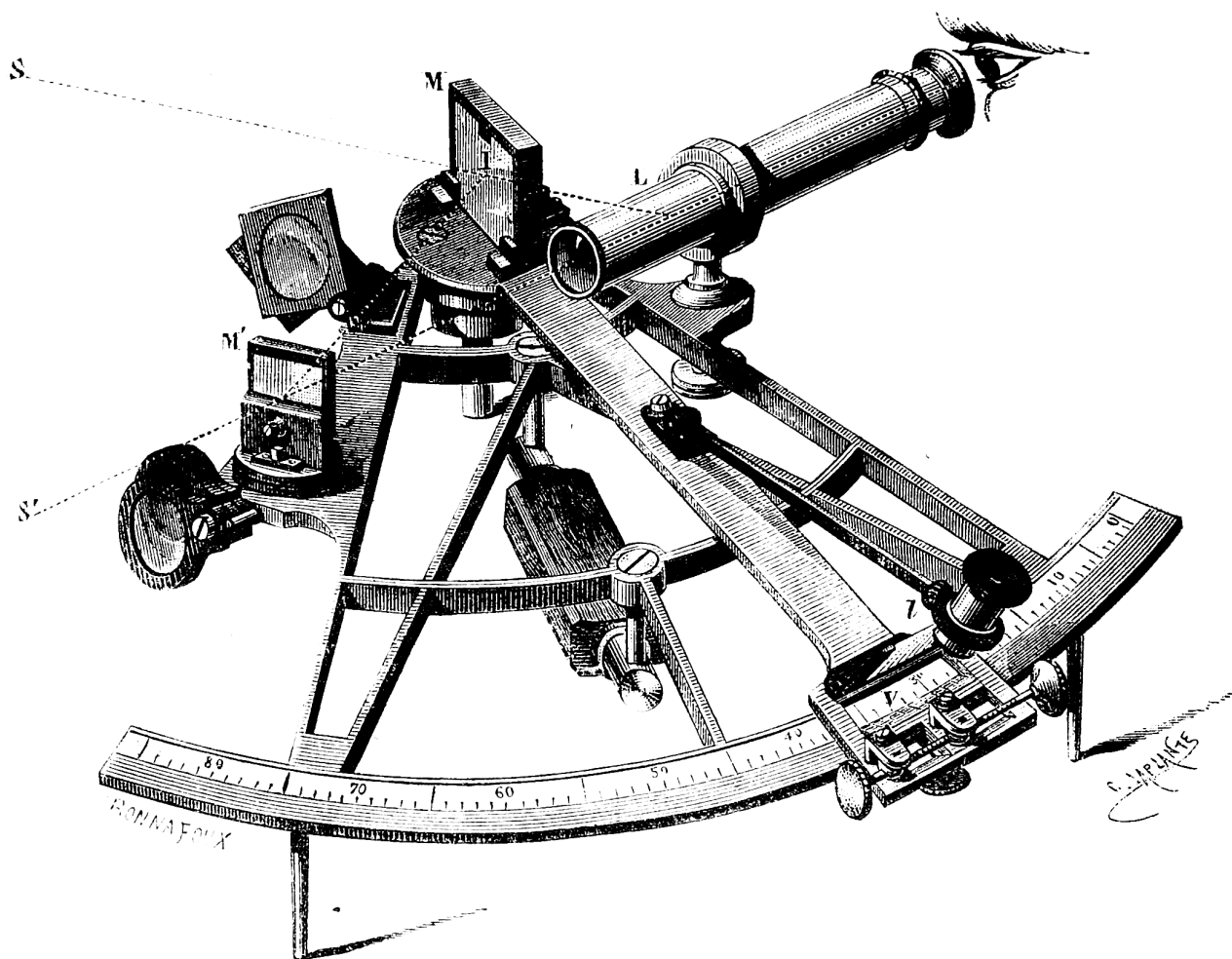




ALMANAQUE NÁUTICO PERSEIS 2015

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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: 9 ^d 9 PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'7 PMG: 21 ^h 19 ^m R°: 52 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	12.2	-23	02.4	51	21.2	+15	06.3	60 N	7	09	8	06	9	02	13	01	36
1	194	11.9		02.2	65	50.1		12.6	58	7	02	7	54	8	45	11	38	29
2	209	11.6		02.0	80	19.0		18.8	56	6	56		44	31		20	40	20
3	224	11.3		01.8	94	47.8		24.9	54		50		36	19		28	41	12
4	239	11.0		01.6	109	16.7		30.9	52		44		28	8	08	35	42	4
5	254	10.7	-23	01.4	123	45.5	+15	36.8	50	6	39	7	20	7	59	13	42	42
6	269	10.4	-23	01.2	138	14.3	+15	42.7	45	6	28	7	05	7	38	13	56	44
7	284	10.1		01.0	152	43.1		48.4	40		17	6	51	22		14	07	46
8	299	09.8		00.8	167	11.9		54.1	35		08		40	7	08	17	47	26
9	314	09.5		00.6	181	40.7	+15	59.7	30	6	00	30		6	56	26	48	18
10	329	09.2		00.4	196	09.5	+16	05.2	20	5	44	6	11	35		41	49	3
11	344	08.9	-23	00.2	210	38.2	+16	10.6	10 N	5	28	5	54	6	17	14	54	51
12	359	08.6	-23	00.0	225	07.0	+16	15.9	0	5	11	5	37	6	00	15	07	51
13	14	08.3	-22	59.8	239	35.7		21.1	10 S	4	52	5	19	5	42	19	53	28
14	29	08.0		59.6	254	04.5		26.2	20		30	4	59	24		32	55	16
15	44	07.7		59.4	268	33.2		31.2	30	4	02	35		5	02	48	56	2
16	59	07.5		59.2	283	02.0		36.2	35	3	43	20		4	49	15	57	56
17	74	07.2	-22	59.0	297	30.7	+16	41.0	40	3	21	4	02	4	35	16	07	58
18	89	06.9	-22	58.8	311	59.4	+16	45.8	45	2	51	3	40	4	17	16	19	59
19	104	06.6		58.6	326	28.1		50.4	50	2	07	3	11	3	55	33	61	21
20	119	06.3		58.4	340	56.8		55.0	52	1	41	2	56		44	40	62	15
21	134	06.0		58.2	355	25.5	+16	59.4	54	1	00	39		32		48	62	08
22	149	05.7		57.9	9	54.2	+17	03.8	44	** **	2	17		19		16	56	64
23	164	05.4		57.7	24	22.9		08.1	43	** **	1	49		3	02	17	06	64
24	179	05.1	-22	57.5	38	51.6	+17	12.3	42	** **	1	05		2	43	17	17	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 15 ^m 8		Mag: -3.9 PMG: 13 ^h 16 ^m		Mag: +1.1 PMG: 14 ^h 53 ^m		Mag: -2.5 PMG: 2 ^h 56 ^m		Mag: +0.5 PMG: 9 ^h 14 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	100	19.9	161	17.9	-22	08.4	136	31.0	-15	33.3
1	115	22.3	176	17.0		07.8	151	31.5		32.6
2	130	24.8	191	16.1		07.3	166	32.1		32.0
3	145	27.2	206	15.3		06.7	181	32.6		31.3
4	160	29.7	221	14.4		06.2	196	33.2		30.7
5	175	32.2	236	13.5	-22	05.6	211	33.7	-15	30.0
6	190	34.6	251	12.7	-22	05.1	226	34.3	-15	29.3
7	205	37.1	266	11.8		04.5	241	34.8		28.7
8	220	39.6	281	11.0		03.9	256	35.4		28.0
9	235	42.0	296	10.1		03.4	271	35.9		27.4
10	250	44.5	311	09.2		02.8	286	36.5		26.7
11	265	47.0	326	08.4	-22	02.3	301	37.0	-15	26.1
12	280	49.4	341	07.5	-22	01.7	316	37.6	-15	25.4
13	295	51.9	356	06.7		01.1	331	38.1		24.8
14	310	54.4	11	05.8	-22	00.6	346	38.7		24.1
15	325	56.8	26	04.9	-22	00.0	1	39.2		23.5
16	340	59.3	41	04.1	-21	59.4	16	39.8		22.8
17	356	01.7	56	03.2	-21	58.9	31	40.3	-15	22.2
18	11	04.2	71	02.4	-21	58.3	46	40.9	-15	21.5
19	26	06.7	86	01.5		57.7	61	41.4		20.9
20	41	09.1	101	00.7		57.1	76	42.0		20.2
21	56	11.6	115	59.8		56.6	91	42.5		19.5
22	71	14.1	130	58.9		56.0	106	43.1		18.9
23	86	16.5	145	58.1		55.4	121	43.6		18.2
24	101	19.0	160	57.2	-21	54.8	136	44.2	-15	17.6
Dif	—		-9		+6		+6		+7	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 03 ^m 9			Edad: 10 ^d 9 PHE { 4 ^h : 56/6 12 ^h : 56/4 20 ^h : 56/3 SD: 15:4 PMG: 22 ^h 11 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	05.1	-22 57.5	38	51.6	+17 12.3		60 N	15 06	16 03	16 59	13 37 46	5 49 61	
1	194	04.8		53	20.3	97 16.4	41	58	23	14	17 06	13 49 46	37 60	
2	209	04.5	57.1	67	49.0	97 20.3	39	56	37	24	13	14 00 46	27 59	
3	224	04.2	56.9	82	17.6	96 24.2	39	54	15 49	33	18	09 47	18 59	
4	239	03.9	56.6	96	46.3	97 28.0	38	52	16 00	40	24	17 47	10 58	
5	254	03.6	-22 56.4	111	15.0	97 +17 31.7	37	50	16 10	16 48	17 29	14 24 48	5 03 58	
6	269	03.4	-22 56.2	125	43.7	97 +17 35.3	36	45	16 30	17 03	17 40	14 40 49	4 47 57	
7	284	03.1	56.0	140	12.3	96 38.8	35	40	16 46	16	50	14 53 49	35 56	
8	299	02.8	55.8	154	41.0	97 42.2	34	35	17 00	28	17 59	15 04 50	24 55	
9	314	02.5	55.6	169	09.7	97 45.5	33	30	12	38	18 08	14 50	4 15 54	
10	329	02.2	55.3	183	38.4	97 48.7	32	20	33	17 56	24	30 51	3 59 53	
11	344	01.9	-22 55.1	198	07.0	96 +17 51.8	31	10 N	17 51	18 13	18 40	15 45 51	3 45 52	
12	359	01.6	-22 54.9	212	35.7	97 +17 54.8	30	0	18 08	18 30	18 56	15 58 52	3 31 52	
13	14	01.3	54.7	227	04.4	97 +17 57.8	30	10 S	25	18 48	19 15	16 12 52	18 51	
14	29	01.0	54.4	241	33.1	97 +18 00.6	28	20	18 43	19 08	19 37	27 52	3 04 50	
15	44	00.7	54.2	256	01.8	97 03.3	27	30	19 05	32	20 05	44 53	2 48 49	
16	59	00.4	54.0	270	30.5	97 05.9	26	35	17	19 47	23	16 53 54	39 48	
17	74	00.2	-22 53.8	284	59.2	97 +18 08.4	25	40	19 32	20 05	20 46	17 05 53	2 28 48	
18	88	59.9	-22 53.5	299	27.9	97 +18 10.8	24	45	19 50	20 27	21 15	17 18 54	2 16 46	
19	103	59.6	53.3	313	56.6	97 13.1	23	50	20 11	20 55	21 59	34 55	2 01 45	
20	118	59.3	53.1	328	25.3	97 15.4	23	52	22	21 10	22 24	42 54	1 53 45	
21	133	59.0	52.8	342	54.0	97 17.5	21	54	34	27	23 03	17 50 55	46 44	
22	148	58.7	52.6	357	22.8	98 19.5	20	56	20 47	21 48	** **	18 00 55	37 43	
23	163	58.4	52.4	11	51.5	97 21.4	19	58	21 03	22 15	** **	10 56	27 42	
24	178	58.1	-22 52.1	26	20.2	97 +18 23.2	18	60 S	21 23	22 57	** **	18 23 56	1 15 41	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 11 ^m 9		Mag: -3.9 PMG: 13 ^h 17 ^m			Mag: +1.1 PMG: 14 ^h 53 ^m			Mag: -2.5 PMG: 2 ^h 52 ^m			Mag: +0.6 PMG: 9 ^h 10 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	101	19.0	160 57.2	-21 54.8		136 44.2	-15 17.6		316 58.4	+15 05.3		222 04.2	-18 27.5	
1	116	21.5	175 56.4	54.3		151 44.7	16.9		332 01.1	05.3		237 06.4	27.5	
2	131	23.9	190 55.5	53.7		166 45.3	16.3		347 03.7	05.4		252 08.6	27.6	
3	146	26.4	205 54.7	53.1		181 45.9	15.6		2 06.3	05.5		267 10.8	27.6	
4	161	28.9	220 53.8	52.5		196 46.4	14.9		17 09.0	05.5		282 13.0	27.7	
5	176	31.3	235 53.0	-21 51.9		211 47.0	-15 14.3		32 11.6	+15 05.6		297 15.2	-18 27.7	
6	191	33.8	250 52.1	-21 51.3		226 47.5	-15 13.6		47 14.3	+15 05.7		312 17.4	-18 27.8	
7	206	36.2	265 51.3	50.8		241 48.1	13.0		62 16.9	05.8		327 19.6	27.8	
8	221	38.7	280 50.4	50.2		256 48.6	12.3		77 19.6	05.8		342 21.9	27.9	
9	236	41.2	295 49.6	49.6		271 49.2	11.7		92 22.2	05.9		357 24.1	27.9	
10	251	43.6	310 48.7	49.0		286 49.7	11.0		107 24.9	06.0		12 26.3	28.0	
11	266	46.1	325 47.9	-21 48.4		301 50.3	-15 10.3		122 27.5	+15 06.0		27 28.5	-18 28.0	
12	281	48.6	340 47.0	-21 47.8		316 50.8	-15 09.7		137 30.2	+15 06.1		42 30.7	-18 28.1	
13	296	51.0	355 46.2	47.2		331 51.4	09.0		152 32.8	06.2		57 32.9	28.1	
14	311	53.5	10 45.3	46.6		346 52.0	08.4		167 35.5	06.3		72 35.1	28.2	
15	326	56.0	25 44.5	46.0		1 52.5	07.7		182 38.2	06.3		87 37.3	28.2	
16	341	58.4	40 43.7	45.4		16 53.1	07.0		197 40.8	06.4		102 39.5	28.3	
17	357	00.9	55 42.8	-21 44.8		31 53.6	-15 06.4		212 43.5	+15 06.5		117 41.7	-18 28.3	
18	12	03.4	70 42.0	-21 44.2		46 54.2	-15 05.7		227 46.1	+15 06.5		132 43.9	-18 28.3	
19	27	05.8	85 41.1	43.6		61 54.7	05.0		242 48.8	06.6		147 46.1	28.4	
20	42	08.3	100 40.3	43.0		76 55.3	04.4		257 51.4	06.7		162 48.3	28.4	
21	57	10.7	115 39.4	42.4		91 55.8	03.7		272 54.1	06.8		177 50.5	28.5	
22	72	13.2	130 38.6	41.8		106 56.4	03.1		287 56.7	06.8		192 52.7	28.5	
23	87	15.7	145 37.8	41.2		121 57.0	02.4		302 59.4	06.9		207 55.0	28.6	
24	102	18.1	160 36.9	-21 40.6		136 57.5	-15 01.7		318 02.0	+15 07.0		222 57.2	-18 28.6	
Dif	—		-8		+6	+6		+7	+27		+1	+22		0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 04 ^m 4				Edad: 11 ^d 9 PHE SD: 15'3 PMG: 23 ^h 02 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	58.1	-22	52.1	26	20.2	+18	23.2	17	58	7 09	8 05	9 01	14 23	54	6 50	51		
1	193	57.8		51.9	40	49.0	98	24.9	17	58	7 02	7 54	8 45	35	54	37	51		
2	208	57.6		51.7	55	17.8	98	26.6	17	56	6 55	44	31	46	54	26	51		
3	223	57.3		51.4	69	46.6	98	28.1	15	54	49	35	19	14	56	53	17	51	
4	238	57.0		51.2	84	15.4	98	29.5	14	52	44	27	8 08	15	04	54	08	51	
5	253	56.7	-22	51.0	98	44.2	98	+18	30.8	13	50	6 39	7 20	7 58	15	12	53	6 01	51
6	268	56.4	-22	50.7	113	13.0	98	+18	32.0	12	45	6 28	7 05	7 38	15	29	52	5 44	51
7	283	56.1		50.5	127	41.8	98		33.2	12	40	18	6 52	22	42	53	31	51	
8	298	55.8		50.2	142	10.7	99		34.2	10	35	09	40	7 08	15	54	52	19	52
9	313	55.5		50.0	156	39.5	98		35.1	9	30	6 00	30	6 56	16	04	52	5 09	52
10	328	55.2		49.8	171	08.4	99		35.9	8	20	5 44	6 12	36	21	51	4 52	52	
11	343	55.0	-22	49.5	185	37.3	99	+18	36.7	8	10 N	5 29	5 55	6 18	16	36	51	4 37	52
12	358	54.7	-22	49.3	200	06.2	99	+18	37.3	6	0	5 12	5 38	6 01	16	50	51	4 23	52
13	13	54.4		49.0	214	35.2	100		37.8	5	10 S	4 54	21	5 44	17	04	51	4 09	52
14	28	54.1		48.8	229	04.1	99		38.2	4	20	32	5 01	25	19	50	3 54	52	
15	43	53.8		48.5	243	33.1	100		38.6	4	30	4 03	4 36	5 04	37	49	37	51	
16	58	53.5		48.3	258	02.1	100		38.8	2	35	3 45	21	4 51	47	49	27	51	
17	73	53.2	-22	48.1	272	31.1	100	+18	38.9	1	40	3 23	4 04	4 36	17	58	49	3 16	51
18	88	53.0	-22	47.8	287	00.1	100	+18	39.0	1	45	2 53	3 42	4 19	18	12	48	3 02	51
19	103	52.7		47.6	301	29.1	100		38.9	1	50	2 10	3 13	3 57	29	47	2 46	51	
20	118	52.4		47.3	315	58.2	101		38.7	2	52	1 44	2 59	47	36	48	38	51	
21	133	52.1		47.1	330	27.3	101		38.5	2	54	1 06	42	35	45	47	30	50	
22	148	51.8		46.8	344	56.4	101		38.1	4	56	** **	2 21	21	18	55	46	20	50
23	163	51.5		46.6	359	25.6	102		37.7	4	58	** **	1 53	3 05	19	06	46	2 09	50
24	178	51.2	-22	46.3	13	54.7	101	+18	37.1	6	60 S	** **	1 11	2 46	19	19	45	1 56	50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 08 ^m 0		Mag: -3.9 PMG: 13 ^h 18 ^m		Mag: +1.1 PMG: 14 ^h 52 ^m		Mag: -2.5 PMG: 2 ^h 47 ^m		Mag: +0.6 PMG: 9 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	102	18.1	160	36.9	-21	40.6	136	57.5	-15	01.7	318	02.0	+15	07.0	222	57.2	-18	28.6
1	117	20.6	175	36.1		40.0	151	58.1		01.1	333	04.7		07.0	237	59.4		28.7
2	132	23.1	190	35.2		39.4	166	58.6	-15	00.4	348	07.3		07.1	253	01.6		28.7
3	147	25.5	205	34.4		38.8	181	59.2	-14	59.7	3	10.0		07.2	268	03.8		28.8
4	162	28.0	220	33.5		38.2	196	59.7		59.1	18	12.7		07.3	283	06.0		28.8
5	177	30.5	235	32.7	-21	37.6	212	00.3	-14	58.4	33	15.3	+15	07.3	298	08.2	-18	28.9
6	192	32.9	250	31.9	-21	37.0	227	00.9	-14	57.8	48	18.0	+15	07.4	313	10.4	-18	28.9
7	207	35.4	265	31.0		36.4	242	01.4		57.1	63	20.6		07.5	328	12.6		29.0
8	222	37.9	280	30.2		35.7	257	02.0		56.4	78	23.3		07.6	343	14.8		29.0
9	237	40.3	295	29.4		35.1	272	02.5		55.8	93	25.9		07.6	358	17.0		29.1
10	252	42.8	310	28.5		34.5	287	03.1		55.1	108	28.6		07.7	13	19.2		29.1
11	267	45.2	325	27.7	-21	33.9	302	03.7	-14	54.4	123	31.3	+15	07.8	28	21.4	-18	29.1
12	282	47.7	340	26.8	-21	33.3	317	04.2	-14	53.8	138	33.9	+15	07.9	43	23.7	-18	29.2
13	297	50.2	355	26.0		32.7	332	04.8		53.1	153	36.6		07.9	58	25.9		29.2
14	312	52.6	10	25.2		32.0	347	05.3		52.4	168	39.2		08.0	73	28.1		29.3
15	327	55.1	25	24.3		31.4	2	05.9		51.8	183	41.9		08.1	88	30.3		29.3
16	342	57.6	40	23.5		30.8	17	06.5		51.1	198	44.5		08.1	103	32.5		29.4
17	358	00.0	55	22.7	-21	30.2	32	07.0	-14	50.4	213	47.2	+15	08.2	118	34.7	-18	29.4
18	13	02.5	70	21.8	-21	29.5	47	07.6	-14	49.8	228	49.9	+15	08.3	133	36.9	-18	29.5
19	28	05.0	85	21.0		28.9	62	08.1		49.1	243	52.5		08.4	148	39.1		29.5
20	43	07.4	100	20.2		28.3	77	08.7		48.4	258	55.2		08.4	163	41.3		29.6
21	58	09.9	115	19.4		27.7	92	09.3		47.8	273	57.8		08.5	178	43.5		29.6
22	73	12.3	130	18.5		27.0	107	09.8		47.1	289	00.5		08.6	193	45.7		29.7
23	88	14.8	145	17.7		26.4	122	10.4		46.4	304	03.2		08.7	208	48.0		29.7
24	103	17.3	160	16.9	-21	25.8	137	11.0	-14	45.8	319	05.8	+15	08.7	223	50.2	-18	29.8
Dif	—		-8		+6		+6		+7		+27		+1		+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3			Edad: 12 ^d 9 PHE	SD: 15 ^h 2				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 8				PMG: 23 ^h 53 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	178	51.2	-22 46.3	13	54.7	+18 37.1	6	60 N	15 09	16 05	17 01	15 17 62	7 41 40	
1	193	51.0	46.0	28	23.9 ¹⁰²	36.5	8	58	26	16	08	29 61	28 42	
2	208	50.7	45.8	42	53.1 ¹⁰²	35.7	8	56	40	26	15	40 60	17 43	
3	223	50.4	45.5	57	22.4 ¹⁰³	34.9	8	54	15 52	35	21	49 59	7 08 43	
4	238	50.1	45.3	71	51.6 ¹⁰²	33.9	10	52	16 02	43	26	15 58 58	6 59 44	
5	253	49.8	-22 45.0	86	20.9 ¹⁰³	+18 32.9	10	50	16 12	16 50	17 31	16 05 58	6 52 44	
6	268	49.5	-22 44.8	100	50.3 ¹⁰⁴	+18 31.8	11	45	16 32	17 05	17 42	16 21 56	6 35 46	
7	283	49.3	44.5	115	19.6 ¹⁰³	30.6	12	40	16 48	18	17 52	35 54	22 46	
8	298	49.0	44.3	129	49.0 ¹⁰⁴	29.3	13	35	17 01	29	18 01	46 54	11 47	
9	313	48.7	44.0	144	18.4 ¹⁰⁴	27.8	15	30	13	40	09	16 56 53	6 01 47	
10	328	48.4	43.7	158	47.8 ¹⁰⁴	26.3	15	20	34	17 58	25	17 12 52	5 44 48	
11	343	48.1	-22 43.5	173	17.3 ¹⁰⁵	+18 24.7	16	10 N	17 52	18 14	18 41	17 27 51	5 29 49	
12	358	47.8	-22 43.2	187	46.8 ¹⁰⁵	+18 23.0	17	0	18 09	18 31	18 57	17 41 49	5 15 50	
13	13	47.6	43.0	202	16.4 ¹⁰⁶	21.3	17	10 S	26	18 48	19 15	17 55 48	5 01 51	
14	28	47.3	42.7	216	45.9 ¹⁰⁵	19.4	19	20	18 44	19 08	19 37	18 09 47	4 46 51	
15	43	47.0	42.4	231	15.5 ¹⁰⁶	17.4	20	30	19 05	32	20 05	26 46	28 53	
16	58	46.7	42.2	245	45.2 ¹⁰⁷	15.4	20	35	18	19 47	23	36 45	18 53	
17	73	46.4	-22 41.9	260	14.8 ¹⁰⁶	+18 13.2	22	40	19 32	20 05	20 46	18 47 44	4 07 53	
18	88	46.1	-22 41.6	274	44.5 ¹⁰⁷	+18 11.0	22	45	19 49	20 26	21 15	19 00 43	3 53 55	
19	103	45.9	41.4	289	14.3 ¹⁰⁸	08.6	24	50	20 11	20 55	21 57	16 41	37 55	
20	118	45.6	41.1	303	44.0 ¹⁰⁷	06.2	24	52	21	21 09	22 22	24 40	29 56	
21	133	45.3	40.8	318	13.8 ¹⁰⁸	03.7	25	54	33	26	22 59	32 39	20 57	
22	148	45.0	40.6	332	43.7 ¹⁰⁹	+18 01.1	26	56	20 46	21 46	** ** *	41 39	3 10 57	
23	163	44.7	40.3	347	13.6 ¹⁰⁹	+17 58.4	27	58	21 02	22 13	** ** *	19 52 37	2 59 58	
24	178	44.5	-22 40.0	1	43.5 ¹⁰⁹	+17 55.6	28	60 S	21 21	22 52	** ** *	20 04 36	2 46 59	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 04 ^m 0		Mag: -3.9 PMG: 13 ^h 20 ^m			Mag: +1.1 PMG: 14 ^h 51 ^m			Mag: -2.5 PMG: 2 ^h 43 ^m			Mag: +0.6 PMG: 9 ^h 03 ^m		
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	103	17.3	160	16.9	-21 25.8	137	11.0	-14 45.8	319	05.8	+15 08.7	223	50.2	-18 29.8
1	118	19.7	175	16.0	25.1	152	11.5	45.1	334	08.5	08.8	238	52.4	29.8
2	133	22.2	190	15.2	24.5	167	12.1	44.4	349	11.2	08.9	253	54.6	29.8
3	148	24.7	205	14.4	23.9	182	12.6	43.7	4	13.8	09.0	268	56.8	29.9
4	163	27.1	220	13.5	23.2	197	13.2	43.1	19	16.5	09.0	283	59.0	29.9
5	178	29.6	235	12.7	-21 22.6	212	13.8	-14 42.4	34	19.1	+15 09.1	299	01.2	-18 30.0
6	193	32.1	250	11.9	-21 22.0	227	14.3	-14 41.7	49	21.8	+15 09.2	314	03.4	-18 30.0
7	208	34.5	265	11.1	21.3	242	14.9	41.1	64	24.5	09.3	329	05.6	30.1
8	223	37.0	280	10.2	20.7	257	15.5	40.4	79	27.1	09.3	344	07.8	30.1
9	238	39.5	295	09.4	20.0	272	16.0	39.7	94	29.8	09.4	359	10.1	30.2
10	253	41.9	310	08.6	19.4	287	16.6	39.1	109	32.5	09.5	14	12.3	30.2
11	268	44.4	325	07.8	-21 18.7	302	17.1	-14 38.4	124	35.1	+15 09.6	29	14.5	-18 30.3
12	283	46.8	340	06.9	-21 18.1	317	17.7	-14 37.7	139	37.8	+15 09.6	44	16.7	-18 30.3
13	298	49.3	355	06.1	17.5	332	18.3	37.0	154	40.5	09.7	59	18.9	30.4
14	313	51.8	10 05.3	16.8	347	18.8	36.4	36.4	169	43.1	09.8	74	21.1	30.4
15	328	54.2	25 04.5	16.2	2 19.4	35.7	35.7	35.7	184	45.8	09.9	89	23.3	30.4
16	343	56.7	40 03.7	15.5	17 20.0	35.0	35.0	35.0	199	48.5	09.9	104	25.5	30.5
17	358	59.2	55 02.8	-21 14.9	32 20.5	-14 34.3	34.3	34.3	214	51.1	+15 10.0	119	27.7	-18 30.5
18	14	01.6	70 02.0	-21 14.2	47 21.1	-14 33.7	33.7	33.7	229	53.8	+15 10.1	134	30.0	-18 30.6
19	29	04.1	85 01.2	13.6	62 21.7	33.0	33.0	33.0	244	56.5	10.2	149	32.2	30.6
20	44	06.6	100 00.4	12.9	77 22.2	32.3	32.3	32.3	259	59.1	10.3	164	34.4	30.7
21	59	09.0	114 59.6	12.3	92 22.8	31.7	31.7	31.7	275	01.8	10.3	179	36.6	30.7
22	74	11.5	129 58.7	11.6	107 23.4	31.0	31.0	31.0	290	04.5	10.4	194	38.8	30.8
23	89	14.0	144 57.9	10.9	122 23.9	30.3	30.3	30.3	305	07.1	10.5	209	41.0	30.8
24	104	16.4	159 57.1	-21 10.3	137 24.5	-14 29.6	29.6	29.6	320	09.8	+15 10.6	224	43.2	-18 30.9
Dif	—		-8		+6	+6		+7	+27		+1	+22		0

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 3				Edad: 13 ^d 9 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /1 20 ^h : 54 ^m /9 PMG: **h **m R°: **m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	44.5	-22	40.0	1	43.5	+17	55.6	29	52.7	29	58	7 08	8 04	9 00	16 19	66	8 21	32		
1	193	44.2		39.7	16	13.4		109				58	7 01	7 53	8 44	30 65		10 33			
2	208	43.9		39.5	30	43.4		110				56	6 55	43	30	40 63		8 00	34		
3	223	43.6		39.2	45	13.5		111				54	49	35	18	48 62		7 51	36		
4	238	43.3		38.9	59	43.5		110				52	44	27	8 07	16 56	60	43	37		
5	253	43.1	-22	38.7	74	13.7	+17	40.4	32	43.6	31	50	6 39	7 20	7 58	17 03	59	7 36	38		
6	268	42.8	-22	38.4	88	43.8	+17	37.1	33	33.7	34	45	6 28	7 05	7 38	17 17	58	7 21	40		
7	283	42.5		38.1	103	14.0		112				40	18	6 52	22	29 56		7 08	42		
8	298	42.2		37.8	117	44.2		112				35	09	41	7 08	40 54		6 58	42		
9	313	41.9		37.5	132	14.5		113				30	6 01	30	6 57	17 49	53	48	44		
10	328	41.7		37.3	146	44.8		113				20	5 45	6 12	36	18 04	51	32	46		
11	343	41.4	-22	37.0	161	15.2	+17	19.3	37	23.0	37	10 N	5 29	5 56	6 18	18 18	49	6 18	47		
12	358	41.1	-22	36.7	175	45.6	+17	15.5	38	11.6	39	0	5 13	5 39	6 02	18 30	48	6 05	48		
13	13	40.8		36.4	190	16.0		114				10 S	4 55	22	5 45	43 46		5 52	49		
14	28	40.5		36.1	204	46.5		115				20	33	5 02	26	18 56	44	37	52		
15	43	40.3		35.9	219	17.0	+17	03.6	41	07.7	41	30	4 05	4 38	5 05	19 12	41	21	53		
16	58	40.0		35.6	233	47.6	+16	59.5	41	23.0	41	35	3 47	23	4 53	21 40		11 55			
17	73	39.7	-22	35.3	248	18.2	+16	55.3	42	46.6	42	40	3 25	4 06	4 38	19 31	39	5 00	56		
18	88	39.4	-22	35.0	262	48.8	+16	51.0	43	42.2	44	45	2 56	3 44	4 21	19 43	37	4 48	57		
19	103	39.2		34.7	277	19.5		117				50	2 13	16	3 59	19 57	35	32	59		
20	118	38.9		34.4	291	50.2		117				52	1 48	3 01	49	20 04	34	25	59		
21	133	38.6		34.1	306	21.0		118				54	1 12	2 45	37	11 33		17 60			
22	148	38.3		33.9	320	51.8		118				56	** **	2 24	24	20 31		4 07	62		
23	163	38.1		33.6	335	22.7		119				58	** **	1 58	3 08	29 30		3 57	63		
24	178	37.8	-22	33.3	349	53.6	+16	23.7	47	28.4	47	60 S	** **	1 18	2 49	20 40	28	3 45	65		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 00 ^m 1		Mag: -3.9 PMG: 13 ^h 21 ^m				Mag: +1.1 PMG: 14 ^h 50 ^m				Mag: -2.5 PMG: 2 ^h 39 ^m				Mag: +0.6 PMG: 9 ^h 00 ^m			
	hG ♂		hG ♀		Dec		hG ♂		Dec		hG ♀		Dec		hG ♀		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	104	16.4	159	57.1	-21	10.3	137	24.5	-14	29.6	320	09.8	+15	10.6	224	43.2	-18	30.9
1	119	18.9	174	56.3		09.6	152	25.1		29.0	335	12.5		10.6	239	45.4		30.9
2	134	21.3	189	55.5		09.0	167	25.6		28.3	350	15.1		10.7	254	47.6		30.9
3	149	23.8	204	54.7		08.3	182	26.2		27.6	5	17.8		10.8	269	49.9		31.0
4	164	26.3	219	53.8		07.6	197	26.8		26.9	20	20.5		10.9	284	52.1		31.0
5	179	28.7	234	53.0	-21	07.0	212	27.3	-14	26.3	35	23.1	+15	10.9	299	54.3	-18	31.1
6	194	31.2	249	52.2	-21	06.3	227	27.9	-14	25.6	50	25.8	+15	11.0	314	56.5	-18	31.1
7	209	33.7	264	51.4		05.6	242	28.5		24.9	65	28.5		11.1	329	58.7		31.2
8	224	36.1	279	50.6		05.0	257	29.0		24.2	80	31.1		11.2	345	00.9		31.2
9	239	38.6	294	49.8		04.3	272	29.6		23.5	95	33.8		11.3	0	03.1		31.3
10	254	41.1	309	49.0		03.6	287	30.2		22.9	110	36.5		11.3	15	05.3		31.3
11	269	43.5	324	48.1	-21	03.0	302	30.7	-14	22.2	125	39.2	+15	11.4	30	07.6	-18	31.4
12	284	46.0	339	47.3	-21	02.3	317	31.3	-14	21.5	140	41.8	+15	11.5	45	09.8	-18	31.4
13	299	48.5	354	46.5		01.6	332	31.9		20.8	155	44.5		11.6	60	12.0		31.4
14	314	50.9	9	45.7		01.0	347	32.4		20.2	170	47.2		11.6	75	14.2		31.5
15	329	53.4	24	44.9	-21	00.3	2	33.0		19.5	185	49.8		11.7	90	16.4		31.5
16	344	55.8	39	44.1	-20	59.6	17	33.6		18.8	200	52.5		11.8	105	18.6		31.6
17	359	58.3	54	43.3	-20	58.9	32	34.2	-14	18.1	215	55.2	+15	11.9	120	20.8	-18	31.6
18	15	00.8	69	42.5	-20	58.3	47	34.7	-14	17.4	230	57.9	+15	12.0	135	23.1	-18	31.7
19	30	03.2	84	41.7		57.6	62	35.3		16.8	246	00.5		12.0	150	25.3		31.7
20	45	05.7	99	40.9		56.9	77	35.9		16.1	261	03.2		12.1	165	27.5		31.8
21	60	08.2	114	40.1		56.2	92	36.4		15.4	276	05.9		12.2	180	29.7		31.8
22	75	10.6	129	39.3		55.5	107	37.0		14.7	291	08.6		12.3	195	31.9		31.9
23	90	13.1	144	38.5		54.9	122	37.6		14.1	306	11.2		12.3	210	34.1		31.9
24	105	15.6	159	37.6	-20	54.2	137	38.1	-14	13.4	321	13.9	+15	12.4	225	36.3	-18	31.9
Dif	—		-8		+7		+6		+7		+27		+1		+22		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 7			Edad: 14 ^d 9 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6 PMG: 0 ^h 42 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	37.8	-22	33.3	349	53.6	+16	23.7	60 N	15 13	16 08	17 04	17 25 70	8 53 25
1	193	37.5		33.0	4	24.6 ¹²⁰		18.8	58	29	19	11	35 67	43 27
2	208	37.2		32.7	18	55.6 ¹²⁰		14.0	56	42	29	17	43 65	34 29
3	223	37.0		32.4	33	26.6 ¹²⁰		09.0	54	15 54	37	23	50 64	27 30
4	238	36.7		32.1	47	57.7 ¹²¹	+16	03.9	52	16 05	45	28	17 56 63	20 31
5	253	36.4	-22	31.8	62	28.8 ¹²¹	+15	58.8	51	16 14	16 52	17 33	18 02 61	8 14 32
6	268	36.1	-22	31.5	77	00.0 ¹²²	+15	53.6	52	16 34	17 07	17 44	18 15 58	8 01 35
7	283	35.9		31.2	91	31.2 ¹²²		48.4	54	16 50	20	17 54	25 56	7 50 37
8	298	35.6		30.9	106	02.5 ¹²³		43.0	54	17 03	31	18 02	34 54	40 39
9	313	35.3		30.6	120	33.8 ¹²³		37.6	54	15	41	11	42 53	32 40
10	328	35.0		30.3	135	05.2 ¹²⁴		32.2	54	35	17 59	26	18 55 50	18 42
11	343	34.8	-22	30.0	149	36.6 ¹²⁴	+15	26.6	56	17 53	18 15	18 42	19 07 48	7 05 45
12	358	34.5	-22	29.7	164	08.1 ¹²⁵	+15	21.0	56	18 09	18 32	18 58	19 18 45	6 53 47
13	13	34.2		29.4	178	39.5 ¹²⁴		15.3	57	26	18 49	19 16	29 43	41 49
14	28	33.9		29.1	193	11.1 ¹²⁶		09.6	57	20	18 44	19 09	19 38	40 41
15	43	33.7		28.8	207	42.7 ¹²⁶	+15	03.8	58	30	19 05	33	20 05	19 53 39
16	58	33.4		28.5	222	14.3 ¹²⁶	+14	57.9	59	35	18	19 47	23	20 01 37
17	73	33.1	-22	28.2	236	46.0 ¹²⁷	+14	52.0	59	40	19 32	20 04	20 45	20 10 35
18	88	32.8	-22	27.9	251	17.7 ¹²⁷	+14	46.0	60	45	19 49	20 26	21 14	20 20 33
19	103	32.6		27.6	265	49.5 ¹²⁸		39.9	61	50	20 10	20 54	21 55	32 30
20	118	32.3		27.3	280	21.3 ¹²⁸		33.8	61	52	21	21 08	22 19	38 29
21	133	32.0		27.0	294	53.1 ¹²⁸		27.6	62	54	32	24	22 54	44 28
22	148	31.8		26.7	309	25.0 ¹²⁹		21.3	63	56	20 45	21 44	** **	51 26
23	163	31.5		26.4	323	57.0 ¹³⁰		15.0	63	58	21 01	22 10	** **	20 59 24
24	178	31.2	-22	26.1	338	29.0 ¹³⁰	+14	08.6	64	60 S	21 19	22 47	** **	21 08 22
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 56 ^m 2		Mag: -3.9 PMG: 13 ^h 22 ^m		Mag: +1.1 PMG: 14 ^h 49 ^m		Mag: -2.5 PMG: 2 ^h 35 ^m		Mag: +0.6 PMG: 8 ^h 56 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	105	15.6	159	37.6	-20	54.2	137	38.1	-14	13.4				
1	120	18.0	174	36.8		53.5	152	38.7		12.7				
2	135	20.5	189	36.0		52.8	167	39.3		12.0				
3	150	23.0	204	35.2		52.1	182	39.9		11.3				
4	165	25.4	219	34.4		51.4	197	40.4		10.6				
5	180	27.9	234	33.6	-20	50.7	212	41.0	-14	10.0				
6	195	30.3	249	32.8	-20	50.1	227	41.6	-14	09.3				
7	210	32.8	264	32.0		49.4	242	42.1		08.6				
8	225	35.3	279	31.2		48.7	257	42.7		07.9				
9	240	37.7	294	30.4		48.0	272	43.3		07.2				
10	255	40.2	309	29.6		47.3	287	43.9		06.6				
11	270	42.7	324	28.8	-20	46.6	302	44.4	-14	05.9				
12	285	45.1	339	28.0	-20	45.9	317	45.0	-14	05.2				
13	300	47.6	354	27.2		45.2	332	45.6		04.5				
14	315	50.1	9	26.4		44.5	347	46.2		03.8				
15	330	52.5	24	25.6		43.8	2	46.7		03.1				
16	345	55.0	39	24.8		43.1	17	47.3		02.5				
17	0	57.4	54	24.1	-20	42.4	32	47.9	-14	01.8				
18	15	59.9	69	23.3	-20	41.7	47	48.5	-14	01.1				
19	31	02.4	84	22.5		41.0	62	49.0	-14	00.4				
20	46	04.8	99	21.7		40.3	77	49.6	-13	59.7				
21	61	07.3	114	20.9		39.6	92	50.2		59.0				
22	76	09.8	129	20.1		38.9	107	50.8		58.3				
23	91	12.2	144	19.3		38.2	122	51.3		57.7				
24	106	14.7	159	18.5	-20	37.5	137	51.9	-13	57.0				
Dif	—		-8		+7		+6		+7					
							+27		+1					
									+22					
									0					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 06 ^m 1				Edad: 15 ^d 9 PHE { SD: 14'9 PMG: 1 ^h 29 ^m R°: 45 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	31.2	-22	26.1	338	29.0	+14	08.6	60 N	7 07	8 03	8 58	18 35	70	9 18	20		
1	193	30.9		25.8	353	01.0 ¹³⁰	+14	02.2 ⁶⁴	58	7 00	7 52	42	42	68	10	22		
2	208	30.7		25.5	7	33.1 ¹³¹	+13	55.7 ⁶⁵	56	6 54	43	29	48	66	9 03	24		
3	223	30.4		25.2	22	05.2 ¹³¹		49.1 ⁶⁶	54	49	34	17	54	64	8 57	26		
4	238	30.1		24.9	36	37.4 ¹³²		42.5 ⁶⁶	52	43	26	8 07	18 59	62	51	28		
5	253	29.9	-22	24.6	51	09.6 ¹³²	+13	35.8 ⁶⁷	50	6 39	7 20	7 57	19 03	62	8 46	29		
6	268	29.6	-22	24.2	65	41.9 ¹³³	+13	29.1 ⁶⁷	45	6 28	7 04	7 38	19 13	59	8 36	31		
7	283	29.3		23.9	80	14.2 ¹³³		22.3 ⁶⁸	40	18	6 52	22	21	56	27	33		
8	298	29.0		23.6	94	46.5 ¹³³		15.5 ⁶⁸	35	09	41	7 09	28	54	19	35		
9	313	28.8		23.3	109	18.9 ¹³⁴		08.6 ⁶⁹	30	6 01	31	6 57	35	52	12	37		
10	328	28.5		23.0	123	51.3 ¹³⁴	+13	01.6 ⁷⁰	20	5 46	6 13	37	45	49	8 00	40		
11	343	28.2	-22	22.7	138	23.8 ¹³⁵	+12	54.6 ⁷⁰	10 N	5 30	5 56	6 19	19 55	46	7 50	42		
12	358	28.0	-22	22.3	152	56.3 ¹³⁵	+12	47.6 ⁷⁰	0	5 14	5 40	6 02	20 03	44	7 40	45		
13	13	27.7		22.0	167	28.9 ¹³⁶		40.5 ⁷¹	10 S	4 56	23	5 46	12	41	30	47		
14	28	27.4		21.7	182	01.5 ¹³⁶		33.3 ⁷²	20	34	5 03	28	21	39	19	50		
15	43	27.2		21.4	196	34.1 ¹³⁶		26.1 ⁷²	30	4 07	4 39	5 07	32	36	07	53		
16	58	26.9		21.1	211	06.8 ¹³⁷		18.8 ⁷³	35	3 49	25	4 54	38	34	7 00	55		
17	73	26.6	-22	20.7	225	39.5 ¹³⁷	+12	11.5 ⁷³	40	3 27	4 08	4 40	20 45	32	6 52	56		
18	88	26.4	-22	20.4	240	12.3 ¹³⁸	+12	04.2 ⁷³	45	2 58	3 46	4 23	20 53	30	6 43	58		
19	103	26.1		20.1	254	45.1 ¹³⁸	+11	56.7 ⁷⁵	50	2 17	18	4 02	21 02	27	31	62		
20	118	25.8		19.8	269	17.9 ¹³⁸		49.3 ⁷⁴	52	1 53	3 04	3 52	07	25	26	63		
21	133	25.6		19.5	283	50.8 ¹³⁹		41.8 ⁷⁵	54	1 18	2 48	40	12	24	20	64		
22	148	25.3		19.1	298	23.7 ¹³⁹		34.2 ⁷⁶	56	** ** *	28	27	17	23	14	66		
23	163	25.0		18.8	312	56.7 ¹⁴⁰		26.6 ⁷⁶	58	** ** *	2 02	3 11	23	21	6 06	68		
24	178	24.8	-22	18.5	327	29.7 ¹⁴⁰	+11	19.0 ⁷⁶	60 S	** ** *	1 25	2 53	21 30	18	5 58	70		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 52 ^m 2		Mag: -3.9 PMG: 13 ^h 23 ^m				Mag: +1.1 PMG: 14 ^h 48 ^m				Mag: -2.5 PMG: 2 ^h 30 ^m				Mag: +0.6 PMG: 8 ^h 53 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	106	14.7	159	18.5	-20	37.5	137	51.9	-13	57.0	322	18.2	+15	14.3	226	29.5	-18	33.0
1	121	17.2	174	17.7		36.7	152	52.5		56.3	337	20.9		14.4	241	31.7		33.1
2	136	19.6	189	16.9		36.0	167	53.1		55.6	352	23.5		14.5	256	33.9		33.1
3	151	22.1	204	16.1		35.3	182	53.6		54.9	7	26.2		14.6	271	36.2		33.1
4	166	24.6	219	15.3		34.6	197	54.2		54.2	22	28.9		14.7	286	38.4		33.2
5	181	27.0	234	14.5	-20	33.9	212	54.8	-13	53.5	37	31.6	+15	14.7	301	40.6	-18	33.2
6	196	29.5	249	13.8	-20	33.2	227	55.4	-13	52.9	52	34.3	+15	14.8	316	42.8	-18	33.3
7	211	31.9	264	13.0		32.5	242	55.9		52.2	67	37.0		14.9	331	45.0		33.3
8	226	34.4	279	12.2		31.7	257	56.5		51.5	82	39.6		15.0	346	47.2		33.4
9	241	36.9	294	11.4		31.0	272	57.1		50.8	97	42.3		15.1	1	49.5		33.4
10	256	39.3	309	10.6		30.3	287	57.7		50.1	112	45.0		15.1	16	51.7		33.5
11	271	41.8	324	09.8	-20	29.6	302	58.2	-13	49.4	127	47.7	+15	15.2	31	53.9	-18	33.5
12	286	44.3	339	09.0	-20	28.9	317	58.8	-13	48.7	142	50.4	+15	15.3	46	56.1	-18	33.5
13	301	46.7	354	08.3		28.1	332	59.4		48.0	157	53.1		15.4	61	58.3		33.6
14	316	49.2	9	07.5		27.4	348	00.0		47.3	172	55.8		15.5	77	00.5		33.6
15	331	51.7	24	06.7		26.7	3	00.6		46.7	187	58.4		15.6	92	02.8		33.7
16	346	54.1	39	05.9		26.0	18	01.1		46.0	203	01.1		15.6	107	05.0		33.7
17	1	56.6	54	05.1	-20	25.2	33	01.7	-13	45.3	218	03.8	+15	15.7	122	07.2	-18	33.8
18	16	59.1	69	04.3	-20	24.5	48	02.3	-13	44.6	233	06.5	+15	15.8	137	09.4	-18	33.8
19	32	01.5	84	03.6		23.8	63	02.9		43.9	248	09.2		15.9	152	11.6		33.9
20	47	04.0	99	02.8		23.1	78	03.4		43.2	263	11.9		16.0	167	13.8		33.9
21	62	06.4	114	02.0		22.3	93	04.0		42.5	278	14.6		16.0	182	16.1		33.9
22	77	08.9	129	01.2		21.6	108	04.6		41.8	293	17.2		16.1	197	18.3		34.0
23	92	11.4	144	00.4		20.9	123	05.2		41.1	308	19.9		16.2	212	20.5		34.0
24	107	13.8	158	59.7	-20	20.1	138	05.8	-13	40.4	323	22.6	+15	16.3	227	22.7	-18	34.1
Dif	—		-8		+7		+6		+7		+27		+1		+22		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 6				Edad: 16 ^d 9 PHE { SD: 14 ^h 8 PMG: 2 ^h 14 ^m													
	hG ☉		Dec		hG ☾		Dif							Hora R°		Hora R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	178	24.8	-22	18.5	327	29.7	+11	19.0	60 N	15 16	16 11	17 07	19 45	70	9 38	17		
1	193	24.5		18.2	342	02.7 ¹⁴⁰		11.3	58	32	22	14	50	68	32	20		
2	208	24.2		17.8	356	35.8 ¹⁴¹	+11	03.5	56	46	31	20	54	66	27	22		
3	223	24.0		17.5	11	08.9 ¹⁴¹	+10	55.8	54	15 57	40	25	19 58	64	23	23		
4	238	23.7		17.2	25	42.0 ¹⁴¹		47.9	52	16 07	47	30	20 01	63	19	24		
5	253	23.4	-22	16.8	40	15.2 ¹⁴²	+10	40.1	50	16 16	16 54	17 35	20 05	61	9 15	26		
6	268	23.2	-22	16.5	54	48.4 ¹⁴²	+10	32.2	45	16 36	17 09	17 46	20 12	58	9 07	29		
7	283	22.9		16.2	69	21.7 ¹⁴³		24.2	40	16 51	22	17 55	17 56		9 00	31		
8	298	22.6		15.8	83	55.0 ¹⁴³		16.2	35	17 05	33	18 04	22 54		8 54	33		
9	313	22.4		15.5	98	28.3 ¹⁴³		08.2	30	16	17 42	12	27 51		49	35		
10	328	22.1		15.2	113	01.7 ¹⁴⁴	+10	00.1	20	36	18 00	27	34 49		40	38		
11	343	21.8	-22	14.8	127	35.1 ¹⁴⁴	+9	52.0	10 N	17 54	18 16	18 43	20 41	46	8 32	41		
12	358	21.6	-22	14.5	142	08.5 ¹⁴⁴	+9	43.9	0	18 10	18 33	18 59	20 47	43	8 25	43		
13	13	21.3		14.2	156	42.0 ¹⁴⁵		35.7	10 S	27	18 50	19 17	20 53	41	17	46		
14	28	21.1		13.8	171	15.5 ¹⁴⁵		27.5	20	18 45	19 09	19 38	21 00	37	09	49		
15	43	20.8		13.5	185	49.0 ¹⁴⁵		19.2	30	19 05	33	20 05	08 34		8 00	52		
16	58	20.5		13.2	200	22.6 ¹⁴⁶		10.9	35	18	19 47	23	12 32		7 55	53		
17	73	20.3	-22	12.8	214	56.2 ¹⁴⁶	+9	02.6	40	19 32	20 04	20 45	21 17	30	7 48	56		
18	88	20.0	-22	12.5	229	29.8 ¹⁴⁶	+8	54.2	45	19 49	20 25	21 13	21 23	27	7 41	59		
19	103	19.7		12.1	244	03.4 ¹⁴⁶		45.8	50	20 10	20 52	21 53	29 25		33	61		
20	118	19.5		11.8	258	37.1 ¹⁴⁷		37.4	52	20	21 06	22 17	32 24		29	63		
21	133	19.2		11.4	273	10.8 ¹⁴⁷		28.9	54	31	22	22 49	36 22		24	65		
22	148	19.0		11.1	287	44.6 ¹⁴⁸		20.5	56	44	21 42	** **	40 20		20	66		
23	163	18.7		10.8	302	18.4 ¹⁴⁸		11.9	58	20 59	22 07	** **	44 18		14	68		
24	178	18.4	-22	10.4	316	52.2 ¹⁴⁸	+8	03.4	60 S	21 17	22 42	** **	21 48	17	7 08	70		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 48 ^m 3		Mag: -3.9 PMG: 13 ^h 25 ^m				Mag: +1.1 PMG: 14 ^h 47 ^m				Mag: -2.5 PMG: 2 ^h 26 ^m				Mag: +0.6 PMG: 8 ^h 49 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	13.8	158	59.7	-20	20.1	138	05.8	-13	40.4	323	22.6	+15	16.3	227	22.7	-18	34.1
1	122	16.3	173	58.9		19.4	153	06.3		39.7	338	25.3		16.4	242	24.9		34.1
2	137	18.8	188	58.1		18.7	168	06.9		39.1	353	28.0		16.5	257	27.2		34.2
3	152	21.2	203	57.3		17.9	183	07.5		38.4	8	30.7		16.5	272	29.4		34.2
4	167	23.7	218	56.5		17.2	198	08.1		37.7	23	33.4		16.6	287	31.6		34.2
5	182	26.2	233	55.8	-20	16.4	213	08.7	-13	37.0	38	36.1	+15	16.7	302	33.8	-18	34.3
6	197	28.6	248	55.0	-20	15.7	228	09.2	-13	36.3	53	38.7	+15	16.8	317	36.0	-18	34.3
7	212	31.1	263	54.2		15.0	243	09.8		35.6	68	41.4		16.9	332	38.3		34.4
8	227	33.6	278	53.4		14.2	258	10.4		34.9	83	44.1		17.0	347	40.5		34.4
9	242	36.0	293	52.7		13.5	273	11.0		34.2	98	46.8		17.0	2	42.7		34.5
10	257	38.5	308	51.9		12.7	288	11.6		33.5	113	49.5		17.1	17	44.9		34.5
11	272	40.9	323	51.1	-20	12.0	303	12.2	-13	32.8	128	52.2	+15	17.2	32	47.1	-18	34.5
12	287	43.4	338	50.4	-20	11.2	318	12.7	-13	32.1	143	54.9	+15	17.3	47	49.4	-18	34.6
13	302	45.9	353	49.6		10.5	333	13.3		31.4	158	57.6		17.4	62	51.6		34.6
14	317	48.3	8	48.8		09.8	348	13.9		30.7	174	00.3		17.5	77	53.8		34.7
15	332	50.8	23	48.0		09.0	3	14.5		30.0	189	03.0		17.5	92	56.0		34.7
16	347	53.3	38	47.3		08.3	18	15.1		29.3	204	05.7		17.6	107	58.2		34.8
17	2	55.7	53	46.5	-20	07.5	33	15.6	-13	28.7	219	08.3	+15	17.7	123	00.5	-18	34.8
18	17	58.2	68	45.7	-20	06.7	48	16.2	-13	28.0	234	11.0	+15	17.8	138	02.7	-18	34.8
19	33	00.7	83	45.0		06.0	63	16.8		27.3	249	13.7		17.9	153	04.9		34.9
20	48	03.1	98	44.2		05.2	78	17.4		26.6	264	16.4		18.0	168	07.1		34.9
21	63	05.6	113	43.4		04.5	93	18.0		25.9	279	19.1		18.0	183	09.3		35.0
22	78	08.0	128	42.7		03.7	108	18.6		25.2	294	21.8		18.1	198	11.6		35.0
23	93	10.5	143	41.9		03.0	123	19.1		24.5	309	24.5		18.2	213	13.8		35.1
24	108	13.0	158	41.1	-20	02.2	138	19.7	-13	23.8	324	27.2	+15	18.3	228	16.0	-18	35.1
Dif	—		-8		+7		+6		+7		+27		+1		+22		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3				Edad: 17 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1													
	PMG: 12 ^h 07 ^m 0				SD: 14 ^m 7 PMG: 2 ^h 58 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	18.4	-22	10.4	316	52.2	+8	03.4	60 N	7 06	8 01	8 56	20 55 70		9 55 16			
1	193	18.2		10.1	331	26.0 ¹⁴⁸	+7	54.8 ⁸⁶	58	6 59	7 51	40	20 58 68		52 18			
2	208	17.9		09.7	345	59.8 ¹⁴⁸		46.2 ⁸⁶	56	53	41	27	21 00 66		49 19			
3	223	17.6		09.4	0	33.7 ¹⁴⁹		37.5 ⁸⁷	54	48	33	16	02 64		46 2			
4	238	17.4		09.0	15	07.6 ¹⁴⁹		28.8 ⁸⁷	52	43	26	8 06	04 63		43 23			
5	253	17.1	-22	08.7	29	41.5 ¹⁴⁹	+7	20.1 ⁸⁷	50	6 38	7 19	7 56	21 06 61		9 41 24			
6	268	16.9	-22	08.3	44	15.5 ¹⁵⁰	+7	11.4 ⁸⁷	45	6 27	7 04	7 37	21 10 58		9 36 26			
7	283	16.6		08.0	58	49.5 ¹⁵⁰	+7	02.6 ⁸⁸	40	18	6 52	22	13 56		31 30			
8	298	16.3		07.6	73	23.5 ¹⁵⁰	+6	53.8 ⁸⁸	35	09	41	7 09	16 53		27 32			
9	313	16.1		07.3	87	57.5 ¹⁵⁰		45.0 ⁸⁸	30	6 01	31	6 57	18 52		24 33			
10	328	15.8		06.9	102	31.5 ¹⁵⁰		36.2 ⁸⁸	20	5 46	6 13	37	23 48		18 37			
11	343	15.6	-22	06.6	117	05.6 ¹⁵¹	+6	27.3 ⁸⁹	10 N	5 31	5 57	6 20	21 27 45		9 13 40			
12	358	15.3	-22	06.2	131	39.7 ¹⁵¹	+6	18.4 ⁸⁹	0	5 15	5 41	6 03	21 30 42		9 08 42			
13	13	15.1		05.9	146	13.8 ¹⁵¹		09.5 ⁸⁹	10 S	4 57	24	5 47	34 39		9 03 45			
14	28	14.8		05.5	160	47.9 ¹⁵¹	+6	00.6 ⁸⁹	20	36	5 05	29	37 37		8 58 48			
15	43	14.5		05.2	175	22.1 ¹⁵²	+5	51.6 ⁹⁰	30	4 08	4 41	5 08	42 33		52 51			
16	58	14.3		04.8	189	56.2 ¹⁵¹		42.6 ⁹⁰	35	3 51	27	4 56	44 31		48 54			
17	73	14.0	-22	04.4	204	30.4 ¹⁵²	+5	33.6 ⁹⁰	40	3 29	4 10	4 42	21 47 29		8 44 56			
18	88	13.8	-22	04.1	219	04.6 ¹⁵²	+5	24.6 ⁹⁰	45	3 01	3 49	4 25	21 50 27		8 40 58			
19	103	13.5		03.7	233	38.9 ¹⁵³		15.6 ⁹⁰	50	2 21	21	4 04	54 24		34 61			
20	118	13.3		03.4	248	13.1 ¹⁵²	+5	06.5 ⁹¹	52	1 57	3 08	3 54	56 22		32 62			
21	133	13.0		03.0	262	47.3 ¹⁵²	+4	57.4 ⁹¹	54	1 25	2 52	43	21 58 20		29 64			
22	148	12.7		02.6	277	21.6 ¹⁵³		48.3 ⁹¹	56	** ** *	32	30	22 00 19		26 66			
23	163	12.5		02.3	291	55.9 ¹⁵³		39.2 ⁹¹	58	** ** *	2 07	3 15	02 17		22 68			
24	178	12.2	-22	01.9	306	30.2 ¹⁵³	+4	30.0 ⁹²	60 S	** ** *	1 32	2 57	22 05 15		8 18 70			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 16 ^h 44 ^m 4		Mag: -3.9 PMG: 13 ^h 26 ^m			Mag: +1.1 PMG: 14 ^h 46 ^m			Mag: -2.5 PMG: 2 ^h 22 ^m			Mag: +0.6 PMG: 8 ^h 46 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	108	13.0	158	41.1	-20	02.2	138	19.7	-13	23.8	324	27.2	+15	18.3	228	16.0	-18	35.1
1	123	15.4	173	40.4		01.5	153	20.3		23.1	339	29.9		18.4	243	18.2		35.1
2	138	17.9	188	39.6	-20	00.7	168	20.9		22.4	354	32.6		18.5	258	20.4		35.2
3	153	20.4	203	38.8	-19	59.9	183	21.5		21.7	9	35.3		18.5	273	22.7		35.2
4	168	22.8	218	38.1		59.2	198	22.1		21.0	24	38.0		18.6	288	24.9		35.3
5	183	25.3	233	37.3	-19	58.4	213	22.7	-13	20.3	39	40.7	+15	18.7	303	27.1	-18	35.3
6	198	27.8	248	36.5	-19	57.6	228	23.2	-13	19.6	54	43.4	+15	18.8	318	29.3	-18	35.4
7	213	30.2	263	35.8		56.9	243	23.8		18.9	69	46.1		18.9	333	31.6		35.4
8	228	32.7	278	35.0		56.1	258	24.4		18.2	84	48.8		19.0	348	33.8		35.4
9	243	35.2	293	34.3		55.3	273	25.0		17.5	99	51.5		19.1	3	36.0		35.5
10	258	37.6	308	33.5		54.6	288	25.6		16.8	114	54.1		19.1	18	38.2		35.5
11	273	40.1	323	32.7	-19	53.8	303	26.2	-13	16.1	129	56.8	+15	19.2	33	40.4	-18	35.6
12	288	42.5	338	32.0	-19	53.0	318	26.8	-13	15.4	144	59.5	+15	19.3	48	42.7	-18	35.6
13	303	45.0	353	31.2		52.3	333	27.3		14.7	160	02.2		19.4	63	44.9		35.7
14	318	47.5	8	30.5		51.5	348	27.9		14.0	175	04.9		19.5	78	47.1		35.7
15	333	49.9	23	29.7		50.7	3	28.5		13.3	190	07.6		19.6	93	49.3		35.7
16	348	52.4	38	29.0		50.0	18	29.1		12.6	205	10.3		19.7	108	51.6		35.8
17	3	54.9	53	28.2	-19	49.2	33	29.7	-13	11.9	220	13.0	+15	19.7	123	53.8	-18	35.8
18	18	57.3	68	27.4	-19	48.4	48	30.3	-13	11.2	235	15.7	+15	19.8	138	56.0	-18	35.9
19	33	59.8	83	26.7		47.6	63	30.9		10.5	250	18.4		19.9	153	58.2		35.9
20	49	02.3	98	25.9		46.8	78	31.5		09.8	265	21.1		20.0	169	00.5		36.0
21	64	04.7	113	25.2		46.1	93	32.0		09.1	280	23.8		20.1	184	02.7		36.0
22	79	07.2	128	24.4		45.3	108	32.6		08.4	295	26.5		20.2	199	04.9		36.0
23	94	09.7	143	23.7		44.5	123	33.2		07.7	310	29.2		20.3	214	07.1		36.1
24	109	12.1	158	22.9	-19	43.7	138	33.8	-13	07.0	325	31.9	+15	20.3	229	09.3	-18	36.1
Dif	—		-8			+8	+6			+7	+27		+1	+22			0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 07 ^m 4			Edad: 18 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2 SD: 14:7 PMG: 3 ^h 40 ^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	12.2	-22 01.9	306	30.2	+4 30.0	91	60 N	15 20	16 15	17 10	22 05 71		10 11 15	
1	193	12.0		321	04.5 ¹⁵³	20.9	91	58	36	25	16	06 68		10 17	
2	208	11.7		335	38.8 ¹⁵³	11.7	92	56	15 49	34	22	06 66		08 19	
3	223	11.5		350	13.1 ¹⁵³	+4 02.5	92	54	16 00	42	28	06 65		07 20	
4	238	11.2		4	47.5 ¹⁵⁴	+3 53.3	92	52	10	50	33	07 63		06 22	
5	253	11.0	-22 00.1	19	21.8 ¹⁵³	+3 44.1	92	50	16 19	16 57	17 37	22 07 62		10 05 23	
6	268	10.7	-21 59.7	33	56.2 ¹⁵⁴	+3 34.8	93	45	16 38	17 11	17 48	22 08 59		10 02 27	
7	283	10.4		48	30.5 ¹⁵³	25.6	92	40	16 53	24	17 57	09 56		10 01 28	
8	298	10.2		63	04.9 ¹⁵⁴	16.3	93	35	17 07	34	18 06	09 54		9 59 31	
9	313	09.9		77	39.3 ¹⁵⁴	+3 07.1	92	30	18	17 44	14	10 51		57 33	
10	328	09.7		92	13.7 ¹⁵⁴	+2 57.8	93	20	38	18 01	29	11 48		55 36	
11	343	09.4	-21 57.9	106	48.1 ¹⁵⁴	+2 48.5	93	10 N	17 55	18 17	18 44	22 12 45		9 53 39	
12	358	09.2	-21 57.5	121	22.5 ¹⁵⁴	+2 39.1	94	0	18 11	18 33	18 59	22 12 43		9 50 43	
13	13	08.9		135	56.9 ¹⁵⁴	29.8	93	10 S	27	18 50	19 17	13 40		48 45	
14	28	08.7		150	31.3 ¹⁵⁴	20.5	93	20	18 45	19 09	19 38	14 36		46 48	
15	43	08.4		165	05.7 ¹⁵⁴	11.1	94	30	19 05	32	20 05	15 33		43 52	
16	58	08.2		179	40.1 ¹⁵⁴	+2 01.8	93	35	18	19 47	22	15 32		42 53	
17	73	07.9	-21 55.6	194	14.5 ¹⁵⁴	+1 52.4	94	40	19 31	20 03	20 44	22 16 29		9 40 56	
18	88	07.7	-21 55.3	208	48.9 ¹⁵⁴	+1 43.0	94	45	19 48	20 24	21 11	22 17 26		9 38 58	
19	103	07.4		223	23.4 ¹⁵⁵	33.7	93	50	20 08	20 51	21 51	18 23		35 62	
20	118	07.2		237	57.8 ¹⁵⁴	24.3	94	52	18	21 04	22 13	18 22		34 63	
21	133	06.9		252	32.2 ¹⁵⁴	14.9	94	54	29	20	22 44	18 21		33 64	
22	148	06.7		267	06.6 ¹⁵⁴	+1 05.5	94	56	42	21 39	** **	19 19		32 66	
23	163	06.4		281	41.0 ¹⁵⁴	+0 56.1	94	58	20 57	22 03	** **	19 18		30 68	
24	178	06.2	-21 53.0	296	15.4 ¹⁵⁴	+0 46.6	95	60 S	21 14	22 36	** **	22 20 15		9 28 71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 16 ^h 40 ^m 5		Mag: -3.9 PMG: 13 ^h 27 ^m			Mag: +1.1 PMG: 14 ^h 45 ^m			Mag: -2.5 PMG: 2 ^h 17 ^m			Mag: +0.6 PMG: 8 ^h 42 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	109	12.1	158	22.9	-19 43.7	138	33.8	-13 07.0	325	31.9	+15 20.3	229	09.3	-18 36.1	
1	124	14.6	173	22.2	42.9	153	34.4	06.3	340	34.6	20.4	244	11.6	36.2	
2	139	17.0	188	21.4	42.2	168	35.0	05.6	355	37.3	20.5	259	13.8	36.2	
3	154	19.5	203	20.7	41.4	183	35.6	04.9	10	40.0	20.6	274	16.0	36.3	
4	169	22.0	218	19.9	40.6	198	36.2	04.2	25	42.7	20.7	289	18.2	36.3	
5	184	24.4	233	19.2	-19 39.8	213	36.8	-13 03.5	40	45.4	+15 20.8	304	20.5	-18 36.3	
6	199	26.9	248	18.4	-19 39.0	228	37.3	-13 02.8	55	48.1	+15 20.9	319	22.7	-18 36.4	
7	214	29.4	263	17.7	38.2	243	37.9	02.1	70	50.8	20.9	334	24.9	36.4	
8	229	31.8	278	16.9	37.4	258	38.5	01.4	85	53.5	21.0	349	27.1	36.5	
9	244	34.3	293	16.2	36.6	273	39.1	-13 00.7	100	56.2	21.1	4	29.4	36.5	
10	259	36.8	308	15.4	35.8	288	39.7	-13 00.0	115	58.9	21.2	19	31.6	36.5	
11	274	39.2	323	14.7	-19 35.1	303	40.3	-12 59.3	131	01.6	+15 21.3	34	33.8	-18 36.6	
12	289	41.7	338	13.9	-19 34.3	318	40.9	-12 58.6	146	04.3	+15 21.4	49	36.0	-18 36.6	
13	304	44.1	353	13.2	33.5	333	41.5	57.9	161	07.0	21.5	64	38.3	36.7	
14	319	46.6	8	12.4	32.7	348	42.1	57.1	176	09.8	21.6	79	40.5	36.7	
15	334	49.1	23	11.7	31.9	3	42.7	56.4	191	12.5	21.6	94	42.7	36.8	
16	349	51.5	38	11.0	31.1	18	43.2	55.7	206	15.2	21.7	109	44.9	36.8	
17	4	54.0	53	10.2	-19 30.3	33	43.8	-12 55.0	221	17.9	+15 21.8	124	47.2	-18 36.8	
18	19	56.5	68	09.5	-19 29.5	48	44.4	-12 54.3	236	20.6	+15 21.9	139	49.4	-18 36.9	
19	34	58.9	83	08.7	28.7	63	45.0	53.6	251	23.3	22.0	154	51.6	36.9	
20	50	01.4	98	08.0	27.9	78	45.6	52.9	266	26.0	22.1	169	53.8	37.0	
21	65	03.9	113	07.3	27.1	93	46.2	52.2	281	28.7	22.2	184	56.1	37.0	
22	80	06.3	128	06.5	26.3	108	46.8	51.5	296	31.4	22.2	199	58.3	37.0	
23	95	08.8	143	05.8	25.5	123	47.4	50.8	311	34.1	22.3	215	00.5	37.1	
24	110	11.3	158	05.0	-19 24.7	138	48.0	-12 50.1	326	36.8	+15 22.4	230	02.7	-18 37.1	
Dif	—		-7		+8	+6		+7	+27		+1	+22			

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: 19 ^d 9 PHE { SD: 14'8 PMG: 4 ^h 22 ^m R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	06.2	-21	53.0	296	15.4	+0 46.6	60 N	7 05	8 00	8 54	23 16	71	10 26 15
1	193	05.9		52.6	310	49.8 ¹⁵⁴	37.2 ⁹⁴	58	6 58	7 49	39	14 69		27 17
2	208	05.7		52.2	325	24.2 ¹⁵⁴	27.8 ⁹⁴	56	52	40	26	12 68		27 19
3	223	05.4		51.8	339	58.6 ¹⁵⁴	18.4 ⁹⁴	54	47	32	14	11 66		27 21
4	238	05.2		51.5	354	33.0 ¹⁵⁴	+0 08.9 ⁹⁵	52	42	25	8 04	10 64		28 22
5	253	04.9	-21	51.1	9	07.4 ¹⁵⁴	-0 00.5 ⁹⁴	50	6 37	7 18	7 55	23 09	62	10 28 24
6	268	04.7	-21	50.7	23	41.8 ¹⁵⁴	-0 09.9 ⁹⁴	45	6 27	7 04	7 37	23 07	59	10 29 27
7	283	04.4		50.3	38	16.1 ¹⁵³	19.4 ⁹⁵	40	18	6 51	21	05 56		29 30
8	298	04.2		49.9	52	50.5 ¹⁵⁴	28.8 ⁹⁴	35	09	41	7 08	03 54		30 32
9	313	03.9		49.5	67	24.8 ¹⁵³	38.2 ⁹⁴	30	6 01	31	6 57	23 01	53	30 34
10	328	03.7		49.1	81	59.2 ¹⁵⁴	47.7 ⁹⁵	20	5 46	6 14	37	22 59	49	31 37
11	343	03.4	-21	48.8	96	33.5 ¹⁵³	-0 57.1 ⁹⁴	10 N	5 32	5 58	6 20	22 57	46	10 32 40
12	358	03.2	-21	48.4	111	07.8 ¹⁵³	-1 06.6 ⁹⁵	0	5 16	5 42	6 04	22 55	43	10 33 42
13	13	02.9		48.0	125	42.1 ¹⁵³	16.0 ⁹⁴	10 S	4 58	25	5 48	53 40		33 46
14	28	02.7		47.6	140	16.4 ¹⁵³	25.4 ⁹⁴	20	37	5 06	30	50 38		34 48
15	43	02.4		47.2	154	50.7 ¹⁵³	34.9 ⁹⁵	30	4 10	4 43	5 10	48 34		35 52
16	58	02.2		46.8	169	24.9 ¹⁵²	44.3 ⁹⁴	35	3 53	29	4 58	47 32		35 54
17	73	01.9	-21	46.4	183	59.2 ¹⁵³	-1 53.7 ⁹⁴	40	3 32	4 12	4 44	22 45	30	10 36 56
18	88	01.7	-21	46.0	198	33.4 ¹⁵²	-2 03.2 ⁹⁵	45	3 04	3 51	4 28	22 43	28	10 36 59
19	103	01.5		45.6	213	07.6 ¹⁵²	12.6 ⁹⁴	50	2 25	24	4 07	41 25		37 62
20	118	01.2		45.2	227	41.8 ¹⁵²	22.0 ⁹⁴	52	2 02	3 11	3 57	40 23		37 63
21	133	01.0		44.8	242	16.0 ¹⁵²	31.4 ⁹⁴	54	1 32	2 55	46	39 22		37 65
22	148	00.7		44.4	256	50.1 ¹⁵¹	40.8 ⁹⁴	56	0 28	36	34	38 20		38 67
23	163	00.5		44.0	271	24.2 ¹⁵¹	50.2 ⁹⁴	58	** **	2 13	19	37 18		38 69
24	178	00.2	-21	43.6	285	58.3 ¹⁵¹	-2 59.6 ⁹⁴	60 S	** **	1 40	3 01	22 35	16	10 39 71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 36 ^m 5		Mag: -3.9 PMG: 13 ^h 28 ^m		Mag: +1.1 PMG: 14 ^h 44 ^m		Mag: -2.5 PMG: 2 ^h 13 ^m		Mag: +0.6 PMG: 8 ^h 39 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	110	11.3	158	05.0	-19	24.7	138	48.0	-12	50.1	326	36.8	+15	22.4	230	02.7	-18	37.1
1	125	13.7	173	04.3		23.9	153	48.6		49.4	341	39.5		22.5	245	05.0		37.2
2	140	16.2	188	03.6		23.0	168	49.2		48.7	356	42.2		22.6	260	07.2		37.2
3	155	18.6	203	02.8		22.2	183	49.8		48.0	11	44.9		22.7	275	09.4		37.3
4	170	21.1	218	02.1		21.4	198	50.4		47.3	26	47.6		22.8	290	11.7		37.3
5	185	23.6	233	01.3	-19	20.6	213	50.9	-12	46.5	41	50.3	+15	22.9	305	13.9	-18	37.3
6	200	26.0	248	00.6	-19	19.8	228	51.5	-12	45.8	56	53.0	+15	23.0	320	16.1	-18	37.4
7	215	28.5	262	59.9		19.0	243	52.1		45.1	71	55.7		23.0	335	18.3		37.4
8	230	31.0	277	59.1		18.2	258	52.7		44.4	86	58.5		23.1	350	20.6		37.5
9	245	33.4	292	58.4		17.4	273	53.3		43.7	102	01.2		23.2	5	22.8		37.5
10	260	35.9	307	57.7		16.6	288	53.9		43.0	117	03.9		23.3	20	25.0		37.5
11	275	38.4	322	56.9	-19	15.7	303	54.5	-12	42.3	132	06.6	+15	23.4	35	27.2	-18	37.6
12	290	40.8	337	56.2	-19	14.9	318	55.1	-12	41.6	147	09.3	+15	23.5	50	29.5	-18	37.6
13	305	43.3	352	55.5		14.1	333	55.7		40.9	162	12.0		23.6	65	31.7		37.7
14	320	45.7	7	54.8		13.3	348	56.3		40.2	177	14.7		23.7	80	33.9		37.7
15	335	48.2	22	54.0		12.5	3	56.9		39.5	192	17.4		23.8	95	36.2		37.7
16	350	50.7	37	53.3		11.6	18	57.5		38.7	207	20.1		23.8	110	38.4		37.8
17	5	53.1	52	52.6	-19	10.8	33	58.1	-12	38.0	222	22.8	+15	23.9	125	40.6	-18	37.8
18	20	55.6	67	51.8	-19	10.0	48	58.7	-12	37.3	237	25.5	+15	24.0	140	42.8	-18	37.9
19	35	58.1	82	51.1		09.2	63	59.3		36.6	252	28.3		24.1	155	45.1		37.9
20	51	00.5	97	50.4		08.4	78	59.9		35.9	267	31.0		24.2	170	47.3		37.9
21	66	03.0	112	49.7		07.5	94	00.5		35.2	282	33.7		24.3	185	49.5		38.0
22	81	05.5	127	48.9		06.7	109	01.1		34.5	297	36.4		24.4	200	51.8		38.0
23	96	07.9	142	48.2		05.9	124	01.7		33.8	312	39.1		24.5	215	54.0		38.1
24	111	10.4	157	47.5	-19	05.0	139	02.3	-12	33.1	327	41.8	+15	24.6	230	56.2	-18	38.1
Dif	—		-7 +8				+6 +7				+27 +1				+22 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3			Edad: 20 ^d 9 PHE { 4 ^h : 54/5 12 ^h : 54/7 20 ^h : 54/8					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 08 ^m 2			SD: 14/8 PMG: 5 ^h 05 ^m R°: 43 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	m	h m m	m	
0	178	00.2	-21 43.6	285	58.3	-2 59.6	60 N	15 24	16 18	17 13	** ** *		10 41	17	
1	193	00.0	43.2	300	32.4 ¹⁵¹	-3 09.0	58	39	28	19	** ** *		44	19	
2	207	59.7	42.8	315	06.5 ¹⁵¹	18.3	56	15 52	37	25	** ** *		46	21	
3	222	59.5	42.4	329	40.5 ¹⁵⁰	27.7	54	16 03	45	30	** ** *		48	22	
4	237	59.3	42.0	344	14.5 ¹⁵⁰	37.1	52	13	53	35	** ** *		50	24	
5	252	59.0	-21 41.6	358	48.5 ¹⁵⁰	-3 46.4	50	16 22	16 59	17 40	** ** *		10 52	25	
6	267	58.8	-21 41.2	13	22.5 ¹⁵⁰	-3 55.7	45	16 40	17 13	17 50	** ** *		10 56	28	
7	282	58.5	40.8	27	56.4 ¹⁴⁹	-4 05.1	40	16 56	25	17 59	** ** *		10 59	31	
8	297	58.3	40.4	42	30.3 ¹⁴⁹	14.4	35	17 08	36	18 07	23 57	56	11 02	33	
9	312	58.1	40.0	57	04.2 ¹⁴⁹	23.7	30	20	17 46	15	54 54		04 35		
10	327	57.8	39.6	71	38.1 ¹⁴⁹	32.9	20	39	18 03	30	48 50		08 38		
11	342	57.6	-21 39.2	86	11.9 ¹⁴⁸	-4 42.2	10 N	17 56	18 18	18 44	23 43	47	11 12	41	
12	357	57.3	-21 38.8	100	45.7 ¹⁴⁸	-4 51.5	0	18 12	18 34	19 00	23 38	45	11 15	44	
13	12	57.1	38.4	115	19.5 ¹⁴⁸	-5 00.7	10 S	28	18 51	17	33 42		19 46		
14	27	56.8	38.0	129	53.2 ¹⁴⁷	10.0	20	18 45	19 09	19 38	28 39		22 50		
15	42	56.6	37.6	144	26.9 ¹⁴⁷	19.2	30	19 05	32	20 05	22 36		27 53		
16	57	56.4	37.2	159	00.5 ¹⁴⁶	28.4	35	17	19 46	22	19 34		29 55		
17	72	56.1	-21 36.8	173	34.2 ¹⁴⁷	-5 37.6	40	19 31	20 03	20 43	23 15	32	11 32	57	
18	87	55.9	-21 36.3	188	07.8 ¹⁴⁶	-5 46.7	45	19 47	20 23	21 10	23 11	29	11 35	60	
19	102	55.6	35.9	202	41.3 ¹⁴⁵	-5 55.9	50	20 07	20 49	21 48	06 26		39 63		
20	117	55.4	35.5	217	14.8 ¹⁴⁵	-6 05.0	52	17	21 03	22 10	03 26		40 65		
21	132	55.2	35.1	231	48.3 ¹⁴⁵	14.1	54	28	18	22 39	23 01	24	42 66		
22	147	54.9	34.7	246	21.8 ¹⁴⁵	23.2	56	40	36	23 30	22 58	22	45 67		
23	162	54.7	34.3	260	55.2 ¹⁴⁴	32.3	58	20 54	21 59	** ** *	55 20		47 70		
24	177	54.5	-21 33.9	275	28.5 ¹⁴³	-6 41.3	60 S	21 11	22 30	** ** *	22 51	18	11 50	71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 32 ^m 6		Mag: -3.9 PMG: 13 ^h 29 ^m			Mag: +1.1 PMG: 14 ^h 43 ^m			Mag: -2.5 PMG: 2 ^h 09 ^m			Mag: +0.6 PMG: 8 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	111	10.4	157	47.5	-19 05.0	139	02.3	-12 33.1	327	41.8	+15 24.6	230	56.2	-18 38.1	
1	126	12.9	172	46.7	04.2	154	02.9	32.3	342	44.5	24.6	245	58.4	38.2	
2	141	15.3	187	46.0	03.4	169	03.5	31.6	357	47.2	24.7	261	00.7	38.2	
3	156	17.8	202	45.3	02.6	184	04.0	30.9	12	50.0	24.8	276	02.9	38.2	
4	171	20.2	217	44.6	01.7	199	04.6	30.2	27	52.7	24.9	291	05.1	38.3	
5	186	22.7	232	43.9	-19 00.9	214	05.2	-12 29.5	42	55.4	+15 25.0	306	07.4	-18 38.3	
6	201	25.2	247	43.1	-19 00.1	229	05.8	-12 28.8	57	58.1	+15 25.1	321	09.6	-18 38.4	
7	216	27.6	262	42.4	-18 59.2	244	06.4	28.1	73	00.8	25.2	336	11.8	38.4	
8	231	30.1	277	41.7	58.4	259	07.0	27.4	88	03.5	25.3	351	14.0	38.4	
9	246	32.6	292	41.0	57.5	274	07.6	26.6	103	06.2	25.4	6	16.3	38.5	
10	261	35.0	307	40.3	56.7	289	08.2	25.9	118	08.9	25.5	21	18.5	38.5	
11	276	37.5	322	39.5	-18 55.9	304	08.8	-12 25.2	133	11.7	+15 25.5	36	20.7	-18 38.6	
12	291	40.0	337	38.8	-18 55.0	319	09.4	-12 24.5	148	14.4	+15 25.6	51	23.0	-18 38.6	
13	306	42.4	352	38.1	54.2	334	10.0	23.8	163	17.1	25.7	66	25.2	38.6	
14	321	44.9	7 37.4	53.3	349	10.6	23.1	178	19.8	25.8		81	27.4	38.7	
15	336	47.4	22 36.7	52.5	4 11.2	22.4	193	22.5	25.9			96	29.7	38.7	
16	351	49.8	37 35.9	51.7	19 11.8	21.6	208	25.2	26.0			111	31.9	38.8	
17	6 52.3	52 35.2	-18 50.8	34 12.4	-12 20.9	223	28.0	+15 26.1	126	34.1	-18 38.8				
18	21 54.7	67 34.5	-18 50.0	49 13.0	-12 20.2	238	30.7	+15 26.2	141	36.3	-18 38.8				
19	36 57.2	82 33.8	49.1	64 13.6	19.5	253	33.4	26.3	156	38.6	38.9				
20	51 59.7	97 33.1	48.3	79 14.2	18.8	268	36.1	26.4	171	40.8	38.9				
21	67 02.1	112 32.4	47.4	94 14.8	18.1	283	38.8	26.4	186	43.0	39.0				
22	82 04.6	127 31.7	46.6	109 15.4	17.3	298	41.5	26.5	201	45.3	39.0				
23	97 07.1	142 31.0	45.7	124 16.0	16.6	313	44.2	26.6	216	47.5	39.0				
24	112 09.5	157 30.2	-18 44.9	139 16.6	-12 15.9	328	47.0	+15 26.7	231	49.7	-18 39.1				
Dif	—		-7 +8			+6 +7			+27 +1		+22 0				

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16:3 PMG: 12 ^h 08 ^m 6				Edad: 21 ^d 9 PHE { SD: 15:0 PMG: 5 ^h 48 ^m R°: 46 ^m 4 ^h : 55:0 12 ^h : 55:2 20 ^h : 55:4																	
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	177	54.5	-21	33.9	275	28.5	-6	41.3	60 N	7	03	7	57	8	51	0	27	73	10	58	20	
1	192	54.2		33.4	290	01.9 ¹⁴⁴		50.3	58	6	57	47	36		23	71	11	03	22			
2	207	54.0		33.0	304	35.1 ¹⁴²		-6	59.3	56	51	39	24		20	68		07	24			
3	222	53.7		32.6	319	08.4 ¹⁴³		-7	08.3	54	46	31	13		17	66		11	25			
4	237	53.5		32.2	333	41.6 ¹⁴²		17.3	52	41	24	8	03		14	65		14	27			
5	252	53.3	-21	31.8	348	14.7 ¹⁴¹		-7	26.2	50	6	37	7	54	0	11	64	11	17	29		
6	267	53.0	-21	31.4	2	47.8 ¹⁴¹		-7	35.1	45	6	26	7	03	7	36	0	06	60	11	24	31
7	282	52.8		30.9	17	20.9 ¹⁴¹		44.0	40	17	6	51	21		0	01	58	30	33			
8	297	52.6		30.5	31	53.9 ¹⁴⁰		-7	52.9	35	09	40	7	08	**	**	**	35	35			
9	312	52.3		30.1	46	26.9 ¹⁴⁰		-8	01.7	30	6	01	31	6	57	**	**	**	39	37		
10	327	52.1		29.7	60	59.8 ¹³⁹		10.5	20	5	47	6	14	38	**	**	**	46	41			
11	342	51.9	-21	29.2	75	32.7 ¹³⁹		-8	19.3	10 N	5	32	5	58	6	21	**	**	**	11	53	43
12	357	51.6	-21	28.8	90	05.5 ¹³⁸		-8	28.0	0	5	17	5	43	6	05	**	**	**	11	59	46
13	12	51.4		28.4	104	38.3 ¹³⁸		36.7	10 S	4	59	26	5	49	**	**	**	12	05	49		
14	27	51.2		28.0	119	11.0 ¹³⁷		45.4	20	39	5	07	32		**	**	**	12	51			
15	42	50.9		27.5	133	43.7 ¹³⁷		-8	54.1	30	4	12	4	45	12	23	58	40	20	54		
16	57	50.7		27.1	148	16.3 ¹³⁶		-9	02.7	35	3	55	31	5	00	53	38	24	56			
17	72	50.4	-21	26.7	162	48.9 ¹³⁶		-9	11.3	40	3	34	4	14	4	46	23	47	36	12	29	58
18	87	50.2	-21	26.3	177	21.4 ¹³⁵		-9	19.8	45	3	07	3	54	4	30	23	40	34	12	35	61
19	102	50.0		25.8	191	53.9 ¹³⁵		28.4	50	2	29	28	10		32	31	42	64				
20	117	49.8		25.4	206	26.3 ¹³⁴		36.9	52	2	07	3	15	4	00	29	29	45	65			
21	132	49.5		25.0	220	58.7 ¹³⁴		45.3	54	1	38	2	59	3	49	25	27	48	67			
22	147	49.3		24.5	235	31.0 ¹³³		-9	53.8	56	0	47	41	37	20	26	52	69				
23	162	49.1		24.1	250	03.2 ¹³²		-10	02.1	58	**	**	2	18	23	15	24	12	57	70		
24	177	48.8	-21	23.7	264	35.4 ¹³²		-10	10.5	60 S	**	**	1	47	3	06	23	09	22	13	01	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 28 ^m 7		Mag: -3.9 PMG: 13 ^h 31 ^m		Mag: +1.1 PMG: 14 ^h 42 ^m		Mag: -2.5 PMG: 2 ^h 04 ^m		Mag: +0.6 PMG: 8 ^h 31 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	112	09.5	157	30.2	-18	44.9	139	16.6	-12	15.9	328	47.0	+15	26.7	231	49.7	-18	39.1
1	127	12.0	172	29.5		44.0	154	17.2		15.2	343	49.7		26.8	246	52.0		39.1
2	142	14.5	187	28.8		43.2	169	17.8		14.5	358	52.4		26.9	261	54.2		39.2
3	157	16.9	202	28.1		42.3	184	18.4		13.8	13	55.1		27.0	276	56.4		39.2
4	172	19.4	217	27.4		41.5	199	19.0		13.0	28	57.8		27.1	291	58.7		39.2
5	187	21.8	232	26.7	-18	40.6	214	19.6	-12	12.3	44	00.6	+15	27.2	307	00.9	-18	39.3
6	202	24.3	247	26.0	-18	39.8	229	20.2	-12	11.6	59	03.3	+15	27.3	322	03.1	-18	39.3
7	217	26.8	262	25.3		38.9	244	20.8		10.9	74	06.0		27.4	337	05.4		39.4
8	232	29.2	277	24.6		38.0	259	21.4		10.2	89	08.7		27.4	352	07.6		39.4
9	247	31.7	292	23.9		37.2	274	22.0		09.5	104	11.4		27.5	7	09.8		39.4
10	262	34.2	307	23.2		36.3	289	22.7		08.7	119	14.2		27.6	22	12.1		39.5
11	277	36.6	322	22.5	-18	35.5	304	23.3	-12	08.0	134	16.9	+15	27.7	37	14.3	-18	39.5
12	292	39.1	337	21.7	-18	34.6	319	23.9	-12	07.3	149	19.6	+15	27.8	52	16.5	-18	39.6
13	307	41.6	352	21.0		33.7	334	24.5		06.6	164	22.3		27.9	67	18.8		39.6
14	322	44.0	7	20.3		32.9	349	25.1		05.9	179	25.0		28.0	82	21.0		39.6
15	337	46.5	22	19.6		32.0	4	25.7		05.1	194	27.8		28.1	97	23.2		39.7
16	352	49.0	37	18.9		31.1	19	26.3		04.4	209	30.5		28.2	112	25.5		39.7
17	7	51.4	52	18.2	-18	30.3	34	26.9	-12	03.7	224	33.2	+15	28.3	127	27.7	-18	39.8
18	22	53.9	67	17.5	-18	29.4	49	27.5	-12	03.0	239	35.9	+15	28.4	142	29.9	-18	39.8
19	37	56.3	82	16.8		28.5	64	28.1		02.3	254	38.6		28.5	157	32.2		39.8
20	52	58.8	97	16.1		27.7	79	28.7		01.5	269	41.4		28.6	172	34.4		39.9
21	68	01.3	112	15.4		26.8	94	29.3		00.8	284	44.1		28.6	187	36.6		39.9
22	83	03.7	127	14.7		25.9	109	29.9	-12	00.1	299	46.8		28.7	202	38.9		39.9
23	98	06.2	142	14.0		25.1	124	30.5	-11	59.4	314	49.5		28.8	217	41.1		40.0
24	113	08.7	157	13.3	-18	24.2	139	31.1	-11	58.7	329	52.3	+15	28.9	232	43.3	-18	40.0
Dif	—		-7		+9		+6		+7		+27		+1		+22		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 08 ^m 9			Edad: 22 ^d 9 PHE { SD: 15/1 PMG: 6 ^h 34 ^m					4 ^h : 55/6 12 ^h : 55/9 20 ^h : 56/1 R°: 48 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	177	48.8	-21 23.7	264	35.4	-10 10.5		60 N	15 29	16 22	17 16	1 40 74		11 18 24	
1	192	48.6	23.2	279	07.5 ¹³¹	18.8	83	58	43	32	22	34 71		25 26	
2	207	48.4	22.8	293	39.6 ¹³¹	27.1	82	56	15 56	41	28	28 70		31 28	
3	222	48.1	22.4	308	11.6 ¹³⁰	35.3	83	54	16 06	48	33	23 68		36 30	
4	237	47.9	21.9	322	43.6 ¹³⁰	43.5	82	52	16	16 55	38	19 66		41 31	
5	252	47.7	-21 21.5	337	15.5 ¹²⁹	-10 51.7	82	50	16 25	17 02	17 42	1 15 65		11 46 32	
6	267	47.4	-21 21.1	351	47.3 ¹²⁸	-10 59.8	81	45	16 43	17 16	17 52	1 06 62		11 55 36	
7	282	47.2	20.6	6	19.1 ¹²⁸	-11 07.8	80	40	16 58	27	18 01	0 59 60		12 03 38	
8	297	47.0	20.2	20	50.8 ¹²⁷	15.9	81	35	17 10	38	09	53 57		10 40	
9	312	46.8	19.7	35	22.4 ¹²⁶	23.8	79	30	21	17 47	17	48 55		16 42	
10	327	46.5	19.3	49	54.0 ¹²⁶	31.8	80	20	40	18 04	31	38 53		27 44	
11	342	46.3	-21 18.9	64	25.5 ¹²⁵	-11 39.7	79	10 N	17 57	18 19	18 45	0 30 50		12 36 47	
12	357	46.1	-21 18.4	78	56.9 ¹²⁴	-11 47.5	78	0	18 13	18 35	19 01	0 23 47		12 45 49	
13	12	45.8	18.0	93	28.3 ¹²⁴	-11 55.3	78	10 S	28	18 51	18	15 45		12 54 51	
14	27	45.6	17.5	107	59.7 ¹²⁴	-12 03.1	78	20	18 45	19 10	19 38	0 07 43		13 03 54	
15	42	45.4	17.1	122	30.9 ¹²²	10.8	77	30	19 05	32	20 04	** ** *		14 56	
16	57	45.2	16.6	137	02.1 ¹²²	18.4	76	35	17	19 46	21	** ** *		20 58	
17	72	44.9	-21 16.2	151	33.2 ¹²¹	-12 26.0	76	40	19 30	20 02	20 42	** ** *		13 27 60	
18	87	44.7	-21 15.7	166	04.3 ¹²¹	-12 33.6	76	45	19 46	20 22	21 08	** ** *		13 36 62	
19	102	44.5	15.3	180	35.2 ¹¹⁹	41.1	75	50	20 06	20 48	21 45	** ** *		46 65	
20	117	44.2	14.9	195	06.1 ¹¹⁹	48.5	74	52	15	21 00	22 06	23 58 34		50 66	
21	132	44.0	14.4	209	37.0 ¹¹⁹	-12 55.9	74	54	26	15	22 33	52 33		13 55 68	
22	147	43.8	14.0	224	07.8 ¹¹⁸	-13 03.3	74	56	38	33	23 17	46 32		14 01 69	
23	162	43.6	13.5	238	38.5 ¹¹⁷	10.6	73	58	20 52	21 55	** ** *	39 30		07 72	
24	177	43.3	-21 13.1	253	09.1 ¹¹⁶	-13 17.8	72	60 S	21 08	22 24	** ** *	23 31 28		14 15 73	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 16 ^h 24 ^m 7		Mag: -3.9 PMG: 13 ^h 32 ^m			Mag: +1.1 PMG: 14 ^h 41 ^m			Mag: -2.5 PMG: 2 ^h 00 ^m			Mag: +0.6 PMG: 8 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	113	08.7	157	13.3	-18 24.2	139	31.1	-11 58.7	329	52.3	+15 28.9	232	43.3	-18 40.0	
1	128	11.1	172	12.6	23.3	154	31.7	57.9	344	55.0	29.0	247	45.6	40.1	
2	143	13.6	187	11.9	22.4	169	32.3	57.2	359	57.7	29.1	262	47.8	40.1	
3	158	16.1	202	11.2	21.6	184	32.9	56.5	15	00.4	29.2	277	50.0	40.1	
4	173	18.5	217	10.5	20.7	199	33.5	55.8	30	03.1	29.3	292	52.3	40.2	
5	188	21.0	232	09.9	-18 19.8	214	34.1	-11 55.1	45	05.9	+15 29.4	307	54.5	-18 40.2	
6	203	23.5	247	09.2	-18 18.9	229	34.7	-11 54.3	60	08.6	+15 29.5	322	56.7	-18 40.3	
7	218	25.9	262	08.5	18.1	244	35.3	53.6	75	11.3	29.6	337	59.0	40.3	
8	233	28.4	277	07.8	17.2	259	36.0	52.9	90	14.0	29.7	353	01.2	40.3	
9	248	30.8	292	07.1	16.3	274	36.6	52.2	105	16.8	29.8	8	03.4	40.4	
10	263	33.3	307	06.4	15.4	289	37.2	51.4	120	19.5	29.9	23	05.7	40.4	
11	278	35.8	322	05.7	-18 14.5	304	37.8	-11 50.7	135	22.2	+15 29.9	38	07.9	-18 40.5	
12	293	38.2	337	05.0	-18 13.6	319	38.4	-11 50.0	150	24.9	+15 30.0	53	10.1	-18 40.5	
13	308	40.7	352	04.3	12.8	334	39.0	49.3	165	27.7	30.1	68	12.4	40.5	
14	323	43.2	7	03.6	11.9	349	39.6	48.5	180	30.4	30.2	83	14.6	40.6	
15	338	45.6	22	02.9	11.0	4	40.2	47.8	195	33.1	30.3	98	16.9	40.6	
16	353	48.1	37	02.2	10.1	19	40.8	47.1	210	35.9	30.4	113	19.1	40.6	
17	8	50.6	52	01.6	-18 09.2	34	41.4	-11 46.4	225	38.6	+15 30.5	128	21.3	-18 40.7	
18	23	53.0	67	00.9	-18 08.3	49	42.0	-11 45.6	240	41.3	+15 30.6	143	23.6	-18 40.7	
19	38	55.5	82	00.2	07.4	64	42.6	44.9	255	44.0	30.7	158	25.8	40.8	
20	53	57.9	96	59.5	06.5	79	43.2	44.2	270	46.8	30.8	173	28.0	40.8	
21	69	00.4	111	58.8	05.7	94	43.8	43.5	285	49.5	30.9	188	30.3	40.8	
22	84	02.9	126	58.1	04.8	109	44.5	42.7	300	52.2	31.0	203	32.5	40.9	
23	99	05.3	141	57.4	03.9	124	45.1	42.0	315	54.9	31.1	218	34.7	40.9	
24	114	07.8	156	56.8	-18 03.0	139	45.7	-11 41.3	330	57.7	+15 31.2	233	37.0	-18 41.0	
Dif	—		-7	+9		+6	+7		+27	+1		+22		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16°3 PMG: 12 ^h 09 ^m 3				Edad: 23 ^d 9 PHE { SD: 15°3 PMG: 7 ^h 22 ^m R°: 51 ^m 4 ^h : 56°4 12 ^h : 56°7 20 ^h : 57°0														
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	177	43.3	-21	13.1	253	09.1	-13	17.8	60 N	7 01	7 55	8 48	2 54	73	11 42	31			
1	192	43.1		12.6	267	39.6	115	25.0	58	6 55	46	34	45	71	51	33			
2	207	42.9		12.2	282	10.1	115	32.1	56	50	37	22	38	69	11 59	35			
3	222	42.7		11.7	296	40.5	114	39.1	54	45	29	11	31	68	12 06	37			
4	237	42.4		11.2	311	10.9	114	46.1	52	40	22	8 01	25	66	12	38			
5	252	42.2	-21	10.8	325	41.1	112	-13 53.1	50	6 36	7 16	7 53	2 20	65	12 18	39			
6	267	42.0	-21	10.3	340	11.3	112	-14 00.0	45	6 26	7 02	7 35	2 08	63	12 31	41			
7	282	41.8		09.9	354	41.5	112	-14 06.8	40	17	6 50	20	1 59	60	41	43			
8	297	41.6		09.4	9	11.5	110	13.5	35	09	40	7 08	50	59	50	44			
9	312	41.3		09.0	23	41.5	110	20.2	30	6 01	31	6 57	43	57	12 58	46			
10	327	41.1		08.5	38	11.4	109	26.8	20	5 47	6 14	38	31	55	13 11	48			
11	342	40.9	-21	08.1	52	41.2	108	-14 33.4	10 N	5 33	5 59	6 21	1 20	53	13 23	50			
12	357	40.7	-21	07.6	67	10.9	107	-14 39.9	0	5 18	5 43	6 06	1 10	51	13 34	52			
13	12	40.4		07.1	81	40.6	107	46.3	10 S	5 01	27	5 50	1 00	49	45	54			
14	27	40.2		06.7	96	10.2	106	52.6	20	4 40	5 09	33	0 50	46	13 57	56			
15	42	40.0		06.2	110	39.7	105	-14 58.9	30	4 14	4 46	13	38	43	14 10	58			
16	57	39.8		05.8	125	09.1	104	-15 05.1	35	3 57	33	5 02	31	42	18	59			
17	72	39.6	-21	05.3	139	38.5	104	-15 11.3	40	3 37	4 17	4 48	0 23	40	14 27	61			
18	87	39.3	-21	04.8	154	07.8	103	-15 17.4	45	3 10	3 57	4 32	0 14	38	14 38	62			
19	102	39.1		04.4	168	37.0	102	23.3	50	2 33	31	13	0 03	36	51	64			
20	117	38.9		03.9	183	06.1	101	29.3	52	2 12	18	4 03	** ** *	**	14 56	66			
21	132	38.7		03.4	197	35.1	100	35.1	54	1 45	3 03	3 53	** ** *	**	15 03	67			
22	147	38.5		03.0	212	04.1	100	40.9	58	1 01	2 46	41	** ** *	**	10	69			
23	162	38.2		02.5	226	33.0	99	46.6	58	** ** *	2 24	27	** ** *	**	19	70			
24	177	38.0	-21	02.0	241	01.8	98	-15 52.2	60 S	** ** *	1 55	3 11	23 59	37	15 28	72			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 20 ^m 8		Mag: -3.9 PMG: 13 ^h 33 ^m		Mag: +1.1 PMG: 14 ^h 40 ^m		Mag: -2.5 PMG: 1 ^h 56 ^m		Mag: +0.6 PMG: 8 ^h 24 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	114	07.8	156	56.8	-18	03.0	139	45.7	-11	41.3
1	129	10.3	171	56.1		02.1	154	46.3		40.6
2	144	12.7	186	55.4		01.2	169	46.9		39.8
3	159	15.2	201	54.7	-18	00.3	184	47.5		39.1
4	174	17.7	216	54.0	-17	59.4	199	48.1		38.4
5	189	20.1	231	53.3	-17	58.5	214	48.7	-11	37.7
6	204	22.6	246	52.7	-17	57.6	229	49.3	-11	36.9
7	219	25.1	261	52.0		56.7	244	49.9		36.2
8	234	27.5	276	51.3		55.8	259	50.6		35.5
9	249	30.0	291	50.6		54.9	274	51.2		34.8
10	264	32.4	306	49.9		54.0	289	51.8		34.0
11	279	34.9	321	49.3	-17	53.1	304	52.4	-11	33.3
12	294	37.4	336	48.6	-17	52.2	319	53.0	-11	32.6
13	309	39.8	351	47.9		51.3	334	53.6		31.8
14	324	42.3	6	47.2		50.4	349	54.2		31.1
15	339	44.8	21	46.6		49.5	4	54.8		30.4
16	354	47.2	36	45.9		48.5	19	55.4		29.7
17	9	49.7	51	45.2	-17	47.6	34	56.1	-11	28.9
18	24	52.2	66	44.5	-17	46.7	49	56.7	-11	28.2
19	39	54.6	81	43.9		45.8	64	57.3		27.5
20	54	57.1	96	43.2		44.9	79	57.9		26.7
21	69	59.6	111	42.5		44.0	94	58.5		26.0
22	85	02.0	126	41.9		43.1	109	59.1		25.3
23	100	04.5	141	41.2		42.2	124	59.7		24.6
24	115	06.9	156	40.5	-17	41.2	140	00.3	-11	23.8
Dif	—		-7		+9		+6		+7	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna											
	SD: 16 ^h 3 PMG: 12 ^h 09 ^m 6			Edad: 24 ^d 9 PHE { 4 ^h : 57 ^h 3 12 ^h : 57 ^h 6 20 ^h : 57 ^h 9 SD: 15 ^h 6 PMG: 8 ^h 13 ^m R°: 55 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m					
0	177	38.0	-21	02.0	241	01.8	-15	52.2	60 N	15 33	16 26	17 20	4 07	70	12 13	42								
1	192	37.8		01.6	255	30.5	97	-15	57.7	58	47	35	26	3 56	69	24	44							
2	207	37.6		01.1	269	59.2	97	-16	03.2	56	15 59	44	31	47	67	34	44							
3	222	37.4		00.6	284	27.8	96		08.6	54	16 10	51	36	39	66	43	45							
4	237	37.2	-21	00.2	298	56.3	95		13.9	53		19	16 58	40	31	65	50	47						
5	252	36.9	-20	59.7	313	24.7	94	-16	19.1	52	16 28	17 04	17 45	3 25	64	12	57	47						
6	267	36.7	-20	59.2	327	53.1	94	-16	24.2	51	16 45	17 18	17 54	3 11	62	13	12	48						
7	282	36.5		58.7	342	21.3	92		29.3	51	17 00	30	18 03	2 59	61	24	50							
8	297	36.3		58.3	356	49.5	92		34.2	49		12	40	11	49	60	34	51						
9	312	36.1		57.8	11	17.6	91		39.1	49		23	17 49	18	40	59	44	51						
10	327	35.9		57.3	25	45.6	90		43.9	48		42	18 05	32	26	56	13	59	53					
11	342	35.6	-20	56.9	40	13.6	90	-16	48.6	47	17 58	18 20	18 46	2 13	55	14	13	54						
12	357	35.4	-20	56.4	54	41.5	89	-16	53.2	46	18 13	18 35	19 01	2 01	53	14	26	55						
13	12	35.2		55.9	69	09.3	88	-16	57.7	45		29	18 51	18	1 49	52	39	56						
14	27	35.0		55.4	83	37.0	87	-17	02.1	44	20	18 46	19 10	19 38	36	50	14	53	57					
15	42	34.8		54.9	98	04.6	86		06.5	44	19 05	32	20 04	21	49	15	08	59						
16	57	34.6		54.5	112	32.2	86		10.7	42	19 16	19 45	20	13	48	17	60							
17	72	34.4	-20	54.0	126	59.7	85	-17	14.9	42	19 29	20 01	20 40	1 03	47	15	28	60						
18	87	34.2	-20	53.5	141	27.1	84	-17	18.9	40	19 45	20 20	21 06	0 52	45	15	40	62						
19	102	33.9		53.0	155	54.5	84		22.9	40	20 04	45	21 42	39	43	15	55	63						
20	117	33.7		52.5	170	21.7	82		26.7	38		13	20 58	22	02	32	42	16	02	63				
21	132	33.5		52.1	184	48.9	82		30.5	38		24	21 12	22	28	25	41	10	64					
22	147	33.3		51.6	199	16.0	81		34.2	37		35	29	23	07	18	39	19	64					
23	162	33.1		51.1	213	43.1	81		37.7	35	20 49	21 50	** ** *	0 09	38	29	65							
24	177	32.9	-20	50.6	228	10.0	79	-17	41.2	35	21 05	22 18	** ** *	** ** *	** ** *	16	40	67						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 16 ^h 16 ^m 9			Mag: -3.9 PMG: 13 ^h 34 ^m			Mag: +1.1 PMG: 14 ^h 39 ^m			Mag: -2.5 PMG: 1 ^h 51 ^m			Mag: +0.5 PMG: 8 ^h 21 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	115	06.9	156	40.5	-17	41.2	140	00.3	-11	23.8	332	03.2	+15	33.4	234	30.7	-18	41.9						
1	130	09.4	171	39.8		40.3	155	01.0		23.1	347	05.9		33.5	249	32.9		41.9						
2	145	11.9	186	39.2		39.4	170	01.6		22.4	2	08.7		33.6	264	35.2		41.9						
3	160	14.3	201	38.5		38.5	185	02.2		21.6	17	11.4		33.7	279	37.4		42.0						
4	175	16.8	216	37.8		37.6	200	02.8		20.9	32	14.1		33.8	294	39.7		42.0						
5	190	19.3	231	37.2	-17	36.7	215	03.4	-11	20.2	47	16.9	+15	33.9	309	41.9	-18	42.1						
6	205	21.7	246	36.5	-17	35.7	230	04.0	-11	19.4	62	19.6	+15	34.0	324	44.1	-18	42.1						
7	220	24.2	261	35.8		34.8	245	04.6		18.7	77	22.4		34.1	339	46.4		42.1						
8	235	26.7	276	35.2		33.9	260	05.3		18.0	92	25.1		34.2	354	48.6		42.2						
9	250	29.1	291	34.5		33.0	275	05.9		17.2	107	27.8		34.3	9	50.9		42.2						
10	265	31.6	306	33.8		32.1	290	06.5		16.5	122	30.6		34.4	24	53.1		42.2						
11	280	34.1	321	33.2	-17	31.1	305	07.1	-11	15.8	137	33.3	+15	34.5	39	55.3	-18	42.3						
12	295	36.5	336	32.5	-17	30.2	320	07.7	-11	15.1	152	36.0	+15	34.6	54	57.6	-18	42.3						
13	310	39.0	351	31.8		29.3	335	08.3		14.3	167	38.8		34.7	69	59.8		42.4						
14	325	41.4	6	31.2		28.3	350	08.9		13.6	182	41.5		34.8	85	02.1		42.4						
15	340	43.9	21	30.5		27.4	5	09.6		12.9	197	44.2		34.9	100	04.3		42.4						
16	355	46.4	36	29.9		26.5	20	10.2		12.1	212	47.0		35.0	115	06.6		42.5						
17	10	48.8	51	29.2	-17	25.6	35	10.8	-11	11.4	227	49.7	+15	35.1	130	08.8	-18	42.5						
18	25	51.3	66	28.5	-17	24.6	50	11.4	-11	10.7	242	52.4	+15	35.2	145	11.0	-18	42.5						
19	40	53.8	81	27.9		23.7	65	12.0		09.9	257	55.2		35.3	160	13.3		42.6						
20	55	56.2	96	27.2		22.8	80	12.6		09.2	272	57.9		35.4	175	15.5		42.6						
21	70	58.7	111	26.6		21.8	95	13.3		08.5	288	00.7		35.4	190	17.8		42.7						
22	86	01.2	126	25.9		20.9	110	13.9		07.7	303	03.4		35.5	205	20.0		42.7						
23	101	03.6	141	25.2		20.0	125	14.5		07.0	318	06.1		35.6	220	22.2		42.7						
24	116	06.1	156	24.6	-17	19.0	140	15.1	-11	06.3	333	08.9	+15	35.7	235	24.5	-18	42.8						
Dif	—			-7			+9			+6			+7			+27			+1			+22		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3			Edad: 25 ^d 9 PHE { 4 ^h : 58'2 12 ^h : 58'5 20 ^h : 58'8	SD: 15'8			R°: 57 ^m	R°		R°					
	PMG: 12 ^h 10 ^m 0				PMG: 9 ^h 08 ^m				R°		R°					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	32.9	-20 50.6	228	10.0	-17 41.2		60 N	6 59	7 53	8 45	5 17	63	12 55	55	
1	192	32.7	50.1	242	36.9	79 44.6	34	58	53	43	31	5 05	62	13 08	55	
2	207	32.5	49.6	257	03.7	78 47.8	32	56	48	35	19	4 54	62	18	56	
3	222	32.2	49.2	271	30.5	78 51.0	32	54	43	28	09	45	61	28	56	
4	237	32.0	48.7	285	57.2	77 54.0	30	52	39	21	8 00	36	62	37	56	
5	252	31.8	-20 48.2	300	23.8	76 -17 57.0	30	50	6 34	7 15	7 51	4 29	61	13 44	57	
6	267	31.6	-20 47.7	314	50.3	75 -17 59.8	28	45	6 25	7 01	7 34	4 13	60	14 00	57	
7	282	31.4	47.2	329	16.8	75 -18 02.6	26	40	16	6 50	19	4 00	60	14	57	
8	297	31.2	46.7	343	43.2	74 05.2	28	35	09	40	7 07	3 49	59	25	57	
9	312	31.0	46.2	358	09.5	73 07.7	25	30	6 01	31	6 56	39	59	35	58	
10	327	30.8	45.7	12	35.7	72 10.1	24	20	5 47	6 14	38	22	58	14 52	58	
11	342	30.6	-20 45.3	27	01.9	72 -18 12.5	24	10 N	5 33	5 59	6 22	3 08	57	15 07	58	
12	357	30.4	-20 44.8	41	28.1	72 -18 14.6	21	0	5 18	5 44	6 06	2 54	57	15 21	58	
13	12	30.2	44.3	55	54.1	70 16.7	21	10 S	5 02	28	5 51	41	56	35	58	
14	27	30.0	43.8	70	20.1	70 18.7	20	20	4 42	5 10	34	26	56	15 50	58	
15	42	29.7	43.3	84	46.0	69 20.6	19	30	16	4 48	15	10	55	16 07	58	
16	57	29.5	42.8	99	11.9	69 22.3	17	35	4 00	35	5 04	2 01	54	17	58	
17	72	29.3	-20 42.3	113	37.7	68 -18 23.9	16	40	3 40	4 19	4 51	1 50	53	16 28	58	
18	87	29.1	-20 41.8	128	03.4	67 -18 25.5	16	45	3 14	4 00	4 35	1 37	53	16 42	58	
19	102	28.9	41.3	142	29.1	67 26.9	14	50	2 38	3 35	16	22	51	16 58	58	
20	117	28.7	40.8	156	54.7	66 28.2	13	52	2 18	22	4 07	14	52	17 05	59	
21	132	28.5	40.3	171	20.3	66 29.3	11	54	1 52	3 08	3 56	1 06	51	14	58	
22	147	28.3	39.8	185	45.8	65 30.4	11	56	1 13	2 51	45	0 57	51	23	59	
23	162	28.1	39.3	200	11.3	65 31.3	9	58	** **	30	31	47	50	34	58	
24	177	27.9	-20 38.8	214	36.6	63 -18 32.1	8	60 S	** **	2 02	3 15	0 36	48	17 47	58	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 16 ^h 12 ^m 9		Mag: -3.9 PMG: 13 ^h 35 ^m		Mag: +1.2 PMG: 14 ^h 38 ^m		Mag: -2.5 PMG: 1 ^h 47 ^m		Mag: +0.5 PMG: 8 ^h 17 ^m						
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	116	06.1	156	24.6	-17 19.0	140	15.1	-11 06.3	333	08.9	+15 35.7	235	24.5	-18 42.8	
1	131	08.5	171	23.9	18.1	155	15.7	05.5	348	11.6	35.8	250	26.7	42.8	
2	146	11.0	186	23.3	17.2	170	16.3	04.8	3	14.4	35.9	265	29.0	42.8	
3	161	13.5	201	22.6	16.2	185	17.0	04.0	18	17.1	36.0	280	31.2	42.9	
4	176	15.9	216	22.0	15.3	200	17.6	03.3	33	19.8	36.1	295	33.5	42.9	
5	191	18.4	231	21.3	-17 14.3	215	18.2	-11 02.6	48	22.6	+15 36.2	310	35.7	-18 43.0	
6	206	20.9	246	20.7	-17 13.4	230	18.8	-11 01.8	63	25.3	+15 36.3	325	37.9	-18 43.0	
7	221	23.3	261	20.0	12.5	245	19.4	01.1	78	28.1	36.4	340	40.2	43.0	
8	236	25.8	276	19.4	11.5	260	20.0	-11 00.4	93	30.8	36.5	355	42.4	43.1	
9	251	28.3	291	18.7	10.6	275	20.7	-10 59.6	108	33.5	36.6	10	44.7	43.1	
10	266	30.7	306	18.1	09.6	290	21.3	58.9	123	36.3	36.7	25	46.9	43.1	
11	281	33.2	321	17.4	-17 08.7	305	21.9	-10 58.2	138	39.0	+15 36.8	40	49.2	-18 43.2	
12	296	35.7	336	16.8	-17 07.7	320	22.5	-10 57.4	153	41.8	+15 36.9	55	51.4	-18 43.2	
13	311	38.1	351	16.1	06.8	335	23.1	56.7	168	44.5	37.0	70	53.7	43.2	
14	326	40.6	6	15.5	05.9	350	23.8	56.0	183	47.2	37.1	85	55.9	43.3	
15	341	43.0	21	14.8	04.9	5	24.4	55.2	198	50.0	37.2	100	58.1	43.3	
16	356	45.5	36	14.2	04.0	20	25.0	54.5	213	52.7	37.3	116	00.4	43.4	
17	11	48.0	51	13.5	-17 03.0	35	25.6	-10 53.7	228	55.5	+15 37.4	131	02.6	-18 43.4	
18	26	50.4	66	12.9	-17 02.1	50	26.2	-10 53.0	243	58.2	+15 37.5	146	04.9	-18 43.4	
19	41	52.9	81	12.2	01.1	65	26.9	52.3	259	00.9	37.6	161	07.1	43.5	
20	56	55.4	96	11.6	-17 00.2	80	27.5	51.5	274	03.7	37.7	176	09.4	43.5	
21	71	57.8	111	10.9	-16 59.2	95	28.1	50.8	289	06.4	37.8	191	11.6	43.5	
22	87	00.3	126	10.3	58.2	110	28.7	50.1	304	09.2	37.9	206	13.9	43.6	
23	102	02.8	141	09.6	57.3	125	29.3	49.3	319	11.9	38.0	221	16.1	43.6	
24	117	05.2	156	09.0	-16 56.3	140	30.0	-10 48.6	334	14.7	+15 38.1	236	18.3	-18 43.6	
Dif	—		-6		+9	+6		+7	+27		+1	+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 16:3 PMG: 12 ^h 10 ^m 3			Edad: 26 ^d 9 PHE { 4 ^h : 59:1 12 ^h : 59:4 20 ^h : 59:7 R°: 59 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m								
0	177	27.9	-20	38.8	214	36.6	-18	32.1	60 N	15 38	16 30	17 23	6 20	53	13 50	70								
1	192	27.7		38.3	229	02.0	64	32.8	58	15 52		39	29	6 07	54	14 03								
2	207	27.5		37.8	243	27.3	63	33.4	56	16 03		47	34	5 56	54	14 68								
3	222	27.3		37.3	257	52.5	62	33.9	54	13	16 55		39	46	55	24 66								
4	237	27.1		36.8	272	17.7	62	34.2	52	22	17 01		43	38	55	33 66								
5	252	26.9	-20	36.3	286	42.8	61	-18 34.4	50	16 31	17 07	17 47	5 30	55	14 41	66								
6	267	26.7	-20	35.8	301	07.9	61	-18 34.5	45	16 48	17 20	17 57	5 13	56	14 57	65								
7	282	26.5		35.3	315	32.9	60	34.5	40	17 02		32	18 05	5 00	56	15 11								
8	297	26.3		34.8	329	57.9	60	34.3	35	14	42	13	4 48	57	22 64									
9	312	26.1		34.3	344	22.8	59	34.0	30	25	17 50	20	38	57	33 62									
10	327	25.9		33.8	358	47.7	59	33.6	20	43	18 06	33	20	58	15 50	61								
11	342	25.7	-20	33.3	13	12.5	58	-18 33.1	10 N	17 59	18 21	18 47	4 05	59	16 05	60								
12	357	25.5	-20	32.7	27	37.3	58	-18 32.5	0	18 14	18 36	19 02	3 51	59	16 19	59								
13	12	25.3		32.2	42	02.1	58	31.7	10 S	29	18 52	18	37	59	33 59									
14	27	25.1		31.7	56	26.8	57	30.8	20	18 45	19 09	19 38	22	60	16 48	57								
15	42	24.9		31.2	70	51.5	57	29.8	30	19 04	31	20 03	3 05	60	17 05	56								
16	57	24.7		30.7	85	16.1	56	28.6	35	16	19 44	19	2 55	60	15 55									
17	72	24.5	-20	30.2	99	40.8	57	-18 27.3	40	19 28	20 00	20 39	2 43	61	17 26	55								
18	87	24.3	-20	29.7	114	05.3	55	-18 25.9	45	19 44	20 19	21 04	2 30	61	17 40	53								
19	102	24.1		29.2	128	29.9	56	24.4	50	20 02	43	39	13	62	17 56	52								
20	117	23.9		28.7	142	54.4	55	22.8	52	11	20 55	21 58	2 06	61	18 04	51								
21	132	23.7		28.1	157	18.8	54	21.0	54	21	21 09	22 22	1 57	62	12 51									
22	147	23.5		27.6	171	43.3	55	19.1	56	33	26	22 57	48	62	22 49									
23	162	23.3		27.1	186	07.7	54	17.0	58	20 46	21 46	** **	37	62	32 49									
24	177	23.1	-20	26.6	200	32.1	54	-18 14.8	60 S	21 01	22 12	** **	1 24	63	18 45	47								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 16 ^h 09 ^m 0			Mag: -3.9 PMG: 13 ^h 36 ^m			Mag: +1.2 PMG: 14 ^h 37 ^m			Mag: -2.5 PMG: 1 ^h 43 ^m			Mag: +0.5 PMG: 8 ^h 14 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	117	05.2	156	09.0	-16	56.3	140	30.0	-10	48.6	334	14.7	+15	38.1	236	18.3								
1	132	07.7	171	08.4		55.4	155	30.6		47.8	349	17.4		38.2	251	20.6								
2	147	10.2	186	07.7		54.4	170	31.2		47.1	4	20.1		38.3	266	22.8								
3	162	12.6	201	07.1		53.5	185	31.8		46.4	19	22.9		38.4	281	25.1								
4	177	15.1	216	06.4		52.5	200	32.4		45.6	34	25.6		38.5	296	27.3								
5	192	17.5	231	05.8	-16	51.5	215	33.1	-10	44.9	49	28.4	+15	38.6	311	29.6								
6	207	20.0	246	05.2	-16	50.6	230	33.7	-10	44.1	64	31.1	+15	38.7	326	31.8								
7	222	22.5	261	04.5		49.6	245	34.3		43.4	79	33.9		38.8	341	34.1								
8	237	24.9	276	03.9		48.7	260	34.9		42.7	94	36.6		38.9	356	36.3								
9	252	27.4	291	03.2		47.7	275	35.5		41.9	109	39.4		39.0	11	38.6								
10	267	29.9	306	02.6		46.7	290	36.2		41.2	124	42.1		39.1	26	40.8								
11	282	32.3	321	02.0	-16	45.8	305	36.8	-10	40.4	139	44.8	+15	39.2	41	43.1								
12	297	34.8	336	01.3	-16	44.8	320	37.4	-10	39.7	154	47.6	+15	39.3	56	45.3								
13	312	37.3	351	00.7		43.8	335	38.0		39.0	169	50.3		39.4	71	47.5								
14	327	39.7	6	00.1		42.9	350	38.7		38.2	184	53.1		39.4	86	49.8								
15	342	42.2	20	59.4		41.9	5	39.3		37.5	199	55.8		39.5	101	52.0								
16	357	44.7	35	58.8		40.9	20	39.9		36.7	214	58.6		39.6	116	54.3								
17	12	47.1	50	58.2	-16	40.0	35	40.5	-10	36.0	230	01.3	+15	39.7	131	56.5								
18	27	49.6	65	57.5	-16	39.0	50	41.2	-10	35.3	245	04.1	+15	39.8	146	58.8								
19	42	52.0	80	56.9		38.0	65	41.8		34.5	260	06.8		39.9	162	01.0								
20	57	54.5	95	56.3		37.1	80	42.4		33.8	275	09.6		40.0	177	03.3								
21	72	57.0	110	55.6		36.1	95	43.0		33.0	290	12.3		40.1	192	05.5								
22	87	59.4	125	55.0		35.1	110	43.7		32.3	305	15.1		40.2	207	07.8								
23	103	01.9	140	54.4		34.1	125	44.3		31.6	320	17.8		40.3	222	10.0								
24	118	04.4	155	53.7	-16	33.2	140	44.9	-10	30.8	335	20.6	+15	40.4	237	12.3								
Dif	—			-6			+10			+6			+7			+27			+1			+22		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 10 ^m 6			Edad: 27 ^d 9 PHE { SD: 16'3 PMG: 11 ^h 04 ^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	177	23.1	-20	26.6	200	32.1	-18	14.8	22	58	6 57	7 50	8 42	7 13	42	15 00	81	
1	192	22.9		26.1	214	56.5	54	12.6	22	58	51	41	28	7 01	43	12	79	
2	207	22.7		25.6	229	20.8	53	10.1	25	56	46	33	17	6 50	45	22	78	
3	222	22.5		25.0	243	45.1	53	07.6	25	54	41	26	8 07	41	46	31	76	
4	237	22.3		24.5	258	09.4	53	04.9	27	52	37	19	7 58	33	47	39	75	
5	252	22.1	-20	24.0	272	33.7	53	-18	02.1	28	50	6 33	7 13	7 50	6 25	49	15 47	73
6	267	21.9	-20	23.5	286	57.9	52	-17	59.2	29	45	6 24	7 00	7 32	6 09	51	16 02	71
7	282	21.7		23.0	301	22.2	53	56.1	31	40	16	6 49	18	5 56	52	15	69	
8	297	21.5		22.4	315	46.4	52	52.9	32	35	08	39	7 06	45	54	26	67	
9	312	21.3		21.9	330	10.6	52	49.6	33	30	6 01	30	6 56	35	55	35	66	
10	327	21.1		21.4	344	34.8	52	46.2	34	20	5 47	14	38	18	57	16 51	64	
11	342	20.9	-20	20.9	358	59.0	52	-17	42.6	36	10 N	5 34	6 00	6 22	5 04	58	17 05	62
12	357	20.8	-20	20.3	13	23.1	51	-17	38.9	37	0	5 19	5 45	6 07	4 50	60	17 18	60
13	12	20.6		19.8	27	47.3	52	35.1	38	10 S	5 03	29	5 52	36	62	32	57	
14	27	20.4		19.3	42	11.5	52	31.1	40	20	4 43	5 12	36	22	62	17 45	56	
15	42	20.2		18.8	56	35.6	51	27.1	40	30	18	4 50	17	4 05	64	18 01	53	
16	57	20.0		18.2	70	59.7	51	22.9	42	35	4 02	37	5 06	3 55	66	10	52	
17	72	19.8	-20	17.7	85	23.9	52	-17	18.5	44	40	3 43	4 22	4 53	3 44	67	18 21	50
18	87	19.6	-20	17.2	99	48.0	51	-17	14.1	44	45	3 17	4 03	4 38	3 31	68	18 33	48
19	102	19.4		16.7	114	12.1	51	09.5	46	50	2 42	3 38	19	15	70	48	45	
20	117	19.2		16.1	128	36.3	52	-17	04.8	47	52	2 23	26	10	3 07	71	18 55	44
21	132	19.0		15.6	143	00.4	51	-17	00.0	48	54	1 59	3 12	4 00	2 59	72	19 03	42
22	147	18.8		15.1	157	24.5	51	-16	55.1	49	56	1 24	2 56	3 49	50	73	11	41
23	162	18.7		14.5	171	48.7	52	50.0	51	58	** **	36	36	39	75	21	39	
24	177	18.5	-20	14.0	186	12.8	51	-16	44.8	52	60 S	** **	2 10	3 20	2 27	76	19 32	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 05 ^m 1		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: +1.2 PMG: 14 ^h 36 ^m		Mag: -2.6 PMG: 1 ^h 38 ^m		Mag: +0.5 PMG: 8 ^h 10 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	118	04.4	155	53.7	-16	33.2	140	44.9	-10	30.8	335	20.6	+15	40.4	237	12.3	-18	44.5
1	133	06.8	170	53.1		32.2	155	45.5		30.1	350	23.3		40.5	252	14.5		44.5
2	148	09.3	185	52.5		31.2	170	46.1		29.3	5	26.0		40.6	267	16.8		44.6
3	163	11.8	200	51.9		30.2	185	46.8		28.6	20	28.8		40.7	282	19.0		44.6
4	178	14.2	215	51.2		29.3	200	47.4		27.8	35	31.5		40.8	297	21.3		44.6
5	193	16.7	230	50.6	-16	28.3	215	48.0	-10	27.1	50	34.3	+15	40.9	312	23.5	-18	44.7
6	208	19.2	245	50.0	-16	27.3	230	48.7	-10	26.4	65	37.0	+15	41.0	327	25.8	-18	44.7
7	223	21.6	260	49.3		26.3	245	49.3		25.6	80	39.8		41.1	342	28.0		44.8
8	238	24.1	275	48.7		25.3	260	49.9		24.9	95	42.5		41.2	357	30.3		44.8
9	253	26.5	290	48.1		24.4	275	50.5		24.1	110	45.3		41.3	12	32.5		44.8
10	268	29.0	305	47.5		23.4	290	51.2		23.4	125	48.0		41.4	27	34.8		44.9
11	283	31.5	320	46.8	-16	22.4	305	51.8	-10	22.6	140	50.8	+15	41.5	42	37.0	-18	44.9
12	298	33.9	335	46.2	-16	21.4	320	52.4	-10	21.9	155	53.5	+15	41.6	57	39.3	-18	44.9
13	313	36.4	350	45.6		20.4	335	53.0		21.2	170	56.3		41.7	72	41.5		45.0
14	328	38.9	5	45.0		19.4	350	53.7		20.4	185	59.0		41.8	87	43.8		45.0
15	343	41.3	20	44.4		18.5	5	54.3		19.7	201	01.8		41.9	102	46.0		45.0
16	358	43.8	35	43.7		17.5	20	54.9		18.9	216	04.5		42.0	117	48.3		45.1
17	13	46.3	50	43.1	-16	16.5	35	55.5	-10	18.2	231	07.3	+15	42.1	132	50.5	-18	45.1
18	28	48.7	65	42.5	-16	15.5	50	56.2	-10	17.4	246	10.0	+15	42.2	147	52.8	-18	45.1
19	43	51.2	80	41.9		14.5	65	56.8		16.7	261	12.8		42.3	162	55.0		45.2
20	58	53.6	95	41.3		13.5	80	57.4		15.9	276	15.5		42.4	177	57.3		45.2
21	73	56.1	110	40.6		12.5	95	58.1		15.2	291	18.3		42.5	192	59.5		45.2
22	88	58.6	125	40.0		11.5	110	58.7		14.4	306	21.1		42.6	208	01.8		45.3
23	104	01.0	140	39.4		10.5	125	59.3		13.7	321	23.8		42.7	223	04.0		45.3
24	119	03.5	155	38.8	-16	09.5	140	59.9	-10	13.0	336	26.6	+15	42.8	238	06.3	-18	45.3
Dif	—		-6 +10		+6 +7		+28 +1		+22									

UT	SOL			● LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 10 ^m 9			Edad: 28 ^d 9 PHE { 4 ^h : 60'/6 12 ^h : 60'/7 20 ^h : 60'/8 R°: 59 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°		Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		h m m				
0	177	18.5	-20	14.0	186	12.8	-16	44.8	60 N	15 43	16 34	17 27	7 55 32		16 21 89						
1	192	18.3		13.5	200	37.0	52	39.5	58	15 56	43	32	44 35		31 86						
2	207	18.1		12.9	215	01.1	51	34.1	56	16 07	51	37	35 38		40 83						
3	222	17.9		12.4	229	25.3	52	28.5	54	17	16 58	42	27 39		47 82						
4	237	17.7		11.9	243	49.5	52	22.9	56	26	17 04	46	20 41		16 54 80						
5	252	17.5	-20	11.3	258	13.6	51	-16 17.1	58	16 34	17 10	17 50	7 14 42		17 00 78						
6	267	17.3	-20	10.8	272	37.8	52	-16 11.2	59	16 51	17 23	17 59	7 00 45		17 13 75						
7	282	17.1		10.3	287	02.1	53	-16 05.1	61	17 04	34	18 07	6 48 48		24 72						
8	297	17.0		09.7	301	26.3	52	-15 59.0	61	16	43	14	39 49		33 70						
9	312	16.8		09.2	315	50.5	52	52.8	62	26	17 52	21	30 51		41 68						
10	327	16.6		08.6	330	14.8	53	46.4	64	17 44	18 08	35	15 54		17 55 64						
11	342	16.4	-20	08.1	344	39.1	53	-15 39.9	65	18 00	18 22	18 48	6 02 57		18 07 61						
12	357	16.2	-20	07.6	359	03.4	53	-15 33.3	66	18 15	18 37	19 02	5 50 59		18 18 59						
13	12	16.0		07.0	13	27.7	53	26.6	67	29	18 52	18	38 61		29 56						
14	27	15.8		06.5	27	52.0	53	19.8	68	20	18 45	19 09	19 37	24 65	41 53						
15	42	15.7		05.9	42	16.4	54	12.8	70	30	19 04	30	20 02	09 68	18 54 50						
16	57	15.5		05.4	56	40.7	53	-15 05.8	70	35	15	43	18	5 01 69	19 02 47						
17	72	15.3	-20	04.8	71	05.2	55	-14 58.6	72	40	19 27	19 58	20 37	4 51 71	19 11 45						
18	87	15.1	-20	04.3	85	29.6	54	-14 51.4	72	45	19 42	20 17	21 02	4 39 73	19 21 42						
19	102	14.9		03.8	99	54.0	54	44.0	74	50	20 00	41	36	25 76	33 39						
20	117	14.7		03.2	114	18.5	55	36.5	75	52	09	20 53	21 54	18 78	39 38						
21	132	14.6		02.7	128	43.0	55	28.9	76	54	19	21 06	22 17	11 79	45 36						
22	147	14.4		02.1	143	07.6	56	21.3	76	56	30	22	22 49	4 03 81	19 52 34						
23	162	14.2		01.6	157	32.1	55	13.5	78	58	42	21 41	** **	3 54 83	20 00 32						
24	177	14.0	-20	01.0	171	56.7	56	-14 05.6	79	60 S	20 57	22 06	** **	3 43 85	20 09 29						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 16 ^h 01 ^m 1			Mag: -3.9 PMG: 13 ^h 38 ^m			Mag: +1.2 PMG: 14 ^h 35 ^m			Mag: -2.6 PMG: 1 ^h 34 ^m			Mag: +0.5 PMG: 8 ^h 06 ^m								
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	119	03.5	155	38.8	-16	09.5	140	59.9	-10	13.0	336	26.6	+15	42.8	238	06.3	-18	45.3			
1	134	06.0	170	38.2		08.6	156	00.6		12.2	351	29.3		42.9	253	08.5		45.4			
2	149	08.4	185	37.6		07.6	171	01.2		11.5	6	32.1		43.0	268	10.8		45.4			
3	164	10.9	200	37.0		06.6	186	01.8		10.7	21	34.8		43.1	283	13.0		45.5			
4	179	13.4	215	36.3		05.6	201	02.4		10.0	36	37.6		43.2	298	15.3		45.5			
5	194	15.8	230	35.7	-16	04.6	216	03.1	-10	09.2	51	40.3	+15	43.3	313	17.5	-18	45.5			
6	209	18.3	245	35.1	-16	03.6	231	03.7	-10	08.5	66	43.1	+15	43.4	328	19.8	-18	45.6			
7	224	20.8	260	34.5		02.6	246	04.3		07.7	81	45.8		43.5	343	22.0		45.6			
8	239	23.2	275	33.9		01.6	261	05.0		07.0	96	48.6		43.6	358	24.3		45.6			
9	254	25.7	290	33.3	-16	00.6	276	05.6		06.2	111	51.3		43.7	13	26.5		45.7			
10	269	28.1	305	32.7	-15	59.6	291	06.2		05.5	126	54.1		43.8	28	28.8		45.7			
11	284	30.6	320	32.1	-15	58.6	306	06.9	-10	04.7	141	56.8	+15	43.9	43	31.0	-18	45.7			
12	299	33.1	335	31.5	-15	57.6	321	07.5	-10	04.0	156	59.6	+15	44.0	58	33.3	-18	45.8			
13	314	35.5	350	30.8		56.6	336	08.1		03.2	172	02.3		44.1	73	35.5		45.8			
14	329	38.0	5	30.2		55.6	351	08.7		02.5	187	05.1		44.2	88	37.8		45.8			
15	344	40.5	20	29.6		54.6	6	09.4		01.7	202	07.9		44.3	103	40.1		45.9			
16	359	42.9	35	29.0		53.6	21	10.0		01.0	217	10.6		44.4	118	42.3		45.9			
17	14	45.4	50	28.4	-15	52.5	36	10.6	-10	00.3	232	13.4	+15	44.5	133	44.6	-18	45.9			
18	29	47.9	65	27.8	-15	51.5	51	11.3	-9	59.5	247	16.1	+15	44.6	148	46.8	-18	46.0			
19	44	50.3	80	27.2		50.5	66	11.9		58.8	262	18.9		44.7	163	49.1		46.0			
20	59	52.8	95	26.6		49.5	81	12.5		58.0	277	21.6		44.8	178	51.3		46.0			
21	74	55.3	110	26.0		48.5	96	13.2		57.3	292	24.4		44.9	193	53.6		46.1			
22	89	57.7	125	25.4		47.5	111	13.8		56.5	307	27.1		45.0	208	55.8		46.1			
23	105	00.2	140	24.8		46.5	126	14.4		55.8	322	29.9		45.1	223	58.1		46.1			
24	120	02.6	155	24.2	-15	45.5	141	15.1	-9	55.0	337	32.7	+15	45.2	239	00.3	-18	46.2			
Dif	—			-6			+10			+6			+7			+28			+1		

