14 44	6	
1	198	31.4	-20 00.0	224	58.4	90 41.5 ¹⁵⁹		58	31	18	07	30 106	14 53	11	
2	213	31.3	-20 00.6	239	26.2	88 -10 57.3 ¹⁵⁸		56	42	25	12	23 102	15 00	16	
3	228	31.1	01.1	253	54.1	89 -11 13.1 ¹⁵⁸		54	15 52	33	17	18 97	07 19		
4	243	30.9	01.7	268	21.8	87 28.8 ¹⁵⁷		52	16 01	39	21	12 95	13 23		
5	258	30.8	-20 02.2	282	49.4	86 -11 44.5 ¹⁵⁷		50	16 09	16 45	17 25	5 08 91	15 19	25	
6	273	30.6	-20 02.8	297	16.9	85 -12 00.1 ¹⁵⁶		45	16 25	16 58	17 34	4 58 84	15 31	31	
7	288	30.5	03.3	311	44.3	84 15.7 ¹⁵⁶		40	39	17 09	42	49 80	41 36		
8	303	30.3	03.8	326	11.7	84 31.2 ¹⁵⁵		35	16 51	18	49	42 76	50 39		
9	318	30.1	04.4	340	38.9	82 -12 46.6 ¹⁵⁴		30	17 01	27	17 56	36 72	15 58	42	
10	333	30.0	04.9	355	06.0	81 -13 02.0 ¹⁵⁴		20	19	43	18 10	25 66	16 11	48	
11	348	29.8	-20 05.5	9	33.1	81 -13 17.3 ¹⁵³		10 N	17 35	17 57	18 23	4 16 61	16 22	54	
12	3	29.6	-20 06.0	24	00.0	79 -13 32.5 ¹⁵²		0	17 50	18 12	18 37	4 08 55	16 33	58	
13	18	29.5	06.5	38	26.8	78 -13 47.6 ¹⁵¹		10 S	18 05	27	18 53	3 59 51	44 63		
14	33	29.3	07.1	52	53.6	78 -14 02.7 ¹⁵¹		20	21	18 45	19 13	50 46	16 56	68	
15	48	29.2	07.6	67	20.2	76 17.7 ¹⁵⁰		30	39	19 06	38	40 40	17 10	73	
16	63	29.0	08.2	81	46.7	75 32.6 ¹⁴⁹		35	18 50	19	19 53	34 37	18 77		
17	78	28.8	-20 08.7	96	13.1	74 -14 47.4 ¹⁴⁸		40	19 03	19 34	20 13	3 28 32	17 27	81	
18	93	28.7	-20 09.2	110	39.4	73 -15 02.2 ¹⁴⁸		45	19 18	19 53	20 38	3 20 28	17 37	86	
19	108	28.5	09.8	125	05.7	73 16.8 ¹⁴⁶		50	36	20 17	21 12	11 22	50 92		
20	123	28.3	10.3	139	31.8	71 31.4 ¹⁴⁶		52	45	29	31	07 19	17 56	95	
21	138	28.2	10.8	153	57.8	70 -15 45.9 ¹⁴⁵		54	19 55	42	21 54	3 02 17	18 03	99	
22	153	28.0	11.4	168	23.7	69 -16 00.3 ¹⁴⁴		56	20 06	20 58	22 27	2 57 13	11 102		
23	168	27.8	11.9	182	49.4	67 14.6 ¹⁴³		58	19	21 18	** **	52 9	19 108		
24	183	27.6	-20 12.4	197	15.1	67 -16 28.8 ¹⁴²		60 S	20 34	21 43	** **	2 45 5	18 29	114	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 54 ^m 5			Mag: -3.9 PMG: 13 ^h 31 ^m			Mag: -0.6 PMG: 19 ^h 09 ^m			Mag: -2.0 PMG: 7 ^h 07 ^m			Mag: -0.2 PMG: 2 ^h 52 ^m		
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°
0	60	34.1	157	27.1	-24 22.6	72	22.2	-6 25.6	252	56.7	+6 25.9	316	58.6	+22 07.8	
1	75	36.6	172	26.2	22.9	87	23.6	25.0	267	58.8	25.8	332	01.2	07.8	
2	90	39.1	187	25.2	23.1	102	24.9	24.4	283	01.0	25.7	347	03.8	07.8	
3	105	41.5	202	24.3	23.4	117	26.3	23.8	298	03.2	25.6	2	06.4	07.8	
4	120	44.0	217	23.4	23.6	132	27.6	23.3	313	05.4	25.5	17	08.9	07.8	
5	135	46.5	232	22.4	-24 23.8	147	29.0	-6 22.7	328	07.6	+6 25.4	32	11.5	+22 07.8	
6	150	48.9	247	21.5	-24 24.1	162	30.3	-6 22.1	343	09.7	+6 25.3	47	14.1	+22 07.8	
7	165	51.4	262	20.5	24.3	177	31.7	21.5	358	11.9	25.2	62	16.7	07.9	
8	180	53.9	277	19.6	24.5	192	33.0	20.9	13	14.1	25.1	77	19.3	07.9	
9	195	56.3	292	18.7	24.8	207	34.4	20.3	28	16.3	24.9	92	21.9	07.9	
10	210	58.8	307	17.7	25.0	222	35.7	19.7	43	18.4	24.8	107	24.5	07.9	
11	226	01.2	322	16.8	-24 25.2	237	37.0	-6 19.1	58	20.6	+6 24.7	122	27.1	+22 07.9	
12	241	03.7	337	15.9	-24 25.4	252	38.4	-6 18.5	73	22.8	+6 24.6	137	29.7	+22 07.9	
13	256	06.2	352	14.9	25.7	267	39.7	18.0	88	25.0	24.5	152	32.3	07.9	
14	271	08.6	7	14.0	25.9	282	41.1	17.4	103	27.2	24.4	167	34.9	07.9	
15	286	11.1	22	13.0	26.1	297	42.4	16.8	118	29.3	24.3	182	37.5	08.0	
16	301	13.6	37	12.1	26.3	312	43.8	16.2	133	31.5	24.2	197	40.1	08.0	
17	316	16.0	52	11.2	-24 26.6	327	45.1	-6 15.6	148	33.7	+6 24.1	212	42.7	+22 08.0	
18	331	18.5	67	10.2	-24 26.8	342	46.5	-6 15.0	163	35.9	+6 24.0	227	45.3	+22 08.0	
19	346	21.0	82	09.3	27.0	357	47.8	14.4	178	38.1	23.9	242	47.9	08.0	
20	1	23.4	97	08.3	27.2	12	49.1	13.8	193	40.2	23.7	257	50.5	08.0	
21	16	25.9	112	07.4	27.4	27	50.5	13.2	208	42.4	23.6	272	53.1	08.0	
22	31	28.4	127	06.5	27.6	42	51.8	12.6	223	44.6	23.5	287	55.7	08.0	
23	46	30.8	142	05.5	27.9	57	53.2	12.0	238	46.8	23.4	302	58.3	08.1	
24	61	33.3	157	04.6	-24 28.1	72	54.5	-6 11.4	253	49.0	+6 23.3	318	00.9	+22 08.1	
Dif	—			-9 -2			+13 +6			+22 -1			+26 0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 46 ^m 3			Edad: 28 ^d 5 PHE { SD: 16:7 PMG: 11 ^h 17 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	27.6	-20	12.4		197	15.1	-16 28.8	60 N	6 31	7 25	8 16	7 29	116	14 50	11
1	198	27.5		13.0		211	40.7	42.9 ¹⁴¹	58	26	16	8 03	16	109	15 04	18
2	213	27.3		13.5		226	06.2	65 -16 56.9 ¹⁴⁰	56	21	08	7 52	7 05	104	16	23
3	228	27.1		14.0		240	31.5	63 -17 10.7 ¹³⁸	54	16	7 01	42	6 55	99	26	28
4	243	27.0		14.5		254	56.8	63 24.5 ¹³⁸	52	12	6 54	33	47	95	36	31
5	258	26.8	-20	15.1		269	21.9	61 -17 38.2 ¹³⁷	50	6 08	6 48	7 25	6 39	92	15 44	34
6	273	26.6	-20	15.6		283	46.9	60 -17 51.7 ¹³⁵	45	5 59	6 35	7 08	6 22	87	16 02	40
7	288	26.5		16.1		298	11.9	60 -18 05.2 ¹³⁵	40	51	24	6 54	6 09	82	17	44
8	303	26.3		16.7		312	36.7	58 18.5 ¹³³	35	43	14	42	5 58	78	29	48
9	318	26.1		17.2		327	01.4	57 31.7 ¹³²	30	36	6 06	31	48	75	40	51
10	333	25.9		17.7		341	26.0	56 44.8 ¹³¹	20	23	5 50	6 13	31	70	16 59	55
11	348	25.8	-20	18.2		355	50.5	55 -18 57.7 ¹²⁹	10 N	5 09	5 35	5 58	5 17	65	17 16	59
12	3	25.6	-20	18.8		10	14.9	54 -19 10.6 ¹²⁹	0	4 55	5 21	5 43	5 03	61	17 31	63
13	18	25.4		19.3		24	39.1	52 23.3 ¹²⁷	10 S	39	5 05	5 28	4 50	56	17 47	66
14	33	25.3		19.8		39	03.3	52 35.8 ¹²⁵	20	4 19	4 48	5 12	36	52	18 04	70
15	48	25.1		20.3		53	27.4	51 -19 48.3 ¹²⁵	30	3 54	26	4 53	20	46	23	75
16	63	24.9		20.8		67	51.3	49 -20 00.6 ¹²³	35	39	4 13	42	11	43	35	77
17	78	24.7	-20	21.4		82	15.2	49 -20 12.8 ¹²²	40	3 19	3 58	4 29	4 00	40	18 48	81
18	93	24.6	-20	21.9		96	38.9	47 -20 24.8 ¹²⁰	45	2 54	3 39	4 14	3 48	35	19 03	85
19	108	24.4		22.4		111	02.5	46 36.7 ¹¹⁹	50	20	15	3 56	33	29	22	91
20	123	24.2		22.9		125	26.1	46 -20 48.4 ¹¹⁷	52	2 01	3 03	47	26	27	31	94
21	138	24.0		23.4		139	49.5	44 -21 00.0 ¹¹⁶	54	1 38	2 50	37	19	23	42	97
22	153	23.9		24.0		154	12.8	43 -21 11.5 ¹¹⁵	56	1 04	33	26	10	20	19 53	101
23	168	23.7		24.5		168	36.1	43 22.8 ¹¹³	58	** **	2 14	3 13	3 01	14	20 07	106
24	183	23.5	-20	25.0		182	59.2	41 -21 33.9 ¹¹¹	60 S	** **	1 49	2 58	2 50	9	20 23	114
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 50 ^m 5			Mag: -3.9 PMG: 13 ^h 33 ^m			Mag: -0.6 PMG: 19 ^h 07 ^m			Mag: -2.0 PMG: 7 ^h 04 ^m			Mag: -0.2 PMG: 2 ^h 47 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	61	33.3		157	04.6	-24	72	54.5	-6	253	49.0	+6	318	00.9	+22	08.1
1	76	35.7		172	03.6		87	55.8	10.9	268	51.1	23.2	333	03.4		08.1
2	91	38.2		187	02.7		102	57.2	10.3	283	53.3	23.1	348	06.0		08.1
3	106	40.7		202	01.8		117	58.5	09.7	298	55.5	23.0	3	08.6		08.1
4	121	43.1		217	00.8		132	59.8	09.1	313	57.7	22.9	18	11.2		08.1
5	136	45.6		231	59.9	-24	148	01.2	-6	328	59.9	+6	33	13.8	+22	08.1
6	151	48.1		246	58.9	-24	163	02.5	-6	344	02.1	+6	48	16.4	+22	08.2
7	166	50.5		261	58.0		178	03.9	07.3	359	04.2	22.6	63	19.0		08.2
8	181	53.0		276	57.1		193	05.2	06.7	14	06.4	22.5	78	21.6		08.2
9	196	55.5		291	56.1		208	06.5	06.1	29	08.6	22.3	93	24.2		08.2
10	211	57.9		306	55.2		223	07.9	05.5	44	10.8	22.2	108	26.8		08.2
11	227	00.4		321	54.2	-24	238	09.2	-6	59	13.0	+6	123	29.4	+22	08.2
12	242	02.8		336	53.3	-24	253	10.5	-6	74	15.2	+6	138	32.0	+22	08.2
13	257	05.3		351	52.3		268	11.9	03.7	89	17.3	21.9	153	34.6		08.2
14	272	07.8		6	51.4		283	13.2	03.1	104	19.5	21.8	168	37.2		08.3
15	287	10.2		21	50.5		298	14.5	02.6	119	21.7	21.7	183	39.8		08.3
16	302	12.7		36	49.5		313	15.9	02.0	134	23.9	21.6	198	42.4		08.3
17	317	15.2		51	48.6	-24	328	17.2	-6	149	26.1	+6	213	45.0	+22	08.3
18	332	17.6		66	47.6	-24	343	18.5	-6	164	28.3	+6	228	47.6	+22	08.3
19	347	20.1		81	46.7		358	19.9	-6	179	30.4	21.3	243	50.2		08.3
20	2	22.6		96	45.7		13	21.2	-5	194	32.6	21.2	258	52.8		08.3
21	17	25.0		111	44.8		28	22.5	59.0	209	34.8	21.1	273	55.4		08.4
22	32	27.5		126	43.9		43	23.9	58.4	224	37.0	21.0	288	58.0		08.4
23	47	30.0		141	42.9		58	25.2	57.8	239	39.2	20.9	304	00.6		08.4
24	62	32.4		156	42.0	-24	73	26.5	-5	254	41.4	+6	319	03.2	+22	08.4
Dif	—			-9		-2	+13		+6	+22		-1	+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: 29 ^d 5 PHE { 4 ^h : 61 ^h 4 12 ^h : 61 ^h 4 20 ^h : 61 ^h 3 R°: 65 ^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	23.5	-20	25.0	182	59.2	-21	33.9	60 N	15 14	16 06	16 59	9 25	111	15 01 25
1	198	23.3		25.5	197	22.2	40	44.9	58	27	15	17 05	9 05	102	22 33
2	213	23.2		26.0	211	45.1	39	55.7	56	39	23	10	8 49	96	39 39
3	228	23.0		26.5	226	08.0	39	06.4	54	49	30	15	34	93	15 54 42
4	243	22.8		27.0	240	30.7	37	16.9	52	15 58	37	19	22	90	16 07 45
5	258	22.6	-20	27.6	254	53.3	36	27.3	50	16 07	16 43	17 23	8 11	87	16 18 47
6	273	22.4	-20	28.1	269	15.9	36	37.5	45	16 24	16 56	17 33	7 49	82	16 42 51
7	288	22.3		28.6	283	38.3	34	47.5	40	38	17 08	41	31	79	17 01 54
8	303	22.1		29.1	298	00.7	34	57.4	35	16 50	18	49	16	76	17 56
9	318	21.9		29.6	312	23.0	33	07.0	30	17 01	27	17 56	7 03	74	31 58
10	333	21.7		30.1	326	45.2	32	16.5	20	19	43	18 10	6 41	70	17 54 61
11	348	21.5	-20	30.6	341	07.3	31	25.9	10 N	17 35	17 57	18 23	6 22	67	18 15 63
12	3	21.4	-20	31.1	355	29.3	30	35.0	0	17 50	18 12	18 38	6 04	64	18 34 65
13	18	21.2		31.6	9	51.2	29	44.0	10 S	18 05	28	18 55	5 46	62	18 53 68
14	33	21.0		32.1	24	13.1	29	52.8	20	22	18 46	19 14	28	58	19 14 70
15	48	20.8		32.7	38	34.8	27	01.5	30	41	19 08	40	5 06	55	38 72
16	63	20.6		33.2	52	56.5	27	09.9	35	18 52	21	19 56	4 54	52	19 52 74
17	78	20.5	-20	33.7	67	18.2	27	24 18.2	40	19 05	19 36	20 16	4 40	49	20 09 75
18	93	20.3	-20	34.2	81	39.7	25	26.2	45	19 20	19 56	20 41	4 23	45	20 28 78
19	108	20.1		34.7	96	01.2	25	34.1	50	39	20 20	21 17	4 02	41	20 53 81
20	123	19.9		35.2	110	22.6	24	41.8	52	48	33	21 36	3 53	37	21 05 83
21	138	19.7		35.7	124	44.0	24	49.3	54	19 58	20 47	22 01	42	34	19 85
22	153	19.5		36.2	139	05.2	22	56.6	56	20 10	21 03	22 37	30	30	34 88
23	168	19.4		36.7	153	26.5	23	03.8	58	23	24	** **	3 15	26	21 53 92
24	183	19.2	-20	37.2	167	47.6	21	25 10.7	60 S	20 39	21 51	** **	2 59	18	22 17 98
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 46 ^m 6		Mag: -3.9 PMG: 13 ^h 34 ^m		Mag: -0.6 PMG: 19 ^h 05 ^m		Mag: -2.0 PMG: 7 ^h 00 ^m		Mag: -0.2 PMG: 2 ^h 43 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	62	32.4	156	42.0	73	26.5	254	41.4	319	03.2					
1	77	34.9	171	41.0	88	27.8	269	43.6	334	05.8					
2	92	37.3	186	40.1	103	29.2	284	45.8	349	08.4					
3	107	39.8	201	39.1	118	30.5	299	47.9	4	11.0					
4	122	42.3	216	38.2	133	31.8	314	50.1	19	13.6					
5	137	44.7	231	37.2	148	33.2	329	52.3	34	16.2					
6	152	47.2	246	36.3	163	34.5	344	54.5	49	18.8					
7	167	49.7	261	35.4	178	35.8	359	56.7	64	21.4					
8	182	52.1	276	34.4	193	37.1	14	58.9	79	24.0					
9	197	54.6	291	33.5	208	38.5	30	01.1	94	26.6					
10	212	57.1	306	32.5	223	39.8	45	03.3	109	29.2					
11	227	59.5	321	31.6	238	41.1	60	05.4	124	31.8					
12	243	02.0	336	30.6	253	42.4	75	07.6	139	34.4					
13	258	04.5	351	29.7	268	43.8	90	09.8	154	37.1					
14	273	06.9	6	28.7	283	45.1	105	12.0	169	39.7					
15	288	09.4	21	27.8	298	46.4	120	14.2	184	42.3					
16	303	11.8	36	26.8	313	47.7	135	16.4	199	44.9					
17	318	14.3	51	25.9	328	49.1	150	18.6	214	47.5					
18	333	16.8	66	25.0	343	50.4	165	20.8	229	50.1					
19	348	19.2	81	24.0	358	51.7	180	23.0	244	52.7					
20	3	21.7	96	23.1	13	53.0	195	25.2	259	55.3					
21	18	24.2	111	22.1	28	54.3	210	27.3	274	57.9					
22	33	26.6	126	21.2	43	55.7	225	29.5	290	00.5					
23	48	29.1	141	20.2	58	57.0	240	31.7	305	03.1					
24	63	31.6	156	19.3	73	58.3	255	33.9	320	05.7					
Dif	—		-9		+13		+22		+26						
			-2		+6		-1		0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 46 ^m 9			Edad: 1 ^d 0 PHE { SD: 16:7 PMG: 13 ^h 24 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	19.2	-20	37.2	167	47.6	-25	10.7	60 N	6 35	7 29	8 21	11 16	81	15 26	57		
1	198	19.0		37.7	182	08.7	21	17.4	58	29	19	8 07	10 47	78	15 55	60		
2	213	18.8		38.2	196	29.8	21	24.0	56	24	11	7 55	25	77	16 18	61		
3	228	18.6		38.7	210	50.8	20	30.3	54	19	7 04	45	10 07	75	36	62		
4	243	18.4		39.2	225	11.7	19	36.5	52	15	6 57	36	9 52	74	16 52	62		
5	258	18.2	-20	39.7	239	32.7	20	-25 42.4	50	6 11	6 51	7 28	9 38	74	17 05	63		
6	273	18.1	-20	40.2	253	53.5	18	-25 48.1	45	6 01	6 37	7 10	9 11	72	17 33	64		
7	288	17.9		40.7	268	14.3	18	53.7	40	5 53	26	6 56	8 50	71	17 55	64		
8	303	17.7		41.2	282	35.1	18	-25 59.0	35	45	16	44	32	70	18 13	65		
9	318	17.5		41.7	296	55.9	18	-26 04.2	30	38	6 07	33	8 17	69	29	64		
10	333	17.3		42.1	311	16.6	17	09.1	20	24	5 51	6 15	7 51	68	18 55	65		
11	348	17.1	-20	42.6	325	37.3	17	-26 13.8	10 N	5 10	5 36	5 58	7 29	67	19 18	65		
12	3	16.9	-20	43.1	339	58.0	17	-26 18.4	0	4 55	5 21	5 43	7 08	66	19 39	66		
13	18	16.7		43.6	354	18.6	16	22.7	10 S	39	5 05	28	6 48	64	20 01	65		
14	33	16.6		44.1	8	39.2	16	26.8	20	4 19	4 47	5 11	26	63	24	65		
15	48	16.4		44.6	22	59.9	17	30.7	30	3 54	26	4 52	6 01	61	20 50	66		
16	63	16.2		45.1	37	20.5	16	34.4	35	37	4 12	41	5 46	60	21 06	65		
17	78	16.0	-20	45.6	51	41.0	15	-26 37.9	40	3 17	3 57	4 28	5 29	59	21 24	65		
18	93	15.8	-20	46.1	66	01.6	16	-26 41.2	45	2 52	3 37	4 13	5 08	58	21 46	65		
19	108	15.6		46.6	80	22.2	16	44.3	50	2 16	13	3 54	4 43	55	22 14	65		
20	123	15.4		47.0	94	42.8	16	47.1	52	1 57	3 00	45	30	54	28	64		
21	138	15.2		47.5	109	03.4	16	49.8	54	1 32	2 46	35	16	52	22 44	63		
22	153	15.0		48.0	123	23.9	15	52.3	56	0 55	30	23	4 00	49	23 02	63		
23	168	14.8		48.5	137	44.5	16	54.5	58	** **	2 09	3 10	3 41	46	25	62		
24	183	14.6	-20	49.0	152	05.1	16	-26 56.6	60 S	** **	1 42	2 54	3 17	40	23 55	61		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 42 ^m 7		Mag: -3.9 PMG: 13 ^h 36 ^m				Mag: -0.5 PMG: 19 ^h 02 ^m				Mag: -2.0 PMG: 6 ^h 57 ^m				Mag: -0.2 PMG: 2 ^h 39 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	63	31.6	156	19.3	-24	36.7	73	58.3	-5	42.9	255	33.9	+6	18.2	320	05.7		
1	78	34.0	171	18.3		36.8	88	59.6		42.3	270	36.1		18.1	335	08.3		
2	93	36.5	186	17.4		37.0	104	00.9		41.7	285	38.3		18.0	350	10.9		
3	108	39.0	201	16.4		37.1	119	02.3		41.1	300	40.5		17.9	5	13.5		
4	123	41.4	216	15.5		37.3	134	03.6		40.5	315	42.7		17.8	20	16.1		
5	138	43.9	231	14.5	-24	37.4	149	04.9	-5	39.9	330	44.9	+6	17.7	35	18.7		
6	153	46.3	246	13.6	-24	37.5	164	06.2	-5	39.3	345	47.1	+6	17.6	50	21.3		
7	168	48.8	261	12.6		37.7	179	07.5		38.7	0	49.3		17.5	65	23.9		
8	183	51.3	276	11.7		37.8	194	08.9		38.1	15	51.5		17.4	80	26.5		
9	198	53.7	291	10.7		38.0	209	10.2		37.5	30	53.7		17.3	95	29.2		
10	213	56.2	306	09.8		38.1	224	11.5		36.9	45	55.9		17.2	110	31.8		
11	228	58.7	321	08.8	-24	38.2	239	12.8	-5	36.3	60	58.1	+6	17.1	125	34.4		
12	244	01.1	336	07.9	-24	38.4	254	14.1	-5	35.7	76	00.2	+6	17.0	140	37.0		
13	259	03.6	351	06.9		38.5	269	15.4		35.1	91	02.4		16.9	155	39.6		
14	274	06.1	6	06.0		38.6	284	16.7		34.5	106	04.6		16.8	170	42.2		
15	289	08.5	21	05.0		38.8	299	18.1		33.9	121	06.8		16.7	185	44.8		
16	304	11.0	36	04.1		38.9	314	19.4		33.3	136	09.0		16.6	200	47.4		
17	319	13.5	51	03.1	-24	39.0	329	20.7	-5	32.7	151	11.2	+6	16.5	215	50.0		
18	334	15.9	66	02.2	-24	39.1	344	22.0	-5	32.1	166	13.4	+6	16.4	230	52.6		
19	349	18.4	81	01.2		39.3	359	23.3		31.5	181	15.6		16.3	245	55.2		
20	4	20.8	96	00.3		39.4	14	24.6		30.9	196	17.8		16.2	260	57.8		
21	19	23.3	110	59.3		39.5	29	25.9		30.3	211	20.0		16.1	276	00.4		
22	34	25.8	125	58.4		39.6	44	27.3		29.7	226	22.2		16.0	291	03.1		
23	49	28.2	140	57.4		39.8	59	28.6		29.1	241	24.4		15.9	306	05.7		
24	64	30.7	155	56.5	-24	39.9	74	29.9	-5	28.5	256	26.6	+6	15.8	321	08.3		
Dif	—		-9		-1		+13		+6		+22		-1		+26			

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: 2 ^d 0 PHE { SD: 16/6 PMG: 14 ^h 29 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	183	14.6	-20	49.0	152	05.1	-26	56.6	60 N	15 11	16 03	16 57	12 37 41	16 23 92	
1	198	14.5		49.5	166	25.8	17	-26 58.4	58	25	13	17 03	12 05 47	16 55 85	
2	213	14.3		50.0	180	46.4	16	-27 00.0	56	37	21	08	11 42 49	17 19 81	
3	228	14.1		50.4	195	07.1	17	-27 01.4	54	47	29	13	22 52	38 79	
4	243	13.9		50.9	209	27.7	16	02.7	52	15 57	35	18	11 06 53	17 54 78	
5	258	13.7	-20	51.4	223	48.5	18	-27 03.7	50	16 05	16 42	17 22	10 52 55	18 08 76	
6	273	13.5	-20	51.9	238	09.2	17	-27 04.5	45	16 23	16 55	17 32	10 23 57	18 37 73	
7	288	13.3		52.4	252	30.0	18	05.0	40	37	17 07	40	10 01 58	18 59 71	
8	303	13.1		52.8	266	50.8	18	05.4	35	16 50	17	48	9 42 60	19 18 69	
9	318	12.9		53.3	281	11.7	19	05.6	30	17 00	26	17 55	9 26 61	19 33 69	
10	333	12.7		53.8	295	32.6	19	05.6	20	19	43	18 10	8 59 62	20 00 66	
11	348	12.5	-20	54.3	309	53.5	19	-27 05.4	10 N	17 35	17 58	18 24	8 36 63	20 23 64	
12	3	12.3	-20	54.7	324	14.5	20	-27 04.9	0	17 51	18 13	18 39	8 14 64	20 45 62	
13	18	12.1		55.2	338	35.5	20	04.3	10 S	18 06	29	18 56	7 52 65	21 06 61	
14	33	11.9		55.7	352	56.6	21	03.5	20	23	18 47	19 16	29 66	29 59	
15	48	11.7		56.2	7	17.8	22	02.5	30	43	19 09	42	7 02 67	21 56 56	
16	63	11.5		56.6	21	39.0	22	-27 01.2	35	18 54	23	19 58	6 46 68	22 11 55	
17	78	11.3	-20	57.1	36	00.3	23	-26 59.8	40	19 07	19 39	20 18	6 28 68	22 29 53	
18	93	11.1	-20	57.6	50	21.7	24	-26 58.2	45	19 23	19 58	20 44	6 06 69	22 51 50	
19	108	10.9		58.1	64	43.1	24	56.3	50	42	20 24	21 21	5 38 70	23 19 46	
20	123	10.7		58.5	79	04.6	25	54.3	52	19 52	36	21 41	24 71	32 45	
21	138	10.5		59.0	93	26.1	25	52.1	54	20 02	20 51	22 08	5 08 71	23 47 43	
22	153	10.3		59.5	107	47.8	27	49.7	56	14	21 08	22 49	4 49 73	** ** *	
23	168	10.1	-20	59.9	122	09.5	27	47.1	58	27	30	** ** *	4 27 73	** ** *	
24	183	09.9	-21	00.4	136	31.3	28	-26 44.3	60 S	20 44	21 58	** ** *	3 57 75	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 38 ^m 7		Mag: -3.9 PMG: 13 ^h 37 ^m			Mag: -0.5 PMG: 19 ^h 00 ^m			Mag: -2.0 PMG: 6 ^h 53 ^m			Mag: -0.2 PMG: 2 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	64	30.7	155	56.5	-24	39.9	74	29.9	-5	28.5	256	26.6	+6	15.8	
1	79	33.2	170	55.5		40.0	89	31.2		27.9	271	28.8		15.7	
2	94	35.6	185	54.6		40.1	104	32.5		27.3	286	31.0		15.6	
3	109	38.1	200	53.6		40.2	119	33.8		26.7	301	33.2		15.5	
4	124	40.6	215	52.7		40.3	134	35.1		26.1	316	35.4		15.4	
5	139	43.0	230	51.7	-24	40.4	149	36.4	-5	25.5	331	37.6	+6	15.3	
6	154	45.5	245	50.8	-24	40.6	164	37.7	-5	24.9	346	39.8	+6	15.2	
7	169	48.0	260	49.8		40.7	179	39.0		24.2	1	42.0		15.1	
8	184	50.4	275	48.9		40.8	194	40.3		23.6	16	44.2		15.0	
9	199	52.9	290	47.9		40.9	209	41.7		23.0	31	46.4		14.9	
10	214	55.3	305	47.0		41.0	224	43.0		22.4	46	48.6		14.8	
11	229	57.8	320	46.0	-24	41.1	239	44.3	-5	21.8	61	50.8	+6	14.7	
12	245	00.3	335	45.1	-24	41.2	254	45.6	-5	21.2	76	53.0	+6	14.6	
13	260	02.7	350	44.1		41.3	269	46.9		20.6	91	55.2		14.5	
14	275	05.2	5	43.2		41.4	284	48.2		20.0	106	57.4		14.4	
15	290	07.7	20	42.2		41.5	299	49.5		19.4	121	59.6		14.3	
16	305	10.1	35	41.3		41.6	314	50.8		18.8	137	01.8		14.2	
17	320	12.6	50	40.3	-24	41.7	329	52.1	-5	18.2	152	04.0	+6	14.1	
18	335	15.1	65	39.4	-24	41.8	344	53.4	-5	17.6	167	06.2	+6	14.0	
19	350	17.5	80	38.4		41.9	359	54.7		17.0	182	08.4		13.9	
20	5	20.0	95	37.5		42.0	14	56.0		16.4	197	10.6		13.8	
21	20	22.5	110	36.5		42.1	29	57.3		15.8	212	12.8		13.7	
22	35	24.9	125	35.6		42.1	44	58.6		15.2	227	15.0		13.6	
23	50	27.4	140	34.6		42.2	59	59.9		14.6	242	17.2		13.5	
24	65	29.8	155	33.7	-24	42.3	75	01.2	-5	14.0	257	19.4	+6	13.4	
Dif	—		-10		-1	+13		+6	+22		-1		+26		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 5			Edad: 3 ^d 0 PHE { SD: 16'3 PMG: 15 ^h 33 ^m 4 ^h : 59'9 12 ^h : 59'6 20 ^h : 59'3 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	09.9	-21	00.4	136	31.3	-26	44.3	30	60 N	6 39	7 33	8 25	13 18	17	17 55	104			
1	198	09.7		00.9	150	53.2	29	41.3	30	58	33	23	8 11	12 52	24	18 20	96			
2	213	09.5		01.3	165	15.2	30	38.2	31	56	27	14	7 59	31 30		40	91			
3	228	09.3		01.8	179	37.3	31	34.8	34	54	22	07	48	12 14	33	18 57	87			
4	243	09.1		02.3	193	59.4	31	31.3	35	52	18	7 00	39	11 59	37	19 12	83			
5	258	08.9	-21	02.7	208	21.7	33	-26	27.6	37	50	6 13	6 54	7 31	11 47	38	19 24	81		
6	273	08.7	-21	03.2	222	44.0	33	-26	23.7	39	45	6 03	6 40	7 13	11 20	43	19 50	76		
7	288	08.5		03.7	237	06.5	35		19.6	41	40	5 55	28	6 58	10 59	47	20 10	73		
8	303	08.3		04.1	251	29.0	35		15.3	43	35	47	18	45	42 49		27	70		
9	318	08.1		04.6	265	51.7	37		10.9	44	30	39	6 09	35	27 51		20	42	67	
10	333	07.9		05.0	280	14.4	37		06.3	46	20	25	5 52	6 16	10 01	54	21 06	64		
11	348	07.7	-21	05.5	294	37.3	39	-26	01.5	48	10 N	5 11	5 37	5 59	9 39	57	21 27	61		
12	3	07.5	-21	06.0	309	00.2	39	-25	56.5	50	0	4 56	5 22	5 44	9 18	60	21 47	57		
13	18	07.3		06.4	323	23.3	41		51.4	51	10 S	39	5 06	28	8 57	62	22 07	54		
14	33	07.1		06.9	337	46.5	42		46.1	53	20	4 19	4 47	5 11	35 65		28	50		
15	48	06.9		07.3	352	09.8	43		40.6	55	30	3 53	25	4 52	8 09	68	22 52	46		
16	63	06.7		07.8	6	33.2	44		34.9	57	35	36	4 12	40	7 54	70	23 06	44		
17	78	06.5	-21	08.3	20	56.7	45	-25	29.1	58	40	3 16	3 56	4 27	7 36	72	23 22	41		
18	93	06.3	-21	08.7	35	20.4	47	-25	23.2	59	45	2 50	3 36	4 11	7 15	75	23 41	38		
19	108	06.1		09.2	49	44.2	48		17.0	62	50	2 13	3 10	3 52	6 48	79	** ** *	**		
20	123	05.9		09.6	64	08.0	48		10.7	63	52	1 53	2 58	43	35 81		** ** *	**		
21	138	05.7		10.1	78	32.0	50	-25	04.3	64	54	1 27	43	32	19 84		** ** *	**		
22	153	05.5		10.5	92	56.2	52	-24	57.7	66	56	0 46	26	20	6 02	87	0 05	40		
23	168	05.3		11.0	107	20.4	52		50.9	68	58	** ** *	2 04	3 07	5 40	92	27 35			
24	183	05.1	-21	11.4	121	44.8	54	-24	44.0	69	60 S	** ** *	1 36	2 51	5 12	99	0 56	28		
UT	ARIES			VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 19 ^h 34 ^m 8			Mag: -3.9 PMG: 13 ^h 39 ^m				Mag: -0.5 PMG: 18 ^h 58 ^m				Mag: -2.0 PMG: 6 ^h 50 ^m				Mag: -0.2 PMG: 2 ^h 31 ^m				
	hG ♈			hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	65	29.8	155	33.7	-24	42.3	75	01.2	-5	14.0	257	19.4	+6	13.4	322	10.9	+22	09.4		
1	80	32.3	170	32.7		42.4	90	02.5		13.4	272	21.6		13.3	337	13.5		09.4		
2	95	34.8	185	31.8		42.5	105	03.8		12.8	287	23.8		13.2	352	16.2		09.5		
3	110	37.2	200	30.8		42.6	120	05.1		12.2	302	26.0		13.1	7	18.8		09.5		
4	125	39.7	215	29.9		42.6	135	06.4		11.6	317	28.2		13.0	22	21.4		09.5		
5	140	42.2	230	28.9	-24	42.7	150	07.7	-5	11.0	332	30.4	+6	12.9	37	24.0	+22	09.5		
6	155	44.6	245	28.0	-24	42.8	165	09.0	-5	10.3	347	32.7	+6	12.8	52	26.6	+22	09.5		
7	170	47.1	260	27.0		42.9	180	10.3		09.7	2	34.9		12.7	67	29.2		09.5		
8	185	49.6	275	26.1		43.0	195	11.6		09.1	17	37.1		12.6	82	31.8		09.5		
9	200	52.0	290	25.1		43.0	210	12.9		08.5	32	39.3		12.5	97	34.5		09.6		
10	215	54.5	305	24.2		43.1	225	14.2		07.9	47	41.5		12.4	112	37.1		09.6		
11	230	57.0	320	23.2	-24	43.2	240	15.5	-5	07.3	62	43.7	+6	12.3	127	39.7	+22	09.6		
12	245	59.4	335	22.3	-24	43.3	255	16.8	-5	06.7	77	45.9	+6	12.2	142	42.3	+22	09.6		
13	261	01.9	350	21.3		43.3	270	18.1		06.1	92	48.1		12.1	157	44.9		09.6		
14	276	04.3	5	20.4		43.4	285	19.4		05.5	107	50.3		12.0	172	47.5		09.6		
15	291	06.8	20	19.4		43.5	300	20.7		04.9	122	52.5		11.9	187	50.1		09.6		
16	306	09.3	35	18.5		43.5	315	22.0		04.3	137	54.7		11.8	202	52.8		09.7		
17	321	11.7	50	17.5	-24	43.6	330	23.3	-5	03.7	152	56.9	+6	11.7	217	55.4	+22	09.7		
18	336	14.2	65	16.5	-24	43.7	345	24.6	-5	03.1	167	59.1	+6	11.6	232	58.0	+22	09.7		
19	351	16.7	80	15.6		43.7	0	25.9		02.5	183	01.3		11.5	248	00.6		09.7		
20	6	19.1	95	14.6		43.8	15	27.2		01.9	198	03.5		11.4	263	03.2		09.7		
21	21	21.6	110	13.7		43.8	30	28.5		01.2	213	05.8		11.3	278	05.8		09.7		
22	36	24.1	125	12.7		43.9	45	29.8	-5	00.6	228	08.0		11.2	293	08.5		09.8		
23	51	26.5	140	11.8		44.0	60	31.1	-5	00.0	243	10.2		11.1	308	11.1		09.8		
24	66	29.0	155	10.8	-24	44.0	75	32.4	-4	59.4	258	12.4	+6	11.0	323	13.7	+22	09.8		
Dif	—			-10 -1				+13 +6				+22 -1				+26 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 8				Edad: 4 ^d 0 PHE { 4 ^h : 59:0 12 ^h : 58:7 20 ^h : 58:3 R°: 53 ^m SD: 16:1 PMG: 16 ^h 31 ^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	h m m		
0	183	05.1	-21	11.4	121	44.8	-24	44.0	60 N	15 07	16 01	16 55	13 35 8	19 39 100					
1	198	04.8		11.9	136	09.3	55	37.0	58	22	10	17 01	16 14	19 56 95					
2	213	04.6		12.3	150	33.9	56	29.8	56	34	19	07	13 01 18	20 11 90					
3	228	04.4		12.8	164	58.6	57	22.4	54	45	27	12	12 47 22	24 86					
4	243	04.2		13.2	179	23.5	59	14.9	52	15 55	34	16	36 24	35 83					
5	258	04.0	-21	13.7	193	48.5	60	-24 07.3	50	16 03	16 40	17 21	12 25 27	20 45 81					
6	273	03.8	-21	14.1	208	13.6	61	-23 59.5	45	16 22	16 54	17 31	12 03 33	21 06 75					
7	288	03.6		14.6	222	38.9	63	51.6	40	36	17 06	40	11 46 36	23 71					
8	303	03.4		15.0	237	04.3	64	43.5	35	16 49	17	48	31 39	37 67					
9	318	03.2		15.5	251	29.8	65	35.3	30	17 00	26	17 55	11 18 42	21 49 64					
10	333	03.0		15.9	265	55.4	66	27.0	20	19	43	18 10	10 55 47	22 10 59					
11	348	02.8	-21	16.3	280	21.2	68	-23 18.6	10 N	17 36	17 58	18 24	10 36 50	22 28 55					
12	3	02.5	-21	16.8	294	47.1	69	-23 10.0	0	17 51	18 14	18 40	10 18 54	22 44 52					
13	18	02.3		17.2	309	13.1	70	-23 01.2	10 S	18 07	30	18 57	9 59 58	23 01 47					
14	33	02.1		17.7	323	39.3	72	-22 52.4	20	24	18 49	19 17	40 61	18 44					
15	48	01.9		18.1	338	05.6	73	43.4	30	44	19 11	19 44	17 66	38 39					
16	63	01.7		18.6	352	32.0	74	34.4	35	18 56	25	20 00	9 04 68	23 50 36					
17	78	01.5	-21	19.0	6	58.6	76	-22 25.1	40	19 09	19 41	20 21	8 48 72	*** ** *					
18	93	01.3	-21	19.4	21	25.3	77	-22 15.8	45	19 25	20 01	20 48	8 30 76	*** ** *					
19	108	01.1		19.9	35	52.1	78	-22 06.4	50	45	27	21 26	8 07 81	0 05 33					
20	123	00.8		20.3	50	19.1	80	-21 56.8	52	19 55	40	21 47	7 56 84	17 30					
21	138	00.6		20.7	64	46.1	80	47.1	54	20 05	20 55	22 14	43 87	30 27					
22	153	00.4		21.2	79	13.3	82	37.4	56	17	21 13	23 01	29 90	0 45 23					
23	168	00.2		21.6	93	40.7	84	27.5	58	32	21 35	*** **	7 12 95	1 02 19					
24	183	00.0	-21	22.0	108	08.2	85	-21 17.5	60 S	20 48	22 05	*** **	6 51 102	1 24 12					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 19 ^h 30 ^m 9		Mag: -3.9 PMG: 13 ^h 40 ^m		Mag: -0.5 PMG: 18 ^h 56 ^m		Mag: -2.0 PMG: 6 ^h 46 ^m		Mag: -0.2 PMG: 2 ^h 27 ^m										
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄										
h	°	'	°	'	°	'	°	'	°	'									
0	66	29.0	155	10.8	-24	44.0	75	32.4	-4	59.4									
1	81	31.5	170	09.9		44.1	90	33.6		58.8									
2	96	33.9	185	08.9		44.1	105	34.9		58.2									
3	111	36.4	200	08.0		44.2	120	36.2		57.6									
4	126	38.8	215	07.0		44.2	135	37.5		57.0									
5	141	41.3	230	06.1	-24	44.3	150	38.8	-4	56.4									
6	156	43.8	245	05.1	-24	44.3	165	40.1	-4	55.8									
7	171	46.2	260	04.2		44.4	180	41.4		55.2									
8	186	48.7	275	03.2		44.4	195	42.7		54.6									
9	201	51.2	290	02.3		44.4	210	44.0		53.9									
10	216	53.6	305	01.3		44.5	225	45.3		53.3									
11	231	56.1	320	00.4	-24	44.5	240	46.5	-4	52.7									
12	246	58.6	334	59.4	-24	44.6	255	47.8	-4	52.1									
13	262	01.0	349	58.4		44.6	270	49.1		51.5									
14	277	03.5	4	57.5		44.6	285	50.4		50.9									
15	292	05.9	19	56.5		44.7	300	51.7		50.3									
16	307	08.4	34	55.6		44.7	315	53.0		49.7									
17	322	10.9	49	54.6	-24	44.8	330	54.3	-4	49.1									
18	337	13.3	64	53.7	-24	44.8	345	55.6	-4	48.5									
19	352	15.8	79	52.7		44.8	0	56.8		47.8									
20	7	18.3	94	51.8		44.8	15	58.1		47.2									
21	22	20.7	109	50.8		44.9	30	59.4		46.6									
22	37	23.2	124	49.9		44.9	46	00.7		46.0									
23	52	25.7	139	48.9		44.9	61	02.0		45.4									
24	67	28.1	154	48.0	-24	44.9	76	03.3	-4	44.8									
Dif	—		-10		0		+13		+6										
									+22										
									-1										
									+26										
									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: 5 ^d 0 SD: 15:8 PMG: 17 ^h 24 ^m	PHE { 4 ^h : 58/0 12 ^h : 57/7 20 ^h : 57/4 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	00.0	-21	22.0	108	08.2	-21	17.5	60 N	6 42	7 36	8 30	13 43	4	21 19	94	
1	197	59.8		22.5	122	35.8	86	-21 07.4	58	36	26	15	30	8	31	89	
2	212	59.6		22.9	137	03.5	87	-20 57.2	56	30	18	8 03	19	12	41	86	
3	227	59.3		23.3	151	31.4	89	46.9	54	25	10	7 52	09	15	50	83	
4	242	59.1		23.8	165	59.3	89	36.4	52	20	7 03	42	13 00	18	21 58	80	
5	257	58.9	-21	24.2	180	27.5	92	-20 25.9	50	6 16	6 56	7 33	12 52	21	22 06	76	
6	272	58.7	-21	24.6	194	55.7	92	-20 15.3	45	6 06	6 42	7 15	12 36	25	22 21	71	
7	287	58.5		25.1	209	24.1	94	-20 04.6	40	5 57	30	7 00	22	29	34	67	
8	302	58.3		25.5	223	52.6	95	-19 53.8	35	49	20	6 47	10	33	44	64	
9	317	58.0		25.9	238	21.2	96	42.9	30	41	6 10	36	12 00	35	22 53	61	
10	332	57.8		26.4	252	49.9	97	32.0	20	26	5 53	17	11 42	41	23 09	56	
11	347	57.6	-21	26.8	267	18.8	99	-19 20.9	10 N	5 12	5 38	6 00	11 26	45	23 23	51	
12	2	57.4	-21	27.2	281	47.8	100	-19 09.7	0	4 56	5 22	5 45	11 12	49	23 36	47	
13	17	57.2		27.6	296	16.9	101	-18 58.5	10 S	39	5 06	29	10 57	53	23 48	43	
14	32	57.0		28.1	310	46.1	102	47.2	20	4 19	4 47	5 11	41	58	** ** *	**	
15	47	56.7		28.5	325	15.5	104	35.8	30	3 52	25	4 52	23	62	** ** *	**	
16	62	56.5		28.9	339	44.9	104	24.3	35	35	4 11	40	12	66	** ** *	**	
17	77	56.3	-21	29.3	354	14.5	106	-18 12.7	40	3 15	3 55	4 26	10 00	69	0 03	33	
18	92	56.1	-21	29.7	8	44.2	107	-18 01.1	45	2 48	3 34	4 10	9 46	73	0 19	28	
19	107	55.9		30.2	23	14.1	109	-17 49.4	50	2 10	3 08	3 50	28	78	38	23	
20	122	55.6		30.6	37	44.0	109	37.6	52	1 49	2 56	41	20	81	47	21	
21	137	55.4		31.0	52	14.1	111	25.7	54	1 21	40	30	9 10	84	0 57	18	
22	152	55.2		31.4	66	44.2	111	13.8	56	0 35	23	18	8 59	88	1 08	15	
23	167	55.0		31.8	81	14.5	113	-17 01.8	58	** ** *	2 00	3 04	47	92	21	11	
24	182	54.8	-21	32.3	95	44.9	114	-16 49.7	60 S	** ** *	1 30	2 47	8 33	96	1 36	6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 26 ^m 9		Mag: -3.9 PMG: 13 ^h 42 ^m		Mag: -0.5 PMG: 18 ^h 54 ^m		Mag: -2.0 PMG: 6 ^h 43 ^m		Mag: -0.2 PMG: 2 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	67	28.1	154	48.0	-24	44.9	76	03.3	-4	44.8
1	82	30.6	169	47.0		45.0	91	04.6		44.2
2	97	33.1	184	46.1		45.0	106	05.8		43.6
3	112	35.5	199	45.1		45.0	121	07.1		43.0
4	127	38.0	214	44.2		45.0	136	08.4		42.3
5	142	40.4	229	43.2	-24	45.0	151	09.7	-4	41.7
6	157	42.9	244	42.3	-24	45.1	166	11.0	-4	41.1
7	172	45.4	259	41.3		45.1	181	12.3		40.5
8	187	47.8	274	40.3		45.1	196	13.5		39.9
9	202	50.3	289	39.4		45.1	211	14.8		39.3
10	217	52.8	304	38.4		45.1	226	16.1		38.7
11	232	55.2	319	37.5	-24	45.1	241	17.4	-4	38.1
12	247	57.7	334	36.5	-24	45.1	256	18.7	-4	37.5
13	263	00.2	349	35.6		45.1	271	19.9		36.8
14	278	02.6	4	34.6		45.1	286	21.2		36.2
15	293	05.1	19	33.7		45.2	301	22.5		35.6
16	308	07.6	34	32.7		45.2	316	23.8		35.0
17	323	10.0	49	31.8	-24	45.2	331	25.1	-4	34.4
18	338	12.5	64	30.8	-24	45.2	346	26.3	-4	33.8
19	353	14.9	79	29.9		45.2	1	27.6		33.2
20	8	17.4	94	28.9		45.2	16	28.9		32.5
21	23	19.9	109	28.0		45.2	31	30.2		31.9
22	38	22.3	124	27.0		45.1	46	31.4		31.3
23	53	24.8	139	26.1		45.1	61	32.7		30.7
24	68	27.3	154	25.1	-24	45.1	76	34.0	-4	30.1
Dif	—		-10		0		+13		+6	
									+22	
									-1	
									+26	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 48 ^m 5			Edad: 6 ^d 0 PHE { SD: 15/6 PMG: 18 ^h 12 ^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	54.8	-21	32.3	95	44.9	-16 49.7	60 N	15 05	15 58	16 53	13 47 2	22 53 88	
1	197	54.5		32.7	110	15.4 ¹¹⁵	37.6 ¹²¹	58	20	16 09	16 59	38 6	23 00 85	
2	212	54.3		33.1	124	46.0 ¹¹⁶	25.4 ¹²²	56	32	17	17 05	31 9	07 81	
3	227	54.1		33.5	139	16.8 ¹¹⁸	13.1 ¹²³	54	43	25	10	24 12	13 78	
4	242	53.9		33.9	153	47.6 ¹¹⁸	-16 00.8 ¹²³	52	15 53	33	15	18 14	18 75	
5	257	53.6	-21	34.3	168	18.5 ¹¹⁹	-15 48.4 ¹²⁴	50	16 02	16 39	17 20	13 13 16	23 22 73	
6	272	53.4	-21	34.8	182	49.6 ¹²¹	-15 35.9 ¹²⁵	45	16 21	16 54	17 30	13 01 21	23 32 68	
7	287	53.2		35.2	197	20.7 ¹²¹	23.4 ¹²⁵	40	36	17 06	39	12 51 25	41 64	
8	302	53.0		35.6	211	52.0 ¹²³	-15 10.9 ¹²⁵	35	16 49	16	47	43 28	48 60	
9	317	52.7		36.0	226	23.3 ¹²³	-14 58.2 ¹²⁷	30	17 00	26	17 55	35 32	23 54 57	
10	332	52.5		36.4	240	54.8 ¹²⁵	45.6 ¹²⁶	20	19	43	18 10	23 36	** ** *	
11	347	52.3	-21	36.8	255	26.3 ¹²⁵	-14 32.8 ¹²⁸	10 N	17 36	17 59	18 25	12 11 41	** ** *	
12	2	52.1	-21	37.2	269	58.0 ¹²⁷	-14 20.1 ¹²⁷	0	17 52	18 14	18 40	12 01 45	** ** *	
13	17	51.8		37.6	284	29.7 ¹²⁷	-14 07.2 ¹²⁹	10 S	18 08	31	18 58	11 50 49	** ** *	
14	32	51.6		38.0	299	01.6 ¹²⁹	-13 54.4 ¹²⁸	20	26	18 50	19 19	39 53	0 02 38	
15	47	51.4		38.4	313	33.5 ¹²⁹	41.4 ¹³⁰	30	46	19 13	19 45	25 59	17 33	
16	62	51.2		38.8	328	05.6 ¹³¹	28.5 ¹²⁹	35	18 58	27	20 03	18 62	26 30	
17	77	50.9	-21	39.3	342	37.7 ¹³¹	-13 15.5 ¹³⁰	40	19 12	19 43	20 24	11 09 65	0 36 27	
18	92	50.7	-21	39.7	357	09.9 ¹³²	-13 02.4 ¹³¹	45	19 28	20 04	20 51	10 59 69	0 47 24	
19	107	50.5		40.1	11	42.2 ¹³³	-12 49.3 ¹³¹	50	48	30	21 30	46 75	1 01 19	
20	122	50.3		40.5	26	14.6 ¹³⁴	36.2 ¹³¹	52	19 58	44	21 52	41 76	08 16	
21	137	50.0		40.9	40	47.1 ¹³⁵	23.0 ¹³²	54	20 09	20 59	22 21	34 80	15 14	
22	152	49.8		41.3	55	19.6 ¹³⁵	-12 09.8 ¹³²	56	21	21 18	23 16	27 83	23 11	
23	167	49.6		41.7	69	52.3 ¹³⁷	-11 56.5 ¹³³	58	36	21 41	** ** *	19 86	32 7	
24	182	49.4	-21	42.1	84	25.0 ¹³⁷	-11 43.2 ¹³³	60 S	20 53	22 13	** ** *	10 09 91	1 42 4	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 23 ^m 0		Mag: -3.9 PMG: 13 ^h 43 ^m			Mag: -0.4 PMG: 18 ^h 52 ^m			Mag: -2.0 PMG: 6 ^h 39 ^m			Mag: -0.3 PMG: 2 ^h 18 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	°	°	'	°	°	'	°	'	°
0	68	27.3	154	25.1	-24 45.1	76	34.0	-4 30.1	259	58.7	+6 06.5	325	19.5	+22 10.5
1	83	29.7	169	24.2	45.1	91	35.3	29.5	275	00.9	06.4	340	22.1	10.5
2	98	32.2	184	23.2	45.1	106	36.5	28.9	290	03.1	06.3	355	24.7	10.6
3	113	34.7	199	22.3	45.1	121	37.8	28.3	305	05.4	06.3	10	27.4	10.6
4	128	37.1	214	21.3	45.1	136	39.1	27.6	320	07.6	06.2	25	30.0	10.6
5	143	39.6	229	20.3	-24 45.1	151	40.4	-4 27.0	335	09.8	+6 06.1	40	32.6	+22 10.6
6	158	42.1	244	19.4	-24 45.1	166	41.6	-4 26.4	350	12.0	+6 06.0	55	35.2	+22 10.6
7	173	44.5	259	18.4	45.0	181	42.9	25.8	5	14.3	05.9	70	37.9	10.6
8	188	47.0	274	17.5	45.0	196	44.2	25.2	20	16.5	05.8	85	40.5	10.6
9	203	49.4	289	16.5	45.0	211	45.5	24.6	35	18.7	05.7	100	43.1	10.7
10	218	51.9	304	15.6	45.0	226	46.7	24.0	50	20.9	05.6	115	45.7	10.7
11	233	54.4	319	14.6	-24 45.0	241	48.0	-4 23.3	65	23.1	+6 05.5	130	48.4	+22 10.7
12	248	56.8	334	13.7	-24 44.9	256	49.3	-4 22.7	80	25.4	+6 05.4	145	51.0	+22 10.7
13	263	59.3	349	12.7	44.9	271	50.6	22.1	95	27.6	05.4	160	53.6	10.7
14	279	01.8	4	11.8	44.9	286	51.8	21.5	110	29.8	05.3	175	56.2	10.7
15	294	04.2	19	10.8	44.9	301	53.1	20.9	125	32.0	05.2	190	58.9	10.8
16	309	06.7	34	09.9	44.8	316	54.4	20.3	140	34.3	05.1	206	01.5	10.8
17	324	09.2	49	08.9	-24 44.8	331	55.6	-4 19.6	155	36.5	+6 05.0	221	04.1	+22 10.8
18	339	11.6	64	08.0	-24 44.8	346	56.9	-4 19.0	170	38.7	+6 04.9	236	06.7	+22 10.8
19	354	14.1	79	07.0	44.7	1	58.2	18.4	185	40.9	04.8	251	09.4	10.8
20	9	16.5	94	06.1	44.7	16	59.5	17.8	200	43.2	04.7	266	12.0	10.8
21	24	19.0	109	05.1	44.7	32	00.7	17.2	215	45.4	04.6	281	14.6	10.9
22	39	21.5	124	04.2	44.6	47	02.0	16.6	230	47.6	04.5	296	17.3	10.9
23	54	23.9	139	03.2	44.6	62	03.3	15.9	245	49.8	04.5	311	19.9	10.9
24	69	26.4	154	02.3	-24 44.6	77	04.5	-4 15.3	260	52.1	+6 04.4	326	22.5	+22 10.9
Dif	—		-10		0	+13		+6	+22		-1	+26		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 9			Edad: 7 ^d 0 PHE { 4 ^h : 56'3 12 ^h : 56'0 20 ^h : 55'8 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	182	49.4	-21	42.1	84	25.0	-11	43.2	60 N	6 45	7 40	8 34	13 49	1	***	***	***	
1	197	49.1		42.5	98	57.9 ¹³⁹		29.9 ¹³³	58	39	30	19	44	4	***	***	***	
2	212	48.9		42.9	113	30.8 ¹³⁹		16.5 ¹³⁴	56	33	21	8 06	40	7	***	***	***	
3	227	48.7		43.3	128	03.7 ¹³⁹	-11	03.1 ¹³⁴	54	28	13	7 55	36	9	***	***	***	
4	242	48.4		43.7	142	36.8 ¹⁴¹	-10	49.7 ¹³⁴	52	23	7 05	45	32	12	***	***	***	
5	257	48.2	-21	44.1	157	09.9 ¹⁴¹	-10	36.2 ¹³⁵	50	6 18	6 59	7 36	13 29	14	***	***	***	
6	272	48.0	-21	44.5	171	43.1 ¹⁴²	-10	22.8 ¹³⁴	45	6 08	6 44	7 17	13 22	19	***	***	***	
7	287	47.8		44.8	186	16.4 ¹⁴³	-10	09.2 ¹³⁶	40	5 59	32	7 02	16	22	***	***	***	
8	302	47.5		45.2	200	49.8 ¹⁴⁴	-9	55.7 ¹³⁵	35	50	21	6 49	11	26	***	***	***	
9	317	47.3		45.6	215	23.2 ¹⁴⁴		42.1 ¹³⁶	30	42	6 12	38	13 07	28	***	***	***	
10	332	47.1		46.0	229	56.7 ¹⁴⁵		28.5 ¹³⁶	20	27	5 55	18	12 59	33	0 05	52		
11	347	46.8	-21	46.4	244	30.3 ¹⁴⁶	-9	14.9 ¹³⁶	10 N	5 13	5 39	6 01	12 52	38	0 14	48		
12	2	46.6	-21	46.8	259	03.9 ¹⁴⁶	-9	01.2 ¹³⁷	0	4 57	5 23	5 45	12 46	42	0 23	43		
13	17	46.4		47.2	273	37.6 ¹⁴⁷	-8	47.6 ¹³⁶	10 S	40	5 06	29	39	46	31	39		
14	32	46.1		47.6	288	11.4 ¹⁴⁸		33.9 ¹³⁷	20	4 19	4 47	5 12	32	51	40	35		
15	47	45.9		48.0	302	45.3 ¹⁴⁹		20.2 ¹³⁷	30	3 52	24	4 51	24	56	50	30		
16	62	45.7		48.4	317	19.2 ¹⁴⁹	-8	06.4 ¹³⁸	35	35	4 10	39	20	59	0 56	27		
17	77	45.4	-21	48.8	331	53.1 ¹⁴⁹	-7	52.7 ¹³⁷	40	3 14	3 54	4 26	12 14	63	1 03	23		
18	92	45.2	-21	49.1	346	27.1 ¹⁵⁰	-7	38.9 ¹³⁸	45	2 46	3 33	4 09	12 08	67	1 11	19		
19	107	45.0		49.5	1	01.2 ¹⁵¹		25.1 ¹³⁸	50	2 07	3 07	3 49	12 01	71	20	15		
20	122	44.7		49.9	15	35.4 ¹⁵²	-7	11.3 ¹³⁸	52	1 45	2 53	39	11 57	74	24	13		
21	137	44.5		50.3	30	09.6 ¹⁵²	-6	57.5 ¹³⁸	54	1 16	38	28	54	76	29	10		
22	152	44.3		50.7	44	43.8 ¹⁵²		43.7 ¹³⁸	56	0 21	2 19	16	50	78	34	8		
23	167	44.0		51.1	59	18.1 ¹⁵³		29.8 ¹³⁹	58	*** **	1 56	3 01	45	82	39	5		
24	182	43.8	-21	51.5	73	52.5 ¹⁵⁴	-6	16.0 ¹³⁸	60 S	*** **	1 24	2 44	11 40	85	1 46	2		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 19 ^m 1		Mag: -3.9 PMG: 13 ^h 45 ^m			Mag: -0.4 PMG: 18 ^h 50 ^m			Mag: -2.1 PMG: 6 ^h 36 ^m			Mag: -0.3 PMG: 2 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	69	26.4	154	02.3	-24	44.6	77	04.5	-4	15.3	260	52.1	+6	04.4	326	22.5	+22	10.9
1	84	28.9	169	01.3		44.5	92	05.8		14.7	275	54.3		04.3	341	25.1		10.9
2	99	31.3	184	00.4		44.5	107	07.1		14.1	290	56.5		04.2	356	27.8		10.9
3	114	33.8	198	59.4		44.4	122	08.3		13.5	305	58.8		04.1	11	30.4		11.0
4	129	36.3	213	58.5		44.4	137	09.6		12.9	321	01.0		04.0	26	33.0		11.0
5	144	38.7	228	57.5	-24	44.4	152	10.9	-4	12.2	336	03.2	+6	03.9	41	35.6	+22	11.0
6	159	41.2	243	56.6	-24	44.3	167	12.1	-4	11.6	351	05.4	+6	03.8	56	38.3	+22	11.0
7	174	43.7	258	55.6		44.3	182	13.4		11.0	6	07.7		03.7	71	40.9		11.0
8	189	46.1	273	54.7		44.2	197	14.7		10.4	21	09.9		03.7	86	43.5		11.0
9	204	48.6	288	53.7		44.2	212	15.9		09.8	36	12.1		03.6	101	46.2		11.0
10	219	51.0	303	52.8		44.1	227	17.2		09.2	51	14.4		03.5	116	48.8		11.1
11	234	53.5	318	51.8	-24	44.1	242	18.5	-4	08.5	66	16.6	+6	03.4	131	51.4	+22	11.1
12	249	56.0	333	50.9	-24	44.0	257	19.7	-4	07.9	81	18.8	+6	03.3	146	54.0	+22	11.1
13	264	58.4	348	49.9		43.9	272	21.0		07.3	96	21.0		03.2	161	56.7		11.1
14	280	00.9	3	49.0		43.9	287	22.2		06.7	111	23.3		03.1	176	59.3		11.1
15	295	03.4	18	48.0		43.8	302	23.5		06.1	126	25.5		03.0	192	01.9		11.1
16	310	05.8	33	47.1		43.8	317	24.8		05.5	141	27.7		03.0	207	04.6		11.2
17	325	08.3	48	46.1	-24	43.7	332	26.0	-4	04.8	156	30.0	+6	02.9	222	07.2	+22	11.2
18	340	10.8	63	45.2	-24	43.6	347	27.3	-4	04.2	171	32.2	+6	02.8	237	09.8	+22	11.2
19	355	13.2	78	44.2		43.6	2	28.6		03.6	186	34.4		02.7	252	12.5		11.2
20	10	15.7	93	43.3		43.5	17	29.8		03.0	201	36.7		02.6	267	15.1		11.2
21	25	18.2	108	42.3		43.4	32	31.1		02.4	216	38.9		02.5	282	17.7		11.2
22	40	20.6	123	41.4		43.4	47	32.3		01.7	231	41.1		02.4	297	20.4		11.3
23	55	23.1	138	40.4		43.3	62	33.6		01.1	246	43.4		02.4	312	23.0		11.3
24	70	25.5	153	39.5	-24	43.2	77	34.9	-4	00.5	261	45.6	+6	02.3	327	25.6	+22	11.3
Dif	—		-9		+1		+13		+6		+22		-1		+26		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 3			Edad: 8 ^d 0 PHE { 4 ^h : 55°6 12 ^h : 55°3 20 ^h : 55°2 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	182	43.8	-21	51.5	73	52.5	-6	16.0	60 N	15 02	15 56	16 51	13 50 1	0 21 84	
1	197	43.6		51.8	88	26.9 ¹⁵⁴	-6	02.1 ¹³⁹	58	17	16 07	16 58	48 4	25 80	
2	212	43.3		52.2	103	01.3 ¹⁵⁴	-5	48.2 ¹³⁹	56	30	16	17 04	47 6	28 77	
3	227	43.1		52.6	117	35.8 ¹⁵⁵		34.3 ¹³⁹	54	42	24	09	45 9	31 74	
4	242	42.9		53.0	132	10.4 ¹⁵⁶		20.4 ¹³⁹	52	15 52	32	14	44 11	33 72	
5	257	42.6	-21	53.4	146	45.0 ¹⁵⁶	-5	06.5 ¹³⁹	50	16 01	16 38	17 19	13 43 13	0 35 71	
6	272	42.4	-21	53.7	161	19.7 ¹⁵⁷	-4	52.6 ¹³⁹	45	16 20	16 53	17 30	13 41 17	0 40 66	
7	287	42.1		54.1	175	54.3 ¹⁵⁶		38.7 ¹³⁹	40	35	17 05	39	38 22	45 61	
8	302	41.9		54.5	190	29.1 ¹⁵⁸		24.7 ¹⁴⁰	35	16 48	16	47	37 24	48 58	
9	317	41.7		54.9	205	03.9 ¹⁵⁸	-4	10.8 ¹³⁹	30	17 00	26	17 55	35 27	51 55	
10	332	41.4		55.2	219	38.7 ¹⁵⁸	-3	56.9 ¹³⁹	20	19	43	18 10	32 32	0 57 50	
11	347	41.2	-21	55.6	234	13.5 ¹⁵⁸	-3	42.9 ¹⁴⁰	10 N	17 37	17 59	18 25	13 30 36	1 02 45	
12	2	41.0	-21	56.0	248	48.4 ¹⁵⁹	-3	29.0 ¹³⁹	0	17 53	18 15	18 41	13 28 40	1 06 41	
13	17	40.7		56.4	263	23.4 ¹⁶⁰		15.0 ¹⁴⁰	10 S	18 09	32	18 59	25 45	10 37	
14	32	40.5		56.7	277	58.3 ¹⁵⁹	-3	01.1 ¹³⁹	20	27	18 51	19 20	23 49	15 33	
15	47	40.2		57.1	292	33.3 ¹⁶⁰	-2	47.1 ¹⁴⁰	30	18 48	19 15	19 47	20 54	20 28	
16	62	40.0		57.5	307	08.4 ¹⁶¹		33.2 ¹³⁹	35	19 00	29	20 05	19 57	23 25	
17	77	39.8	-21	57.9	321	43.4 ¹⁶⁰	-2	19.3 ¹³⁹	40	19 14	19 46	20 26	13 17 60	1 26 22	
18	92	39.5	-21	58.2	336	18.5 ¹⁶¹	-2	05.3 ¹⁴⁰	45	19 30	20 06	20 54	13 15 64	1 30 18	
19	107	39.3		58.6	350	53.7 ¹⁶²	-1	51.4 ¹³⁹	50	19 51	34	21 34	12 69	35 13	
20	122	39.0		59.0	5	28.8 ¹⁶¹		37.4 ¹⁴⁰	52	20 01	20 47	21 57	11 71	37 11	
21	137	38.8		59.3	20	04.0 ¹⁶²		23.5 ¹³⁹	54	12	21 03	22 28	10 73	39 10	
22	152	38.6	-21	59.7	34	39.2 ¹⁶²	-1	09.6 ¹³⁹	56	25	22	** **	08 77	42 7	
23	167	38.3	-22	00.1	49	14.4 ¹⁶²	-0	55.7 ¹³⁹	58	39	21 46	** **	07 79	44 5	
24	182	38.1	-22	00.4	63	49.7 ¹⁶³	-0	41.8 ¹³⁹	60 S	20 57	22 20	** **	13 05 82	1 48 1	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 15 ^m 1		Mag: -3.9 PMG: 13 ^h 46 ^m			Mag: -0.4 PMG: 18 ^h 48 ^m			Mag: -2.1 PMG: 6 ^h 32 ^m			Mag: -0.3 PMG: 2 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	70	25.5	153	39.5	-24	77	34.9	-4	261	45.6	+6	327	25.6	+22	11.3
1	85	28.0	168	38.5		92	36.1	-3	276	47.8		342	28.2		11.3
2	100	30.5	183	37.6		107	37.4		291	50.1		357	30.9		11.3
3	115	32.9	198	36.6		122	38.6		306	52.3		12	33.5		11.3
4	130	35.4	213	35.7		137	39.9		321	54.5		27	36.1		11.4
5	145	37.9	228	34.7	-24	152	41.2	-3	336	56.8	+6	42	38.8	+22	11.4
6	160	40.3	243	33.8	-24	167	42.4	-3	351	59.0	+6	57	41.4	+22	11.4
7	175	42.8	258	32.8		182	43.7		7	01.2		72	44.0		11.4
8	190	45.3	273	31.9		197	44.9		22	03.5		87	46.7		11.4
9	205	47.7	288	30.9		212	46.2		37	05.7		102	49.3		11.4
10	220	50.2	303	30.0		227	47.5		52	07.9		117	51.9		11.5
11	235	52.6	318	29.0	-24	242	48.7	-3	67	10.2	+6	132	54.6	+22	11.5
12	250	55.1	333	28.1	-24	257	50.0	-3	82	12.4	+6	147	57.2	+22	11.5
13	265	57.6	348	27.1		272	51.2		97	14.6		162	59.8		11.5
14	281	00.0	3	26.2		287	52.5		112	16.9		178	02.5		11.5
15	296	02.5	18	25.3		302	53.7		127	19.1		193	05.1		11.5
16	311	05.0	33	24.3		317	55.0		142	21.3		208	07.7		11.6
17	326	07.4	48	23.4	-24	332	56.2	-3	157	23.6	+6	223	10.4	+22	11.6
18	341	09.9	63	22.4	-24	347	57.5	-3	172	25.8	+6	238	13.0	+22	11.6
19	356	12.4	78	21.5		2	58.8		187	28.1		253	15.6		11.6
20	11	14.8	93	20.5		18	00.0		202	30.3		268	18.3		11.6
21	26	17.3	108	19.6		33	01.3		217	32.5		283	20.9		11.6
22	41	19.8	123	18.6		48	02.5		232	34.8		298	23.5		11.7
23	56	22.2	138	17.7		63	03.8		247	37.0		313	26.2		11.7
24	71	24.7	153	16.7	-24	78	05.0	-3	262	39.2	+6	328	28.8	+22	11.7
Dif	—		-9		+1	+13		+6	+22		-1		+26		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: 9 ^d 0 SD: 15:0 PMG: 20 ^h 18 ^m	PHE { 4 ^h : 55:0 12 ^h : 54:8 20 ^h : 54:7 R°: 40 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	38.1	-22	00.4	63	49.7	-0 41.8	60 N	6 48	7 43	8 38	13 51	1	1 45	82
1	197	37.8		00.8	78	25.0 ¹⁶³	27.9 ¹³⁹	58	42	33	23	52	4	45	79
2	212	37.6		01.2	93	00.3 ¹⁶³	14.0 ¹³⁹	56	36	24	8 09	53	7	45	76
3	227	37.4		01.5	107	35.6 ¹⁶³	-0 00.1 ¹³⁹	54	30	15	7 58	54	10	45	74
4	242	37.1		01.9	122	10.9 ¹⁶³	+0 13.8 ¹³⁹	52	25	08	48	55	12	45	71
5	257	36.9	-22	02.2	136	46.3 ¹⁶⁴	+0 27.7 ¹³⁹	50	6 20	7 01	7 39	13 56	13	1 46	68
6	272	36.6	-22	02.6	151	21.6 ¹⁶³	+0 41.5 ¹³⁸	45	6 10	6 46	7 20	13 58	18	1 46	64
7	287	36.4		03.0	165	57.0 ¹⁶⁴	+0 55.4 ¹³⁹	40	6 00	34	7 04	14 00	21	46	60
8	302	36.1		03.3	180	32.4 ¹⁶⁴	+1 09.2 ¹³⁸	35	5 52	23	6 51	01	25	46	57
9	317	35.9		03.7	195	07.8 ¹⁶⁴	23.0 ¹³⁸	30	44	6 13	39	02	28	46	54
10	332	35.7		04.0	209	43.3 ¹⁶⁵	36.8 ¹³⁸	20	29	5 56	20	04	33	47	49
11	347	35.4	-22	04.4	224	18.7 ¹⁶⁴	+1 50.6 ¹³⁸	10 N	5 14	5 40	6 02	14 06	37	1 47	45
12	2	35.2	-22	04.8	238	54.2 ¹⁶⁵	+2 04.4 ¹³⁸	0	4 58	5 24	5 46	14 08	41	1 47	41
13	17	34.9		05.1	253	29.6 ¹⁶⁴	18.1 ¹³⁷	10 S	40	5 07	30	10	45	47	37
14	32	34.7		05.5	268	05.1 ¹⁶⁵	31.9 ¹³⁸	20	4 19	4 48	5 12	12	49	48	32
15	47	34.4		05.8	282	40.6 ¹⁶⁵	45.6 ¹³⁷	30	3 51	24	4 51	14	54	48	27
16	62	34.2		06.2	297	16.0 ¹⁶⁴	+2 59.3 ¹³⁷	35	34	4 10	39	16	56	48	24
17	77	33.9	-22	06.5	311	51.5 ¹⁶⁵	+3 13.0 ¹³⁷	40	3 13	3 53	4 25	14 17	60	1 48	21
18	92	33.7	-22	06.9	326	27.0 ¹⁶⁵	+3 26.6 ¹³⁶	45	2 45	3 32	4 08	14 19	64	1 48	18
19	107	33.5		07.2	341	02.5 ¹⁶⁵	40.3 ¹³⁷	50	2 05	3 05	3 48	21	69	48	14
20	122	33.2		07.6	355	38.0 ¹⁶⁵	+3 53.9 ¹³⁶	52	1 42	2 52	38	22	71	48	12
21	137	33.0		07.9	10	13.5 ¹⁶⁵	+4 07.5 ¹³⁶	54	1 11	36	27	23	73	49	9
22	152	32.7		08.3	24	48.9 ¹⁶⁴	21.1 ¹³⁶	56	** **	2 16	3 14	25	75	49	6
23	167	32.5		08.6	39	24.4 ¹⁶⁵	34.7 ¹³⁶	58	** **	1 52	2 59	26	78	49	4
24	182	32.2	-22	09.0	53	59.9 ¹⁶⁵	+4 48.2 ¹³⁵	60 S	** **	1 18	2 41	14 27	82	1 49	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 19 ^h 11 ^m 2		Mag: -3.9 PMG: 13 ^h 48 ^m		Mag: -0.4 PMG: 18 ^h 46 ^m		Mag: -2.1 PMG: 6 ^h 28 ^m		Mag: -0.3 PMG: 2 ^h 06 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	71	24.7	153	16.7	-24	41.2	78	05.0	-3	45.6	262	39.2	+6	00.2	328	28.8	+22	11.7	
1	86	27.1	168	15.8		41.1	93	06.3		45.0	277	41.5		00.1	343	31.4		11.7	
2	101	29.6	183	14.8		41.0	108	07.5		44.4	292	43.7	+6	00.1	358	34.1		11.7	
3	116	32.1	198	13.9		40.9	123	08.8		43.8	307	46.0	+6	00.0	13	36.7		11.7	
4	131	34.5	213	12.9		40.7	138	10.0		43.1	322	48.2	+5	59.9	28	39.3		11.8	
5	146	37.0	228	12.0	-24	40.6	153	11.3	-3	42.5	337	50.4	+5	59.8	43	42.0	+22	11.8	
6	161	39.5	243	11.1	-24	40.5	168	12.5	-3	41.9	352	52.7	+5	59.7	58	44.6	+22	11.8	
7	176	41.9	258	10.1		40.4	183	13.8		41.3	7	54.9		59.6	73	47.3		11.8	
8	191	44.4	273	09.2		40.3	198	15.0		40.7	22	57.2		59.6	88	49.9		11.8	
9	206	46.9	288	08.2		40.2	213	16.3		40.0	37	59.4		59.5	103	52.5		11.8	
10	221	49.3	303	07.3		40.1	228	17.5		39.4	53	01.6		59.4	118	55.2		11.9	
11	236	51.8	318	06.3	-24	40.0	243	18.8	-3	38.8	68	03.9	+5	59.3	133	57.8	+22	11.9	
12	251	54.2	333	05.4	-24	39.8	258	20.0	-3	38.2	83	06.1	+5	59.2	149	00.4	+22	11.9	
13	266	56.7	348	04.4		39.7	273	21.3		37.5	98	08.4		59.1	164	03.1		11.9	
14	281	59.2	3	03.5		39.6	288	22.5		36.9	113	10.6		59.1	179	05.7		11.9	
15	297	01.6	18	02.6		39.5	303	23.8		36.3	128	12.9		59.0	194	08.3		11.9	
16	312	04.1	33	01.6		39.4	318	25.0		35.7	143	15.1		58.9	209	11.0		12.0	
17	327	06.6	48	00.7	-24	39.2	333	26.3	-3	35.0	158	17.3	+5	58.8	224	13.6	+22	12.0	
18	342	09.0	62	59.7	-24	39.1	348	27.5	-3	34.4	173	19.6	+5	58.7	239	16.3	+22	12.0	
19	357	11.5	77	58.8		39.0	3	28.8		33.8	188	21.8		58.7	254	18.9		12.0	
20	12	14.0	92	57.8		38.9	18	30.0		33.2	203	24.1		58.6	269	21.5		12.0	
21	27	16.4	107	56.9		38.7	33	31.3		32.6	218	26.3		58.5	284	24.2		12.0	
22	42	18.9	122	56.0		38.6	48	32.5		31.9	233	28.6		58.4	299	26.8		12.1	
23	57	21.4	137	55.0		38.5	63	33.8		31.3	248	30.8		58.3	314	29.4		12.1	
24	72	23.8	152	54.1	-24	38.3	78	35.0	-3	30.7	263	33.0	+5	58.2	329	32.1	+22	12.1	
Dif	—		-9	+1		+12	+6			+22	-1			+26					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 10 ^d 0	PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3									
	PMG: 11 ^h 50 ^m 0					SD: 14'9			PMG: 20 ^h 58 ^m		R°: 42 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	32.2	-22 09.0	53	59.9	+4 48.2		60 N	15 00	15 55	16 50	13 52 2	3 07 82	
1	197	32.0	09.3	68	35.4 ¹⁶⁵	+5 01.7 ¹³⁵		58	15	16 05	16 57	13 56 5	04 78	
2	212	31.7	09.7	83	10.8 ¹⁶⁴	15.2 ¹³⁵		56	29	15	17 03	14 00 8	3 01 76	
3	227	31.5	10.0	97	46.3 ¹⁶⁵	28.6 ¹³⁴		54	40	23	08	04 10	2 59 76	
4	242	31.2	10.4	112	21.8 ¹⁶⁵	42.1 ¹³⁵		52	15 51	31	14	07 12	56 71	
5	257	31.0	-22 10.7	126	57.2 ¹⁶⁴	+5 55.5 ¹³⁴		50	16 00	16 37	17 18	14 09 15	2 54 69	
6	272	30.7	-22 11.0	141	32.7 ¹⁶⁵	+6 08.8 ¹³³		45	16 19	16 52	17 29	14 16 19	2 50 64	
7	287	30.5	11.4	156	08.1 ¹⁶⁴	22.2 ¹³⁴		40	35	17 05	39	21 23	46 60	
8	302	30.2	11.7	170	43.5 ¹⁶⁴	35.5 ¹³³		35	16 48	16	47	26 25	43 57	
9	317	30.0	12.1	185	18.9 ¹⁶⁴	+6 48.8 ¹³³		30	17 00	26	17 55	30 28	40 54	
10	332	29.7	12.4	199	54.3 ¹⁶⁴	+7 02.0 ¹³²		20	20	17 44	18 11	37 33	36 49	
11	347	29.5	-22 12.7	214	29.7 ¹⁶⁴	+7 15.3 ¹³³		10 N	17 37	18 00	18 26	14 43 37	2 32 44	
12	2	29.2	-22 13.1	229	05.0 ¹⁶³	+7 28.5 ¹³²		0	17 54	18 16	18 42	14 49 41	2 28 40	
13	17	29.0	13.4	243	40.4 ¹⁶⁴	41.6 ¹³¹		10 S	18 10	33	19 00	14 55 45	24 36	
14	32	28.7	13.8	258	15.7 ¹⁶³	+7 54.7 ¹³¹		20	28	18 53	22	15 01 49	20 32	
15	47	28.5	14.1	272	51.0 ¹⁶³	+8 07.8 ¹³¹		30	18 49	19 16	19 49	08 54	15 28	
16	62	28.2	14.4	287	26.3 ¹⁶³	20.9 ¹³¹		35	19 01	31	20 07	12 57	12 25	
17	77	28.0	-22 14.8	302	01.6 ¹⁶³	+8 33.9 ¹³⁰		40	19 16	19 48	20 28	15 17 61	2 09 22	
18	92	27.7	-22 15.1	316	36.8 ¹⁶²	+8 46.9 ¹³⁰		45	19 32	20 09	20 57	15 23 64	2 06 18	
19	107	27.5	15.4	331	12.1 ¹⁶³	+8 59.8 ¹²⁹		50	19 53	37	21 38	30 68	02 13	
20	122	27.2	15.8	345	47.3 ¹⁶²	+9 12.7 ¹²⁹		52	20 04	20 50	22 01	33 71	2 00 11	
21	137	27.0	16.1	0	22.4 ¹⁶¹	25.6 ¹²⁹		54	15	21 07	22 35	36 74	1 58 9	
22	152	26.7	16.4	14	57.6 ¹⁶²	38.4 ¹²⁸		56	28	26	** **	40 76	55 7	
23	167	26.5	16.8	29	32.7 ¹⁶¹	+9 51.2 ¹²⁸		58	20 43	21 51	** **	44 80	53 4	
24	182	26.2	-22 17.1	44	07.8 ¹⁶¹	+10 04.0 ¹²⁸		60 S	21 01	22 27	** **	15 49 83	1 50 1	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG 19 ^h 07 ^m 3		Mag: -3.9 PMG: 13 ^h 49 ^m			Mag: -0.3 PMG: 18 ^h 44 ^m			Mag: -2.1 PMG: 6 ^h 25 ^m		Mag: -0.3 PMG: 2 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	
0	72	23.8	152 54.1	-24 38.3	78 35.0	-3 30.7	263 33.0	+5 58.2	329 32.1	+22 12.1				
1	87	26.3	167 53.1	38.2	93 36.2	30.1	278 35.3	58.2	344 34.7	12.1				
2	102	28.7	182 52.2	38.1	108 37.5	29.4	293 37.5	58.1	359 37.4	12.1				
3	117	31.2	197 51.2	37.9	123 38.7	28.8	308 39.8	58.0	14 40.0	12.1				
4	132	33.7	212 50.3	37.8	138 40.0	28.2	323 42.0	57.9	29 42.6	12.2				
5	147	36.1	227 49.4	-24 37.7	153 41.2	-3 27.6	338 44.3	+5 57.8	44 45.3	+22 12.2				
6	162	38.6	242 48.4	-24 37.5	168 42.5	-3 26.9	353 46.5	+5 57.8	59 47.9	+22 12.2				
7	177	41.1	257 47.5	37.4	183 43.7	26.3	8 48.8	57.7	74 50.5	12.2				
8	192	43.5	272 46.5	37.2	198 45.0	25.7	23 51.0	57.6	89 53.2	12.2				
9	207	46.0	287 45.6	37.1	213 46.2	25.1	38 53.3	57.5	104 55.8	12.2				
10	222	48.5	302 44.6	36.9	228 47.4	24.4	53 55.5	57.4	119 58.5	12.3				
11	237	50.9	317 43.7	-24 36.8	243 48.7	-3 23.8	68 57.8	+5 57.4	135 01.1	+22 12.3				
12	252	53.4	332 42.8	-24 36.6	258 49.9	-3 23.2	84 00.0	+5 57.3	150 03.7	+22 12.3				
13	267	55.9	347 41.8	36.5	273 51.2	22.6	99 02.2	57.2	165 06.4	12.3				
14	282	58.3	2 40.9	36.3	288 52.4	21.9	114 04.5	57.1	180 09.0	12.3				
15	298	00.8	17 39.9	36.2	303 53.7	21.3	129 06.7	57.0	195 11.7	12.3				
16	313	03.2	32 39.0	36.0	318 54.9	20.7	144 09.0	57.0	210 14.3	12.4				
17	328	05.7	47 38.1	-24 35.9	333 56.1	-3 20.1	159 11.2	+5 56.9	225 16.9	+22 12.4				
18	343	08.2	62 37.1	-24 35.7	348 57.4	-3 19.4	174 13.5	+5 56.8	240 19.6	+22 12.4				
19	358	10.6	77 36.2	35.6	3 58.6	18.8	189 15.7	56.7	255 22.2	12.4				
20	13	13.1	92 35.2	35.4	18 59.9	18.2	204 18.0	56.6	270 24.9	12.4				
21	28	15.6	107 34.3	35.2	34 01.1	17.6	219 20.2	56.6	285 27.5	12.4				
22	43	18.0	122 33.4	35.1	49 02.3	16.9	234 22.5	56.5	300 30.1	12.5				
23	58	20.5	137 32.4	34.9	64 03.6	16.3	249 24.7	56.4	315 32.8	12.5				
24	73	23.0	152 31.5	-24 34.8	79 04.8	-3 15.7	264 27.0	+5 56.3	330 35.4	+22 12.5				
Dif	—		-9	+1	+12	+6	+22	-1	+26	0				