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: 0 ^d 4 PHE { 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'0 R°: 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	14.0	-20	01.0	171	56.7	-14	05.6	60 N	6 54	7 47	8 38	8 27	26	17 50	91
1	192	13.8	-20	00.5	186	21.4	-13	57.6	58	49	38	25	19	29	17 57	88
2	207	13.7	-19	59.9	200	46.0	56	49.5	56	44	30	14	13	31	18 03	86
3	222	13.5		59.4	215	10.7	57	41.3	54	40	23	8 04	06	33	09	83
4	237	13.3		58.8	229	35.5	58	33.1	52	35	17	7 55	8 01	35	14	81
5	252	13.1	-19	58.3	244	00.2	57	-13	24.7	50	6 31	7 11	7 48	7 56	36	18 18
6	267	12.9	-19	57.7	258	25.0	58	-13	16.2	45	6 23	6 59	7 31	7 45	40	18 28
7	282	12.8		57.2	272	49.9	59	-13	07.6	40	15	48	17	36	43	36
8	297	12.6		56.6	287	14.7	58	-12	59.0	35	08	38	7 06	28	45	43
9	312	12.4		56.1	301	39.7	60		50.2	30	6 01	30	6 55	21	48	49
10	327	12.2		55.5	316	04.6	59		41.4	20	5 47	14	38	7 09	52	18 59
11	342	12.0	-19	54.9	330	29.6	60	-12	32.5	10 N	5 34	6 00	6 22	6 59	54	19 08
12	357	11.9	-19	54.4	344	54.6	60	-12	23.4	0	5 20	5 46	6 08	6 49	58	19 17
13	12	11.7		53.8	359	19.7	61		14.3	10 S	5 04	30	5 53	39	61	25
14	27	11.5		53.3	13	44.8	61	-12	05.2	20	4 45	5 13	37	29	64	34
15	42	11.3		52.7	28	09.9	61	-11	55.9	30	20	4 52	18	17	67	44
16	57	11.2		52.2	42	35.1	62		46.5	35	4 05	39	5 08	10	70	49
17	72	11.0	-19	51.6	57	00.3	62	-11	37.1	40	3 45	4 24	4 55	6 02	72	19 56
18	87	10.8	-19	51.0	71	25.6	63	-11	27.6	45	3 21	4 06	4 40	5 52	76	20 03
19	102	10.6		50.5	85	50.9	63		18.0	50	2 47	3 42	22	41	79	12
20	117	10.5		49.9	100	16.2	63	-11	08.3	52	29	30	14	36	81	17
21	132	10.3		49.4	114	41.6	64	-10	58.6	54	2 06	17	4 04	30	83	21
22	147	10.1		48.8	129	07.1	65		48.8	56	1 34	3 01	3 53	24	85	26
23	162	09.9		48.2	143	32.5	64		38.9	58	** **	2 42	40	17	87	32
24	177	09.8	-19	47.7	157	58.1	66	-10	28.9	60 S	** **	2 17	3 26	5 08	90	20 38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 57 ^m 2		Mag: -3.9 PMG: 13 ^h 39 ^m		Mag: +1.2 PMG: 14 ^h 34 ^m		Mag: -2.6 PMG: 1 ^h 30 ^m		Mag: +0.5 PMG: 8 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	120	02.6	155	24.2	-15	45.5	337	32.7	+15	45.2
1	135	05.1	170	23.6		44.5	352	35.4		45.3
2	150	07.6	185	23.0		43.5	7	38.2		45.4
3	165	10.0	200	22.4		42.4	22	40.9		45.5
4	180	12.5	215	21.8		41.4	37	43.7		45.7
5	195	15.0	230	21.2	-15	40.4	52	46.4	+15	45.8
6	210	17.4	245	20.6	-15	39.4	67	49.2	+15	45.9
7	225	19.9	260	20.0		38.4	82	52.0		46.0
8	240	22.4	275	19.4		37.4	97	54.7		46.1
9	255	24.8	290	18.8		36.3	112	57.5		46.2
10	270	27.3	305	18.2		35.3	128	00.2		46.3
11	285	29.8	320	17.6	-15	34.3	143	03.0	+15	46.4
12	300	32.2	335	17.0	-15	33.3	158	05.7	+15	46.5
13	315	34.7	350	16.4		32.3	173	08.5		46.6
14	330	37.1	5	15.8		31.2	188	11.3		46.7
15	345	39.6	20	15.2		30.2	203	14.0		46.8
16	0	42.1	35	14.6		29.2	218	16.8		46.9
17	15	44.5	50	14.0	-15	28.2	233	19.5	+15	47.0
18	30	47.0	65	13.4	-15	27.2	248	22.3	+15	47.1
19	45	49.5	80	12.8		26.1	263	25.1		47.2
20	60	51.9	95	12.3		25.1	278	27.8		47.3
21	75	54.4	110	11.7		24.1	293	30.6		47.4
22	90	56.9	125	11.1		23.0	308	33.3		47.5
23	105	59.3	140	10.5		22.0	323	36.1		47.6
24	121	01.8	155	09.9	-15	21.0	338	38.9	+15	47.7
Dif	—		-6		+10		+6		+8	
							+28		+1	
									+23	
									0	

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: 1 ^d 4 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'8 R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	09.8	-19 47.7	157	58.1	-10 28.9	65	60 N	15 48	16 38	17 31	8 53 22	19 21 91	
1	192	09.6	47.1	172	23.6	18.9	100	58	16 00	47	36	48 25	25 88	
2	207	09.4	46.5	186	49.2	66	101	56	11	16 54	41	44 27	29 85	
3	222	09.2	46.0	201	14.9	67	101	54	21	17 01	45	39 30	32 83	
4	237	09.1	45.4	215	40.6	67	103	52	29	07	49	36 31	35 81	
5	252	08.9	-19 44.8	230	06.3	67	103	50	16 37	17 13	17 53	8 32 33	19 38 79	
6	267	08.7	-19 44.3	244	32.1	68	103	45	16 53	17 25	18 01	8 25 36	19 44 75	
7	282	08.6	43.7	258	58.0	69	104	40	17 07	36	09	19 39	49 71	
8	297	08.4	43.1	273	23.8	68	105	35	18	45	16	13 43	53 69	
9	312	08.2	42.6	287	49.8	70	105	30	28	17 54	23	09 44	19 56 67	
10	327	08.0	42.0	302	15.7	69	106	20	17 46	18 09	36	8 01 48	20 03 62	
11	342	07.9	-19 41.4	316	41.7	70	106	10 N	18 01	18 23	18 49	7 53 53	20 08 59	
12	357	07.7	-19 40.9	331	07.8	71	107	0	18 15	18 37	19 03	7 47 55	20 13 55	
13	12	07.5	40.3	345	33.9	71	108	10 S	30	18 52	18	40 59	18 52	
14	27	07.4	39.7	0	00.0	71	108	20	18 45	19 09	19 37	33 62	24 47	
15	42	07.2	39.1	14	26.2	72	108	30	19 03	30	20 01	24 67	30 43	
16	57	07.0	38.6	28	52.5	73	109	35	14	42	17	20 69	33 41	
17	72	06.9	-19 38.0	43	18.8	73	110	40	19 26	19 57	20 35	7 14 72	20 37 38	
18	87	06.7	-19 37.4	57	45.1	73	109	45	19 40	20 15	20 59	7 08 75	20 42 35	
19	102	06.5	36.8	72	11.5	74	111	50	19 58	38	21 32	7 00 80	47 31	
20	117	06.4	36.3	86	37.9	74	110	52	20 07	20 50	21 49	6 57 81	49 30	
21	132	06.2	35.7	101	04.3	74	111	54	16	21 03	22 11	53 83	52 28	
22	147	06.0	35.1	115	30.8	75	112	56	27	18	22 40	49 85	55 26	
23	162	05.9	34.5	129	57.4	76	112	58	39	36	23 32	44 88	20 58 24	
24	177	05.7	-19 34.0	144	24.0	76	112	60 S	20 53	21 59	** **	6 38 91	21 02 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 53 ^m 3		Mag: -3.9 PMG: 13 ^h 40 ^m		Mag: +1.2 PMG: 14 ^h 33 ^m		Mag: -2.6 PMG: 1 ^h 25 ^m		Mag: +0.5 PMG: 7 ^h 59 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	121	01.8	155	09.9	-15 21.0	141	30.3	-9 37.0	338	38.9	+15 47.7	239	54.5	-18 47.0
1	136	04.2	170	09.3	20.0	156	30.9	36.2	353	41.6	47.8	254	56.7	47.0
2	151	06.7	185	08.7	18.9	171	31.5	35.5	8	44.4	47.9	269	59.0	47.0
3	166	09.2	200	08.1	17.9	186	32.2	34.7	23	47.1	48.0	285	01.3	47.1
4	181	11.6	215	07.5	16.9	201	32.8	34.0	38	49.9	48.1	300	03.5	47.1
5	196	14.1	230	07.0	-15 15.8	216	33.5	-9 33.2	53	52.7	+15 48.2	315	05.8	-18 47.1
6	211	16.6	245	06.4	-15 14.8	231	34.1	-9 32.5	68	55.4	+15 48.3	330	08.0	-18 47.2
7	226	19.0	260	05.8	13.8	246	34.7	31.7	83	58.2	48.4	345	10.3	47.2
8	241	21.5	275	05.2	12.7	261	35.4	31.0	99	01.0	48.5	0	12.6	47.2
9	256	24.0	290	04.6	11.7	276	36.0	30.2	114	03.7	48.6	15	14.8	47.3
10	271	26.4	305	04.0	10.7	291	36.6	29.4	129	06.5	48.7	30	17.1	47.3
11	286	28.9	320	03.4	-15 09.6	306	37.3	-9 28.7	144	09.2	+15 48.8	45	19.3	-18 47.3
12	301	31.4	335	02.9	-15 08.6	321	37.9	-9 27.9	159	12.0	+15 48.9	60	21.6	-18 47.4
13	316	33.8	350	02.3	07.5	336	38.5	27.2	174	14.8	49.0	75	23.8	47.4
14	331	36.3	5	01.7	06.5	351	39.2	26.4	189	17.5	49.1	90	26.1	47.4
15	346	38.7	20	01.1	05.5	6	39.8	25.7	204	20.3	49.2	105	28.4	47.5
16	1	41.2	35	00.5	04.4	21	40.5	24.9	219	23.0	49.3	120	30.6	47.5
17	16	43.7	50	00.0	-15 03.4	36	41.1	-9 24.2	234	25.8	+15 49.4	135	32.9	-18 47.5
18	31	46.1	64	59.4	-15 02.3	51	41.7	-9 23.4	249	28.6	+15 49.5	150	35.1	-18 47.6
19	46	48.6	79	58.8	01.3	66	42.4	22.6	264	31.3	49.6	165	37.4	47.6
20	61	51.1	94	58.2	-15 00.3	81	43.0	21.9	279	34.1	49.7	180	39.7	47.6
21	76	53.5	109	57.6	-14 59.2	96	43.7	21.1	294	36.9	49.8	195	41.9	47.7
22	91	56.0	124	57.1	58.2	111	44.3	20.4	309	39.6	49.9	210	44.2	47.7
23	106	58.5	139	56.5	57.1	126	44.9	19.6	324	42.4	50.0	225	46.4	47.7
24	122	00.9	154	55.9	-14 56.1	141	45.6	-9 18.9	339	45.2	+15 50.1	240	48.7	-18 47.8
Dif	—		-6 +10		+6 +8		+28 +1		+23 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'2 PMG: 12 ^h 11 ^m 8			Edad: 2 ^d 4 PHE { SD: 16'6 PMG: 14 ^h 55 ^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	177	05.7	-19	34.0	144	24.0	-6	12.5	60 N	6 51	7 44	8 34	9 15	20	20 52	88					
1	192	05.5		33.4	158	50.6	76	-6 01.3	58	46	35	22	13	22	53	86					
2	207	05.4		32.8	173	17.3	77	-5 50.0	56	42	28	11	11	24	54	83					
3	222	05.2		32.2	187	44.0	77	38.7	54	37	21	8 01	09	26	55	81					
4	237	05.0		31.6	202	10.8	78	27.3	52	34	15	7 53	07	28	56	79					
5	252	04.9	-19	31.1	216	37.6	78	-5 16.0	50	6 30	7 09	7 45	9 05	30	20 57	77					
6	267	04.7	-19	30.5	231	04.5	79	-5 04.6	45	6 21	6 57	7 29	9 01	35	20 59	73					
7	282	04.6		29.9	245	31.4	79	-4 53.1	40	14	47	16	8 58	38	21 00	71					
8	297	04.4		29.3	259	58.3	79	41.7	35	07	38	7 05	56	40	02	67					
9	312	04.2		28.7	274	25.3	80	30.2	30	6 00	29	6 55	53	43	03	65					
10	327	04.1		28.1	288	52.3	80	18.7	20	5 47	14	38	49	47	05	60					
11	342	03.9	-19	27.5	303	19.4	81	-4 07.2	10 N	5 35	6 00	6 22	8 46	50	21 07	56					
12	357	03.7	-19	27.0	317	46.5	81	-3 55.7	0	5 21	5 46	6 08	8 42	54	21 08	53					
13	12	03.6		26.4	332	13.6	81	44.1	10 S	5 05	31	5 54	39	58	10	50					
14	27	03.4		25.8	346	40.8	82	32.6	20	4 46	5 14	38	35	62	11	46					
15	42	03.3		25.2	1	08.1	83	21.0	30	22	4 54	20	31	66	13	42					
16	57	03.1		24.6	15	35.3	82	-3 09.4	35	4 07	41	5 10	29	68	14	40					
17	72	02.9	-19	24.0	30	02.6	83	-2 57.8	40	3 48	4 27	4 58	8 26	71	21 15	37					
18	87	02.8	-19	23.4	44	30.0	84	-2 46.2	45	3 24	4 09	4 43	8 23	75	21 17	33					
19	102	02.6		22.8	58	57.3	83	34.6	50	2 52	3 46	26	20	78	18	30					
20	117	02.5		22.2	73	24.8	85	23.0	52	34	34	17	18	80	19	28					
21	132	02.3		21.7	87	52.2	84	-2 11.3	54	2 13	21	4 08	16	82	20	26					
22	147	02.1		21.1	102	19.7	85	-1 59.7	56	1 43	3 06	3 57	14	84	21	24					
23	162	02.0		20.5	116	47.2	85	48.1	58	0 52	2 48	45	12	87	22	22					
24	177	01.8	-19	19.9	131	14.8	86	-1 36.4	60 S	** **	2 24	3 31	8 09	90	21 23	19					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 15 ^h 49 ^m 3			Mag: -3.9 PMG: 13 ^h 41 ^m			Mag: +1.2 PMG: 14 ^h 32 ^m			Mag: -2.6 PMG: 1 ^h 21 ^m			Mag: +0.5 PMG: 7 ^h 56 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	122	00.9	154	55.9	-14	56.1	141	45.6	-9	18.9	339	45.2	+15	50.1	240	48.7	-18	47.8			
1	137	03.4	169	55.3		55.0	156	46.2		18.1	354	47.9		50.3	255	51.0		47.8			
2	152	05.9	184	54.8		54.0	171	46.8		17.4	9	50.7		50.4	270	53.2		47.8			
3	167	08.3	199	54.2		52.9	186	47.5		16.6	24	53.5		50.5	285	55.5		47.9			
4	182	10.8	214	53.6		51.9	201	48.1		15.8	39	56.2		50.6	300	57.8		47.9			
5	197	13.2	229	53.0	-14	50.8	216	48.8	-9	15.1	54	59.0	+15	50.7	316	00.0	-18	47.9			
6	212	15.7	244	52.5	-14	49.8	231	49.4	-9	14.3	70	01.7	+15	50.8	331	02.3	-18	48.0			
7	227	18.2	259	51.9		48.7	246	50.0		13.6	85	04.5		50.9	346	04.5		48.0			
8	242	20.6	274	51.3		47.7	261	50.7		12.8	100	07.3		51.0	1	06.8		48.0			
9	257	23.1	289	50.8		46.6	276	51.3		12.1	115	10.0		51.1	16	09.1		48.1			
10	272	25.6	304	50.2		45.6	291	52.0		11.3	130	12.8		51.2	31	11.3		48.1			
11	287	28.0	319	49.6	-14	44.5	306	52.6	-9	10.5	145	15.6	+15	51.3	46	13.6	-18	48.1			
12	302	30.5	334	49.0	-14	43.5	321	53.3	-9	09.8	160	18.3	+15	51.4	61	15.8	-18	48.2			
13	317	33.0	349	48.5		42.4	336	53.9		09.0	175	21.1		51.5	76	18.1		48.2			
14	332	35.4	4	47.9		41.4	351	54.5		08.3	190	23.9		51.6	91	20.4		48.2			
15	347	37.9	19	47.3		40.3	6	55.2		07.5	205	26.6		51.7	106	22.6		48.2			
16	2	40.3	34	46.8		39.2	21	55.8		06.8	220	29.4		51.8	121	24.9		48.3			
17	17	42.8	49	46.2	-14	38.2	36	56.5	-9	06.0	235	32.2	+15	51.9	136	27.2	-18	48.3			
18	32	45.3	64	45.6	-14	37.1	51	57.1	-9	05.2	250	34.9	+15	52.0	151	29.4	-18	48.3			
19	47	47.7	79	45.1		36.1	66	57.7		04.5	265	37.7		52.1	166	31.7		48.4			
20	62	50.2	94	44.5		35.0	81	58.4		03.7	280	40.5		52.2	181	34.0		48.4			
21	77	52.7	109	43.9		34.0	96	59.0		03.0	295	43.2		52.3	196	36.2		48.4			
22	92	55.1	124	43.4		32.9	111	59.7		02.2	310	46.0		52.4	211	38.5		48.5			
23	107	57.6	139	42.8		31.8	127	00.3		01.4	325	48.8		52.5	226	40.7		48.5			
24	123	00.1	154	42.3	-14	30.8	142	01.0	-9	00.7	340	51.5	+15	52.6	241	43.0	-18	48.5			
Dif	—			-6			+11			+8			+28			+1			+23		

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: 3 ^d 4 PHE { 4 ^h : 60:2 12 ^h : 60:0 20 ^h : 59:8 PMG: 15 ^h 49 ^m R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	177	01.8	-19	19.9	131	14.8	-1	36.4	60 N	15 53	16 43	17 35	9 35 20	22 20 86				
1	192	01.7		19.3	145	42.4		24.8	58	16 05		51 40	35 22	19 83				
2	207	01.5		18.7	160	10.0		13.2	56	15	16 58	44	35 25	17 81				
3	222	01.4		18.1	174	37.7		01.5	54	24	17 05	48	35 27	16 79				
4	237	01.2		17.5	189	05.4		49.9	52	33		11 52	35 28	15 77				
5	252	01.1	-19	16.9	203	33.2		38.3	50	16 40	17 16	17 56	9 35 30	22 14 75				
6	267	00.9	-19	16.3	218	00.9		26.7	45	16 56	17 28	18 04	9 36 33	22 12 72				
7	282	00.7		15.7	232	28.7		15.1	40	17 09		38 11	36 36	11 68				
8	297	00.6		15.1	246	56.6		03.5	35		20 47	18	36 39	09 66				
9	312	00.4		14.5	261	24.4		08.1	30	30	17 55	24	36 41	08 63				
10	327	00.3		13.9	275	52.3		19.7	20	17 47	18 10	37	36 46	05 60				
11	342	00.1	-19	13.3	290	20.3		31.3	10 N	18 02	18 24	18 49	9 36 49	22 03 56				
12	357	00.0	-19	12.7	304	48.2		42.8	0	18 16	18 37	19 03	9 36 53	22 01 53				
13	11	59.8		12.1	319	16.2		54.3	10 S	30	18 52	18	37 56	22 00 48				
14	26	59.7		11.5	333	44.2		05.9	20	18 45	19 09	19 37	37 60	21 57 46				
15	41	59.5		10.9	348	12.3		17.4	30	19 02	29	20 00	37 64	55 42				
16	56	59.4		10.3	2	40.3		28.8	35	13	41	15	37 67	54 39				
17	71	59.2	-19	09.7	17	08.4		40.3	40	19 25	19 55	20 33	9 37 70	21 52 37				
18	86	59.1	-19	09.1	31	36.6		51.7	45	19 39	20 13	20 57	9 38 72	21 50 34				
19	101	58.9		08.5	46	04.7		03.2	50	19 56	35	21 28	38 76	48 30				
20	116	58.8		07.9	60	32.9		14.5	52	20 04	46	21 45	38 78	47 29				
21	131	58.6		07.3	75	01.1		25.9	54	13	20 59	22 05	38 80	46 27				
22	146	58.5		06.7	89	29.4		37.3	56	23	21 14	22 32	38 83	45 25				
23	161	58.3		06.0	103	57.6		48.6	58	35	31	23 15	39 84	44 22				
24	176	58.2	-19	05.4	118	25.9		59.9	60 S	20 49	21 53	** **	9 39 87	21 42 20				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 45 ^m 4		Mag: -3.9 PMG: 13 ^h 42 ^m				Mag: +1.2 PMG: 14 ^h 31 ^m				Mag: -2.6 PMG: 1 ^h 16 ^m				Mag: +0.5 PMG: 7 ^h 52 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	123	00.1	154	42.3	-14	30.8	142	01.0	-9	00.7	340	51.5	+15	52.6	241	43.0	-18	48.5
1	138	02.5	169	41.7		29.7	157	01.6	-8	59.9	355	54.3		52.7	256	45.3		48.6
2	153	05.0	184	41.1		28.6	172	02.2		59.2	10	57.1		52.8	271	47.5		48.6
3	168	07.5	199	40.6		27.6	187	02.9		58.4	25	59.8		52.9	286	49.8		48.6
4	183	09.9	214	40.0		26.5	202	03.5		57.6	41	02.6		53.0	301	52.1		48.7
5	198	12.4	229	39.5	-14	25.4	217	04.2	-8	56.9	56	05.4	+15	53.1	316	54.3	-18	48.7
6	213	14.8	244	38.9	-14	24.4	232	04.8	-8	56.1	71	08.1	+15	53.3	331	56.6	-18	48.7
7	228	17.3	259	38.3		23.3	247	05.5		55.4	86	10.9		53.4	346	58.9		48.8
8	243	19.8	274	37.8		22.2	262	06.1		54.6	101	13.7		53.5	2	01.1		48.8
9	258	22.2	289	37.2		21.2	277	06.7		53.8	116	16.5		53.6	17	03.4		48.8
10	273	24.7	304	36.7		20.1	292	07.4		53.1	131	19.2		53.7	32	05.7		48.8
11	288	27.2	319	36.1	-14	19.0	307	08.0	-8	52.3	146	22.0	+15	53.8	47	07.9	-18	48.9
12	303	29.6	334	35.5	-14	18.0	322	08.7	-8	51.6	161	24.8	+15	53.9	62	10.2	-18	48.9
13	318	32.1	349	35.0		16.9	337	09.3		50.8	176	27.5		54.0	77	12.4		48.9
14	333	34.6	4	34.4		15.8	352	10.0		50.0	191	30.3		54.1	92	14.7		49.0
15	348	37.0	19	33.9		14.7	7	10.6		49.3	206	33.1		54.2	107	17.0		49.0
16	3	39.5	34	33.3		13.7	22	11.3		48.5	221	35.8		54.3	122	19.2		49.0
17	18	42.0	49	32.8	-14	12.6	37	11.9	-8	47.8	236	38.6	+15	54.4	137	21.5	-18	49.1
18	33	44.4	64	32.2	-14	11.5	52	12.6	-8	47.0	251	41.4	+15	54.5	152	23.8	-18	49.1
19	48	46.9	79	31.7		10.5	67	13.2		46.2	266	44.2		54.6	167	26.0		49.1
20	63	49.3	94	31.1		09.4	82	13.8		45.5	281	46.9		54.7	182	28.3		49.2
21	78	51.8	109	30.6		08.3	97	14.5		44.7	296	49.7		54.8	197	30.6		49.2
22	93	54.3	124	30.0		07.2	112	15.1		43.9	311	52.5		54.9	212	32.8		49.2
23	108	56.7	139	29.5		06.1	127	15.8		43.2	326	55.2		55.0	227	35.1		49.3
24	123	59.2	154	28.9	-14	05.1	142	16.4	-8	42.4	341	58.0	+15	55.1	242	37.4	-18	49.3
Dif	—		-6		+11		+6		+8		+28		+1		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 2			Edad: 4 ^d 4 PHE { 4 ^h : 59'6 12 ^h : 59'3 20 ^h : 59'1 Rº: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	58.2	-19	05.4	118	25.9	+2 59.9	60 N	6 48	7 40	8 30	9 55	20	23 46	83
1	191	58.0		04.8	132	54.2	+3 11.1	58	44	32	18	9 57	23	42	80
2	206	57.9		04.2	147	22.5		56	39	25	8 08	10 00	25	38	78
3	221	57.7		03.6	161	50.9		54	35	19	7 59	02 27		35	76
4	236	57.6		03.0	176	19.2		52	31	13	51	03 29		32	74
5	251	57.4	-19	02.4	190	47.6	+3 55.8	50	6 28	7 07	7 43	10 05	31	23 29	73
6	266	57.3	-19	01.8	205	16.0	+4 06.9	45	6 20	6 56	7 28	10 09	34	23 24	69
7	281	57.1		01.2	219	44.5		40	13	46	15	12 37		19	66
8	296	57.0	-19	00.6	234	12.9		35	06	37	7 04	15 39		15	63
9	311	56.8	-18	59.9	248	41.4		30	6 00	29	6 54	17 42		11	61
10	326	56.7		59.3	263	09.9	+4 50.9	20	5 47	14	37	22 45		23 05	57
11	341	56.6	-18	58.7	277	38.4	+5 01.8	10 N	5 35	6 00	6 23	10 25	49	22 59	55
12	356	56.4	-18	58.1	292	06.9	+5 12.6	0	5 21	5 47	6 09	10 29	52	22 54	51
13	11	56.3		57.5	306	35.5		10 S	5 06	32	5 55	33 55		48	49
14	26	56.1		56.9	321	04.0		20	4 48	5 16	40	37 58		43	46
15	41	56.0		56.2	335	32.6		30	24	4 56	22	41 62		37	42
16	56	55.8		55.6	350	01.2	+5 55.7	35	4 09	44	12	44 64		33	40
17	71	55.7	-18	55.0	4	29.8	+6 06.3	40	3 51	4 29	5 00	10 47	67	22 29	37
18	86	55.6	-18	54.4	18	58.4	+6 16.9	45	3 28	4 12	4 46	10 50	70	22 24	35
19	101	55.4		53.8	33	27.1		50	2 56	3 49	29	54 74		18	32
20	116	55.3		53.1	47	55.7		52	40	38	21	56 76		16	30
21	131	55.1		52.5	62	24.4		54	2 19	26	12	10 58	78	13	28
22	146	55.0		51.9	76	53.1	+6 58.8	56	1 52	3 11	4 02	11 01	79	10	26
23	161	54.8		51.3	91	21.8	+7 09.1	58	1 10	2 54	3 50	03 82		06	24
24	176	54.7	-18	50.7	105	50.5	+7 19.4	60 S	** **	2 32	3 36	11 06	84	22 02	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 41 ^m 5		Mag: -3.9 PMG: 13 ^h 43 ^m		Mag: +1.2 PMG: 14 ^h 30 ^m		Mag: -2.6 PMG: 1 ^h 12 ^m		Mag: +0.5 PMG: 7 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	123	59.2	154	28.9	-14	05.1	142	16.4	-8	42.4
1	139	01.7	169	28.4		04.0	157	17.1		41.7
2	154	04.1	184	27.8		02.9	172	17.7		40.9
3	169	06.6	199	27.3		01.8	187	18.4		40.1
4	184	09.1	214	26.7	-14	00.7	202	19.0		39.4
5	199	11.5	229	26.2	-13	59.7	217	19.7	-8	38.6
6	214	14.0	244	25.6	-13	58.6	232	20.3	-8	37.8
7	229	16.4	259	25.1		57.5	247	21.0		37.1
8	244	18.9	274	24.5		56.4	262	21.6		36.3
9	259	21.4	289	24.0		55.3	277	22.3		35.6
10	274	23.8	304	23.4		54.2	292	22.9		34.8
11	289	26.3	319	22.9	-13	53.2	307	23.5	-8	34.0
12	304	28.8	334	22.4	-13	52.1	322	24.2	-8	33.3
13	319	31.2	349	21.8		51.0	337	24.8		32.5
14	334	33.7	4	21.3		49.9	352	25.5		31.7
15	349	36.2	19	20.7		48.8	7	26.1		31.0
16	4	38.6	34	20.2		47.7	22	26.8		30.2
17	19	41.1	49	19.6	-13	46.6	37	27.4	-8	29.4
18	34	43.6	64	19.1	-13	45.5	52	28.1	-8	28.7
19	49	46.0	79	18.6		44.5	67	28.7		27.9
20	64	48.5	94	18.0		43.4	82	29.4		27.2
21	79	50.9	109	17.5		42.3	97	30.0		26.4
22	94	53.4	124	16.9		41.2	112	30.7		25.6
23	109	55.9	139	16.4		40.1	127	31.3		24.9
24	124	58.3	154	15.9	-13	39.0	142	32.0	-8	24.1
Dif	—		-5		+11		+6		+8	
							+28		+1	
									+23	

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: 5 ^d 4 PHE { 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'3 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	176	54.7	-18 50.7	105	50.5	+7 19.4	97	60 N	15 58	16 47	17 39	10 15 24	** ** *	
1	191	54.6	50.0	120	19.2	29.6	102	58	16 09	16 55	43	20 26	** ** *	
2	206	54.4	49.4	134	47.9	39.8	102	56	19	17 02	48	25 27	** ** *	
3	221	54.3	48.8	149	16.7	+7 49.9	101	54	28	08	52	29 29	** ** *	
4	236	54.1	48.2	163	45.4	+8 00.0	101	52	36	14	55	32 31	** ** *	
5	251	54.0	-18 47.5	178	14.2	+8 10.0	100	50	16 43	17 19	17 59	10 36 32	** ** *	
6	266	53.9	-18 46.9	192	42.9	+8 20.0	100	45	16 59	17 31	18 06	10 43 36	** ** *	
7	281	53.7	46.3	207	11.7	29.9	99	40	17 11	40	13	49 38	** ** *	
8	296	53.6	45.7	221	40.5	39.7	98	35	22	49	20	54 41	** ** *	
9	311	53.5	45.0	236	09.3	49.5	98	30	32	17 57	26	10 59 42	** ** *	
10	326	53.3	44.4	250	38.1	+8 59.2	97	20	17 48	18 11	38	11 07 46	** ** *	
11	341	53.2	-18 43.8	265	06.9	+9 08.9	97	10 N	18 02	18 25	18 50	11 14 49	23 54 54	
12	356	53.1	-18 43.1	279	35.7	+9 18.4	95	0	18 16	18 38	19 03	11 21 51	23 45 52	
13	11	52.9	42.5	294	04.5	28.0	96	10 S	30	18 52	18	28 54	37 49	
14	26	52.8	41.9	308	33.4	37.4	94	20	18 45	19 08	36	35 57	29 46	
15	41	52.6	41.2	323	02.2	46.8	94	30	19 02	28	19 59	43 61	19 43	
16	56	52.5	40.6	337	31.1	+9 56.2	94	35	12	40	20 14	48 63	13 41	
17	71	52.4	-18 40.0	351	59.9	+10 05.4	92	40	19 23	19 54	20 31	11 54 65	23 06 40	
18	86	52.2	-18 39.3	6	28.8	+10 14.6	92	45	19 37	20 11	20 54	12 00 68	22 59 37	
19	101	52.1	38.7	20	57.6	23.8	92	50	19 53	32	21 24	08 71	50 34	
20	116	52.0	38.1	35	26.5	32.8	90	52	20 01	43	21 40	12 72	46 32	
21	131	51.8	37.4	49	55.4	41.8	90	54	10	20 55	22 00	16 74	41 31	
22	146	51.7	36.8	64	24.2	50.8	90	56	20	21 09	22 25	20 76	36 29	
23	161	51.6	36.2	78	53.1	+10 59.6	88	58	31	26	23 02	25 78	30 28	
24	176	51.4	-18 35.5	93	22.0	+11 08.4	88	60 S	20 44	21 47	** **	12 30 81	22 24 25	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 37 ^m 5		Mag: -3.9 PMG: 13 ^h 43 ^m		Mag: +1.2 PMG: 14 ^h 29 ^m		Mag: -2.6 PMG: 1 ^h 07 ^m		Mag: +0.5 PMG: 7 ^h 45 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	124	58.3	154	15.9	-13 39.0	142	32.0	-8 24.1	343	04.5	+15 57.6	243	31.8	-18 50.0
1	140	00.8	169	15.3	37.9	157	32.6	23.3	358	07.3	57.7	258	34.1	50.0
2	155	03.3	184	14.8	36.8	172	33.3	22.6	13	10.1	57.8	273	36.4	50.1
3	170	05.7	199	14.3	35.7	187	33.9	21.8	28	12.9	58.0	288	38.6	50.1
4	185	08.2	214	13.7	34.6	202	34.6	21.0	43	15.6	58.1	303	40.9	50.1
5	200	10.7	229	13.2	-13 33.5	217	35.2	-8 20.3	58	18.4	+15 58.2	318	43.2	-18 50.2
6	215	13.1	244	12.7	-13 32.4	232	35.9	-8 19.5	73	21.2	+15 58.3	333	45.5	-18 50.2
7	230	15.6	259	12.1	31.3	247	36.5	18.7	88	24.0	58.4	348	47.7	50.2
8	245	18.0	274	11.6	30.2	262	37.2	18.0	103	26.7	58.5	3	50.0	50.3
9	260	20.5	289	11.1	29.1	277	37.8	17.2	118	29.5	58.6	18	52.3	50.3
10	275	23.0	304	10.5	28.0	292	38.5	16.4	133	32.3	58.7	33	54.5	50.3
11	290	25.4	319	10.0	-13 26.9	307	39.1	-8 15.7	148	35.1	+15 58.8	48	56.8	-18 50.3
12	305	27.9	334	09.5	-13 25.8	322	39.8	-8 14.9	163	37.8	+15 58.9	63	59.1	-18 50.4
13	320	30.4	349	08.9	24.7	337	40.4	14.1	178	40.6	59.0	79	01.4	50.4
14	335	32.8	4	08.4	23.6	352	41.1	13.4	193	43.4	59.1	94	03.6	50.4
15	350	35.3	19	07.9	22.5	7	41.8	12.6	208	46.2	59.2	109	05.9	50.5
16	5	37.8	34	07.3	21.4	22	42.4	11.8	223	48.9	59.3	124	08.2	50.5
17	20	40.2	49	06.8	-13 20.3	37	43.1	-8 11.1	238	51.7	+15 59.4	139	10.5	-18 50.5
18	35	42.7	64	06.3	-13 19.2	52	43.7	-8 10.3	253	54.5	+15 59.5	154	12.7	-18 50.6
19	50	45.2	79	05.8	18.1	67	44.4	09.5	268	57.3	59.6	169	15.0	50.6
20	65	47.6	94	05.2	17.0	82	45.0	08.8	284	00.0	59.7	184	17.3	50.6
21	80	50.1	109	04.7	15.9	97	45.7	08.0	299	02.8	+15 59.8	199	19.5	50.6
22	95	52.5	124	04.2	14.8	112	46.3	07.2	314	05.6	+16 00.0	214	21.8	50.7
23	110	55.0	139	03.7	13.7	127	47.0	06.5	329	08.4	+16 00.1	229	24.1	50.7
24	125	57.5	154	03.1	-13 12.5	142	47.6	-8 05.7	344	11.2	+16 00.2	244	26.4	-18 50.7
Dif	—		-5 +11		+7 +8		+28 +1		+23 0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 7			Edad: 6 ^d 4 PHE { 4 ^h : 58'1 12 ^h : 57'8 20 ^h : 57'6 R°: 51 ^m	hG ☾ Dif	Dec		Dif			Hora	R°	Hora	R°		
	hG ☉	Dec							Náutico						Civil	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	51.4	-18	35.5	93	22.0	+11	08.4	60 N	6 45	7 37	8 26	10 39	27	1 09	78
1	191	51.3		34.9	107	50.9	99	17.1	58	41	29	14	46	30	1 02	76
2	206	51.2		34.3	122	19.8	99	25.7	56	37	22	8 04	52	32	0 56	74
3	221	51.1		33.6	136	48.6	98	34.3	54	33	16	7 56	10 58	33	51	72
4	236	50.9		33.0	151	17.5	99	42.8	52	29	10	48	11 03	35	46	71
5	251	50.8	-18	32.3	165	46.4	99	+11 51.2	50	6 26	7 05	7 41	11 08	36	0 42	69
6	266	50.7	-18	31.7	180	15.3	99	+11 59.6	45	6 18	6 54	7 26	11 19	38	0 33	66
7	281	50.5		31.1	194	44.2	99	+12 07.8	40	11	44	13	27	41	25	64
8	296	50.4		30.4	209	13.1	99	16.0	35	6 05	36	7 02	35	42	18	62
9	311	50.3		29.8	223	42.0	99	24.1	30	5 59	28	6 53	41	45	12	60
10	326	50.2		29.1	238	10.9	99	32.2	20	47	14	37	11 53	47	0 02	57
11	341	50.0	-18	28.5	252	39.8	99	+12 40.1	10 N	5 35	6 01	6 23	12 03	49	** ** *	**
12	356	49.9	-18	27.8	267	08.8	100	+12 48.0	0	5 22	5 47	6 09	12 12	52	** ** *	**
13	11	49.8		27.2	281	37.7	99	+12 55.8	10 S	5 07	33	5 55	22	54	** ** *	**
14	26	49.6		26.5	296	06.6	99	+13 03.5	20	4 49	5 17	41	32	56	** ** *	**
15	41	49.5		25.9	310	35.5	99	11.2	30	26	4 58	24	44	59	** ** *	**
16	56	49.4		25.3	325	04.4	99	18.7	35	4 12	46	14	51	60	23 54	44
17	71	49.3	-18	24.6	339	33.3	99	+13 26.2	40	3 54	4 32	5 02	12 59	62	23 46	42
18	86	49.1	-18	24.0	354	02.2	99	+13 33.6	45	3 32	4 15	4 49	13 08	64	23 36	40
19	101	49.0		23.3	8	31.1	99	40.9	50	3 01	3 53	32	19	67	24	38
20	116	48.9		22.7	23	00.1	100	48.2	52	2 45	43	25	24	68	18	37
21	131	48.8		22.0	37	29.0	99	+13 55.3	54	26	31	16	30	69	12	36
22	146	48.6		21.4	51	57.9	99	+14 02.4	56	2 01	17	4 06	36	71	23 05	35
23	161	48.5		20.7	66	26.8	99	09.4	58	1 24	3 00	3 55	43	73	22 58	32
24	176	48.4	-18	20.1	80	55.7	99	+14 16.3	60 S	** ** *	2 39	3 42	13 51	75	22 49	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 33 ^m 6		Mag: -3.9 PMG: 13 ^h 44 ^m		Mag: +1.2 PMG: 14 ^h 28 ^m		Mag: -2.6 PMG: 1 ^h 03 ^m		Mag: +0.5 PMG: 7 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	125	57.5	154	03.1	-13	12.5	142	47.6	-8	05.7
1	140	59.9	169	02.6		11.4	157	48.3		04.9
2	156	02.4	184	02.1		10.3	172	48.9		04.2
3	171	04.9	199	01.6		09.2	187	49.6		03.4
4	186	07.3	214	01.0		08.1	202	50.2		02.6
5	201	09.8	229	00.5	-13	07.0	217	50.9	-8	01.9
6	216	12.3	244	00.0	-13	05.9	232	51.5	-8	01.1
7	231	14.7	258	59.5		04.8	247	52.2	-8	00.3
8	246	17.2	273	59.0		03.7	262	52.9	-7	59.6
9	261	19.7	288	58.4		02.5	277	53.5		58.8
10	276	22.1	303	57.9		01.4	292	54.2		58.0
11	291	24.6	318	57.4	-13	00.3	307	54.8	-7	57.2
12	306	27.0	333	56.9	-12	59.2	322	55.5	-7	56.5
13	321	29.5	348	56.4		58.1	337	56.1		55.7
14	336	32.0	3	55.8		57.0	352	56.8		54.9
15	351	34.4	18	55.3		55.8	7	57.4		54.2
16	6	36.9	33	54.8		54.7	22	58.1		53.4
17	21	39.4	48	54.3	-12	53.6	37	58.8	-7	52.6
18	36	41.8	63	53.8	-12	52.5	52	59.4	-7	51.9
19	51	44.3	78	53.3		51.4	68	00.1		51.1
20	66	46.8	93	52.7		50.2	83	00.7		50.3
21	81	49.2	108	52.2		49.1	98	01.4		49.5
22	96	51.7	123	51.7		48.0	113	02.0		48.8
23	111	54.1	138	51.2		46.9	128	02.7		48.0
24	126	56.6	153	50.7	-12	45.8	143	03.3	-7	47.2
Dif	—		-5 +11		+7 +8		+28 +1		+23 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 12 ^m 9			Edad: 7 ^d 4 PHE { 4 ^h : 57:3 12 ^h : 57:1 20 ^h : 56:9 PMG: 19 ^h 16 ^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	176	48.4	-18 20.1	80	55.7	+14 16.3	68	60 N	16 03	16 51	17 43	11 06 34	2 27 72	
1	191	48.3	19.4	95	24.6	99	23.1	58	14	16 59	47	16 35	18 70	
2	206	48.2	18.8	109	53.6	100	29.8	56	24	17 06	51	24 37	10 68	
3	221	48.0	18.1	124	22.5	99	36.4	54	32	12	55	31 39	2 03 67	
4	236	47.9	17.5	138	51.4	99	43.0	52	40	17	17 58	38 40	1 57 65	
5	251	47.8	-18 16.8	153	20.3	99	+14 49.4	50	16 47	17 22	18 01	11 44 41	1 51 65	
6	266	47.7	-18 16.1	167	49.2	99	+14 55.8	45	17 02	17 33	18 09	11 57 43	1 39 62	
7	281	47.5	15.5	182	18.1	99	+15 02.1	40	14	43	15	12 08 44	29 60	
8	296	47.4	14.8	196	47.1	100	08.3	35	24	51	22	17 46	20 59	
9	311	47.3	14.2	211	16.0	99	14.4	30	33	17 59	27	26 46	1 12 58	
10	326	47.2	13.5	225	44.9	99	20.5	20	17 49	18 12	39	40 48	0 59 56	
11	341	47.1	-18 12.9	240	13.8	99	+15 26.4	10 N	18 03	18 25	18 51	12 52 50	0 48 53	
12	356	46.9	-18 12.2	254	42.8	100	+15 32.2	0	18 16	18 38	19 03	13 04 51	0 37 52	
13	11	46.8	11.6	269	11.7	99	38.0	10 S	30	18 52	18	16 53	26 50	
14	26	46.7	10.9	283	40.6	99	43.7	20	18 44	19 08	35	28 55	15 48	
15	41	46.6	10.2	298	09.5	99	49.2	30	19 01	27	19 58	43 56	0 02 45	
16	56	46.5	09.6	312	38.5	100	+15 54.7	35	10	38	20 12	13 51 57	** ** **	
17	71	46.4	-18 08.9	327	07.4	99	+16 00.1	40	19 21	19 52	20 29	14 01 58	** ** **	
18	86	46.2	-18 08.3	341	36.3	99	+16 05.4	45	19 35	20 08	20 51	14 12 60	** ** **	
19	101	46.1	07.6	356	05.3	100	10.6	50	51	29	21 20	26 62	** ** **	
20	116	46.0	06.9	10	34.2	99	15.7	52	19 58	40	36	32 63	23 55 42	
21	131	45.9	06.3	25	03.1	99	20.8	54	20 07	20 51	21 54	39 64	48 41	
22	146	45.8	05.6	39	32.1	100	25.7	56	16	21 05	22 17	47 65	40 40	
23	161	45.7	04.9	54	01.0	99	30.5	58	27	21	22 50	14 56 67	30 39	
24	176	45.6	-18 04.3	68	30.0	100	+16 35.3	60 S	20 40	21 40	** **	15 06 69	23 20 37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 15 ^h 29 ^m 7		Mag: -3.9 PMG: 13 ^h 45 ^m		Mag: +1.2 PMG: 14 ^h 27 ^m		Mag: -2.6 PMG: 0 ^h 59 ^m		Mag: +0.5 PMG: 7 ^h 37 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	126	56.6	153	50.7	-12	45.8	143	03.3	-7	47.2	345	17.8	+16	02.7	245	21.0	-18	51.4
1	141	59.1	168	50.2		44.6	158	04.0		46.5	0	20.6		02.8	260	23.3		51.5
2	157	01.5	183	49.7		43.5	173	04.7		45.7	15	23.4		02.9	275	25.5		51.5
3	172	04.0	198	49.2		42.4	188	05.3		44.9	30	26.2		03.0	290	27.8		51.5
4	187	06.5	213	48.7		41.3	203	06.0		44.2	45	28.9		03.1	305	30.1		51.5
5	202	08.9	228	48.1	-12	40.1	218	06.6	-7	43.4	60	31.7	+16	03.2	320	32.4	-18	51.6
6	217	11.4	243	47.6	-12	39.0	233	07.3	-7	42.6	75	34.5	+16	03.3	335	34.6	-18	51.6
7	232	13.9	258	47.1		37.9	248	07.9		41.8	90	37.3		03.4	350	36.9		51.6
8	247	16.3	273	46.6		36.8	263	08.6		41.1	105	40.1		03.5	5	39.2		51.7
9	262	18.8	288	46.1		35.6	278	09.3		40.3	120	42.8		03.7	20	41.5		51.7
10	277	21.3	303	45.6		34.5	293	09.9		39.5	135	45.6		03.8	35	43.8		51.7
11	292	23.7	318	45.1	-12	33.4	308	10.6	-7	38.8	150	48.4	+16	03.9	50	46.0	-18	51.7
12	307	26.2	333	44.6	-12	32.2	323	11.2	-7	38.0	165	51.2	+16	04.0	65	48.3	-18	51.8
13	322	28.6	348	44.1		31.1	338	11.9		37.2	180	54.0		04.1	80	50.6		51.8
14	337	31.1	3	43.6		30.0	353	12.6		36.4	195	56.7		04.2	95	52.9		51.8
15	352	33.6	18	43.1		28.8	8	13.2		35.7	210	59.5		04.3	110	55.1		51.8
16	7	36.0	33	42.6		27.7	23	13.9		34.9	226	02.3		04.4	125	57.4		51.9
17	22	38.5	48	42.1	-12	26.6	38	14.5	-7	34.1	241	05.1	+16	04.5	140	59.7	-18	51.9
18	37	41.0	63	41.6	-12	25.4	53	15.2	-7	33.4	256	07.9	+16	04.6	156	02.0	-18	51.9
19	52	43.4	78	41.1		24.3	68	15.9		32.6	271	10.7		04.7	171	04.3		52.0
20	67	45.9	93	40.6		23.2	83	16.5		31.8	286	13.4		04.8	186	06.5		52.0
21	82	48.4	108	40.1		22.0	98	17.2		31.0	301	16.2		04.9	201	08.8		52.0
22	97	50.8	123	39.5		20.9	113	17.8		30.3	316	19.0		05.0	216	11.1		52.0
23	112	53.3	138	39.0		19.8	128	18.5		29.5	331	21.8		05.1	231	13.4		52.1
24	127	55.8	153	38.5	-12	18.6	143	19.2	-7	28.7	346	24.6	+16	05.2	246	15.7	-18	52.1
Dif	—		-5	+11		+7	+8		+28	+1		+23						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 8 ^d 4 PHE { 4 ^h : 56:7 12 ^h : 56:4 20 ^h : 56:2 PMG: 20 ^h 08 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	45.6	-18	04.3	68	30.0	+16	35.3	60 N	6 42	7 33	8 21	11 40	42	3 39	64
1	191	45.4		03.6	82	58.9	99	39.9	58	38	26	11	11 51	43	28	63
2	206	45.3		02.9	97	27.9	100	44.5	56	34	19	8 01	12 01	44	18	62
3	221	45.2		02.3	111	56.8	99	49.0	54	30	13	7 53	10 44		10	61
4	236	45.1		01.6	126	25.8	100	53.3	52	27	08	45	18 44		3 02	60
5	251	45.0	-18	00.9	140	54.8	100	+16 57.6	50	6 24	7 03	7 38	12 25	45	2 56	59
6	266	44.9	-18	00.3	155	23.7	99	+17 01.8	45	6 17	6 52	7 24	12 40	46	2 41	58
7	281	44.8	-17	59.6	169	52.7	100	05.9	40	10	43	12	12 52	47	29	57
8	296	44.7		58.9	184	21.7	100	09.9	40	6 04	34	7 01	13 03	48	19	56
9	311	44.5		58.3	198	50.7	100	13.8	39	5 58	27	6 52	12 49		2 10	55
10	326	44.4		57.6	213	19.7	100	17.6	38	47	13	36	28 50		1 55	53
11	341	44.3	-17	56.9	227	48.7	100	+17 21.3	10 N	5 35	6 01	6 23	13 42	50	1 41	53
12	356	44.2	-17	56.3	242	17.7	100	+17 24.9	0	5 22	5 48	6 10	13 55	51	1 29	51
13	11	44.1		55.6	256	46.7	100	28.4	10 S	5 08	34	5 56	14 09	51	16	50
14	26	44.0		54.9	271	15.7	100	31.8	20	4 51	19	42	23 52		1 03	49
15	41	43.9		54.2	285	44.7	100	35.1	33	29	5 00	26	39 53		0 47	48
16	56	43.8		53.6	300	13.7	100	38.4	33	4 14	4 48	16	48 54		38	47
17	71	43.7	-17	52.9	314	42.8	101	+17 41.5	40	3 57	4 35	5 05	14 59	55	0 28	46
18	86	43.6	-17	52.2	329	11.8	100	+17 44.5	45	3 35	4 18	4 52	15 12	55	0 16	45
19	101	43.4		51.5	343	40.9	101	47.5	30	3 06	3 57	36	28 56		0 02	43
20	116	43.3		50.9	358	09.9	100	50.3	28	2 51	47	28	35 56		** ** *	**
21	131	43.2		50.2	12	39.0	101	53.1	28	32	35	20	43 57		** ** *	**
22	146	43.1		49.5	27	08.1	101	55.7	26	2 09	22	10	15 52	58	** ** *	**
23	161	43.0		48.8	41	37.2	101	+17 58.3	26	1 37	3 06	4 00	16 03	58	** ** *	**
24	176	42.9	-17	48.2	56	06.3	101	+18 00.7	24	** ** *	2 46	3 47	16 15	58	23 57	46

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 25 ^m 7		Mag: -3.9 PMG: 13 ^h 46 ^m		Mag: +1.2 PMG: 14 ^h 26 ^m		Mag: -2.6 PMG: 0 ^h 54 ^m		Mag: +0.5 PMG: 7 ^h 34 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	127	55.8	153	38.5	-12	18.6	143	19.2	-7	28.7
1	142	58.2	168	38.0		17.5	158	19.8		27.9
2	158	00.7	183	37.5		16.4	173	20.5		27.2
3	173	03.1	198	37.0		15.2	188	21.1		26.4
4	188	05.6	213	36.6		14.1	203	21.8		25.6
5	203	08.1	228	36.1	-12	12.9	218	22.5	-7	24.9
6	218	10.5	243	35.6	-12	11.8	233	23.1	-7	24.1
7	233	13.0	258	35.1		10.7	248	23.8		23.3
8	248	15.5	273	34.6		09.5	263	24.4		22.5
9	263	17.9	288	34.1		08.4	278	25.1		21.8
10	278	20.4	303	33.6		07.2	293	25.8		21.0
11	293	22.9	318	33.1	-12	06.1	308	26.4	-7	20.2
12	308	25.3	333	32.6	-12	04.9	323	27.1	-7	19.4
13	323	27.8	348	32.1		03.8	338	27.7		18.7
14	338	30.3	3	31.6		02.7	353	28.4		17.9
15	353	32.7	18	31.1		01.5	8	29.1		17.1
16	8	35.2	33	30.6	-12	00.4	23	29.7		16.3
17	23	37.6	48	30.1	-11	59.2	38	30.4	-7	15.6
18	38	40.1	63	29.6	-11	58.1	53	31.1	-7	14.8
19	53	42.6	78	29.1		56.9	68	31.7		14.0
20	68	45.0	93	28.6		55.8	83	32.4		13.2
21	83	47.5	108	28.2		54.6	98	33.0		12.5
22	98	50.0	123	27.7		53.5	113	33.7		11.7
23	113	52.4	138	27.2		52.3	128	34.4		10.9
24	128	54.9	153	26.7	-11	51.2	143	35.0	-7	10.1
Dif	—		-5		+11		+7		+8	
							+28		+1	
									+23	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 9 ^d 4	PHE {	4 ^h : 56:0 12 ^h : 55:9 20 ^h : 55:7										
	PMG: 12 ^h 13 ^m 2					SD: 15:3			PMG: 20 ^h 59 ^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		
0	176	42.9	-17 48.2		56 06.3	+18 00.7	60 N	16 08	16 56	17 47	12 22 50		4 43 54		
1	191	42.8			70 35.4 ¹⁰¹	03.1 ²⁴	58	19	17 03	51	34 50		31 53		
2	206	42.7			85 04.5 ¹⁰¹	05.3 ²²	56	28	10	55	45 50		20 53		
3	221	42.6			99 33.7 ¹⁰²	07.5 ²²	54	36	15	17 58	12 54 50		11 53		
4	236	42.5			114 02.8 ¹⁰¹	09.6 ²¹	52	44	21	18 01	13 02 51		4 02 53		
5	251	42.4	-17 44.8		128 32.0 ¹⁰²	+18 11.5 ¹⁹	50	16 50	17 25	18 04	13 10 51		3 55 53		
6	266	42.3	-17 44.1		143 01.2 ¹⁰²	+18 13.4 ¹⁹	45	17 04	17 36	18 11	13 26 51		3 39 52		
7	281	42.2			157 30.4 ¹⁰²	15.2 ¹⁸	40	16	45	18	39 51		26 52		
8	296	42.1			171 59.6 ¹⁰²	16.9 ¹⁷	35	26	17 53	23	13 51 50		15 52		
9	311	42.0			186 28.8 ¹⁰²	18.4 ¹⁵	30	35	18 00	29	14 01 50		3 05 52		
10	326	41.9			200 58.0 ¹⁰²	19.9 ¹⁵	20	17 50	14	40	18 50		2 48 52		
11	341	41.8	-17 40.7		215 27.3 ¹⁰³	+18 21.3 ¹⁴	10 N	18 04	18 26	18 51	14 32 51		2 34 51		
12	356	41.7	-17 40.0		229 56.5 ¹⁰²	+18 22.6 ¹³	0	18 17	18 38	19 04	14 46 51		2 20 51		
13	11	41.6			244 25.8 ¹⁰³	23.8 ¹²	10 S	30	18 52	18	15 00 51		2 06 51		
14	26	41.5			258 55.1 ¹⁰³	24.9 ¹¹	20	18 44	19 07	35	15 50		1 52 50		
15	41	41.4			273 24.4 ¹⁰³	25.9 ¹⁰	30	19 00	25	19 56	32 50		35 50		
16	56	41.3			287 53.7 ¹⁰³	26.8 ⁹	35	09	37	20 10	42 50		25 49		
17	71	41.2	-17 36.5		302 23.1 ¹⁰⁴	+18 27.6 ⁸	40	19 20	19 50	20 27	15 54 50		1 14 49		
18	86	41.1	-17 35.9		316 52.4 ¹⁰³	+18 28.3 ⁷	45	19 32	20 06	20 48	16 07 50		1 01 49		
19	101	41.0			331 21.8 ¹⁰⁴	29.0 ⁷	50	48	26	21 16	24 49		0 45 48		
20	116	40.9			345 51.2 ¹⁰⁴	29.5 ⁵	52	19 55	36	31	31 50		37 48		
21	131	40.8			0 20.6 ¹⁰⁴	29.9 ⁴	54	20 03	20 47	21 48	40 49		29 48		
22	146	40.7			14 50.1 ¹⁰⁵	30.2 ³	56	12	21 00	22 10	16 50 49		20 47		
23	161	40.6			29 19.5 ¹⁰⁴	30.5 ³	58	23	15	22 39	17 01 48		0 09 47		
24	176	40.5	-17 31.7		43 49.0 ¹⁰⁵	+18 30.6 ¹	60 S	20 35	21 34	23 31	17 13 49		** ** *		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 15 ^h 21 ^m 8		Mag: -3.9 PMG: 13 ^h 47 ^m		Mag: +1.2 PMG: 14 ^h 25 ^m		Mag: -2.6 PMG: 0 ^h 50 ^m			Mag: +0.5 PMG: 7 ^h 30 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	128	54.9	153 26.7	-11 51.2	143 35.0	-7 10.1	347 31.3	+16 07.8	247 10.4	-18 52.8					
1	143	57.4	168 26.2	50.0	158 35.7	09.4	2 34.1	07.9	262 12.7	52.8					
2	158	59.8	183 25.7	48.9	173 36.4	08.6	17 36.9	08.0	277 15.0	52.8					
3	174	02.3	198 25.2	47.7	188 37.0	07.8	32 39.7	08.1	292 17.3	52.8					
4	189	04.7	213 24.7	46.6	203 37.7	07.0	47 42.5	08.2	307 19.6	52.9					
5	204	07.2	228 24.2	-11 45.4	218 38.4	-7 06.3	62 45.3	+16 08.3	322 21.9	-18 52.9					
6	219	09.7	243 23.8	-11 44.3	233 39.0	-7 05.5	77 48.1	+16 08.4	337 24.1	-18 52.9					
7	234	12.1	258 23.3	43.1	248 39.7	04.7	92 50.8	08.5	352 26.4	52.9					
8	249	14.6	273 22.8	42.0	263 40.3	03.9	107 53.6	08.7	7 28.7	53.0					
9	264	17.1	288 22.3	40.8	278 41.0	03.2	122 56.4	08.8	22 31.0	53.0					
10	279	19.5	303 21.8	39.7	293 41.7	02.4	137 59.2	08.9	37 33.3	53.0					
11	294	22.0	318 21.3	-11 38.5	308 42.3	-7 01.6	153 02.0	+16 09.0	52 35.6	-18 53.1					
12	309	24.5	333 20.9	-11 37.3	323 43.0	-7 00.8	168 04.8	+16 09.1	67 37.9	-18 53.1					
13	324	26.9	348 20.4	36.2	338 43.7	-7 00.1	183 07.5	09.2	82 40.1	53.1					
14	339	29.4	3 19.9	35.0	353 44.3	-6 59.3	198 10.3	09.3	97 42.4	53.1					
15	354	31.9	18 19.4	33.9	8 45.0	58.5	213 13.1	09.4	112 44.7	53.2					
16	9	34.3	33 18.9	32.7	23 45.7	57.7	228 15.9	09.5	127 47.0	53.2					
17	24	36.8	48 18.4	-11 31.5	38 46.3	-6 57.0	243 18.7	+16 09.6	142 49.3	-18 53.2					
18	39	39.2	63 18.0	-11 30.4	53 47.0	-6 56.2	258 21.5	+16 09.7	157 51.6	-18 53.2					
19	54	41.7	78 17.5	29.2	68 47.7	55.4	273 24.3	09.8	172 53.9	53.3					
20	69	44.2	93 17.0	28.1	83 48.3	54.6	288 27.0	09.9	187 56.2	53.3					
21	84	46.6	108 16.5	26.9	98 49.0	53.8	303 29.8	10.0	202 58.4	53.3					
22	99	49.1	123 16.1	25.7	113 49.7	53.1	318 32.6	10.1	218 00.7	53.3					
23	114	51.6	138 15.6	24.6	128 50.3	52.3	333 35.4	10.3	233 03.0	53.4					
24	129	54.0	153 15.1	-11 23.4	143 51.0	-6 51.5	348 38.2	+16 10.4	248 05.3	-18 53.4					
Dif	—		-5	+12	+7	+8	+28	+1	+23						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 4			Edad: 10 ^d 4 PHE { 4 ^h : 55:5 12 ^h : 55:4 20 ^h : 55:2 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	176	40.5	-17	31.7	43	49.0	+18	30.6	60 N	6 38	7 29	8 17	13 12	58	5 37	43	
1	191	40.4		31.0	58	18.5 ¹⁰⁵		30.7	58	34	22	8 06	24	58	24	44	
2	206	40.3		30.3	72	48.0 ¹⁰⁵		30.6	56	31	16	7 57	35	57	13	45	
3	221	40.2		29.6	87	17.6 ¹⁰⁶		30.5	54	28	10	49	44	56	5	04	45
4	236	40.1		29.0	101	47.1 ¹⁰⁵		30.2	52	24	05	42	13 53	55	4	55	46
5	251	40.0	-17	28.3	116	16.7 ¹⁰⁶	+18	29.9	50	6 22	7 00	7 35	14 01	54	4	48	46
6	266	39.9	-17	27.6	130	46.4 ¹⁰⁷	+18	29.5	45	6 15	6 50	7 21	14 17	54	4	31	47
7	281	39.8		26.9	145	16.0 ¹⁰⁶		29.0	40	09	41	10	30	53	18	48	
8	296	39.7		26.2	159	45.6 ¹⁰⁶		28.4	35	6 03	33	7 00	41	53	4	07	48
9	311	39.6		25.5	174	15.3 ¹⁰⁷		27.6	30	5 57	26	6 51	14 51	52	3	57	48
10	326	39.5		24.8	188	45.0 ¹⁰⁷		26.9	20	46	13	36	15 08	51	40	49	
11	341	39.4	-17	24.1	203	14.8 ¹⁰⁸	+18	26.0	10 N	5 35	6 01	6 23	15 23	50	3	25	49
12	356	39.3	-17	23.4	217	44.5 ¹⁰⁷	+18	25.0	0	5 23	5 48	6 10	15 37	49	3	11	50
13	11	39.3		22.7	232	14.3 ¹⁰⁸		23.9	10 S	5 09	35	5 57	15 51	48	2	57	50
14	26	39.2		22.0	246	44.1 ¹⁰⁸		22.7	20	4 52	20	43	16 05	48	42	51	
15	41	39.1		21.3	261	14.0 ¹⁰⁹		21.5	30	31	5 02	27	22	47	25	51	
16	56	39.0		20.6	275	43.9 ¹⁰⁹		20.1	35	17	4 50	18	32	46	14	52	
17	71	38.9	-17	19.9	290	13.8 ¹⁰⁹	+18	18.7	40	4 00	4 37	5 07	16 44	45	2	03	52
18	86	38.8	-17	19.2	304	43.7 ¹⁰⁹	+18	17.1	45	3 39	4 21	4 55	16 57	44	1	50	52
19	101	38.7		18.5	319	13.6 ¹⁰⁹		15.5	50	3 11	4 01	39	17 13	43	33	53	
20	116	38.6		17.8	333	43.6 ¹¹⁰		13.8	52	2 56	3 51	32	21	42	25	54	
21	131	38.5		17.1	348	13.6 ¹¹⁰		12.0	54	39	40	24	29	42	17	53	
22	146	38.4		16.4	2	43.7 ¹¹¹		10.1	56	2 17	27	15	39	40	1	07	54
23	161	38.4		15.7	17	13.7 ¹¹⁰		08.1	58	1 48	3 12	4 05	17 49	40	0	56	54
24	176	38.3	-17	15.0	31	43.8 ¹¹¹	+18	06.1	60 S	0 56	2 54	3 53	18 02	39	0	43	55

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 17 ^m 9		Mag: -3.9 PMG: 13 ^h 47 ^m			Mag: +1.2 PMG: 14 ^h 24 ^m			Mag: -2.6 PMG: 0 ^h 45 ^m			Mag: +0.5 PMG: 7 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	129	54.0	153	15.1	-11	23.4	143	51.0	-6	51.5	348	38.2	+16	10.4	248	05.3	-18	53.4
1	144	56.5	168	14.6		22.3	158	51.7		50.7	3	41.0		10.5	263	07.6		53.4
2	159	59.0	183	14.1		21.1	173	52.3		50.0	18	43.8		10.6	278	09.9		53.4
3	175	01.4	198	13.7		19.9	188	53.0		49.2	33	46.5		10.7	293	12.2		53.5
4	190	03.9	213	13.2		18.8	203	53.7		48.4	48	49.3		10.8	308	14.5		53.5
5	205	06.4	228	12.7	-11	17.6	218	54.3	-6	47.6	63	52.1	+16	10.9	323	16.7	-18	53.5
6	220	08.8	243	12.2	-11	16.4	233	55.0	-6	46.9	78	54.9	+16	11.0	338	19.0	-18	53.6
7	235	11.3	258	11.8		15.3	248	55.7		46.1	93	57.7		11.1	353	21.3		53.6
8	250	13.7	273	11.3		14.1	263	56.3		45.3	109	00.5		11.2	8	23.6		53.6
9	265	16.2	288	10.8		12.9	278	57.0		44.5	124	03.3		11.3	23	25.9		53.6
10	280	18.7	303	10.4		11.8	293	57.7		43.7	139	06.0		11.4	38	28.2		53.7
11	295	21.1	318	09.9	-11	10.6	308	58.3	-6	43.0	154	08.8	+16	11.5	53	30.5	-18	53.7
12	310	23.6	333	09.4	-11	09.4	323	59.0	-6	42.2	169	11.6	+16	11.6	68	32.8	-18	53.7
13	325	26.1	348	08.9		08.3	338	59.7		41.4	184	14.4		11.7	83	35.0		53.7
14	340	28.5	3	08.5		07.1	354	00.3		40.6	199	17.2		11.9	98	37.3		53.8
15	355	31.0	18	08.0		05.9	9	01.0		39.8	214	20.0		12.0	113	39.6		53.8
16	10	33.5	33	07.5		04.7	24	01.7		39.1	229	22.8		12.1	128	41.9		53.8
17	25	35.9	48	07.1	-11	03.6	39	02.3	-6	38.3	244	25.6	+16	12.2	143	44.2	-18	53.8
18	40	38.4	63	06.6	-11	02.4	54	03.0	-6	37.5	259	28.3	+16	12.3	158	46.5	-18	53.9
19	55	40.9	78	06.1		01.2	69	03.7		36.7	274	31.1		12.4	173	48.8		53.9
20	70	43.3	93	05.6	-11	00.1	84	04.3		36.0	289	33.9		12.5	188	51.1		53.9
21	85	45.8	108	05.2	-10	58.9	99	05.0		35.2	304	36.7		12.6	203	53.4		53.9
22	100	48.2	123	04.7		57.7	114	05.7		34.4	319	39.5		12.7	218	55.7		54.0
23	115	50.7	138	04.2		56.5	129	06.4		33.6	334	42.3		12.8	233	58.0		54.0
24	130	53.2	153	03.8	-10	55.4	144	07.0	-6	32.8	349	45.1	+16	12.9	249	00.2	-18	54.0
Dif	—		-5 +12			+7 +8			+28 +1			+23 0						

UT	SOL		O LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 5		Edad: 11 ^d 4 PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 8 R°: 47 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	38.3	-17	15.0	31	43.8	+18 06.1	60 N	16 13	17 01	17 52	14 10 64	6 20 35		
1	191	38.2		14.3	46	14.0 ¹¹²	03.9 ²²	58	23	07	55	22 62	6 08 36		
2	206	38.1		13.6	60	44.1 ¹¹¹	+18 01.7	56	32	13	17 59	32 61	5 58 37		
3	221	38.0		12.9	75	14.3 ¹¹²	+17 59.3	54	40	19	18 02	40 61	49 38		
4	236	37.9		12.2	89	44.6 ¹¹³	56.9 ²⁴	52	47	24	05	48 59	41 39		
5	251	37.8	-17	11.4	104	14.8 ¹¹²	+17 54.4	50	16 54	17 29	18 07	14 55 59	5 34 40		
6	266	37.7	-17	10.7	118	45.1 ¹¹³	+17 51.8	45	17 07	17 39	18 14	15 11 56	5 18 42		
7	281	37.7		10.0	133	15.4 ¹¹³	49.1 ²⁷	40	19	47	20	23 55	5 06 42		
8	296	37.6		09.3	147	45.8 ¹¹⁴	46.3 ²⁸	35	28	17 55	25	34 53	4 55 43		
9	311	37.5		08.6	162	16.2 ¹¹⁴	43.5 ²⁸	30	37	18 02	31	43 53	45 45		
10	326	37.4		07.9	176	46.6 ¹¹⁴	40.6 ²⁹	20	17 52	15	41	15 59 51	29 46		
11	341	37.3	-17	07.2	191	17.1 ¹¹⁵	+17 37.5	10 N	18 05	18 27	18 52	16 13 49	4 14 48		
12	356	37.2	-17	06.5	205	47.6 ¹¹⁵	+17 34.4	0	18 17	18 39	19 04	16 26 48	4 01 48		
13	11	37.1		05.8	220	18.1 ¹¹⁵	31.2 ³²	10 S	29	18 52	17	39 46	3 47 50		
14	26	37.1		05.1	234	48.6 ¹¹⁵	28.0 ³²	20	43	19 06	34	16 53 45	33 50		
15	41	37.0		04.4	249	19.2 ¹¹⁶	24.6 ³⁴	30	18 58	24	19 55	17 09 43	16 52		
16	56	36.9		03.6	263	49.9 ¹¹⁷	21.2 ³⁴	35	19 07	35	20 08	18 42	3 06 53		
17	71	36.8	-17	02.9	278	20.5 ¹¹⁶	+17 17.7	40	19 18	19 48	20 24	17 29 40	2 55 54		
18	86	36.7	-17	02.2	292	51.3 ¹¹⁸	+17 14.1	45	19 30	20 03	20 45	17 41 39	2 42 55		
19	101	36.7		01.5	307	22.0 ¹¹⁷	10.4 ³⁷	50	45	23	21 12	17 56 37	26 57		
20	116	36.6		00.8	321	52.8 ¹¹⁸	06.6 ³⁸	52	19 52	32	26	18 03 36	19 57		
21	131	36.5	-17	00.1	336	23.6 ¹¹⁸	+17 02.8	54	20 00	43	21 42	11 35	10 59		
22	146	36.4	-16	59.4	350	54.4 ¹¹⁸	+16 58.9	56	09	20 55	22 03	19 34	2 01 59		
23	161	36.3		58.6	5	25.3 ¹¹⁹	54.9 ⁴⁰	58	18	21 10	22 30	29 32	1 50 61		
24	176	36.2	-16	57.9	19	56.2 ¹¹⁹	+16 50.8	60 S	20 30	21 27	23 11	18 41 30	1 38 62		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 14 ^m 0		Mag: -3.9 PMG: 13 ^h 48 ^m		Mag: +1.2 PMG: 14 ^h 23 ^m		Mag: -2.6 PMG: 0 ^h 41 ^m		Mag: +0.5 PMG: 7 ^h 23 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	130	53.2	153	03.8	-10	55.4	144	07.0	-6	32.8
1	145	55.6	168	03.3		54.2	159	07.7		32.1
2	160	58.1	183	02.9		53.0	174	08.4		31.3
3	176	00.6	198	02.4		51.8	189	09.0		30.5
4	191	03.0	213	01.9		50.7	204	09.7		29.7
5	206	05.5	228	01.5	-10	49.5	219	10.4	-6	28.9
6	221	08.0	243	01.0	-10	48.3	234	11.0	-6	28.2
7	236	10.4	258	00.5		47.1	249	11.7		27.4
8	251	12.9	273	00.1		45.9	264	12.4		26.6
9	266	15.3	287	59.6		44.8	279	13.1		25.8
10	281	17.8	302	59.1		43.6	294	13.7		25.0
11	296	20.3	317	58.7	-10	42.4	309	14.4	-6	24.3
12	311	22.7	332	58.2	-10	41.2	324	15.1	-6	23.5
13	326	25.2	347	57.8		40.0	339	15.7		22.7
14	341	27.7	2	57.3		38.9	354	16.4		21.9
15	356	30.1	17	56.8		37.7	9	17.1		21.1
16	11	32.6	32	56.4		36.5	24	17.8		20.4
17	26	35.1	47	55.9	-10	35.3	39	18.4	-6	19.6
18	41	37.5	62	55.5	-10	34.1	54	19.1	-6	18.8
19	56	40.0	77	55.0		33.0	69	19.8		18.0
20	71	42.5	92	54.6		31.8	84	20.4		17.2
21	86	44.9	107	54.1		30.6	99	21.1		16.5
22	101	47.4	122	53.6		29.4	114	21.8		15.7
23	116	49.8	137	53.2		28.2	129	22.5		14.9
24	131	52.3	152	52.7	-10	27.0	144	23.1	-6	14.1
Dif	—		-5		+12		+7		+8	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 12 ^d 4 PHE { 4 ^h : 54:7 12 ^h : 54:6 20 ^h : 54:5 Rº: 46 ^m													
	PMG: 12 ^h 13 ^m 6			SD: 14:9 PMG: 23 ^h 25 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	176	36.2	-16	57.9	19	56.2	+16	50.8	42	60 N	6	35	7	25	8	12	15
1	191	36.2		57.2	34	27.2		46.6	42	58	31	19	8	02	24	66	6
2	206	36.1		56.5	48	58.2		42.4	42	56	28	13	7	54	33	64	5
3	221	36.0		55.8	63	29.2		38.1	43	54	25	07	46	41	62	27	3
4	236	35.9		55.1	78	00.3		33.7	44	52	22	7	02	39	47	62	20
5	251	35.9	-16	54.3	92	31.4	+16	29.2	45	50	6	19	6	58	7	33	15
6	266	35.8	-16	53.6	107	02.6	+16	24.7	45	45	6	13	6	48	7	19	16
7	281	35.7		52.9	121	33.8		20.1	46	40	07	39	7	08	18	56	6
8	296	35.6		52.2	136	05.0		15.4	47	35	6	02	32	6	58	27	5
9	311	35.5		51.5	150	36.3		10.6	48	30	5	56	25	50	36	52	3
10	326	35.5		50.7	165	07.6		05.8	48	20	46	12	35	16	50	50	15
11	341	35.4	-16	50.0	179	38.9	+16	00.9	49	10 N	5	35	6	00	6	22	17
12	356	35.3	-16	49.3	194	10.3	+15	55.9	50	0	5	23	5	49	6	10	17
13	11	35.2		48.6	208	41.7		50.9	50	10 S	5	10	36	5	58	25	4
14	26	35.2		47.8	223	13.2		45.8	51	20	4	54	21	44	38	41	3
15	41	35.1		47.1	237	44.7		40.6	52	30	33	5	03	29	17	52	4
16	56	35.0		46.4	252	16.2		35.3	53	35	19	4	53	20	18	00	3
17	71	34.9	-16	45.7	266	47.8	+15	30.0	53	40	4	03	4	40	5	10	18
18	86	34.9	-16	44.9	281	19.4	+15	24.6	54	45	3	43	4	24	4	58	18
19	101	34.8		44.2	295	51.0		19.1	55	50	16	4	05	43	33	32	3
20	116	34.7		43.5	310	22.7		13.6	55	52	3	02	3	55	39	31	2
21	131	34.7		42.8	324	54.5		08.0	56	54	2	45	45	28	46	29	1
22	146	34.6		42.0	339	26.2	+15	02.3	57	56	2	25	32	19	18	53	3
23	161	34.5		41.3	353	58.1	+14	56.6	57	58	1	58	18	4	10	19	0
24	176	34.4	-16	40.6	8	29.9	+14	50.8	58	60 S	1	16	3	01	3	58	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 10 ^m 0		Mag: -3.9 PMG: 13 ^h 49 ^m		Mag: +1.2 PMG: 14 ^h 22 ^m		Mag: -2.6 PMG: 0 ^h 36 ^m		Mag: +0.5 PMG: 7 ^h 19 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	131	52.3	152	52.7	-10	27.0	144	23.1	-6	14.1
1	146	54.8	167	52.3		25.8	159	23.8		13.3
2	161	57.2	182	51.8		24.7	174	24.5		12.6
3	176	59.7	197	51.4		23.5	189	25.1		11.8
4	192	02.2	212	50.9		22.3	204	25.8		11.0
5	207	04.6	227	50.5	-10	21.1	219	26.5	-6	10.2
6	222	07.1	242	50.0	-10	19.9	234	27.2	-6	09.4
7	237	09.6	257	49.6		18.7	249	27.8		08.6
8	252	12.0	272	49.1		17.5	264	28.5		07.9
9	267	14.5	287	48.6		16.3	279	29.2		07.1
10	282	17.0	302	48.2		15.1	294	29.9		06.3
11	297	19.4	317	47.7	-10	13.9	309	30.5	-6	05.5
12	312	21.9	332	47.3	-10	12.8	324	31.2	-6	04.7
13	327	24.3	347	46.8		11.6	339	31.9		04.0
14	342	26.8	2	46.4		10.4	354	32.6		03.2
15	357	29.3	17	45.9		09.2	9	33.2		02.4
16	12	31.7	32	45.5		08.0	24	33.9		01.6
17	27	34.2	47	45.1	-10	06.8	39	34.6	-6	00.8
18	42	36.7	62	44.6	-10	05.6	54	35.3	-6	00.0
19	57	39.1	77	44.2		04.4	69	35.9	-5	59.3
20	72	41.6	92	43.7		03.2	84	36.6		58.5
21	87	44.1	107	43.3		02.0	99	37.3		57.7
22	102	46.5	122	42.8	-10	00.8	114	38.0		56.9
23	117	49.0	137	42.4	-9	59.6	129	38.6		56.1
24	132	51.5	152	41.9	-9	58.4	144	39.3	-5	55.4
Dif	—		-4		+12		+7		+8	
							+28		+1	
									+23	

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: 13 ^d 4 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3 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	176	34.4	-16	40.6	8	29.9	+14 50.8	60 N	16 19	17 05	17 56	16 22 69	7 22 22					
1	191	34.4		39.9	23	01.8 ¹²⁹	44.9 ⁵⁹	58	28	12	17 59	30 67	14 24					
2	206	34.3		39.1	37	33.7 ¹²⁹	39.0 ⁵⁹	56	37	17	18 02	37 65	06 26					
3	221	34.2		38.4	52	05.7 ¹³⁰	33.0 ⁶⁰	54	44	23	05	43 64	7 00 26					
4	236	34.2		37.7	66	37.7 ¹³⁰	26.9 ⁶¹	52	51	27	08	49 62	6 54 28					
5	251	34.1	-16	36.9	81	09.7 ¹³⁰	+14 20.8	50	16 57	17 32	18 10	16 54 61	6 48 30					
6	266	34.0	-16	36.2	95	41.8 ¹³¹	+14 14.6	45	17 10	17 41	18 16	17 05 58	6 36 33					
7	281	33.9		35.5	110	13.9 ¹³¹	08.4	40	21	50	22	14 56	27 34					
8	296	33.9		34.7	124	46.1 ¹³²	+14 02.1	35	30	17 57	27	21 54	18 37					
9	311	33.8		34.0	139	18.3 ¹³²	+13 55.7	30	39	18 04	32	28 52	6 11 38					
10	326	33.7		33.3	153	50.5 ¹³²	49.3 ⁶⁴	20	17 53	16	42	40 49	5 58 41					
11	341	33.7	-16	32.5	168	22.8 ¹³³	+13 42.8	10 N	18 05	18 27	18 52	17 50 47	5 47 43					
12	356	33.6	-16	31.8	182	55.1 ¹³³	+13 36.3	0	18 17	18 39	19 04	18 00 44	5 36 45					
13	11	33.5		31.1	197	27.5 ¹³⁴	29.7 ⁶⁶	10 S	29	18 51	17	09 42	25 48					
14	26	33.5		30.3	211	59.9 ¹³⁴	23.0 ⁶⁷	20	42	19 05	33	19 40	14 50					
15	41	33.4		29.6	226	32.3 ¹³⁴	16.3 ⁶⁷	30	18 57	23	19 53	31 37	5 01 53					
16	56	33.3		28.9	241	04.8 ¹³⁵	09.6 ⁶⁷	35	19 06	33	20 06	38 35	4 53 54					
17	71	33.3	-16	28.1	255	37.3 ¹³⁵	+13 02.7	40	19 16	19 46	20 22	18 45 34	4 45 56					
18	86	33.2	-16	27.4	270	09.8 ¹³⁵	+12 55.9	45	19 28	20 01	20 42	18 54 31	4 35 58					
19	101	33.2		26.6	284	42.4 ¹³⁶	48.9 ⁷⁰	50	42	19	21 08	19 05 28	22 61					
20	116	33.1		25.9	299	15.0 ¹³⁶	41.9 ⁷⁰	52	49	28	21	10 27	16 62					
21	131	33.0		25.2	313	47.7 ¹³⁷	34.9 ⁷⁰	54	19 56	39	37	15 26	10 64					
22	146	33.0		24.4	328	20.4 ¹³⁷	27.8 ⁷¹	56	20 04	20 51	21 56	21 24	4 03 65					
23	161	32.9		23.7	342	53.1 ¹³⁷	20.7 ⁷¹	58	14	21 04	22 20	28 22	3 55 67					
24	176	32.8	-16	22.9	357	25.8 ¹³⁷	+12 13.5	60 S	20 25	21 21	22 56	19 35 20	3 46 69					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 06 ^m 1		Mag: -3.9 PMG: 13 ^h 50 ^m			Mag: +1.2 PMG: 14 ^h 21 ^m			Mag: -2.6 PMG: 0 ^h 32 ^m			Mag: +0.5 PMG: 7 ^h 16 ^m						
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	132	51.5	152	41.9	-9	58.4	144	39.3	-5	55.4	351	58.9	+16	18.1	250	50.4	-18	55.2
1	147	53.9	167	41.5		57.2	159	40.0		54.6	7	01.7		18.2	265	52.7		55.2
2	162	56.4	182	41.0		56.0	174	40.7		53.8	22	04.5		18.3	280	55.0		55.2
3	177	58.8	197	40.6		54.8	189	41.3		53.0	37	07.3		18.4	295	57.3		55.3
4	193	01.3	212	40.2		53.6	204	42.0		52.2	52	10.1		18.5	310	59.6		55.3
5	208	03.8	227	39.7	-9	52.4	219	42.7	-5	51.4	67	12.9	+16	18.6	326	01.9	-18	55.3
6	223	06.2	242	39.3	-9	51.2	234	43.4	-5	50.7	82	15.7	+16	18.7	341	04.2	-18	55.3
7	238	08.7	257	38.8		50.0	249	44.0		49.9	97	18.5		18.8	356	06.5		55.4
8	253	11.2	272	38.4		48.8	264	44.7		49.1	112	21.2		18.9	11	08.8		55.4
9	268	13.6	287	37.9		47.6	279	45.4		48.3	127	24.0		19.0	26	11.1		55.4
10	283	16.1	302	37.5		46.4	294	46.1		47.5	142	26.8		19.1	41	13.4		55.4
11	298	18.6	317	37.1	-9	45.2	309	46.7	-5	46.7	157	29.6	+16	19.2	56	15.7	-18	55.5
12	313	21.0	332	36.6	-9	44.0	324	47.4	-5	46.0	172	32.4	+16	19.3	71	18.0	-18	55.5
13	328	23.5	347	36.2		42.8	339	48.1		45.2	187	35.2		19.4	86	20.3		55.5
14	343	25.9	2	35.7		41.6	354	48.8		44.4	202	38.0		19.6	101	22.6		55.5
15	358	28.4	17	35.3		40.4	9	49.5		43.6	217	40.8		19.7	116	24.9		55.6
16	13	30.9	32	34.9		39.2	24	50.1		42.8	232	43.6		19.8	131	27.2		55.6
17	28	33.3	47	34.4	-9	38.0	39	50.8	-5	42.0	247	46.4	+16	19.9	146	29.5	-18	55.6
18	43	35.8	62	34.0	-9	36.8	54	51.5	-5	41.3	262	49.2	+16	20.0	161	31.8	-18	55.6
19	58	38.3	77	33.6		35.6	69	52.2		40.5	277	51.9		20.1	176	34.1		55.6
20	73	40.7	92	33.1		34.4	84	52.8		39.7	292	54.7		20.2	191	36.4		55.7
21	88	43.2	107	32.7		33.2	99	53.5		38.9	307	57.5		20.3	206	38.7		55.7
22	103	45.7	122	32.2		32.0	114	54.2		38.1	323	00.3		20.4	221	41.0		55.7
23	118	48.1	137	31.8		30.8	129	54.9		37.3	338	03.1		20.5	236	43.3		55.7
24	133	50.6	152	31.4	-9	29.5	144	55.6	-5	36.5	353	05.9	+16	20.6	251	45.6	-18	55.8
Dif	—		-4			+12	+7		+8		+28		+1		+23			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 14 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1												
	PMG: 12 ^h 13 ^m 9			SD: 14'8 PMG: 0 ^h 11 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	32.8	-16	22.9	357	25.8	+12 13.5	73 60 N	6 31	7 21	8 07	17 31	70	7 44	19	
1	191	32.8		22.2	11	58.6 ¹³⁸	+12 06.2	73 58	27	15	7 58	37	68	38	21	
2	206	32.7		21.5	26	31.5 ¹³⁹	+11 58.9	73 56	24	09	50	42	66	32	23	
3	221	32.6		20.7	41	04.3 ¹³⁸		73 54	22	7 04	42	47	64	27	22	
4	236	32.6		20.0	55	37.2 ¹³⁹		74 52	19	6 59	36	51	63	22	26	
5	251	32.5	-16	19.2	70	10.2 ¹⁴⁰	+11 36.8	74 50	6 16	6 55	7 30	17 55	61	7 18	27	
6	266	32.5	-16	18.5	84	43.2 ¹⁴⁰	+11 29.3	75 45	6 11	6 46	7 17	18 03	58	7 09	30	
7	281	32.4		17.7	99	16.2 ¹⁴⁰		75 40	05	38	7 06	10	55	7 01	32	
8	296	32.3		17.0	113	49.2 ¹⁴⁰		76 35	6 00	30	6 57	15	54	6 55	34	
9	311	32.3		16.3	128	22.3 ¹⁴¹	+11 06.6	76 30	5 55	24	49	20	52	49	36	
10	326	32.2		15.5	142	55.4 ¹⁴¹	+10 58.9	77 20	45	12	35	29	49	39	38	
11	341	32.2	-16	14.8	157	28.5 ¹⁴¹	+10 51.2	77 10 N	5 35	6 00	6 22	18 37	46	6 30	41	
12	356	32.1	-16	14.0	172	01.7 ¹⁴²	+10 43.4	78 0	5 24	5 49	6 10	18 44	44	6 21	44	
13	11	32.0		13.3	186	34.9 ¹⁴²		78 10 S	5 11	36	5 58	51	41	13	46	
14	26	32.0		12.5	201	08.2 ¹⁴³		78 20	4 55	22	46	18 59	38	6 04	49	
15	41	31.9		11.8	215	41.4 ¹⁴²		79 30	35	5 05	31	19 08	35	5 54	52	
16	56	31.9		11.0	230	14.7 ¹⁴³		79 35	22	4 55	22	13	33	47	54	
17	71	31.8	-16	10.3	244	48.1 ¹⁴⁴	+10 04.0	80 40	4 06	4 43	5 12	19 19	30	5 41	56	
18	86	31.8	-16	09.5	259	21.4 ¹⁴³	+9 56.0	80 45	3 46	4 28	5 01	19 25	29	5 33	58	
19	101	31.7		08.8	273	54.8 ¹⁴⁴		81 50	20	09	4 46	33	26	23	61	
20	116	31.7		08.0	288	28.3 ¹⁴⁵		80 52	3 07	4 00	40	37	24	18	63	
21	131	31.6		07.3	303	01.7 ¹⁴⁴		82 54	2 52	3 50	32	41	23	14	64	
22	146	31.5		06.5	317	35.2 ¹⁴⁵		81 56	33	38	24	45	21	08	66	
23	161	31.5		05.8	332	08.7 ¹⁴⁵		82 58	2 08	24	14	50	19	5	02	
24	176	31.4	-16	05.0	346	42.3 ¹⁴⁶	+9 07.1	83 60 S	1 32	3 08	4 04	19 55	18	4 55	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 02 ^m 2		Mag: -3.9 PMG: 13 ^h 50 ^m		Mag: +1.2 PMG: 14 ^h 20 ^m		Mag: -2.6 PMG: 0 ^h 28 ^m		Mag: +0.5 PMG: 7 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	133	50.6	152	31.4	-9	29.5	144	55.6	-5	36.5
1	148	53.1	167	30.9		28.3	159	56.2		35.8
2	163	55.5	182	30.5		27.1	174	56.9		35.0
3	178	58.0	197	30.1		25.9	189	57.6		34.2
4	194	00.4	212	29.6		24.7	204	58.3		33.4
5	209	02.9	227	29.2	-9	23.5	219	58.9	-5	32.6
6	224	05.4	242	28.8	-9	22.3	234	59.6	-5	31.8
7	239	07.8	257	28.3		21.1	250	00.3		31.1
8	254	10.3	272	27.9		19.9	265	01.0		30.3
9	269	12.8	287	27.5		18.7	280	01.7		29.5
10	284	15.2	302	27.0		17.4	295	02.3		28.7
11	299	17.7	317	26.6	-9	16.2	310	03.0	-5	27.9
12	314	20.2	332	26.2	-9	15.0	325	03.7	-5	27.1
13	329	22.6	347	25.8		13.8	340	04.4		26.3
14	344	25.1	2	25.3		12.6	355	05.1		25.6
15	359	27.6	17	24.9		11.4	10	05.7		24.8
16	14	30.0	32	24.5		10.2	25	06.4		24.0
17	29	32.5	47	24.0	-9	08.9	40	07.1	-5	23.2
18	44	34.9	62	23.6	-9	07.7	55	07.8	-5	22.4
19	59	37.4	77	23.2		06.5	70	08.5		21.6
20	74	39.9	92	22.8		05.3	85	09.1		20.8
21	89	42.3	107	22.3		04.1	100	09.8		20.1
22	104	44.8	122	21.9		02.9	115	10.5		19.3
23	119	47.3	137	21.5		01.6	130	11.2		18.5
24	134	49.7	152	21.1	-9	00.4	145	11.9	-5	17.7
Dif	—		-4		+12		+7		+8	
									+28	
									+1	
									+23	

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: 15 ^d 4 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 PMG: 0 ^h 55 ^m R°: 43 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	176	31.4	-16	05.0	346	42.3	+9	07.1	60 N	16 24	17 10	18 00	18 41	70	8 03	16	
1	191	31.4		04.3	1	15.8 ¹⁴⁵	+8	58.9 ⁸²	58	33	16	03	45	68	7 59	18	
2	206	31.3		03.5	15	49.4 ¹⁴⁶		50.6 ⁸³	56	41	21	06	48	66	55	20	
3	221	31.3		02.8	30	23.1 ¹⁴⁷		42.2 ⁸⁴	54	48	26	09	51	64	51	22	
4	236	31.2		02.0	44	56.7 ¹⁴⁶		33.8 ⁸⁴	52	16 55	31	11	54	62	48	23	
5	251	31.2	-16	01.3	59	30.4 ¹⁴⁷	+8	25.4 ⁸⁴	50	17 00	17 35	18 13	18 56	61	7 45	25	
6	266	31.1	-16	00.5	74	04.1 ¹⁴⁷	+8	17.0 ⁸⁴	45	17 13	17 44	18 19	19 01	58	7 39	27	
7	281	31.1	-15	59.7	88	37.8 ¹⁴⁷	+8	08.5 ⁸⁵	40	23	52	24	05	56	33	30	
8	296	31.0		59.0	103	11.6 ¹⁴⁸	+8	00.0 ⁸⁵	35	32	17 59	29	09	53	29	32	
9	311	31.0		58.2	117	45.4 ¹⁴⁸	+7	51.5 ⁸⁵	30	40	18 05	34	12	52	25	34	
10	326	30.9		57.5	132	19.2 ¹⁴⁸		42.9 ⁸⁶	20	17 54	17	43	18	48	17	38	
11	341	30.9	-15	56.7	146	53.0 ¹⁴⁸	+7	34.3 ⁸⁶	10 N	18 06	18 28	18 53	19 23	45	7 11	40	
12	356	30.8	-15	56.0	161	26.9 ¹⁴⁹	+7	25.7 ⁸⁶	0	18 17	18 39	19 04	19 28	42	7 05	43	
13	11	30.8		55.2	176	00.8 ¹⁴⁹		17.0 ⁸⁷	10 S	29	18 51	16	32	40	6 59	46	
14	26	30.7		54.4	190	34.7 ¹⁴⁹	+7	08.4 ⁸⁶	20	41	19 05	32	37	37	53	48	
15	41	30.7		53.7	205	08.6 ¹⁴⁹	+6	59.6 ⁸⁸	30	18 56	21	19 52	43	33	46	51	
16	56	30.6		52.9	219	42.5 ¹⁴⁹		50.9 ⁸⁷	35	19 04	31	20 04	46	32	41	54	
17	71	30.6	-15	52.2	234	16.5 ¹⁵⁰	+6	42.1 ⁸⁸	40	19 14	19 43	20 19	19 49	30	6 37	55	
18	86	30.5	-15	51.4	248	50.5 ¹⁵⁰	+6	33.3 ⁸⁸	45	19 25	19 58	20 38	19 54	27	6 31	58	
19	101	30.5		50.6	263	24.5 ¹⁵⁰		24.5 ⁸⁸	50	39	20 16	21 03	19 59	24	24	61	
20	116	30.4		49.9	277	58.6 ¹⁵¹		15.7 ⁸⁸	52	45	25	16	20 01	23	21	63	
21	131	30.4		49.1	292	32.6 ¹⁵⁰	+6	06.8 ⁸⁹	54	19 52	34	31	04	21	18	64	
22	146	30.3		48.3	307	06.7 ¹⁵¹	+5	57.9 ⁸⁹	56	20 00	46	21 49	06	20	14	66	
23	161	30.3		47.6	321	40.8 ¹⁵¹		49.0 ⁸⁹	58	09	20 59	22 12	09	18	10	67	
24	176	30.2	-15	46.8	336	14.9 ¹⁵¹	+5	40.1 ⁸⁹	60 S	20 20	21 14	22 43	20 13	16	6 05	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 58 ^m 2		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: +1.2 PMG: 14 ^h 19 ^m		Mag: -2.6 PMG: 0 ^h 23 ^m		Mag: +0.5 PMG: 7 ^h 08 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	134	49.7	152	21.1	-9	00.4	145	11.9	-5	17.7
1	149	52.2	167	20.6	-8	59.2	160	12.5		16.9
2	164	54.7	182	20.2		58.0	175	13.2		16.1
3	179	57.1	197	19.8		56.8	190	13.9		15.3
4	194	59.6	212	19.4		55.6	205	14.6		14.6
5	210	02.0	227	18.9	-8	54.3	220	15.3	-5	13.8
6	225	04.5	242	18.5	-8	53.1	235	16.0	-5	13.0
7	240	07.0	257	18.1		51.9	250	16.6		12.2
8	255	09.4	272	17.7		50.7	265	17.3		11.4
9	270	11.9	287	17.3		49.5	280	18.0		10.6
10	285	14.4	302	16.8		48.2	295	18.7		09.8
11	300	16.8	317	16.4	-8	47.0	310	19.4	-5	09.1
12	315	19.3	332	16.0	-8	45.8	325	20.0	-5	08.3
13	330	21.8	347	15.6		44.6	340	20.7		07.5
14	345	24.2	2	15.1		43.3	355	21.4		06.7
15	0	26.7	17	14.7		42.1	10	22.1		05.9
16	15	29.2	32	14.3		40.9	25	22.8		05.1
17	30	31.6	47	13.9	-8	39.7	40	23.5	-5	04.3
18	45	34.1	62	13.5	-8	38.4	55	24.1	-5	03.6
19	60	36.5	77	13.1		37.2	70	24.8		02.8
20	75	39.0	92	12.6		36.0	85	25.5		02.0
21	90	41.5	107	12.2		34.8	100	26.2		01.2
22	105	43.9	122	11.8		33.5	115	26.9	-5	00.4
23	120	46.4	137	11.4		32.3	130	27.6	-4	59.6
24	135	48.9	152	11.0	-8	31.1	145	28.2	-4	58.8
Dif	—		-4 +12		+7 +8		+28 +1		+23 0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 0				Edad: 16 ^d 4 PHE { SD: 14 ^h 7 PMG: 1 ^h 38 ^m R°: 42 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m		
0	176	30.2	-15	46.8	336	14.9	+5	40.1	60 N	6	27	7	16	8	03	19	51	71	8	19	16
1	191	30.2		46.1	350	49.0 ¹⁵¹		31.2 ⁸⁹	58	24		11	7	54		53	68		17	17	
2	206	30.1		45.3	5	23.1 ¹⁵¹		22.2 ⁹⁰	56	21		05	46	54	66		54	66		15	19
3	221	30.1		44.5	19	57.3 ¹⁵²		13.2 ⁹⁰	54	18		7 01	39	55	65		55	65		13	21
4	236	30.0		43.8	34	31.5 ¹⁵²	+5	04.2 ⁹⁰	52	16		6 56	32	56	63		56	63		11	23
5	251	30.0	-15	43.0	49	05.7 ¹⁵²	+4	55.1 ⁹¹	50	6	14	6	52	7	27	19	57	62	8	10	23
6	266	30.0	-15	42.2	63	39.9 ¹⁵²	+4	46.1 ⁹⁰	45	6	08	6	43	7	14	19	59	58	8	06	27
7	281	29.9		41.5	78	14.1 ¹⁵²		37.0 ⁹¹	40	6	03	36	7	04	20	01	56		03	30	
8	296	29.9		40.7	92	48.3 ¹⁵²		27.9 ⁹¹	35	5	59	29	6	55	02	54		8	01	31	
9	311	29.8		39.9	107	22.5 ¹⁵²		18.8 ⁹¹	30	54	22	47	04	51	7	59	33				
10	326	29.8		39.2	121	56.8 ¹⁵³		09.7 ⁹¹	20	45	11	34	06	48	55	36					
11	341	29.7	-15	38.4	136	31.1 ¹⁵³	+4	00.6 ⁹¹	10 N	5	35	6	00	6	22	20	08	45	7	51	40
12	356	29.7	-15	37.6	151	05.4 ¹⁵³	+3	51.4 ⁹²	0	5	24	5	49	6	11	20	10	42	7	48	42
13	11	29.7		36.8	165	39.7 ¹⁵³		42.2 ⁹²	10 S	5	12	37	5	59	12	39		45	45		
14	26	29.6		36.1	180	14.0 ¹⁵³		33.0 ⁹²	20	4	56	24	47	14	36		41	48			
15	41	29.6		35.3	194	48.3 ¹⁵³		23.8 ⁹²	30	37	5	07	33	16	33		37	52			
16	56	29.5		34.5	209	22.6 ¹⁵³		14.6 ⁹²	35	24	4	57	24	18	31		35	53			
17	71	29.5	-15	33.8	223	56.9 ¹⁵³	+3	05.4 ⁹²	40	4	09	4	45	5	15	20	19	29	7	32	56
18	86	29.5	-15	33.0	238	31.3 ¹⁵⁴	+2	56.2 ⁹²	45	3	50	4	31	5	04	20	21	26	7	29	58
19	101	29.4		32.2	253	05.6 ¹⁵³		46.9 ⁹³	50	25	13	4	50	23	23		25	62			
20	116	29.4		31.4	267	40.0 ¹⁵⁴		37.7 ⁹²	52	3	13	4	04	24	22		24	62			
21	131	29.3		30.7	282	14.3 ¹⁵³		28.4 ⁹³	54	2	58	3	54	25	21		22	64			
22	146	29.3		29.9	296	48.7 ¹⁵⁴		19.1 ⁹³	56	40	43	28	26	19	20	66					
23	161	29.3		29.1	311	23.1 ¹⁵⁴		09.8 ⁹³	58	2	17	30	19	27	17		17	68			
24	176	29.2	-15	28.4	325	57.4 ¹⁵³	+2	00.6 ⁹²	60 S	1	46	3	15	4	09	20	29	15	7	15	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 54 ^m 3		Mag: -3.9 PMG: 13 ^h 52 ^m		Mag: +1.2 PMG: 14 ^h 17 ^m		Mag: -2.6 PMG: 0 ^h 19 ^m		Mag: +0.5 PMG: 7 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	135	48.9	152	11.0	-8	31.1	145	28.2	-4	58.8	355	19.9	+16	25.7	253	36.2	-18	56.8
1	150	51.3	167	10.6		29.9	160	28.9		58.0	10	22.7		25.8	268	38.5		56.9
2	165	53.8	182	10.1		28.6	175	29.6		57.3	25	25.5		26.0	283	40.9		56.9
3	180	56.3	197	09.7		27.4	190	30.3		56.5	40	28.3		26.1	298	43.2		56.9
4	195	58.7	212	09.3		26.2	205	31.0		55.7	55	31.1		26.2	313	45.5		56.9
5	211	01.2	227	08.9	-8	24.9	220	31.7	-4	54.9	70	33.9	+16	26.3	328	47.8	-18	56.9
6	226	03.6	242	08.5	-8	23.7	235	32.3	-4	54.1	85	36.7	+16	26.4	343	50.1	-18	57.0
7	241	06.1	257	08.1		22.5	250	33.0		53.3	100	39.4		26.5	358	52.4		57.0
8	256	08.6	272	07.7		21.3	265	33.7		52.5	115	42.2		26.6	13	54.7		57.0
9	271	11.0	287	07.2		20.0	280	34.4		51.7	130	45.0		26.7	28	57.0		57.0
10	286	13.5	302	06.8		18.8	295	35.1		51.0	145	47.8		26.8	43	59.3		57.0
11	301	16.0	317	06.4	-8	17.6	310	35.8	-4	50.2	160	50.6	+16	26.9	59	01.6	-18	57.1
12	316	18.4	332	06.0	-8	16.3	325	36.5	-4	49.4	175	53.4	+16	27.0	74	04.0	-18	57.1
13	331	20.9	347	05.6		15.1	340	37.1		48.6	190	56.2		27.1	89	06.3		57.1
14	346	23.4	2	05.2		13.9	355	37.8		47.8	205	59.0		27.2	104	08.6		57.1
15	1	25.8	17	04.8		12.6	10	38.5		47.0	221	01.8		27.3	119	10.9		57.2
16	16	28.3	32	04.4		11.4	25	39.2		46.2	236	04.6		27.4	134	13.2		57.2
17	31	30.8	47	04.0	-8	10.2	40	39.9	-4	45.4	251	07.4	+16	27.5	149	15.5	-18	57.2
18	46	33.2	62	03.6	-8	08.9	55	40.6	-4	44.7	266	10.2	+16	27.7	164	17.8	-18	57.2
19	61	35.7	77	03.1		07.7	70	41.3		43.9	281	13.0		27.8	179	20.1		57.2
20	76	38.1	92	02.7		06.5	85	41.9		43.1	296	15.7		27.9	194	22.4		57.3
21	91	40.6	107	02.3		05.2	100	42.6		42.3	311	18.5		28.0	209	24.8		57.3
22	106	43.1	122	01.9		04.0	115	43.3		41.5	326	21.3		28.1	224	27.1		57.3
23	121	45.5	137	01.5		02.8	130	44.0		40.7	341	24.1		28.2	239	29.4		57.3
24	136	48.0	152	01.1	-8	01.5	145	44.7	-4	39.9	356	26.9	+16	28.3	254	31.7	-18	57.3
Dif	—		-4		+12		+7		+8		+28		+1		+23		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 17 ^d 4 PHE { SD: 14:7 PMG: 2 ^h 20 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	176	29.2	-15	28.4	325	57.4	+2	00.6	60 N	16 29	17 15	18 05	21 02	70
1	191	29.2		27.6	340	31.8 ¹⁵⁴	+1	51.3 ⁹³	58	38	20	07	01 68	34 18
2	206	29.2		26.8	355	06.2 ¹⁵⁴		41.9 ⁹⁴	56	45	26	10	00 67	34 19
3	221	29.1		26.0	9	40.6 ¹⁵⁴		32.6 ⁹³	54	52	30	12	21 00 64	34 20
4	236	29.1		25.2	24	15.0 ¹⁵⁴		23.3 ⁹³	52	16 58	34	14	20 59 63	34 22
5	251	29.0	-15	24.5	38	49.4 ¹⁵⁴	+1	14.0 ⁹³	50	17 04	17 38	18 17	20 59 61	8 33 24
6	266	29.0	-15	23.7	53	23.8 ¹⁵⁴	+1	04.6 ⁹⁴	45	17 16	17 47	18 22	20 57 59	8 33 27
7	281	29.0		22.9	67	58.2 ¹⁵⁴	+0	55.3 ⁹³	40	26	17 54	26	57 56	33 29
8	296	28.9		22.1	82	32.6 ¹⁵⁴		46.0 ⁹³	35	34	18 01	31	56 54	32 31
9	311	28.9		21.4	97	07.0 ¹⁵⁴		36.6 ⁹⁴	30	42	07	35	55 52	32 33
10	326	28.9		20.6	111	41.4 ¹⁵⁴		27.3 ⁹³	20	17 55	18	44	54 48	31 37
11	341	28.8	-15	19.8	126	15.7 ¹⁵³	+0	17.9 ⁹⁴	10 N	18 07	18 28	18 53	20 53 45	8 31 39
12	356	28.8	-15	19.0	140	50.1 ¹⁵⁴	+0	08.5 ⁹⁴	0	18 18	18 39	19 04	20 52 43	8 30 43
13	11	28.8		18.2	155	24.5 ¹⁵⁴	-0	00.8 ⁹³	10 S	29	18 50	16	51 40	30 45
14	26	28.7		17.5	169	58.9 ¹⁵⁴		10.2 ⁹⁴	20	41	19 04	31	50 37	29 48
15	41	28.7		16.7	184	33.3 ¹⁵⁴		19.5 ⁹³	30	18 54	20	19 50	49 34	29 51
16	56	28.7		15.9	199	07.6 ¹⁵³		28.9 ⁹⁴	35	19 02	29	20 02	49 31	28 54
17	71	28.6	-15	15.1	213	42.0 ¹⁵⁴	-0	38.2 ⁹³	40	19 12	19 41	20 17	20 48 30	8 28 56
18	86	28.6	-15	14.3	228	16.4 ¹⁵⁴	-0	47.6 ⁹⁴	45	19 22	19 55	20 35	20 47 27	8 27 59
19	101	28.6		13.5	242	50.7 ¹⁵³	-0	56.9 ⁹³	50	35	20 12	20 59	46 24	27 61
20	116	28.5		12.8	257	25.1 ¹⁵⁴	-1	06.3 ⁹⁴	52	42	20	21 11	46 23	26 63
21	131	28.5		12.0	271	59.4 ¹⁵³		15.6 ⁹³	54	48	30	25	46 21	26 65
22	146	28.5		11.2	286	33.7 ¹⁵³		25.0 ⁹⁴	56	19 56	41	21 42	45 20	26 66
23	161	28.5		10.4	301	08.1 ¹⁵⁴		34.3 ⁹³	58	20 05	20 53	22 03	44 18	25 68
24	176	28.4	-15	09.6	315	42.4 ¹⁵³	-1	43.7 ⁹⁴	60 S	20 14	21 08	22 31	20 44 16	8 25 70
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 14 ^h 50 ^m 4		Mag: -3.9 PMG: 13 ^h 52 ^m		Mag: +1.2 PMG: 14 ^h 16 ^m		Mag: -2.6 PMG: 0 ^h 14 ^m		Mag: +0.5 PMG: 7 ^h 01 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	136	48.0	152	01.1	145	44.7	356	26.9	254	31.7				
1	151	50.5	167	00.7	160	45.4	11	29.7	269	34.0				
2	166	52.9	182	00.3	175	46.1	26	32.5	284	36.3				
3	181	55.4	196	59.9	190	46.7	41	35.3	299	38.6				
4	196	57.9	211	59.5	205	47.4	56	38.1	314	41.0				
5	212	00.3	226	59.1	220	48.1	71	40.9	329	43.3				
6	227	02.8	241	58.7	235	48.8	86	43.7	344	45.6				
7	242	05.3	256	58.3	250	49.5	101	46.5	359	47.9				
8	257	07.7	271	57.9	265	50.2	116	49.3	14	50.2				
9	272	10.2	286	57.5	280	50.9	131	52.0	29	52.5				
10	287	12.6	301	57.1	295	51.5	146	54.8	44	54.8				
11	302	15.1	316	56.7	310	52.2	161	57.6	59	57.1				
12	317	17.6	331	56.3	325	52.9	177	00.4	74	59.5				
13	332	20.0	346	55.8	340	53.6	192	03.2	90	01.8				
14	347	22.5	1	55.4	355	54.3	207	06.0	105	04.1				
15	2	25.0	16	55.0	10	55.0	222	08.8	120	06.4				
16	17	27.4	31	54.6	25	55.7	237	11.6	135	08.7				
17	32	29.9	46	54.2	40	56.4	252	14.4	150	11.0				
18	47	32.4	61	53.8	55	57.0	267	17.2	165	13.4				
19	62	34.8	76	53.4	70	57.7	282	20.0	180	15.7				
20	77	37.3	91	53.0	85	58.4	297	22.8	195	18.0				
21	92	39.7	106	52.6	100	59.1	312	25.6	210	20.3				
22	107	42.2	121	52.2	115	59.8	327	28.4	225	22.6				
23	122	44.7	136	51.8	131	00.5	342	31.1	240	24.9				
24	137	47.1	151	51.4	146	01.2	357	33.9	255	27.3				
Dif	—		-4	+12	+7	+8	+28	+1	+23					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 14 ^m 1			Edad: 18 ^d 4 PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/4 SD: 14/7 PMG: 3 ^h 02 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	28.4	-15	09.6	315	42.4	-1 43.7	60 N	6 22	7 12	7 57	22 12	71	8 50	16
1	191	28.4		08.8	330	16.7 ¹⁵³	-1 53.0 ⁹³	58	20	06	49	09	69	52	18
2	206	28.4		08.0	344	51.0 ¹⁵³	-2 02.3 ⁹³	56	17	7 02	41	07	67	53	20
3	221	28.3		07.3	359	25.2 ¹⁵²	11.6 ⁹³	54	15	6 57	35	04	65	55	22
4	236	28.3		06.5	13	59.5 ¹⁵³	20.9 ⁹³	52	13	53	29	02	64	56	23
5	251	28.3	-15	05.7	28	33.7 ¹⁵²	-2 30.2 ⁹³	50	6 11	6 49	7 23	22 00	62	8 57	25
6	266	28.3	-15	04.9	43	08.0 ¹⁵³	-2 39.5 ⁹³	45	6 06	6 41	7 12	21 56	59	9 00	27
7	281	28.2		04.1	57	42.2 ¹⁵²	48.8 ⁹³	40	6 02	34	7 02	53	56	02	30
8	296	28.2		03.3	72	16.4 ¹⁵²	-2 58.1 ⁹³	35	5 57	27	6 53	50	54	03	33
9	311	28.2		02.5	86	50.6 ¹⁵²	-3 07.4 ⁹³	30	53	21	46	47	52	05	34
10	326	28.1		01.7	101	24.8 ¹⁵²	16.6 ⁹²	20	44	10	33	42	50	08	37
11	341	28.1	-15	00.9	115	58.9 ¹⁵¹	-3 25.9 ⁹³	10 N	5 35	6 00	6 21	21 38	47	9 10	41
12	356	28.1	-15	00.2	130	33.1 ¹⁵²	-3 35.1 ⁹²	0	5 24	5 49	6 11	21 35	43	9 13	43
13	11	28.1	-14	59.4	145	07.2 ¹⁵¹	44.3 ⁹²	10 S	5 12	38	6 00	31	41	15	46
14	26	28.0		58.6	159	41.3 ¹⁵¹	-3 53.5 ⁹²	20	4 58	25	5 48	27	38	17	49
15	41	28.0		57.8	174	15.4 ¹⁵¹	-4 02.7 ⁹²	30	39	5 09	34	23	35	20	52
16	56	28.0		57.0	188	49.4 ¹⁵⁰	11.9 ⁹²	35	27	4 59	26	20	33	22	54
17	71	28.0	-14	56.2	203	23.5 ¹⁵¹	-4 21.1 ⁹²	40	4 12	4 48	5 17	21 18	30	9 24	56
18	86	27.9	-14	55.4	217	57.5 ¹⁵⁰	-4 30.3 ⁹²	45	3 54	4 34	5 06	21 14	29	9 26	58
19	101	27.9		54.6	232	31.5 ¹⁵⁰	39.4 ⁹¹	50	30	17	4 53	10	26	28	62
20	116	27.9		53.8	247	05.4 ¹⁴⁹	48.5 ⁹¹	52	18	4 08	47	09	24	29	64
21	131	27.9		53.0	261	39.4 ¹⁵⁰	-4 57.6 ⁹¹	54	3 04	3 59	41	07	22	31	64
22	146	27.9		52.2	276	13.3 ¹⁴⁹	-5 06.7 ⁹¹	56	2 47	48	33	05	21	32	66
23	161	27.8		51.4	290	47.2 ¹⁴⁹	15.8 ⁹¹	58	2 26	36	24	02	19	33	69
24	176	27.8	-14	50.6	305	21.1 ¹⁴⁹	-5 24.8 ⁹⁰	60 S	1 58	3 21	4 15	21 00	17	9 35	71
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 14 ^h 46 ^m 4		Mag: -3.9 PMG: 13 ^h 53 ^m		Mag: +1.2 PMG: 14 ^h 15 ^m		Mag: -2.6 PMG: 0 ^h 10 ^m		Mag: +0.5 PMG: 6 ^h 57 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	137	47.1	151	51.4	-7	31.7	357	33.9	+16	30.8					
1	152	49.6	166	51.0		30.5	12	36.7		30.9					
2	167	52.1	181	50.7		29.3	27	39.5		31.0					
3	182	54.5	196	50.3		28.0	42	42.3		31.1					
4	197	57.0	211	49.9		26.8	57	45.1		31.2					
5	212	59.5	226	49.5	-7	25.5	72	47.9	+16	31.4					
6	228	01.9	241	49.1	-7	24.3	87	50.7	+16	31.5					
7	243	04.4	256	48.7		23.0	102	53.5		31.6					
8	258	06.9	271	48.3		21.8	117	56.3		31.7					
9	273	09.3	286	47.9		20.5	132	59.1		31.8					
10	288	11.8	301	47.5		19.3	148	01.9		31.9					
11	303	14.2	316	47.1	-7	18.0	163	04.7	+16	32.0					
12	318	16.7	331	46.7	-7	16.8	178	07.4	+16	32.1					
13	333	19.2	346	46.3		15.5	193	10.2		32.2					
14	348	21.6	1	45.9		14.3	208	13.0		32.3					
15	3	24.1	16	45.5		13.0	223	15.8		32.4					
16	18	26.6	31	45.1		11.8	238	18.6		32.5					
17	33	29.0	46	44.7	-7	10.5	253	21.4	+16	32.6					
18	48	31.5	61	44.3	-7	09.3	268	24.2	+16	32.7					
19	63	34.0	76	43.9		08.0	283	27.0		32.8					
20	78	36.4	91	43.6		06.8	298	29.8		32.9					
21	93	38.9	106	43.2		05.5	313	32.6		33.0					
22	108	41.3	121	42.8		04.3	328	35.4		33.1					
23	123	43.8	136	42.4		03.0	343	38.2		33.3					
24	138	46.3	151	42.0	-7	01.8	358	41.0	+16	33.4					
Dif	—		-4		+12		+28		+1						
					+7		+8								

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: 19 ^d 4 PHE { SD: 14:8 PMG: 3 ^h 45 ^m																
	hG ☉		Dec		hG ☾		Dif														
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	h	m
0	176	27.8	-14	50.6	305	21.1	-5	24.8	60 N	16	34	17	20	18	09	23	23	72	9	06	18
1	191	27.8		49.8	319	54.9 ¹⁴⁸		33.9 ⁹¹	58	43	25	12			18	70		10	20		
2	206	27.8		49.0	334	28.8 ¹⁴⁹		42.9 ⁹⁰	56	50	30	14			14	67		13	23		
3	221	27.8		48.2	349	02.5 ¹⁴⁷		-5 51.9 ⁹⁰	54	16	56	34	16		09	66		16	24		
4	236	27.7		47.4	3	36.3 ¹⁴⁸		-6 00.9 ⁹⁰	52	17	02	38	18		06	64		19	25		
5	251	27.7	-14	46.6	18	10.0 ¹⁴⁷		-6 09.8 ⁸⁹	50	17	07	17	41	18	20	23	02	63	9	22	26
6	266	27.7	-14	45.8	32	43.7 ¹⁴⁷		-6 18.8 ⁹⁰	45	17	19	17	49	18	24	22	55	60	9	27	30
7	281	27.7		45.0	47	17.4 ¹⁴⁷		27.7 ⁸⁹	40	28	17	56	28		49	58		32	32		
8	296	27.7		44.2	61	51.1 ¹⁴⁷		36.6 ⁸⁹	35	36	18	03	33		44	55		36	34		
9	311	27.6		43.4	76	24.7 ¹⁴⁶		45.4 ⁸⁸	30	44	08	37	37		39	54		39	36		
10	326	27.6		42.6	90	58.2 ¹⁴⁵		-6 54.3 ⁸⁹	20	17	56	19	45		32	50		45	39		
11	341	27.6	-14	41.8	105	31.8 ¹⁴⁶		-7 03.1 ⁸⁸	10 N	18	07	18	29	18	54	22	25	48	9	51	41
12	356	27.6	-14	41.0	120	05.3 ¹⁴⁵		-7 11.9 ⁸⁸	0	18	18	18	39	19	04	22	18	46	9	56	44
13	11	27.6		40.2	134	38.8 ¹⁴⁵		20.7 ⁸⁸	10 S	28	18	50	15		12	43		10	01	47	
14	26	27.6		39.4	149	12.2 ¹⁴⁴		29.4 ⁸⁷	20	40	19	03	30		22	05	41		06	50	
15	41	27.5		38.6	163	45.6 ¹⁴⁴		38.1 ⁸⁷	30	18	53	18	19	48	21	58	37		12	53	
16	56	27.5		37.8	178	19.0 ¹⁴⁴		46.8 ⁸⁷	35	19	00	27	20	00		53	36		16	54	
17	71	27.5	-14	37.0	192	52.3 ¹⁴³		-7 55.4 ⁸⁶	40	19	09	19	38	20	14	21	48	34	10	20	57
18	86	27.5	-14	36.2	207	25.6 ¹⁴³		-8 04.1 ⁸⁷	45	19	20	19	52	20	31	21	43	31	10	24	60
19	101	27.5		35.4	221	58.9 ¹⁴³		12.7 ⁸⁶	50	32	20	08	20	54		36	28		30	62	
20	116	27.5		34.6	236	32.1 ¹⁴²		21.2 ⁸⁵	52	38	16	21	06		33	27		33	63		
21	131	27.4		33.8	251	05.3 ¹⁴²		29.8 ⁸⁶	54	44	25	19			29	26		35	66		
22	146	27.4		33.0	265	38.4 ¹⁴¹		38.3 ⁸⁵	56	19	52	36	35		26	23		38	68		
23	161	27.4		32.2	280	11.5 ¹⁴¹		46.8 ⁸⁵	58	20	00	20	47	21	55	21	22		42	69	
24	176	27.4	-14	31.4	294	44.6 ¹⁴¹		-8 55.2 ⁸⁴	60 S	20	09	21	01	22	20	21	17	20	10	46	71
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 14 ^h 42 ^m 5				Mag: -3.9 PMG: 13 ^h 54 ^m				Mag: +1.2 PMG: 14 ^h 14 ^m				Mag: -2.6 PMG: 0 ^h 05 ^m				Mag: +0.5 PMG: 6 ^h 53 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	138	46.3	151	42.0	-7	01.8	146	17.7	-4	02.0	358	41.0	+16	33.4	256	22.9	-18	58.3			
1	153	48.7	166	41.6	-7	00.5	161	18.4		01.2	13	43.7		33.5	271	25.2		58.3			
2	168	51.2	181	41.2	-6	59.3	176	19.1	-4	00.5	28	46.5		33.6	286	27.5		58.3			
3	183	53.7	196	40.8		58.0	191	19.8	-3	59.7	43	49.3		33.7	301	29.9		58.4			
4	198	56.1	211	40.4		56.8	206	20.5		58.9	58	52.1		33.8	316	32.2		58.4			
5	213	58.6	226	40.0	-6	55.5	221	21.2	-3	58.1	73	54.9	+16	33.9	331	34.5	-18	58.4			
6	229	01.1	241	39.7	-6	54.3	236	21.9	-3	57.3	88	57.7	+16	34.0	346	36.8	-18	58.4			
7	244	03.5	256	39.3		53.0	251	22.6		56.5	104	00.5		34.1	1	39.1		58.4			
8	259	06.0	271	38.9		51.7	266	23.3		55.7	119	03.3		34.2	16	41.5		58.5			
9	274	08.5	286	38.5		50.5	281	24.0		54.9	134	06.1		34.3	31	43.8		58.5			
10	289	10.9	301	38.1		49.2	296	24.6		54.1	149	08.9		34.4	46	46.1		58.5			
11	304	13.4	316	37.7	-6	48.0	311	25.3	-3	53.3	164	11.7	+16	34.5	61	48.4	-18	58.5			
12	319	15.8	331	37.3	-6	46.7	326	26.0	-3	52.6	179	14.5	+16	34.6	76	50.7	-18	58.5			
13	334	18.3	346	36.9		45.5	341	26.7		51.8	194	17.3		34.7	91	53.1		58.5			
14	349	20.8	1	36.6		44.2	356	27.4		51.0	209	20.0		34.8	106	55.4		58.6			
15	4	23.2	16	36.2		43.0	11	28.1		50.2	224	22.8		34.9	121	57.7		58.6			
16	19	25.7	31	35.8		41.7	26	28.8		49.4	239	25.6		35.0	137	00.0		58.6			
17	34	28.2	46	35.4	-6	40.4	41	29.5	-3	48.6	254	28.4	+16	35.1	152	02.4	-18	58.6			
18	49	30.6	61	35.0	-6	39.2	56	30.2	-3	47.8	269	31.2	+16	35.2	167	04.7	-18	58.6			
19	64	33.1	76	34.6		37.9	71	30.9		47.0	284	34.0		35.3	182	07.0		58.7			
20	79	35.6	91	34.3		36.7	86	31.6		46.2	299	36.8		35.5	197	09.3		58.7			
21	94	38.0	106	33.9		35.4	101	32.3		45.4	314	39.6		35.6	212	11.7		58.7			
22	109	40.5	121	33.5		34.1	116	33.0		44.6	329	42.4		35.7	227	14.0		58.7			
23	124	43.0	136	33.1		32.9	131	33.7		43.9	344	45.2		35.8	242	16.3		58.7			
24	139	45.4	151	32.7	-6	31.6	146	34.3	-3	43.1	359	48.0	+16	35.9	257	18.6	-18	58.8			
Dif	—		-4		+13		+7		+8		+28		+1		+23		0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 2				Edad: 20 ^d 4 PHE { SD: 14'9 PMG: 4 ^h 29 ^m R°: 46 ^m 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'3															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	176	27.4	-14	31.4	294	44.6	-8	55.2	60 N	6 18	7 07	7 52	** ** *		9 24	22				
1	191	27.4		30.6	309	17.6 ¹⁴⁰	-9	03.6 ⁸⁴	58	16	7 02	44	** ** *		30	24				
2	206	27.4		29.8	323	50.5 ¹³⁹		12.0 ⁸⁴	56	14	6 58	37	** ** *		36	25				
3	221	27.4		29.0	338	23.5 ¹⁴⁰		20.3 ⁸³	54	12	53	31	** ** *		40	27				
4	236	27.3		28.1	352	56.4 ¹³⁹		28.6 ⁸³	52	10	50	25	** ** *		44	29				
5	251	27.3	-14	27.3	7	29.2 ¹³⁸	-9	36.9 ⁸³	50	6 08	6 46	7 20	** ** *		9 48	30				
6	266	27.3	-14	26.5	22	02.0 ¹³⁸	-9	45.1 ⁸²	45	6 04	6 38	7 09	23 55	61	9 57	32				
7	281	27.3		25.7	36	34.7 ¹³⁷	-9	53.3 ⁸²	40	5 59	31	6 59	47 58		10 04	35				
8	296	27.3		24.9	51	07.4 ¹³⁷	-10	01.5 ⁸²	35	55	25	51	39 57		10	37				
9	311	27.3		24.1	65	40.1 ¹³⁷		09.6 ⁸¹	30	51	20	44	33 55		15	39				
10	326	27.3		23.3	80	12.7 ¹³⁶		17.7 ⁸¹	20	43	6 09	32	22 52		24	42				
11	341	27.3	-14	22.5	94	45.3 ¹³⁶	-10	25.7 ⁸⁰	10 N	5 34	5 59	6 21	23 13	50	10 32	44				
12	356	27.3	-14	21.7	109	17.8 ¹³⁵	-10	33.7 ⁸⁰	0	5 25	5 49	6 11	23 04	47	10 40	46				
13	11	27.3		20.9	123	50.2 ¹³⁴		41.7 ⁸⁰	10 S	5 13	39	6 00	22 55	45	48	48				
14	26	27.2		20.0	138	22.6 ¹³⁴		49.6 ⁷⁹	20	4 59	26	5 49	46 43		10 56	51				
15	41	27.2		19.2	152	55.0 ¹³⁴	-10	57.5 ⁷⁹	30	41	11	36	35 40		11 05	54				
16	56	27.2		18.4	167	27.3 ¹³³	-11	05.3 ⁷⁸	35	29	5 01	28	29 39		10	56				
17	71	27.2	-14	17.6	181	59.6 ¹³³	-11	13.1 ⁷⁸	40	4 15	4 50	5 20	22 22	37	11 17	57				
18	86	27.2	-14	16.8	196	31.8 ¹³²	-11	20.9 ⁷⁸	45	3 57	4 37	5 09	22 14	35	11 24	60				
19	101	27.2		16.0	211	03.9 ¹³¹		28.6 ⁷⁷	50	34	21	4 57	04 33		32	63				
20	116	27.2		15.2	225	36.0 ¹³¹		36.2 ⁷⁶	52	23	13	51	22 00	31	36	65				
21	131	27.2		14.3	240	08.1 ¹³¹		43.8 ⁷⁶	54	3 10	4 04	45	21 55	30	41	65				
22	146	27.2		13.5	254	40.0 ¹²⁹		51.4 ⁷⁶	56	2 54	3 54	38	49 29		46	67				
23	161	27.2		12.7	269	12.0 ¹³⁰	-11	58.9 ⁷⁵	58	34	42	29	43 27		51	69				
24	176	27.2	-14	11.9	283	43.9 ¹²⁹	-12	06.4 ⁷⁵	60 S	2 09	3 28	4 20	21 37	24	11 57	72				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 38 ^m 6				Mag: -3.9 PMG: 13 ^h 54 ^m				Mag: +1.2 PMG: 14 ^h 13 ^m				Mag: -2.6 PMG: 0 ^h 01 ^m				Mag: +0.5 PMG: 6 ^h 50 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	139	45.4			151	32.7	-6	31.6	146	34.3	-3	43.1	359	48.0	+16	35.9	257	18.6	-18	58.8
1	154	47.9			166	32.3		30.4	161	35.0		42.3	14	50.8		36.0	272	21.0		58.8
2	169	50.3			181	32.0		29.1	176	35.7		41.5	29	53.6		36.1	287	23.3		58.8
3	184	52.8			196	31.6		27.8	191	36.4		40.7	44	56.3		36.2	302	25.6		58.8
4	199	55.3			211	31.2		26.6	206	37.1		39.9	59	59.1		36.3	317	27.9		58.8
5	214	57.7			226	30.8	-6	25.3	221	37.8	-3	39.1	75	01.9	+16	36.4	332	30.3	-18	58.8
6	230	00.2			241	30.4	-6	24.1	236	38.5	-3	38.3	90	04.7	+16	36.5	347	32.6	-18	58.9
7	245	02.7			256	30.1		22.8	251	39.2		37.5	105	07.5		36.6	2	34.9		58.9
8	260	05.1			271	29.7		21.5	266	39.9		36.7	120	10.3		36.7	17	37.2		58.9
9	275	07.6			286	29.3		20.3	281	40.6		35.9	135	13.1		36.8	32	39.6		58.9
10	290	10.1			301	28.9		19.0	296	41.3		35.2	150	15.9		36.9	47	41.9		58.9
11	305	12.5			316	28.5	-6	17.8	311	42.0	-3	34.4	165	18.7	+16	37.0	62	44.2	-18	59.0
12	320	15.0			331	28.2	-6	16.5	326	42.7	-3	33.6	180	21.5	+16	37.1	77	46.5	-18	59.0
13	335	17.4			346	27.8		15.2	341	43.4		32.8	195	24.3		37.2	92	48.9		59.0
14	350	19.9			1	27.4		14.0	356	44.1		32.0	210	27.1		37.3	107	51.2		59.0
15	5	22.4			16	27.0		12.7	11	44.8		31.2	225	29.8		37.4	122	53.5		59.0
16	20	24.8			31	26.6		11.4	26	45.4		30.4	240	32.6		37.5	137	55.8		59.0
17	35	27.3			46	26.3	-6	10.2	41	46.1	-3	29.6	255	35.4	+16	37.6	152	58.2	-18	59.1
18	50	29.8			61	25.9	-6	08.9	56	46.8	-3	28.8	270	38.2	+16	37.7	168	00.5	-18	59.1
19	65	32.2			76	25.5		07.6	71	47.5		28.0	285	41.0		37.9	183	02.8		59.1
20	80	34.7			91	25.1		06.4	86	48.2		27.2	300	43.8		38.0	198	05.1		59.1
21	95	37.2			106	24.8		05.1	101	48.9		26.4	315	46.6		38.1	213	07.5		59.1
22	110	39.6			121	24.4		03.8	116	49.6		25.7	330	49.4		38.2	228	09.8		59.1
23	125	42.1			136	24.0		02.6	131	50.3		24.9	345	52.2		38.3	243	12.1		59.2
24	140	44.6			151	23.6	-6	01.3	146	51.0	-3	24.1	0	55.0	+16	38.4	258	14.5	-18	59.2
Dif	—				-4 +13				+7 +8				-8972 +1				+23 0			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 2				Edad: 21 ^d 4 PHE { 4 ^h : 55:5 12 ^h : 55:7 20 ^h : 56:0 PMG: 5 ^h 15 ^m R°: 48 ^m														
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	176	27.2	-14	11.9	283	43.9	-12	06.4	74	60 N	16	40	17	24	18	14	0	35	
1	191	27.2		11.1	298	15.7 ¹²⁸		13.8	74	58	47	29		16		28	69		
2	206	27.2		10.3	312	47.4 ¹²⁷		21.1	73	56	16	54		34		21	67		
3	221	27.2		09.4	327	19.1 ¹²⁷		28.5	74	54	17	00		38		15	66		
4	236	27.2		08.6	341	50.8 ¹²⁷		35.7	72	52	06	41		21		10	64		
5	251	27.2	-14	07.8	356	22.4 ¹²⁶	-12	42.9	72	50	17	11	17	45	18	23	0	05	
6	266	27.1	-14	07.0	10	53.9 ¹²⁵	-12	50.1	72	45	17	22	17	52	18	27	**	**	
7	281	27.1		06.2	25	25.4 ¹²⁵	-12	57.2	71	40	31	17	59		31		**	**	
8	296	27.1		05.3	39	56.8 ¹²⁴	-13	04.3	71	35	38	18	04		34		**	**	
9	311	27.1		04.5	54	28.2 ¹²⁴		11.2	69	30	45		10		38		**	**	
10	326	27.1		03.7	68	59.5 ¹²³		18.2	70	20	17	57		20		46		**	**
11	341	27.1	-14	02.9	83	30.7 ¹²²	-13	25.1	69	10 N	18	08	18	29	18	54	**	**	
12	356	27.1	-14	02.1	98	01.9 ¹²²	-13	31.9	68	0	18	18	18	39	19	04	23	51	
13	11	27.1		01.2	112	33.0 ¹²¹		38.7	68	10 S		28	18	49		15	40	49	
14	26	27.1	-14	00.4	127	04.0 ¹²⁰		45.4	67	20	39	19	01		28		29	47	
15	41	27.1	-13	59.6	141	35.0 ¹²⁰		52.0	66	30	51		16		46		15	45	
16	56	27.1		58.8	156	05.9 ¹¹⁹	-13	58.6	66	35	18	58		25	19	57	23	08	
17	71	27.1	-13	57.9	170	36.8 ¹¹⁹	-14	05.1	65	40	19	07	19	36	20	11	22	59	
18	86	27.1	-13	57.1	185	07.6 ¹¹⁸	-14	11.6	65	45	19	17	19	49	20	28	22	49	
19	101	27.1		56.3	199	38.3 ¹¹⁷		18.0	64	50	29	20	05	20	50		37	38	
20	116	27.1		55.5	214	09.0 ¹¹⁷		24.4	64	52	34		12	21	01		31	37	
21	131	27.1		54.6	228	39.6 ¹¹⁶		30.6	62	54	40		21		14		25	36	
22	146	27.1		53.8	243	10.1 ¹¹⁵		36.8	62	56	47		30		29		18	34	
23	161	27.1		53.0	257	40.6 ¹¹⁵		43.0	62	58	19	55	42	21	47		10	33	
24	176	27.1	-13	52.2	272	11.0 ¹¹⁴	-14	49.1	61	60 S	20	04	20	55	22	10	22	01	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 34 ^m 6		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: +1.2 PMG: 14 ^h 12 ^m		Mag: -2.6 PMG: 23 ^h 52 ^m		Mag: +0.5 PMG: 6 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	140	44.6	151	23.6	-6	01.3	146	51.0	-3	24.1
1	155	47.0	166	23.3	-6	00.0	161	51.7		23.3
2	170	49.5	181	22.9	-5	58.8	176	52.4		22.5
3	185	51.9	196	22.5		57.5	191	53.1		21.7
4	200	54.4	211	22.1		56.2	206	53.8		20.9
5	215	56.9	226	21.8	-5	55.0	221	54.5	-3	20.1
6	230	59.3	241	21.4	-5	53.7	236	55.2	-3	19.3
7	246	01.8	256	21.0		52.4	251	55.9		18.5
8	261	04.3	271	20.6		51.2	266	56.6		17.7
9	276	06.7	286	20.3		49.9	281	57.3		16.9
10	291	09.2	301	19.9		48.6	296	58.0		16.2
11	306	11.7	316	19.5	-5	47.4	311	58.7	-3	15.4
12	321	14.1	331	19.2	-5	46.1	326	59.4	-3	14.6
13	336	16.6	346	18.8		44.8	342	00.1		13.8
14	351	19.1	1	18.4		43.5	357	00.8		13.0
15	6	21.5	16	18.0		42.3	12	01.4		12.2
16	21	24.0	31	17.7		41.0	27	02.1		11.4
17	36	26.4	46	17.3	-5	39.7	42	02.8	-3	10.6
18	51	28.9	61	16.9	-5	38.5	57	03.5	-3	09.8
19	66	31.4	76	16.6		37.2	72	04.2		09.0
20	81	33.8	91	16.2		35.9	87	04.9		08.2
21	96	36.3	106	15.8		34.7	102	05.6		07.4
22	111	38.8	121	15.5		33.4	117	06.3		06.6
23	126	41.2	136	15.1		32.1	132	07.0		05.9
24	141	43.7	151	14.7	-5	30.8	147	07.7	-3	05.1
Dif	—		-4 +13		+7 +8		+28 +1		+23 0	