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 50 ^m 5			Edad: 11 ^d 0 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1 R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	26.2	-22	44	07.8	+10	04.0	60 N	6	51	7	47	8	42	13	54
1	197	26.0		58	42.9 ¹⁶¹		16.7 ¹²⁷	58	44	36	26		14	01	7	22
2	212	25.7		73	18.0 ¹⁶¹		29.3 ¹²⁶	56	38	26	12		08	10		17
3	227	25.5		87	53.0 ¹⁶⁰		42.0 ¹²⁷	54	32	18	8	01	14	12		12
4	242	25.2		102	28.0 ¹⁶⁰	+10	54.5 ¹²⁵	52	27	10	7	50	19	15		07
5	257	24.9	-22	117	02.9 ¹⁵⁹	+11	07.1 ¹²⁶	50	6	22	7	03	7	41	14	24
6	272	24.7	-22	131	37.8 ¹⁵⁹	+11	19.6 ¹²⁵	45	6	12	6	48	7	22	14	35
7	287	24.4		146	12.7 ¹⁵⁹		32.0 ¹²⁴	40	6	02	36	7	06	44	25	46
8	302	24.2		160	47.6 ¹⁵⁹		44.4 ¹²⁴	35	5	53	25	6	53	51	28	40
9	317	23.9		175	22.4 ¹⁵⁸	+11	56.7 ¹²³	30	45	6	15	41	14	58	31	34
10	332	23.7		189	57.2 ¹⁵⁸	+12	09.0 ¹²³	20	30	5	57	21	15	10	35	25
11	347	23.4	-22	204	32.0 ¹⁵⁸	+12	21.3 ¹²³	10 N	5	14	5	41	6	03	15	20
12	2	23.2	-22	219	06.7 ¹⁵⁷	+12	33.5 ¹²²	0	4	58	5	24	5	47	15	30
13	17	22.9		233	41.4 ¹⁵⁷		45.6 ¹²¹	10 S	40	5	07	30	40	46	3	00
14	32	22.6		248	16.0 ¹⁵⁶	+12	57.7 ¹²¹	20	4	19	4	48	5	12	15	50
15	47	22.4		262	50.6 ¹⁵⁶	+13	09.8 ¹²¹	30	3	51	24	4	51	16	02	55
16	62	22.1		277	25.2 ¹⁵⁶		21.8 ¹²⁰	35	34	4	10	39	09	58	37	27
17	77	21.9	-22	291	59.7 ¹⁵⁵	+13	33.7 ¹¹⁹	40	3	12	3	53	4	25	16	18
18	92	21.6	-22	306	34.1 ¹⁵⁴	+13	45.6 ¹¹⁹	45	2	43	3	31	4	08	16	27
19	107	21.4		321	08.6 ¹⁵⁵	+13	57.4 ¹¹⁸	50	2	02	3	04	3	47	38	70
20	122	21.1		335	43.0 ¹⁵⁴	+14	09.2 ¹¹⁸	52	1	39	2	50	37	44	72	11
21	137	20.8		350	17.3 ¹⁵³		20.9 ¹¹⁷	54	1	06	34	25	50	74	07	11
22	152	20.6		4	51.6 ¹⁵³		32.6 ¹¹⁷	56	** *	2	14	3	12	16	56	78
23	167	20.3		19	25.9 ¹⁵³		44.2 ¹¹⁶	58	** *	1	49	2	57	17	04	81
24	182	20.1	-22	34	00.1 ¹⁵²	+14	55.7 ¹¹⁵	60 S	** *	1	13	2	39	17	12	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 03 ^m 3		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: -0.3 PMG: 18 ^h 42 ^m		Mag: -2.1 PMG: 6 ^h 21 ^m		Mag: -0.3 PMG: 1 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	73	23.0	152	31.5	-24	34.8	79	04.8	-3	15.7
1	88	25.4	167	30.6		34.6	94	06.1		15.1
2	103	27.9	182	29.6		34.4	109	07.3		14.4
3	118	30.3	197	28.7		34.3	124	08.5		13.8
4	133	32.8	212	27.7		34.1	139	09.8		13.2
5	148	35.3	227	26.8	-24	33.9	154	11.0	-3	12.6
6	163	37.7	242	25.9	-24	33.7	169	12.2	-3	11.9
7	178	40.2	257	24.9		33.6	184	13.5		11.3
8	193	42.7	272	24.0		33.4	199	14.7		10.7
9	208	45.1	287	23.0		33.2	214	15.9		10.1
10	223	47.6	302	22.1		33.0	229	17.2		09.4
11	238	50.1	317	21.2	-24	32.9	244	18.4	-3	08.8
12	253	52.5	332	20.2	-24	32.7	259	19.7	-3	08.2
13	268	55.0	347	19.3		32.5	274	20.9		07.5
14	283	57.5	2	18.4		32.3	289	22.1		06.9
15	298	59.9	17	17.4		32.1	304	23.4		06.3
16	314	02.4	32	16.5		32.0	319	24.6		05.7
17	329	04.8	47	15.6	-24	31.8	334	25.8	-3	05.0
18	344	07.3	62	14.6	-24	31.6	349	27.1	-3	04.4
19	359	09.8	77	13.7		31.4	4	28.3		03.8
20	14	12.2	92	12.8		31.2	19	29.5		03.2
21	29	14.7	107	11.8		31.0	34	30.8		02.5
22	44	17.2	122	10.9		30.8	49	32.0		01.9
23	59	19.6	137	10.0		30.6	64	33.2		01.3
24	74	22.1	152	09.0	-24	30.4	79	34.5	-3	00.6
Dif	—		-9	+2			+12	+6		
									+23	-1
										+26

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 50 ^m 9			Edad: 12 ^d 0 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 R°: 46 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	182	20.1	-22	24.8	34	00.1	+14	55.7	60 N	14	58	15	53	16	49	13	57	5	53
1	197	19.8		25.1	48	34.3 ¹⁵²	+15	07.2 ¹¹⁵	58	15	14	16	04	16	56	14	08	10	42
2	212	19.5		25.4	63	08.4 ¹⁵¹		18.6 ¹¹⁴	56		28		14	17	02	18	13		33
3	227	19.3		25.7	77	42.5 ¹⁵¹		30.0 ¹¹⁴	54		39		22	08	26	17			25
4	242	19.0		26.0	92	16.5 ¹⁵⁰		41.3 ¹¹³	52		50		30	13	34	19			18
5	257	18.8	-22	26.3	106	50.5 ¹⁵⁰	+15	52.5 ¹¹²	50	15	59	16	37	17	18	14	41	21	5
6	272	18.5	-22	26.6	121	24.4 ¹⁴⁹	+16	03.7 ¹¹²	45	16	19	16	52	17	29	14	56	26	4
7	287	18.2		26.9	135	58.3 ¹⁴⁹		14.8 ¹¹¹	40		35		17	05	39	15	09	29	47
8	302	18.0		27.2	150	32.1 ¹⁴⁸		25.9 ¹¹¹	35	16	48		16	47	19	32			37
9	317	17.7		27.5	165	05.9 ¹⁴⁸		36.8 ¹⁰⁹	30	17	00		26	17	56	29	34		29
10	332	17.5		27.8	179	39.6 ¹⁴⁷		47.8 ¹¹⁰	20		20	17	44	18	11	45	38		14
11	347	17.2	-22	28.1	194	13.3 ¹⁴⁷	+16	58.6 ¹⁰⁸	10 N	17	38	18	01	18	27	15	59	42	4
12	2	16.9	-22	28.5	208	46.9 ¹⁴⁶	+17	09.4 ¹⁰⁸	0	17	55	18	17	18	43	16	13	45	3
13	17	16.7		28.8	223	20.4 ¹⁴⁵		20.1 ¹⁰⁷	10 S	18	11		34	19	01	26	49		39
14	32	16.4		29.1	237	53.9 ¹⁴⁵		30.7 ¹⁰⁶	20		30	18	54	23	41	52			26
15	47	16.2		29.4	252	27.4 ¹⁴⁵		41.3 ¹⁰⁶	30	18	51	19	18	19	51	16	57	56	12
16	62	15.9		29.7	267	00.8 ¹⁴⁴	+17	51.8 ¹⁰⁵	35	19	03		32	20	09	17	07	59	3
17	77	15.6	-22	30.0	281	34.1 ¹⁴³	+18	02.2 ¹⁰⁴	40	19	17	19	50	20	31	17	18	62	2
18	92	15.4	-22	30.2	296	07.4 ¹⁴³	+18	12.5 ¹⁰³	45	19	35	20	11	21	00	17	32	65	2
19	107	15.1		30.5	310	40.6 ¹⁴²		22.8 ¹⁰³	50	19	56		39	21	41	48	70		31
20	122	14.8		30.8	325	13.8 ¹⁴²		33.0 ¹⁰²	52	20	06	20	53	22	06	17	56	72	25
21	137	14.6		31.1	339	46.9 ¹⁴¹		43.1 ¹⁰¹	54		18	21	10	22	41	18	04	75	18
22	152	14.3		31.4	354	20.0 ¹⁴¹	+18	53.2 ¹⁰¹	56		31		30	** **	14	78			11
23	167	14.1		31.7	8	53.0 ¹⁴⁰	+19	03.1 ⁹⁹	58	20	47	21	56	** **	25	82	2	03	8
24	182	13.8	-22	32.0	23	25.9 ¹³⁹	+19	13.0 ⁹⁹	60 S	21	05	22	34	** **	18	37	88		1
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 59 ^m 4			Mag: -3.9 PMG: 13 ^h 52 ^m			Mag: -0.3 PMG: 18 ^h 40 ^m			Mag: -2.1 PMG: 6 ^h 18 ^m			Mag: -0.3 PMG: 1 ^h 53 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	74	22.1	152	09.0	-24	30.4	79	34.5	-3	00.6	265	21.1	+5	54.5	331	38.9	+22	12.9	
1	89	24.6	167	08.1		30.2	94	35.7	-3	00.0	280	23.3		54.4	346	41.5		12.9	
2	104	27.0	182	07.2		30.0	109	36.9	-2	59.4	295	25.6		54.3	1	44.1		12.9	
3	119	29.5	197	06.2		29.8	124	38.1		58.8	310	27.9		54.3	16	46.8		13.0	
4	134	32.0	212	05.3		29.6	139	39.4		58.1	325	30.1		54.2	31	49.4		13.0	
5	149	34.4	227	04.4	-24	29.4	154	40.6	-2	57.5	340	32.4	+5	54.1	46	52.1	+22	13.0	
6	164	36.9	242	03.4	-24	29.2	169	41.8	-2	56.9	355	34.6	+5	54.0	61	54.7	+22	13.0	
7	179	39.3	257	02.5		29.0	184	43.1		56.2	10	36.9		54.0	76	57.4		13.0	
8	194	41.8	272	01.6		28.8	199	44.3		55.6	25	39.2		53.9	92	00.0		13.0	
9	209	44.3	287	00.6		28.6	214	45.5		55.0	40	41.4		53.8	107	02.7		13.1	
10	224	46.7	301	59.7		28.4	229	46.8		54.4	55	43.7		53.7	122	05.3		13.1	
11	239	49.2	316	58.8	-24	28.2	244	48.0	-2	53.7	70	45.9	+5	53.7	137	08.0	+22	13.1	
12	254	51.7	331	57.8	-24	28.0	259	49.2	-2	53.1	85	48.2	+5	53.6	152	10.6	+22	13.1	
13	269	54.1	346	56.9		27.8	274	50.4		52.5	100	50.5		53.5	167	13.2		13.1	
14	284	56.6	1	56.0		27.6	289	51.7		51.8	115	52.7		53.4	182	15.9		13.1	
15	299	59.1	16	55.0		27.4	304	52.9		51.2	130	55.0		53.4	197	18.5		13.2	
16	315	01.5	31	54.1		27.1	319	54.1		50.6	145	57.2		53.3	212	21.2		13.2	
17	330	04.0	46	53.2	-24	26.9	334	55.3	-2	50.0	160	59.5	+5	53.2	227	23.8	+22	13.2	
18	345	06.4	61	52.2	-24	26.7	349	56.6	-2	49.3	176	01.8	+5	53.1	242	26.5	+22	13.2	
19	0	08.9	76	51.3		26.5	4	57.8		48.7	191	04.0		53.1	257	29.1		13.2	
20	15	11.4	91	50.4		26.3	19	59.0		48.1	206	06.3		53.0	272	31.8		13.3	
21	30	13.8	106	49.5		26.0	35	00.3		47.4	221	08.5		52.9	287	34.4		13.3	
22	45	16.3	121	48.5		25.8	50	01.5		46.8	236	10.8		52.8	302	37.1		13.3	
23	60	18.8	136	47.6		25.6	65	02.7		46.2	251	13.1		52.8	317	39.7		13.3	
24	75	21.2	151	46.7	-24	25.4	80	03.9	-2	45.5	266	15.3	+5	52.7	332	42.4	+22	13.3	
Dif	—			-9 +2			+12 +6			+23			-1			+26			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 51 ^m 3			Edad: 13 ^d 0 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 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	13.8	-22	32.0	23	25.9	+19	13.0	60 N	6 54	7 50	8 45	14 02	10	7 19	87
1	197	13.5		32.3	37	58.8 ¹³⁹		22.8 ⁹⁸	58	47	39	29	18 15		7 04	81
2	212	13.3		32.6	52	31.6 ¹³⁸		32.6 ⁹⁶	56	41	29	15	31 20		6 51	77
3	227	13.0		32.9	67	04.4 ¹³⁸		42.2 ⁹⁸	54	35	20	8 03	43 23		40	74
4	242	12.7		33.2	81	37.1 ¹³⁷	+19	51.8 ⁹⁶	52	29	13	7 53	14 53	25	30	71
5	257	12.5	-22	33.5	96	09.8 ¹³⁷	+20	01.3 ⁹⁵	50	6 25	7 06	7 44	15 02	28	6 21	69
6	272	12.2	-22	33.8	110	42.3 ¹³⁵	+20	10.7 ⁹⁴	45	6 13	6 50	7 24	15 22	31	6 03	65
7	287	11.9		34.1	125	14.9 ¹³⁶		20.0 ⁹³	40	6 04	38	7 08	38 34		5 48	61
8	302	11.7		34.3	139	47.3 ¹³⁴		29.2 ⁹²	35	5 55	26	6 54	15 51	37	35	59
9	317	11.4		34.6	154	19.7 ¹³⁴		38.4 ⁹²	30	47	6 16	42	16 03	39	24	57
10	332	11.1		34.9	168	52.1 ¹³⁴		47.4 ⁹⁰	20	31	5 58	22	23 43		5 06	52
11	347	10.9	-22	35.2	183	24.4 ¹³³	+20	56.4 ⁹⁰	10 N	5 15	5 42	6 04	16 41	45	4 49	50
12	2	10.6	-22	35.5	197	56.6 ¹³²	+21	05.3 ⁸⁹	0	4 59	5 25	5 48	16 58	48	4 34	47
13	17	10.3		35.8	212	28.7 ¹³¹		14.1 ⁸⁸	10 S	41	5 08	31	17 15	50	19	44
14	32	10.1		36.0	227	00.8 ¹³¹		22.8 ⁸⁷	20	4 19	4 48	5 12	33 53		4 03	40
15	47	09.8		36.3	241	32.9 ¹³¹		31.4 ⁸⁶	30	3 51	24	4 51	17 53	57	3 45	36
16	62	09.5		36.6	256	04.8 ¹²⁹		39.9 ⁸⁵	35	33	4 10	39	18 06	58	34	34
17	77	09.3	-22	36.9	270	36.7 ¹²⁹	+21	48.3 ⁸⁴	40	3 11	3 52	4 25	18 20	61	3 22	31
18	92	09.0	-22	37.2	285	08.6 ¹²⁹	+21	56.7 ⁸⁴	45	2 42	3 31	4 07	18 37	63	3 07	29
19	107	08.7		37.4	299	40.4 ¹²⁸	+22	04.9 ⁸²	50	2 00	3 03	3 46	18 58	67	2 50	24
20	122	08.5		37.7	314	12.1 ¹²⁷		13.0 ⁸¹	52	1 36	2 48	36	19 08	70	42	21
21	137	08.2		38.0	328	43.8 ¹²⁷		21.1 ⁸¹	54	1 01	32	24	19 72		33	19
22	152	07.9		38.3	343	15.4 ¹²⁶		29.0 ⁷⁹	56	** ** *	2 12	3 11	32 75		22	16
23	167	07.6		38.6	357	46.9 ¹²⁵		36.9 ⁷⁹	58	** ** *	1 46	2 55	19 47	80	2 11	12
24	182	07.4	-22	38.8	12	18.4 ¹²⁵	+22	44.7 ⁷⁸	60 S	** ** *	1 07	2 37	20 05	86	1 57	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 55 ^m 5		Mag: -3.9 PMG: 13 ^h 54 ^m		Mag: -0.3 PMG: 18 ^h 38 ^m		Mag: -2.1 PMG: 6 ^h 14 ^m		Mag: -0.3 PMG: 1 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	75	21.2	151	46.7	-24	25.4	80	03.9	-2	45.5
1	90	23.7	166	45.7		25.1	95	05.2		44.9
2	105	26.2	181	44.8		24.9	110	06.4		44.3
3	120	28.6	196	43.9		24.7	125	07.6		43.7
4	135	31.1	211	43.0		24.4	140	08.8		43.0
5	150	33.6	226	42.0	-24	24.2	155	10.1	-2	42.4
6	165	36.0	241	41.1	-24	24.0	170	11.3	-2	41.8
7	180	38.5	256	40.2		23.7	185	12.5		41.1
8	195	40.9	271	39.3		23.5	200	13.7		40.5
9	210	43.4	286	38.3		23.3	215	14.9		39.9
10	225	45.9	301	37.4		23.0	230	16.2		39.2
11	240	48.3	316	36.5	-24	22.8	245	17.4	-2	38.6
12	255	50.8	331	35.5	-24	22.6	260	18.6	-2	38.0
13	270	53.3	346	34.6		22.3	275	19.8		37.4
14	285	55.7	1	33.7		22.1	290	21.1		36.7
15	300	58.2	16	32.8		21.8	305	22.3		36.1
16	316	00.7	31	31.8		21.6	320	23.5		35.5
17	331	03.1	46	30.9	-24	21.3	335	24.7	-2	34.8
18	346	05.6	61	30.0	-24	21.1	350	25.9	-2	34.2
19	1	08.1	76	29.1		20.8	5	27.2		33.6
20	16	10.5	91	28.2		20.6	20	28.4		32.9
21	31	13.0	106	27.2		20.3	35	29.6		32.3
22	46	15.4	121	26.3		20.1	50	30.8		31.7
23	61	17.9	136	25.4		19.8	65	32.0		31.0
24	76	20.4	151	24.5	-24	19.6	80	33.2	-2	30.4
Dif	—		-9		+2		+12		+6	
									+23	
									-1	
									+26	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 51 ^m 7		Edad: 14 ^d 0 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	07.4	-22 38.8	12 18.4	+22 44.7	76	60 N	14 56	15 52	16 48	14 12 20	8 46 82		
1	197	07.1	39.1	26 49.8 ¹²⁴	52.3	76	58	15 13	16 03	16 55	33 26	25 77		
2	212	06.8	39.4	41 21.2 ¹²⁴	+22 59.9	76	56	26	13	17 02	14 51 29	8 08 73		
3	227	06.6	39.6	55 52.5 ¹²³	+23 07.3	74	54	38	22	07	15 06 32	7 54 70		
4	242	06.3	39.9	70 23.7 ¹²²	14.7	74	52	49	29	13	18 35	41 68		
5	257	06.0	-22 40.2	84 54.9 ¹²²	+23 21.9	72	50	15 59	16 36	17 18	15 30 36	7 30 66		
6	272	05.8	-22 40.5	99 26.0 ¹²¹	+23 29.1	72	45	16 18	16 52	17 29	15 53 39	7 08 62		
7	287	05.5	40.7	113 57.0 ¹²⁰	36.1	70	40	35	17 05	39	16 12 42	6 49 60		
8	302	05.2	41.0	128 28.0 ¹²⁰	43.1	70	35	16 48	16	48	28 43	34 58		
9	317	04.9	41.3	142 59.0 ¹²⁰	49.9	68	30	17 00	26	17 56	16 42 44	6 21 56		
10	332	04.7	41.5	157 29.9 ¹¹⁹	+23 56.6	67	20	21	17 45	18 12	17 06 46	5 58 54		
11	347	04.4	-22 41.8	172 00.7 ¹¹⁸	+24 03.2	66	10 N	17 39	18 01	18 28	17 26 49	5 39 51		
12	2	04.1	-22 42.1	186 31.4 ¹¹⁷	+24 09.8	66	0	17 55	18 18	18 44	17 46 50	5 21 49		
13	17	03.9	42.3	201 02.1 ¹¹⁷	16.2	64	10 S	18 12	35	19 02	18 05 52	5 03 46		
14	32	03.6	42.6	215 32.8 ¹¹⁷	22.5	63	20	31	18 55	24	26 53	4 43 45		
15	47	03.3	42.9	230 03.4 ¹¹⁶	28.6	61	30	18 52	19 19	19 52	18 50 55	21 42		
16	62	03.0	43.1	244 33.9 ¹¹⁵	34.7	61	35	19 05	34	20 10	19 04 57	4 08 40		
17	77	02.8	-22 43.4	259 04.4 ¹¹⁵	+24 40.7	60	40	19 19	19 52	20 33	19 21 58	3 53 38		
18	92	02.5	-22 43.6	273 34.8 ¹¹⁴	+24 46.5	58	45	19 37	20 13	21 02	19 40 61	3 36 34		
19	107	02.2	43.9	288 05.1 ¹¹³	52.3	58	50	19 58	42	21 45	20 05 63	14 31		
20	122	01.9	44.2	302 35.4 ¹¹³	+24 57.9	56	52	20 09	20 56	22 10	18 64	3 03 29		
21	137	01.7	44.4	317 05.7 ¹¹³	+25 03.4	55	54	20	21 13	22 47	31 67	2 52 26		
22	152	01.4	44.7	331 35.9 ¹¹²	08.8	54	56	34	21 34	** **	20 47 69	38 24		
23	167	01.1	44.9	346 06.0 ¹¹¹	14.1	53	58	20 50	22 01	** **	21 07 72	23 19		
24	182	00.8	-22 45.2	0 36.1 ¹¹¹	+25 19.2	51	60 S	21 09	22 41	** **	21 31 77	2 04 14		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 51 ^m 5		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: -0.3 PMG: 18 ^h 36 ^m		Mag: -2.1 PMG: 6 ^h 10 ^m		Mag: -0.3 PMG: 1 ^h 45 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	76	20.4	151 24.5	80 33.2	-2 30.4	267 09.7	+5 51.0	333 45.9	+22 13.7					
1	91	22.8	166 23.5	95 34.5	29.8	282 12.0	50.9	348 48.6	13.8					
2	106	25.3	181 22.6	110 35.7	29.1	297 14.3	50.8	3 51.2	13.8					
3	121	27.8	196 21.7	125 36.9	28.5	312 16.5	50.8	18 53.9	13.8					
4	136	30.2	211 20.8	140 38.1	27.9	327 18.8	50.7	33 56.5	13.8					
5	151	32.7	226 19.9	-24 18.3	155 39.3	-2 27.2	342 21.1	+5 50.6	48 59.2	+22 13.8				
6	166	35.2	241 18.9	-24 18.0	170 40.6	-2 26.6	357 23.4	+5 50.5	64 01.8	+22 13.9				
7	181	37.6	256 18.0	17.7	185 41.8	26.0	12 25.6	50.5	79 04.5	13.9				
8	196	40.1	271 17.1	17.5	200 43.0	25.4	27 27.9	50.4	94 07.1	13.9				
9	211	42.6	286 16.2	17.2	215 44.2	24.7	42 30.2	50.3	109 09.8	13.9				
10	226	45.0	301 15.3	16.9	230 45.4	24.1	57 32.4	50.3	124 12.4	13.9				
11	241	47.5	316 14.3	-24 16.6	245 46.6	-2 23.5	72 34.7	+5 50.2	139 15.1	+22 13.9				
12	256	49.9	331 13.4	-24 16.4	260 47.8	-2 22.8	87 37.0	+5 50.1	154 17.7	+22 14.0				
13	271	52.4	346 12.5	16.1	275 49.1	22.2	102 39.3	50.1	169 20.4	14.0				
14	286	54.9	1 11.6	15.8	290 50.3	21.6	117 41.5	50.0	184 23.0	14.0				
15	301	57.3	16 10.7	15.6	305 51.5	20.9	132 43.8	49.9	199 25.7	14.0				
16	316	59.8	31 09.7	15.3	320 52.7	20.3	147 46.1	49.9	214 28.3	14.0				
17	332	02.3	46 08.8	-24 15.0	335 53.9	-2 19.7	162 48.4	+5 49.8	229 31.0	+22 14.0				
18	347	04.7	61 07.9	-24 14.7	350 55.1	-2 19.0	177 50.6	+5 49.7	244 33.7	+22 14.1				
19	2	07.2	76 07.0	14.4	5 56.3	18.4	192 52.9	49.6	259 36.3	14.1				
20	17	09.7	91 06.1	14.2	20 57.6	17.8	207 55.2	49.6	274 39.0	14.1				
21	32	12.1	106 05.2	13.9	35 58.8	17.1	222 57.5	49.5	289 41.6	14.1				
22	47	14.6	121 04.2	13.6	51 00.0	16.5	237 59.7	49.4	304 44.3	14.1				
23	62	17.1	136 03.3	13.3	66 01.2	15.9	253 02.0	49.4	319 46.9	14.2				
24	77	19.5	151 02.4	-24 13.0	81 02.4	-2 15.2	268 04.3	+5 49.3	334 49.6	+22 14.2				
Dif	—	—	-9 +3	+12	+6	+23	-1	+27	0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 52 ^m 2			Edad: 15 ^d 0 PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/2 R°: ***													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	00.8	-22 45.2	0	36.1	+25	19.2	51	60 N	6 56	7 52	8 49	14 32	39	10 08	68	
1	197	00.6	45.4	15	06.2		24.3	51	58	49	41	32	14 59	42	9 42	64	
2	212	00.3	45.7	29	36.2		29.2	49	56	43	31	18	15 20	44	21	62	
3	227	00.0	46.0	44	06.1		34.0	48	54	37	23	8 06	38	45	9 04	61	
4	241	59.7	46.2	58	36.0		38.7	47	52	32	15	7 55	15 53	45	8 49	60	
5	256	59.5	-22 46.5	73	05.8	+25	43.2	45	50	6 26	7 08	7 46	16 06	46	8 36	59	
6	271	59.2	-22 46.7	87	35.6	+25	47.7	45	45	6 15	6 52	7 26	16 32	48	8 10	57	
7	286	58.9	47.0	102	05.4		52.0	43	40	6 05	39	7 10	16 54	48	7 49	56	
8	301	58.6	47.2	116	35.1	+25	56.2	42	35	5 56	28	6 56	17 11	49	32	55	
9	316	58.4	47.5	131	04.7	+26	00.3	41	30	48	6 18	44	26	50	7 17	54	
10	331	58.1	47.7	145	34.3		04.3	40	20	32	5 59	23	17 52	51	6 52	53	
11	346	57.8	-22 48.0	160	03.9	+26	08.1	38	10 N	5 16	5 43	6 05	18 15	51	6 30	52	
12	1	57.5	-22 48.2	174	33.4	+26	11.8	37	0	5 00	5 26	5 48	18 36	51	6 10	50	
13	16	57.3	48.5	189	02.9		15.4	36	10 S	4 41	5 08	31	18 57	52	5 49	50	
14	31	57.0	48.7	203	32.4		18.8	34	20	4 20	4 49	5 13	19 19	53	28	48	
15	46	56.7	48.9	218	01.7		22.2	34	30	3 51	24	4 52	19 45	53	5 03	47	
16	61	56.4	49.2	232	31.1		25.4	32	35	33	4 10	39	20 01	53	4 48	46	
17	76	56.2	-22 49.4	247	00.4	+26	28.5	31	40	3 11	3 52	4 24	20 19	53	4 31	45	
18	91	55.9	-22 49.7	261	29.7	+26	31.4	29	45	2 42	3 30	4 07	20 41	54	4 10	44	
19	106	55.6	49.9	275	59.0		34.3	29	50	1 59	3 02	3 45	21 08	55	3 45	41	
20	121	55.3	50.2	290	28.2		37.0	27	52	1 34	2 47	35	22	54	32	40	
21	136	55.0	50.4	304	57.4		39.5	25	54	0 56	30	23	38	54	18	38	
22	151	54.8	50.6	319	26.5		42.0	25	56	** ** *	2 10	3 10	21 56	55	3 02	36	
23	166	54.5	50.9	333	55.6		44.3	23	58	** ** *	1 43	2 54	22 19	56	2 42	33	
24	181	54.2	-22 51.1	348	24.7	+26	46.5	22	60 S	** ** *	1 02	2 35	22 48	57	2 18	27	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 18 ^h 47 ^m 6		Mag: -3.9 PMG: 13 ^h 57 ^m			Mag: -0.2 PMG: 18 ^h 34 ^m			Mag: -2.1 PMG: 6 ^h 07 ^m			Mag: -0.3 PMG: 1 ^h 40 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	
0	77	19.5	151	02.4	-24 13.0	81	02.4	-2 15.2	268	04.3	+5 49.3	334	49.6	+22 14.2			
1	92	22.0	166	01.5	12.7	96	03.6	14.6	283	06.6	49.2	349	52.2	14.2			
2	107	24.4	181	00.6	12.4	111	04.8	14.0	298	08.8	49.2	4	54.9	14.2			
3	122	26.9	195	59.7	12.1	126	06.0	13.3	313	11.1	49.1	19	57.5	14.2			
4	137	29.4	210	58.8	11.8	141	07.3	12.7	328	13.4	49.0	35	00.2	14.2			
5	152	31.8	225	57.8	-24 11.6	156	08.5	-2 12.1	343	15.7	+5 49.0	50	02.8	+22 14.3			
6	167	34.3	240	56.9	-24 11.3	171	09.7	-2 11.4	358	17.9	+5 48.9	65	05.5	+22 14.3			
7	182	36.8	255	56.0	11.0	186	10.9	10.8	13	20.2	48.8	80	08.1	14.3			
8	197	39.2	270	55.1	10.7	201	12.1	10.2	28	22.5	48.8	95	10.8	14.3			
9	212	41.7	285	54.2	10.4	216	13.3	09.5	43	24.8	48.7	110	13.5	14.3			
10	227	44.2	300	53.3	10.1	231	14.5	08.9	58	27.1	48.6	125	16.1	14.4			
11	242	46.6	315	52.4	-24 09.8	246	15.7	-2 08.3	73	29.3	+5 48.6	140	18.8	+22 14.4			
12	257	49.1	330	51.4	-24 09.5	261	16.9	-2 07.6	88	31.6	+5 48.5	155	21.4	+22 14.4			
13	272	51.5	345	50.5	09.2	276	18.1	07.0	103	33.9	48.4	170	24.1	14.4			
14	287	54.0	0	49.6	08.9	291	19.4	06.3	118	36.2	48.4	185	26.7	14.4			
15	302	56.5	15	48.7	08.5	306	20.6	05.7	133	38.4	48.3	200	29.4	14.4			
16	317	58.9	30	47.8	08.2	321	21.8	05.1	148	40.7	48.2	215	32.0	14.5			
17	333	01.4	45	46.9	-24 07.9	336	23.0	-2 04.4	163	43.0	+5 48.2	230	34.7	+22 14.5			
18	348	03.9	60	46.0	-24 07.6	351	24.2	-2 03.8	178	45.3	+5 48.1	245	37.3	+22 14.5			
19	3	06.3	75	45.1	07.3	6	25.4	03.2	193	47.6	48.0	260	40.0	14.5			
20	18	08.8	90	44.2	07.0	21	26.6	02.5	208	49.9	48.0	275	42.7	14.5			
21	33	11.3	105	43.3	06.7	36	27.8	01.9	223	52.1	47.9	290	45.3	14.6			
22	48	13.7	120	42.3	06.4	51	29.0	01.3	238	54.4	47.8	305	48.0	14.6			
23	63	16.2	135	41.4	06.1	66	30.2	-2 00.6	253	56.7	47.8	320	50.6	14.6			
24	78	18.7	150	40.5	-24 05.7	81	31.4	-2 00.0	268	59.0	+5 47.7	335	53.3	+22 14.6			
Dif	—		-9 +3			+12 +6			+23 -1			+27 0					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2			Edad: 16 ^d 0 PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/4										
	PMG: 11 ^h 52 ^m 6			SD: 14'8 PMG: 0 ^h 48 ^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	181	54.2	-22 51.1	348	24.7	+26 46.5	20	60 N	14 55	15 51	16 47	15 11 64	11 16 44	
1	196	53.9	51.4	2	53.7 ¹⁰⁰	48.5	19	58	15 12	16 03	16 55	15 41 61	10 46 46	
2	211	53.6	51.6	17	22.8 ¹⁰¹	50.4	20	56	26	12	17 01	16 04 60	23 48	
3	226	53.4	51.8	31	51.8 ¹⁰⁰	52.2	18	54	38	21	07	23 59	10 05 48	
4	241	53.1	52.1	46	20.7 ⁹⁹	53.9	17	52	49	29	13	38 59	9 49 49	
5	256	52.8	-22 52.3	60	49.7 ¹⁰⁰	+26 55.4	15	50	15 58	16 36	17 18	16 52 58	9 35 49	
6	271	52.5	-22 52.5	75	18.6 ⁹⁹	+26 56.8	14	45	16 18	16 52	17 29	17 20 57	9 07 50	
7	286	52.2	52.8	89	47.5 ⁹⁹	58.1	13	40	35	17 05	39	17 42 56	8 45 51	
8	301	52.0	53.0	104	16.4 ⁹⁹	+26 59.2	11	35	16 48	16	48	18 00 55	27 51	
9	316	51.7	53.2	118	45.2 ⁹⁸	+27 00.2	10	30	17 00	27	17 57	16 55	8 11 51	
10	331	51.4	53.4	133	14.0 ⁹⁸	01.1	9	20	21	17 45	18 13	18 43 53	7 45 51	
11	346	51.1	-22 53.7	147	42.9 ⁹⁹	+27 01.8	7	10 N	17 39	18 02	18 28	19 06 52	7 22 51	
12	1	50.8	-22 53.9	162	11.7 ⁹⁸	+27 02.4	6	0	17 56	18 19	18 45	19 27 52	7 00 52	
13	16	50.6	54.1	176	40.4 ⁹⁷	02.9	5	10 S	18 14	37	19 03	19 49 51	6 39 52	
14	31	50.3	54.4	191	09.2 ⁹⁸	03.2	3	20	32	18 57	26	20 12 50	6 16 52	
15	46	50.0	54.6	205	38.0 ⁹⁸	03.4	2	30	18 54	19 21	19 54	38 49	5 50 52	
16	61	49.7	54.8	220	06.7 ⁹⁷	03.5	1	35	19 06	36	20 12	20 54 48	34 52	
17	76	49.4	-22 55.0	234	35.4 ⁹⁷	+27 03.4	1	40	19 21	19 54	20 35	21 12 48	5 16 52	
18	91	49.1	-22 55.3	249	04.1 ⁹⁷	+27 03.2	2	45	19 39	20 16	21 05	21 35 45	4 54 52	
19	106	48.9	55.5	263	32.8 ⁹⁷	02.9	3	50	20 00	44	21 48	22 03 44	26 52	
20	121	48.6	55.7	278	01.5 ⁹⁷	02.4	5	52	11	20 59	22 14	16 43	4 12 52	
21	136	48.3	55.9	292	30.2 ⁹⁷	01.8	6	54	23	21 16	22 53	32 42	3 56 52	
22	151	48.0	56.1	306	58.9 ⁹⁷	01.1	7	56	37	21 37	** **	22 51 40	38 52	
23	166	47.7	56.4	321	27.6 ⁹⁷	+27 00.2	9	58	20 53	22 05	** **	23 15 36	3 15 51	
24	181	47.4	-22 56.6	335	56.3 ⁹⁷	+26 59.2	10	60 S	21 12	22 48	** **	23 45 32	2 45 51	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 43 ^m 7		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: -0.2 PMG: 18 ^h 32 ^m		Mag: -2.1 PMG: 6 ^h 03 ^m		Mag: -0.3 PMG: 1 ^h 36 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	78	18.7	150	40.5	81	31.4	268	59.0	335	53.3				
1	93	21.1	165	39.6	96	32.6	284	01.3	350	55.9				
2	108	23.6	180	38.7	111	33.8	299	03.5	5	58.6				
3	123	26.0	195	37.8	126	35.0	314	05.8	21	01.2				
4	138	28.5	210	36.9	141	36.2	329	08.1	36	03.9				
5	153	31.0	225	36.0	156	37.5	344	10.4	51	06.6				
6	168	33.4	240	35.1	171	38.7	359	12.7	66	09.2				
7	183	35.9	255	34.2	186	39.9	14	15.0	81	11.9				
8	198	38.4	270	33.3	201	41.1	29	17.2	96	14.5				
9	213	40.8	285	32.4	216	42.3	44	19.5	111	17.2				
10	228	43.3	300	31.5	231	43.5	59	21.8	126	19.8				
11	243	45.8	315	30.6	246	44.7	74	24.1	141	22.5				
12	258	48.2	330	29.7	261	45.9	89	26.4	156	25.2				
13	273	50.7	345	28.7	276	47.1	104	28.7	171	27.8				
14	288	53.2	0	27.8	291	48.3	119	31.0	186	30.5				
15	303	55.6	15	26.9	306	49.5	134	33.2	201	33.1				
16	318	58.1	30	26.0	321	50.7	149	35.5	216	35.8				
17	334	00.5	45	25.1	336	51.9	164	37.8	231	38.4				
18	349	03.0	60	24.2	351	53.1	179	40.1	246	41.1				
19	4	05.5	75	23.3	6	54.3	194	42.4	261	43.8				
20	19	07.9	90	22.4	21	55.5	209	44.7	276	46.4				
21	34	10.4	105	21.5	36	56.7	224	47.0	291	49.1				
22	49	12.9	120	20.6	51	57.9	239	49.3	306	51.7				
23	64	15.3	135	19.7	66	59.1	254	51.5	321	54.4				
24	79	17.8	150	18.8	82	00.3	269	53.8	336	57.0				
Dif	—		-9	+3	+12	+6	+23	-1	+27	0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 53 ^m 1			Edad: 17 ^d 0 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8 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	181	47.4	-22	56.6	335	56.3	+26	59.2	12	60 N	6 59	7 55	8 52	16 15	83	12 00	24	
1	196	47.2		56.8	350	25.0		58.0	12	58	51	44	35	16 42	78	11 32	30	
2	211	46.9		57.0	4	53.6		56.7	13	56	45	34	21	17 04	73	11 11	32	
3	226	46.6		57.2	19	22.3		55.3	14	54	39	25	8 08	22 70		10 53	35	
4	241	46.3		57.5	33	51.0		53.8	15	52	33	17	7 57	37 68		38 37		
5	256	46.0	-22	57.7	48	19.7	+26	52.1	17	50	6 28	7 10	7 48	17 50	67	10 24	39	
6	271	45.7	-22	57.9	62	48.4	+26	50.3	18	45	6 17	6 54	7 28	18 17	63	9 57	42	
7	286	45.5		58.1	77	17.1		48.3	20	40	6 07	41	7 11	38 61		36 43		
8	301	45.2		58.3	91	45.8		46.2	21	35	5 58	29	6 57	18 55	60	18 45		
9	316	44.9		58.5	106	14.5		44.0	22	30	49	19	45	19 11	57	9 02	47	
10	331	44.6		58.7	120	43.2		41.6	24	20	33	6 01	25	36 55		8 36	48	
11	346	44.3	-22	58.9	135	11.9	+26	39.1	25	10 N	5 17	5 44	6 06	19 58	53	8 13	50	
12	1	44.0	-22	59.1	149	40.6	+26	36.5	26	0	5 01	5 27	5 49	20 19	51	7 52	52	
13	16	43.7		59.4	164	09.4		33.7	28	10 S	4 42	5 09	32	20 40	49	31 53		
14	31	43.5		59.6	178	38.2		30.8	29	20	4 20	4 49	5 14	21 02	46	7 08 55		
15	46	43.2	-22	59.8	193	06.9		27.8	30	30	3 52	25	4 52	27 44		6 42 56		
16	61	42.9	-23	00.0	207	35.7		24.7	31	35	33	4 10	39	21 42 43		26 57		
17	76	42.6	-23	00.2	222	04.5	+26	21.4	33	40	3 11	3 52	4 25	22 00 40		6 08 59		
18	91	42.3	-23	00.4	236	33.4	+26	17.9	35	45	2 41	3 30	4 07	22 20 38		5 46 60		
19	106	42.0		00.6	251	02.2		14.4	35	50	1 57	3 01	3 45	47 34		18 63		
20	121	41.7		00.8	265	31.1		10.7	37	52	1 32	2 47	35	22 59 33		5 04 64		
21	136	41.5		01.0	279	59.9		06.9	38	54	0 52	29	23	23 14 30		4 48 66		
22	151	41.2		01.2	294	28.8	+26	02.9	40	56	** ** *	2 08	3 09	31 27		30 67		
23	166	40.9		01.4	308	57.8 ¹⁰⁰	+25	58.8	41	58	** ** *	1 40	2 53	23 51 23		4 06 71		
24	181	40.6	-23	01.6	323	26.7 ⁹⁹	+25	54.6	42	60 S	** ** *	0 58	2 33	** ** *		3 36 75		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 18 ^h 39 ^m 7			Mag: -3.9 PMG: 14 ^h 00 ^m			Mag: -0.2 PMG: 18 ^h 31 ^m			Mag: -2.1 PMG: 5 ^h 59 ^m			Mag: -0.3 PMG: 1 ^h 32 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	79	17.8	150	18.8	-23	57.7	82	00.3	-1	44.7	269	53.8	+5	46.2	336	57.0	+22	15.0
1	94	20.3	165	17.9		57.4	97	01.5		44.1	284	56.1		46.1	351	59.7		15.1
2	109	22.7	180	17.0		57.0	112	02.7		43.5	299	58.4		46.1	7	02.4		15.1
3	124	25.2	195	16.1		56.7	127	03.9		42.8	315	00.7		46.0	22	05.0		15.1
4	139	27.7	210	15.2		56.3	142	05.1		42.2	330	03.0		45.9	37	07.7		15.1
5	154	30.1	225	14.3	-23	56.0	157	06.3	-1	41.5	345	05.3	+5	45.9	52	10.3	+22	15.1
6	169	32.6	240	13.4	-23	55.6	172	07.5	-1	40.9	0	07.6	+5	45.8	67	13.0	+22	15.2
7	184	35.0	255	12.5		55.3	187	08.7		40.3	15	09.9		45.8	82	15.7		15.2
8	199	37.5	270	11.6		54.9	202	09.9		39.6	30	12.2		45.7	97	18.3		15.2
9	214	40.0	285	10.7		54.5	217	11.1		39.0	45	14.4		45.6	112	21.0		15.2
10	229	42.4	300	09.8		54.2	232	12.3		38.4	60	16.7		45.6	127	23.6		15.2
11	244	44.9	315	08.9	-23	53.8	247	13.5	-1	37.7	75	19.0	+5	45.5	142	26.3	+22	15.2
12	259	47.4	330	08.1	-23	53.5	262	14.7	-1	37.1	90	21.3	+5	45.4	157	29.0	+22	15.3
13	274	49.8	345	07.2		53.1	277	15.9		36.4	105	23.6		45.4	172	31.6		15.3
14	289	52.3	0	06.3		52.7	292	17.1		35.8	120	25.9		45.3	187	34.3		15.3
15	304	54.8	15	05.4		52.4	307	18.3		35.2	135	28.2		45.3	202	36.9		15.3
16	319	57.2	30	04.5		52.0	322	19.5		34.5	150	30.5		45.2	217	39.6		15.3
17	334	59.7	45	03.6	-23	51.6	337	20.6	-1	33.9	165	32.8	+5	45.1	232	42.3	+22	15.4
18	350	02.2	60	02.7	-23	51.3	352	21.8	-1	33.3	180	35.1	+5	45.1	247	44.9	+22	15.4
19	5	04.6	75	01.8		50.9	7	23.0		32.6	195	37.4		45.0	262	47.6		15.4
20	20	07.1	90	00.9		50.5	22	24.2		32.0	210	39.7		45.0	277	50.2		15.4
21	35	09.5	105	00.0		50.1	37	25.4		31.3	225	42.0		44.9	292	52.9		15.4
22	50	12.0	119	59.1		49.8	52	26.6		30.7	240	44.3		44.8	307	55.6		15.4
23	65	14.5	134	58.2		49.4	67	27.8		30.1	255	46.6		44.8	322	58.2		15.5
24	80	16.9	149	57.3	-23	49.0	82	29.0	-1	29.4	270	48.8	+5	44.7	338	00.9	+22	15.5
Dif	—			-9 +4			+12 +6			+23 -1			+27 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 53 ^m 5			Edad: 18 ^d 0 PHE { SD: 14/9 PMG: 2 ^h 31 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	40.6	-23	01.6	323	26.7	+25 54.6	60 N	14 54	15 51	16 47	17 38 91	12 24 12	
1	196	40.3		01.8	337	55.7 ¹⁰⁰	50.3 43	58	15 11	16 02	16 54	18 00 85	12 02 17	
2	211	40.0		02.0	352	24.7 ¹⁰⁰	45.8 45	56	25	12	17 01	17 81	11 43 22	
3	226	39.7		02.2	6	53.7 ¹⁰⁰	41.2 46	54	38	21	07	32 78	28 25	
4	241	39.4		02.4	21	22.8 ¹⁰¹	36.4 48	52	48	29	13	45 75	15 28	
5	256	39.1	-23	02.6	35	51.9 ¹⁰¹	+25 31.6 48	50	15 58	16 36	17 18	18 57 72	11 03 30	
6	271	38.9	-23	02.8	50	21.0 ¹⁰¹	+25 26.6 50	45	16 18	16 52	17 29	19 20 68	10 39 34	
7	286	38.6		03.0	64	50.1 ¹⁰¹	21.4 52	40	35	17 05	39	39 64	19 37	
8	301	38.3		03.2	79	19.3 ¹⁰²	16.2 52	35	16 49	17	48	19 55 61	10 03 39	
9	316	38.0		03.4	93	48.5 ¹⁰²	10.8 54	30	17 01	27	17 57	20 08 60	9 49 41	
10	331	37.7		03.6	108	17.7 ¹⁰²	+25 05.3 55	20	22	17 46	18 13	31 56	24 45	
11	346	37.4	-23	03.8	122	47.0 ¹⁰³	+24 59.7 56	10 N	17 40	18 03	18 29	20 51 53	9 03 48	
12	1	37.1	-23	03.9	137	16.3 ¹⁰³	+24 53.9 58	0	17 57	18 20	18 46	21 10 49	8 44 50	
13	16	36.8		04.1	151	45.6 ¹⁰³	48.0 59	10 S	18 15	38	19 05	29 46	24 53	
14	31	36.5		04.3	166	15.0 ¹⁰⁴	42.0 60	20	33	18 58	27	21 48 44	8 03 55	
15	46	36.3		04.5	180	44.4 ¹⁰⁴	35.9 61	30	18 55	19 22	19 56	22 11 40	7 38 59	
16	61	36.0		04.7	195	13.8 ¹⁰⁴	29.6 63	35	19 08	37	20 14	25 37	23 61	
17	76	35.7	-23	04.9	209	43.3 ¹⁰⁵	+24 23.3 63	40	19 23	19 55	20 37	22 40 34	7 07 63	
18	91	35.4	-23	05.1	224	12.8 ¹⁰⁵	+24 16.8 65	45	19 40	20 17	21 07	22 58 31	6 46 66	
19	106	35.1		05.3	238	42.3 ¹⁰⁵	10.1 67	50	20 02	20 47	21 51	23 21 26	21 69	
20	121	34.8		05.4	253	11.9 ¹⁰⁶	+24 03.4 69	52	13	21 01	22 17	32 24	6 08 72	
21	136	34.5		05.6	267	41.5 ¹⁰⁶	+23 56.5 67	54	25	19	22 59	44 21	5 54 74	
22	151	34.2		05.8	282	11.2 ¹⁰⁷	49.5 70	56	39	21 40	** ** *	23 58 18	37 78	
23	166	33.9		06.0	296	40.9 ¹⁰⁷	42.4 71	58	20 55	22 09	** ** *	** ** **	5 17 82	
24	181	33.6	-23	06.2	311	10.6 ¹⁰⁷	+23 35.2 72	60 S	21 15	22 54	** ** *	0 17 16	4 51 89	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 35 ^m 8		Mag: -3.9 PMG: 14 ^h 01 ^m		Mag: -0.2 PMG: 18 ^h 29 ^m		Mag: -2.1 PMG: 5 ^h 56 ^m		Mag: -0.3 PMG: 1 ^h 28 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	80	16.9	149	57.3	82	29.0	270	48.8	338	00.9				
1	95	19.4	164	56.4	97	30.2	285	51.1	353	03.5				
2	110	21.9	179	55.5	112	31.4	300	53.4	8	06.2				
3	125	24.3	194	54.7	127	32.6	315	55.7	23	08.9				
4	140	26.8	209	53.8	142	33.8	330	58.0	38	11.5				
5	155	29.3	224	52.9	157	35.0	346	00.3	53	14.2				
6	170	31.7	239	52.0	172	36.2	1	02.6	68	16.8				
7	185	34.2	254	51.1	187	37.4	16	04.9	83	19.5				
8	200	36.7	269	50.2	202	38.6	31	07.2	98	22.2				
9	215	39.1	284	49.3	217	39.7	46	09.5	113	24.8				
10	230	41.6	299	48.4	232	40.9	61	11.8	128	27.5				
11	245	44.0	314	47.5	247	42.1	76	14.1	143	30.2				
12	260	46.5	329	46.7	262	43.3	91	16.4	158	32.8				
13	275	49.0	344	45.8	277	44.5	106	18.7	173	35.5				
14	290	51.4	359	44.9	292	45.7	121	21.0	188	38.1				
15	305	53.9	14	44.0	307	46.9	136	23.3	203	40.8				
16	320	56.4	29	43.1	322	48.1	151	25.6	218	43.5				
17	335	58.8	44	42.2	337	49.3	166	27.9	233	46.1				
18	351	01.3	59	41.3	352	50.5	181	30.2	248	48.8				
19	6	03.8	74	40.5	7	51.6	196	32.5	263	51.5				
20	21	06.2	89	39.6	22	52.8	211	34.8	278	54.1				
21	36	08.7	104	38.7	37	54.0	226	37.1	293	56.8				
22	51	11.2	119	37.8	52	55.2	241	39.4	308	59.4				
23	66	13.6	134	36.9	67	56.4	256	41.7	324	02.1				
24	81	16.1	149	36.0	82	57.6	271	44.0	339	04.8				
Dif	—		-9		+4		+23		-1		+27		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 0			Edad: 19 ^d 0 PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/7 PMG: 3 ^h 22 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	33.6	-23	06.2	311	10.6	+23	35.2	60 N	7 01	7 57	8 54	19 09	93	12 36	6
1	196	33.3		06.3	325	40.4 ¹⁰⁸		27.8 ⁷⁴	58	6 53	46	37	25	87	19	12
2	211	33.1		06.5	340	10.2 ¹⁰⁸		20.4 ⁷⁶	56	47	36	23	38	84	12 05	16
3	226	32.8		06.7	354	40.1 ¹⁰⁹		12.8 ⁷⁶	54	41	27	8 10	19 50	80	11 53	19
4	241	32.5		06.9	9	10.0 ¹⁰⁹	+23	05.1 ⁷⁷	52	35	19	7 59	20 00	77	43	21
5	256	32.2	-23	07.1	23	40.0 ¹¹⁰	+22	57.3 ⁷⁸	50	6 30	7 11	7 50	20 09	75	11 33	23
6	271	31.9	-23	07.2	38	10.0 ¹¹⁰	+22	49.3 ⁸⁰	45	6 19	6 56	7 29	20 28	70	11 13	28
7	286	31.6		07.4	52	40.0 ¹¹⁰		41.3 ⁸⁰	40	6 08	42	7 13	43	66	10 56	32
8	301	31.3		07.6	67	10.1 ¹¹¹		33.1 ⁸²	35	5 59	31	6 59	20 56	63	42	35
9	316	31.0		07.8	81	40.2 ¹¹¹		24.9 ⁸²	30	51	20	47	21 08	60	30	38
10	331	30.7		07.9	96	10.3 ¹¹¹		16.5 ⁸⁴	20	34	6 02	26	27	55	10 09	42
11	346	30.4	-23	08.1	110	40.5 ¹¹²	+22	08.0 ⁸⁵	10 N	5 18	5 45	6 07	21 44	51	9 51	45
12	1	30.1	-23	08.3	125	10.8 ¹¹³	+21	59.4 ⁸⁶	0	5 02	5 28	5 50	21 59	48	9 34	48
13	16	29.8		08.4	139	41.1 ¹¹³		50.6 ⁸⁸	10 S	4 43	5 10	33	22 15	44	9 17	52
14	31	29.5		08.6	154	11.4 ¹¹³		41.8 ⁸⁸	20	4 21	4 50	5 14	32	40	8 58	56
15	46	29.2		08.8	168	41.8 ¹¹⁴		32.9 ⁸⁹	30	3 52	25	4 52	22 51	35	37	59
16	61	28.9		09.0	183	12.2 ¹¹⁴		23.8 ⁹¹	35	33	4 10	40	23 02	32	24	62
17	76	28.7	-23	09.1	197	42.6 ¹¹⁴	+21	14.6 ⁹²	40	3 11	3 52	4 25	23 14	30	8 10	65
18	91	28.4	-23	09.3	212	13.2 ¹¹⁶	+21	05.4 ⁹²	45	2 41	3 30	4 07	23 29	26	7 52	69
19	106	28.1		09.5	226	43.7 ¹¹⁵	+20	56.0 ⁹⁴	50	1 56	3 01	3 45	47	21	30	74
20	121	27.8		09.6	241	14.3 ¹¹⁶		46.5 ⁹⁵	52	1 30	2 46	34	23 56	18	20	76
21	136	27.5		09.8	255	44.9 ¹¹⁶		36.9 ⁹⁶	54	0 48	29	22	** ** *	**	7 08	80
22	151	27.2		09.9	270	15.6 ¹¹⁷		27.3 ⁹⁶	56	** ** *	2 07	3 08	** ** *	**	6 55	83
23	166	26.9		10.1	284	46.3 ¹¹⁷		17.5 ⁹⁸	58	** ** *	1 39	2 52	0 14	14	39	87
24	181	26.6	-23	10.3	299	17.1 ¹¹⁸	+20	07.6 ⁹⁹	60 S	** ** *	0 53	2 32	0 33	9	6 20	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 31 ^m 9		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: -0.1 PMG: 18 ^h 27 ^m		Mag: -2.1 PMG: 5 ^h 52 ^m		Mag: -0.3 PMG: 1 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	16.1	149	36.0	-23	39.6	82	57.6	-1	14.1
1	96	18.5	164	35.2		39.2	97	58.8		13.5
2	111	21.0	179	34.3		38.8	113	00.0		12.8
3	126	23.5	194	33.4		38.3	128	01.1		12.2
4	141	25.9	209	32.5		37.9	143	02.3		11.5
5	156	28.4	224	31.6	-23	37.5	158	03.5	-1	10.9
6	171	30.9	239	30.8	-23	37.1	173	04.7	-1	10.3
7	186	33.3	254	29.9		36.7	188	05.9		09.6
8	201	35.8	269	29.0		36.3	203	07.1		09.0
9	216	38.3	284	28.1		35.9	218	08.3		08.3
10	231	40.7	299	27.2		35.4	233	09.5		07.7
11	246	43.2	314	26.4	-23	35.0	248	10.6	-1	07.1
12	261	45.6	329	25.5	-23	34.6	263	11.8	-1	06.4
13	276	48.1	344	24.6		34.2	278	13.0		05.8
14	291	50.6	359	23.7		33.7	293	14.2		05.1
15	306	53.0	14	22.8		33.3	308	15.4		04.5
16	321	55.5	29	22.0		32.9	323	16.6		03.9
17	336	58.0	44	21.1	-23	32.5	338	17.7	-1	03.2
18	352	00.4	59	20.2	-23	32.0	353	18.9	-1	02.6
19	7	02.9	74	19.3		31.6	8	20.1		01.9
20	22	05.4	89	18.5		31.2	23	21.3		01.3
21	37	07.8	104	17.6		30.7	38	22.5	-1	00.7
22	52	10.3	119	16.7		30.3	53	23.7	-1	00.0
23	67	12.8	134	15.8		29.9	68	24.8	-0	59.4
24	82	15.2	149	15.0	-23	29.4	83	26.0	-0	58.7
Dif	—		-9 +4		+12 +6		+23 -1		+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 5			Edad: 20 ^d 0 PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/3 SD: 15:2 PMG: 4 ^h 11 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	26.6	-23	10.3	299	17.1	+20 07.6	60 N	14 53	15 50	16 47	20 42 92	12 42 4	
1	196	26.3		10.4	313	47.9 ¹¹⁸	+19 57.6 ¹⁰⁰	58	15 10	16 02	16 54	20 52 88	31 7	
2	211	26.0		10.6	328	18.7 ¹¹⁸	47.5 ¹⁰¹	56	25	12	17 01	21 02 84	21 11	
3	226	25.7		10.8	342	49.6 ¹¹⁹	37.3 ¹⁰²	54	37	21	07	10 81	12 14	
4	241	25.4		10.9	357	20.6 ¹²⁰	27.0 ¹⁰³	52	48	29	13	17 78	12 04 16	
5	256	25.1	-23	11.1	11	51.5 ¹¹⁹	+19 16.6 ¹⁰⁴	50	15 58	16 36	17 18	21 24 76	11 56 19	
6	271	24.8	-23	11.2	26	22.5 ¹²⁰	+19 06.1 ¹⁰⁵	45	16 19	16 52	17 30	21 38 70	11 41 24	
7	286	24.5		11.4	40	53.6 ¹²¹	+18 55.5 ¹⁰⁶	40	35	17 06	40	49 67	28 28	
8	301	24.2		11.5	55	24.7 ¹²¹	44.8 ¹⁰⁷	35	16 49	17	49	21 59 63	17 31	
9	316	23.9		11.7	69	55.8 ¹²¹	34.0 ¹⁰⁸	30	17 02	28	17 58	22 08 60	11 08 33	
10	331	23.6		11.8	84	27.0 ¹²²	23.1 ¹⁰⁹	20	23	17 47	18 14	22 55	10 51 39	
11	346	23.3	-23	12.0	98	58.2 ¹²²	+18 12.2 ¹⁰⁹	10 N	17 41	18 04	18 30	22 35 50	10 36 43	
12	1	23.0	-23	12.2	113	29.5 ¹²³	+18 01.1 ¹¹¹	0	17 58	18 21	18 47	22 47 46	10 22 47	
13	16	22.7		12.3	128	00.8 ¹²³	+17 49.9 ¹¹²	10 S	18 16	39	19 06	22 59 42	10 09 50	
14	31	22.4		12.5	142	32.1 ¹²³	38.7 ¹¹²	20	34	18 59	28	23 12 37	9 54 55	
15	46	22.1		12.6	157	03.5 ¹²⁴	27.3 ¹¹⁴	30	18 56	19 24	19 57	26 33	36 60	
16	61	21.8		12.8	171	34.9 ¹²⁴	15.9 ¹¹⁴	35	19 09	39	20 15	34 30	26 63	
17	76	21.6	-23	12.9	186	06.4 ¹²⁵	+17 04.4 ¹¹⁵	40	19 24	19 57	20 38	23 44 26	9 15 66	
18	91	21.3	-23	13.0	200	37.8 ¹²⁴	+16 52.7 ¹¹⁷	45	19 42	20 19	21 09	23 55 22	9 01 70	
19	106	21.0		13.2	215	09.4 ¹²⁶	41.0 ¹¹⁷	50	20 04	20 49	21 53	** ** *	8 44 76	
20	121	20.7		13.3	229	40.9 ¹²⁵	29.2 ¹¹⁸	52	15	21 04	22 21	** ** *	36 78	
21	136	20.4		13.5	244	12.5 ¹²⁶	17.4 ¹¹⁸	54	27	21	23 04	0 05 16	28 80	
22	151	20.1		13.6	258	44.1 ¹²⁶	+16 05.4 ¹²⁰	56	41	21 43	** ** *	16 12	18 84	
23	166	19.8		13.8	273	15.8 ¹²⁷	+15 53.4 ¹²⁰	58	20 58	22 12	** ** *	28 9	8 06 88	
24	181	19.5	-23	13.9	287	47.5 ¹²⁷	+15 41.2 ¹²²	60 S	21 18	22 59	** ** *	0 42 4	7 53 92	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 28 ^m 0		Mag: -3.9 PMG: 14 ^h 04 ^m			Mag: -0.1 PMG: 18 ^h 25 ^m			Mag: -2.1 PMG: 5 ^h 48 ^m			Mag: -0.4 PMG: 1 ^h 19 ^m		
	hG ♈		hG ♎	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	82	15.2	149	15.0	-23	29.4	83	26.0	-0	58.7	272	39.3	+5	42.0
1	97	17.7	164	14.1		29.0	98	27.2		58.1	287	41.7		42.0
2	112	20.1	179	13.2		28.6	113	28.4		57.4	302	44.0		41.9
3	127	22.6	194	12.4		28.1	128	29.6		56.8	317	46.3		41.9
4	142	25.1	209	11.5		27.7	143	30.7		56.2	332	48.6		41.8
5	157	27.5	224	10.6	-23	27.2	158	31.9	-0	55.5	347	50.9	+5	41.7
6	172	30.0	239	09.7	-23	26.8	173	33.1	-0	54.9	2	53.2	+5	41.7
7	187	32.5	254	08.9		26.3	188	34.3		54.2	17	55.5		41.6
8	202	34.9	269	08.0		25.9	203	35.5		53.6	32	57.8		41.6
9	217	37.4	284	07.1		25.4	218	36.7		53.0	48	00.1		41.5
10	232	39.9	299	06.3		25.0	233	37.8		52.3	63	02.5		41.5
11	247	42.3	314	05.4	-23	24.5	248	39.0	-0	51.7	78	04.8	+5	41.4
12	262	44.8	329	04.5	-23	24.1	263	40.2	-0	51.0	93	07.1	+5	41.4
13	277	47.3	344	03.7		23.6	278	41.4		50.4	108	09.4		41.3
14	292	49.7	359	02.8		23.2	293	42.5		49.7	123	11.7		41.3
15	307	52.2	14	01.9		22.7	308	43.7		49.1	138	14.0		41.2
16	322	54.6	29	01.1		22.3	323	44.9		48.5	153	16.3		41.2
17	337	57.1	44	00.2	-23	21.8	338	46.1	-0	47.8	168	18.6	+5	41.1
18	352	59.6	58	59.3	-23	21.4	353	47.3	-0	47.2	183	21.0	+5	41.1
19	8	02.0	73	58.5		20.9	8	48.4		46.5	198	23.3		41.0
20	23	04.5	88	57.6		20.4	23	49.6		45.9	213	25.6		41.0
21	38	07.0	103	56.7		20.0	38	50.8		45.3	228	27.9		40.9
22	53	09.4	118	55.9		19.5	53	52.0		44.6	243	30.2		40.9
23	68	11.9	133	55.0		19.1	68	53.1		44.0	258	32.5		40.8
24	83	14.4	148	54.1	-23	18.6	83	54.3	-0	43.3	273	34.8	+5	40.8
Dif	—		-9	+5		+12	+6		+23		-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: 11 ^h 55 ^m 4			Edad: 22 ^d 0 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/8 SD: 15/6 PMG: 5 ^h 44 ^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
0	181	12.3	-23	17.1	276	36.1	+10	27.1	60 N	14 53	15 50	16 47	23 46	94	12 48	2
1	196	12.0		17.2	291	08.4 ¹³³	+10	13.1 ¹⁴⁰	58	15 10	16 02	16 55	49 90		44 5	
2	211	11.7		17.3	305	40.6 ¹³²	+9	59.1 ¹⁴⁰	56	25	12	17 01	51 87		41 8	
3	226	11.4		17.5	320	12.9 ¹³³		45.0 ¹⁴¹	54	38	21	07	53 84		37 1	
4	241	11.1		17.6	334	45.2 ¹³³		30.9 ¹⁴¹	52	49	29	13	55 81		35 13	
5	256	10.8	-23	17.7	349	17.5 ¹³³	+9	16.7 ¹⁴²	50	15 58	16 37	17 18	23 56	79	12 32	15
6	271	10.5	-23	17.8	3	49.8 ¹³³	+9	02.4 ¹⁴³	45	16 19	16 53	17 30	** ** *		12 26	20
7	286	10.2		17.9	18	22.2 ¹³⁴	+8	48.1 ¹⁴³	40	36	17 06	40	** ** *		21 24	
8	301	09.8		18.1	32	54.5 ¹³³		33.8 ¹⁴³	35	16 50	18	50	** ** *		17 28	
9	316	09.5		18.2	47	26.8 ¹³³		19.3 ¹⁴⁵	30	17 02	29	17 58	** ** *		13 31	
10	331	09.2		18.3	61	59.1 ¹³³	+8	04.9 ¹⁴⁴	20	23	17 47	18 15	** ** *		06 37	
11	346	08.9	-23	18.4	76	31.5 ¹³⁴	+7	50.3 ¹⁴⁶	10 N	17 42	18 05	18 31	** ** *		12 01	41
12	1	08.6	-23	18.5	91	03.8 ¹³³	+7	35.8 ¹⁴⁵	0	17 59	18 22	18 48	** ** *		11 55	46
13	16	08.3		18.6	105	36.2 ¹³⁴		21.1 ¹⁴⁷	10 S	18 17	18 40	19 07	** ** *		49 51	
14	31	08.0		18.7	120	08.5 ¹³³	+7	06.4 ¹⁴⁷	20	36	19 00	29	** ** *		43 56	
15	46	07.7		18.9	134	40.8 ¹³³	+6	51.7 ¹⁴⁷	30	18 58	25	19 58	** ** *		37 61	
16	61	07.4		19.0	149	13.1 ¹³³		36.9 ¹⁴⁸	35	19 11	40	20 17	0 04 28		33 64	
17	76	07.1	-23	19.1	163	45.5 ¹³⁴	+6	22.1 ¹⁴⁸	40	19 26	19 58	20 40	0 10 25		11 28	68
18	91	06.8	-23	19.2	178	17.8 ¹³³	+6	07.2 ¹⁴⁹	45	19 43	20 21	21 10	0 17 21		11 23	72
19	106	06.5		19.3	192	50.1 ¹³³	+5	52.3 ¹⁴⁹	50	20 06	20 50	21 56	25 16		16 78	
20	121	06.2		19.4	207	22.4 ¹³³		37.3 ¹⁵⁰	52	17	21 05	22 23	29 14		13 80	
21	136	05.9		19.5	221	54.7 ¹³³		22.3 ¹⁵⁰	54	29	23	23 08	34 11		10 83	
22	151	05.6		19.6	236	27.0 ¹³³	+5	07.3 ¹⁵⁰	56	20 43	21 45	** ** *	38 9		06 86	
23	166	05.3		19.7	250	59.2 ¹³²	+4	52.2 ¹⁵¹	58	21 00	22 15	** ** *	43 6		11 02	89
24	181	05.0	-23	19.8	265	31.5 ¹³³	+4	37.0 ¹⁵²	60 S	21 20	23 04	** ** *	0 49 2		10 57	93
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 20 ^m 1		Mag: -3.9 PMG: 14 ^h 07 ^m		Mag: -0.1 PMG: 18 ^h 21 ^m		Mag: -2.1 PMG: 5 ^h 41 ^m		Mag: -0.4 PMG: 1 ^h 11 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	13.5	148	33.6	-23	07.1	84	22.5	-0	27.9	274	30.5	+5	39.6	342	16.8
1	99	16.0	163	32.7		06.6	99	23.7		27.3	289	32.8		39.5	357	19.5
2	114	18.4	178	31.9		06.1	114	24.8		26.6	304	35.1		39.5	12	22.1
3	129	20.9	193	31.0		05.6	129	26.0		26.0	319	37.5		39.4	27	24.8
4	144	23.4	208	30.2		05.1	144	27.2		25.3	334	39.8		39.4	42	27.5
5	159	25.8	223	29.3	-23	04.6	159	28.3	-0	24.7	349	42.1	+5	39.3	57	30.1
6	174	28.3	238	28.5	-23	04.1	174	29.5	-0	24.0	4	44.4	+5	39.3	72	32.8
7	189	30.7	253	27.6		03.6	189	30.7		23.4	19	46.8		39.2	87	35.5
8	204	33.2	268	26.8		03.1	204	31.8		22.8	34	49.1		39.2	102	38.1
9	219	35.7	283	25.9		02.6	219	33.0		22.1	49	51.4		39.1	117	40.8
10	234	38.1	298	25.1		02.0	234	34.2		21.5	64	53.7		39.1	132	43.5
11	249	40.6	313	24.2	-23	01.5	249	35.4	-0	20.8	79	56.1	+5	39.1	147	46.2
12	264	43.1	328	23.4	-23	01.0	264	36.5	-0	20.2	94	58.4	+5	39.0	162	48.8
13	279	45.5	343	22.5	-23	00.5	279	37.7		19.5	110	00.7		39.0	177	51.5
14	294	48.0	358	21.7	-23	00.0	294	38.9		18.9	125	03.0		38.9	192	54.2
15	309	50.5	13	20.8	-22	59.5	309	40.0		18.2	140	05.4		38.9	207	56.8
16	324	52.9	28	20.0		59.0	324	41.2		17.6	155	07.7		38.8	222	59.5
17	339	55.4	43	19.2	-22	58.5	339	42.4	-0	17.0	170	10.0	+5	38.8	238	02.2
18	354	57.8	58	18.3	-22	58.0	354	43.5	-0	16.3	185	12.3	+5	38.7	253	04.9
19	10	00.3	73	17.5		57.4	9	44.7		15.7	200	14.7		38.7	268	07.5
20	25	02.8	88	16.6		56.9	24	45.9		15.0	215	17.0		38.6	283	10.2
21	40	05.2	103	15.8		56.4	39	47.0		14.4	230	19.3		38.6	298	12.9
22	55	07.7	118	14.9		55.9	54	48.2		13.7	245	21.7		38.5	313	15.5
23	70	10.2	133	14.1		55.4	69	49.4		13.1	260	24.0		38.5	328	18.2
24	85	12.6	148	13.3	-22	54.8	84	50.5	-0	12.4	275	26.3	+5	38.5	343	20.9
Dif	—		-8		+5		+12		+6		+23		0		+27	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 55 ^m 9			Edad: 23 ^d 0 PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6 SD: 15'8 323 40.3 PMG: 6 ^h 30 ^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	181	05.0	-23	19.8	265	31.5	+4	37.0	60 N	7 04	8 01	8 59	*** ** *	12 50	2	
1	196	04.7		19.9	280	03.7 ¹³²		21.9 ¹⁵¹	58	6 57	7 49	41	*** ** *	49	5	
2	211	04.4		20.0	294	35.9 ¹³²	+4	06.7 ¹⁵²	56	50	39	27	*** ** *	49	8	
3	226	04.1		20.1	309	08.1 ¹³²	+3	51.4 ¹⁵³	54	44	30	14	*** ** *	48	1	
4	241	03.8		20.2	323	40.3 ¹³²		36.1 ¹⁵³	52	38	22	8 03	*** ** *	48	13	
5	256	03.5	-23	20.3	338	12.5 ¹³²	+3	20.8 ¹⁵³	50	6 33	7 15	7 53	*** ** *	12 47	16	
6	271	03.2	-23	20.4	352	44.6 ¹³¹	+3	05.5 ¹⁵³	45	6 21	6 59	7 32	0 00 74	12 46	21	
7	286	02.9		20.5	7	16.8 ¹³²	+2	50.1 ¹⁵⁴	40	11	45	16	03 69	45	25	
8	301	02.6		20.6	21	48.9 ¹³¹		34.6 ¹⁵⁵	35	6 02	33	7 02	06 65	45	28	
9	316	02.3		20.7	36	20.9 ¹³⁰		19.2 ¹⁵⁴	30	5 53	23	6 49	08 62	44	32	
10	331	02.0		20.8	50	53.0 ¹³¹	+2	03.7 ¹⁵⁵	20	37	6 04	28	12 56	43	37	
11	346	01.6	-23	20.9	65	25.0 ¹³⁰	+1	48.2 ¹⁵⁵	10 N	5 20	5 47	6 10	0 16 51	12 42	42	
12	1	01.3	-23	21.0	79	57.0 ¹³⁰	+1	32.7 ¹⁵⁵	0	5 03	5 30	5 52	0 19 46	12 41	47	
13	16	01.0		21.1	94	29.0 ¹³⁰		17.1 ¹⁵⁶	10 S	4 44	5 12	35	22 42	40	52	
14	31	00.7		21.2	109	00.9 ¹²⁹	+1	01.5 ¹⁵⁶	20	4 22	4 51	5 16	26 37	39	57	
15	46	00.4		21.3	123	32.8 ¹²⁹	+0	45.9 ¹⁵⁶	30	3 53	26	4 54	30 31	38	62	
16	61	00.1		21.4	138	04.7 ¹²⁹		30.3 ¹⁵⁶	35	34	4 11	41	32 28	37	66	
17	75	59.8	-23	21.5	152	36.5 ¹²⁸	+0	14.6 ¹⁵⁷	40	3 11	3 53	4 26	0 35 24	12 36	70	
18	90	59.5	-23	21.6	167	08.3 ¹²⁸	-0	01.1 ¹⁵⁷	45	2 41	3 30	4 08	0 38 20	12 35	75	
19	105	59.2		21.6	181	40.0 ¹²⁷		16.7 ¹⁵⁶	50	1 56	3 01	3 45	41 16	34	80	
20	120	58.9		21.7	196	11.8 ¹²⁸		32.5 ¹⁵⁸	52	1 28	2 46	35	43 13	33	83	
21	135	58.6		21.8	210	43.4 ¹²⁶	-0	48.2 ¹⁵⁷	54	0 43	28	22	45 10	33	85	
22	150	58.3		21.9	225	15.1 ¹²⁷	-1	03.9 ¹⁵⁷	56	*** ** *	2 06	3 08	47 8	32	88	
23	165	58.0		22.0	239	46.7 ¹²⁶		19.7 ¹⁵⁸	58	*** ** *	1 36	2 51	49 5	31	92	
24	180	57.7	-23	22.1	254	18.2 ¹²⁵	-1	35.5 ¹⁵⁸	60 S	*** ** *	0 47	2 31	0 51 2	12 30	96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 16 ^m 2		Mag: -3.9 PMG: 14 ^h 08 ^m		Mag: -0.1 PMG: 18 ^h 19 ^m		Mag: -2.2 PMG: 5 ^h 37 ^m		Mag: -0.4 PMG: 1 ^h 06 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	85	12.6	148	13.3	-22	54.8	84	50.5	-0	12.4	275	26.3	+5	38.5	343	20.9	+22	17.8
1	100	15.1	163	12.4		54.3	99	51.7		11.8	290	28.6		38.4	358	23.6		17.8
2	115	17.6	178	11.6		53.8	114	52.8		11.2	305	31.0		38.4	13	26.2		17.8
3	130	20.0	193	10.7		53.3	129	54.0		10.5	320	33.3		38.3	28	28.9		17.8
4	145	22.5	208	09.9		52.7	144	55.2		09.9	335	35.6		38.3	43	31.6		17.8
5	160	25.0	223	09.1	-22	52.2	159	56.3	-0	09.2	350	38.0	+5	38.2	58	34.2	+22	17.8
6	175	27.4	238	08.2	-22	51.7	174	57.5	-0	08.6	5	40.3	+5	38.2	73	36.9	+22	17.9
7	190	29.9	253	07.4		51.1	189	58.7		07.9	20	42.6		38.1	88	39.6		17.9
8	205	32.3	268	06.5		50.6	204	59.8		07.3	35	45.0		38.1	103	42.3		17.9
9	220	34.8	283	05.7		50.1	220	01.0		06.6	50	47.3		38.1	118	44.9		17.9
10	235	37.3	298	04.9		49.5	235	02.2		06.0	65	49.6		38.0	133	47.6		17.9
11	250	39.7	313	04.0	-22	49.0	250	03.3	-0	05.4	80	51.9	+5	38.0	148	50.3	+22	18.0
12	265	42.2	328	03.2	-22	48.5	265	04.5	-0	04.7	95	54.3	+5	37.9	163	53.0	+22	18.0
13	280	44.7	343	02.4		47.9	280	05.6		04.1	110	56.6		37.9	178	55.6		18.0
14	295	47.1	358	01.5		47.4	295	06.8		03.4	125	58.9		37.8	193	58.3		18.0
15	310	49.6	13	00.7		46.9	310	08.0		02.8	141	01.3		37.8	209	01.0		18.0
16	325	52.1	27	59.9		46.3	325	09.1		02.1	156	03.6		37.8	224	03.6		18.1
17	340	54.5	42	59.0	-22	45.8	340	10.3	-0	01.5	171	05.9	+5	37.7	239	06.3	+22	18.1
18	355	57.0	57	58.2	-22	45.2	355	11.5	-0	00.8	186	08.3	+5	37.7	254	09.0	+22	18.1
19	10	59.5	72	57.4		44.7	10	12.6	-0	00.2	201	10.6		37.6	269	11.7		18.1
20	26	01.9	87	56.5		44.1	25	13.8	+0	00.4	216	12.9		37.6	284	14.3		18.1
21	41	04.4	102	55.7		43.6	40	14.9		01.1	231	15.3		37.5	299	17.0		18.2
22	56	06.8	117	54.9		43.0	55	16.1		01.7	246	17.6		37.5	314	19.7		18.2
23	71	09.3	132	54.0		42.5	70	17.3		02.4	261	20.0		37.5	329	22.4		18.2
24	86	11.8	147	53.2	-22	41.9	85	18.4	+0	03.0	276	22.3	+5	37.4	344	25.0	+22	18.2
Dif	—		-8		+5		+12		+6		+23		0		+27			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 56 ^m 4			Edad: 24 ^d 0 PHE SD: 16/0 PMG: 7 ^h 17 ^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	57.7	-23	22.1	254	18.2	-1	35.5	60 N	14 53	15 51	16 48	1 20 98	12 52 2		
1	195	57.4		22.2	268	49.7 ¹²⁵	-1	51.3 ¹⁵⁸	58	15 11	16 02	16 55	19 94	54 6		
2	210	57.1		22.2	283	21.2 ¹²⁵	-2	07.1 ¹⁵⁸	56	25	13	17 02	18 90	57 9		
3	225	56.8		22.3	297	52.6 ¹²⁴		22.9 ¹⁵⁸	54	38	22	08	17 87	12 59 12		
4	240	56.4		22.4	312	23.9 ¹²³		38.7 ¹⁵⁸	52	49	30	14	16 85	13 01 15		
5	255	56.1	-23	22.5	326	55.2 ¹²³	-2	54.5 ¹⁵⁸	50	15 59	16 37	17 19	1 15 82	13 03 17		
6	270	55.8	-23	22.6	341	26.5 ¹²³	-3	10.3 ¹⁵⁸	45	16 20	16 53	17 31	1 14 76	13 07 23		
7	285	55.5		22.6	355	57.7 ¹²²		26.1 ¹⁵⁸	40	36	17 07	41	12 72	10 27		
8	300	55.2		22.7	10	28.8 ¹²¹		42.0 ¹⁵⁹	35	16 51	19	50	11 68	13 31		
9	315	54.9		22.8	24	59.9 ¹²¹	-3	57.8 ¹⁵⁸	30	17 03	29	17 59	10 64	16 34		
10	330	54.6		22.9	39	30.9 ¹²⁰	-4	13.6 ¹⁵⁸	20	24	17 48	18 16	08 59	20 40		
11	345	54.3	-23	23.0	54	01.9 ¹²⁰	-4	29.5 ¹⁵⁹	10 N	17 43	18 06	18 32	1 07 53	13 24 45		
12	0	54.0	-23	23.0	68	32.8 ¹¹⁹	-4	45.3 ¹⁵⁸	0	18 00	18 23	18 49	1 05 49	13 28 50		
13	15	53.7		23.1	83	03.6 ¹¹⁸	-5	01.1 ¹⁵⁸	10 S	18	18 41	19 08	04 44	32 55		
14	30	53.4		23.2	97	34.4 ¹¹⁸		16.9 ¹⁵⁸	20	37	19 01	19 30	03 38	36 60		
15	45	53.1		23.2	112	05.1 ¹¹⁷		32.7 ¹⁵⁸	30	18 59	26	20 00	01 33	40 66		
16	60	52.8		23.3	126	35.7 ¹¹⁶	-5	48.5 ¹⁵⁸	35	19 12	19 41	18	1 00 30	43 69		
17	75	52.4	-23	23.4	141	06.3 ¹¹⁶	-6	04.3 ¹⁵⁸	40	19 27	20 00	20 41	0 59 26	13 46 73		
18	90	52.1	-23	23.5	155	36.8 ¹¹⁵	-6	20.1 ¹⁵⁸	45	19 45	20 22	21 12	0 58 22	13 50 78		
19	105	51.8		23.5	170	07.2 ¹¹⁴		35.8 ¹⁵⁷	50	20 07	20 52	21 58	57 16	54 83		
20	120	51.5		23.6	184	37.6 ¹¹⁴	-6	51.6 ¹⁵⁸	52	18	21 07	22 25	56 14	56 86		
21	135	51.2		23.7	199	07.9 ¹¹³	-7	07.3 ¹⁵⁷	54	31	25	23 12	55 12	13 58 89		
22	150	50.9		23.7	213	38.1 ¹¹²		23.0 ¹⁵⁷	56	20 45	21 47	** **	55 8	14 00 93		
23	165	50.6		23.8	228	08.2 ¹¹¹		38.7 ¹⁵⁷	58	21 02	22 17	** **	54 6	03 96		
24	180	50.3	-23	23.9	242	38.3 ¹¹¹	-7	54.4 ¹⁵⁷	60 S	21 22	23 08	** **	0 53 2	14 06 100		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 18 ^h 12 ^m 2		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: 0.0 PMG: 18 ^h 17 ^m		Mag: -2.2 PMG: 5 ^h 34 ^m		Mag: -0.4 PMG: 1 ^h 02 ^m							
	hG ♂		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	86	11.8	147	53.2	85	18.4	+0	03.0	276	22.3	+5	37.4	344	25.0	+22	18.2
1	101	14.2	162	52.4	100	19.6		03.7	291	24.6		37.4	359	27.7		18.2
2	116	16.7	177	51.6	115	20.7		04.3	306	27.0		37.3	14	30.4		18.3
3	131	19.2	192	50.7	130	21.9		05.0	321	29.3		37.3	29	33.1		18.3
4	146	21.6	207	49.9	145	23.1		05.6	336	31.6		37.2	44	35.7		18.3
5	161	24.1	222	49.1	160	24.2	+0	06.3	351	34.0	+5	37.2	59	38.4	+22	18.3
6	176	26.6	237	48.2	175	25.4	+0	06.9	6	36.3	+5	37.2	74	41.1	+22	18.3
7	191	29.0	252	47.4	190	26.5		07.5	21	38.6		37.1	89	43.8		18.3
8	206	31.5	267	46.6	205	27.7		08.2	36	41.0		37.1	104	46.4		18.4
9	221	33.9	282	45.8	220	28.8		08.8	51	43.3		37.0	119	49.1		18.4
10	236	36.4	297	44.9	235	30.0		09.5	66	45.7		37.0	134	51.8		18.4
11	251	38.9	312	44.1	250	31.2	+0	10.1	81	48.0	+5	37.0	149	54.5	+22	18.4
12	266	41.3	327	43.3	265	32.3	+0	10.8	96	50.3	+5	36.9	164	57.1	+22	18.4
13	281	43.8	342	42.5	280	33.5		11.4	111	52.7		36.9	179	59.8		18.5
14	296	46.3	357	41.6	295	34.6		12.1	126	55.0		36.8	195	02.5		18.5
15	311	48.7	12	40.8	310	35.8		12.7	141	57.4		36.8	210	05.2		18.5
16	326	51.2	27	40.0	325	36.9		13.4	156	59.7		36.8	225	07.8		18.5
17	341	53.7	42	39.2	340	38.1	+0	14.0	172	02.0	+5	36.7	240	10.5	+22	18.5
18	356	56.1	57	38.4	355	39.2	+0	14.7	187	04.4	+5	36.7	255	13.2	+22	18.6
19	11	58.6	72	37.5	10	40.4		15.3	202	06.7		36.6	270	15.9		18.6
20	27	01.1	87	36.7	25	41.6		15.9	217	09.1		36.6	285	18.5		18.6
21	42	03.5	102	35.9	40	42.7		16.6	232	11.4		36.6	300	21.2		18.6
22	57	06.0	117	35.1	55	43.9		17.2	247	13.8		36.5	315	23.9		18.6
23	72	08.4	132	34.3	70	45.0		17.9	262	16.1		36.5	330	26.6		18.7
24	87	10.9	147	33.4	85	46.2	+0	18.5	277	18.4	+5	36.4	345	29.2	+22	18.7
Dif	—		-8		+6		+12		+23		0		+27		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 11 ^h 56 ^m 9			Edad: 25 ^d 0 PHE { 4 ^h : 59/7 12 ^h : 59/9 20 ^h : 60/2 SD: 16/2 PMG: 8 ^h 06 ^m R°: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	50.3	-23	23.9	242	38.3	-7	54.4	60 N	7 06	8 03	9 00	2 58	105	12 54	4	8	
1	195	50.0		23.9	257	08.2	109	-8	10.0	58	6 58	7 51	8 43	53	100	13 00	9	
2	210	49.7		24.0	271	38.1	109		25.6	56	52	41	28	48	96	06	12	
3	225	49.4		24.1	286	08.0	109		41.2	54	45	32	15	44	92	11	16	
4	240	49.1		24.1	300	37.7	107	-8	56.8	52	40	23	8	04	41	88	16	19
5	255	48.7	-23	24.2	315	07.3	106	-9	12.3	50	6 34	7 16	7 54	2 37	86	13 20	22	
6	270	48.4	-23	24.2	329	36.9	106	-9	27.8	45	6 23	7 00	7 34	2 30	80	13 30	26	
7	285	48.1		24.3	344	06.4	105		43.3	40	12	6 46	17	24	75	37	32	
8	300	47.8		24.4	358	35.7	103	-9	58.7	35	6 03	35	7 03	19	71	44	35	
9	315	47.5		24.4	13	05.0	103	-10	14.1	30	5 54	24	6 50	14	68	13 50	39	
10	330	47.2		24.5	27	34.3	103		29.5	20	38	6 05	29	07	62	14 00	45	
11	345	46.9	-23	24.5	42	03.4	101	-10	44.8	10 N	5 21	5 48	6 11	2 00	57	14 09	50	
12	0	46.6	-23	24.6	56	32.4	100	-11	00.1	0	5 04	5 31	5 53	1 54	52	14 18	54	
13	15	46.3		24.6	71	01.3	99		15.3	10 S	4 45	5 12	36	48	47	27	58	
14	30	46.0		24.7	85	30.1	98		30.5	20	4 23	4 52	5 17	41	42	36	64	
15	45	45.7		24.7	99	58.9	98	-11	45.6	30	3 54	27	4 55	34	36	46	70	
16	60	45.3		24.8	114	27.5	96	-12	00.7	35	35	4 12	42	30	33	52	74	
17	75	45.0	-23	24.8	128	56.0	95	-12	15.7	40	3 12	3 54	4 26	1 25	29	14 59	78	
18	90	44.7	-23	24.9	143	24.5	95	-12	30.7	45	2 41	3 31	4 08	1 20	24	15 08	82	
19	105	44.4		24.9	157	52.8	93	-12	45.6	50	1 56	3 01	3 46	13	19	17	88	
20	120	44.1		25.0	172	21.0	92	-13	00.5	52	1 28	2 46	35	10	17	22	91	
21	135	43.8		25.0	186	49.2	92		15.3	54	0 41	28	23	07	14	27	94	
22	150	43.5		25.1	201	17.2	90		30.0	56	** **	2 06	3 08	03	11	33	98	
23	165	43.2		25.1	215	45.1	89		44.7	58	** **	1 36	2 52	1 00	7	39	102	
24	180	42.9	-23	25.2	230	12.9	88	-13	59.3	60 S	** **	0 46	2 31	0 55	4	15 46	108	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 08 ^m 3		Mag: -3.9 PMG: 14 ^h 11 ^m		Mag: 0.0 PMG: 18 ^h 16 ^m		Mag: -2.2 PMG: 5 ^h 30 ^m		Mag: -0.4 PMG: 0 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	87	10.9	147	33.4	-22	28.4	85	46.2	+0	18.5
1	102	13.4	162	32.6		27.8	100	47.3		19.2
2	117	15.8	177	31.8		27.2	115	48.5		19.8
3	132	18.3	192	31.0		26.6	130	49.6		20.5
4	147	20.8	207	30.2		26.1	145	50.8		21.1
5	162	23.2	222	29.4	-22	25.5	160	51.9	+0	21.8
6	177	25.7	237	28.6	-22	24.9	175	53.1	+0	22.4
7	192	28.2	252	27.7		24.3	190	54.3		23.1
8	207	30.6	267	26.9		23.7	205	55.4		23.7
9	222	33.1	282	26.1		23.1	220	56.6		24.3
10	237	35.6	297	25.3		22.5	235	57.7		25.0
11	252	38.0	312	24.5	-22	21.9	250	58.9	+0	25.6
12	267	40.5	327	23.7	-22	21.4	266	00.0	+0	26.3
13	282	42.9	342	22.9		20.8	281	01.2		26.9
14	297	45.4	357	22.1		20.2	296	02.3		27.6
15	312	47.9	12	21.2		19.6	311	03.5		28.2
16	327	50.3	27	20.4		19.0	326	04.6		28.9
17	342	52.8	42	19.6	-22	18.4	341	05.8	+0	29.5
18	357	55.3	57	18.8	-22	17.8	356	06.9	+0	30.2
19	12	57.7	72	18.0		17.2	11	08.1		30.8
20	28	00.2	87	17.2		16.6	26	09.2		31.5
21	43	02.7	102	16.4		16.0	41	10.4		32.1
22	58	05.1	117	15.6		15.4	56	11.5		32.8
23	73	07.6	132	14.8		14.8	71	12.7		33.4
24	88	10.0	147	14.0	-22	14.2	86	13.8	+0	34.1
Dif	—		-8		+6		+12		+6	
							+23		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 57 ^m 4			Edad: 26 ^d 0 PHE SD: 16/4 PMG: 8 ^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										
0	180	42.9	-23	25.2	230	12.9	-13	59.3	60 N	14 54	15 51	16 48	4 43	111	12 58	7											
1	195	42.6		25.2	244	40.6	87	-14 13.8 ¹⁴⁵	58	15 11	16 03	16 56	33	105	13 09	13											
2	210	42.3		25.3	259	08.2	86	28.3 ¹⁴⁵	56	26	13	17 03	24	100	18 18												
3	225	41.9		25.3	273	35.7	85	42.7 ¹⁴⁴	54	39	23	09	16	97	27 22												
4	240	41.6		25.4	288	03.1	84	-14 57.0 ¹⁴³	52	15 50	31	14	09	93	35 25												
5	255	41.3	-23	25.4	302	30.3	82	-15 11.3 ¹⁴³	50	16 00	16 38	17 20	4 03	90	13 42	28											
6	270	41.0	-23	25.4	316	57.5	82	-15 25.5 ¹⁴²	45	16 20	16 54	17 32	3 50	84	13 56	34											
7	285	40.7		25.5	331	24.5	80	39.5 ¹⁴⁰	40	37	17 08	42	39	79	14 09	38											
8	300	40.4		25.5	345	51.4	79	-15 53.6 ¹⁴¹	35	16 51	20	17 51	30	75	19 42												
9	315	40.1		25.5	0	18.2	78	-16 07.5 ¹³⁹	30	17 04	30	18 00	22	72	29 45												
10	330	39.8		25.6	14	44.9	77	21.3 ¹³⁸	20	25	17 49	17	3 09	66	45 50												
11	345	39.5	-23	25.6	29	11.5	76	-16 35.1 ¹³⁸	10 N	17 44	18 07	18 33	2 57	61	14 59	55											
12	0	39.1	-23	25.7	43	38.0	75	-16 48.7 ¹³⁶	0	18 01	18 24	18 50	2 46	56	15 12	59											
13	15	38.8		25.7	58	04.3	73	-17 02.3 ¹³⁶	10 S	19	18 42	19 09	35	52	25 63												
14	30	38.5		25.7	72	30.5	72	15.7 ¹³⁴	20	18 38	19 02	19 32	23	48	40 67												
15	45	38.2		25.8	86	56.7	72	29.1 ¹³⁴	30	19 00	27	20 01	10	42	15 56	73											
16	60	37.9		25.8	101	22.6	69	42.4 ¹³³	35	13	19 43	19	2 03	38	16 06	76											
17	75	37.6	-23	25.8	115	48.5	69	-17 55.6 ¹³²	40	19 28	20 01	20 43	1 54	35	16 17	79											
18	90	37.3	-23	25.9	130	14.3	68	-18 08.6 ¹³⁰	45	19 46	20 23	21 13	1 44	31	16 30	84											
19	105	37.0		25.9	144	39.9	66	21.6 ¹³⁰	50	20 09	20 53	21 59	32	25	45 91												
20	120	36.7		25.9	159	05.4	65	34.4 ¹²⁸	52	19	21 08	22 27	27	22	16 53	93											
21	135	36.4		25.9	173	30.8	64	47.2 ¹²⁸	54	32	26	23 14	21	19	17 01	97											
22	150	36.0		26.0	187	56.1	63	-18 59.8 ¹²⁶	56	20 46	21 49	** **	14	16	11 101												
23	165	35.7		26.0	202	21.2	61	-19 12.3 ¹²⁵	58	21 03	22 19	** **	1 07	11	21 107												
24	180	35.4	-23	26.0	216	46.3	61	-19 24.7 ¹²⁴	60 S	21 24	23 10	** **	0 59	6	17 34	113											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 18 ^h 04 ^m 4			Mag: -3.9 PMG: 14 ^h 12 ^m			Mag: 0.0 PMG: 18 ^h 14 ^m			Mag: -2.2 PMG: 5 ^h 26 ^m			Mag: -0.4 PMG: 0 ^h 54 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	88	10.0	147	14.0	-22	14.2	86	13.8	+0	34.1	278	14.8	+5	35.5	346	33.5	+22	19.1									
1	103	12.5	162	13.2		13.6	101	15.0		34.7	293	17.1		35.5	1	36.1		19.2									
2	118	15.0	177	12.4		13.0	116	16.1		35.3	308	19.5		35.5	16	38.8		19.2									
3	133	17.4	192	11.6		12.3	131	17.3		36.0	323	21.8		35.4	31	41.5		19.2									
4	148	19.9	207	10.8		11.7	146	18.4		36.6	338	24.2		35.4	46	44.2		19.2									
5	163	22.4	222	10.0	-22	11.1	161	19.6	+0	37.3	353	26.5	+5	35.4	61	46.9	+22	19.2									
6	178	24.8	237	09.2	-22	10.5	176	20.7	+0	37.9	8	28.9	+5	35.3	76	49.5	+22	19.3									
7	193	27.3	252	08.4		09.9	191	21.9		38.6	23	31.2		35.3	91	52.2		19.3									
8	208	29.8	267	07.6		09.3	206	23.0		39.2	38	33.6		35.3	106	54.9		19.3									
9	223	32.2	282	06.7		08.7	221	24.1		39.9	53	35.9		35.2	121	57.6		19.3									
10	238	34.7	297	05.9		08.0	236	25.3		40.5	68	38.3		35.2	137	00.2		19.3									
11	253	37.2	312	05.1	-22	07.4	251	26.4	+0	41.2	83	40.6	+5	35.2	152	02.9	+22	19.4									
12	268	39.6	327	04.4	-22	06.8	266	27.6	+0	41.8	98	43.0	+5	35.1	167	05.6	+22	19.4									
13	283	42.1	342	03.6		06.2	281	28.7		42.5	113	45.3		35.1	182	08.3		19.4									
14	298	44.5	357	02.8		05.6	296	29.9		43.1	128	47.7		35.0	197	11.0		19.4									
15	313	47.0	12	02.0		04.9	311	31.0		43.8	143	50.0		35.0	212	13.6		19.4									
16	328	49.5	27	01.2		04.3	326	32.2		44.4	158	52.4		35.0	227	16.3		19.5									
17	343	51.9	42	00.4	-22	03.7	341	33.3	+0	45.1	173	54.7	+5	34.9	242	19.0	+22	19.5									
18	358	54.4	56	59.6	-22	03.1	356	34.5	+0	45.7	188	57.1	+5	34.9	257	21.7	+22	19.5									
19	13	56.9	71	58.8		02.4	11	35.6		46.4	203	59.5		34.9	272	24.3		19.5									
20	28	59.3	86	58.0		01.8	26	36.7		47.0	219	01.8		34.8	287	27.0		19.5									
21	44	01.8	101	57.2		01.2	41	37.9		47.7	234	04.2		34.8	302	29.7		19.5									
22	59	04.3	116	56.4	-22	00.6	56	39.0		48.3	249	06.5		34.8	317	32.4		19.6									
23	74	06.7	131	55.6	-21	59.9	71	40.2		49.0	264	08.9		34.7	332	35.1		19.6									
24	89	09.2	146	54.8	-21	59.3	86	41.3	+0	49.6	279	11.2	+5	34.7	347	37.7	+22	19.6									
Dif	—			-8			+6			+11			+6			+24			0			+27			0		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 9				Edad: 27 ^d 0 PHE { 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'1 SD: 16'6 PMG: 9 ^h 57 ^m R°: 62 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	35.4	-23	26.0	216	46.3	-19	24.7	60 N	7 07	8 04	9 02	6 34	114	13 05	17		
1	195	35.1		26.0	231	11.2	59	36.9	58	7 00	7 52	8 44	18	106	22	24		
2	210	34.8		26.1	245	36.0	58	-19 49.1	56	6 53	42	29	6 04	101	36	30		
3	225	34.5		26.1	260	00.6	56	-20 01.1	54	47	33	17	5 53	96	13 49	33		
4	240	34.2		26.1	274	25.2	56	13.0	52	41	25	8 06	42	93	14 00	36		
5	255	33.9	-23	26.1	288	49.6	54	-20 24.8	50	6 36	7 17	7 56	5 33	90	14 10	39		
6	270	33.6	-23	26.2	303	14.0	54	-20 36.4	45	6 24	7 01	7 35	5 14	84	14 30	45		
7	285	33.2		26.2	317	38.1	51	47.9	40	13	6 47	18	4 58	80	14 47	48		
8	300	32.9		26.2	332	02.2	51	-20 59.3	35	6 04	36	7 04	45	77	15 01	51		
9	315	32.6		26.2	346	26.2	50	-21 10.5	30	5 55	25	6 51	34	74	14	53		
10	330	32.3		26.2	0	50.0	48	21.6	20	39	6 06	30	4 15	69	35	57		
11	345	32.0	-23	26.3	15	13.7	47	-21 32.5	10 N	5 22	5 49	6 12	3 58	65	15 54	60		
12	0	31.7	-23	26.3	29	37.4	47	-21 43.3	0	5 05	5 32	5 54	3 42	62	16 11	64		
13	15	31.4		26.3	44	00.8	44	-21 54.0	10 S	4 46	5 13	37	27	58	28	67		
14	30	31.1		26.3	58	24.2	44	-22 04.5	20	4 24	4 53	5 18	3 11	54	16 47	70		
15	45	30.7		26.3	72	47.5	43	14.9	30	3 55	28	4 55	2 52	49	17 09	74		
16	60	30.4		26.3	87	10.6	41	25.1	35	36	4 13	42	41	47	22	76		
17	75	30.1	-23	26.3	101	33.7	41	-22 35.1	40	3 13	3 54	4 27	2 29	43	17 36	79		
18	90	29.8	-23	26.3	115	56.6	39	-22 45.0	45	2 42	3 32	4 09	2 15	38	17 54	82		
19	105	29.5		26.4	130	19.4	38	-22 54.7	50	1 56	3 02	3 47	1 57	33	18 16	87		
20	120	29.2		26.4	144	42.1	37	-23 04.3	52	1 28	2 47	36	49	30	26	89		
21	135	28.9		26.4	159	04.7	36	13.7	54	0 41	29	23	40	27	38	92		
22	150	28.6		26.4	173	27.2	35	22.9	56	** **	2 06	3 09	30	23	18 52	96		
23	165	28.3		26.4	187	49.6	34	32.0	58	** **	1 36	2 52	18	18	19 08	101		
24	180	27.9	-23	26.4	202	11.9	33	-23 40.9	60 S	** **	0 45	2 32	1 05	12	19 27	109		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 00 ^m 4		Mag: -3.9 PMG: 14 ^h 13 ^m				Mag: 0.0 PMG: 18 ^h 12 ^m				Mag: -2.2 PMG: 5 ^h 22 ^m				Mag: -0.4 PMG: 0 ^h 49 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	89	09.2	146	54.8	-21	59.3	86	41.3	+0	49.6	279	11.2	+5	34.7	347	37.7	+22	19.6
1	104	11.7	161	54.0		58.7	101	42.5		50.2	294	13.6		34.7	2	40.4		19.6
2	119	14.1	176	53.2		58.0	116	43.6		50.9	309	16.0		34.6	17	43.1		19.6
3	134	16.6	191	52.4		57.4	131	44.8		51.5	324	18.3		34.6	32	45.8		19.7
4	149	19.0	206	51.6		56.8	146	45.9		52.2	339	20.7		34.6	47	48.5		19.7
5	164	21.5	221	50.8	-21	56.1	161	47.0	+0	52.8	354	23.0	+5	34.5	62	51.1	+22	19.7
6	179	24.0	236	50.1	-21	55.5	176	48.2	+0	53.5	9	25.4	+5	34.5	77	53.8	+22	19.7
7	194	26.4	251	49.3		54.8	191	49.3		54.1	24	27.7		34.5	92	56.5		19.7
8	209	28.9	266	48.5		54.2	206	50.5		54.8	39	30.1		34.5	107	59.2		19.8
9	224	31.4	281	47.7		53.6	221	51.6		55.4	54	32.5		34.4	123	01.9		19.8
10	239	33.8	296	46.9		52.9	236	52.7		56.1	69	34.8		34.4	138	04.5		19.8
11	254	36.3	311	46.1	-21	52.3	251	53.9	+0	56.7	84	37.2	+5	34.4	153	07.2	+22	19.8
12	269	38.8	326	45.3	-21	51.6	266	55.0	+0	57.4	99	39.5	+5	34.3	168	09.9	+22	19.8
13	284	41.2	341	44.5		51.0	281	56.2		58.0	114	41.9		34.3	183	12.6		19.9
14	299	43.7	356	43.8		50.3	296	57.3		58.7	129	44.3		34.3	198	15.3		19.9
15	314	46.2	11	43.0		49.7	311	58.4	+0	59.3	144	46.6		34.2	213	17.9		19.9
16	329	48.6	26	42.2		49.0	326	59.6	+1	00.0	159	49.0		34.2	228	20.6		19.9
17	344	51.1	41	41.4	-21	48.4	342	00.7	+1	00.6	174	51.4	+5	34.2	243	23.3	+22	19.9
18	359	53.5	56	40.6	-21	47.7	357	01.9	+1	01.3	189	53.7	+5	34.1	258	26.0	+22	20.0
19	14	56.0	71	39.8		47.1	12	03.0		01.9	204	56.1		34.1	273	28.6		20.0
20	29	58.5	86	39.1		46.4	27	04.1		02.6	219	58.4		34.1	288	31.3		20.0
21	45	00.9	101	38.3		45.8	42	05.3		03.2	235	00.8		34.0	303	34.0		20.0
22	60	03.4	116	37.5		45.1	57	06.4		03.9	250	03.2		34.0	318	36.7		20.0
23	75	05.9	131	36.7		44.5	72	07.6		04.5	265	05.5		34.0	333	39.4		20.1
24	90	08.3	146	35.9	-21	43.8	87	08.7	+1	05.2	280	07.9	+5	34.0	348	42.0	+22	20.1
Dif	—		-8 +6		+11 +6		+24 0		+27 0		+24 0		+27 0		+24 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 58 ^m 4				Edad: 28 ^d 0 PHE { 4 ^h : 61'2 12 ^h : 61'2 20 ^h : 61'2 R°: 66 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	180	27.9	-23	26.4	202	11.9	-23	40.9	60 N	14 54	15 52	16 49	8 28	101	13 22	38	
1	195	27.6		26.4	216	34.1		49.7	58	15 12	16 04	16 57	8 04	94	13 46	45	
2	210	27.3		26.4	230	56.2	31	-23 58.2	85	27	14	17 04	7 45	89	14 06	48	
3	225	27.0		26.4	245	18.2	30	-24 06.6	84	40	23	10	29	86	22	52	
4	240	26.7		26.4	259	40.1	29	14.8	82	15 51	32	15	15	84	36	54	
5	255	26.4	-23	26.4	274	01.9	28	-24 22.8	80	16 01	16 39	17 21	7 03	82	14 49	55	
6	270	26.1	-23	26.4	288	23.6	27	-24 30.7	79	16 21	16 55	17 33	6 38	79	15 15	57	
7	285	25.8		26.4	302	45.2	26	38.4	77	38	17 09	43	18	77	35	60	
8	300	25.4		26.4	317	06.8	26	45.8	74	35	16 52	21	17 52	6 02	74	15 52	61
9	315	25.1		26.4	331	28.2	24	-24 53.1	73	30	17 05	31	18 01	5 48	72	16 07	62
10	330	24.8		26.4	345	49.6	24	-25 00.3	72	20	26	17 50	18	24	70	32	64
11	345	24.5	-23	26.4	0	10.9	23	-25 07.2	69	10 N	17 45	18 08	18 34	5 03	68	16 54	66
12	0	24.2	-23	26.4	14	32.1	22	-25 13.9	67	0	18 02	18 25	18 51	4 44	65	17 15	66
13	15	23.9		26.4	28	53.2	21	20.5	66	10 S	20	18 43	19 10	25	63	35	68
14	30	23.6		26.4	43	14.3	21	26.8	63	20	18 39	19 03	19 33	4 05	60	17 57	69
15	45	23.3		26.4	57	35.2	19	33.0	62	30	19 01	28	20 02	3 41	58	18 23	70
16	60	22.9		26.4	71	56.2	20	38.9	59	35	14	19 44	20	28	56	38	71
17	75	22.6	-23	26.4	86	17.0	18	-25 44.7	58	40	19 29	20 02	20 44	3 12	54	18 55	72
18	90	22.3	-23	26.4	100	37.8	18	-25 50.3	56	45	19 47	20 25	21 14	2 53	51	19 16	73
19	105	22.0		26.4	114	58.5	17	-25 55.6	53	50	20 10	20 54	22 00	30	47	43	74
20	120	21.7		26.4	129	19.2	17	-26 00.8	52	52	21	21 09	22 28	19	45	19 55	76
21	135	21.4		26.3	143	39.8	16	05.7	49	54	33	28	23 15	2 07	42	20 10	77
22	150	21.1		26.3	158	00.3	15	10.5	48	56	20 47	21 50	** **	1 53	38	28	78
23	165	20.8		26.3	172	20.9	16	15.1	46	58	21 04	22 20	** **	36	34	20 49	79
24	180	20.4	-23	26.3	186	41.3	14	-26 19.4	43	60 S	21 25	23 11	** **	1 17	26	21 16	82