UT	SOL				☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16/2 PMG: 12 ^h 14 ^m 2				Edad: 22 ^d 4 PHE { 4 ^h : 56/2 12 ^h : 56/5 20 ^h : 56/8 PMG: 6 ^h 03 ^m R°: 52 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m				
0	176	27.1	-13	52.2	272	11.0	-14	49.1	60	58	60 N	6	13	7	03	7	47	1	46	70	10	13	36	
1	191	27.1		51.3	286	41.3	113	-14	55.1	60	58	12		6	58	40		37	68		23	37		
2	206	27.1		50.5	301	11.6	113	-15	01.0	59	56	10		54	33		28	67		32	38			
3	221	27.1		49.7	315	41.8	112		06.9	59	54	08		50	27		21	65		40	39			
4	236	27.2		48.9	330	11.9	111		12.7	58	52	06		46	21		14	64		47	40			
5	251	27.2	-13	48.0	344	42.0	111	-15	18.4	57	50	6	05	6	43	7	17	1	08	63	10	53	42	
6	266	27.2	-13	47.2	359	12.0	110	-15	24.1	57	45	6	01	6	36	7	06	0	56	60	11	07	43	
7	281	27.2		46.4	13	41.9	109		29.7	56	40	5	57	29	6	57		45	59		18	45		
8	296	27.2		45.5	28	11.7	108		35.2	55	35	54		23	49		36	57		28	46			
9	311	27.2		44.7	42	41.5	108		40.7	55	30	50		18	43		28	56		36	47			
10	326	27.2		43.9	57	11.3	108		46.0	53	20	42	6	08	31		14	54		11	51	49		
11	341	27.2	-13	43.0	71	40.9	106	-15	51.3	53	10 N	5	34	5	59	6	21	0	03	52	12	03	51	
12	356	27.2	-13	42.2	86	10.5	106	-15	56.6	53	0	5	25	5	49	6	11	**	**	**	12	15	52	
13	11	27.2		41.4	100	40.0	105	-16	01.7	51	10 S	14		39	6	01	**	**	**		27	54		
14	26	27.2		40.6	115	09.5	105		06.8	51	20	5	00	27	5	50	**	**	**		40	55		
15	41	27.2		39.7	129	38.8	103		11.8	50	30	4	43	12	38		**	**	**		12	55	56	
16	56	27.2		38.9	144	08.2	104		16.7	49	35	31	5	04	30		23	51	50		13	03	58	
17	71	27.2	-13	38.1	158	37.4	102	-16	21.5	48	40	4	18	4	53	5	22	23	41	48		13	13	59
18	86	27.2	-13	37.2	173	06.6	102	-16	26.3	48	45	4	01	4	40	5	12	23	29	47		13	24	60
19	101	27.2		36.4	187	35.7	101		30.9	46	50	3	39	25	5	00		15	46		38	62		
20	116	27.2		35.6	202	04.7	100		35.5	46	52	28		17	4	55		08	45		45	62		
21	131	27.3		34.7	216	33.6	99		40.0	45	54	16	4	08	49		23	01	44		13	52	63	
22	146	27.3		33.9	231	02.5	99		44.4	44	56	3	01	3	59	42		22	52	44		14	00	64
23	161	27.3		33.0	245	31.4	99		48.8	44	58	2	42	48	34		43	42		09	66			
24	176	27.3	-13	32.2	260	00.1	97	-16	53.0	42	60 S	2	19	3	35	4	26	22	32	41		14	19	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 30 ^m 7		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: +1.2 PMG: 14 ^h 11 ^m		Mag: -2.6 PMG: 23 ^h 47 ^m		Mag: +0.5 PMG: 6 ^h 42 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	141	43.7	151	14.7	-5	30.8	147	07.7	-3	05.1	17	01.9	+16	40.9	259	10.4	-18	59.6
1	156	46.2	166	14.3		29.6	162	08.4		04.3	17	04.7		41.0	274	12.7		59.6
2	171	48.6	181	14.0		28.3	177	09.1		03.5	32	07.5		41.1	289	15.0		59.6
3	186	51.1	196	13.6		27.0	192	09.8		02.7	47	10.3		41.2	304	17.4		59.6
4	201	53.5	211	13.2		25.7	207	10.5		01.9	62	13.1		41.3	319	19.7		59.7
5	216	56.0	226	12.9	-5	24.5	222	11.2	-3	01.1	77	15.9	+16	41.4	334	22.0	-18	59.7
6	231	58.5	241	12.5	-5	23.2	237	11.9	-3	00.3	92	18.7	+16	41.5	349	24.4	-18	59.7
7	247	00.9	256	12.1		21.9	252	12.6	-2	59.5	107	21.5		41.6	4	26.7		59.7
8	262	03.4	271	11.8		20.6	267	13.3		58.7	122	24.3		41.7	19	29.0		59.7
9	277	05.9	286	11.4		19.4	282	14.0		57.9	137	27.1		41.8	34	31.4		59.7
10	292	08.3	301	11.0		18.1	297	14.7		57.1	152	29.8		41.9	49	33.7		59.8
11	307	10.8	316	10.7	-5	16.8	312	15.4	-2	56.3	167	32.6	+16	42.0	64	36.0	-18	59.8
12	322	13.3	331	10.3	-5	15.5	327	16.1	-2	55.6	182	35.4	+16	42.1	79	38.4	-18	59.8
13	337	15.7	346	10.0		14.3	342	16.8		54.8	197	38.2		42.2	94	40.7		59.8
14	352	18.2	1	09.6		13.0	357	17.5		54.0	212	41.0		42.3	109	43.0		59.8
15	7	20.7	16	09.2		11.7	12	18.2		53.2	227	43.8		42.4	124	45.4		59.8
16	22	23.1	31	08.9		10.4	27	18.9		52.4	242	46.6		42.5	139	47.7		59.9
17	37	25.6	46	08.5	-5	09.2	42	19.6	-2	51.6	257	49.4	+16	42.6	154	50.0	-18	59.9
18	52	28.0	61	08.1	-5	07.9	57	20.3	-2	50.8	272	52.2	+16	42.7	169	52.4	-18	59.9
19	67	30.5	76	07.8		06.6	72	21.0		50.0	287	55.0		42.8	184	54.7		59.9
20	82	33.0	91	07.4		05.3	87	21.7		49.2	302	57.7		42.9	199	57.1		59.9
21	97	35.4	106	07.0		04.0	102	22.4		48.4	318	00.5		43.0	214	59.4	-18	59.9
22	112	37.9	121	06.7		02.8	117	23.1		47.6	333	03.3		43.1	230	01.7	-19	00.0
23	127	40.4	136	06.3		01.5	132	23.8		46.8	348	06.1		43.2	245	04.1		00.0
24	142	42.8	151	06.0	-5	00.2	147	24.5	-2	46.0	3	08.9	+16	43.3	260	06.4	-19	00.0
Dif	—		-4		+13		+7		+8		+28		+1		+23			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 23 ^d 4 PHE { 4 ^h : 57:1 12 ^h : 57:4 20 ^h : 57:7					Civil			Náutico		Hora R°		
	PMG: 12 ^h 14 ^m 2			SD: 15:5 PMG: 6 ^h 55 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	176	27.3	-13 32.2	260	00.1	-16 53.0	42	60 N	16 45	17 29	18 18	2 56	65	10 49	46	
1	191	27.3		274	28.8	-16 57.2	40	58	52	34	20	45	63	11 00	48	
2	206	27.3		288	57.4	-17 01.2	40	56	16 59	38	22	35	62	10 49		
3	221	27.3		303	25.9		39	54	17 04	41	23	26	62	19 49		
4	236	27.3		317	54.4		38	52	10	45	24	18	61	27 50		
5	251	27.3	-13 28.0	332	22.8	-17 12.9	37	50	17 14	17 48	18 26	2 11	61	11 35	50	
6	266	27.4	-13 27.2	346	51.1	-17 16.6	35	45	17 24	17 55	18 29	1 56	59	11 50	51	
7	281	27.4		1	19.4		35	40	33	18 01	33	44	58	12 03	51	
8	296	27.4		15	47.6		34	35	40	06	36	33	58	14 52		
9	311	27.4		30	15.7		34	30	47	11	40	24	57	23 53		
10	326	27.4		44	43.8		32	20	17 58	21	47	1 08	56	40 53		
11	341	27.4	-13 23.0	59	11.8	-17 33.8	31	10 N	18 08	18 30	18 55	0 55	54	12 54	54	
12	356	27.4	-13 22.1	73	39.7	-17 37.0	31	0	18 18	18 39	19 03	0 42	53	13 07	55	
13	11	27.4		88	07.5		29	10 S	27	18 49	14	29	53	21 55		
14	26	27.5		102	35.3		28	20	38	19 00	27	16	51	35 56		
15	41	27.5		117	03.0		26	30	49	14	44	0 00	50	13 51	57	
16	56	27.5		131	30.7		25	35	18 56	23	19 55	***	***	***	14 01	57
17	71	27.5	-13 17.9	145	58.3	-17 51.3	26	40	19 04	19 33	20 08	***	***	***	14 12	57
18	86	27.5	-13 17.1	160	25.8	-17 53.9	25	45	19 14	19 45	20 24	***	***	***	14 24	58
19	101	27.5		174	53.2		23	50	25	20 01	45	***	***	***	40	59
20	116	27.6		189	20.6	-17 58.7	23	52	30	08	20 56	23 53	55	47 59		
21	131	27.6		203	47.9	-18 01.0	22	54	36	16	21 08	45	54	14 55	60	
22	146	27.6		218	15.2		20	56	43	25	22	36	54	15 04	60	
23	161	27.6		232	42.3		20	58	50	36	21 39	25	54	15 60		
24	176	27.6	-13 12.0	247	09.5	-18 07.2	20	60 S	19 58	20 48	22 00	23 13	54	15 26	61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 26 ^m 8		Mag: -3.9 PMG: 13 ^h 56 ^m		Mag: +1.2 PMG: 14 ^h 10 ^m		Mag: -2.6 PMG: 23 ^h 43 ^m		Mag: +0.5 PMG: 6 ^h 39 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	142	42.8	151	06.0	-5	00.2	147	24.5	-2	46.0	3	08.9	+16	43.3	260	06.4	-19	00.0
1	157	45.3	166	05.6	-4	58.9	162	25.2		45.2	18	11.7		43.4	275	08.7		00.0
2	172	47.8	181	05.2		57.7	177	25.9		44.5	33	14.5		43.5	290	11.1		00.0
3	187	50.2	196	04.9		56.4	192	26.6		43.7	48	17.3		43.6	305	13.4	-19	00.0
4	202	52.7	211	04.5		55.1	207	27.3		42.9	63	20.1		43.7	320	15.7	-19	00.1
5	217	55.2	226	04.2	-4	53.8	222	28.0	-2	42.1	78	22.8	+16	43.8	335	18.1	-19	00.1
6	232	57.6	241	03.8	-4	52.5	237	28.7	-2	41.3	93	25.6	+16	43.9	350	20.4	-19	00.1
7	248	00.1	256	03.4		51.3	252	29.4		40.5	108	28.4		44.0	5	22.7		00.1
8	263	02.5	271	03.1		50.0	267	30.1		39.7	123	31.2		44.1	20	25.1		00.1
9	278	05.0	286	02.7		48.7	282	30.8		38.9	138	34.0		44.2	35	27.4		00.1
10	293	07.5	301	02.4		47.4	297	31.5		38.1	153	36.8		44.3	50	29.8		00.1
11	308	09.9	316	02.0	-4	46.1	312	32.2	-2	37.3	168	39.6	+16	44.4	65	32.1	-19	00.2
12	323	12.4	331	01.6	-4	44.9	327	32.9	-2	36.5	183	42.4	+16	44.5	80	34.4	-19	00.2
13	338	14.9	346	01.3		43.6	342	33.6		35.7	198	45.1		44.7	95	36.8		00.2
14	353	17.3	1	00.9		42.3	357	34.3		34.9	213	47.9		44.8	110	39.1		00.2
15	8	19.8	16	00.6		41.0	12	35.0		34.1	228	50.7		44.9	125	41.5		00.2
16	23	22.3	31	00.2		39.7	27	35.7		33.4	243	53.5		45.0	140	43.8		00.2
17	38	24.7	45	59.8	-4	38.4	42	36.4	-2	32.6	258	56.3	+16	45.1	155	46.1	-19	00.3
18	53	27.2	60	59.5	-4	37.2	57	37.1	-2	31.8	273	59.1	+16	45.2	170	48.5	-19	00.3
19	68	29.6	75	59.1		35.9	72	37.8		31.0	289	01.9		45.3	185	50.8		00.3
20	83	32.1	90	58.8		34.6	87	38.5		30.2	304	04.7		45.4	200	53.1		00.3
21	98	34.6	105	58.4		33.3	102	39.2		29.4	319	07.5		45.5	215	55.5		00.3
22	113	37.0	120	58.1		32.0	117	39.9		28.6	334	10.2		45.6	230	57.8		00.3
23	128	39.5	135	57.7		30.7	132	40.6		27.8	349	13.0		45.7	246	00.2		00.4
24	143	42.0	150	57.4	-4	29.5	147	41.3	-2	27.0	4	15.8	+16	45.8	261	02.5	-19	00.4
Dif	—		-4		+13		+7		+8		+28		+1		+23			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 1				Edad: 24 ^d 4 PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'7 SD: 15'8 PMG: 7 ^h 49 ^m R°: 56 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.6	-13	12.0	247	09.5	-18	07.2	18	60 N	6 09	6 58	7 42	4 01	57	11 35	60
1	191	27.6		11.2	261	36.5		09.0	18	58	07	53	35	3 48	57	48	60
2	206	27.7		10.3	276	03.5		10.8	18	56	06	49	28	37	57	11 59	59
3	221	27.7		09.5	290	30.4		12.4	16	54	04	46	23	28	57	12 08	60
4	236	27.7		08.6	304	57.3		14.0	16	52	03	43	18	19	57	17	59
5	251	27.7	-13	07.8	319	24.1	78	-18	15.4	14	50	6 02	6 40	7 13	3 12	56	59
6	266	27.7	-13	07.0	333	50.9	78	-18	16.7	13	45	5 58	6 33	7 03	2 55	57	59
7	281	27.7		06.1	348	17.5	76		17.9	12	40	55	27	6 55	42	57	59
8	296	27.8		05.3	2	44.2	77		19.0	11	35	52	21	47	31	56	58
9	311	27.8		04.4	17	10.7	75		20.0	10	30	48	17	41	21	56	58
10	326	27.8		03.6	31	37.2	75		20.9	9	20	41	6 07	30	2 04	56	58
11	341	27.8	-13	02.7	46	03.7	75	-18	21.7	8	10 N	5 34	5 59	6 20	1 49	56	57
12	356	27.9	-13	01.9	60	30.1	74	-18	22.3	6	0	5 25	5 50	6 11	1 35	57	57
13	11	27.9		01.0	74	56.4	73		22.9	6	10 S	14	40	6 01	22	56	57
14	26	27.9	-13	00.2	89	22.7	73		23.3	4	20	5 01	28	5 51	1 07	56	56
15	41	27.9	-12	59.3	103	48.9	72		23.6	3	30	4 45	14	39	0 50	56	56
16	56	27.9		58.5	118	15.1	72		23.8	2	35	34	5 06	32	41	55	55
17	71	28.0	-12	57.6	132	41.2	71	-18	23.9	1	40	4 21	4 56	5 24	0 29	56	55
18	86	28.0	-12	56.8	147	07.3	71	-18	23.9	0	45	4 05	4 44	5 15	0 16	55	55
19	101	28.0		55.9	161	33.3	70		23.7	2	50	3 44	28	5 04	0 01	54	54
20	116	28.0		55.1	175	59.2	69		23.5	2	52	33	21	4 59	** ** *	**	54
21	131	28.1		54.2	190	25.1	69		23.1	4	54	21	13	53	** ** *	**	53
22	146	28.1		53.3	204	51.0	69		22.6	5	56	3 07	4 04	47	** ** *	**	53
23	161	28.1		52.5	219	16.8	68		22.0	6	58	2 50	3 53	39	** ** *	**	52
24	176	28.1	-12	51.6	233	42.5	67	-18	21.3	7	60 S	2 29	3 41	4 31	** ** *	**	52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 22 ^m 8		Mag: -3.9 PMG: 13 ^h 57 ^m		Mag: +1.2 PMG: 14 ^h 09 ^m		Mag: -2.6 PMG: 23 ^h 39 ^m		Mag: +0.5 PMG: 6 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	143	42.0	150	57.4	-4	29.5	147	41.3	-2	27.0
1	158	44.4	165	57.0		28.2	162	42.0		26.2
2	173	46.9	180	56.6		26.9	177	42.7		25.4
3	188	49.4	195	56.3		25.6	192	43.4		24.6
4	203	51.8	210	55.9		24.3	207	44.1		23.8
5	218	54.3	225	55.6	-4	23.0	222	44.8	-2	23.0
6	233	56.8	240	55.2	-4	21.8	237	45.5	-2	22.3
7	248	59.2	255	54.9		20.5	252	46.2		21.5
8	264	01.7	270	54.5		19.2	267	46.9		20.7
9	279	04.1	285	54.2		17.9	282	47.6		19.9
10	294	06.6	300	53.8		16.6	297	48.3		19.1
11	309	09.1	315	53.5	-4	15.3	312	49.0	-2	18.3
12	324	11.5	330	53.1	-4	14.0	327	49.7	-2	17.5
13	339	14.0	345	52.7		12.8	342	50.4		16.7
14	354	16.5	0	52.4		11.5	357	51.1		15.9
15	9	18.9	15	52.0		10.2	12	51.8		15.1
16	24	21.4	30	51.7		08.9	27	52.5		14.3
17	39	23.9	45	51.3	-4	07.6	42	53.2	-2	13.5
18	54	26.3	60	51.0	-4	06.3	57	53.9	-2	12.7
19	69	28.8	75	50.6		05.0	72	54.6		11.9
20	84	31.3	90	50.3		03.7	87	55.3		11.1
21	99	33.7	105	49.9		02.5	102	56.0		10.4
22	114	36.2	120	49.6	-4	01.2	117	56.7		09.6
23	129	38.6	135	49.2	-3	59.9	132	57.4		08.8
24	144	41.1	150	48.9	-3	58.6	147	58.1	-2	08.0
Dif	—		-4 +13		+7 +8		+28 +1		+23 0	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1				Edad: 25 ^d 4 PHE { 4 ^h : 59/0 12 ^h : 59/3 20 ^h : 59/6 PMG: 8 ^h 45 ^m R°: 59 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	
0	176	28.1	-12	51.6	233	42.5	-18	21.3	60 N	16 50	17 34	18 23	4 58 46	12 35 74			
1	191	28.2		50.8	248	08.3		20.4	58	16 57		38	45 48	48 72			
2	206	28.2		49.9	262	33.9		19.5	56	17 03		42	34 49	12 58 71			
3	221	28.2		49.1	276	59.5		18.4	54		08	45	25 50	13 08 70			
4	236	28.2		48.2	291	25.1		17.2	52		13	48	16 51	16 69			
5	251	28.3	-12	47.4	305	50.6	-18	15.9	50	17 18	17 51	18 29	4 08 52	13 24 68			
6	266	28.3	-12	46.5	320	16.1	-18	14.4	45	17 27	17 58	18 32	3 52 53	13 40 66			
7	281	28.3		45.6	334	41.6		12.9	40		35	18 03	39 53	13 53 65			
8	296	28.3		44.8	349	07.0		11.2	35		42	08	27 55	14 04 64			
9	311	28.4		43.9	3	32.3		09.4	30		48	13	17 56	14 63			
10	326	28.4		43.1	17	57.7		07.5	20	17 59	22	48	3 00 57	31 61			
11	341	28.4	-12	42.2	32	22.9	-18	05.4	10 N	18 09	18 30	18 55	2 45 58	14 45 60			
12	356	28.5	-12	41.4	46	48.2	-18	03.3	0	18 18	18 39	19 03	2 32 58	14 59 59			
13	11	28.5		40.5	61	13.4	-18	01.0	10 S		27	48	18 59	15 13 57			
14	26	28.5		39.6	75	38.6	-17	58.6	20		36	18 59	2 03 60	27 56			
15	41	28.5		38.8	90	03.7		56.0	30		48	19 13	1 46 61	44 54			
16	56	28.6		37.9	104	28.8		53.4	35	18 54	21	19 52	36 61	15 53 53			
17	71	28.6	-12	37.1	118	53.9	-17	50.6	40	19 02	19 30	20 05	1 25 62	16 04 52			
18	86	28.6	-12	36.2	133	19.0	-17	47.7	45	19 11	19 42	20 21	1 11 63	16 17 50			
19	101	28.7		35.3	147	44.0		44.7	50		21	19 57	0 55 64	33 48			
20	116	28.7		34.5	162	09.0		41.5	52		26	20 03	48 64	40 47			
21	131	28.7		33.6	176	33.9		38.3	54		32	11	39 65	48 46			
22	146	28.8		32.8	190	58.8		34.9	56		38	20	30 65	16 57 45			
23	161	28.8		31.9	205	23.8		31.4	58		45	30	19 66	17 07 44			
24	176	28.8	-12	31.0	219	48.6	-17	27.7	60 S	19 52	20 42	21 51	0 07 67	17 19 42			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 14 ^h 18 ^m 9		Mag: -3.9 PMG: 13 ^h 57 ^m		Mag: +1.2 PMG: 14 ^h 07 ^m		Mag: -2.6 PMG: 23 ^h 34 ^m		Mag: +0.5 PMG: 6 ^h 31 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	144	41.1	150	48.9	147	58.1	5	22.7	261	58.7							
1	159	43.6	165	48.5	162	58.8	20	25.5	277	01.1							
2	174	46.0	180	48.2	177	59.5	35	28.3	292	03.4							
3	189	48.5	195	47.8	193	00.2	50	31.1	307	05.7							
4	204	51.0	210	47.5	208	01.0	65	33.8	322	08.1							
5	219	53.4	225	47.1	223	01.7	80	36.6	337	10.4							
6	234	55.9	240	46.8	238	02.4	95	39.4	352	12.8							
7	249	58.4	255	46.4	253	03.1	110	42.2	7	15.1							
8	265	00.8	270	46.1	268	03.8	125	45.0	22	17.5							
9	280	03.3	285	45.7	283	04.5	140	47.8	37	19.8							
10	295	05.8	300	45.4	298	05.2	155	50.6	52	22.2							
11	310	08.2	315	45.0	313	05.9	170	53.3	67	24.5							
12	325	10.7	330	44.7	328	06.6	185	56.1	82	26.9							
13	340	13.1	345	44.4	343	07.3	200	58.9	97	29.2							
14	355	15.6	0	44.0	358	08.0	216	01.7	112	31.5							
15	10	18.1	15	43.7	13	08.7	231	04.5	127	33.9							
16	25	20.5	30	43.3	28	09.4	246	07.3	142	36.2							
17	40	23.0	45	43.0	43	10.1	261	10.1	157	38.6							
18	55	25.5	60	42.6	58	10.8	276	12.8	172	40.9							
19	70	27.9	75	42.3	73	11.5	291	15.6	187	43.3							
20	85	30.4	90	41.9	88	12.2	306	18.4	202	45.6							
21	100	32.9	105	41.6	103	12.9	321	21.2	217	48.0							
22	115	35.3	120	41.2	118	13.6	336	24.0	232	50.3							
23	130	37.8	135	40.9	133	14.3	351	26.8	247	52.7							
24	145	40.2	150	40.5	148	15.0	6	29.5	262	55.0							
Dif	—		-3		+7		+28		+23								
			+13		+8		+1		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: 26 ^d 4 PHE { 4 ^h : 59/9 12 ^h : 60/2 20 ^h : 60/4 SD: 16:3 PMG: 9 ^h 44 ^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	28.8	-12	31.0	219	48.6	-17	27.7	60 N	6 04	6 53	7 36	5 44	38	13 49	84		
1	191	28.9		30.2	234	13.5	59	24.0	58	03	49	30	33	40	14 00	82		
2	206	28.9		29.3	248	38.3	58	20.1	56	02	45	24	23	42	09	80		
3	221	28.9		28.4	263	03.1	58	16.1	54	6 01	42	19	15	42	18	78		
4	236	29.0		27.6	277	27.9	58	12.0	52	5 59	39	14	07	44	25	77		
5	251	29.0	-12	26.7	291	52.7	58	-17 07.7	50	5 58	6 36	7 09	5 00	45	14 32	75		
6	266	29.0	-12	25.9	306	17.4	57	-17 03.4	45	5 56	6 30	7 00	4 45	48	14 46	73		
7	281	29.1		25.0	320	42.2	58	-16 58.9	46	53	24	6 52	32	50	14 58	70		
8	296	29.1		24.1	335	06.9	57	54.3	35	50	19	45	22	51	15 08	68		
9	311	29.1		23.3	349	31.6	57	49.6	30	47	15	39	4 13	52	17	67		
10	326	29.2		22.4	3	56.3	57	44.7	20	40	6 06	29	3 57	55	32	64		
11	341	29.2	-12	21.5	18	21.0	57	-16 39.7	10 N	5 33	5 58	6 20	3 43	57	15 45	62		
12	356	29.2	-12	20.7	32	45.6	56	-16 34.6	0	5 25	5 49	6 11	3 30	59	15 58	58		
13	11	29.3		19.8	47	10.3	57	29.4	10 S	15	40	6 02	17	60	16 10	56		
14	26	29.3		18.9	61	34.9	56	24.1	20	5 03	29	5 52	3 03	62	23	54		
15	41	29.3		18.1	75	59.6	57	18.7	30	4 46	16	41	2 47	65	38	51		
16	56	29.4		17.2	90	24.2	56	13.1	35	36	5 08	34	37	67	46	50		
17	71	29.4	-12	16.3	104	48.8	56	-16 07.4	40	4 24	4 58	5 27	2 27	68	16 56	47		
18	86	29.5	-12	15.4	119	13.4	56	-16 01.6	45	4 08	4 47	5 18	2 14	70	17 07	45		
19	101	29.5		14.6	133	38.0	56	-15 55.7	50	3 48	32	08	1 59	72	21	42		
20	116	29.5		13.7	148	02.6	56	49.7	52	38	25	5 03	52	73	27	41		
21	131	29.6		12.8	162	27.2	56	43.5	54	27	18	4 57	44	75	34	40		
22	146	29.6		12.0	176	51.8	56	37.3	56	3 14	4 09	51	35	76	42	38		
23	161	29.6		11.1	191	16.4	56	30.9	58	2 58	3 59	44	25	78	17 51	36		
24	176	29.7	-12	10.2	205	41.0	56	-15 24.4	60 S	2 38	3 47	4 37	1 14	79	18 01	33		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 15 ^m 0		Mag: -3.9 PMG: 13 ^h 58 ^m				Mag: +1.2 PMG: 14 ^h 06 ^m				Mag: -2.6 PMG: 23 ^h 30 ^m				Mag: +0.5 PMG: 6 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	145	40.2	150	40.5	-3	27.6	148	15.0	-1	48.9	6 29.5	+16	50.6	262	55.0	-19	01.1	
1	160	42.7	165	40.2		26.3	163	15.7		48.1	21 32.3		50.7	277	57.4		01.1	
2	175	45.2	180	39.9		25.0	178	16.4		47.4	36 35.1		50.8	292	59.7		01.1	
3	190	47.6	195	39.5		23.7	193	17.1		46.6	51 37.9		50.9	308	02.1		01.1	
4	205	50.1	210	39.2		22.4	208	17.8		45.8	66 40.7		51.0	323	04.4		01.1	
5	220	52.6	225	38.8	-3	21.1	223	18.6	-1	45.0	81 43.5	+16	51.1	338	06.8	-19	01.1	
6	235	55.0	240	38.5	-3	19.9	238	19.3	-1	44.2	96 46.2	+16	51.2	353	09.1	-19	01.1	
7	250	57.5	255	38.1		18.6	253	20.0		43.4	111 49.0		51.3	8 11.5		01.2		
8	266	00.0	270	37.8		17.3	268	20.7		42.6	126 51.8		51.4	23 13.8		01.2		
9	281	02.4	285	37.5		16.0	283	21.4		41.8	141 54.6		51.5	38 16.2		01.2		
10	296	04.9	300	37.1		14.7	298	22.1		41.0	156 57.4		51.6	53 18.5		01.2		
11	311	07.4	315	36.8	-3	13.4	313	22.8	-1	40.2	172 00.2	+16	51.7	68 20.9	-19	01.2		
12	326	09.8	330	36.4	-3	12.1	328	23.5	-1	39.4	187 02.9	+16	51.8	83 23.2	-19	01.2		
13	341	12.3	345	36.1		10.8	343	24.2		38.6	202 05.7		51.9	98 25.6		01.2		
14	356	14.7	0 35.7			09.5	358	24.9		37.8	217 08.5		52.0	113 27.9		01.3		
15	11	17.2	15 35.4			08.2	13 25.6			37.0	232 11.3		52.1	128 30.3		01.3		
16	26	19.7	30 35.1			06.9	28 26.3			36.2	247 14.1		52.2	143 32.6		01.3		
17	41	22.1	45 34.7	-3	05.6	43 27.0	-1 35.5			35.5	262 16.9	+16	52.3	158 35.0	-19	01.3		
18	56	24.6	60 34.4	-3	04.3	58 27.7	-1 34.7			34.7	277 19.6	+16	52.4	173 37.3	-19	01.3		
19	71	27.1	75 34.0		03.0	73 28.4		33.9		33.9	292 22.4		52.5	188 39.7		01.3		
20	86	29.5	90 33.7		01.7	88 29.1		33.1		33.1	307 25.2		52.6	203 42.0		01.3		
21	101	32.0	105 33.4	-3	00.4	103 29.8		32.3		32.3	322 28.0		52.7	218 44.4		01.3		
22	116	34.5	120 33.0	-2	59.1	118 30.5		31.5		31.5	337 30.8		52.8	233 46.7		01.4		
23	131	36.9	135 32.7		57.8	133 31.3		30.7		30.7	352 33.6		52.9	248 49.1		01.4		
24	146	39.4	150 32.3	-2	56.5	148 32.0	-1 29.9			29.9	7 36.3	+16	53.0	263 51.4	-19	01.4		
Dif	—		-3 +13		+7 +8		+28 +1		+24									

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 27 ^d 4 PHE { 4 ^h : 60:7 12 ^h : 60:9 20 ^h : 61:1 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	176	29.7	-12	10.2	205	41.0	-15	24.4	60 N	16 55	17 39	18 28	6 22 30	15 13 90			
1	191	29.7		09.4	220	05.6		17.8	58	17 02		43	13 32	22 87			
2	206	29.8		08.5	234	30.2		11.1	56	07	46	29	6 05 34	29 85			
3	221	29.8		07.6	248	54.8		56	54	12	49	30	5 57 37	36 83			
4	236	29.8		06.7	263	19.4		56	52	17	52	31	51 38	42 81			
5	251	29.9	-12	05.9	277	44.0		56	50	17 21	17 54	18 32	5 45 40	15 47 80			
6	266	29.9	-12	05.0	292	08.6		56	45	17 30	18 00	18 35	5 33 43	15 59 76			
7	281	30.0		04.1	306	33.2		56	40	38	05	37	22 46	16 08 73			
8	296	30.0		03.2	320	57.8		56	35	44	10	40	13 48	16 71			
9	311	30.1		02.4	335	22.5		57	30	17 50	14	42	5 05 50	24 68			
10	326	30.1		01.5	349	47.1		56	20	18 00	22	48	4 52 53	36 64			
11	341	30.1	-12	00.6	4	11.7		56	10 N	18 09	18 30	18 55	4 40 56	16 47 61			
12	356	30.2	-11	59.8	18	36.4		57	0	18 17	18 38	19 03	4 29 58	16 56 59			
13	11	30.2		58.9	33	01.1		57	10 S	26	47	13	17 62	17 06 56			
14	26	30.3		58.0	47	25.8		57	20	35	18 58	24	4 05 65	17 52			
15	41	30.3		57.1	61	50.4		56	30	46	19 11	40	3 52 67	29 48			
16	56	30.4		56.2	76	15.2		58	35	52	18	19 50	44 69	36 46			
17	71	30.4	-11	55.4	90	39.9		57	40	18 59	19 28	20 02	3 35 71	17 43 44			
18	86	30.5	-11	54.5	105	04.6		57	45	19 08	19 39	20 17	3 24 74	17 52 41			
19	101	30.5		53.6	119	29.4		58	50	18	53	36	11 78	18 03 38			
20	116	30.5		52.7	133	54.1		57	52	22	19 59	45	3 05 79	08 36			
21	131	30.6		51.9	148	18.9		58	54	27	20 06	20 56	2 59 80	14 34			
22	146	30.6		51.0	162	43.7		58	56	33	15	21 09	51 83	20 32			
23	161	30.7		50.1	177	08.5		58	58	40	24	24	43 85	27 29			
24	176	30.7	-11	49.2	191	33.4		59	60 S	19 47	20 35	21 42	2 33 88	18 34 27			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 14 ^h 11 ^m 0		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: +1.2 PMG: 14 ^h 05 ^m		Mag: -2.6 PMG: 23 ^h 25 ^m		Mag: +0.5 PMG: 6 ^h 24 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	146	39.4	150	32.3	-2	56.5	148	32.0	-1	29.9							
1	161	41.9	165	32.0		55.2	163	32.7		29.1							
2	176	44.3	180	31.7		53.9	178	33.4		28.3							
3	191	46.8	195	31.3		52.7	193	34.1		27.5							
4	206	49.2	210	31.0		51.4	208	34.8		26.7							
5	221	51.7	225	30.6	-2	50.1	223	35.5	-1	25.9							
6	236	54.2	240	30.3	-2	48.8	238	36.2	-1	25.1							
7	251	56.6	255	30.0		47.5	253	36.9		24.3							
8	266	59.1	270	29.6		46.2	268	37.6		23.6							
9	282	01.6	285	29.3		44.9	283	38.3		22.8							
10	297	04.0	300	28.9		43.6	298	39.0		22.0							
11	312	06.5	315	28.6	-2	42.3	313	39.7	-1	21.2							
12	327	09.0	330	28.3	-2	41.0	328	40.4	-1	20.4							
13	342	11.4	345	27.9		39.7	343	41.1		19.6							
14	357	13.9	0	27.6		38.4	358	41.9		18.8							
15	12	16.4	15	27.3		37.1	13	42.6		18.0							
16	27	18.8	30	26.9		35.8	28	43.3		17.2							
17	42	21.3	45	26.6	-2	34.5	43	44.0	-1	16.4							
18	57	23.7	60	26.2	-2	33.2	58	44.7	-1	15.6							
19	72	26.2	75	25.9		31.9	73	45.4		14.8							
20	87	28.7	90	25.6		30.6	88	46.1		14.0							
21	102	31.1	105	25.2		29.3	103	46.8		13.2							
22	117	33.6	120	24.9		28.0	118	47.5		12.5							
23	132	36.1	135	24.6		26.7	133	48.2		11.7							
24	147	38.5	150	24.2	-2	25.4	148	48.9	-1	10.9							
Dif	—		-3		+13		+7		+8		+28		+1		+24		0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna													
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 29 ^d 4 PHE { 4 ^h : 61 ⁴ / ₄ 12 ^h : 61 ⁴ / ₄ 20 ^h : 61 ⁴ / 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	h m m	h m m												
0	176	31.9	-11	28.0	177	36.3	-8	16.6	60 N	17 01	17 44	18 32	7 16 22	18 16 93													
1	191	32.0		27.2	192	01.8	65	-8 05.7 ¹⁰⁹	58	07	47	33	13 24	19 90													
2	206	32.0		26.3	206	27.3	65	-7 54.8 ¹⁰⁹	56	12	50	33	09 27	21 88													
3	221	32.1		25.4	220	52.8	65	43.8 ¹¹⁰	54	16	53	34	06 29	24 85													
4	236	32.2		24.5	235	18.3	65	32.8 ¹¹⁰	52	21	55	35	03 31	26 83													
5	251	32.2	-11	23.6	249	43.9	66	-7 21.8 ¹¹⁰	50	17 25	17 58	18 35	7 00 33	18 28 81													
6	266	32.3	-11	22.7	264	09.5	66	-7 10.6 ¹¹²	45	17 33	18 03	18 37	6 55 36	18 32 76													
7	281	32.3		21.8	278	35.1	66	-6 59.5 ¹¹¹	40	40	08	39	50 40	35 73													
8	296	32.4		20.9	293	00.8	67	48.2 ¹¹³	35	46	12	41	46 42	38 70													
9	311	32.4		20.0	307	26.4	66	37.0 ¹¹²	30	17 51	16	44	42 45	40 68													
10	326	32.5		19.2	321	52.2	68	25.7 ¹¹³	20	18 01	23	49	36 49	45 63													
11	341	32.6	-11	18.3	336	17.9	67	-6 14.3 ¹¹⁴	10 N	18 09	18 31	18 55	6 30 53	18 48 60													
12	356	32.6	-11	17.4	350	43.7	68	-6 02.9 ¹¹⁴	0	18 17	18 38	19 03	6 25 57	18 52 56													
13	11	32.7		16.5	5	09.5	68	-5 51.5 ¹¹⁴	10 S	25	47	12	20 60	55 53													
14	26	32.7		15.6	19	35.3	68	40.0 ¹¹⁵	20	34	18 57	23	14 64	18 59 49													
15	41	32.8		14.7	34	01.2	69	28.5 ¹¹⁵	30	44	19 09	38	08 68	19 03 44													
16	56	32.8		13.8	48	27.1	69	17.0 ¹¹⁵	35	50	16	47	04 71	05 42													
17	71	32.9	-11	12.9	62	53.0	69	-5 05.4 ¹¹⁶	40	18 57	19 25	19 59	6 00 74	19 08 39													
18	86	33.0	-11	12.0	77	18.9	69	-4 53.8 ¹¹⁶	45	19 04	19 35	20 13	5 55 77	19 11 36													
19	101	33.0		11.1	91	44.9	70	42.1 ¹¹⁷	50	14	48	31	49 82	15 32													
20	116	33.1		10.2	106	10.9	70	30.5 ¹¹⁶	52	18	19 55	40	47 83	16 31													
21	131	33.1		09.4	120	37.0	71	18.8 ¹¹⁷	54	23	20 02	20 51	44 85	18 28													
22	146	33.2		08.5	135	03.0	70	-4 07.1 ¹¹⁷	56	28	09	21 02	41 87	20 26													
23	161	33.3		07.6	149	29.1	71	-3 55.3 ¹¹⁸	58	34	18	16	37 90	22 24													
24	176	33.3	-11	06.7	163	55.2	71	-3 43.5 ¹¹⁸	60 S	19 41	20 29	21 33	5 33 93	19 25 21													
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 14 ^h 03 ^m 2			Mag: -3.9 PMG: 13 ^h 59 ^m			Mag: +1.3 PMG: 14 ^h 03 ^m			Mag: -2.6 PMG: 23 ^h 16 ^m			Mag: +0.5 PMG: 6 ^h 16 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	148	37.7	150	16.2	-1	54.2	149	05.9	-0	51.8	9	49.8	+16	57.6	265	44.5	-19	02.0									
1	163	40.1	165	15.9		52.9	164	06.6		51.1	24	52.5		57.7	280	46.9		02.0									
2	178	42.6	180	15.6		51.6	179	07.3		50.3	39	55.3		57.8	295	49.2		02.0									
3	193	45.1	195	15.2		50.3	194	08.1		49.5	54	58.1		57.9	310	51.6		02.0									
4	208	47.5	210	14.9		49.0	209	08.8		48.7	70	00.9		58.0	325	54.0		02.0									
5	223	50.0	225	14.6	-1	47.7	224	09.5	-0	47.9	85	03.6	+16	58.1	340	56.3	-19	02.0									
6	238	52.5	240	14.2	-1	46.4	239	10.2	-0	47.1	100	06.4	+16	58.2	355	58.7	-19	02.0									
7	253	54.9	255	13.9		45.1	254	10.9		46.3	115	09.2		58.3	11	01.0		02.0									
8	268	57.4	270	13.6		43.7	269	11.6		45.5	130	12.0		58.4	26	03.4		02.1									
9	283	59.8	285	13.2		42.4	284	12.3		44.7	145	14.7		58.5	41	05.8		02.1									
10	299	02.3	300	12.9		41.1	299	13.0		43.9	160	17.5		58.6	56	08.1		02.1									
11	314	04.8	315	12.6	-1	39.8	314	13.7	-0	43.1	175	20.3	+16	58.7	71	10.5	-19	02.1									
12	329	07.2	330	12.2	-1	38.5	329	14.4	-0	42.3	190	23.1	+16	58.8	86	12.9	-19	02.1									
13	344	09.7	345	11.9		37.2	344	15.2		41.5	205	25.8		58.9	101	15.2		02.1									
14	359	12.2	0	11.6		35.9	359	15.9		40.8	220	28.6		59.0	116	17.6		02.1									
15	14	14.6	15	11.3		34.6	14	16.6		40.0	235	31.4		59.1	131	19.9		02.1									
16	29	17.1	30	10.9		33.3	29	17.3		39.2	250	34.2		59.2	146	22.3		02.1									
17	44	19.6	45	10.6	-1	32.0	44	18.0	-0	38.4	265	36.9	+16	59.3	161	24.7	-19	02.2									
18	59	22.0	60	10.3	-1	30.7	59	18.7	-0	37.6	280	39.7	+16	59.4	176	27.0	-19	02.2									
19	74	24.5	75	09.9		29.4	74	19.4		36.8	295	42.5		59.5	191	29.4		02.2									
20	89	26.9	90	09.6		28.1	89	20.1		36.0	310	45.3		59.6	206	31.8		02.2									
21	104	29.4	105	09.3		26.8	104	20.8		35.2	325	48.0		59.7	221	34.1		02.2									
22	119	31.9	120	09.0		25.5	119	21.5		34.4	340	50.8		59.8	236	36.5		02.2									
23	134	34.3	135	08.6		24.2	134	22.3		33.6	355	53.6		59.8	251	38.9		02.2									
24	149	36.8	150	08.3	-1	22.9	149	23.0	-0	32.8	10	56.4	+16	59.9	266	41.2	-19	02.2									
Dif	—			-3			+13			+7			+8			+28			+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 7			Edad: 1 ^d 0 PHE { 4 ^h : 61/3 12 ^h : 61/2 20 ^h : 61/0 Rº: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	33.3	-11	06.7	163	55.2	-3	43.5	60 N	5 54	6 42	7 25	7 38	21	19 49 90
1	191	33.4		05.8	178	21.4	72	31.8	58	54	39	20	37	23	49 87
2	206	33.4		04.9	192	47.6	72	20.0	56	53	36	14	36	26	49 85
3	221	33.5		04.0	207	13.8	72	-3	54	53	34	10	35	28	49 83
4	236	33.6		03.1	221	40.0	72	-2	52	52	31	06	34	30	49 81
5	251	33.6	-11	02.2	236	06.3	73	-2	50	5 51	6 29	7 02	7 33	31	19 49 79
6	266	33.7	-11	01.3	250	32.6	73	-2	45	5 50	6 24	6 54	7 31	35	19 48 76
7	281	33.8	-11	00.4	264	58.9	73	20.7	40	48	19	47	30	38	48 72
8	296	33.8	-10	59.5	279	25.3	74	-2	35	46	15	41	28	41	48 69
9	311	33.9		58.6	293	51.7	74	-1	30	43	11	36	27	44	48 67
10	326	33.9		57.7	308	18.1	74	45.0	20	38	6 04	26	25	48	48 62
11	341	34.0	-10	56.8	322	44.5	74	-1	10 N	5 32	5 57	6 18	7 23	52	19 48 59
12	356	34.1	-10	55.9	337	11.0	75	-1	0	5 25	5 49	6 10	7 22	55	19 48 55
13	11	34.1		55.0	351	37.4	74	-1	10 S	16	41	6 02	20	59	48 51
14	26	34.2		54.1	6	04.0	76	-0	20	5 05	31	5 54	18	63	48 47
15	41	34.3		53.2	20	30.5	75	45.5	30	4 50	19	44	16	67	47 44
16	56	34.3		52.3	34	57.1	76	33.6	35	41	12	38	15	70	47 41
17	71	34.4	-10	51.4	49	23.7	76	-0	40	4 29	5 03	5 32	7 14	72	19 47 38
18	86	34.5	-10	50.5	63	50.3	76	-0	45	4 15	4 53	5 24	7 12	76	19 47 35
19	101	34.5		49.6	78	16.9	76	+0	50	3 57	40	15	11	80	47 31
20	116	34.6		48.7	92	43.6	77	13.9	52	48	34	10	10	82	47 29
21	131	34.7		47.8	107	10.3	77	25.8	54	38	27	05	09	84	46 28
22	146	34.7		46.9	121	37.0	77	37.7	56	26	19	5 00	08	86	46 26
23	161	34.8		46.0	136	03.8	78	+0	58	3 12	10	4 54	07	89	46 23
24	176	34.9	-10	45.1	150	30.5	77	+1	60 S	2 55	4 00	4 47	7 06	91	19 46 21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 59 ^m 2		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +1.3 PMG: 14 ^h 02 ^m		Mag: -2.6 PMG: 23 ^h 12 ^m		Mag: +0.5 PMG: 6 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	36.8	150	08.3	149	23.0	10	56.4	266	41.2
1	164	39.3	165	08.0	164	23.7	25	59.1	281	43.6
2	179	41.7	180	07.6	179	24.4	41	01.9	296	46.0
3	194	44.2	195	07.3	194	25.1	56	04.7	311	48.3
4	209	46.7	210	07.0	209	25.8	71	07.5	326	50.7
5	224	49.1	225	06.7	224	26.5	86	10.2	341	53.0
6	239	51.6	240	06.3	239	27.2	101	13.0	356	55.4
7	254	54.1	255	06.0	254	27.9	116	15.8	11	57.8
8	269	56.5	270	05.7	269	28.7	131	18.6	27	00.1
9	284	59.0	285	05.4	284	29.4	146	21.3	42	02.5
10	300	01.4	300	05.0	299	30.1	161	24.1	57	04.9
11	315	03.9	315	04.7	314	30.8	176	26.9	72	07.2
12	330	06.4	330	04.4	329	31.5	191	29.6	87	09.6
13	345	08.8	345	04.0	344	32.2	206	32.4	102	12.0
14	0	11.3	0	03.7	359	32.9	221	35.2	117	14.3
15	15	13.8	15	03.4	14	33.6	236	38.0	132	16.7
16	30	16.2	30	03.1	29	34.3	251	40.7	147	19.1
17	45	18.7	45	02.7	44	35.1	266	43.5	162	21.4
18	60	21.2	60	02.4	59	35.8	281	46.3	177	23.8
19	75	23.6	75	02.1	74	36.5	296	49.0	192	26.2
20	90	26.1	90	01.8	89	37.2	311	51.8	207	28.5
21	105	28.5	105	01.4	104	37.9	326	54.6	222	30.9
22	120	31.0	120	01.1	119	38.6	341	57.4	237	33.3
23	135	33.5	135	00.8	134	39.3	357	00.1	252	35.7
24	150	35.9	150	00.5	149	40.0	12	02.9	267	38.0
Dif	—		-3		+13		+28		+24	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 6			Edad: 2 ^d 0 PHE { SD: 16'6 PMG: 14 ^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	h m m
0	176	34.9	-10	45.1	150	30.5	+1	01.3	60 N	17 06	17 49	18 37	7 59 21	21 19 88
1	191	34.9		44.2	164	57.3 78		13.1 118	58	11	52	37	8 00 24	16 85
2	206	35.0		43.3	179	24.1 78		24.9 118	56	16	54	37	02 25	14 82
3	221	35.1		42.4	193	51.0 79		36.7 118	54	20	57	38	03 28	12 80
4	236	35.1		41.5	208	17.8 78	+1	48.5 118	52	24	17 59	38	04 29	10 78
5	251	35.2	-10	40.6	222	44.7 79	+2	00.2 117	50	17 28	18 01	18 39	8 04 32	21 08 76
6	266	35.3	-10	39.7	237	11.6 79	+2	11.9 117	45	17 36	18 06	18 40	8 06 36	21 04 73
7	281	35.4		38.8	251	38.6 80		23.6 117	40	42	10	41	08 38	21 00 70
8	296	35.4		37.9	266	05.5 79		35.2 116	35	48	14	43	09 41	20 57 68
9	311	35.5		37.0	280	32.5 80		46.9 117	30	17 53	17	45	11 43	55 65
10	326	35.6		36.1	294	59.5 80	+2	58.5 116	20	18 02	24	50	13 47	50 61
11	341	35.6	-10	35.2	309	26.5 80	+3	10.0 115	10 N	18 10	18 31	18 56	8 15 51	20 47 57
12	356	35.7	-10	34.3	323	53.5 80	+3	21.6 116	0	18 17	18 38	19 02	8 17 54	20 43 54
13	11	35.8		33.4	338	20.6 81		33.1 115	10 S	25	46	11	19 58	39 51
14	26	35.8		32.5	352	47.7 81		44.5 114	20	33	18 55	22	21 61	35 48
15	41	35.9		31.6	7	14.8 81	+3	56.0 115	30	42	19 07	36	23 66	31 43
16	56	36.0		30.7	21	41.9 81	+4	07.4 114	35	47	14	45	25 68	28 42
17	71	36.1	-10	29.8	36	09.0 81	+4	18.7 113	40	18 54	19 22	19 56	8 26 71	20 25 39
18	86	36.1	-10	28.9	50	36.2 82	+4	30.1 114	45	19 01	19 32	20 09	8 28 74	20 22 36
19	101	36.2		28.0	65	03.4 82		41.3 112	50	10	44	27	31 78	18 32
20	116	36.3		27.1	79	30.5 81	+4	52.6 113	52	14	50	35	32 79	16 31
21	131	36.4		26.1	93	57.8 83	+5	03.8 112	54	18	19 57	45	33 82	14 29
22	146	36.4		25.2	108	25.0 82		14.9 111	56	23	20 04	20 56	34 84	12 27
23	161	36.5		24.3	122	52.2 82		26.0 111	58	29	12	21 09	36 86	09 25
24	176	36.6	-10	23.4	137	19.5 83	+5	37.1 111	60 S	19 35	20 22	21 25	8 37 89	20 07 22
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 13 ^h 55 ^m 3		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +1.3 PMG: 14 ^h 01 ^m		Mag: -2.6 PMG: 23 ^h 08 ^m		Mag: +0.5 PMG: 6 ^h 08 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	150	35.9	150	00.5	149	40.0	12	02.9	+17	02.2				
1	165	38.4	165	00.1	164	40.7	27	05.7		02.3				
2	180	40.9	179	59.8	179	41.5	42	08.4		02.4				
3	195	43.3	194	59.5	194	42.2	57	11.2		02.5				
4	210	45.8	209	59.2	209	42.9	72	14.0		02.6				
5	225	48.3	224	58.8	224	43.6	87	16.8	+17	02.7				
6	240	50.7	239	58.5	239	44.3	102	19.5	+17	02.8				
7	255	53.2	254	58.2	254	45.0	117	22.3		02.9				
8	270	55.7	269	57.9	269	45.7	132	25.1		03.0				
9	285	58.1	284	57.5	284	46.4	147	27.8		03.0				
10	301	00.6	299	57.2	299	47.2	162	30.6		03.1				
11	316	03.0	314	56.9	314	47.9	177	33.4	+17	03.2				
12	331	05.5	329	56.6	329	48.6	192	36.1	+17	03.3				
13	346	08.0	344	56.3	344	49.3	207	38.9		03.4				
14	1	10.4	359	55.9	359	50.0	222	41.7		03.5				
15	16	12.9	14	55.6	14	50.7	237	44.5		03.6				
16	31	15.4	29	55.3	29	51.4	252	47.2		03.7				
17	46	17.8	44	55.0	44	52.1	267	50.0	+17	03.8				
18	61	20.3	59	54.6	59	52.9	282	52.8	+17	03.9				
19	76	22.8	74	54.3	74	53.6	297	55.5		04.0				
20	91	25.2	89	54.0	89	54.3	312	58.3		04.1				
21	106	27.7	104	53.7	104	55.0	328	01.1		04.2				
22	121	30.1	119	53.3	119	55.7	343	03.8		04.3				
23	136	32.6	134	53.0	134	56.4	358	06.6		04.3				
24	151	35.1	149	52.7	149	57.1	13	09.4	+17	04.4				
Dif	—		-3	+13	+7	+8	+28	+1						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 13 ^m 5			Edad: 3 ^d 0 PHE { 4 ^h : 60/2 12 ^h : 59/9 20 ^h : 59/6 PMG: 15 ^h 24 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	176	36.6	-10	23.4	137	19.5	+5	37.1	60 N	5	49	6	37	7	20	8	20	23
1	191	36.7		22.5	151	46.8	83	48.1	58	49	34		14		24	26	41	
2	206	36.7		21.6	166	14.1	83	+5	59.1	56	49	32	10		27	28	36	
3	221	36.8		20.7	180	41.4	83	+6	10.0	54	48	29	05		31	29	32	
4	236	36.9		19.8	195	08.7	83		20.8	52	48	27	7	02	33	32	28	
5	251	37.0	-10	18.9	209	36.1	84	+6	31.7	50	5	48	6	58	8	36	33	
6	266	37.0	-10	18.0	224	03.5	84	+6	42.4	45	5	47	6	50	8	42	36	
7	281	37.1		17.1	238	30.8	83	+6	53.1	40	45	17	44		46	40	10	
8	296	37.2		16.2	252	58.2	84	+7	03.8	35	43	13	39		50	42	05	
9	311	37.3		15.2	267	25.6	84		14.4	30	42	09	34		8	54	44	
10	326	37.3		14.3	281	53.1	85		24.9	20	37	6	03	25	9	00	48	
11	341	37.4	-10	13.4	296	20.5	84	+7	35.4	10 N	5	31	5	56	9	06	51	
12	356	37.5	-10	12.5	310	48.0	85	+7	45.8	0	5	25	5	49	9	11	54	
13	11	37.6		11.6	325	15.4	84	+7	56.1	10 S	16	41	6	03	17	57	30	
14	26	37.7		10.7	339	42.9	85	+8	06.4	20	5	06	32	5	55	22	61	
15	41	37.7		09.8	354	10.4	85		16.6	30	4	52	21	45	29	64	14	
16	56	37.8		08.9	8	37.9	85		26.8	35	43	14	40		33	66	10	
17	71	37.9	-10	08.0	23	05.5	86	+8	36.9	40	4	32	5	06	9	37	69	
18	86	38.0	-10	07.0	37	33.0	85	+8	46.9	45	4	19	4	56	9	42	72	
19	101	38.1		06.1	52	00.6	86	+8	56.9	50	4	01	44	18	49	74	50	
20	116	38.1		05.2	66	28.1	85	+9	06.8	52	3	53	38	14	51	77	47	
21	131	38.2		04.3	80	55.7	86		16.6	54	43	31	10		55	78	43	
22	146	38.3		03.4	95	23.3	86		26.4	56	32	24	5	05	9	58	80	
23	161	38.4		02.5	109	50.9	86		36.1	58	19	16	4	59	10	02	83	
24	176	38.5	-10	01.6	124	18.6	87	+9	45.7	60 S	3	03	4	06	10	06	86	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 51 ^m 4		Mag: -3.9 PMG: 14 ^h 01 ^m		Mag: +1.3 PMG: 14 ^h 00 ^m		Mag: -2.6 PMG: 23 ^h 03 ^m		Mag: +0.5 PMG: 6 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	151	35.1	149	52.7	149	57.1	13	09.4	268	34.9
1	166	37.5	164	52.4	164	57.9	28	12.1	283	37.3
2	181	40.0	179	52.1	179	58.6	43	14.9	298	39.7
3	196	42.5	194	51.7	194	59.3	58	17.7	313	42.0
4	211	44.9	209	51.4	210	00.0	73	20.4	328	44.4
5	226	47.4	224	51.1	225	00.7	88	23.2	343	46.8
6	241	49.9	239	50.8	240	01.4	103	26.0	358	49.2
7	256	52.3	254	50.5	255	02.1	118	28.7	13	51.5
8	271	54.8	269	50.1	270	02.8	133	31.5	28	53.9
9	286	57.3	284	49.8	285	03.6	148	34.3	43	56.3
10	301	59.7	299	49.5	300	04.3	163	37.0	58	58.7
11	317	02.2	314	49.2	315	05.0	178	39.8	74	01.0
12	332	04.6	329	48.8	330	05.7	193	42.6	89	03.4
13	347	07.1	344	48.5	345	06.4	208	45.3	104	05.8
14	2	09.6	359	48.2	0	07.1	223	48.1	119	08.2
15	17	12.0	14	47.9	15	07.8	238	50.9	134	10.5
16	32	14.5	29	47.6	+0	00.7	253	53.6	149	12.9
17	47	17.0	44	47.2	+0	02.0	268	56.4	164	15.3
18	62	19.4	59	46.9	+0	03.3	283	59.2	179	17.7
19	77	21.9	74	46.6		04.6	299	01.9	194	20.0
20	92	24.4	89	46.3		05.9	314	04.7	209	22.4
21	107	26.8	104	46.0		07.2	329	07.4	224	24.8
22	122	29.3	119	45.6		08.5	344	10.2	239	27.2
23	137	31.8	134	45.3		09.8	359	13.0	254	29.6
24	152	34.2	149	45.0	+0	11.1	14	15.7	269	31.9
Dif	—		-3		+13		+28		+24	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 4			Edad: 4 ^d 0 SD: 16:2 PMG: 16 ^h 18 ^m	PHE { 4 ^h : 59/3 12 ^h : 59/0 20 ^h : 58/7 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	h m m	
0	176	38.5	-10	01.6	124	18.6	+9 45.7	60 N	17 11	17 54	18 42	8 43 27	** ** *	** ** *	
1	191	38.5	-10	00.6	138	46.2	+9 55.3	58	16	56	42	50 29	** ** *	** ** *	
2	206	38.6	-9	59.7	153	13.8	+10 04.7	56	20	17 58	42	8 55 31	23 54	73	
3	221	38.7		58.8	167	41.5	14.2	54	24	18 00	42	9 00 33	48	77	
4	236	38.8		57.9	182	09.2	23.5	52	28	02	42	05 34	43	69	
5	251	38.9	-9	57.0	196	36.8	+10 32.7	50	17 31	18 04	18 42	9 09 36	23 37	69	
6	266	39.0	-9	56.1	211	04.5	+10 41.9	45	17 39	18 08	18 42	9 18 39	23 26	66	
7	281	39.0		55.2	225	32.2	+10 51.0	40	45	12	44	26 41	17	64	
8	296	39.1		54.2	240	00.0	+11 00.0	35	50	15	45	32 43	09	62	
9	311	39.2		53.3	254	27.7	+11 09.0	30	17 54	19	47	38 45	23 02	61	
10	326	39.3		52.4	268	55.4	17.9	20	18 03	25	51	48 48	22 51	57	
11	341	39.4	-9	51.5	283	23.2	+11 26.6	10 N	18 10	18 31	18 56	9 57 50	22 40	55	
12	356	39.5	-9	50.6	297	51.0	+11 35.4	0	18 17	18 38	19 02	10 05 53	22 31	53	
13	11	39.5		49.7	312	18.7	44.0	10 S	24	45	10	14 55	21	51	
14	26	39.6		48.7	326	46.5	+11 52.5	20	31	18 54	20	23 58	22 11	48	
15	41	39.7		47.8	341	14.3	+12 01.0	30	40	19 05	33	33 61	21 59	46	
16	56	39.8		46.9	355	42.1	09.4	35	45	11	42	39 63	52	44	
17	71	39.9	-9	46.0	10	10.0	+12 17.7	40	18 51	19 19	19 52	10 46 65	21 44	43	
18	86	40.0	-9	45.1	24	37.8	+12 25.9	45	18 58	19 28	20 05	10 54 67	21 35	41	
19	101	40.1		44.1	39	05.6	34.0	50	19 06	40	22	11 03 71	25	37	
20	116	40.1		43.2	53	33.5	42.1	52	10	46	30	08 72	20	36	
21	131	40.2		42.3	68	01.4	50.0	54	14	52	39	13 74	14	35	
22	146	40.3		41.4	82	29.2	+12 57.9	56	19	19 59	20 50	18 76	08	33	
23	161	40.4		40.5	96	57.1	+13 05.7	58	24	20 07	21 02	25 77	21 01	32	
24	176	40.5	-9	39.5	111	25.0	+13 13.4	60 S	19 30	20 16	21 17	11 32 79	20 54	29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG	Mag: -3.9	PMG: 14 ^h 01 ^m	Mag: +1.3	PMG: 13 ^h 58 ^m	Mag: -2.5	PMG: 22 ^h 59 ^m	Mag: +0.5	PMG: 6 ^h 01 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'		
0	152	34.2	149	45.0	+0 11.1	150	14.3	+0 24.1	14 15.7	+17 06.6	269 31.9	-19 02.9
1	167	36.7	164	44.7	12.5	165	15.0	24.9	29 18.5	06.7	284 34.3	02.9
2	182	39.1	179	44.4	13.8	180	15.7	25.7	44 21.3	06.8	299 36.7	02.9
3	197	41.6	194	44.0	15.1	195	16.4	26.5	59 24.0	06.9	314 39.1	02.9
4	212	44.1	209	43.7	16.4	210	17.1	27.3	74 26.8	07.0	329 41.4	02.9
5	227	46.5	224	43.4	+0 17.7	225	17.8	+0 28.1	89 29.6	+17 07.1	344 43.8	-19 02.9
6	242	49.0	239	43.1	+0 19.0	240	18.6	+0 28.9	104 32.3	+17 07.2	359 46.2	-19 03.0
7	257	51.5	254	42.8	20.3	255	19.3	29.6	119 35.1	07.3	14 48.6	03.0
8	272	53.9	269	42.4	21.6	270	20.0	30.4	134 37.8	07.4	29 51.0	03.0
9	287	56.4	284	42.1	22.9	285	20.7	31.2	149 40.6	07.4	44 53.3	03.0
10	302	58.9	299	41.8	24.2	300	21.4	32.0	164 43.4	07.5	59 55.7	03.0
11	318	01.3	314	41.5	+0 25.5	315	22.1	+0 32.8	179 46.1	+17 07.6	74 58.1	-19 03.0
12	333	03.8	329	41.2	+0 26.8	330	22.8	+0 33.6	194 48.9	+17 07.7	90 00.5	-19 03.0
13	348	06.2	344	40.9	28.1	345	23.6	34.4	209 51.7	07.8	105 02.9	03.0
14	3 08.7	359 40.5	29.5	0 24.3	35.2	224 54.4	07.9	120 05.2	03.0			
15	18 11.2	14 40.2	30.8	15 25.0	36.0	239 57.2	08.0	135 07.6	03.0			
16	33 13.6	29 39.9	32.1	30 25.7	36.7	254 59.9	08.1	150 10.0	03.0			
17	48 16.1	44 39.6	+0 33.4	45 26.4	+0 37.5	270 02.7	+17 08.2	165 12.4	-19 03.0			
18	63 18.6	59 39.3	+0 34.7	60 27.1	+0 38.3	285 05.5	+17 08.3	180 14.8	-19 03.0			
19	78 21.0	74 38.9	36.0	75 27.9	39.1	300 08.2	08.3	195 17.1	03.1			
20	93 23.5	89 38.6	37.3	90 28.6	39.9	315 11.0	08.4	210 19.5	03.1			
21	108 26.0	104 38.3	38.6	105 29.3	40.7	330 13.7	08.5	225 21.9	03.1			
22	123 28.4	119 38.0	39.9	120 30.0	41.5	345 16.5	08.6	240 24.3	03.1			
23	138 30.9	134 37.7	41.2	135 30.7	42.3	0 19.3	08.7	255 26.7	03.1			
24	153 33.4	149 37.4	+0 42.5	150 31.4	+0 43.1	15 22.0	+17 08.8	270 29.0	-19 03.1			
Dif	—	-3	+13	+7	+8	+28	+1	+24				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 2			Edad: 5 ^d 0 SD: 15'9 PMG: 17 ^h 11 ^m	PHE { 4 ^h : 58'4 12 ^h : 58'1 20 ^h : 57'8 R°: 53 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	40.5	-9 39.5	111	25.0	+13 13.4	76	60 N	5 43	6 32	7 14	9 10	32	0 10	76
1	191	40.6		125	52.9	89 21.0	76	58	44	29	09	19	34	0 02	74
2	206	40.7		140	20.9	90 28.5	75	56	44	27	05	26	36	** ** *	**
3	221	40.8		154	48.8	89 35.9	74	54	44	25	01	33	38	** ** *	**
4	236	40.8		169	16.8	90 43.3	74	52	44	23	57	39	39	** ** *	**
5	251	40.9	-9 34.9	183	44.7	89 +13 50.5	72	50	5 44	6 21	6 54	9 45	40	** ** *	**
6	266	41.0	-9 34.0	198	12.7	90 +13 57.7	72	45	5 43	6 18	6 47	9 57	42	** ** *	**
7	281	41.1		212	40.7	90 +14 04.7	70	40	43	14	41	10 07	44	** ** *	**
8	296	41.2		227	08.7	90 11.7	70	35	41	11	36	15	46	** ** *	**
9	311	41.3		241	36.7	90 18.6	69	30	40	08	32	23	47	** ** *	**
10	326	41.4		256	04.7	90 25.4	68	20	36	6 01	24	36	49	23 48	55
11	341	41.5	-9 29.4	270	32.7	90 +14 32.1	67	10 N	5 31	5 55	6 17	10 47	51	23 35	54
12	356	41.6	-9 28.5	285	00.8	91 +14 38.7	66	0	5 25	5 49	6 10	10 58	53	23 24	52
13	11	41.7		299	28.8	90 45.2	65	10 S	17	42	6 03	11 09	55	23 12	51
14	26	41.8		313	56.9	91 51.7	65	20	5 07	33	5 56	21 56	52	22 59	50
15	41	41.8		328	25.0	91 +14 58.0	63	30	4 54	22	47	34	59	45	47
16	56	41.9		342	53.1	91 +15 04.2	62	35	45	16	42	42	60	36	47
17	71	42.0	-9 23.9	357	21.2	91 +15 10.4	62	40	4 35	5 08	5 36	11 51	61	22 27	45
18	86	42.1	-9 22.9	11	49.3	91 +15 16.4	60	45	4 22	4 59	5 30	12 01	64	22 16	44
19	101	42.2		26	17.5	92 22.4	60	50	4 05	47	21	14	65	22 02	42
20	116	42.3		40	45.6	91 28.2	58	52	3 57	42	18	20	66	21 56	41
21	131	42.4		55	13.8	92 34.0	58	54	48	36	14	27	67	49	40
22	146	42.5		69	42.0	92 39.6	56	56	38	29	09	34	69	41	39
23	161	42.6		84	10.1	91 45.2	56	58	25	21	5 04	42	71	33	37
24	176	42.7	-9 17.4	98	38.4	93 +15 50.7	55	60 S	3 11	4 12	4 58	12 51	73	21 23	36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 13 ^h 43 ^m 5		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +1.3 PMG: 13 ^h 57 ^m		Mag: -2.5 PMG: 22 ^h 54 ^m		Mag: +0.5 PMG: 5 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	153	33.4	149	37.4	+0 42.5	150	31.4	+0 43.1	15	22.0	+17 08.8	270	29.0	-19 03.1
1	168	35.8	164	37.0		165	32.1		30	24.8		285	31.4	
2	183	38.3	179	36.7		180	32.9		45	27.5		300	33.8	
3	198	40.7	194	36.4		195	33.6		60	30.3		315	36.2	
4	213	43.2	209	36.1		210	34.3		75	33.1		330	38.6	
5	228	45.7	224	35.8	+0 49.1	225	35.0	+0 47.0	90	35.8	+17 09.2	345	40.9	-19 03.1
6	243	48.1	239	35.5	+0 50.4	240	35.7	+0 47.8	105	38.6	+17 09.3	0	43.3	-19 03.1
7	258	50.6	254	35.1		255	36.4		120	41.3		15	45.7	
8	273	53.1	269	34.8		270	37.2		135	44.1		30	48.1	
9	288	55.5	284	34.5		285	37.9		150	46.9		45	50.5	
10	303	58.0	299	34.2		300	38.6		165	49.6		60	52.9	
11	319	00.5	314	33.9	+0 56.9	315	39.3	+0 51.7	180	52.4	+17 09.8	75	55.2	-19 03.2
12	334	02.9	329	33.6	+0 58.2	330	40.0	+0 52.5	195	55.1	+17 09.9	90	57.6	-19 03.2
13	349	05.4	344	33.2	+0 59.5	345	40.7		210	57.9		106	00.0	
14	4	07.8	359	32.9	+1 00.8	0	41.5		226	00.7		121	02.4	
15	19	10.3	14	32.6		15	42.2		241	03.4		136	04.8	
16	34	12.8	29	32.3		30	42.9		256	06.2		151	07.2	
17	49	15.2	44	32.0	+1 04.7	45	43.6	+0 56.5	271	08.9	+17 10.3	166	09.6	-19 03.2
18	64	17.7	59	31.7	+1 06.1	60	44.3	+0 57.2	286	11.7	+17 10.4	181	11.9	-19 03.2
19	79	20.2	74	31.3		75	45.0		301	14.4		196	14.3	
20	94	22.6	89	31.0		90	45.7		316	17.2		211	16.7	
21	109	25.1	104	30.7		105	46.5	+0 59.6	331	20.0		226	19.1	
22	124	27.6	119	30.4		120	47.2	+1 00.4	346	22.7		241	21.5	
23	139	30.0	134	30.1		135	47.9		1	25.5		256	23.9	
24	154	32.5	149	29.8	+1 13.9	150	48.6	+1 02.0	16	28.2	+17 10.9	271	26.2	-19 03.3
Dif	—		-3 +13		+7 +8		+28 +1		+24 0					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 6 ^d 0 SD: 15:7 PMG: 18 ^h 04 ^m	PHE { 4 ^h : 57:5 12 ^h : 57:2 20 ^h : 56:9 R°: 51 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	42.7	-9 17.4	98	38.4	+15 50.7	53	60 N	17 16	17 59	18 47	9 42 40		1 26 68	
1	191	42.8		113	06.6	+15 56.0	53	58	21	18 01	46	9 53 41		16 66	
2	206	42.9		127	34.8	+16 01.3	53	56	25	03	46	10 02 42		1 07 65	
3	221	43.0		142	03.1	06.5	52	54	28	04	45	11 42		0 59 64	
4	236	43.1		156	31.3	11.6	51	52	32	06	45	18 44		52 63	
5	251	43.2	-9 12.7	170	59.6	+16 16.5	49	50	17 35	18 07	18 45	10 25 44		0 46 62	
6	266	43.3	-9 11.8	185	27.9	+16 21.4	49	45	17 41	18 11	18 45	10 39 46		0 32 61	
7	281	43.4		199	56.2	26.2	48	40	47	14	46	10 51 46		21 59	
8	296	43.4		214	24.6	30.9	47	35	52	17	47	11 01 47		11 58	
9	311	43.5		228	52.9	35.5	46	30	17 56	20	48	10 48		0 03 57	
10	326	43.6		243	21.3	40.0	45	20	18 03	26	51	25 50		** ** *	
11	341	43.7	-9 07.2	257	49.7	+16 44.4	44	10 N	18 10	18 31	18 56	11 38 51		** ** *	
12	356	43.8	-9 06.2	272	18.1	+16 48.7	43	0	18 16	18 37	19 02	11 51 52		** ** *	
13	11	43.9		286	46.5	52.9	42	10 S	23	44	09	12 04 53		** ** *	
14	26	44.0		301	14.9	+16 57.0	41	20	30	18 52	18	17 54		23 49 50	
15	41	44.1		315	43.4	+17 01.0	40	30	38	19 02	31	33 55		32 50	
16	56	44.2		330	11.8	04.9	39	35	43	09	39	42 56		23 49	
17	71	44.3	-9 01.6	344	40.3	+17 08.7	38	40	18 48	19 16	19 49	12 52 57		23 12 49	
18	86	44.4	-9 00.7	359	08.8	+17 12.4	37	45	18 54	19 25	20 01	13 05 57		23 00 47	
19	101	44.5	-8 59.7	13	37.4	16.0	36	50	19 02	36	17	19 59		22 44 47	
20	116	44.6		28	05.9	19.5	35	52	05	41	25	26 60		37 47	
21	131	44.7		42	34.5	22.9	34	54	09	47	34	34 60		29 46	
22	146	44.8		57	03.1	26.2	33	56	14	19 53	43	43 61		20 46	
23	161	44.9		71	31.7	29.4	32	58	18	20 01	20 55	13 53 61		22 10 45	
24	176	45.0	-8 55.1	86	00.3	+17 32.5	31	60 S	19 24	20 09	21 09	14 04 63		21 59 43	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 13 ^h 39 ^m 6		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +1.3 PMG: 13 ^h 56 ^m		Mag: -2.5 PMG: 22 ^h 50 ^m			Mag: +0.5 PMG: 5 ^h 53 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	154	32.5	149	29.8	+1 13.9	150	48.6	+1 02.0	16	28.2	+17 10.9	271	26.2	-19 03.3
1	169	35.0	164	29.4	15.2	165	49.3	02.8	31	31.0	11.0	286	28.6	03.3
2	184	37.4	179	29.1	16.5	180	50.0	03.5	46	33.7	11.1	301	31.0	03.3
3	199	39.9	194	28.8	17.8	195	50.8	04.3	61	36.5	11.2	316	33.4	03.3
4	214	42.3	209	28.5	19.1	210	51.5	05.1	76	39.2	11.3	331	35.8	03.3
5	229	44.8	224	28.2	+1 20.4	225	52.2	+1 05.9	91	42.0	+17 11.3	346	38.2	-19 03.3
6	244	47.3	239	27.9	+1 21.7	240	52.9	+1 06.7	106	44.8	+17 11.4	1	40.6	-19 03.3
7	259	49.7	254	27.5	23.0	255	53.6	07.5	121	47.5	11.5	16	43.0	03.3
8	274	52.2	269	27.2	24.3	270	54.4	08.3	136	50.3	11.6	31	45.3	03.3
9	289	54.7	284	26.9	25.7	285	55.1	09.1	151	53.0	11.7	46	47.7	03.3
10	304	57.1	299	26.6	27.0	300	55.8	09.8	166	55.8	11.8	61	50.1	03.3
11	319	59.6	314	26.3	+1 28.3	315	56.5	+1 10.6	181	58.5	+17 11.9	76	52.5	-19 03.3
12	335	02.1	329	26.0	+1 29.6	330	57.2	+1 11.4	197	01.3	+17 12.0	91	54.9	-19 03.3
13	350	04.5	344	25.7	30.9	345	57.9	12.2	212	04.0	12.0	106	57.3	03.3
14	5	07.0	359	25.3	32.2	0	58.7	13.0	227	06.8	12.1	121	59.7	03.3
15	20	09.5	14	25.0	33.5	15	59.4	13.8	242	09.5	12.2	137	02.1	03.4
16	35	11.9	29	24.7	34.8	31	00.1	14.6	257	12.3	12.3	152	04.4	03.4
17	50	14.4	44	24.4	+1 36.1	46	00.8	+1 15.4	272	15.1	+17 12.4	167	06.8	-19 03.4
18	65	16.8	59	24.1	+1 37.4	61	01.5	+1 16.1	287	17.8	+17 12.5	182	09.2	-19 03.4
19	80	19.3	74	23.8	38.7	76	02.2	16.9	302	20.6	12.6	197	11.6	03.4
20	95	21.8	89	23.4	40.0	91	03.0	17.7	317	23.3	12.6	212	14.0	03.4
21	110	24.2	104	23.1	41.3	106	03.7	18.5	332	26.1	12.7	227	16.4	03.4
22	125	26.7	119	22.8	42.6	121	04.4	19.3	347	28.8	12.8	242	18.8	03.4
23	140	29.2	134	22.5	43.9	136	05.1	20.1	2	31.6	12.9	257	21.2	03.4
24	155	31.6	149	22.2	+1 45.2	151	05.8	+1 20.9	17	34.3	+17 13.0	272	23.6	-19 03.4
Dif	—		-3		+13	+7		+8	+28		+1	+24		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 7 ^d 0	PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'1	R ^o : 51 ^m		Náutico			Civil	Hora	R ^o	Hora	R ^o	
	PMG: 12 ^h 12 ^m 9															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	45.0	-8 55.1	86	00.3	+17 32.5	30	60 N	5 38	6 26	7 08	10 22	48	2 34	58	
1	191	45.1	54.1	100	29.0	35.5	29	58	39	24	04	34	48	22	57	
2	206	45.2	53.2	114	57.6	38.4	28	56	39	22	7 00	44	49	12	57	
3	221	45.3	52.3	129	26.3	41.2	29	54	40	21	6 56	10 53	49	2 03	56	
4	236	45.4	51.4	143	55.0	43.9	27	52	40	19	53	11 02	48	1 55	56	
5	251	45.5	-8 50.4	158	23.8	46.5	26	50	5 40	6 18	6 50	11 09	49	1 48	55	
6	266	45.6	-8 49.5	172	52.5	49.0	25	45	5 40	6 14	6 44	11 25	49	1 33	54	
7	281	45.7	48.6	187	21.3	51.4	24	40	40	11	38	37	50	20	54	
8	296	45.8	47.6	201	50.1	53.8	24	35	39	08	34	48	50	09	54	
9	311	45.9	46.7	216	19.0	56.0	22	30	38	06	30	11 58	50	1 00	53	
10	326	46.0	45.7	230	47.8	58.1	21	20	34	6 00	22	12 15	50	0 43	53	
11	341	46.1	-8 44.8	245	16.7	00.1	20	10 N	5 30	5 55	6 16	12 29	51	0 29	52	
12	356	46.3	-8 43.9	259	45.6	02.0	19	0	5 24	5 49	6 10	12 43	51	0 16	52	
13	11	46.4	42.9	274	14.5	03.8	18	10 S	17	42	6 03	12 57	51	0 03	51	
14	26	46.5	42.0	288	43.5	05.6	18	20	5 08	34	5 56	13 11	51	** ** *	**	
15	41	46.6	41.1	303	12.5	07.2	15	30	4 55	24	48	28	51	** ** *	**	
16	56	46.7	40.1	317	41.5	08.7	15	35	47	18	44	38	51	** ** *	**	
17	71	46.8	-8 39.2	332	10.5	10.1	14	40	4 37	5 11	5 39	13 49	52	** ** *	**	
18	86	46.9	-8 38.3	346	39.6	11.5	14	45	4 25	5 02	5 32	14 02	52	23 47	52	
19	101	47.0	37.3	1 08.6	100	12.7	12	50	10	4 51	25	18	52	31	52	
20	116	47.1	36.4	15 37.8	102	13.8	11	52	4 02	46	21	26	52	24	51	
21	131	47.2	35.5	30 06.9	101	14.9	11	54	3 53	40	18	34	52	15	52	
22	146	47.3	34.5	44 36.1	102	15.8	9	56	43	34	13	44	52	23 06	51	
23	161	47.4	33.6	59 05.3	102	16.7	9	58	32	26	09	14 54	52	22 55	52	
24	176	47.5	-8 32.6	73 34.5	102	17.4	7	60 S	3 18	4 18	5 03	15 07	52	22 42	52	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 35 ^m 7		Mag: -3.9 PMG: 14 ^h 03 ^m		Mag: +1.3 PMG: 13 ^h 55 ^m		Mag: -2.5 PMG: 22 ^h 46 ^m		Mag: +0.5 PMG: 5 ^h 50 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	155	31.6	149 22.2	+1 45.2	151 05.8	+1 20.9	17 34.3	+17 13.0	272 23.6	-19 03.4					
1	170	34.1	164 21.9	46.6	166 06.5	21.6	32 37.1	13.1	287 25.9	03.4					
2	185	36.6	179 21.6	47.9	181 07.3	22.4	47 39.8	13.2	302 28.3	03.4					
3	200	39.0	194 21.2	49.2	196 08.0	23.2	62 42.6	13.3	317 30.7	03.4					
4	215	41.5	209 20.9	50.5	211 08.7	24.0	77 45.3	13.3	332 33.1	03.4					
5	230	44.0	224 20.6	+1 51.8	226 09.4	+1 24.8	92 48.1	+17 13.4	347 35.5	-19 03.4					
6	245	46.4	239 20.3	+1 53.1	241 10.1	+1 25.6	107 50.8	+17 13.5	2 37.9	-19 03.4					
7	260	48.9	254 20.0	54.4	256 10.9	26.4	122 53.6	13.6	17 40.3	03.4					
8	275	51.3	269 19.7	55.7	271 11.6	27.1	137 56.3	13.7	32 42.7	03.5					
9	290	53.8	284 19.4	57.0	286 12.3	27.9	152 59.1	13.8	47 45.1	03.5					
10	305	56.3	299 19.0	58.3	301 13.0	28.7	168 01.8	13.9	62 47.5	03.5					
11	320	58.7	314 18.7	+1 59.6	316 13.7	+1 29.5	183 04.6	+17 13.9	77 49.9	-19 03.5					
12	336	01.2	329 18.4	+2 00.9	331 14.4	+1 30.3	198 07.3	+17 14.0	92 52.3	-19 03.5					
13	351	03.7	344 18.1	02.2	346 15.2	31.1	213 10.1	14.1	107 54.6	03.5					
14	6	06.1	359 17.8	03.5	1 15.9	31.9	228 12.8	14.2	122 57.0	03.5					
15	21	08.6	14 17.5	04.8	16 16.6	32.6	243 15.6	14.3	137 59.4	03.5					
16	36	11.1	29 17.2	06.1	31 17.3	33.4	258 18.3	14.4	153 01.8	03.5					
17	51	13.5	44 16.8	+2 07.4	46 18.0	+1 34.2	273 21.1	+17 14.4	168 04.2	-19 03.5					
18	66	16.0	59 16.5	+2 08.7	61 18.8	+1 35.0	288 23.8	+17 14.5	183 06.6	-19 03.5					
19	81	18.4	74 16.2	10.0	76 19.5	35.8	303 26.6	14.6	198 09.0	03.5					
20	96	20.9	89 15.9	11.4	91 20.2	36.6	318 29.3	14.7	213 11.4	03.5					
21	111	23.4	104 15.6	12.7	106 20.9	37.4	333 32.1	14.8	228 13.8	03.5					
22	126	25.8	119 15.3	14.0	121 21.6	38.1	348 34.8	14.9	243 16.2	03.5					
23	141	28.3	134 15.0	15.3	136 22.3	38.9	3 37.6	15.0	258 18.6	03.5					
24	156	30.8	149 14.6	+2 16.6	151 23.1	+1 39.7	18 40.3	+17 15.0	273 21.0	-19 03.5					
Dif	—		-3	+13		+7	+8		+27	+1		+24			0

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2		Edad: 8 ^d 0	PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5	SD: 15'3				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 12 ^m 7				PMG: 19 ^h 46 ^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	176	47.5	-8	32.6	73	34.5	+18	17.4	60 N	17 21	18 03	18 52	11 10 55	3 32 47
1	191	47.6		31.7	88	03.7 ¹⁰²		18.1	58	25	05	51	22 55	19 48
2	206	47.7		30.8	102	33.0 ¹⁰³		18.6	56	29	07	50	33 54	3 09 48
3	221	47.8		29.8	117	02.3 ¹⁰³		19.1	54	32	08	49	42 54	2 59 48
4	236	47.9		28.9	131	31.7 ¹⁰⁴		19.4	52	35	09	49	50 54	51 48
5	251	48.1	-8	28.0	146	01.0 ¹⁰³	+18	19.7	50	17 38	18 11	18 48	11 58 53	2 43 49
6	266	48.2	-8	27.0	160	30.4 ¹⁰⁴	+18	19.9	45	17 44	18 14	18 48	12 14 53	2 27 49
7	281	48.3		26.1	174	59.9 ¹⁰⁵		20.0	40	49	16	48	27 52	14 49
8	296	48.4		25.1	189	29.3 ¹⁰⁴		19.9	35	53	19	48	38 52	2 03 49
9	311	48.5		24.2	203	58.8 ¹⁰⁵		19.8	30	17 57	21	49	12 48 52	1 53 50
10	326	48.6		23.3	218	28.3 ¹⁰⁵		19.6	20	18 04	26	52	13 05 51	36 50
11	341	48.7	-8	22.3	232	57.9 ¹⁰⁶	+18	19.3	10 N	18 10	18 31	18 56	13 20 50	1 21 50
12	356	48.8	-8	21.4	247	27.5 ¹⁰⁶	+18	18.9	0	18 16	18 37	19 01	13 34 49	1 08 50
13	11	48.9		20.4	261	57.1 ¹⁰⁶		18.4	10 S	22	43	08	13 48 49	0 54 50
14	26	49.0		19.5	276	26.8 ¹⁰⁷		17.9	20	28	18 51	17	14 02 49	39 51
15	41	49.1		18.6	290	56.4 ¹⁰⁶		17.2	30	36	19 00	29	19 48	22 51
16	56	49.3		17.6	305	26.2 ¹⁰⁸		16.4	35	40	06	37	29 47	12 51
17	71	49.4	-8	16.7	319	55.9 ¹⁰⁷	+18	15.6	40	18 45	19 13	19 46	14 41 46	0 01 51
18	86	49.5	-8	15.7	334	25.7 ¹⁰⁸	+18	14.6	45	18 51	19 21	19 58	14 54 46	*** ** **
19	101	49.6		14.8	348	55.5 ¹⁰⁸		13.6	50	18 58	31	20 12	15 10 45	*** ** **
20	116	49.7		13.9	3	25.4 ¹⁰⁹		12.5	52	19 01	36	20	18 44	*** ** **
21	131	49.8		12.9	17	55.3 ¹⁰⁹		11.2	54	05	42	28	26 44	*** ** **
22	146	49.9		12.0	32	25.2 ¹⁰⁹		09.9	56	08	48	37	36 43	23 57 57
23	161	50.0		11.0	46	55.1 ¹⁰⁹		08.5	58	13	19 55	20 48	46 43	47 58
24	176	50.1	-8	10.1	61	25.1 ¹¹⁰	+18	07.0	60 S	19 18	20 03	21 01	15 59 42	23 34 59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 31 ^m 7		Mag: -3.9 PMG: 14 ^h 03 ^m		Mag: +1.3 PMG: 13 ^h 54 ^m		Mag: -2.5 PMG: 22 ^h 41 ^m		Mag: +0.5 PMG: 5 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	156	30.8	149	14.6	+2	16.6	151	23.1	+1	39.7
1	171	33.2	164	14.3		17.9	166	23.8		40.5
2	186	35.7	179	14.0		19.2	181	24.5		41.3
3	201	38.2	194	13.7		20.5	196	25.2		42.1
4	216	40.6	209	13.4		21.8	211	25.9		42.8
5	231	43.1	224	13.1	+2	23.1	226	26.7	+1	43.6
6	246	45.6	239	12.8	+2	24.4	241	27.4	+1	44.4
7	261	48.0	254	12.4		25.7	256	28.1		45.2
8	276	50.5	269	12.1		27.0	271	28.8		46.0
9	291	52.9	284	11.8		28.3	286	29.5		46.8
10	306	55.4	299	11.5		29.6	301	30.2		47.6
11	321	57.9	314	11.2	+2	30.9	316	31.0	+1	48.3
12	337	00.3	329	10.9	+2	32.2	331	31.7	+1	49.1
13	352	02.8	344	10.6		33.5	346	32.4		49.9
14	7	05.3	359	10.2		34.8	1	33.1		50.7
15	22	07.7	14	09.9		36.1	16	33.8		51.5
16	37	10.2	29	09.6		37.4	31	34.6		52.3
17	52	12.7	44	09.3	+2	38.7	46	35.3	+1	53.0
18	67	15.1	59	09.0	+2	40.0	61	36.0	+1	53.8
19	82	17.6	74	08.7		41.3	76	36.7		54.6
20	97	20.1	89	08.4		42.6	91	37.4		55.4
21	112	22.5	104	08.0		43.9	106	38.2		56.2
22	127	25.0	119	07.7		45.2	121	38.9		57.0
23	142	27.4	134	07.4		46.5	136	39.6		57.7
24	157	29.9	149	07.1	+2	47.8	151	40.3	+1	58.5
Dif	—		-3		+13		+7		+8	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 9 ^d 0	PHE { 4 ^h : 55'3 12 ^h : 55'1 20 ^h : 54'9	Principio del crepúsculo		Salida de Luna			Puesta de Luna			
	PMG: 12 ^h 12 ^m 6					PMG: 20 ^h 35 ^m		R°: 47 ^m			R°: 47 ^m		R°: 47 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	176	50.1	-8	61	25.1	+18	07.0	5	33	6	20	7	02	12
1	191	50.3		75	55.2 ¹¹¹		05.5 ¹⁵	34	19	6	58	17	60	4
2	206	50.4		90	25.2 ¹¹⁰		03.8 ¹⁷	35	18		55	27	59	3
3	221	50.5		104	55.3 ¹¹¹		02.0 ¹⁸	35	16		52	36	58	47
4	236	50.6		119	25.5 ¹¹²	+18	00.2 ¹⁸	36	15		49	44	58	39
5	251	50.7	-8	133	55.6 ¹¹¹	+17	58.3 ¹⁹	5	36	6	14	6	46	12
6	266	50.8	-8	148	25.8 ¹¹²	+17	56.2 ²¹	5	37	6	11	6	40	13
7	281	50.9		162	56.1 ¹¹³		54.1 ²¹	37	08		35	19	54	3
8	296	51.1		177	26.3 ¹¹²		51.9 ²²	36	06		31	30	53	2
9	311	51.2		191	56.7 ¹¹⁴		49.7 ²²	36	03	6	03	27	40	52
10	326	51.3	-8	206	27.0 ¹¹³		47.3 ²⁴	33	5	59	21	13	56	50
11	341	51.4	-7	220	57.4 ¹¹⁴	+17	44.9 ²⁴	5	29	5	54	6	15	14
12	356	51.5	-7	235	27.8 ¹¹⁴	+17	42.3 ²⁶	5	24	5	48	6	09	14
13	11	51.6		249	58.3 ¹¹⁵		39.7 ²⁶	17	42		6	03	37	46
14	26	51.7		264	28.8 ¹¹⁵		37.0 ²⁷	20	5	09	35	5	57	14
15	41	51.9		278	59.3 ¹¹⁵		34.2 ²⁸	30	4	57	26	50	15	07
16	56	52.0		293	29.9 ¹¹⁶		31.3 ²⁹	35	49	20	46	16	43	1
17	71	52.1	-7	308	00.5 ¹¹⁶	+17	28.4 ²⁹	40	4	40	5	13	5	41
18	86	52.2	-7	322	31.2 ¹¹⁷	+17	25.4 ³⁰	45	4	28	5	05	5	35
19	101	52.3		337	01.9 ¹¹⁷		22.2 ³²	50	14	4	55	28	15	55
20	116	52.4		351	32.6 ¹¹⁷		19.0 ³²	52	4	06	50	25	16	02
21	131	52.6		6	03.4 ¹¹⁸		15.8 ³²	54	3	58	44	22	10	37
22	146	52.7		20	34.2 ¹¹⁸		12.4 ³⁴	56	49	38	18	19	36	**
23	161	52.8		35	05.0 ¹¹⁸		09.0 ³⁴	58	38	32	14	29	35	**
24	176	52.9	-7	49	35.9 ¹¹⁹	+17	05.4 ³⁶	60	3	25	4	24	5	09

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 27 ^m 8		Mag: -3.9 PMG: 14 ^h 04 ^m		Mag: +1.3 PMG: 13 ^h 53 ^m		Mag: -2.5 PMG: 22 ^h 37 ^m		Mag: +0.5 PMG: 5 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	157	29.9	149	07.1	151	40.3	19	46.2	274	18.5
1	172	32.4	164	06.8	166	41.0	34	48.9	289	20.9
2	187	34.8	179	06.5	181	41.8	49	51.7	304	23.3
3	202	37.3	194	06.2	196	42.5	64	54.4	319	25.7
4	217	39.8	209	05.9	211	43.2	79	57.2	334	28.1
5	232	42.2	224	05.5	226	43.9	94	59.9	349	30.5
6	247	44.7	239	05.2	241	44.6	110	02.6	4	32.9
7	262	47.2	254	04.9	256	45.4	125	05.4	19	35.3
8	277	49.6	269	04.6	271	46.1	140	08.1	34	37.7
9	292	52.1	284	04.3	286	46.8	155	10.9	49	40.1
10	307	54.5	299	04.0	301	47.5	170	13.6	64	42.5
11	322	57.0	314	03.7	316	48.2	185	16.4	79	44.9
12	337	59.5	329	03.3	331	49.0	200	19.1	94	47.3
13	353	01.9	344	03.0	346	49.7	215	21.8	109	49.7
14	8	04.4	359	02.7	1	50.4	230	24.6	124	52.1
15	23	06.9	14	02.4	16	51.1	245	27.3	139	54.5
16	38	09.3	29	02.1	31	51.8	260	30.1	154	56.9
17	53	11.8	44	01.8	46	52.6	275	32.8	169	59.3
18	68	14.3	59	01.5	61	53.3	290	35.5	185	01.7
19	83	16.7	74	01.1	76	54.0	305	38.3	200	04.1
20	98	19.2	89	00.8	91	54.7	320	41.0	215	06.5
21	113	21.7	104	00.5	106	55.4	335	43.8	230	08.9
22	128	24.1	119	00.2	121	56.2	350	46.5	245	11.3
23	143	26.6	133	59.9	136	56.9	5	49.2	260	13.7
24	158	29.0	148	59.6	151	57.6	20	52.0	275	16.1
Dif	—		-3	+13	+7	+8	+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: 10 ^d 0 PHE		SD: 14 ^h 9									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	52.9	-7	47.4	49	35.9	+17 05.4	60 N	17 26	18 08	18 57	13 07 66	4 56 30	
1	191	53.0		46.5	64	06.8 ¹¹⁹	+17 01.8	58	30	10	55	17 64	45 32	
2	206	53.2		45.5	78	37.8 ¹²⁰	+16 58.2	56	33	11	54	26 63	36 33	
3	221	53.3		44.6	93	08.8 ¹²⁰		54	36	12	53	34 62	28 34	
4	236	53.4		43.6	107	39.8 ¹²⁰		52	39	13	52	42 60	20 35	
5	251	53.5	-7	42.7	122	10.9 ¹²¹	+16 46.7	50	17 41	18 14	18 51	13 48 59	4 14 36	
6	266	53.6	-7	41.7	136	42.0 ¹²¹	+16 42.7	45	17 47	18 16	18 50	14 02 57	3 59 38	
7	281	53.7		40.8	151	13.2 ¹²²		40	51	19	50	13 55	47 40	
8	296	53.9		39.8	165	44.4 ¹²²		35	55	21	50	23 54	37 41	
9	311	54.0		38.9	180	15.6 ¹²²		30	17 59	23	51	32 52	28 42	
10	326	54.1		37.9	194	46.9 ¹²³		20	18 05	27	53	46 50	3 13 44	
11	341	54.2	-7	37.0	209	18.2 ¹²³	+16 21.6	10 N	18 10	18 32	18 56	14 59 48	2 59 46	
12	356	54.4	-7	36.0	223	49.6 ¹²⁴	+16 17.2	0	18 16	18 37	19 01	15 11 46	2 47 47	
13	11	54.5		35.1	238	20.9 ¹²³		10 S	21	42	07	23 45	34 49	
14	26	54.6		34.1	252	52.4 ¹²⁵		20	27	49	15	36 42	20 51	
15	41	54.7		33.2	267	23.8 ¹²⁴	+16 03.4	30	34	18 58	26	51 40	2 05 52	
16	56	54.8		32.2	281	55.4 ¹²⁶	+15 58.7	35	38	19 03	34	15 59 39	1 55 54	
17	71	55.0	-7	31.3	296	26.9 ¹²⁵	+15 53.9	40	18 42	19 10	19 43	16 09 37	1 45 55	
18	86	55.1	-7	30.3	310	58.5 ¹²⁶	+15 49.0	45	18 47	19 17	19 54	16 20 36	1 33 56	
19	101	55.2		29.4	325	30.1 ¹²⁶		50	54	27	20 08	34 33	18 58	
20	116	55.3		28.4	340	01.8 ¹²⁷		52	18 57	32	15	40 32	11 59	
21	131	55.4		27.5	354	33.5 ¹²⁷		54	19 00	37	22	47 31	1 03 60	
22	146	55.6		26.5	9	05.2 ¹²⁷		56	03	42	31	16 55 30	0 54 62	
23	161	55.7		25.6	23	37.0 ¹²⁸		58	07	49	41	17 04 28	45 62	
24	176	55.8	-7	24.6	38	08.8 ¹²⁸	+15 18.3	60 S	19 12	19 56	20 53	17 14 26	0 33 65	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 23 ^m 9		Mag: -3.9 PMG: 14 ^h 04 ^m		Mag: +1.3 PMG: 13 ^h 51 ^m		Mag: -2.5 PMG: 22 ^h 32 ^m		Mag: +0.4 PMG: 5 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	158	29.0	148	59.6	+3	19.1	151	57.6	+2	17.3
1	173	31.5	163	59.3		20.4	166	58.3		18.1
2	188	34.0	178	59.0		21.7	181	59.0		18.9
3	203	36.4	193	58.6		23.0	196	59.8		19.7
4	218	38.9	208	58.3		24.3	212	00.5		20.4
5	233	41.4	223	58.0	+3	25.6	227	01.2	+2	21.2
6	248	43.8	238	57.7	+3	26.9	242	01.9	+2	22.0
7	263	46.3	253	57.4		28.2	257	02.6		22.8
8	278	48.8	268	57.1		29.5	272	03.4		23.6
9	293	51.2	283	56.8		30.8	287	04.1		24.3
10	308	53.7	298	56.4		32.1	302	04.8		25.1
11	323	56.2	313	56.1	+3	33.4	317	05.5	+2	25.9
12	338	58.6	328	55.8	+3	34.7	332	06.2	+2	26.7
13	354	01.1	343	55.5		36.0	347	07.0		27.5
14	9	03.5	358	55.2		37.3	2	07.7		28.2
15	24	06.0	13	54.9		38.6	17	08.4		29.0
16	39	08.5	28	54.6		39.8	32	09.1		29.8
17	54	10.9	43	54.2	+3	41.1	47	09.8	+2	30.6
18	69	13.4	58	53.9	+3	42.4	62	10.6	+2	31.4
19	84	15.9	73	53.6		43.7	77	11.3		32.1
20	99	18.3	88	53.3		45.0	92	12.0		32.9
21	114	20.8	103	53.0		46.3	107	12.7		33.7
22	129	23.3	118	52.7		47.6	122	13.4		34.5
23	144	25.7	133	52.4		48.9	137	14.2		35.3
24	159	28.2	148	52.0	+3	50.2	152	14.9	+2	36.0
Dif	—		-3		+13		+7		+8	
								+27		+1
									+24	
										0

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 12 ^m 2			Edad: 11 ^d 0 PHE { SD: 14'8 PMG: 22 ^h 08 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	55.8	-7	24.6	38	08.8	+15	18.3	5	27	6	15	6	57	14	13
1	191	55.9			52	40.7 ¹²⁹		13.0	28	14	53		21	67	5	26
2	206	56.1			67	12.6 ¹²⁹		07.6	30	13	50		29	64	17	25
3	221	56.2			81	44.5 ¹²⁹	+15	02.1	31	12	47		36	62	09	27
4	236	56.3			96	16.5 ¹³⁰	+14	56.5	32	11	44		42	61	5	02
5	251	56.4	-7	19.9	110	48.5 ¹³⁰	+14	50.9	5	32	6	10	6	42	4	55
6	266	56.6	-7	18.9	125	20.5 ¹³⁰	+14	45.2	5	34	6	07	14	47	4	31
7	281	56.7			139	52.6 ¹³¹		39.5	5	34	6	07	14	59	4	37
8	296	56.8			154	24.7 ¹³¹		33.7	34	05	33		15	08	27	36
9	311	56.9			168	56.9 ¹³²		27.8	34	03	29		17	53	18	37
10	326	57.1			183	29.1 ¹³²		21.9	34	01	25		24	52	4	10
11	341	57.2	-7	14.1	198	01.3 ¹³²	+14	15.9	32	5	57	19	36	50	3	57
12	356	57.3	-7	13.2	212	33.6 ¹³³	+14	09.8	32	5	57	19	36	50	3	57
13	11	57.4			227	05.9 ¹³³	+14	03.7	5	28	5	53	15	47	3	45
14	26	57.6			241	38.2 ¹³³	+13	57.6	5	24	5	48	15	57	3	45
15	41	57.7			256	10.6 ¹³⁴		51.3	5	18	42	6	04	16	08	42
16	56	57.8			270	43.0 ¹³⁴		45.0	10	18	42	6	04	16	08	42
17	71	58.0	-7	08.4	285	15.5 ¹³⁵	+13	38.7	5	10	36	5	58	18	41	3
18	86	58.1	-7	07.5	299	48.0 ¹³⁵	+13	32.3	4	58	27	51	31	37	2	57
19	101	58.2			314	20.5 ¹³⁵		25.8	51	22	47		38	36	49	53
20	116	58.3			328	53.1 ¹³⁶		19.3	4	42	5	15	16	46	2	40
21	131	58.5			343	25.7 ¹³⁶		12.7	4	32	5	08	16	56	2	29
22	146	58.6			357	58.3 ¹³⁶	+13	06.1	18	4	58	32	17	07	16	60
23	161	58.7			12	31.0 ¹³⁷	+12	59.4	11	54	29		12	28	10	61
24	176	58.8	-7	01.7	27	03.7 ¹³⁷	+12	52.6	4	03	49	26	18	27	2	03
									66	54	49	26	18	27	2	03
									66	54	49	26	18	27	2	03
									67	55	43	22	25	25	1	56
									67	55	43	22	25	25	1	56
									68	58	44	37	32	23	47	66
									68	58	44	37	32	23	47	66

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1		Edad: 12 ^d 0 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /1 20 ^h : 54 ^m /1 R°: 43 ^m																
	PMG: 12 ^h 12 ^m 0		SD: 14 ^h 8 PMG: 22 ^h 53 ^m																
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m						
0	176	58.8	-7 01.7		27 03.7	+12 52.6	60 N	17 31	18 13	19 01	15 21 70		5 50 19						
1	191	59.0	-7 00.8		41 36.4 ¹³⁷	45.8 ⁶⁸	58	35	14	19 00	28 67		42 22						
2	206	59.1	-6 59.8		56 09.2 ¹³⁸	39.0 ⁶⁸	56	38	15	18 58	33 66		36 24						
3	221	59.2		58.9	70 42.0 ¹³⁸	32.1 ⁶⁹	54	40	16	57	38 64		31 25						
4	236	59.4		57.9	85 14.8 ¹³⁸	25.1 ⁷⁰	52	43	16	56	43 62		26 26						
5	251	59.5	-6 57.0		99 47.7 ¹³⁹	+12 18.1 ⁷⁰	50	17 45	18 17	18 55	15 47 61		5 21 28						
6	266	59.6	-6 56.0		114 20.6 ¹³⁹	+12 11.0 ⁷¹	45	17 50	18 19	18 53	15 56 58		5 11 30						
7	281	59.8		55.0	128 53.5 ¹³⁹	+12 03.9 ⁷¹	40	54	21	52	16 04 55		5 03 32						
8	296	59.9		54.1	143 26.5 ¹⁴⁰	+11 56.8 ⁷¹	35	17 57	22	52	10 54		4 55 35						
9	312	00.0		53.1	157 59.5 ¹⁴⁰	49.6 ⁷²	30	18 00	24	52	16 52		49 36						
10	327	00.1		52.2	172 32.5 ¹⁴⁰	42.3 ⁷³	20	06	28	53	26 48		38 39						
11	342	00.3	-6 51.2		187 05.6 ¹⁴¹	+11 35.0 ⁷³	10 N	18 11	18 32	18 56	16 34 46		4 28 42						
12	357	00.4	-6 50.3		201 38.6 ¹⁴⁰	+11 27.6 ⁷⁴	0	18 15	18 36	19 00	16 42 44		4 19 44						
13	12	00.5		49.3	216 11.8 ¹⁴²	20.2 ⁷⁴	10 S	20	41	06	50 41		10 47						
14	27	00.7		48.3	230 44.9 ¹⁴¹	12.8 ⁷⁴	20	25	48	14	16 59 38		4 00 49						
15	42	00.8		47.4	245 18.1 ¹⁴²	+11 05.3 ⁷⁵	30	31	18 56	24	17 08 36		3 49 52						
16	57	00.9		46.4	259 51.3 ¹⁴²	+10 57.7 ⁷⁶	35	35	19 01	31	14 34		42 54						
17	72	01.1	-6 45.5		274 24.6 ¹⁴³	+10 50.1 ⁷⁶	40	18 39	19 07	19 39	17 20 32		3 35 56						
18	87	01.2	-6 44.5		288 57.8 ¹⁴²	+10 42.5 ⁷⁶	45	18 44	19 14	19 50	17 28 29		3 26 58						
19	102	01.3		43.5	303 31.1 ¹⁴³	34.8 ⁷⁷	50	50	23	20 03	36 27		16 60						
20	117	01.5		42.6	318 04.5 ¹⁴⁴	27.1 ⁷⁷	52	52	27	09	40 26		11 62						
21	132	01.6		41.6	332 37.8 ¹⁴³	19.4 ⁷⁷	54	55	32	17	45 24		05 64						
22	147	01.7		40.7	347 11.2 ¹⁴⁴	11.6 ⁷⁸	56	18 58	37	25	50 22		3 00 65						
23	162	01.9		39.7	1 44.6 ¹⁴⁴	+10 03.7 ⁷⁹	58	19 02	43	35	17 55 21		2 53 67						
24	177	02.0	-6 38.7		16 18.1 ¹⁴⁵	+9 55.8 ⁷⁹	60 S	19 06	19 50	20 46	18 01 19		2 45 69						
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO									
	PMG: 13 ^h 16 ^m 0		Mag: -3.9 PMG: 14 ^h 05 ^m		Mag: +1.3 PMG: 13 ^h 49 ^m		Mag: -2.5 PMG: 22 ^h 24 ^m			Mag: +0.4 PMG: 5 ^h 30 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'							
0	160	27.3	148	44.5	+4	21.3	152	32.2	+2	54.7	23	03.2	+17	22.8	277	11.7	-19	03.9	
1	175	29.8	163	44.2		22.6	167	32.9		55.5	38	05.9		22.9	292	14.1		03.9	
2	190	32.3	178	43.9		23.9	182	33.6		56.3	53	08.6		23.0	307	16.5		03.9	
3	205	34.7	193	43.5		25.2	197	34.4		57.1	68	11.3		23.0	322	18.9		03.9	
4	220	37.2	208	43.2		26.5	212	35.1		57.9	83	14.1		23.1	337	21.3		03.9	
5	235	39.6	223	42.9	+4	27.8	227	35.8	+2	58.6	98	16.8	+17	23.2	352	23.7	-19	03.9	
6	250	42.1	238	42.6	+4	29.1	242	36.5	+2	59.4	113	19.5	+17	23.3	7	26.1	-19	03.9	
7	265	44.6	253	42.3		30.3	257	37.2	+3	00.2	128	22.2		23.3	22	28.6		03.9	
8	280	47.0	268	42.0		31.6	272	38.0		01.0	143	25.0		23.4	37	31.0		03.9	
9	295	49.5	283	41.7		32.9	287	38.7		01.7	158	27.7		23.5	52	33.4		03.9	
10	310	52.0	298	41.3		34.2	302	39.4		02.5	173	30.4		23.6	67	35.8		03.9	
11	325	54.4	313	41.0	+4	35.5	317	40.1	+3	03.3	188	33.1	+17	23.7	82	38.2	-19	03.9	
12	340	56.9	328	40.7	+4	36.8	332	40.9	+3	04.1	203	35.9	+17	23.7	97	40.6	-19	03.9	
13	355	59.4	343	40.4		38.1	347	41.6		04.9	218	38.6		23.8	112	43.0		03.9	
14	11	01.8	358	40.1		39.4	2	42.3		05.6	233	41.3		23.9	127	45.5		03.9	
15	26	04.3	13	39.8		40.7	17	43.0		06.4	248	44.0		24.0	142	47.9		03.9	
16	41	06.7	28	39.4		42.0	32	43.7		07.2	263	46.8		24.0	157	50.3		03.9	
17	56	09.2	43	39.1	+4	43.3	47	44.5	+3	08.0	278	49.5	+17	24.1	172	52.7	-19	03.9	
18	71	11.7	58	38.8	+4	44.5	62	45.2	+3	08.7	293	52.2	+17	24.2	187	55.1	-19	03.9	
19	86	14.1	73	38.5		45.8	77	45.9		09.5	308	54.9		24.3	202	57.5		03.9	
20	101	16.6	88	38.2		47.1	92	46.6		10.3	323	57.7		24.3	217	59.9		03.9	
21	116	19.1	103	37.9		48.4	107	47.3		11.1	339	00.4		24.4	233	02.4		03.9	
22	131	21.5	118	37.6		49.7	122	48.1		11.8	354	03.1		24.5	248	04.8		03.9	
23	146	24.0	133	37.2		51.0	137	48.8		12.6	9	05.8		24.6	263	07.2		03.9	
24	161	26.5	148	36.9	+4	52.3	152	49.5	+3	13.4	24	08.6	+17	24.6	278	09.6	-19	03.9	
Dif	—		-3		+13		+7		+8			+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 11 ^m 8			Edad: 13 ^d 0 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 Rº: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	02.0	-6 38.7	16	18.1	+9 55.8	60 N	5 21	6 09	6 51	16 31	69	6 09	18	
1	192	02.1		30	51.6 ¹⁴⁵	47.9 ⁷⁹	58	23	08	48	35	68	04	20	
2	207	02.3		45	25.1 ¹⁴⁵	39.9 ⁸⁰	56	25	08	45	39	65	6 00	21	
3	222	02.4		59	58.6 ¹⁴⁵	31.9 ⁸⁰	54	26	07	42	42	64	5 56	23	
4	237	02.5		74	32.1 ¹⁴⁵	23.9 ⁸⁰	52	27	06	40	45	63	52	24	
5	252	02.7	-6 33.9	89	05.7 ¹⁴⁶	+9 15.8 ⁸¹	50	5 28	6 06	6 38	16 48	61	5 49	25	
6	267	02.8	-6 33.0	103	39.3 ¹⁴⁶	+9 07.7 ⁸¹	45	5 30	6 04	6 33	16 54	58	5 41	29	
7	282	02.9		118	12.9 ¹⁴⁶	+8 59.5 ⁸²	40	31	02	29	16 59	56	35	31	
8	297	03.1		132	46.6 ¹⁴⁷	51.3 ⁸²	35	32	6 01	26	17 04	53	30	33	
9	312	03.2		147	20.2 ¹⁴⁶	43.1 ⁸²	30	31	5 59	23	08 51		25	35	
10	327	03.3		161	53.9 ¹⁴⁷	34.8 ⁸³	20	30	56	18	14 49		17	38	
11	342	03.5	-6 28.2	176	27.7 ¹⁴⁸	+8 26.5 ⁸³	10 N	5 27	5 52	6 13	17 20	46	5 10	41	
12	357	03.6	-6 27.2	191	01.4 ¹⁴⁷	+8 18.2 ⁸³	0	5 23	5 48	6 08	17 26	42	5 03	43	
13	12	03.8		205	35.2 ¹⁴⁸	09.8 ⁸⁴	10 S	18	43	6 04	31 40		4 57	45	
14	27	03.9		220	08.9 ¹⁴⁷	+8 01.4 ⁸⁴	20	10	36	5 59	37 37		49	49	
15	42	04.0		234	42.7 ¹⁴⁸	+7 53.0 ⁸⁴	30	5 00	29	53	44 34		41	52	
16	57	04.2		249	16.6 ¹⁴⁹	44.5 ⁸⁵	35	4 53	24	49	48 32		36	54	
17	72	04.3	-6 22.4	263	50.4 ¹⁴⁸	+7 36.1 ⁸⁴	40	4 45	5 18	5 45	17 52	30	4 31	55	
18	87	04.4	-6 21.4	278	24.3 ¹⁴⁹	+7 27.5 ⁸⁶	45	4 35	5 11	5 41	17 57	28	4 24	58	
19	102	04.6		292	58.2 ¹⁴⁹	19.0 ⁸⁵	50	22	5 02	35	18 03	25	16	61	
20	117	04.7		307	32.1 ¹⁴⁹	10.4 ⁸⁶	52	15	4 58	32	06 23		13	62	
21	132	04.9		322	06.0 ¹⁴⁹	+7 01.8 ⁸⁶	54	08	53	30	09 22		09	64	
22	147	05.0		336	40.0 ¹⁵⁰	+6 53.1 ⁸⁷	56	4 00	48	26	12 20		05	65	
23	162	05.1		351	13.9 ¹⁴⁹	44.5 ⁸⁶	58	3 50	42	23	16 18		4 00	67	
24	177	05.3	-6 15.7	5	47.9 ¹⁵⁰	+6 35.8 ⁸⁷	60 S	3 39	4 35	5 19	18 20	16	3 54	70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 12 ^m 1		Mag: -3.9 PMG: 14 ^h 06 ^m			Mag: +1.3 PMG: 13 ^h 48 ^m			Mag: -2.5 PMG: 22 ^h 19 ^m			Mag: +0.4 PMG: 5 ^h 26 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	161	26.5	148 36.9	+4 52.3	152 49.5	+3 13.4	24 08.6	+17 24.6	278 09.6	-19 03.9					
1	176	28.9	163 36.6	53.6	167 50.2	14.2	39 11.3	24.7	293 12.0	03.9					
2	191	31.4	178 36.3	54.9	182 51.0	14.9	54 14.0	24.8	308 14.4	03.9					
3	206	33.9	193 36.0	56.2	197 51.7	15.7	69 16.7	24.9	323 16.9	03.9					
4	221	36.3	208 35.7	57.4	212 52.4	16.5	84 19.5	24.9	338 19.3	03.9					
5	236	38.8	223 35.3	+4 58.7	227 53.1	+3 17.3	99 22.2	+17 25.0	353 21.7	-19 03.9					
6	251	41.2	238 35.0	+5 00.0	242 53.8	+3 18.0	114 24.9	+17 25.1	8 24.1	-19 03.9					
7	266	43.7	253 34.7	+5 01.3	257 54.6	18.8	129 27.6	25.2	23 26.5	03.9					
8	281	46.2	268 34.4	02.6	272 55.3	19.6	144 30.3	25.2	38 28.9	03.9					
9	296	48.6	283 34.1	03.9	287 56.0	20.4	159 33.1	25.3	53 31.4	03.9					
10	311	51.1	298 33.8	05.2	302 56.7	21.1	174 35.8	25.4	68 33.8	03.9					
11	326	53.6	313 33.4	+5 06.5	317 57.5	+3 21.9	189 38.5	+17 25.5	83 36.2	-19 03.9					
12	341	56.0	328 33.1	+5 07.7	332 58.2	+3 22.7	204 41.2	+17 25.5	98 38.6	-19 03.9					
13	356	58.5	343 32.8	09.0	347 58.9	23.5	219 43.9	25.6	113 41.0	03.9					
14	12	01.0	358 32.5	10.3	2 59.6	24.2	234 46.7	25.7	128 43.5	03.9					
15	27	03.4	13 32.2	11.6	18 00.3	25.0	249 49.4	25.8	143 45.9	03.9					
16	42	05.9	28 31.8	12.9	33 01.1	25.8	264 52.1	25.8	158 48.3	03.9					
17	57	08.4	43 31.5	+5 14.2	48 01.8	+3 26.6	279 54.8	+17 25.9	173 50.7	-19 03.9					
18	72	10.8	58 31.2	+5 15.5	63 02.5	+3 27.3	294 57.5	+17 26.0	188 53.1	-19 03.9					
19	87	13.3	73 30.9	16.7	78 03.2	28.1	310 00.3	26.1	203 55.5	03.9					
20	102	15.7	88 30.6	18.0	93 04.0	28.9	325 03.0	26.1	218 58.0	03.9					
21	117	18.2	103 30.3	19.3	108 04.7	29.7	340 05.7	26.2	234 00.4	03.9					
22	132	20.7	118 29.9	20.6	123 05.4	30.4	355 08.4	26.3	249 02.8	03.9					
23	147	23.1	133 29.6	21.9	138 06.1	31.2	10 11.1	26.4	264 05.2	03.9					
24	162	25.6	148 29.3	+5 23.2	153 06.8	+3 32.0	25 13.8	+17 26.4	279 07.6	-19 03.9					
Dif	—		-3	+13	+7	+8	+27	+1	+24	0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 11 ^m 5			Edad: 14 ^d 0 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ 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	177	05.3	-6 15.7	5	47.9	+6 35.8	88	60 N	17 36	18 18	19 06	17 40 71		6 27 16	
1	192	05.4		20	21.9 ¹⁵⁰		88	58	39	19	04	43 68		24 18	
2	207	05.5		34	55.9 ¹⁵⁰		87	56	42	19	02	44 67		21 20	
3	222	05.7		49	29.9 ¹⁵⁰		88	54	44	19	00	46 65		19 22	
4	237	05.8		64	04.0 ¹⁵¹	+6 00.7	88	52	46	20	18 59	48 63		16 23	
5	252	06.0	-6 10.8	78	38.0 ¹⁵⁰	+5 51.9	88	50	17 48	18 20	18 58	17 49 62		6 14 24	
6	267	06.1	-6 09.9	93	12.1 ¹⁵¹	+5 43.1	88	45	17 52	18 22	18 56	17 52 59		6 10 27	
7	282	06.2		107	46.2 ¹⁵¹		89	40	56	23	54	55 56		06 30	
8	297	06.4		122	20.3 ¹⁵¹		89	35	17 59	24	53	57 54		03 32	
9	312	06.5		136	54.4 ¹⁵¹		89	30	18 02	25	53	17 59 52		6 00 34	
10	327	06.7		151	28.6 ¹⁵²	+5 07.4	90	20	06	28	54	18 03 48		5 55 37	
11	342	06.8	-6 05.1	166	02.7 ¹⁵¹	+4 58.5	89	10 N	18 11	18 32	18 56	18 06 45		5 51 39	
12	357	06.9	-6 04.1	180	36.9 ¹⁵²	+4 49.5	90	0	18 15	18 36	19 00	18 08 43		5 46 43	
13	12	07.1		195	11.0 ¹⁵¹		90	10 S	19	40	05	11 40		42 45	
14	27	07.2		209	45.2 ¹⁵²		90	20	24	46	12	14 37		38 48	
15	42	07.4		224	19.4 ¹⁵²		90	30	29	53	22	18 33		33 51	
16	57	07.5	-6 00.2	238	53.6 ¹⁵²		91	35	32	18 58	28	20 31		30 53	
17	72	07.7	-5 59.3	253	27.8 ¹⁵²	+4 04.3	91	40	18 36	19 03	19 36	18 22 29		5 26 56	
18	87	07.8	-5 58.3	268	02.0 ¹⁵²	+3 55.2	91	45	18 40	19 10	19 46	18 25 26		5 22 58	
19	102	07.9		282	36.2 ¹⁵²		91	50	45	18	19 58	28 24		17 62	
20	117	08.1		297	10.5 ¹⁵³		91	52	48	22	20 04	29 23		15 63	
21	132	08.2		311	44.7 ¹⁵²		92	54	50	27	11	31 21		13 64	
22	147	08.4		326	18.9 ¹⁵²		92	56	53	32	19	32 20		10 66	
23	162	08.5		340	53.2 ¹⁵³		91	58	18 56	37	28	34 18		07 68	
24	177	08.6	-5 52.5	355	27.5 ¹⁵³	+3 00.4	92	60 S	19 00	19 43	20 38	18 36 16		5 04 70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 08 ^m 1		Mag: -3.9 PMG: 14 ^h 06 ^m			Mag: +1.3 PMG: 13 ^h 47 ^m			Mag: -2.5 PMG: 22 ^h 15 ^m			Mag: +0.4 PMG: 5 ^h 23 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	162	25.6	148	29.3	+5 23.2	153 06.8	+3 32.0	25	13.8	+17 26.4	279	07.6	-19 03.9		
1	177	28.1	163	29.0	24.5	168 07.6	32.8	40	16.6	26.5	294	10.1	03.9		
2	192	30.5	178	28.7	25.7	183 08.3	33.5	55	19.3	26.6	309	12.5	03.9		
3	207	33.0	193	28.4	27.0	198 09.0	34.3	70	22.0	26.7	324	14.9	03.9		
4	222	35.5	208	28.0	28.3	213 09.7	35.1	85	24.7	26.7	339	17.3	03.9		
5	237	37.9	223	27.7	+5 29.6	228 10.5	+3 35.9	100	27.4	+17 26.8	354	19.8	-19 03.9		
6	252	40.4	238	27.4	+5 30.9	243 11.2	+3 36.6	115	30.1	+17 26.9	9	22.2	-19 03.9		
7	267	42.8	253	27.1	32.2	258 11.9	37.4	130	32.9	26.9	24	24.6	03.9		
8	282	45.3	268	26.8	33.4	273 12.6	38.2	145	35.6	27.0	39	27.0	03.9		
9	297	47.8	283	26.4	34.7	288 13.3	39.0	160	38.3	27.1	54	29.4	03.9		
10	312	50.2	298	26.1	36.0	303 14.1	39.7	175	41.0	27.2	69	31.9	03.9		
11	327	52.7	313	25.8	+5 37.3	318 14.8	+3 40.5	190	43.7	+17 27.2	84	34.3	-19 03.9		
12	342	55.2	328	25.5	+5 38.6	333 15.5	+3 41.3	205	46.4	+17 27.3	99	36.7	-19 03.9		
13	357	57.6	343	25.2	39.8	348 16.2	42.0	220	49.1	27.4	114	39.1	03.9		
14	13	00.1	358	24.8	41.1	3	17.0	235	51.9	27.5	129	41.6	03.9		
15	28	02.6	13	24.5	42.4	18 17.7	43.6	250	54.6	27.5	144	44.0	03.9		
16	43	05.0	28	24.2	43.7	33 18.4	44.4	265	57.3	27.6	159	46.4	03.9		
17	58	07.5	43	23.9	+5 45.0	48 19.1	+3 45.1	281	00.0	+17 27.7	174	48.8	-19 03.9		
18	73	10.0	58	23.6	+5 46.3	63 19.8	+3 45.9	296	02.7	+17 27.7	189	51.2	-19 03.9		
19	88	12.4	73	23.2	47.5	78 20.6	46.7	311	05.4	27.8	204	53.7	03.9		
20	103	14.9	88	22.9	48.8	93 21.3	47.5	326	08.1	27.9	219	56.1	03.9		
21	118	17.3	103	22.6	50.1	108 22.0	48.2	341	10.9	28.0	234	58.5	03.9		
22	133	19.8	118	22.3	51.4	123 22.7	49.0	356	13.6	28.0	250	00.9	03.9		
23	148	22.3	133	22.0	52.7	138 23.5	49.8	11	16.3	28.1	265	03.4	03.9		
24	163	24.7	148	21.6	+5 53.9	153 24.2	+3 50.5	26	19.0	+17 28.2	280	05.8	-19 03.9		
Dif	—		-3		+13	+7		+8		+27		+1		+24	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 11 ^m 3			Edad: 15 ^d 0 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 SD: 14'7 PMG: 0 ^h 19 ^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	177	08.6	-5	52.5	355	27.5	+3	00.4	60 N	5 15	6 03	6 45	18 51	70	6 43	15	
1	192	08.8		51.5	10	01.7 ¹⁵²	+2	51.2	92	58	18	03	42	51	68	42	17
2	207	08.9		50.6	24	36.0 ¹⁵³		42.0	92	56	20	03	40	51	66	41	19
3	222	09.1		49.6	39	10.3 ¹⁵³		32.8	92	54	21	02	38	51	64	40	21
4	237	09.2		48.6	53	44.5 ¹⁵²		23.6	92	52	23	02	36	51	63	39	23
5	252	09.4	-5	47.7	68	18.8 ¹⁵³	+2	14.4	92	50	5 24	6 02	6 34	18 51	61	6 38	24
6	267	09.5	-5	46.7	82	53.1 ¹⁵³	+2	05.1	93	45	5 27	6 01	6 30	18 51	58	6 37	27
7	282	09.7		45.7	97	27.4 ¹⁵³	+1	55.9	92	40	28	5 59	26	51	56	36	29
8	297	09.8		44.7	112	01.7 ¹⁵³		46.6	93	35	29	58	23	51	53	35	31
9	312	09.9		43.8	126	36.0 ¹⁵³		37.3	93	30	29	57	21	51	51	34	33
10	327	10.1		42.8	141	10.3 ¹⁵³		28.1	92	20	29	54	16	51	48	32	37
11	342	10.2	-5	41.8	155	44.6 ¹⁵³	+1	18.8	93	10 N	5 27	5 51	6 12	18 51	45	6 30	40
12	357	10.4	-5	40.9	170	18.9 ¹⁵³	+1	09.5	93	0	5 23	5 47	6 08	18 51	42	6 29	42
13	12	10.5		39.9	184	53.1 ¹⁵²	+1	00.2	93	10 S	18	43	6 04	51	40	27	46
14	27	10.7		38.9	199	27.4 ¹⁵³	+0	50.9	93	20	11	37	5 59	51	37	26	48
15	42	10.8		38.0	214	01.7 ¹⁵³		41.6	93	30	5 02	30	54	51	34	24	52
16	57	11.0		37.0	228	36.0 ¹⁵³		32.3	93	35	4 55	25	51	51	32	23	54
17	72	11.1	-5	36.0	243	10.3 ¹⁵³	+0	23.0	93	40	4 47	5 20	5 47	18 51	30	6 22	56
18	87	11.3	-5	35.1	257	44.6 ¹⁵³	+0	13.7	93	45	4 38	5 13	5 43	18 51	27	6 20	59
19	102	11.4		34.1	272	18.9 ¹⁵³	+0	04.3	94	50	25	05	38	52	24	19	61
20	117	11.5		33.1	286	53.1 ¹⁵²	-0	05.0	93	52	19	5 01	36	52	22	18	63
21	132	11.7		32.2	301	27.4 ¹⁵³		14.3	93	54	13	4 57	34	52	21	17	65
22	147	11.8		31.2	316	01.7 ¹⁵³		23.6	93	56	4 05	52	31	52	19	16	66
23	162	12.0		30.2	330	35.9 ¹⁵²		32.9	93	58	3 56	47	28	52	18	15	68
24	177	12.1	-5	29.2	345	10.2 ¹⁵³	-0	42.2	93	60 S	3 46	4 41	5 24	18 52	16	6 14	70
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 13 ^h 04 ^m 2			Mag: -3.9 PMG: 14 ^h 07 ^m			Mag: +1.3 PMG: 13 ^h 46 ^m			Mag: -2.5 PMG: 22 ^h 11 ^m			Mag: +0.4 PMG: 5 ^h 19 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	163	24.7		148	21.6	+5 53.9	153	24.2	+3 50.5	26	19.0	+17 28.2	280	05.8	-19 03.9		
1	178	27.2		163	21.3	55.2	168	24.9	51.3	41	21.7	28.2	295	08.2		03.9	
2	193	29.7		178	21.0	56.5	183	25.6	52.1	56	24.4	28.3	310	10.6		03.9	
3	208	32.1		193	20.7	57.8	198	26.4	52.9	71	27.1	28.4	325	13.1		03.9	
4	223	34.6		208	20.4	+5 59.0	213	27.1	53.6	86	29.8	28.5	340	15.5		03.9	
5	238	37.1		223	20.0	+6 00.3	228	27.8	+3 54.4	101	32.5	+17 28.5	355	17.9	-19	03.9	
6	253	39.5		238	19.7	+6 01.6	243	28.5	+3 55.2	116	35.3	+17 28.6	10	20.3	-19	03.9	
7	268	42.0		253	19.4	02.9	258	29.2	55.9	131	38.0	28.7	25	22.8		03.9	
8	283	44.4		268	19.1	04.2	273	30.0	56.7	146	40.7	28.7	40	25.2		03.9	
9	298	46.9		283	18.8	05.4	288	30.7	57.5	161	43.4	28.8	55	27.6		03.9	
10	313	49.4		298	18.4	06.7	303	31.4	58.3	176	46.1	28.9	70	30.1		03.9	
11	328	51.8		313	18.1	+6 08.0	318	32.1	+3 59.0	191	48.8	+17 29.0	85	32.5	-19	03.9	
12	343	54.3		328	17.8	+6 09.3	333	32.9	+3 59.8	206	51.5	+17 29.0	100	34.9	-19	03.9	
13	358	56.8		343	17.5	10.5	348	33.6	+4 00.6	221	54.2	29.1	115	37.3		03.9	
14	13	59.2		358	17.2	11.8	3	34.3	01.3	236	56.9	29.2	130	39.8		03.9	
15	29	01.7		13	16.8	13.1	18	35.0	02.1	251	59.6	29.2	145	42.2		03.9	
16	44	04.2		28	16.5	14.4	33	35.7	02.9	267	02.3	29.3	160	44.6		03.9	
17	59	06.6		43	16.2	+6 15.6	48	36.5	+4 03.6	282	05.1	+17 29.4	175	47.0	-19	03.9	
18	74	09.1		58	15.9	+6 16.9	63	37.2	+4 04.4	297	07.8	+17 29.5	190	49.5	-19	03.9	
19	89	11.6		73	15.5	18.2	78	37.9	05.2	312	10.5	29.5	205	51.9		03.9	
20	104	14.0		88	15.2	19.5	93	38.6	06.0	327	13.2	29.6	220	54.3		03.9	
21	119	16.5		103	14.9	20.7	108	39.4	06.7	342	15.9	29.7	235	56.8		03.9	
22	134	18.9		118	14.6	22.0	123	40.1	07.5	357	18.6	29.7	250	59.2		03.9	
23	149	21.4		133	14.3	23.3	138	40.8	08.3	12	21.3	29.8	266	01.6		03.9	
24	164	23.9		148	13.9	+6 24.6	153	41.5	+4 09.0	27	24.0	+17 29.9	281	04.0	-19	03.9	
Dif	—			-3 +13			+7 +8			+27 +1			+24				

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 16 ^d 0 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2											
	PMG: 12 ^h 11 ^m 1			SD: 14 ^h 7 PMG: 1 ^h 01 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	12.1	-5 29.2	345	10.2	-0 42.2		60 N	17 41	18 23	19 11	20 01 71	6 58 16		
1	192	12.3	28.3	359	44.4 ¹⁵²	-0 51.6 ⁹⁴		58	44	23	09	19 59 68	6 59 18		
2	207	12.4	27.3	14	18.6 ¹⁵²	-1 00.9 ⁹³		56	46	23	06	57 67	7 00 20		
3	222	12.6	26.3	28	52.9 ¹⁵³	10.2 ⁹³		54	48	23	04	55 65	01 21		
4	237	12.7	25.4	43	27.1 ¹⁵²	19.5 ⁹³		52	50	23	03	54 63	02 23		
5	252	12.9	-5 24.4	58	01.3 ¹⁵²	-1 28.8 ⁹³		50	17 51	18 24	19 01	19 52 62	7 02 25		
6	267	13.0	-5 23.4	72	35.5 ¹⁵²	-1 38.1 ⁹³		45	17 55	18 24	18 58	19 49 59	7 04 27		
7	282	13.2	22.4	87	09.7 ¹⁵²	47.4 ⁹³		40	17 58	25	56	47 56	05 30		
8	297	13.3	21.5	101	43.9 ¹⁵²	-1 56.7 ⁹³		35	18 01	26	55	44 55	06 32		
9	312	13.5	20.5	116	18.0 ¹⁵¹	-2 06.0 ⁹³		30	03	27	55	42 53	07 34		
10	327	13.6	19.5	130	52.2 ¹⁵²	15.2 ⁹²		20	07	29	55	39 49	09 37		
11	342	13.8	-5 18.6	145	26.3 ¹⁵¹	-2 24.5 ⁹³		10 N	18 11	18 32	18 56	19 36 46	7 10 40		
12	357	13.9	-5 17.6	160	00.4 ¹⁵¹	-2 33.8 ⁹²		0	18 14	18 35	18 59	19 33 44	7 11 43		
13	12	14.1	16.6	174	34.6 ¹⁵²	43.0 ⁹³		10 S	18	39	19 04	31 40	13 45		
14	27	14.2	15.6	189	08.7 ¹⁵¹	-2 52.3 ⁹³		20	22	44	10	28 38	14 49		
15	42	14.4	14.7	203	42.7 ¹⁵⁰	-3 01.5 ⁹²		30	27	51	19	25 34	16 52		
16	57	14.5	13.7	218	16.8 ¹⁵¹	10.7 ⁹²		35	30	18 55	25	23 32	17 53		
17	72	14.7	-5 12.7	232	50.9 ¹⁵¹	-3 20.0 ⁹³		40	18 33	19 00	19 33	19 21 30	7 18 56		
18	87	14.8	-5 11.8	247	24.9 ¹⁵⁰	-3 29.2 ⁹²		45	18 37	19 06	19 42	19 18 28	7 19 58		
19	102	15.0	10.8	261	58.9 ¹⁵⁰	38.4 ⁹²		50	41	14	53	16 25	20 62		
20	117	15.1	09.8	276	32.9 ¹⁵⁰	47.5 ⁹¹		52	43	18	19 59	14 24	21 63		
21	132	15.3	08.8	291	06.9 ¹⁵⁰	-3 56.7 ⁹²		54	45	22	20 06	13 22	22 64		
22	147	15.4	07.9	305	40.9 ¹⁵⁰	-4 05.8 ⁹¹		56	48	26	13	11 21	22 67		
23	162	15.6	06.9	320	14.9 ¹⁵⁰	15.0 ⁹²		58	51	31	21	10 18	23 69		
24	177	15.7	-5 05.9	334	48.8 ¹⁴⁹	-4 24.1 ⁹¹		60 S	18 54	19 37	20 31	19 08 16	7 24 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 00 ^m 3		Mag: -3.9 PMG: 14 ^h 07 ^m		Mag: +1.3 PMG: 13 ^h 45 ^m		Mag: -2.5 PMG: 22 ^h 06 ^m		Mag: +0.4 PMG: 5 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	164	23.9	148	13.9	153	41.5	27	24.0	281	04.0
1	179	26.3	163	13.6	168	42.3	42	26.7	296	06.5
2	194	28.8	178	13.3	183	43.0	57	29.4	311	08.9
3	209	31.3	193	13.0	198	43.7	72	32.1	326	11.3
4	224	33.7	208	12.6	213	44.4	87	34.8	341	13.8
5	239	36.2	223	12.3	228	45.1	102	37.5	356	16.2
6	254	38.7	238	12.0	243	45.9	117	40.2	11	18.6
7	269	41.1	253	11.7	258	46.6	132	42.9	26	21.1
8	284	43.6	268	11.3	273	47.3	147	45.6	41	23.5
9	299	46.0	283	11.0	288	48.0	162	48.3	56	25.9
10	314	48.5	298	10.7	303	48.8	177	51.0	71	28.3
11	329	51.0	313	10.4	318	49.5	192	53.8	86	30.8
12	344	53.4	328	10.1	333	50.2	207	56.5	101	33.2
13	359	55.9	343	9.7	348	50.9	222	59.2	116	35.6
14	14	58.4	358	9.4	3	51.6	238	01.9	131	38.1
15	30	00.8	13	09.1	18	52.4	253	04.6	146	40.5
16	45	03.3	28	08.8	33	53.1	268	07.3	161	42.9
17	60	05.8	43	08.4	48	53.8	283	10.0	176	45.4
18	75	08.2	58	08.1	63	54.5	298	12.7	191	47.8
19	90	10.7	73	07.8	78	55.3	313	15.4	206	50.2
20	105	13.2	88	07.5	93	56.0	328	18.1	221	52.7
21	120	15.6	103	07.1	108	56.7	343	20.8	236	55.1
22	135	18.1	118	06.8	123	57.4	358	23.5	251	57.5
23	150	20.5	133	06.5	138	58.2	373	26.2	267	00.0
24	165	23.0	148	06.2	153	58.9	388	28.9	282	02.4
Dif	—		-3	+13	+7	+8	+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: 17 ^d 0	PHE { 4 ^h : 54 ^m /3 12 ^h : 54 ^m /4 20 ^h : 54 ^m /5	Principio del crepúsculo		Salida de Luna			Puesta de Luna				
	PMG: 12 ^h 10 ^m 8					SD: 14 ^h 8		R°: 43 ^m			R°: 43 ^m		R°: 43 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m		h	m	m
0	177	15.7	-5 05.9	334	48.8	-4 24.1	91	60 N	5 09	5 58	6 39	21 12	71	7 14	18
1	192	15.9	04.9	349	22.7 ¹⁴⁹	33.2	91	58	12	58	37	07 69		17 20	
2	207	16.0	04.0	3	56.6 ¹⁴⁹	42.3	91	56	15	58	35	04 67		20 21	
3	222	16.2	03.0	18	30.5 ¹⁴⁹	-4 51.4	91	54	17	58	33	21 00	65	22 24	
4	237	16.3	02.0	33	04.3 ¹⁴⁸	-5 00.4	90	52	18	57	31	20 57	64	25 24	
5	252	16.5	-5 01.0	47	38.1 ¹⁴⁸	-5 09.5	91	50	5 20	5 57	6 30	20 54	63	7 27	26
6	267	16.6	-5 00.1	62	11.9 ¹⁴⁸	-5 18.5	90	45	5 23	5 57	6 26	20 48	59	7 31	29
7	282	16.8	-4 59.1	76	45.7 ¹⁴⁸	27.5	90	40	25	56	23	43 57		35 31	
8	297	16.9	58.1	91	19.5 ¹⁴⁸	36.5	90	35	26	56	21	39 54		38 33	
9	312	17.1	57.2	105	53.2 ¹⁴⁷	45.4	89	30	27	55	19	35 53		41 35	
10	327	17.2	56.2	120	26.9 ¹⁴⁷	-5 54.4	90	20	27	53	15	28 50		46 38	
11	342	17.4	-4 55.2	135	00.6 ¹⁴⁷	-6 03.3	89	10 N	5 26	5 50	6 11	20 22	47	7 50	41
12	357	17.5	-4 54.2	149	34.2 ¹⁴⁶	-6 12.2	89	0	5 23	5 47	6 08	20 17	44	7 54	44
13	12	17.7	53.3	164	07.9 ¹⁴⁷	21.0	88	10 S	18	43	04	11 42		7 58	47
14	27	17.9	52.3	178	41.5 ¹⁴⁶	29.9	89	20	12	38	6 00	20 06	39	8 03	49
15	42	18.0	51.3	193	15.1 ¹⁴⁶	38.7	88	30	5 03	31	5 55	19 59	36	08 52	
16	57	18.2	50.3	207	48.6 ¹⁴⁵	47.5	88	35	4 57	27	53	55 35		10 55	
17	72	18.3	-4 49.4	222	22.1 ¹⁴⁵	-6 56.3	88	40	4 50	5 22	5 50	19 51	33	8 14	56
18	87	18.5	-4 48.4	236	55.6 ¹⁴⁵	-7 05.0	87	45	4 41	5 16	5 46	19 46	30	8 17	59
19	102	18.6	47.4	251	29.1 ¹⁴⁵	13.8	88	50	29	09	42	41 27		22 62	
20	117	18.8	46.4	266	02.5 ¹⁴⁴	22.4	86	52	24	05	40	38 26		24 63	
21	132	18.9	45.5	280	35.9 ¹⁴⁴	31.1	87	54	17	5 01	37	35 25		26 65	
22	147	19.1	44.5	295	09.3 ¹⁴⁴	39.7	86	56	10	4 57	35	32 23		29 67	
23	162	19.2	43.5	309	42.6 ¹⁴³	48.4	87	58	4 02	52	32	28 21		32 68	
24	177	19.4	-4 42.5	324	15.9 ¹⁴³	-7 56.9	85	60 S	3 52	4 46	5 29	19 24	19	8 35	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 56 ^m 3		Mag: -3.9 PMG: 14 ^h 08 ^m		Mag: +1.3 PMG: 13 ^h 43 ^m		Mag: -2.5 PMG: 22 ^h 02 ^m		Mag: +0.4 PMG: 5 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	165	23.0	148	06.2	+6 55.1	153 58.9	+4 27.5	28 28.9	+17 31.5	282 02.4
1	180	25.5	163	05.8	56.3	168 59.6	28.2	43 31.6	31.6	297 04.8
2	195	27.9	178	05.5	57.6	184 00.3	29.0	58 34.3	31.7	312 07.3
3	210	30.4	193	05.2	+6 58.9	199 01.0	29.8	73 37.0	31.7	327 09.7
4	225	32.9	208	04.9	+7 00.1	214 01.8	30.5	88 39.7	31.8	342 12.1
5	240	35.3	223	04.5	+7 01.4	229 02.5	+4 31.3	103 42.4	+17 31.9	357 14.6
6	255	37.8	238	04.2	+7 02.7	244 03.2	+4 32.1	118 45.1	+17 31.9	12 17.0
7	270	40.3	253	03.9	03.9	259 03.9	32.8	133 47.8	32.0	27 19.4
8	285	42.7	268	03.5	05.2	274 04.7	33.6	148 50.5	32.1	42 21.9
9	300	45.2	283	03.2	06.5	289 05.4	34.4	163 53.2	32.1	57 24.3
10	315	47.6	298	02.9	07.7	304 06.1	35.1	178 55.9	32.2	72 26.7
11	330	50.1	313	02.6	+7 09.0	319 06.8	+4 35.9	193 58.6	+17 32.3	87 29.2
12	345	52.6	328	02.2	+7 10.3	334 07.6	+4 36.7	209 01.3	+17 32.3	102 31.6
13	0 55.0	343 01.9	11.5	349 08.3	37.4	224 03.9	32.4	224 03.9	32.4	117 34.1
14	15 57.5	358 01.6	12.8	4 09.0	38.2	239 06.6	32.5	239 06.6	32.5	132 36.5
15	31 00.0	13 01.3	14.1	19 09.7	39.0	254 09.3	32.5	254 09.3	32.5	147 38.9
16	46 02.4	28 00.9	15.3	34 10.4	39.7	269 12.0	32.6	269 12.0	32.6	162 41.4
17	61 04.9	43 00.6	+7 16.6	49 11.2	+4 40.5	284 14.7	+17 32.7	284 14.7	+17 32.7	177 43.8
18	76 07.4	58 00.3	+7 17.8	64 11.9	+4 41.3	299 17.4	+17 32.7	299 17.4	+17 32.7	192 46.2
19	91 09.8	72 59.9	19.1	79 12.6	42.0	314 20.1	32.8	314 20.1	32.8	207 48.7
20	106 12.3	87 59.6	20.4	94 13.3	42.8	329 22.8	32.9	329 22.8	32.9	222 51.1
21	121 14.8	102 59.3	21.6	109 14.1	43.5	344 25.5	32.9	344 25.5	32.9	237 53.5
22	136 17.2	117 59.0	22.9	124 14.8	44.3	359 28.2	33.0	359 28.2	33.0	252 56.0
23	151 19.7	132 58.6	24.2	139 15.5	45.1	14 30.9	33.1	14 30.9	33.1	267 58.4
24	166 22.1	147 58.3	+7 25.4	154 16.2	+4 45.8	29 33.6	+17 33.1	29 33.6	+17 33.1	283 00.9
Dif	—		-3 +13		+7 +8		+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: 18 ^d 0 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9					Civil			Hora		Hora	
	PMG: 12 ^h 10 ^m 6			SD: 14 ^h 9 PMG: 2 ^h 27 ^m R°: 45 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177	19.4	-4 42.5	324	15.9	-7 56.9	86	60 N	17 46	18 28	19 16	22 23 71	7 32 20		
1	192	19.6		338	49.2 ¹⁴³	-8 05.5	86	58	48		13	16 69	37 22		
2	207	19.7		353	22.4 ¹⁴²		85	56	50	27	11	11 66	41 25		
3	222	19.9		7	55.6 ¹⁴²	22.5	85	54	52	27	08	05 66	46 25		
4	237	20.0		22	28.8 ¹⁴²	30.9	84	52	53	27	06	22 01 63	49 28		
5	252	20.2	-4 37.6	37	01.9 ¹⁴¹	-8 39.3	84	50	17 55	18 27	19 04	21 57 62	7 53 28		
6	267	20.3	-4 36.7	51	35.0 ¹⁴¹	-8 47.7	84	45	17 58	18 27	19 01	21 47 60	8 00 31		
7	282	20.5		66	08.1 ¹⁴¹	-8 56.1	84	40	18 00	27	18 58	40 57	06 34		
8	297	20.6		80	41.1 ¹⁴⁰	-9 04.4	83	35	02	27	57	33 56	11 36		
9	312	20.8		95	14.1 ¹⁴⁰		83	30	04	28	56	28 54	16 37		
10	327	21.0		109	47.1 ¹⁴⁰	20.9	82	20	08	30	55	18 51	24 41		
11	342	21.1	-4 31.8	124	20.0 ¹³⁹	-9 29.1	82	10 N	18 11	18 32	18 56	21 09 49	8 31 43		
12	357	21.3	-4 30.8	138	52.9 ¹³⁹	-9 37.3	82	0	18 14	18 35	18 59	21 01 47	8 38 45		
13	12	21.4		153	25.7 ¹³⁸		81	10 S	17	38	19 03	20 53 44	45 48		
14	27	21.6		167	58.5 ¹³⁸	-9 53.5	81	20	21	43	08	45 42	8 52 50		
15	42	21.7		182	31.3 ¹³⁸	-10 01.6	81	30	25	49	17	35 39	9 00 53		
16	57	21.9		197	04.0 ¹³⁷		80	35	27	52	22	30 37	05 55		
17	72	22.1	-4 25.9	211	36.7 ¹³⁷	-10 17.6	80	40	18 30	18 57	19 29	20 24 35	9 10 57		
18	87	22.2	-4 24.9	226	09.3 ¹³⁶	-10 25.5	79	45	18 33	19 03	19 38	20 16 34	9 16 60		
19	102	22.4		240	41.9 ¹³⁶		79	50	37	10	49	08 30	24 62		
20	117	22.5		255	14.5 ¹³⁶		78	52	39	13	19 54	04 29	27 64		
21	132	22.7		269	47.0 ¹³⁵		78	54	41	17	20 00	20 00 27	31 65		
22	147	22.9		284	19.5 ¹³⁵	-10 56.8	78	56	43	21	07	19 55 26	36 66		
23	162	23.0		298	51.9 ¹³⁴	-11 04.5	77	58	45	25	15	49 25	40 69		
24	177	23.2	-4 19.1	313	24.3 ¹³⁴	-11 12.2	77	60 S	18 48	19 31	20 24	19 43 23	9 46 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 12 ^h 52 ^m 4		Mag: -3.9 PMG: 14 ^h 08 ^m		Mag: +1.3 PMG: 13 ^h 42 ^m		Mag: -2.5 PMG: 21 ^h 58 ^m		Mag: +0.4 PMG: 5 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	166	22.1	147 58.3	+7 25.4	154 16.2	+4 45.8	29 33.6	+17 33.1	283 00.9	-19 03.9
1	181	24.6	162 58.0	26.7	169 17.0	46.6	44 36.3	33.2	298 03.3	03.8
2	196	27.1	177 57.6	27.9	184 17.7	47.4	59 39.0	33.3	313 05.7	03.8
3	211	29.5	192 57.3	29.2	199 18.4	48.1	74 41.7	33.3	328 08.2	03.8
4	226	32.0	207 57.0	30.5	214 19.1	48.9	89 44.4	33.4	343 10.6	03.8
5	241	34.5	222 56.7	+7 31.7	229 19.8	+4 49.7	104 47.1	+17 33.5	358 13.1	-19 03.8
6	256	36.9	237 56.3	+7 33.0	244 20.6	+4 50.4	119 49.8	+17 33.5	13 15.5	-19 03.8
7	271	39.4	252 56.0	34.2	259 21.3	51.2	134 52.4	33.6	28 17.9	03.8
8	286	41.9	267 55.7	35.5	274 22.0	52.0	149 55.1	33.6	43 20.4	03.8
9	301	44.3	282 55.3	36.8	289 22.7	52.7	164 57.8	33.7	58 22.8	03.8
10	316	46.8	297 55.0	38.0	304 23.5	53.5	180 00.5	33.8	73 25.2	03.8
11	331	49.3	312 54.7	+7 39.3	319 24.2	+4 54.2	195 03.2	+17 33.8	88 27.7	-19 03.8
12	346	51.7	327 54.3	+7 40.5	334 24.9	+4 55.0	210 05.9	+17 33.9	103 30.1	-19 03.8
13	1	54.2	342 54.0	41.8	349 25.6	55.8	225 08.6	34.0	118 32.6	03.8
14	16	56.6	357 53.7	43.0	4 26.4	56.5	240 11.3	34.0	133 35.0	03.8
15	31	59.1	12 53.3	44.3	19 27.1	57.3	255 14.0	34.1	148 37.5	03.8
16	47	01.6	27 53.0	45.6	34 27.8	58.1	270 16.7	34.2	163 39.9	03.8
17	62	04.0	42 52.7	+7 46.8	49 28.5	+4 58.8	285 19.4	+17 34.2	178 42.3	-19 03.8
18	77	06.5	57 52.4	+7 48.1	64 29.2	+4 59.6	300 22.0	+17 34.3	193 44.8	-19 03.8
19	92	09.0	72 52.0	49.3	79 30.0	+5 00.3	315 24.7	34.4	208 47.2	03.8
20	107	11.4	87 51.7	50.6	94 30.7	01.1	330 27.4	34.4	223 49.7	03.8
21	122	13.9	102 51.4	51.8	109 31.4	01.9	345 30.1	34.5	238 52.1	03.8
22	137	16.4	117 51.0	53.1	124 32.1	02.6	0 32.8	34.6	253 54.5	03.8
23	152	18.8	132 50.7	54.3	139 32.9	03.4	15 35.5	34.6	268 57.0	03.8
24	167	21.3	147 50.4	+7 55.6	154 33.6	+5 04.2	30 38.2	+17 34.7	283 59.4	-19 03.8
Dif	—		-3	+13	+7	+8	+27	+1	+24	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 19 ^d 0	PHE { 4 ^h : 55 ^h /0 12 ^h : 55 ^h /2 20 ^h : 55 ^h /3	SD: 15 ^h 0		R°: 47 ^m			R°		R°		
	PMG: 12 ^h 10 ^m 3	PMG: 3 ^h 12 ^m	PMG: 3 ^h 12 ^m			R°: 47 ^m		Hora	R°		Hora	R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	23.2	-4	19.1	313	24.3	-11	12.2	5 03	5 52	6 33	23 34	69	7 52	25
1	192	23.3		18.1	327	56.6 ¹³³	19.8	76	58	07	52	31	25	67	7 59
2	207	23.5		17.1	342	28.9 ¹³³	27.4	76	56	09	53	29	17	66	8 06
3	222	23.6		16.1	357	01.2 ¹³³	34.9	75	54	12	53	28	11	64	11
4	237	23.8		15.2	11	33.4 ¹³²	42.4	75	52	14	53	27	23	04	63
5	252	24.0	-4	14.2	26	05.6 ¹³²	-11	49.8	74	5 16	5 53	6 25	22	59	62
6	267	24.1	-4	13.2	40	37.7 ¹³¹	-11	57.2	74	5 19	5 53	6 23	22	47	59
7	282	24.3		12.2	55	09.7 ¹³⁰	-12	04.6	74	22	53	20	37	58	40
8	297	24.4		11.2	69	41.8 ¹³¹	11.8	72	35	24	53	18	29	56	47
9	312	24.6		10.3	84	13.7 ¹²⁹	19.1	73	30	25	52	16	22	54	8
10	327	24.8		09.3	98	45.7 ¹³⁰	26.2	71	20	25	51	13	22	09	52
11	342	24.9	-4	08.3	113	17.6 ¹²⁹	-12	33.4	72	5 25	5 49	6 10	21	58	50
12	357	25.1	-4	07.3	127	49.4 ¹²⁸	-12	40.5	71	5 22	5 46	6 07	21	48	48
13	12	25.2		06.3	142	21.2 ¹²⁸	47.5	70	10 S	18	43	04	37	47	33
14	27	25.4		05.4	156	52.9 ¹²⁷	-12	54.4	69	20	39	6 01	27	44	42
15	42	25.6		04.4	171	24.6 ¹²⁷	-13	01.3	69	30	5 05	33	5 57	14	43
16	57	25.7		03.4	185	56.2 ¹²⁶	08.2	69	35	4 59	29	54	21	07	41
17	72	25.9	-4	02.4	200	27.8 ¹²⁶	-13	15.0	68	4 52	5 25	5 52	20	59	40
18	87	26.1	-4	01.4	214	59.4 ¹²⁶	-13	21.7	67	4 44	5 19	5 49	20	50	37
19	102	26.2	-4	00.5	229	30.9 ¹²⁵	28.4	67	50	33	12	45	38	36	26
20	117	26.4	-3	59.5	244	02.3 ¹²⁴	35.0	66	52	28	09	43	33	35	31
21	132	26.5		58.5	258	33.7 ¹²⁴	41.6	66	54	22	05	41	27	34	36
22	147	26.7		57.5	273	05.0 ¹²³	48.1	65	56	15	5 01	39	21	32	42
23	162	26.9		56.5	287	36.3 ¹²³	-13	54.6	65	4 07	4 57	37	14	30	49
24	177	27.0	-3	55.6	302	07.5 ¹²²	-14	00.9	63	3 58	4 51	5 34	20	06	28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 48 ^m 5		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: +1.3 PMG: 13 ^h 41 ^m		Mag: -2.5 PMG: 21 ^h 54 ^m		Mag: +0.4 PMG: 5 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	167	21.3	147	50.4	+7	55.6	154	33.6	+5	04.2
1	182	23.7	162	50.0		56.9	169	34.3		04.9
2	197	26.2	177	49.7		58.1	184	35.0		05.7
3	212	28.7	192	49.4	+7	59.4	199	35.7		06.4
4	227	31.1	207	49.0	+8	00.6	214	36.5		07.2
5	242	33.6	222	48.7	+8	01.9	229	37.2	+5	08.0
6	257	36.1	237	48.4	+8	03.1	244	37.9	+5	08.7
7	272	38.5	252	48.0		04.4	259	38.6		09.5
8	287	41.0	267	47.7		05.6	274	39.4		10.2
9	302	43.5	282	47.4		06.9	289	40.1		11.0
10	317	45.9	297	47.0		08.1	304	40.8		11.8
11	332	48.4	312	46.7	+8	09.4	319	41.5	+5	12.5
12	347	50.9	327	46.4	+8	10.6	334	42.3	+5	13.3
13	2	53.3	342	46.0		11.9	349	43.0		14.0
14	17	55.8	357	45.7		13.1	4	43.7		14.8
15	32	58.2	12	45.4		14.4	19	44.4		15.6
16	48	00.7	27	45.0		15.6	34	45.1		16.3
17	63	03.2	42	44.7	+8	16.9	49	45.9	+5	17.1
18	78	05.6	57	44.3	+8	18.1	64	46.6	+5	17.8
19	93	08.1	72	44.0		19.4	79	47.3		18.6
20	108	10.6	87	43.7		20.6	94	48.0		19.4
21	123	13.0	102	43.3		21.9	109	48.8		20.1
22	138	15.5	117	43.0		23.1	124	49.5		20.9
23	153	18.0	132	42.7		24.4	139	50.2		21.6
24	168	20.4	147	42.3	+8	25.6	154	50.9	+5	22.4
Dif	—		-3	+13		+7	+8	+27	+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 20 ^d 0	PHE { 4 ^h : 55 ^s /5 12 ^h : 55 ^s /7 20 ^h : 55 ^s /9										
	PMG: 12 ^h 10 ^m 1					SD: 15 ^h 1			PMG: 3 ^h 59 ^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	m	h m m	m
0	177	27.0	-3 55.6	302	07.5	-14 00.9	64	60 N	17 51	18 33	19 22	** ** *		8 17	32
1	192	27.2	54.6	316	38.7 ¹²²	07.3	64	58	53	32	18	** ** *		26	34
2	207	27.3	53.6	331	09.8 ¹²¹	13.5	62	56	54	31	15	** ** *		34	35
3	222	27.5	52.6	345	40.9 ¹²¹	19.7	62	54	56	31	12	** ** *		42	36
4	237	27.7	51.6	0	11.9 ¹²⁰	25.8	61	52	57	30	10	** ** *		48	37
5	252	27.8	-3 50.7	14	42.9 ¹²⁰	-14 31.9	61	50	17 58	18 30	19 08	** ** *		8 54	38
6	267	28.0	-3 49.7	29	13.8 ¹¹⁹	-14 37.9	60	45	18 00	18 29	19 04	23 46 59		9 07	40
7	282	28.2	48.7	43	44.7 ¹¹⁹	43.8	59	40	02	29	19 01	35 57		17	42
8	297	28.3	47.7	58	15.5 ¹¹⁸	49.7	59	35	04	29	18 58	25 56		26	43
9	312	28.5	46.7	72	46.2 ¹¹⁷	-14 55.5	58	30	05	29	57	16 55		34	44
10	327	28.6	45.7	87	16.9 ¹¹⁷	-15 01.2	57	20	08	30	56	23 01 54		9 48	46
11	342	28.8	-3 44.8	101	47.5 ¹¹⁶	-15 06.9	57	10 N	18 11	18 32	18 56	22 48 53		10 00	48
12	357	29.0	-3 43.8	116	18.1 ¹¹⁶	-15 12.5	56	0	18 13	18 34	18 58	22 36 51		10 11	49
13	12	29.1	42.8	130	48.7 ¹¹⁶	18.0	55	10 S	16	37	19 01	24 50		22	51
14	27	29.3	41.8	145	19.1 ¹¹⁴	23.5	55	20	19	41	07	22 11 49		34	53
15	42	29.5	40.8	159	49.6 ¹¹⁵	28.8	53	30	22	46	14	21 57 46		48	55
16	57	29.6	39.9	174	19.9 ¹¹³	34.2	54	35	24	50	19	48 46		10 56	56
17	72	29.8	-3 38.9	188	50.2 ¹¹³	-15 39.4	52	40	18 27	18 54	19 26	21 39 44		11 05	57
18	87	30.0	-3 37.9	203	20.5 ¹¹³	-15 44.5	51	45	18 29	18 59	19 34	21 27 44		11 15	59
19	102	30.1	36.9	217	50.7 ¹¹²	49.6	51	50	33	19 05	44	14 42		28	61
20	117	30.3	35.9	232	20.8 ¹¹¹	54.6	50	52	34	08	49	08 40		34	62
21	132	30.5	34.9	246	50.9 ¹¹¹	-15 59.6	50	54	36	11	19 55	21 01 39		41	63
22	147	30.6	34.0	261	21.0 ¹¹¹	-16 04.4	48	56	38	15	20 01	20 53 39		48	64
23	162	30.8	33.0	275	50.9 ¹⁰⁹	09.2	48	58	40	19	08	44 38		11 57	65
24	177	31.0	-3 32.0	290	20.8 ¹⁰⁹	-16 13.9	47	60 S	18 42	19 24	20 17	20 34 36		12 06	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 44 ^m 5		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: +1.3 PMG: 13 ^h 40 ^m		Mag: -2.5 PMG: 21 ^h 49 ^m		Mag: +0.4 PMG: 4 ^h 59 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	168	20.4	147 42.3	+8 25.6	154 50.9	+5 22.4	31 42.6	+17 36.2	284 58.1	-19 03.7
1	183	22.9	162 42.0	26.9	169 51.7	23.2	46 45.3	36.2	300 00.5	03.7
2	198	25.3	177 41.7	28.1	184 52.4	23.9	61 48.0	36.3	315 03.0	03.7
3	213	27.8	192 41.3	29.4	199 53.1	24.7	76 50.7	36.4	330 05.4	03.7
4	228	30.3	207 41.0	30.6	214 53.8	25.4	91 53.3	36.4	345 07.9	03.7
5	243	32.7	222 40.6	+8 31.8	229 54.5	+5 26.2	106 56.0	+17 36.5	0 10.3	-19 03.7
6	258	35.2	237 40.3	+8 33.1	244 55.3	+5 27.0	121 58.7	+17 36.5	15 12.8	-19 03.7
7	273	37.7	252 40.0	34.3	259 56.0	27.7	137 01.4	36.6	30 15.2	03.7
8	288	40.1	267 39.6	35.6	274 56.7	28.5	152 04.1	36.7	45 17.7	03.7
9	303	42.6	282 39.3	36.8	289 57.4	29.2	167 06.7	36.7	60 20.1	03.7
10	318	45.1	297 38.9	38.1	304 58.2	30.0	182 09.4	36.8	75 22.6	03.7
11	333	47.5	312 38.6	+8 39.3	319 58.9	+5 30.7	197 12.1	+17 36.9	90 25.0	-19 03.7
12	348	50.0	327 38.3	+8 40.5	334 59.6	+5 31.5	212 14.8	+17 36.9	105 27.5	-19 03.6
13	3 52.5	342 37.9	41.8	350 00.3	32.3	227 17.4	37.0		120 29.9	03.6
14	18 54.9	357 37.6	43.0	5 01.0	33.0	242 20.1	37.0		135 32.4	03.6
15	33 57.4	12 37.3	44.3	20 01.8	33.8	257 22.8	37.1		150 34.8	03.6
16	48 59.8	27 36.9	45.5	35 02.5	34.5	272 25.5	37.2		165 37.3	03.6
17	64 02.3	42 36.6	+8 46.8	50 03.2	+5 35.3	287 28.2	+17 37.2		180 39.7	-19 03.6
18	79 04.8	57 36.2	+8 48.0	65 03.9	+5 36.0	302 30.8	+17 37.3		195 42.2	-19 03.6
19	94 07.2	72 35.9	49.2	80 04.7	36.8	317 33.5	37.3		210 44.6	03.6
20	109 09.7	87 35.6	50.5	95 05.4	37.6	332 36.2	37.4		225 47.1	03.6
21	124 12.2	102 35.2	51.7	110 06.1	38.3	347 38.9	37.5		240 49.5	03.6
22	139 14.6	117 34.9	53.0	125 06.8	39.1	2 41.5	37.5		255 52.0	03.6
23	154 17.1	132 34.5	54.2	140 07.5	39.8	17 44.2	37.6		270 54.4	03.6
24	169 19.6	147 34.2	+8 55.4	155 08.3	+5 40.6	32 46.9	+17 37.6		285 56.9	-19 03.6
Dif	—	-3	+12	+7	+8	+27	+1	+24	0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 21 ^d 0	PHE { 4 ^h : 56'1 12 ^h : 56'4 20 ^h : 56'6											
	PMG: 12 ^h 09 ^m 8					PMG: 4 ^h 48 ^m		R°: 52 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	31.0	-3 32.0	290	20.8	-16 13.9	46	60 N	4 57	5 46	6 27	0 43	65	8 49	40	
1	192	31.1	31.0	304	50.7 ¹⁰⁹	18.5	46	58	5 01	47	26	32	64	9 00	42	
2	207	31.3	30.0	319	20.5 ¹⁰⁸	23.1	46	56	04	47	24	23	62	09	43	
3	222	31.4	29.1	333	50.3 ¹⁰⁸	27.5	44	54	07	48	23	15	61	18	43	
4	237	31.6	28.1	348	20.0 ¹⁰⁷	31.9	44	52	09	48	22	07	61	25	45	
5	252	31.8	-3 27.1	2	49.6 ¹⁰⁶	-16 36.2	43	50	5 11	5 49	6 21	0 01	59	9 32	45	
6	267	31.9	-3 26.1	17	19.2 ¹⁰⁶	-16 40.5	43	45	5 16	5 50	6 19	** ** *	**	9 47	46	
7	282	32.1	25.1	31	48.7 ¹⁰⁵	44.6	41	40	19	50	17	** ** *	**	9 59	47	
8	297	32.3	24.1	46	18.2 ¹⁰⁵	48.7	41	35	21	50	15	** ** *	**	10 09	49	
9	312	32.4	23.2	60	47.6 ¹⁰⁴	52.6	39	30	22	50	14	** ** *	**	18	49	
10	327	32.6	22.2	75	16.9 ¹⁰³	-16 56.5	39	20	24	49	11	23 55	54	34	50	
11	342	32.8	-3 21.2	89	46.2 ¹⁰³	-17 00.3	38	10 N	5 24	5 48	6 09	23 41	53	10 48	51	
12	357	32.9	-3 20.2	104	15.5 ¹⁰³	-17 04.0	37	0	5 22	5 46	6 07	23 27	53	11 00	52	
13	12	33.1	19.2	118	44.7 ¹⁰²	07.7	37	10 S	19	43	04	14	53	13	53	
14	27	33.3	18.2	133	13.8 ¹⁰¹	11.2	35	20	13	39	6 01	23 00	52	27	54	
15	42	33.4	17.3	147	42.9 ¹⁰¹	14.7	35	30	06	34	5 58	22 43	52	43	55	
16	57	33.6	16.3	162	11.9 ¹⁰⁰	18.0	33	35	5 01	31	56	34	51	11 52	55	
17	72	33.8	-3 15.3	176	40.9 ¹⁰⁰	-17 21.3	33	40	4 55	5 27	5 54	22 23	51	12 02	56	
18	87	33.9	-3 14.3	191	09.8 ⁹⁹	-17 24.5	32	45	4 47	5 22	5 51	22 11	50	12 14	57	
19	102	34.1	13.3	205	38.6 ⁹⁸	27.6	31	50	37	16	48	21 56	49	29	58	
20	117	34.3	12.3	220	07.4 ⁹⁸	30.6	30	52	32	13	47	48	49	36	59	
21	132	34.4	11.3	234	36.2 ⁹⁸	33.5	29	54	26	09	45	40	49	44	59	
22	147	34.6	10.4	249	04.9 ⁹⁷	36.3	28	56	20	06	43	32	48	12 52	60	
23	162	34.8	09.4	263	33.5 ⁹⁶	39.1	28	58	13	5 01	41	22	47	13 02	61	
24	177	35.0	-3 08.4	278	02.1 ⁹⁶	-17 41.7	26	60 S	4 04	4 57	5 39	21 10	47	13 13	62	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 40 ^m 6		Mag: -3.9 PMG: 14 ^h 10 ^m		Mag: +1.3 PMG: 13 ^h 39 ^m		Mag: -2.5 PMG: 21 ^h 45 ^m		Mag: +0.4 PMG: 4 ^h 55 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	169	19.6	147	34.2	+8 55.4	155	08.3	+5 40.6	32	46.9	+17 37.6	285	56.9	-19 03.6	
1	184	22.0	162	33.8	56.7	170	09.0	41.3	47	49.6	37.7	300	59.3	03.6	
2	199	24.5	177	33.5	57.9	185	09.7	42.1	62	52.2	37.8	316	01.8	03.6	
3	214	27.0	192	33.2	+8 59.2	200	10.4	42.9	77	54.9	37.8	331	04.2	03.6	
4	229	29.4	207	32.8	+9 00.4	215	11.2	43.6	92	57.6	37.9	346	06.7	03.6	
5	244	31.9	222	32.5	+9 01.6	230	11.9	+5 44.4	108	00.3	+17 37.9	1	09.1	-19 03.6	
6	259	34.3	237	32.1	+9 02.9	245	12.6	+5 45.1	123	02.9	+17 38.0	16	11.6	-19 03.6	
7	274	36.8	252	31.8	04.1	260	13.3	45.9	138	05.6	38.0	31	14.0	03.6	
8	289	39.3	267	31.5	05.3	275	14.1	46.6	153	08.3	38.1	46	16.5	03.6	
9	304	41.7	282	31.1	06.6	290	14.8	47.4	168	11.0	38.2	61	18.9	03.5	
10	319	44.2	297	30.8	07.8	305	15.5	48.1	183	13.6	38.2	76	21.4	03.5	
11	334	46.7	312	30.4	+9 09.0	320	16.2	+5 48.9	198	16.3	+17 38.3	91	23.9	-19 03.5	
12	349	49.1	327	30.1	+9 10.3	335	16.9	+5 49.7	213	19.0	+17 38.3	106	26.3	-19 03.5	
13	4	51.6	342	29.7	11.5	350	17.7	50.4	228	21.6	38.4	121	28.8	03.5	
14	19	54.1	357	29.4	12.7	5	18.4	51.2	243	24.3	38.5	136	31.2	03.5	
15	34	56.5	12	29.0	14.0	20	19.1	51.9	258	27.0	38.5	151	33.7	03.5	
16	49	59.0	27	28.7	15.2	35	19.8	52.7	273	29.7	38.6	166	36.1	03.5	
17	65	01.4	42	28.4	+9 16.4	50	20.6	+5 53.4	288	32.3	+17 38.6	181	38.6	-19 03.5	
18	80	03.9	57	28.0	+9 17.7	65	21.3	+5 54.2	303	35.0	+17 38.7	196	41.0	-19 03.5	
19	95	06.4	72	27.7	18.9	80	22.0	54.9	318	37.7	38.7	211	43.5	03.5	
20	110	08.8	87	27.3	20.1	95	22.7	55.7	333	40.3	38.8	226	45.9	03.5	
21	125	11.3	102	27.0	21.4	110	23.4	56.4	348	43.0	38.9	241	48.4	03.5	
22	140	13.8	117	26.6	22.6	125	24.2	57.2	3	45.7	38.9	256	50.8	03.5	
23	155	16.2	132	26.3	23.8	140	24.9	57.9	18	48.3	39.0	271	53.3	03.5	
24	170	18.7	147	25.9	+9 25.1	155	25.6	+5 58.7	33	51.0	+17 39.0	286	55.8	-19 03.5	
Dif	—		-3	+12		+7	+8		+27		+1	+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 22 ^d 0 PHE { 4 ^h : 56/9 12 ^h : 57/2 20 ^h : 57/4					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 09 ^m 5			SD: 15/5 PMG: 5 ^h 40 ^m R°: 53 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	35.0	-3 08.4	278	02.1	-17 41.7	25	60 N	17 56	18 38	19 27	1 48 58	9 29 53		
1	192	35.1	07.4	292	30.6	44.2	25	58	58	37	23	36 57	42 52		
2	207	35.3	06.4	306	59.1	46.7	25	56	59	36	19	25 58	9 52 53		
3	222	35.5	05.4	321	27.5	49.0	23	54	17 59	35	16	16 57	10 01 53		
4	237	35.6	04.5	335	55.9	51.3	23	52	18 00	34	13	08 57	10 53		
5	252	35.8	-3 03.5	350	24.2	-17 53.5	22	50	18 01	18 33	19 11	1 00 57	10 17 54		
6	267	36.0	-3 02.5	4	52.5	-17 55.5	20	45	18 03	18 32	19 06	0 45 56	10 33 54		
7	282	36.1	01.5	19	20.7	57.5	20	40	04	31	03	32 55	46 54		
8	297	36.3	-3 00.5	33	48.9	-17 59.3	18	35	06	31	19 00	21 55	10 58 53		
9	312	36.5	-2 59.5	48	17.0	-18 01.1	18	30	07	31	18 58	0 11 55	11 07 54		
10	327	36.6	58.5	62	45.0	02.8	17	20	09	31	56	*** ** *	24 54		
11	342	36.8	-2 57.6	77	13.0	-18 04.4	16	10 N	18 11	18 32	18 56	*** ** *	11 39 54		
12	357	37.0	-2 56.6	91	41.0	-18 05.8	14	0	18 13	18 33	18 58	*** ** *	11 52 55		
13	12	37.1	55.6	106	08.9	07.2	14	10 S	15	36	19 00	*** ** *	12 06 54		
14	27	37.3	54.6	120	36.8	08.5	13	20	17	39	05	23 52 56	21 54		
15	42	37.5	53.6	135	04.6	09.6	11	30	20	44	12	35 56	38 54		
16	57	37.7	52.6	149	32.3	10.7	11	35	21	47	17	25 57	47 55		
17	72	37.8	-2 51.7	164	00.0	-18 11.7	10	40	18 23	18 50	19 22	23 14 57	12 58 55		
18	87	38.0	-2 50.7	178	27.7	-18 12.5	8	45	18 26	18 55	19 30	23 01 57	13 11 55		
19	102	38.2	49.7	192	55.3	13.3	8	50	28	19 01	39	22 45 57	27 54		
20	117	38.3	48.7	207	22.9	13.9	6	52	29	03	44	37 58	35 54		
21	132	38.5	47.7	221	50.4	14.5	6	54	31	06	49	29 58	43 54		
22	147	38.7	46.7	236	17.9	14.9	4	56	32	10	19 55	20 58	13 52 54		
23	162	38.9	45.7	250	45.3	15.2	3	58	34	14	20 02	22 09 59	14 03 54		
24	177	39.0	-2 44.8	265	12.7	-18 15.5	3	60 S	18 36	19 18	20 10	21 57 59	14 15 54		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 36 ^m 7		Mag: -3.9 PMG: 14 ^h 11 ^m			Mag: +1.3 PMG: 13 ^h 38 ^m			Mag: -2.5 PMG: 21 ^h 41 ^m			Mag: +0.4 PMG: 4 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	170	18.7	147 25.9	+9 25.1	155 25.6	+5 58.7	33 51.0	+17 39.0	286 55.8	-19 03.5					
1	185	21.2	162 25.6	26.3	170 26.3	+5 59.5	48 53.7	39.1	301 58.2	03.5					
2	200	23.6	177 25.2	27.5	185 27.1	+6 00.2	63 56.3	39.2	317 00.7	03.5					
3	215	26.1	192 24.9	28.8	200 27.8	01.0	78 59.0	39.2	332 03.1	03.5					
4	230	28.6	207 24.6	30.0	215 28.5	01.7	94 01.7	39.3	347 05.6	03.4					
5	245	31.0	222 24.2	+9 31.2	230 29.2	+6 02.5	109 04.3	+17 39.3	2 08.0	-19 03.4					
6	260	33.5	237 23.9	+9 32.4	245 29.9	+6 03.2	124 07.0	+17 39.4	17 10.5	-19 03.4					
7	275	35.9	252 23.5	33.7	260 30.7	04.0	139 09.7	39.4	32 13.0	03.4					
8	290	38.4	267 23.2	34.9	275 31.4	04.7	154 12.3	39.5	47 15.4	03.4					
9	305	40.9	282 22.8	36.1	290 32.1	05.5	169 15.0	39.5	62 17.9	03.4					
10	320	43.3	297 22.5	37.3	305 32.8	06.2	184 17.7	39.6	77 20.3	03.4					
11	335	45.8	312 22.1	+9 38.6	320 33.5	+6 07.0	199 20.3	+17 39.7	92 22.8	-19 03.4					
12	350	48.3	327 21.8	+9 39.8	335 34.3	+6 07.7	214 23.0	+17 39.7	107 25.2	-19 03.4					
13	5	50.7	342 21.4	41.0	350 35.0	08.5	229 25.7	39.8	122 27.7	03.4					
14	20	53.2	357 21.1	42.2	5 35.7	09.2	244 28.3	39.8	137 30.2	03.4					
15	35	55.7	12 20.7	43.5	20 36.4	10.0	259 31.0	39.9	152 32.6	03.4					
16	50	58.1	27 20.4	44.7	35 37.2	10.7	274 33.7	39.9	167 35.1	03.4					
17	66	00.6	42 20.0	+9 45.9	50 37.9	+6 11.5	289 36.3	+17 40.0	182 37.5	-19 03.4					
18	81	03.1	57 19.7	+9 47.1	65 38.6	+6 12.2	304 39.0	+17 40.1	197 40.0	-19 03.4					
19	96	05.5	72 19.3	48.4	80 39.3	13.0	319 41.7	40.1	212 42.5	03.4					
20	111	08.0	87 19.0	49.6	95 40.0	13.7	334 44.3	40.2	227 44.9	03.4					
21	126	10.4	102 18.6	50.8	110 40.8	14.5	349 47.0	40.2	242 47.4	03.4					
22	141	12.9	117 18.3	52.0	125 41.5	15.2	4 49.6	40.3	257 49.8	03.3					
23	156	15.4	132 17.9	53.3	140 42.2	16.0	19 52.3	40.3	272 52.3	03.3					
24	171	17.8	147 17.6	+9 54.5	155 42.9	+6 16.7	34 55.0	+17 40.4	287 54.7	-19 03.3					
Dif	—		-3	+12	+7		+8	+27		+1	+25		0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 23 ^d 0	PHE {	4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'3									
	PMG: 12 ^h 09 ^m 3														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	39.0	-2	265	12.7	-18	15.5	1	60 N	4 51	5 40	6 21	2 46	49	10 22 65
1	192	39.2		279	40.0		15.6	1	58	55	41	20	33	51	34 64
2	207	39.4		294	07.3		15.6	0	56	4 59	42	19	23	50	45 63
3	222	39.5		308	34.6		15.5	1	54	5 02	43	18	13	51	10 54 63
4	237	39.7		323	01.8		15.3	2	52	05	44	17	2 05	51	11 03 62
5	252	39.9	-2	337	28.9	-18	15.0	3	50	5 07	5 45	6 17	1 57	52	11 11 61
6	267	40.0	-2	351	56.0	-18	14.6	4	45	5 12	5 46	6 15	1 41	52	11 27 60
7	282	40.2		6	23.1		14.1	5	40	16	47	14	27	53	40 60
8	297	40.4		20	50.2		13.4	7	35	18	47	13	16	53	11 51 59
9	312	40.6		35	17.2		12.7	7	30	20	48	12	1 06	54	12 01 59
10	327	40.7		49	44.1		11.8	9	20	22	48	10	0 49	54	18 58
11	342	40.9	-2	64	11.0	-18	10.9	9	10 N	5 22	5 47	6 08	0 34	55	12 33 56
12	357	41.1	-2	78	37.9	-18	09.8	11	0	5 21	5 45	6 06	0 20	56	12 47 55
13	12	41.3		93	04.8		08.6	12	10 S	19	43	04	0 07	55	13 00 55
14	27	41.4		107	31.6		07.3	13	20	14	40	6 02	** ** *	**	15 54
15	42	41.6		121	58.3		05.9	14	30	07	35	5 59	** ** *	**	32 53
16	57	41.8		136	25.1		04.4	15	35	5 03	32	58	** ** *	**	42 52
17	72	41.9	-2	150	51.8	-18	02.8	16	40	4 57	5 29	5 56	** ** *	**	13 53 51
18	87	42.1	-2	165	18.4	-18	01.0	18	45	4 50	5 24	5 54	23 58	64	14 06 50
19	102	42.3		179	45.0	-17	59.2	18	50	40	19	51	42	66	21 50
20	117	42.5		194	11.6		57.2	20	52	36	16	50	35	67	29 48
21	132	42.6		208	38.2		55.1	21	54	30	13	49	27	67	37 48
22	147	42.8		223	04.7		52.9	22	56	25	10	48	18	68	46 47
23	162	43.0		237	31.2		50.6	23	58	18	06	46	23 08	69	14 57 46
24	177	43.2	-2	251	57.7	-17	48.2	24	60 S	4 10	5 02	5 44	22 56	71	15 09 45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 32 ^m 7		Mag: -3.9 PMG: 14 ^h 11 ^m		Mag: +1.3 PMG: 13 ^h 36 ^m		Mag: -2.5 PMG: 21 ^h 37 ^m		Mag: +0.4 PMG: 4 ^h 48 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	171	17.8	147	17.6	+9	54.5	155	42.9	+6	16.7	34	55.0	+17	40.4	287	54.7	-19	03.3
1	186	20.3	162	17.2		55.7	170	43.7		17.5	49	57.6		40.4	302	57.2		03.3
2	201	22.8	177	16.9		56.9	185	44.4		18.2	65	00.3		40.5	317	59.7		03.3
3	216	25.2	192	16.5		58.1	200	45.1		19.0	80	03.0		40.6	333	02.1		03.3
4	231	27.7	207	16.2		+9 59.4	215	45.8		19.7	95	05.6		40.6	348	04.6		03.3
5	246	30.2	222	15.8	+10	00.6	230	46.5	+6	20.5	110	08.3	+17	40.7	3	07.1	-19	03.3
6	261	32.6	237	15.5	+10	01.8	245	47.3	+6	21.2	125	10.9	+17	40.7	18	09.5	-19	03.3
7	276	35.1	252	15.1		03.0	260	48.0		22.0	140	13.6		40.8	33	12.0		03.3
8	291	37.6	267	14.7		04.2	275	48.7		22.7	155	16.3		40.8	48	14.4		03.3
9	306	40.0	282	14.4		05.4	290	49.4		23.5	170	18.9		40.9	63	16.9		03.3
10	321	42.5	297	14.0		06.7	305	50.1		24.2	185	21.6		40.9	78	19.4		03.3
11	336	44.9	312	13.7	+10	07.9	320	50.9	+6	25.0	200	24.2	+17	41.0	93	21.8	-19	03.3
12	351	47.4	327	13.3	+10	09.1	335	51.6	+6	25.7	215	26.9	+17	41.0	108	24.3	-19	03.3
13	6	49.9	342	13.0		10.3	350	52.3		26.5	230	29.5		41.1	123	26.7		03.2
14	21	52.3	357	12.6		11.5	5	53.0		27.2	245	32.2		41.2	138	29.2		03.2
15	36	54.8	12	12.3		12.7	20	53.8		28.0	260	34.9		41.2	153	31.7		03.2
16	51	57.3	27	11.9		14.0	35	54.5		28.7	275	37.5		41.3	168	34.1		03.2
17	66	59.7	42	11.6	+10	15.2	50	55.2	+6	29.5	290	40.2	+17	41.3	183	36.6	-19	03.2
18	82	02.2	57	11.2	+10	16.4	65	55.9	+6	30.2	305	42.8	+17	41.4	198	39.1	-19	03.2
19	97	04.7	72	10.8		17.6	80	56.6		31.0	320	45.5		41.4	213	41.5		03.2
20	112	07.1	87	10.5		18.8	95	57.4		31.7	335	48.1		41.5	228	44.0		03.2
21	127	09.6	102	10.1		20.0	110	58.1		32.5	350	50.8		41.5	243	46.5		03.2
22	142	12.0	117	09.8		21.2	125	58.8		33.2	5	53.5		41.6	258	48.9		03.2
23	157	14.5	132	09.4		22.5	140	59.5		34.0	20	56.1		41.6	273	51.4		03.2
24	172	17.0	147	09.1	+10	23.7	156	00.2	+6	34.7	35	58.8	+17	41.7	288	53.8	-19	03.2
Dif	—		-4		+12		+7		+7		+27		+1		+25			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 24 ^d 0 PHE { 4 ^h : 58/6 12 ^h : 58/9 20 ^h : 59/2						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	43.2	-2	21.1	251	57.7	-17 48.2	60 N	18 01	18 43	19 32	3 35 41	11 27 76		
1	192	43.3		20.1	266	24.1	45.7	58	02	41	27	24 41	38 75		
2	207	43.5		19.1	280	50.5	43.1	56	03	40	23	13 44	48 73		
3	222	43.7		18.1	295	16.9	40.3	54	03	39	20	3 04 45	11 57 72		
4	237	43.8		17.1	309	43.2	37.4	52	04	37	17	2 56 46	12 05 70		
5	252	44.0	-2	16.1	324	09.5	-17 34.5	50	18 04	18 37	19 14	2 49 46	12 12 69		
6	267	44.2	-2	15.2	338	35.8	-17 31.4	45	18 05	18 35	19 09	2 33 48	12 27 67		
7	282	44.4		14.2	353	02.1	28.1	40	06	33	05	20 50	40 65		
8	297	44.5		13.2	7	28.3	24.8	35	07	32	02	09 51	12 50 64		
9	312	44.7		12.2	21	54.5	21.4	30	08	32	19 00	2 00 52	13 00 62		
10	327	44.9		11.2	36	20.7	17.8	20	09	31	18 57	1 43 54	16 60		
11	342	45.1	-2	10.2	50	46.9	-17 14.2	10 N	18 11	18 32	18 56	1 29 55	13 29 59		
12	357	45.2	-2	09.2	65	13.0	-17 10.4	0	18 12	18 33	18 57	1 16 56	13 42 57		
13	12	45.4		08.3	79	39.2	06.5	10 S	14	35	18 59	1 02 58	13 55 55		
14	27	45.6		07.3	94	05.2	-17 02.5	20	15	37	19 03	0 48 59	14 09 53		
15	42	45.8		06.3	108	31.3	-16 58.4	30	18	41	09	31 61	25 50		
16	57	45.9		05.3	122	57.4	54.2	35	19	44	14	22 61	34 49		
17	72	46.1	-2	04.3	137	23.4	-16 49.8	40	18 20	18 47	19 19	0 11 63	14 44 48		
18	87	46.3	-2	03.3	151	49.4	-16 45.4	45	18 22	18 51	19 26	*** ** *	14 56 46		
19	102	46.5		02.3	166	15.4	40.8	50	24	56	35	*** ** *	15 11 43		
20	117	46.6		01.3	180	41.4	36.1	52	25	18 59	39	*** ** *	17 43		
21	132	46.8	-2	00.4	195	07.4	31.3	54	26	19 01	44	*** ** *	25 41		
22	147	47.0	-1	59.4	209	33.3	26.4	56	27	04	49	*** ** *	33 40		
23	162	47.2		58.4	223	59.2	21.4	58	28	08	19 56	*** ** *	43 38		
24	177	47.3	-1	57.4	238	25.2	-16 16.3	60 S	18 30	19 12	20 03	*** ** *	15 54 36		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 12 ^h 28 ^m 8		Mag: -3.9 PMG: 14 ^h 12 ^m		Mag: +1.3 PMG: 13 ^h 35 ^m		Mag: -2.5 PMG: 21 ^h 32 ^m		Mag: +0.4 PMG: 4 ^h 44 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	172	17.0	147	09.1	156	00.2	+6 34.7	35 58.8	+17 41.7	288 53.8	-19 03.2				
1	187	19.4	162	08.7	171	01.0	35.4	51 01.4	41.7	303 56.3	03.2				
2	202	21.9	177	08.4	186	01.7	36.2	66 04.1	41.8	318 58.8	03.2				
3	217	24.4	192	08.0	201	02.4	36.9	81 06.7	41.8	334 01.2	03.2				
4	232	26.8	207	07.6	216	03.1	37.7	96 09.4	41.9	349 03.7	03.1				
5	247	29.3	222	07.3	231	03.9	+6 38.4	111 12.0	+17 42.0	4 06.2	-19 03.1				
6	262	31.8	237	06.9	246	04.6	+6 39.2	126 14.7	+17 42.0	19 08.6	-19 03.1				
7	277	34.2	252	06.6	261	05.3	39.9	141 17.3	42.1	34 11.1	03.1				
8	292	36.7	267	06.2	276	06.0	40.7	156 20.0	42.1	49 13.6	03.1				
9	307	39.2	282	05.8	291	06.7	41.4	171 22.7	42.2	64 16.0	03.1				
10	322	41.6	297	05.5	306	07.5	42.2	186 25.3	42.2	79 18.5	03.1				
11	337	44.1	312	05.1	321	08.2	+6 42.9	201 28.0	+17 42.3	94 21.0	-19 03.1				
12	352	46.5	327	04.8	336	08.9	+6 43.7	216 30.6	+17 42.3	109 23.4	-19 03.1				
13	7	49.0	342	04.4	351	09.6	44.4	231 33.3	42.4	124 25.9	03.1				
14	22	51.5	357	04.0	6	10.3	45.1	246 35.9	42.4	139 28.4	03.1				
15	37	53.9	12	03.7	21	11.1	45.9	261 38.6	42.5	154 30.8	03.1				
16	52	56.4	27	03.3	36	11.8	46.6	276 41.2	42.5	169 33.3	03.1				
17	67	58.9	42	03.0	51	12.5	+6 47.4	291 43.9	+17 42.6	184 35.8	-19 03.1				
18	83	01.3	57	02.6	66	13.2	+6 48.1	306 46.5	+17 42.6	199 38.2	-19 03.0				
19	98	03.8	72	02.2	81	13.9	48.9	321 49.2	42.7	214 40.7	03.0				
20	113	06.3	87	01.9	96	14.7	49.6	336 51.8	42.7	229 43.2	03.0				
21	128	08.7	102	01.5	111	15.4	50.4	351 54.5	42.8	244 45.6	03.0				
22	143	11.2	117	01.2	126	16.1	51.1	6 57.1	42.8	259 48.1	03.0				
23	158	13.7	132	00.8	141	16.8	51.8	21 59.8	42.9	274 50.6	03.0				
24	173	16.1	147	00.4	156	17.6	+6 52.6	37 02.4	+17 42.9	289 53.0	-19 03.0				
Dif	—		-4	+12	+7	+7		+27	+1	+25	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 7			Edad: 25 ^d 0 PHE { 4 ^h : 59'5 12 ^h : 59'8 20 ^h : 60'0 SD: 16'2 PMG: 8 ^h 26 ^m R°: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	177	47.3	-1	57.4	238	25.2	-16	16.3	60 N	4 45	5 34	6 15	4 16	32	12 43	85	
1	192	47.5		56.4	252	51.1		11.0	58	49	35	14	4 05	35	12 53	82	
2	207	47.7		55.4	267	17.0		05.7	56	53	37	14	3 57	36	13 01	80	
3	222	47.9		54.4	281	42.8		00.2	54	4 57	38	13	49	38		09	78
4	237	48.0		53.4	296	08.7		54.7	52	5 00	39	13	42	39		15	77
5	252	48.2	-1	52.4	310	34.5		49.0	50	5 03	5 40	6 12	3 35	41	13 21	76	
6	267	48.4	-1	51.5	325	00.4		43.2	45	5 08	5 42	6 11	3 21	44	13 34	72	
7	282	48.6		50.5	339	26.2		37.3	40	12	44	11	10	46		45	70
8	297	48.7		49.5	353	52.0		31.3	35	15	45	10	3 00	48	13 54	68	
9	312	48.9		48.5	8	17.8		25.2	30	18	45	09	2 52	49	14 02	66	
10	327	49.1		47.5	22	43.6		19.0	20	20	46	08	37	52		16	62
11	342	49.3	-1	46.5	37	09.4		12.6	10 N	5 21	5 46	6 07	2 24	55	14 28	59	
12	357	49.5	-1	45.5	51	35.2		06.2	0	5 21	5 45	6 05	2 12	57	14 39	57	
13	12	49.6		44.5	66	01.0		59.7	10 S	19	43	04	2 00	59	14 50	54	
14	27	49.8		43.6	80	26.8		53.0	20	15	40	03	1 47	61	15 02	51	
15	42	50.0		42.6	94	52.5		46.3	30	09	37	6 01	32	64		15	49
16	57	50.2		41.6	109	18.3		39.4	35	5 04	34	5 59	23	66		23	47
17	72	50.3	-1	40.6	123	44.0		32.4	40	4 59	5 31	5 58	1 14	67	15 32	44	
18	87	50.5	-1	39.6	138	09.8		25.4	45	4 52	5 27	5 57	1 02	70	15 42	42	
19	102	50.7		38.6	152	35.5		18.2	50	44	22	55	0 48	73	15 54	39	
20	117	50.9		37.6	167	01.3		10.9	52	39	20	54	42	73	16 00	37	
21	132	51.0		36.6	181	27.0		03.6	54	35	17	53	34	76		06	36
22	147	51.2		35.7	195	52.8		56.1	56	29	14	52	26	77		13	34
23	162	51.4		34.7	210	18.5		48.5	58	23	11	51	17	79		21	32
24	177	51.6	-1	33.7	224	44.2		40.9	60 S	4 16	5 07	5 49	0 07	81	16 30	29	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 12 ^h 24 ^m 9			Mag: -3.9 PMG: 14 ^h 12 ^m			Mag: +1.3 PMG: 13 ^h 34 ^m			Mag: -2.5 PMG: 21 ^h 28 ^m			Mag: +0.4 PMG: 4 ^h 40 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	173	16.1	147	00.4	+10	52.6	156	17.6	+6	52.6	37	02.4	+17	42.9	289	53.0	
1	188	18.6	162	00.1		53.8	171	18.3		53.3	52	05.1		43.0	304	55.5	
2	203	21.0	176	59.7		55.0	186	19.0		54.1	67	07.7		43.0	319	58.0	
3	218	23.5	191	59.3		56.2	201	19.7		54.8	82	10.3		43.1	335	00.5	
4	233	26.0	206	59.0		57.4	216	20.4		55.6	97	13.0		43.1	350	02.9	
5	248	28.4	221	58.6	+10	58.6	231	21.2	+6	56.3	112	15.6	+17	43.2	5	05.4	
6	263	30.9	236	58.2	+10	59.8	246	21.9	+6	57.0	127	18.3	+17	43.2	20	07.9	
7	278	33.4	251	57.9	+11	01.0	261	22.6		57.8	142	20.9		43.3	35	10.3	
8	293	35.8	266	57.5		02.2	276	23.3		58.5	157	23.6		43.3	50	12.8	
9	308	38.3	281	57.2		03.4	291	24.0	+6	59.3	172	26.2		43.4	65	15.3	
10	323	40.8	296	56.8		04.6	306	24.8	+7	00.0	187	28.9		43.4	80	17.7	
11	338	43.2	311	56.4	+11	05.8	321	25.5	+7	00.8	202	31.5	+17	43.5	95	20.2	
12	353	45.7	326	56.1	+11	07.0	336	26.2	+7	01.5	217	34.2	+17	43.5	110	22.7	
13	8	48.1	341	55.7		08.2	351	26.9		02.2	232	36.8		43.6	125	25.2	
14	23	50.6	356	55.3		09.4	6	27.6		03.0	247	39.4		43.6	140	27.6	
15	38	53.1	11	55.0		10.6	21	28.4		03.7	262	42.1		43.7	155	30.1	
16	53	55.5	26	54.6		11.8	36	29.1		04.5	277	44.7		43.7	170	32.6	
17	68	58.0	41	54.2	+11	13.0	51	29.8	+7	05.2	292	47.4	+17	43.8	185	35.0	
18	84	00.5	56	53.9	+11	14.2	66	30.5	+7	05.9	307	50.0	+17	43.8	200	37.5	
19	99	02.9	71	53.5		15.4	81	31.2		06.7	322	52.7		43.9	215	40.0	
20	114	05.4	86	53.1		16.6	96	32.0		07.4	337	55.3		43.9	230	42.5	
21	129	07.9	101	52.8		17.8	111	32.7		08.2	352	57.9		44.0	245	44.9	
22	144	10.3	116	52.4		19.0	126	33.4		08.9	8	00.6		44.0	260	47.4	
23	159	12.8	131	52.0		20.1	141	34.1		09.7	23	03.2		44.1	275	49.9	
24	174	15.3	146	51.6	+11	21.3	156	34.8	+7	10.4	38	05.9	+17	44.1	290	52.4	
Dif	—			-4 +12			+7 +7			+26 0			+25 0				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 26 ^d 0	PHE {	SD: 16'4			R°: 57 ^m							
	PMG: 12 ^h 08 ^m 4															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	177	51.6	-1	33.7	224	44.2	-13	40.9	60 N	18 06	18 48	19 37	4 48	27	14 08 90	
1	192	51.8		32.7	239	10.0	68	33.1	58	07	46	32	40	30	15 87	
2	207	51.9		31.7	253	35.7	67	25.2	56	07	44	28	33	32	21 85	
3	222	52.1		30.7	268	01.4	67	17.2	54	07	42	24	27	34	27 82	
4	237	52.3		29.7	282	27.2	68	09.2	52	07	41	21	21	36	32 80	
5	252	52.5	-1	28.7	296	52.9	67	-13 01.0	50	18 08	18 40	19 18	4 16	37	14 37 78	
6	267	52.6	-1	27.7	311	18.7	68	-12 52.8	45	18 08	18 37	19 12	4 05	41	14 46 75	
7	282	52.8		26.8	325	44.4	67	44.4	40	08	35	07	3 56	43	14 55 72	
8	297	53.0		25.8	340	10.1	67	36.0	35	09	34	04	48	46	15 02 69	
9	312	53.2		24.8	354	35.9	68	27.5	30	09	33	19 01	41	48	08 67	
10	327	53.4		23.8	9	01.6	67	18.8	20	10	32	18 58	29	51	18 64	
11	342	53.5	-1	22.8	23	27.4	68	-12 10.1	10 N	18 11	18 32	18 56	3 19	54	15 27 60	
12	357	53.7	-1	21.8	37	53.1	67	-12 01.3	0	18 12	18 32	18 56	3 09	57	15 36 57	
13	12	53.9		20.8	52	18.9	68	-11 52.4	10 S	13	34	18 58	2 59	60	44 54	
14	27	54.1		19.8	66	44.7	68	43.5	20	14	36	19 01	48	63	15 53 51	
15	42	54.3		18.8	81	10.4	67	34.4	30	15	39	07	36	67	16 04 46	
16	57	54.4		17.9	95	36.2	68	25.2	35	16	41	11	29	69	10 44	
17	72	54.6	-1	16.9	110	02.0	68	-11 16.0	40	18 17	18 44	19 16	2 21	71	16 16 42	
18	87	54.8	-1	15.9	124	27.8	68	-11 06.7	45	18 18	18 47	19 22	2 12	74	16 24 39	
19	102	55.0		14.9	138	53.6	68	-10 57.3	50	20	52	30	2 01	77	33 35	
20	117	55.1		13.9	153	19.4	68	47.8	52	20	54	34	1 55	79	37 34	
21	132	55.3		12.9	167	45.2	68	38.2	54	21	56	39	50	80	42 32	
22	147	55.5		11.9	182	11.0	68	28.6	56	22	18 59	44	43	83	47 30	
23	162	55.7		10.9	196	36.8	68	18.9	58	23	19 02	49	36	85	53 27	
24	177	55.9	-1	09.9	211	02.6	68	-10 09.1	60 S	18 24	19 05	19 56	1 28	87	16 59 25	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 12 ^h 21 ^m 0		Mag: -4.0		Mag: +1.3		Mag: -2.5			Mag: +0.4								
	PMG: 14 ^h 13 ^m		PMG: 13 ^h 33 ^m		PMG: 21 ^h 24 ^m			PMG: 4 ^h 36 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	174	15.3	146	51.6	+11	21.3	156	34.8	+7	10.4	38	05.9	+17	44.1	290	52.4	-19	02.8
1	189	17.7	161	51.3		22.5	171	35.6		11.1	53	08.5		44.2	305	54.8		02.8
2	204	20.2	176	50.9		23.7	186	36.3		11.9	68	11.2		44.2	320	57.3		02.8
3	219	22.6	191	50.5		24.9	201	37.0		12.6	83	13.8		44.3	335	59.8		02.8
4	234	25.1	206	50.2		26.1	216	37.7		13.4	98	16.4		44.3	351	02.2		02.8
5	249	27.6	221	49.8	+11	27.3	231	38.4	+7	14.1	113	19.1	+17	44.4	6	04.7	-19	02.8
6	264	30.0	236	49.4	+11	28.5	246	39.2	+7	14.8	128	21.7	+17	44.4	21	07.2	-19	02.8
7	279	32.5	251	49.1		29.7	261	39.9		15.6	143	24.3		44.5	36	09.7		02.8
8	294	35.0	266	48.7		30.8	276	40.6		16.3	158	27.0		44.5	51	12.1		02.7
9	309	37.4	281	48.3		32.0	291	41.3		17.0	173	29.6		44.6	66	14.6		02.7
10	324	39.9	296	47.9		33.2	306	42.0		17.8	188	32.3		44.6	81	17.1		02.7
11	339	42.4	311	47.6	+11	34.4	321	42.8	+7	18.5	203	34.9	+17	44.7	96	19.6	-19	02.7
12	354	44.8	326	47.2	+11	35.6	336	43.5	+7	19.3	218	37.5	+17	44.7	111	22.0	-19	02.7
13	9	47.3	341	46.8		36.8	351	44.2		20.0	233	40.2		44.8	126	24.5		02.7
14	24	49.8	356	46.5		38.0	6	44.9		20.7	248	42.8		44.8	141	27.0		02.7
15	39	52.2	11	46.1		39.1	21	45.6		21.5	263	45.4		44.8	156	29.5		02.7
16	54	54.7	26	45.7		40.3	36	46.4		22.2	278	48.1		44.9	171	32.0		02.7
17	69	57.1	41	45.3	+11	41.5	51	47.1	+7	23.0	293	50.7	+17	44.9	186	34.4	-19	02.7
18	84	59.6	56	45.0	+11	42.7	66	47.8	+7	23.7	308	53.4	+17	45.0	201	36.9	-19	02.7
19	100	02.1	71	44.6		43.9	81	48.5		24.4	323	56.0		45.0	216	39.4		02.7
20	115	04.5	86	44.2		45.1	96	49.2		25.2	338	58.6		45.1	231	41.9		02.6
21	130	07.0	101	43.8		46.2	111	50.0		25.9	354	01.3		45.1	246	44.3		02.6
22	145	09.5	116	43.5		47.4	126	50.7		26.6	9	03.9		45.2	261	46.8		02.6
23	160	11.9	131	43.1		48.6	141	51.4		27.4	24	06.5		45.2	276	49.3		02.6
24	175	14.4	146	42.7	+11	49.8	156	52.1	+7	28.1	39	09.2	+17	45.3	291	51.8	-19	02.6
Dif	—		-4		+12		+7		+7		+26		0		+25		0	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 27 ^d 0 PHE { 4 ^h : 60 ^m 9 12 ^h : 61 ^m 0 20 ^h : 61 ^m 2 R°: 57 ^m													
	PMG: 12 ^h 08 ^m 1			SD: 16 ^h 6 PMG: 10 ^h 19 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	177	55.9	-1 09.9	211	02.6		-10 09.1		60 N	4 38	5 28	6 09	5 15	23	15 38	92	
1	192	56.0	09.0	225	28.5	69	-9 59.2	99	58	43	30	09	10 25	42	89		
2	207	56.2	08.0	239	54.3	68	49.3	99	56	48	32	09	05 28	46	87		
3	222	56.4	07.0	254	20.2	69	39.3	100	54	52	33	08	5 01 30	49	85		
4	237	56.6	06.0	268	46.0	68	29.2	101	52	55	35	08	4 57 32	52	83		
5	252	56.8	-1 05.0	283	11.9	69	-9 19.0	102	50	4 58	5 36	6 08	4 53 34	15 55	81		
6	267	56.9	-1 04.0	297	37.8	69	-9 08.8	102	45	5 04	5 39	6 08	4 46 37	16 01	77		
7	282	57.1	03.0	312	03.6	68	-8 58.5	103	40	09	40	07	39 41	07	73		
8	297	57.3	02.0	326	29.5	69	48.1	104	35	13	42	07	34 43	11	71		
9	312	57.5	01.1	340	55.4	69	37.7	104	30	15	43	07	29 45	15	68		
10	327	57.7	-1 00.1	355	21.3	69	27.2	105	20	19	44	06	20 50	22	63		
11	342	57.8	-0 59.1	9	47.3	70	-8 16.6	106	10 N	5 20	5 45	6 06	4 13 53	16 27	60		
12	357	58.0	-0 58.1	24	13.2	69	-8 06.0	106	0	5 20	5 44	6 05	4 06 56	16 33	56		
13	12	58.2	57.1	38	39.1	69	-7 55.3	107	10 S	19	43	04	3 59 60	38	53		
14	27	58.4	56.1	53	05.1	70	44.6	107	20	15	41	03	51 64	44	49		
15	42	58.6	55.1	67	31.0	69	33.8	108	30	10	38	02	43 68	50	45		
16	57	58.7	54.1	81	57.0	70	22.9	109	35	06	36	01	38 70	54	42		
17	72	58.9	-0 53.1	96	23.0	70	-7 12.0	109	40	5 01	5 33	6 00	3 32 73	16 58	40		
18	87	59.1	-0 52.2	110	49.0	70	-7 01.0	110	45	4 55	5 30	5 59	3 26 76	17 03	36		
19	102	59.3	51.2	125	15.0	70	-6 50.0	110	50	47	26	58	18 80	08	33		
20	117	59.5	50.2	139	41.0	70	38.9	111	52	43	23	57	14 82	11	31		
21	132	59.6	49.2	154	07.0	70	27.8	111	54	39	21	57	10 84	14	29		
22	147	59.8	48.2	168	33.0	70	16.6	112	56	34	19	56	06 86	17	27		
23	163	00.0	47.2	182	59.0	70	-6 05.4	112	58	28	16	55	3 01 88	20	25		
24	178	00.2	-0 46.2	197	25.1	71	-5 54.2	112	60 S	4 22	5 12	5 54	2 55 92	17 24	22		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 17 ^m 0		Mag: -4.0 PMG: 14 ^h 14 ^m		Mag: +1.3 PMG: 13 ^h 32 ^m		Mag: -2.4 PMG: 21 ^h 20 ^m		Mag: +0.4 PMG: 4 ^h 32 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	175	14.4	146	42.7	+11 49.8	156	52.1	+7 28.1	39	09.2	+17 45.3	291	51.8	-19 02.6
1	190	16.9	161	42.3	51.0	171	52.8	28.8	54	11.8	45.3	306	54.2	02.6
2	205	19.3	176	42.0	52.1	186	53.6	29.6	69	14.4	45.4	321	56.7	02.6
3	220	21.8	191	41.6	53.3	201	54.3	30.3	84	17.1	45.4	336	59.2	02.6
4	235	24.2	206	41.2	54.5	216	55.0	31.1	99	19.7	45.5	352	01.7	02.6
5	250	26.7	221	40.8	+11 55.7	231	55.7	+7 31.8	114	22.3	+17 45.5	7	04.2	-19 02.6
6	265	29.2	236	40.5	+11 56.9	246	56.4	+7 32.5	129	25.0	+17 45.5	22	06.6	-19 02.6
7	280	31.6	251	40.1	58.0	261	57.1	33.3	144	27.6	45.6	37	09.1	02.5
8	295	34.1	266	39.7	+11 59.2	276	57.9	34.0	159	30.2	45.6	52	11.6	02.5
9	310	36.6	281	39.3	+12 00.4	291	58.6	34.7	174	32.9	45.7	67	14.1	02.5
10	325	39.0	296	38.9	01.6	306	59.3	35.5	189	35.5	45.7	82	16.6	02.5
11	340	41.5	311	38.6	+12 02.7	322	00.0	+7 36.2	204	38.1	+17 45.8	97	19.0	-19 02.5
12	355	44.0	326	38.2	+12 03.9	337	00.7	+7 36.9	219	40.7	+17 45.8	112	21.5	-19 02.5
13	10	46.4	341	37.8	05.1	352	01.5	37.7	234	43.4	45.9	127	24.0	02.5
14	25	48.9	356	37.4	06.3	7	02.2	38.4	249	46.0	45.9	142	26.5	02.5
15	40	51.4	11	37.0	07.4	22	02.9	39.1	264	48.6	46.0	157	29.0	02.5
16	55	53.8	26	36.7	08.6	37	03.6	39.9	279	51.3	46.0	172	31.4	02.5
17	70	56.3	41	36.3	+12 09.8	52	04.3	+7 40.6	294	53.9	+17 46.0	187	33.9	-19 02.4
18	85	58.7	56	35.9	+12 10.9	67	05.1	+7 41.3	309	56.5	+17 46.1	202	36.4	-19 02.4
19	101	01.2	71	35.5	12.1	82	05.8	42.1	324	59.2	46.1	217	38.9	02.4
20	116	03.7	86	35.1	13.3	97	06.5	42.8	340	01.8	46.2	232	41.4	02.4
21	131	06.1	101	34.8	14.5	112	07.2	43.5	355	04.4	46.2	247	43.8	02.4
22	146	08.6	116	34.4	15.6	127	07.9	44.3	10	07.0	46.3	262	46.3	02.4
23	161	11.1	131	34.0	16.8	142	08.6	45.0	25	09.7	46.3	277	48.8	02.4
24	176	13.5	146	33.6	+12 18.0	157	09.4	+7 45.7	40	12.3	+17 46.4	292	51.3	-19 02.4
Dif	—		-4		+12	+7		+7	+26		0	+25		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 8			Edad: 28 ^d 0 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 3 20 ^h : 61 ^h 3 PMG: 11 ^h 16 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	00.2	-0 46.2	197	25.1	-5 54.2	60 N	18 11	18 53	19 43	5 38 22		17 10 92		
1	193	00.4	45.2	211	51.1	42.9 ¹¹³	58	11	50	37	35 25		11 90		
2	208	00.6	44.2	226	17.2	31.5 ¹¹⁴	56	11	48	32	33 26		13 87		
3	223	00.7	43.3	240	43.3	20.1 ¹¹⁴	54	11	46	28	31 28		14 85		
4	238	00.9	42.3	255	09.4	-5 08.7 ¹¹⁴	52	11	44	24	29 30		15 83		
5	253	01.1	-0 41.3	269	35.5	-4 57.2 ¹¹⁵	50	18 11	18 43	19 21	5 27 32		17 16 81		
6	268	01.3	-0 40.3	284	01.6	-4 45.7 ¹¹⁵	45	18 11	18 40	19 14	5 23 36		17 18 77		
7	283	01.5	39.3	298	27.7	34.2 ¹¹⁵	40	11	38	09	20 39		20 73		
8	298	01.6	38.3	312	53.8	22.6 ¹¹⁶	35	11	36	05	17 42		22 70		
9	313	01.8	37.3	327	19.9	-4 11.0 ¹¹⁶	30	11	34	19 02	14 45		23 68		
10	328	02.0	36.3	341	46.1	-3 59.4 ¹¹⁶	20	11	33	18 58	10 49		25 64		
11	343	02.2	-0 35.3	356	12.2	-3 47.7 ¹¹⁷	10 N	18 11	18 32	18 56	5 06 53		17 27 60		
12	358	02.4	-0 34.4	10	38.4	-3 36.0 ¹¹⁷	0	18 11	18 32	18 56	5 02 57		17 29 56		
13	13	02.6	33.4	25	04.5	24.3 ¹¹⁷	10 S	11	32	18 57	4 59 60		31 52		
14	28	02.7	32.4	39	30.7	12.6 ¹¹⁷	20	12	34	19 00	55 64		33 48		
15	43	02.9	31.4	53	56.9	-3 00.8 ¹¹⁸	30	13	37	04	51 68		35 44		
16	58	03.1	30.4	68	23.1	-2 49.0 ¹¹⁸	35	13	38	08	48 71		36 42		
17	73	03.3	-0 29.4	82	49.3	-2 37.2 ¹¹⁸	40	18 14	18 41	19 12	4 45 74		17 38 39		
18	88	03.5	-0 28.4	97	15.5	-2 25.4 ¹¹⁸	45	18 14	18 44	19 18	4 42 77		17 39 36		
19	103	03.6	27.4	111	41.8	13.6 ¹¹⁸	50	15	47	26	38 81		41 32		
20	118	03.8	26.4	126	08.0	-2 01.7 ¹¹⁹	52	16	49	29	36 83		42 30		
21	133	04.0	25.5	140	34.2	-1 49.8 ¹¹⁹	54	16	51	33	34 85		43 28		
22	148	04.2	24.5	155	00.5	37.9 ¹¹⁹	56	17	54	38	32 87		44 26		
23	163	04.4	23.5	169	26.7	26.1 ¹¹⁸	58	17	56	43	29 90		45 24		
24	178	04.6	-0 22.5	183	53.0	-1 14.2 ¹¹⁹	60 S	18 18	18 59	19 49	4 27 92		17 46 21		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 13 ^m 1			Mag: -4.0 PMG: 14 ^h 14 ^m			Mag: +1.3 PMG: 13 ^h 31 ^m			Mag: -2.4 PMG: 21 ^h 15 ^m			Mag: +0.4 PMG: 4 ^h 28 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	176	13.5	146	33.6	+12 18.0	157	09.4	+7 45.7	40	12.3	+17 46.4	292	51.3	-19 02.4	
1	191	16.0	161	33.2	19.1	172	10.1	46.5	55	14.9	46.4	307	53.8	02.4	
2	206	18.5	176	32.8	20.3	187	10.8	47.2	70	17.5	46.4	322	56.3	02.4	
3	221	20.9	191	32.5	21.5	202	11.5	47.9	85	20.2	46.5	337	58.7	02.4	
4	236	23.4	206	32.1	22.6	217	12.2	48.7	100	22.8	46.5	353	01.2	02.3	
5	251	25.9	221	31.7	+12 23.8	232	13.0	+7 49.4	115	25.4	+17 46.6	8	03.7	-19 02.3	
6	266	28.3	236	31.3	+12 25.0	247	13.7	+7 50.1	130	28.0	+17 46.6	23	06.2	-19 02.3	
7	281	30.8	251	30.9	26.1	262	14.4	50.9	145	30.7	46.7	38	08.7	02.3	
8	296	33.2	266	30.5	27.3	277	15.1	51.6	160	33.3	46.7	53	11.2	02.3	
9	311	35.7	281	30.2	28.5	292	15.8	52.3	175	35.9	46.8	68	13.6	02.3	
10	326	38.2	296	29.8	29.6	307	16.5	53.1	190	38.5	46.8	83	16.1	02.3	
11	341	40.6	311	29.4	+12 30.8	322	17.3	+7 53.8	205	41.2	+17 46.8	98	18.6	-19 02.3	
12	356	43.1	326	29.0	+12 31.9	337	18.0	+7 54.5	220	43.8	+17 46.9	113	21.1	-19 02.3	
13	11	45.6	341	28.6	33.1	352	18.7	55.3	235	46.4	46.9	128	23.6	02.3	
14	26	48.0	356	28.2	34.3	7	19.4	56.0	250	49.0	47.0	143	26.1	02.2	
15	41	50.5	11	27.8	35.4	22	20.1	56.7	265	51.7	47.0	158	28.5	02.2	
16	56	53.0	26	27.5	36.6	37	20.9	57.5	280	54.3	47.1	173	31.0	02.2	
17	71	55.4	41	27.1	+12 37.8	52	21.6	+7 58.2	295	56.9	+17 47.1	188	33.5	-19 02.2	
18	86	57.9	56	26.7	+12 38.9	67	22.3	+7 58.9	310	59.5	+17 47.1	203	36.0	-19 02.2	
19	102	00.3	71	26.3	40.1	82	23.0	+7 59.6	326	02.1	47.2	218	38.5	02.2	
20	117	02.8	86	25.9	41.2	97	23.7	+8 00.4	341	04.8	47.2	233	41.0	02.2	
21	132	05.3	101	25.5	42.4	112	24.4	01.1	356	07.4	47.3	248	43.5	02.2	
22	147	07.7	116	25.1	43.5	127	25.2	01.8	11	10.0	47.3	263	45.9	02.2	
23	162	10.2	131	24.7	44.7	142	25.9	02.6	26	12.6	47.4	278	48.4	02.1	
24	177	12.7	146	24.4	+12 45.9	157	26.6	+8 03.3	41	15.2	+17 47.4	293	50.9	-19 02.1	
Dif	—			-4 +12			+7 +7			+26 0			+25 0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 29 ^d 0	PHE { 4 ^h : 61 ^m /3 12 ^h : 61 ^m /2 20 ^h : 61 ^m /2 R°: 56 ^m									
	PMG: 12 ^h 07 ^m 5													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	04.6	-0 22.5	183	53.0	-1 14.2	60 N	4 32	5 21	6 03	6 00	21	18 42	91
1	193	04.7		198	19.3	73 -1 02.2	120 58	37	24	03	6 00	24	41	88
2	208	04.9		212	45.5	72 -0 50.3	119 56	42	26	03	5 59	27	40	86
3	223	05.1		227	11.8	73 38.4	119 54	47	28	03	59	29	39	83
4	238	05.3		241	38.1	73 26.5	119 52	50	30	04	59	31	38	81
5	253	05.5	-0 17.5	256	04.4	73 -0 14.6	119 50	4 54	5 32	6 04	5 59	32	18 37	80
6	268	05.7	-0 16.6	270	30.7	73 -0 02.7	119 45	5 00	5 35	6 04	5 59	36	18 35	76
7	283	05.8		284	57.0	73 +0 09.3	120 40	06	37	04	59	39	33	73
8	298	06.0		299	23.4	74 21.2	119 35	10	39	04	59	42	32	70
9	313	06.2		313	49.7	73 33.1	119 30	13	41	04	59	44	31	67
10	328	06.4		328	16.0	73 45.0	119 20	17	42	04	59	48	29	63
11	343	06.6	-0 11.6	342	42.4	74 +0 56.9	119 10 N	5 19	5 43	6 04	5 59	52	18 27	59
12	358	06.8	-0 10.6	357	08.7	73 +1 08.8	119 0	5 20	5 44	6 04	5 59	55	18 25	56
13	13	06.9	09.6	11	35.1	74 20.6	118 10 S	19	43	04	59	59	23	53
14	28	07.1	08.6	26	01.4	73 32.5	119 20	16	42	04	59	63	21	49
15	43	07.3	07.7	40	27.8	74 44.4	119 30	11	39	03	59	67	19	45
16	58	07.5	06.7	54	54.2	74 +1 56.2	118 35	08	38	03	59	70	18	42
17	73	07.7	-0 05.7	69	20.6	74 +2 08.0	118 40	5 04	5 35	6 02	5 59	73	18 17	39
18	88	07.9	-0 04.7	83	46.9	73 +2 19.8	118 45	4 58	5 32	6 02	5 59	76	18 15	36
19	103	08.0	03.7	98	13.3	74 31.6	118 50	51	29	01	59	80	13	32
20	118	08.2	02.7	112	39.7	74 43.3	117 52	47	27	01	59	82	12	31
21	133	08.4	01.7	127	06.1	74 +2 55.0	117 54	43	25	00	59	84	11	29
22	148	08.6	-0 00.7	141	32.5	74 +3 06.7	117 56	38	23	00	59	87	10	27
23	163	08.8	+0 00.2	155	59.0	75 18.4	117 58	33	20	6 00	59	89	09	24
24	178	09.0	+0 01.2	170	25.4	74 +3 30.1	117 60 S	4 27	5 17	5 59	5 59	92	18 07	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 09 ^m 2		Mag: -4.0 PMG: 14 ^h 15 ^m		Mag: +1.3 PMG: 13 ^h 30 ^m		Mag: -2.4 PMG: 21 ^h 11 ^m		Mag: +0.4 PMG: 4 ^h 24 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	177	12.7	146	24.4	+12 45.9	157	26.6	+8 03.3	41	15.2	+17 47.4	293	50.9	-19 02.1
1	192	15.1	161	24.0	47.0	172	27.3	04.0	56	17.9	47.4	308	53.4	02.1
2	207	17.6	176	23.6	48.2	187	28.0	04.8	71	20.5	47.5	323	55.9	02.1
3	222	20.1	191	23.2	49.3	202	28.8	05.5	86	23.1	47.5	338	58.4	02.1
4	237	22.5	206	22.8	50.5	217	29.5	06.2	101	25.7	47.6	354	00.9	02.1
5	252	25.0	221	22.4	+12 51.6	232	30.2	+8 06.9	116	28.3	+17 47.6	9	03.3	-19 02.1
6	267	27.5	236	22.0	+12 52.8	247	30.9	+8 07.7	131	30.9	+17 47.6	24	05.8	-19 02.1
7	282	29.9	251	21.6	53.9	262	31.6	08.4	146	33.6	47.7	39	08.3	02.1
8	297	32.4	266	21.2	55.1	277	32.3	09.1	161	36.2	47.7	54	10.8	02.1
9	312	34.8	281	20.8	56.2	292	33.1	09.9	176	38.8	47.8	69	13.3	02.0
10	327	37.3	296	20.4	57.4	307	33.8	10.6	191	41.4	47.8	84	15.8	02.0
11	342	39.8	311	20.1	+12 58.5	322	34.5	+8 11.3	206	44.0	+17 47.8	99	18.3	-19 02.0
12	357	42.2	326	19.7	+12 59.7	337	35.2	+8 12.0	221	46.6	+17 47.9	114	20.8	-19 02.0
13	12	44.7	341	19.3	+13 00.8	352	35.9	12.8	236	49.3	47.9	129	23.3	02.0
14	27	47.2	356	18.9	02.0	7	36.6	13.5	251	51.9	48.0	144	25.7	02.0
15	42	49.6	11	18.5	03.1	22	37.4	14.2	266	54.5	48.0	159	28.2	02.0
16	57	52.1	26	18.1	04.3	37	38.1	14.9	281	57.1	48.1	174	30.7	02.0
17	72	54.6	41	17.7	+13 05.4	52	38.8	+8 15.7	296	59.7	+17 48.1	189	33.2	-19 02.0
18	87	57.0	56	17.3	+13 06.6	67	39.5	+8 16.4	312	02.3	+17 48.1	204	35.7	-19 01.9
19	102	59.5	71	16.9	07.7	82	40.2	17.1	327	04.9	48.2	219	38.2	01.9
20	118	01.9	86	16.5	08.9	97	40.9	17.8	342	07.6	48.2	234	40.7	01.9
21	133	04.4	101	16.1	10.0	112	41.7	18.6	357	10.2	48.3	249	43.2	01.9
22	148	06.9	116	15.7	11.2	127	42.4	19.3	12	12.8	48.3	264	45.7	01.9
23	163	09.3	131	15.3	12.3	142	43.1	20.0	27	15.4	48.3	279	48.2	01.9
24	178	11.8	146	14.9	+13 13.5	157	43.8	+8 20.8	42	18.0	+17 48.4	294	50.6	-19 01.9
Dif	—		-4	+12		+7	+7		+26	0		+25		

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: 30 ^d 0 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'7 R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	09.0	+0 01.2	170	25.4	+3 30.1	60 N	18 16	18 58	19 48	6 21 23	20 13 88					
1	193	09.1		184	51.8	41.7 ¹¹⁶	58	16	55	42	24 25	09 86					
2	208	09.3		199	18.2	+3 53.3 ¹¹⁶	56	15	52	37	26 27	06 83					
3	223	09.5		213	44.6	+4 04.8 ¹¹⁵	54	15	50	32	28 29	20 02 81					
4	238	09.7		228	11.1	16.3 ¹¹⁵	52	14	48	28	30 31	19 59 79					
5	253	09.9	+0 06.2	242	37.5	+4 27.8 ¹¹⁵	50	18 14	18 46	19 24	6 31 33	19 57 77					
6	268	10.1	+0 07.2	257	04.0	+4 39.3 ¹¹⁵	45	18 13	18 43	19 17	6 35 37	19 51 74					
7	283	10.2		271	30.4	+4 50.7 ¹¹⁴	40	13	40	11	38 40	46 71					
8	298	10.4		285	56.9	+5 02.1 ¹¹⁴	35	12	37	07	41 42	42 68					
9	313	10.6		300	23.3	13.4 ¹¹³	30	12	36	19 04	43 45	38 66					
10	328	10.8		314	49.8	24.7 ¹¹³	20	11	33	18 59	47 49	32 62					
11	343	11.0	+0 12.1	329	16.2	+5 35.9 ¹¹²	10 N	18 11	18 32	18 56	6 51 52	19 26 59					
12	358	11.2	+0 13.1	343	42.7	+5 47.1 ¹¹²	0	18 11	18 31	18 55	6 54 56	19 21 56					
13	13	11.4		358	09.2	+5 58.3 ¹¹²	10 S	10	31	56	6 58 59	16 52					
14	28	11.5		12	35.7	+6 09.4 ¹¹¹	20	10	32	18 58	7 02 62	10 49					
15	43	11.7		27	02.1	20.4 ¹¹⁰	30	10	34	19 02	06 67	04 45					
16	58	11.9		41	28.6	31.4 ¹¹⁰	35	10	36	05	09 69	19 00 43					
17	73	12.1	+0 18.0	55	55.1	+6 42.4 ¹¹⁰	40	18 10	18 37	19 09	7 12 71	18 56 41					
18	88	12.3	+0 19.0	70	21.6	+6 53.3 ¹⁰⁹	45	18 11	18 40	19 14	7 15 75	18 51 38					
19	103	12.5		84	48.1	+7 04.1 ¹⁰⁸	50	11	43	21	19 79	45 35					
20	118	12.7		99	14.6	14.9 ¹⁰⁸	52	11	45	24	21 81	43 32					
21	133	12.8		113	41.1	25.7 ¹⁰⁸	54	11	46	28	23 83	40 31					
22	148	13.0		128	07.6	36.3 ¹⁰⁶	56	11	48	32	26 84	37 29					
23	163	13.2		142	34.1	47.0 ¹⁰⁷	58	11	51	37	28 87	33 27					
24	178	13.4	+0 24.9	157	00.6	+7 57.5 ¹⁰⁵	60 S	18 12	18 53	19 43	7 31 90	18 29 24					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 05 ^m 2		Mag: -4.0 PMG: 14 ^h 15 ^m		Mag: +1.3 PMG: 13 ^h 28 ^m		Mag: -2.4 PMG: 21 ^h 07 ^m		Mag: +0.4 PMG: 4 ^h 20 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	178	11.8	146	14.9	+13 13.5	157	43.8	+8 20.8	42	18.0	+17 48.4	294	50.6	-19 01.9
1	193	14.3	161	14.5	14.6	172	44.5	21.5	57	20.6	48.4	309	53.1	01.9
2	208	16.7	176	14.1	15.7	187	45.2	22.2	72	23.2	48.5	324	55.6	01.9
3	223	19.2	191	13.7	16.9	202	46.0	22.9	87	25.8	48.5	339	58.1	01.8
4	238	21.7	206	13.3	18.0	217	46.7	23.7	102	28.4	48.5	355	00.6	01.8
5	253	24.1	221	12.9	+13 19.2	232	47.4	+8 24.4	117	31.1	+17 48.6	10	03.1	-19 01.8
6	268	26.6	236	12.5	+13 20.3	247	48.1	+8 25.1	132	33.7	+17 48.6	25	05.6	-19 01.8
7	283	29.1	251	12.1	21.5	262	48.8	25.8	147	36.3	48.6	40	08.1	01.8
8	298	31.5	266	11.7	22.6	277	49.5	26.5	162	38.9	48.7	55	10.6	01.8
9	313	34.0	281	11.3	23.7	292	50.3	27.3	177	41.5	48.7	70	13.1	01.8
10	328	36.4	296	10.9	24.9	307	51.0	28.0	192	44.1	48.8	85	15.6	01.8
11	343	38.9	311	10.5	+13 26.0	322	51.7	+8 28.7	207	46.7	+17 48.8	100	18.1	-19 01.8
12	358	41.4	326	10.1	+13 27.1	337	52.4	+8 29.4	222	49.3	+17 48.8	115	20.5	-19 01.7
13	13	43.8	341	09.7	28.3	352	53.1	30.2	237	51.9	48.9	130	23.0	01.7
14	28	46.3	356	09.3	29.4	7	53.8	30.9	252	54.5	48.9	145	25.5	01.7
15	43	48.8	11	08.9	30.6	22	54.6	31.6	267	57.1	49.0	160	28.0	01.7
16	58	51.2	26	08.5	31.7	37	55.3	32.3	282	59.8	49.0	175	30.5	01.7
17	73	53.7	41	08.1	+13 32.8	52	56.0	+8 33.1	298	02.4	+17 49.0	190	33.0	-19 01.7
18	88	56.2	56	07.7	+13 34.0	67	56.7	+8 33.8	313	05.0	+17 49.1	205	35.5	-19 01.7
19	103	58.6	71	07.3	35.1	82	57.4	34.5	328	07.6	49.1	220	38.0	01.7
20	119	01.1	86	06.9	36.2	97	58.1	35.2	343	10.2	49.1	235	40.5	01.7
21	134	03.5	101	06.5	37.4	112	58.9	35.9	358	12.8	49.2	250	43.0	01.6
22	149	06.0	116	06.1	38.5	127	59.6	36.7	13	15.4	49.2	265	45.5	01.6
23	164	08.5	131	05.7	39.6	143	00.3	37.4	28	18.0	49.3	280	48.0	01.6
24	179	10.9	146	05.3	+13 40.8	158	01.0	+8 38.1	43	20.6	+17 49.3	295	50.5	-19 01.6

Dif	—	-4	+11	+7	+7	+26	0	+25

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 07 ^m 0			Edad: 1 ^d 6 SD: 16'5 PMG: 14 ^h 03 ^m	PHE { 4 ^h : 60'4 12 ^h : 60'2 20 ^h : 59'9 R°: 56 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	13.4	+0	24.9	157	00.6	+7 57.5	60 N	4 25	5 15	5 57	6 44	26	21 41	83	
1	193	13.6		25.9	171	27.1	+8 08.0	58	31	18	57	49	28	35	80	
2	208	13.8		26.9	185	53.7	+7 18.4	56	37	21	58	53	31	29	78	
3	223	13.9		27.9	200	20.2	+7 28.8	54	41	23	59	6 57	33	23	76	
4	238	14.1		28.9	214	46.7	+7 39.1	52	45	25	59	7 01	34	18	75	
5	253	14.3	+0	29.9	229	13.3	+8 49.3	50	4 49	5 27	5 59	7 04	36	21 14	73	
6	268	14.5	+0	30.9	243	39.8	+8 59.5	45	4 57	5 31	6 00	7 12	39	21 05	70	
7	283	14.7		31.9	258	06.3	+9 09.6	40	5 02	34	01	18	42	20 57	67	
8	298	14.9		32.8	272	32.9	+7 19.6	35	07	36	02	23	44	50	66	
9	313	15.1		33.8	286	59.4	+7 29.6	30	10	38	02	28	46	44	64	
10	328	15.2		34.8	301	26.0	+7 39.5	20	15	41	03	36	50	34	60	
11	343	15.4	+0	35.8	315	52.5	+9 49.3	10 N	5 18	5 42	6 03	7 43	53	20 25	58	
12	358	15.6	+0	36.8	330	19.1	+9 59.0	0	5 19	5 43	6 04	7 50	56	20 17	55	
13	13	15.8		37.8	344	45.7	+10 08.7	10 S	19	43	04	7 57	58	20 08	53	
14	28	16.0		38.8	359	12.3	+7 18.3	20	17	42	04	8 04	62	19 59	50	
15	43	16.2		39.7	13	38.8	+7 27.8	30	13	40	04	13	65	49	47	
16	58	16.4		40.7	28	05.4	+7 37.2	35	10	39	04	18	67	43	45	
17	73	16.5	+0	41.7	42	32.0	+10 46.6	40	5 06	5 37	6 04	8 23	70	19 37	43	
18	88	16.7	+0	42.7	56	58.6	+10 55.9	45	5 01	5 35	6 04	8 30	72	19 29	40	
19	103	16.9		43.7	71	25.2	+11 05.1	50	4 54	32	04	38	75	20	37	
20	118	17.1		44.7	85	51.8	+7 14.2	52	51	31	04	42	77	15	37	
21	133	17.3		45.7	100	18.4	+7 23.2	54	47	29	04	46	78	11	34	
22	148	17.5		46.7	114	45.1	+7 32.1	56	43	27	04	50	81	06	32	
23	163	17.7		47.6	129	11.7	+7 41.0	58	38	25	04	8 55	83	19 00	31	
24	178	17.9	+0	48.6	143	38.3	+11 49.8	60 S	4 32	5 22	6 04	9 01	85	18 53	29	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 01 ^m 3		Mag: -4.0 PMG: 14 ^h 16 ^m			Mag: +1.3 PMG: 13 ^h 27 ^m			Mag: -2.4 PMG: 21 ^h 03 ^m			Mag: +0.3 PMG: 4 ^h 16 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	179	10.9	146	05.3	+13 40.8	158	01.0	+8 38.1	43	20.6	+17 49.3	295	50.5	-19 01.6	
1	194	13.4	161	04.9	41.9	173	01.7	38.8	58	23.2	49.3	310	53.0	01.6	
2	209	15.9	176	04.5	43.0	188	02.4	39.6	73	25.8	49.4	325	55.5	01.6	
3	224	18.3	191	04.1	44.1	203	03.2	40.3	88	28.4	49.4	340	58.0	01.6	
4	239	20.8	206	03.7	45.3	218	03.9	41.0	103	31.0	49.4	356	00.5	01.6	
5	254	23.3	221	03.3	+13 46.4	233	04.6	+8 41.7	118	33.6	+17 49.5	11	03.0	-19 01.5	
6	269	25.7	236	02.9	+13 47.5	248	05.3	+8 42.4	133	36.2	+17 49.5	26	05.5	-19 01.5	
7	284	28.2	251	02.5	48.7	263	06.0	43.2	148	38.8	49.6	41	07.9	01.5	
8	299	30.7	266	02.1	49.8	278	06.7	43.9	163	41.4	49.6	56	10.4	01.5	
9	314	33.1	281	01.7	50.9	293	07.4	44.6	178	44.0	49.6	71	12.9	01.5	
10	329	35.6	296	01.3	52.0	308	08.2	45.3	193	46.6	49.7	86	15.4	01.5	
11	344	38.0	311	00.8	+13 53.2	323	08.9	+8 46.0	208	49.2	+17 49.7	101	17.9	-19 01.5	
12	359	40.5	326	00.4	+13 54.3	338	09.6	+8 46.8	223	51.8	+17 49.7	116	20.4	-19 01.5	
13	14	43.0	341	00.0	55.4	353	10.3	47.5	238	54.4	49.8	131	22.9	01.4	
14	29	45.4	355	59.6	56.5	8	11.0	48.2	253	57.0	49.8	146	25.4	01.4	
15	44	47.9	10	59.2	57.7	23	11.7	48.9	268	59.6	49.8	161	27.9	01.4	
16	59	50.4	25	58.8	58.8	38	12.5	49.6	284	02.2	49.9	176	30.4	01.4	
17	74	52.8	40	58.4	+13 59.9	53	13.2	+8 50.4	299	04.8	+17 49.9	191	32.9	-19 01.4	
18	89	55.3	55	58.0	+14 01.0	68	13.9	+8 51.1	314	07.4	+17 50.0	206	35.4	-19 01.4	
19	104	57.8	70	57.6	02.1	83	14.6	51.8	329	10.0	50.0	221	37.9	01.4	
20	120	00.2	85	57.2	03.3	98	15.3	52.5	344	12.6	50.0	236	40.4	01.4	
21	135	02.7	100	56.8	04.4	113	16.0	53.2	359	15.2	50.1	251	42.9	01.3	
22	150	05.1	115	56.3	05.5	128	16.7	53.9	14	17.8	50.1	266	45.4	01.3	
23	165	07.6	130	55.9	06.6	143	17.5	54.7	29	20.4	50.1	281	47.9	01.3	
24	180	10.1	145	55.5	+14 07.7	158	18.2	+8 55.4	44	23.0	+17 50.2	296	50.4	-19 01.3	
Dif	—		-4		+11	+7		+7	+26		0	+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 06 ^m 7			Edad: 2 ^d 6 PHE { 4 ^h : 59'6 12 ^h : 59'3 20 ^h : 59'0 R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	17.9	+0	48.6	143	38.3	+11 49.8	60 N	18 21	19 03	19 54	7 10 31	23 04 74	
1	193	18.0		49.6	158	05.0	77 +11 58.5	58	20	18 59	47	17 33	22 55 72	
2	208	18.2		50.6	172	31.6	76 +12 07.1	56	19	56	41	24 35	47 71	
3	223	18.4		51.6	186	58.3	77 15.6	54	18	54	36	30 37	39 70	
4	238	18.6		52.6	201	24.9	76 24.0	52	18	52	32	35 38	33 68	
5	253	18.8	+0	53.6	215	51.6	77 +12 32.4	50	18 17	18 49	19 28	7 40 40	22 27 68	
6	268	19.0	+0	54.5	230	18.3	77 +12 40.6	45	18 16	18 45	19 20	7 51 42	22 15 65	
7	283	19.2		55.5	244	45.0	77 48.8	40	15	42	14	8 00 44	22 04 64	
8	298	19.3		56.5	259	11.7	77 +12 56.8	35	14	39	09	07 46	21 56 61	
9	313	19.5		57.5	273	38.4	77 +13 04.8	30	13	37	19 05	14 48	48 60	
10	328	19.7		58.5	288	05.1	77 12.7	20	12	34	18 59	26 50	34 59	
11	343	19.9	+0	59.5	302	31.8	77 +13 20.5	10 N	18 11	18 32	18 56	8 36 53	21 23 56	
12	358	20.1	+1	00.5	316	58.6	78 +13 28.2	0	18 10	18 31	18 55	8 46 55	21 12 55	
13	13	20.3		01.4	331	25.3	77 35.8	10 S	09	30	55	8 55 57	21 01 53	
14	28	20.5		02.4	345	52.1	78 43.3	20	09	30	56	9 06 59	20 49 51	
15	43	20.7		03.4	0	18.9	78 50.7	30	08	32	18 59	18 62	36 49	
16	58	20.8		04.4	14	45.7	78 +13 58.0	35	08	33	19 02	25 64	28 48	
17	73	21.0	+1	05.4	29	12.5	78 +14 05.2	40	18 07	18 34	19 06	9 33 65	20 20 46	
18	88	21.2	+1	06.4	43	39.3	78 +14 12.3	45	18 07	18 36	19 10	9 42 68	20 09 45	
19	103	21.4		07.4	58	06.1	78 19.3	50	06	39	16	53 71	19 57 42	
20	118	21.6		08.3	72	32.9	78 26.3	52	06	40	19	9 59 71	52 40	
21	133	21.8		09.3	86	59.8	79 33.1	54	06	41	23	10 04 74	45 40	
22	148	22.0		10.3	101	26.6	78 39.8	56	06	43	27	11 75	38 38	
23	163	22.1		11.3	115	53.5	79 46.4	58	06	45	31	18 77	31 36	
24	178	22.3	+1	12.3	130	20.4	79 +14 53.0	60 S	18 06	18 47	19 36	10 26 79	19 22 34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 57 ^m 4		Mag: -4.0 PMG: 14 ^h 17 ^m		Mag: +1.4 PMG: 13 ^h 26 ^m		Mag: -2.4 PMG: 20 ^h 59 ^m		Mag: +0.3 PMG: 4 ^h 12 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	180	10.1	145	55.5	+14	07.7	158	18.2	+8	55.4	44	23.0	+17	50.2	296	50.4	-19	01.3
1	195	12.5	160	55.1		08.8	173	18.9		56.1	59	25.6		50.2	311	52.9		01.3
2	210	15.0	175	54.7		10.0	188	19.6		56.8	74	28.2		50.2	326	55.4		01.3
3	225	17.5	190	54.3		11.1	203	20.3		57.5	89	30.8		50.3	341	57.9		01.3
4	240	19.9	205	53.9		12.2	218	21.0		58.2	104	33.4		50.3	357	00.4		01.3
5	255	22.4	220	53.5	+14	13.3	233	21.8	+8	59.0	119	36.0	+17	50.3	12	02.9	-19	01.2
6	270	24.9	235	53.0	+14	14.4	248	22.5	+8	59.7	134	38.6	+17	50.4	27	05.4	-19	01.2
7	285	27.3	250	52.6		15.5	263	23.2	+9	00.4	149	41.2		50.4	42	07.9		01.2
8	300	29.8	265	52.2		16.6	278	23.9		01.1	164	43.8		50.4	57	10.4		01.2
9	315	32.3	280	51.8		17.8	293	24.6		01.8	179	46.4		50.5	72	12.9		01.2
10	330	34.7	295	51.4		18.9	308	25.3		02.5	194	49.0		50.5	87	15.4		01.2
11	345	37.2	310	51.0	+14	20.0	323	26.0	+9	03.3	209	51.5	+17	50.5	102	17.9	-19	01.2
12	0	39.6	325	50.6	+14	21.1	338	26.8	+9	04.0	224	54.1	+17	50.6	117	20.4	-19	01.2
13	15	42.1	340	50.1		22.2	353	27.5		04.7	239	56.7		50.6	132	22.9		01.1
14	30	44.6	355	49.7		23.3	8	28.2		05.4	254	59.3		50.6	147	25.4		01.1
15	45	47.0	10	49.3		24.4	23	28.9		06.1	270	01.9		50.7	162	27.9		01.1
16	60	49.5	25	48.9		25.5	38	29.6		06.8	285	04.5		50.7	177	30.4		01.1
17	75	52.0	40	48.5	+14	26.6	53	30.3	+9	07.5	300	07.1	+17	50.7	192	32.9	-19	01.1
18	90	54.4	55	48.1	+14	27.7	68	31.0	+9	08.3	315	09.7	+17	50.8	207	35.4	-19	01.1
19	105	56.9	70	47.6		28.9	83	31.8		09.0	330	12.3		50.8	222	37.9		01.1
20	120	59.4	85	47.2		30.0	98	32.5		09.7	345	14.9		50.8	237	40.4		01.1
21	136	01.8	100	46.8		31.1	113	33.2		10.4	0	17.5		50.9	252	42.9		01.0
22	151	04.3	115	46.4		32.2	128	33.9		11.1	15	20.0		50.9	267	45.4		01.0
23	166	06.8	130	46.0		33.3	143	34.6		11.8	30	22.6		50.9	282	48.0		01.0
24	181	09.2	145	45.5	+14	34.4	158	35.3	+9	12.5	45	25.2	+17	51.0	297	50.5	-19	01.0
Dif	—		-4		+11		+7		+7		+26		0		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG: 12 ^h 06 ^m 4			Edad: 3 ^d 6	PHE { 4 ^h : 58'7 12 ^h : 58'4 20 ^h : 58'1 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	178	22.3	+1	12.3	130	20.4	+14	53.0	60 N	4	18	5	09	5	51	7	41	37		
1	193	22.5		13.3	144	47.3	79	+14	59.4	64	25	12	52		50	40		*** ** *		
2	208	22.7		14.3	159	14.2	79	+15	05.7	63	31	16	53		7	59	41	23 58 62		
3	223	22.9		15.2	173	41.2	80		11.9	62	36	18	54		8	07	42	49 60		
4	238	23.1		16.2	188	08.1	79		18.0	61	40	21	54		13	43		41 61		
5	253	23.3	+1	17.2	202	35.1	80	+15	24.1	61	44	5	23	5	55	8	20	43	23 35 60	
6	268	23.5	+1	18.2	217	02.1	80	+15	30.0	59	53	5	27	5	57	8	33	46	23 20 59	
7	283	23.6		19.2	231	29.1	80		35.8	58	59	31	58		44	47		23 08 58		
8	298	23.8		20.2	245	56.1	80		41.5	57	5	04	33	5	59	8	53	49	22 57 58	
9	313	24.0		21.2	260	23.2	81		47.1	56	08	36	6	00	9	02	49		48 57	
10	328	24.2		22.1	274	50.2	80		52.6	55	13	39	01		16	51		33	55	
11	343	24.4	+1	23.1	289	17.3	81	+15	58.0	54	17	5	41	6	02	9	29	52	22 19 55	
12	358	24.6	+1	24.1	303	44.4	81	+16	03.3	53	18	5	42	6	03	9	41	54	22 07 53	
13	13	24.8		25.1	318	11.6	82		08.5	52	19	43	04		9	52	56		21 54 53	
14	28	25.0		26.1	332	38.7	81		13.6	51	20	17	43	05	10	05	57		40 52	
15	43	25.1		27.1	347	05.9	82		18.6	50	30	14	42	06		20	59		25 50	
16	58	25.3		28.0	1	33.1	82		23.4	48	35	11	41	06		29	59		16 49	
17	73	25.5	+1	29.0	16	00.3	82	+16	28.2	48	40	5	08	5	39	6	06	10	38 61	21 06 48
18	88	25.7	+1	30.0	30	27.5	82	+16	32.9	47	45	5	03	5	38	6	07	10	50 62	20 54 47
19	103	25.9		31.0	44	54.8	83		37.4	45	50	4	57	35	07	11	04	64		39 46
20	118	26.1		32.0	59	22.0	82		41.9	45	52	54	34	08		10	65		32	46
21	133	26.3		33.0	73	49.3	83		46.2	43	54	51	33	08		18	65		25	45
22	148	26.5		34.0	88	16.7	84		50.5	43	56	47	31	08		26	66		16	44
23	163	26.7		34.9	102	44.0	83		54.6	41	58	43	29	09		35	68		20	07 43
24	178	26.8	+1	35.9	117	11.4	84	+16	58.6	40	60 S	4	38	5	27	6	09	11	45 70	19 56 42