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 56 ^m 5		Mag: -3.9 PMG: 14 ^h 14 ^m				Mag: 0.0 PMG: 18 ^h 10 ^m				Mag: -2.2 PMG: 5 ^h 19 ^m				Mag: -0.4 PMG: 0 ^h 45 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♏		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	90	08.3	146	35.9	-21	43.8	87	08.7	+1	05.2	280	07.9	+5	34.0	348	42.0	+22	20.1
1	105	10.8	161	35.2		43.1	102	09.8		05.8	295	10.3		33.9	3	44.7		20.1
2	120	13.3	176	34.4		42.5	117	11.0		06.5	310	12.6		33.9	18	47.4		20.1
3	135	15.7	191	33.6		41.8	132	12.1		07.1	325	15.0		33.9	33	50.1		20.1
4	150	18.2	206	32.8		41.1	147	13.3		07.8	340	17.4		33.8	48	52.8		20.2
5	165	20.7	221	32.0	-21	40.5	162	14.4	+1	08.4	355	19.7	+5	33.8	63	55.5	+22	20.2
6	180	23.1	236	31.3	-21	39.8	177	15.5	+1	09.1	10	22.1	+5	33.8	78	58.1	+22	20.2
7	195	25.6	251	30.5		39.2	192	16.7		09.7	25	24.5		33.8	94	00.8		20.2
8	210	28.0	266	29.7		38.5	207	17.8		10.4	40	26.8		33.7	109	03.5		20.2
9	225	30.5	281	28.9		37.8	222	18.9		11.0	55	29.2		33.7	124	06.2		20.2
10	240	33.0	296	28.2		37.1	237	20.1		11.7	70	31.6		33.7	139	08.9		20.3
11	255	35.4	311	27.4	-21	36.5	252	21.2	+1	12.3	85	33.9	+5	33.6	154	11.5	+22	20.3
12	270	37.9	326	26.6	-21	35.8	267	22.3	+1	13.0	100	36.3	+5	33.6	169	14.2	+22	20.3
13	285	40.4	341	25.9		35.1	282	23.5		13.6	115	38.7		33.6	184	16.9		20.3
14	300	42.8	356	25.1		34.5	297	24.6		14.2	130	41.0		33.6	199	19.6		20.3
15	315	45.3	11	24.3		33.8	312	25.7		14.9	145	43.4		33.5	214	22.3		20.4
16	330	47.8	26	23.5		33.1	327	26.9		15.5	160	45.8		33.5	229	24.9		20.4
17	345	50.2	41	22.8	-21	32.4	342	28.0	+1	16.2	175	48.1	+5	33.5	244	27.6	+22	20.4
18	0	52.7	56	22.0	-21	31.8	357	29.2	+1	16.8	190	50.5	+5	33.4	259	30.3	+22	20.4
19	15	55.2	71	21.2		31.1	12	30.3		17.5	205	52.9		33.4	274	33.0		20.4
20	30	57.6	86	20.5		30.4	27	31.4		18.1	220	55.2		33.4	289	35.7		20.5
21	46	00.1	101	19.7		29.7	42	32.6		18.8	235	57.6		33.4	304	38.3		20.5
22	61	02.5	116	18.9		29.0	57	33.7		19.4	251	00.0		33.3	319	41.0		20.5
23	76	05.0	131	18.2		28.3	72	34.8		20.1	266	02.4		33.3	334	43.7		20.5
24	91	07.5	146	17.4	-21	27.7	87	36.0	+1	20.7	281	04.7	+5	33.3	349	46.4	+22	20.5
Dif	—		-8		+7		+11		+6		+24		0		+27			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 58 ^m 9			Edad: 29 ^d 0 PHE { 4 ^h : 61'1 12 ^h : 61'0 20 ^h : 60'9 R°: 66 ^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	20.4	-23	26.3	186	41.3	-26	19.4	60 N	7 08	8 05	9 03	10 09	62	14 00	76		
1	195	20.1		26.3	201	01.7	14	23.6	58	7 01	7 53	8 45	9 38	64	31	74		
2	210	19.8		26.3	215	22.1	14	27.5	56	6 54	43	30	9 14	65	14 54	74		
3	225	19.5		26.3	229	42.5	14	31.2	54	48	34	18	8 55	65	15 14	72		
4	240	19.2		26.2	244	02.8	13	34.8	52	42	26	8 07	39	66	30	72		
5	255	18.9	-23	26.2	258	23.1	13	-26 38.1	50	6 37	7 18	7 57	8 25	66	15 44	71		
6	270	18.6	-23	26.2	272	43.3	12	-26 41.2	45	6 25	7 02	7 36	7 57	66	16 12	71		
7	285	18.3		26.2	287	03.6	13	44.1	40	14	6 48	19	35	66	35	69		
8	300	18.0		26.2	301	23.8	12	46.8	35	6 05	37	7 05	16	67	16 53	69		
9	315	17.6		26.1	315	44.0	12	49.3	30	5 56	26	6 52	7 00	67	17 09	69		
10	330	17.3		26.1	330	04.2	12	51.5	20	40	6 07	31	6 34	66	17 36	68		
11	345	17.0	-23	26.1	344	24.3	11	-26 53.6	10 N	5 23	5 50	6 13	6 11	66	18 00	66		
12	0	16.7	-23	26.1	358	44.5	12	-26 55.4	0	5 06	5 33	5 55	5 49	67	18 21	66		
13	15	16.4		26.1	13	04.7	12	57.1	10 S	4 47	5 14	38	28	66	18 43	64		
14	30	16.1		26.0	27	24.8	11	58.5	20	4 25	4 54	5 19	5 05	66	19 06	64		
15	45	15.8		26.0	41	45.0	12	-26 59.7	30	3 56	29	4 56	4 39	66	33	62		
16	60	15.5		26.0	56	05.2	12	-27 00.7	35	37	4 14	43	24	65	19 49	61		
17	75	15.1	-23	26.0	70	25.4	12	-27 01.5	40	3 14	3 55	4 28	4 06	65	20 07	60		
18	90	14.8	-23	25.9	84	45.6	12	-27 02.1	45	2 43	3 33	4 10	3 44	65	20 29	59		
19	105	14.5		25.9	99	05.8	12	02.5	50	1 57	3 03	3 48	17	64	20 57	57		
20	120	14.2		25.9	113	26.0	12	02.6	52	1 29	2 48	37	3 04	63	21 11	56		
21	135	13.9		25.8	127	46.3	13	02.6	54	0 42	30	24	2 49	62	27	54		
22	150	13.6		25.8	142	06.6	13	02.3	56	** **	2 07	3 10	31	62	21 46	52		
23	165	13.3		25.8	156	26.9	13	01.8	58	** **	1 37	2 53	2 10	60	22 08	49		
24	180	13.0	-23	25.7	170	47.3	14	-27 01.2	60 S	** **	0 46	2 33	1 43	57	22 38	44		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 52 ^m 6		Mag: -3.9 PMG: 14 ^h 16 ^m				Mag: +0.1 PMG: 18 ^h 08 ^m				Mag: -2.2 PMG: 5 ^h 15 ^m				Mag: -0.4 PMG: 0 ^h 41 ^m			
	hG ♂		hG ♀		Dec		hG ♂		Dec		hG ♀		Dec		hG ♀		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	91	07.5	146	17.4	-21	27.7	87	36.0	+1	20.7	281	04.7	+5	33.3	349	46.4	+22	20.5
1	106	09.9	161	16.6		27.0	102	37.1		21.4	296	07.1		33.2	4	49.1		20.6
2	121	12.4	176	15.9		26.3	117	38.2		22.0	311	09.5		33.2	19	51.8		20.6
3	136	14.9	191	15.1		25.6	132	39.4		22.7	326	11.8		33.2	34	54.4		20.6
4	151	17.3	206	14.3		24.9	147	40.5		23.3	341	14.2		33.2	49	57.1		20.6
5	166	19.8	221	13.6	-21	24.2	162	41.6	+1	24.0	356	16.6	+5	33.1	64	59.8	+22	20.6
6	181	22.3	236	12.8	-21	23.5	177	42.7	+1	24.6	11	19.0	+5	33.1	80	02.5	+22	20.7
7	196	24.7	251	12.0		22.8	192	43.9		25.3	26	21.3		33.1	95	05.2		20.7
8	211	27.2	266	11.3		22.1	207	45.0		25.9	41	23.7		33.1	110	07.8		20.7
9	226	29.7	281	10.5		21.5	222	46.1		26.6	56	26.1		33.0	125	10.5		20.7
10	241	32.1	296	09.8		20.8	237	47.3		27.2	71	28.5		33.0	140	13.2		20.7
11	256	34.6	311	09.0	-21	20.1	252	48.4	+1	27.9	86	30.8	+5	33.0	155	15.9	+22	20.8
12	271	37.0	326	08.2	-21	19.4	267	49.5	+1	28.5	101	33.2	+5	33.0	170	18.6	+22	20.8
13	286	39.5	341	07.5		18.7	282	50.7		29.2	116	35.6		32.9	185	21.3		20.8
14	301	42.0	356	06.7		18.0	297	51.8		29.8	131	38.0		32.9	200	23.9		20.8
15	316	44.4	11	06.0		17.3	312	52.9		30.5	146	40.3		32.9	215	26.6		20.8
16	331	46.9	26	05.2		16.6	327	54.1		31.1	161	42.7		32.9	230	29.3		20.9
17	346	49.4	41	04.5	-21	15.9	342	55.2	+1	31.8	176	45.1	+5	32.8	245	32.0	+22	20.9
18	1	51.8	56	03.7	-21	15.2	357	56.3	+1	32.4	191	47.5	+5	32.8	260	34.7	+22	20.9
19	16	54.3	71	02.9		14.5	12	57.4		33.1	206	49.8		32.8	275	37.3		20.9
20	31	56.8	86	02.2		13.7	27	58.6		33.7	221	52.2		32.8	290	40.0		20.9
21	46	59.2	101	01.4		13.0	42	59.7		34.4	236	54.6		32.7	305	42.7		21.0
22	62	01.7	116	00.7		12.3	58	00.8		35.0	251	57.0		32.7	320	45.4		21.0
23	77	04.2	130	59.9		11.6	73	02.0		35.7	266	59.3		32.7	335	48.1		21.0
24	92	06.6	145	59.2	-21	10.9	88	03.1	+1	36.3	282	01.7	+5	32.7	350	50.8	+22	21.0
Dif	—		-8		+7		+11		+6		+24		0		+27			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna						
	SD: 16'3 PMG: 11 ^h 59 ^m 4			Edad: 30 ^d 0 PHE SD: 16'6 PMG: 13 ^h 11 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m			
0	180	13.0	-23	25.7	170	47.3	-27	01.2	60 N	14 56	15 54	16 50	11 11	27	15 16	104					
1	195	12.6		25.7	185	07.7	-27	00.3	58	15 13	16 05	16 58	10 42	35	15 45	96					
2	210	12.3		25.7	199	28.1	-26	59.2	56	28	15	17 05	19 40		16 08	90					
3	225	12.0		25.6	213	48.6		57.9	54	41	25	11	10 00	43	26	87					
4	240	11.7		25.6	228	09.1		56.4	52	15 52	33	17	9 45	45	42	84					
5	255	11.4	-23	25.6	242	29.7	-26	54.7	50	16 02	16 40	17 22	9 31	48	16 55	82					
6	270	11.1	-23	25.5	256	50.4	-26	52.7	45	16 22	16 56	17 34	9 03	51	17 23	77					
7	285	10.8		25.5	271	11.0		50.6	40	39	17 10	44	8 41	54	17 44	75					
8	300	10.5		25.4	285	31.8		48.3	35	16 54	22	17 53	23 55		18 02	73					
9	315	10.1		25.4	299	52.6		45.8	30	17 06	32	18 02	8 07	57	18 70						
10	330	09.8		25.4	314	13.5		43.0	20	27	17 51	19	7 40	60	18 44	67					
11	345	09.5	-23	25.3	328	34.5	-26	40.1	10 N	17 46	18 09	18 35	7 17	62	19 06	64					
12	0	09.2	-23	25.3	342	55.5	-26	37.0	0	18 03	18 26	18 52	6 56	64	19 27	61					
13	15	08.9		25.2	357	16.6		33.7	10 S	21	18 44	19 11	34 66		19 47	59					
14	30	08.6		25.2	11	37.8		30.1	20	18 40	19 04	19 34	6 11	68	20 10	56					
15	45	08.3		25.1	25	59.0		26.4	30	19 02	29	20 03	5 45	70	35	53					
16	60	08.0		25.1	40	20.4		22.5	35	15	19 45	21	29 71		20 50	51					
17	75	07.7	-23	25.1	54	41.8	-26	18.4	40	19 30	20 03	20 45	5 11	72	21 07	48					
18	90	07.3	-23	25.0	69	03.3	-26	14.1	45	19 48	20 25	21 15	4 49	74	21 28	45					
19	105	07.0		25.0	83	24.9		09.7	50	20 10	20 55	22 01	21 77		21 54	40					
20	120	06.7		24.9	97	46.6		05.0	52	21	21 10	22 29	4 07	79	22 07	37					
21	135	06.4		24.9	112	08.4	-26	00.1	54	34	28	23 15	3 51	81	21 35						
22	150	06.1		24.8	126	30.3	-25	55.1	56	20 48	21 51	** **	33 83		38 31						
23	165	05.8		24.8	140	52.3		49.9	58	21 05	22 20	** **	3 10	86	22 57	27					
24	180	05.5	-23	24.7	155	14.4	-25	44.5	60 S	21 25	23 11	** **	2 40	92	23 22	20					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 17 ^h 48 ^m 6			Mag: -3.9 PMG: 14 ^h 17 ^m			Mag: +0.1 PMG: 18 ^h 06 ^m			Mag: -2.2 PMG: 5 ^h 11 ^m			Mag: -0.4 PMG: 0 ^h 37 ^m								
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	92	06.6	145	59.2	-21	10.9	88	03.1	+1	36.3	282	01.7	+5	32.7	350	50.8	+22	21.0			
1	107	09.1	160	58.4		10.2	103	04.2		37.0	297	04.1		32.6	5	53.4		21.0			
2	122	11.5	175	57.7		09.5	118	05.3		37.6	312	06.5		32.6	20	56.1		21.1			
3	137	14.0	190	56.9		08.8	133	06.5		38.3	327	08.9		32.6	35	58.8		21.1			
4	152	16.5	205	56.2		08.1	148	07.6		38.9	342	11.2		32.6	51	01.5		21.1			
5	167	18.9	220	55.4	-21	07.3	163	08.7	+1	39.6	357	13.6	+5	32.5	66	04.2	+22	21.1			
6	182	21.4	235	54.7	-21	06.6	178	09.8	+1	40.2	12	16.0	+5	32.5	81	06.9	+22	21.1			
7	197	23.9	250	53.9		05.9	193	11.0		40.9	27	18.4		32.5	96	09.5		21.2			
8	212	26.3	265	53.2		05.2	208	12.1		41.5	42	20.8		32.5	111	12.2		21.2			
9	227	28.8	280	52.4		04.5	223	13.2		42.2	57	23.1		32.5	126	14.9		21.2			
10	242	31.3	295	51.7		03.8	238	14.3		42.8	72	25.5		32.4	141	17.6		21.2			
11	257	33.7	310	50.9	-21	03.0	253	15.5	+1	43.5	87	27.9	+5	32.4	156	20.3	+22	21.2			
12	272	36.2	325	50.2	-21	02.3	268	16.6	+1	44.1	102	30.3	+5	32.4	171	22.9	+22	21.2			
13	287	38.7	340	49.4		01.6	283	17.7		44.8	117	32.7		32.4	186	25.6		21.3			
14	302	41.1	355	48.7		00.9	298	18.8		45.4	132	35.1		32.3	201	28.3		21.3			
15	317	43.6	10	48.0	-21	00.1	313	20.0		46.1	147	37.4		32.3	216	31.0		21.3			
16	332	46.0	25	47.2	-20	59.4	328	21.1		46.7	162	39.8		32.3	231	33.7		21.3			
17	347	48.5	40	46.5	-20	58.7	343	22.2	+1	47.4	177	42.2	+5	32.3	246	36.4	+22	21.3			
18	2	51.0	55	45.7	-20	58.0	358	23.3	+1	48.0	192	44.6	+5	32.3	261	39.0	+22	21.4			
19	17	53.4	70	45.0		57.2	13	24.5		48.7	207	47.0		32.2	276	41.7		21.4			
20	32	55.9	85	44.2		56.5	28	25.6		49.3	222	49.4		32.2	291	44.4		21.4			
21	47	58.4	100	43.5		55.8	43	26.7		50.0	237	51.7		32.2	306	47.1		21.4			
22	63	00.8	115	42.8		55.0	58	27.8		50.6	252	54.1		32.2	321	49.8		21.4			
23	78	03.3	130	42.0		54.3	73	29.0		51.3	267	56.5		32.2	336	52.5		21.5			
24	93	05.8	145	41.3	-20	53.6	88	30.1	+1	51.9	282	58.9	+5	32.1	351	55.1	+22	21.5			
Dif	—			-7			+7			+11			+7			+24			0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 11 ^h 59 ^m 9			Edad: 1 ^d 6 PHE { 4 ^h : 60:1 12 ^h : 59:8 20 ^h : 59:6 R°: 58 ^m	hG ☾ Dif	Dec		Dif									
	hG ☉	Dec							Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	05.5	-23	24.7	155	14.4	-25	44.5	60 N	7 09	8 06	9 03	11 38	12	17 00	107	
1	195	05.2		24.6	169	36.6	32	38.9	58	7 01	7 54	8 46	11 17	18	21	100	
2	210	04.8		24.6	183	58.9	33	33.2	56	6 55	44	31	10 59	23	38	95	
3	225	04.5		24.5	198	21.4	35	27.2	60	48	35	18	43	28	17	53	
4	240	04.2		24.5	212	43.9	35	21.1	61	52	43	26	8 07	30	31	18	
5	255	03.9	-23	24.4	227	06.5	36	-25	14.8	63	6 37	7 19	7 57	10 19	33	18	
6	270	03.6	-23	24.4	241	29.3	38	-25	08.4	64	6 26	7 03	7 37	9 54	39	18	
7	285	03.3		24.3	255	52.2	39	-25	01.8	66	15	6 49	20	35	42	18	
8	300	03.0		24.2	270	15.2	40	-24	55.0	68	6 06	38	7 06	18	46	19	
9	315	02.7		24.2	284	38.3	41	48.0	70	30	5 57	27	6 53	9 04	48	28	
10	330	02.4		24.1	299	01.5	42	40.9	71	20	41	6 08	32	8 40	52	19	
11	345	02.0	-23	24.1	313	24.8	43	-24	33.6	73	5 24	5 51	6 14	8 19	56	20	
12	0	01.7	-23	24.0	327	48.3	45	-24	26.2	74	5 07	5 34	5 56	8 00	58	20	
13	15	01.4		23.9	342	11.9	46	18.6	76	10 S	4 48	5 15	39	7 40	62	20	
14	30	01.1		23.9	356	35.6	47	10.9	77	20	4 26	4 55	5 20	7 19	66	21	
15	45	00.8		23.8	10	59.5	49	-24	03.0	79	3 57	30	4 58	6 55	69	28	
16	60	00.5		23.7	25	23.5	50	-23	54.9	81	38	4 15	44	40	72	41	
17	75	00.2	-23	23.7	39	47.6	51	-23	46.7	82	3 15	3 57	4 29	6 23	75	21	
18	89	59.9	-23	23.6	54	11.8	52	-23	38.4	83	2 44	3 34	4 11	6 03	79	22	
19	104	59.6		23.5	68	36.2	54	29.9	85	50	1 59	3 04	3 49	5 38	84	34	
20	119	59.2		23.5	83	00.7	55	21.2	87	52	1 31	2 49	38	26	86	44	
21	134	58.9		23.4	97	25.3	56	12.5	87	54	0 44	31	26	5 12	89	22	
22	149	58.6		23.3	111	50.1	58	-23	03.5	90	** **	2 09	3 11	4 56	93	23	
23	164	58.3		23.3	126	15.0	59	-22	54.5	90	** **	1 39	2 55	36	99	24	
24	179	58.0	-23	23.2	140	40.0	60	-22	45.3	92	** **	0 48	2 34	4 12	106	23	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 44 ^m 7		Mag: -3.9 PMG: 14 ^h 18 ^m			Mag: +0.1 PMG: 18 ^h 05 ^m			Mag: -2.2 PMG: 5 ^h 07 ^m			Mag: -0.4 PMG: 0 ^h 32 ^m					
h	°	'	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec	
0	93	05.8	145	41.3	-20	53.6	88	30.1	+1	51.9	282	58.9	+5	32.1	351	55.1	+22
1	108	08.2	160	40.6		52.8	103	31.2		52.6	298	01.3		32.1	6	57.8	
2	123	10.7	175	39.8		52.1	118	32.3		53.2	313	03.7		32.1	22	00.5	
3	138	13.1	190	39.1		51.3	133	33.5		53.9	328	06.1		32.1	37	03.2	
4	153	15.6	205	38.3		50.6	148	34.6		54.5	343	08.4		32.1	52	05.9	
5	168	18.1	220	37.6	-20	49.9	163	35.7	+1	55.2	358	10.8	+5	32.0	67	08.6	+22
6	183	20.5	235	36.9	-20	49.1	178	36.8	+1	55.9	13	13.2	+5	32.0	82	11.2	+22
7	198	23.0	250	36.1		48.4	193	37.9		56.5	28	15.6		32.0	97	13.9	
8	213	25.5	265	35.4		47.6	208	39.1		57.2	43	18.0		32.0	112	16.6	
9	228	27.9	280	34.7		46.9	223	40.2		57.8	58	20.4		32.0	127	19.3	
10	243	30.4	295	33.9		46.2	238	41.3		58.5	73	22.8		31.9	142	22.0	
11	258	32.9	310	33.2	-20	45.4	253	42.4	+1	59.1	88	25.2	+5	31.9	157	24.7	+22
12	273	35.3	325	32.5	-20	44.7	268	43.5	+1	59.8	103	27.6	+5	31.9	172	27.4	+22
13	288	37.8	340	31.7		43.9	283	44.7	+2	00.4	118	29.9		31.9	187	30.0	
14	303	40.3	355	31.0		43.2	298	45.8		01.1	133	32.3		31.9	202	32.7	
15	318	42.7	10	30.3		42.4	313	46.9		01.7	148	34.7		31.8	217	35.4	
16	333	45.2	25	29.6		41.7	328	48.0		02.4	163	37.1		31.8	232	38.1	
17	348	47.6	40	28.8	-20	40.9	343	49.1	+2	03.0	178	39.5	+5	31.8	247	40.8	+22
18	3	50.1	55	28.1	-20	40.2	358	50.3	+2	03.7	193	41.9	+5	31.8	262	43.5	+22
19	18	52.6	70	27.4		39.4	13	51.4		04.3	208	44.3		31.8	277	46.1	
20	33	55.0	85	26.6		38.6	28	52.5		05.0	223	46.7		31.7	292	48.8	
21	48	57.5	100	25.9		37.9	43	53.6		05.6	238	49.1		31.7	307	51.5	
22	64	00.0	115	25.2		37.1	58	54.7		06.3	253	51.5		31.7	322	54.2	
23	79	02.4	130	24.5		36.4	73	55.9		06.9	268	53.9		31.7	337	56.9	
24	94	04.9	145	23.7	-20	35.6	88	57.0	+2	07.6	283	56.3	+5	31.7	352	59.6	+22
Dif	—		-7			+7	+11		+7		+24		0		+27		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 00 ^m 4			Edad: 2 ^d 6 PHE SD: 16/2 PMG: 15 ^h 12 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	58.0	-23	23.2	140	40.0	-22 45.3	60 N	14 57	15 55	16 52	11 50 6	18 47 100		
1	194	57.7		23.1	155	05.2	62 36.0	58	15 15	16 07	16 59	35 11	19 01 95		
2	209	57.4		23.0	169	30.5	63 26.5	56	29	17	17 06	22 15	13 91		
3	224	57.1		23.0	183	55.9	64 16.9	54	42	26	12	11 18	24 87		
4	239	56.8		22.9	198	21.5	66 -22 07.2	52	15 53	34	18	11 01 21	33 84		
5	254	56.4	-23	22.8	212	47.2	67 -21 57.4	50	16 03	16 42	17 23	10 52 24	19 42 81		
6	269	56.1	-23	22.7	227	13.0	68 -21 47.5	45	16 24	16 58	17 35	10 33 29	19 59 76		
7	284	55.8		22.7	241	39.0	70 37.4	40	41	17 11	45	17 33	20 14 71		
8	299	55.5		22.6	256	05.1	71 27.2	35	16 55	23	17 55	10 04 37	26 68		
9	314	55.2		22.5	270	31.3	72 16.9	30	17 07	33	18 03	9 52 40	36 65		
10	329	54.9		22.4	284	57.7	74 -21 06.4	20	28	17 52	20	32 45	20 54 60		
11	344	54.6	-23	22.3	299	24.2	75 -20 55.9	10 N	17 47	18 10	18 36	9 15 49	21 10 55		
12	359	54.3	-23	22.3	313	50.9	77 -20 45.3	0	18 04	18 27	18 53	8 58 54	21 24 51		
13	14	54.0		22.2	328	17.7	78 34.5	10 S	22	18 45	19 12	42 57	39 46		
14	29	53.7		22.1	342	44.6	79 23.6	20	18 41	19 05	19 34	25 61	21 54 42		
15	44	53.3		22.0	357	11.6	80 12.7	30	19 03	30	20 03	8 04 67	22 12 36		
16	59	53.0		21.9	11	38.8	82 -20 01.6	35	16	19 45	22	7 52 70	22 33		
17	74	52.7	-23	21.8	26	06.1	83 -19 50.4	40	19 31	20 03	20 45	7 38 73	22 33 30		
18	89	52.4	-23	21.8	40	33.6	85 -19 39.2	45	19 49	20 26	21 16	7 22 77	22 46 27		
19	104	52.1		21.7	55	01.2	86 27.8	50	20 11	20 56	22 01	7 02 83	23 03 21		
20	119	51.8		21.6	69	28.9	87 16.3	52	22	21 11	22 29	6 52 86	10 19		
21	134	51.5		21.5	83	56.7	88 -19 04.8	54	34	29	23 14	41 89	19 15		
22	149	51.2		21.4	98	24.7	90 -18 53.2	56	20 48	21 51	** **	29 93	28 13		
23	164	50.9		21.3	112	52.8	91 41.4	58	21 05	22 20	** **	6 15 97	39 9		
24	179	50.6	-23	21.2	127	21.1	93 -18 29.6	60 S	21 26	23 10	** **	5 58 103	23 51 4		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 17 ^h 40 ^m 8		Mag: -3.9 PMG: 14 ^h 19 ^m		Mag: +0.1 PMG: 18 ^h 03 ^m		Mag: -2.2 PMG: 5 ^h 03 ^m		Mag: -0.4 PMG: 0 ^h 28 ^m						
	hG ♂		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	94	04.9	145	23.7	88	57.0	283	56.3	352	59.6					
1	109	07.4	160	23.0	103	58.1	298	58.6	8	02.2					
2	124	09.8	175	22.3	118	59.2	314	01.0	23	04.9					
3	139	12.3	190	21.6	134	00.3	329	03.4	38	07.6					
4	154	14.8	205	20.9	149	01.4	344	05.8	53	10.3					
5	169	17.2	220	20.1	164	02.6	359	08.2	68	13.0					
6	184	19.7	235	19.4	179	03.7	14	10.6	83	15.7					
7	199	22.1	250	18.7	194	04.8	29	13.0	98	18.4					
8	214	24.6	265	18.0	209	05.9	44	15.4	113	21.0					
9	229	27.1	280	17.3	224	07.0	59	17.8	128	23.7					
10	244	29.5	295	16.5	239	08.1	74	20.2	143	26.4					
11	259	32.0	310	15.8	254	09.3	89	22.6	158	29.1					
12	274	34.5	325	15.1	269	10.4	104	25.0	173	31.8					
13	289	36.9	340	14.4	284	11.5	119	27.4	188	34.5					
14	304	39.4	355	13.7	299	12.6	134	29.8	203	37.1					
15	319	41.9	10	13.0	314	13.7	149	32.2	218	39.8					
16	334	44.3	25	12.2	329	14.8	164	34.6	233	42.5					
17	349	46.8	40	11.5	344	15.9	179	37.0	248	45.2					
18	4	49.3	55	10.8	359	17.1	194	39.4	263	47.9					
19	19	51.7	70	10.1	14	18.2	209	41.8	278	50.6					
20	34	54.2	85	09.4	29	19.3	224	44.2	293	53.3					
21	49	56.6	100	08.7	44	20.4	239	46.6	308	55.9					
22	64	59.1	115	08.0	59	21.5	254	49.0	323	58.6					
23	80	01.6	130	07.3	74	22.6	269	51.4	339	01.3					
24	95	04.0	145	06.5	89	23.7	284	53.8	354	04.0					
Dif	—		-7		+8		+11		+27						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3			Edad: 3 ^d 6	PHE { 4 ^h : 58'3 12 ^h : 58'0 20 ^h : 57'7												
	PMG: 12 ^h 00 ^m 9																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m			
0	179	50.6	-23	127	21.1	-18	29.6	60 N	7 09	8 06	9 04	11 56	3	20 27 93			
1	194	50.2		141	49.4 ⁹³		17.7 ¹¹⁹	58	7 02	7 54	8 46	46	7	36 89			
2	209	49.9		156	17.9 ⁹⁵	-18	05.7 ¹²⁰	56	6 55	44	32	37	10	44 85			
3	224	49.6		170	46.5 ⁹⁶	-17	53.6 ¹²¹	54	49	35	19	29	14	51 8			
4	239	49.3		185	15.3 ⁹⁸		41.5 ¹²¹	52	43	27	8 08	22	16	20 57 80			
5	254	49.0	-23	199	44.2 ⁹⁹	-17	29.3 ¹²²	50	6 38	7 20	7 58	11 16	18	21 03 77			
6	269	48.7	-23	214	13.2 ¹⁰⁰	-17	17.0 ¹²³	45	6 26	7 04	7 37	11 02	23	21 15 72			
7	284	48.4		228	42.3 ¹⁰¹	-17	04.6 ¹²⁴	40	16	6 50	21	10 50	28	25 67			
8	299	48.1		243	11.5 ¹⁰²	-16	52.1 ¹²⁵	35	6 07	38	7 06	41	31	34 63			
9	314	47.8		257	40.9 ¹⁰⁴		39.6 ¹²⁵	30	5 58	28	6 54	32	34	41 60			
10	329	47.5		272	10.4 ¹⁰⁵		27.0 ¹²⁶	20	41	6 09	33	17	39	21 54 55			
11	344	47.2	-23	286	40.0 ¹⁰⁶	-16	14.4 ¹²⁶	10 N	5 25	5 52	6 15	10 04	44	22 05 50			
12	359	46.8	-23	301	09.7 ¹⁰⁷	-16	01.7 ¹²⁷	0	5 08	5 35	5 57	9 52	48	22 15 46			
13	14	46.5		315	39.5 ¹⁰⁸	-15	48.9 ¹²⁸	10 S	4 49	5 17	40	39	53	25 42			
14	29	46.2		330	09.5 ¹¹⁰		36.0 ¹²⁹	20	4 27	4 56	5 21	26	57	36 37			
15	44	45.9		344	39.6 ¹¹¹		23.1 ¹²⁹	30	3 58	31	4 59	11	62	48 32			
16	59	45.6		359	09.8 ¹¹²	-15	10.2 ¹²⁹	35	39	4 16	46	9 02	65	22 55 29			
17	74	45.3	-23	13	40.1 ¹¹³	-14	57.1 ¹³¹	40	3 16	3 58	4 31	8 51	70	23 03 26			
18	89	45.0	-23	28	10.5 ¹¹⁴	-14	44.1 ¹³⁰	45	2 46	3 35	4 13	8 39	74	23 13 21			
19	104	44.7		42	41.0 ¹¹⁵		30.9 ¹³²	50	2 00	3 06	3 50	25	79	24 16			
20	119	44.4		57	11.6 ¹¹⁶		17.7 ¹³²	52	1 33	2 51	39	18	81	29 14			
21	134	44.1		71	42.4 ¹¹⁸	-14	04.5 ¹³²	54	0 47	33	27	10	85	34 12			
22	149	43.8		86	13.2 ¹¹⁸	-13	51.2 ¹³³	56	** **	2 11	3 13	8 02	87	41 9			
23	164	43.5		100	44.2 ¹²⁰		37.9 ¹³³	58	** **	1 41	2 56	7 52	91	48 6			
24	179	43.1	-23	115	15.2 ¹²⁰	-13	24.5 ¹³⁴	60 S	** **	0 51	2 36	7 41	96	23 55 3			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 36 ^m 8		Mag: -3.9 PMG: 14 ^h 20 ^m			Mag: +0.1 PMG: 18 ^h 01 ^m			Mag: -2.2 PMG: 5 ^h 00 ^m			Mag: -0.4 PMG: 0 ^h 24 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°			
0	95	04.0	145	06.5	-20	89	23.7	+2	23.2	284	53.8	+5	31.3	354	04.0	+22	22.4
1	110	06.5	160	05.8		104	24.9		23.8	299	56.2		31.3	9	06.7		22.4
2	125	09.0	175	05.1		119	26.0		24.5	314	58.6		31.3	24	09.4		22.5
3	140	11.4	190	04.4		134	27.1		25.1	330	01.0		31.2	39	12.0		22.5
4	155	13.9	205	03.7		149	28.2		25.8	345	03.4		31.2	54	14.7		22.5
5	170	16.4	220	03.0	-20	164	29.3	+2	26.4	0	05.8	+5	31.2	69	17.4	+22	22.5
6	185	18.8	235	02.3	-20	179	30.4	+2	27.1	15	08.2	+5	31.2	84	20.1	+22	22.5
7	200	21.3	250	01.6		194	31.5		27.7	30	10.6		31.2	99	22.8		22.6
8	215	23.8	265	00.9		209	32.6		28.4	45	13.0		31.2	114	25.5		22.6
9	230	26.2	280	00.2		224	33.7		29.0	60	15.4		31.2	129	28.2		22.6
10	245	28.7	294	59.5		239	34.9		29.7	75	17.8		31.2	144	30.8		22.6
11	260	31.1	309	58.8	-20	254	36.0	+2	30.4	90	20.2	+5	31.1	159	33.5	+22	22.6
12	275	33.6	324	58.1	-20	269	37.1	+2	31.0	105	22.6	+5	31.1	174	36.2	+22	22.7
13	290	36.1	339	57.4		284	38.2		31.7	120	25.0		31.1	189	38.9		22.7
14	305	38.5	354	56.7		299	39.3		32.3	135	27.4		31.1	204	41.6		22.7
15	320	41.0	9	56.0		314	40.4		33.0	150	29.8		31.1	219	44.3		22.7
16	335	43.5	24	55.3		329	41.5		33.6	165	32.2		31.1	234	47.0		22.7
17	350	45.9	39	54.6	-20	344	42.6	+2	34.3	180	34.6	+5	31.1	249	49.6	+22	22.8
18	5	48.4	54	53.9	-20	359	43.7	+2	34.9	195	37.0	+5	31.1	264	52.3	+22	22.8
19	20	50.9	69	53.2		14	44.8		35.6	210	39.4		31.0	279	55.0		22.8
20	35	53.3	84	52.5		29	46.0		36.2	225	41.8		31.0	294	57.7		22.8
21	50	55.8	99	51.8	-20	44	47.1		36.9	240	44.3		31.0	310	00.4		22.8
22	65	58.2	114	51.1	-19	59	48.2		37.5	255	46.7		31.0	325	03.1		22.9
23	81	00.7	129	50.4		74	49.3		38.2	270	49.1		31.0	340	05.8		22.9
24	96	03.2	144	49.7	-19	89	50.4	+2	38.8	285	51.5	+5	31.0	355	08.4	+22	22.9
Dif	—		-7		+8	+11		+7	+24		0		+27			0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 4 ^d 6	PHE { 4 ^h : 57/4 12 ^h : 57/0 20 ^h : 56/7	Rº: 43 ^m								
	PMG: 12 ^h 01 ^m 4													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	43.1	-23 18.8	115	15.2	-13 24.5		60 N	14 59	15 57	16 53	11 59 2	22 00 87	
1	194	42.8		129	46.4 ¹²²	-13 11.1 ¹³⁴		58	15 17	16 08	17 01	53 5	05 83	
2	209	42.5		144	17.7 ¹²³	-12 57.6 ¹³⁵		56	31	18	08	47 8	09 81	
3	224	42.2		158	49.0 ¹²³	44.1 ¹³⁵		54	44	27	14	43 10	13 78	
4	239	41.9		173	20.5 ¹²⁵	30.5 ¹³⁶		52	15 55	36	19	38 13	17 75	
5	254	41.6	-23 18.2	187	52.1 ¹²⁶	-12 16.9 ¹³⁶		50	16 05	16 43	17 25	11 34 15	22 20 73	
6	269	41.3	-23 18.1	202	23.7 ¹²⁶	-12 03.3 ¹³⁶		45	16 25	16 59	17 36	11 25 20	22 27 68	
7	284	41.0		216	55.5 ¹²⁸	-11 49.6 ¹³⁷		40	42	17 12	46	18 24	32 64	
8	299	40.7		231	27.3 ¹²⁸	35.9 ¹³⁷		35	16 56	24	17 56	12 27	37 60	
9	314	40.4		245	59.3 ¹³⁰	22.2 ¹³⁷		30	17 08	35	18 04	11 06 30	41 58	
10	329	40.1		260	31.3 ¹³⁰	-11 08.4 ¹³⁸		20	29	17 53	21	10 56 36	49 52	
11	344	39.8	-23 17.5	275	03.4 ¹³¹	-10 54.6 ¹³⁸		10 N	17 48	18 11	18 37	10 48 40	22 55 48	
12	359	39.5	-23 17.4	289	35.7 ¹³³	-10 40.7 ¹³⁹		0	18 05	18 28	18 54	10 40 44	23 01 43	
13	14	39.2		304	08.0 ¹³³	26.9 ¹³⁸		10 S	23	18 46	19 13	32 48	07 39	
14	29	38.8		318	40.4 ¹³⁴	-10 13.0 ¹³⁹		20	18 41	19 06	19 35	23 53	13 35	
15	44	38.5		333	12.8 ¹³⁴	-9 59.1 ¹³⁹		30	19 03	31	20 04	13 59	20 29	
16	59	38.2		347	45.4 ¹³⁶	45.1 ¹⁴⁰		35	16	19 46	23	07 62	24 27	
17	74	37.9	-23 16.7	2	18.1 ¹³⁷	-9 31.2 ¹³⁹		40	19 31	20 04	20 46	10 01 65	23 29 23	
18	89	37.6	-23 16.6	16	50.8 ¹³⁷	-9 17.2 ¹⁴⁰		45	19 49	20 26	21 16	9 53 69	23 34 19	
19	104	37.3		31	23.6 ¹³⁸	-9 03.1 ¹⁴¹		50	20 12	20 56	22 01	44 74	40 15	
20	119	37.0		45	56.5 ¹³⁹	-8 49.1 ¹⁴⁰		52	22	21 11	22 28	39 77	43 13	
21	134	36.7		60	29.4 ¹³⁹	35.1 ¹⁴⁰		54	34	29	23 12	35 79	46 10	
22	149	36.4		75	02.5 ¹⁴¹	21.0 ¹⁴¹		56	20 49	21 51	** **	29 83	50 7	
23	164	36.1		89	35.6 ¹⁴¹	-8 06.9 ¹⁴¹		58	21 05	22 20	** **	23 86	54 4	
24	179	35.8	-23 15.8	104	08.8 ¹⁴²	-7 52.8 ¹⁴¹		60 S	21 25	23 08	** **	9 17 89	23 58 1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 32 ^m 9		Mag: -3.9 PMG: 14 ^h 21 ^m		Mag: +0.2 PMG: 17 ^h 59 ^m		Mag: -2.2 PMG: 4 ^h 56 ^m		Mag: -0.4 PMG: 0 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	96	03.2	144	49.7	-19	58.0	89	50.4	+2	38.8
1	111	05.6	159	49.0		57.2	104	51.5		39.5
2	126	08.1	174	48.3		56.4	119	52.6		40.1
3	141	10.6	189	47.6		55.6	134	53.7		40.8
4	156	13.0	204	46.9		54.7	149	54.8		41.4
5	171	15.5	219	46.2	-19	53.9	164	55.9	+2	42.1
6	186	18.0	234	45.5	-19	53.1	179	57.0	+2	42.7
7	201	20.4	249	44.8		52.3	194	58.1		43.4
8	216	22.9	264	44.2		51.5	209	59.2		44.0
9	231	25.4	279	43.5		50.7	225	00.4		44.7
10	246	27.8	294	42.8		49.9	240	01.5		45.3
11	261	30.3	309	42.1	-19	49.0	255	02.6	+2	46.0
12	276	32.7	324	41.4	-19	48.2	270	03.7	+2	46.6
13	291	35.2	339	40.7		47.4	285	04.8		47.3
14	306	37.7	354	40.0		46.6	300	05.9		47.9
15	321	40.1	9	39.3		45.8	315	07.0		48.6
16	336	42.6	24	38.7		44.9	330	08.1		49.2
17	351	45.1	39	38.0	-19	44.1	345	09.2	+2	49.9
18	6	47.5	54	37.3	-19	43.3	0	10.3	+2	50.5
19	21	50.0	69	36.6		42.5	15	11.4		51.2
20	36	52.5	84	35.9		41.6	30	12.5		51.8
21	51	54.9	99	35.2		40.8	45	13.6		52.5
22	66	57.4	114	34.6		40.0	60	14.7		53.1
23	81	59.9	129	33.9		39.2	75	15.8		53.8
24	97	02.3	144	33.2	-19	38.3	90	16.9	+2	54.4
Dif	—		-7 +8		+11		+7		+24 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 9			Edad: 5 ^d 6 SD: 15/4 PMG: 17 ^h 34 ^m	PHE { 4 ^h : 56/5 12 ^h : 56/2 20 ^h : 55/9 R°: 42 ^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	35.8	-23	15.8	104	08.8	-7	52.8	60 N	7 10	8 06	9 03	12 01	1	23 27	84		
1	194	35.5		15.7	118	42.0 ¹⁴²		38.7 ¹⁴¹	58	7 02	7 55	8 46	11 58	4	28	81		
2	209	35.2		15.6	133	15.4 ¹⁴⁴		24.5 ¹⁴²	56	6 55	45	32	55	7	30	77		
3	224	34.9		15.4	147	48.8 ¹⁴⁴		10.4 ¹⁴¹	54		49	36	19	53	10	31	75	
4	239	34.6		15.3	162	22.2 ¹⁴⁴		56.2 ¹⁴²	52		44	27	8 08	51	12	32	72	
5	254	34.3	-23	15.2	176	55.8 ¹⁴⁶		42.0 ¹⁴²	50	6 39	7 20	7 58	11 49	14	23 33	70		
6	269	33.9	-23	15.0	191	29.4 ¹⁴⁶		27.9 ¹⁴¹	45	6 27	7 04	7 38	11 45	18	23 35	65		
7	284	33.6		14.9	206	03.0 ¹⁴⁶		13.7 ¹⁴²	40		17	6 51	42	22	36	62		
8	299	33.3		14.8	220	36.8 ¹⁴⁸		59.5 ¹⁴²	35	6 07	39	7 07	39	25	37	59		
9	314	33.0		14.6	235	10.5 ¹⁴⁷		45.3 ¹⁴²	30	5 59	29	6 55	36	28	39	55		
10	329	32.7		14.5	249	44.4 ¹⁴⁹		31.1 ¹⁴²	20		42	6 10	32	33	41	50		
11	344	32.4	-23	14.4	264	18.3 ¹⁴⁹		16.8 ¹⁴³	10 N	5 26	5 53	6 15	11 28	37	23 43	45		
12	359	32.1	-23	14.2	278	52.3 ¹⁵⁰		02.6 ¹⁴²	0	5 09	5 36	5 58	11 24	42	23 44	41		
13	14	31.8		14.1	293	26.3 ¹⁵⁰		48.4 ¹⁴²	10 S	4 51	5 18	41	20	46	46	37		
14	29	31.5		13.9	308	00.3 ¹⁵⁰		34.2 ¹⁴²	20	4 28	4 57	22	16	51	48	32		
15	44	31.2		13.8	322	34.5 ¹⁵²		19.9 ¹⁴³	30	3 59	33	5 00	12	55	49	28		
16	59	30.9		13.6	337	08.6 ¹⁵¹		05.7 ¹⁴²	35		41	4 17	4 47	09	59	51	24	
17	74	30.6	-23	13.5	351	42.9 ¹⁵³		51.5 ¹⁴²	40	3 18	3 59	4 32	11 06	62	23 52	21		
18	89	30.3	-23	13.4	6	17.2 ¹⁵³		37.3 ¹⁴²	45	2 47	3 37	4 14	11 02	67	23 53	18		
19	104	30.0		13.2	20	51.5 ¹⁵³		23.0 ¹⁴³	50	2 02	3 07	3 52	10 58	71	55	13		
20	119	29.7		13.1	35	25.8 ¹⁵³		08.8 ¹⁴²	52	1 35	2 52	41	56	74	56	11		
21	134	29.4		12.9	50	00.3 ¹⁵⁵		54.6 ¹⁴²	54	0 51	35	29	54	76	56	10		
22	149	29.1		12.8	64	34.7 ¹⁵⁴		40.4 ¹⁴²	56	** **	2 13	3 15	52	78	57	7		
23	164	28.8		12.6	79	09.2 ¹⁵⁵		26.2 ¹⁴²	58	** **	1 44	2 58	49	82	58	5		
24	179	28.5	-23	12.5	93	43.8 ¹⁵⁶		12.0 ¹⁴²	60 S	** **	0 56	2 38	10 46	85	23 59	2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 29 ^m 0		Mag: -3.9 PMG: 14 ^h 22 ^m		Mag: +0.2 PMG: 17 ^h 58 ^m		Mag: -2.2 PMG: 4 ^h 52 ^m		Mag: -0.4 PMG: 0 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	97	02.3	144	33.2	-19	38.3	90	16.9	+2	54.4	286	49.4	+5	30.8	356	12.9	+22	23.4
1	112	04.8	159	32.5		37.5	105	18.0		55.1	301	51.8		30.7	11	15.6		23.4
2	127	07.2	174	31.8		36.7	120	19.1		55.8	316	54.2		30.7	26	18.3		23.4
3	142	09.7	189	31.2		35.8	135	20.2		56.4	331	56.6		30.7	41	21.0		23.4
4	157	12.2	204	30.5		35.0	150	21.3		57.1	346	59.0		30.7	56	23.6		23.5
5	172	14.6	219	29.8	-19	34.2	165	22.4	+2	57.7	2	01.4	+5	30.7	71	26.3	+22	23.5
6	187	17.1	234	29.1	-19	33.3	180	23.5	+2	58.4	17	03.9	+5	30.7	86	29.0	+22	23.5
7	202	19.6	249	28.5		32.5	195	24.6		59.0	32	06.3		30.7	101	31.7		23.5
8	217	22.0	264	27.8		31.6	210	25.7	+2	59.7	47	08.7		30.7	116	34.4		23.5
9	232	24.5	279	27.1		30.8	225	26.9	+3	00.3	62	11.1		30.7	131	37.1		23.5
10	247	27.0	294	26.4		30.0	240	28.0		01.0	77	13.5		30.7	146	39.8		23.6
11	262	29.4	309	25.8	-19	29.1	255	29.1	+3	01.6	92	15.9	+5	30.7	161	42.4	+22	23.6
12	277	31.9	324	25.1	-19	28.3	270	30.2	+3	02.3	107	18.4	+5	30.7	176	45.1	+22	23.6
13	292	34.3	339	24.4		27.4	285	31.3		02.9	122	20.8		30.7	191	47.8		23.6
14	307	36.8	354	23.7		26.6	300	32.4		03.6	137	23.2		30.7	206	50.5		23.6
15	322	39.3	9	23.1		25.8	315	33.5		04.2	152	25.6		30.6	221	53.2		23.7
16	337	41.7	24	22.4		24.9	330	34.6		04.9	167	28.0		30.6	236	55.9		23.7
17	352	44.2	39	21.7	-19	24.1	345	35.7	+3	05.5	182	30.5	+5	30.6	251	58.6	+22	23.7
18	7	46.7	54	21.1	-19	23.2	0	36.8	+3	06.2	197	32.9	+5	30.6	267	01.3	+22	23.7
19	22	49.1	69	20.4		22.4	15	37.9		06.8	212	35.3		30.6	282	03.9		23.7
20	37	51.6	84	19.7		21.5	30	39.0		07.5	227	37.7		30.6	297	06.6		23.8
21	52	54.1	99	19.1		20.7	45	40.1		08.1	242	40.1		30.6	312	09.3		23.8
22	67	56.5	114	18.4		19.8	60	41.2		08.8	257	42.6		30.6	327	12.0		23.8
23	82	59.0	129	17.7		19.0	75	42.3		09.4	272	45.0		30.6	342	14.7		23.8
24	98	01.5	144	17.1	-19	18.1	90	43.4	+3	10.1	287	47.4	+5	30.6	357	17.4	+22	23.8
Dif	—		-7		+8		+11		+7		+24		0		+27			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 02 ^m 3			Edad: 6 ^d 6 PHE { SD: 15:2 PMG: 18 ^h 16 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	28.5	-23	12.5	93	43.8	-2 12.0	60 N	15 02	15 59	16 55	12 02 1	** ** *	** ** *
1	194	28.2		12.3	108	18.4 ¹⁵⁶	-1 57.8 ¹⁴²	58	19	16 10	17 03	02 4	** ** *	** ** *
2	209	27.9		12.2	122	53.0 ¹⁵⁶	43.6 ¹⁴²	56	33	20	09	02 7	** ** *	** ** *
3	224	27.6		12.0	137	27.6 ¹⁵⁶	29.4 ¹⁴²	54	46	29	15	03 9	** ** *	** ** *
4	239	27.3		11.9	152	02.3 ¹⁵⁷	15.2 ¹⁴²	52	15 57	37	21	03 11	** ** *	** ** *
5	254	27.0	-23	11.7	166	37.1 ¹⁵⁸	-1 01.1 ¹⁴¹	50	16 06	16 45	17 26	12 03 13	** ** *	** ** *
6	269	26.7	-23	11.5	181	11.8 ¹⁵⁷	-0 46.9 ¹⁴²	45	16 27	17 00	17 38	12 03 18	** ** *	** ** *
7	284	26.4		11.4	195	46.6 ¹⁵⁸	32.8 ¹⁴¹	40	43	14	48	04 21	** ** *	** ** *
8	299	26.0		11.2	210	21.5 ¹⁵⁹	18.7 ¹⁴¹	35	16 57	25	17 57	04 25	** ** *	** ** *
9	314	25.7		11.1	224	56.3 ¹⁵⁸	-0 04.6 ¹⁴¹	30	17 10	36	18 06	04 28	** ** *	** ** *
10	329	25.4		10.9	239	31.2 ¹⁵⁹	+0 09.5 ¹⁴¹	20	31	17 55	22	05 32	** ** *	** ** *
11	344	25.1	-23	10.8	254	06.1 ¹⁵⁹	+0 23.6 ¹⁴¹	10 N	17 49	18 12	18 38	12 05 37	** ** *	** ** *
12	359	24.8	-23	10.6	268	41.1 ¹⁶⁰	+0 37.7 ¹⁴¹	0	18 06	18 29	18 55	12 06 41	** ** *	** ** *
13	14	24.5		10.4	283	16.0 ¹⁵⁹	+0 51.7 ¹⁴⁰	10 S	23	18 46	19 14	06 45	** ** *	** ** *
14	29	24.2		10.3	297	51.0 ¹⁶⁰	+1 05.7 ¹⁴⁰	20	18 42	19 07	19 36	07 49	** ** *	** ** *
15	44	23.9		10.1	312	26.0 ¹⁶⁰	19.8 ¹⁴¹	30	19 04	31	20 05	07 55	** ** *	** ** *
16	59	23.6		09.9	327	01.1 ¹⁶¹	33.7 ¹³⁹	35	17	19 46	23	08 57	** ** *	** ** *
17	74	23.3	-23	09.8	341	36.1 ¹⁶⁰	+1 47.7 ¹⁴⁰	40	19 32	20 04	20 46	12 08 61	** ** *	** ** *
18	89	23.0	-23	09.6	356	11.2 ¹⁶¹	+2 01.7 ¹⁴⁰	45	19 49	20 27	21 16	12 09 64	** ** *	** ** *
19	104	22.7		09.5	10	46.3 ¹⁶¹	15.6 ¹³⁹	50	20 12	20 56	22 00	09 70	** ** *	** ** *
20	119	22.4		09.3	25	21.4 ¹⁶¹	29.5 ¹³⁹	52	22	21 11	22 27	10 71	** ** *	** ** *
21	134	22.1		09.1	39	56.5 ¹⁶¹	43.4 ¹³⁹	54	34	28	23 09	10 74	** ** *	** ** *
22	149	21.8		08.9	54	31.7 ¹⁶²	+2 57.3 ¹³⁹	56	20 48	21 50	** ** *	10 77	** ** *	** ** *
23	164	21.5		08.8	69	06.8 ¹⁶¹	+3 11.1 ¹³⁸	58	21 05	22 19	** ** *	11 79	** ** *	** ** *
24	179	21.2	-23	08.6	83	42.0 ¹⁶²	+3 24.9 ¹³⁸	60 S	21 25	23 04	** ** *	12 11 83	** ** *	** ** *
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 25 ^m 0		Mag: -3.9 PMG: 14 ^h 23 ^m		Mag: +0.2 PMG: 17 ^h 56 ^m		Mag: -2.2 PMG: 4 ^h 48 ^m		Mag: -0.5 PMG: 0 ^h 11 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	98	01.5	144	17.1	90	43.4	+3 10.1	287 47.4	+5 30.6	357 17.4	+22 23.8			
1	113	03.9	159	16.4	105	44.5	10.7	302 49.8	30.6	12 20.1	23.9			
2	128	06.4	174	15.7	120	45.6	11.4	317 52.3	30.6	27 22.7	23.9			
3	143	08.8	189	15.1	135	46.7	12.0	332 54.7	30.6	42 25.4	23.9			
4	158	11.3	204	14.4	150	47.8	12.7	347 57.1	30.6	57 28.1	23.9			
5	173	13.8	219	13.7	165	48.8	+3 13.3	2 59.5	+5 30.6	72 30.8	+22 23.9			
6	188	16.2	234	13.1	180	49.9	+3 14.0	18 01.9	+5 30.6	87 33.5	+22 24.0			
7	203	18.7	249	12.4	195	51.0	14.6	33 04.4	30.6	102 36.2	24.0			
8	218	21.2	264	11.8	210	52.1	15.3	48 06.8	30.6	117 38.9	24.0			
9	233	23.6	279	11.1	225	53.2	15.9	63 09.2	30.6	132 41.5	24.0			
10	248	26.1	294	10.4	240	54.3	16.6	78 11.6	30.6	147 44.2	24.0			
11	263	28.6	309	09.8	255	55.4	+3 17.2	93 14.1	+5 30.5	162 46.9	+22 24.1			
12	278	31.0	324	09.1	270	56.5	+3 17.9	108 16.5	+5 30.5	177 49.6	+22 24.1			
13	293	33.5	339	08.5	285	57.6	18.5	123 18.9	30.5	192 52.3	24.1			
14	308	36.0	354	07.8	300	58.7	19.2	138 21.4	30.5	207 55.0	24.1			
15	323	38.4	9	07.2	315	59.8	19.8	153 23.8	30.5	222 57.7	24.1			
16	338	40.9	24	06.5	331	00.9	20.5	168 26.2	30.5	238 00.4	24.2			
17	353	43.3	39	05.9	346	02.0	+3 21.1	183 28.6	+5 30.5	253 03.0	+22 24.2			
18	8	45.8	54	05.2	1	03.1	+3 21.8	198 31.1	+5 30.5	268 05.7	+22 24.2			
19	23	48.3	69	04.5	16	04.2	22.5	213 33.5	30.5	283 08.4	24.2			
20	38	50.7	84	03.9	31	05.3	23.1	228 35.9	30.5	298 11.1	24.2			
21	53	53.2	99	03.2	46	06.4	23.8	243 38.3	30.5	313 13.8	24.3			
22	68	55.7	114	02.6	61	07.5	24.4	258 40.8	30.5	328 16.5	24.3			
23	83	58.1	129	01.9	76	08.6	25.1	273 43.2	30.5	343 19.2	24.3			
24	99	00.6	144	01.3	91	09.7	+3 25.7	288 45.6	+5 30.5	358 21.8	+22 24.3			
Dif	—		-7		+9		+7	+24		0		+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 8			Edad: 7 ^d 6 PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'7 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	179	21.2	-23	08.6	83	42.0	+3	24.9	60 N	7 10	8 06	9 03	12 03	1	0 51	83
1	194	20.9		08.4	98	17.1 ¹⁶¹		38.7 ¹³⁸	58	7 02	7 55	8 46		06	5	49 79
2	209	20.6		08.3	112	52.3 ¹⁶²	+3	52.5 ¹³⁸	56	6 56	45	32	09	8		47 76
3	224	20.3		08.1	127	27.5 ¹⁶²	+4	06.2 ¹³⁷	54		50	36	19	12	10	46 73
4	239	20.0		07.9	142	02.7 ¹⁶²		20.0 ¹³⁸	52		44	28	8 08	14	12	44 71
5	254	19.7	-23	07.8	156	37.9 ¹⁶²	+4	33.7 ¹³⁷	50	6 39	7 20	7 59	12 16	15	0 43	69
6	269	19.4	-23	07.6	171	13.1 ¹⁶²	+4	47.3 ¹³⁶	45	6 27	7 04	7 38	12 21	19	0 40	64
7	284	19.1		07.4	185	48.3 ¹⁶²	+5	00.9 ¹³⁶	40		17	6 51	22	25	22	38 60
8	299	18.8		07.2	200	23.5 ¹⁶²		14.5 ¹³⁶	35	6 08	40	7 08	29	25		36 57
9	314	18.5		07.0	214	58.8 ¹⁶³		28.1 ¹³⁶	30	5 59	29	6 56	32	28		34 54
10	329	18.2		06.9	229	34.0 ¹⁶²		41.7 ¹³⁶	20		43	6 11	35	37	33	31 49
11	344	17.9	-23	06.7	244	09.2 ¹⁶²	+5	55.2 ¹³⁵	10 N	5 27	5 54	6 16	12 42	37	0 28	45
12	359	17.6	-23	06.5	258	44.4 ¹⁶²	+6	08.6 ¹³⁴	0	5 10	5 37	5 59	12 47	41	0 25	41
13	14	17.3		06.3	273	19.6 ¹⁶²		22.1 ¹³⁵	10 S	4 52	5 19	42		51	45	23 37
14	29	17.0		06.2	287	54.8 ¹⁶²		35.5 ¹³⁴	20		29	4 58	23	12	56	50 33
15	44	16.7		06.0	302	30.0 ¹⁶²	+6	48.9 ¹³⁴	30	4 01		34	5 01	13	02	54 17 28
16	59	16.4		05.8	317	05.2 ¹⁶²	+7	02.2 ¹³³	35	3 42		19	4 48		05	57 15 25
17	74	16.1	-23	05.6	331	40.4 ¹⁶²	+7	15.5 ¹³³	40	3 19	4 01	4 34	13 09	60	0 13	22
18	89	15.8	-23	05.4	346	15.6 ¹⁶²	+7	28.8 ¹³³	45	2 49	3 39	4 16	13 13	65	0 11	18
19	104	15.5		05.2	0	50.7 ¹⁶¹		42.0 ¹³²	50	2 05	3 09	3 54		19	69	08 14
20	119	15.2		05.0	15	25.9 ¹⁶²	+7	55.2 ¹³²	52	1 38	2 55	43	21	71		07 12
21	134	14.9		04.9	30	01.0 ¹⁶¹	+8	08.4 ¹³²	54	0 56		37	31	24	73	06 9
22	149	14.6		04.7	44	36.2 ¹⁶²		21.5 ¹³¹	56	** **	2 15	17		27	76	04 7
23	164	14.3		04.5	59	11.3 ¹⁶¹		34.6 ¹³¹	58	** **	1 47	3 01	30	79		03 4
24	179	14.0	-23	04.3	73	46.4 ¹⁶¹	+8	47.6 ¹³⁰	60 S	** **	1 01	2 41	13 34	83	0 01	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 21 ^m 1		Mag: -3.9 PMG: 14 ^h 25 ^m		Mag: +0.2 PMG: 17 ^h 54 ^m		Mag: -2.2 PMG: 4 ^h 44 ^m		Mag: -0.5 PMG: 0 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	99	00.6	144	01.3	-18	57.4	91	09.7	+3	25.7	288	45.6	+5	30.5	358	21.8	+22	24.3
1	114	03.1	159	00.6		56.5	106	10.8		26.4	303	48.1		30.5	13	24.5		24.3
2	129	05.5	174	00.0		55.6	121	11.9		27.0	318	50.5		30.5	28	27.2		24.4
3	144	08.0	188	59.3		54.7	136	13.0		27.7	333	52.9		30.5	43	29.9		24.4
4	159	10.4	203	58.7		53.9	151	14.1		28.3	348	55.4		30.5	58	32.6		24.4
5	174	12.9	218	58.1	-18	53.0	166	15.1	+3	29.0	3	57.8	+5	30.5	73	35.3	+22	24.4
6	189	15.4	233	57.4	-18	52.1	181	16.2	+3	29.6	19	00.2	+5	30.5	88	38.0	+22	24.4
7	204	17.8	248	56.8		51.2	196	17.3		30.3	34	02.7		30.5	103	40.6		24.4
8	219	20.3	263	56.1		50.3	211	18.4		30.9	49	05.1		30.5	118	43.3		24.5
9	234	22.8	278	55.5		49.5	226	19.5		31.6	64	07.5		30.5	133	46.0		24.5
10	249	25.2	293	54.8		48.6	241	20.6		32.2	79	10.0		30.5	148	48.7		24.5
11	264	27.7	308	54.2	-18	47.7	256	21.7	+3	32.9	94	12.4	+5	30.5	163	51.4	+22	24.5
12	279	30.2	323	53.5	-18	46.8	271	22.8	+3	33.5	109	14.8	+5	30.5	178	54.1	+22	24.5
13	294	32.6	338	52.9		45.9	286	23.9		34.2	124	17.3		30.5	193	56.8		24.6
14	309	35.1	353	52.3		45.0	301	25.0		34.8	139	19.7		30.5	208	59.5		24.6
15	324	37.6	8	51.6		44.2	316	26.1		35.5	154	22.1		30.5	224	02.1		24.6
16	339	40.0	23	51.0		43.3	331	27.2		36.1	169	24.6		30.5	239	04.8		24.6
17	354	42.5	38	50.3	-18	42.4	346	28.3	+3	36.8	184	27.0	+5	30.5	254	07.5	+22	24.6
18	9	44.9	53	49.7	-18	41.5	1	29.3	+3	37.4	199	29.4	+5	30.5	269	10.2	+22	24.7
19	24	47.4	68	49.1		40.6	16	30.4		38.1	214	31.9		30.5	284	12.9		24.7
20	39	49.9	83	48.4		39.7	31	31.5		38.7	229	34.3		30.5	299	15.6		24.7
21	54	52.3	98	47.8		38.8	46	32.6		39.4	244	36.7		30.5	314	18.3		24.7
22	69	54.8	113	47.2		37.9	61	33.7		40.0	259	39.2		30.5	329	20.9		24.7
23	84	57.3	128	46.5		37.0	76	34.8		40.7	274	41.6		30.5	344	23.6		24.8
24	99	59.7	143	45.9	-18	36.1	91	35.9	+3	41.3	289	44.0	+5	30.5	359	26.3	+22	24.8
Dif	—		-6		+9		+11		+7		+24		0		+27		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 03 ^m 3			Edad: 8 ^d 6 PHE { SD: 14:9 PMG: 19 ^h 38 ^m 4 ^h : 54:6 12 ^h : 54:4 20 ^h : 54:3 R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	14.0	-23 04.3	73	46.4	+8 47.6	60 N	15 04	16 01	16 57	12 04 3	2 14 83		
1	194	13.7	04.1	88	21.5 ¹⁶¹	+9 00.6 ¹³⁰	58	21	12	17 05	11 6	08 80		
2	209	13.4	03.9	102	56.5 ¹⁶⁰	13.6 ¹³⁰	56	35	22	11	17 9	2 03 77		
3	224	13.2	03.7	117	31.6 ¹⁶¹	26.5 ¹²⁹	54	48	31	17	22 11	1 59 77		
4	239	12.9	03.5	132	06.6 ¹⁶⁰	39.4 ¹²⁹	52	15 59	39	23	26 14	55 72		
5	254	12.6	-23 03.3	146	41.6 ¹⁶⁰	+9 52.2 ¹²⁸	50	16 08	16 46	17 28	12 31 16	1 52 69		
6	269	12.3	-23 03.1	161	16.6 ¹⁶⁰	+10 05.0 ¹²⁸	45	16 28	17 02	17 39	12 40 20	1 44 65		
7	284	12.0	03.0	175	51.6 ¹⁶⁰	17.7 ¹²⁷	40	45	15	49	47 25	38 61		
8	299	11.7	02.8	190	26.5 ¹⁵⁹	30.4 ¹²⁷	35	16 59	27	17 58	12 54 27	33 57		
9	314	11.4	02.6	205	01.5 ¹⁶⁰	43.0 ¹²⁶	30	17 11	37	18 07	13 00 30	28 55		
10	329	11.1	02.4	219	36.4 ¹⁵⁹	+10 55.6 ¹²⁶	20	32	17 56	23	10 35	20 50		
11	344	10.8	-23 02.2	234	11.2 ¹⁵⁸	+11 08.2 ¹²⁶	10 N	17 50	18 13	18 39	13 19 39	1 13 45		
12	359	10.5	-23 02.0	248	46.1 ¹⁵⁹	+11 20.7 ¹²⁵	0	18 07	18 30	18 56	13 28 42	1 06 42		
13	14	10.2	01.8	263	20.9 ¹⁵⁸	33.2 ¹²⁵	10 S	24	18 47	19 14	36 46	1 00 37		
14	29	09.9	01.6	277	55.7 ¹⁵⁸	45.6 ¹²⁴	20	18 43	19 07	19 36	46 50	0 53 33		
15	44	09.6	01.4	292	30.4 ¹⁵⁷	+11 57.9 ¹²³	30	19 05	32	20 05	13 56 55	45 29		
16	59	09.3	01.2	307	05.2 ¹⁵⁸	+12 10.2 ¹²³	35	17	19 47	23	14 02 58	40 26		
17	74	09.0	-23 01.0	321	39.9 ¹⁵⁷	+12 22.5 ¹²³	40	19 32	20 05	20 46	14 09 61	0 35 23		
18	89	08.7	-23 00.8	336	14.5 ¹⁵⁶	+12 34.7 ¹²²	45	19 50	20 27	21 16	14 18 64	0 29 20		
19	104	08.4	00.6	350	49.2 ¹⁵⁷	46.9 ¹²²	50	20 12	20 56	22 00	28 69	22 15		
20	119	08.1	00.4	5	23.8 ¹⁵⁶	+12 59.0 ¹²¹	52	22	21 10	22 26	32 72	19 13		
21	134	07.8	-23 00.1	19	58.3 ¹⁵⁵	+13 11.0 ¹²⁰	54	34	28	23 06	37 74	15 11		
22	149	07.5	-22 59.9	34	32.9 ¹⁵⁶	23.0 ¹²⁰	56	20 48	21 49	** **	43 77	11 8		
23	164	07.2	59.7	49	07.3 ¹⁵⁴	34.9 ¹¹⁹	58	21 04	22 17	** **	49 81	07 5		
24	179	06.9	-22 59.5	63	41.8 ¹⁵⁵	+13 46.8 ¹¹⁹	60 S	21 24	23 00	** **	14 57 84	0 02 2		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 17 ^m 2		Mag: -3.9 PMG: 14 ^h 26 ^m		Mag: +0.2 PMG: 17 ^h 52 ^m		Mag: -2.3 PMG: 4 ^h 40 ^m		Mag: -0.5 PMG: 0 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	99	59.7	143	45.9	91	35.9	289	44.0	359	26.3				
1	115	02.2	158	45.3	106	37.0	304	46.5	14	29.0				
2	130	04.7	173	44.6	121	38.1	319	48.9	29	31.7				
3	145	07.1	188	44.0	136	39.2	334	51.4	44	34.4				
4	160	09.6	203	43.4	151	40.2	349	53.8	59	37.1				
5	175	12.1	218	42.7	166	41.3	4	56.2	74	39.8				
6	190	14.5	233	42.1	181	42.4	19	58.7	89	42.4				
7	205	17.0	248	41.5	196	43.5	35	01.1	104	45.1				
8	220	19.4	263	40.8	211	44.6	50	03.6	119	47.8				
9	235	21.9	278	40.2	226	45.7	65	06.0	134	50.5				
10	250	24.4	293	39.6	241	46.8	80	08.4	149	53.2				
11	265	26.8	308	38.9	256	47.9	95	10.9	164	55.9				
12	280	29.3	323	38.3	271	49.0	110	13.3	179	58.6				
13	295	31.8	338	37.7	286	50.0	125	15.8	195	01.2				
14	310	34.2	353	37.1	301	51.1	140	18.2	210	03.9				
15	325	36.7	8	36.4	316	52.2	155	20.6	225	06.6				
16	340	39.2	23	35.8	331	53.3	170	23.1	240	09.3				
17	355	41.6	38	35.2	346	54.4	185	25.5	255	12.0				
18	10	44.1	53	34.6	1	55.5	200	28.0	270	14.7				
19	25	46.5	68	33.9	16	56.6	215	30.4	285	17.4				
20	40	49.0	83	33.3	31	57.7	230	32.9	300	20.1				
21	55	51.5	98	32.7	46	58.7	245	35.3	315	22.7				
22	70	53.9	113	32.1	61	59.8	260	37.7	330	25.4				
23	85	56.4	128	31.5	77	00.9	275	40.2	345	28.1				
24	100	58.9	143	30.8	92	02.0	290	42.6	0	30.8				
Dif	—		-6	+9	+11	+7	+24	0	-8973	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	52.2	52.3	52.3	52.3	52.1	51.8	51.6	51.3	51.2	51.2	51.2	51.3
2 - β Cas	<i>Caph</i>	2.3	357	40.4	40.6	40.7	40.6	40.4	40.0	39.6	39.3	39.1	39.1	39.2	39.4
3 - γ Peg	<i>Algenib</i>	2.8	356	39.5	39.5	39.6	39.5	39.3	39.1	38.8	38.6	38.5	38.5	38.5	38.6
4 - α Phe	<i>Ankaa</i>	2.4	353	23.8	23.9	23.9	23.9	23.7	23.4	23.1	22.9	22.7	22.7	22.7	22.8
5 - α Cas	<i>Schedar</i>	2.2	349	50.2	50.4	50.5	50.5	50.3	49.9	49.6	49.3	49.1	49.0	49.0	49.2
6 - β Cet	<i>Diphda</i>	2.0	349	4.1	4.2	4.3	4.2	4.1	3.9	3.6	3.4	3.2	3.2	3.2	3.2
7 - γ Cas	<i>Navi</i>	1.6	345	47.1	47.3	47.4	47.4	47.2	46.8	46.4	46.1	45.8	45.7	45.7	45.9
8 - β And	<i>Mirach</i>	2.1	342	31.8	31.9	32.0	32.0	31.8	31.6	31.3	31.0	30.8	30.7	30.7	30.8
9 - α Eri	<i>Achernar</i>	0.5	335	32.7	32.9	33.0	33.1	33.0	32.7	32.4	32.0	31.7	31.6	31.6	31.8
10 - γ And	<i>Almak</i>	2.3	328	58.9	59.1	59.2	59.2	59.2	58.9	58.6	58.3	58.1	57.9	57.8	57.9
12 - α Ari	<i>Hamal</i>	2.0	328	10.0	10.1	10.2	10.3	10.2	10.0	9.7	9.5	9.3	9.1	9.1	9.1
11 - α UMi	<i>Polaris</i>	2.0	320	71.7	84.8	95.3	101.6	100.2	91.8	79.7	65.9	53.3	44.6	41.4	45.3
13 - θ Eri	<i>Acamar</i>	3.3	315	24.3	24.5	24.6	24.7	24.7	24.6	24.3	24.1	23.8	23.6	23.5	23.6
14 - α Cet	<i>Menkar</i>	2.5	314	23.5	23.6	23.7	23.8	23.7	23.6	23.4	23.1	22.9	22.8	22.7	22.6
15 - β Per	<i>Algol</i>	2.1	312	54.6	54.8	54.9	55.0	55.0	54.8	54.5	54.2	53.9	53.7	53.6	53.5
16 - α Per	<i>Mirfak</i>	1.8	308	52.0	52.2	52.3	52.5	52.4	52.2	51.9	51.6	51.3	51.0	50.8	50.8
17 - η Tau	<i>Alcyone</i>	2.9	303	5.1	5.2	5.3	5.4	5.4	5.3	5.0	4.8	4.5	4.3	4.2	4.1
18 - γ Eri	<i>Zaurak</i>	3.0	300	27.4	27.5	27.6	27.7	27.8	27.7	27.5	27.2	27.0	26.8	26.7	26.6
19 - α Tau	<i>Aldebaran</i>	0.9	290	58.6	58.7	58.8	58.9	58.9	58.8	58.6	58.4	58.2	58.0	57.8	57.7
20 - β Ori	<i>Rigel</i>	0.1	281	19.7	19.7	19.9	20.0	20.0	20.0	19.9	19.7	19.4	19.2	19.0	18.9
21 - α Aur	<i>Capella</i>	0.1	280	46.2	46.3	46.5	46.7	46.7	46.6	46.4	46.2	45.8	45.5	45.3	45.1
22 - γ Ori	<i>Bellatrix</i>	1.6	278	40.5	40.6	40.7	40.8	40.9	40.8	40.7	40.5	40.3	40.0	39.8	39.7
23 - β Tau	<i>Elnath</i>	1.7	278	22.7	22.7	22.9	23.0	23.1	23.0	22.9	22.6	22.4	22.1	21.9	21.7
24 - δ Ori	<i>Mintaka</i>	2.2	276	57.5	57.6	57.7	57.8	57.9	57.8	57.7	57.5	57.3	57.1	56.9	56.7
25 - ϵ Ori	<i>Alnilam</i>	1.7	275	54.4	54.5	54.6	54.7	54.8	54.7	54.6	54.4	54.2	54.0	53.8	53.6
26 - ζ Ori	<i>Alnitak</i>	1.9	274	46.2	46.3	46.4	46.5	46.6	46.6	46.4	46.3	46.0	45.8	45.6	45.5
27 - κ Ori	<i>Saiph</i>	2.1	273	1.4	1.4	1.6	1.7	1.8	1.7	1.6	1.5	1.2	1.0	0.8	0.7
28 - α Ori	<i>Betelgeuse</i>	0.4	271	9.9	9.9	10.0	10.2	10.2	10.2	10.1	9.9	9.7	9.4	9.2	9.1
29 - β Aur	<i>Menkalinan</i>	1.9	270	3.6	3.7	3.8	4.0	4.1	4.1	3.9	3.7	3.4	3.0	2.7	2.5
30 - β CMa	<i>Mirzam</i>	2.0	264	17.4	17.4	17.5	17.7	17.8	17.8	17.7	17.5	17.3	17.1	16.9	16.7
31 - α Car	<i>Canopus</i>	-0.7	263	59.3	59.4	59.6	59.9	60.1	60.2	60.2	60.0	59.7	59.4	59.1	58.9
32 - γ Gem	<i>Alhena</i>	1.9	260	31.6	31.6	31.7	31.8	31.9	31.9	31.8	31.7	31.4	31.2	31.0	30.8
33 - α CMa	<i>Sirius</i>	-1.5	258	40.6	40.7	40.8	40.9	41.0	41.0	41.0	40.8	40.6	40.4	40.2	40.0
34 - ϵ CMa	<i>Adhara</i>	1.5	255	18.6	18.7	18.8	18.9	19.1	19.1	19.1	18.9	18.7	18.5	18.3	18.1
35 - δ CMa	<i>Wezen</i>	1.9	252	52.1	52.1	52.2	52.4	52.5	52.6	52.5	52.4	52.2	52.0	51.7	51.5
36 - η CMa	<i>Aludra</i>	2.5	248	56.6	56.6	56.7	56.9	57.0	57.1	57.0	56.9	56.7	56.5	56.2	56.0
37 - α Gem	<i>Castor</i>	2.0	246	18.0	17.9	18.0	18.2	18.3	18.3	18.2	18.1	17.9	17.6	17.3	17.1
38 - α CMi	<i>Procyon</i>	0.4	245	8.0	8.0	8.0	8.2	8.3	8.3	8.2	8.1	7.9	7.7	7.5	7.3
39 - β Gem	<i>Pollux</i>	1.1	243	37.4	37.3	37.4	37.5	37.6	37.7	37.6	37.5	37.3	37.1	36.8	36.5
40 - ζ Pup	<i>Naos</i>	2.3	239	4.4	4.4	4.5	4.7	4.8	4.9	5.0	4.9	4.7	4.5	4.2	4.0
41 - γ Vel	<i>Regor</i>	1.8	237	35.3	35.3	35.4	35.6	35.8	36.0	36.0	36.0	35.8	35.5	35.2	35.0
42 - ϵ Car	<i>Avior</i>	1.9	234	20.8	20.9	21.1	21.4	21.7	21.9	22.0	22.0	21.8	21.4	21.1	20.7
43 - δ Velorum		2.0	228	47.8	47.8	47.9	48.1	48.4	48.6	48.7	48.7	48.5	48.3	47.9	47.6
44 - ζ Hydrae		3.1	226	6.6	6.5	6.5	6.6	6.7	6.8	6.8	6.7	6.6	6.4	6.2	5.9
45 - λ Vel	<i>Suhail</i>	2.2	222	58.1	58.1	58.1	58.3	58.5	58.6	58.7	58.7	58.6	58.4	58.1	57.8
46 - β Car	<i>Miaplacidus</i>	1.7	221	40.8	40.8	41.0	41.4	41.8	42.2	42.5	42.6	42.4	42.0	41.5	41.0
47 - ι Car	<i>Aspidiske</i>	2.3	220	42.0	42.0	42.1	42.3	42.6	42.8	43.0	43.0	42.9	42.6	42.3	41.9
48 - α Lyn	<i>Elvashak</i>	3.1	219	41.3	41.2	41.2	41.3	41.4	41.5	41.5	41.4	41.3	41.1	40.8	40.5
49 - α Hyd	<i>Alphard</i>	2.0	218	3.9	3.8	3.8	3.9	4.0	4.0	4.1	4.0	3.9	3.8	3.5	3.3
50 - α Leo	<i>Regulus</i>	1.4	207	52.0	51.8	51.8	51.8	51.9	52.0	52.1	52.0	52.0	51.8	51.6	51.3

ESTRELLAS, 2003
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	6.4	6.4	6.3	6.2	6.2	6.3	6.4	6.5	6.7	6.8	6.8	
2 - β Cas	<i>Caph</i>	2.3	+59	10.1	10.0	9.9	9.8	9.7	9.7	9.8	10.0	10.1	10.3	10.4	10.5
3 - γ Peg	<i>Algenib</i>	2.8	+15	12.0	11.9	11.9	11.9	11.9	12.0	12.1	12.2	12.3	12.3	12.4	12.4
4 - α Phe	<i>Ankaa</i>	2.4	-42	17.7	17.7	17.6	17.4	17.3	17.1	17.0	17.0	17.1	17.2	17.3	17.4
5 - α Cas	<i>Schedar</i>	2.2	+56	33.4	33.3	33.2	33.1	33.0	33.0	33.1	33.2	33.4	33.5	33.7	33.8
6 - β Cet	<i>Diphda</i>	2.0	-17	58.4	58.4	58.4	58.3	58.2	58.1	58.0	57.9	57.9	57.9	58.0	58.1
7 - γ Cas	<i>Navi</i>	1.6	+60	44.2	44.1	44.0	43.9	43.8	43.8	43.8	43.9	44.1	44.3	44.4	44.5
8 - β And	<i>Mirach</i>	2.1	+35	38.3	38.2	38.1	38.1	38.0	38.1	38.1	38.3	38.4	38.5	38.6	38.6
9 - α Eri	<i>Achernar</i>	0.5	-57	13.7	13.6	13.5	13.3	13.1	13.0	12.9	12.8	12.9	13.0	13.2	13.3
10 - γ And	<i>Almak</i>	2.3	+42	20.8	20.8	20.7	20.6	20.5	20.5	20.6	20.7	20.8	20.9	21.0	21.1
12 - α Ari	<i>Hamal</i>	2.0	+23	28.6	28.6	28.6	28.5	28.5	28.5	28.6	28.7	28.8	28.9	28.9	29.0
11 - α UMi	<i>Polaris</i>	2.0	+89	16.9	16.9	16.9	16.7	16.6	16.5	16.4	16.5	16.6	16.7	16.9	17.1
13 - θ Eri	<i>Acamar</i>	3.3	-40	17.8	17.9	17.8	17.7	17.5	17.4	17.2	17.1	17.1	17.2	17.3	17.5
14 - α Cet	<i>Menkar</i>	2.5	+4	6.0	6.0	6.0	6.0	6.1	6.1	6.2	6.3	6.4	6.4	6.4	6.3
15 - β Per	<i>Algol</i>	2.1	+40	58.2	58.2	58.1	58.1	58.0	58.0	58.0	58.0	58.1	58.2	58.3	58.4
16 - α Per	<i>Mirfak</i>	1.8	+49	52.5	52.5	52.5	52.4	52.3	52.2	52.2	52.3	52.3	52.5	52.6	52.7
17 - η Tau	<i>Alcyone</i>	2.9	+24	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.0	7.0	7.1	7.1	7.1
18 - γ Eri	<i>Zaurak</i>	3.0	-13	30.1	30.2	30.2	30.1	30.0	29.9	29.8	29.7	29.7	29.7	29.7	29.8
19 - α Tau	<i>Aldebaran</i>	0.9	+16	30.9	30.9	30.9	30.9	30.9	30.9	31.0	31.1	31.1	31.1	31.1	31.1
20 - β Ori	<i>Rigel</i>	0.1	-8	11.9	12.0	12.0	12.0	11.9	11.8	11.7	11.6	11.6	11.6	11.7	11.8
21 - α Aur	<i>Capella</i>	0.1	+46	0.2	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.1	21.1	21.1	21.1	21.1	21.2	21.3	21.3	21.4	21.3	21.3	21.3
23 - β Tau	<i>Elnath</i>	1.7	+28	36.7	36.7	36.7	36.7	36.7	36.6	36.6	36.7	36.7	36.7	36.7	36.7
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.8	17.9	17.9	17.9	17.8	17.8	17.7	17.6	17.6	17.6	17.6	17.7
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	12.0	12.1	12.1	12.1	12.0	12.0	11.9	11.8	11.8	11.8	11.8	11.9
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.5	56.5	56.5	56.5	56.5	56.4	56.3	56.3	56.2	56.2	56.3	56.3
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.2	40.2	40.2	40.2	40.2	40.1	40.0	39.9	39.8	39.8	39.9	40.0
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.5	24.4	24.4	24.4	24.5	24.5	24.6	24.6	24.6	24.6	24.6	24.6
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.0	57.1	57.0	57.0	56.9	56.8	56.8	56.8	56.8	56.9	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	57.1	57.2	57.2	57.3
31 - α Car	<i>Canopus</i>	-0.7	-52	41.9	42.0	42.1	42.1	42.0	41.8	41.7	41.5	41.4	41.4	41.5	41.7
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.8	23.8	23.8	23.8	23.8	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	43.4	43.4	43.3	43.2	43.1	43.0	43.0	43.0	43.0	43.2
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	58.6	58.7	58.8	58.8	58.7	58.6	58.5	58.3	58.3	58.3	58.3	58.5
35 - δ CMa	<i>Wezen</i>	1.9	-26	23.9	24.0	24.1	24.1	24.0	23.9	23.8	23.7	23.6	23.6	23.7	23.8
36 - η CMa	<i>Aludra</i>	2.5	-29	18.5	18.6	18.7	18.7	18.7	18.6	18.5	18.3	18.3	18.2	18.3	18.4
37 - α Gem	<i>Castor</i>	2.0	+31	52.9	53.0	53.0	53.0	53.0	53.0	53.0	53.0	52.9	52.9	52.8	52.8
38 - α CMi	<i>Procyon</i>	0.4	+5	13.1	13.0	13.0	13.0	13.0	13.1	13.1	13.1	13.2	13.1	13.1	13.0
39 - β Gem	<i>Pollux</i>	1.1	+28	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0
40 - ζ Pup	<i>Naos</i>	2.3	-40	0.6	0.8	0.9	0.9	0.9	0.8	0.7	0.5	0.4	0.4	0.5	0.6
41 - γ Vel	<i>Regor</i>	1.8	-47	20.6	20.8	20.9	21.0	21.0	20.9	20.7	20.6	20.5	20.4	20.5	20.6
42 - ϵ Car	<i>Avior</i>	1.9	-59	31.0	31.2	31.3	31.4	31.4	31.3	31.2	31.0	30.9	30.8	30.9	31.0
43 - δ Velorum		2.0	-54	43.0	43.2	43.4	43.4	43.5	43.4	43.3	43.1	43.0	42.9	42.9	43.1
44 - ζ Hydrae		3.1	+5	56.1	56.0	56.0	56.0	56.0	56.1	56.1	56.1	56.1	56.1	56.0	55.9
45 - λ Vel	<i>Suhail</i>	2.2	-43	26.5	26.7	26.8	26.9	26.9	26.9	26.8	26.6	26.5	26.4	26.5	26.6
46 - β Car	<i>Miaplacidus</i>	1.7	-69	43.6	43.8	43.9	44.0	44.1	44.0	43.9	43.8	43.6	43.5	43.5	43.6
47 - ι Car	<i>Aspidiske</i>	2.3	-59	17.1	17.3	17.4	17.5	17.6	17.5	17.4	17.3	17.1	17.0	17.0	17.1
48 - α Lyn	<i>Elvashak</i>	3.1	+34	22.7	22.8	22.8	22.9	22.9	22.9	22.9	22.8	22.8	22.7	22.6	22.5
49 - α Hyd	<i>Alphard</i>	2.0	-8	40.2	40.3	40.4	40.4	40.4	40.4	40.3	40.2	40.2	40.2	40.3	40.4
50 - α Leo	<i>Regulus</i>	1.4	+11	57.1	57.1	57.1	57.1	57.2	57.2	57.2	57.2	57.2	57.1	57.0	56.9