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 53 ^m 4		Mag: -4.0 PMG: 14 ^h 17 ^m			Mag: +1.4 PMG: 13 ^h 25 ^m			Mag: -2.4 PMG: 20 ^h 55 ^m			Mag: +0.3 PMG: 4 ^h 08 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	181	09.2	145	45.5	+14	34.4	158	35.3	+9	12.5	45	25.2	+17	51.0	297	50.5	-19	01.0
1	196	11.7	160	45.1		35.5	173	36.0		13.3	60	27.8		51.0	312	53.0		01.0
2	211	14.1	175	44.7		36.6	188	36.8		14.0	75	30.4		51.0	327	55.5		01.0
3	226	16.6	190	44.3		37.7	203	37.5		14.7	90	33.0		51.1	342	58.0		01.0
4	241	19.1	205	43.9		38.8	218	38.2		15.4	105	35.6		51.1	358	00.5		00.9
5	256	21.5	220	43.4	+14	39.9	233	38.9	+9	16.1	120	38.2	+17	51.1	13	03.0	-19	00.9
6	271	24.0	235	43.0	+14	41.0	248	39.6	+9	16.8	135	40.8	+17	51.2	28	05.5	-19	00.9
7	286	26.5	250	42.6		42.1	263	40.3		17.5	150	43.3		51.2	43	08.0		00.9
8	301	28.9	265	42.2		43.2	278	41.0		18.2	165	45.9		51.2	58	10.5		00.9
9	316	31.4	280	41.8		44.3	293	41.8		19.0	180	48.5		51.3	73	13.0		00.9
10	331	33.9	295	41.3		45.4	308	42.5		19.7	195	51.1		51.3	88	15.5		00.9
11	346	36.3	310	40.9	+14	46.5	323	43.2	+9	20.4	210	53.7	+17	51.3	103	18.0	-19	00.9
12	1	38.8	325	40.5	+14	47.6	338	43.9	+9	21.1	225	56.3	+17	51.4	118	20.5	-19	00.8
13	16	41.2	340	40.1		48.7	353	44.6		21.8	240	58.9		51.4	133	23.0		00.8
14	31	43.7	355	39.6		49.8	8	45.3		22.5	256	01.4		51.4	148	25.5		00.8
15	46	46.2	10	39.2		50.9	23	46.0		23.2	271	04.0		51.5	163	28.0		00.8
16	61	48.6	25	38.8		51.9	38	46.7		23.9	286	06.6		51.5	178	30.5		00.8
17	76	51.1	40	38.4	+14	53.0	53	47.5	+9	24.6	301	09.2	+17	51.5	193	33.0	-19	00.8
18	91	53.6	55	37.9	+14	54.1	68	48.2	+9	25.4	316	11.8	+17	51.6	208	35.6	-19	00.8
19	106	56.0	70	37.5		55.2	83	48.9		26.1	331	14.4		51.6	223	38.1		00.7
20	121	58.5	85	37.1		56.3	98	49.6		26.8	346	16.9		51.6	238	40.6		00.7
21	137	01.0	100	36.7		57.4	113	50.3		27.5	1	19.5		51.6	253	43.1		00.7
22	152	03.4	115	36.2		58.5	128	51.0		28.2	16	22.1		51.7	268	45.6		00.7
23	167	05.9	130	35.8	+14	59.6	143	51.7		28.9	31	24.7		51.7	283	48.1		00.7
24	182	08.4	145	35.4	+15	00.7	158	52.5	+9	29.6	46	27.3	+17	51.7	298	50.6	-19	00.7
Dif	—		-4		+11		+7		+7		+26		0		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 06 ^m 1			Edad: 4 ^d 6 PHE { 4 ^h : 57/7 12 ^h : 57/4 20 ^h : 57/1 PMG: 16 ^h 47 ^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	178	26.8	+1 35.9	117	11.4	+16 58.6	40	60 N	18 26	19 08	19 59	8 18 46	0 18 64	
1	193	27.0		131	38.8	+17 02.6	38	58	24	04	52	30 46	0 07 63	
2	208	27.2		146	06.2	06.4	37	56	23	19 01	46	40 47	** ** *	**
3	223	27.4		160	33.7	10.1	36	54	22	18 58	40	49 47	** ** *	**
4	238	27.6		175	01.2	13.7	35	52	21	55	35	8 56 49	** ** *	**
5	253	27.8	+1 40.8	189	28.7	+17 17.2	34	50	18 20	18 53	19 31	9 03 49	** ** *	**
6	268	28.0	+1 41.8	203	56.3	+17 20.6	33	45	18 18	18 48	19 22	9 19 49	** ** *	**
7	283	28.2		218	23.8	23.9	32	40	17	44	16	31 50	** ** *	**
8	298	28.3		232	51.4	27.1	31	35	15	41	10	42 50	23 55 52	**
9	313	28.5		247	19.1	30.2	30	30	14	38	06	9 51 51	45 52	
10	328	28.7		261	46.7	33.2	28	20	12	34	19 00	10 07 52	28 53	
11	343	28.9	+1 46.7	276	14.4	+17 36.0	27	10 N	18 11	18 32	18 56	10 21 53	23 14 52	
12	358	29.1	+1 47.7	290	42.2	+17 38.8	26	0	18 09	18 30	18 54	10 35 52	23 00 52	
13	13	29.3		305	09.9	41.5	25	10 S	08	29	53	10 48 53	22 47 52	
14	28	29.5		319	37.7	44.0	24	20	07	29	54	11 02 54	32 52	
15	43	29.7		334	05.5	46.5	23	30	05	29	57	19 54	15 52	
16	58	29.8		348	33.4	48.8	22	35	05	30	18 59	28 55	22 05 52	
17	73	30.0	+1 52.6	3	01.3	+17 51.0	21	40	18 04	18 31	19 02	11 39 55	21 54 52	
18	88	30.2	+1 53.6	17	29.2	+17 53.2	20	45	18 03	18 32	19 06	11 52 55	21 41 52	
19	103	30.4		31	57.2	55.2	19	50	02	34	12	12 08 56	25 51	
20	118	30.6		46	25.1	57.1	19	52	02	35	15	15 56	18 51	
21	133	30.8		60	53.2	+17 59.0	17	54	01	36	18	23 57	10 50	
22	148	31.0		75	21.2	+18 00.7	16	56	01	38	21	32 57	21 00 51	
23	163	31.2		89	49.3	02.3	15	58	00	39	25	43 57	20 50 50	
24	178	31.4	+1 59.5	104	17.5	+18 03.8	15	60 S	18 00	18 41	19 30	12 55 57	20 38 50	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 49 ^m 5		Mag: -4.0 PMG: 14 ^h 18 ^m		Mag: +1.4 PMG: 13 ^h 24 ^m		Mag: -2.4 PMG: 20 ^h 51 ^m		Mag: +0.3 PMG: 4 ^h 04 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	182	08.4	145	35.4	+15 00.7	158	52.5	+9 29.6	46	27.3	+17 51.7	298	50.6	-19 00.7
1	197	10.8	160	35.0	01.8	173	53.2	30.3	61	29.8	51.8	313	53.1	00.7
2	212	13.3	175	34.5	02.8	188	53.9	31.0	76	32.4	51.8	328	55.6	00.6
3	227	15.7	190	34.1	03.9	203	54.6	31.7	91	35.0	51.8	343	58.1	00.6
4	242	18.2	205	33.7	05.0	218	55.3	32.4	106	37.6	51.9	359	00.6	00.6
5	257	20.7	220	33.2	+15 06.1	233	56.0	+9 33.2	121	40.2	+17 51.9	14	03.1	-19 00.6
6	272	23.1	235	32.8	+15 07.2	248	56.7	+9 33.9	136	42.7	+17 51.9	29	05.7	-19 00.6
7	287	25.6	250	32.4	08.3	263	57.4	34.6	151	45.3	51.9	44	08.2	00.6
8	302	28.1	265	32.0	09.4	278	58.2	35.3	166	47.9	52.0	59	10.7	00.6
9	317	30.5	280	31.5	10.4	293	58.9	36.0	181	50.5	52.0	74	13.2	00.6
10	332	33.0	295	31.1	11.5	308	59.6	36.7	196	53.1	52.0	89	15.7	00.5
11	347	35.5	310	30.7	+15 12.6	324	00.3	+9 37.4	211	55.6	+17 52.1	104	18.2	-19 00.5
12	2	37.9	325	30.2	+15 13.7	339	01.0	+9 38.1	226	58.2	+17 52.1	119	20.7	-19 00.5
13	17	40.4	340	29.8	14.8	354	01.7	38.8	242	00.8	52.1	134	23.2	00.5
14	32	42.9	355	29.4	15.9	9	02.4	39.5	257	03.4	52.2	149	25.7	00.5
15	47	45.3	10	28.9	16.9	24	03.1	40.2	272	05.9	52.2	164	28.2	00.5
16	62	47.8	25	28.5	18.0	39	03.9	40.9	287	08.5	52.2	179	30.8	00.5
17	77	50.2	40	28.1	+15 19.1	54	04.6	+9 41.6	302	11.1	+17 52.2	194	33.3	-19 00.4
18	92	52.7	55	27.6	+15 20.2	69	05.3	+9 42.3	317	13.7	+17 52.3	209	35.8	-19 00.4
19	107	55.2	70	27.2	21.2	84	06.0	43.0	332	16.2	52.3	224	38.3	00.4
20	122	57.6	85	26.8	22.3	99	06.7	43.8	347	18.8	52.3	239	40.8	00.4
21	138	00.1	100	26.3	23.4	114	07.4	44.5	2	21.4	52.4	254	43.3	00.4
22	153	02.6	115	25.9	24.5	129	08.1	45.2	17	24.0	52.4	269	45.8	00.4
23	168	05.0	130	25.5	25.5	144	08.8	45.9	32	26.5	52.4	284	48.3	00.3
24	183	07.5	145	25.0	+15 26.6	159	09.5	+9 46.6	47	29.1	+17 52.4	299	50.8	-19 00.3
Dif	—		-4 +11		+7 +7		+26 0		+25 0		0		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: 5 ^d 6 SD: 15'5 PMG: 17 ^h 40 ^m	PHE { 4 ^h : 56'8 12 ^h : 56'5 20 ^h : 56'3 R°: 51 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	31.4	+1	59.5	104	17.5	+18 03.8	60 N	4 12	5 03	5 45	9 04	54	1 22	53			
1	193	31.5	+2	00.5	118	45.7	05.2	58	19	07	46	16	54	10	53			
2	208	31.7		01.5	133	13.9	06.5	56	25	10	47	27	53	1 00	52			
3	223	31.9		02.5	147	42.1	07.7	54	31	13	49	36	54	0 50	53			
4	238	32.1		03.4	162	10.4	08.8	52	35	16	50	45	53	42	53			
5	253	32.3	+2	04.4	176	38.7	+18 09.9	50	4 40	5 18	5 51	9 52	53	0 35	52			
6	268	32.5	+2	05.4	191	07.1	+18 10.8	45	4 49	5 23	5 53	10 08	53	0 19	52			
7	283	32.7		06.4	205	35.5	11.6	40	4 56	27	54	21	53	0 06	52			
8	298	32.9		07.4	220	04.0	12.2	35	5 01	31	56	32	53	** ** *	**			
9	313	33.1		08.3	234	32.5	12.8	30	05	33	57	42	52	** ** *	**			
10	328	33.2		09.3	249	01.0	13.3	20	12	37	5 59	10 59	52	** ** *	**			
11	343	33.4	+2	10.3	263	29.5	+18 13.7	10 N	5 16	5 40	6 01	11 14	51	** ** *	**			
12	358	33.6	+2	11.3	277	58.2	+18 14.0	0	5 18	5 42	6 02	11 27	52	23 52	50			
13	13	33.8		12.3	292	26.8	14.2	10 S	19	43	04	41	51	39	50			
14	28	34.0		13.2	306	55.5	14.3	20	18	43	05	11 56	50	24	51			
15	43	34.2		14.2	321	24.2	14.3	30	15	43	07	12 13	50	23 07	52			
16	58	34.4		15.2	335	53.0	14.2	35	13	42	08	23	50	22 57	53			
17	73	34.6	+2	16.2	350	21.8	+18 14.0	40	5 10	5 42	6 09	12 34	50	22 46	53			
18	88	34.8	+2	17.2	4	50.7	+18 13.8	45	5 06	5 40	6 09	12 47	49	22 33	54			
19	103	34.9		18.2	19	19.6	13.4	50	5 01	38	11	13 04	48	16	55			
20	118	35.1		19.1	33	48.6	12.9	52	4 58	38	11	11	48	09	55			
21	133	35.3		20.1	48	17.6	12.3	54	55	36	12	20	47	22 00	56			
22	148	35.5		21.1	62	46.6	11.6	56	52	35	12	29	48	21 51	56			
23	163	35.7		22.1	77	15.7	10.8	58	48	34	13	40	47	40	57			
24	178	35.9	+2	23.1	91	44.8	+18 10.0	60 S	4 43	5 32	6 14	13 52	47	21 28	57			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 45 ^m 6			Mag: -4.0 PMG: 14 ^h 19 ^m			Mag: +1.4 PMG: 13 ^h 23 ^m			Mag: -2.4 PMG: 20 ^h 46 ^m			Mag: +0.3 PMG: 4 ^h 00 ^m					
	hG ♈		Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	183	07.5	145	25.0	+15 26.6	159	09.5	+9 46.6	47	29.1	+17 52.4	299	50.8	-19 00.3				
1	198	10.0	160	24.6	27.7	174	10.3	47.3	62	31.7	52.5	314	53.4	00.3				
2	213	12.4	175	24.2	28.8	189	11.0	48.0	77	34.3	52.5	329	55.9	00.3				
3	228	14.9	190	23.7	29.8	204	11.7	48.7	92	36.8	52.5	344	58.4	00.3				
4	243	17.4	205	23.3	30.9	219	12.4	49.4	107	39.4	52.6	0	00.9	00.3				
5	258	19.8	220	22.8	+15 32.0	234	13.1	+9 50.1	122	42.0	+17 52.6	15	03.4	-19 00.3				
6	273	22.3	235	22.4	+15 33.0	249	13.8	+9 50.8	137	44.6	+17 52.6	30	05.9	-19 00.2				
7	288	24.7	250	22.0	34.1	264	14.5	51.5	152	47.1	52.6	45	08.4	00.2				
8	303	27.2	265	21.5	35.2	279	15.2	52.2	167	49.7	52.7	60	11.0	00.2				
9	318	29.7	280	21.1	36.3	294	16.0	52.9	182	52.3	52.7	75	13.5	00.2				
10	333	32.1	295	20.7	37.3	309	16.7	53.6	197	54.8	52.7	90	16.0	00.2				
11	348	34.6	310	20.2	+15 38.4	324	17.4	+9 54.3	212	57.4	+17 52.7	105	18.5	-19 00.2				
12	3	37.1	325	19.8	+15 39.5	339	18.1	+9 55.0	228	00.0	+17 52.8	120	21.0	-19 00.2				
13	18	39.5	340	19.3	40.5	354	18.8	55.7	243	02.5	52.8	135	23.5	00.1				
14	33	42.0	355	18.9	41.6	9	19.5	56.4	258	05.1	52.8	150	26.0	00.1				
15	48	44.5	10	18.5	42.6	24	20.2	57.1	273	07.7	52.9	165	28.6	00.1				
16	63	46.9	25	18.0	43.7	39	20.9	57.8	288	10.3	52.9	180	31.1	00.1				
17	78	49.4	40	17.6	+15 44.8	54	21.6	+9 58.5	303	12.8	+17 52.9	195	33.6	-19 00.1				
18	93	51.8	55	17.1	+15 45.8	69	22.4	+9 59.2	318	15.4	+17 52.9	210	36.1	-19 00.1				
19	108	54.3	70	16.7	46.9	84	23.1	+9 59.9	333	18.0	53.0	225	38.6	-19 00.1				
20	123	56.8	85	16.3	48.0	99	23.8	+10 00.6	348	20.5	53.0	240	41.1	-19 00.0				
21	138	59.2	100	15.8	49.0	114	24.5	01.3	3	23.1	53.0	255	43.6	00.0				
22	154	01.7	115	15.4	50.1	129	25.2	02.0	18	25.7	53.0	270	46.2	00.0				
23	169	04.2	130	14.9	51.1	144	25.9	02.7	33	28.2	53.1	285	48.7	00.0				
24	184	06.6	145	14.5	+15 52.2	159	26.6	+10 03.4	48	30.8	+17 53.1	300	51.2	-19 00.0				
Dif	—			-4			+11			+26			0			+25		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 5			Edad: 6 ^d 6 PHE { 4 ^h : 56'0 12 ^h : 55'7 20 ^h : 55'5 Rº: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	35.9	+2 23.1	91	44.8	+18 10.0	10	60 N	18 31	19 13	20 05	9 58 61	2 15 41	
1	193	36.1	24.0	106	14.0 ¹⁰²	09.0	10	58	29	09	19 57	10 10 59	2 03 42	
2	208	36.3	25.0	120	43.2 ¹⁰²	08.0	10	56	27	05	50	20 59	1 52 43	
3	223	36.4	26.0	135	12.5 ¹⁰³	06.8	12	54	26	19 02	44	30 57	43 44	
4	238	36.6	27.0	149	41.8 ¹⁰³	05.6	12	52	25	18 59	39	38 57	35 44	
5	253	36.8	+2 28.0	164	11.2 ¹⁰⁴	+18 04.2	14	50	18 23	18 56	19 35	10 45 56	1 27 45	
6	268	37.0	+2 28.9	178	40.6 ¹⁰⁴	+18 02.8	15	45	18 21	18 50	19 25	11 01 55	1 11 46	
7	283	37.2	29.9	193	10.0 ¹⁰⁴	+18 01.3	14	40	19	46	18	14 54	0 58 47	
8	298	37.4	30.9	207	39.5 ¹⁰⁵	+17 59.7	16	35	17	42	12	25 53	47 47	
9	313	37.6	31.9	222	09.1 ¹⁰⁶	58.0	17	30	15	39	07	34 53	37 48	
10	328	37.8	32.8	236	38.7 ¹⁰⁶	56.2	18	20	13	35	19 01	11 51 51	21 48	
11	343	38.0	+2 33.8	251	08.3 ¹⁰⁶	+17 54.3	19	10 N	18 11	18 32	18 56	12 05 50	0 06 49	
12	358	38.1	+2 34.8	265	38.0 ¹⁰⁷	+17 52.3	20	0	18 09	18 29	18 53	12 19 49	*** ** *	
13	13	38.3	35.8	280	07.7 ¹⁰⁷	50.2	21	10 S	07	28	52	32 48	*** ** *	
14	28	38.5	36.8	294	37.5 ¹⁰⁸	48.1	21	20	05	27	53	12 46 47	*** ** *	
15	43	38.7	37.7	309	07.3 ¹⁰⁸	45.9	22	30	03	27	55	13 03 45	23 59 53	
16	58	38.9	38.7	323	37.2 ¹⁰⁹	43.5	24	35	02	27	56	13 44	50 54	
17	73	39.1	+2 39.7	338	07.1 ¹⁰⁹	+17 41.1	24	40	18 01	18 28	18 59	13 24 43	23 39 55	
18	88	39.3	+2 40.7	352	37.1 ¹¹⁰	+17 38.6	25	45	17 59	18 29	19 03	13 36 43	23 27 56	
19	103	39.5	41.7	7	07.1 ¹¹⁰	36.0	26	50	58	30	07	52 41	11 58	
20	118	39.7	42.6	21	37.2 ¹¹¹	33.4	26	52	57	31	10	13 59 41	23 04 59	
21	133	39.8	43.6	36	07.3 ¹¹¹	30.6	28	54	56	31	13	14 07 40	22 56 60	
22	148	40.0	44.6	50	37.5 ¹¹²	27.8	28	56	55	32	16	17 38	47 61	
23	163	40.2	45.6	65	07.7 ¹¹²	24.8	30	58	55	33	19	27 38	37 62	
24	178	40.4	+2 46.5	79	38.0 ¹¹³	+17 21.8	30	60 S	17 53	18 35	19 24	14 39 36	22 25 64	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 41 ^m 6		Mag: -4.0 PMG: 14 ^h 19 ^m			Mag: +1.4 PMG: 13 ^h 22 ^m			Mag: -2.4 PMG: 20 ^h 42 ^m			Mag: +0.3 PMG: 3 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	184	06.6	145 14.5	+15 52.2	159 26.6	+10 03.4	48 30.8	+17 53.1	300 51.2	-19 00.0				
1	199	09.1	160 14.0	53.2	174 27.3	04.1	63 33.4	53.1	315 53.7	-19 00.0				
2	214	11.6	175 13.6	54.3	189 28.0	04.8	78 35.9	53.1	330 56.2	-18 59.9				
3	229	14.0	190 13.1	55.4	204 28.8	05.5	93 38.5	53.2	345 58.7	59.9				
4	244	16.5	205 12.7	56.4	219 29.5	06.2	108 41.0	53.2	1 01.3	59.9				
5	259	19.0	220 12.3	+15 57.5	234 30.2	+10 06.9	123 43.6	+17 53.2	16 03.8	-18 59.9				
6	274	21.4	235 11.8	+15 58.5	249 30.9	+10 07.6	138 46.2	+17 53.2	31 06.3	-18 59.9				
7	289	23.9	250 11.4	+15 59.6	264 31.6	08.3	153 48.7	53.3	46 08.8	59.9				
8	304	26.3	265 10.9	+16 00.6	279 32.3	09.0	168 51.3	53.3	61 11.3	59.9				
9	319	28.8	280 10.5	01.7	294 33.0	09.7	183 53.9	53.3	76 13.9	59.8				
10	334	31.3	295 10.0	02.7	309 33.7	10.4	198 56.4	53.3	91 16.4	59.8				
11	349	33.7	310 09.6	+16 03.8	324 34.4	+10 11.1	213 59.0	+17 53.4	106 18.9	-18 59.8				
12	4	36.2	325 09.1	+16 04.8	339 35.1	+10 11.8	229 01.5	+17 53.4	121 21.4	-18 59.8				
13	19	38.7	340 08.7	05.9	354 35.9	12.5	244 04.1	53.4	136 23.9	59.8				
14	34	41.1	355 08.2	06.9	9 36.6	13.2	259 06.7	53.4	151 26.4	59.8				
15	49	43.6	10 07.8	08.0	24 37.3	13.9	274 09.2	53.5	166 29.0	59.7				
16	64	46.1	25 07.3	09.0	39 38.0	14.6	289 11.8	53.5	181 31.5	59.7				
17	79	48.5	40 06.9	+16 10.1	54 38.7	+10 15.3	304 14.4	+17 53.5	196 34.0	-18 59.7				
18	94	51.0	55 06.4	+16 11.1	69 39.4	+10 16.0	319 16.9	+17 53.5	211 36.5	-18 59.7				
19	109	53.5	70 06.0	12.2	84 40.1	16.7	334 19.5	53.6	226 39.0	59.7				
20	124	55.9	85 05.5	13.2	99 40.8	17.4	349 22.0	53.6	241 41.6	59.7				
21	139	58.4	100 05.1	14.3	114 41.5	18.1	4 24.6	53.6	256 44.1	59.7				
22	155	00.8	115 04.6	15.3	129 42.2	18.8	19 27.1	53.6	271 46.6	59.6				
23	170	03.3	130 04.2	16.3	144 43.0	19.5	34 29.7	53.7	286 49.1	59.6				
24	185	05.8	145 03.7	+16 17.4	159 43.7	+10 20.2	49 32.3	+17 53.7	301 51.6	-18 59.6				
Dif	—		-4		+10	+7	+7	+26	0		+25		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 2			Edad: 7 ^d 6 PHE { 4 ^h : 55'3 12 ^h : 55'1 20 ^h : 54'9 R°: 47 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	40.4	+2	46.5	79	38.0	+17 21.8	60 N	4 05	4 56	5 39	10 59	65	2 56	32
1	193	40.6		47.5	94	08.3 ¹¹³	18.7 ³¹	58	13	5 01	41	11 09	64	45	34
2	208	40.8		48.5	108	38.6 ¹¹³	15.6 ³¹	56	19	05	42	19 62		35	35
3	223	41.0		49.5	123	09.0 ¹¹⁴	12.3 ³³	54	25	08	44	27 61		27	36
4	238	41.2		50.5	137	39.5 ¹¹⁵	09.0 ³³	52	30	11	45	35 59		19	37
5	253	41.4	+2	51.4	152	10.0 ¹¹⁵	+17 05.6 ³⁴	50	4 35	5 14	5 46	11 41	59	2 12	38
6	268	41.5	+2	52.4	166	40.6 ¹¹⁶	+17 02.1 ³⁵	45	4 45	5 20	5 49	11 56	56	1 57	40
7	283	41.7		53.4	181	11.2 ¹¹⁶	+16 58.5 ³⁶	40	52	24	51	12 08	55	45	41
8	298	41.9		54.4	195	41.8 ¹¹⁶	54.8 ³⁷	35	4 58	28	53	18 53		34	43
9	313	42.1		55.3	210	12.5 ¹¹⁷	51.1 ³⁷	30	5 03	31	55	27 52		25	44
10	328	42.3		56.3	224	43.3 ¹¹⁸	47.3 ³⁸	20	10	35	5 57	42 50		1 09	46
11	343	42.5	+2	57.3	239	14.1 ¹¹⁸	+16 43.4 ³⁹	10 N	5 14	5 39	6 00	12 55	49	0 55	47
12	358	42.7	+2	58.3	253	44.9 ¹¹⁸	+16 39.4 ⁴⁰	0	5 17	5 41	6 02	13 08	47	0 42	49
13	13	42.9	+2	59.2	268	15.8 ¹¹⁹	35.4 ⁴⁰	10 S	18	43	04	20 45		29	50
14	28	43.1	+3	00.2	282	46.7 ¹¹⁹	31.3 ⁴¹	20	18	44	06	33 44		0 15	51
15	43	43.2		01.2	297	17.7 ¹²⁰	27.1 ⁴²	30	16	44	08	48 42		***	***
16	58	43.4		02.2	311	48.8 ¹²¹	22.8 ⁴³	35	15	44	09	13 57	41	***	***
17	73	43.6	+3	03.2	326	19.8 ¹²⁰	+16 18.5 ⁴³	40	5 12	5 44	6 11	14 07	39	***	***
18	88	43.8	+3	04.1	340	51.0 ¹²²	+16 14.0 ⁴⁵	45	5 09	5 43	6 12	14 19	37	***	***
19	103	44.0		05.1	355	22.1 ¹²¹	09.5 ⁴⁵	50	04	42	14	33 36		***	***
20	118	44.2		06.1	9	53.4 ¹²³	05.0 ⁴⁵	52	5 02	41	15	40 34		***	***
21	133	44.4		07.1	24	24.6 ¹²²	+16 00.3 ⁴⁷	54	4 59	40	15	47 33		23 56	61
22	148	44.6		08.0	38	56.0 ¹²⁴	+15 55.6 ⁴⁷	56	56	39	16	14 55	32	48	63
23	163	44.8		09.0	53	27.3 ¹²³	50.9 ⁴⁷	58	52	38	17	15 05	30	39	65
24	178	44.9	+3	10.0	67	58.7 ¹²⁴	+15 46.0 ⁴⁹	60 S	4 48	5 37	6 19	15 15	29	23 29	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 11 ^h 37 ^m 7		Mag: -4.0 PMG: 14 ^h 20 ^m		Mag: +1.4 PMG: 13 ^h 20 ^m		Mag: -2.4 PMG: 20 ^h 38 ^m		Mag: +0.3 PMG: 3 ^h 52 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	185	05.8	145	03.7	+16 17.4	159	43.7	+10 20.2	49	32.3	+17 53.7	301	51.6	-18 59.6	
1	200	08.2	160	03.3	18.4	174	44.4	20.9	64	34.8	53.7	316	54.2	59.6	
2	215	10.7	175	02.8	19.5	189	45.1	21.6	79	37.4	53.7	331	56.7	59.6	
3	230	13.2	190	02.4	20.5	204	45.8	22.3	94	39.9	53.7	346	59.2	59.6	
4	245	15.6	205	01.9	21.6	219	46.5	23.0	109	42.5	53.8	2	01.7	59.5	
5	260	18.1	220	01.5	+16 22.6	234	47.2	+10 23.6	124	45.0	+17 53.8	17	04.2	-18 59.5	
6	275	20.6	235	01.0	+16 23.6	249	47.9	+10 24.3	139	47.6	+17 53.8	32	06.8	-18 59.5	
7	290	23.0	250	00.6	24.7	264	48.6	25.0	154	50.2	53.8	47	09.3	59.5	
8	305	25.5	265	00.1	25.7	279	49.3	25.7	169	52.7	53.9	62	11.8	59.5	
9	320	27.9	279	59.6	26.7	294	50.1	26.4	184	55.3	53.9	77	14.3	59.5	
10	335	30.4	294	59.2	27.8	309	50.8	27.1	199	57.8	53.9	92	16.9	59.4	
11	350	32.9	309	58.7	+16 28.8	324	51.5	+10 27.8	215	00.4	+17 53.9	107	19.4	-18 59.4	
12	5	35.3	324	58.3	+16 29.8	339	52.2	+10 28.5	230	02.9	+17 54.0	122	21.9	-18 59.4	
13	20	37.8	339	57.8	30.9	354	52.9	29.2	245	05.5	54.0	137	24.4	59.4	
14	35	40.3	354	57.4	31.9	9	53.6	29.9	260	08.0	54.0	152	26.9	59.4	
15	50	42.7	9	56.9	32.9	24	54.3	30.6	275	10.6	54.0	167	29.5	59.4	
16	65	45.2	24	56.5	34.0	39	55.0	31.3	290	13.1	54.0	182	32.0	59.3	
17	80	47.7	39	56.0	+16 35.0	54	55.7	+10 32.0	305	15.7	+17 54.1	197	34.5	-18 59.3	
18	95	50.1	54	55.5	+16 36.0	69	56.4	+10 32.7	320	18.2	+17 54.1	212	37.0	-18 59.3	
19	110	52.6	69	55.1	37.1	84	57.1	33.4	335	20.8	54.1	227	39.6	59.3	
20	125	55.1	84	54.6	38.1	99	57.9	34.0	350	23.4	54.1	242	42.1	59.3	
21	140	57.5	99	54.2	39.1	114	58.6	34.7	5	25.9	54.2	257	44.6	59.3	
22	156	00.0	114	53.7	40.1	129	59.3	35.4	20	28.5	54.2	272	47.1	59.3	
23	171	02.4	129	53.2	41.2	145	00.0	36.1	35	31.0	54.2	287	49.7	59.2	
24	186	04.9	144	52.8	+16 42.2	160	00.7	+10 36.8	50	33.6	+17 54.2	302	52.2	-18 59.2	
Dif	—		-5		+10	+7		+7	+26		0	+25			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 8 ^d 6	PHE { 4 ^h : 54'8 12 ^h : 54'6 20 ^h : 54'5										
	PMG: 12 ^h 04 ^m 9					SD: 14'9			PMG: 20 ^h 06 ^m		R°: 45 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m	
0	178	44.9	+3 10.0	67	58.7	+15 46.0		60 N	18 36	19 18	20 11	12 04	67	3 28 26	
1	193	45.1		82	30.2 ¹²⁵	41.1	49	58	33	13	20 02	13 65		19 27	
2	208	45.3	11.9	97	01.7 ¹²⁵	36.1	50	56	31	09	19 55	21 64		10 30	
3	223	45.5	12.9	111	33.2 ¹²⁵	31.1	50	54	30	05	49	28 62		3 03 3	
4	238	45.7	13.9	126	04.8 ¹²⁶	25.9	52	52	28	19 02	43	34 61		2 56 32	
5	253	45.9	+3 14.9	140	36.5 ¹²⁷	+15 20.7	52	50	18 27	18 59	19 38	12 40	60	2 50 33	
6	268	46.1	+3 15.8	155	08.2 ¹²⁷	+15 15.5	52	45	18 23	18 53	19 28	12 52	58	2 37 35	
7	283	46.3	16.8	169	39.9 ¹²⁷	10.1	54	40	21	48	20	13 03	55	26 37	
8	298	46.5	17.8	184	11.7 ¹²⁸	+15 04.8	53	35	19	44	14	11 54		17 39	
9	313	46.6	18.8	198	43.5 ¹²⁸	+14 59.3	55	30	17	41	09	19 52		2 09 40	
10	328	46.8	19.7	213	15.4 ¹²⁹	53.8	55	20	13	35	19 01	32 50		1 55 42	
11	343	47.0	+3 20.7	227	47.3 ¹²⁹	+14 48.2	56	10 N	18 11	18 32	18 56	13 44	47	1 42 45	
12	358	47.2	+3 21.7	242	19.2 ¹²⁹	+14 42.5	57	0	18 08	18 29	18 53	13 55	45	1 31 46	
13	13	47.4	22.7	256	51.2 ¹³⁰	36.8	57	10 S	06	27	51	14 05	44	19 48	
14	28	47.6	23.6	271	23.3 ¹³¹	31.1	57	20	03	25	51	17 41		1 06 50	
15	43	47.8	24.6	285	55.4 ¹³¹	25.2	59	30	18 01	24	52	30 39		0 52 52	
16	58	48.0	25.6	300	27.5 ¹³¹	19.3	59	35	17 59	24	54	38 37		44 53	
17	73	48.2	+3 26.5	314	59.7 ¹³²	+14 13.4	59	40	17 58	18 24	18 56	14 46	36	0 34 55	
18	88	48.3	+3 27.5	329	31.9 ¹³²	+14 07.3	61	45	17 56	18 25	18 59	14 56	34	0 23 57	
19	103	48.5	28.5	344	04.1 ¹³²	+14 01.3	60	50	53	26	19 03	15 09	30	09 60	
20	118	48.7	29.5	358	36.4 ¹³³	+13 55.1	62	52	52	26	05	14 30		0 03 60	
21	133	48.9	30.4	13	08.8 ¹³⁴	48.9	62	54	51	27	08	20 29		** ** *	
22	148	49.1	31.4	27	41.2 ¹³⁴	42.7	62	56	50	27	10	27 27		** ** *	
23	163	49.3	32.4	42	13.6 ¹³⁴	36.3	64	58	49	28	14	35 25		** ** *	
24	178	49.5	+3 33.4	56	46.0 ¹³⁴	+13 30.0	63	60 S	17 47	18 29	19 17	15 44	23	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 33 ^m 8		Mag: -4.0			Mag: +1.4			Mag: -2.4			Mag: +0.3			
	PMG: 14 ^h 21 ^m		PMG: 13 ^h 19 ^m			PMG: 20 ^h 34 ^m			PMG: 3 ^h 48 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	186	04.9	144	52.8	+16 42.2		160	00.7	+10 36.8	50	33.6	+17 54.2	302	52.2	-18 59.2
1	201	07.4	159	52.3	43.2		175	01.4	37.5	65	36.1	54.2	317	54.7	59.2
2	216	09.8	174	51.9	44.2		190	02.1	38.2	80	38.7	54.3	332	57.2	59.2
3	231	12.3	189	51.4	45.3		205	02.8	38.9	95	41.2	54.3	347	59.8	59.2
4	246	14.8	204	50.9	46.3		220	03.5	39.6	110	43.8	54.3	3	02.3	59.2
5	261	17.2	219	50.5	+16 47.3		235	04.2	+10 40.3	125	46.3	+17 54.3	18	04.8	-18 59.1
6	276	19.7	234	50.0	+16 48.3		250	04.9	+10 40.9	140	48.8	+17 54.3	33	07.3	-18 59.1
7	291	22.2	249	49.5	49.4		265	05.6	41.6	155	51.4	54.4	48	09.9	59.1
8	306	24.6	264	49.1	50.4		280	06.4	42.3	170	53.9	54.4	63	12.4	59.1
9	321	27.1	279	48.6	51.4		295	07.1	43.0	185	56.5	54.4	78	14.9	59.1
10	336	29.6	294	48.2	52.4		310	07.8	43.7	200	59.0	54.4	93	17.4	59.1
11	351	32.0	309	47.7	+16 53.4		325	08.5	+10 44.4	216	01.6	+17 54.4	108	20.0	-18 59.0
12	6	34.5	324	47.2	+16 54.4		340	09.2	+10 45.1	231	04.1	+17 54.5	123	22.5	-18 59.0
13	21	36.9	339	46.8	55.5		355	09.9	45.8	246	06.7	54.5	138	25.0	59.0
14	36	39.4	354	46.3	56.5		10	10.6	46.5	261	09.2	54.5	153	27.6	59.0
15	51	41.9	9	45.8	57.5		25	11.3	47.1	276	11.8	54.5	168	30.1	59.0
16	66	44.3	24	45.4	58.5		40	12.0	47.8	291	14.3	54.5	183	32.6	59.0
17	81	46.8	39	44.9	+16 59.5		55	12.7	+10 48.5	306	16.9	+17 54.6	198	35.1	-18 58.9
18	96	49.3	54	44.4	+17 00.5		70	13.4	+10 49.2	321	19.4	+17 54.6	213	37.7	-18 58.9
19	111	51.7	69	44.0	01.5		85	14.1	49.9	336	21.9	54.6	228	40.2	58.9
20	126	54.2	84	43.5	02.6		100	14.8	50.6	351	24.5	54.6	243	42.7	58.9
21	141	56.7	99	43.0	03.6		115	15.5	51.3	6	27.0	54.6	258	45.2	58.9
22	156	59.1	114	42.6	04.6		130	16.3	52.0	21	29.6	54.7	273	47.8	58.8
23	172	01.6	129	42.1	05.6		145	17.0	52.6	36	32.1	54.7	288	50.3	58.8
24	187	04.0	144	41.6	+17 06.6		160	17.7	+10 53.3	51	34.7	+17 54.7	303	52.8	-18 58.8
Dif	—		-5 +10			+7 +7			+25 0			+25 0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 04 ^m 6			Edad: 9 ^d 6 SD: 14'8 PMG: 20 ^h 51 ^m											
	hG ☉ Dec			hG ☾ Dif Dec Dif											
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	49.5	+3 33.4	56	46.0	+13 30.0	60 N	3 58	4 50	5 33	13 11	69	3 54	21	
1	193	49.7	34.3	71	18.5 ¹³⁵	23.5 ⁶⁵	58	4 06	55	35	18 67		46 24		
2	208	49.8	35.3	85	51.1 ¹³⁶	17.1 ⁶⁴	56	13	4 59	37	25 65		40 24		
3	223	50.0	36.3	100	23.7 ¹³⁶	10.5 ⁶⁶	54	20	5 03	39	30 64		34 26		
4	238	50.2	37.2	114	56.3 ¹³⁶	+13 03.9	52	25	06	40	35 62		28 28		
5	253	50.4	+3 38.2	129	28.9 ¹³⁶	+12 57.3	50	4 30	5 09	5 42	13 40	60	3 23	29	
6	268	50.6	+3 39.2	144	01.6 ¹³⁷	+12 50.6	45	4 41	5 16	5 45	13 50	57	3 12	32	
7	283	50.8	40.2	158	34.4 ¹³⁸	43.8 ⁶⁸	40	49	21	48	13 58	55	3 03	34	
8	298	51.0	41.1	173	07.1 ¹³⁷	37.0 ⁶⁸	35	4 55	25	50	14 05	53	2 56	35	
9	313	51.2	42.1	187	39.9 ¹³⁸	30.2 ⁶⁸	30	5 00	28	52	11 52		49 37		
10	328	51.4	43.1	202	12.8 ¹³⁹	23.2 ⁷⁰	20	08	34	56	22 49		37 40		
11	343	51.5	+3 44.0	216	45.7 ¹³⁹	+12 16.3	10 N	5 13	5 38	5 59	14 31	46	2 27	42	
12	358	51.7	+3 45.0	231	18.6 ¹³⁹	+12 09.3	0	5 17	5 41	6 01	14 40	44	2 17	44	
13	13	51.9	46.0	245	51.5 ¹³⁹	+12 02.2	10 S	18	43	04	49 41		2 07	47	
14	28	52.1	47.0	260	24.5 ¹⁴⁰	+11 55.1	20	19	44	06	14 58	39	1 56	50	
15	43	52.3	47.9	274	57.5 ¹⁴⁰	47.9 ⁷²	30	18	45	09	15 09	35	44 52		
16	58	52.5	48.9	289	30.6 ¹⁴¹	40.7 ⁷²	35	16	46	11	15 34		37 54		
17	73	52.7	+3 49.9	304	03.7 ¹⁴¹	+11 33.5	40	5 14	5 46	6 13	15 22	32	1 29	56	
18	88	52.9	+3 50.8	318	36.8 ¹⁴¹	+11 26.2	45	5 11	5 45	6 15	15 30	30	1 20	58	
19	103	53.0	51.8	333	10.0 ¹⁴²	18.8 ⁷⁴	50	07	45	17	39 28		09 60		
20	118	53.2	52.8	347	43.2 ¹⁴²	11.4 ⁷⁴	52	05	44	18	44 26		1 03	62	
21	133	53.4	53.8	2	16.4 ¹⁴²	+11 04.0	54	03	44	19	49 24		0 57	63	
22	148	53.6	54.7	16	49.6 ¹⁴²	+10 56.5	56	5 00	43	20	15 54	23	51 65		
23	163	53.8	55.7	31	22.9 ¹⁴³	48.9 ⁷⁶	58	4 57	43	22	16 00	21	44 66		
24	178	54.0	+3 56.7	45	56.2 ¹⁴³	+10 41.4	60 S	4 53	5 42	6 23	16 07	19	0 35	69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 29 ^m 8		Mag: -4.0 PMG: 14 ^h 22 ^m		Mag: +1.4 PMG: 13 ^h 18 ^m		Mag: -2.4 PMG: 20 ^h 30 ^m		Mag: +0.3 PMG: 3 ^h 44 ^m					
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'			
0	187	04.0	144	41.6	+17 06.6	160	17.7	+10 53.3	51	34.7	+17 54.7	303	52.8	-18 58.8
1	202	06.5	159	41.2	07.6	175	18.4	54.0	66	37.2	54.7	318	55.4	58.8
2	217	09.0	174	40.7	08.6	190	19.1	54.7	81	39.7	54.7	333	57.9	58.8
3	232	11.4	189	40.2	09.6	205	19.8	55.4	96	42.3	54.8	349	00.4	58.8
4	247	13.9	204	39.8	10.6	220	20.5	56.1	111	44.8	54.8	4	03.0	58.7
5	262	16.4	219	39.3	+17 11.6	235	21.2	+10 56.8	126	47.4	+17 54.8	19	05.5	-18 58.7
6	277	18.8	234	38.8	+17 12.6	250	21.9	+10 57.4	141	49.9	+17 54.8	34	08.0	-18 58.7
7	292	21.3	249	38.3	13.6	265	22.6	58.1	156	52.4	54.8	49	10.5	58.7
8	307	23.8	264	37.9	14.6	280	23.3	58.8	171	55.0	54.8	64	13.1	58.7
9	322	26.2	279	37.4	15.6	295	24.0	+10 59.5	186	57.5	54.9	79	15.6	58.7
10	337	28.7	294	36.9	16.6	310	24.7	+11 00.2	202	00.1	54.9	94	18.1	58.6
11	352	31.2	309	36.4	+17 17.6	325	25.4	+11 00.9	217	02.6	+17 54.9	109	20.7	-18 58.6
12	7	33.6	324	36.0	+17 18.6	340	26.2	+11 01.5	232	05.1	+17 54.9	124	23.2	-18 58.6
13	22	36.1	339	35.5	19.6	355	26.9	02.2	247	07.7	54.9	139	25.7	58.6
14	37	38.5	354	35.0	20.6	10	27.6	02.9	262	10.2	55.0	154	28.3	58.6
15	52	41.0	9	34.6	21.6	25	28.3	03.6	277	12.7	55.0	169	30.8	58.6
16	67	43.5	24	34.1	22.6	40	29.0	04.3	292	15.3	55.0	184	33.3	58.5
17	82	45.9	39	33.6	+17 23.6	55	29.7	+11 05.0	307	17.8	+17 55.0	199	35.9	-18 58.5
18	97	48.4	54	33.1	+17 24.6	70	30.4	+11 05.6	322	20.4	+17 55.0	214	38.4	-18 58.5
19	112	50.9	69	32.7	25.6	85	31.1	06.3	337	22.9	55.0	229	40.9	58.5
20	127	53.3	84	32.2	26.6	100	31.8	07.0	352	25.4	55.1	244	43.4	58.5
21	142	55.8	99	31.7	27.6	115	32.5	07.7	7	28.0	55.1	259	46.0	58.4
22	157	58.3	114	31.2	28.6	130	33.2	08.4	22	30.5	55.1	274	48.5	58.4
23	173	00.7	129	30.7	29.6	145	33.9	09.1	37	33.0	55.1	289	51.0	58.4
24	188	03.2	144	30.3	+17 30.6	160	34.6	+11 09.7	52	35.6	+17 55.1	304	53.6	-18 58.4
Dif	—		-5 +10			+7 +7			+25 0			+25 0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna						
	SD: 16'0 PMG: 12 ^h 04 ^m 2			Edad: 10 ^d 6 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0 SD: 14'7 PMG: 21 ^h 34 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	178	54.0	+3 56.7	45	56.2	+10 41.4	77	60 N	18 40	19 23	20 17	14 20 70	4 15 18					
1	193	54.2		60	29.6 ¹⁴⁴	33.7	77	58	38	18	08	25 67	10 20					
2	208	54.4	58.6	75	03.0 ¹⁴⁴	26.1	76	56	35	13	20 00	30 65	04 22					
3	223	54.5	+3 59.6	89	36.4 ¹⁴⁴	18.4	77	54	33	09	19 53	34 63	4 00 23					
4	238	54.7	+4 00.5	104	09.8 ¹⁴⁴	10.6	78	52	31	06	47	37 62	3 56 25					
5	253	54.9	+4 01.5	118	43.3 ¹⁴⁵	+10 02.8	78	50	18 30	19 02	19 42	14 40 61	3 52 26					
6	268	55.1	+4 02.5	133	16.8 ¹⁴⁵	+9 55.0	78	45	18 26	18 56	19 31	14 47 58	3 44 29					
7	283	55.3	03.4	147	50.3 ¹⁴⁵	47.1	79	40	23	50	22	53 56	37 31					
8	298	55.5	04.4	162	23.8 ¹⁴⁵	39.2	79	35	20	46	16	14 58 54	31 33					
9	313	55.7	05.4	176	57.4 ¹⁴⁶	31.3	79	30	18	42	10	15 03 51	26 35					
10	328	55.9	06.4	191	31.0 ¹⁴⁶	23.3	80	20	14	36	19 02	11 48	17 38					
11	343	56.0	+4 07.3	206	04.6 ¹⁴⁶	+9 15.3	80	10 N	18 11	18 32	18 56	15 17 46	3 09 41					
12	358	56.2	+4 08.3	220	38.3 ¹⁴⁷	+9 07.2	81	0	18 08	18 28	18 52	15 24 43	3 01 44					
13	13	56.4	09.3	235	11.9 ¹⁴⁶	+8 59.1	81	10 S	05	26	50	30 40	2 54 45					
14	28	56.6	10.2	249	45.6 ¹⁴⁷	51.0	81	20	18 02	24	49	37 37	46 48					
15	43	56.8	11.2	264	19.4 ¹⁴⁸	42.8	82	30	17 58	22	50	44 35	36 52					
16	58	57.0	12.2	278	53.1 ¹⁴⁷	34.6	82	35	56	22	51	49 32	31 53					
17	73	57.2	+4 13.1	293	26.9 ¹⁴⁸	+8 26.4	82	40	17 54	18 21	18 53	15 54 30	2 25 55					
18	88	57.4	+4 14.1	308	00.7 ¹⁴⁸	+8 18.1	83	45	17 52	18 21	18 55	16 00 28	2 18 57					
19	103	57.5	15.1	322	34.5 ¹⁴⁸	09.8	83	50	49	21	18 59	07 25	09 61					
20	118	57.7	16.0	337	08.3 ¹⁴⁸	+8 01.4	84	52	48	21	19 01	10 24	05 62					
21	133	57.9	17.0	351	42.2 ¹⁴⁹	+7 53.1	83	54	47	22	03	13 23	2 00 64					
22	148	58.1	18.0	6	16.1 ¹⁴⁹	44.7	84	56	45	22	05	17 21	1 56 65					
23	163	58.3	18.9	20	50.0 ¹⁴⁹	36.2	85	58	43	22	08	21 19	50 67					
24	178	58.5	+4 19.9	35	23.9 ¹⁴⁹	+7 27.8	84	60 S	17 41	18 23	19 11	16 26 17	1 44 69					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 25 ^m 9		Mag: -4.0 PMG: 14 ^h 22 ^m			Mag: +1.4 PMG: 13 ^h 17 ^m			Mag: -2.4 PMG: 20 ^h 26 ^m			Mag: +0.3 PMG: 3 ^h 40 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	'	°	°	'	°	'	°	'				
0	188	03.2	144	30.3	+17	30.6	160	34.6	+11	09.7	52	35.6	+17	55.1	304	53.6	-18	58.4
1	203	05.7	159	29.8		31.6	175	35.3		10.4	67	38.1		55.1	319	56.1		58.4
2	218	08.1	174	29.3		32.6	190	36.0		11.1	82	40.6		55.2	334	58.6		58.4
3	233	10.6	189	28.8		33.6	205	36.7		11.8	97	43.2		55.2	350	01.2		58.3
4	248	13.0	204	28.4		34.5	220	37.4		12.5	112	45.7		55.2	5	03.7		58.3
5	263	15.5	219	27.9	+17	35.5	235	38.2	+11	13.1	127	48.2	+17	55.2	20	06.2	-18	58.3
6	278	18.0	234	27.4	+17	36.5	250	38.9	+11	13.8	142	50.8	+17	55.2	35	08.8	-18	58.3
7	293	20.4	249	26.9		37.5	265	39.6		14.5	157	53.3		55.2	50	11.3		58.3
8	308	22.9	264	26.4		38.5	280	40.3		15.2	172	55.8		55.3	65	13.8		58.3
9	323	25.4	279	26.0		39.5	295	41.0		15.9	187	58.4		55.3	80	16.4		58.2
10	338	27.8	294	25.5		40.5	310	41.7		16.5	203	00.9		55.3	95	18.9		58.2
11	353	30.3	309	25.0	+17	41.4	325	42.4	+11	17.2	218	03.4	+17	55.3	110	21.5	-18	58.2
12	8	32.8	324	24.5	+17	42.4	340	43.1	+11	17.9	233	06.0	+17	55.3	125	24.0	-18	58.2
13	23	35.2	339	24.0		43.4	355	43.8		18.6	248	08.5		55.3	140	26.5		58.2
14	38	37.7	354	23.6		44.4	10	44.5		19.2	263	11.0		55.3	155	29.1		58.1
15	53	40.1	9	23.1		45.4	25	45.2		19.9	278	13.5		55.4	170	31.6		58.1
16	68	42.6	24	22.6		46.3	40	45.9		20.6	293	16.1		55.4	185	34.1		58.1
17	83	45.1	39	22.1	+17	47.3	55	46.6	+11	21.3	308	18.6	+17	55.4	200	36.7	-18	58.1
18	98	47.5	54	21.6	+17	48.3	70	47.3	+11	22.0	323	21.1	+17	55.4	215	39.2	-18	58.1
19	113	50.0	69	21.1		49.3	85	48.0		22.6	338	23.7		55.4	230	41.7		58.1
20	128	52.5	84	20.7		50.3	100	48.7		23.3	353	26.2		55.4	245	44.3		58.0
21	143	54.9	99	20.2		51.2	115	49.4		24.0	8	28.7		55.5	260	46.8		58.0
22	158	57.4	114	19.7		52.2	130	50.1		24.7	23	31.2		55.5	275	49.3		58.0
23	173	59.9	129	19.2		53.2	145	50.8		25.3	38	33.8		55.5	290	51.9		58.0
24	189	02.3	144	18.7	+17	54.1	160	51.5	+11	26.0	53	36.3	+17	55.5	305	54.4	-18	58.0
Dif	—		-5		+10		+7		+7		+25		0		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'0 PMG: 12 ^h 04 ^m 0			Edad: 11 ^d 6 PHE SD: 14'7 PMG: 22 ^h 17 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°							
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m								
0	178	58.5	+4	19.9	35	23.9	+7	27.8	85	60 N	3	51	4	44	5	27	15	30	69	4	33	17
1	193	58.7		20.9	49	57.8 ¹⁴⁹		19.3	86	58	4	00	49	29			32	68		30	18	
2	208	58.9		21.8	64	31.8 ¹⁵⁰		10.7	86	56	07	54	32			35	66		26	21		
3	223	59.0		22.8	79	05.7 ¹⁴⁹	+7	02.2	85	54	14	4	58	34			37	64		23	22	
4	238	59.2		23.8	93	39.7 ¹⁵⁰	+6	53.6	86	52	20	5	02	36			39	63		21	23	
5	253	59.4	+4	24.7	108	13.7 ¹⁵⁰	+6	45.0	86	50	4	26	5	05	5	38	15	41	61	4	18	25
6	268	59.6	+4	25.7	122	47.7 ¹⁵⁰	+6	36.3	87	45	4	37	5	12	5	42	15	45	59	4	13	27
7	283	59.8		26.7	137	21.8 ¹⁵¹		27.6	87	40	45	17	45			49	55		08	30		
8	299	00.0		27.6	151	55.8 ¹⁵⁰		18.9	87	35	52	22	48			52	53		04	32		
9	314	00.2		28.6	166	29.9 ¹⁵¹		10.2	87	30	4	58	26	50			54	52		4	01	34
10	329	00.4		29.6	181	04.0 ¹⁵¹	+6	01.5	87	20	5	06	32	54			15	59	48	3	55	37
11	344	00.5	+4	30.5	195	38.1 ¹⁵¹	+5	52.7	88	10 N	5	12	5	36	5	58	16	03	45	3	50	40
12	359	00.7	+4	31.5	210	12.2 ¹⁵¹	+5	43.9	88	0	5	16	5	40	6	01	16	07	42	3	45	42
13	14	00.9		32.4	224	46.3 ¹⁵¹		35.1	88	10 S	18	43	04			10	40		39	46		
14	29	01.1		33.4	239	20.4 ¹⁵¹		26.2	89	20	19	45	07			14	37		34	48		
15	44	01.3		34.4	253	54.6 ¹⁵²		17.4	88	30	19	47	10			19	33		28	51		
16	59	01.5		35.3	268	28.7 ¹⁵¹	+5	08.5	89	35	18	47	12			21	32		24	54		
17	74	01.7	+4	36.3	283	02.9 ¹⁵²	+4	59.6	89	40	5	16	5	48	6	15	16	24	30	3	20	56
18	89	01.8	+4	37.3	297	37.1 ¹⁵²	+4	50.6	90	45	5	14	5	48	6	17	16	28	27	3	15	58
19	104	02.0		38.2	312	11.2 ¹⁵¹		41.7	89	50	10	48	20			32	24		10	61		
20	119	02.2		39.2	326	45.4 ¹⁵²		32.7	90	52	09	48	21			34	22		07	62		
21	134	02.4		40.2	341	19.6 ¹⁵²		23.7	90	54	06	48	23			36	21		04	64		
22	149	02.6		41.1	355	53.8 ¹⁵²		14.7	90	56	04	47	24			38	20		3	01	66	
23	164	02.8		42.1	10	28.0 ¹⁵²	+4	05.7	90	58	5	01	47	26			40	18		2	57	68
24	179	03.0	+4	43.0	25	02.3 ¹⁵³	+3	56.6	91	60 S	4	58	5	47	6	28	16	43	16	2	53	70

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 11 ^h 22 ^m 0		Mag: -4.0 PMG: 14 ^h 23 ^m			Mag: +1.4 PMG: 13 ^h 16 ^m			Mag: -2.4 PMG: 20 ^h 22 ^m			Mag: +0.3 PMG: 3 ^h 36 ^m							
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	189	02.3	144	18.7	+17	54.1	160	51.5	+11	26.0	53	36.3	+17	55.5	305	54.4	-18	58.0	
1	204	04.8	159	18.2		55.1	175	52.3		26.7	68	38.8		55.5	320	57.0		57.9	
2	219	07.3	174	17.7		56.1	190	53.0		27.4	83	41.3		55.5	335	59.5		57.9	
3	234	09.7	189	17.2		57.1	205	53.7		28.0	98	43.9		55.5	351	02.0		57.9	
4	249	12.2	204	16.8		58.0	220	54.4		28.7	113	46.4		55.6	6	04.6		57.9	
5	264	14.6	219	16.3	+17	59.0	235	55.1	+11	29.4	128	48.9	+17	55.6	21	07.1	-18	57.9	
6	279	17.1	234	15.8	+18	00.0	250	55.8	+11	30.1	143	51.4	+17	55.6	36	09.6	-18	57.9	
7	294	19.6	249	15.3	+18	00.9	265	56.5		30.7	158	54.0		55.6	51	12.2		57.8	
8	309	22.0	264	14.8		01.9	280	57.2		31.4	173	56.5		55.6	66	14.7		57.8	
9	324	24.5	279	14.3		02.9	295	57.9		32.1	188	59.0		55.6	81	17.3		57.8	
10	339	27.0	294	13.8		03.8	310	58.6		32.8	204	01.5		55.6	96	19.8		57.8	
11	354	29.4	309	13.3	+18	04.8	325	59.3	+11	33.4	219	04.1	+17	55.7	111	22.3	-18	57.8	
12	9	31.9	324	12.9	+18	05.8	341	00.0	+11	34.1	234	06.6	+17	55.7	126	24.9	-18	57.7	
13	24	34.4	339	12.4		06.7	356	00.7		34.8	249	09.1		55.7	141	27.4		57.7	
14	39	36.8	354	11.9		07.7	11	01.4		35.5	264	11.6		55.7	156	30.0		57.7	
15	54	39.3	9	11.4		08.7	26	02.1		36.1	279	14.1		55.7	171	32.5		57.7	
16	69	41.7	24	10.9		09.6	41	02.8		36.8	294	16.7		55.7	186	35.0		57.7	
17	84	44.2	39	10.4	+18	10.6	56	03.5	+11	37.5	309	19.2	+17	55.7	201	37.6	-18	57.6	
18	99	46.7	54	09.9	+18	11.5	71	04.2	+11	38.2	324	21.7	+17	55.7	216	40.1	-18	57.6	
19	114	49.1	69	09.4		12.5	86	04.9		38.8	339	24.2		55.8	231	42.7		57.6	
20	129	51.6	84	08.9		13.4	101	05.6		39.5	354	26.7		55.8	246	45.2		57.6	
21	144	54.1	99	08.4		14.4	116	06.3		40.2	9	29.3		55.8	261	47.7		57.6	
22	159	56.5	114	07.9		15.4	131	07.0		40.8	24	31.8		55.8	276	50.3		57.5	
23	174	59.0	129	07.4		16.3	146	07.7		41.5	39	34.3		55.8	291	52.8		57.5	
24	190	01.5	144	06.9	+18	17.3	161	08.4	+11	42.2	54	36.8	+17	55.8	306	55.4	-18	57.5	
Dif	—		-5		+10		+7		+7		+25		0		+25		0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:0 PMG: 12 ^h 03 ^m 7			Edad: 12 ^d 6 PHE { 4 ^h : 54:0 12 ^h : 54:1 20 ^h : 54:1 PMG: 22 ^h 59 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	179	03.0	+4	43.0	25	02.3	+3	56.6	60 N	18 45	19 29	20 23	16 39 71	4 50 15				
1	194	03.1		44.0	39	36.5 ¹⁵²		47.6 ⁹⁰	58	42	23	13	40 69	48 18				
2	209	03.3		45.0	54	10.7 ¹⁵²		38.5 ⁹¹	56	40	18	20 05	41 66	47 19				
3	224	03.5		45.9	68	45.0 ¹⁵³		29.4 ⁹¹	54	37	13	19 57	41 65	45 21				
4	239	03.7		46.9	83	19.2 ¹⁵²		20.3 ⁹¹	52	35	09	51	42 63	44 23				
5	254	03.9	+4	47.9	97	53.5 ¹⁵³	+3	11.1 ⁹²	50	18 33	19 06	19 45	16 42 62	4 43 24				
6	269	04.1	+4	48.8	112	27.7 ¹⁵²	+3	02.0 ⁹¹	45	18 28	18 58	19 34	16 44 58	4 40 27				
7	284	04.3		49.8	127	02.0 ¹⁵³	+2	52.8 ⁹²	40	25	52	25	44 56	38 30				
8	299	04.4		50.7	141	36.2 ¹⁵²		43.7 ⁹¹	35	22	47	17	45 54	36 32				
9	314	04.6		51.7	156	10.5 ¹⁵³		34.5 ⁹²	30	19	43	11	46 52	35 33				
10	329	04.8		52.7	170	44.7 ¹⁵²		25.3 ⁹²	20	14	37	19 02	47 48	32 37				
11	344	05.0	+4	53.6	185	19.0 ¹⁵³	+2	16.1 ⁹²	10 N	18 11	18 32	18 56	16 48 45	4 30 39				
12	359	05.2	+4	54.6	199	53.2 ¹⁵²	+2	06.8 ⁹³	0	18 07	18 28	18 52	16 49 43	4 27 43				
13	14	05.4		55.6	214	27.5 ¹⁵³	+1	57.6 ⁹²	10 S	03	24	49	50 40	25 45				
14	29	05.6		56.5	229	01.7 ¹⁵²		48.4 ⁹²	20	18 00	22	47	51 37	22 48				
15	44	05.7		57.5	243	36.0 ¹⁵³		39.1 ⁹³	30	17 56	20	47	52 34	19 52				
16	59	05.9		58.4	258	10.2 ¹⁵²		29.9 ⁹²	35	54	19	48	53 32	18 53				
17	74	06.1	+4	59.4	272	44.5 ¹⁵³	+1	20.6 ⁹³	40	17 51	18 18	18 49	16 54 29	4 16 55				
18	89	06.3	+5	00.4	287	18.7 ¹⁵²	+1	11.3 ⁹³	45	17 48	18 18	18 51	16 55 27	4 13 59				
19	104	06.5		01.3	301	53.0 ¹⁵³	+1	02.0 ⁹³	50	45	17	54	56 24	11 61				
20	119	06.7		02.3	316	27.2 ¹⁵²	+0	52.8 ⁹²	52	43	17	56	56 23	09 63				
21	134	06.9		03.2	331	01.5 ¹⁵³		43.5 ⁹³	54	42	17	18 58	57 21	08 64				
22	149	07.0		04.2	345	35.7 ¹⁵²		34.2 ⁹³	56	40	17	19 00	58 19	07 66				
23	164	07.2		05.2	0 09.9 ¹⁵²	24.9 ⁹³		24.9 ⁹³	58	38	17	02	58 18	05 68				
24	179	07.4	+5	06.1	14	44.1 ¹⁵²	+0	15.6 ⁹³	60 S	17 35	18 17	19 05	16 59 16	4 03 70				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 18 ^m 0		Mag: -4.0 PMG: 14 ^h 24 ^m			Mag: +1.4 PMG: 13 ^h 15 ^m			Mag: -2.4 PMG: 20 ^h 18 ^m			Mag: +0.3 PMG: 3 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	190	01.5	144	06.9	+18	17.3	161	08.4	+11	42.2	54	36.8	+17	55.8	306	55.4	-18	57.5
1	205	03.9	159	06.4		18.2	176	09.1		42.9	69	39.3		55.8	321	57.9		57.5
2	220	06.4	174	06.0		19.2	191	09.8		43.5	84	41.9		55.8	337	00.4		57.5
3	235	08.9	189	05.5		20.1	206	10.5		44.2	99	44.4		55.9	352	03.0		57.5
4	250	11.3	204	05.0		21.1	221	11.3		44.9	114	46.9		55.9	7	05.5		57.4
5	265	13.8	219	04.5	+18	22.0	236	12.0	+11	45.5	129	49.4	+17	55.9	22	08.1	-18	57.4
6	280	16.2	234	04.0	+18	23.0	251	12.7	+11	46.2	144	51.9	+17	55.9	37	10.6	-18	57.4
7	295	18.7	249	03.5		23.9	266	13.4		46.9	159	54.4		55.9	52	13.2		57.4
8	310	21.2	264	03.0		24.9	281	14.1		47.5	174	57.0		55.9	67	15.7		57.4
9	325	23.6	279	02.5		25.8	296	14.8		48.2	189	59.5		55.9	82	18.2		57.3
10	340	26.1	294	02.0		26.8	311	15.5		48.9	205	02.0		55.9	97	20.8		57.3
11	355	28.6	309	01.5	+18	27.7	326	16.2	+11	49.5	220	04.5	+17	55.9	112	23.3	-18	57.3
12	10	31.0	324	01.0	+18	28.7	341	16.9	+11	50.2	235	07.0	+17	56.0	127	25.9	-18	57.3
13	25	33.5	339	00.5		29.6	356	17.6		50.9	250	09.5		56.0	142	28.4		57.3
14	40	36.0	354	00.0		30.6	11	18.3		51.6	265	12.0		56.0	157	30.9		57.2
15	55	38.4	8	59.5		31.5	26	19.0		52.2	280	14.6		56.0	172	33.5		57.2
16	70	40.9	23	59.0		32.4	41	19.7		52.9	295	17.1		56.0	187	36.0		57.2
17	85	43.3	38	58.5	+18	33.4	56	20.4	+11	53.6	310	19.6	+17	56.0	202	38.6	-18	57.2
18	100	45.8	53	58.0	+18	34.3	71	21.1	+11	54.2	325	22.1	+17	56.0	217	41.1	-18	57.2
19	115	48.3	68	57.5		35.3	86	21.8		54.9	340	24.6		56.0	232	43.7		57.1
20	130	50.7	83	57.0		36.2	101	22.5		55.6	355	27.1		56.0	247	46.2		57.1
21	145	53.2	98	56.5		37.1	116	23.2		56.2	10	29.6		56.0	262	48.8		57.1
22	160	55.7	113	56.0		38.1	131	23.9		56.9	25	32.1		56.1	277	51.3		57.1
23	175	58.1	128	55.5		39.0	146	24.6		57.6	40	34.7		56.1	292	53.8		57.1
24	191	00.6	143	55.0	+18	39.9	161	25.3	+11	58.2	55	37.2	+17	56.1	307	56.4	-18	57.0
Dif	—		-5			+9	+7		+7		+25		0		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 4			Edad: 13 ^d 6 PHE { SD: 14 ^h 7 PMG: 23 ^h 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	07.4	+5 06.1	14	44.1	+0 15.6	60 N	3	43	4	37	5	20	17 50 71
1	194	07.6	07.1	29	18.3 ¹⁵²	+0 06.2 ⁹⁴	58	3	53	43	24	49	68	06 18
2	209	07.8	08.0	43	52.5 ¹⁵²	-0 03.1 ⁹³	56	4	02	48	26	47	67	06 20
3	224	08.0	09.0	58	26.7 ¹⁵²	12.4 ⁹³	54	09	53	29	46	65	06	22
4	239	08.1	10.0	73	00.9 ¹⁵²	21.7 ⁹³	52	15	4	57	31	45	64	07 22
5	254	08.3	+5 10.9	87	35.1 ¹⁵²	-0 31.0 ⁹³	50	4	21	5	00	5	33	17 44 62
6	269	08.5	+5 11.9	102	09.2 ¹⁵¹	-0 40.3 ⁹³	45	4	33	5	08	5	38	17 42 59
7	284	08.7	12.8	116	43.4 ¹⁵²	49.7 ⁹⁴	40	42	14	42	40	57	08	29
8	299	08.9	13.8	131	17.5 ¹⁵¹	-0 59.0 ⁹³	35	49	19	45	39	54	08	32
9	314	09.1	14.7	145	51.7 ¹⁵²	-1 08.3 ⁹³	30	4	55	23	48	38	52	08 34
10	329	09.3	15.7	160	25.8 ¹⁵¹	17.6 ⁹³	20	5	04	30	52	35	49	09 37
11	344	09.4	+5 16.7	174	59.9 ¹⁵¹	-1 26.9 ⁹⁴	10 N	5	11	5	35	5	56	17 33 46
12	359	09.6	+5 17.6	189	34.0 ¹⁵¹	-1 36.3 ⁹³	0	5	15	5	39	6	00	17 32 43
13	14	09.8	18.6	204	08.1 ¹⁵¹	45.6 ⁹³	10 S	18	43	04	30	40	10	46
14	29	10.0	19.5	218	42.1 ¹⁵⁰	-1 54.9 ⁹³	20	20	45	07	28	38	10	49
15	44	10.2	20.5	233	16.2 ¹⁵¹	-2 04.2 ⁹³	30	20	48	12	26	34	11	52
16	59	10.4	21.4	247	50.2 ¹⁵⁰	13.5 ⁹³	35	19	49	14	25	32	11	54
17	74	10.5	+5 22.4	262	24.3 ¹⁵¹	-2 22.8 ⁹³	40	5	18	5	50	6	17	17 23 31
18	89	10.7	+5 23.4	276	58.3 ¹⁵⁰	-2 32.0 ⁹²	45	5	16	5	50	6	20	17 22 28
19	104	10.9	24.3	291	32.2 ¹⁴⁹	41.3 ⁹³	50	13	51	23	20	25	12	62
20	119	11.1	25.3	306	06.2 ¹⁵⁰	50.6 ⁹³	52	12	51	25	19	24	12	64
21	134	11.3	26.2	320	40.2 ¹⁵⁰	-2 59.8 ⁹²	54	10	51	27	18	22	12	65
22	149	11.5	27.2	335	14.1 ¹⁴⁹	-3 09.1 ⁹³	56	08	51	28	17	20	13	66
23	164	11.6	28.1	349	48.0 ¹⁴⁹	18.3 ⁹²	58	06	51	31	16	19	13	68
24	179	11.8	+5 29.1	4	21.9 ¹⁴⁹	-3 27.6 ⁹³	60 S	5	03	5	51	6	33	17 15 16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 14 ^m 1		Mag: -4.0 PMG: 14 ^h 25 ^m		Mag: +1.4 PMG: 13 ^h 14 ^m		Mag: -2.4 PMG: 20 ^h 14 ^m		Mag: +0.3 PMG: 3 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	191	00.6	143	55.0	+18 39.9	161	25.3	+11 58.2	307	56.4
1	206	03.1	158	54.5	40.9	176	26.0	58.9	322	58.9
2	221	05.5	173	54.0	41.8	191	26.7	+11 59.6	338	01.5
3	236	08.0	188	53.5	42.7	206	27.4	+12 00.2	353	04.0
4	251	10.5	203	52.9	43.7	221	28.1	00.9	8	06.6
5	266	12.9	218	52.4	+18 44.6	236	28.8	+12 01.5	23	09.1
6	281	15.4	233	51.9	+18 45.5	251	29.5	+12 02.2	38	11.7
7	296	17.8	248	51.4	46.5	266	30.2	02.9	53	14.2
8	311	20.3	263	50.9	47.4	281	30.9	03.5	68	16.8
9	326	22.8	278	50.4	48.3	296	31.6	04.2	83	19.3
10	341	25.2	293	49.9	49.3	311	32.3	04.9	98	21.8
11	356	27.7	308	49.4	+18 50.2	326	33.0	+12 05.5	113	24.4
12	11	30.2	323	48.9	+18 51.1	341	33.7	+12 06.2	128	26.9
13	26	32.6	338	48.4	52.0	356	34.4	06.9	143	29.5
14	41	35.1	353	47.9	53.0	11	35.1	07.5	158	32.0
15	56	37.6	8	47.4	53.9	26	35.8	08.2	173	34.6
16	71	40.0	23	46.9	54.8	41	36.5	08.8	188	37.1
17	86	42.5	38	46.4	+18 55.7	56	37.2	+12 09.5	203	39.7
18	101	44.9	53	45.8	+18 56.7	71	37.9	+12 10.2	218	42.2
19	116	47.4	68	45.3	57.6	86	38.6	10.8	233	44.8
20	131	49.9	83	44.8	58.5	101	39.3	11.5	248	47.3
21	146	52.3	98	44.3	+18 59.4	116	40.0	12.2	263	49.9
22	161	54.8	113	43.8	+19 00.3	131	40.7	12.8	278	52.4
23	176	57.3	128	43.3	01.2	146	41.4	13.5	293	55.0
24	191	59.7	143	42.8	+19 02.2	161	42.1	+12 14.1	308	57.5
Dif	—		-5		+9	+7		+7	+25	

0	179	07.4	+5 06.1	14	44.1	+0 15.6	60 N	3	43	4	37	5	20	17 50 71	5 05 16
1	194	07.6	07.1	29	18.3 ¹⁵²	+0 06.2 ⁹⁴	58	3	53	43	24	49	68	06 18	
2	209	07.8	08.0	43	52.5 ¹⁵²	-0 03.1 ⁹³	56	4	02	48	26	47	67	06 20	
3	224	08.0	09.0	58	26.7 ¹⁵²	12.4 ⁹³	54	09	53	29	46	65	06	22	
4	239	08.1	10.0	73	00.9 ¹⁵²	21.7 ⁹³	52	15	4	57	31	45	64	07 22	
5	254	08.3	+5 10.9	87	35.1 ¹⁵²	-0 31.0 ⁹³	50	4	21	5	00	5	33	17 44 62	5 07 24
6	269	08.5	+5 11.9	102	09.2 ¹⁵¹	-0 40.3 ⁹³	45	4	33	5	08	5	38	17 42 59	5 07 27
7	284	08.7	12.8	116	43.4 ¹⁵²	49.7 ⁹⁴	40	42	14	42	40	57	08	29	
8	299	08.9	13.8	131	17.5 ¹⁵¹	-0 59.0 ⁹³	35	49	19	45	39	54	08	32	
9	314	09.1	14.7	145	51.7 ¹⁵²	-1 08.3 ⁹³	30	4	55	23	48	38	52	08 34	
10	329	09.3	15.7	160	25.8 ¹⁵¹	17.6 ⁹³	20	5	04	30	52	35	49	09 37	
11	344	09.4	+5 16.7	174	59.9 ¹⁵¹	-1 26.9 ⁹⁴	10 N	5	11	5	35	5	56	17 33 46	5 09 40
12	359	09.6	+5 17.6	189	34.0 ¹⁵¹	-1 36.3 ⁹³	0	5	15	5	39	6	00	17 32 43	5 10 42
13	14	09.8	18.6	204	08.1 ¹⁵¹	45.6 ⁹³	10 S	18	43	04	30	40	10	46	
14	29	10.0	19.5	218	42.1 ¹⁵⁰	-1 54.9 ⁹³	20	20	45	07	28	38	10	49	
15	44	10.2	20.5	233	16.2 ¹⁵¹	-2 04.2 ⁹³	30	20	48	12	26	34	11	52	
16	59	10.4	21.4	247	50.2 ¹⁵⁰	13.5 ⁹³	35	19	49	14	25	32	11	54	
17	74	10.5	+5 22.4	262	24.3 ¹⁵¹	-2 22.8 ⁹³	40	5	18	5	50	6	17	17 23 31	5 11 57
18	89	10.7	+5 23.4	276	58.3 ¹⁵⁰	-2 32.0 ⁹²	45	5	16	5	50	6	20	17 22 28	5 12 58
19	104	10.9	24.3	291	32.2 ¹⁴⁹	41.3 ⁹³	50	13	51	23	20	25	12	62	
20	119	11.1	25.3	306	06.2 ¹⁵⁰	50.6 ⁹³	52	12	51	25	19	24	12	64	
21	134	11.3	26.2	320	40.2 ¹⁵⁰	-2 59.8 ⁹²	54	10	51	27	18	22	12	65	
22	149	11.5	27.2	335	14.1 ¹⁴⁹	-3 09.1 ⁹³	56	08	51	28	17	20	13	66	
23	164	11.6	28.1	349	48.0 ¹⁴⁹	18.3 ⁹²	58	06	51	31	16	19	13	68	
24	179	11.8	+5 29.1	4	21.9 ¹⁴⁹	-3 27.6 ⁹³	60 S	5	03	5	51	6	33	17 15 16	5 13 71

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 03 ^m 1			Edad: 14 ^d 6 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	11.8	+5 29.1	4	21.9	-3 27.6	92	60 N	18 50	19 34	20 29	19 01 72	5 21 18		
1	194	12.0	30.0	18	55.8 ¹⁴⁹	36.8	92	58	47	28	18	18 57 70	24 19		
2	209	12.2	31.0	33	29.7 ¹⁴⁹	46.0	92	56	44	22	09	54 68	26 21		
3	224	12.4	32.0	48	03.5 ¹⁴⁸	-3 55.2	92	54	41	17	20 02	51 66	28 22		
4	239	12.6	32.9	62	37.3 ¹⁴⁸	-4 04.4	92	52	38	13	19 55	49 64	29 25		
5	254	12.7	+5 33.9	77	11.1 ¹⁴⁸	-4 13.5	91	50	18 36	19 09	19 49	18 46 63	5 31 26		
6	269	12.9	+5 34.8	91	44.9 ¹⁴⁸	-4 22.7	92	45	18 31	19 01	19 37	18 41 60	5 34 29		
7	284	13.1	35.8	106	18.6 ¹⁴⁷	31.8	91	40	27	18 54	27	37 57	37 31		
8	299	13.3	36.7	120	52.3 ¹⁴⁷	41.0	92	35	23	49	19	33 55	40 33		
9	314	13.5	37.7	135	26.0 ¹⁴⁷	50.1	91	30	20	44	13	30 53	42 35		
10	329	13.7	38.6	149	59.7 ¹⁴⁷	-4 59.2	91	20	15	37	19 03	24 50	46 38		
11	344	13.8	+5 39.6	164	33.4 ¹⁴⁷	-5 08.2	90	10 N	18 10	18 32	18 56	18 19 48	5 49 41		
12	359	14.0	+5 40.5	179	07.0 ¹⁴⁶	-5 17.3	91	0	18 06	18 27	18 51	18 15 44	5 52 44		
13	14	14.2	41.5	193	40.6 ¹⁴⁶	26.3	90	10 S	18 02	23	48	10 42	56 46		
14	29	14.4	42.4	208	14.2 ¹⁴⁶	35.4	91	20	17 58	20	46	06 39	5 59 49		
15	44	14.6	43.4	222	47.7 ¹⁴⁵	44.4	90	30	53	17	45	18 00 36	6 03 53		
16	59	14.7	44.4	237	21.2 ¹⁴⁵	-5 53.3	89	35	51	16	45	17 57 34	05 55		
17	74	14.9	+5 45.3	251	54.7 ¹⁴⁵	-6 02.3	90	40	17 48	18 15	18 46	17 54 32	6 08 56		
18	89	15.1	+5 46.3	266	28.2 ¹⁴⁵	-6 11.2	89	45	17 45	18 14	18 48	17 50 29	6 10 60		
19	104	15.3	47.2	281	01.6 ¹⁴⁴	20.2	90	50	41	13	50	45 26	14 62		
20	119	15.5	48.2	295	35.0 ¹⁴⁴	29.0	88	52	39	12	51	43 25	16 63		
21	134	15.7	49.1	310	08.4 ¹⁴⁴	37.9	89	54	37	12	53	40 24	17 66		
22	149	15.8	50.1	324	41.8 ¹⁴⁴	46.8	89	56	35	12	55	37 23	19 67		
23	164	16.0	51.0	339	15.1 ¹⁴³	-6 55.6	88	58	32	11	57	35 20	21 70		
24	179	16.2	+5 52.0	353	48.4 ¹⁴³	-7 04.4	88	60 S	17 30	18 11	18 59	17 31 19	6 24 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 10 ^m 2		Mag: -4.0 PMG: 14 ^h 26 ^m		Mag: +1.4 PMG: 13 ^h 13 ^m		Mag: -2.3 PMG: 20 ^h 10 ^m		Mag: +0.3 PMG: 3 ^h 24 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	191	59.7	143	42.8	+19 02.2	161	42.1	+12 14.1	56	37.3	+17 56.3	308	57.5	-18 56.6
1	207	02.2	158	42.3	03.1	176	42.8	14.8	71	39.8	56.3	324	00.1	56.5
2	222	04.7	173	41.8	04.0	191	43.5	15.5	86	42.3	56.3	339	02.6	56.5
3	237	07.1	188	41.2	04.9	206	44.2	16.1	101	44.8	56.3	354	05.2	56.5
4	252	09.6	203	40.7	05.8	221	44.9	16.8	116	47.3	56.3	9	07.7	56.5
5	267	12.1	218	40.2	+19 06.7	236	45.6	+12 17.4	131	49.8	+17 56.3	24	10.3	-18 56.5
6	282	14.5	233	39.7	+19 07.6	251	46.3	+12 18.1	146	52.3	+17 56.3	39	12.8	-18 56.4
7	297	17.0	248	39.2	08.6	266	47.0	18.8	161	54.8	56.3	54	15.4	56.4
8	312	19.4	263	38.7	09.5	281	47.7	19.4	176	57.3	56.3	69	17.9	56.4
9	327	21.9	278	38.2	10.4	296	48.4	20.1	191	59.8	56.3	84	20.5	56.4
10	342	24.4	293	37.6	11.3	311	49.1	20.7	207	02.3	56.4	99	23.0	56.4
11	357	26.8	308	37.1	+19 12.2	326	49.8	+12 21.4	222	04.8	+17 56.4	114	25.6	-18 56.3
12	12	29.3	323	36.6	+19 13.1	341	50.5	+12 22.0	237	07.3	+17 56.4	129	28.1	-18 56.3
13	27	31.8	338	36.1	14.0	356	51.2	22.7	252	09.8	56.4	144	30.7	56.3
14	42	34.2	353	35.6	14.9	11	51.9	23.4	267	12.3	56.4	159	33.2	56.3
15	57	36.7	8	35.1	15.8	26	52.6	24.0	282	14.8	56.4	174	35.8	56.3
16	72	39.2	23	34.5	16.7	41	53.3	24.7	297	17.3	56.4	189	38.3	56.2
17	87	41.6	38	34.0	+19 17.6	56	54.0	+12 25.3	312	19.8	+17 56.4	204	40.9	-18 56.2
18	102	44.1	53	33.5	+19 18.5	71	54.7	+12 26.0	327	22.3	+17 56.4	219	43.4	-18 56.2
19	117	46.6	68	33.0	19.4	86	55.4	26.6	342	24.8	56.4	234	46.0	56.2
20	132	49.0	83	32.5	20.3	101	56.1	27.3	357	27.3	56.4	249	48.5	56.2
21	147	51.5	98	31.9	21.2	116	56.8	28.0	12	29.8	56.4	264	51.1	56.1
22	162	53.9	113	31.4	22.1	131	57.5	28.6	27	32.3	56.4	279	53.6	56.1
23	177	56.4	128	30.9	23.0	146	58.2	29.3	42	34.8	56.4	294	56.2	56.1
24	192	58.9	143	30.4	+19 23.9	161	58.9	+12 29.9	57	37.3	+17 56.4	309	58.7	-18 56.1
Dif	—		-5	+9		+7	+7		+25	0		+26		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: 15 ^d 6 PHE SD: 14'9 PMG: 0 ^h 26 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	16.2	+5	52.0	353	48.4	-7	04.4	60 N	3	36	4	31	5	14
1	194	16.4		52.9	8	21.6 ¹⁴²	13.1	87	58		46	37	18	07	69
2	209	16.6		53.9	22	54.8 ¹⁴²	21.9	88	56		3	55	43	21	02
3	224	16.7		54.8	37	28.0 ¹⁴²	30.6	87	54		4	03	48	24	57
4	239	16.9		55.8	52	01.2 ¹⁴²	39.3	87	52		10	52	27	53	64
5	254	17.1	+5	56.7	66	34.3 ¹⁴¹	-7	47.9	50		4	16	4	56	5
6	269	17.3	+5	57.7	81	07.4 ¹⁴¹	-7	56.6	45		4	29	5	04	5
7	284	17.5		58.6	95	40.4 ¹⁴⁰	-8	05.1	40		38	11	38	34	58
8	299	17.7	+5	59.6	110	13.5 ¹⁴¹	13.7	86	35		46	16	42	28	56
9	314	17.8	+6	00.5	124	46.5 ¹⁴⁰	22.2	85	30		4	53	21	45	23
10	329	18.0		01.5	139	19.4 ¹³⁹	30.7	85	20		5	02	28	51	14
11	344	18.2	+6	02.4	153	52.3 ¹³⁹	-8	39.2	10 N		5	10	5	34	5
12	359	18.4	+6	03.4	168	25.2 ¹³⁹	-8	47.6	0		5	15	5	39	5
13	14	18.6		04.3	182	58.0 ¹³⁸	-8	56.0	10 S		18	43	6	04	52
14	29	18.7		05.3	197	30.8 ¹³⁸	-9	04.4	20		20	46	08	45	41
15	44	18.9		06.2	212	03.6 ¹³⁸	12.7	83	30		21	49	13	36	38
16	59	19.1		07.2	226	36.3 ¹³⁷	21.0	83	35		21	50	16	31	37
17	74	19.3	+6	08.1	241	09.0 ¹³⁷	-9	29.3	40		5	20	5	51	6
18	89	19.5	+6	09.1	255	41.7 ¹³⁷	-9	37.5	45		5	19	5	53	6
19	104	19.6		10.0	270	14.3 ¹³⁶	45.7	82	50		16	54	26	11	30
20	119	19.8		11.0	284	46.9 ¹³⁶	-9	53.8	52		15	54	28	08	28
21	134	20.0		11.9	299	19.4 ¹³⁵	-10	01.9	54		14	55	30	04	27
22	149	20.2		12.9	313	51.9 ¹³⁵	10.0	81	56		12	55	32	18	00
23	164	20.4		13.8	328	24.4 ¹³⁵	18.0	80	58		10	56	35	17	55
24	179	20.5	+6	14.7	342	56.8 ¹³⁴	-10	25.9	60 S		5	08	5	56	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 06 ^m 3		Mag: -4.0 PMG: 14 ^h 26 ^m		Mag: +1.4 PMG: 13 ^h 11 ^m		Mag: -2.3 PMG: 20 ^h 06 ^m		Mag: +0.3 PMG: 3 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	192	58.9	143	30.4	+19	161	58.9	+12	57	37.3
1	208	01.3	158	29.9		176	59.6		72	39.8
2	223	03.8	173	29.3		192	00.3		87	42.3
3	238	06.3	188	28.8		207	01.0		102	44.8
4	253	08.7	203	28.3		222	01.7		117	47.3
5	268	11.2	218	27.8	+19	237	02.4	+12	132	49.7
6	283	13.7	233	27.3	+19	252	03.1	+12	147	52.2
7	298	16.1	248	26.7		267	03.8		162	54.7
8	313	18.6	263	26.2		282	04.5		177	57.2
9	328	21.0	278	25.7		297	05.2		192	59.7
10	343	23.5	293	25.2		312	05.9		208	02.2
11	358	26.0	308	24.6	+19	327	06.6	+12	223	04.7
12	13	28.4	323	24.1	+19	342	07.3	+12	238	07.2
13	28	30.9	338	23.6		357	08.0		253	09.7
14	43	33.4	353	23.1		12	08.7	39.1	268	12.2
15	58	35.8	8	22.5		27	09.4	39.7	283	14.7
16	73	38.3	23	22.0		42	10.1	40.4	298	17.1
17	88	40.8	38	21.5	+19	57	10.7	+12	313	19.6
18	103	43.2	53	21.0	+19	72	11.4	+12	328	22.1
19	118	45.7	68	20.4		87	12.1		343	24.6
20	133	48.2	83	19.9		102	12.8		358	27.1
21	148	50.6	98	19.4		117	13.5		13	29.6
22	163	53.1	113	18.8		132	14.2		28	32.1
23	178	55.5	128	18.3		147	14.9		43	34.6
24	193	58.0	143	17.8	+19	162	15.6	+12	58	37.0
Dif	—		-5	+9		+7	+7		+25	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:0 PMG: 12 ^h 02 ^m 5			Edad: 16 ^d 6 PHE { 4 ^h : 55:0 12 ^h : 55:1 20 ^h : 55:2 PMG: 1 ^h 10 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	179	20.5	+6	14.7	342	56.8	-10	25.9	60 N	18 55	19 39	20 35	21 24	70	5 58	24		
1	194	20.7		15.7	357	29.2 ¹³⁴		33.9 ⁸⁰	58	51	32	24	16	68	6 05	25		
2	209	20.9		16.6	12	01.5 ¹³³		41.8 ⁷⁹	56	48	26	14	09	66	10	28		
3	224	21.1		17.6	26	33.8 ¹³³		49.6 ⁷⁸	54	45	21	20	06	65	16	28		
4	239	21.3		18.5	41	06.0 ¹³²	-10	57.4 ⁷⁸	52	42	17	19	59	64	20	30		
5	254	21.4	+6	19.5	55	38.2 ¹³²	-11	05.2 ⁷⁸	50	18 39	19 12	19 53	20 52	62	6 24	32		
6	269	21.6	+6	20.4	70	10.4 ¹³²	-11	12.9 ⁷⁷	45	18 34	19 04	19 39	20 41	60	6 34	34		
7	284	21.8		21.4	84	42.5 ¹³¹		20.5 ⁷⁶	40	29	18	56	29	32	58	41	37	
8	299	22.0		22.3	99	14.6 ¹³¹		28.1 ⁷⁶	35	25	51	21	24	56	48	38		
9	314	22.1		23.3	113	46.6 ¹³⁰		35.7 ⁷⁶	30	21	46	14	17	55	6 54	40		
10	329	22.3		24.2	128	18.6 ¹³⁰		43.2 ⁷⁵	20	16	38	19	04	20	05	53	7 04	43
11	344	22.5	+6	25.2	142	50.6 ¹³⁰	-11	50.7 ⁷⁵	10 N	18 10	18 32	18 56	19 55	50	7 13	45		
12	359	22.7	+6	26.1	157	22.5 ¹²⁹	-11	58.1 ⁷⁴	0	18 06	18 27	18 51	19 46	48	7 21	47		
13	14	22.9		27.0	171	54.3 ¹²⁸	-12	05.5 ⁷⁴	10 S	18 01	22	47	36	46	30	49		
14	29	23.0		28.0	186	26.2 ¹²⁹		12.8 ⁷³	20	17 56	19	44	26	44	39	51		
15	44	23.2		28.9	200	57.9 ¹²⁷		20.0 ⁷²	30	51	15	43	14	42	49	54		
16	59	23.4		29.9	215	29.6 ¹²⁷		27.2 ⁷²	35	48	13	43	08	40	7 55	56		
17	74	23.6	+6	30.8	230	01.3 ¹²⁷	-12	34.4 ⁷²	40	17 45	18 12	18 43	19 00	39	8 02	58		
18	89	23.8	+6	31.8	244	33.0 ¹²⁷	-12	41.5 ⁷¹	45	17 41	18 10	18 44	18 52	36	8 10	60		
19	104	23.9		32.7	259	04.5 ¹²⁵		48.5 ⁷⁰	50	36	09	46	41	34	19	63		
20	119	24.1		33.6	273	36.1 ¹²⁶	-12	55.5 ⁷⁰	52	34	08	47	36	33	24	63		
21	134	24.3		34.6	288	07.6 ¹²⁵	-13	02.5 ⁷⁰	54	32	07	48	31	31	28	66		
22	149	24.5		35.5	302	39.0 ¹²⁴		09.3 ⁶⁸	56	29	07	50	25	30	34	67		
23	164	24.6		36.5	317	10.4 ¹²⁴		16.1 ⁶⁸	58	27	06	51	18	29	40	68		
24	179	24.8	+6	37.4	331	41.8 ¹²⁴	-13	22.9 ⁶⁸	60 S	17 24	18 05	18 53	18 11	26	8 47	70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 02 ^m 3		Mag: -4.0 PMG: 14 ^h 27 ^m		Mag: +1.4 PMG: 13 ^h 10 ^m		Mag: -2.3 PMG: 20 ^h 02 ^m		Mag: +0.3 PMG: 3 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	193	58.0	143	17.8	+19	45.2	162	15.6	+12	45.6	58	37.0	+17	56.5	311	00.1	-18	55.6
1	209	00.5	158	17.3		46.1	177	16.3		46.2	73	39.5		56.5	326	02.6		55.5
2	224	02.9	173	16.7		46.9	192	17.0		46.9	88	42.0		56.5	341	05.2		55.5
3	239	05.4	188	16.2		47.8	207	17.7		47.5	103	44.5		56.5	356	07.7		55.5
4	254	07.9	203	15.7		48.7	222	18.4		48.2	118	47.0		56.5	11	10.3		55.5
5	269	10.3	218	15.1	+19	49.5	237	19.1	+12	48.8	133	49.5	+17	56.5	26	12.8	-18	55.5
6	284	12.8	233	14.6	+19	50.4	252	19.8	+12	49.5	148	52.0	+17	56.5	41	15.4	-18	55.4
7	299	15.3	248	14.1		51.3	267	20.5		50.1	163	54.4		56.6	56	18.0		55.4
8	314	17.7	263	13.5		52.2	282	21.2		50.8	178	56.9		56.6	71	20.5		55.4
9	329	20.2	278	13.0		53.0	297	21.9		51.4	193	59.4		56.6	86	23.1		55.4
10	344	22.6	293	12.5		53.9	312	22.6		52.1	209	01.9		56.6	101	25.6		55.4
11	359	25.1	308	11.9	+19	54.8	327	23.3	+12	52.7	224	04.4	+17	56.6	116	28.2	-18	55.3
12	14	27.6	323	11.4	+19	55.6	342	24.0	+12	53.4	239	06.9	+17	56.6	131	30.7	-18	55.3
13	29	30.0	338	10.9		56.5	357	24.7		54.0	254	09.3		56.6	146	33.3		55.3
14	44	32.5	353	10.3		57.4	12	25.4		54.7	269	11.8		56.6	161	35.9		55.3
15	59	35.0	8	09.8		58.2	27	26.1		55.3	284	14.3		56.6	176	38.4		55.2
16	74	37.4	23	09.3		59.1	42	26.8		55.9	299	16.8		56.6	191	41.0		55.2
17	89	39.9	38	08.7	+19	59.9	57	27.5	+12	56.6	314	19.3	+17	56.6	206	43.5	-18	55.2
18	104	42.4	53	08.2	+20	00.8	72	28.2	+12	57.2	329	21.8	+17	56.6	221	46.1	-18	55.2
19	119	44.8	68	07.7		01.7	87	28.9		57.9	344	24.2		56.6	236	48.7		55.2
20	134	47.3	83	07.1		02.5	102	29.5		58.5	359	26.7		56.6	251	51.2		55.1
21	149	49.8	98	06.6		03.4	117	30.2		59.2	14	29.2		56.6	266	53.8		55.1
22	164	52.2	113	06.1		04.2	132	30.9	+12	59.8	29	31.7		56.6	281	56.3		55.1
23	179	54.7	128	05.5		05.1	147	31.6	+13	00.5	44	34.2		56.6	296	58.9		55.1
24	194	57.1	143	05.0	+20	05.9	162	32.3	+13	01.1	59	36.6	+17	56.6	312	01.5	-18	55.0
Dif	—		-5		+9		+7		+6		+25		0		+26		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0			Edad: 17 ^d 6 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 5 20 ^h : 55 ^m 7												
	PMG: 12 ^h 02 ^m 2			SD: 15 ^h 1 PMG: 1 ^h 57 ^m R°: 49 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	179	24.8	+6 37.4	331	41.8		-13 22.9		60 N	3 29	4 25	5 08	22 34	67	6 22	29
1	194	25.0		346	13.1 ¹²³		29.6	67	58	40	31	12	24	65	30	31
2	209	25.2		0	44.3 ¹²²		36.2	66	56	49	37	16	15	64	38	32
3	224	25.4		15	15.6 ¹²³		42.8	66	54	3 58	43	19	08	62	44	35
4	239	25.5		29	46.7 ¹²¹		49.3	65	52	4 05	47	22	22	01	61	50
5	254	25.7	+6 42.1	44	17.8 ¹²¹		-13 55.8	65	50	4 11	4 52	5 25	21	54	61	6 56
6	269	25.9	+6 43.1	58	48.9 ¹²¹		-14 02.2	64	45	4 25	5 00	5 30	21	41	58	7 08
7	284	26.1		73	19.9 ¹²⁰		08.5	63	40	35	08	35	30	57	18	40
8	299	26.2		87	50.9 ¹²⁰		14.7	62	35	43	14	39	20	56	26	42
9	314	26.4		102	21.8 ¹¹⁹		20.9	62	30	4 50	19	43	21	12	55	34
10	329	26.6		116	52.7 ¹¹⁹		27.1	62	20	5 01	27	49	20	58	53	47
11	344	26.8	+6 47.8	131	23.5 ¹¹⁸		-14 33.1	60	10 N	5 08	5 33	5 54	20	45	52	7 58
12	359	26.9	+6 48.7	145	54.3 ¹¹⁸		-14 39.1	60	0	5 14	5 38	5 59	20	34	50	8 08
13	14	27.1		160	25.1 ¹¹⁸		45.0	59	10 S	18	43	6 04	22	49	19	51
14	29	27.3		174	55.7 ¹¹⁶		50.9	59	20	21	46	09	20	10	47	30
15	44	27.5		189	26.4 ¹¹⁷		-14 56.7	58	30	22	50	14	19	56	45	43
16	59	27.6		203	57.0 ¹¹⁶		-15 02.4	57	35	22	52	17	48	44	8 51	56
17	74	27.8	+6 53.4	218	27.5 ¹¹⁵		-15 08.1	57	40	5 22	5 53	6 21	19	39	43	9 00
18	89	28.0	+6 54.3	232	58.0 ¹¹⁵		-15 13.6	55	45	5 21	5 55	6 25	19	28	41	9 10
19	104	28.2		247	28.5 ¹¹⁵		19.1	55	50	20	57	29	15	39	22	61
20	119	28.4		261	58.8 ¹¹³		24.6	55	52	19	58	31	09	39	27	63
21	134	28.5		276	29.2 ¹¹⁴		29.9	53	54	17	58	34	19	02	38	34
22	149	28.7		290	59.5 ¹¹³		35.2	53	56	16	5 59	36	18	55	36	41
23	164	28.9	+6 59.0	305	29.7 ¹¹²		40.4	52	58	15	6 00	39	47	35	48	67
24	179	29.1	+7 00.0	319	59.9 ¹¹²		-15 45.6	52	60 S	5 13	6 01	6 43	18	37	34	9 57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 58 ^m 4		Mag: -4.0 PMG: 14 ^h 28 ^m		Mag: +1.4 PMG: 13 ^h 09 ^m		Mag: -2.3 PMG: 19 ^h 58 ^m		Mag: +0.3 PMG: 3 ^h 11 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'			
0	194	57.1	143	05.0	+20 05.9	162	32.3	+13 01.1	59	36.6	+17 56.6			
1	209	59.6	158	04.4		177	33.0		74	39.1	56.6			
2	225	02.1	173	03.9		192	33.7		89	41.6	56.6			
3	240	04.5	188	03.4		207	34.4		104	44.1	56.6			
4	255	07.0	203	02.8		222	35.1		119	46.5	56.6			
5	270	09.5	218	02.3	+20 10.2	237	35.8	+13 04.3	134	49.0	+17 56.6			
6	285	11.9	233	01.8	+20 11.1	252	36.5	+13 05.0	149	51.5	+17 56.6			
7	300	14.4	248	01.2		267	37.2		164	54.0	56.6			
8	315	16.9	263	00.7		282	37.9		179	56.4	56.6			
9	330	19.3	278	00.1		297	38.6		194	58.9	56.6			
10	345	21.8	292	59.6		312	39.3		210	01.4	56.6			
11	0	24.3	307	59.1	+20 15.3	327	40.0	+13 08.2	225	03.9	+17 56.6			
12	15	26.7	322	58.5	+20 16.1	342	40.7	+13 08.8	240	06.4	+17 56.6			
13	30	29.2	337	58.0		357	41.4		255	08.8	56.6			
14	45	31.6	352	57.4		12	42.0		270	11.3	56.6			
15	60	34.1	7	56.9		27	42.7		285	13.8	56.6			
16	75	36.6	22	56.3		42	43.4		300	16.2	56.6			
17	90	39.0	37	55.8	+20 20.4	57	44.1	+13 12.0	315	18.7	+17 56.6			
18	105	41.5	52	55.3	+20 21.2	72	44.8	+13 12.7	330	21.2	+17 56.6			
19	120	44.0	67	54.7		87	45.5		345	23.7	56.6			
20	135	46.4	82	54.2		102	46.2		0	26.1	56.6			
21	150	48.9	97	53.6		117	46.9		15	28.6	56.6			
22	165	51.4	112	53.1		132	47.6		30	31.1	56.6			
23	180	53.8	127	52.5		147	48.3		45	33.6	56.6			
24	195	56.3	142	52.0	+20 26.2	162	49.0	+13 16.5	60	36.0	+17 56.6			
Dif	—		-5		+8	+7		+6	+25		0	+26		0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 01 ^m 9			Edad: 18 ^d 6 PHE { 4 ^h : 55/9 12 ^h : 56/0 20 ^h : 56/2 PMG: 2 ^h 46 ^m R°: 50 ^m					Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m
0	179	29.1	+7 00.0	319	59.9	-15 45.6	50 60 N	19 00	19 44	20 42	23 41	60	6 51	37	
1	194	29.2	+7 00.9	334	30.1 ¹¹²	50.6	58	18 56	37	30	29 59		7 01	39	
2	209	29.4	01.9	349	00.2 ¹¹¹	-15 55.6	50 56	52	31	19	19 58		10 40		
3	224	29.6	02.8	3	30.3 ¹¹¹	-16 00.5	48 54	48	25	11	10 58		19 44		
4	239	29.8	03.7	18	00.3 ¹¹⁰	05.3	48 52	45	20	20 03	23 02	57	26 42		
5	254	29.9	+7 04.7	32	30.2 ¹⁰⁹	-16 10.1	48 50	18 42	19 16	19 56	22 55	57	7 32	43	
6	269	30.1	+7 05.6	47	00.1 ¹⁰⁹	-16 14.8	47 45	18 36	19 06	19 42	22 39	57	7 46	45	
7	284	30.3	06.5	61	30.0 ¹⁰⁹	19.4	46 40	31	18 59	31	27 55		7 58	46	
8	299	30.4	07.5	75	59.8 ¹⁰⁸	23.9	45 35	27	52	23	16 55		8 08	46	
9	314	30.6	08.4	90	29.6 ¹⁰⁸	28.3	44 30	23	47	16	22 07	54	17 47		
10	329	30.8	09.3	104	59.3 ¹⁰⁷	32.7	44 20	16	38	19 04	21 51	53	32 49		
11	344	31.0	+7 10.3	119	29.0 ¹⁰⁷	-16 36.9	42 10 N	18 10	18 32	18 56	21 37	53	8 45	50	
12	359	31.1	+7 11.2	133	58.6 ¹⁰⁶	-16 41.1	42 0	18 05	18 26	18 50	21 24	52	8 57	51	
13	14	31.3	12.1	148	28.2 ¹⁰⁶	45.2	41 10 S	18 00	21	46	21 11	51	9 10	52	
14	29	31.5	13.1	162	57.7 ¹⁰⁵	49.2	40 20	17 55	17	43	20 57	50	23 53		
15	44	31.7	14.0	177	27.2 ¹⁰⁵	53.2	40 30	49	13	41	41 50		38 55		
16	59	31.8	15.0	191	56.7 ¹⁰⁵	-16 57.0	38 35	45	11	40	32 49		47 55		
17	74	32.0	+7 15.9	206	26.1 ¹⁰⁴	-17 00.8	38 40	17 42	18 09	18 40	20 22	48	9 57	56	
18	89	32.2	+7 16.8	220	55.4 ¹⁰³	-17 04.4	36 45	17 37	18 07	18 41	20 09	48	10 09	57	
19	104	32.4	17.8	235	24.7 ¹⁰³	08.0	36 50	32	05	42	19 54	47	23 59		
20	119	32.5	18.7	249	54.0 ¹⁰³	11.5	35 52	30	04	43	48 45		30 59		
21	134	32.7	19.6	264	23.2 ¹⁰²	14.9	34 54	27	03	43	40 45		37 60		
22	149	32.9	20.6	278	52.4 ¹⁰²	18.3	34 56	24	02	45	31 45		46 61		
23	164	33.0	21.5	293	21.5 ¹⁰¹	21.5	32 58	21	18 01	46	22 43		10 55	62	
24	179	33.2	+7 22.4	307	50.6 ¹⁰¹	-17 24.6	31 60 S	17 18	17 59	18 47	19 11	42	11 06	63	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 54 ^m 5		Mag: -4.0 PMG: 14 ^h 29 ^m		Mag: +1.4 PMG: 13 ^h 08 ^m		Mag: -2.3 PMG: 19 ^h 54 ^m		Mag: +0.3 PMG: 3 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	195	56.3	142 52.0	+20 26.2	162 49.0	+13 16.5	60 36.0	+17 56.6	313 03.0	-18 54.5
1	210	58.7	157 51.4	27.1	177 49.7	17.1	75 38.5	56.6	328 05.5	54.5
2	226	01.2	172 50.9	27.9	192 50.4	17.8	90 41.0	56.6	343 08.1	54.5
3	241	03.7	187 50.3	28.7	207 51.1	18.4	105 43.4	56.6	358 10.6	54.4
4	256	06.1	202 49.8	29.5	222 51.8	19.1	120 45.9	56.6	13 13.2	54.4
5	271	08.6	217 49.2	+20 30.4	237 52.4	+13 19.7	135 48.4	+17 56.6	28 15.8	-18 54.4
6	286	11.1	232 48.7	+20 31.2	252 53.1	+13 20.3	150 50.8	+17 56.6	43 18.3	-18 54.4
7	301	13.5	247 48.2	32.0	267 53.8	21.0	165 53.3	56.5	58 20.9	54.4
8	316	16.0	262 47.6	32.9	282 54.5	21.6	180 55.8	56.5	73 23.5	54.3
9	331	18.5	277 47.1	33.7	297 55.2	22.2	195 58.2	56.5	88 26.0	54.3
10	346	20.9	292 46.5	34.5	312 55.9	22.9	211 00.7	56.5	103 28.6	54.3
11	1	23.4	307 46.0	+20 35.3	327 56.6	+13 23.5	226 03.2	+17 56.5	118 31.2	-18 54.3
12	16	25.9	322 45.4	+20 36.2	342 57.3	+13 24.1	241 05.6	+17 56.5	133 33.7	-18 54.2
13	31	28.3	337 44.9	37.0	357 58.0	24.8	256 08.1	56.5	148 36.3	54.2
14	46	30.8	352 44.3	37.8	12 58.7	25.4	271 10.6	56.5	163 38.9	54.2
15	61	33.2	7 43.8	38.6	27 59.4	26.1	286 13.0	56.5	178 41.4	54.2
16	76	35.7	22 43.2	39.5	43 00.1	26.7	301 15.5	56.5	193 44.0	54.1
17	91	38.2	37 42.6	+20 40.3	58 00.8	+13 27.3	316 18.0	+17 56.5	208 46.6	-18 54.1
18	106	40.6	52 42.1	+20 41.1	73 01.4	+13 28.0	331 20.4	+17 56.5	223 49.1	-18 54.1
19	121	43.1	67 41.5	41.9	88 02.1	28.6	346 22.9	56.5	238 51.7	54.1
20	136	45.6	82 41.0	42.7	103 02.8	29.2	1 25.4	56.5	253 54.3	54.1
21	151	48.0	97 40.4	43.5	118 03.5	29.9	16 27.8	56.5	268 56.8	54.0
22	166	50.5	112 39.9	44.4	133 04.2	30.5	31 30.3	56.5	283 59.4	54.0
23	181	53.0	127 39.3	45.2	148 04.9	31.1	46 32.8	56.5	299 02.0	54.0
24	196	55.4	142 38.8	+20 46.0	163 05.6	+13 31.8	61 35.2	+17 56.5	314 04.5	-18 54.0
Dif	—		-6	+8	+7	+6	+25	0	+26	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 01 ^m 6			Edad: 19 ^d 6 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 PMG: 3 ^h 36 ^m R°: 52 ^m															
	hG ☉	Dec		hG ☾	Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	33.2	+7	22.4	307	50.6	-17	24.6	31	60 N	3	21	4	18	5	02	**	**	**
1	194	33.4		23.3	322	19.6		27.7	100	58	33	25		07		**	**	**	
2	209	33.6		24.3	336	48.6		30.7	30	56	43	32		11		**	**	**	
3	224	33.7		25.2	351	17.6		33.5	28	54	3	52	38	14		**	**	**	
4	239	33.9		26.1	5	46.5		36.3	28	52	4	00	43	18		23	59	53	
5	254	34.1	+7	27.1	20	15.3	98	-17	39.0	27	50	4	07	4	47	5	23	52	52
6	269	34.3	+7	28.0	34	44.1	98	-17	41.6	26	45	4	21	4	57	5	23	36	52
7	284	34.4		28.9	49	12.9	98		44.1	25	40	32	5	04	32		22	53	
8	299	34.6		29.9	63	41.7	98		46.5	24	35	40	11	37			11	53	
9	314	34.8		30.8	78	10.4	97		48.8	23	30	48	16	40		23	01	53	
10	329	34.9		31.7	92	39.0	96		51.0	22	20	4	59	25	47		22	44	54
11	344	35.1	+7	32.7	107	07.6	96	-17	53.2	22	10 N	5	07	5	32	5	22	30	53
12	359	35.3	+7	33.6	121	36.2	96	-17	55.2	20	0	5	13	5	38	5	22	16	53
13	14	35.5		34.5	136	04.8	96		57.1	19	10 S	18	42	6	04		22	02	54
14	29	35.6		35.5	150	33.2	94	-17	58.9	18	20	21	47	09		21	47	54	
15	44	35.8		36.4	165	01.7	95	-18	00.7	18	30	23	51	15			31	53	
16	59	36.0		37.3	179	30.1	94		02.3	16	35	24	53	19			21	54	
17	74	36.1	+7	38.2	193	58.5	94	-18	03.9	16	40	5	24	5	55	6	23	10	53
18	89	36.3	+7	39.2	208	26.9	94	-18	05.3	14	45	5	24	5	58	6	20	57	53
19	104	36.5		40.1	222	55.2	93		06.6	13	50	23	6	00	32		41	54	
20	119	36.6		41.0	237	23.4	92		07.9	13	52	22	01	35			33	54	
21	134	36.8		42.0	251	51.7	93		09.0	11	54	21	02	38			25	54	
22	149	37.0		42.9	266	19.9	92		10.1	11	56	20	03	40			16	54	
23	164	37.2		43.8	280	48.0	91		11.0	9	58	19	04	44			20	05	54
24	179	37.3	+7	44.7	295	16.2	92	-18	11.9	9	60 S	5	17	6	05	6	19	53	54

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 10 ^h 50 ^m 5		Mag: -4.0 PMG: 14 ^h 30 ^m			Mag: +1.4 PMG: 13 ^h 07 ^m			Mag: -2.3 PMG: 19 ^h 50 ^m			Mag: +0.2 PMG: 3 ^h 03 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	196	55.4	142	38.8	+20	46.0	163	05.6	+13	31.8	61	35.2	+17	56.5		
1	211	57.9	157	38.2		46.8	178	06.3		32.4	76	37.7		56.5		
2	227	00.4	172	37.7		47.6	193	07.0		33.0	91	40.2		56.5		
3	242	02.8	187	37.1		48.4	208	07.7		33.7	106	42.6		56.5		
4	257	05.3	202	36.6		49.2	223	08.4		34.3	121	45.1		56.5		
5	272	07.7	217	36.0	+20	50.0	238	09.1	+13	34.9	136	47.5	+17	56.5		
6	287	10.2	232	35.4	+20	50.8	253	09.7	+13	35.6	151	50.0	+17	56.5		
7	302	12.7	247	34.9		51.6	268	10.4		36.2	166	52.5		56.5		
8	317	15.1	262	34.3		52.5	283	11.1		36.8	181	54.9		56.5		
9	332	17.6	277	33.8		53.3	298	11.8		37.4	196	57.4		56.5		
10	347	20.1	292	33.2		54.1	313	12.5		38.1	211	59.8		56.5		
11	2	22.5	307	32.7	+20	54.9	328	13.2	+13	38.7	227	02.3	+17	56.4		
12	17	25.0	322	32.1	+20	55.7	343	13.9	+13	39.3	242	04.8	+17	56.4		
13	32	27.5	337	31.5		56.5	358	14.6		40.0	257	07.2		56.4		
14	47	29.9	352	31.0		57.3	13	15.3		40.6	272	09.7		56.4		
15	62	32.4	7	30.4		58.1	28	16.0		41.2	287	12.1		56.4		
16	77	34.8	22	29.9		58.9	43	16.6		41.9	302	14.6		56.4		
17	92	37.3	37	29.3	+20	59.7	58	17.3	+13	42.5	317	17.0	+17	56.4		
18	107	39.8	52	28.7	+21	00.5	73	18.0	+13	43.1	332	19.5	+17	56.4		
19	122	42.2	67	28.2		01.3	88	18.7		43.7	347	22.0		56.4		
20	137	44.7	82	27.6		02.0	103	19.4		44.4	2	24.4		56.4		
21	152	47.2	97	27.1		02.8	118	20.1		45.0	17	26.9		56.4		
22	167	49.6	112	26.5		03.6	133	20.8		45.6	32	29.3		56.4		
23	182	52.1	127	25.9		04.4	148	21.5		46.3	47	31.8		56.4		
24	197	54.6	142	25.4	+21	05.2	163	22.2	+13	46.9	62	34.2	+17	56.4		
Dif	—		-6			+8	+7		+6		+25		0		+26	

0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 01 ^m 4			Edad: 20 ^d 6 PHE { 4 ^h : 57/0 12 ^h : 57/2 20 ^h : 57/4 PMG: 4 ^h 28 ^m R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	37.3	+7 44.7	295	16.2	-18 11.9	7	60 N	19 05	19 50	20 48	0 41 51	8 16 59	
1	194	37.5	45.7	309	44.3	12.6	6	58	19 00	42	35	28 52	28 59	
2	209	37.7	46.6	324	12.3	13.2	6	56	18 56	35	25	17 52	39 59	
3	224	37.8	47.5	338	40.3	13.8	6	54	52	29	15	0 08 52	49 58	
4	239	38.0	48.4	353	08.3	14.2	4	52	49	24	07	** ** *	8 57 58	
5	254	38.2	+7 49.4	7	36.3	14.6	4	50	18 45	19 19	20 00	** ** *	9 05 57	
6	269	38.3	+7 50.3	22	04.2	14.8	2	45	18 39	19 09	19 45	** ** *	9 21 57	
7	284	38.5	51.2	36	32.1	14.9	1	40	33	19 01	34	** ** *	34 57	
8	299	38.7	52.1	51	00.0	14.9	0	35	28	18 54	25	** ** *	46 56	
9	314	38.9	53.1	65	27.8	14.9	0	30	24	48	17	23 54 51	9 56 55	
10	329	39.0	54.0	79	55.6	14.7	2	20	17	39	19 05	38 52	10 13 55	
11	344	39.2	+7 54.9	94	23.4	14.4	3	10 N	18 10	18 32	18 56	23 23 53	10 27 55	
12	359	39.4	+7 55.8	108	51.2	14.0	4	0	18 05	18 26	18 50	23 09 55	10 41 54	
13	14	39.5	56.8	123	18.9	13.5	5	10 S	17 59	20	45	22 56 55	10 55 53	
14	29	39.7	57.7	137	46.6	12.9	6	20	53	15	41	41 56	11 10 53	
15	44	39.9	58.6	152	14.3	12.2	7	30	47	11	38	24 58	27 52	
16	59	40.0	+7 59.5	166	41.9	11.4	8	35	43	08	38	15 58	36 52	
17	74	40.2	+8 00.5	181	09.5	10.5	9	40	17 39	18 06	18 37	22 03 60	11 48 51	
18	89	40.4	+8 01.4	195	37.1	09.5	10	45	17 34	18 03	18 37	21 50 61	12 01 50	
19	104	40.5	02.3	210	04.7	08.3	12	50	28	18 00	38	35 61	17 49	
20	119	40.7	03.2	224	32.2	07.1	12	52	25	17 59	38	27 62	24 49	
21	134	40.9	04.2	238	59.7	05.8	13	54	22	58	39	19 62	33 48	
22	149	41.0	05.1	253	27.2	04.3	15	56	19	57	40	21 10 63	42 48	
23	164	41.2	06.0	267	54.7	02.8	15	58	16	55	41	20 59 64	12 52 48	
24	179	41.4	+8 06.9	282	22.2	01.1	17	60 S	17 12	17 54	18 42	20 47 65	13 05 46	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 46 ^m 6		Mag: -4.0 PMG: 14 ^h 31 ^m		Mag: +1.4 PMG: 13 ^h 06 ^m		Mag: -2.3 PMG: 19 ^h 46 ^m		Mag: +0.2 PMG: 2 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	197	54.6	142 25.4	+21 05.2	163 22.2	+13 46.9	62 34.2	+17 56.4	315 06.2	-18 53.4
1	212	57.0	157 24.8	06.0	178 22.9	47.5	77 36.7	56.4	330 08.8	53.4
2	227	59.5	172 24.2	06.8	193 23.5	48.1	92 39.1	56.4	345 11.3	53.4
3	243	02.0	187 23.7	07.6	208 24.2	48.8	107 41.6	56.4	0 13.9	53.3
4	258	04.4	202 23.1	08.4	223 24.9	49.4	122 44.1	56.3	15 16.5	53.3
5	273	06.9	217 22.6	+21 09.2	238 25.6	+13 50.0	137 46.5	+17 56.3	30 19.1	-18 53.3
6	288	09.3	232 22.0	+21 09.9	253 26.3	+13 50.6	152 49.0	+17 56.3	45 21.6	-18 53.3
7	303	11.8	247 21.4	10.7	268 27.0	51.3	167 51.4	56.3	60 24.2	53.2
8	318	14.3	262 20.9	11.5	283 27.7	51.9	182 53.9	56.3	75 26.8	53.2
9	333	16.7	277 20.3	12.3	298 28.4	52.5	197 56.3	56.3	90 29.4	53.2
10	348	19.2	292 19.7	13.1	313 29.1	53.1	212 58.8	56.3	105 31.9	53.2
11	3	21.7	307 19.2	+21 13.9	328 29.7	+13 53.8	228 01.2	+17 56.3	120 34.5	-18 53.1
12	18	24.1	322 18.6	+21 14.6	343 30.4	+13 54.4	243 03.7	+17 56.3	135 37.1	-18 53.1
13	33	26.6	337 18.0	15.4	358 31.1	55.0	258 06.1	56.3	150 39.6	53.1
14	48	29.1	352 17.5	16.2	13 31.8	55.6	273 08.6	56.3	165 42.2	53.1
15	63	31.5	7 16.9	17.0	28 32.5	56.3	288 11.0	56.3	180 44.8	53.0
16	78	34.0	22 16.3	17.7	43 33.2	56.9	303 13.5	56.3	195 47.4	53.0
17	93	36.5	37 15.8	+21 18.5	58 33.9	+13 57.5	318 15.9	+17 56.3	210 49.9	-18 53.0
18	108	38.9	52 15.2	+21 19.3	73 34.6	+13 58.1	333 18.4	+17 56.2	225 52.5	-18 53.0
19	123	41.4	67 14.6	20.1	88 35.2	58.8	348 20.8	56.2	240 55.1	52.9
20	138	43.8	82 14.1	20.8	103 35.9	+13 59.4	3 23.3	56.2	255 57.7	52.9
21	153	46.3	97 13.5	21.6	118 36.6	+14 00.0	18 25.7	56.2	271 00.2	52.9
22	168	48.8	112 12.9	22.4	133 37.3	+14 00.6	33 28.2	56.2	286 02.8	52.9
23	183	51.2	127 12.4	23.2	148 38.0	01.2	48 30.6	56.2	301 05.4	52.8
24	198	53.7	142 11.8	+21 23.9	163 38.7	+14 01.9	63 33.1	+17 56.2	316 08.0	-18 52.8
Dif	—		-6	+8	+7	+6	+25	0	+26	

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 01 ^m 1			Edad: 21 ^d 6 PHE { 4 ^h : 57'7 12 ^h : 57'9 20 ^h : 58'1 PMG: 5 ^h 22 ^m R°: 55 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	179	41.4	+8	06.9	282	22.2	-18	01.1	60 N	3 13	4 12	4 56	1 32	42	9 15	70			
1	194	41.5		07.8	296	49.6	84	-17	59.3	18 58	26	19	5 01	20	43	27	69		
2	209	41.7		08.8	311	17.0	84		57.5	18 56	37	26	06	09	45	38	67		
3	224	41.9		09.7	325	44.4	84		55.5	20 54	46	32	10	1 00	45	47	66		
4	239	42.0		10.6	340	11.7	83		53.4	21 52	3 55	38	13	0 52	46	9 55	65		
5	254	42.2	+8	11.5	354	39.1	84	-17	51.2	22 50	4 02	4 43	5 16	0 44	47	10 02	65		
6	269	42.4	+8	12.4	9	06.4	83	-17	48.9	23 45	4 17	4 53	5 23	0 28	49	10 18	63		
7	284	42.5		13.4	23	33.7	83		46.5	24 40	28	5 01	29	15	50	31	61		
8	299	42.7		14.3	38	01.0	83		44.0	25 35	37	08	34	0 04	50	42	60		
9	314	42.9		15.2	52	28.3	83		41.4	26 30	45	14	38	** ** *	**	10 51	60		
10	329	43.0		16.1	66	55.6	83		38.6	28 20	4 57	23	46	** ** *	**	11 08	57		
11	344	43.2	+8	17.0	81	22.8	82	-17	35.8	28 10 N	5 06	5 31	5 52	** ** *	**	11 22	56		
12	359	43.4	+8	18.0	95	50.0	82	-17	32.9	29 0	5 13	5 37	5 58	** ** *	**	11 35	55		
13	14	43.5		18.9	110	17.2	82		29.8	31 10 S	18	42	6 04	23	51	57	11 48	54	
14	29	43.7		19.8	124	44.4	82		26.7	31 20	22	47	10	37	59	12	03	51	
15	44	43.8		20.7	139	11.6	82		23.4	33 30	25	52	16	22	61	19	50		
16	59	44.0		21.6	153	38.8	82		20.0	34 35	25	55	20	13	62	28	49		
17	74	44.2	+8	22.6	168	06.0	82	-17	16.6	34 40	5 26	5 57	6 25	23	03	63	12	39	47
18	89	44.3	+8	23.5	182	33.1	81	-17	13.0	36 45	5 26	6 00	6 30	22	51	65	12	51	46
19	104	44.5		24.4	197	00.2	81		09.3	37 50	25	03	35	36	68	13	06	45	
20	119	44.7		25.3	211	27.4	82		05.5	38 52	25	04	38	29	69	13	44		
21	134	44.8		26.2	225	54.5	81	-17	01.6	39 54	25	06	41	21	70	21	42		
22	149	45.0		27.1	240	21.6	81	-16	57.6	40 56	24	07	44	13	71	30	41		
23	164	45.2		28.1	254	48.7	81		53.5	41 58	23	08	48	22	03	73	40	40	
24	179	45.3	+8	29.0	269	15.8	81	-16	49.3	42 60 S	5 22	6 10	6 52	21	52	75	13	51	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 42 ^m 7		Mag: -4.0 PMG: 14 ^h 32 ^m		Mag: +1.4 PMG: 13 ^h 05 ^m		Mag: -2.3 PMG: 19 ^h 43 ^m		Mag: +0.2 PMG: 2 ^h 55 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	198	53.7	142	11.8	+21 23.9	163	38.7	+14 01.9	63	33.1	+17 56.2				
1	213	56.2	157	11.2	24.7	178	39.4	02.5	78	35.5	56.2				
2	228	58.6	172	10.6	25.5	193	40.1	03.1	93	38.0	56.2				
3	244	01.1	187	10.1	26.2	208	40.8	03.7	108	40.4	56.2				
4	259	03.6	202	09.5	27.0	223	41.4	04.3	123	42.8	56.2				
5	274	06.0	217	08.9	+21 27.8	238	42.1	+14 05.0	138	45.3	+17 56.2				
6	289	08.5	232	08.4	+21 28.5	253	42.8	+14 05.6	153	47.7	+17 56.1				
7	304	11.0	247	07.8	29.3	268	43.5	06.2	168	50.2	56.1				
8	319	13.4	262	07.2	30.0	283	44.2	06.8	183	52.6	56.1				
9	334	15.9	277	06.6	30.8	298	44.9	07.4	198	55.1	56.1				
10	349	18.3	292	06.1	31.6	313	45.6	08.1	213	57.5	56.1				
11	4	20.8	307	05.5	+21 32.3	328	46.2	+14 08.7	229	00.0	+17 56.1				
12	19	23.3	322	04.9	+21 33.1	343	46.9	+14 09.3	244	02.4	+17 56.1				
13	34	25.7	337	04.3	33.8	358	47.6	09.9	259	04.8	56.1				
14	49	28.2	352	03.8	34.6	13	48.3	10.5	274	07.3	56.1				
15	64	30.7	7	03.2	35.3	28	49.0	11.2	289	09.7	56.1				
16	79	33.1	22	02.6	36.1	43	49.7	11.8	304	12.2	56.1				
17	94	35.6	37	02.0	+21 36.8	58	50.4	+14 12.4	319	14.6	+17 56.0				
18	109	38.1	52	01.5	+21 37.6	73	51.0	+14 13.0	334	17.1	+17 56.0				
19	124	40.5	67	00.9	38.3	88	51.7	13.6	349	19.5	56.0				
20	139	43.0	82	00.3	39.1	103	52.4	14.2	4	21.9	56.0				
21	154	45.4	96	59.7	39.8	118	53.1	14.9	19	24.4	56.0				
22	169	47.9	111	59.2	40.6	133	53.8	15.5	34	26.8	56.0				
23	184	50.4	126	58.6	41.3	148	54.5	16.1	49	29.3	56.0				
24	199	52.8	141	58.0	+21 42.1	163	55.2	+14 16.7	64	31.7	+17 56.0				
Dif	—		-6		+8	+7		+6	+24		0	+26		0	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:0		Edad: 22 ^d 6	PHE {	4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'8	Civil			Náutico		Hora		R°				
	PMG: 12 ^h 00 ^m 8	PMG: 6 ^h 17 ^m				R°: 55 ^m			hG ☉	Dec	hG ☾	Dif	Dec	Dif	h	m	h
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	45.3	+8 29.0	269	15.8	-16 49.3	80	60 N	19 10	19 55	20 55	2 14 34	10 25 79				
1	194	45.5		283	42.8	45.0	43	58	05	47	41	2 03 36	36 76				
2	209	45.7	30.8	298	09.9	40.6	44	56	19 00	40	30	1 54 38	45 75				
3	224	45.8	31.7	312	37.0	36.0	46	54	18 56	33	20	45 40	10 53 73				
4	239	46.0	32.6	327	04.0	31.4	46	52	52	28	11	38 40	11 00 72				
5	254	46.1	+8 33.6	341	31.1	-16 26.7	47	50	18 49	19 22	20 04	1 31 42	11 07 70				
6	269	46.3	+8 34.5	355	58.1	-16 21.8	49	45	18 41	19 12	19 48	1 17 44	11 21 67				
7	284	46.5	35.4	10 25.1	16.9	49	51	40	35	19 03	36	1 05 45	32 66				
8	299	46.6	36.3	24 52.2	11.8	51	51	35	30	18 56	26	0 54 48	42 64				
9	314	46.8	37.2	39 19.2	06.7	51	53	30	25	50	18	45 49	11 51 62				
10	329	47.0	38.1	53 46.2	-16 01.4	53	55	20	17	40	19 06	30 51	12 05 59				
11	344	47.1	+8 39.0	68 13.2	-15 56.1	53	56	10 N	18 10	18 32	18 57	0 16 53	12 18 57				
12	359	47.3	+8 39.9	82 40.2	-15 50.6	55	56	0	18 04	18 25	18 49	0 04 54	12 30 55				
13	14	47.4	40.9	97 07.2	45.0	56	58	10 S	17 58	19	44	** ** *	42 52				
14	29	47.6	41.8	111 34.2	39.4	56	20	20	52	14	39	** ** *	12 54 50				
15	44	47.8	42.7	126 01.2	33.6	58	21	30	44	08	36	** ** *	13 09 47				
16	59	47.9	43.6	140 28.2	27.7	59	22	35	40	06	35	** ** *	17 46				
17	74	48.1	+8 44.5	154 55.2	-15 21.8	59	23	40	17 36	18 03	18 34	** ** *	13 26 44				
18	89	48.2	+8 45.4	169 22.2	-15 15.7	61	24	45	17 30	18 00	18 34	23 56 70	13 37 42				
19	104	48.4	46.3	183 49.2	09.6	61	25	50	24	17 56	34	44 72	51 39				
20	119	48.6	47.2	198 16.2	-15 03.3	63	26	52	21	55	34	38 74	13 57 38				
21	134	48.7	48.2	212 43.2	-14 56.9	64	27	54	18	53	34	31 76	14 03 37				
22	149	48.9	49.1	227 10.2	50.5	64	28	56	14	52	35	24 78	11 35				
23	164	49.0	50.0	241 37.1	43.9	66	29	58	10	50	35	16 80	20 32				
24	179	49.2	+8 50.9	256 04.1	-14 37.3	66	30	60 S	17 06	17 48	18 36	23 07 82	14 29 31				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 38 ^m 7	Mag: -4.1 PMG: 14 ^h 33 ^m	Mag: +1.4 PMG: 13 ^h 04 ^m	Mag: -2.3 PMG: 19 ^h 39 ^m	Mag: +0.2 PMG: 2 ^h 51 ^m					
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄					
h	°	'	°	'	°	'	°	'	°	'
0	199	52.8	141 58.0	+21 42.1	163 55.2	+14 16.7	64 31.7	+17 56.0	317 09.8	-18 52.2
1	214	55.3	156 57.4	42.8	178 55.9	17.3	79 34.1	56.0	332 12.4	52.2
2	229	57.8	171 56.8	43.6	193 56.5	17.9	94 36.6	56.0	347 15.0	52.2
3	245	00.2	186 56.3	44.3	208 57.2	18.5	109 39.0	55.9	2 17.5	52.2
4	260	02.7	201 55.7	45.1	223 57.9	19.2	124 41.5	55.9	17 20.1	52.1
5	275	05.2	216 55.1	+21 45.8	238 58.6	+14 19.8	139 43.9	+17 55.9	32 22.7	-18 52.1
6	290	07.6	231 54.5	+21 46.5	253 59.3	+14 20.4	154 46.3	+17 55.9	47 25.3	-18 52.1
7	305	10.1	246 53.9	47.3	269 00.0	21.0	169 48.8	55.9	62 27.9	52.1
8	320	12.6	261 53.4	48.0	284 00.6	21.6	184 51.2	55.9	77 30.4	52.0
9	335	15.0	276 52.8	48.8	299 01.3	22.2	199 53.6	55.9	92 33.0	52.0
10	350	17.5	291 52.2	49.5	314 02.0	22.8	214 56.1	55.9	107 35.6	52.0
11	5	19.9	306 51.6	+21 50.2	329 02.7	+14 23.5	229 58.5	+17 55.8	122 38.2	-18 52.0
12	20	22.4	321 51.0	+21 51.0	344 03.4	+14 24.1	245 00.9	+17 55.8	137 40.8	-18 51.9
13	35	24.9	336 50.5	51.7	359 04.1	24.7	260 03.4	55.8	152 43.3	51.9
14	50	27.3	351 49.9	52.4	14 04.8	25.3	275 05.8	55.8	167 45.9	51.9
15	65	29.8	6 49.3	53.2	29 05.4	25.9	290 08.2	55.8	182 48.5	51.9
16	80	32.3	21 48.7	53.9	44 06.1	26.5	305 10.7	55.8	197 51.1	51.8
17	95	34.7	36 48.1	+21 54.6	59 06.8	+14 27.1	320 13.1	+17 55.8	212 53.7	-18 51.8
18	110	37.2	51 47.5	+21 55.4	74 07.5	+14 27.7	335 15.5	+17 55.8	227 56.2	-18 51.8
19	125	39.7	66 47.0	56.1	89 08.2	28.3	350 18.0	55.8	242 58.8	51.8
20	140	42.1	81 46.4	56.8	104 08.9	29.0	5 20.4	55.7	258 01.4	51.7
21	155	44.6	96 45.8	57.5	119 09.5	29.6	20 22.8	55.7	273 04.0	51.7
22	170	47.1	111 45.2	58.3	134 10.2	30.2	35 25.3	55.7	288 06.6	51.7
23	185	49.5	126 44.6	59.0	149 10.9	30.8	50 27.7	55.7	303 09.2	51.7
24	200	52.0	141 44.0	+21 59.7	164 11.6	+14 31.4	65 30.1	+17 55.7	318 11.7	-18 51.6
Dif	—		-6	+7	+7	+6	+24	0	+26	0

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 00 ^m 6			Edad: 23 ^d 6 PHE { 4 ^h : 59'0 12 ^h : 59'3 20 ^h : 59'5 PMG: 7 ^h 12 ^m R°: 54 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	49.2	+8	50.9	256	04.1	80	-14	37.3	60 N	3 06	4 05	4 51	2 48	28	11 44 85	
1	194	49.4		51.8	270	31.1	80		30.5	58	19	14	4 56	39	30	11 52 83	
2	209	49.5		52.7	284	58.1	80		23.7	56	31	21	5 01	32	32	12 00 80	
3	224	49.7		53.6	299	25.1	80		16.8	54	41	27	05	25	34	06 78	
4	239	49.8		54.5	313	52.1	80		09.7	52	49	33	09	18	36	12 76	
5	254	50.0	+8	55.4	328	19.1	80	-14	02.6	50	3 57	4 38	5 12	2 13	37	12 17 75	
6	269	50.2	+8	56.3	342	46.1	80	-13	55.4	45	4 13	4 49	5 20	2 01	40	12 28 72	
7	284	50.3		57.3	357	13.1	80		48.1	40	25	4 58	26	1 50	43	38 68	
8	299	50.5		58.2	11	40.1	80		40.7	35	35	5 05	31	42	44	46 66	
9	314	50.6	+8	59.1	26	07.1	80		33.2	30	43	12	36	34	47	12 53 64	
10	329	50.8	+9	00.0	40	34.1	80		25.6	20	4 55	22	44	21	49	13 04 61	
11	344	51.0	+9	00.9	55	01.1	80	-13	17.9	10 N	5 05	5 30	5 51	1 09	53	13 15 57	
12	359	51.1	+9	01.8	69	28.1	80	-13	10.2	0	5 12	5 36	5 57	0 58	55	13 25 54	
13	14	51.3		02.7	83	55.1	80	-13	02.3	10 S	18	42	6 04	48	57	34 52	
14	29	51.4		03.6	98	22.1	80	-12	54.4	20	22	48	10	36	60	44 49	
15	44	51.6		04.5	112	49.1	80		46.3	30	26	53	18	23	63	13 56 45	
16	59	51.8		05.4	127	16.2	81		38.2	35	27	56	22	15	65	14 03 43	
17	74	51.9	+9	06.3	141	43.2	80	-12	30.0	40	5 28	5 59	6 27	0 06	67	14 10 41	
18	89	52.1	+9	07.2	156	10.2	80	-12	21.7	45	5 28	6 02	6 32	** ** *	**	14 19 39	
19	104	52.2		08.1	170	37.3	81		13.3	50	28	06	39	** ** *	**	30 35	
20	119	52.4		09.0	185	04.3	80	-12	04.9	52	28	07	42	** ** *	**	35 33	
21	134	52.5		09.9	199	31.3	80	-11	56.4	54	28	09	45	** ** *	**	40 32	
22	149	52.7		10.8	213	58.4	81		47.7	56	28	11	48	** ** *	**	46 30	
23	164	52.9		11.7	228	25.4	80		39.0	58	27	13	52	** ** *	**	14 52 28	
24	179	53.0	+9	12.7	242	52.5	81	-11	30.3	60 S	5 26	6 15	6 57	** ** *	**	15 00 25	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 34 ^m 8			Mag: -4.1 PMG: 14 ^h 34 ^m			Mag: +1.4 PMG: 13 ^h 03 ^m			Mag: -2.3 PMG: 19 ^h 35 ^m			Mag: +0.2 PMG: 2 ^h 47 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°		
0	200	52.0		141	44.0	+21	59.7	164	11.6	+14	31.4	65	30.1	+17	55.7		
1	215	54.4		156	43.4	+22	00.4	179	12.3		32.0	80	32.6		55.7		
2	230	56.9		171	42.9		01.1	194	13.0		32.6	95	35.0		55.7		
3	245	59.4		186	42.3		01.9	209	13.6		33.2	110	37.4		55.7		
4	261	01.8		201	41.7		02.6	224	14.3		33.8	125	39.9		55.6		
5	276	04.3		216	41.1	+22	03.3	239	15.0	+14	34.4	140	42.3	+17	55.6		
6	291	06.8		231	40.5	+22	04.0	254	15.7	+14	35.0	155	44.7	+17	55.6		
7	306	09.2		246	39.9		04.7	269	16.4		35.7	170	47.2		55.6		
8	321	11.7		261	39.3		05.4	284	17.1		36.3	185	49.6		55.6		
9	336	14.2		276	38.7		06.2	299	17.7		36.9	200	52.0		55.6		
10	351	16.6		291	38.2		06.9	314	18.4		37.5	215	54.4		55.6		
11	6	19.1		306	37.6	+22	07.6	329	19.1	+14	38.1	230	56.9	+17	55.5		
12	21	21.5		321	37.0	+22	08.3	344	19.8	+14	38.7	245	59.3	+17	55.5		
13	36	24.0		336	36.4		09.0	359	20.5		39.3	261	01.7		55.5		
14	51	26.5		351	35.8		09.7	14	21.2		39.9	276	04.1		55.5		
15	66	28.9		6	35.2		10.4	29	21.8		40.5	291	06.6		55.5		
16	81	31.4		21	34.6		11.1	44	22.5		41.1	306	09.0		55.5		
17	96	33.9		36	34.0	+22	11.8	59	23.2	+14	41.7	321	11.4	+17	55.5		
18	111	36.3		51	33.4	+22	12.5	74	23.9	+14	42.3	336	13.9	+17	55.4		
19	126	38.8		66	32.8		13.3	89	24.6		42.9	351	16.3		55.4		
20	141	41.3		81	32.3		14.0	104	25.2		43.5	6	18.7		55.4		
21	156	43.7		96	31.7		14.7	119	25.9		44.1	21	21.1		55.4		
22	171	46.2		111	31.1		15.4	134	26.6		44.7	36	23.6		55.4		
23	186	48.7		126	30.5		16.1	149	27.3		45.3	51	26.0		55.4		
24	201	51.1		141	29.9	+22	16.8	164	28.0	+14	45.9	66	28.4	+17	55.4		
Dif	—			-6			+7	+7			+6	+24			0	+26	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 12 ^h 00 ^m 3			Edad: 24 ^d 6 PHE { 4 ^h : 59'7 12 ^h : 59'9 20 ^h : 60'1 SD: 16'2 PMG: 8 ^h 06 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	53.0	+9 12.7	242	52.5	-11 30.3	60 N	19 15	20 01	21 02	3 16 24	13 09 88		
1	194	53.2		257	19.5 ⁸⁰	21.4 ⁸⁹	58	09	19 52	20 47	09 27	15 85		
2	209	53.3	14.5	271	46.6 ⁸¹	12.5 ⁸⁹	56	19 04	44	35	3 04 28	20 82		
3	224	53.5	15.4	286	13.7 ⁸¹	-11 03.4 ⁹¹	54	18 59	37	25	2 59 30	24 81		
4	239	53.6	16.3	300	40.7 ⁸⁰	-10 54.3 ⁹¹	52	55	31	16	54 32	28 79		
5	254	53.8	+9 17.2	315	07.8 ⁸¹	-10 45.2 ⁹¹	50	18 52	19 26	20 08	2 50 33	13 32 77		
6	269	53.9	+9 18.1	329	34.9 ⁸¹	-10 35.9 ⁹³	45	18 44	19 14	19 51	2 41 37	13 40 73		
7	284	54.1	19.0	344	02.0 ⁸¹	26.6 ⁹³	40	37	19 05	39	33 40	46 70		
8	299	54.3	19.9	358	29.0 ⁸⁰	17.2 ⁹⁴	35	31	18 57	28	26 43	52 67		
9	314	54.4	20.8	12	56.1 ⁸¹	-10 07.7 ⁹⁵	30	26	51	20	21 44	13 57 65		
10	329	54.6	21.7	27	23.2 ⁸¹	-9 58.2 ⁹⁵	20	18	40	19 07	10 49	14 05 61		
11	344	54.7	+9 22.6	41	50.3 ⁸¹	-9 48.6 ⁹⁶	10 N	18 10	18 32	18 57	2 02 51	14 12 58		
12	359	54.9	+9 23.5	56	17.4 ⁸¹	-9 38.9 ⁹⁷	0	18 04	18 25	18 49	1 53 55	14 19 55		
13	14	55.0	24.4	70	44.5 ⁸¹	29.2 ⁹⁷	10 S	17 57	18	43	45 58	26 51		
14	29	55.2	25.3	85	11.6 ⁸¹	19.4 ⁹⁸	20	50	12	38	36 61	33 48		
15	44	55.3	26.2	99	38.8 ⁸²	-9 09.5 ⁹⁹	30	42	06	34	26 65	41 44		
16	59	55.5	27.1	114	05.9 ⁸¹	-8 59.5 ¹⁰⁰	35	38	03	33	20 67	46 42		
17	74	55.6	+9 28.0	128	33.0 ⁸¹	-8 49.5 ¹⁰⁰	40	17 33	18 00	18 31	1 13 70	14 51 39		
18	89	55.8	+9 28.9	143	00.1 ⁸¹	-8 39.5 ¹⁰⁰	45	17 27	17 56	18 30	1 06 72	14 58 36		
19	104	56.0	29.8	157	27.2 ⁸¹	29.3 ¹⁰²	50	20	52	30	0 56 76	15 05 32		
20	119	56.1	30.7	171	54.4 ⁸²	19.1 ¹⁰²	52	17	51	30	52 77	08 31		
21	134	56.3	31.6	186	21.5 ⁸¹	-8 08.9 ¹⁰²	54	13	49	30	47 80	12 29		
22	149	56.4	32.5	200	48.6 ⁸¹	-7 58.6 ¹⁰³	56	09	47	30	42 81	16 27		
23	164	56.6	33.4	215	15.8 ⁸²	48.2 ¹⁰⁴	58	05	45	30	36 84	20 25		
24	179	56.7	+9 34.3	229	42.9 ⁸¹	-7 37.8 ¹⁰⁴	60 S	17 00	17 43	18 31	0 29 86	15 25 23		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 30 ^m 9		Mag: -4.1 PMG: 14 ^h 35 ^m			Mag: +1.4 PMG: 13 ^h 02 ^m			Mag: -2.3 PMG: 19 ^h 31 ^m			Mag: +0.2 PMG: 2 ^h 43 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	201	51.1	141	29.9	+22 16.8	164	28.0	+14 45.9	66	28.4	+17 55.4	319	13.8	-18 51.0
1	216	53.6	156	29.3	17.5	179	28.7	46.5	81	30.8	55.3	334	16.3	51.0
2	231	56.0	171	28.7	18.2	194	29.3	47.1	96	33.2	55.3	349	18.9	51.0
3	246	58.5	186	28.1	18.8	209	30.0	47.7	111	35.7	55.3	4	21.5	50.9
4	262	01.0	201	27.5	19.5	224	30.7	48.3	126	38.1	55.3	19	24.1	50.9
5	277	03.4	216	26.9	+22 20.2	239	31.4	+14 49.0	141	40.5	+17 55.3	34	26.7	-18 50.9
6	292	05.9	231	26.3	+22 20.9	254	32.1	+14 49.6	156	42.9	+17 55.3	49	29.3	-18 50.9
7	307	08.4	246	25.7	21.6	269	32.7	50.2	171	45.4	55.2	64	31.9	50.8
8	322	10.8	261	25.1	22.3	284	33.4	50.8	186	47.8	55.2	79	34.4	50.8
9	337	13.3	276	24.5	23.0	299	34.1	51.4	201	50.2	55.2	94	37.0	50.8
10	352	15.8	291	23.9	23.7	314	34.8	52.0	216	52.6	55.2	109	39.6	50.8
11	7	18.2	306	23.3	+22 24.4	329	35.5	+14 52.6	231	55.0	+17 55.2	124	42.2	-18 50.7
12	22	20.7	321	22.8	+22 25.1	344	36.1	+14 53.2	246	57.5	+17 55.2	139	44.8	-18 50.7
13	37	23.2	336	22.2	25.8	359	36.8	53.8	261	59.9	55.2	154	47.4	50.7
14	52	25.6	351	21.6	26.4	14	37.5	54.4	277	02.3	55.1	169	50.0	50.7
15	67	28.1	6	21.0	27.1	29	38.2	55.0	292	04.7	55.1	184	52.6	50.6
16	82	30.5	21	20.4	27.8	44	38.9	55.6	307	07.1	55.1	199	55.1	50.6
17	97	33.0	36	19.8	+22 28.5	59	39.5	+14 56.2	322	09.6	+17 55.1	214	57.7	-18 50.6
18	112	35.5	51	19.2	+22 29.2	74	40.2	+14 56.8	337	12.0	+17 55.1	230	00.3	-18 50.6
19	127	37.9	66	18.6	29.9	89	40.9	57.4	352	14.4	55.1	245	02.9	50.5
20	142	40.4	81	18.0	30.5	104	41.6	57.9	7	16.8	55.0	260	05.5	50.5
21	157	42.9	96	17.4	31.2	119	42.3	58.5	22	19.2	55.0	275	08.1	50.5
22	172	45.3	111	16.8	31.9	134	42.9	59.1	37	21.6	55.0	290	10.7	50.5
23	187	47.8	126	16.2	32.6	149	43.6	+14 59.7	52	24.1	55.0	305	13.3	50.4
24	202	50.3	141	15.6	+22 33.2	164	44.3	+15 00.3	67	26.5	+17 55.0	320	15.8	-18 50.4
Dif	—		-6		+7	+7		+6	+24		0	+26		

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 12 ^h 00 ^m 1			Edad: 25 ^d 6 PHE { 4 ^h : 60/2 12 ^h : 60/4 20 ^h : 60/5 PMG: 9 ^h 01 ^m R°: 54 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	56.7	+9 34.3	229	42.9	-7 37.8		60 N	2 58	3 59	4 45	3 40	21	14 37	90		
1	194	56.9		35.2	244	10.0	81 27.3 ¹⁰⁵	58	3 12	4 08	50	36	23	40	87		
2	209	57.0		36.1	258	37.2	82 16.7 ¹⁰⁶	56	24	15	4 56	32	26	42	85		
3	224	57.2		37.0	273	04.3	81 -7 06.1 ¹⁰⁶	54	35	22	5 00	29	28	45	8		
4	239	57.3		37.9	287	31.5	82 -6 55.5 ¹⁰⁶	52	44	28	04	26	30	47	80		
5	254	57.5	+9 38.7		301	58.6	81 -6 44.8 ¹⁰⁷	50	3 52	4 34	5 08	3 23	32	14 49	79		
6	269	57.6	+9 39.6		316	25.8	82 -6 34.1 ¹⁰⁷	45	4 09	4 46	5 16	3 18	35	14 53	75		
7	284	57.8		40.5	330	52.9	81 23.3 ¹⁰⁸	40	21	4 55	23	13	38	56	72		
8	299	57.9		41.4	345	20.1	82 12.4 ¹⁰⁹	35	32	5 03	29	09	41	14 59	69		
9	314	58.1		42.3	359	47.2	81 -6 01.5 ¹⁰⁹	30	40	09	34	3 05	44	15 02	66		
10	329	58.2		43.2	14	14.4	82 -5 50.6 ¹⁰⁹	20	4 54	20	42	2 59	47	06	62		
11	344	58.4	+9 44.1		28	41.5	81 -5 39.6 ¹¹⁰	10 N	5 04	5 29	5 50	2 53	51	15 10	58		
12	359	58.5	+9 45.0		43	08.7	82 -5 28.6 ¹¹⁰	0	5 11	5 36	5 57	2 48	55	15 14	54		
13	14	58.7		45.9	57	35.8	81 17.5 ¹¹¹	10 S	18	42	6 04	43	58	17	52		
14	29	58.8		46.8	72	03.0	82 -5 06.4 ¹¹¹	20	23	48	11	37	62	21	48		
15	44	59.0		47.7	86	30.1	81 -4 55.3 ¹¹¹	30	27	55	19	31	66	25	44		
16	59	59.1		48.6	100	57.3	82 44.1 ¹¹²	35	28	5 58	23	27	68	28	41		
17	74	59.3	+9 49.5		115	24.4	81 -4 32.9 ¹¹²	40	5 30	6 01	6 29	2 23	71	15 30	39		
18	89	59.4	+9 50.4		129	51.6	82 -4 21.6 ¹¹³	45	5 31	6 05	6 35	2 18	74	15 34	35		
19	104	59.6		51.3	144	18.7	81 -4 10.3 ¹¹³	50	31	09	42	12	78	37	32		
20	119	59.7		52.2	158	45.9	82 -3 59.0 ¹¹³	52	31	11	45	09	80	39	30		
21	134	59.9		53.0	173	13.0	81 47.7 ¹¹³	54	32	13	49	07	81	41	28		
22	150	00.0		53.9	187	40.1	81 36.3 ¹¹⁴	56	31	15	52	03	84	43	26		
23	165	00.2		54.8	202	07.3	82 24.9 ¹¹⁴	58	31	17	6 57	2 00	86	45	24		
24	180	00.3	+9 55.7		216	34.4	81 -3 13.5 ¹¹⁴	60 S	5 31	6 19	7 02	1 55	90	15 48	20		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 26 ^m 9		Mag: -4.1 PMG: 14 ^h 36 ^m		Mag: +1.4 PMG: 13 ^h 00 ^m		Mag: -2.3 PMG: 19 ^h 27 ^m		Mag: +0.2 PMG: 2 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	202	50.3	141 15.6	+22 33.2	164 44.3	+15 00.3	67 26.5	+17 55.0	320 15.8	-18 50.4
1	217	52.7	156 15.0	33.9	179 45.0	00.9	82 28.9	54.9	335 18.4	50.4
2	232	55.2	171 14.4	34.6	194 45.7	01.5	97 31.3	54.9	350 21.0	50.3
3	247	57.6	186 13.8	35.3	209 46.3	02.1	112 33.7	54.9	5 23.6	50.3
4	263	00.1	201 13.2	35.9	224 47.0	02.7	127 36.1	54.9	20 26.2	50.3
5	278	02.6	216 12.6	+22 36.6	239 47.7	+15 03.3	142 38.5	+17 54.9	35 28.8	-18 50.3
6	293	05.0	231 12.0	+22 37.3	254 48.4	+15 03.9	157 41.0	+17 54.9	50 31.4	-18 50.2
7	308	07.5	246 11.4	37.9	269 49.1	04.5	172 43.4	54.8	65 34.0	50.2
8	323	10.0	261 10.8	38.6	284 49.7	05.1	187 45.8	54.8	80 36.6	50.2
9	338	12.4	276 10.2	39.3	299 50.4	05.7	202 48.2	54.8	95 39.2	50.2
10	353	14.9	291 09.6	39.9	314 51.1	06.3	217 50.6	54.8	110 41.7	50.1
11	8 17.4	306 09.0	+22 40.6	329 51.8	+15 06.9	232 53.0	+17 54.8	125 44.3	-18 50.1	
12	23 19.8	321 08.4	+22 41.3	344 52.5	+15 07.5	247 55.4	+17 54.8	140 46.9	-18 50.1	
13	38 22.3	336 07.8	41.9	359 53.1	08.1	262 57.8	54.7	155 49.5	50.1	
14	53 24.8	351 07.1	42.6	14 53.8	08.7	278 00.3	54.7	170 52.1	50.0	
15	68 27.2	6 06.5	43.3	29 54.5	09.3	293 02.7	54.7	185 54.7	50.0	
16	83 29.7	21 05.9	43.9	44 55.2	09.9	308 05.1	54.7	200 57.3	50.0	
17	98 32.1	36 05.3	+22 44.6	59 55.8	+15 10.4	323 07.5	+17 54.7	215 59.9	-18 49.9	
18	113 34.6	51 04.7	+22 45.2	74 56.5	+15 11.0	338 09.9	+17 54.6	231 02.5	-18 49.9	
19	128 37.1	66 04.1	45.9	89 57.2	11.6	353 12.3	54.6	246 05.1	49.9	
20	143 39.5	81 03.5	46.5	104 57.9	12.2	8 14.7	54.6	261 07.7	49.9	
21	158 42.0	96 02.9	47.2	119 58.6	12.8	23 17.1	54.6	276 10.2	49.8	
22	173 44.5	111 02.3	47.8	134 59.2	13.4	38 19.5	54.6	291 12.8	49.8	
23	188 46.9	126 01.7	48.5	149 59.9	14.0	53 21.9	54.5	306 15.4	49.8	
24	203 49.4	141 01.1	+22 49.2	165 00.6	+15 14.6	68 24.4	+17 54.5	321 18.0	-18 49.8	
Dif	—		-6	+7	+7	+6	+24	0	+26	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 9			Edad: 26 ^d 6 PHE { 4 ^h : 60'6 12 ^h : 60'7 20 ^h : 60'7 SD: 16'5 PMG: 9 ^h 55 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	00.3	+9	55.7	216	34.4	-3 13.5	60 N	19 20	20 06	21 09	4 01 21	16 07 91	
1	195	00.5		56.6	231	01.5	-3 02.0 ¹¹⁵	58	14	19 57	20 54	3 59 24	07 88	
2	210	00.6		57.5	245	28.7	-2 50.5 ¹¹⁵	56	08	49	41	58 26	07 86	
3	225	00.8		58.4	259	55.8	39.0 ¹¹⁵	54	19 03	41	30	57 28	07 83	
4	240	00.9	+9	59.3	274	22.9	27.5 ¹¹⁵	52	18 59	35	20	56 30	07 82	
5	255	01.1	+10	00.2	288	50.0	-2 15.9 ¹¹⁶	50	18 55	19 29	20 12	3 55 31	16 08 79	
6	270	01.2	+10	01.1	303	17.1	-2 04.4 ¹¹⁵	45	18 46	19 17	19 54	3 53 35	16 08 75	
7	285	01.4		01.9	317	44.2	-1 52.8 ¹¹⁶	40	39	19 07	41	51 38	08 72	
8	300	01.5		02.8	332	11.3	41.2 ¹¹⁶	35	33	18 59	30	50 41	08 69	
9	315	01.7		03.7	346	38.4	29.5 ¹¹⁷	30	28	52	21	49 43	08 67	
10	330	01.8		04.6	1 05.5	81	17.9 ¹¹⁶	20	18	41	19 07	46 48	08 63	
11	345	02.0	+10	05.5	15 32.5	80	-1 06.3 ¹¹⁶	10 N	18 11	18 32	18 57	3 44 52	16 08 59	
12	0	02.1	+10	06.4	29 59.6	81	-0 54.6 ¹¹⁷	0	18 03	18 24	18 49	3 43 54	16 08 55	
13	15	02.3		07.3	44 26.7	81	42.9 ¹¹⁷	10 S	17 56	17	42	41 58	09 51	
14	30	02.4		08.2	58 53.7	80	31.3 ¹¹⁶	20	48	11	36	39 62	09 47	
15	45	02.6		09.0	73 20.8	81	19.6 ¹¹⁷	30	40	04	32	37 66	09 43	
16	60	02.7		09.9	87 47.8	80	-0 07.9 ¹¹⁷	35	35	18 01	30	35 69	09 41	
17	75	02.9	+10	10.8	102 14.9	81	+0 03.8 ¹¹⁷	40	17 30	17 57	18 28	3 34 72	16 09 38	
18	90	03.0	+10	11.7	116 41.9	80	+0 15.5 ¹¹⁷	45	17 23	17 53	18 27	3 32 75	16 09 35	
19	105	03.1		12.6	131 08.9	80	27.2 ¹¹⁷	50	16	49	26	30 79	09 31	
20	120	03.3		13.5	145 35.9	80	38.9 ¹¹⁷	52	12	47	26	29 81	09 29	
21	135	03.4		14.4	160 02.9	80	+0 50.5 ¹¹⁶	54	08	44	25	28 83	09 27	
22	150	03.6		15.2	174 29.9	80	+1 02.2 ¹¹⁷	56	04	42	25	27 85	09 25	
23	165	03.7		16.1	188 56.9	80	13.9 ¹¹⁷	58	17 00	40	25	26 88	09 23	
24	180	03.9	+10	17.0	203 23.8	79	+1 25.6 ¹¹⁷	60 S	16 54	17 37	18 25	3 25 90	16 08 21	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 23 ^m 0		Mag: -4.1 PMG: 14 ^h 37 ^m		Mag: +1.4 PMG: 12 ^h 59 ^m		Mag: -2.3 PMG: 19 ^h 23 ^m		Mag: +0.2 PMG: 2 ^h 34 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	203	49.4	141	01.1	165	00.6	68	24.4	321	18.0				
1	218	51.9	156	00.5	180	01.3	83	26.8	336	20.6				
2	233	54.3	170	59.9	195	01.9	98	29.2	351	23.2				
3	248	56.8	185	59.3	210	02.6	113	31.6	6	25.8				
4	263	59.2	200	58.7	225	03.3	128	34.0	21	28.4				
5	279	01.7	215	58.1	240	04.0	143	36.4	36	31.0				
6	294	04.2	230	57.5	255	04.6	158	38.8	51	33.6				
7	309	06.6	245	56.8	270	05.3	173	41.2	66	36.2				
8	324	09.1	260	56.2	285	06.0	188	43.6	81	38.8				
9	339	11.6	275	55.6	300	06.7	203	46.0	96	41.4				
10	354	14.0	290	55.0	315	07.4	218	48.4	111	44.0				
11	9	16.5	305	54.4	330	08.0	233	50.8	126	46.5				
12	24	19.0	320	53.8	345	08.7	248	53.2	141	49.1				
13	39	21.4	335	53.2	0	09.4	263	55.6	156	51.7				
14	54	23.9	350	52.6	15	10.1	278	58.0	171	54.3				
15	69	26.4	5	52.0	30	10.7	294	00.4	186	56.9				
16	84	28.8	20	51.4	45	11.4	309	02.8	201	59.5				
17	99	31.3	35	50.7	60	12.1	324	05.2	217	02.1				
18	114	33.7	50	50.1	75	12.8	339	07.6	232	04.7				
19	129	36.2	65	49.5	90	13.4	354	10.0	247	07.3				
20	144	38.7	80	48.9	105	14.1	9	12.4	262	09.9				
21	159	41.1	95	48.3	120	14.8	24	14.9	277	12.5				
22	174	43.6	110	47.7	135	15.5	39	17.3	292	15.1				
23	189	46.1	125	47.1	150	16.1	54	19.7	307	17.7				
24	204	48.5	140	46.5	165	16.8	69	22.1	322	20.3				
Dif	—		-6	+6	+7	+6	+24	0	+26	0				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 6				Edad: 27 ^d 6 PHE { 4 ^h : 60'7 12 ^h : 60'7 20 ^h : 60'7 PMG: 10 ^h 50 ^m R°: 56 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	03.9	+10	17.0	203	23.8	+1	25.6	60 N	2	49	3	52	4	39	4	22
1	195	04.0		17.9	217	50.8	80	37.3 ¹¹⁷	58	3	05	4	02	45	23	24	35
2	210	04.2		18.8	232	17.7	79	+1 48.9 ¹¹⁶	56	18	10	51		24	26	33	84
3	225	04.3		19.7	246	44.7	80	+2 00.6 ¹¹⁷	54	29	17	4	55	25	28	30	88
4	240	04.5		20.5	261	11.6	79	12.2 ¹¹⁶	52	39	24	5	00	26	30	29	80
5	255	04.6	+10	21.4	275	38.5	79	+2 23.8 ¹¹⁶	50	3	47	4	30	5	04	4	26
6	270	04.7	+10	22.3	290	05.4	79	+2 35.4 ¹¹⁶	45	4	05	4	42	5	13	4	28
7	285	04.9		23.2	304	32.3	79	47.0 ¹¹⁶	40	18	4	52	20	29	39	20	71
8	300	05.0		24.1	318	59.2	79	+2 58.6 ¹¹⁶	35	29	5	00	26	31	41	17	69
9	315	05.2		25.0	333	26.1	79	+3 10.1 ¹¹⁵	30	38	07	32		32	44	15	66
10	330	05.3		25.8	347	53.0	79	21.7 ¹¹⁶	20	4	52	18	41	34	48	11	62
11	345	05.5	+10	26.7	2	19.8	78	+3 33.2 ¹¹⁵	10 N	5	03	5	27	5	49	4	36
12	0	05.6	+10	27.6	16	46.6	78	+3 44.7 ¹¹⁵	0	5	11	5	35	5	56	4	37
13	15	05.7		28.5	31	13.5	79	+3 56.1 ¹¹⁴	10 S	18	42	6	04	39	59	17	03
14	30	05.9		29.4	45	40.3	78	+4 07.6 ¹¹⁵	20	23	49	11		41	62	16	56
15	45	06.0		30.2	60	07.1	78	19.0 ¹¹⁴	30	28	56	20		43	67	52	45
16	60	06.2		31.1	74	33.9	78	30.4 ¹¹⁴	35	30	5	59	25	44	69	50	42
17	75	06.3	+10	32.0	89	00.6	77	+4 41.7 ¹¹³	40	5	32	6	03	6	31	4	46
18	90	06.5	+10	32.9	103	27.4	78	+4 53.0 ¹¹³	45	5	33	6	07	6	37	4	47
19	105	06.6		33.8	117	54.1	77	+5 04.3 ¹¹³	50	34	12	45		49	79	40	33
20	120	06.7		34.6	132	20.9	78	15.6 ¹¹³	52	35	14	48		50	81	38	32
21	135	06.9		35.5	146	47.6	77	26.8 ¹¹²	54	35	16	52		51	83	36	30
22	150	07.0		36.4	161	14.3	77	37.9 ¹¹¹	56	35	18	6	56	52	86	34	28
23	165	07.2		37.3	175	41.0	77	+5 49.1 ¹¹²	58	35	21	7	01	54	87	32	25
24	180	07.3	+10	38.1	190	07.7	77	+6 00.2 ¹¹¹	60 S	5	35	6	24	7	07	4	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 19 ^m 1		Mag: -4.1 PMG: 14 ^h 38 ^m		Mag: +1.4 PMG: 12 ^h 58 ^m		Mag: -2.3 PMG: 19 ^h 19 ^m		Mag: +0.2 PMG: 2 ^h 30 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	204	48.5	140	46.5	+23	04.5	69	22.1	+17	54.0
1	219	51.0	155	45.9		05.1	84	24.5		54.0
2	234	53.5	170	45.2		05.7	99	26.9		54.0
3	249	55.9	185	44.6		06.3	114	29.3		54.0
4	264	58.4	200	44.0		07.0	129	31.7		53.9
5	280	00.8	215	43.4	+23	07.6	144	34.0	+17	53.9
6	295	03.3	230	42.8	+23	08.2	159	36.4	+17	53.9
7	310	05.8	245	42.2		08.8	174	38.8		53.9
8	325	08.2	260	41.6		09.5	189	41.2		53.9
9	340	10.7	275	40.9		10.1	204	43.6		53.8
10	355	13.2	290	40.3		10.7	219	46.0		53.8
11	10	15.6	305	39.7	+23	11.3	234	48.4	+17	53.8
12	25	18.1	320	39.1	+23	11.9	249	50.8	+17	53.8
13	40	20.6	335	38.5		12.5	264	53.2		53.7
14	55	23.0	350	37.9		13.1	279	55.6		53.7
15	70	25.5	5	37.2		13.8	294	58.0		53.7
16	85	28.0	20	36.6		14.4	310	00.4		53.7
17	100	30.4	35	36.0	+23	15.0	325	02.8	+17	53.6
18	115	32.9	50	35.4	+23	15.6	340	05.2	+17	53.6
19	130	35.3	65	34.8		16.2	355	07.6		53.6
20	145	37.8	80	34.2		16.8	10	10.0		53.6
21	160	40.3	95	33.5		17.4	25	12.4		53.6
22	175	42.7	110	32.9		18.0	40	14.8		53.5
23	190	45.2	125	32.3		18.6	55	17.2		53.5
24	205	47.7	140	31.7	+23	19.2	70	19.6	+17	53.5
Dif	—		-6		+6		+24		0	
									+26	

0	180	03.9	+10	17.0	203	23.8	+1	25.6	60 N	2	49	3	52	4	39	4	22	17	38	89
1	195	04.0		17.9	217	50.8	80	37.3 ¹¹⁷	58	3	05	4	02	45	23	24	35	87		
2	210	04.2		18.8	232	17.7	79	+1 48.9 ¹¹⁶	56	18	10	51		24	26	33	84			
3	225	04.3		19.7	246	44.7	80	+2 00.6 ¹¹⁷	54	29	17	4	55	25	28	30	88			
4	240	04.5		20.5	261	11.6	79	12.2 ¹¹⁶	52	39	24	5	00	26	30	29	80			
5	255	04.6	+10	21.4	275	38.5	79	+2 23.8 ¹¹⁶	50	3	47	4	30	5	04	4	26	32	17	27
6	270	04.7	+10	22.3	290	05.4	79	+2 35.4 ¹¹⁶	45	4	05	4	42	5	13	4	28	36	17	23
7	285	04.9		23.2	304	32.3	79	47.0 ¹¹⁶	40	18	4	52	20	29	39	20	71			
8	300	05.0		24.1	318	59.2	79	+2 58.6 ¹¹⁶	35	29	5	00	26	31	41	17	69			
9	315	05.2		25.0	333	26.1	79	+3 10.1 ¹¹⁵	30	38	07	32		32	44	15	66			
10	330	05.3		25.8	347	53.0	79	21.7 ¹¹⁶	20	4	52	18	41	34	48	11	62			
11	345	05.5	+10	26.7	2	19.8	78	+3 33.2 ¹¹⁵	10 N	5	03	5	27	5	49	4	36	51	17	07
12	0	05.6	+10	27.6	16	46.6	78	+3 44.7 ¹¹⁵	0	5	11	5	35	5	56	4	37	55	17	03
13	15	05.7		28.5	31	13.5	79	+3 56.1 ¹¹⁴	10 S	18	42	6	04	39	59	17	00	52		
14	30	05.9		29.4	45	40.3	78	+4 07.6 ¹¹⁵	20	23	49	11		41	62	16	56	49		
15	45	06.0		30.2	60	07.1	78	19.0 ¹¹⁴	30	28	56	20		43	67	52	45			
16	60	06.2		31.1	74	33.9	78	30.4 ¹¹⁴	35	30	5	59	25	44	69	50	42			
17	75	06.3	+10	32.0	89	00.6	77	+4 41.7 ¹¹³	40	5	32	6	03	6	31	4	46	72	16	47
18	90	06.5	+10	32.9	103	27.4	78	+4 53.0 ¹¹³	45	5	33	6	07	6	37	4	47	76	16	44
19	105	06.6		33.8	117	54.1	77	+5 04.3 ¹¹³	50	34	12	45		49	79	40	33			
20	120	06.7		34.6	132	20.9	78	15.6 ¹¹³	52	35	14	48		50	81	38	32			
21	135	06.9		35.5	146	47.6	77	26.8 ¹¹²	54	35	16	52		51	83	36	30			
22	150	07.0		36.4	161	14.3	77	37.9 ¹¹¹	56	35	18	6	56	52	86	34	28			
23	165	07.2		37.3	175	41.0	77	+5 49.1 ¹¹²	58	35	21	7	01	54	87	32	25			
24	180	07.3	+10	38.1	190	07.7	77	+6 00.2 ¹¹¹	60 S	5	35	6	24	7	07	4	55	91	16	29

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 28 ^d 6	PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'4										
	PMG: 11 ^h 59 ^m 4					SD: 16'5			PMG: 11 ^h 46 ^m		R°: 56 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	07.3	+10 38.1	190	07.7	+6 00.2	76	60 N	19 25	20 12	21 17	4 43 24	19 07 87		
1	195	07.4	39.0	204	34.3	11.2	110	58	18	20 02	21 00	47 27	19 02 84		
2	210	07.6	39.9	219	01.0	22.2	110	56	12	19 53	20 46	50 29	18 57 82		
3	225	07.7	40.8	233	27.6	33.2	110	54	07	45	34	53 31	53 80		
4	240	07.9	41.6	247	54.3	44.1	109	52	19 02	39	24	56 33	49 78		
5	255	08.0	+10 42.5	262	20.9	55.0	109	50	18 58	19 33	20 15	4 58 35	18 45 77		
6	270	08.2	+10 43.4	276	47.5	05.8	108	45	18 49	19 20	19 57	5 04 38	18 38 73		
7	285	08.3	44.3	291	14.0	16.6	108	40	41	09	43	08 41	31 71		
8	300	08.4	45.1	305	40.6	27.3	107	35	35	19 01	32	12 44	26 68		
9	315	08.6	46.0	320	07.2	38.0	107	30	29	18 54	23	16 45	21 66		
10	330	08.7	46.9	334	33.7	48.6	106	20	19	42	19 08	22 49	13 62		
11	345	08.8	+10 47.8	349	00.2	59.2	106	10 N	18 11	18 32	18 57	5 27 53	18 06 59		
12	0	09.0	+10 48.6	3	26.8	09.7	105	0	18 03	18 24	18 48	5 32 56	17 59 56		
13	15	09.1	49.5	17	53.3	20.1	104	10 S	17 55	16	41	38 59	52 53		
14	30	09.3	50.4	32	19.7	30.5	104	20	47	09	35	43 63	45 50		
15	45	09.4	51.2	46	46.2	40.8	103	30	38	18 02	30	50 66	37 46		
16	60	09.5	52.1	61	12.7	51.1	103	35	33	17 58	28	53 69	32 44		
17	75	09.7	+10 53.0	75	39.1	01.3	102	40	17 27	17 54	18 26	5 58 71	17 27 42		
18	90	09.8	+10 53.9	90	05.6	11.4	101	45	17 20	17 50	18 24	6 03 74	17 20 40		
19	105	10.0	54.7	104	32.0	21.5	101	50	12	45	22	08 78	13 36		
20	120	10.1	55.6	118	58.4	31.5	100	52	08	43	22	11 80	10 34		
21	135	10.2	56.5	133	24.8	41.4	99	54	17 04	40	21	14 82	06 33		
22	150	10.4	57.3	147	51.2	51.3	99	56	16 59	38	21	18 83	17 02 30		
23	165	10.5	58.2	162	17.6	01.1	98	58	54	35	20	21 86	16 57 29		
24	180	10.6	+10 59.1	176	43.9	10.8	97	60 S	16 49	17 32	18 20	6 26 88	16 52 26		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 15 ^m 1		Mag: -4.1 PMG: 14 ^h 38 ^m			Mag: +1.4 PMG: 12 ^h 57 ^m			Mag: -2.3 PMG: 19 ^h 16 ^m			Mag: +0.2 PMG: 2 ^h 26 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	205	47.7	140	31.7	+23 19.2	165	33.0	+15 42.6	70	19.6	+17 53.5	323	22.6	-18 48.5	
1	220	50.1	155	31.1	19.8	180	33.7	43.2	85	22.0	53.5	338	25.2	48.4	
2	235	52.6	170	30.5	20.4	195	34.3	43.8	100	24.3	53.4	353	27.8	48.4	
3	250	55.1	185	29.8	21.0	210	35.0	44.4	115	26.7	53.4	8	30.4	48.4	
4	265	57.5	200	29.2	21.6	225	35.7	44.9	130	29.1	53.4	23	33.0	48.3	
5	281	00.0	215	28.6	+23 22.2	240	36.4	+15 45.5	145	31.5	+17 53.4	38	35.6	-18 48.3	
6	296	02.5	230	28.0	+23 22.8	255	37.0	+15 46.1	160	33.9	+17 53.3	53	38.2	-18 48.3	
7	311	04.9	245	27.4	23.4	270	37.7	46.7	175	36.3	53.3	68	40.8	48.3	
8	326	07.4	260	26.7	24.0	285	38.4	47.2	190	38.7	53.3	83	43.4	48.2	
9	341	09.8	275	26.1	24.6	300	39.1	47.8	205	41.1	53.3	98	46.0	48.2	
10	356	12.3	290	25.5	25.2	315	39.7	48.4	220	43.5	53.2	113	48.6	48.2	
11	11	14.8	305	24.9	+23 25.8	330	40.4	+15 49.0	235	45.9	+17 53.2	128	51.2	-18 48.1	
12	26	17.2	320	24.3	+23 26.3	345	41.1	+15 49.5	250	48.3	+17 53.2	143	53.8	-18 48.1	
13	41	19.7	335	23.6	26.9	0	41.7	50.1	265	50.6	53.2	158	56.4	48.1	
14	56	22.2	350	23.0	27.5	15	42.4	50.7	280	53.0	53.1	173	59.0	48.1	
15	71	24.6	5	22.4	28.1	30	43.1	51.3	295	55.4	53.1	189	01.6	48.0	
16	86	27.1	20	21.8	28.7	45	43.8	51.8	310	57.8	53.1	204	04.2	48.0	
17	101	29.6	35	21.1	+23 29.3	60	44.4	+15 52.4	326	00.2	+17 53.1	219	06.8	-18 48.0	
18	116	32.0	50	20.5	+23 29.9	75	45.1	+15 53.0	341	02.6	+17 53.0	234	09.4	-18 47.9	
19	131	34.5	65	19.9	30.4	90	45.8	53.6	356	05.0	53.0	249	12.0	47.9	
20	146	36.9	80	19.3	31.0	105	46.4	54.1	11	07.3	53.0	264	14.6	47.9	
21	161	39.4	95	18.7	31.6	120	47.1	54.7	26	09.7	53.0	279	17.2	47.9	
22	176	41.9	110	18.0	32.2	135	47.8	55.3	41	12.1	52.9	294	19.8	47.8	
23	191	44.3	125	17.4	32.8	150	48.5	55.8	56	14.5	52.9	309	22.4	47.8	
24	206	46.8	140	16.8	+23 33.3	165	49.1	+15 56.4	71	16.9	+17 52.9	324	25.0	-18 47.8	
Dif	—		-6	+6		+7	+6		+24		0	+26		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 2				Edad: 0 ^d 2 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 0 20 ^h : 59 ^m 8 R°: 56 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	10.6	+10	59.1	176	43.9	+10	10.8	60 N	2	41	3	46	4	33	5	07	29
1	195	10.8	+11	00.0	191	10.3	74	20.5	58	2	58	3	56	40		14	30	20
2	210	10.9	+11	00.8	205	36.6	73	30.0	56	3	12	4	05	46		19	33	34
3	225	11.1		01.7	220	02.9	73	39.6	54		23		12	51		24	35	76
4	240	11.2		02.6	234	29.3	74	49.0	52		34	19		4	56	29	36	13
5	255	11.3	+11	03.4	248	55.6	73	+10	50	3	42	4	25	5	00	5	33	07
6	270	11.5	+11	04.3	263	21.9	73	+11	45	4	01	4	38	5	09	5	42	72
7	285	11.6		05.2	277	48.2	73	16.8	40		15	49		17		49	44	69
8	300	11.7		06.0	292	14.4	72	25.9	35		26	4	57	24		5	56	42
9	315	11.9		06.9	306	40.7	73	34.9	30		35	5	05	29		6	01	65
10	330	12.0		07.8	321	07.0	73	43.9	20	4	50	17		39		11	51	27
11	345	12.1	+11	08.6	335	33.2	72	+11	10 N	5	01	5	26	5	48	6	20	63
12	0	12.3	+11	09.5	349	59.5	73	+12	0	5	10	5	35	5	56	6	28	15
13	15	12.4		10.4	4	25.7	72	10.2	10 S		18	42		6	04	37	58	56
14	30	12.5		11.2	18	51.9	72	18.9	20		24	50		12		46	61	45
15	45	12.7		12.1	33	18.1	72	27.4	30		29	5	57	21		6	56	52
16	60	12.8		12.9	47	44.4	73	35.8	35		31	6	01	27		7	02	49
17	75	12.9	+11	13.8	62	10.6	72	+12	40	5	33	6	05	6	33	7	09	16
18	90	13.1	+11	14.7	76	36.8	72	+12	45	5	35	6	10	6	40	7	17	48
19	105	13.2		15.5	91	03.0	72	+13	50		37	15		48		26	75	43
20	120	13.3		16.4	105	29.2	72	08.7	52		38	17		52		31	76	40
21	135	13.5		17.3	119	55.4	72	16.7	54		38	19		6	56	36	77	39
22	150	13.6		18.1	134	21.6	72	24.5	56		39	22		7	00	41	80	37
23	165	13.7		19.0	148	47.7	71	32.3	58		39	25		06		47	82	36
24	180	13.9	+11	19.9	163	13.9	72	+13	60 S	5	40	6	28	7	11	7	54	33
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 11 ^m 2		Mag: -4.1 PMG: 14 ^h 39 ^m				Mag: +1.4 PMG: 12 ^h 56 ^m				Mag: -2.2 PMG: 19 ^h 12 ^m				Mag: +0.2 PMG: 2 ^h 22 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	206	46.8	140	16.8	+23	33.3			165	49.1	+15	56.4	71	16.9	+17	52.9	324	25.0
1	221	49.3	155	16.2		33.9			180	49.8		57.0	86	19.3		52.9	339	27.6
2	236	51.7	170	15.5		34.5			195	50.5		57.6	101	21.7		52.8	354	30.2
3	251	54.2	185	14.9		35.1			210	51.1		58.1	116	24.0		52.8	9	32.8
4	266	56.7	200	14.3		35.6			225	51.8		58.7	131	26.4		52.8	24	35.4
5	281	59.1	215	13.7	+23	36.2			240	52.5	+15	59.3	146	28.8	+17	52.7	39	38.0
6	297	01.6	230	13.0	+23	36.8			255	53.2	+15	59.8	161	31.2	+17	52.7	54	40.6
7	312	04.1	245	12.4		37.3			270	53.8	+16	00.4	176	33.6		52.7	69	43.2
8	327	06.5	260	11.8		37.9			285	54.5		01.0	191	36.0		52.7	84	45.8
9	342	09.0	275	11.2		38.5			300	55.2		01.5	206	38.3		52.6	99	48.4
10	357	11.4	290	10.5		39.0			315	55.8		02.1	221	40.7		52.6	114	51.0
11	12	13.9	305	09.9	+23	39.6			330	56.5	+16	02.7	236	43.1	+17	52.6	129	53.6
12	27	16.4	320	09.3	+23	40.2			345	57.2	+16	03.2	251	45.5	+17	52.6	144	56.3
13	42	18.8	335	08.7		40.7			0	57.9		03.8	266	47.9		52.5	159	58.9
14	57	21.3	350	08.0		41.3			15	58.5		04.4	281	50.2		52.5	175	01.5
15	72	23.8	5	07.4		41.9			30	59.2		04.9	296	52.6		52.5	190	04.1
16	87	26.2	20	06.8		42.4			45	59.9		05.5	311	55.0		52.4	205	06.7
17	102	28.7	35	06.1	+23	43.0			61	00.5	+16	06.1	326	57.4	+17	52.4	220	09.3
18	117	31.2	50	05.5	+23	43.5			76	01.2	+16	06.6	341	59.8	+17	52.4	235	11.9
19	132	33.6	65	04.9		44.1			91	01.9		07.2	357	02.1		52.4	250	14.5
20	147	36.1	80	04.3		44.6			106	02.5		07.8	12	04.5		52.3	265	17.1
21	162	38.5	95	03.6		45.2			121	03.2		08.3	27	06.9		52.3	280	19.7
22	177	41.0	110	03.0		45.8			136	03.9		08.9	42	09.3		52.3	295	22.3
23	192	43.5	125	02.4		46.3			151	04.5		09.5	57	11.7		52.3	310	24.9
24	207	45.9	140	01.7	+23	46.9			166	05.2	+16	10.0	72	14.0	+17	52.2	325	27.5
Dif	—		-6 +6		+7 +6				+24 0				+26 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 0			Edad: 1 ^d 2 PHE { 4 ^h : 59'5 12 ^h : 59'3 20 ^h : 59'0 SD: 16'2 PMG: 13 ^h 38 ^m R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	13.9	+11 19.9	163	13.9	+13 40.0	76	60 N	19 30	20 18	21 24	5 36 35	21 55 71	
1	195	14.0	20.7	177	40.1	47.6	76	58	23	20 07	21 06	44 37	44 70	
2	210	14.1	21.6	192	06.3	55.1	75	56	16	19 58	20 52	52 39	35 69	
3	225	14.3	22.4	206	32.5	02.6	75	54	11	50	39	5 59 40	27 68	
4	240	14.4	23.3	220	58.6	09.9	73	52	06	42	29	6 05 42	20 67	
5	255	14.5	+11 24.2	235	24.8	17.1	72	50	19 01	19 36	20 19	6 11 42	21 14 65	
6	270	14.7	+11 25.0	249	51.0	24.2	71	45	18 51	19 22	20 00	6 23 45	21 00 64	
7	285	14.8	25.9	264	17.2	31.2	70	40	43	12	19 46	33 47	20 49 62	
8	300	14.9	26.7	278	43.4	38.1	69	35	36	19 03	34	41 49	39 61	
9	315	15.1	27.6	293	09.5	44.9	68	30	30	18 55	24	6 49 50	30 61	
10	330	15.2	28.4	307	35.7	51.7	68	20	20	42	19 09	7 02 52	16 59	
11	345	15.3	+11 29.3	322	01.9	58.3	66	10 N	18 11	18 32	18 57	7 14 54	20 03 57	
12	0	15.5	+11 30.2	336	28.1	04.8	65	0	18 02	18 23	18 48	7 24 56	19 51 56	
13	15	15.6	31.0	350	54.3	11.2	64	10 S	17 54	15	40	35 58	39 55	
14	30	15.7	31.9	5	20.5	17.5	63	20	45	08	34	7 47 60	27 52	
15	45	15.8	32.7	19	46.8	23.7	62	30	36	18 00	28	8 01 62	12 51	
16	60	16.0	33.6	34	13.0	29.8	61	35	30	17 56	25	08 64	19 04 49	
17	75	16.1	+11 34.4	48	39.2	35.8	60	40	17 24	17 51	18 23	8 17 65	18 54 49	
18	90	16.2	+11 35.3	63	05.5	41.6	58	45	17 17	17 47	18 21	8 28 67	18 43 47	
19	105	16.4	36.2	77	31.7	47.4	58	50	08	41	19	41 69	29 45	
20	120	16.5	37.0	91	58.0	53.1	57	52	17 04	38	18	47 70	23 44	
21	135	16.6	37.9	106	24.2	58.6	55	54	16 59	36	17	8 53 72	16 43	
22	150	16.8	38.7	120	50.5	04.1	55	56	55	33	16	9 01 72	18 08 42	
23	165	16.9	39.6	135	16.8	09.4	53	58	49	30	15	09 74	17 59 41	
24	180	17.0	+11 40.4	149	43.1	14.7	53	60 S	16 43	17 26	18 15	9 18 77	17 49 39	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 07 ^m 3		Mag: -4.1 PMG: 14 ^h 40 ^m		Mag: +1.4 PMG: 12 ^h 55 ^m		Mag: -2.2 PMG: 19 ^h 08 ^m		Mag: +0.2 PMG: 2 ^h 18 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	207	45.9	140	01.7	+23 46.9	166	05.2	+16 10.0	72	14.0	+17 52.2	325	27.5	-18 47.1
1	222	48.4	155	01.1	47.4	181	05.9	10.6	87	16.4	52.2	340	30.1	47.1
2	237	50.9	170	00.5	48.0	196	06.6	11.2	102	18.8	52.2	355	32.7	47.0
3	252	53.3	184	59.9	48.5	211	07.2	11.7	117	21.2	52.1	10	35.3	47.0
4	267	55.8	199	59.2	49.1	226	07.9	12.3	132	23.5	52.1	25	37.9	47.0
5	282	58.3	214	58.6	+23 49.6	241	08.6	+16 12.9	147	25.9	+17 52.1	40	40.5	-18 47.0
6	298	00.7	229	58.0	+23 50.1	256	09.2	+16 13.4	162	28.3	+17 52.1	55	43.1	-18 46.9
7	313	03.2	244	57.3	50.7	271	09.9	14.0	177	30.7	52.0	70	45.7	46.9
8	328	05.7	259	56.7	51.2	286	10.6	14.5	192	33.0	52.0	85	48.3	46.9
9	343	08.1	274	56.1	51.8	301	11.2	15.1	207	35.4	52.0	100	50.9	46.8
10	358	10.6	289	55.5	52.3	316	11.9	15.7	222	37.8	51.9	115	53.6	46.8
11	13	13.0	304	54.8	+23 52.8	331	12.6	+16 16.2	237	40.2	+17 51.9	130	56.2	-18 46.8
12	28	15.5	319	54.2	+23 53.4	346	13.2	+16 16.8	252	42.5	+17 51.9	145	58.8	-18 46.7
13	43	18.0	334	53.6	53.9	1	13.9	17.4	267	44.9	51.8	161	01.4	46.7
14	58	20.4	349	52.9	54.5	16	14.6	17.9	282	47.3	51.8	176	04.0	46.7
15	73	22.9	4	52.3	55.0	31	15.2	18.5	297	49.7	51.8	191	06.6	46.7
16	88	25.4	19	51.7	55.5	46	15.9	19.0	312	52.0	51.8	206	09.2	46.6
17	103	27.8	34	51.0	+23 56.1	61	16.6	+16 19.6	327	54.4	+17 51.7	221	11.8	-18 46.6
18	118	30.3	49	50.4	+23 56.6	76	17.2	+16 20.2	342	56.8	+17 51.7	236	14.4	-18 46.6
19	133	32.8	64	49.8	57.1	91	17.9	20.7	357	59.1	51.7	251	17.0	46.5
20	148	35.2	79	49.1	57.7	106	18.6	21.3	13	01.5	51.6	266	19.6	46.5
21	163	37.7	94	48.5	58.2	121	19.2	21.8	28	03.9	51.6	281	22.2	46.5
22	178	40.2	109	47.9	58.7	136	19.9	22.4	43	06.3	51.6	296	24.8	46.5
23	193	42.6	124	47.2	59.2	151	20.6	22.9	58	08.6	51.5	311	27.4	46.4
24	208	45.1	139	46.6	+23 59.8	166	21.2	+16 23.5	73	11.0	+17 51.5	326	30.1	-18 46.4
Dif	—		-6	+5		+7	+6		+24	0		+26		0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 58 ^m 8				Edad: 2 ^d 2 PHE { 4 ^h : 58'7 12 ^h : 58'4 20 ^h : 58'1 PMG: 14 ^h 34 ^m R°: 55 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	17.0	+11	40.4	149	43.1	+16	14.7	51	60 N	2	32	3	39	4	27	6	11 43 23 06 59		
1	195	17.1		41.3	164	09.4	73	19.8	51	58	2	50		50		34	21	45 22 54 59		
2	210	17.3		42.1	178	35.8	74	24.8	50	56	3	05	3	59		41	31	45 44 59		
3	225	17.4		43.0	193	02.1	73	29.7	49	54	18		4	07		46	39	46 35 58		
4	240	17.5		43.8	207	28.5	74	34.5	48	52	28			15		51	47	47 27 58		
5	255	17.6	+11	44.7	221	54.9	74	+16	39.2	47	50	3	38	4	21	4	56	6	53 48 22 19 58	
6	270	17.8	+11	45.5	236	21.3	74	+16	43.8	46	45	3	57	4	35	5	06	7	08 49 22 04 57	
7	285	17.9		46.4	250	47.7	74		48.3	45	40	4	11		46		14	20	50 21 51 57	
8	300	18.0		47.2	265	14.2	75		52.6	43	35	23		4	55		21	30	51 40 57	
9	315	18.2		48.1	279	40.6	74	+16	56.9	43	30	33		5	02		27	39	52 31 56	
10	330	18.3		48.9	294	07.1	75	+17	01.0	41	20	4	49		15		38	7	54 53 15 55	
11	345	18.4	+11	49.8	308	33.6	75	+17	05.0	40	10 N	5	00		5	25	5	47	8	08 54 21 00 55
12	0	18.5	+11	50.6	323	00.1	75	+17	09.0	40	0	5	10		5	34	5	55	8	20 56 20 47 54
13	15	18.7		51.5	337	26.7	76		12.8	38	10 S	18			42		6	04		33 56 34 54
14	30	18.8		52.3	351	53.3	76		16.5	37	20	24			50		13	8	47 57 19 54	
15	45	18.9		53.2	6	19.9	76		20.0	35	30	30			5	58		22	9	03 58 20 03 53
16	60	19.0		54.0	20	46.5	76		23.5	35	35	33			6	02		28	12	59 19 53 53
17	75	19.2	+11	54.9	35	13.1	76	+17	26.9	34	40	5	35		6	07	6	35	9	22 60 19 43 51
18	90	19.3	+11	55.7	49	39.8	77	+17	30.1	32	45	5	38		6	12	6	42	9	35 60 19 30 51
19	105	19.4		56.6	64	06.5	77		33.3	32	50	40			18		51	50	61 14 51	
20	120	19.5		57.4	78	33.2	77		36.3	30	52	41			20		55	9	57 62 19 07 50	
21	135	19.7		58.3	93	00.0	78		39.2	29	54	42			23		6	59	10	05 62 18 59 50
22	150	19.8	+11	59.1	107	26.8	78		42.0	28	56	42			26		7	04	13	64 50 49
23	165	19.9	+12	00.0	121	53.6	78		44.7	27	58	43			29		10	23	65 40 48	
24	180	20.0	+12	00.8	136	20.5	79	+17	47.3	26	60 S	5	44		6	33	7	16	10	35 65 18 28 48

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 03 ^m 3		Mag: -4.1 PMG: 14 ^h 42 ^m				Mag: +1.4 PMG: 12 ^h 54 ^m				Mag: -2.2 PMG: 19 ^h 04 ^m				Mag: +0.2 PMG: 2 ^h 14 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	208	45.1	139	46.6	+23	59.8	166	21.2	+16	23.5	73	11.0	+17	51.5	326	30.1	-18	46.4
1	223	47.5	154	46.0	+24	00.3	181	21.9		24.1	88	13.4		51.5	341	32.7		46.4
2	238	50.0	169	45.3		00.8	196	22.6		24.6	103	15.7		51.5	356	35.3		46.3
3	253	52.5	184	44.7		01.3	211	23.3		25.2	118	18.1		51.4	11	37.9		46.3
4	268	54.9	199	44.1		01.9	226	23.9		25.7	133	20.5		51.4	26	40.5		46.3
5	283	57.4	214	43.4	+24	02.4	241	24.6	+16	26.3	148	22.8	+17	51.4	41	43.1	-18	46.3
6	298	59.9	229	42.8	+24	02.9	256	25.3	+16	26.8	163	25.2	+17	51.3	56	45.7	-18	46.2
7	314	02.3	244	42.2		03.4	271	25.9		27.4	178	27.6		51.3	71	48.3		46.2
8	329	04.8	259	41.5		03.9	286	26.6		28.0	193	29.9		51.3	86	50.9		46.2
9	344	07.3	274	40.9		04.4	301	27.2		28.5	208	32.3		51.2	101	53.5		46.1
10	359	09.7	289	40.3		05.0	316	27.9		29.1	223	34.7		51.2	116	56.1		46.1
11	14	12.2	304	39.6	+24	05.5	331	28.6	+16	29.6	238	37.0	+17	51.2	131	58.7	-18	46.1
12	29	14.7	319	39.0	+24	06.0	346	29.2	+16	30.2	253	39.4	+17	51.1	147	01.4	-18	46.0
13	44	17.1	334	38.4		06.5	1	29.9		30.7	268	41.8		51.1	162	04.0		46.0
14	59	19.6	349	37.7		07.0	16	30.6		31.3	283	44.1		51.1	177	06.6		46.0
15	74	22.0	4	37.1		07.5	31	31.2		31.8	298	46.5		51.0	192	09.2		46.0
16	89	24.5	19	36.5		08.0	46	31.9		32.4	313	48.9		51.0	207	11.8		45.9
17	104	27.0	34	35.8	+24	08.5	61	32.6	+16	32.9	328	51.2	+17	51.0	222	14.4	-18	45.9
18	119	29.4	49	35.2	+24	09.0	76	33.2	+16	33.5	343	53.6	+17	51.0	237	17.0	-18	45.9
19	134	31.9	64	34.5		09.5	91	33.9		34.1	358	56.0		50.9	252	19.6		45.8
20	149	34.4	79	33.9		10.0	106	34.6		34.6	13	58.3		50.9	267	22.2		45.8
21	164	36.8	94	33.3		10.5	121	35.2		35.2	29	00.7		50.9	282	24.8		45.8
22	179	39.3	109	32.6		11.1	136	35.9		35.7	44	03.0		50.8	297	27.5		45.8
23	194	41.8	124	32.0		11.6	151	36.6		36.3	59	05.4		50.8	312	30.1		45.7
24	209	44.2	139	31.4	+24	12.1	166	37.2	+16	36.8	74	07.8	+17	50.8	327	32.7	-18	45.7
Dif	—		-6		+5		+7		+6		+24		0		+26		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15:9 PMG: 11 ^h 58 ^m 6			Edad: 3 ^d 2 PHE { 4 ^h : 57/8 12 ^h : 57/5 20 ^h : 57/2 R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	20.0	+12 00.8	136	20.5	+17 47.3	25	60 N	19 35	20 24	21 32	6 54	52	**	**	**
1	195	20.2		150	47.3	49.8	25	58	27	12	21 13	7 06	52	23	53	48
2	210	20.3	02.5	165	14.3	52.2	24	56	20	20 02	20 57	16	53	43	48	
3	225	20.4	03.4	179	41.2	54.4	22	54	14	19 54	44	25	53	33	49	
4	240	20.5	04.2	194	08.2	56.6	22	52	09	46	33	34	52	25	49	
5	255	20.7	+12 05.0	208	35.2	58.6	20	50	19 04	19 39	20 23	7 41	53	23	17	50
6	270	20.8	+12 05.9	223	02.3	00.5	19	45	18 54	19 25	20 04	7 57	53	23	01	50
7	285	20.9	06.7	237	29.4	02.4	19	40	45	14	19 48	8 10	53	22	48	51
8	300	21.0	07.6	251	56.5	04.1	17	35	38	19 04	36	21	53	37	51	
9	315	21.1	08.4	266	23.7	05.7	16	30	31	18 56	26	31	53	27	51	
10	330	21.3	09.3	280	50.9	07.1	14	20	20	43	19 10	8 47	54	22	10	52
11	345	21.4	+12 10.1	295	18.1	08.5	14	10 N	18 11	18 32	18 57	9 02	53	21	55	52
12	0	21.5	+12 10.9	309	45.4	09.8	13	0	18 02	18 23	18 48	9 16	53	21	41	53
13	15	21.6	11.8	324	12.7	11.0	12	10 S	17 53	15	39	29	54	28	52	
14	30	21.8	12.6	338	40.1	12.0	10	20	44	18 06	32	9 44	54	21	13	53
15	45	21.9	13.5	353	07.5	13.0	10	30	34	17 58	26	10 01	53	20	56	53
16	60	22.0	14.3	7	34.9	13.8	8	35	28	54	23	11	53	46	54	
17	75	22.1	+12 15.1	22	02.4	14.6	8	40	17 21	17 49	18 20	10 22	53	20	34	55
18	90	22.2	+12 16.0	36	29.9	15.2	6	45	17 13	17 43	18 18	10 35	54	20	21	55
19	105	22.4	16.8	50	57.5	15.7	5	50	04	37	15	51	54	20	05	55
20	120	22.5	17.7	65	25.2	16.1	4	52	17 00	35	14	10 59	53	19	57	55
21	135	22.6	18.5	79	52.8	16.4	3	54	16 55	32	13	11 07	54	49	55	
22	150	22.7	19.3	94	20.5	16.6	2	56	50	28	12	17	53	39	56	
23	165	22.8	20.2	108	48.3	16.7	1	58	44	25	11	28	53	28	56	
24	180	23.0	+12 21.0	123	16.1	16.7	0	60 S	16 38	17 21	18 10	11 40	53	19	16	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 9 ^h 59 ^m 4		Mag: -4.1 PMG: 14 ^h 43 ^m		Mag: +1.4 PMG: 12 ^h 53 ^m		Mag: -2.2 PMG: 19 ^h 00 ^m		Mag: +0.2 PMG: 2 ^h 09 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	209	44.2	139	31.4	+24 12.1	166	37.2	+16 36.8	74	07.8	+17 50.8	327	32.7	-18 45.7		
1	224	46.7	154	30.7	12.5	181	37.9	37.4	89	10.1	50.7	342	35.3	45.7		
2	239	49.1	169	30.1	13.0	196	38.6	37.9	104	12.5	50.7	357	37.9	45.6		
3	254	51.6	184	29.5	13.5	211	39.2	38.5	119	14.9	50.7	12	40.5	45.6		
4	269	54.1	199	28.8	14.0	226	39.9	39.0	134	17.2	50.6	27	43.1	45.6		
5	284	56.5	214	28.2	+24 14.5	241	40.6	+16 39.6	149	19.6	+17 50.6	42	45.7	-18 45.5		
6	299	59.0	229	27.5	+24 15.0	256	41.2	+16 40.1	164	21.9	+17 50.6	57	48.3	-18 45.5		
7	315	01.5	244	26.9	15.5	271	41.9	40.7	179	24.3	50.5	72	51.0	45.5		
8	330	03.9	259	26.3	16.0	286	42.6	41.2	194	26.7	50.5	87	53.6	45.5		
9	345	06.4	274	25.6	16.5	301	43.2	41.8	209	29.0	50.5	102	56.2	45.4		
10	0	08.9	289	25.0	17.0	316	43.9	42.3	224	31.4	50.4	117	58.8	45.4		
11	15	11.3	304	24.4	+24 17.5	331	44.5	+16 42.9	239	33.7	+17 50.4	133	01.4	-18 45.4		
12	30	13.8	319	23.7	+24 18.0	346	45.2	+16 43.4	254	36.1	+17 50.4	148	04.0	-18 45.3		
13	45	16.3	334	23.1	18.4	1	45.9	43.9	269	38.4	50.3	163	06.6	45.3		
14	60	18.7	349	22.4	18.9	16	46.5	44.5	284	40.8	50.3	178	09.2	45.3		
15	75	21.2	4	21.8	19.4	31	47.2	45.0	299	43.2	50.3	193	11.9	45.3		
16	90	23.6	19	21.2	19.9	46	47.9	45.6	314	45.5	50.2	208	14.5	45.2		
17	105	26.1	34	20.5	+24 20.4	61	48.5	+16 46.1	329	47.9	+17 50.2	223	17.1	-18 45.2		
18	120	28.6	49	19.9	+24 20.9	76	49.2	+16 46.7	344	50.2	+17 50.2	238	19.7	-18 45.2		
19	135	31.0	64	19.2	21.3	91	49.9	47.2	359	52.6	50.1	253	22.3	45.1		
20	150	33.5	79	18.6	21.8	106	50.5	47.8	14	54.9	50.1	268	24.9	45.1		
21	165	36.0	94	18.0	22.3	121	51.2	48.3	29	57.3	50.1	283	27.5	45.1		
22	180	38.4	109	17.3	22.8	136	51.8	48.9	44	59.7	50.0	298	30.1	45.0		
23	195	40.9	124	16.7	23.2	151	52.5	49.4	60	02.0	50.0	313	32.8	45.0		
24	210	43.4	139	16.0	+24 23.7	166	53.2	+16 50.0	75	04.4	+17 49.9	328	35.4	-18 45.0		
Dif	—		-6 +5		+7 +5		+24 +5		+24 0		+26 0					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 4				Edad: 4 ^d 2 PHE { 4 ^h : 57 ^h 0 12 ^h : 56 ^h 7 20 ^h : 56 ^h 4 PMG: 16 ^h 22 ^m R°: 50 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	180	23.0	+12	21.0	123	16.1	+18	16.7	1	60 N	2 24	3 32	4 21	7 46	59	0 05	48		
1	195	23.1		21.8	137	44.0		16.6	2	58	43	44	29	7 58	59	**	**	**	
2	210	23.2		22.7	152	11.9		16.4	3	56	2 59	3 54	36	8 09	58	**	**	**	
3	225	23.3		23.5	166	39.8		16.1	4	54	3 12	4 02	42	18 57		**	**	**	
4	240	23.4		24.4	181	07.8		15.7	5	52	23	10	47	26 57		**	**	**	
5	255	23.6	+12	25.2	195	35.9	+18	15.2	6	50	3 33	4 17	4 52	8 34	56	**	**	**	
6	270	23.7	+12	26.0	210	04.0	+18	14.6	7	45	3 53	4 31	5 03	8 50	55	23 51	44		
7	285	23.8		26.9	224	32.1		13.8	8	40	4 08	43	11	9 03	55	39	44		
8	300	23.9		27.7	239	00.3		13.0	9	35	21	4 52	19	14 54		28	45		
9	315	24.0		28.5	253	28.6		12.1	10	30	31	5 00	25	24 54		18	47		
10	330	24.1		29.4	267	56.9		11.1	11	20	47	14	36	41 52		23 02	48		
11	345	24.3	+12	30.2	282	25.2	+18	10.0	12	10 N	4 59	5 24	5 46	9 55	52	22 47	49		
12	0	24.4	+12	31.0	296	53.6	+18	08.8	13	0	5 09	5 34	5 55	10 09	51	22 34	50		
13	15	24.5		31.9	311	22.1		07.4	14	10 S	18	42	6 04	23 50		20	52		
14	30	24.6		32.7	325	50.6		06.0	15	20	25	51	13	38 49		22 06	53		
15	45	24.7		33.5	340	19.2		04.5	16	30	31	5 59	24	10 54	49	21 49	54		
16	60	24.8		34.4	354	47.8		02.9	17	35	34	6 04	30	11 04	48	40	55		
17	75	25.0	+12	35.2	9	16.5	+18	01.2	18	40	5 37	6 09	6 37	11 15	48	21 29	55		
18	90	25.1	+12	36.0	23	45.2	+17	59.4	19	45	5 40	6 14	6 44	11 29	46	21 16	57		
19	105	25.2		36.8	38	14.0		57.5	20	50	43	21	54	45 45		21 00	58		
20	120	25.3		37.7	52	42.8		55.5	21	52	44	23	6 58	11 52	45	20 52	59		
21	135	25.4		38.5	67	11.7		53.5	22	54	45	26	7 03	12 01	44	44	60		
22	150	25.5		39.3	81	40.7		51.3	23	56	46	30	08	10 43		35	60		
23	165	25.7		40.2	96	09.7		49.0	24	58	47	33	14	21 42		24	62		
24	180	25.8	+12	41.0	110	38.7	+17	46.7	25	60 S	5 48	6 37	7 21	12 33	41	20 12	63		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 55 ^m 5		Mag: -4.1 PMG: 14 ^h 44 ^m		Mag: +1.4 PMG: 12 ^h 52 ^m		Mag: -2.2 PMG: 18 ^h 57 ^m		Mag: +0.2 PMG: 2 ^h 05 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	210	43.4	139	16.0	+24	23.7	166	53.2	+16	50.0	75	04.4	+17	49.9	328	35.4	-18	45.0
1	225	45.8	154	15.4		24.2	181	53.8		50.5	90	06.7		49.9	343	38.0		45.0
2	240	48.3	169	14.8		24.7	196	54.5		51.0	105	09.1		49.9	358	40.6		44.9
3	255	50.8	184	14.1		25.1	211	55.2		51.6	120	11.4		49.8	13	43.2		44.9
4	270	53.2	199	13.5		25.6	226	55.8		52.1	135	13.8		49.8	28	45.8		44.9
5	285	55.7	214	12.8	+24	26.1	241	56.5	+16	52.7	150	16.1	+17	49.8	43	48.4	-18	44.8
6	300	58.1	229	12.2	+24	26.5	256	57.1	+16	53.2	165	18.5	+17	49.7	58	51.1	-18	44.8
7	316	00.6	244	11.6		27.0	271	57.8		53.8	180	20.8		49.7	73	53.7		44.8
8	331	03.1	259	10.9		27.5	286	58.5		54.3	195	23.2		49.7	88	56.3		44.7
9	346	05.5	274	10.3		27.9	301	59.1		54.8	210	25.5		49.6	103	58.9		44.7
10	1	08.0	289	09.6		28.4	316	59.8		55.4	225	27.9		49.6	119	01.5		44.7
11	16	10.5	304	09.0	+24	28.8	332	00.5	+16	55.9	240	30.2	+17	49.6	134	04.1	-18	44.7
12	31	12.9	319	08.4	+24	29.3	347	01.1	+16	56.5	255	32.6	+17	49.5	149	06.7	-18	44.6
13	46	15.4	334	07.7		29.8	2	01.8		57.0	270	34.9		49.5	164	09.4		44.6
14	61	17.9	349	07.1		30.2	17	02.4		57.5	285	37.3		49.5	179	12.0		44.6
15	76	20.3	4	06.4		30.7	32	03.1		58.1	300	39.6		49.4	194	14.6		44.5
16	91	22.8	19	05.8		31.1	47	03.8		58.6	315	42.0		49.4	209	17.2		44.5
17	106	25.3	34	05.1	+24	31.6	62	04.4	+16	59.2	330	44.3	+17	49.3	224	19.8	-18	44.5
18	121	27.7	49	04.5	+24	32.0	77	05.1	+16	59.7	345	46.7	+17	49.3	239	22.4	-18	44.4
19	136	30.2	64	03.9		32.5	92	05.8	+17	00.2	0	49.0		49.3	254	25.0		44.4
20	151	32.6	79	03.2		32.9	107	06.4		00.8	15	51.4		49.2	269	27.7		44.4
21	166	35.1	94	02.6		33.4	122	07.1		01.3	30	53.7		49.2	284	30.3		44.4
22	181	37.6	109	01.9		33.8	137	07.7		01.9	45	56.1		49.2	299	32.9		44.3
23	196	40.0	124	01.3		34.3	152	08.4		02.4	60	58.4		49.1	314	35.5		44.3
24	211	42.5	139	00.7	+24	34.7	167	09.1	+17	02.9	76	00.8	+17	49.1	329	38.1	-18	44.3
Dif	—		-6		+5		+7		+5		+24		0		+26		0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 58 ^m 2				Edad: 5 ^d 2 PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'6 R°: 49 ^m													
	hG ☉ Dec		hG ☾ Dif		Dec Dif						Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	25.8	+12	41.0	110	38.7	+17	46.7	60 N	19 40	20 29	21 41	8 45 65	0 53 36				
1	195	25.9		41.8	125	07.9 ¹⁰²		44.2	58	32	17	20	8 57 63	41 38				
2	210	26.0		42.6	139	37.0 ¹⁰¹		41.7	56	24	20 07	21 03	9 07 62	31 39				
3	225	26.1		43.5	154	06.3 ¹⁰³		39.1	54	18	19 58	20 49	15 61	22 40				
4	240	26.2		44.3	168	35.6 ¹⁰³		36.3	52	12	50	38	23 60	14 41				
5	255	26.3	+12	45.1	183	04.9 ¹⁰³	+17	33.5	50	19 07	19 43	20 27	9 30 59	0 07 41				
6	270	26.5	+12	46.0	197	34.3 ¹⁰⁴	+17	30.7	45	18 56	19 28	20 07	9 45 58	*** ** *				
7	285	26.6		46.8	212	03.8 ¹⁰⁵		27.7	40	47	16	19 51	9 58 56	*** ** *				
8	300	26.7		47.6	226	33.3 ¹⁰⁵		24.6	35	39	19 06	38	10 08 55	*** ** *				
9	315	26.8		48.4	241	02.9 ¹⁰⁶		21.5	30	33	18 58	27	18 53	*** ** *				
10	330	26.9		49.3	255	32.5 ¹⁰⁶		18.2	20	21	44	19 11	33 52	23 50 44				
11	345	27.0	+12	50.1	270	02.2 ¹⁰⁷	+17	14.9	10 N	18 11	18 33	18 58	10 47 51	23 36 47				
12	0	27.1	+12	50.9	284	31.9 ¹⁰⁷	+17	11.5	0	18 02	18 23	18 47	11 00 49	23 24 48				
13	15	27.2		51.7	299	01.7 ¹⁰⁸		08.0	10 S	17 52	14	39	13 48	23 12 49				
14	30	27.4		52.6	313	31.6 ¹⁰⁹		04.4	20	43	18 05	31	27 46	22 59 51				
15	45	27.5		53.4	328	01.5 ¹⁰⁹	+17	00.8	30	32	17 56	24	43 44	43 54				
16	60	27.6		54.2	342	31.5 ¹¹⁰	+16	57.0	38	35	25	51	21	11 52 43	35 54			
17	75	27.7	+12	55.0	357	01.5 ¹¹⁰	+16	53.2	40	17 18	17 46	18 18	12 03 41	22 24 57				
18	90	27.8	+12	55.8	11	31.6 ¹¹¹	+16	49.3	45	17 10	17 40	18 15	12 15 40	22 13 57				
19	105	27.9		56.7	26	01.8 ¹¹²		45.3	50	17 00	34	11	30 38	21 58 60				
20	120	28.0		57.5	40	32.0 ¹¹²		41.3	52	16 56	31	10	37 37	51 61				
21	135	28.1		58.3	55	02.3 ¹¹³		37.1	54	51	27	09	45 36	44 62				
22	150	28.2		59.1	69	32.6 ¹¹³		32.9	56	45	24	08	12 53 36	35 64				
23	165	28.4	+12	59.9	84	03.0 ¹¹⁴		28.6	58	39	20	06	13 03 34	26 65				
24	180	28.5	+13	00.8	98	33.4 ¹¹⁴	+16	24.2	60 S	16 32	17 16	18 05	13 14 32	21 15 67				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 51 ^m 5		Mag: -4.1 PMG: 14 ^h 45 ^m				Mag: +1.4 PMG: 12 ^h 51 ^m				Mag: -2.2 PMG: 18 ^h 53 ^m				Mag: +0.2 PMG: 2 ^h 01 ^m			
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		hG ♅ Dec		hG ♆ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	211	42.5	139	00.7	+24	34.7	167	09.1	+17	02.9	76	00.8	+17	49.1	329	38.1	-18	44.3
1	226	45.0	154	00.0		35.2	182	09.7		03.5	91	03.1		49.0	344	40.7		44.2
2	241	47.4	168	59.4		35.6	197	10.4		04.0	106	05.5		49.0	359	43.4		44.2
3	256	49.9	183	58.7		36.1	212	11.0		04.5	121	07.8		49.0	14	46.0		44.2
4	271	52.4	198	58.1		36.5	227	11.7		05.1	136	10.2		48.9	29	48.6		44.1
5	286	54.8	213	57.4	+24	37.0	242	12.4	+17	05.6	151	12.5	+17	48.9	44	51.2	-18	44.1
6	301	57.3	228	56.8	+24	37.4	257	13.0	+17	06.1	166	14.9	+17	48.9	59	53.8	-18	44.1
7	316	59.7	243	56.2		37.8	272	13.7		06.7	181	17.2		48.8	74	56.4		44.0
8	332	02.2	258	55.5		38.3	287	14.3		07.2	196	19.6		48.8	89	59.1		44.0
9	347	04.7	273	54.9		38.7	302	15.0		07.7	211	21.9		48.8	105	01.7		44.0
10	2	07.1	288	54.2		39.1	317	15.7		08.3	226	24.2		48.7	120	04.3		44.0
11	17	09.6	303	53.6	+24	39.6	332	16.3	+17	08.8	241	26.6	+17	48.7	135	06.9	-18	43.9
12	32	12.1	318	52.9	+24	40.0	347	17.0	+17	09.3	256	28.9	+17	48.6	150	09.5	-18	43.9
13	47	14.5	333	52.3		40.4	2	17.6		09.9	271	31.3		48.6	165	12.1		43.9
14	62	17.0	348	51.6		40.9	17	18.3		10.4	286	33.6		48.6	180	14.8		43.8
15	77	19.5	3	51.0		41.3	32	19.0		10.9	301	36.0		48.5	195	17.4		43.8
16	92	21.9	18	50.4		41.7	47	19.6		11.5	316	38.3		48.5	210	20.0		43.8
17	107	24.4	33	49.7	+24	42.2	62	20.3	+17	12.0	331	40.6	+17	48.4	225	22.6	-18	43.7
18	122	26.9	48	49.1	+24	42.6	77	20.9	+17	12.5	346	43.0	+17	48.4	240	25.2	-18	43.7
19	137	29.3	63	48.4		43.0	92	21.6		13.1	1	45.3		48.4	255	27.9		43.7
20	152	31.8	78	47.8		43.4	107	22.3		13.6	16	47.7		48.3	270	30.5		43.7
21	167	34.2	93	47.1		43.9	122	22.9		14.1	31	50.0		48.3	285	33.1		43.6
22	182	36.7	108	46.5		44.3	137	23.6		14.7	46	52.3		48.3	300	35.7		43.6
23	197	39.2	123	45.9		44.7	152	24.2		15.2	61	54.7		48.2	315	38.3		43.6
24	212	41.6	138	45.2	+24	45.1	167	24.9	+17	15.7	76	57.0	+17	48.2	330	40.9	-18	43.5
Dif	—		-6 +4				+7 +5				+23 0				+26 0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 58 ^m 0			Edad: 6 ^d 2 SD: 15°1 PMG: 18 ^h 01 ^m	PHE { 4 ^h : 55°4 12 ^h : 55°2 20 ^h : 55°0 R°: 46 ^m											
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	28.5	+13 00.8	98	33.4	+16 24.2	44	60 N	2 14	3 26	4 16	9 50	68	1 29	29	
1	195	28.6	01.6	113	03.9 ¹¹⁵	19.8	44	58	35	38	24	10 00	66	19	30	
2	210	28.7	02.4	127	34.5 ¹¹⁶	15.3	45	56	2 52	48	31	09 54	64	10	32	
3	225	28.8	03.2	142	05.1 ¹¹⁶	10.7	46	54	3 06	3 58	37	16 63		1 02	33	
4	240	28.9	04.0	156	35.8 ¹¹⁷	06.0	47	52	18	4 06	43	23 62		0 55	34	
5	255	29.0	+13 04.9	171	06.5 ¹¹⁷	+16 01.2	48	50	3 28	4 13	4 48	10 29	61	0 48	36	
6	270	29.1	+13 05.7	185	37.3 ¹¹⁸	+15 56.4	48	45	3 49	4 28	4 59	10 43	58	0 35	37	
7	285	29.2	06.5	200	08.1 ¹¹⁸	51.5	49	40	4 05	40	5 09	10 54	56	23	39	
8	300	29.3	07.3	214	39.0 ¹¹⁹	46.6	49	35	18	50	16	11 03	54	13	41	
9	315	29.4	08.1	229	10.0 ¹²⁰	41.5	51	30	29	4 58	23	11 53		0 05	42	
10	330	29.6	08.9	243	41.0 ¹²⁰	36.4	51	20	45	5 12	35	25 51		** ** *	**	
11	345	29.7	+13 09.8	258	12.0 ¹²⁰	+15 31.3	51	10 N	4 58	5 24	5 45	11 38	48	** ** *	**	
12	0	29.8	+13 10.6	272	43.1 ¹²¹	+15 26.0	53	0	5 09	5 33	5 55	11 49	47	** ** *	**	
13	15	29.9	11.4	287	14.3 ¹²²	20.7	53	10 S	18	42	6 04	12 01	44	** ** *	**	
14	30	30.0	12.2	301	45.5 ¹²²	15.3	54	20	25	5 51	14	13 43		23 50	50	
15	45	30.1	13.0	316	16.8 ¹²³	09.9	54	30	32	6 00	25	27 40		37 53		
16	60	30.2	13.8	330	48.2 ¹²⁴	+15 04.4	55	35	36	05	31	35 39		29 54		
17	75	30.3	+13 14.6	345	19.5 ¹²³	+14 58.8	56	40	5 39	6 11	6 39	12 44	38	23 21	56	
18	90	30.4	+13 15.5	359	51.0 ¹²⁵	+14 53.2	56	45	5 42	6 17	6 47	12 55	35	23 10	59	
19	105	30.5	16.3	14	22.5 ¹²⁵	47.5	57	50	45	23	6 57	13 08	33	22 58	61	
20	120	30.6	17.1	28	54.0 ¹²⁵	41.7	58	52	47	26	7 02	14 32		52 62		
21	135	30.7	17.9	43	25.6 ¹²⁶	35.9	58	54	48	30	07	21 30		46 63		
22	150	30.8	18.7	57	57.3 ¹²⁷	30.0	59	56	50	33	12	29 28		39 65		
23	165	30.9	19.5	72	29.0 ¹²⁷	24.0	60	58	51	37	19	37 27		31 67		
24	180	31.1	+13 20.3	87	00.8 ¹²⁸	+14 18.0	60	60 S	5 53	6 42	7 26	13 46	26	22 22	69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 9 ^h 47 ^m 6		Mag: -4.1 PMG: 14 ^h 46 ^m			Mag: +1.4 PMG: 12 ^h 50 ^m			Mag: -2.2 PMG: 18 ^h 49 ^m			Mag: +0.2 PMG: 1 ^h 57 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	212	41.6	138	45.2	+24 45.1	167	24.9	+17 15.7	76	57.0	+17 48.2	330	40.9	-18 43.5		
1	227	44.1	153	44.6	45.5	182	25.6	16.3	91	59.4	48.1	345	43.6	43.5		
2	242	46.6	168	43.9	46.0	197	26.2	16.8	107	01.7	48.1	0	46.2	43.5		
3	257	49.0	183	43.3	46.4	212	26.9	17.3	122	04.0	48.1	15	48.8	43.4		
4	272	51.5	198	42.6	46.8	227	27.5	17.8	137	06.4	48.0	30	51.4	43.4		
5	287	54.0	213	42.0	+24 47.2	242	28.2	+17 18.4	152	08.7	+17 48.0	45	54.0	-18 43.4		
6	302	56.4	228	41.3	+24 47.6	257	28.9	+17 18.9	167	11.1	+17 47.9	60	56.7	-18 43.3		
7	317	58.9	243	40.7	48.0	272	29.5	19.4	182	13.4	47.9	75	59.3	43.3		
8	333	01.4	258	40.1	48.4	287	30.2	20.0	197	15.7	47.9	91	01.9	43.3		
9	348	03.8	273	39.4	48.9	302	30.8	20.5	212	18.1	47.8	106	04.5	43.3		
10	3	06.3	288	38.8	49.3	317	31.5	21.0	227	20.4	47.8	121	07.1	43.2		
11	18	08.7	303	38.1	+24 49.7	332	32.1	+17 21.5	242	22.7	+17 47.7	136	09.8	-18 43.2		
12	33	11.2	318	37.5	+24 50.1	347	32.8	+17 22.1	257	25.1	+17 47.7	151	12.4	-18 43.2		
13	48	13.7	333	36.8	50.5	2	33.5	22.6	272	27.4	47.7	166	15.0	43.1		
14	63	16.1	348	36.2	50.9	17	34.1	23.1	287	29.8	47.6	181	17.6	43.1		
15	78	18.6	3	35.5	51.3	32	34.8	23.6	302	32.1	47.6	196	20.2	43.1		
16	93	21.1	18	34.9	51.7	47	35.4	24.2	317	34.4	47.5	211	22.9	43.0		
17	108	23.5	33	34.2	+24 52.1	62	36.1	+17 24.7	332	36.8	+17 47.5	226	25.5	-18 43.0		
18	123	26.0	48	33.6	+24 52.5	77	36.7	+17 25.2	347	39.1	+17 47.5	241	28.1	-18 43.0		
19	138	28.5	63	33.0	52.9	92	37.4	25.7	2	41.4	47.4	256	30.7	42.9		
20	153	30.9	78	32.3	53.3	107	38.1	26.3	17	43.8	47.4	271	33.3	42.9		
21	168	33.4	93	31.7	53.7	122	38.7	26.8	32	46.1	47.3	286	36.0	42.9		
22	183	35.8	108	31.0	54.1	137	39.4	27.3	47	48.4	47.3	301	38.6	42.8		
23	198	38.3	123	30.4	54.5	152	40.0	27.8	62	50.8	47.3	316	41.2	42.8		
24	213	40.8	138	29.7	+24 54.9	167	40.7	+17 28.4	77	53.1	+17 47.2	331	43.8	-18 42.8		
Dif	—		-6		+4	+7		+5	+23		0	+26		0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 8			Edad: 7 ^d 2 PHE { SD: 15°0 PMG: 18 ^h 47 ^m 4 ^h : 54/8 12 ^h : 54/7 20 ^h : 54/6 R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	31.1	+13 20.3	87	00.8	+14 18.0		60 N	19 45	20 35	21 50	10 58 69	1 58 23	
1	195	31.2		101	32.6 ¹²⁸	11.9	61	58	36	23	27	11 06 67	49 25	
2	210	31.3	21.9	116	04.4 ¹²⁸	+14 05.8	61	56	28	12	21 09	13 65	42 27	
3	225	31.4	22.8	130	36.4 ¹³⁰	+13 59.6	62	54	22	20 02	20 55	19 64	35 28	
4	240	31.5	23.6	145	08.3 ¹²⁹	53.3	63	52	16	19 54	42	25 62	29 30	
5	255	31.6	+13 24.4	159	40.3 ¹³⁰	+13 47.0	63	50	19 10	19 46	20 31	11 30 61	1 24 30	
6	270	31.7	+13 25.2	174	12.4 ¹³¹	+13 40.6	64	45	18 59	19 31	20 10	11 41 58	1 12 33	
7	285	31.8	26.0	188	44.5 ¹³¹	34.2	64	40	49	18	19 53	50 56	1 02 36	
8	300	31.9	26.8	203	16.7 ¹³²	27.7	65	35	41	19 08	40	11 57 54	0 54 37	
9	315	32.0	27.6	217	48.9 ¹³²	21.1	66	30	34	18 59	29	12 04 52	47 38	
10	330	32.1	28.4	232	21.1 ¹³²	14.5	66	20	22	45	19 11	16 49	34 41	
11	345	32.2	+13 29.2	246	53.5 ¹³⁴	+13 07.9	66	10 N	18 11	18 33	18 58	12 26 47	0 23 43	
12	0	32.3	+13 30.0	261	25.8 ¹³³	+13 01.2	67	0	18 01	18 22	18 47	12 36 44	0 12 46	
13	15	32.4	30.8	275	58.2 ¹³⁴	+12 54.4	68	10 S	17 52	13	38	45 43	0 01 48	
14	30	32.5	31.6	290	30.6 ¹³⁴	47.6	68	20	41	18 04	30	12 56 39	** ** *	
15	45	32.6	32.4	305	03.1 ¹³⁵	40.7	69	30	30	17 54	22	13 07 37	** ** *	
16	60	32.7	33.2	319	35.7 ¹³⁶	33.8	69	35	23	49	19	14 35	** ** *	
17	75	32.8	+13 34.0	334	08.3 ¹³⁶	+12 26.8	70	40	17 16	17 44	18 15	13 22 33	** ** *	
18	90	32.9	+13 34.9	348	40.9 ¹³⁶	+12 19.8	70	45	17 07	17 37	18 12	13 30 32	** ** *	
19	105	33.0	35.7	3	13.5 ¹³⁶	12.7	71	50	16 57	30	08	41 29	23 59 61	
20	120	33.1	36.5	17	46.3 ¹³⁸	+12 05.6	71	52	52	27	07	46 27	54 63	
21	135	33.2	37.3	32	19.0 ¹³⁷	+11 58.4	72	54	46	23	05	51 26	49 64	
22	150	33.3	38.1	46	51.8 ¹³⁸	51.2	72	56	41	20	03	13 57 25	44 65	
23	165	33.4	38.9	61	24.6 ¹³⁸	44.0	72	58	34	16	02	14 04 23	38 67	
24	180	33.5	+13 39.7	75	57.5 ¹³⁹	+11 36.7	73	60 S	16 27	17 11	18 00	14 12 20	23 31 69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 43 ^m 7		Mag: -4.1 PMG: 14 ^h 47 ^m		Mag: +1.4 PMG: 12 ^h 49 ^m		Mag: -2.2 PMG: 18 ^h 46 ^m		Mag: +0.2 PMG: 1 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	213	40.8	138 29.7	+24 54.9	167 40.7	+17 28.4	77 53.1	+17 47.2	331 43.8	-18 42.8
1	228	43.2	153 29.1	55.3	182 41.3	28.9	92 55.4	47.2	346 46.5	42.8
2	243	45.7	168 28.4	55.7	197 42.0	29.4	107 57.8	47.1	1 49.1	42.7
3	258	48.2	183 27.8	56.0	212 42.7	29.9	123 00.1	47.1	16 51.7	42.7
4	273	50.6	198 27.1	56.4	227 43.3	30.5	138 02.4	47.0	31 54.3	42.7
5	288	53.1	213 26.5	+24 56.8	242 44.0	+17 31.0	153 04.7	+17 47.0	46 56.9	-18 42.6
6	303	55.6	228 25.9	+24 57.2	257 44.6	+17 31.5	168 07.1	+17 47.0	61 59.6	-18 42.6
7	318	58.0	243 25.2	57.6	272 45.3	32.0	183 09.4	46.9	77 02.2	42.6
8	334	00.5	258 24.6	58.0	287 45.9	32.5	198 11.7	46.9	92 04.8	42.5
9	349	03.0	273 23.9	58.4	302 46.6	33.1	213 14.1	46.8	107 07.4	42.5
10	4	05.4	288 23.3	58.7	317 47.3	33.6	228 16.4	46.8	122 10.1	42.5
11	19	07.9	303 22.6	+24 59.1	332 47.9	+17 34.1	243 18.7	+17 46.8	137 12.7	-18 42.4
12	34	10.3	318 22.0	+24 59.5	347 48.6	+17 34.6	258 21.1	+17 46.7	152 15.3	-18 42.4
13	49	12.8	333 21.3	+24 59.9	2 49.2	35.1	273 23.4	46.7	167 17.9	42.4
14	64	15.3	348 20.7	+25 00.3	17 49.9	35.7	288 25.7	46.6	182 20.5	42.4
15	79	17.7	3 20.0	00.6	32 50.5	36.2	303 28.0	46.6	197 23.2	42.3
16	94	20.2	18 19.4	01.0	47 51.2	36.7	318 30.4	46.5	212 25.8	42.3
17	109	22.7	33 18.7	+25 01.4	62 51.9	+17 37.2	333 32.7	+17 46.5	227 28.4	-18 42.3
18	124	25.1	48 18.1	+25 01.8	77 52.5	+17 37.7	348 35.0	+17 46.5	242 31.0	-18 42.2
19	139	27.6	63 17.5	02.1	92 53.2	38.3	3 37.4	46.4	257 33.7	42.2
20	154	30.1	78 16.8	02.5	107 53.8	38.8	18 39.7	46.4	272 36.3	42.2
21	169	32.5	93 16.2	02.9	122 54.5	39.3	33 42.0	46.3	287 38.9	42.1
22	184	35.0	108 15.5	03.2	137 55.1	39.8	48 44.3	46.3	302 41.5	42.1
23	199	37.5	123 14.9	03.6	152 55.8	40.3	63 46.7	46.2	317 44.2	42.1
24	214	39.9	138 14.2	+25 04.0	167 56.4	+17 40.8	78 49.0	+17 46.2	332 46.8	-18 42.0
Dif	—		-6	+4	+7	+5	+23	0	+26	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 8 ^d 2	PHE { 4 ^h : 54 ^h 4 12 ^h : 54 ^h 3 20 ^h : 54 ^h 3	SD: 14 ^h 8		PMG: 19 ^h 31 ^m	R ^o : 43 ^m						
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Náutico
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	33.5	+13	39.7	75	57.5	+11	36.7	60 N	2 05	3 19	4 10	12 07	69	2 21 19
1	195	33.6		40.5	90	30.4 ¹³⁹		29.3	58	28	32	19	13 67		14 21
2	210	33.7		41.3	105	03.4 ¹⁴⁰		21.9	56	2 45	43	26	18 65		09 22
3	225	33.8		42.1	119	36.4 ¹⁴⁰		14.4	54	3 00	3 53	33	23 63		2 03 25
4	240	33.9		42.9	134	09.4 ¹⁴⁰	+11	06.9	52	13	4 01	39	27 62		1 59 26
5	255	34.0	+13	43.7	148	42.5 ¹⁴¹	+10	59.4	50	3 23	4 09	4 44	12 31	60	1 54 28
6	270	34.1	+13	44.5	163	15.6 ¹⁴¹	+10	51.8	45	3 45	4 24	4 56	12 39	58	1 45 30
7	285	34.2		45.3	177	48.8 ¹⁴²		44.2	40	4 02	37	5 06	46 55		38 32
8	300	34.3		46.1	192	22.0 ¹⁴²		36.5	35	15	47	14	51 54		31 34
9	315	34.4		46.9	206	55.2 ¹⁴²		28.8	30	26	4 56	21	12 56	52	25 36
10	330	34.5		47.7	221	28.5 ¹⁴³		21.1	20	44	5 11	34	13 05	49	15 39
11	345	34.6	+13	48.5	236	01.8 ¹⁴³	+10	13.3	10 N	4 57	5 23	5 44	13 13	46	1 06 41
12	0	34.7	+13	49.3	250	35.1 ¹⁴³	+10	05.4	0	5 08	5 33	5 54	13 20	44	0 58 43
13	15	34.8		50.0	265	08.5 ¹⁴⁴	+9	57.6	10 S	18	43	6 04	28 40		49 46
14	30	34.9		50.8	279	41.9 ¹⁴⁴		49.6	20	26	5 52	14	35 38		40 49
15	45	35.0		51.6	294	15.3 ¹⁴⁴		41.7	30	33	6 02	26	44 35		30 51
16	60	35.1		52.4	308	48.8 ¹⁴⁵		33.7	35	37	07	33	49 33		23 54
17	75	35.2	+13	53.2	323	22.3 ¹⁴⁵	+9	25.7	40	5 41	6 13	6 41	13 55	31	0 17 55
18	90	35.3	+13	54.0	337	55.8 ¹⁴⁵	+9	17.6	45	5 44	6 19	6 49	14 02	28	0 09 58
19	105	35.4		54.8	352	29.3 ¹⁴⁵		09.5	50	48	26	7 00	10 26		** ** **
20	120	35.5		55.6	7	02.9 ¹⁴⁶	+9	01.4	52	50	30	05	13 25		** ** **
21	135	35.6		56.4	21	36.5 ¹⁴⁶	+8	53.2	54	51	33	10	17 23		** ** **
22	150	35.7		57.2	36	10.2 ¹⁴⁷		45.0	56	53	37	16	22 21		** ** **
23	165	35.8		58.0	50	43.9 ¹⁴⁷		36.8	58	55	41	23	27 19		** ** **
24	180	35.9	+13	58.8	65	17.6 ¹⁴⁷	+8	28.5	60 S	5 57	6 46	7 31	14 32	18	** ** **

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 39 ^m 8		Mag: -4.1 PMG: 14 ^h 48 ^m		Mag: +1.4 PMG: 12 ^h 48 ^m		Mag: -2.2 PMG: 18 ^h 42 ^m		Mag: +0.1 PMG: 1 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	214	39.9	138	14.2	+25	04.0	167	56.4	+17	40.8	78	49.0	+17	46.2	332	46.8	-18	42.0
1	229	42.4	153	13.6		04.3	182	57.1		41.3	93	51.3		46.2	347	49.4		42.0
2	244	44.8	168	12.9		04.7	197	57.7		41.9	108	53.6		46.1	2	52.0		42.0
3	259	47.3	183	12.3		05.1	212	58.4		42.4	123	56.0		46.1	17	54.6		41.9
4	274	49.8	198	11.6		05.4	227	59.1		42.9	138	58.3		46.0	32	57.3		41.9
5	289	52.2	213	11.0	+25	05.8	242	59.7	+17	43.4	154	00.6	+17	46.0	47	59.9	-18	41.9
6	304	54.7	228	10.3	+25	06.1	258	00.4	+17	43.9	169	02.9	+17	45.9	63	02.5	-18	41.8
7	319	57.2	243	09.7		06.5	273	01.0		44.4	184	05.3		45.9	78	05.1		41.8
8	334	59.6	258	09.1		06.9	288	01.7		44.9	199	07.6		45.9	93	07.8		41.8
9	350	02.1	273	08.4		07.2	303	02.3		45.5	214	09.9		45.8	108	10.4		41.8
10	5	04.6	288	07.8		07.6	318	03.0		46.0	229	12.2		45.8	123	13.0		41.7
11	20	07.0	303	07.1	+25	07.9	333	03.6	+17	46.5	244	14.5	+17	45.7	138	15.6	-18	41.7
12	35	09.5	318	06.5	+25	08.3	348	04.3	+17	47.0	259	16.9	+17	45.7	153	18.3	-18	41.7
13	50	11.9	333	05.8		08.6	3	04.9		47.5	274	19.2		45.6	168	20.9		41.6
14	65	14.4	348	05.2		09.0	18	05.6		48.0	289	21.5		45.6	183	23.5		41.6
15	80	16.9	3	04.5		09.3	33	06.3		48.5	304	23.8		45.5	198	26.1		41.6
16	95	19.3	18	03.9		09.7	48	06.9		49.0	319	26.1		45.5	213	28.8		41.5
17	110	21.8	33	03.2	+25	10.0	63	07.6	+17	49.6	334	28.5	+17	45.5	228	31.4	-18	41.5
18	125	24.3	48	02.6	+25	10.4	78	08.2	+17	50.1	349	30.8	+17	45.4	243	34.0	-18	41.5
19	140	26.7	63	01.9		10.7	93	08.9		50.6	4	33.1		45.4	258	36.6		41.4
20	155	29.2	78	01.3		11.1	108	09.5		51.1	19	35.4		45.3	273	39.3		41.4
21	170	31.7	93	00.6		11.4	123	10.2		51.6	34	37.7		45.3	288	41.9		41.4
22	185	34.1	108	00.0		11.7	138	10.8		52.1	49	40.1		45.2	303	44.5		41.3
23	200	36.6	122	59.4		12.1	153	11.5		52.6	64	42.4		45.2	318	47.2		41.3
24	215	39.1	137	58.7	+25	12.4	168	12.1	+17	53.1	79	44.7	+17	45.1	333	49.8	-18	41.3
Dif	—		-6		+4		+7		+5		+23		0		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 5			Edad: 9 ^d 2 SD: 14'8 PMG: 20 ^h 14 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1 R°: 42 ^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	180	35.9	+13 58.8	65	17.6	+8 28.5		60 N	19 50	20 41	21 59	13 16 70	2 40 17		
1	195	36.0	+13 59.6	79	51.3 ¹⁴⁷	20.2	⁸³	58	40	28	35	20 68	35 19		
2	210	36.1	+14 00.4	94	25.1 ¹⁴⁸	11.8	⁸⁴	56	33	16	15	23 66	31 21		
3	225	36.1	01.2	108	58.8 ¹⁴⁷	+8 03.5	⁸³	54	26	20 06	21 00	26 64	28 22		
4	240	36.2	01.9	123	32.6 ¹⁴⁸	+7 55.1	⁸⁴	52	19	19 57	20 47	29 63	25 23		
5	255	36.3	+14 02.7	138	06.5 ¹⁴⁹	+7 46.6	⁸⁵	50	19 14	19 50	20 36	13 31 62	2 22 25		
6	270	36.4	+14 03.5	152	40.3 ¹⁴⁸	+7 38.2	⁸⁴	45	19 01	19 33	20 13	13 37 58	2 15 28		
7	285	36.5	04.3	167	14.2 ¹⁴⁹	29.7	⁸⁵	40	18 51	20	19 56	41 56	10 30		
8	300	36.6	05.1	181	48.1 ¹⁴⁹	21.1	⁸⁶	35	43	10	42	45 53	05 33		
9	315	36.7	05.9	196	22.0 ¹⁴⁹	12.6	⁸⁵	30	35	19 00	30	48 52	2 01 34		
10	330	36.8	06.7	210	56.0 ¹⁵⁰	+7 04.0	⁸⁶	20	22	18 45	19 12	54 48	1 54 37		
11	345	36.9	+14 07.5	225	29.9 ¹⁴⁹	+6 55.4	⁸⁶	10 N	18 11	18 33	18 58	13 59 45	1 47 41		
12	0	37.0	+14 08.2	240	03.9 ¹⁵⁰	+6 46.7	⁸⁷	0	18 01	18 22	18 47	14 04 42	1 41 43		
13	15	37.1	09.0	254	37.9 ¹⁵⁰	38.1	⁸⁶	10 S	17 51	12	37	08 40	35 46		
14	30	37.2	09.8	269	11.9 ¹⁵⁰	29.4	⁸⁷	20	40	18 03	29	13 37	29 48		
15	45	37.3	10.6	283	46.0 ¹⁵¹	20.7	⁸⁷	30	28	17 53	21	19 34	21 52		
16	60	37.4	11.4	298	20.0 ¹⁵⁰	11.9	⁸⁸	35	21	47	17	22 32	17 54		
17	75	37.5	+14 12.2	312	54.1 ¹⁵¹	+6 03.1	⁸⁸	40	17 13	17 41	18 13	14 26 30	1 12 56		
18	90	37.5	+14 13.0	327	28.2 ¹⁵¹	+5 54.3	⁸⁸	45	17 04	17 34	18 09	14 30 28	1 07 58		
19	105	37.6	13.7	342	02.3 ¹⁵¹	45.5	⁸⁸	50	16 53	27	05	36 24	1 00 61		
20	120	37.7	14.5	356	36.4 ¹⁵¹	36.7	⁸⁸	52	48	23	03	38 23	0 57 62		
21	135	37.8	15.3	11	10.6 ¹⁵²	27.8	⁸⁹	54	42	20	18 01	40 22	53 64		
22	150	37.9	16.1	25	44.7 ¹⁵¹	18.9	⁸⁹	56	36	15	17 59	43 20	49 66		
23	165	38.0	16.9	40	18.9 ¹⁵²	10.0	⁸⁹	58	29	11	57	46 19	45 68		
24	180	38.1	+14 17.7	54	53.1 ¹⁵²	+5 01.1	⁸⁹	60 S	16 21	17 06	17 55	14 50 16	0 40 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 35 ^m 8		Mag: -4.1 PMG: 14 ^h 49 ^m		Mag: +1.4 PMG: 12 ^h 47 ^m		Mag: -2.2 PMG: 18 ^h 38 ^m		Mag: +0.1 PMG: 1 ^h 44 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	215	39.1	137	58.7	+25 12.4	168	12.1	+17 53.1	79	44.7	+17 45.1	333	49.8	-18 41.3
1	230	41.5	152	58.1	12.8	183	12.8	53.6	94	47.0	45.1	348	52.4	41.2
2	245	44.0	167	57.4	13.1	198	13.4	54.1	109	49.3	45.0	3	55.0	41.2
3	260	46.4	182	56.8	13.4	213	14.1	54.6	124	51.7	45.0	18	57.7	41.2
4	275	48.9	197	56.1	13.8	228	14.7	55.2	139	54.0	45.0	34	00.3	41.2
5	290	51.4	212	55.5	+25 14.1	243	15.4	+17 55.7	154	56.3	+17 44.9	49	02.9	-18 41.1
6	305	53.8	227	54.8	+25 14.4	258	16.1	+17 56.2	169	58.6	+17 44.9	64	05.5	-18 41.1
7	320	56.3	242	54.2	14.8	273	16.7	56.7	185	00.9	44.8	79	08.2	41.1
8	335	58.8	257	53.5	15.1	288	17.4	57.2	200	03.2	44.8	94	10.8	41.0
9	351	01.2	272	52.9	15.4	303	18.0	57.7	215	05.6	44.7	109	13.4	41.0
10	6	03.7	287	52.2	15.7	318	18.7	58.2	230	07.9	44.7	124	16.0	41.0
11	21	06.2	302	51.6	+25 16.1	333	19.3	+17 58.7	245	10.2	+17 44.6	139	18.7	-18 40.9
12	36	08.6	317	51.0	+25 16.4	348	20.0	+17 59.2	260	12.5	+17 44.6	154	21.3	-18 40.9
13	51	11.1	332	50.3	16.7	3	20.6	+17 59.7	275	14.8	44.5	169	23.9	40.9
14	66	13.6	347	49.7	17.0	18	21.3	+18 00.2	290	17.1	44.5	184	26.6	40.8
15	81	16.0	2	49.0	17.4	33	21.9	00.7	305	19.4	44.5	199	29.2	40.8
16	96	18.5	17	48.4	17.7	48	22.6	01.2	320	21.8	44.4	214	31.8	40.8
17	111	20.9	32	47.7	+25 18.0	63	23.2	+18 01.7	335	24.1	+17 44.4	229	34.4	-18 40.7
18	126	23.4	47	47.1	+25 18.3	78	23.9	+18 02.2	350	26.4	+17 44.3	244	37.1	-18 40.7
19	141	25.9	62	46.4	18.6	93	24.5	02.7	5	28.7	44.3	259	39.7	40.7
20	156	28.3	77	45.8	19.0	108	25.2	03.2	20	31.0	44.2	274	42.3	40.6
21	171	30.8	92	45.1	19.3	123	25.8	03.7	35	33.3	44.2	289	45.0	40.6
22	186	33.3	107	44.5	19.6	138	26.5	04.2	50	35.6	44.1	304	47.6	40.6
23	201	35.7	122	43.9	19.9	153	27.1	04.7	65	37.9	44.1	319	50.2	40.5
24	216	38.2	137	43.2	+25 20.2	168	27.8	+18 05.2	80	40.2	+17 44.0	334	52.8	-18 40.5
Dif	—		-6		+3	+7		+5	+23		0	+26		

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 4				Edad: 10 ^d 2 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 2 PMG: 20 ^h 56 ^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	38.1	+14	17.7	54	53.1	+5	01.1	90	60 N	1 55	3 13	4 05	14 26	71	2 57	15	
1	195	38.2		18.4	69	27.3	152	+4	52.1	90	58	2 20	26	14	28	68	54	18
2	210	38.3		19.2	84	01.5	152		43.2	89	56	39	38	22	29	66	52	20
3	225	38.4		20.0	98	35.7	152		34.2	90	54	2 54	48	29	30	65	50	21
4	240	38.4		20.8	113	09.9	152		25.2	90	52	3 07	3 57	35	32	62	48	23
5	255	38.5	+14	21.6	127	44.1	152	+4	16.1	91	50	3 19	4 05	4 41	14 33	61	2 47	24
6	270	38.6	+14	22.3	142	18.4	153	+4	07.1	90	45	3 41	4 21	4 53	14 35	58	2 43	27
7	285	38.7		23.1	156	52.6	152	+3	58.0	91	40	3 59	34	5 03	37	55	40	30
8	300	38.8		23.9	171	26.8	152		49.0	90	35	4 13	45	12	38	54	38	31
9	315	38.9		24.7	186	01.1	153		39.9	91	30	24	4 54	19	40	51	35	34
10	330	39.0		25.5	200	35.4	153		30.7	92	20	42	5 09	32	42	48	31	37
11	345	39.1	+14	26.2	215	09.6	152	+3	21.6	91	10 N	4 56	5 22	5 44	14 44	45	2 28	39
12	0	39.2	+14	27.0	229	43.9	153	+3	12.5	91	0	5 08	5 33	5 54	14 46	43	2 24	43
13	15	39.2		27.8	244	18.2	153	+3	03.3	92	10 S	18	43	6 04	48	40	21	45
14	30	39.3		28.6	258	52.5	153	+2	54.1	92	20	26	5 52	15	50	37	17	48
15	45	39.4		29.3	273	26.8	153		44.9	92	30	34	6 03	27	53	33	13	51
16	60	39.5		30.1	288	01.0	152		35.8	91	35	38	08	35	54	32	11	53
17	75	39.6	+14	30.9	302	35.3	153	+2	26.5	93	40	5 42	6 14	6 43	14 56	29	2 08	55
18	90	39.7	+14	31.7	317	09.6	153	+2	17.3	92	45	5 47	6 21	6 52	14 58	27	2 05	58
19	105	39.8		32.4	331	43.9	153	+2	08.1	92	50	51	29	7 03	15 00	24	2 01	61
20	120	39.8		33.2	346	18.2	153	+1	58.8	93	52	53	33	08	01	22	1 59	63
21	135	39.9		34.0	0	52.5	153		49.6	92	54	55	36	14	02	21	57	64
22	150	40.0		34.8	15	26.8	153		40.3	93	56	57	41	20	03	20	55	66
23	165	40.1		35.5	30	01.0	152		31.0	93	58	5 59	45	27	05	17	53	67
24	180	40.2	+14	36.3	44	35.3	153	+1	21.8	92	60 S	6 01	6 50	7 35	15 06	16	1 50	70

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 9 ^h 31 ^m 9		Mag: -4.1 PMG: 14 ^h 50 ^m				Mag: +1.4 PMG: 12 ^h 46 ^m				Mag: -2.2 PMG: 18 ^h 34 ^m				Mag: +0.1 PMG: 1 ^h 40 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	216	38.2	137	43.2	+25	20.2			168	27.8	+18	05.2	80	40.2	+17	44.0	334	52.8	-18	40.5
1	231	40.7	152	42.6		20.5			183	28.4		05.7	95	42.6		44.0	349	55.5		40.5
2	246	43.1	167	41.9		20.8			198	29.1		06.2	110	44.9		43.9	4	58.1		40.4
3	261	45.6	182	41.3		21.1			213	29.7		06.7	125	47.2		43.9	20	00.7		40.4
4	276	48.0	197	40.6		21.4			228	30.4		07.2	140	49.5		43.8	35	03.4		40.4
5	291	50.5	212	40.0	+25	21.8			243	31.0	+18	07.7	155	51.8	+17	43.8	50	06.0	-18	40.4
6	306	53.0	227	39.3	+25	22.1			258	31.7	+18	08.2	170	54.1	+17	43.7	65	08.6	-18	40.3
7	321	55.4	242	38.7		22.4			273	32.3		08.7	185	56.4		43.7	80	11.2		40.3
8	336	57.9	257	38.0		22.7			288	33.0		09.2	200	58.7		43.6	95	13.9		40.3
9	352	00.4	272	37.4		23.0			303	33.6		09.7	216	01.0		43.6	110	16.5		40.2
10	7	02.8	287	36.8		23.3			318	34.3		10.2	231	03.3		43.6	125	19.1		40.2
11	22	05.3	302	36.1	+25	23.6			333	34.9	+18	10.7	246	05.7	+17	43.5	140	21.8	-18	40.2
12	37	07.8	317	35.5	+25	23.9			348	35.6	+18	11.2	261	08.0	+17	43.5	155	24.4	-18	40.1
13	52	10.2	332	34.8		24.2			3	36.2		11.7	276	10.3		43.4	170	27.0		40.1
14	67	12.7	347	34.2		24.5			18	36.9		12.2	291	12.6		43.4	185	29.6		40.1
15	82	15.2	2	33.5		24.7			33	37.5		12.7	306	14.9		43.3	200	32.3		40.0
16	97	17.6	17	32.9		25.0			48	38.2		13.2	321	17.2		43.3	215	34.9		40.0
17	112	20.1	32	32.2	+25	25.3			63	38.8	+18	13.7	336	19.5	+17	43.2	230	37.5	-18	40.0
18	127	22.5	47	31.6	+25	25.6			78	39.5	+18	14.2	351	21.8	+17	43.2	245	40.2	-18	39.9
19	142	25.0	62	31.0		25.9			93	40.1		14.7	6	24.1		43.1	260	42.8		39.9
20	157	27.5	77	30.3		26.2			108	40.8		15.2	21	26.4		43.1	275	45.4		39.9
21	172	29.9	92	29.7		26.5			123	41.4		15.7	36	28.7		43.0	290	48.1		39.8
22	187	32.4	107	29.0		26.8			138	42.1		16.2	51	31.0		43.0	305	50.7		39.8
23	202	34.9	122	28.4		27.1			153	42.7		16.7	66	33.3		42.9	320	53.3		39.8
24	217	37.3	137	27.7	+25	27.3			168	43.4	+18	17.2	81	35.6	+17	42.9	335	56.0	-18	39.7
Dif	—		-6		+3				+7		+5		+23		0		+26		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 3				Edad: 11 ^d 2 PHE { SD: 14'8 PMG: 21 ^h 39 ^m 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 43 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	40.2	+14	36.3	44	35.3	+1	21.8	60 N	19 54	20 47	22 09	15 37 71	3 12 16		
1	195	40.3		37.1	59	09.6 ¹⁵³		12.5 ⁹³	58	45	33	21 42	36 69	12 18		
2	210	40.4		37.8	73	43.9 ¹⁵³	+1	03.2 ⁹³	56	37	21	22	35 67	12 19		
3	225	40.4		38.6	88	18.1 ¹⁵²	+0	53.9 ⁹³	54	29	10	21 05	35 65	11 21		
4	240	40.5		39.4	102	52.4 ¹⁵³		44.5 ⁹⁴	52	23	20 01	20 52	34 64	11 23		
5	255	40.6	+14	40.2	117	26.6 ¹⁵²	+0	35.2 ⁹³	50	19 17	19 53	20 40	15 34 62	3 11 24		
6	270	40.7	+14	40.9	132	00.9 ¹⁵³	+0	25.9 ⁹³	45	19 04	19 36	20 16	15 33 59	3 10 27		
7	285	40.8		41.7	146	35.1 ¹⁵²		16.6 ⁹³	40	18 53	23	19 58	32 57	10 29		
8	300	40.9		42.5	161	09.4 ¹⁵³	+0	07.2 ⁹⁴	35	44	11	44	32 54	09 32		
9	315	40.9		43.2	175	43.6 ¹⁵²	-0	02.1 ⁹³	30	36	19 02	32	31 52	09 33		
10	330	41.0		44.0	190	17.8 ¹⁵²		11.4 ⁹³	20	23	18 46	19 13	30 49	08 37		
11	345	41.1	+14	44.8	204	52.0 ¹⁵²	-0	20.8 ⁹⁴	10 N	18 11	18 33	18 59	15 29 46	3 07 40		
12	0	41.2	+14	45.5	219	26.2 ¹⁵²	-0	30.1 ⁹³	0	18 01	18 22	18 47	15 29 43	3 07 42		
13	15	41.3		46.3	234	00.4 ¹⁵²		39.5 ⁹⁴	10 S	17 50	12	37	28 40	06 45		
14	30	41.4		47.1	248	34.5 ¹⁵¹		48.8 ⁹³	20	39	18 02	28	27 37	05 49		
15	45	41.4		47.8	263	08.7 ¹⁵²	-0	58.2 ⁹⁴	30	26	17 51	19	26 34	04 52		
16	60	41.5		48.6	277	42.8 ¹⁵¹	-1	07.5 ⁹³	35	19	45	15	26 32	04 54		
17	75	41.6	+14	49.4	292	17.0 ¹⁵²	-1	16.9 ⁹⁴	40	17 11	17 39	18 11	15 25 30	3 03 56		
18	90	41.7	+14	50.1	306	51.1 ¹⁵¹	-1	26.2 ⁹³	45	17 01	17 32	18 06	15 25 27	3 03 58		
19	105	41.8		50.9	321	25.2 ¹⁵¹		35.6 ⁹⁴	50	16 49	23	02	24 24	02 62		
20	120	41.8		51.7	335	59.2 ¹⁵⁰		44.9 ⁹³	52	44	20	18 00	23 23	02 63		
21	135	41.9		52.4	350	33.3 ¹⁵¹	-1	54.2 ⁹³	54	38	16	17 58	23 22	01 65		
22	150	42.0		53.2	5	07.4 ¹⁵¹	-2	03.6 ⁹⁴	56	32	11	55	23 19	01 66		
23	165	42.1		53.9	19	41.4 ¹⁵⁰		12.9 ⁹³	58	24	07	53	22 18	00 69		
24	180	42.2	+14	54.7	34	15.4 ¹⁵⁰	-2	22.2 ⁹³	60 S	16 16	17 01	17 51	15 22 16	3 00 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 28 ^m 0		Mag: -4.1 PMG: 14 ^h 51 ^m		Mag: +1.4 PMG: 12 ^h 45 ^m		Mag: -2.2 PMG: 18 ^h 31 ^m		Mag: +0.1 PMG: 1 ^h 36 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	217	37.3	137	27.7	+25	27.3	168	43.4	+18	17.2	81	35.6	+17	42.9	335	56.0	-18	39.7
1	232	39.8	152	27.1		27.6	183	44.0		17.7	96	37.9		42.8	350	58.6		39.7
2	247	42.3	167	26.4		27.9	198	44.7		18.2	111	40.2		42.8	6	01.2		39.7
3	262	44.7	182	25.8		28.2	213	45.3		18.7	126	42.5		42.7	21	03.8		39.6
4	277	47.2	197	25.2		28.5	228	46.0		19.2	141	44.8		42.7	36	06.5		39.6
5	292	49.6	212	24.5	+25	28.7	243	46.6	+18	19.6	156	47.1	+17	42.6	51	09.1	-18	39.6
6	307	52.1	227	23.9	+25	29.0	258	47.3	+18	20.1	171	49.4	+17	42.6	66	11.7	-18	39.5
7	322	54.6	242	23.2		29.3	273	47.9		20.6	186	51.7		42.5	81	14.4		39.5
8	337	57.0	257	22.6		29.6	288	48.6		21.1	201	54.0		42.5	96	17.0		39.5
9	352	59.5	272	21.9		29.9	303	49.2		21.6	216	56.4		42.4	111	19.6		39.4
10	8	02.0	287	21.3		30.1	318	49.9		22.1	231	58.7		42.4	126	22.3		39.4
11	23	04.4	302	20.6	+25	30.4	333	50.5	+18	22.6	247	01.0	+17	42.3	141	24.9	-18	39.4
12	38	06.9	317	20.0	+25	30.7	348	51.2	+18	23.1	262	03.3	+17	42.3	156	27.5	-18	39.3
13	53	09.4	332	19.4		30.9	3	51.8		23.6	277	05.6		42.2	171	30.2		39.3
14	68	11.8	347	18.7		31.2	18	52.5		24.1	292	07.9		42.2	186	32.8		39.3
15	83	14.3	2	18.1		31.5	33	53.1		24.5	307	10.2		42.1	201	35.4		39.3
16	98	16.8	17	17.4		31.7	48	53.8		25.0	322	12.5		42.1	216	38.1		39.2
17	113	19.2	32	16.8	+25	32.0	63	54.4	+18	25.5	337	14.8	+17	42.0	231	40.7	-18	39.2
18	128	21.7	47	16.2	+25	32.3	78	55.1	+18	26.0	352	17.1	+17	42.0	246	43.3	-18	39.2
19	143	24.1	62	15.5		32.5	93	55.7		26.5	7	19.4		41.9	261	46.0		39.1
20	158	26.6	77	14.9		32.8	108	56.4		27.0	22	21.6		41.9	276	48.6		39.1
21	173	29.1	92	14.2		33.0	123	57.0		27.5	37	23.9		41.8	291	51.2		39.1
22	188	31.5	107	13.6		33.3	138	57.6		28.0	52	26.2		41.8	306	53.9		39.0
23	203	34.0	122	12.9		33.6	153	58.3		28.5	67	28.5		41.7	321	56.5		39.0
24	218	36.5	137	12.3	+25	33.8	168	58.9	+18	28.9	82	30.8	+17	41.7	336	59.1	-18	39.0
Dif	—		-6 +3		+6 +5		+23 -1		+26 0									

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 1				Edad: 12 ^d 2 PHE { SD: 14 ^h 8 PMG: 22 ^h 22 ^m												
					R ^o : 45 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	42.2	+14	54.7	34	15.4	-2	22.2	60 N	1 45	3 06	3 59	16 48	72	3 28	17	
1	195	42.2		55.5	48	49.4 ¹⁵⁰		31.5 ⁹³	58	2 12	20	4 09	45	70	30	18	
2	210	42.3		56.2	63	23.4 ¹⁵⁰		40.9 ⁹⁴	56	32	33	17	42	68	31	21	
3	225	42.4		57.0	77	57.3 ¹⁴⁹		50.2 ⁹³	54	2 48	43	24	40	66	32	22	
4	240	42.5		57.7	92	31.2 ¹⁴⁹	-2	59.5 ⁹³	52	3 02	3 52	31	38	64	34	23	
5	255	42.6	+14	58.5	107	05.1 ¹⁴⁹	-3	08.8 ⁹³	50	3 14	4 01	4 37	16 36	63	3 35	25	
6	270	42.6	+14	59.3	121	39.0 ¹⁴⁹	-3	18.0 ⁹²	45	3 38	4 18	4 50	16 32	60	3 37	28	
7	285	42.7	+15	00.0	136	12.9 ¹⁴⁹		27.3 ⁹³	40	3 56	31	5 01	29	57	39	30	
8	300	42.8	+15	00.8	150	46.7 ¹⁴⁸		36.6 ⁹³	35	4 10	43	10	26	55	41	32	
9	315	42.9		01.5	165	20.6 ¹⁴⁹		45.8 ⁹²	30	22	4 52	18	23	54	42	35	
10	330	42.9		02.3	179	54.4 ¹⁴⁸	-3	55.1 ⁹³	20	41	5 08	31	19	50	45	38	
11	345	43.0	+15	03.1	194	28.1 ¹⁴⁷	-4	04.3 ⁹²	10 N	4 56	5 21	5 43	16 15	47	3 47	41	
12	0	43.1	+15	03.8	209	01.9 ¹⁴⁸	-4	13.5 ⁹²	0	5 07	5 32	5 54	16 12	44	3 49	44	
13	15	43.2		04.6	223	35.6 ¹⁴⁷		22.7 ⁹²	10 S	18	43	6 04	08	42	51	47	
14	30	43.2		05.3	238	09.3 ¹⁴⁷		31.9 ⁹²	20	27	5 53	16	04	39	54	49	
15	45	43.3		06.1	252	42.9 ¹⁴⁶		41.1 ⁹²	30	36	6 04	29	16	00	35	56	53
16	60	43.4		06.8	267	16.6 ¹⁴⁷		50.3 ⁹²	35	40	10	36	15	58	33	58	54
17	75	43.5	+15	07.6	281	50.2 ¹⁴⁶	-4	59.4 ⁹¹	40	5 44	6 16	6 45	15	55	31	3 59	57
18	90	43.5	+15	08.3	296	23.8 ¹⁴⁶	-5	08.6 ⁹²	45	5 49	6 24	6 54	15	52	29	4 01	60
19	105	43.6		09.1	310	57.3 ¹⁴⁵		17.7 ⁹¹	50	54	32	7 06	48	26	04	62	
20	120	43.7		09.9	325	30.8 ¹⁴⁵		26.8 ⁹¹	52	56	36	11	46	25	05	64	
21	135	43.8		10.6	340	04.3 ¹⁴⁵		35.9 ⁹¹	54	5 58	40	17	45	23	06	66	
22	150	43.8		11.4	354	37.8 ¹⁴⁵		44.9 ⁹⁰	56	6 00	44	24	42	22	07	68	
23	165	43.9		12.1	9	11.2 ¹⁴⁴	-5	54.0 ⁹¹	58	02	49	32	40	20	09	69	
24	180	44.0	+15	12.9	23	44.6 ¹⁴⁴	-6	03.0 ⁹⁰	60 S	6 05	6 55	7 40	15	38	17	4 10	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 24 ^m 0		Mag: -4.2 PMG: 14 ^h 52 ^m		Mag: +1.4 PMG: 12 ^h 44 ^m		Mag: -2.2 PMG: 18 ^h 27 ^m		Mag: +0.1 PMG: 1 ^h 32 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	218	36.5	137	12.3	+25	33.8	168	58.9	+18	28.9
1	233	38.9	152	11.7		34.1	183	59.6		29.4
2	248	41.4	167	11.0		34.3	199	00.2		29.9
3	263	43.9	182	10.4		34.6	214	00.9		30.4
4	278	46.3	197	09.7		34.8	229	01.5		30.9
5	293	48.8	212	09.1	+25	35.1	244	02.2	+18	31.4
6	308	51.2	227	08.4	+25	35.3	259	02.8	+18	31.8
7	323	53.7	242	07.8		35.6	274	03.5		32.3
8	338	56.2	257	07.2		35.8	289	04.1		32.8
9	353	58.6	272	06.5		36.1	304	04.8		33.3
10	9	01.1	287	05.9		36.3	319	05.4		33.8
11	24	03.6	302	05.2	+25	36.6	334	06.1	+18	34.3
12	39	06.0	317	04.6	+25	36.8	349	06.7	+18	34.8
13	54	08.5	332	04.0		37.1	4	07.3		35.2
14	69	11.0	347	03.3		37.3	19	08.0		35.7
15	84	13.4	2	02.7		37.5	34	08.6		36.2
16	99	15.9	17	02.0		37.8	49	09.3		36.7
17	114	18.4	32	01.4	+25	38.0	64	09.9	+18	37.2
18	129	20.8	47	00.8	+25	38.2	79	10.6	+18	37.6
19	144	23.3	62	00.1		38.5	94	11.2		38.1
20	159	25.7	76	59.5		38.7	109	11.9		38.6
21	174	28.2	91	58.8		38.9	124	12.5		39.1
22	189	30.7	106	58.2		39.2	139	13.2		39.6
23	204	33.1	121	57.6		39.4	154	13.8		40.0
24	219	35.6	136	56.9	+25	39.6	169	14.5	+18	40.5
Dif	—		-6		+2		+6		+5	

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: 13 ^d 2 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 54'9 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	44.0	+15	12.9	23	44.6	-6 03.0	60 N	19 59	20 54	22 20	18 00 72	3 45 18		
1	195	44.1		13.6	38	18.0 ¹⁴⁴	12.0 ⁹⁰	58	49	38	21 50	17 55 70	48 21		
2	210	44.1		14.4	52	51.3 ¹⁴³	21.0 ⁹⁰	56	41	26	28	50 68	52 22		
3	225	44.2		15.1	67	24.6 ¹⁴³	30.0 ⁹⁰	54	33	15	21 11	46 67	54 25		
4	240	44.3		15.9	81	57.9 ¹⁴³	38.9 ⁸⁹	52	26	20 05	20 56	42 65	3 57 26		
5	255	44.4	+15	16.6	96	31.1 ¹⁴²	-6 47.8 ⁸⁹	50	19 20	19 57	20 44	17 39 64	4 00 27		
6	270	44.4	+15	17.4	111	04.3 ¹⁴²	-6 56.7 ⁸⁹	45	19 06	19 39	20 19	17 32 61	4 05 30		
7	285	44.5		18.1	125	37.4 ¹⁴¹	-7 05.6 ⁸⁸	40	18 55	25	20 01	26 58	09 33		
8	300	44.6		18.9	140	10.5 ¹⁴¹	14.4 ⁸⁸	35	46	13	19 46	21 56	13 35		
9	315	44.7		19.6	154	43.6 ¹⁴¹	23.3 ⁸⁹	30	38	19 03	33	17 54	17 36		
10	330	44.7		20.4	169	16.7 ¹⁴¹	32.0 ⁸⁷	20	24	18 47	19 14	09 51	23 39		
11	345	44.8	+15	21.1	183	49.7 ¹⁴⁰	-7 40.8 ⁸⁸	10 N	18 12	18 34	18 59	17 02 49	4 28 42		
12	0	44.9	+15	21.8	198	22.6 ¹³⁹	-7 49.5 ⁸⁷	0	18 00	18 22	18 47	16 56 46	4 33 45		
13	15	44.9		22.6	212	55.6 ¹⁴⁰	-7 58.3 ⁸⁸	10 S	17 49	11	36	50 43	38 47		
14	30	45.0		23.3	227	28.5 ¹³⁹	-8 06.9 ⁸⁶	20	38	18 00	27	43 41	43 50		
15	45	45.1		24.1	242	01.3 ¹³⁸	15.6 ⁸⁷	30	24	17 49	18	35 38	49 54		
16	60	45.1		24.8	256	34.1 ¹³⁸	24.2 ⁸⁶	35	17	43	13	31 36	52 56		
17	75	45.2	+15	25.6	271	06.9 ¹³⁸	-8 32.8 ⁸⁶	40	17 08	17 36	18 08	16 26 34	4 56 58		
18	90	45.3	+15	26.3	285	39.6 ¹³⁷	-8 41.3 ⁸⁵	45	16 58	17 29	18 04	16 21 31	5 01 60		
19	105	45.4		27.1	300	12.3 ¹³⁷	49.9 ⁸⁶	50	46	20	17 58	14 29	06 63		
20	120	45.4		27.8	314	45.0 ¹³⁷	-8 58.3 ⁸⁴	52	40	16	56	11 27	09 64		
21	135	45.5		28.5	329	17.6 ¹³⁶	-9 06.8 ⁸⁵	54	34	12	54	08 25	12 66		
22	150	45.6		29.3	343	50.1 ¹³⁵	15.2 ⁸⁴	56	27	07	52	04 24	15 68		
23	165	45.6		30.0	358	22.6 ¹³⁵	23.6 ⁸⁴	58	19	17 02	49	16 00 22	18 70		
24	180	45.7	+15	30.8	12	55.1 ¹³⁵	-9 31.9 ⁸³	60 S	16 11	16 56	17 46	15 55 20	5 22 72		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 20 ^m 1		Mag: -4.2 PMG: 14 ^h 53 ^m		Mag: +1.4 PMG: 12 ^h 42 ^m		Mag: -2.2 PMG: 18 ^h 23 ^m		Mag: +0.1 PMG: 1 ^h 28 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	219	35.6	136	56.9	+25	39.6	169	14.5	+18	40.5					
1	234	38.1	151	56.3		39.9	184	15.1		41.0					
2	249	40.5	166	55.6		40.1	199	15.7		41.5					
3	264	43.0	181	55.0		40.3	214	16.4		42.0					
4	279	45.5	196	54.4		40.5	229	17.0		42.4					
5	294	47.9	211	53.7	+25	40.8	244	17.7	+18	42.9					
6	309	50.4	226	53.1	+25	41.0	259	18.3	+18	43.4					
7	324	52.9	241	52.5		41.2	274	19.0		43.9					
8	339	55.3	256	51.8		41.4	289	19.6		44.3					
9	354	57.8	271	51.2		41.6	304	20.3		44.8					
10	10	00.2	286	50.5		41.9	319	20.9		45.3					
11	25	02.7	301	49.9	+25	42.1	334	21.5	+18	45.8					
12	40	05.2	316	49.3	+25	42.3	349	22.2	+18	46.2					
13	55	07.6	331	48.6		42.5	4	22.8		46.7					
14	70	10.1	346	48.0		42.7	19	23.5		47.2					
15	85	12.6	1	47.4		42.9	34	24.1		47.7					
16	100	15.0	16	46.7		43.1	49	24.8		48.1					
17	115	17.5	31	46.1	+25	43.4	64	25.4	+18	48.6					
18	130	20.0	46	45.4	+25	43.6	79	26.1	+18	49.1					
19	145	22.4	61	44.8		43.8	94	26.7		49.6					
20	160	24.9	76	44.2		44.0	109	27.3		50.0					
21	175	27.3	91	43.5		44.2	124	28.0		50.5					
22	190	29.8	106	42.9		44.4	139	28.6		51.0					
23	205	32.3	121	42.3		44.6	154	29.3		51.4					
24	220	34.7	136	41.6	+25	44.8	169	29.9	+18	51.9					
Dif	—		-6		+2		+6		+5		+23		-1	+26	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna											
	SD: 15°9 PMG: 11 ^h 56 ^m 9				Edad: 14 ^d 2 PHE { 4 ^h : 55'1 12 ^h : 55'2 20 ^h : 55'4 PMG: 23 ^h 53 ^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	h	m	m							
0	180	45.7	+15	30.8	12	55.1	-9	31.9	84	58	60 N	1	33	3	00	3	54	19	12	72	4	03	22						
1	195	45.8		31.5	27	27.5 ¹³⁴		40.3	84	58		2	03		15	4	04	19	05	69		09	24						
2	210	45.8		32.2	41	59.9 ¹³⁴		48.5	82	56			25		28		13	18	58	68		14	26						
3	225	45.9		33.0	56	32.3 ¹³⁴	-9	56.8	83	54			43		39		20		53	66		19	27						
4	240	46.0		33.7	71	04.6 ¹³³	-10	05.0	82	52			2	57		48		27		47	65		23	29					
5	255	46.0	+15	34.5	85	36.8 ¹³²	-10	13.1	81	50			3	09		3	57	4	34	18	43	63	4	27	30				
6	270	46.1	+15	35.2	100	09.0 ¹³²	-10	21.2	81	45			3	34		4	15	4	47	18	33	60	4	35	33				
7	285	46.2		35.9	114	41.2 ¹³²		29.3	81	40			3	53		29		4	58		24	59		42	35				
8	300	46.2		36.7	129	13.3 ¹³¹		37.3	80	35			4	08		40		5	08		17	57		48	37				
9	315	46.3		37.4	143	45.4 ¹³¹		45.3	80	30				20		4	50		16		11	55		4	53	39			
10	330	46.4		38.1	158	17.4 ¹³⁰	-10	53.2	79	20				40		5	07		30	18	00	52		5	02	42			
11	345	46.4	+15	38.9	172	49.4 ¹³⁰	-11	01.1	79	10 N				4	55		5	20	5	42	17	51	50		5	10	45		
12	0	46.5	+15	39.6	187	21.3 ¹²⁹	-11	09.0	79	0				5	07		5	32	5	53	17	42	48		5	18	47		
13	15	46.6		40.4	201	53.2 ¹²⁹		16.8	78	10 S				18		43		6	05		33	46			25	49			
14	30	46.6		41.1	216	25.0 ¹²⁸		24.6	78	20				27		5	54		17		24	43			33	52			
15	45	46.7		41.8	230	56.8 ¹²⁸		32.3	77	30				37		6	05		30		13	41			43	54			
16	60	46.8		42.6	245	28.5 ¹²⁷		39.9	76	35				41		11		38		07	39				48	56			
17	75	46.8	+15	43.3	260	00.2 ¹²⁷	-11	47.6	77	40				5	46		6	18	6	46	17	00	38			5	54	58	
18	90	46.9	+15	44.0	274	31.8 ¹²⁶	-11	55.1	75	45				5	51		6	26	6	57	16	52	35			6	01	61	
19	105	47.0		44.8	289	03.4 ¹²⁶	-12	02.6	75	50				56		35		7	09		43	32				09	64		
20	120	47.0		45.5	303	35.0 ¹²⁶		10.1	75	52				5	58		39		15		38	32				13	65		
21	135	47.1		46.2	318	06.5 ¹²⁵		17.5	74	54				6	01		43		21		33	30				18	66		
22	150	47.1		47.0	332	37.9 ¹²⁴		24.9	74	56					03		48		28		28	29				23	68		
23	165	47.2		47.7	347	09.3 ¹²⁴		32.2	73	58					06		53		36		22	27				28	70		
24	180	47.3	+15	48.4	1	40.6 ¹²³	-12	39.4	72	60 S				6	09		6	59	7	45	16	15	25				6	34	72
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO												
	PMG 9 ^h 16 ^m 2				Mag: -4.2 PMG: 14 ^h 54 ^m				Mag: +1.4 PMG: 12 ^h 41 ^m				Mag: -2.1 PMG: 18 ^h 20 ^m				Mag: +0.1 PMG: 1 ^h 23 ^m												
	hG ♈				hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	220	34.7			136	41.6	+25	44.8	169	29.9	+18	51.9	84	20.8	+17	39.1	339	05.6	-18	37.4									
1	235	37.2			151	41.0		45.0	184	30.6		52.4	99	23.0		39.0	354	08.2		37.3									
2	250	39.7			166	40.4		45.2	199	31.2		52.9	114	25.3		39.0	9	10.9		37.3									
3	265	42.1			181	39.7		45.4	214	31.8		53.3	129	27.6		38.9	24	13.5		37.3									
4	280	44.6			196	39.1		45.6	229	32.5		53.8	144	29.9		38.9	39	16.1		37.2									
5	295	47.1			211	38.5	+25	45.8	244	33.1	+18	54.3	159	32.2	+17	38.8	54	18.8	-18	37.2									
6	310	49.5			226	37.8	+25	46.0	259	33.8	+18	54.7	174	34.5	+17	38.8	69	21.4	-18	37.2									
7	325	52.0			241	37.2		46.2	274	34.4		55.2	189	36.7		38.7	84	24.1		37.1									
8	340	54.5			256	36.6		46.4	289	35.1		55.7	204	39.0		38.7	99	26.7		37.1									
9	355	56.9			271	35.9		46.5	304	35.7		56.1	219	41.3		38.6	114	29.3		37.1									
10	10	59.4			286	35.3		46.7	319	36.3		56.6	234	43.6		38.5	129	32.0		37.0									
11	26	01.8			301	34.7	+25	46.9	334	37.0	+18	57.1	249	45.9	+17	38.5	144	34.6	-18	37.0									
12	41	04.3			316	34.0	+25	47.1	349	37.6	+18	57.5	264	48.1	+17	38.4	159	37.2	-18	37.0									
13	56	06.8			331	33.4		47.3	4	38.3		58.0	279	50.4		38.4	174	39.9		36.9									
14	71	09.2			346	32.8		47.5	19	38.9		58.5	294	52.7		38.3	189	42.5		36.9									
15	86	11.7			1	32.1		47.7	34	39.6		58.9	309	55.0		38.3	204	45.2		36.9									
16	101	14.2			16	31.5		47.9	49	40.2		59.4	324	57.3		38.2	219	47.8		36.8									
17	116	16.6			31	30.9	+25	48.0	64	40.8	+18	59.9	339	59.5	+17	38.1	234	50.4	-18	36.8									
18	131	19.1			46	30.2	+25	48.2	79	41.5	+19	00.3	355	01.8	+17	38.1	249	53.1	-18	36.8									
19	146	21.6			61	29.6		48.4	94	42.1		00.8	10	04.1		38.0	264	55.7		36.7									
20	161	24.0			76	29.0		48.6	109	42.8		01.3	25	06.4		38.0	279	58.4		36.7									
21	176	26.5			91	28.3		48.8	124	43.4		01.7	40	08.7		37.9	295	01.0		36.7									
22	191	29.0			106	27.7		48.9	139	44.0		02.2	55	10.9		37.9	310	03.6		36.6									
23	206	31.4			121	27.1		49.1	154	44.7		02.7	70	13.2		37.8	325	06.3		36.6									
24	221	33.9			136	26.4	+25	49.3	169	45.3	+19	03.1	85	15.5	+17	37.7	340	08.9	-18	36.6									
Dif	—				-6 +2				+6 +5				+23 -1				+26 0												

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15/9 PMG: 11 ^h 56 ^m 8			Edad: 15 ^d 2 PHE { SD: 15/1 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	47.3	+15	48.4	1	40.6	-12 39.4	60 N	20 04	21 00	22 32	20 24 69	4 25 27		
1	195	47.3		49.1	16	11.9 ¹²³	46.6 72	58	19 54	20 44	21 58	14 68	33 29		
2	210	47.4		49.9	30	43.1 ¹²²	-12 53.7 71	56	45	30	35	20 06 66	40 31		
3	225	47.5		50.6	45	14.3 ¹²²	-13 00.8 71	54	37	19	16	19 59 64	46 33		
4	240	47.5		51.3	59	45.4 ¹²¹	07.9 71	52	29	09	21 01	52 63	52 34		
5	255	47.6	+15	52.1	74	16.5 ¹²¹	-13 14.8 69	50	19 23	20 00	20 48	19 46 62	4 57 35		
6	270	47.6	+15	52.8	88	47.6 ¹²¹	-13 21.7 69	45	19 09	19 42	20 22	19 33 60	5 08 37		
7	285	47.7		53.5	103	18.5 ¹¹⁹	28.6 69	40	18 57	27	20 03	23 58	17 40		
8	300	47.8		54.2	117	49.5 ¹²⁰	35.4 68	35	48	15	19 48	14 57	25 41		
9	315	47.8		55.0	132	20.3 ¹¹⁸	42.1 67	30	39	19 05	35	19 06 56	32 42		
10	330	47.9		55.7	146	51.2 ¹¹⁹	48.7 66	20	25	18 48	15	18 52 54	44 45		
11	345	47.9	+15	56.4	161	21.9 ¹¹⁷	-13 55.3 66	10 N	18 12	18 34	19 00	18 41 52	5 55 47		
12	0	48.0	+15	57.1	175	52.6 ¹¹⁷	-14 01.9 66	0	18 00	18 22	18 47	18 30 50	6 05 49		
13	15	48.1		57.9	190	23.3 ¹¹⁷	08.4 65	10 S	17 49	18 10	36	19 48	14 51		
14	30	48.1		58.6	204	53.9 ¹¹⁶	14.8 64	20	36	17 59	26	18 07 47	25 53		
15	45	48.2	+15	59.3	219	24.5 ¹¹⁶	21.1 63	30	23	48	16	17 54 44	37 56		
16	60	48.2	+16	00.0	233	55.0 ¹¹⁵	27.4 63	35	15	41	11	46 43	44 57		
17	75	48.3	+16	00.8	248	25.5 ¹¹⁵	-14 33.6 62	40	17 06	17 34	18 06	17 38 41	6 52 59		
18	90	48.4	+16	01.5	262	55.9 ¹¹⁴	-14 39.7 61	45	16 55	17 26	18 01	17 27 41	7 02 60		
19	105	48.4		02.2	277	26.2 ¹¹³	45.8 61	50	43	17	17 55	15 38	13 63		
20	120	48.5		02.9	291	56.5 ¹¹³	51.8 60	52	37	13	53	10 37	18 64		
21	135	48.5		03.6	306	26.8 ¹¹³	-14 57.7 59	54	30	08	51	17 03 36	24 65		
22	150	48.6		04.4	320	57.0 ¹¹²	-15 03.6 59	56	23	17 03	48	16 57 34	31 66		
23	165	48.7		05.1	335	27.1 ¹¹¹	09.4 58	58	15	16 58	45	49 33	38 68		
24	180	48.7	+16	05.8	349	57.2 ¹¹¹	-15 15.1 57	60 S	16 06	16 52	17 42	16 40 31	7 46 71		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 9 ^h 12 ^m 2		Mag: -4.2 PMG: 14 ^h 55 ^m			Mag: +1.4 PMG: 12 ^h 40 ^m			Mag: -2.1 PMG: 18 ^h 16 ^m			Mag: +0.1 PMG: 1 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	221	33.9	136	26.4	+25	49.3	169	45.3	+19	03.1	85	15.5	+17	37.7	
1	236	36.3	151	25.8		49.4	184	46.0		03.6	100	17.8		37.7	
2	251	38.8	166	25.2		49.6	199	46.6		04.1	115	20.0		37.6	
3	266	41.3	181	24.5		49.8	214	47.2		04.5	130	22.3		37.6	
4	281	43.7	196	23.9		50.0	229	47.9		05.0	145	24.6		37.5	
5	296	46.2	211	23.3	+25	50.1	244	48.5	+19	05.4	160	26.9	+17	37.5	
6	311	48.7	226	22.6	+25	50.3	259	49.2	+19	05.9	175	29.1	+17	37.4	
7	326	51.1	241	22.0		50.5	274	49.8		06.4	190	31.4		37.3	
8	341	53.6	256	21.4		50.6	289	50.5		06.8	205	33.7		37.3	
9	356	56.1	271	20.8		50.8	304	51.1		07.3	220	36.0		37.2	
10	11	58.5	286	20.1		51.0	319	51.7		07.7	235	38.2		37.2	
11	27	01.0	301	19.5	+25	51.1	334	52.4	+19	08.2	250	40.5	+17	37.1	
12	42	03.4	316	18.9	+25	51.3	349	53.0	+19	08.7	265	42.8	+17	37.0	
13	57	05.9	331	18.2		51.4	4	53.7		09.1	280	45.1		37.0	
14	72	08.4	346	17.6		51.6	19	54.3		09.6	295	47.3		36.9	
15	87	10.8	1	17.0		51.7	34	54.9		10.0	310	49.6		36.9	
16	102	13.3	16	16.4		51.9	49	55.6		10.5	325	51.9		36.8	
17	117	15.8	31	15.7	+25	52.1	64	56.2	+19	11.0	340	54.1	+17	36.8	
18	132	18.2	46	15.1	+25	52.2	79	56.9	+19	11.4	355	56.4	+17	36.7	
19	147	20.7	61	14.5		52.4	94	57.5		11.9	10	58.7		36.6	
20	162	23.2	76	13.9		52.5	109	58.1		12.3	26	01.0		36.6	
21	177	25.6	91	13.2		52.7	124	58.8		12.8	41	03.2		36.5	
22	192	28.1	106	12.6		52.8	139	59.4		13.3	56	05.5		36.5	
23	207	30.6	121	12.0		53.0	155	00.1		13.7	71	07.8		36.4	
24	222	33.0	136	11.3	+25	53.1	170	00.7	+19	14.2	86	10.0	+17	36.3	
Dif	—		-6		+2	+6		+5	+23		-1		+26		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15:9 PMG: 11 ^h 56 ^m 7			Edad: 16 ^d 2 PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/3 PMG: 0 ^h 42 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	180	48.7	+16 05.8	349	57.2	-15 15.1	56	60 N	1 21	2 53	3 48	21 33	63	4 52	35			
1	195	48.8	06.5	4	27.3 ¹¹¹	20.7	56	58	1 54	3 09	3 59	22 62		5 02	37			
2	210	48.8	07.2	18	57.3 ¹¹⁰	26.3	56	56	2 18	22	4 08	12 61		11 38				
3	225	48.9	07.9	33	27.2 ¹⁰⁹	31.8	55	54	37	34	16	21 03	61	19 39				
4	240	48.9	08.7	47	57.1 ¹⁰⁹	37.2	54	52	2 52	44	24	20 55	60	26 40				
5	255	49.0	+16 09.4	62	27.0 ¹⁰⁹	-15 42.6	54	50	3 05	3 53	4 30	20 48	60	5 32	41			
6	270	49.0	+16 10.1	76	56.7 ¹⁰⁷	-15 47.8	52	45	3 31	4 11	4 44	20 33	58	5 45	43			
7	285	49.1	10.8	91	26.5 ¹⁰⁸	53.0	52	40	3 50	26	4 56	21 57		5 57	44			
8	300	49.2	11.5	105	56.2 ¹⁰⁷	-15 58.1	51	35	4 05	38	5 06	11 56		6 06	46			
9	315	49.2	12.2	120	25.8 ¹⁰⁶	-16 03.1	50	30	18	4 49	14	20 02	55	14 47				
10	330	49.3	13.0	134	55.4 ¹⁰⁶	08.1	50	20	38	5 06	29	19 46	54	29 48				
11	345	49.3	+16 13.7	149	25.0 ¹⁰⁶	-16 13.0	49	10 N	4 54	5 20	5 41	19 33	53	6 42	49			
12	0	49.4	+16 14.4	163	54.4 ¹⁰⁴	-16 17.7	47	0	5 07	5 32	5 53	19 20	52	6 54	51			
13	15	49.4	15.1	178	23.9 ¹⁰⁵	22.5	48	10 S	18	43	6 05	19 07	51	7 05	53			
14	30	49.5	15.8	192	53.3 ¹⁰⁴	27.1	46	20	28	5 54	17	18 54	50	18 54				
15	45	49.5	16.5	207	22.6 ¹⁰³	31.6	45	30	38	6 06	31	38 49		33 55				
16	60	49.6	17.2	221	51.9 ¹⁰³	36.1	45	35	43	13	39	29 48		41 57				
17	75	49.6	+16 17.9	236	21.2 ¹⁰³	-16 40.4	43	40	5 48	6 20	6 48	18 19	47	7 51	58			
18	90	49.7	+16 18.7	250	50.4 ¹⁰²	-16 44.7	43	45	5 53	6 28	6 59	18 08	45	8 02	59			
19	105	49.7	19.4	265	19.5 ¹⁰¹	48.9	42	50	5 59	37	7 12	17 53	45	16 61				
20	120	49.8	20.1	279	48.6 ¹⁰¹	53.1	42	52	6 01	42	18	47 43		22 62				
21	135	49.8	20.8	294	17.7 ¹⁰¹	-16 57.1	40	54	04	46	25	39 43		29 63				
22	150	49.9	21.5	308	46.7 ¹⁰⁰	-17 01.0	39	56	07	51	32	31 42		37 64				
23	165	50.0	22.2	323	15.7 ¹⁰⁰	04.9	39	58	09	6 57	40	22 41		46 65				
24	180	50.0	+16 22.9	337	44.6 ⁹⁹	-17 08.6	37	60 S	6 13	7 03	7 50	17 11	40	8 57	66			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 08 ^m 3		Mag: -4.2 PMG: 14 ^h 56 ^m			Mag: +1.4 PMG: 12 ^h 39 ^m			Mag: -2.1 PMG: 18 ^h 13 ^m			Mag: +0.1 PMG: 1 ^h 15 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	222	33.0	136 11.3	+25 53.1	170 00.7	+19 14.2	86 10.0	+17 36.3	341 12.3	-18 35.8				
1	237	35.5	151 10.7	53.2	185 01.3	14.6	101 12.3	36.3	356 14.9	35.7				
2	252	37.9	166 10.1	53.4	200 02.0	15.1	116 14.6	36.2	11 17.5	35.7				
3	267	40.4	181 09.5	53.5	215 02.6	15.5	131 16.9	36.2	26 20.2	35.7				
4	282	42.9	196 08.8	53.7	230 03.2	16.0	146 19.1	36.1	41 22.8	35.6				
5	297	45.3	211 08.2	+25 53.8	245 03.9	+19 16.4	161 21.4	+17 36.0	56 25.5	-18 35.6				
6	312	47.8	226 07.6	+25 54.0	260 04.5	+19 16.9	176 23.7	+17 36.0	71 28.1	-18 35.6				
7	327	50.3	241 07.0	54.1	275 05.2	17.3	191 25.9	35.9	86 30.7	35.5				
8	342	52.7	256 06.3	54.2	290 05.8	17.8	206 28.2	35.9	101 33.4	35.5				
9	357	55.2	271 05.7	54.4	305 06.4	18.3	221 30.5	35.8	116 36.0	35.5				
10	12	57.7	286 05.1	54.5	320 07.1	18.7	236 32.7	35.7	131 38.7	35.4				
11	28	00.1	301 04.5	+25 54.6	335 07.7	+19 19.2	251 35.0	+17 35.7	146 41.3	-18 35.4				
12	43	02.6	316 03.9	+25 54.8	350 08.4	+19 19.6	266 37.3	+17 35.6	161 44.0	-18 35.4				
13	58	05.1	331 03.2	54.9	5 09.0	20.1	281 39.5	35.6	176 46.6	35.3				
14	73	07.5	346 02.6	55.0	20 09.6	20.5	296 41.8	35.5	191 49.2	35.3				
15	88	10.0	1 02.0	55.2	35 10.3	21.0	311 44.1	35.4	206 51.9	35.3				
16	103	12.4	16 01.4	55.3	50 10.9	21.4	326 46.3	35.4	221 54.5	35.2				
17	118	14.9	31 00.7	+25 55.4	65 11.5	+19 21.9	341 48.6	+17 35.3	236 57.2	-18 35.2				
18	133	17.4	46 00.1	+25 55.5	80 12.2	+19 22.3	356 50.9	+17 35.3	251 59.8	-18 35.2				
19	148	19.8	60 59.5	55.7	95 12.8	22.8	11 53.1	35.2	267 02.4	35.1				
20	163	22.3	75 58.9	55.8	110 13.5	23.2	26 55.4	35.1	282 05.1	35.1				
21	178	24.8	90 58.3	55.9	125 14.1	23.7	41 57.7	35.1	297 07.7	35.1				
22	193	27.2	105 57.6	56.0	140 14.7	24.1	56 59.9	35.0	312 10.4	35.0				
23	208	29.7	120 57.0	56.1	155 15.4	24.6	72 02.2	35.0	327 13.0	35.0				
24	223	32.2	135 56.4	+25 56.3	170 16.0	+19 25.0	87 04.4	+17 34.9	342 15.7	-18 35.0				
Dif	—		-6	+1	+6	+5	+23	-1	+26	0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 17 ^d 2 PHE	SD: 15°4				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 6				PMG: 1 ^h 32 ^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	50.0	+16 22.9	337	44.6	-17 08.6		60 N	20 09	21 06	22 45	22 36 55		5 27 45	
1	195	50.1	23.6	352	13.5	99 12.3	37	58	19 58	20 49	22 07	24 55		39 45	
2	210	50.1	24.3	6	42.3	98 15.9	36	56	49	35	21 41	13 55		49 46	
3	225	50.2	25.0	21	11.1	98 19.4	35	54	40	23	22	22 04 54		5 58 47	
4	240	50.2	25.7	35	39.8	97 22.8	34	52	33	13	21 06	21 55 55		6 06 47	
5	255	50.3	+16 26.4	50	08.5	97 -17 26.1	33	50	19 26	20 03	20 52	21 48 54		6 13 48	
6	270	50.3	+16 27.1	64	37.2	97 -17 29.3	32	45	19 11	19 44	20 26	21 31 55		6 28 49	
7	285	50.4	27.9	79	05.8	96 32.4	31	40	18 59	29	20 06	18 55		41 49	
8	300	50.4	28.6	93	34.4	96 35.5	31	35	49	17	19 50	21 07 54		6 52 50	
9	315	50.5	29.3	108	02.9	95 38.4	29	30	40	19 06	37	20 57 54		7 01 51	
10	330	50.5	30.0	122	31.4	95 41.2	28	20	25	18 49	16	40 54		17 52	
11	345	50.5	+16 30.7	136	59.9	95 -17 44.0	28	10 N	18 12	18 34	19 00	20 26 53		7 31 53	
12	0	50.6	+16 31.4	151	28.3	94 -17 46.6	26	0	18 00	18 22	18 47	20 12 54		7 45 53	
13	15	50.6	32.1	165	56.7	94 49.2	26	10 S	17 48	18 10	35	19 58 54		7 58 53	
14	30	50.7	32.8	180	25.0	93 51.7	25	20	35	17 58	25	44 53		8 12 54	
15	45	50.7	33.5	194	53.3	93 54.0	23	30	21	46	15	27 53		28 55	
16	60	50.8	34.2	209	21.5	92 56.3	23	35	13	39	09	17 53		38 55	
17	75	50.8	+16 34.9	223	49.8	93 -17 58.4	21	40	17 03	17 32	18 04	19 06 53		8 49 55	
18	90	50.9	+16 35.6	238	18.0	92 -18 00.5	21	45	16 52	17 24	17 59	18 53 53		9 01 57	
19	105	50.9	36.3	252	46.1	91 02.5	20	50	39	14	53	38 52		17 57	
20	120	51.0	37.0	267	14.2	91 04.3	18	52	33	10	50	30 52		24 57	
21	135	51.0	37.7	281	42.3	91 06.1	18	54	26	05	47	22 52		32 58	
22	150	51.1	38.4	296	10.3	90 07.8	17	56	19	17 00	44	13 51		41 58	
23	165	51.1	39.1	310	38.4	91 09.3	15	58	10	16 54	41	18 03 50		9 51 59	
24	180	51.2	+16 39.8	325	06.3	89 -18 10.8	15	60 S	16 01	16 47	17 38	17 51 50		10 03 59	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 04 ^m 4		Mag: -4.2 PMG: 14 ^h 57 ^m		Mag: +1.5 PMG: 12 ^h 38 ^m		Mag: -2.1 PMG: 18 ^h 09 ^m		Mag: +0.1 PMG: 1 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	32.2	135 56.4	+25 56.3	170 16.0	+19 25.0	87 04.4	+17 34.9	342 15.7	-18 35.0
1	238	34.6	150 55.8	56.4	185 16.7	25.5	102 06.7	34.8	357 18.3	34.9
2	253	37.1	165 55.2	56.5	200 17.3	25.9	117 09.0	34.8	12 20.9	34.9
3	268	39.5	180 54.5	56.6	215 17.9	26.3	132 11.2	34.7	27 23.6	34.9
4	283	42.0	195 53.9	56.7	230 18.6	26.8	147 13.5	34.6	42 26.2	34.8
5	298	44.5	210 53.3	+25 56.8	245 19.2	+19 27.2	162 15.8	+17 34.6	57 28.9	-18 34.8
6	313	46.9	225 52.7	+25 56.9	260 19.8	+19 27.7	177 18.0	+17 34.5	72 31.5	-18 34.8
7	328	49.4	240 52.1	57.1	275 20.5	28.1	192 20.3	34.5	87 34.2	34.7
8	343	51.9	255 51.4	57.2	290 21.1	28.6	207 22.5	34.4	102 36.8	34.7
9	358	54.3	270 50.8	57.3	305 21.7	29.0	222 24.8	34.3	117 39.4	34.6
10	13	56.8	285 50.2	57.4	320 22.4	29.5	237 27.1	34.3	132 42.1	34.6
11	28	59.3	300 49.6	+25 57.5	335 23.0	+19 29.9	252 29.3	+17 34.2	147 44.7	-18 34.6
12	44	01.7	315 49.0	+25 57.6	350 23.7	+19 30.4	267 31.6	+17 34.2	162 47.4	-18 34.5
13	59	04.2	330 48.4	57.7	5 24.3	30.8	282 33.8	34.1	177 50.0	34.5
14	74	06.7	345 47.7	57.8	20 24.9	31.2	297 36.1	34.0	192 52.7	34.5
15	89	09.1	0 47.1	57.9	35 25.6	31.7	312 38.4	34.0	207 55.3	34.4
16	104	11.6	15 46.5	58.0	50 26.2	32.1	327 40.6	33.9	222 57.9	34.4
17	119	14.0	30 45.9	+25 58.1	65 26.8	+19 32.6	342 42.9	+17 33.8	238 00.6	-18 34.4
18	134	16.5	45 45.3	+25 58.2	80 27.5	+19 33.0	357 45.1	+17 33.8	253 03.2	-18 34.3
19	149	19.0	60 44.7	58.3	95 28.1	33.5	12 47.4	33.7	268 05.9	34.3
20	164	21.4	75 44.0	58.4	110 28.7	33.9	27 49.7	33.7	283 08.5	34.3
21	179	23.9	90 43.4	58.5	125 29.4	34.3	42 51.9	33.6	298 11.2	34.2
22	194	26.4	105 42.8	58.6	140 30.0	34.8	57 54.2	33.5	313 13.8	34.2
23	209	28.8	120 42.2	58.7	155 30.7	35.2	72 56.4	33.5	328 16.5	34.2
24	224	31.3	135 41.6	+25 58.8	170 31.3	+19 35.7	87 58.7	+17 33.4	343 19.1	-18 34.1
Dif	—		-6	+1	+6	+4	+23	-1	+26	0