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	16.4	16.2	16.2	16.3	16.4	16.6	16.7	16.8	16.8	16.7	16.4	16.1
52 - ν	Hydrae	3.1	197	33.4	33.2	33.2	33.2	33.3	33.4	33.4	33.5	33.4	33.3	33.1	32.8
53 - β	UMa Merak	2.4	194	29.5	29.2	29.1	29.2	29.3	29.5	29.7	29.7	29.7	29.5	29.2	28.8
54 - α	UMa Dubhe	1.8	194	1.0	0.7	0.6	0.7	0.9	1.2	1.3	1.4	1.4	1.2	0.9	0.4
55 - β	Leo Denebola	2.1	182	41.8	41.6	41.5	41.5	41.6	41.7	41.7	41.8	41.8	41.7	41.5	41.3
56 - γ	Crv Gienah	2.6	176	0.7	0.5	0.4	0.3	0.4	0.4	0.5	0.6	0.6	0.6	0.4	0.1
57 - α	Cru Acrux	1.4	173	18.6	18.2	18.1	18.0	18.1	18.3	18.6	18.9	19.0	19.0	18.7	18.3
58 - γ	Cru Gacrux	1.6	172	10.1	9.8	9.6	9.6	9.7	9.8	10.0	10.2	10.3	10.3	10.1	9.7
59 - γ	Cen Muhlifain	2.2	169	34.9	34.6	34.4	34.4	34.4	34.5	34.7	34.9	34.9	34.9	34.7	34.4
60 - β	Cru Mimosa	1.3	168	1.7	1.4	1.2	1.1	1.1	1.3	1.5	1.8	1.9	1.9	1.7	1.3
61 - ε	UMa Alioth	1.8	166	27.6	27.2	27.0	26.9	27.0	27.2	27.4	27.6	27.7	27.7	27.5	27.2
62 - α^2	CVn Cor Caroli	2.9	165	57.6	57.3	57.1	57.0	57.1	57.2	57.3	57.4	57.5	57.5	57.3	57.1
63 - ε	Vir Vindemiatrix	2.8	164	25.2	25.0	24.9	24.8	24.8	24.9	24.9	25.0	25.1	25.0	24.9	24.7
64 - ζ	UMa Mizar	2.3	158	59.4	59.0	58.8	58.7	58.7	58.9	59.0	59.2	59.4	59.4	59.3	59.0
65 - α	Vir Spica	1.0	158	39.9	39.7	39.5	39.4	39.4	39.5	39.5	39.6	39.7	39.7	39.6	39.4
66 - η	UMa Alkaid	1.9	153	5.3	4.9	4.7	4.6	4.6	4.7	4.8	5.0	5.2	5.2	5.1	4.9
67 - β	Cen Hadar	0.6	148	59.9	59.5	59.2	59.0	58.9	59.0	59.1	59.4	59.6	59.7	59.6	59.3
68 - θ	Cen Menkent	2.1	148	17.4	17.1	16.9	16.8	16.7	16.8	16.8	17.0	17.1	17.1	17.0	16.8
69 - α	Boo Arcturus	0.0	146	3.3	3.0	2.8	2.7	2.7	2.7	2.7	2.8	3.0	3.0	2.9	2.8
70 - α^1	Cen Rigil Kentaurus	0.0	140	3.5	3.1	2.7	2.5	2.4	2.4	2.6	2.9	3.1	3.2	3.2	2.9
71 - α^2	Lib Zubenelgenubi	2.8	137	14.7	14.4	14.2	14.1	14.0	13.9	14.0	14.1	14.2	14.2	14.2	14.0
72 - β	UMi Kochab	2.1	137	19.8	19.1	18.6	18.2	18.1	18.4	18.9	19.4	20.0	20.4	20.5	20.2
73 - β	Lib Zubeneschamali	2.6	130	42.8	42.6	42.4	42.2	42.1	42.1	42.1	42.2	42.3	42.4	42.3	42.2
74 - α	CrB Alphecca	2.2	126	18.1	17.9	17.6	17.5	17.4	17.3	17.4	17.5	17.6	17.7	17.7	17.6
75 - α	Ser Unukalhai	2.7	123	54.1	53.9	53.7	53.5	53.4	53.3	53.4	53.4	53.6	53.7	53.7	53.5
76 - α	Sco Antares	0.9	112	36.6	36.4	36.1	35.9	35.7	35.6	35.6	35.7	35.8	35.9	36.0	35.9
77 - α	TrA Atria	1.9	107	46.4	45.8	45.3	44.7	44.3	44.1	44.1	44.4	44.8	45.1	45.3	45.1
78 - ε	Scorpii	2.3	107	25.2	24.9	24.7	24.4	24.2	24.1	24.1	24.1	24.3	24.4	24.5	24.4
79 - η	Oph Sabik	2.4	102	22.3	22.0	21.8	21.6	21.4	21.3	21.2	21.3	21.4	21.5	21.6	21.5
80 - α	Her Rasalgethi	3.1	101	18.7	18.5	18.3	18.1	17.9	17.8	17.7	17.8	17.9	18.1	18.1	18.1
81 - λ	Sco Shaula	1.6	96	33.4	33.2	32.9	32.6	32.4	32.2	32.2	32.2	32.4	32.5	32.6	32.5
82 - α	Oph Rasalhague	2.1	96	14.4	14.2	14.0	13.7	13.6	13.4	13.4	13.5	13.6	13.7	13.8	13.8
83 - θ	Sco Sargas	1.9	95	37.7	37.4	37.1	36.8	36.5	36.4	36.3	36.3	36.5	36.7	36.8	36.7
84 - γ	Dra Eltanin	2.2	90	50.5	50.2	50.0	49.6	49.4	49.3	49.3	49.4	49.6	49.9	50.1	50.2
85 - ε	Sgr Kaus Australis	1.9	83	55.1	54.9	54.6	54.3	54.1	53.9	53.8	53.8	53.9	54.1	54.2	54.1
86 - α	Lyr Vega	0.0	80	45.0	44.8	44.6	44.3	44.1	43.9	43.8	43.9	44.1	44.3	44.4	44.5
87 - σ	Sgr Nunki	2.0	76	8.8	8.6	8.4	8.2	7.9	7.7	7.6	7.6	7.7	7.8	7.9	7.9
88 - α	Aql Altair	0.8	62	16.6	16.5	16.3	16.1	15.9	15.7	15.5	15.5	15.6	15.7	15.8	15.8
89 - γ	Cyg Sadr	2.2	54	25.6	25.5	25.3	25.1	24.8	24.6	24.4	24.4	24.5	24.7	24.8	25.0
90 - α	Pav Peacock	1.9	53	32.6	32.4	32.2	31.8	31.4	31.1	30.8	30.7	30.8	31.0	31.2	31.3
91 - α	Cyg Deneb	1.3	49	37.6	37.6	37.4	37.2	36.9	36.6	36.5	36.4	36.5	36.7	36.9	37.0
92 - α	Cep Alderamin	2.4	40	21.1	21.1	21.0	20.6	20.3	19.9	19.6	19.5	19.7	19.9	20.2	20.5
93 - ε	Peg Enif	0.7	33	55.5	55.5	55.4	55.2	55.0	54.7	54.5	54.4	54.4	54.5	54.6	54.7
94 - δ	Cap Deneb Algedi	2.9	33	12.4	12.4	12.3	12.1	11.9	11.6	11.4	11.3	11.2	11.3	11.4	11.5
95 - α	Gru Al Na'ir	1.7	27	54.3	54.2	54.1	53.9	53.6	53.3	53.0	52.8	52.8	52.8	53.0	53.1
96 - β	Gruis	2.1	19	17.8	17.8	17.8	17.6	17.3	17.0	16.7	16.5	16.4	16.4	16.6	16.7
97 - α	PsA Fomalhaut	1.2	15	33.2	33.2	33.1	33.0	32.8	32.5	32.3	32.1	32.0	32.0	32.1	32.2
98 - β	Peg Scheat	2.4	14	1.6	1.7	1.7	1.5	1.3	1.1	0.8	0.6	0.6	0.6	0.7	0.8
99 - α	Peg Markab	2.5	13	46.8	46.8	46.8	46.6	46.4	46.2	46.0	45.8	45.7	45.7	45.8	45.9