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna									
	SD: 15'9 PMG: 11 ^h 56 ^m 6				Edad: 18 ^d 2 PHE { 4 ^h : 57'0 12 ^h : 57'1 20 ^h : 57'3 SD: 15'5 PMG: 2 ^h 25 ^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	h	m
0	180	51.2	+16	39.8	325	06.3			-18	10.8			60 N	1 07	2 46	3 43		23 31	45			6 12	56					
1	195	51.2		40.5	339	34.3	90			12.2	14		58	1 45	3 03	3 54		19 46			24	56						
2	210	51.2		41.1	354	02.2	89			13.4	12		56	2 11	17	4 04		23 08	47			35	56					
3	225	51.3		41.8	8	30.1	89			14.6	12		54	31	29	12		22 58	48			45	55					
4	240	51.3		42.5	22	57.9	88			15.7	11		52	2 47	40	20		50 48			6 53	56						
5	255	51.4	+16	43.2	37	25.8	89		-18	16.6	9		50	3 00	3 49	4 27		22 42	49			7 01	55					
6	270	51.4	+16	43.9	51	53.6	88		-18	17.5	9		45	3 27	4 08	4 41		22 26	50			7 17	55					
7	285	51.5		44.6	66	21.3	87			18.2	7		40	3 47	24	4 53		13 50			30	56						
8	300	51.5		45.3	80	49.1	88			18.9	7		35	4 03	36	5 04		22 01	52			42	55					
9	315	51.5		46.0	95	16.8	87			19.4	5		30	16	4 47	13		21 51	52			7 52	55					
10	330	51.6		46.7	109	44.5	87			19.8	4		20	37	5 04	28		34 53			8 09	54						
11	345	51.6	+16	47.4	124	12.1	86		-18	20.2	4		10 N	4 53	5 19	5 41		21 19	54			8 24	54					
12	0	51.7	+16	48.1	138	39.8	87		-18	20.4	2		0	5 06	5 32	5 53		21 06	54			8 38	54					
13	15	51.7		48.8	153	07.4	86			20.5	1		10 S	18	43	6 05		20 52	55			8 51	54					
14	30	51.8		49.5	167	35.0	86			20.5	0		20	29	5 55	18		37 56			9 06	54						
15	45	51.8		50.1	182	02.6	86			20.4	1		30	39	6 07	32		20 57			23	53						
16	60	51.8		50.8	196	30.1	85			20.2	2		35	44	14	41		20 10	57			33	53					
17	75	51.9	+16	51.5	210	57.6	85		-18	19.9	3		40	5 49	6 22	6 50		19 59	58			9 44	53					
18	90	51.9	+16	52.2	225	25.2	86		-18	19.5	4		45	5 55	6 30	7 01		19 46	58			9 58	52					
19	105	52.0		52.9	239	52.6	84			19.0	5		50	6 01	40	15		30 59			10 14	51						
20	120	52.0		53.6	254	20.1	85			18.4	6		52	04	45	21		22 60			21	52						
21	135	52.0		54.3	268	47.6	85			17.7	7		54	07	49	28		14 60			30	51						
22	150	52.1		55.0	283	15.0	84			16.8	9		56	10	6 55	36		19 04	61			39	51					
23	165	52.1		55.6	297	42.4	84			15.9	9		58	13	7 01	44		18 53	62			10 50	50					
24	180	52.2	+16	56.3	312	09.8	84		-18	14.9	10		60 S	6 16	7 07	7 54		18 41	62			11 02	50					

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 9 ^h 00 ^m 4		Mag: -4.2 PMG: 14 ^h 58 ^m				Mag: +1.5 PMG: 12 ^h 37 ^m				Mag: -2.1 PMG: 18 ^h 05 ^m				Mag: +0.1 PMG: 1 ^h 07 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	224	31.3	135	41.6	+25	58.8			170	31.3	+19	35.7	87	58.7	+17	33.4	343	19.1	-18	34.1
1	239	33.8	150	41.0		58.8			185	31.9		36.1	103	00.9		33.3	358	21.7		34.1
2	254	36.2	165	40.4		58.9			200	32.6		36.5	118	03.2		33.3	13	24.4		34.1
3	269	38.7	180	39.7		59.0			215	33.2		37.0	133	05.5		33.2	28	27.0		34.0
4	284	41.2	195	39.1		59.1			230	33.8		37.4	148	07.7		33.1	43	29.7		34.0
5	299	43.6	210	38.5	+25	59.2			245	34.5	+19	37.9	163	10.0	+17	33.1	58	32.3	-18	34.0
6	314	46.1	225	37.9	+25	59.3			260	35.1	+19	38.3	178	12.2	+17	33.0	73	35.0	-18	33.9
7	329	48.5	240	37.3		59.4			275	35.7		38.7	193	14.5		33.0	88	37.6		33.9
8	344	51.0	255	36.7		59.4			290	36.4		39.2	208	16.7		32.9	103	40.2		33.9
9	359	53.5	270	36.1		59.5			305	37.0		39.6	223	19.0		32.8	118	42.9		33.8
10	14	55.9	285	35.5		59.6			320	37.6		40.1	238	21.2		32.8	133	45.5		33.8
11	29	58.4	300	34.9	+25	59.7			335	38.3	+19	40.5	253	23.5	+17	32.7	148	48.2	-18	33.8
12	45	00.9	315	34.2	+25	59.8			350	38.9	+19	40.9	268	25.7	+17	32.6	163	50.8	-18	33.7
13	60	03.3	330	33.6		59.8			5	39.5		41.4	283	28.0		32.6	178	53.5		33.7
14	75	05.8	345	33.0	+25	59.9			20	40.2		41.8	298	30.3		32.5	193	56.1		33.7
15	90	08.3	0	32.4	+26	00.0			35	40.8		42.2	313	32.5		32.4	208	58.8		33.6
16	105	10.7	15	31.8	+26	00.1			50	41.4		42.7	328	34.8		32.4	224	01.4		33.6
17	120	13.2	30	31.2	+26	00.1			65	42.1	+19	43.1	343	37.0	+17	32.3	239	04.1	-18	33.6
18	135	15.7	45	30.6	+26	00.2			80	42.7	+19	43.5	358	39.3	+17	32.2	254	06.7	-18	33.5
19	150	18.1	60	30.0		00.3			95	43.3		44.0	13	41.5		32.2	269	09.3		33.5
20	165	20.6	75	29.4		00.3			110	44.0		44.4	28	43.8		32.1	284	12.0		33.5
21	180	23.0	90	28.8		00.4			125	44.6		44.8	43	46.0		32.1	299	14.6		33.4
22	195	25.5	105	28.2		00.5			140	45.2		45.3	58	48.3		32.0	314	17.3		33.4
23	210	28.0	120	27.6		00.5			155	45.9		45.7	73	50.5		31.9	329	19.9		33.4
24	225	30.4	135	27.0	+26	00.6			170	46.5	+19	46.1	88	52.8	+17	31.9	344	22.6	-18	33.3
Dif	—		-6		+1				+6		+4		+23		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 5			Edad: 19 ^d 2 PHE { 4 ^h : 57'5 12 ^h : 57'6 20 ^h : 57'8 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	m	h m m	m		
0	180	52.2	+16 56.3	312	09.8	-18 14.9	60 N	20 14	21 12	23 02	** ** *		7 08	67		
1	195	52.2	57.0	326	37.2	13.7	58	20 03	20 55	22 16	** ** *		20	66		
2	210	52.2	57.7	341	04.6	12.4	56	19 53	40	21 48	23 55	39	31	65		
3	225	52.3	58.4	355	31.9	11.1	54	44	27	27	46	41	40	64		
4	240	52.3	59.1	9	59.3	09.6	52	36	16	21 11	38	42	49	63		
5	255	52.4	+16 59.7	24	26.6	-18 08.0	50	19 29	20 07	20 56	23 31	43	7	56	63	
6	270	52.4	+17 00.4	38	53.9	-18 06.3	45	19 14	19 47	20 29	23 16	45	8	12	61	
7	285	52.4	01.1	53	21.3	04.5	40	19 01	31	20 08	23 03	47	26	59		
8	300	52.5	01.8	67	48.6	02.6	35	18 51	18	19 52	22 53	47	37	59		
9	315	52.5	02.5	82	15.8	-18 00.6	30	42	19 07	38	43	49	8	47	58	
10	330	52.5	03.1	96	43.1	-17 58.5	20	26	18 49	17	27	51	9	03	57	
11	345	52.6	+17 03.8	111	10.4	-17 56.3	10 N	18 13	18 35	19 00	22 13	53	9	18	55	
12	0	52.6	+17 04.5	125	37.7	-17 53.9	0	18 00	18 22	18 47	22 00	54	9	32	54	
13	15	52.6	05.2	140	04.9	51.5	10 S	17 48	18 09	35	21	47	56	9	45	53
14	30	52.7	05.9	154	32.2	49.0	20	34	17 57	24	33	57	10	00	52	
15	45	52.7	06.5	168	59.4	46.3	30	20	45	13	17	59	16	51		
16	60	52.8	07.2	183	26.7	43.6	35	11	38	08	21	07	61	26	49	
17	75	52.8	+17 07.9	197	53.9	-17 40.7	40	17 01	17 30	18 02	20 57	61	10	37	48	
18	90	52.8	+17 08.6	212	21.1	-17 37.7	45	16 50	17 21	17 56	20	44	63	10	50	47
19	105	52.9	09.2	226	48.4	34.7	50	36	11	50	29	65	11	05	46	
20	120	52.9	09.9	241	15.6	31.5	52	30	06	47	22	66	13	45		
21	135	52.9	10.6	255	42.8	28.2	54	23	17 01	44	14	67	21	44		
22	150	53.0	11.3	270	10.1	24.8	56	15	16 56	41	20	05	68	30	43	
23	165	53.0	11.9	284	37.3	21.3	58	16 06	50	37	19	55	69	40	42	
24	180	53.0	+17 12.6	299	04.5	-17 17.7	60 S	15 56	16 43	17 34	19	43	72	11	52	40

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 8 ^h 56 ^m 5		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 12 ^h 36 ^m		Mag: -2.1 PMG: 18 ^h 02 ^m			Mag: +0.1 PMG: 1 ^h 02 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	°	'	°	°	'	°	'	°	'					
0	225	30.4	135	27.0	+26	00.6	170	46.5	+19	46.1	88	52.8	+17	31.9	344	22.6	-18	33.3
1	240	32.9	150	26.3		00.7	185	47.1		46.6	103	55.0		31.8	359	25.2		33.3
2	255	35.4	165	25.7		00.7	200	47.8		47.0	118	57.3		31.7	14	27.9		33.2
3	270	37.8	180	25.1		00.8	215	48.4		47.4	133	59.5		31.7	29	30.5		33.2
4	285	40.3	195	24.5		00.8	230	49.0		47.9	149	01.8		31.6	44	33.2		33.2
5	300	42.8	210	23.9	+26	00.9	245	49.7	+19	48.3	164	04.0	+17	31.5	59	35.8	-18	33.1
6	315	45.2	225	23.3	+26	01.0	260	50.3	+19	48.7	179	06.3	+17	31.5	74	38.4	-18	33.1
7	330	47.7	240	22.7		01.0	275	50.9		49.2	194	08.5		31.4	89	41.1		33.1
8	345	50.1	255	22.1		01.1	290	51.6		49.6	209	10.8		31.3	104	43.7		33.0
9	0	52.6	270	21.5		01.1	305	52.2		50.0	224	13.0		31.3	119	46.4		33.0
10	15	55.1	285	20.9		01.2	320	52.8		50.4	239	15.3		31.2	134	49.0		33.0
11	30	57.5	300	20.3	+26	01.2	335	53.5	+19	50.9	254	17.5	+17	31.1	149	51.7	-18	32.9
12	46	00.0	315	19.7	+26	01.3	350	54.1	+19	51.3	269	19.8	+17	31.1	164	54.3	-18	32.9
13	61	02.5	330	19.1		01.3	5	54.7		51.7	284	22.0		31.0	179	57.0		32.9
14	76	04.9	345	18.5		01.4	20	55.4		52.2	299	24.3		30.9	194	59.6		32.8
15	91	07.4	0	17.9		01.4	35	56.0		52.6	314	26.5		30.9	210	02.3		32.8
16	106	09.9	15	17.3		01.5	50	56.6		53.0	329	28.7		30.8	225	04.9		32.8
17	121	12.3	30	16.7	+26	01.5	65	57.3	+19	53.4	344	31.0	+17	30.7	240	07.6	-18	32.7
18	136	14.8	45	16.1	+26	01.5	80	57.9	+19	53.9	359	33.2	+17	30.7	255	10.2	-18	32.7
19	151	17.3	60	15.5		01.6	95	58.5		54.3	14	35.5		30.6	270	12.8		32.7
20	166	19.7	75	14.9		01.6	110	59.2		54.7	29	37.7		30.5	285	15.5		32.6
21	181	22.2	90	14.3		01.7	125	59.8		55.1	44	40.0		30.5	300	18.1		32.6
22	196	24.6	105	13.7		01.7	141	00.4		55.6	59	42.2		30.4	315	20.8		32.6
23	211	27.1	120	13.1		01.7	156	01.1		56.0	74	44.5		30.3	330	23.4		32.5
24	226	29.6	135	12.5	+26	01.8	171	01.7	+19	56.4	89	46.7	+17	30.3	345	26.1	-18	32.5
Dif	—		-6	0		+6	+4		+22		-1			+26				

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^s 8				Edad: 20 ^d 2 PHE { 4 ^h : 58' ⁰ 12 ^h : 58' ¹ 20 ^h : 58' ³ PMG: 4 ^h 13 ^m R°: 54 ^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	m	h m	m	
0	180	53.0	+17	12.6	299	04.5	-17	17.7	37	60 N	0 51	2 40	3 38	0 16	36	8 15	75	
1	195	53.1		13.3	313	31.8	83	14.0	37	58	1 36	2 58	3 50	0 05	37	26	74	
2	210	53.1		14.0	327	59.0	82	10.2	38	56	2 04	3 12	4 00	**	**	36	71	
3	225	53.1		14.6	342	26.2	82	06.3	39	54	25	25	09	**	**	44	71	
4	240	53.2		15.3	356	53.5	83	-17	02.2	41	52	42	36	17	**	**	52	69
5	255	53.2	+17	16.0	11	20.7	82	-16	58.1	41	50	2 56	3 46	4 24	**	**	8 59	68
6	270	53.2	+17	16.6	25	47.9	82	-16	53.9	42	45	3 24	4 06	4 39	**	**	9 13	66
7	285	53.2		17.3	40	15.2	83	49.6	43	40	3 44	21	4 51	23 50	42	25	64	
8	300	53.3		18.0	54	42.4	82	45.1	45	35	4 01	34	5 02	40 45	45	36	62	
9	315	53.3		18.6	69	09.7	83	40.6	45	30	14	4 45	11	32 47		9 45	60	
10	330	53.3		19.3	83	37.0	83	36.0	46	20	36	5 03	27	18 49		10 00	58	
11	345	53.4	+17	20.0	98	04.2	82	-16	31.2	48	10 N	4 52	5 18	5 40	23 06	51	10 13	56
12	0	53.4	+17	20.6	112	31.5	83	-16	26.4	48	0	5 06	5 31	5 53	22 54	54	10 26	54
13	15	53.4		21.3	126	58.8	83	21.4	50	10 S	18	44	6 05	43 56	38	53		
14	30	53.5		22.0	141	26.1	83	16.4	50	20	29	5 56	19	30 59		10 52	50	
15	45	53.5		22.6	155	53.4	83	11.3	51	30	40	6 09	34	16 62		11 07	47	
16	60	53.5		23.3	170	20.7	83	06.0	53	35	45	16	42	22 08	63	15	47	
17	75	53.5	+17	24.0	184	48.0	83	-16	00.7	53	40	5 51	6 24	6 52	21 58	65	11 25	45
18	90	53.6	+17	24.6	199	15.3	83	-15	55.3	54	45	5 57	6 32	7 04	21 47	68	11 37	43
19	105	53.6		25.3	213	42.7	84	49.7	56	50	6 04	43	18	34 70		51	40	
20	120	53.6		26.0	228	10.0	83	44.1	56	52	07	47	24	28 71		11 58	38	
21	135	53.7		26.6	242	37.4	84	38.4	57	54	10	52	31	21 73		12 05	37	
22	150	53.7		27.3	257	04.7	83	32.5	59	56	13	6 58	39	13 75		13	36	
23	165	53.7		28.0	271	32.1	84	26.6	59	58	16	7 04	48	21 04	77	22	34	
24	180	53.7	+17	28.6	285	59.5	84	-15	20.6	60	60 S	6 20	7 11	7 59	20 55	78	12 32	33

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 52 ^m 6		Mag: -4.2 PMG: 15 ^h 00 ^m				Mag: +1.5 PMG: 12 ^h 35 ^m				Mag: -2.1 PMG: 17 ^h 58 ^m				Mag: +0.1 PMG: 0 ^h 58 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	226	29.6	135	12.5	+26	01.8	171	01.7	+19	56.4	89	46.7	+17	30.3	345	26.1		
1	241	32.0	150	11.9		01.8	186	02.3		56.8	104	48.9		30.2	0	28.7		
2	256	34.5	165	11.3		01.8	201	03.0		57.3	119	51.2		30.1	15	31.4		
3	271	37.0	180	10.7		01.9	216	03.6		57.7	134	53.4		30.1	30	34.0		
4	286	39.4	195	10.1		01.9	231	04.2		58.1	149	55.7		30.0	45	36.7		
5	301	41.9	210	09.5	+26	01.9	246	04.9	+19	58.5	164	57.9	+17	29.9	60	39.3		
6	316	44.4	225	08.9	+26	02.0	261	05.5	+19	59.0	180	00.2	+17	29.9	75	42.0		
7	331	46.8	240	08.3		02.0	276	06.1		59.4	195	02.4		29.8	90	44.6		
8	346	49.3	255	07.7		02.0	291	06.7	+19	59.8	210	04.6		29.7	105	47.3		
9	1	51.8	270	07.1		02.0	306	07.4	+20	00.2	225	06.9		29.7	120	49.9		
10	16	54.2	285	06.5		02.1	321	08.0		00.6	240	09.1		29.6	135	52.6		
11	31	56.7	300	05.9	+26	02.1	336	08.6	+20	01.1	255	11.4	+17	29.5	150	55.2		
12	46	59.1	315	05.4	+26	02.1	351	09.3	+20	01.5	270	13.6	+17	29.5	165	57.8		
13	62	01.6	330	04.8		02.1	6	09.9		01.9	285	15.9		29.4	181	00.5		
14	77	04.1	345	04.2		02.2	21	10.5		02.3	300	18.1		29.3	196	03.1		
15	92	06.5	0	03.6		02.2	36	11.2		02.7	315	20.3		29.3	211	05.8		
16	107	09.0	15	03.0		02.2	51	11.8		03.2	330	22.6		29.2	226	08.4		
17	122	11.5	30	02.4	+26	02.2	66	12.4	+20	03.6	345	24.8	+17	29.1	241	11.1		
18	137	13.9	45	01.8	+26	02.2	81	13.1	+20	04.0	0	27.1	+17	29.0	256	13.7		
19	152	16.4	60	01.2		02.2	96	13.7		04.4	15	29.3		29.0	271	16.4		
20	167	18.9	75	00.6		02.3	111	14.3		04.8	30	31.5		28.9	286	19.0		
21	182	21.3	90	00.0		02.3	126	14.9		05.3	45	33.8		28.8	301	21.7		
22	197	23.8	104	59.4		02.3	141	15.6		05.7	60	36.0		28.8	316	24.3		
23	212	26.3	119	58.8		02.3	156	16.2		06.1	75	38.2		28.7	331	27.0		
24	227	28.7	134	58.3	+26	02.3	171	16.8	+20	06.5	90	40.5	+17	28.6	346	29.6		
Dif	—		-6		0		+6		+4		+22		-1		+26			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8		Edad: 21 ^d 2	PHE {	4 ^h : 58 ^h /4 12 ^h : 58 ^h /6 20 ^h : 58 ^h /8	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 56 ^m 4	PMG: 5 ^h 07 ^m				R°: 54 ^m			Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	180	53.7	+17 28.6	285	59.5	-15 20.6	61	60 N	20 19	21 19	23 25	0 52	29	9 30	82
1	195	53.8	29.3	300	26.9	14.5	61	58	20 07	21 00	22 26	42	32	40	78
2	210	53.8	29.9	314	54.3	84 08.3	62	56	19 56	20 44	21 55	34	33	47	77
3	225	53.8	30.6	329	21.7	84 -15 02.0	63	54	47	31	33	27	34	9 55	74
4	240	53.8	31.3	343	49.2	85 -14 55.6	64	52	39	20	15	20	36	10 01	73
5	255	53.9	+17 31.9	358	16.6	84 -14 49.1	65	50	19 32	20 10	21 01	0 14	37	10 07	71
6	270	53.9	+17 32.6	12	44.1	85 -14 42.5	66	45	19 16	19 50	20 32	0 01	40	10 19	68
7	285	53.9	33.2	27	11.6	85 35.8	67	40	19 03	33	20 11	** ** *	**	29	66
8	300	53.9	33.9	41	39.1	85 29.1	67	35	18 52	20	19 54	** ** *	**	38	64
9	315	54.0	34.5	56	06.6	85 22.2	69	30	43	19 09	40	** ** *	**	45	62
10	330	54.0	35.2	70	34.1	85 15.3	69	20	27	18 50	18	** ** *	**	10 58	59
11	345	54.0	+17 35.8	85	01.6	85 -14 08.3	70	10 N	18 13	18 35	19 01	23 57	51	11 09	57
12	0	54.0	+17 36.5	99	29.2	86 -14 01.1	72	0	18 00	18 22	18 47	23 48	53	11 20	54
13	15	54.1	37.2	113	56.7	85 -13 53.9	72	10 S	17 47	18 09	34	39	56	31	50
14	30	54.1	37.8	128	24.3	86 46.6	73	20	34	17 57	23	29	59	42	48
15	45	54.1	38.5	142	51.9	86 39.3	73	30	18	43	12	18	62	11 54	45
16	60	54.1	39.1	157	19.5	86 31.8	75	35	17 09	36	06	11	65	12 02	43
17	75	54.2	+17 39.8	171	47.1	86 -13 24.2	76	40	16 59	17 28	18 00	23 03	67	12 10	41
18	90	54.2	+17 40.4	186	14.8	87 -13 16.6	76	45	16 47	17 19	17 54	22 55	69	12 20	38
19	105	54.2	41.1	200	42.4	86 08.9	77	50	33	08	47	44	73	31	36
20	120	54.2	41.7	215	10.1	87 -13 01.1	78	52	26	17 03	44	39	75	36	35
21	135	54.2	42.4	229	37.8	87 -12 53.2	79	54	19	16 58	41	34	76	42	33
22	150	54.3	43.0	244	05.5	87 45.2	80	56	11	52	38	28	78	49	31
23	165	54.3	43.7	258	33.2	87 37.2	80	58	16 02	46	34	21	81	12 56	29
24	180	54.3	+17 44.3	273	00.9	87 -12 29.1	81	60 S	15 51	16 39	17 30	22 13	84	13 05	26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.2		Mag: +1.5		Mag: -2.1		Mag: +0.1	
	8 ^h 48 ^m 6	PMG: 15 ^h 01 ^m	PMG: 12 ^h 34 ^m	PMG: 17 ^h 55 ^m	PMG: 0 ^h 54 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	227	28.7	134 58.3	+26 02.3	171 16.8	+20 06.5	90 40.5	+17 28.6	346 29.6	-18 31.7
1	242	31.2	149 57.7	02.3	186 17.5	06.9	105 42.7	28.6	1 32.3	31.6
2	257	33.6	164 57.1	02.3	201 18.1	07.3	120 45.0	28.5	16 34.9	31.6
3	272	36.1	179 56.5	02.3	216 18.7	07.8	135 47.2	28.4	31 37.6	31.6
4	287	38.6	194 55.9	02.3	231 19.4	08.2	150 49.4	28.4	46 40.2	31.5
5	302	41.0	209 55.3	+26 02.3	246 20.0	+20 08.6	165 51.7	+17 28.3	61 42.9	-18 31.5
6	317	43.5	224 54.7	+26 02.3	261 20.6	+20 09.0	180 53.9	+17 28.2	76 45.5	-18 31.5
7	332	46.0	239 54.1	02.3	276 21.2	09.4	195 56.1	28.1	91 48.2	31.4
8	347	48.4	254 53.6	02.3	291 21.9	09.8	210 58.4	28.1	106 50.8	31.4
9	2 50.9	269 53.0	02.3	306 22.5	10.2	226 00.6	28.0	121 53.5	31.4	
10	17 53.4	284 52.4	02.3	321 23.1	10.7	241 02.8	27.9	136 56.1	31.3	
11	32 55.8	299 51.8	+26 02.3	336 23.8	+20 11.1	256 05.1	+17 27.9	151 58.8	-18 31.3	
12	47 58.3	314 51.2	+26 02.3	351 24.4	+20 11.5	271 07.3	+17 27.8	167 01.4	-18 31.2	
13	63 00.7	329 50.6	02.3	6 25.0	11.9	286 09.6	27.7	182 04.1	31.2	
14	78 03.2	344 50.0	02.3	21 25.6	12.3	301 11.8	27.7	197 06.7	31.2	
15	93 05.7	359 49.5	02.3	36 26.3	12.7	316 14.0	27.6	212 09.4	31.1	
16	108 08.1	14 48.9	02.3	51 26.9	13.1	331 16.3	27.5	227 12.0	31.1	
17	123 10.6	29 48.3	+26 02.3	66 27.5	+20 13.5	346 18.5	+17 27.4	242 14.7	-18 31.1	
18	138 13.1	44 47.7	+26 02.3	81 28.2	+20 13.9	1 20.7	+17 27.4	257 17.3	-18 31.0	
19	153 15.5	59 47.1	02.2	96 28.8	14.4	16 23.0	27.3	272 20.0	31.0	
20	168 18.0	74 46.5	02.2	111 29.4	14.8	31 25.2	27.2	287 22.6	31.0	
21	183 20.5	89 46.0	02.2	126 30.0	15.2	46 27.4	27.2	302 25.2	30.9	
22	198 22.9	104 45.4	02.2	141 30.7	15.6	61 29.7	27.1	317 27.9	30.9	
23	213 25.4	119 44.8	02.2	156 31.3	16.0	76 31.9	27.0	332 30.5	30.9	
24	228 27.9	134 44.2	+26 02.2	171 31.9	+20 16.4	91 34.1	+17 27.0	347 33.2	-18 30.8	
Dif	—	-6	0	+6	+4	+22	-1	+26	0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 22 ^d 2 PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 2 PMG: 6 ^h 01 ^m R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	54.3	+17	44.3	273	00.9	-12	29.1	60 N	0 27	2 33	3 33	1 21	24	10 52	84		
1	195	54.3		45.0	287	28.7 88		20.9 82	58	1 26	2 52	45	14	26	10 58	82		
2	210	54.3		45.6	301	56.4 87		12.6 83	56	1 57	3 08	3 56	07	29	11 04	80		
3	225	54.4		46.3	316	24.2 88	-12	04.2 84	54	2 19	21	4 05	1 01	31	09	78		
4	240	54.4		46.9	330	52.0 88	-11	55.8 84	52		37	32	13	0 56	32	14	76	
5	255	54.4	+17	47.6	345	19.8 88	-11	47.3 85	50	2 52	3 42	4 21	0 51	34	11 18	75		
6	270	54.4	+17	48.2	359	47.6 88	-11	38.7 86	45	3 20	4 03	4 36	0 41	37	11 27	71		
7	285	54.4		48.8	14	15.5 89		30.0 87	40		42	19	4 49	32	40	35	68	
8	300	54.5		49.5	28	43.3 88		21.3 87	35	3 59	32	5 00	25	42	42	65		
9	315	54.5		50.1	43	11.2 89		12.5 88	30	4 13	4 44	10	19	43	47	63		
10	330	54.5		50.8	57	39.1 89	-11	03.6 89	20		35	5 02	26	0 07	48	11 57	59	
11	345	54.5	+17	51.4	72	07.0 89	-10	54.7 89	10 N	4 52	5 18	5 40	** ** *	**	12 06	56		
12	0	54.5	+17	52.1	86	34.9 89	-10	45.6 91	0	5 06	5 31	5 53	** ** *	**	12 14	52		
13	15	54.6		52.7	101	02.8 89		36.6 90	10 S		18	44	6 06	** ** *		21	50	
14	30	54.6		53.3	115	30.7 89		27.4 92	20		30	5 56	19	** ** *		30	46	
15	45	54.6		54.0	129	58.7 90		18.2 92	30		41	6 10	35	** ** *		39	43	
16	60	54.6		54.6	144	26.7 90	-10	08.9 93	35		47	17	44	** ** *		45	41	
17	75	54.6	+17	55.3	158	54.6 89	-9	59.5 94	40	5 53	6 25	6 54	** ** *	**	12 51	38		
18	90	54.6	+17	55.9	173	22.6 90	-9	50.1 94	45	5 59	6 35	7 06	** ** *	**	12 58	36		
19	105	54.7		56.5	187	50.6 90		40.6 95	50	6 06	45	21	23	57	13 07	32		
20	120	54.7		57.2	202	18.7 91		31.1 95	52		09	50	27	54	77	11	30	
21	135	54.7		57.8	216	46.7 90		21.5 96	54		13	6 56	35	50	79	15	29	
22	150	54.7		58.5	231	14.7 90		11.8 97	56		16	7 01	43	46	81	20	27	
23	165	54.7		59.1	245	42.8 91	-9	02.1 97	58		20	08	7 53	42	83	25	25	
24	180	54.7	+17	59.7	260	10.9 91	-8	52.3 98	60 S	6 24	7 15	8 03	23	37	85	13	31	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 44 ^m 7		Mag: -4.2 PMG: 15 ^h 02 ^m		Mag: +1.5 PMG: 12 ^h 33 ^m		Mag: -2.1 PMG: 17 ^h 51 ^m		Mag: +0.1 PMG: 0 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	228	27.9	134	44.2	+26	02.2	171	31.9	+20	16.4
1	243	30.3	149	43.6		02.1	186	32.6		16.8
2	258	32.8	164	43.1		02.1	201	33.2		17.2
3	273	35.2	179	42.5		02.1	216	33.8		17.6
4	288	37.7	194	41.9		02.1	231	34.4		18.0
5	303	40.2	209	41.3	+26	02.1	246	35.1	+20	18.4
6	318	42.6	224	40.8	+26	02.0	261	35.7	+20	18.8
7	333	45.1	239	40.2		02.0	276	36.3		19.2
8	348	47.6	254	39.6		02.0	291	36.9		19.7
9	3	50.0	269	39.0		01.9	306	37.6		20.1
10	18	52.5	284	38.5		01.9	321	38.2		20.5
11	33	55.0	299	37.9	+26	01.9	336	38.8	+20	20.9
12	48	57.4	314	37.3	+26	01.9	351	39.5	+20	21.3
13	63	59.9	329	36.7		01.8	6	40.1		21.7
14	79	02.4	344	36.2		01.8	21	40.7		22.1
15	94	04.8	359	35.6		01.8	36	41.3		22.5
16	109	07.3	14	35.0		01.7	51	42.0		22.9
17	124	09.7	29	34.4	+26	01.7	66	42.6	+20	23.3
18	139	12.2	44	33.9	+26	01.6	81	43.2	+20	23.7
19	154	14.7	59	33.3		01.6	96	43.8		24.1
20	169	17.1	74	32.7		01.6	111	44.5		24.5
21	184	19.6	89	32.2		01.5	126	45.1		24.9
22	199	22.1	104	31.6		01.5	141	45.7		25.3
23	214	24.5	119	31.0		01.4	156	46.3		25.7
24	229	27.0	134	30.4	+26	01.4	171	47.0	+20	26.1
Dif	—		-6		0		+6		+4	

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: 23 ^d 2 SD: 16'1 PMG: 6 ^h 54 ^m	PHE { 4 ^h : 59'3 12 ^h : 59'4 20 ^h : 59'5 R°: 53 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	54.7	+17	59.7	260	10.9	-8	52.3	60 N	20 24	21 25	** **	1 45	21	12 16	87		
1	195	54.7	+18	00.4	274	38.9	90	42.5	58	11	21 05	22 37	40	24	20	84		
2	210	54.8		01.0	289	07.0	91	32.6	56	20 00	20 49	22 03	36	25	24	81		
3	225	54.8		01.6	303	35.1	91	22.6	54	19 51	36	21 39	32	27	27	79		
4	240	54.8		02.3	318	03.2	91	12.6	52	42	24	20	28	30	30	77		
5	255	54.8	+18	02.9	332	31.4	92	-8 02.5	50	19 35	20 13	21 05	1 25	31	12 33	75		
6	270	54.8	+18	03.5	346	59.5	91	-7 52.4	45	19 18	19 52	20 35	1 18	35	12 38	72		
7	285	54.8		04.2	1	27.6	91	42.2	40	19 05	36	20 13	12	38	43	69		
8	300	54.8		04.8	15	55.8	92	32.0	35	18 54	22	19 56	07	40	47	66		
9	315	54.8		05.4	30	23.9	91	21.7	30	44	19 10	41	1 02	43	50	64		
10	330	54.9		06.1	44	52.1	92	11.4	20	28	18 51	19	0 55	46	12 56	60		
11	345	54.9	+18	06.7	59	20.3	92	-7 01.0	10 N	18 13	18 35	19 01	0 48	49	13 02	56		
12	0	54.9	+18	07.3	73	48.5	92	-6 50.6	0	18 00	18 22	18 47	0 41	53	13 06	53		
13	15	54.9		08.0	88	16.7	92	40.2	10 S	17 47	18 09	34	35	56	11	50		
14	30	54.9		08.6	102	44.8	91	29.6	20	33	17 56	22	28	59	16	46		
15	45	54.9		09.2	117	13.1	93	19.1	30	17	42	11	20	64	22	42		
16	60	54.9		09.8	131	41.3	92	-6 08.5	35	17 08	34	18 05	16	65	26	39		
17	75	54.9	+18	10.5	146	09.5	92	-5 57.9	40	16 57	17 26	17 59	0 10	69	13 29	37		
18	90	54.9	+18	11.1	160	37.7	92	-5 47.2	45	16 45	17 17	17 52	0 04	72	13 34	34		
19	105	55.0		11.7	175	05.9	92	36.5	50	30	05	45	** ** *	**	39	30		
20	120	55.0		12.3	189	34.2	93	25.7	52	23	17 00	41	** ** *	**	41	29		
21	135	55.0		13.0	204	02.4	92	14.9	54	16	16 55	38	** ** *	**	44	27		
22	150	55.0		13.6	218	30.6	92	-5 04.1	56	16 07	49	34	** ** *	**	47	24		
23	165	55.0		14.2	232	58.9	93	-4 53.2	58	15 57	42	30	** ** *	**	50	22		
24	180	55.0	+18	14.8	247	27.1	92	-4 42.3	60 S	15 46	16 35	17 26	** ** *	**	13 53	20		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 8 ^h 40 ^m 8		Mag: -4.2 PMG: 15 ^h 03 ^m			Mag: +1.5 PMG: 12 ^h 32 ^m			Mag: -2.1 PMG: 17 ^h 48 ^m			Mag: +0.1 PMG: 0 ^h 45 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	229	27.0	134	30.4	+26	01.4	171	47.0	+20	26.1	92	27.6	+17	25.2	348	36.8	-18	30.0
1	244	29.5	149	29.9		01.3	186	47.6		26.5	107	29.8		25.2	3	39.5		30.0
2	259	31.9	164	29.3		01.3	201	48.2		26.9	122	32.0		25.1	18	42.1		29.9
3	274	34.4	179	28.7		01.2	216	48.9		27.3	137	34.3		25.0	33	44.8		29.9
4	289	36.8	194	28.2		01.2	231	49.5		27.7	152	36.5		24.9	48	47.4		29.9
5	304	39.3	209	27.6	+26	01.1	246	50.1	+20	28.1	167	38.7	+17	24.9	63	50.1	-18	29.8
6	319	41.8	224	27.0	+26	01.1	261	50.7	+20	28.5	182	40.9	+17	24.8	78	52.7	-18	29.8
7	334	44.2	239	26.5		01.0	276	51.4		28.9	197	43.2		24.7	93	55.4		29.8
8	349	46.7	254	25.9		01.0	291	52.0		29.3	212	45.4		24.6	108	58.0		29.7
9	4	49.2	269	25.3		00.9	306	52.6		29.7	227	47.6		24.6	124	00.7		29.7
10	19	51.6	284	24.8		00.9	321	53.2		30.1	242	49.8		24.5	139	03.3		29.6
11	34	54.1	299	24.2	+26	00.8	336	53.9	+20	30.5	257	52.1	+17	24.4	154	06.0	-18	29.6
12	49	56.6	314	23.6	+26	00.7	351	54.5	+20	30.9	272	54.3	+17	24.3	169	08.6	-18	29.6
13	64	59.0	329	23.1		00.7	6	55.1		31.3	287	56.5		24.3	184	11.3		29.5
14	80	01.5	344	22.5		00.6	21	55.7		31.7	302	58.7		24.2	199	13.9		29.5
15	95	04.0	359	22.0		00.6	36	56.4		32.1	318	00.9		24.1	214	16.6		29.5
16	110	06.4	14	21.4		00.5	51	57.0		32.5	333	03.2		24.1	229	19.2		29.4
17	125	08.9	29	20.8	+26	00.4	66	57.6	+20	32.9	348	05.4	+17	24.0	244	21.9	-18	29.4
18	140	11.3	44	20.3	+26	00.4	81	58.2	+20	33.3	3	07.6	+17	23.9	259	24.5	-18	29.4
19	155	13.8	59	19.7		00.3	96	58.9		33.6	18	09.8		23.8	274	27.2		29.3
20	170	16.3	74	19.1		00.2	111	59.5		34.0	33	12.0		23.8	289	29.8		29.3
21	185	18.7	89	18.6		00.2	127	00.1		34.4	48	14.3		23.7	304	32.5		29.3
22	200	21.2	104	18.0	+26	00.1	142	00.7		34.8	63	16.5		23.6	319	35.1		29.2
23	215	23.7	119	17.5	+26	00.0	157	01.4		35.2	78	18.7		23.5	334	37.8		29.2
24	230	26.1	134	16.9	+26	00.0	172	02.0	+20	35.6	93	20.9	+17	23.5	349	40.4	-18	29.2
Dif	—		-6		-1		+6		+4		+22		-1		+27			0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 24 ^d 2 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 7 20 ^h : 59 ^m 8 PMG: 7 ^h 47 ^m R°: 52 ^m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	55.0	+18	14.8	247	27.1	-4	42.3	60 N	**	**	2	27	3	28	2	06	20
1	195	55.0		15.5	261	55.4	93	31.4	58	1	15	2	47		41	04	22	44 85
2	210	55.0		16.1	276	23.6	92	20.4	56	1	49	3	03	3	52	2	01	25
3	225	55.0		16.7	290	51.8	92	-4	54	2	13	17		4	01	1	59	27
4	240	55.0		17.3	305	20.1	93	-3	52		32	28		10		58	28	47 79
5	255	55.0	+18	18.0	319	48.3	92	-3	50	2	47	3	39	4	18	1	56	30
6	270	55.0	+18	18.6	334	16.6	93	-3	45	3	17	4	00	4	34	1	53	33
7	285	55.0		19.2	348	44.8	92	25.2	40		39	17		47		50	36	52 69
8	300	55.1		19.8	3	13.1	93	14.1	35	3	57	30		4	58	47	39	53 66
9	315	55.1		20.4	17	41.3	92	-3	30	4	11	4	42	5	08	45	41	54 64
10	330	55.1		21.0	32	09.6	93	-2	20		34	5	01		25	41	46	56 60
11	345	55.1	+18	21.7	46	37.8	92	-2	10 N	4	51	5	17	5	39	1	37	50
12	0	55.1	+18	22.3	61	06.1	93	-2	0	5	06	5	31	5	53	1	34	53
13	15	55.1		22.9	75	34.3	92	18.1	10 S		19	44		6	06	31	56	14 01
14	30	55.1		23.5	90	02.5	92	-2	20		30	5	57		20	27	60	02 46
15	45	55.1		24.1	104	30.8	93	-1	30		42	6	11		36	24	64	04 42
16	60	55.1		24.7	118	59.0	92	44.3	35		48	19		46		21	67	05 39
17	75	55.1	+18	25.4	133	27.2	92	-1	40	5	54	6	27	6	56	1	19	69
18	90	55.1	+18	26.0	147	55.4	92	-1	45	6	01	6	37	7	08	1	16	72
19	105	55.1		26.6	162	23.6	92	-1	50		09	48		23		12	76	09 30
20	120	55.1		27.2	176	51.8	92	-0	52		12	53		30		11	78	10 28
21	135	55.1		27.8	191	20.0	92	47.6	54		15	6	59	38		09	80	11 26
22	150	55.1		28.4	205	48.2	92	36.3	56		19	7	05	47		07	82	11 25
23	165	55.1		29.0	220	16.4	92	24.9	58		23	12		7	57	05	84	12 23
24	180	55.1	+18	29.6	234	44.5	91	-0	60 S	6	27	7	19	8	08	1	02	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 36 ^m 8		Mag: -4.2 PMG: 15 ^h 03 ^m		Mag: +1.5 PMG: 12 ^h 31 ^m		Mag: -2.1 PMG: 17 ^h 44 ^m		Mag: +0.1 PMG: 0 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	230	26.1	134	16.9	+26	00.0	172	02.0	+20	35.6
1	245	28.6	149	16.4	+25	59.9	187	02.6		36.0
2	260	31.1	164	15.8		59.8	202	03.2		36.4
3	275	33.5	179	15.2		59.7	217	03.9		36.8
4	290	36.0	194	14.7		59.6	232	04.5		37.2
5	305	38.5	209	14.1	+25	59.6	247	05.1	+20	37.6
6	320	40.9	224	13.6	+25	59.5	262	05.7	+20	38.0
7	335	43.4	239	13.0		59.4	277	06.3		38.3
8	350	45.8	254	12.5		59.3	292	07.0		38.7
9	5	48.3	269	11.9		59.2	307	07.6		39.1
10	20	50.8	284	11.4		59.2	322	08.2		39.5
11	35	53.2	299	10.8	+25	59.1	337	08.8	+20	39.9
12	50	55.7	314	10.3	+25	59.0	352	09.5	+20	40.3
13	65	58.2	329	09.7		58.9	7	10.1		40.7
14	81	00.6	344	09.1		58.8	22	10.7		41.1
15	96	03.1	359	08.6		58.7	37	11.3		41.5
16	111	05.6	14	08.0		58.6	52	12.0		41.8
17	126	08.0	29	07.5	+25	58.5	67	12.6	+20	42.2
18	141	10.5	44	06.9	+25	58.5	82	13.2	+20	42.6
19	156	12.9	59	06.4		58.4	97	13.8		43.0
20	171	15.4	74	05.9		58.3	112	14.5		43.4
21	186	17.9	89	05.3		58.2	127	15.1		43.8
22	201	20.3	104	04.8		58.1	142	15.7		44.2
23	216	22.8	119	04.2		58.0	157	16.3		44.5
24	231	25.3	134	03.7	+25	57.9	172	16.9	+20	44.9
Dif	—		-6		-1		+6		+4	

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: 25 ^d 2 PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 59'9 SD: 16'3 PMG: 8 ^h 39 ^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	h m m
0	180	55.1	+18 29.6	234	44.5	-0 13.5	92	60 N	20 29	21 32	** **	2 26 20		15 10 88	
1	195	55.1	30.3	249	12.7	-0 02.2	113	58	15	21 11	22 49	26 22		09 85	
2	210	55.1	30.9	263	40.8	+0 09.2	114	56	20 04	20 54	22 10	26 25		08 82	
3	225	55.1	31.5	278	09.0		114	54	19 54	40	21 45	26 27		07 80	
4	240	55.1	32.1	292	37.1		114	52	45	27	25	26 29		06 78	
5	255	55.1	+18 32.7	307	05.2	+0 43.4	114	50	19 37	20 17	21 09	2 26 30		15 05 76	
6	270	55.1	+18 33.3	321	33.3	+0 54.8	114	45	19 21	19 55	20 38	2 26 34		15 03 73	
7	285	55.1	33.9	336	01.4	+1 06.1	113	40	19 07	38	20 15	26 37		15 01 70	
8	300	55.1	34.5	350	29.5		114	35	18 56	24	19 58	26 40		14 59 68	
9	315	55.1	35.1	4 57.5	90	28.9	114	30	46	19 12	43	26 42		58 65	
10	330	55.1	35.7	19 25.6	91	40.2	113	20	28	18 52	20	27 46		56 60	
11	345	55.1	+18 36.3	33 53.6	90	+1 51.6	114	10 N	18 14	18 36	19 02	2 27 49		14 54 57	
12	0	55.1	+18 36.9	48 21.6	90	+2 03.0	114	0	18 00	18 22	18 47	2 27 53		14 52 54	
13	15	55.1	37.5	62 49.7	91	14.3	113	10 S	17 46	18 08	34	27 57		50 50	
14	30	55.1	38.1	77 17.6	89	25.6	113	20	32	17 55	22	27 61		48 47	
15	45	55.1	38.7	91 45.6	90	36.9	113	30	15	41	10	28 64		46 42	
16	60	55.1	39.3	106 13.6	90	48.2	113	35	17 06	33	18 03	28 67		44 41	
17	75	55.1	+18 39.9	120 41.5	89	+2 59.5	113	40	16 55	17 24	17 57	2 28 70		14 43 38	
18	90	55.1	+18 40.5	135 09.5	90	+3 10.8	113	45	16 43	17 14	17 50	2 28 73		14 41 35	
19	105	55.1	41.1	149 37.4	89	22.0	112	50	27	17 03	42	28 77		39 31	
20	120	55.1	41.7	164 05.3	89	33.3	113	52	20	16 58	39	29 78		38 29	
21	135	55.1	42.3	178 33.1	88	44.5	112	54	12	52	35	29 80		37 27	
22	150	55.1	42.9	193 01.0	89	+3 55.7	112	56	16 03	46	31	29 83		36 25	
23	165	55.1	43.5	207 28.8	88	+4 06.9	112	58	15 53	39	27	29 85		35 23	
24	180	55.1	+18 44.1	221 56.7	89	+4 18.0	111	60 S	15 42	16 31	17 23	2 29 88		14 33 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 32 ^m 9		Mag: -4.2 PMG: 15 ^h 04 ^m		Mag: +1.5 PMG: 12 ^h 30 ^m		Mag: -2.1 PMG: 17 ^h 40 ^m		Mag: +0.1 PMG: 0 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	231	25.3	134 03.7	+25 57.9	172 16.9	+20 44.9	94 14.1	+17 21.6	350 44.1	-18 28.3
1	246	27.7	149 03.1	57.8	187 17.6	45.3	109 16.3	21.6	5 46.7	28.3
2	261	30.2	164 02.6	57.7	202 18.2	45.7	124 18.5	21.5	20 49.4	28.2
3	276	32.7	179 02.0	57.6	217 18.8	46.1	139 20.7	21.4	35 52.1	28.2
4	291	35.1	194 01.5	57.5	232 19.4	46.5	154 23.0	21.3	50 54.7	28.2
5	306	37.6	209 00.9	+25 57.4	247 20.1	+20 46.8	169 25.2	+17 21.3	65 57.4	-18 28.1
6	321	40.1	224 00.4	+25 57.3	262 20.7	+20 47.2	184 27.4	+17 21.2	81 00.0	-18 28.1
7	336	42.5	238 59.9	57.2	277 21.3	47.6	199 29.6	21.1	96 02.7	28.1
8	351	45.0	253 59.3	57.0	292 21.9	48.0	214 31.8	21.0	111 05.3	28.0
9	6 47.4	268 58.8	56.9	307 22.5	48.4	229 34.0	20.9	126 08.0	28.0	
10	21 49.9	283 58.2	56.8	322 23.2	48.7	244 36.2	20.9	141 10.6	28.0	
11	36 52.4	298 57.7	+25 56.7	337 23.8	+20 49.1	259 38.4	+17 20.8	156 13.3	-18 27.9	
12	51 54.8	313 57.1	+25 56.6	352 24.4	+20 49.5	274 40.6	+17 20.7	171 15.9	-18 27.9	
13	66 57.3	328 56.6	56.5	7 25.0	49.9	289 42.9	20.6	186 18.6	27.9	
14	81 59.8	343 56.1	56.4	22 25.7	50.3	304 45.1	20.6	201 21.2	27.8	
15	97 02.2	358 55.5	56.3	37 26.3	50.6	319 47.3	20.5	216 23.9	27.8	
16	112 04.7	13 55.0	56.1	52 26.9	51.0	334 49.5	20.4	231 26.5	27.8	
17	127 07.2	28 54.5	+25 56.0	67 27.5	+20 51.4	349 51.7	+17 20.3	246 29.2	-18 27.7	
18	142 09.6	43 53.9	+25 55.9	82 28.1	+20 51.8	4 53.9	+17 20.2	261 31.8	-18 27.7	
19	157 12.1	58 53.4	55.8	97 28.8	52.1	19 56.1	20.2	276 34.5	27.6	
20	172 14.5	73 52.8	55.7	112 29.4	52.5	34 58.3	20.1	291 37.2	27.6	
21	187 17.0	88 52.3	55.5	127 30.0	52.9	50 00.5	20.0	306 39.8	27.6	
22	202 19.5	103 51.8	55.4	142 30.6	53.3	65 02.7	19.9	321 42.5	27.5	
23	217 21.9	118 51.2	55.3	157 31.2	53.7	80 04.9	19.9	336 45.1	27.5	
24	232 24.4	133 50.7	+25 55.2	172 31.9	+20 54.0	95 07.2	+17 19.8	351 47.8	-18 27.5	
Dif	—	-5	-1	+6	+4	+22	-1	+27	0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 26 ^d 2 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 9 20 ^h : 59 ^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	55.1	+18	44.1	221	56.7	+4	18.0	60 N	**	**	2	20	3	23	2	46			
1	195	55.1		44.7	236	24.5	88	29.1	58	1	03	41	37	48	25	34	84			
2	210	55.1		45.3	250	52.2	87	40.2	56	1	42	2	58	48	51	26	82			
3	225	55.1		45.9	265	20.0	88	+4	51.3	54	2	07	3	12	3	58	27			
4	240	55.1		46.5	279	47.7	87	+5	02.3	52	27	25	4	07	55	30	78			
5	255	55.1	+18	47.1	294	15.5	88	+5	13.3	50	2	43	3	35	4	15	77			
6	270	55.1	+18	47.7	308	43.2	87	+5	24.3	45	3	14	3	57	4	31	72			
7	285	55.1		48.3	323	10.8	86	35.3	40	37	4	15	45	03	39	11	69			
8	300	55.1		48.9	337	38.5	87	46.2	35	3	55	29	4	57	06	41	65			
9	315	55.0		49.5	352	06.1	86	+5	57.0	30	4	09	4	41	5	07	67			
10	330	55.0		50.1	6	33.7	86	+6	07.9	20	33	5	00	24	13	47	61			
11	345	55.0	+18	50.7	21	01.3	86	+6	18.7	10 N	4	51	5	17	5	39	57			
12	0	55.0	+18	51.3	35	28.9	86	+6	29.4	0	5	06	5	31	3	20	54			
13	15	55.0		51.9	49	56.4	85	40.2	10 S	19		44	6	07	24	57	52			
14	30	55.0		52.4	64	24.0	86	+6	50.8	20	31	5	58	21	28	60	48			
15	45	55.0		53.0	78	51.5	85	+7	01.5	30	43	6	12	38	32	65	45			
16	60	55.0		53.6	93	18.9	84	12.1	35	49	20	47		47	35	67	42			
17	75	55.0	+18	54.2	107	46.4	85	+7	22.6	40	5	56	6	29	3	38	39			
18	90	55.0	+18	54.8	122	13.8	84	+7	33.1	45	6	03	6	39	3	41	37			
19	105	55.0		55.4	136	41.2	84	43.6	50	11	50	26		45	77	10	33			
20	120	55.0		56.0	151	08.6	84	+7	54.0	52	14	6	56	33	47	78	32			
21	135	55.0		56.6	165	36.0	84	+8	04.3	54	18	7	02	41	49	80	31			
22	150	54.9		57.1	180	03.3	83	14.7	56	22	08	7	50		52	82	28			
23	165	54.9		57.7	194	30.6	83	24.9	58	26	15	8	01		54	85	26			
24	180	54.9	+18	58.3	208	57.9	83	+8	35.1	60 S	6	31	7	23	3	57	23			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 29 ^m 0				Mag: -4.2 PMG: 15 ^h 05 ^m				Mag: +1.5 PMG: 12 ^h 29 ^m				Mag: -2.1 PMG: 17 ^h 37 ^m				Mag: +0.1 PMG: 0 ^h 33 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	232	24.4	133	50.7	+25	55.2			172	31.9	+20	54.0	95	07.2	+17	19.8	351	47.8	-18	27.5
1	247	26.9	148	50.2		55.0			187	32.5		54.4	110	09.4		19.7	6	50.4		27.4
2	262	29.3	163	49.6		54.9			202	33.1		54.8	125	11.6		19.6	21	53.1		27.4
3	277	31.8	178	49.1		54.8			217	33.7		55.2	140	13.8		19.5	36	55.7		27.4
4	292	34.3	193	48.6		54.7			232	34.3		55.5	155	16.0		19.5	51	58.4		27.3
5	307	36.7	208	48.0	+25	54.5			247	35.0	+20	55.9	170	18.2	+17	19.4	67	01.0	-18	27.3
6	322	39.2	223	47.5	+25	54.4			262	35.6	+20	56.3	185	20.4	+17	19.3	82	03.7	-18	27.3
7	337	41.7	238	47.0		54.3			277	36.2		56.7	200	22.6		19.2	97	06.3		27.2
8	352	44.1	253	46.5		54.1			292	36.8		57.0	215	24.8		19.1	112	09.0		27.2
9	7	46.6	268	45.9		54.0			307	37.4		57.4	230	27.0		19.1	127	11.7		27.2
10	22	49.0	283	45.4		53.9			322	38.1		57.8	245	29.2		19.0	142	14.3		27.1
11	37	51.5	298	44.9	+25	53.7			337	38.7	+20	58.1	260	31.4	+17	18.9	157	17.0	-18	27.1
12	52	54.0	313	44.3	+25	53.6			352	39.3	+20	58.5	275	33.6	+17	18.8	172	19.6	-18	27.1
13	67	56.4	328	43.8		53.4			7	39.9		58.9	290	35.8		18.8	187	22.3		27.0
14	82	58.9	343	43.3		53.3			22	40.6		59.3	305	38.0		18.7	202	24.9		27.0
15	98	01.4	358	42.8		53.2			37	41.2	+20	59.6	320	40.2		18.6	217	27.6		26.9
16	113	03.8	13	42.2		53.0			52	41.8	+21	00.0	335	42.4		18.5	232	30.2		26.9
17	128	06.3	28	41.7	+25	52.9			67	42.4	+21	00.4	350	44.6	+17	18.4	247	32.9	-18	26.9
18	143	08.8	43	41.2	+25	52.7			82	43.0	+21	00.7	5	46.8	+17	18.4	262	35.5	-18	26.8
19	158	11.2	58	40.7		52.6			97	43.6		01.1	20	49.0		18.3	277	38.2		26.8
20	173	13.7	73	40.1		52.4			112	44.3		01.5	35	51.2		18.2	292	40.9		26.8
21	188	16.2	88	39.6		52.3			127	44.9		01.8	50	53.4		18.1	307	43.5		26.7
22	203	18.6	103	39.1		52.1			142	45.5		02.2	65	55.6		18.0	322	46.2		26.7
23	218	21.1	118	38.6		52.0			157	46.1		02.6	80	57.8		18.0	337	48.8		26.7
24	233	23.5	133	38.1	+25	51.8			172	46.7	+21	02.9	96	00.0	+17	17.9	352	51.5	-18	26.6
Dif	—				-5				+6				+22				-1			
					-1				+4								+27			

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: 27 ^d 2 PHE { 4 ^h : 59'8 12 ^h : 59'7 20 ^h : 59'6 R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	54.9	+18 58.3	208	57.9	+8 35.1	101	60 N	20 33	21 38	** **	3 08 25	18 05 83	
1	195	54.9	58.9	223	25.2	83	45.2	58	20	21 16	23 03	13 28	17 58 81	
2	210	54.9	+18 59.5	237	52.4	82	+8 55.3	56	20 08	20 58	22 18	17 30	52 79	
3	225	54.9	+19 00.1	252	19.6	82	+9 05.4	54	19 58	44	21 51	21 32	47 77	
4	240	54.9	00.6	266	46.8	82	15.3	52	48	31	30	25 34	42 75	
5	255	54.9	+19 01.2	281	14.0	82	+9 25.2	50	19 40	20 20	21 13	3 28 36	17 38 73	
6	270	54.9	+19 01.8	295	41.1	81	+9 35.1	45	19 23	19 57	20 41	3 36 38	17 28 71	
7	285	54.8	02.4	310	08.2	81	44.9	40	19 09	40	18	42 41	20 68	
8	300	54.8	03.0	324	35.3	81	+9 54.6	35	18 57	25	20 00	47 44	14 65	
9	315	54.8	03.5	339	02.4	81	+10 04.3	30	47	19 13	19 45	3 52 45	17 08 64	
10	330	54.8	04.1	353	29.4	80	13.9	20	29	18 53	21	4 00 49	16 57 61	
11	345	54.8	+19 04.7	7	56.4	80	+10 23.4	10 N	18 14	18 36	19 03	4 07 52	16 48 59	
12	0	54.8	+19 05.3	22	23.4	80	+10 32.9	0	18 00	18 22	18 47	4 14 55	16 40 56	
13	15	54.8	05.9	36	50.4	80	42.2	10 S	17 46	18 08	34	21 58	32 53	
14	30	54.8	06.4	51	17.3	79	+10 51.6	20	31	17 54	21	28 61	23 50	
15	45	54.7	07.0	65	44.3	80	+11 00.8	30	14	40	09	37 64	13 47	
16	60	54.7	07.6	80	11.2	79	10.0	35	17 05	32	18 02	42 66	07 45	
17	75	54.7	+19 08.2	94	38.0	78	+11 19.1	40	16 53	17 23	17 55	4 47 69	16 00 43	
18	90	54.7	+19 08.7	109	04.9	79	+11 28.1	45	16 40	17 12	17 48	4 54 72	15 53 40	
19	105	54.7	09.3	123	31.7	78	37.1	50	25	17 00	40	5 02 75	43 38	
20	120	54.7	09.9	137	58.5	78	46.0	52	17	16 55	36	05 77	39 36	
21	135	54.7	10.5	152	25.3	78	+11 54.8	54	09	49	33	09 79	35 34	
22	150	54.6	11.0	166	52.1	78	+12 03.5	56	16 00	43	29	14 81	29 33	
23	165	54.6	11.6	181	18.8	77	12.1	58	15 49	35	24	19 83	24 30	
24	180	54.6	+19 12.2	195	45.5	77	+12 20.7	60 S	15 37	16 27	17 19	5 25 85	15 17 28	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 25 ^m 0		Mag: -4.3 PMG: 15 ^h 06 ^m			Mag: +1.5 PMG: 12 ^h 28 ^m			Mag: -2.1 PMG: 17 ^h 33 ^m			Mag: 0.0 PMG: 0 ^h 28 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	233	23.5	133	38.1	+25 51.8	172	46.7	+21 02.9	96	00.0	+17 17.9	352	51.5	-18 26.6
1	248	26.0	148	37.5	51.7	187	47.4	03.3	111	02.2	17.8	7	54.1	26.6
2	263	28.5	163	37.0	51.5	202	48.0	03.7	126	04.4	17.7	22	56.8	26.6
3	278	30.9	178	36.5	51.4	217	48.6	04.0	141	06.6	17.6	37	59.4	26.5
4	293	33.4	193	36.0	51.2	232	49.2	04.4	156	08.8	17.6	53	02.1	26.5
5	308	35.9	208	35.5	+25 51.1	247	49.8	+21 04.8	171	11.0	+17 17.5	68	04.7	-18 26.5
6	323	38.3	223	35.0	+25 50.9	262	50.5	+21 05.1	186	13.2	+17 17.4	83	07.4	-18 26.4
7	338	40.8	238	34.4	50.7	277	51.1	05.5	201	15.4	17.3	98	10.1	26.4
8	353	43.3	253	33.9	50.6	292	51.7	05.9	216	17.6	17.2	113	12.7	26.3
9	8	45.7	268	33.4	50.4	307	52.3	06.2	231	19.8	17.1	128	15.4	26.3
10	23	48.2	283	32.9	50.2	322	52.9	06.6	246	22.0	17.1	143	18.0	26.3
11	38	50.6	298	32.4	+25 50.1	337	53.6	+21 07.0	261	24.2	+17 17.0	158	20.7	-18 26.2
12	53	53.1	313	31.9	+25 49.9	352	54.2	+21 07.3	276	26.4	+17 16.9	173	23.3	-18 26.2
13	68	55.6	328	31.4	49.8	7	54.8	07.7	291	28.6	16.8	188	26.0	26.2
14	83	58.0	343	30.8	49.6	22	55.4	08.1	306	30.8	16.7	203	28.6	26.1
15	99	00.5	358	30.3	49.4	37	56.0	08.4	321	33.0	16.7	218	31.3	26.1
16	114	03.0	13	29.8	49.2	52	56.6	08.8	336	35.2	16.6	233	33.9	26.1
17	129	05.4	28	29.3	+25 49.1	67	57.3	+21 09.1	351	37.4	+17 16.5	248	36.6	-18 26.0
18	144	07.9	43	28.8	+25 48.9	82	57.9	+21 09.5	6	39.6	+17 16.4	263	39.3	-18 26.0
19	159	10.4	58	28.3	48.7	97	58.5	09.9	21	41.8	16.3	278	41.9	26.0
20	174	12.8	73	27.8	48.6	112	59.1	10.2	36	44.0	16.3	293	44.6	25.9
21	189	15.3	88	27.3	48.4	127	59.7	10.6	51	46.2	16.2	308	47.2	25.9
22	204	17.8	103	26.8	48.2	143	00.4	10.9	66	48.4	16.1	323	49.9	25.9
23	219	20.2	118	26.3	48.0	158	01.0	11.3	81	50.6	16.0	338	52.5	25.8
24	234	22.7	133	25.8	+25 47.9	173	01.6	+21 11.7	96	52.8	+17 15.9	353	55.2	-18 25.8
Dif	—		-5	-2		+6	+4		+22		-1	+27		0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 28 ^d 2 PHE { 4 ^h : 59 ^s 5 12 ^h : 59 ^s 3 20 ^h : 59 ^s 2 PMG: 11 ^h 22 ^m R ^o : 56 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.6	+19	12.2	195	45.5	+12	20.7	60 N	**	**	2	14	3	33	31	19
1	195	54.6		12.7	210	12.2	77	29.2	58	0	50	36	32	41	33	19	75
2	210	54.6		13.3	224	38.9	77	37.6	56	1	34	2	54	47	36	11	72
3	225	54.6		13.9	239	05.6	77	45.9	54	2	02	3	09	53	37	19	04
4	240	54.5		14.4	253	32.2	76	+12	54.1	22	21	4	04	3	59	38	18
5	255	54.5	+19	15.0	267	58.8	76	+13	02.3	50	2	39	3	32	4	04	39
6	270	54.5	+19	15.6	282	25.4	76	+13	10.3	45	3	11	3	55	4	14	43
7	285	54.5		16.2	296	52.0	76	18.3	40	34	4	13	43	23	45	28	65
8	300	54.5		16.7	311	18.6	76	26.2	35	3	53	27	4	55	31	46	19
9	315	54.5		17.3	325	45.1	75	34.0	30	4	08	4	39	5	06	37	49
10	330	54.4		17.8	340	11.7	76	41.7	20	32	5	00	23	49	51	17	58
11	345	54.4	+19	18.4	354	38.2	75	+13	49.3	10 N	4	50	5	16	5	59	57
12	0	54.4	+19	19.0	9	04.7	75	+13	56.8	0	5	05	5	31	5	09	56
13	15	54.4		19.5	23	31.1	74	+14	04.3	10 S	19	45	6	07	19	58	25
14	30	54.4		20.1	37	57.6	75	11.6	73	20	32	5	59	22	29	61	13
15	45	54.3		20.7	52	24.0	74	18.8	72	30	44	6	13	39	41	64	17
16	60	54.3		21.2	66	50.5	75	26.0	72	35	51	22	6	49	48	65	16
17	75	54.3	+19	21.8	81	16.9	74	+14	33.0	40	5	58	6	31	5	56	67
18	90	54.3	+19	22.4	95	43.3	74	+14	40.0	45	6	05	6	41	6	06	69
19	105	54.3		22.9	110	09.7	74	46.9	69	50	13	53	29	17	72	17	21
20	120	54.2		23.5	124	36.1	74	+14	53.6	52	17	6	58	36	22	73	15
21	135	54.2		24.0	139	02.5	74	+15	00.3	54	21	7	04	45	28	75	09
22	150	54.2		24.6	153	28.8	73	06.8	65	56	25	11	7	54	35	76	16
23	165	54.2		25.1	167	55.2	74	13.3	65	58	29	18	8	05	42	78	15
24	180	54.2	+19	25.7	182	21.5	73	+15	19.7	60 S	6	34	7	27	6	50	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 21 ^m 1		Mag: -4.3 PMG: 15 ^h 07 ^m		Mag: +1.5 PMG: 12 ^h 27 ^m		Mag: -2.1 PMG: 17 ^h 30 ^m		Mag: 0.0 PMG: 0 ^h 24 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	234	22.7	133	25.8	+25	47.9	173	01.6	+21	11.7
1	249	25.1	148	25.2		47.7	188	02.2		12.0
2	264	27.6	163	24.7		47.5	203	02.8		12.4
3	279	30.1	178	24.2		47.3	218	03.4		12.7
4	294	32.5	193	23.7		47.1	233	04.1		13.1
5	309	35.0	208	23.2	+25	47.0	248	04.7	+21	13.4
6	324	37.5	223	22.7	+25	46.8	263	05.3	+21	13.8
7	339	39.9	238	22.2		46.6	278	05.9		14.2
8	354	42.4	253	21.7		46.4	293	06.5		14.5
9	9	44.9	268	21.2		46.2	308	07.1		14.9
10	24	47.3	283	20.7		46.0	323	07.8		15.2
11	39	49.8	298	20.2	+25	45.8	338	08.4	+21	15.6
12	54	52.3	313	19.7	+25	45.6	353	09.0	+21	15.9
13	69	54.7	328	19.2		45.4	8	09.6		16.3
14	84	57.2	343	18.7		45.3	23	10.2		16.7
15	99	59.6	358	18.2		45.1	38	10.8		17.0
16	115	02.1	13	17.7		44.9	53	11.5		17.4
17	130	04.6	28	17.2	+25	44.7	68	12.1	+21	17.7
18	145	07.0	43	16.8	+25	44.5	83	12.7	+21	18.1
19	160	09.5	58	16.3		44.3	98	13.3		18.4
20	175	12.0	73	15.8		44.1	113	13.9		18.8
21	190	14.4	88	15.3		43.9	128	14.5		19.1
22	205	16.9	103	14.8		43.7	143	15.2		19.5
23	220	19.4	118	14.3		43.5	158	15.8		19.8
24	235	21.8	133	13.8	+25	43.3	173	16.4	+21	20.2
Dif	—		-5		-2		+6		+4	
							+22		-1	
									+27	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 29 ^d 2	PHE { 4 ^h : 59°0 12 ^h : 58°8 20 ^h : 58°6										
	PMG: 11 ^h 56 ^m 4					SD: 16°1			PMG: 12 ^h 18 ^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	180	54.2	+19 25.7	182	21.5	+15 19.7		60 N	20 38	21 45	** **	4 04	39	20 45	66
1	195	54.1	26.3	196	47.9	25.9	62	58	24	21	23 21	14	40	34	65
2	210	54.1	26.8	211	14.2	32.1	62	56	12	21 03	22 26	23	42	24	64
3	225	54.1	27.4	225	40.5	38.1	60	54	20 01	20 48	21 57	30	43	15	64
4	240	54.1	27.9	240	06.8	44.1	60	52	19 51	35	35	37	44	07	63
5	255	54.0	+19 28.5	254	33.1	+15 49.9	58	50	19 43	20 23	21 17	4 43	46	20 00	63
6	270	54.0	+19 29.0	268	59.5	+15 55.7	58	45	19 25	20 00	20 44	4 57	47	19 46	61
7	285	54.0	29.6	283	25.8	+16 01.3	56	40	19 11	19 42	20	5 08	48	33	61
8	300	54.0	30.1	297	52.1	06.9	56	35	18 59	27	20 01	17	50	23	60
9	315	53.9	30.7	312	18.4	12.3	54	30	48	19 14	19 46	26	51	19 14	59
10	330	53.9	31.2	326	44.6	17.6	53	20	30	18 54	22	40	53	18 58	58
11	345	53.9	+19 31.8	341	10.9	+16 22.8	52	10 N	18 14	18 37	19 03	5 53	54	18 44	57
12	0	53.9	+19 32.3	355	37.2	+16 27.9	51	0	18 00	18 22	18 47	6 05	56	18 32	55
13	15	53.8	32.9	10	03.5	32.9	50	10 S	17 46	18 08	34	17	57	19	54
14	30	53.8	33.4	24	29.8	37.8	49	20	30	17 54	21	30	59	18 05	54
15	45	53.8	34.0	38	56.1	42.6	48	30	13	39	08	45	60	17 49	53
16	60	53.8	34.5	53	22.4	47.3	47	35	17 03	30	18 01	6 53	62	40	52
17	75	53.7	+19 35.1	67	48.7	+16 51.8	45	40	16 52	17 21	17 54	7 03	63	17 30	51
18	90	53.7	+19 35.6	82	15.1	+16 56.3	45	45	16 38	17 11	17 46	7 15	64	17 18	49
19	105	53.7	36.2	96	41.4	+17 00.7	44	50	22	16 58	38	29	66	17 03	48
20	120	53.7	36.7	111	07.7	04.9	42	52	15	53	34	35	67	16 56	48
21	135	53.6	37.3	125	34.0	09.0	41	54	16 06	46	30	43	67	49	46
22	150	53.6	37.8	140	00.4	13.0	40	56	15 57	40	26	7 51	69	40	46
23	165	53.6	38.4	154	26.8	16.9	39	58	46	32	21	8 00	70	31	44
24	180	53.6	+19 38.9	168	53.1	+17 20.7	38	60 S	15 33	16 24	17 16	8 11	71	16 20	43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 17 ^m 2		Mag: -4.3 PMG: 15 ^h 08 ^m		Mag: +1.5 PMG: 12 ^h 26 ^m		Mag: -2.1 PMG: 17 ^h 26 ^m		Mag: 0.0 PMG: 0 ^h 20 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	235	21.8	133	13.8	+25 43.3	173	16.4	+21 20.2	97	45.4	+17 13.9	354	58.9	-18 24.9	
1	250	24.3	148	13.3	43.1	188	17.0	20.5	112	47.6	13.8	10	01.6	24.9	
2	265	26.7	163	12.8	42.9	203	17.6	20.9	127	49.8	13.8	25	04.2	24.9	
3	280	29.2	178	12.3	42.7	218	18.2	21.2	142	52.0	13.7	40	06.9	24.8	
4	295	31.7	193	11.8	42.4	233	18.9	21.6	157	54.2	13.6	55	09.5	24.8	
5	310	34.1	208	11.4	+25 42.2	248	19.5	+21 21.9	172	56.4	+17 13.5	70	12.2	-18 24.8	
6	325	36.6	223	10.9	+25 42.0	263	20.1	+21 22.3	187	58.6	+17 13.4	85	14.9	-18 24.7	
7	340	39.1	238	10.4	41.8	278	20.7	22.6	203	00.7	13.3	100	17.5	24.7	
8	355	41.5	253	09.9	41.6	293	21.3	23.0	218	02.9	13.3	115	20.2	24.7	
9	10	44.0	268	09.4	41.4	308	21.9	23.3	233	05.1	13.2	130	22.8	24.6	
10	25	46.5	283	08.9	41.2	323	22.6	23.7	248	07.3	13.1	145	25.5	24.6	
11	40	48.9	298	08.4	+25 41.0	338	23.2	+21 24.0	263	09.5	+17 13.0	160	28.1	-18 24.5	
12	55	51.4	313	08.0	+25 40.7	353	23.8	+21 24.4	278	11.7	+17 12.9	175	30.8	-18 24.5	
13	70	53.9	328	07.5	40.5	8	24.4	24.7	293	13.9	12.8	190	33.4	24.5	
14	85	56.3	343	07.0	40.3	23	25.0	25.0	308	16.0	12.7	205	36.1	24.4	
15	100	58.8	358	06.5	40.1	38	25.6	25.4	323	18.2	12.7	220	38.8	24.4	
16	116	01.2	13	06.0	39.9	53	26.3	25.7	338	20.4	12.6	235	41.4	24.4	
17	131	03.7	28	05.6	+25 39.7	68	26.9	+21 26.1	353	22.6	+17 12.5	250	44.1	-18 24.3	
18	146	06.2	43	05.1	+25 39.4	83	27.5	+21 26.4	8	24.8	+17 12.4	265	46.7	-18 24.3	
19	161	08.6	58	04.6	39.2	98	28.1	26.8	23	27.0	12.3	280	49.4	24.3	
20	176	11.1	73	04.1	39.0	113	28.7	27.1	38	29.2	12.2	295	52.0	24.2	
21	191	13.6	88	03.6	38.8	128	29.3	27.5	53	31.3	12.1	310	54.7	24.2	
22	206	16.0	103	03.2	38.5	143	29.9	27.8	68	33.5	12.1	325	57.3	24.2	
23	221	18.5	118	02.7	38.3	158	30.6	28.1	83	35.7	12.0	341	00.0	24.1	
24	236	21.0	133	02.2	+25 38.1	173	31.2	+21 28.5	98	37.9	+17 11.9	356	02.7	-18 24.1	
Dif	—		-5	-2		+6	+3		+22	-1		+27		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 0 ^d 8 SD: 15 ^h 9 PMG: 13 ^h 14 ^m										
				PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 1 20 ^h : 57 ^h 8 R ^o : 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	53.6	+19 38.9	168	53.1	+17 20.7	60 N	** **	2 07	3 14	4 43	48	21 51	54
1	195	53.5	39.4	183	19.5	24.4	58	0 32	31	29	4 54	49	39	54
2	210	53.5	40.0	197	45.9	28.0	56	1 26	2 49	41	5 05	49	28	55
3	225	53.5	40.5	212	12.3	31.4	54	1 56	3 05	3 51	13	50	19	54
4	240	53.4	41.1	226	38.7	34.8	52	2 18	18	4 01	21	51	10	55
5	255	53.4	+19 41.6	241	05.1	+17 38.0	50	2 35	3 29	4 09	5 29	50	21 03	54
6	270	53.4	+19 42.2	255	31.6	+17 41.2	45	3 08	3 53	4 27	5 44	52	20 47	54
7	285	53.4	42.7	269	58.1	44.2	40	32	4 11	42	5 56	53	34	54
8	300	53.3	43.2	284	24.5	47.1	35	3 51	26	4 54	6 07	53	23	54
9	315	53.3	43.8	298	51.0	49.9	30	4 06	38	5 05	17	53	20 13	54
10	330	53.3	44.3	313	17.6	52.5	20	31	4 59	23	33	54	19 56	54
11	345	53.2	+19 44.8	327	44.1	+17 55.1	10 N	4 50	5 16	5 38	6 47	55	19 41	55
12	0	53.2	+19 45.4	342	10.7	+17 57.5	0	5 05	5 31	5 53	7 01	55	19 27	55
13	15	53.2	45.9	356	37.3	+17 59.9	10 S	19	45	6 07	14	56	19 13	55
14	30	53.1	46.5	11	03.9	+18 02.1	20	32	5 59	23	29	56	18 59	54
15	45	53.1	47.0	25	30.5	04.2	30	45	6 14	40	45	57	42	54
16	60	53.1	47.5	39	57.2	06.2	35	52	23	6 50	7 55	57	32	54
17	75	53.1	+19 48.1	54	23.9	+18 08.1	40	5 59	6 32	7 02	8 06	57	18 21	54
18	90	53.0	+19 48.6	68	50.6	+18 09.9	45	6 07	6 43	7 15	8 19	58	18 07	54
19	105	53.0	49.1	83	17.3	11.6	50	16	6 55	32	35	58	17 51	54
20	120	53.0	49.7	97	44.1	13.1	52	19	7 01	39	42	59	44	53
21	135	52.9	50.2	112	10.9	14.6	54	23	07	48	8 50	59	35	54
22	150	52.9	50.7	126	37.8	15.9	56	28	14	7 57	9 00	59	26	53
23	165	52.9	51.2	141	04.6	17.1	58	32	22	8 08	10	60	15	53
24	180	52.8	+19 51.8	155	31.5	+18 18.2	60 S	6 38	7 30	8 21	9 22	61	17 03	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 8 ^h 13 ^m 3		Mag: -4.3 PMG: 15 ^h 08 ^m		Mag: +1.5 PMG: 12 ^h 25 ^m		Mag: -2.0 PMG: 17 ^h 23 ^m		Mag: 0.0 PMG: 0 ^h 16 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	236	21.0	133	02.2	+25 38.1	173	31.2	+21 28.5	98	37.9	+17 11.9	356	02.7	-18 24.1
1	251	23.4	148	01.7	37.8	188	31.8	28.8	113	40.1	11.8	11	05.3	24.1
2	266	25.9	163	01.3	37.6	203	32.4	29.2	128	42.3	11.7	26	08.0	24.0
3	281	28.4	178	00.8	37.4	218	33.0	29.5	143	44.4	11.6	41	10.6	24.0
4	296	30.8	193	00.3	37.1	233	33.6	29.9	158	46.6	11.5	56	13.3	23.9
5	311	33.3	207	59.8	+25 36.9	248	34.2	+21 30.2	173	48.8	+17 11.5	71	15.9	-18 23.9
6	326	35.7	222	59.4	+25 36.7	263	34.9	+21 30.5	188	51.0	+17 11.4	86	18.6	-18 23.9
7	341	38.2	237	58.9	36.4	278	35.5	30.9	203	53.2	11.3	101	21.3	23.8
8	356	40.7	252	58.4	36.2	293	36.1	31.2	218	55.4	11.2	116	23.9	23.8
9	11	43.1	267	58.0	36.0	308	36.7	31.5	233	57.5	11.1	131	26.6	23.8
10	26	45.6	282	57.5	35.7	323	37.3	31.9	248	59.7	11.0	146	29.2	23.7
11	41	48.1	297	57.0	+25 35.5	338	37.9	+21 32.2	264	01.9	+17 10.9	161	31.9	-18 23.7
12	56	50.5	312	56.6	+25 35.2	353	38.5	+21 32.6	279	04.1	+17 10.9	176	34.5	-18 23.7
13	71	53.0	327	56.1	35.0	8	39.2	32.9	294	06.3	10.8	191	37.2	23.6
14	86	55.5	342	55.6	34.8	23	39.8	33.2	309	08.4	10.7	206	39.8	23.6
15	101	57.9	357	55.2	34.5	38	40.4	33.6	324	10.6	10.6	221	42.5	23.6
16	117	00.4	12	54.7	34.3	53	41.0	33.9	339	12.8	10.5	236	45.2	23.5
17	132	02.9	27	54.2	+25 34.0	68	41.6	+21 34.2	354	15.0	+17 10.4	251	47.8	-18 23.5
18	147	05.3	42	53.8	+25 33.8	83	42.2	+21 34.6	9	17.2	+17 10.3	266	50.5	-18 23.5
19	162	07.8	57	53.3	33.5	98	42.8	34.9	24	19.3	10.2	281	53.1	23.4
20	177	10.2	72	52.9	33.3	113	43.5	35.3	39	21.5	10.2	296	55.8	23.4
21	192	12.7	87	52.4	33.0	128	44.1	35.6	54	23.7	10.1	311	58.4	23.3
22	207	15.2	102	51.9	32.8	143	44.7	35.9	69	25.9	10.0	327	01.1	23.3
23	222	17.6	117	51.5	32.5	158	45.3	36.3	84	28.1	09.9	342	03.8	23.3
24	237	20.1	132	51.0	+25 32.3	173	45.9	+21 36.6	99	30.2	+17 09.8	357	06.4	-18 23.2
Dif	—		-5	-2		+6	+3		+22	-1		+27		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 1 ^d 8 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 3 20 ^h : 57 ^m 1 PMG: 14 ^h 09 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	52.8	+19 51.8	155	31.5	+18 18.2	10	60 N	20 43	21 51	** **	5 31	57	22 45	43
1	195	52.8	52.3	169	58.5	19.2	90	58	28	27	** **	43	57	33	44
2	210	52.8	52.8	184	25.4	20.1	80	56	15	21 07	22 35	5 54	56	23	44
3	225	52.7	53.4	198	52.4	20.9	8	54	20 04	20 52	22 03	6 03	57	13	45
4	240	52.7	53.9	213	19.5	21.6	7	52	19 54	38	21 40	12	56	22 05	46
5	255	52.7	+19 54.4	227	46.6	22.1	5	50	19 46	20 26	21 21	6 19	56	21 57	47
6	270	52.6	+19 54.9	242	13.7	22.6	3	45	19 27	20 02	20 47	6 36	55	21 41	48
7	285	52.6	55.5	256	40.8	22.9	3	40	13	19 44	23	6 49	55	28	49
8	300	52.6	56.0	271	08.0	23.2	3	35	19 00	29	20 03	7 00	55	17	49
9	315	52.5	56.5	285	35.3	23.3	1	30	18 49	19 16	19 48	10 55		21 07	50
10	330	52.5	57.0	300	02.5	23.3	0	20	31	18 55	23	27 54		20 50	51
11	345	52.4	+19 57.6	314	29.8	23.2	1	10 N	18 15	18 37	19 04	7 42	54	20 36	51
12	0	52.4	+19 58.1	328	57.2	23.1	1	0	18 00	18 22	18 48	7 56	53	20 22	52
13	15	52.4	58.6	343	24.6	22.7	4	10 S	17 45	18 08	33	8 10	53	20 08	53
14	30	52.3	59.1	357	52.1	22.3	4	20	30	17 53	20	25 52		19 53	54
15	45	52.3	+19 59.6	12	19.5	21.8	5	30	12	38	07	42 52		36	55
16	60	52.3	+20 00.2	26	47.1	21.2	6	35	17 02	29	18 00	8 52	52	26	56
17	75	52.2	+20 00.7	41	14.7	20.5	7	40	16 50	17 20	17 53	9 03	52	19 15	56
18	90	52.2	+20 01.2	55	42.3	19.7	8	45	16 36	17 09	17 45	9 17	51	19 01	57
19	105	52.2	01.7	70	10.0	18.7	10	50	20	16 56	36	33 50		18 45	58
20	120	52.1	02.2	84	37.7	17.7	10	52	12	50	32	41 50		37	59
21	135	52.1	02.8	99	05.5	16.6	11	54	16 03	44	28	49 50		29	59
22	150	52.0	03.3	113	33.3	15.3	13	56	15 53	37	23	9 59	49	19	60
23	165	52.0	03.8	128	01.2	14.0	13	58	42	29	18	10 10	48	18 08	61
24	180	52.0	+20 04.3	142	29.1	12.5	15	60 S	15 29	16 20	17 13	10 23	47	17 56	61
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 09 ^m 3		Mag: -4.3 PMG: 15 ^h 09 ^m			Mag: +1.5 PMG: 12 ^h 24 ^m			Mag: -2.0 PMG: 17 ^h 19 ^m			Mag: 0.0 PMG: 0 ^h 12 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	237	20.1	132	51.0	+25 32.3	173	45.9	+21 36.6	99	30.2	+17 09.8	357	06.4	-18 23.2	
1	252	22.6	147	50.6	32.0	188	46.5	36.9	114	32.4	09.7	12	09.1	23.2	
2	267	25.0	162	50.1	31.8	203	47.1	37.3	129	34.6	09.6	27	11.7	23.2	
3	282	27.5	177	49.7	31.5	218	47.8	37.6	144	36.8	09.5	42	14.4	23.1	
4	297	30.0	192	49.2	31.2	233	48.4	37.9	159	38.9	09.5	57	17.0	23.1	
5	312	32.4	207	48.7	+25 31.0	248	49.0	+21 38.3	174	41.1	+17 09.4	72	19.7	-18 23.1	
6	327	34.9	222	48.3	+25 30.7	263	49.6	+21 38.6	189	43.3	+17 09.3	87	22.4	-18 23.0	
7	342	37.4	237	47.8	30.5	278	50.2	38.9	204	45.5	09.2	102	25.0	23.0	
8	357	39.8	252	47.4	30.2	293	50.8	39.3	219	47.7	09.1	117	27.7	23.0	
9	12	42.3	267	46.9	29.9	308	51.4	39.6	234	49.8	09.0	132	30.3	22.9	
10	27	44.7	282	46.5	29.7	323	52.0	39.9	249	52.0	08.9	147	33.0	22.9	
11	42	47.2	297	46.0	+25 29.4	338	52.7	+21 40.2	264	54.2	+17 08.8	162	35.6	-18 22.9	
12	57	49.7	312	45.6	+25 29.1	353	53.3	+21 40.6	279	56.4	+17 08.7	177	38.3	-18 22.8	
13	72	52.1	327	45.1	28.9	8	53.9	40.9	294	58.5	08.7	192	41.0	22.8	
14	87	54.6	342	44.7	28.6	23	54.5	41.2	310	00.7	08.6	207	43.6	22.8	
15	102	57.1	357	44.2	28.3	38	55.1	41.6	325	02.9	08.5	222	46.3	22.7	
16	117	59.5	12	43.8	28.1	53	55.7	41.9	340	05.1	08.4	237	48.9	22.7	
17	133	02.0	27	43.3	+25 27.8	68	56.3	+21 42.2	355	07.2	+17 08.3	252	51.6	-18 22.6	
18	148	04.5	42	42.9	+25 27.5	83	56.9	+21 42.5	10	09.4	+17 08.2	267	54.2	-18 22.6	
19	163	06.9	57	42.5	27.3	98	57.6	42.9	25	11.6	08.1	282	56.9	22.6	
20	178	09.4	72	42.0	27.0	113	58.2	43.2	40	13.8	08.0	297	59.5	22.5	
21	193	11.8	87	41.6	26.7	128	58.8	43.5	55	15.9	07.9	313	02.2	22.5	
22	208	14.3	102	41.1	26.4	143	59.4	43.8	70	18.1	07.9	328	04.9	22.5	
23	223	16.8	117	40.7	26.2	159	00.0	44.2	85	20.3	07.8	343	07.5	22.4	
24	238	19.2	132	40.2	+25 25.9	174	00.6	+21 44.5	100	22.4	+17 07.7	358	10.2	-18 22.4	
Dif	—		-4		-3	+6		+3	+22		-1	+27		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 2 ^d 8 PHE { 4 ^h : 56 ^h 8 12 ^h : 56 ^h 6 20 ^h : 56 ^h 3 PMG: 15 ^h 02 ^m R ^o : 50 ^m															
	hG ☉		Dec		hG ☾		Dif													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	180	52.0	+20	04.3	142	29.1	+18	12.5	15	60 N	** **	2 01	3 10	6 28	64	23 28	32			
1	195	51.9		04.8	156	57.1		11.0	16	58	** **	26	25	40	63	17	34			
2	210	51.9		05.3	171	25.1		09.4	16	56	1 18	2 45	37	6 50	62	23 07	36			
3	225	51.8		05.8	185	53.2		07.6	18	54	1 50	3 01	48	7 00	60	22 58	37			
4	240	51.8		06.4	200	21.3		05.8	18	52	2 13	15	3 58	08	60	51	38			
5	255	51.8	+20	06.9	214	49.5	+18	03.8	20	50	2 31	3 26	4 07	7 15	60	22 44	39			
6	270	51.7	+20	07.4	229	17.7	+18	01.8	20	45	3 05	3 50	4 25	7 31	58	22 29	41			
7	285	51.7		07.9	243	46.0	+17	59.7	21	40	30	4 09	40	44	57	17	42			
8	300	51.6		08.4	258	14.4		57.4	23	35	3 49	24	4 53	7 55	56	22 06	44			
9	315	51.6		08.9	272	42.8		55.1	23	30	4 05	37	5 04	8 05	55	21 57	45			
10	330	51.6		09.4	287	11.2		52.7	24	20	30	4 58	22	21	54	41	47			
11	345	51.5	+20	09.9	301	39.7	+17	50.1	26	10 N	4 49	5 16	5 38	8 36	52	21 27	49			
12	0	51.5	+20	10.4	316	08.3	+17	47.5	26	0	5 05	5 31	5 53	8 49	51	21 14	50			
13	15	51.4		10.9	330	36.9		44.8	27	10 S	20	5 45	6 08	9 03	50	21 01	51			
14	30	51.4		11.5	345	05.6		42.0	28	20	33	6 00	23	17	49	20 47	53			
15	45	51.4		12.0	359	34.4		39.1	29	30	46	16	41	34	47	31	55			
16	60	51.3		12.5	14	03.2		36.1	30	35	5 53	24	6 52	44	46	22	56			
17	75	51.3	+20	13.0	28	32.0	+17	33.1	30	40	6 01	6 34	7 03	9 55	45	20 11	57			
18	90	51.2	+20	13.5	43	00.9	+17	29.9	32	45	6 09	6 45	7 17	10 08	43	19 58	59			
19	105	51.2		14.0	57	29.9		26.7	32	50	18	6 58	34	23	43	43	61			
20	120	51.1		14.5	71	59.0		23.3	34	52	22	7 04	42	31	41	36	61			
21	135	51.1		15.0	86	28.0		19.9	34	54	26	10	7 51	39	40	28	62			
22	150	51.1		15.5	100	57.2		16.4	35	56	30	17	8 01	48	39	19	63			
23	165	51.0		16.0	115	26.4		12.7	37	58	35	25	12	10 58	39	19 09	65			
24	180	51.0	+20	16.5	129	55.7	+17	09.1	36	60 S	6 41	7 34	8 25	11 10	37	18 57	67			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 05 ^m 4				Mag: -4.3 PMG: 15 ^h 10 ^m				Mag: +1.5 PMG: 12 ^h 23 ^m				Mag: -2.0 PMG: 17 ^h 16 ^m				Mag: 0.0 PMG: 0 ^h 07 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	238	19.2	132	40.2	+25	25.9			174	00.6	+21	44.5	100	22.4	+17	07.7	358	10.2	-18	22.4
1	253	21.7	147	39.8		25.6			189	01.2		44.8	115	24.6		07.6	13	12.8		22.4
2	268	24.2	162	39.4		25.3			204	01.8		45.1	130	26.8		07.5	28	15.5		22.3
3	283	26.6	177	38.9		25.0			219	02.5		45.5	145	29.0		07.4	43	18.1		22.3
4	298	29.1	192	38.5		24.7			234	03.1		45.8	160	31.1		07.3	58	20.8		22.3
5	313	31.6	207	38.0	+25	24.5			249	03.7	+21	46.1	175	33.3	+17	07.2	73	23.5	-18	22.2
6	328	34.0	222	37.6	+25	24.2			264	04.3	+21	46.4	190	35.5	+17	07.1	88	26.1	-18	22.2
7	343	36.5	237	37.2		23.9			279	04.9		46.8	205	37.6		07.1	103	28.8		22.2
8	358	39.0	252	36.7		23.6			294	05.5		47.1	220	39.8		07.0	118	31.4		22.1
9	13	41.4	267	36.3		23.3			309	06.1		47.4	235	42.0		06.9	133	34.1		22.1
10	28	43.9	282	35.9		23.0			324	06.7		47.7	250	44.2		06.8	148	36.7		22.0
11	43	46.3	297	35.4	+25	22.7			339	07.4	+21	48.1	265	46.3	+17	06.7	163	39.4	-18	22.0
12	58	48.8	312	35.0	+25	22.5			354	08.0	+21	48.4	280	48.5	+17	06.6	178	42.1	-18	22.0
13	73	51.3	327	34.6		22.2			9	08.6		48.7	295	50.7		06.5	193	44.7		21.9
14	88	53.7	342	34.2		21.9			24	09.2		49.0	310	52.8		06.4	208	47.4		21.9
15	103	56.2	357	33.7		21.6			39	09.8		49.3	325	55.0		06.3	223	50.0		21.9
16	118	58.7	12	33.3		21.3			54	10.4		49.7	340	57.2		06.2	238	52.7		21.8
17	134	01.1	27	32.9	+25	21.0			69	11.0	+21	50.0	355	59.3	+17	06.2	253	55.3	-18	21.8
18	149	03.6	42	32.4	+25	20.7			84	11.6	+21	50.3	11	01.5	+17	06.1	268	58.0	-18	21.8
19	164	06.1	57	32.0		20.4			99	12.2		50.6	26	03.7		06.0	284	00.7		21.7
20	179	08.5	72	31.6		20.1			114	12.9		50.9	41	05.9		05.9	299	03.3		21.7
21	194	11.0	87	31.2		19.8			129	13.5		51.2	56	08.0		05.8	314	06.0		21.7
22	209	13.5	102	30.7		19.5			144	14.1		51.6	71	10.2		05.7	329	08.6		21.6
23	224	15.9	117	30.3		19.2			159	14.7		51.9	86	12.4		05.6	344	11.3		21.6
24	239	18.4	132	29.9	+25	18.9			174	15.3	+21	52.2	101	14.5	+17	05.5	359	13.9	-18	21.6
Dif	—				-4 -3				+6 +3				+22 -1				+27 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6			Edad: 3 ^d 8 PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 20 ^h : 55 ^m 6 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	m
0	180	51.0	+20	16.5	129	55.7	+17	09.1	60 N	20 47	21 58	** **	7 32	68		
1	195	50.9		17.0	144	25.0 ¹⁰³		05.3 ³⁸	58	32	32	** **	43	66	23 51	27
2	210	50.9		17.5	158	54.4 ¹⁰⁴	+17	01.4 ³⁹	56	19	21 12	22 44	7 52	65	43	29
3	225	50.8		18.0	173	23.9 ¹⁰⁵	+16	57.5 ³⁹	54	20 07	20 55	22 09	8 00	64	35	31
4	240	50.8		18.5	187	53.4 ¹⁰⁵		53.4 ⁴¹	52	19 57	41	21 44	08	62	29	31
5	255	50.7	+20	19.0	202	23.0 ¹⁰⁶	+16	49.3 ⁴¹	50	19 48	20 29	21 25	8 15	61	23 23	33
6	270	50.7	+20	19.5	216	52.6 ¹⁰⁶	+16	45.1 ⁴²	45	19 30	20 05	20 50	8 29	59	23 10	35
7	285	50.7		20.0	231	22.3 ¹⁰⁷		40.8 ⁴³	40	14	19 46	25	41	57	22 59	38
8	300	50.6		20.5	245	52.1 ¹⁰⁸		36.5 ⁴³	35	19 02	30	20 05	8 51	55	50	39
9	315	50.6		21.0	260	21.9 ¹⁰⁸		32.0 ⁴⁵	30	18 51	19 17	19 49	9 00	54	42	40
10	330	50.5		21.5	274	51.8 ¹⁰⁹		27.5 ⁴⁵	20	32	18 56	24	15	52	28	43
11	345	50.5	+20	22.0	289	21.7 ¹⁰⁹	+16	22.9 ⁴⁶	10 N	18 15	18 38	19 04	9 28	50	22 16	45
12	0	50.4	+20	22.4	303	51.7 ¹¹⁰	+16	18.2 ⁴⁷	0	18 00	18 22	18 48	9 40	49	22 04	47
13	15	50.4		22.9	318	21.8 ¹¹¹		13.5 ⁴⁷	10 S	17 45	18 08	33	9 53	46	21 52	50
14	30	50.3		23.4	332	51.9 ¹¹¹		08.7 ⁴⁸	20	29	17 53	20	10	06	45	40 52
15	45	50.3		23.9	347	22.1 ¹¹²	+16	03.8 ⁴⁹	30	11	37	18 06	21	43	26	54
16	60	50.2		24.4	1	52.3 ¹¹²	+15	58.8 ⁵⁰	35	17 01	28	17 59	30	41	18	55
17	75	50.2	+20	24.9	16	22.6 ¹¹³	+15	53.7 ⁵¹	40	16 49	17 18	17 51	10	40	39	21 08 57
18	90	50.1	+20	25.4	30	53.0 ¹¹⁴	+15	48.6 ⁵¹	45	16 35	17 07	17 43	10	51	38	20 57 59
19	105	50.1		25.9	45	23.5 ¹¹⁵		43.4 ⁵²	50	17	16 54	34	11	06	35	44 61
20	120	50.0		26.4	59	53.9 ¹¹⁴		38.1 ⁵³	52	09	48	30	12	35	37	63
21	135	50.0		26.9	74	24.5 ¹¹⁶		32.8 ⁵³	54	16 00	41	26	19	34	30	64
22	150	49.9		27.4	88	55.1 ¹¹⁶		27.4 ⁵⁴	56	15 50	34	21	27	32	22	66
23	165	49.9		27.8	103	25.8 ¹¹⁷		21.9 ⁵⁵	58	39	26	16	37	30	14	67
24	180	49.8	+20	28.3	117	56.5 ¹¹⁷	+15	16.3 ⁵⁶	60 S	15 25	16 17	17 10	11	47	29	20 04 69

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 01 ^m 5		Mag: -4.3 PMG: 15 ^h 10 ^m			Mag: +1.5 PMG: 12 ^h 22 ^m			Mag: -2.0 PMG: 17 ^h 13 ^m			Mag: 0.0 PMG: 0 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	239	18.4	132	29.9	+25	18.9	174	15.3	+21	52.2	101	14.5	+17	05.5	359	13.9	-18	21.6
1	254	20.8	147	29.5		18.6	189	15.9		52.5	116	16.7		05.4	14	16.6		21.5
2	269	23.3	162	29.0		18.3	204	16.5		52.8	131	18.9		05.3	29	19.3		21.5
3	284	25.8	177	28.6		18.0	219	17.1		53.1	146	21.0		05.2	44	21.9		21.5
4	299	28.2	192	28.2		17.7	234	17.7		53.5	161	23.2		05.1	59	24.6		21.4
5	314	30.7	207	27.8	+25	17.4	249	18.4	+21	53.8	176	25.4	+17	05.1	74	27.2	-18	21.4
6	329	33.2	222	27.4	+25	17.0	264	19.0	+21	54.1	191	27.5	+17	05.0	89	29.9	-18	21.3
7	344	35.6	237	27.0		16.7	279	19.6		54.4	206	29.7		04.9	104	32.5		21.3
8	359	38.1	252	26.5		16.4	294	20.2		54.7	221	31.9		04.8	119	35.2		21.3
9	14	40.6	267	26.1		16.1	309	20.8		55.0	236	34.0		04.7	134	37.9		21.2
10	29	43.0	282	25.7		15.8	324	21.4		55.3	251	36.2		04.6	149	40.5		21.2
11	44	45.5	297	25.3	+25	15.5	339	22.0	+21	55.7	266	38.3	+17	04.5	164	43.2	-18	21.2
12	59	48.0	312	24.9	+25	15.2	354	22.6	+21	56.0	281	40.5	+17	04.4	179	45.8	-18	21.1
13	74	50.4	327	24.5		14.9	9	23.2		56.3	296	42.7		04.3	194	48.5		21.1
14	89	52.9	342	24.1		14.5	24	23.9		56.6	311	44.8		04.2	209	51.1		21.1
15	104	55.3	357	23.7		14.2	39	24.5		56.9	326	47.0		04.1	224	53.8		21.0
16	119	57.8	12	23.2		13.9	54	25.1		57.2	341	49.2		04.0	239	56.5		21.0
17	135	00.3	27	22.8	+25	13.6	69	25.7	+21	57.5	356	51.3	+17	04.0	254	59.1	-18	21.0
18	150	02.7	42	22.4	+25	13.3	84	26.3	+21	57.8	11	53.5	+17	03.9	270	01.8	-18	20.9
19	165	05.2	57	22.0		12.9	99	26.9		58.1	26	55.7		03.8	285	04.4		20.9
20	180	07.7	72	21.6		12.6	114	27.5		58.5	41	57.8		03.7	300	07.1		20.9
21	195	10.1	87	21.2		12.3	129	28.1		58.8	57	00.0		03.6	315	09.7		20.8
22	210	12.6	102	20.8		12.0	144	28.7		59.1	72	02.1		03.5	330	12.4		20.8
23	225	15.1	117	20.4		11.6	159	29.3		59.4	87	04.3		03.4	345	15.1		20.8
24	240	17.5	132	20.0	+25	11.3	174	30.0	+21	59.7	102	06.5	+17	03.3	0	17.7	-18	20.7
Dif	—		-4		-3	+6		+3		+22		-1		-8973				