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Posiciones aparentes

DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	25.9	26.1	26.2	26.4	26.5	26.5	26.4	26.3	26.1	26.1	26.0	26.1
52 - ν	Hydrae	3.1	-16	12.4	12.6	12.7	12.7	12.7	12.7	12.7	12.6	12.5	12.5	12.6	12.6
53 - β	UMa Merak	2.4	+56	21.8	21.9	22.0	22.1	22.2	22.2	22.2	22.1	21.9	21.7	21.6	21.5
54 - α	UMa Dubhe	1.8	+61	43.9	44.0	44.1	44.2	44.3	44.3	44.3	44.2	44.0	43.8	43.7	43.6
55 - β	Leo Denebola	2.1	+14	33.3	33.2	33.2	33.2	33.3	33.3	33.4	33.3	33.3	33.2	33.1	33.0
56 - γ	Crv Gienah	2.6	-17	33.4	33.5	33.6	33.7	33.7	33.7	33.7	33.6	33.6	33.5	33.6	33.6
57 - α	Cru Acrux	1.4	-63	6.6	6.7	6.9	7.1	7.2	7.3	7.3	7.2	7.1	7.0	6.9	6.9
58 - γ	Cru Gacrux	1.6	-57	7.5	7.6	7.8	7.9	8.1	8.1	8.1	8.1	8.0	7.8	7.8	7.8
59 - γ	Cen Muhlifain	2.2	-48	58.3	58.4	58.6	58.7	58.8	58.9	58.9	58.8	58.7	58.6	58.6	58.6
60 - β	Cru Mimosas	1.3	-59	42.0	42.1	42.3	42.4	42.6	42.7	42.7	42.6	42.5	42.4	42.3	42.3
61 - ϵ	UMa Alioth	1.8	+55	56.4	56.4	56.5	56.6	56.7	56.8	56.8	56.7	56.6	56.5	56.3	56.1
62 - α^2	CVn Cor Caroli	2.9	+38	17.9	17.9	18.0	18.1	18.2	18.2	18.3	18.2	18.1	18.0	17.9	17.7
63 - ϵ	Vir Vindemiatrix	2.8	+10	56.5	56.5	56.4	56.5	56.5	56.6	56.6	56.6	56.6	56.5	56.4	56.3
64 - ζ	UMa Mizar	2.3	+54	54.3	54.3	54.4	54.5	54.7	54.7	54.8	54.7	54.6	54.5	54.3	54.1
65 - α	Vir Spica	1.0	-11	10.5	10.6	10.7	10.8	10.8	10.8	10.7	10.7	10.7	10.7	10.7	10.8
66 - η	UMa Alkaid	1.9	+49	17.7	17.6	17.7	17.8	17.9	18.0	18.1	18.0	18.0	17.8	17.6	17.4
67 - β	Cen Hadar	0.6	-60	22.9	23.0	23.2	23.3	23.4	23.6	23.6	23.6	23.5	23.4	23.3	23.2
68 - θ	Cen Menkent	2.1	-36	22.9	23.0	23.1	23.2	23.3	23.3	23.4	23.3	23.3	23.2	23.2	23.2
69 - α	Boo Arcturus	0.0	+19	9.9	9.8	9.8	9.8	9.9	10.0	10.0	10.0	10.0	9.9	9.8	9.7
70 - α^1	Cen Rigil Kentaurus	0.0	-60	50.6	50.6	50.8	50.9	51.0	51.2	51.2	51.2	51.2	51.0	50.9	50.9
71 - α^2	Lib Zubenelgenubi	2.8	-16	3.2	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.4	3.4
72 - β	UMi Kochab	2.1	+74	8.3	8.2	8.3	8.4	8.6	8.7	8.8	8.8	8.7	8.5	8.3	8.1
73 - β	Lib Zubeneshamali	2.6	-9	23.6	23.7	23.8	23.8	23.8	23.8	23.7	23.7	23.7	23.7	23.7	23.8
74 - α	CrB Alphecca	2.2	+26	42.1	42.0	42.0	42.0	42.1	42.3	42.3	42.4	42.4	42.3	42.2	42.0
75 - α	Ser Unukalhai	2.7	+6	24.9	24.8	24.8	24.8	24.8	24.9	24.9	25.0	25.0	25.0	24.9	24.8
76 - α	Sco Antares	0.9	-26	26.3	26.3	26.4	26.4	26.4	26.4	26.5	26.5	26.5	26.4	26.4	26.4
77 - α	TrA Atria	1.9	-69	1.8	1.8	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.3	2.2	2.1
78 - ϵ	Scorpii	2.3	-34	17.9	17.9	17.9	18.0	18.0	18.0	18.1	18.1	18.1	18.1	18.0	18.0
79 - η	Oph Sabik	2.4	-15	43.7	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8
80 - α	Her Rasalgethi	3.1	+14	23.1	23.0	22.9	23.0	23.0	23.1	23.2	23.3	23.3	23.3	23.2	23.1
81 - λ	Sco Shaula	1.6	-37	6.3	6.3	6.3	6.4	6.4	6.4	6.5	6.5	6.5	6.5	6.5	6.5
82 - α	Oph Rasalhague	2.1	+12	33.3	33.2	33.2	33.2	33.3	33.4	33.5	33.5	33.6	33.5	33.5	33.4
83 - θ	Sco Sargas	1.9	-42	59.9	59.9	59.9	60.0	60.0	60.1	60.1	60.2	60.2	60.2	60.1	60.1
84 - γ	Dra Eltanin	2.2	+51	29.1	29.0	28.9	28.9	29.1	29.2	29.4	29.5	29.5	29.5	29.4	29.3
85 - ϵ	Sgr Kaus Australis	1.9	-34	23.0	23.0	23.0	23.0	23.0	23.0	23.1	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	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.7	17.6	17.6
88 - α	Aql Altair	0.8	+8	52.4	52.4	52.3	52.3	52.4	52.5	52.6	52.7	52.7	52.8	52.7	52.7
89 - γ	Cyg Sadr	2.2	+40	15.9	15.8	15.7	15.6	15.7	15.8	16.0	16.1	16.2	16.3	16.3	16.2
90 - α	Pav Peacock	1.9	-56	43.7	43.6	43.5	43.4	43.4	43.4	43.4	43.5	43.6	43.7	43.7	43.6
91 - α	Cyg Deneb	1.3	+45	17.4	17.3	17.1	17.1	17.1	17.3	17.4	17.6	17.7	17.8	17.8	17.7
92 - α	Cep Alderamin	2.4	+62	35.9	35.7	35.6	35.5	35.5	35.6	35.8	36.0	36.2	36.3	36.3	36.3
93 - ϵ	Peg Enif	0.7	+9	53.2	53.1	53.1	53.1	53.2	53.3	53.4	53.5	53.5	53.6	53.6	53.5
94 - δ	Cap Deneb Algedi	2.9	-16	7.0	7.0	7.0	6.9	6.8	6.7	6.7	6.7	6.7	6.7	6.7	6.7
95 - α	Gru Al Na'ir	1.7	-46	57.1	57.0	56.9	56.7	56.6	56.6	56.5	56.6	56.7	56.8	56.8	56.8
96 - β	Gruis	2.1	-46	52.5	52.4	52.2	52.1	52.0	51.9	51.9	51.9	52.0	52.1	52.2	52.2
97 - α	PsA Fomalhaut	1.2	-29	36.7	36.6	36.5	36.4	36.3	36.2	36.1	36.1	36.2	36.2	36.3	36.3
98 - β	Peg Scheat	2.4	+28	5.9	5.8	5.8	5.7	5.7	5.8	5.9	6.1	6.2	6.3	6.3	6.3
99 - α	Peg Markab	2.5	+15	13.2	13.1	13.1	13.1	13.1	13.2	13.3	13.4	13.5	13.6	13.6	13.6

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

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

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

1ª CORRECCIÓN

Se restará para obtener la hora del paso en otro día del mismo mes.

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

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

2ª CORRECCIÓN

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2003

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	-33.7	26 00	-42.2	52 00	-42.1	78 00	-33.5	104 00	-18.1	130 00	+0.9	156 00	+19.8
0 30	-33.9	26 30	-42.2	52 30	-42.0	78 30	-33.3	104 30	-17.8	130 30	+1.3	156 30	+20.1
1 00	-34.2	27 00	-42.3	53 00	-41.9	79 00	-33.0	105 00	-17.5	131 00	+1.7	157 00	+20.4
1 30	-34.4	27 30	-42.4	53 30	-41.8	79 30	-32.8	105 30	-17.1	131 30	+2.0	157 30	+20.8
2 00	-34.6	28 00	-42.5	54 00	-41.7	80 00	-32.5	106 00	-16.8	132 00	+2.4	158 00	+21.1
2 30	-34.8	28 30	-42.5	54 30	-41.6	80 30	-32.3	106 30	-16.4	132 30	+2.8	158 30	+21.4
3 00	-35.1	29 00	-42.6	55 00	-41.5	81 00	-32.0	107 00	-16.1	133 00	+3.2	159 00	+21.7
3 30	-35.3	29 30	-42.7	55 30	-41.4	81 30	-31.8	107 30	-15.7	133 30	+3.5	159 30	+22.1
4 00	-35.5	30 00	-42.7	56 00	-41.3	82 00	-31.5	108 00	-15.4	134 00	+3.9	160 00	+22.4
4 30	-35.7	30 30	-42.8	56 30	-41.2	82 30	-31.3	108 30	-15.0	134 30	+4.3	160 30	+22.7
5 00	-35.9	31 00	-42.8	57 00	-41.1	83 00	-31.0	109 00	-14.6	135 00	+4.7	161 00	+23.0
5 30	-36.1	31 30	-42.9	57 30	-41.0	83 30	-30.7	109 30	-14.3	135 30	+5.0	161 30	+23.4
6 00	-36.3	32 00	-42.9	58 00	-40.8	84 00	-30.5	110 00	-13.9	136 00	+5.4	162 00	+23.7
6 30	-36.5	32 30	-43.0	58 30	-40.7	84 30	-30.2	110 30	-13.6	136 30	+5.8	162 30	+24.0
7 00	-36.7	33 00	-43.0	59 00	-40.6	85 00	-29.9	111 00	-13.2	137 00	+6.2	163 00	+24.3
7 30	-36.9	33 30	-43.1	59 30	-40.4	85 30	-29.7	111 30	-12.9	137 30	+6.5	163 30	+24.6
8 00	-37.1	34 00	-43.1	60 00	-40.3	86 00	-29.4	112 00	-12.5	138 00	+6.9	164 00	+24.9
8 30	-37.3	34 30	-43.1	60 30	-40.2	86 30	-29.1	112 30	-12.1	138 30	+7.3	164 30	+25.2
9 00	-37.5	35 00	-43.1	61 00	-40.0	87 00	-28.8	113 00	-11.8	139 00	+7.7	165 00	+25.5
9 30	-37.7	35 30	-43.2	61 30	-39.9	87 30	-28.5	113 30	-11.4	139 30	+8.0	165 30	+25.8
10 00	-37.9	36 00	-43.2	62 00	-39.7	88 00	-28.3	114 00	-11.0	140 00	+8.4	166 00	+26.1
10 30	-38.1	36 30	-43.2	62 30	-39.6	88 30	-28.0	114 30	-10.7	140 30	+8.8	166 30	+26.4
11 00	-38.2	37 00	-43.2	63 00	-39.4	89 00	-27.7	115 00	-10.3	141 00	+9.1	167 00	+26.7
11 30	-38.4	37 30	-43.2	63 30	-39.3	89 30	-27.4	115 30	-9.9	141 30	+9.5	167 30	+27.0
12 00	-38.6	38 00	-43.2	64 00	-39.1	90 00	-27.1	116 00	-9.6	142 00	+9.9	168 00	+27.3
12 30	-38.8	38 30	-43.2	64 30	-39.0	90 30	-26.8	116 30	-9.2	142 30	+10.2	168 30	+27.6
13 00	-38.9	39 00	-43.2	65 00	-38.8	91 00	-26.5	117 00	-8.8	143 00	+10.6	169 00	+27.9
13 30	-39.1	39 30	-43.2	65 30	-38.6	91 30	-26.2	117 30	-8.5	143 30	+11.0	169 30	+28.2
14 00	-39.3	40 00	-43.2	66 00	-38.5	92 00	-25.9	118 00	-8.1	144 00	+11.3	170 00	+28.5
14 30	-39.4	40 30	-43.2	66 30	-38.3	92 30	-25.6	118 30	-7.7	144 30	+11.7	170 30	+28.8
15 00	-39.6	41 00	-43.2	67 00	-38.1	93 00	-25.3	119 00	-7.4	145 00	+12.1	171 00	+29.0
15 30	-39.7	41 30	-43.2	67 30	-37.9	93 30	-25.0	119 30	-7.0	145 30	+12.4	171 30	+29.3
16 00	-39.9	42 00	-43.2	68 00	-37.7	94 00	-24.7	120 00	-6.6	146 00	+12.8	172 00	+29.6
16 30	-40.0	42 30	-43.1	68 30	-37.6	94 30	-24.4	120 30	-6.2	146 30	+13.1	172 30	+29.9
17 00	-40.1	43 00	-43.1	69 00	-37.4	95 00	-24.1	121 00	-5.9	147 00	+13.5	173 00	+30.1
17 30	-40.3	43 30	-43.1	69 30	-37.2	95 30	-23.7	121 30	-5.5	147 30	+13.9	173 30	+30.4
18 00	-40.4	44 00	-43.1	70 00	-37.0	96 00	-23.4	122 00	-5.1	148 00	+14.2	174 00	+30.7
18 30	-40.6	44 30	-43.0	70 30	-36.8	96 30	-23.1	122 30	-4.7	148 30	+14.6	174 30	+30.9
19 00	-40.7	45 00	-43.0	71 00	-36.6	97 00	-22.8	123 00	-4.4	149 00	+14.9	175 00	+31.2
19 30	-40.8	45 30	-42.9	71 30	-36.4	97 30	-22.5	123 30	-4.0	149 30	+15.3	175 30	+31.5
20 00	-40.9	46 00	-42.9	72 00	-36.2	98 00	-22.1	124 00	-3.6	150 00	+15.6	176 00	+31.7
20 30	-41.1	46 30	-42.8	72 30	-36.0	98 30	-21.8	124 30	-3.2	150 30	+16.0	176 30	+32.0
21 00	-41.2	47 00	-42.8	73 00	-35.8	99 00	-21.5	125 00	-2.9	151 00	+16.3	177 00	+32.2
21 30	-41.3	47 30	-42.7	73 30	-35.6	99 30	-21.2	125 30	-2.5	151 30	+16.7	177 30	+32.5
22 00	-41.4	48 00	-42.7	74 00	-35.3	100 00	-20.8	126 00	-2.1	152 00	+17.0	178 00	+32.7
22 30	-41.5	48 30	-42.6	74 30	-35.1	100 30	-20.5	126 30	-1.7	152 30	+17.4	178 30	+33.0
23 00	-41.6	49 00	-42.6	75 00	-34.9	101 00	-20.2	127 00	-1.4	153 00	+17.7	179 00	+33.2
23 30	-41.7	49 30	-42.5	75 30	-34.7	101 30	-19.8	127 30	-1.0	153 30	+18.1	179 30	+33.5
24 00	-41.8	50 00	-42.4	76 00	-34.4	102 00	-19.5	128 00	-0.6	154 00	+18.4	180 00	+33.7
24 30	-41.9	50 30	-42.3	76 30	-34.2	102 30	-19.2	128 30	-0.2	154 30	+18.7	180 30	+33.9
25 00	-42.0	51 00	-42.3	77 00	-34.0	103 00	-18.8	129 00	+0.1	155 00	+19.1	181 00	+34.2
25 30	-42.1	51 30	-42.2	77 30	-33.7	103 30	-18.5	129 30	+0.5	155 30	+19.4	181 30	+34.4
26 00	-42.2	52 00	-42.1	78 00	-33.5	104 00	-18.1	130 00	+0.9	156 00	+19.8	182 00	+34.6

DETERMINACIÓN DE LA LATITUD
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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+34.6	208 00	+42.5	234 00	+41.7	260 00	+32.5	286 00	+16.8	312 00	-2.4	338 00	-21.1
182 30	+34.8	208 30	+42.5	234 30	+41.6	260 30	+32.3	286 30	+16.4	312 30	-2.8	338 30	-21.4
183 00	+35.1	209 00	+42.6	235 00	+41.5	261 00	+32.0	287 00	+16.1	313 00	-3.2	339 00	-21.7
183 30	+35.3	209 30	+42.7	235 30	+41.4	261 30	+31.8	287 30	+15.7	313 30	-3.5	339 30	-22.1
184 00	+35.5	210 00	+42.7	236 00	+41.3	262 00	+31.5	288 00	+15.4	314 00	-3.9	340 00	-22.4
184 30	+35.7	210 30	+42.8	236 30	+41.2	262 30	+31.3	288 30	+15.0	314 30	-4.3	340 30	-22.7
185 00	+35.9	211 00	+42.8	237 00	+41.1	263 00	+31.0	289 00	+14.6	315 00	-4.7	341 00	-23.0
185 30	+36.1	211 30	+42.9	237 30	+41.0	263 30	+30.7	289 30	+14.3	315 30	-5.0	341 30	-23.4
186 00	+36.3	212 00	+42.9	238 00	+40.8	264 00	+30.5	290 00	+13.9	316 00	-5.4	342 00	-23.7
186 30	+36.5	212 30	+43.0	238 30	+40.7	264 30	+30.2	290 30	+13.6	316 30	-5.8	342 30	-24.0
187 00	+36.7	213 00	+43.0	239 00	+40.6	265 00	+29.9	291 00	+13.2	317 00	-6.2	343 00	-24.3
187 30	+36.9	213 30	+43.1	239 30	+40.4	265 30	+29.7	291 30	+12.9	317 30	-6.5	343 30	-24.6
188 00	+37.1	214 00	+43.1	240 00	+40.3	266 00	+29.4	292 00	+12.5	318 00	-6.9	344 00	-24.9
188 30	+37.3	214 30	+43.1	240 30	+40.2	266 30	+29.1	292 30	+12.1	318 30	-7.3	344 30	-25.2
189 00	+37.5	215 00	+43.1	241 00	+40.0	267 00	+28.8	293 00	+11.8	319 00	-7.7	345 00	-25.5
189 30	+37.7	215 30	+43.2	241 30	+39.9	267 30	+28.5	293 30	+11.4	319 30	-8.0	345 30	-25.8
190 00	+37.9	216 00	+43.2	242 00	+39.7	268 00	+28.3	294 00	+11.0	320 00	-8.4	346 00	-26.1
190 30	+38.1	216 30	+43.2	242 30	+39.6	268 30	+28.0	294 30	+10.7	320 30	-8.8	346 30	-26.4
191 00	+38.2	217 00	+43.2	243 00	+39.4	269 00	+27.7	295 00	+10.3	321 00	-9.1	347 00	-26.7
191 30	+38.4	217 30	+43.2	243 30	+39.3	269 30	+27.4	295 30	+9.9	321 30	-9.5	347 30	-27.0
192 00	+38.6	218 00	+43.2	244 00	+39.1	270 00	+27.1	296 00	+9.6	322 00	-9.9	348 00	-27.3
192 30	+38.8	218 30	+43.2	244 30	+39.0	270 30	+26.8	296 30	+9.2	322 30	-10.2	348 30	-27.6
193 00	+38.9	219 00	+43.2	245 00	+38.8	271 00	+26.5	297 00	+8.8	323 00	-10.6	349 00	-27.9
193 30	+39.1	219 30	+43.2	245 30	+38.6	271 30	+26.2	297 30	+8.5	323 30	-11.0	349 30	-28.2
194 00	+39.3	220 00	+43.2	246 00	+38.5	272 00	+25.9	298 00	+8.1	324 00	-11.3	350 00	-28.5
194 30	+39.4	220 30	+43.2	246 30	+38.3	272 30	+25.6	298 30	+7.7	324 30	-11.7	350 30	-28.8
195 00	+39.6	221 00	+43.2	247 00	+38.1	273 00	+25.3	299 00	+7.4	325 00	-12.1	351 00	-29.0
195 30	+39.7	221 30	+43.2	247 30	+37.9	273 30	+25.0	299 30	+7.0	325 30	-12.4	351 30	-29.3
196 00	+39.9	222 00	+43.2	248 00	+37.7	274 00	+24.7	300 00	+6.6	326 00	-12.8	352 00	-29.6
196 30	+40.0	222 30	+43.1	248 30	+37.6	274 30	+24.4	300 30	+6.2	326 30	-13.1	352 30	-29.9
197 00	+40.1	223 00	+43.1	249 00	+37.4	275 00	+24.1	301 00	+5.9	327 00	-13.5	353 00	-30.1
197 30	+40.3	223 30	+43.1	249 30	+37.2	275 30	+23.7	301 30	+5.5	327 30	-13.9	353 30	-30.4
198 00	+40.4	224 00	+43.1	250 00	+37.0	276 00	+23.4	302 00	+5.1	328 00	-14.2	354 00	-30.7
198 30	+40.6	224 30	+43.0	250 30	+36.8	276 30	+23.1	302 30	+4.7	328 30	-14.6	354 30	-30.9
199 00	+40.7	225 00	+43.0	251 00	+36.6	277 00	+22.8	303 00	+4.4	329 00	-14.9	355 00	-31.2
199 30	+40.8	225 30	+42.9	251 30	+36.4	277 30	+22.5	303 30	+4.0	329 30	-15.3	355 30	-31.5
200 00	+40.9	226 00	+42.9	252 00	+36.2	278 00	+22.1	304 00	+3.6	330 00	-15.6	356 00	-31.7
200 30	+41.1	226 30	+42.8	252 30	+36.0	278 30	+21.8	304 30	+3.2	330 30	-16.0	356 30	-32.0
201 00	+41.2	227 00	+42.8	253 00	+35.8	279 00	+21.5	305 00	+2.9	331 00	-16.3	357 00	-32.2
201 30	+41.3	227 30	+42.7	253 30	+35.6	279 30	+21.2	305 30	+2.5	331 30	-16.7	357 30	-32.5
202 00	+41.4	228 00	+42.7	254 00	+35.3	280 00	+20.8	306 00	+2.1	332 00	-17.0	358 00	-32.7
202 30	+41.5	228 30	+42.6	254 30	+35.1	280 30	+20.5	306 30	+1.7	332 30	-17.4	358 30	-33.0
203 00	+41.6	229 00	+42.6	255 00	+34.9	281 00	+20.2	307 00	+1.4	333 00	-17.7	359 00	-33.2
203 30	+41.7	229 30	+42.5	255 30	+34.7	281 30	+19.8	307 30	+1.0	333 30	-18.1	359 30	-33.5
204 00	+41.8	230 00	+42.4	256 00	+34.4	282 00	+19.5	308 00	+0.6	334 00	-18.4	360 00	-33.7
204 30	+41.9	230 30	+42.3	256 30	+34.2	282 30	+19.2	308 30	+0.2	334 30	-18.7		
205 00	+42.0	231 00	+42.3	257 00	+34.0	283 00	+18.8	309 00	-0.1	335 00	-19.1		
205 30	+42.1	231 30	+42.2	257 30	+33.7	283 30	+18.5	309 30	-0.5	335 30	-19.4		
206 00	+42.2	232 00	+42.1	258 00	+33.5	284 00	+18.1	310 00	-0.9	336 00	-19.8		
206 30	+42.2	232 30	+42.0	258 30	+33.3	284 30	+17.8	310 30	-1.3	336 30	-20.1		
207 00	+42.3	233 00	+41.9	259 00	+33.0	285 00	+17.5	311 00	-1.7	337 00	-20.4		
207 30	+42.4	233 30	+41.8	259 30	+32.8	285 30	+17.1	311 30	-2.0	337 30	-20.8		
208 00	+42.5	234 00	+41.7	260 00	+32.5	286 00	+16.8	312 00	-2.4	338 00	-21.1		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2003

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	0.2	0.3	0.4	0.4
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	0.2	0.3	0.4	0.4
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	-0.1	+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	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	0.0	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+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	-0.5	-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	+0.1	-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	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-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	+0.5	+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	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	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	-0.7	-0.8	-1.0	-1.1	80
90	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-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	-1.2	-1.4	-1.7	120
130	-0.7	-0.7	-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	-0.9	-1.0	-1.2	-1.3	-1.6	150
160	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	160
170	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	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	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220
230	+0.1	+0.1	+0.1	+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	+0.4	+0.5	+0.6	240
250	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	250
260	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.1	260
270	+0.6	+0.6	+0.6	+0.6	+0.6	+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	+1.2	+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	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.4	+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	+1.2	+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, 2003**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2003)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte.	Corrección	Altura apte.	Corrección	Altura apte.	Corrección	Altura apte.	Corrección	Altura apte.	Corrección		
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2			Ene 1	+0'3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Ene 23	+0'2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Feb 27	+0'1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Mar 22	0'0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			Abr 13	-0'1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			May 7	-0'2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jun 12	-0'3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Jul 28	-0'2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 2	-0'1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Sep 26	0'0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	44 50	+15.2			Oct 17	+0'1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	47 11	+15.3			Nov 10	+0'2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	49 32	+15.4			Dic 15	+0'3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	51 53	+15.5			Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	54 14	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	56 35	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	58 56	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	61 17	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	63 38	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	65 59	+16.1				
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59	+14.2						
6.0	-4.4	22.6	-8.5												
6.2	-4.5	23.1	-8.6												
6.5	-4.6	23.7	-8.7												
6.8	-4.7	24.2	-8.8												
7.1	-4.8	24.8	-8.9												
7.4	-4.9	25.4	-9.0												
7.7	-5.0	25.9	-9.1												
8.0	-5.1	26.5	-9.2												
8.4	-5.2	27.1	-9.3												
8.7	-5.3	27.7	-9.4												
9.0	-5.4	28.3	-9.5												
9.4	-5.5	28.9	-9.6												
9.7	-5.6	29.5	-9.7												
10.1	-5.7	30.1	-9.8												
10.4	-5.8	30.7	-9.9												
10.8	-5.9	31.3	-10.0												
11.2	-6.0	32.0	-10.1												
11.6	-6.1	32.6	-10.2												
11.9	-6.2	33.3	-10.3												
12.3	-6.3	33.9	-10.4												
12.7		34.6													

TABLA C = PLANETAS Y ESTRELLAS											
Refracción						Paralaje (2003)					
Altura apte.	Corrección	Altura apte.	Corrección	Fechas		Venus para cualquier altura	Marte Altura aparente				
° /	'	° /	'				< 30°	> 30° < 60°	> 60°		
6 30	-7.8	14 00	-3.8	Ene	1	+0'2	+0'1	+0'1	0'0		
6 40	-7.6	15 00	-3.6	Feb	8	+0'1	+0'1	+0'1	0'0		
6 50	-7.5	16 00	-3.3	Abr	29	+0'1	+0'1	+0'1	+0'1		
7 00	-7.3	17 00	-3.1	May	10	+0'1	+0'2	+0'1	+0'1		
7 15	-7.1	18 00	-3.0	Jun	10	+0'1	+0'2	+0'2	+0'1		
7 30	-6.9	19 00	-2.8	Jul	2	+0'1	+0'3	+0'2	+0'1		
7 45	-6.7	20 00	-2.6	Ago	2	+0'1	+0'3	+0'3	+0'1		
8 00	-6.5	21 00	-2.5	Ago	9	+0'1	+0'4	+0'3	+0'1		
8 15	-6.3	22 00	-2.4	Sep	13	+0'1	+0'3	+0'3	+0'1		
8 30	-6.2	24 00	-2.2	Sep	21	+0'1	+0'3	+0'2	+0'1		
8 45	-6.0	26 00	-2.0	Oct	20	+0'1	+0'2	+0'2	+0'1		
9 00	-5.9	28 00	-1.8	Nov	10	+0'1	+0'2	+0'1	+0'1		
9 20	-5.7	32 00	-1.6	Dic	9	+0'1	+0'1	+0'1	+0'1		
9 40	-5.5	36 00	-1.3	Dic	19	+0'1	+0'1	+0'1	0'0		
10 00	-5.3	40 00	-1.2	Dic	31						
10 30	-5.1	45 00	-1.0								
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.