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: 4 ^d 8 PHE SD: 15 ^h 1 PMG: 16 ^h 40 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	49.8	+20 28.3	117	56.5	+15 16.3	56	60 N	** **	1 55	3 06	8 40	70	0 00	26
1	195	49.8	28.8	132	27.3 ¹¹⁸	10.7	56	58	** **	2 21	21	49	68	** **	**
2	210	49.7	29.3	146	58.2 ¹¹⁹	+15 05.0	57	56	1 09	41	34	8 57	66	** **	**
3	225	49.7	29.8	161	29.1 ¹¹⁹	+14 59.3	57	54	1 44	2 58	46	9 04	64	** **	**
4	240	49.6	30.3	176	00.0 ¹¹⁹	53.5	58	52	2 09	3 12	3 56	10	63	** **	**
5	255	49.6	+20 30.7	190	31.1 ¹²¹	+14 47.6	59	50	2 28	3 24	4 05	9 16	61	23 56	28
6	270	49.5	+20 31.2	205	02.2 ¹²¹	+14 41.6	60	45	3 03	3 48	4 23	9 28	59	23 45	32
7	285	49.5	31.7	219	33.3 ¹²¹	35.6	60	40	28	4 07	39	38	57	37	33
8	300	49.4	32.2	234	04.5 ¹²²	29.5	61	35	3 48	23	4 51	46	56	29	36
9	315	49.4	32.7	248	35.8 ¹²³	23.4	61	30	4 04	36	5 03	9 54	53	22	38
10	330	49.3	33.2	263	07.1 ¹²³	17.2	62	20	29	4 58	22	10 07	51	11	40
11	345	49.3	+20 33.6	277	38.5 ¹²⁴	+14 10.9	63	10 N	4 49	5 15	5 38	10 18	49	23 01	43
12	0	49.2	+20 34.1	292	09.9 ¹²⁴	+14 04.6	63	0	5 05	5 31	5 53	10 29	46	22 51	46
13	15	49.2	34.6	306	41.4 ¹²⁵	+13 58.2	64	10 S	20	5 46	6 08	39	44	42	47
14	30	49.1	35.1	321	13.0 ¹²⁶	51.7	65	20	34	6 01	24	10 51	41	32	50
15	45	49.1	35.5	335	44.6 ¹²⁶	45.2	65	30	47	17	42	11 04	38	20	53
16	60	49.0	36.0	350	16.2 ¹²⁶	38.7	65	35	5 55	26	6 53	11	37	13	55
17	75	49.0	+20 36.5	4	47.9 ¹²⁷	+13 32.0	67	40	6 02	6 35	7 05	11 19	36	22 05	57
18	90	48.9	+20 37.0	19	19.7 ¹²⁸	+13 25.4	66	45	6 11	6 47	7 19	11 29	34	21 56	59
19	105	48.9	37.4	33	51.5 ¹²⁸	18.6	68	50	20	7 00	37	41	31	45	62
20	120	48.8	37.9	48	23.4 ¹²⁹	11.8	68	52	24	06	45	47	29	40	63
21	135	48.8	38.4	62	55.4 ¹³⁰	+13 05.0	68	54	28	13	7 54	53	28	34	65
22	150	48.7	38.9	77	27.4 ¹³⁰	+12 58.1	69	56	33	20	8 04	11 59	27	28	66
23	165	48.6	39.3	91	59.4 ¹³⁰	51.2	69	58	38	28	16	12 07	25	21	68
24	180	48.6	+20 39.8	106	31.5 ¹³¹	+12 44.1	71	60 S	6 44	7 37	8 29	12 16	22	21 13	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 7 ^h 57 ^m 5		Mag: -4.3 PMG: 15 ^h 11 ^m		Mag: +1.5 PMG: 12 ^h 22 ^m		Mag: -2.0 PMG: 17 ^h 09 ^m		Mag: 0.0 PMG: 23 ^h 55 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	240	17.5	132	20.0	+25 11.3	174	30.0	+21 59.7	102	06.5	+17 03.3	0	17.7	-18 20.7	
1	255	20.0	147	19.6	11.0	189	30.6	+22 00.0	117	08.6	03.2	15	20.4	20.7	
2	270	22.4	162	19.2	10.7	204	31.2	+22 00.3	132	10.8	03.1	30	23.0	20.6	
3	285	24.9	177	18.8	10.3	219	31.8	00.6	147	13.0	03.0	45	25.7	20.6	
4	300	27.4	192	18.4	10.0	234	32.4	00.9	162	15.1	02.9	60	28.3	20.6	
5	315	29.8	207	18.0	+25 09.7	249	33.0	+22 01.2	177	17.3	+17 02.8	75	31.0	-18 20.5	
6	330	32.3	222	17.6	+25 09.3	264	33.6	+22 01.5	192	19.4	+17 02.7	90	33.7	-18 20.5	
7	345	34.8	237	17.2	09.0	279	34.2	01.8	207	21.6	02.7	105	36.3	20.5	
8	0	37.2	252	16.8	08.7	294	34.8	02.1	222	23.8	02.6	120	39.0	20.4	
9	15	39.7	267	16.4	08.3	309	35.4	02.5	237	25.9	02.5	135	41.6	20.4	
10	30	42.2	282	16.0	08.0	324	36.1	02.8	252	28.1	02.4	150	44.3	20.4	
11	45	44.6	297	15.6	+25 07.7	339	36.7	+22 03.1	267	30.2	+17 02.3	165	46.9	-18 20.3	
12	60	47.1	312	15.2	+25 07.3	354	37.3	+22 03.4	282	32.4	+17 02.2	180	49.6	-18 20.3	
13	75	49.6	327	14.8	07.0	9	37.9	03.7	297	34.6	02.1	195	52.3	20.3	
14	90	52.0	342	14.4	06.6	24	38.5	04.0	312	36.7	02.0	210	54.9	20.2	
15	105	54.5	357	14.0	06.3	39	39.1	04.3	327	38.9	01.9	225	57.6	20.2	
16	120	56.9	12	13.7	06.0	54	39.7	04.6	342	41.0	01.8	241	00.2	20.2	
17	135	59.4	27	13.3	+25 05.6	69	40.3	+22 04.9	357	43.2	+17 01.7	256	02.9	-18 20.1	
18	151	01.9	42	12.9	+25 05.3	84	40.9	+22 05.2	12	45.3	+17 01.6	271	05.5	-18 20.1	
19	166	04.3	57	12.5	04.9	99	41.5	05.5	27	47.5	01.5	286	08.2	20.1	
20	181	06.8	72	12.1	04.6	114	42.1	05.8	42	49.7	01.4	301	10.8	20.0	
21	196	09.3	87	11.7	04.2	129	42.8	06.1	57	51.8	01.3	316	13.5	20.0	
22	211	11.7	102	11.3	03.9	144	43.4	06.4	72	54.0	01.2	331	16.2	19.9	
23	226	14.2	117	10.9	03.5	159	44.0	06.7	87	56.1	01.2	346	18.8	19.9	
24	241	16.7	132	10.6	+25 03.2	174	44.6	+22 07.0	102	58.3	+17 01.1	1	21.5	-18 19.9	
Dif	—		-4	-3		+6	+3		+22	-1		+27	0		0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 5 ^d 8	PHE {	4 ^h : 54 ^h /9 12 ^h : 54 ^h /7 20 ^h : 54 ^h /6 R°: 44 ^m									
	PMG: 11 ^h 56 ^m 8								SD: 15 ^h 0	SD: 15 ^h 0	PMG: 17 ^h 26 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	48.6	+20 39.8	106	31.5	+12 44.1	70	60 N	20 51	22 05	** **	9 50 70	0 26 20		
1	195	48.5		121	03.6 ¹³¹	37.1	70	58	35	21 37	** **	9 57 68	18 23		
2	210	48.5		135	35.8 ¹³²	30.0	71	56	22	21 16	22 54	10 03 66	12 24		
3	225	48.4		150	08.1 ¹³³	22.8	72	54	10	20 59	22 15	08 65	06 26		
4	240	48.4		164	40.4 ¹³³	15.6	72	52	20 00	45	21 49	13 63	0 00 28		
5	255	48.3	+20 42.2	179	12.7 ¹³³	+12 08.4	72	50	19 51	20 32	21 29	10 17 62	** ** *		
6	270	48.3	+20 42.6	193	45.1 ¹³⁴	+12 01.1	73	45	19 32	20 07	20 53	10 27 59	** ** *		
7	285	48.2		208	17.6 ¹³⁵	+11 53.7	74	40	16	19 48	27	35 56	** ** *		
8	300	48.1		222	50.1 ¹³⁵	46.3	74	35	19 03	32	20 07	42 54	** ** *		
9	315	48.1		237	22.6 ¹³⁵	38.9	74	30	18 52	19 18	19 51	47 53	** ** *		
10	330	48.0		251	55.2 ¹³⁶	31.4	75	20	32	18 56	25	10 58 49	23 51 38		
11	345	48.0	+20 45.0	266	27.8 ¹³⁶	+11 23.8	76	10 N	18 16	18 38	19 05	11 07 46	23 44 41		
12	0	47.9	+20 45.4	281	00.5 ¹³⁷	+11 16.2	76	0	18 00	18 23	18 48	11 15 44	23 37 43		
13	15	47.9		295	33.2 ¹³⁷	08.6	76	10 S	17 45	18 08	33	23 42	29 46		
14	30	47.8		310	06.0 ¹³⁸	+11 00.9	77	20	29	17 52	19	32 39	22 49		
15	45	47.7		324	38.8 ¹³⁸	+10 53.2	77	30	10	36	18 05	42 36	13 52		
16	60	47.7		339	11.7 ¹³⁹	45.5	77	35	17 00	27	17 58	48 35	08 54		
17	75	47.6	+20 47.7	353	44.6 ¹³⁹	+10 37.7	78	40	16 47	17 17	17 50	11 55 32	23 02 56		
18	90	47.6	+20 48.2	8	17.6 ¹⁴⁰	+10 29.8	79	45	16 33	17 06	17 42	12 03 29	22 55 59		
19	105	47.5		22	50.6 ¹⁴⁰	22.0	78	50	15	16 52	32	12 27	47 61		
20	120	47.5		37	23.6 ¹⁴⁰	14.0	80	52	16 07	46	28	16 26	43 63		
21	135	47.4		51	56.7 ¹⁴¹	+10 06.1	79	54	15 58	39	24	21 24	39 64		
22	150	47.3		66	29.8 ¹⁴¹	+9 58.1	80	56	47	32	19	26 23	34 67		
23	165	47.3		81	02.9 ¹⁴¹	50.0	81	58	36	23	13	32 21	29 68		
24	180	47.2	+20 50.9	95	36.1 ¹⁴²	+9 42.0	80	60 S	15 22	16 14	17 08	12 38 19	22 23 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 53 ^m 6		Mag: -4.3 PMG: 15 ^h 12 ^m		Mag: +1.5 PMG: 12 ^h 21 ^m		Mag: -2.0 PMG: 17 ^h 06 ^m		Mag: 0.0 PMG: 23 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	16.7	132	10.6	+25 03.2	174	44.6	+22 07.0	102	58.3
1	256	19.1	147	10.2	02.8	189	45.2	07.3	118	00.4
2	271	21.6	162	09.8	02.5	204	45.8	07.6	133	02.6
3	286	24.1	177	09.4	02.1	219	46.4	07.9	148	04.8
4	301	26.5	192	09.0	01.8	234	47.0	08.2	163	06.9
5	316	29.0	207	08.7	+25 01.4	249	47.6	+22 08.5	178	09.1
6	331	31.4	222	08.3	+25 01.1	264	48.2	+22 08.8	193	11.2
7	346	33.9	237	07.9	00.7	279	48.8	09.1	208	13.4
8	1	36.4	252	07.5	+25 00.4	294	49.5	09.4	223	15.5
9	16	38.8	267	07.2	+25 00.0	309	50.1	09.7	238	17.7
10	31	41.3	282	06.8	+24 59.6	324	50.7	10.0	253	19.8
11	46	43.8	297	06.4	+24 59.3	339	51.3	+22 10.3	268	22.0
12	61	46.2	312	06.0	+24 58.9	354	51.9	+22 10.5	283	24.1
13	76	48.7	327	05.7	58.5	9	52.5	10.8	298	26.3
14	91	51.2	342	05.3	58.2	24	53.1	11.1	313	28.5
15	106	53.6	357	04.9	57.8	39	53.7	11.4	328	30.6
16	121	56.1	12	04.6	57.5	54	54.3	11.7	343	32.8
17	136	58.6	27	04.2	+24 57.1	69	54.9	+22 12.0	358	34.9
18	152	01.0	42	03.8	+24 56.7	84	55.5	+22 12.3	13	37.1
19	167	03.5	57	03.4	56.4	99	56.2	12.6	28	39.2
20	182	05.9	72	03.1	56.0	114	56.8	12.9	43	41.4
21	197	08.4	87	02.7	55.6	129	57.4	13.2	58	43.5
22	212	10.9	102	02.4	55.2	144	58.0	13.5	73	45.7
23	227	13.3	117	02.0	54.9	159	58.6	13.8	88	47.8
24	242	15.8	132	01.6	+24 54.5	174	59.2	+22 14.1	103	50.0
Dif	—		-4	-4	+6	+3	+22	-1	+27	0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9				Edad: 6 ^d 8 SD: 14 ^h 9 PMG: 18 ^h 10 ^m											
					PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 R°: 42 ^m											
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	47.2	+20	50.9	95	36.1	+9	42.0	60 N	** **	1 48	3 02	11 00	70	0 46	18
1	195	47.2		51.4	110	09.4 ¹⁴³		33.8	58	** **	2 16	18	05	68	41	20
2	210	47.1		51.9	124	42.7 ¹⁴³		25.7	56	1 00	37	31	09	66	36	22
3	225	47.0		52.3	139	16.0 ¹⁴³		17.5	54	1 39	2 54	43	13	64	32	22
4	240	47.0		52.8	153	49.3 ¹⁴³		09.3	52	2 04	3 09	3 53	16	63	28	25
5	255	46.9	+20	53.2	168	22.7 ¹⁴⁴	+9	01.0	50	2 24	3 21	4 02	11 19	61	0 24	26
6	270	46.9	+20	53.7	182	56.1 ¹⁴⁴	+8	52.8	45	3 00	3 46	4 22	11 26	58	0 17	29
7	285	46.8		54.1	197	29.6 ¹⁴⁵		44.4	40	26	4 06	37	31	56	10	31
8	300	46.7		54.6	212	03.1 ¹⁴⁵		36.1	35	3 46	22	4 50	36	53	05	33
9	315	46.7		55.0	226	36.6 ¹⁴⁵		27.7	30	4 03	35	5 02	40	52	0 00	35
10	330	46.6		55.5	241	10.2 ¹⁴⁶		19.3	20	29	4 57	21	47	48	** **	**
11	345	46.5	+20	55.9	255	43.7 ¹⁴⁵	+8	10.8	10 N	4 49	5 15	5 38	11 53	46	** **	**
12	0	46.5	+20	56.4	270	17.4 ¹⁴⁷	+8	02.3	0	5 05	5 31	5 53	11 59	43	** **	**
13	15	46.4		56.8	284	51.0 ¹⁴⁶	+7	53.8	10 S	20	5 46	6 09	12 05	40	** **	**
14	30	46.4		57.3	299	24.7 ¹⁴⁷		45.3	20	34	6 01	25	11	38	** **	**
15	45	46.3		57.7	313	58.4 ¹⁴⁷		36.7	30	48	18	44	18	35	** **	**
16	60	46.2		58.2	328	32.2 ¹⁴⁸		28.1	35	5 56	27	6 54	23	32	** **	**
17	75	46.2	+20	58.6	343	05.9 ¹⁴⁷	+7	19.5	40	6 04	6 37	7 07	12 27	30	23 58	56
18	90	46.1	+20	59.1	357	39.7 ¹⁴⁸	+7	10.8	45	6 12	6 49	7 21	12 32	28	23 54	58
19	105	46.0		59.5	12	13.6 ¹⁴⁹	+7	02.2	50	22	7 02	39	39	25	48	62
20	120	46.0	+20	59.9	26	47.4 ¹⁴⁸	+6	53.5	52	26	08	47	42	23	46	63
21	135	45.9	+21	00.4	41	21.3 ¹⁴⁹		44.7	54	31	15	7 57	45	22	43	65
22	150	45.8		00.8	55	55.2 ¹⁴⁹		36.0	56	36	23	8 07	49	20	41	66
23	165	45.8		01.3	70	29.1 ¹⁴⁹		27.2	58	41	31	19	53	18	37	68
24	180	45.7	+21	01.7	85	03.1 ¹⁵⁰	+6	18.4	60 S	6 47	7 41	8 33	12 57	17	23 34	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 49 ^m 7		Mag: -4.3 PMG: 15 ^h 12 ^m		Mag: +1.5 PMG: 12 ^h 20 ^m		Mag: -2.0 PMG: 17 ^h 02 ^m		Mag: 0.0 PMG: 23 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	242	15.8	132	01.6	+24	54.5	174	59.2	+22	14.1
1	257	18.3	147	01.3		54.1	189	59.8		14.4
2	272	20.7	162	00.9		53.7	205	00.4		14.6
3	287	23.2	177	00.5		53.4	220	01.0		14.9
4	302	25.7	192	00.2		53.0	235	01.6		15.2
5	317	28.1	206	59.8	+24	52.6	250	02.2	+22	15.5
6	332	30.6	221	59.5	+24	52.2	265	02.8	+22	15.8
7	347	33.0	236	59.1		51.9	280	03.4		16.1
8	2	35.5	251	58.8		51.5	295	04.1		16.4
9	17	38.0	266	58.4		51.1	310	04.7		16.7
10	32	40.4	281	58.1		50.7	325	05.3		16.9
11	47	42.9	296	57.7	+24	50.3	340	05.9	+22	17.2
12	62	45.4	311	57.3	+24	49.9	355	06.5	+22	17.5
13	77	47.8	326	57.0		49.6	10	07.1		17.8
14	92	50.3	341	56.6		49.2	25	07.7		18.1
15	107	52.8	356	56.3		48.8	40	08.3		18.4
16	122	55.2	11	55.9		48.4	55	08.9		18.7
17	137	57.7	26	55.6	+24	48.0	70	09.5	+22	19.0
18	153	00.2	41	55.3	+24	47.6	85	10.1	+22	19.2
19	168	02.6	56	54.9		47.2	100	10.7		19.5
20	183	05.1	71	54.6		46.8	115	11.3		19.8
21	198	07.5	86	54.2		46.4	130	12.0		20.1
22	213	10.0	101	53.9		46.0	145	12.6		20.4
23	228	12.5	116	53.5		45.6	160	13.2		20.7
24	243	14.9	131	53.2	+24	45.3	175	13.8	+22	20.9
Dif	—		-4	-4			+6	+3		
									+21	-1
										+27
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 57 ^m 0			Edad: 7 ^d 8 SD: 14'8 PMG: 18 ^h 52 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 R°: 43 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	45.7	+21 01.7	85	03.1	+6 18.4	89	60 N	20 56	22 11	** **	12 10 70	1 04 16				
1	195	45.7	02.2	99	37.0 ¹⁴⁹	09.5	89	58	39	21 42	** **	13 68	1 01 18				
2	210	45.6	02.6	114	11.0 ¹⁵⁰	+6 00.7	88	56	25	20	23 04	15 66	0 58 19				
3	225	45.5	03.0	128	45.0 ¹⁵⁰	+5 51.8	89	54	13	21 03	22 21	17 64	55 22				
4	240	45.5	03.5	143	19.1 ¹⁵¹	42.9	89	52	20 03	20 48	21 54	19 62	53 22				
5	255	45.4	+21 03.9	157	53.1 ¹⁵⁰	+5 34.0	89	50	19 53	20 35	21 33	12 20 62	0 50 25				
6	270	45.3	+21 04.3	172	27.2 ¹⁵¹	+5 25.0	90	45	19 34	20 09	20 56	12 24 58	0 46 27				
7	285	45.3	04.8	187	01.3 ¹⁵¹	16.1	89	40	18	19 50	29	27 55	41 30				
8	300	45.2	05.2	201	35.4 ¹⁵¹	+5 07.1	90	35	19 05	33	20 09	29 54	38 32				
9	315	45.1	05.7	216	09.6 ¹⁵²	+4 58.1	90	30	18 53	19 20	19 52	32 51	35 33				
10	330	45.1	06.1	230	43.7 ¹⁵¹	49.1	90	20	33	18 57	26	35 49	29 37				
11	345	45.0	+21 06.5	245	17.9 ¹⁵²	+4 40.0	91	10 N	18 16	18 39	19 06	12 39 45	0 25 39				
12	0	44.9	+21 07.0	259	52.0 ¹⁵¹	+4 31.0	90	0	18 01	18 23	18 49	12 42 42	0 20 43				
13	15	44.9	07.4	274	26.2 ¹⁵²	21.9	91	10 S	17 45	18 07	33	45 40	15 46				
14	30	44.8	07.8	289	00.4 ¹⁵²	12.8	91	20	28	17 52	19	49 36	11 48				
15	45	44.7	08.3	303	34.7 ¹⁵³	+4 03.7	91	30	17 10	35	18 05	53 33	05 51				
16	60	44.7	08.7	318	08.9 ¹⁵²	+3 54.6	91	35	16 59	26	17 57	55 31	0 02 53				
17	75	44.6	+21 09.1	332	43.1 ¹⁵²	+3 45.4	92	40	16 46	17 16	17 49	12 57 30	** ** *				
18	90	44.5	+21 09.6	347	17.4 ¹⁵³	+3 36.3	91	45	16 31	17 04	17 41	13 00 27	** ** *				
19	105	44.5	10.0	1	51.6 ¹⁵²	27.1	92	50	13	16 50	31	04 24	** ** *				
20	120	44.4	10.4	16	25.9 ¹⁵³	17.9	92	52	16 05	44	26	05 23	** ** *				
21	135	44.3	10.8	31	00.2 ¹⁵³	+3 08.7	92	54	15 55	37	22	07 21	** ** *				
22	150	44.2	11.3	45	34.5 ¹⁵³	+2 59.5	92	56	45	29	17	09 19	** ** *				
23	165	44.2	11.7	60	08.8 ¹⁵³	50.3	92	58	33	21	11	11 18	** ** *				
24	180	44.1	+21 12.1	74	43.1 ¹⁵³	+2 41.0	93	60 S	15 18	16 11	17 05	13 14 15	** ** *				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 7 ^h 45 ^m 7		Mag: -4.3 PMG: 15 ^h 13 ^m			Mag: +1.5 PMG: 12 ^h 19 ^m			Mag: -2.0 PMG: 16 ^h 59 ^m			Mag: 0.0 PMG: 23 ^h 42 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	243	14.9	131	53.2	+24 45.3	175	13.8	+22 20.9	104	41.5	+16 56.4	3	29.0	-18 18.2			
1	258	17.4	146	52.9	44.9	190	14.4	21.2	119	43.7	56.3	18	31.7	18.2			
2	273	19.9	161	52.5	44.5	205	15.0	21.5	134	45.8	56.2	33	34.3	18.1			
3	288	22.3	176	52.2	44.1	220	15.6	21.8	149	48.0	56.1	48	37.0	18.1			
4	303	24.8	191	51.8	43.7	235	16.2	22.1	164	50.1	56.0	63	39.6	18.1			
5	318	27.3	206	51.5	+24 43.3	250	16.8	+22 22.3	179	52.3	+16 55.9	78	42.3	-18 18.0			
6	333	29.7	221	51.2	+24 42.9	265	17.4	+22 22.6	194	54.4	+16 55.8	93	44.9	-18 18.0			
7	348	32.2	236	50.8	42.5	280	18.0	22.9	209	56.6	55.7	108	47.6	18.0			
8	3	34.6	251	50.5	42.0	295	18.6	23.2	224	58.7	55.6	123	50.3	17.9			
9	18	37.1	266	50.2	41.6	310	19.2	23.5	240	00.9	55.5	138	52.9	17.9			
10	33	39.6	281	49.8	41.2	325	19.8	23.7	255	03.0	55.4	153	55.6	17.9			
11	48	42.0	296	49.5	+24 40.8	340	20.5	+22 24.0	270	05.1	+16 55.3	168	58.2	-18 17.8			
12	63	44.5	311	49.2	+24 40.4	355	21.1	+22 24.3	285	07.3	+16 55.3	184	00.9	-18 17.8			
13	78	47.0	326	48.8	40.0	10	21.7	24.6	300	09.4	55.2	199	03.5	17.8			
14	93	49.4	341	48.5	39.6	25	22.3	24.8	315	11.6	55.1	214	06.2	17.7			
15	108	51.9	356	48.2	39.2	40	22.9	25.1	330	13.7	55.0	229	08.8	17.7			
16	123	54.4	11	47.9	38.8	55	23.5	25.4	345	15.9	54.9	244	11.5	17.7			
17	138	56.8	26	47.5	+24 38.4	70	24.1	+22 25.7	0	18.0	+16 54.8	259	14.2	-18 17.6			
18	153	59.3	41	47.2	+24 38.0	85	24.7	+22 25.9	15	20.1	+16 54.7	274	16.8	-18 17.6			
19	169	01.8	56	46.9	37.6	100	25.3	26.2	30	22.3	54.6	289	19.5	17.6			
20	184	04.2	71	46.6	37.1	115	25.9	26.5	45	24.4	54.5	304	22.1	17.5			
21	199	06.7	86	46.2	36.7	130	26.5	26.8	60	26.6	54.4	319	24.8	17.5			
22	214	09.1	101	45.9	36.3	145	27.1	27.0	75	28.7	54.3	334	27.4	17.4			
23	229	11.6	116	45.6	35.9	160	27.7	27.3	90	30.8	54.2	349	30.1	17.4			
24	244	14.1	131	45.3	+24 35.5	175	28.3	+22 27.6	105	33.0	+16 54.1	4	32.8	-18 17.4			
Dif	—		-3			-4			+21			-1			+27		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1				Edad: 8 ^d 8 SD: 14 ^h 8 PMG: 19 ^h 35 ^m					PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 3 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	44.1	+21	12.1	74	43.1	+2	41.0	60 N	** **	1 42	2 58	13 20	71	1 20	15	
1	195	44.0		12.5	89	17.4 ¹⁵³		31.8 ⁹²	58	** **	2 11	3 15		21 68		19 17	
2	210	44.0		13.0	103	51.7 ¹⁵³		22.5 ⁹³	56	0 49	33	29		21 66		17 20	
3	225	43.9		13.4	118	26.0 ¹⁵³		13.3 ⁹²	54	1 33	2 51	41		21 65		16 21	
4	240	43.8		13.8	133	00.3 ¹⁵³	+2	04.0 ⁹³	52	2 00	3 06	3 51		21 64		15 23	
5	255	43.8	+21	14.2	147	34.6 ¹⁵³	+1	54.7 ⁹³	50	2 21	3 19	4 00	13 22	61	1 15	23	
6	270	43.7	+21	14.7	162	09.0 ¹⁵⁴	+1	45.4 ⁹³	45	2 58	3 44	4 20	13 22	59	1 13	26	
7	285	43.6		15.1	176	43.3 ¹⁵³		36.1 ⁹³	40	3 25	4 04	36		22 56		11 29	
8	300	43.5		15.5	191	17.6 ¹⁵³		26.8 ⁹³	35	3 45	21	4 49		23 54		10 31	
9	315	43.5		15.9	205	51.9 ¹⁵³		17.5 ⁹³	30	4 02	34	5 01		23 52		08 34	
10	330	43.4		16.3	220	26.2 ¹⁵³	+1	08.1 ⁹⁴	20	28	4 57	21		24 48		06 37	
11	345	43.3	+21	16.8	235	00.6 ¹⁵⁴	+0	58.8 ⁹³	10 N	4 48	5 15	5 38	13 24	45	1 04	40	
12	0	43.3	+21	17.2	249	34.9 ¹⁵³	+0	49.5 ⁹³	0	5 06	5 31	5 54	13 24	43	1 03	42	
13	15	43.2		17.6	264	09.2 ¹⁵³		40.1 ⁹⁴	10 S	21	5 47	6 09		25 40		1 01 45	
14	30	43.1		18.0	278	43.5 ¹⁵³		30.8 ⁹³	20	35	6 02	26		25 37		0 59 48	
15	45	43.0		18.4	293	17.8 ¹⁵³		21.4 ⁹⁴	30	49	19	45		26 33		56 52	
16	60	43.0		18.9	307	52.1 ¹⁵³		12.1 ⁹³	35	5 57	28	6 56		26 32		55 54	
17	75	42.9	+21	19.3	322	26.4 ¹⁵³	+0	02.7 ⁹⁴	40	6 05	6 39	7 08	13 27	29	0 54	55	
18	90	42.8	+21	19.7	337	00.7 ¹⁵³	-0	06.7 ⁹⁴	45	6 14	6 50	7 23	13 27	27	0 52	58	
19	105	42.8		20.1	351	35.0 ¹⁵³		16.0 ⁹³	50	24	7 04	41		28 23		50 61	
20	120	42.7		20.5	6	09.2 ¹⁵²		25.4 ⁹⁴	52	28	11	50		28 22		49 63	
21	135	42.6		20.9	20	43.5 ¹⁵³		34.8 ⁹⁴	54	33	18	7 59		28 21		48 64	
22	150	42.5		21.3	35	17.7 ¹⁵²		44.1 ⁹³	56	38	25	8 10		28 20		47 66	
23	165	42.5		21.7	49	52.0 ¹⁵³	-0	53.5 ⁹⁴	58	44	34	23		29 17		45 68	
24	180	42.4	+21	22.2	64	26.2 ¹⁵²	-1	02.9 ⁹⁴	60 S	6 50	7 44	8 37	13 29	16	0 44	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 7 ^h 41 ^m 8		Mag: -4.3 PMG: 15 ^h 13 ^m		Mag: +1.5 PMG: 12 ^h 18 ^m		Mag: -2.0 PMG: 16 ^h 55 ^m		Mag: 0.0 PMG: 23 ^h 38 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	244	14.1	131	45.3	+24 35.5	175	28.3	+22 27.6	105	33.0	+16 54.1
1	259	16.5	146	45.0	35.0	190	28.9	27.9	120	35.1	54.0
2	274	19.0	161	44.7	34.6	205	29.6	28.1	135	37.3	53.9
3	289	21.5	176	44.3	34.2	220	30.2	28.4	150	39.4	53.8
4	304	23.9	191	44.0	33.8	235	30.8	28.7	165	41.6	53.7
5	319	26.4	206	43.7	+24 33.4	250	31.4	+22 29.0	180	43.7	+16 53.6
6	334	28.9	221	43.4	+24 32.9	265	32.0	+22 29.2	195	45.8	+16 53.5
7	349	31.3	236	43.1	32.5	280	32.6	29.5	210	48.0	53.4
8	4	33.8	251	42.8	32.1	295	33.2	29.8	225	50.1	53.3
9	19	36.3	266	42.5	31.7	310	33.8	30.0	240	52.3	53.2
10	34	38.7	281	42.2	31.2	325	34.4	30.3	255	54.4	53.1
11	49	41.2	296	41.8	+24 30.8	340	35.0	+22 30.6	270	56.5	+16 53.0
12	64	43.6	311	41.5	+24 30.4	355	35.6	+22 30.8	285	58.7	+16 52.9
13	79	46.1	326	41.2	29.9	10	36.2	31.1	301	00.8	52.8
14	94	48.6	341	40.9	29.5	25	36.8	31.4	316	02.9	52.7
15	109	51.0	356	40.6	29.1	40	37.4	31.7	331	05.1	52.6
16	124	53.5	11	40.3	28.7	55	38.0	31.9	346	07.2	52.5
17	139	56.0	26	40.0	+24 28.2	70	38.6	+22 32.2	1	09.4	+16 52.4
18	154	58.4	41	39.7	+24 27.8	85	39.3	+22 32.5	16	11.5	+16 52.3
19	170	00.9	56	39.4	27.3	100	39.9	32.7	31	13.6	52.2
20	185	03.4	71	39.1	26.9	115	40.5	33.0	46	15.8	52.0
21	200	05.8	86	38.8	26.5	130	41.1	33.3	61	17.9	51.9
22	215	08.3	101	38.5	26.0	145	41.7	33.5	76	20.0	51.8
23	230	10.7	116	38.2	25.6	160	42.3	33.8	91	22.2	51.7
24	245	13.2	131	37.9	+24 25.2	175	42.9	+22 34.0	106	24.3	+16 51.6
Dif	—		-3 -4		+6 +3		+21 -1		+27 0		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 57 ^m 2				Edad: 9 ^d 8 PHE { SD: 14/8 4 ^h : 54/4 12 ^h : 54/4 20 ^h : 54/5 PMG: 20 ^h 17 ^m R°: 44 ^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	180	42.4	+21	22.2	64	26.2	-1	02.9	60 N	20 59	22 18	** **	14 31 72	1 35 16				
1	195	42.3		22.6	79	00.4 ¹⁵²		12.2 ⁹³	58	43	21 47	** **	29 69	36 18				
2	210	42.2		23.0	93	34.6 ¹⁵²		21.6 ⁹⁴	56	28	24	23 17	27 68	37 19				
3	225	42.2		23.4	108	08.8 ¹⁵²		31.0 ⁹⁴	54	16	21 06	22 27	26 66	37 22				
4	240	42.1		23.8	122	43.0 ¹⁵²		40.3 ⁹³	52	20 05	20 51	21 58	25 64	38 23				
5	255	42.0	+21	24.2	137	17.1 ¹⁵¹	-1	49.7 ⁹⁴	50	19 56	20 38	21 37	14 23 63	1 38 24				
6	270	41.9	+21	24.6	151	51.3 ¹⁵²	-1	59.0 ⁹³	45	19 36	20 12	20 58	14 21 59	1 39 28				
7	285	41.9		25.0	166	25.4 ¹⁵¹	-2	08.4 ⁹⁴	40	19	19 51	31	18 57	40 30				
8	300	41.8		25.4	180	59.5 ¹⁵¹		17.7 ⁹³	35	19 06	35	20 10	17 54	41 32				
9	315	41.7		25.8	195	33.6 ¹⁵¹		27.1 ⁹⁴	30	18 54	19 21	19 53	15 52	42 34				
10	330	41.6		26.2	210	07.7 ¹⁵¹		36.4 ⁹³	20	34	18 58	27	12 49	43 37				
11	345	41.6	+21	26.6	224	41.7 ¹⁵⁰	-2	45.7 ⁹³	10 N	18 17	18 40	19 06	14 09 47	1 44 40				
12	0	41.5	+21	27.0	239	15.8 ¹⁵¹	-2	55.0 ⁹³	0	18 01	18 23	18 49	14 07 43	1 45 43				
13	15	41.4		27.4	253	49.8 ¹⁵⁰	-3	04.4 ⁹⁴	10 S	17 45	18 08	34	05 40	46 46				
14	30	41.3		27.8	268	23.8 ¹⁵⁰		13.7 ⁹³	20	28	17 52	19	14 02 38	47 49				
15	45	41.2		28.2	282	57.8 ¹⁵⁰		23.0 ⁹³	30	17 09	35	18 04	13 59 35	48 52				
16	60	41.2		28.6	297	31.7 ¹⁴⁹		32.2 ⁹²	35	16 58	25	17 57	58 32	49 54				
17	75	41.1	+21	29.0	312	05.6 ¹⁴⁹	-3	41.5 ⁹³	40	16 45	17 15	17 48	13 56 30	1 49 57				
18	90	41.0	+21	29.4	326	39.5 ¹⁴⁹	-3	50.8 ⁹³	45	16 30	17 03	17 39	13 54 28	1 50 59				
19	105	40.9		29.8	341	13.4 ¹⁴⁹	-4	00.1 ⁹³	50	12	16 49	29	51 25	51 62				
20	120	40.9		30.2	355	47.2 ¹⁴⁸		09.3 ⁹²	52	16 03	42	25	50 24	52 63				
21	135	40.8		30.6	10	21.1 ¹⁴⁹		18.5 ⁹²	54	15 53	35	20	49 22	52 65				
22	150	40.7		31.0	24	54.9 ¹⁴⁸		27.7 ⁹²	56	42	27	15	48 20	53 67				
23	165	40.6		31.4	39	28.6 ¹⁴⁷		37.0 ⁹³	58	30	18	09	46 19	53 69				
24	180	40.5	+21	31.8	54	02.4 ¹⁴⁸	-4	46.1 ⁹¹	60 S	15 15	16 09	17 03	13 45 16	1 54 71				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 37 ^m 9		Mag: -4.4 PMG: 15 ^h 14 ^m				Mag: +1.5 PMG: 12 ^h 17 ^m				Mag: -2.0 PMG: 16 ^h 52 ^m				Mag: 0.0 PMG: 23 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	245	13.2	131	37.9	+24	25.2	175	42.9	+22	34.0	106	24.3	+16	51.6	5	36.5		
1	260	15.7	146	37.6		24.7	190	43.5		34.3	121	26.5		51.5	20	39.2		
2	275	18.1	161	37.3		24.3	205	44.1		34.6	136	28.6		51.4	35	41.8		
3	290	20.6	176	37.0		23.8	220	44.7		34.8	151	30.7		51.3	50	44.5		
4	305	23.1	191	36.8		23.4	235	45.3		35.1	166	32.9		51.2	65	47.1		
5	320	25.5	206	36.5	+24	22.9	250	45.9	+22	35.4	181	35.0	+16	51.1	80	49.8		
6	335	28.0	221	36.2	+24	22.5	265	46.5	+22	35.6	196	37.1	+16	51.0	95	52.4		
7	350	30.5	236	35.9		22.0	280	47.1		35.9	211	39.3		50.9	110	55.1		
8	5	32.9	251	35.6		21.6	295	47.7		36.2	226	41.4		50.8	125	57.7		
9	20	35.4	266	35.3		21.2	310	48.3		36.4	241	43.5		50.7	141	00.4		
10	35	37.9	281	35.0		20.7	325	48.9		36.7	256	45.7		50.6	156	03.1		
11	50	40.3	296	34.7	+24	20.3	340	49.5	+22	36.9	271	47.8	+16	50.5	171	05.7		
12	65	42.8	311	34.5	+24	19.8	355	50.2	+22	37.2	286	49.9	+16	50.4	186	08.4		
13	80	45.2	326	34.2		19.4	10	50.8		37.5	301	52.1		50.3	201	11.0		
14	95	47.7	341	33.9		18.9	25	51.4		37.7	316	54.2		50.2	216	13.7		
15	110	50.2	356	33.6		18.4	40	52.0		38.0	331	56.3		50.1	231	16.3		
16	125	52.6	11	33.3		18.0	55	52.6		38.2	346	58.5		50.0	246	19.0		
17	140	55.1	26	33.0	+24	17.5	70	53.2	+22	38.5	2	00.6	+16	49.9	261	21.6		
18	155	57.6	41	32.8	+24	17.1	85	53.8	+22	38.7	17	02.7	+16	49.8	276	24.3		
19	171	00.0	56	32.5		16.6	100	54.4		39.0	32	04.9		49.7	291	27.0		
20	186	02.5	71	32.2		16.2	115	55.0		39.3	47	07.0		49.6	306	29.6		
21	201	05.0	86	31.9		15.7	130	55.6		39.5	62	09.1		49.5	321	32.3		
22	216	07.4	101	31.7		15.2	145	56.2		39.8	77	11.3		49.4	336	34.9		
23	231	09.9	116	31.4		14.8	160	56.8		40.0	92	13.4		49.3	351	37.6		
24	246	12.4	131	31.1	+24	14.3	175	57.4	+22	40.3	107	15.5	+16	49.2	6	40.2		
Dif	—		-3		-5		+6		+3		+21		-1		+27			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 4				Edad: 10 ^d 8 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9 PMG: 21 ^h 01 ^m Rº: 46 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	40.5	+21	31.8	54	02.4	-4	46.1	92	58	60 N	** **	1 36	2 55	15	43	72	1 51	17	
1	195	40.5		32.2	68	36.1 ¹⁴⁷	-4	55.3	92	58	58	** *	2 07	3 12	38	71	54	19		
2	210	40.4		32.6	83	09.7 ¹⁴⁶	-5	04.5	91	56	56	0 37	30	26	35	68	56	22		
3	225	40.3		33.0	97	43.4 ¹⁴⁷		13.6	92	54	54	1 27	2 48	38	32	66	1 59	23		
4	240	40.2		33.4	112	17.0 ¹⁴⁶		22.8	92	52	52	1 56	3 03	49	29	64	2 01	24		
5	255	40.1	+21	33.8	126	50.6 ¹⁴⁶	-5	31.9	91	50	50	2 18	3 16	3 59	15	26	63	2 02	26	
6	270	40.1	+21	34.2	141	24.2 ¹⁴⁶	-5	41.0	91	45	45	2 56	3 43	4 19	15	20	60	2 07	28	
7	285	40.0		34.6	155	57.7 ¹⁴⁵		50.1	91	40	40	3 23	4 03	35	15	58	10	31		
8	300	39.9		35.0	170	31.2 ¹⁴⁵	-5	59.1	90	35	35	3 44	20	4 49	11	56	13	33		
9	315	39.8		35.4	185	04.6 ¹⁴⁴	-6	08.2	91	30	30	4 01	33	5 00	07	54	16	35		
10	330	39.7		35.7	199	38.0 ¹⁴⁴		17.2	90	20	20	28	4 56	20	15	01	51	20	39	
11	345	39.7	+21	36.1	214	11.4 ¹⁴⁴	-6	26.2	90	10 N	10 N	4 48	5 15	5 38	14	56	47	2 24	41	
12	0	39.6	+21	36.5	228	44.8 ¹⁴⁴	-6	35.2	90	0	0	5 06	5 32	5 54	14	50	46	2 28	44	
13	15	39.5		36.9	243	18.1 ¹⁴³		44.1	90	10 S	10 S	21	5 47	6 10	45	43	32	46		
14	30	39.4		37.3	257	51.3 ¹⁴²	-6	53.1	90	20	20	36	6 03	27	40	40	36	49		
15	45	39.3		37.7	272	24.6 ¹⁴³	-7	02.0	89	30	30	50	20	46	34	36	40	53		
16	60	39.3		38.1	286	57.8 ¹⁴²		10.8	88	35	35	5 58	29	6 57	30	35	43	55		
17	75	39.2	+21	38.5	301	30.9 ¹⁴¹	-7	19.7	89	40	40	6 06	6 40	7 10	14	26	33	2 46	57	
18	90	39.1	+21	38.8	316	04.0 ¹⁴¹	-7	28.6	89	45	45	6 15	6 52	7 25	14	22	30	2 49	60	
19	105	39.0		39.2	330	37.1 ¹⁴¹		37.4	88	50	50	26	7 06	44	16	28	53	63		
20	120	38.9		39.6	345	10.2 ¹⁴¹		46.1	87	52	52	30	13	7 52	14	26	55	64		
21	135	38.8		40.0	359	43.1 ¹³⁹	-7	54.9	88	54	54	35	20	8 02	11	25	2 57	66		
22	150	38.8		40.4	14	16.1 ¹⁴⁰	-8	03.6	87	56	56	40	28	13	08	23	3 00	67		
23	165	38.7		40.7	28	49.0 ¹³⁹		12.3	87	58	58	46	37	26	05	21	02	70		
24	180	38.6	+21	41.1	43	21.9 ¹³⁹	-8	21.0	87	60 S	60 S	6 52	7 47	8 41	14	01	19	3 05	72	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 7 ^h 33 ^m 9			Mag: -4.4 PMG: 15 ^h 14 ^m			Mag: +1.5 PMG: 12 ^h 16 ^m			Mag: -2.0 PMG: 16 ^h 49 ^m			Mag: +0.1 PMG: 23 ^h 29 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	246	12.4		131	31.1	+24	175	57.4	+22	107	15.5	+16	6	40.2	-18			
1	261	14.8		146	30.8		190	58.0		122	17.7		21	42.9				
2	276	17.3		161	30.6		205	58.6		137	19.8		36	45.5				
3	291	19.7		176	30.3		220	59.2		152	21.9		51	48.2				
4	306	22.2		191	30.0		235	59.8		167	24.0		66	50.9				
5	321	24.7		206	29.8	+24	251	00.4	+22	182	26.2	+16	81	53.5	-18			
6	336	27.1		221	29.5	+24	266	01.0	+22	197	28.3	+16	96	56.2	-18			
7	351	29.6		236	29.2		281	01.7		212	30.4		111	58.8				
8	6	32.1		251	29.0		296	02.3		227	32.6		127	01.5				
9	21	34.5		266	28.7		311	02.9		242	34.7		142	04.1				
10	36	37.0		281	28.5		326	03.5		257	36.8		157	06.8				
11	51	39.5		296	28.2	+24	341	04.1	+22	272	39.0	+16	172	09.4	-18			
12	66	41.9		311	27.9	+24	356	04.7	+22	287	41.1	+16	187	12.1	-18			
13	81	44.4		326	27.7		11	05.3		302	43.2		202	14.7				
14	96	46.8		341	27.4		26	05.9		317	45.3		217	17.4				
15	111	49.3		356	27.2		41	06.5		332	47.5		232	20.1				
16	126	51.8		11	26.9		56	07.1		347	49.6		247	22.7				
17	141	54.2		26	26.6	+24	71	07.7	+22	2	51.7	+16	262	25.4	-18			
18	156	56.7		41	26.4	+24	86	08.3	+22	17	53.9	+16	277	28.0	-18			
19	171	59.2		56	26.1		101	08.9		32	56.0		292	30.7				
20	187	01.6		71	25.9		116	09.5		47	58.1		307	33.3				
21	202	04.1		86	25.6		131	10.1		63	00.2		322	36.0				
22	217	06.6		101	25.4		146	10.7		78	02.4		337	38.6				
23	232	09.0		116	25.1		161	11.3		93	04.5		352	41.3				
24	247	11.5		131	24.9	+24	176	11.9	+22	108	06.6	+16	7	43.9	-18			
Dif	—			-3			+6			+21			-1			+27		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 5			Edad: 11 ^d 8 PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/4 R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	
0	180	38.6	+21 41.1	43	21.9	-8	21.0	60 N	21 03	22 25	** **	16 55 73	2 08 21	
1	195	38.5		57	54.7 ¹³⁸		29.7 ⁸⁷	58	20 46	21 52	** **	49 70	13 23	
2	210	38.4		72	27.5 ¹³⁸		38.3 ⁸⁶	56	31	28	23 33	43 69	18 24	
3	225	38.3		87	00.2 ¹³⁷		46.8 ⁸⁵	54	19	21 09	22 33	38 67	22 25	
4	240	38.3		101	32.9 ¹³⁷		-8 55.4 ⁸⁶	52	20 08	20 54	22 02	33 66	25 27	
5	255	38.2	+21 43.0	116	05.5 ¹³⁶		-9 03.9 ⁸⁵	50	19 58	20 40	21 40	16 29 64	2 28 29	
6	270	38.1	+21 43.4	130	38.1 ¹³⁶		-9 12.4 ⁸⁵	45	19 37	20 14	21 01	16 20 62	2 35 32	
7	285	38.0		145	10.6 ¹³⁵		20.8 ⁸⁴	40	21	19 53	20 33	13 59	41 34	
8	300	37.9		159	43.1 ¹³⁵		29.3 ⁸⁵	35	19 07	36	20 12	07 57	46 36	
9	315	37.8		174	15.6 ¹³⁵		37.6 ⁸³	30	18 55	19 22	19 55	16 01 55	51 38	
10	330	37.8		188	48.0 ¹³⁴		46.0 ⁸⁴	20	35	18 59	28	15 52 52	2 59 40	
11	345	37.7	+21 45.3	203	20.3 ¹³³		-9 54.3 ⁸³	10 N	18 17	18 40	19 07	15 43 50	3 05 44	
12	0	37.6	+21 45.6	217	52.6 ¹³³		-10 02.5 ⁸²	0	18 01	18 23	18 49	15 36 47	3 12 46	
13	15	37.5		232	24.9 ¹³³		10.8 ⁸³	10 S	17 45	18 08	34	28 45	18 49	
14	30	37.4		246	57.1 ¹³²		19.0 ⁸²	20	28	17 52	19	20 42	25 52	
15	45	37.3		261	29.2 ¹³¹		27.1 ⁸¹	30	17 08	34	18 04	10 40	33 55	
16	60	37.2		276	01.3 ¹³¹		35.2 ⁸¹	35	16 57	25	17 56	15 05 38	38 56	
17	75	37.2	+21 47.5	290	33.4 ¹³¹		-10 43.3 ⁸¹	40	16 44	17 14	17 48	14 59 36	3 43 58	
18	90	37.1	+21 47.8	305	05.4 ¹³⁰		-10 51.3 ⁸⁰	45	16 29	17 02	17 38	14 52 33	3 49 61	
19	105	37.0		319	37.3 ¹²⁹		-10 59.3 ⁸⁰	50	10	16 47	28	44 30	56 64	
20	120	36.9		334	09.2 ¹²⁹		-11 07.2 ⁷⁹	52	16 01	41	23	40 29	3 59 66	
21	135	36.8		348	41.0 ¹²⁸		15.1 ⁷⁹	54	15 51	33	19	36 28	4 03 67	
22	150	36.7		3	12.8 ¹²⁸		23.0 ⁷⁹	56	40	25	13	31 26	07 69	
23	165	36.6		17	44.5 ¹²⁷		30.8 ⁷⁸	58	27	16	07	26 24	12 70	
24	180	36.5	+21 50.0	32	16.2 ¹²⁷		-11 38.5 ⁷⁷	60 S	15 12	16 06	17 01	14 20 22	4 17 72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 30 ^m 0		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +1.5 PMG: 12 ^h 15 ^m		Mag: -2.0 PMG: 16 ^h 45 ^m		Mag: +0.1 PMG: 23 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	247	11.5	131 24.9	+24 03.0	176 11.9	+22 46.3	108 06.6	+16 46.7	7 43.9	-18 14.9
1	262	14.0	146 24.6	02.5	191 12.5	46.6	123 08.7	46.6	22 46.6	14.9
2	277	16.4	161 24.4	02.0	206 13.1	46.8	138 10.9	46.5	37 49.3	14.8
3	292	18.9	176 24.2	01.5	221 13.7	47.1	153 13.0	46.4	52 51.9	14.8
4	307	21.3	191 23.9	01.1	236 14.3	47.3	168 15.1	46.3	67 54.6	14.8
5	322	23.8	206 23.7	+24 00.6	251 15.0	+22 47.5	183 17.2	+16 46.2	82 57.2	-18 14.7
6	337	26.3	221 23.4	+24 00.1	266 15.6	+22 47.8	198 19.4	+16 46.1	97 59.9	-18 14.7
7	352	28.7	236 23.2	+23 59.6	281 16.2	48.0	213 21.5	46.0	113 02.5	14.7
8	7	31.2	251 22.9	59.1	296 16.8	48.3	228 23.6	45.9	128 05.2	14.6
9	22	33.7	266 22.7	58.6	311 17.4	48.5	243 25.7	45.8	143 07.8	14.6
10	37	36.1	281 22.5	58.1	326 18.0	48.8	258 27.9	45.6	158 10.5	14.6
11	52	38.6	296 22.2	+23 57.6	341 18.6	+22 49.0	273 30.0	+16 45.5	173 13.1	-18 14.5
12	67	41.1	311 22.0	+23 57.1	356 19.2	+22 49.3	288 32.1	+16 45.4	188 15.8	-18 14.5
13	82	43.5	326 21.8	56.6	11 19.8	49.5	303 34.2	45.3	203 18.5	14.5
14	97	46.0	341 21.5	56.1	26 20.4	49.7	318 36.4	45.2	218 21.1	14.4
15	112	48.4	356 21.3	55.7	41 21.0	50.0	333 38.5	45.1	233 23.8	14.4
16	127	50.9	11 21.1	55.2	56 21.6	50.2	348 40.6	45.0	248 26.4	14.4
17	142	53.4	26 20.8	+23 54.7	71 22.2	+22 50.5	3 42.7	+16 44.9	263 29.1	-18 14.3
18	157	55.8	41 20.6	+23 54.2	86 22.8	+22 50.7	18 44.9	+16 44.8	278 31.7	-18 14.3
19	172	58.3	56 20.4	53.7	101 23.4	50.9	33 47.0	44.7	293 34.4	14.3
20	188	00.8	71 20.2	53.2	116 24.0	51.2	48 49.1	44.6	308 37.0	14.2
21	203	03.2	86 19.9	52.7	131 24.6	51.4	63 51.2	44.5	323 39.7	14.2
22	218	05.7	101 19.7	52.2	146 25.2	51.7	78 53.4	44.4	338 42.3	14.2
23	233	08.2	116 19.5	51.7	161 25.8	51.9	93 55.5	44.3	353 45.0	14.1
24	248	10.6	131 19.3	+23 51.2	176 26.4	+22 52.1	108 57.6	+16 44.2	8 47.7	-18 14.1
Dif	—		-2	-5	+6	+2	+21	-1	+27	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 6			Edad: 12 ^d 8 PHE { SD: 15 ^h 1 PMG: 22 ^h 35 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	36.5	+21	50.0	32	16.2	-11	38.5	77	60 N	** *	1 30	2 51	18 08	71	2 29 24
1	195	36.5		50.4	46	47.8 ¹²⁶		46.2	77	58	** *	2 03	3 09	17 59	70	36 26
2	210	36.4		50.8	61	19.4 ¹²⁶	-11	53.9	77	56	0 21	27	24	52	67	42 28
3	225	36.3		51.1	75	50.9 ¹²⁵	-12	01.5	76	54	1 22	2 45	36	45	66	47 31
4	240	36.2		51.5	90	22.3 ¹²⁴		09.1	76	52	1 52	3 01	47	39	65	52 32
5	255	36.1	+21	51.9	104	53.7 ¹²⁴	-12	16.6	75	50	2 15	3 14	3 57	17 33	64	2 57 33
6	270	36.0	+21	52.2	119	25.1 ¹²⁴	-12	24.0	74	45	2 54	3 41	4 17	17 22	61	3 07 36
7	285	35.9		52.6	133	56.4 ¹²³		31.4	74	40	3 22	4 02	34	12	59	15 38
8	300	35.8		52.9	148	27.6 ¹²²		38.8	74	35	3 43	19	4 48	17 04	57	22 40
9	315	35.7		53.3	162	58.7 ¹²¹		46.1	73	30	4 00	33	5 00	16 56	57	29 41
10	330	35.7		53.6	177	29.8 ¹²¹	-12	53.3	72	20	27	4 56	20	44	54	39 44
11	345	35.6	+21	54.0	192	00.9 ¹²¹	-13	00.5	72	10 N	4 48	5 15	5 38	16 33	52	3 49 46
12	0	35.5	+21	54.4	206	31.9 ¹²⁰	-13	07.6	71	0	5 06	5 32	5 54	16 23	50	3 58 48
13	15	35.4		54.7	221	02.8 ¹¹⁹		14.7	71	10 S	22	5 48	6 10	13	48	4 07 51
14	30	35.3		55.1	235	33.7 ¹¹⁹		21.7	70	20	36	6 04	27	16	02	46 17 53
15	45	35.2		55.4	250	04.5 ¹¹⁸		28.7	70	30	51	21	47	15	50	43 28 55
16	60	35.1		55.8	264	35.3 ¹¹⁸		35.6	69	35	5 59	31	6 58	43	42	34 57
17	75	35.0	+21	56.1	279	05.9 ¹¹⁶	-13	42.4	68	40	6 08	6 41	7 11	15	35	40 4 41 59
18	90	34.9	+21	56.5	293	36.6 ¹¹⁷	-13	49.2	68	45	6 17	6 54	7 27	15	25	39 4 50 61
19	105	34.8		56.8	308	07.2 ¹¹⁶	-13	55.9	67	50	27	7 08	46	14	36	5 00 64
20	120	34.8		57.2	322	37.7 ¹¹⁵	-14	02.6	67	52	32	15	7 55	09	35	05 65
21	135	34.7		57.5	337	08.1 ¹¹⁴		09.2	66	54	37	22	8 05	15	04	33 10 66
22	150	34.6		57.9	351	38.5 ¹¹⁴		15.7	65	56	42	30	16	14	57	32 16 68
23	165	34.5		58.2	6	08.9 ¹¹⁴		22.1	64	58	48	40	29	50	30	22 70
24	180	34.4	+21	58.6	20	39.1 ¹¹²	-14	28.5	64	60 S	6 55	7 50	8 44	14	42	28 5 29 73
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 7 ^h 26 ^m 1		Mag: -4.4 PMG: 15 ^h 15 ^m			Mag: +1.5 PMG: 12 ^h 14 ^m			Mag: -2.0 PMG: 16 ^h 42 ^m			Mag: +0.1 PMG: 23 ^h 21 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	248	10.6	131	19.3	+23	51.2	176	26.4	+22	52.1	108	57.6	+16	44.2	8	47.7
1	263	13.1	146	19.0		50.7	191	27.0		52.4	123	59.7		44.1	23	50.3
2	278	15.6	161	18.8		50.1	206	27.6		52.6	139	01.8		44.0	38	53.0
3	293	18.0	176	18.6		49.6	221	28.2		52.9	154	04.0		43.8	53	55.6
4	308	20.5	191	18.4		49.1	236	28.8		53.1	169	06.1		43.7	68	58.3
5	323	22.9	206	18.2	+23	48.6	251	29.4	+22	53.3	184	08.2	+16	43.6	84	00.9
6	338	25.4	221	17.9	+23	48.1	266	30.1	+22	53.6	199	10.3	+16	43.5	99	03.6
7	353	27.9	236	17.7		47.6	281	30.7		53.8	214	12.4		43.4	114	06.2
8	8	30.3	251	17.5		47.1	296	31.3		54.0	229	14.6		43.3	129	08.9
9	23	32.8	266	17.3		46.6	311	31.9		54.3	244	16.7		43.2	144	11.5
10	38	35.3	281	17.1		46.1	326	32.5		54.5	259	18.8		43.1	159	14.2
11	53	37.7	296	16.9	+23	45.6	341	33.1	+22	54.7	274	20.9	+16	43.0	174	16.8
12	68	40.2	311	16.7	+23	45.1	356	33.7	+22	55.0	289	23.0	+16	42.9	189	19.5
13	83	42.7	326	16.5		44.5	11	34.3		55.2	304	25.2		42.8	204	22.1
14	98	45.1	341	16.3		44.0	26	34.9		55.4	319	27.3		42.7	219	24.8
15	113	47.6	356	16.0		43.5	41	35.5		55.7	334	29.4		42.6	234	27.5
16	128	50.1	11	15.8		43.0	56	36.1		55.9	349	31.5		42.5	249	30.1
17	143	52.5	26	15.6	+23	42.5	71	36.7	+22	56.1	4	33.6	+16	42.3	264	32.8
18	158	55.0	41	15.4	+23	42.0	86	37.3	+22	56.4	19	35.8	+16	42.2	279	35.4
19	173	57.4	56	15.2		41.4	101	37.9		56.6	34	37.9		42.1	294	38.1
20	188	59.9	71	15.0		40.9	116	38.5		56.8	49	40.0		42.0	309	40.7
21	204	02.4	86	14.8		40.4	131	39.1		57.1	64	42.1		41.9	324	43.4
22	219	04.8	101	14.6		39.9	146	39.7		57.3	79	44.2		41.8	339	46.0
23	234	07.3	116	14.4		39.4	161	40.3		57.5	94	46.3		41.7	354	48.7
24	249	09.8	131	14.2	+23	38.8	176	40.9	+22	57.7	109	48.5	+16	41.6	9	51.3
Dif	—		-2		-5		+6		+2		+21		-1		+27	
																0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 13 ^d 8 PHE {	4 ^h : 56 ^m 1 12 ^h : 56 ^m 3 20 ^h : 56 ^m 5 R°: 53 ^m										
	PMG: 11 ^h 57 ^m 8				SD: 15 ^h 3 PMG: 23 ^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	34.4	+21 58.6	20	39.1	-14 28.5		60 N	21 07	22 31	** **	19 19 68		2 53 32	
1	195	34.3	58.9	35	09.4 ¹¹³	34.9	64	58	20 49	21 56	** **	19 09 65		3 02 34	
2	210	34.2	59.3	49	39.5 ¹¹¹	41.1	62	56	34	32	** **	18 59 65		10 36	
3	225	34.1	+21 59.6	64	09.6 ¹¹¹	47.3	62	54	21	21 12	22 39	51 64		18 36	
4	240	34.0	+22 00.0	78	39.7 ¹¹¹	53.4	61	52	10	20 56	22 06	44 62		24 38	
5	255	33.9	+22 00.3	93	09.6 ¹⁰⁹	-14 59.5	61	50	20 00	20 43	21 43	18 37 62		3 30 39	
6	270	33.8	+22 00.7	107	39.6 ¹¹⁰	-15 05.4	59	45	19 39	20 16	21 03	18 23 60		3 43 40	
7	285	33.7	01.0	122	09.4 ¹⁰⁸	11.3	59	40	22	19 55	20 35	11 59		3 53 43	
8	300	33.6	01.3	136	39.2 ¹⁰⁸	17.2	59	35	19 08	38	20 14	18 01 58		4 02 44	
9	315	33.6	01.7	151	08.9 ¹⁰⁷	22.9	57	30	18 56	23	19 56	17 53 56		10 45	
10	330	33.5	02.0	165	38.6 ¹⁰⁷	28.6	57	20	36	19 00	29	38 55		23 48	
11	345	33.4	+22 02.4	180	08.2 ¹⁰⁶	-15 34.2	56	10 N	18 18	18 41	19 08	17 25 53		4 35 50	
12	0	33.3	+22 02.7	194	37.8 ¹⁰⁶	-15 39.8	56	0	18 01	18 24	18 50	17 13 52		4 46 51	
13	15	33.2	03.0	209	07.3 ¹⁰⁵	45.2	54	10 S	17 45	18 08	34	17 01 50		4 58 52	
14	30	33.1	03.4	223	36.7 ¹⁰⁴	50.6	54	20	28	17 51	19	16 48 49		5 10 54	
15	45	33.0	03.7	238	06.1 ¹⁰⁴	-15 55.9	53	30	17 08	34	18 04	33 48		23 57	
16	60	32.9	04.1	252	35.5 ¹⁰⁴	-16 01.1	52	35	16 56	24	17 56	25 46		31 58	
17	75	32.8	+22 04.4	267	04.7 ¹⁰²	-16 06.3	52	40	16 43	17 13	17 47	16 15 45		5 40 59	
18	90	32.7	+22 04.7	281	33.9 ¹⁰²	-16 11.3	50	45	16 28	17 01	17 38	16 04 44		5 51 61	
19	105	32.6	05.1	296	03.1 ¹⁰²	16.3	50	50	09	16 46	27	15 50 42		6 04 63	
20	120	32.5	05.4	310	32.2 ¹⁰¹	21.2	49	52	16 00	39	22	44 41		10 64	
21	135	32.4	05.7	325	01.2 ¹⁰⁰	26.0	48	54	15 49	32	17	37 40		16 65	
22	150	32.3	06.1	339	30.2 ¹⁰⁰	30.8	48	56	38	24	12	29 39		24 66	
23	165	32.2	06.4	353	59.1 ⁹⁹	35.4	46	58	25	14	17 06	20 38		32 68	
24	180	32.1	+22 06.7	8	28.0 ⁹⁹	-16 40.0	46	60 S	15 09	16 04	16 59	15 10 37		6 42 69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 7 ^h 22 ^m 1		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +1.5 PMG: 12 ^h 13 ^m		Mag: -2.0 PMG: 16 ^h 38 ^m		Mag: +0.1 PMG: 23 ^h 16 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	249	09.8	131	14.2	+23 38.8		176	40.9	+22 57.7		109	48.5	+16 41.6		9	51.3	-18 13.3
1	264	12.2	146	14.0	38.3		191	41.5	58.0		124	50.6	41.5		24	54.0	13.3
2	279	14.7	161	13.8	37.8		206	42.1	58.2		139	52.7	41.4		39	56.6	13.2
3	294	17.2	176	13.7	37.3		221	42.7	58.4		154	54.8	41.3		54	59.3	13.2
4	309	19.6	191	13.5	36.7		236	43.3	58.7		169	56.9	41.2		70	01.9	13.2
5	324	22.1	206	13.3	+23 36.2		251	43.9	+22 58.9		184	59.0	+16 41.0		85	04.6	-18 13.1
6	339	24.6	221	13.1	+23 35.7		266	44.5	+22 59.1		200	01.2	+16 40.9		100	07.3	-18 13.1
7	354	27.0	236	12.9	35.2		281	45.1	59.3		215	03.3	40.8		115	09.9	13.1
8	9	29.5	251	12.7	34.6		296	45.7	59.6		230	05.4	40.7		130	12.6	13.0
9	24	31.9	266	12.5	34.1		311	46.3	+22 59.8		245	07.5	40.6		145	15.2	13.0
10	39	34.4	281	12.3	33.6		326	47.0	+23 00.0		260	09.6	40.5		160	17.9	13.0
11	54	36.9	296	12.1	+23 33.0		341	47.6	+23 00.2		275	11.7	+16 40.4		175	20.5	-18 12.9
12	69	39.3	311	12.0	+23 32.5		356	48.2	+23 00.5		290	13.9	+16 40.3		190	23.2	-18 12.9
13	84	41.8	326	11.8	32.0		11	48.8	00.7		305	16.0	40.2		205	25.8	12.9
14	99	44.3	341	11.6	31.4		26	49.4	00.9		320	18.1	40.1		220	28.5	12.8
15	114	46.7	356	11.4	30.9		41	50.0	01.1		335	20.2	40.0		235	31.1	12.8
16	129	49.2	11	11.2	30.4		56	50.6	01.4		350	22.3	39.9		250	33.8	12.8
17	144	51.7	26	11.1	+23 29.8		71	51.2	+23 01.6		5	24.4	+16 39.7		265	36.4	-18 12.7
18	159	54.1	41	10.9	+23 29.3		86	51.8	+23 01.8		20	26.5	+16 39.6		280	39.1	-18 12.7
19	174	56.6	56	10.7	28.8		101	52.4	02.0		35	28.7	39.5		295	41.7	12.7
20	189	59.0	71	10.5	28.2		116	53.0	02.3		50	30.8	39.4		310	44.4	12.6
21	205	01.5	86	10.4	27.7		131	53.6	02.5		65	32.9	39.3		325	47.0	12.6
22	220	04.0	101	10.2	27.1		146	54.2	02.7		80	35.0	39.2		340	49.7	12.6
23	235	06.4	116	10.0	26.6		161	54.8	02.9		95	37.1	39.1		355	52.3	12.5
24	250	08.9	131	09.8	+23 26.1		176	55.4	+23 03.1		110	39.2	+16 39.0		10	55.0	-18 12.5
Dif	—		-2		-5		+6		+2		+21		-1		+27		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15 ^h 8			Edad: 14 ^d 8 PHE	4 ^h : 56 ^m 7 12 ^h : 56 ^m 9 20 ^h : 57 ^m 1 R°: **m												
	PMG: 11 ^h 57 ^m 9				SD: 15 ^h 4					PMG: **h **m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	32.1	+22 06.7	8	28.0	-16 40.0	45	60 N	** **	1 24	2 48	20 27	59	3 25	41		
1	195	32.0	07.1	22	56.8	44.5	45	58	** **	1 59	3 06	14 60		36	42		
2	210	31.9	07.4	37	25.5	48.9	44	56	** **	2 24	21	20 04	59	46	43		
3	225	31.8	07.7	51	54.2	53.2	43	54	1 17	43	34	19 55	58	3 54	44		
4	240	31.7	08.1	66	22.8	-16 57.4	42	52	1 49	2 59	45	46 58		4 02	45		
5	255	31.7	+22 08.4	80	51.4	-17 01.5	41	50	2 12	3 13	3 55	19 39	58	4 09	45		
6	270	31.6	+22 08.7	95	20.0	-17 05.5	40	45	2 52	3 40	4 16	19 23	57	4 23	48		
7	285	31.5	09.0	109	48.4	09.5	40	40	3 20	4 01	33	19 10	57	36	48		
8	300	31.4	09.4	124	16.9	13.3	38	35	42	18	47	18 59	56	46	49		
9	315	31.3	09.7	138	45.2	17.1	38	30	3 59	32	4 59	49 56		4 55	50		
10	330	31.2	10.0	153	13.5	20.8	37	20	4 27	4 56	5 20	33 55		5 11	51		
11	345	31.1	+22 10.3	167	41.8	-17 24.3	35	10 N	4 48	5 15	5 38	18 18	55	5 25	52		
12	0	31.0	+22 10.7	182	10.0	-17 27.8	35	0	5 06	5 32	5 54	18 05	54	5 37	54		
13	15	30.9	11.0	196	38.2	31.2	34	10 S	22	5 48	6 11	17 51	54	5 50	54		
14	30	30.8	11.3	211	06.3	34.5	33	20	37	6 04	28	37 53		6 04	55		
15	45	30.7	11.6	225	34.4	37.7	32	30	5 52	22	6 48	21 52		20	56		
16	60	30.6	12.0	240	02.4	40.8	31	35	6 00	32	7 00	11 52		29	57		
17	75	30.5	+22 12.3	254	30.3	-17 43.8	30	40	6 09	6 43	7 13	17 00	52	6 39	58		
18	90	30.4	+22 12.6	268	58.3	-17 46.7	29	45	6 18	6 55	7 28	16 48	50	6 52	58		
19	105	30.3	12.9	283	26.1	49.5	28	50	29	7 10	48	32 50		7 07	59		
20	120	30.2	13.2	297	54.0	52.2	27	52	34	17	7 57	25 50		14	60		
21	135	30.1	13.6	312	21.7	54.8	26	54	39	24	8 07	17 49		21	61		
22	150	30.0	13.9	326	49.5	57.4	26	56	45	33	18	16 08	49	30	62		
23	165	29.9	14.2	341	17.2	-17 59.8	24	58	51	42	32	15 58	48	40	62		
24	180	29.8	+22 14.5	355	44.8	-18 02.1	23	60 S	6 57	7 53	8 47	15 47	47	7 51	64		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 18 ^m 2		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 12 ^m		Mag: -2.0 PMG: 16 ^h 35 ^m		Mag: +0.1 PMG: 23 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	250	08.9	131 09.8	+23 26.1	176 55.4	+23 03.1	110 39.2	+16 39.0	10 55.0	-18 12.5
1	265	11.4	146 09.7	25.5	191 56.0	03.4	125 41.3	38.9	25 57.6	12.5
2	280	13.8	161 09.5	25.0	206 56.6	03.6	140 43.4	38.8	41 00.3	12.4
3	295	16.3	176 09.3	24.4	221 57.2	03.8	155 45.6	38.6	56 03.0	12.4
4	310	18.8	191 09.2	23.9	236 57.8	04.0	170 47.7	38.5	71 05.6	12.4
5	325	21.2	206 09.0	+23 23.3	251 58.4	+23 04.2	185 49.8	+16 38.4	86 08.3	-18 12.3
6	340	23.7	221 08.8	+23 22.8	266 59.0	+23 04.5	200 51.9	+16 38.3	101 10.9	-18 12.3
7	355	26.2	236 08.7	22.2	281 59.6	04.7	215 54.0	38.2	116 13.6	12.3
8	10	28.6	251 08.5	21.7	297 00.2	04.9	230 56.1	38.1	131 16.2	12.2
9	25	31.1	266 08.4	21.1	312 00.8	05.1	245 58.2	38.0	146 18.9	12.2
10	40	33.5	281 08.2	20.6	327 01.4	05.3	261 00.3	37.9	161 21.5	12.2
11	55	36.0	296 08.0	+23 20.0	342 02.0	+23 05.5	276 02.4	+16 37.8	176 24.2	-18 12.1
12	70	38.5	311 07.9	+23 19.5	357 02.6	+23 05.8	291 04.6	+16 37.7	191 26.8	-18 12.1
13	85	40.9	326 07.7	18.9	12 03.2	06.0	306 06.7	37.5	206 29.5	12.1
14	100	43.4	341 07.6	18.4	27 03.8	06.2	321 08.8	37.4	221 32.1	12.0
15	115	45.9	356 07.4	17.8	42 04.4	06.4	336 10.9	37.3	236 34.8	12.0
16	130	48.3	11 07.3	17.3	57 05.0	06.6	351 13.0	37.2	251 37.4	12.0
17	145	50.8	26 07.1	+23 16.7	72 05.6	+23 06.8	6 15.1	+16 37.1	266 40.1	-18 11.9
18	160	53.3	41 07.0	+23 16.2	87 06.2	+23 07.0	21 17.2	+16 37.0	281 42.7	-18 11.9
19	175	55.7	56 06.8	15.6	102 06.9	07.3	36 19.3	36.9	296 45.4	11.9
20	190	58.2	71 06.7	15.0	117 07.5	07.5	51 21.4	36.8	311 48.0	11.8
21	206	00.7	86 06.5	14.5	132 08.1	07.7	66 23.5	36.7	326 50.7	11.8
22	221	03.1	101 06.4	13.9	147 08.7	07.9	81 25.6	36.6	341 53.3	11.8
23	236	05.6	116 06.2	13.4	162 09.3	08.1	96 27.8	36.4	356 56.0	11.7
24	251	08.0	131 06.1	+23 12.8	177 09.9	+23 08.3	111 29.9	+16 36.3	11 58.6	-18 11.7
Dif	—		-2	-6	+6	+2	+21	-1	+27	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8			Edad: 15 ^d 8 PHE { 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/6										
	PMG: 11 ^h 58 ^m 1			SD: 15/6 PMG: 0 ^h 18 ^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	180	29.8	+22 14.5	355	44.8	-18 02.1	22	60 N	21 10	22 37	** **	21 26 50	4 06 53	
1	195	29.7	14.8	10	12.4	04.3	86	58	20 52	22 01	** **	14 50	18 53	
2	210	29.6	15.1	24	40.0	06.4	21	56	37	21 35	** **	21 03 51	29 53	
3	225	29.5	15.5	39	07.5	08.4	20	54	24	21 15	22 44	20 53 51	38 54	
4	240	29.4	15.8	53	35.0	10.3	19	52	12	20 59	22 10	44 52	47 53	
5	255	29.3	+22 16.1	68	02.4	-18 12.1	18	50	20 02	20 45	21 47	20 37 52	4 54 54	
6	270	29.2	+22 16.4	82	29.8	-18 13.8	17	45	19 41	20 17	21 05	20 20 53	5 11 54	
7	285	29.1	16.7	96	57.1	15.4	16	40	24	19 56	20 37	20 07 53	24 54	
8	300	29.0	17.0	111	24.5	16.8	14	35	19 10	39	20 15	19 55 54	35 54	
9	315	28.9	17.3	125	51.7	18.2	14	30	18 57	24	19 57	45 54	5 45 54	
10	330	28.8	17.6	140	19.0	19.5	13	20	36	19 01	30	28 55	6 02 55	
11	345	28.7	+22 17.9	154	46.2	-18 20.6	11	10 N	18 18	18 41	19 08	19 13 55	6 17 54	
12	0	28.6	+22 18.2	169	13.4	-18 21.7	11	0	18 02	18 24	18 50	18 59 55	6 31 54	
13	15	28.5	18.6	183	40.5	22.6	9	10 S	17 45	18 08	34	45 56	44 55	
14	30	28.4	18.9	198	07.6	23.5	9	20	28	17 51	19	30 56	6 59 55	
15	45	28.3	19.2	212	34.7	24.2	7	30	17 08	34	18 03	13 57	7 16 55	
16	60	28.2	19.5	227	01.8	24.8	6	35	16 56	24	17 55	18 03 57	26 55	
17	75	28.1	+22 19.8	241	28.8	-18 25.4	6	40	16 42	17 13	17 46	17 52 57	7 37 55	
18	90	28.0	+22 20.1	255	55.8	-18 25.8	4	45	16 27	17 00	17 37	17 38 58	7 50 55	
19	105	27.9	20.4	270	22.7	26.1	3	50	16 07	16 45	26	22 58	8 06 55	
20	120	27.7	20.7	284	49.7	26.3	2	52	15 58	38	21	15 58	14 55	
21	135	27.6	21.0	299	16.6	26.3	0	54	48	31	16	17 06 58	22 55	
22	150	27.5	21.3	313	43.5	26.3	0	56	36	22	10	16 57 58	32 55	
23	165	27.4	21.6	328	10.3	26.2	1	58	23	13	17 04	46 58	42 55	
24	180	27.3	+22 21.9	342	37.1	-18 25.9	3	60 S	15 07	16 02	16 57	16 34 58	8 55 55	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 14 ^m 3		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 11 ^m		Mag: -2.0 PMG: 16 ^h 32 ^m		Mag: +0.1 PMG: 23 ^h 08 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	251	08.0	131	06.1	+23 12.8	177	09.9	+23 08.3	111	29.9	+16 36.3	11 58.6	-18 11.7	
1	266	10.5	146	05.9	12.2	192	10.5	08.5	126	32.0	36.2	27 01.3	11.7	
2	281	13.0	161	05.8	11.7	207	11.1	08.7	141	34.1	36.1	42 03.9	11.6	
3	296	15.4	176	05.7	11.1	222	11.7	09.0	156	36.2	36.0	57 06.6	11.6	
4	311	17.9	191	05.5	10.6	237	12.3	09.2	171	38.3	35.9	72 09.2	11.6	
5	326	20.4	206	05.4	+23 10.0	252	12.9	+23 09.4	186	40.4	+16 35.8	87 11.9	-18 11.5	
6	341	22.8	221	05.2	+23 09.4	267	13.5	+23 09.6	201	42.5	+16 35.7	102 14.5	-18 11.5	
7	356	25.3	236	05.1	08.9	282	14.1	09.8	216	44.6	35.5	117 17.2	11.5	
8	11	27.8	251	05.0	08.3	297	14.7	10.0	231	46.7	35.4	132 19.8	11.5	
9	26	30.2	266	04.8	07.7	312	15.3	10.2	246	48.8	35.3	147 22.5	11.4	
10	41	32.7	281	04.7	07.2	327	15.9	10.4	261	50.9	35.2	162 25.1	11.4	
11	56	35.2	296	04.6	+23 06.6	342	16.5	+23 10.6	276	53.0	+16 35.1	177 27.8	-18 11.4	
12	71	37.6	311	04.4	+23 06.0	357	17.1	+23 10.8	291	55.1	+16 35.0	192 30.4	-18 11.3	
13	86	40.1	326	04.3	05.4	12	17.7	11.0	306	57.3	34.9	207 33.1	11.3	
14	101	42.5	341	04.2	04.9	27	18.3	11.2	321	59.4	34.8	222 35.7	11.3	
15	116	45.0	356	04.1	04.3	42	18.9	11.5	337	01.5	34.7	237 38.4	11.2	
16	131	47.5	11	03.9	03.7	57	19.5	11.7	352	03.6	34.5	252 41.0	11.2	
17	146	49.9	26	03.8	+23 03.2	72	20.1	+23 11.9	7	05.7	+16 34.4	267 43.7	-18 11.2	
18	161	52.4	41	03.7	+23 02.6	87	20.7	+23 12.1	22	07.8	+16 34.3	282 46.3	-18 11.1	
19	176	54.9	56	03.6	02.0	102	21.3	12.3	37	09.9	34.2	297 49.0	11.1	
20	191	57.3	71	03.5	01.4	117	21.9	12.5	52	12.0	34.1	312 51.6	11.1	
21	206	59.8	86	03.3	00.9	132	22.5	12.7	67	14.1	34.0	327 54.3	11.0	
22	222	02.3	101	03.2	+23 00.3	147	23.1	12.9	82	16.2	33.9	342 56.9	11.0	
23	237	04.7	116	03.1	+22 59.7	162	23.7	13.1	97	18.3	33.8	357 59.6	11.0	
24	252	07.2	131	03.0	+22 59.1	177	24.3	+23 13.3	112	20.4	+16 33.6	13 02.2	-18 10.9	
Dif	—		-1		-6	+6		+2	+21		-1	+27		0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 3				Edad: 16 ^d 8 PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 0 20 ^h : 58 ^m 1 PMG: 1 ^h 12 ^m R°: 56 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	27.3	+22	21.9	342	37.1	-18	25.9	60 N	** **	1 19	2 46	22 16	40	4 59	64		
1	195	27.2		22.2	357	04.0		25.5	58	** **	1 55	3 04	22 04	41	5 11	64		
2	210	27.1		22.5	11	30.7		25.1	56	** **	2 21	19	21 54	42		22	63	
3	225	27.0		22.8	25	57.5		24.5	54	1 12	41	33		44	44	32	62	
4	240	26.9		23.1	40	24.3		23.8	52	1 46	2 57	44		36	45	40	62	
5	255	26.8	+22	23.4	54	51.0	-18	23.0	50	2 09	3 11	3 54	21 29	46	5 48	61		
6	270	26.7	+22	23.7	69	17.7	-18	22.1	45	2 51	3 39	4 15	21 13	48	6 05	60		
7	285	26.6		24.0	83	44.4		21.0	40	3 19	4 00	32	21 00	49	18	60		
8	300	26.5		24.3	98	11.1		19.9	35	41	17	47	20 49	50	29	59		
9	315	26.4		24.6	112	37.7		18.6	30	3 59	32	4 59		39	51	39	59	
10	330	26.3		24.9	127	04.4		17.3	20	4 27	4 55	5 20		23	52	6 57	57	
11	345	26.2	+22	25.1	141	31.0	-18	15.8	10 N	4 48	5 15	5 38	20 08	54	7 11	57		
12	0	26.1	+22	25.4	155	57.6	-18	14.2	0	5 06	5 32	5 55	19 54	56	7 25	56		
13	15	26.0		25.7	170	24.3		12.5	10 S	22	5 49	6 11	41	57		39	55	
14	30	25.9		26.0	184	50.9		10.7	20	38	6 05	29	26	58	7 54	54		
15	45	25.8		26.3	199	17.5		08.8	30	5 53	23	6 49	10	59	8 11	53		
16	60	25.7		26.6	213	44.0		06.7	35	6 01	33	7 01	19 00	61		21	52	
17	75	25.5	+22	26.9	228	10.6	-18	04.6	40	6 10	6 44	7 14	18 49	62	8 32	51		
18	90	25.4	+22	27.2	242	37.2	-18	02.3	45	6 20	6 57	7 30	18 36	63	8 45	51		
19	105	25.3		27.5	257	03.7	-17	59.9	50	31	7 12	50		20	65	9 01	49	
20	120	25.2		27.7	271	30.3		57.5	52	36	19	7 59		13	65	09	48	
21	135	25.1		28.0	285	56.9		54.9	54	41	26	8 09	18 04	67		17	48	
22	150	25.0		28.3	300	23.4		52.2	56	46	35	21	17 55	67		27	47	
23	165	24.9		28.6	314	50.0		49.4	58	53	44	34		44	69	37	46	
24	180	24.8	+22	28.9	329	16.5	-17	46.4	60 S	6 59	7 55	8 50	17 32	70	9 50	44		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 10 ^m 3		Mag: -4.4 PMG: 15 ^h 16 ^m				Mag: +1.5 PMG: 12 ^h 10 ^m				Mag: -2.0 PMG: 16 ^h 28 ^m				Mag: +0.1 PMG: 23 ^h 04 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	252	07.2	131	03.0	+22	59.1	177	24.3	+23	13.3	112	20.4	+16	33.6	13	02.2	-18	10.9
1	267	09.6	146	02.9		58.5	192	24.9		13.5	127	22.5		33.5	28	04.9		10.9
2	282	12.1	161	02.8		58.0	207	25.5		13.7	142	24.6		33.4	43	07.5		10.9
3	297	14.6	176	02.6		57.4	222	26.1		13.9	157	26.7		33.3	58	10.2		10.8
4	312	17.0	191	02.5		56.8	237	26.7		14.1	172	28.8		33.2	73	12.8		10.8
5	327	19.5	206	02.4	+22	56.2	252	27.3	+23	14.3	187	30.9	+16	33.1	88	15.5	-18	10.8
6	342	22.0	221	02.3	+22	55.6	267	27.9	+23	14.5	202	33.0	+16	33.0	103	18.1	-18	10.7
7	357	24.4	236	02.2		55.0	282	28.5		14.7	217	35.1		32.8	118	20.8		10.7
8	12	26.9	251	02.1		54.5	297	29.1		14.9	232	37.2		32.7	133	23.4		10.7
9	27	29.4	266	02.0		53.9	312	29.7		15.1	247	39.3		32.6	148	26.1		10.6
10	42	31.8	281	01.9		53.3	327	30.4		15.3	262	41.4		32.5	163	28.7		10.6
11	57	34.3	296	01.8	+22	52.7	342	31.0	+23	15.5	277	43.5	+16	32.4	178	31.4	-18	10.6
12	72	36.8	311	01.7	+22	52.1	357	31.6	+23	15.7	292	45.6	+16	32.3	193	34.0	-18	10.5
13	87	39.2	326	01.6		51.5	12	32.2		15.9	307	47.7		32.2	208	36.7		10.5
14	102	41.7	341	01.5		50.9	27	32.8		16.1	322	49.8		32.1	223	39.3		10.5
15	117	44.1	356	01.4		50.3	42	33.4		16.3	337	51.9		31.9	238	42.0		10.4
16	132	46.6	11	01.3		49.8	57	34.0		16.5	352	54.0		31.8	253	44.6		10.4
17	147	49.1	26	01.2	+22	49.2	72	34.6	+23	16.7	7	56.1	+16	31.7	268	47.3	-18	10.4
18	162	51.5	41	01.1	+22	48.6	87	35.2	+23	16.9	22	58.2	+16	31.6	283	49.9	-18	10.3
19	177	54.0	56	01.0		48.0	102	35.8		17.1	38	00.3		31.5	298	52.6		10.3
20	192	56.5	71	00.9		47.4	117	36.4		17.3	53	02.4		31.4	313	55.2		10.3
21	207	58.9	86	00.8		46.8	132	37.0		17.5	68	04.5		31.3	328	57.9		10.2
22	223	01.4	101	00.7		46.2	147	37.6		17.7	83	06.6		31.1	344	00.5		10.2
23	238	03.9	116	00.6		45.6	162	38.2		17.9	98	08.7		31.0	359	03.2		10.2
24	253	06.3	131	00.6	+22	45.0	177	38.8	+23	18.0	113	10.8	+16	30.9	14	05.8	-18	10.2
Dif	—		-1		-6		+6		+2		+21		-1		+26			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 8	PHE	4 ^h : 58 ^h /3 12 ^h : 58 ^h /4 20 ^h : 58 ^h /5									
	PMG: 11 ^h 58 ^m 4								SD: 15 ^h 8			PMG: 2 ^h 08 ^m			R°: 55 ^m
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	24.8	+22 28.9	329	16.5	-17 46.4	30	60 N	21 13	22 43	** **	22 56 31	6 03 75		
1	195	24.7		343	43.1	43.4	30	58	20 55	22 05	** **	45 34	15 72		
2	210	24.6		358	09.6		32	56	39	21 38	** **	36 36	25 71		
3	225	24.5		12	36.2	37.0	32	54	26	18	22 50	28 37	34 70		
4	240	24.4		30.0	27 02.7	33.6	34	52	14	21 01	22 14	21 39	42 69		
5	255	24.3	+22 30.3	41	29.3	-17 30.2	34	50	20 04	20 47	21 50	22 15 39	6 49 68		
6	270	24.2	+22 30.6	55	55.8	-17 26.6	36	45	19 42	20 19	21 07	22 01 42	7 05 65		
7	285	24.0		70	22.4	22.9	37	40	25	19 58	20 39	21 49 44	18 63		
8	300	23.9		84	49.0	19.1	38	35	19 11	40	20 16	39 46	28 62		
9	315	23.8		99	15.6	15.2	39	30	18 58	26	19 58	30 48	38 61		
10	330	23.7		113	42.1	11.2	40	20	37	19 02	31	15 51	7 54 59		
11	345	23.6	+22 32.0	128	08.7	-17 07.0	42	10 N	18 19	18 42	19 09	21 02 53	8 08 57		
12	0	23.5	+22 32.2	142	35.3	-17 02.8	42	0	18 02	18 24	18 51	20 50 55	8 21 55		
13	15	23.4		157	01.9	-16 58.5	43	10 S	17 45	18 08	34	38 57	34 54		
14	30	23.3		32.5	171 28.6	54.0	45	20	28	17 51	19	24 60	8 48 52		
15	45	23.2		33.1	185 55.2	49.5	45	30	17 07	33	18 03	09 62	9 04 49		
16	60	23.1		33.3	200 21.8	44.8	47	35	16 55	23	17 55	20 01 63	13 48		
17	75	23.0	+22 33.6	214	48.5	-16 40.0	48	40	16 42	17 12	17 46	19 51 65	9 23 47		
18	90	22.8	+22 33.9	229	15.2	-16 35.2	48	45	16 26	16 59	17 36	19 39 67	9 36 45		
19	105	22.7		34.1	243 41.9	30.2	50	50	16 06	44	25	25 69	50 43		
20	120	22.6		34.4	258 08.6	25.1	51	52	15 57	37	20	18 71	9 57 42		
21	135	22.5		34.7	272 35.3	20.0	51	54	46	29	15	11 72	10 05 40		
22	150	22.4		34.9	287 02.0	14.7	53	56	35	21	09	19 02 74	14 39		
23	165	22.3		35.2	301 28.7	09.3	54	58	21	11	17 03	18 53 76	23 38		
24	180	22.2	+22 35.5	315	55.5	-16 03.8	55	60 S	15 05	16 00	16 56	18 42 78	10 34 36		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -4.4			Mag: +1.5			Mag: -1.9			Mag: +0.1		
	7 ^h 06 ^m 4		PMG: 15 ^h 16 ^m			PMG: 12 ^h 09 ^m			PMG: 16 ^h 25 ^m			PMG: 23 ^h 00 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	'	°	'	'	°	'	'	
0	253	06.3	131	00.6	+22 45.0	177	38.8	+23 18.0	113	10.8	+16 30.9	14	05.8	-18 10.2
1	268	08.8	146	00.5	44.4	192	39.4	18.2	128	12.9	30.8	29	08.5	10.1
2	283	11.3	161	00.4	43.8	207	40.0	18.4	143	15.0	30.7	44	11.1	10.1
3	298	13.7	176	00.3	43.2	222	40.6	18.6	158	17.1	30.6	59	13.8	10.1
4	313	16.2	191	00.2	42.6	237	41.2	18.8	173	19.2	30.5	74	16.4	10.1
5	328	18.6	206	00.1	+22 42.0	252	41.8	+23 19.0	188	21.3	+16 30.3	89	19.1	-18 10.0
6	343	21.1	221	00.1	+22 41.4	267	42.4	+23 19.2	203	23.4	+16 30.2	104	21.7	-18 10.0
7	358	23.6	236	00.0	40.8	282	43.0	19.4	218	25.5	30.1	119	24.4	09.9
8	13	26.0	250	59.9	40.2	297	43.6	19.6	233	27.6	30.0	134	27.0	09.9
9	28	28.5	265	59.8	39.6	312	44.2	19.8	248	29.7	29.9	149	29.7	09.9
10	43	31.0	280	59.7	39.0	327	44.8	20.0	263	31.8	29.8	164	32.3	09.8
11	58	33.4	295	59.7	+22 38.4	342	45.4	+23 20.2	278	33.9	+16 29.7	179	35.0	-18 09.8
12	73	35.9	310	59.6	+22 37.8	357	46.0	+23 20.3	293	36.0	+16 29.5	194	37.6	-18 09.8
13	88	38.4	325	59.5	37.2	12	46.6	20.5	308	38.1	29.4	209	40.3	09.7
14	103	40.8	340	59.5	36.6	27	47.2	20.7	323	40.2	29.3	224	42.9	09.7
15	118	43.3	355	59.4	36.0	42	47.8	20.9	338	42.3	29.2	239	45.6	09.7
16	133	45.8	10	59.3	35.3	57	48.4	21.1	353	44.4	29.1	254	48.2	09.6
17	148	48.2	25	59.2	+22 34.7	72	49.0	+23 21.3	8	46.5	+16 29.0	269	50.9	-18 09.6
18	163	50.7	40	59.2	+22 34.1	87	49.6	+23 21.5	23	48.6	+16 28.8	284	53.5	-18 09.6
19	178	53.1	55	59.1	33.5	102	50.2	21.7	38	50.7	28.7	299	56.2	09.5
20	193	55.6	70	59.1	32.9	117	50.8	21.8	53	52.8	28.6	314	58.8	09.5
21	208	58.1	85	59.0	32.3	132	51.4	22.0	68	54.9	28.5	330	01.4	09.5
22	224	00.5	100	58.9	31.7	147	52.0	22.2	83	57.0	28.4	345	04.1	09.4
23	239	03.0	115	58.9	31.1	162	52.6	22.4	98	59.1	28.3	0	06.7	09.4
24	254	05.5	130	58.8	+22 30.5	177	53.2	+23 22.6	114	01.2	+16 28.1	15	09.4	-18 09.4
Dif	—		-1		-6	+6		+2	+21		-1	+26		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 18 ^d 8 PHE { 4 ^h : 58 ^m 6 12 ^h : 58 ^m 7 20 ^h : 58 ^m 8						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 6			SD: 16 ^h 0 PMG: 3 ^h 03 ^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	180	22.2	+22	315	55.5	-16	03.8	55	60 N	** **	1 13	2 43	23 27	26	7 18	80
1	195	22.1		330	22.3	-15	58.3	57	58	** **	1 52	3 02	19 28		27 79	
2	210	22.0		344	49.1		52.6	58	56	** **	2 18	18	12 30		36 76	
3	225	21.8		359	15.9		46.8	58	54	1 07	39	31	05 32		44 74	
4	240	21.7		13	42.8		40.9	59	52	1 43	2 55	43	23 00	33	51 73	
5	255	21.6	+22	28	09.6	-15	34.9	60	50	2 07	3 10	3 53	22 54	35	7 57	71
6	270	21.5	+22	42	36.5	-15	28.9	60	45	2 49	3 38	4 14	22 43	38	8 10	69
7	285	21.4		57	03.4		22.7	62	40	3 18	3 59	32	33 41		21 66	
8	300	21.3		71	30.3		16.4	63	35	41	4 17	46	25 43		30 65	
9	315	21.2		85	57.3		10.1	63	30	3 58	31	4 59	18 45		39 62	
10	330	21.1		100	24.2	-15	03.6	65	20	4 26	4 55	5 20	22 06	48	8 53	59
11	345	20.9	+22	114	51.2	-14	57.1	65	10 N	4 48	5 15	5 38	21 55	51	9 05	57
12	0	20.8	+22	129	18.2	-14	50.4	67	0	5 06	5 33	5 55	21 45	54	9 16	55
13	15	20.7		143	45.3		43.7	67	10 S	23	5 49	6 12	35 56		28 51	
14	30	20.6		158	12.3		36.8	69	20	38	6 06	30	24 59		40 49	
15	45	20.5		172	39.4		29.9	69	30	5 54	24	6 50	11 63		9 53	47
16	60	20.4		187	06.5		22.9	70	35	6 02	34	7 02	21 04	65	10 01	45
17	75	20.3	+22	201	33.6	-14	15.8	71	40	6 11	6 45	7 15	20 56	67	10 10	43
18	90	20.2	+22	216	00.8	-14	08.6	72	45	6 21	6 58	7 32	20 46	70	10 21	40
19	105	20.0		230	28.0	-14	01.3	73	50	32	7 13	7 51	34 73		33 37	
20	120	19.9		244	55.2	-13	54.0	73	52	37	20	8 01	29 74		39 36	
21	135	19.8		259	22.4		46.5	75	54	42	28	11	23 76		45 35	
22	150	19.7		273	49.7		39.0	75	56	48	37	23	16 78		10 53	32
23	165	19.6		288	17.0		31.4	76	58	6 55	46	37	09 80		11 01	30
24	180	19.5	+22	302	44.3	-13	23.7	77	60 S	7 02	7 57	8 53	20 00	83	11 10	28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 02 ^m 5		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 08 ^m		Mag: -1.9 PMG: 16 ^h 22 ^m		Mag: +0.1 PMG: 22 ^h 55 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	254	05.5	130	58.8	+22	30.5	177	53.2	+23	22.6	114	01.2	+16	28.1	15	09.4	-18	09.4
1	269	07.9	145	58.8		29.8	192	53.8		22.8	129	03.3		28.0	30	12.0		09.4
2	284	10.4	160	58.7		29.2	207	54.4		23.0	144	05.4		27.9	45	14.7		09.3
3	299	12.9	175	58.6		28.6	222	55.0		23.1	159	07.5		27.8	60	17.3		09.3
4	314	15.3	190	58.6		28.0	237	55.6		23.3	174	09.5		27.7	75	20.0		09.3
5	329	17.8	205	58.5	+22	27.4	252	56.2	+23	23.5	189	11.6	+16	27.6	90	22.6	-18	09.2
6	344	20.3	220	58.5	+22	26.8	267	56.8	+23	23.7	204	13.7	+16	27.5	105	25.3	-18	09.2
7	359	22.7	235	58.4		26.1	282	57.5		23.9	219	15.8		27.3	120	27.9		09.2
8	14	25.2	250	58.4		25.5	297	58.1		24.1	234	17.9		27.2	135	30.6		09.1
9	29	27.6	265	58.3		24.9	312	58.7		24.2	249	20.0		27.1	150	33.2		09.1
10	44	30.1	280	58.3		24.3	327	59.3		24.4	264	22.1		27.0	165	35.9		09.1
11	59	32.6	295	58.2	+22	23.7	342	59.9	+23	24.6	279	24.2	+16	26.9	180	38.5	-18	09.0
12	74	35.0	310	58.2	+22	23.0	358	00.5	+23	24.8	294	26.3	+16	26.8	195	41.2	-18	09.0
13	89	37.5	325	58.2		22.4	13	01.1		25.0	309	28.4		26.6	210	43.8		09.0
14	104	40.0	340	58.1		21.8	28	01.7		25.1	324	30.5		26.5	225	46.5		08.9
15	119	42.4	355	58.1		21.2	43	02.3		25.3	339	32.6		26.4	240	49.1		08.9
16	134	44.9	10	58.0		20.5	58	02.9		25.5	354	34.7		26.3	255	51.7		08.9
17	149	47.4	25	58.0	+22	19.9	73	03.5	+23	25.7	9	36.8	+16	26.2	270	54.4	-18	08.8
18	164	49.8	40	58.0	+22	19.3	88	04.1	+23	25.9	24	38.8	+16	26.1	285	57.0	-18	08.8
19	179	52.3	55	57.9		18.7	103	04.7		26.0	39	40.9		25.9	300	59.7		08.8
20	194	54.7	70	57.9		18.0	118	05.3		26.2	54	43.0		25.8	316	02.3		08.8
21	209	57.2	85	57.9		17.4	133	05.9		26.4	69	45.1		25.7	331	05.0		08.7
22	224	59.7	100	57.8		16.8	148	06.5		26.6	84	47.2		25.6	346	07.6		08.7
23	240	02.1	115	57.8		16.1	163	07.1		26.7	99	49.3		25.5	1	10.3		08.7
24	255	04.6	130	57.8	+22	15.5	178	07.7	+23	26.9	114	51.4	+16	25.3	16	12.9	-18	08.6
Dif	—		0	-6			+6	+2			+21	-1			+26			0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 19 ^d 8	PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 1									
	PMG: 11 ^h 58 ^m 8					SD: 16 ^h 0			PMG: 3 ^h 58 ^m		R°: 53 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	19.5	+22 41.7	302	44.3	-13 23.7	83	60 N	21 16	22 49	** **	23 53 21	8 38 84	
1	195	19.4	41.9	317	11.6	15.9	78	58	20 57	22 08	** **	47 24	46 81	
2	210	19.2	42.2	331	39.0	08.0	79	56	41	21 41	** **	42 26	52 80	
3	225	19.1	42.4	346	06.4	-13 00.1	84	54	28	21	22 55	37 28	8 58 77	
4	240	19.0	42.7	0	33.8	-12 52.0	81	52	16	21 04	22 18	33 30	9 04 75	
5	255	18.9	+22 42.9	15	01.3	-12 43.9	81	50	20 06	20 49	21 52	23 29 32	9 08 74	
6	270	18.8	+22 43.2	29	28.8	-12 35.7	82	45	19 44	20 21	21 09	23 21 35	9 19 70	
7	285	18.7	43.4	43	56.3	27.5	82	40	26	19 59	20 40	14 38	27 68	
8	300	18.6	43.7	58	23.8	19.1	84	35	19 12	41	18	08 41	35 65	
9	315	18.4	43.9	72	51.4	10.7	84	30	18 59	27	20 00	23 03 43	41 63	
10	330	18.3	44.2	87	19.0	-12 02.2	85	20	38	19 02	19 31	22 54 46	9 52 59	
11	345	18.2	+22 44.4	101	46.6	-11 53.6	86	10 N	18 20	18 42	19 09	22 46 50	10 02 56	
12	0	18.1	+22 44.6	116	14.2	-11 45.0	86	0	18 02	18 25	18 51	22 39 52	10 11 53	
13	15	18.0	44.9	130	41.9	36.3	87	10 S	17 46	18 08	35	31 56	19 51	
14	30	17.9	45.1	145	09.6	27.5	88	20	28	17 51	19	23 59	29 47	
15	45	17.7	45.4	159	37.3	18.6	89	30	17 07	33	18 03	14 63	40 43	
16	60	17.6	45.6	174	05.1	09.7	89	35	16 55	23	17 55	09 65	46 41	
17	75	17.5	+22 45.8	188	32.9	-11 00.7	90	40	16 41	17 12	17 46	22 03 67	10 53 39	
18	90	17.4	+22 46.1	203	00.7	-10 51.6	91	45	16 25	16 59	17 36	21 56 70	11 01 36	
19	105	17.3	46.3	217	28.5	42.5	91	50	16 05	43	24	47 74	10 33	
20	120	17.2	46.5	231	56.4	33.3	92	52	15 56	36	19	43 76	15 31	
21	135	17.0	46.8	246	24.3	24.1	92	54	45	28	14	39 78	20 29	
22	150	16.9	47.0	260	52.2	14.7	94	56	33	20	08	34 80	25 28	
23	165	16.8	47.3	275	20.1	-10 05.3	94	58	19	16 10	17 02	29 82	31 26	
24	180	16.7	+22 47.5	289	48.1	-9 55.9	94	60 S	15 03	15 59	16 55	21 23 85	11 38 23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 6 ^h 58 ^m 5		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 07 ^m		Mag: -1.9 PMG: 16 ^h 18 ^m		Mag: +0.1 PMG: 22 ^h 51 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	255	04.6	130	57.8	178	07.7	+23 26.9	114	51.4	+16 25.3	16 12.9	-18 08.6
1	270	07.1	145	57.7	193	08.3	27.1	129	53.5	25.2	31 15.6	08.6
2	285	09.5	160	57.7	208	08.9	27.3	144	55.6	25.1	46 18.2	08.6
3	300	12.0	175	57.7	223	09.5	27.4	159	57.7	25.0	61 20.9	08.5
4	315	14.5	190	57.7	238	10.1	27.6	174	59.8	24.9	76 23.5	08.5
5	330	16.9	205	57.6	+22 12.3	253 10.7	+23 27.8	190	01.8	+16 24.8	91 26.1	-18 08.5
6	345	19.4	220	57.6	+22 11.7	268 11.3	+23 28.0	205	03.9	+16 24.6	106 28.8	-18 08.4
7	0	21.9	235	57.6	11.1	283 11.9	28.1	220	06.0	24.5	121 31.4	08.4
8	15	24.3	250	57.6	10.4	298 12.5	28.3	235	08.1	24.4	136 34.1	08.4
9	30	26.8	265	57.6	09.8	313 13.1	28.5	250	10.2	24.3	151 36.7	08.3
10	45	29.2	280	57.5	09.2	328 13.7	28.7	265	12.3	24.2	166 39.4	08.3
11	60	31.7	295	57.5	+22 08.5	343 14.3	+23 28.8	280	14.4	+16 24.1	181 42.0	-18 08.3
12	75	34.2	310	57.5	+22 07.9	358 14.9	+23 29.0	295	16.5	+16 23.9	196 44.7	-18 08.3
13	90	36.6	325	57.5	07.2	13 15.5	29.2	310	18.6	23.8	211 47.3	08.2
14	105	39.1	340	57.5	06.6	28 16.1	29.3	325	20.7	23.7	226 50.0	08.2
15	120	41.6	355	57.5	06.0	43 16.7	29.5	340	22.7	23.6	241 52.6	08.2
16	135	44.0	10	57.5	05.3	58 17.3	29.7	355	24.8	23.5	256 55.3	08.1
17	150	46.5	25	57.5	+22 04.7	73 17.9	+23 29.9	10	26.9	+16 23.3	271 57.9	-18 08.1
18	165	49.0	40	57.4	+22 04.0	88 18.5	+23 30.0	25	29.0	+16 23.2	287 00.5	-18 08.1
19	180	51.4	55	57.4	03.4	103 19.1	30.2	40	31.1	23.1	302 03.2	08.0
20	195	53.9	70	57.4	02.7	118 19.7	30.4	55	33.2	23.0	317 05.8	08.0
21	210	56.4	85	57.4	02.1	133 20.3	30.5	70	35.3	22.9	332 08.5	08.0
22	225	58.8	100	57.4	01.5	148 20.9	30.7	85	37.4	22.7	347 11.1	07.9
23	241	01.3	115	57.4	00.8	163 21.5	30.9	100	39.4	22.6	2 13.8	07.9
24	256	03.7	130	57.4	+22 00.2	178 22.1	+23 31.0	115	41.5	+16 22.5	17 16.4	-18 07.9
Dif	—		0	-6	+6	+2		+21	-1		+26	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 0			Edad: 20 ^d 8 PHE SD: 16 ^h 1 PMG: 4 ^h 51 ^m R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif Dec Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	16.7	+22	47.5	289	48.1	-9 55.9	60 N	** **	1 08	2 41	** **	** **	10 02 86
1	195	16.6		47.7	304	16.1	90 46.4	58	** **	1 49	3 00	** **	** **	07 83
2	210	16.5		48.0	318	44.1	90 36.8	56	** **	2 16	16	** **	** **	12 80
3	225	16.3		48.2	333	12.2	91 27.2	54	1 02	37	30	** **	** **	15 79
4	240	16.2		48.4	347	40.3	91 17.5	52	1 40	2 54	42	** **	** **	19 76
5	255	16.1	+22	48.6	2	08.4	91 -9 07.8	50	2 05	3 08	3 52	** **	** **	10 22 75
6	270	16.0	+22	48.9	16	36.5	91 -8 58.0	45	2 48	3 37	4 14	23 56	33	10 29 71
7	285	15.9		49.1	31	04.6	91 48.1	40	3 18	3 59	31	52 36		35 68
8	300	15.7		49.3	45	32.8	92 38.2	35	40	4 16	46	49 38		40 65
9	315	15.6		49.6	60	01.0	92 28.3	30	3 58	31	4 58	46 41		44 63
10	330	15.5		49.8	74	29.2	92 18.3	20	4 26	4 55	5 20	40 45		51 59
11	345	15.4	+22	50.0	88	57.5	93 -8 08.2	10 N	4 48	5 15	5 38	23 36	48	10 58 55
12	0	15.3	+22	50.2	103	25.8	93 -7 58.1	0	5 07	5 33	5 55	23 31	52	11 04 52
13	15	15.2		50.5	117	54.0	92 48.0	10 S	23	5 50	6 12	27 55		10 49
14	30	15.0		50.7	132	22.4	94 37.8	20	39	6 06	30	22 59		16 45
15	45	14.9		50.9	146	50.7	93 27.5	30	5 55	25	6 51	17 63		23 42
16	60	14.8		51.1	161	19.1	94 17.2	35	6 03	35	7 03	14 65		27 40
17	75	14.7	+22	51.4	175	47.4	93 -7 06.9	40	6 12	6 46	7 17	23 10	68	11 32 37
18	90	14.6	+22	51.6	190	15.8	94 -6 56.5	45	6 22	6 59	7 33	23 06	71	11 37 34
19	105	14.4		51.8	204	44.3	95 46.1	50	34	7 15	7 53	23 01	75	43 31
20	120	14.3		52.0	219	12.7	94 35.6	52	39	22	8 02	22 59	77	46 29
21	135	14.2		52.2	233	41.2	95 25.1	54	44	30	13	57 78		49 27
22	150	14.1		52.5	248	09.6	94 14.6	56	50	39	25	54 81		53 25
23	165	14.0		52.7	262	38.1	95 -6 04.0	58	6 56	48	39	51 83		11 57 23
24	180	13.8	+22	52.9	277	06.6	95 -5 53.4	60 S	7 03	7 59	8 56	22 48	85	12 01 21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 54 ^m 6		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 06 ^m		Mag: -1.9 PMG: 16 ^h 15 ^m		Mag: +0.1 PMG: 22 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	256	03.7	130	57.4	+22	00.2	178	22.1	+23	31.0	115	41.5	+16	22.5	17	16.4	-18	07.9
1	271	06.2	145	57.4	+21	59.5	193	22.7		31.2	130	43.6		22.4	32	19.1		07.8
2	286	08.7	160	57.4		58.9	208	23.3		31.4	145	45.7		22.3	47	21.7		07.8
3	301	11.1	175	57.4		58.2	223	23.9		31.5	160	47.8		22.2	62	24.3		07.8
4	316	13.6	190	57.4		57.6	238	24.5		31.7	175	49.9		22.0	77	27.0		07.8
5	331	16.1	205	57.5	+21	56.9	253	25.1	+23	31.9	190	52.0	+16	21.9	92	29.6	-18	07.7
6	346	18.5	220	57.5	+21	56.3	268	25.7	+23	32.0	205	54.0	+16	21.8	107	32.3	-18	07.7
7	1	21.0	235	57.5		55.6	283	26.3		32.2	220	56.1		21.7	122	34.9		07.7
8	16	23.5	250	57.5		55.0	298	26.9		32.4	235	58.2		21.6	137	37.6		07.6
9	31	25.9	265	57.5		54.3	313	27.6		32.5	251	00.3		21.4	152	40.2		07.6
10	46	28.4	280	57.5		53.7	328	28.2		32.7	266	02.4		21.3	167	42.9		07.6
11	61	30.9	295	57.5	+21	53.0	343	28.8	+23	32.8	281	04.5	+16	21.2	182	45.5	-18	07.5
12	76	33.3	310	57.5	+21	52.3	358	29.4	+23	33.0	296	06.6	+16	21.1	197	48.1	-18	07.5
13	91	35.8	325	57.6		51.7	13	30.0		33.2	311	08.6		21.0	212	50.8		07.5
14	106	38.2	340	57.6		51.0	28	30.6		33.3	326	10.7		20.8	227	53.4		07.4
15	121	40.7	355	57.6		50.4	43	31.2		33.5	341	12.8		20.7	242	56.1		07.4
16	136	43.2	10	57.6		49.7	58	31.8		33.7	356	14.9		20.6	257	58.7		07.4
17	151	45.6	25	57.6	+21	49.1	73	32.4	+23	33.8	11	17.0	+16	20.5	273	01.4	-18	07.4
18	166	48.1	40	57.7	+21	48.4	88	33.0	+23	34.0	26	19.1	+16	20.4	288	04.0	-18	07.3
19	181	50.6	55	57.7		47.7	103	33.6		34.1	41	21.1		20.2	303	06.7		07.3
20	196	53.0	70	57.7		47.1	118	34.2		34.3	56	23.2		20.1	318	09.3		07.3
21	211	55.5	85	57.7		46.4	133	34.8		34.5	71	25.3		20.0	333	11.9		07.2
22	226	58.0	100	57.8		45.8	148	35.4		34.6	86	27.4		19.9	348	14.6		07.2
23	242	00.4	115	57.8		45.1	163	36.0		34.8	101	29.5		19.8	3	17.2		07.2
24	257	02.9	130	57.8	+21	44.4	178	36.6	+23	34.9	116	31.6	+16	19.6	18	19.9	-18	07.1
Dif	—		0		-7		+6		+2		+21		-1		+26			

0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 59 ^m 2			Edad: 21 ^d 8 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 SD: 16°1 PMG: 5 ^h 44 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m	h m m	
0	180	13.8	+22 52.9	277	06.6	-5 53.4	96	60 N	21 19	22 55	** **	0 14 20	11 28 85	
1	195	13.7	53.1	291	35.2	42.7 ¹⁰⁷	96	58	20 59	22 12	** **	11 22	30 83	
2	210	13.6	53.3	306	03.7	32.1 ¹⁰⁶	95	56	43	21 44	** **	08 24	32 81	
3	225	13.5	53.5	320	32.3	21.3 ¹⁰⁸	96	54	30	23	23 01	05 27	34 78	
4	240	13.3	53.8	335	00.9	-5 10.6 ¹⁰⁷	96	52	18	21 06	22 21	03 28	35 77	
5	255	13.2	+22 54.0	349	29.5	-4 59.8 ¹⁰⁸	96	50	20 07	20 51	21 55	0 01 29	11 37 75	
6	270	13.1	+22 54.2	3	58.1	-4 49.0 ¹⁰⁸	96	45	19 45	20 22	21 11	** ** *	11 40 71	
7	285	13.0	54.4	18	26.7	38.2 ¹⁰⁸	96	40	28	20 00	20 41	** ** *	43 68	
8	300	12.9	54.6	32	55.4	27.3 ¹⁰⁹	97	35	13	19 42	19	** ** *	45 65	
9	315	12.7	54.8	47	24.0	16.4 ¹⁰⁹	96	30	19 00	27	20 01	** ** *	47 63	
10	330	12.6	55.0	61	52.7	-4 05.5 ¹⁰⁹	97	20	18 39	19 03	19 32	** ** *	50 59	
11	345	12.5	+22 55.2	76	21.4	-3 54.5 ¹¹⁰	97	10 N	18 20	18 43	19 10	** ** *	11 53 55	
12	0	12.4	+22 55.4	90	50.1	-3 43.6 ¹⁰⁹	97	0	18 03	18 25	18 51	** ** *	11 56 52	
13	15	12.3	55.7	105	18.8	32.6 ¹¹⁰	97	10 S	17 46	18 09	35	** ** *	11 59 48	
14	30	12.1	55.9	119	47.5	21.6 ¹¹⁰	97	20	28	17 52	19	** ** *	12 01 45	
15	45	12.0	56.1	134	16.2	-3 10.6 ¹¹⁰	97	30	17 07	33	18 03	** ** *	05 40	
16	60	11.9	56.3	148	45.0	-2 59.5 ¹¹¹	98	35	16 55	23	17 54	** ** *	07 38	
17	75	11.8	+22 56.5	163	13.7	-2 48.4 ¹¹¹	97	40	16 41	17 11	17 45	** ** *	12 09 35	
18	90	11.6	+22 56.7	177	42.5	-2 37.4 ¹¹⁰	98	45	16 25	16 58	17 35	** ** *	12 11 33	
19	105	11.5	56.9	192	11.2	26.3 ¹¹¹	97	50	16 05	43	24	** ** *	14 29	
20	120	11.4	57.1	206	40.0	15.1 ¹¹²	98	52	15 55	35	19	** ** *	15 28	
21	135	11.3	57.3	221	08.8	-2 04.0 ¹¹¹	98	54	44	28	13	** ** *	16 26	
22	150	11.2	57.5	235	37.6	-1 52.9 ¹¹¹	98	56	32	19	07	** ** *	18 24	
23	165	11.0	57.7	250	06.3	41.7 ¹¹²	97	58	18	16 09	17 01	** ** *	20 21	
24	180	10.9	+22 57.9	264	35.1	-1 30.6 ¹¹¹	98	60 S	15 01	15 58	16 54	** ** *	12 22 19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 50 ^m 7		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 05 ^m		Mag: -1.9 PMG: 16 ^h 12 ^m		Mag: +0.1 PMG: 22 ^h 43 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	257	02.9	130	57.8	+21 44.4	178	36.6	+23 34.9	116	31.6	+16 19.6	18	19.9	-18 07.1
1	272	05.3	145	57.9	43.8	193	37.2	35.1	131	33.6	19.5	33	22.5	07.1
2	287	07.8	160	57.9	43.1	208	37.8	35.2	146	35.7	19.4	48	25.2	07.1
3	302	10.3	175	57.9	42.4	223	38.4	35.4	161	37.8	19.3	63	27.8	07.0
4	317	12.7	190	58.0	41.8	238	39.0	35.6	176	39.9	19.2	78	30.4	07.0
5	332	15.2	205	58.0	+21 41.1	253	39.6	+23 35.7	191	42.0	+16 19.0	93	33.1	-18 07.0
6	347	17.7	220	58.0	+21 40.4	268	40.2	+23 35.9	206	44.0	+16 18.9	108	35.7	-18 07.0
7	2	20.1	235	58.1	39.8	283	40.8	36.0	221	46.1	18.8	123	38.4	06.9
8	17	22.6	250	58.1	39.1	298	41.4	36.2	236	48.2	18.7	138	41.0	06.9
9	32	25.1	265	58.2	38.4	313	42.0	36.3	251	50.3	18.5	153	43.7	06.9
10	47	27.5	280	58.2	37.8	328	42.6	36.5	266	52.4	18.4	168	46.3	06.8
11	62	30.0	295	58.3	+21 37.1	343	43.2	+23 36.6	281	54.5	+16 18.3	183	48.9	-18 06.8
12	77	32.5	310	58.3	+21 36.4	358	43.8	+23 36.8	296	56.5	+16 18.2	198	51.6	-18 06.8
13	92	34.9	325	58.4	35.8	13	44.4	37.0	311	58.6	18.1	213	54.2	06.7
14	107	37.4	340	58.4	35.1	28	45.0	37.1	327	00.7	17.9	228	56.9	06.7
15	122	39.8	355	58.5	34.4	43	45.6	37.3	342	02.8	17.8	243	59.5	06.7
16	137	42.3	10	58.5	33.8	58	46.2	37.4	357	04.9	17.7	259	02.2	06.6
17	152	44.8	25	58.6	+21 33.1	73	46.8	+23 37.6	12	06.9	+16 17.6	274	04.8	-18 06.6
18	167	47.2	40	58.6	+21 32.4	88	47.4	+23 37.7	27	09.0	+16 17.5	289	07.4	-18 06.6
19	182	49.7	55	58.7	31.7	103	48.0	37.9	42	11.1	17.3	304	10.1	06.6
20	197	52.2	70	58.7	31.1	118	48.6	38.0	57	13.2	17.2	319	12.7	06.5
21	212	54.6	85	58.8	30.4	133	49.2	38.2	72	15.2	17.1	334	15.4	06.5
22	227	57.1	100	58.8	29.7	148	49.8	38.3	87	17.3	17.0	349	18.0	06.5
23	242	59.6	115	58.9	29.0	163	50.4	38.5	102	19.4	16.8	4	20.6	06.4
24	258	02.0	130	59.0	+21 28.3	178	51.0	+23 38.6	117	21.5	+16 16.7	19	23.3	-18 06.4
Dif	—		0 -7		+6 +2		+21 -1		+26 0					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 11 ^h 59 ^m 4				Edad: 22 ^d 8 PHE SD: 16/2 PMG: 6 ^h 35 ^m					R°: 52 ^m			Hora		R°					
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico		Civil		Hora		R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	180	10.9	+22	57.9	264	35.1	-1	30.6	60 N	** **	1 03	2 39	0 34	19	12 53	86				
1	195	10.8		58.1	279	03.9	98	19.4 ¹¹²	58	** **	1 46	2 59	33	22	53	83				
2	210	10.7		58.3	293	32.7	98	-1 08.2 ¹¹²	56	** **	2 14	3 15	32	24	53	80				
3	225	10.5		58.5	308	01.6	99	-0 57.0 ¹¹²	54	0 58	35	29	32	25	52	79				
4	240	10.4		58.7	322	30.4	98	45.8 ¹¹²	52	1 38	2 53	41	31	28	52	77				
5	255	10.3	+22	58.9	336	59.2	98	-0 34.6 ¹¹²	50	2 04	3 07	3 51	0 30	30	12 52	75				
6	270	10.2	+22	59.1	351	28.0	98	-0 23.4 ¹¹²	45	2 47	3 36	4 13	0 29	33	12 51	71				
7	285	10.0		59.3	5	56.8	98	12.2 ¹¹²	40	3 17	3 58	31	28	36	51	68				
8	300	09.9		59.5	20	25.6	98	-0 01.0 ¹¹²	35	40	4 16	46	27	39	50	65				
9	315	09.8		59.7	34	54.4	98	+0 10.2 ¹¹²	30	3 58	31	4 58	27	40	50	63				
10	330	09.7	+22	59.9	49	23.3	99	21.4 ¹¹²	20	4 26	4 55	5 20	25	45	49	59				
11	345	09.5	+23	00.1	63	52.1	98	+0 32.6 ¹¹²	10 N	4 48	5 15	5 38	0 24	48	12 48	55				
12	0	09.4	+23	00.2	78	20.9	98	+0 43.8 ¹¹²	0	5 07	5 33	5 56	0 23	52	12 48	52				
13	15	09.3		00.4	92	49.7	98	+0 55.0 ¹¹²	10 S	24	5 50	6 13	22	55	47	49				
14	30	09.2		00.6	107	18.5	98	+1 06.2 ¹¹²	20	40	6 07	31	21	59	46	45				
15	45	09.0		00.8	121	47.3	98	17.3 ¹¹¹	30	5 56	25	6 52	20	63	45	41				
16	60	08.9		01.0	136	16.1	98	28.5 ¹¹²	35	6 04	36	7 04	19	65	45	39				
17	75	08.8	+23	01.2	150	44.9	98	+1 39.7 ¹¹²	40	6 13	6 47	7 18	0 18	68	12 44	37				
18	90	08.7	+23	01.4	165	13.7	98	+1 50.8 ¹¹¹	45	6 23	7 00	7 34	0 17	71	12 44	33				
19	105	08.5		01.6	179	42.5	98	+2 02.0 ¹¹²	50	35	16	7 54	16	75	43	30				
20	120	08.4		01.8	194	11.2	97	13.1 ¹¹¹	52	40	23	8 04	16	76	43	28				
21	135	08.3		01.9	208	40.0	98	24.2 ¹¹¹	54	45	31	15	15	79	42	26				
22	150	08.2		02.1	223	08.8	98	35.3 ¹¹¹	56	51	40	27	15	80	42	24				
23	165	08.0		02.3	237	37.5	97	46.4 ¹¹¹	58	6 58	7 50	41	14	83	41	22				
24	180	07.9	+23	02.5	252	06.3	98	+2 57.5 ¹¹¹	60 S	7 05	8 01	8 58	0 13	86	12 41	19				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 46 ^m 8				Mag: -4.5 PMG: 15 ^h 16 ^m				Mag: +1.5 PMG: 12 ^h 04 ^m				Mag: -1.9 PMG: 16 ^h 08 ^m				Mag: +0.1 PMG: 22 ^h 38 ^m			
	hG ♈		hG ♀		hG ♂		Dec		hG ♉		Dec		hG ♊		Dec		hG ♋		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	258	02.0	130	59.0	+21	28.3	178	51.0	+23	38.6	117	21.5	+16	16.7	19	23.3	-18	06.4		
1	273	04.5	145	59.0		27.7	193	51.6		38.8	132	23.6		16.6	34	25.9		06.4		
2	288	06.9	160	59.1		27.0	208	52.2		38.9	147	25.6		16.5	49	28.6		06.3		
3	303	09.4	175	59.2		26.3	223	52.8		39.1	162	27.7		16.4	64	31.2		06.3		
4	318	11.9	190	59.2		25.6	238	53.4		39.2	177	29.8		16.2	79	33.9		06.3		
5	333	14.3	205	59.3	+21	25.0	253	54.0	+23	39.4	192	31.9	+16	16.1	94	36.5	-18	06.3		
6	348	16.8	220	59.4	+21	24.3	268	54.6	+23	39.5	207	34.0	+16	16.0	109	39.1	-18	06.2		
7	3	19.3	235	59.4		23.6	283	55.2		39.6	222	36.0		15.9	124	41.8		06.2		
8	18	21.7	250	59.5		22.9	298	55.9		39.8	237	38.1		15.7	139	44.4		06.2		
9	33	24.2	265	59.6		22.2	313	56.5		39.9	252	40.2		15.6	154	47.1		06.1		
10	48	26.7	280	59.7		21.5	328	57.1		40.1	267	42.3		15.5	169	49.7		06.1		
11	63	29.1	295	59.7	+21	20.9	343	57.7	+23	40.2	282	44.3	+16	15.4	184	52.3	-18	06.1		
12	78	31.6	310	59.8	+21	20.2	358	58.3	+23	40.4	297	46.4	+16	15.3	199	55.0	-18	06.0		
13	93	34.1	325	59.9		19.5	13	58.9		40.5	312	48.5		15.1	214	57.6		06.0		
14	108	36.5	341	00.0		18.8	28	59.5		40.7	327	50.6		15.0	230	00.3		06.0		
15	123	39.0	356	00.1		18.1	44	00.1		40.8	342	52.6		14.9	245	02.9		06.0		
16	138	41.4	11	00.1		17.4	59	00.7		41.0	357	54.7		14.8	260	05.5		05.9		
17	153	43.9	26	00.2	+21	16.7	74	01.3	+23	41.1	12	56.8	+16	14.6	275	08.2	-18	05.9		
18	168	46.4	41	00.3	+21	16.1	89	01.9	+23	41.2	27	58.9	+16	14.5	290	10.8	-18	05.9		
19	183	48.8	56	00.4		15.4	104	02.5		41.4	43	00.9		14.4	305	13.5		05.8		
20	198	51.3	71	00.5		14.7	119	03.1		41.5	58	03.0		14.3	320	16.1		05.8		
21	213	53.8	86	00.6		14.0	134	03.7		41.7	73	05.1		14.1	335	18.8		05.8		
22	228	56.2	101	00.7		13.3	149	04.3		41.8	88	07.2		14.0	350	21.4		05.7		
23	243	58.7	116	00.8		12.6	164	04.9		41.9	103	09.2		13.9	5	24.0		05.7		
24	259	01.2	131	00.9	+21	11.9	179	05.5	+23	42.1	118	11.3	+16	13.8	20	26.7	-18	05.7		
Dif	—		+1		-7		+6		+1		+21		-1		+26		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 59 ^m 6			Edad: 23 ^d 8 PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/2 SD: 16'1 PMG: 7 ^h 27 ^m R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	07.9	+23 02.5	252	06.3	+2 57.5	60 N	21 21	23 00	** **	0 53 20	14 19 85		
1	195	07.8	02.7	266	35.0	+3 08.6 ¹¹¹	58	21 01	22 15	** **	55 22	16 82		
2	210	07.7	02.9	281	03.7	19.6 ¹¹⁰	56	20 45	21 46	** **	56 25	13 80		
3	225	07.5	03.0	295	32.4	30.6 ¹¹⁰	54	31	25	23 05	57 27	11 78		
4	240	07.4	03.2	310	01.1	41.6 ¹¹⁰	52	19	21 07	22 24	0 59 28	09 76		
5	255	07.3	+23 03.4	324	29.8	+3 52.6 ¹¹⁰	50	20 08	20 53	21 57	1 00 30	14 07 74		
6	270	07.2	+23 03.6	338	58.5	+4 03.5 ¹⁰⁹	45	19 46	20 24	21 13	1 02 34	14 02 71		
7	285	07.0	03.8	353	27.2	14.5 ¹¹⁰	40	29	20 01	20 43	04 37	13 59 67		
8	300	06.9	03.9	7	55.8	25.4 ¹⁰⁹	35	14	19 43	20	06 39	55 66		
9	315	06.8	04.1	22	24.5	36.2 ¹⁰⁸	30	19 01	28	20 02	07 42	53 63		
10	330	06.6	04.3	36	53.1	47.1 ¹⁰⁹	20	18 39	19 04	19 33	10 45	48 59		
11	345	06.5	+23 04.5	51	21.7	+4 57.9 ¹⁰⁸	10 N	18 21	18 44	19 11	1 12 49	13 43 56		
12	0	06.4	+23 04.6	65	50.3	+5 08.7 ¹⁰⁸	0	18 03	18 26	18 52	1 15 52	13 40 52		
13	15	06.3	04.8	80	18.9	19.5 ¹⁰⁸	10 S	17 46	18 09	35	17 56	36 49		
14	30	06.1	05.0	94	47.5	30.2 ¹⁰⁷	20	28	17 52	19	20 59	31 46		
15	45	06.0	05.2	109	16.0	40.9 ¹⁰⁷	30	17 07	33	18 03	23 63	26 43		
16	60	05.9	05.3	123	44.6	+5 51.5 ¹⁰⁶	35	16 55	23	17 54	24 66	24 40		
17	75	05.8	+23 05.5	138	13.1	+6 02.2 ¹⁰⁷	40	16 41	17 11	17 45	1 26 68	13 21 37		
18	90	05.6	+23 05.7	152	41.6	+6 12.8 ¹⁰⁶	45	16 24	16 58	17 35	1 28 71	13 17 35		
19	105	05.5	05.8	167	10.1	23.3 ¹⁰⁵	50	16 04	42	24	31 75	13 31		
20	120	05.4	06.0	181	38.5	33.8 ¹⁰⁵	52	15 54	35	18	32 77	11 29		
21	135	05.2	06.2	196	07.0	44.3 ¹⁰⁵	54	43	27	13	34 78	08 28		
22	150	05.1	06.3	210	35.4	+6 54.7 ¹⁰⁴	56	31	18	07	35 81	06 26		
23	165	05.0	06.5	225	03.8	+7 05.1 ¹⁰⁴	58	17	16 08	17 00	37 83	03 24		
24	180	04.9	+23 06.7	239	32.2	+7 15.5 ¹⁰⁴	60 S	15 00	15 57	16 53	1 39 85	13 00 22		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 6 ^h 42 ^m 8		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 03 ^m		Mag: -1.9 PMG: 16 ^h 05 ^m			Mag: +0.1 PMG: 22 ^h 34 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	259	01.2	131	00.9	+21 11.9	179 05.5	+23 42.1	118 11.3	+16 13.8	20 26.7	-18 05.7	
1	274	03.6	146	01.0	11.2	194 06.1	42.2	133 13.4	13.7	35 29.3	05.7	
2	289	06.1	161	01.1	10.5	209 06.7	42.4	148 15.5	13.5	50 32.0	05.6	
3	304	08.6	176	01.2	09.8	224 07.3	42.5	163 17.5	13.4	65 34.6	05.6	
4	319	11.0	191	01.3	09.1	239 07.9	42.6	178 19.6	13.3	80 37.2	05.6	
5	334	13.5	206	01.4	+21 08.4	254 08.5	+23 42.8	193 21.7	+16 13.2	95 39.9	-18 05.5	
6	349	15.9	221	01.5	+21 07.7	269 09.1	+23 42.9	208 23.8	+16 13.0	110 42.5	-18 05.5	
7	4	18.4	236	01.6	07.0	284 09.7	43.1	223 25.8	12.9	125 45.1	05.5	
8	19	20.9	251	01.7	06.4	299 10.3	43.2	238 27.9	12.8	140 47.8	05.4	
9	34	23.3	266	01.8	05.7	314 10.9	43.3	253 30.0	12.7	155 50.4	05.4	
10	49	25.8	281	01.9	05.0	329 11.5	43.5	268 32.1	12.5	170 53.1	05.4	
11	64	28.3	296	02.0	+21 04.3	344 12.1	+23 43.6	283 34.1	+16 12.4	185 55.7	-18 05.4	
12	79	30.7	311	02.1	+21 03.6	359 12.7	+23 43.7	298 36.2	+16 12.3	200 58.3	-18 05.3	
13	94	33.2	326	02.2	02.9	14 13.3	43.9	313 38.3	12.2	216 01.0	05.3	
14	109	35.7	341	02.3	02.2	29 13.9	44.0	328 40.3	12.0	231 03.6	05.3	
15	124	38.1	356	02.4	01.5	44 14.5	44.1	343 42.4	11.9	246 06.3	05.2	
16	139	40.6	11	02.6	00.8	59 15.1	44.3	358 44.5	11.8	261 08.9	05.2	
17	154	43.0	26	02.7	+21 00.1	74 15.7	+23 44.4	13 46.6	+16 11.7	276 11.5	-18 05.2	
18	169	45.5	41	02.8	+20 59.4	89 16.3	+23 44.5	28 48.6	+16 11.5	291 14.2	-18 05.1	
19	184	48.0	56	02.9	58.7	104 16.9	44.7	43 50.7	11.4	306 16.8	05.1	
20	199	50.4	71	03.0	58.0	119 17.5	44.8	58 52.8	11.3	321 19.5	05.1	
21	214	52.9	86	03.1	57.2	134 18.1	44.9	73 54.8	11.2	336 22.1	05.1	
22	229	55.4	101	03.3	56.5	149 18.7	45.1	88 56.9	11.0	351 24.7	05.0	
23	244	57.8	116	03.4	55.8	164 19.4	45.2	103 59.0	10.9	6 27.4	05.0	
24	260	00.3	131	03.5	+20 55.1	179 20.0	+23 45.3	119 01.1	+16 10.8	21 30.0	-18 05.0	
Dif	—		+1	-7		+6	+1	+21	-1		+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 8				Edad: 24 ^d 8 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 1 20 ^h : 59 ^m 0 SD: 16 ^h 1 PMG: 8 ^h 19 ^m R°: 54 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	04.9	+23	06.7	239	32.2	+7	15.5	60 N	** *	0 59	2 38	1 13	23	15 44	83	
1	195	04.7		06.8	254	00.6	94	25.8	58	** *	1 44	2 58	17	26	38	81	
2	210	04.6		07.0	268	28.9	93	36.0	56	** *	2 13	3 14	21	27	33	78	
3	225	04.5		07.2	282	57.2	93	46.2	54	0 54	34	28	24	29	29	76	
4	240	04.3		07.3	297	25.5	93	+7 56.4	52	1 36	2 52	40	27	31	25	74	
5	255	04.2	+23	07.5	311	53.8	93	+8 06.5	50	2 02	3 07	3 51	1 30	32	15 21	73	
6	270	04.1	+23	07.7	326	22.1	93	+8 16.6	45	2 47	3 36	4 13	1 36	36	15 13	70	
7	285	04.0		07.8	340	50.3	92	26.6	40	3 17	3 58	31	41	38	06	67	
8	300	03.8		08.0	355	18.5	92	36.6	35	39	4 16	45	45	41	15 01	64	
9	315	03.7		08.2	9	46.7	92	46.5	30	3 58	31	4 58	49	43	14 56	62	
10	330	03.6		08.3	24	14.9	92	+8 56.3	20	4 26	4 56	5 20	1 55	47	47	59	
11	345	03.4	+23	08.5	38	43.0	91	+9 06.2	10 N	4 49	5 16	5 39	2 01	50	14 39	56	
12	0	03.3	+23	08.6	53	11.2	92	+9 15.9	0	5 07	5 34	5 56	2 07	53	14 32	54	
13	15	03.2		08.8	67	39.3	91	25.6	10 S	24	5 51	6 13	13	56	25	51	
14	30	03.1		08.9	82	07.3	90	35.2	20	40	6 08	32	19	59	17	48	
15	45	02.9		09.1	96	35.4	91	44.8	30	5 56	26	6 53	26	62	09	44	
16	60	02.8		09.3	111	03.4	90	+9 54.3	35	6 05	37	7 05	30	65	14 04	42	
17	75	02.7	+23	09.4	125	31.4	90	+10 03.8	40	6 14	6 48	7 19	2 34	68	13 58	40	
18	90	02.5	+23	09.6	139	59.4	90	+10 13.2	45	6 24	7 02	7 35	2 39	71	13 52	37	
19	105	02.4		09.7	154	27.3	89	22.5	50	36	17	7 56	46	74	44	34	
20	120	02.3		09.9	168	55.3	90	31.8	52	41	25	8 05	49	75	40	33	
21	135	02.1		10.0	183	23.2	89	41.0	54	47	33	16	52	77	36	31	
22	150	02.0		10.2	197	51.1	89	50.1	56	53	42	29	2 56	79	32	29	
23	165	01.9		10.3	212	18.9	88	+10 59.2	58	6 59	7 52	8 43	3 00	81	27	27	
24	180	01.8	+23	10.5	226	46.8	89	+11 08.2	60 S	7 07	8 03	9 00	3 04	85	13 22	24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 38 ^m 9		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +1.5 PMG: 12 ^h 02 ^m		Mag: -1.9 PMG: 16 ^h 02 ^m		Mag: +0.1 PMG: 22 ^h 30 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	260	00.3	131	03.5	+20	55.1	179	20.0	+23	45.3	119	01.1	+16	10.8	21	30.0	-18	05.0
1	275	02.8	146	03.7		54.4	194	20.6		45.5	134	03.1		10.7	36	32.6		04.9
2	290	05.2	161	03.8		53.7	209	21.2		45.6	149	05.2		10.5	51	35.3		04.9
3	305	07.7	176	03.9		53.0	224	21.8		45.7	164	07.3		10.4	66	37.9		04.9
4	320	10.2	191	04.0		52.3	239	22.4		45.9	179	09.3		10.3	81	40.6		04.9
5	335	12.6	206	04.2	+20	51.6	254	23.0	+23	46.0	194	11.4	+16	10.2	96	43.2	-18	04.8
6	350	15.1	221	04.3	+20	50.9	269	23.6	+23	46.1	209	13.5	+16	10.0	111	45.8	-18	04.8
7	5	17.5	236	04.4		50.2	284	24.2		46.3	224	15.5		09.9	126	48.5		04.8
8	20	20.0	251	04.6		49.5	299	24.8		46.4	239	17.6		09.8	141	51.1		04.7
9	35	22.5	266	04.7		48.8	314	25.4		46.5	254	19.7		09.7	156	53.8		04.7
10	50	24.9	281	04.9		48.0	329	26.0		46.6	269	21.8		09.5	171	56.4		04.7
11	65	27.4	296	05.0	+20	47.3	344	26.6	+23	46.8	284	23.8	+16	09.4	186	59.0	-18	04.6
12	80	29.9	311	05.2	+20	46.6	359	27.2	+23	46.9	299	25.9	+16	09.3	202	01.7	-18	04.6
13	95	32.3	326	05.3		45.9	14	27.8		47.0	314	28.0		09.2	217	04.3		04.6
14	110	34.8	341	05.4		45.2	29	28.4		47.1	329	30.0		09.0	232	06.9		04.6
15	125	37.3	356	05.6		44.5	44	29.0		47.3	344	32.1		08.9	247	09.6		04.5
16	140	39.7	11	05.7		43.8	59	29.6		47.4	359	34.2		08.8	262	12.2		04.5
17	155	42.2	26	05.9	+20	43.1	74	30.2	+23	47.5	14	36.2	+16	08.7	277	14.8	-18	04.5
18	170	44.7	41	06.0	+20	42.3	89	30.8	+23	47.6	29	38.3	+16	08.5	292	17.5	-18	04.4
19	185	47.1	56	06.2		41.6	104	31.4		47.8	44	40.4		08.4	307	20.1		04.4
20	200	49.6	71	06.3		40.9	119	32.0		47.9	59	42.4		08.3	322	22.8		04.4
21	215	52.0	86	06.5		40.2	134	32.6		48.0	74	44.5		08.2	337	25.4		04.4
22	230	54.5	101	06.7		39.5	149	33.2		48.1	89	46.6		08.0	352	28.0		04.3
23	245	57.0	116	06.8		38.7	164	33.8		48.3	104	48.6		07.9	7	30.7		04.3
24	260	59.4	131	07.0	+20	38.0	179	34.4	+23	48.4	119	50.7	+16	07.8	22	33.3	-18	04.3
Dif	—		+1 -7		+6 +1		+21 -1		+26 0									

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 25 ^d 8 PHE { 4 ^h : 58/9 12 ^h : 58/8 20 ^h : 58/7													
	PMG: 12 ^h 00 ^m 0				SD: 16 ^h 1 PMG: 9 ^h 13 ^m R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	180	01.8	+23	10.5	226	46.8	+11	08.2	60 N	21 23	23 05	** **	1 36 27		17 07 78			
1	195	01.6		10.6	241	14.6		17.1	58	21 03	22 17	** **	43 29		16 59 76			
2	210	01.5		10.8	255	42.3		26.0	56	20 47	21 48	** **	48 32		51 75			
3	225	01.4		10.9	270	10.1		34.8	54	33	27	23 09	53 34		45 77			
4	240	01.2		11.1	284	37.8		43.5	52	20	21 09	22 26	1 58 35		39 71			
5	255	01.1	+23	11.2	299	05.5	+11	52.2	50	20 10	20 54	21 59	2 02 37		16 34 70			
6	270	01.0	+23	11.4	313	33.2	+12	00.8	45	19 47	20 25	21 14	2 12 39		16 23 67			
7	285	00.8		11.5	328	00.9		09.3	40	30	20 02	20 44	19 42		13 65			
8	300	00.7		11.6	342	28.5		17.7	35	15	19 44	21	26 44		16 05 63			
9	315	00.6		11.8	356	56.1		26.0	30	19 02	29	20 02	32 46		15 58 62			
10	330	00.4		11.9	11	23.7		34.3	20	18 40	19 04	19 34	42 49		46 59			
11	345	00.3	+23	12.1	25	51.3	+12	42.5	10 N	18 21	18 44	19 11	2 51 52		15 35 57			
12	0	00.2	+23	12.2	40	18.8	+12	50.6	0	18 04	18 26	18 52	3 00 54		15 26 54			
13	15	00.1		12.3	54	46.3	+12	58.7	10 S	17 46	18 09	36	09 56		16 52			
14	29	59.9		12.5	69	13.8	+13	06.6	20	28	17 52	19	18 59		15 05 50			
15	44	59.8		12.6	83	41.3		14.5	30	17 07	33	18 03	28 63		14 53 47			
16	59	59.7		12.8	98	08.7		22.3	35	16 55	23	17 54	35 64		46 46			
17	74	59.5	+23	12.9	112	36.1	+13	30.0	40	16 41	17 11	17 45	3 42 66		14 38 44			
18	89	59.4	+23	13.0	127	03.5	+13	37.7	45	16 24	16 58	17 35	3 50 68		14 29 42			
19	104	59.3		13.2	141	30.9		45.2	50	16 04	42	23	4 00 71		18 39			
20	119	59.1		13.3	155	58.2	+13	52.7	52	15 54	35	18	04 73		13 38			
21	134	59.0		13.4	170	25.6	+14	00.0	54	43	27	13	09 75		07 37			
22	149	58.9		13.6	184	52.9	+14	07.3	56	30	18	07	15 77		14 01 35			
23	164	58.7		13.7	199	20.2		14.5	58	15 16	16 07	17 00	21 79		13 54 33			
24	179	58.6	+23	13.8	213	47.4	+14	21.6	60 S	14 59	15 56	16 52	4 29 81		13 46 31			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 35 ^m 0		Mag: -4.5 PMG: 15 ^h 15 ^m				Mag: +1.5 PMG: 12 ^h 01 ^m				Mag: -1.9 PMG: 15 ^h 58 ^m				Mag: +0.1 PMG: 22 ^h 26 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	260	59.4	131	07.0	+20	38.0	179	34.4	+23	48.4	119	50.7	+16	07.8	22	33.3	-18	04.3
1	276	01.9	146	07.1		37.3	194	35.0		48.5	134	52.8		07.6	37	35.9		04.2
2	291	04.4	161	07.3		36.6	209	35.6		48.6	149	54.8		07.5	52	38.6		04.2
3	306	06.8	176	07.5		35.9	224	36.2		48.8	164	56.9		07.4	67	41.2		04.2
4	321	09.3	191	07.6		35.1	239	36.8		48.9	179	59.0		07.3	82	43.8		04.2
5	336	11.8	206	07.8	+20	34.4	254	37.4	+23	49.0	195	01.0	+16	07.1	97	46.5	-18	04.1
6	351	14.2	221	08.0	+20	33.7	269	38.0	+23	49.1	210	03.1	+16	07.0	112	49.1	-18	04.1
7	6	16.7	236	08.1		33.0	284	38.7		49.2	225	05.2		06.9	127	51.8		04.1
8	21	19.1	251	08.3		32.3	299	39.3		49.4	240	07.2		06.8	142	54.4		04.0
9	36	21.6	266	08.5		31.5	314	39.9		49.5	255	09.3		06.6	157	57.0		04.0
10	51	24.1	281	08.6		30.8	329	40.5		49.6	270	11.4		06.5	172	59.7		04.0
11	66	26.5	296	08.8	+20	30.1	344	41.1	+23	49.7	285	13.4	+16	06.4	188	02.3	-18	04.0
12	81	29.0	311	09.0	+20	29.4	359	41.7	+23	49.8	300	15.5	+16	06.2	203	04.9	-18	03.9
13	96	31.5	326	09.2		28.6	14	42.3		49.9	315	17.6		06.1	218	07.6		03.9
14	111	33.9	341	09.4		27.9	29	42.9		50.1	330	19.6		06.0	233	10.2		03.9
15	126	36.4	356	09.5		27.2	44	43.5		50.2	345	21.7		05.9	248	12.8		03.8
16	141	38.9	11	09.7		26.5	59	44.1		50.3	0	23.8		05.7	263	15.5		03.8
17	156	41.3	26	09.9	+20	25.7	74	44.7	+23	50.4	15	25.8	+16	05.6	278	18.1	-18	03.8
18	171	43.8	41	10.1	+20	25.0	89	45.3	+23	50.5	30	27.9	+16	05.5	293	20.7	-18	03.8
19	186	46.3	56	10.3		24.3	104	45.9		50.6	45	29.9		05.4	308	23.4		03.7
20	201	48.7	71	10.5		23.5	119	46.5		50.8	60	32.0		05.2	323	26.0		03.7
21	216	51.2	86	10.7		22.8	134	47.1		50.9	75	34.1		05.1	338	28.6		03.7
22	231	53.6	101	10.8		22.1	149	47.7		51.0	90	36.1		05.0	353	31.3		03.6
23	246	56.1	116	11.0		21.4	164	48.3		51.1	105	38.2		04.8	8	33.9		03.6
24	261	58.6	131	11.2	+20	20.6	179	48.9	+23	51.2	120	40.3	+16	04.7	23	36.6	-18	03.6
Dif	—		+2		-7		+6		+1		+21		-1		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 2			Edad: 26 ^d 8 PHE { SD: 16 ^h 0 PMG: 10 ^h 07 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	58.6	+23	13.8	213	47.4	+14	21.6	60 N	** **	0 55	2 37	2 03	34	18 25 71
1	194	58.5		14.0	228	14.7 83		28.6 70	58	** **	1 43	2 57	12	36	15 69
2	209	58.3		14.1	242	41.9 82		35.5 69	56	** **	2 12	3 13	20	38	18 06 67
3	224	58.2		14.2	257	09.1 82		42.4 69	54	0 51	33	27	27	39	17 58 66
4	239	58.1		14.4	271	36.3 82		49.1 67	52	1 34	2 51	40	33	41	50 66
5	254	57.9	+23	14.5	286	03.4 81	+14	55.8 67	50	2 01	3 06	3 50	2 39	42	17 44 65
6	269	57.8	+23	14.6	300	30.6 82	+15	02.3 65	45	2 46	3 35	4 13	2 51	44	17 30 63
7	284	57.7		14.8	314	57.7 81		08.8 65	40	3 16	3 58	31	3 01	46	18 62
8	299	57.5		14.9	329	24.8 81		15.2 64	35	39	4 16	45	10	47	08 61
9	314	57.4		15.0	343	51.9 81		21.4 62	30	3 58	31	4 58	18	49	17 00 59
10	329	57.3		15.1	358	19.0 81		27.6 62	20	4 27	4 56	5 20	31	51	16 45 58
11	344	57.1	+23	15.3	12	46.1 81	+15	33.7 61	10 N	4 49	5 16	5 39	3 43	53	16 32 57
12	359	57.0	+23	15.4	27	13.1 80	+15	39.7 60	0	5 08	5 34	5 57	3 54	55	16 20 55
13	14	56.9		15.5	41	40.1 80		45.6 59	10 S	25	5 51	6 14	4 05	57	16 08 54
14	29	56.7		15.6	56	07.2 81		51.4 58	20	41	6 08	32	17	59	15 55 52
15	44	56.6		15.7	70	34.2 80	+15	57.1 57	30	5 57	27	6 53	31	60	40 51
16	59	56.5		15.9	85	01.2 80	+16	02.6 55	35	6 06	37	7 06	39	62	32 49
17	74	56.3	+23	16.0	99	28.1 79	+16	08.1 55	40	6 15	6 49	7 20	4 48	63	15 22 48
18	89	56.2	+23	16.1	113	55.1 80	+16	13.5 54	45	6 25	7 02	7 36	4 58	66	15 11 46
19	104	56.1		16.2	128	22.1 80		18.8 53	50	37	18	7 57	5 11	68	14 57 45
20	119	55.9		16.3	142	49.0 79		24.0 52	52	42	26	8 07	17	69	51 43
21	134	55.8		16.5	157	15.9 79		29.1 51	54	48	34	18	24	70	44 42
22	149	55.7		16.6	171	42.9 80		34.1 50	56	6 54	43	30	32	71	36 41
23	164	55.5		16.7	186	09.8 79		38.9 48	58	7 01	7 53	8 45	40	73	27 40
24	179	55.4	+23	16.8	200	36.7 79	+16	43.7 48	60 S	7 08	8 05	9 02	5 50	75	14 17 38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 6 ^h 31 ^m 0		Mag: -4.5 PMG: 15 ^h 15 ^m		Mag: +1.5 PMG: 12 ^h 00 ^m		Mag: -1.9 PMG: 15 ^h 55 ^m		Mag: +0.1 PMG: 22 ^h 22 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	261	58.6	131	11.2	+20	20.6	179	48.9	+23	51.2	120	40.3	+16	04.7	23	36.6	-18	03.6	
1	277	01.0	146	11.4		19.9	194	49.5		51.3	135	42.3		04.6	38	39.2		03.6	
2	292	03.5	161	11.6		19.2	209	50.1		51.4	150	44.4		04.5	53	41.8		03.5	
3	307	06.0	176	11.8		18.4	224	50.7		51.6	165	46.4		04.3	68	44.5		03.5	
4	322	08.4	191	12.0		17.7	239	51.3		51.7	180	48.5		04.2	83	47.1		03.5	
5	337	10.9	206	12.2	+20	17.0	254	51.9	+23	51.8	195	50.6	+16	04.1	98	49.7	-18	03.4	
6	352	13.4	221	12.4	+20	16.2	269	52.5	+23	51.9	210	52.6	+16	03.9	113	52.4	-18	03.4	
7	7	15.8	236	12.6		15.5	284	53.1		52.0	225	54.7		03.8	128	55.0		03.4	
8	22	18.3	251	12.8		14.8	299	53.7		52.1	240	56.8		03.7	143	57.6		03.4	
9	37	20.8	266	13.0		14.0	314	54.4		52.2	255	58.8		03.6	159	00.3		03.3	
10	52	23.2	281	13.2		13.3	329	55.0		52.3	271	00.9		03.4	174	02.9		03.3	
11	67	25.7	296	13.4	+20	12.5	344	55.6	+23	52.4	286	02.9	+16	03.3	189	05.5	-18	03.3	
12	82	28.1	311	13.7	+20	11.8	359	56.2	+23	52.6	301	05.0	+16	03.2	204	08.2	-18	03.2	
13	97	30.6	326	13.9		11.1	14	56.8		52.7	316	07.1		03.0	219	10.8		03.2	
14	112	33.1	341	14.1		10.3	29	57.4		52.8	331	09.1		02.9	234	13.4		03.2	
15	127	35.5	356	14.3		09.6	44	58.0		52.9	346	11.2		02.8	249	16.1		03.2	
16	142	38.0	11	14.5		08.9	59	58.6		53.0	1	13.2		02.7	264	18.7		03.1	
17	157	40.5	26	14.7	+20	08.1	74	59.2	+23	53.1	16	15.3	+16	02.5	279	21.3	-18	03.1	
18	172	42.9	41	15.0	+20	07.4	89	59.8	+23	53.2	31	17.4	+16	02.4	294	24.0	-18	03.1	
19	187	45.4	56	15.2		06.6	105	00.4		53.3	46	19.4		02.3	309	26.6		03.0	
20	202	47.9	71	15.4		05.9	120	01.0		53.4	61	21.5		02.1	324	29.2		03.0	
21	217	50.3	86	15.6		05.1	135	01.6		53.5	76	23.5		02.0	339	31.9		03.0	
22	232	52.8	101	15.8		04.4	150	02.2		53.6	91	25.6		01.9	354	34.5		03.0	
23	247	55.3	116	16.1		03.7	165	02.8		53.7	106	27.7		01.8	9	37.1		02.9	
24	262	57.7	131	16.3	+20	02.9	180	03.4	+23	53.8	121	29.7	+16	01.6	24	39.8	-18	02.9	
Dif	—		+2		-7		+6		+1		+21		-1		+26			0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna		
	SD: 15 ^h 7			Edad: 27 ^d 8	PHE { 4 ^h : 58'1 12 ^h : 58'0 20 ^h : 57'8									
	PMG: 12 ^h 00 ^m 4					SD: 15 ^h 9							PMG: 11 ^h 02 ^m	R°: 55 ^m
	hG ☉	Dec		hG ☾	Dif				Dec	Dif				
									Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	179	55.4	+23	16.8	200	36.7	+16 43.7	60 N	21 25	23 09	** **	2 37 43	19 36 60	
1	194	55.3		16.9	215	03.6	48.4 47	58	21 05	22 20	** **	48 44	24 59	
2	209	55.1		17.0	229	30.5	53.0 46	56	20 48	21 50	** **	2 58 45	13 59	
3	224	55.0		17.2	243	57.4	+16 57.4 44	54	34	28	23 13	3 06 46	19 04 59	
4	239	54.9		17.3	258	24.3	+17 01.8 44	52	22	21 10	22 28	14 47	18 56 58	
5	254	54.7	+23	17.4	272	51.2	+17 06.0 42	50	20 11	20 55	22 00	3 21 47	18 49 58	
6	269	54.6	+23	17.5	287	18.0	+17 10.2 42	45	19 48	20 26	21 15	3 35 49	18 33 57	
7	284	54.5		17.6	301	44.9	14.2 40	40	30	20 03	20 45	47 50	20 57	
8	299	54.3		17.7	316	11.8	18.1 39	35	15	19 45	22	3 57 51	18 09 57	
9	314	54.2		17.8	330	38.7	22.0 39	30	19 02	30	20 03	4 07 51	17 59 57	
10	329	54.1		17.9	345	05.6	25.7 37	20	18 40	19 05	19 34	22 53	43 56	
11	344	53.9	+23	18.0	359	32.4	+17 29.3 36	10 N	18 22	18 45	19 12	4 36 54	17 29 55	
12	359	53.8	+23	18.1	13	59.3	+17 32.8 35	0	18 04	18 27	18 53	4 49 55	17 15 55	
13	14	53.7		18.2	28	26.2	36.2 34	10 S	17 47	18 10	36	5 02 56	17 02 54	
14	29	53.5		18.4	42	53.1	39.5 33	20	28	17 52	20	16 56	16 47 54	
15	44	53.4		18.5	57	20.0	42.7 32	30	17 07	34	18 03	31 58	31 53	
16	59	53.3		18.6	71	46.9	45.7 30	35	16 55	23	17 55	41 58	21 53	
17	74	53.1	+23	18.7	86	13.8	+17 48.7 30	40	16 41	17 11	17 45	5 51 60	16 10 52	
18	89	53.0	+23	18.8	100	40.7	+17 51.6 29	45	16 24	16 58	17 35	6 04 60	15 57 52	
19	104	52.9		18.9	115	07.6	54.3 27	50	16 03	42	23	19 62	42 50	
20	119	52.7		19.0	129	34.5	56.9 26	52	15 54	34	18	26 62	34 50	
21	134	52.6		19.1	144	01.5	+17 59.5 26	54	43	26	12	34 63	26 50	
22	149	52.5		19.2	158	28.4	+18 01.9 24	56	30	17	06	43 63	17 49	
23	164	52.3		19.3	172	55.4	04.2 23	58	15 15	16 07	17 00	6 53 64	15 07 48	
24	179	52.2	+23	19.4	187	22.3	+18 06.4 22	60 S	14 58	15 55	16 52	7 05 65	14 55 47	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 27 ^m 1		Mag: -4.5 PMG: 15 ^h 15 ^m			Mag: +1.5 PMG: 11 ^h 59 ^m			Mag: -1.9 PMG: 15 ^h 52 ^m			Mag: +0.1 PMG: 22 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	262	57.7	131	16.3	+20	02.9	180	03.4	+23	53.8	121	29.7	+16	01.6				
1	278	00.2	146	16.5		02.2	195	04.0		53.9	136	31.8		01.5				
2	293	02.6	161	16.8		01.4	210	04.6		54.0	151	33.8		01.4				
3	308	05.1	176	17.0	+20	00.7	225	05.2		54.1	166	35.9		01.2				
4	323	07.6	191	17.2	+19	59.9	240	05.8		54.2	181	38.0		01.1				
5	338	10.0	206	17.5	+19	59.2	255	06.4	+23	54.3	196	40.0	+16	01.0				
6	353	12.5	221	17.7	+19	58.5	270	07.0	+23	54.4	211	42.1	+16	00.8				
7	8	15.0	236	17.9		57.7	285	07.7		54.6	226	44.1		00.7				
8	23	17.4	251	18.2		57.0	300	08.3		54.7	241	46.2		00.6				
9	38	19.9	266	18.4		56.2	315	08.9		54.8	256	48.3		00.5				
10	53	22.4	281	18.7		55.5	330	09.5		54.9	271	50.3		00.3				
11	68	24.8	296	18.9	+19	54.7	345	10.1	+23	55.0	286	52.4	+16	00.2				
12	83	27.3	311	19.1	+19	54.0	0	10.7	+23	55.1	301	54.4	+16	00.1				
13	98	29.7	326	19.4		53.2	15	11.3		55.2	316	56.5	+15	59.9				
14	113	32.2	341	19.6		52.5	30	11.9		55.3	331	58.5		59.8				
15	128	34.7	356	19.9		51.7	45	12.5		55.4	347	00.6		59.7				
16	143	37.1	11	20.1		51.0	60	13.1		55.5	2	02.7		59.5				
17	158	39.6	26	20.4	+19	50.2	75	13.7	+23	55.5	17	04.7	+15	59.4				
18	173	42.1	41	20.7	+19	49.5	90	14.3	+23	55.6	32	06.8	+15	59.3				
19	188	44.5	56	20.9		48.7	105	14.9		55.7	47	08.8		59.2				
20	203	47.0	71	21.2		48.0	120	15.5		55.8	62	10.9		59.0				
21	218	49.5	86	21.4		47.2	135	16.1		55.9	77	12.9		58.9				
22	233	51.9	101	21.7		46.5	150	16.7		56.0	92	15.0		58.8				
23	248	54.4	116	21.9		45.7	165	17.3		56.1	107	17.0		58.6				
24	263	56.9	131	22.2	+19	44.9	180	17.9	+23	56.2	122	19.1	+15	58.5				
Dif	—		+2		-7		+6		+1		+21		-1		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 28 ^d 8	PHE	SD: 15 ^h 7		R ^o : 54 ^m	Principio del crepúsculo		Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 00 ^m 6								Principio del crepúsculo		Salida de Luna		Puesta de Luna			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	179	52.2	+23	19.4	187	22.3	+18	06.4	21	58	** **	0 52	2 36	3 20	53	20 36 47
1	194	52.1		19.5	201	49.3		08.5	20	58	** **	1 41	2 56	32	53	23 49
2	209	51.9		19.6	216	16.3		10.5	20	56	** **	2 11	3 13	43	53	12 40
3	224	51.8		19.7	230	43.3		12.3	18	54	0 48	33	27	3 52	53	20 03 49
4	239	51.6		19.8	245	10.4		14.1	18	52	1 33	2 51	39	4 01	53	19 54 50
5	254	51.5	+23	19.8	259	37.4	+18	15.7	16	50	2 00	3 06	3 50	4 08	53	19 47 50
6	269	51.4	+23	19.9	274	04.5	+18	17.3	16	45	2 46	3 35	4 13	4 24	54	19 30 51
7	284	51.2		20.0	288	31.6		18.7	14	40	3 16	3 58	31	37	54	17 51
8	299	51.1		20.1	302	58.7		20.0	13	35	39	4 16	46	48	54	19 06 51
9	314	51.0		20.2	317	25.8		21.2	12	30	3 58	31	4 59	4 58	54	18 56 52
10	329	50.8		20.3	331	52.9		22.3	11	20	4 27	4 56	5 21	5 15	54	39 52
11	344	50.7	+23	20.4	346	20.1	+18	23.3	10	10 N	4 49	5 16	5 39	5 30	54	18 24 53
12	359	50.6	+23	20.5	0	47.3	+18	24.2	9	0	5 08	5 34	5 57	5 44	54	18 10 53
13	14	50.4		20.6	15	14.5		25.0	8	10 S	25	5 52	6 14	5 58	54	17 56 54
14	29	50.3		20.7	29	41.8		25.7	7	20	41	6 09	33	6 12	55	41 54
15	44	50.2		20.8	44	09.0		26.2	5	30	5 58	28	6 54	29	55	24 54
16	59	50.0		20.8	58	36.3		26.7	5	35	6 06	38	7 06	39	55	14 54
17	74	49.9	+23	20.9	73	03.6	+18	27.0	3	40	6 16	6 50	7 20	6 51	54	17 02 55
18	89	49.8	+23	21.0	87	31.0	+18	27.3	3	45	6 26	7 03	7 37	7 04	54	16 49 55
19	104	49.6		21.1	101	58.4		27.4	1	50	38	19	7 58	21	54	32 56
20	119	49.5		21.2	116	25.8		27.4	0	52	43	27	8 08	28	54	24 57
21	134	49.3		21.3	130	53.2		27.3	1	54	49	35	19	37	54	16 56
22	149	49.2		21.4	145	20.7		27.2	1	56	6 55	44	31	46	54	16 06 57
23	164	49.1		21.4	159	48.2		26.9	3	58	7 02	7 54	8 46	7 57	54	15 55 57
24	179	48.9	+23	21.5	174	15.7	+18	26.5	4	60 S	7 09	8 06	9 03	8 10	54	15 42 58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG		Mag: -4.5		Mag: +1.5		Mag: -1.9		Mag: +0.2		
	6 ^h 23 ^m 2		PMG: 15 ^h 14 ^m		PMG: 11 ^h 58 ^m		PMG: 15 ^h 49 ^m		PMG: 22 ^h 13 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	263	56.9	131	22.2	+19	44.9	122	19.1	+15	58.5	
1	278	59.3	146	22.5		44.2	137	21.2		58.4	
2	294	01.8	161	22.7		43.4	152	23.2		58.2	
3	309	04.2	176	23.0		42.7	167	25.3		58.1	
4	324	06.7	191	23.3		41.9	182	27.3		58.0	
5	339	09.2	206	23.5	+19	41.2	197	29.4	+15	57.8	
6	354	11.6	221	23.8	+19	40.4	212	31.4	+15	57.7	
7	9	14.1	236	24.1		39.7	227	33.5		57.6	
8	24	16.6	251	24.4		38.9	242	35.5		57.4	
9	39	19.0	266	24.6		38.1	257	37.6		57.3	
10	54	21.5	281	24.9		37.4	272	39.7		57.2	
11	69	24.0	296	25.2	+19	36.6	287	41.7	+15	57.1	
12	84	26.4	311	25.5	+19	35.9	302	43.8	+15	56.9	
13	99	28.9	326	25.8		35.1	317	45.8		56.8	
14	114	31.4	341	26.0		34.3	332	47.9		56.7	
15	129	33.8	356	26.3		33.6	347	49.9		56.5	
16	144	36.3	11	26.6		32.8	2	52.0		56.4	
17	159	38.7	26	26.9	+19	32.1	17	54.0	+15	56.3	
18	174	41.2	41	27.2	+19	31.3	32	56.1	+15	56.1	
19	189	43.7	56	27.5		30.5	47	58.1		56.0	
20	204	46.1	71	27.8		29.8	63	00.2		55.9	
21	219	48.6	86	28.1		29.0	78	02.2		55.7	
22	234	51.1	101	28.4		28.2	93	04.3		55.6	
23	249	53.5	116	28.7		27.5	108	06.3		55.5	
24	264	56.0	131	29.0	+19	26.7	123	08.4	+15	55.3	
Dif	—		+3	-8		+6	+1	+21	-1	+26	0

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 29 ^d 8	PHE { 4 ^h : 57/0 12 ^h : 56/8 20 ^h : 56/6 R°: 51 ^m											
	PMG: 12 ^h 00 ^m 8						PMG: 12 ^h 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	179	48.9	+23	21.5	174	15.7	+18	26.5	60 N	21 26	23 11	** **	4 13 61		21 23 37		
1	194	48.8		21.6	188	43.3		26.0	58	21 06	22 21	** **	25 60		12 38		
2	209	48.7		21.7	203	10.9		25.3	56	20 49	21 52	** **	36 59		21 01 40		
3	224	48.5		21.8	217	38.6		24.6	54	35	29	23 16	45 59		20 52 41		
4	239	48.4		21.8	232	06.2		23.8	52	22	21 11	22 29	4 54 58		44 42		
5	254	48.3	+23	21.9	246	34.0	+18	22.9	50	20 12	20 56	22 02	5 01 58		20 37 42		
6	269	48.1	+23	22.0	261	01.7	+18	21.9	45	19 49	20 27	21 16	5 18 57		20 21 44		
7	284	48.0		22.1	275	29.5		20.7	40	31	20 04	20 46	31 56		20 08 46		
8	299	47.8		22.1	289	57.4		19.5	35	16	19 46	23	42 56		19 57 47		
9	314	47.7		22.2	304	25.2		18.1	30	19 03	31	20 04	5 52 55		48 47		
10	329	47.6		22.3	318	53.2		16.7	20	18 41	19 06	19 35	6 09 54		31 49		
11	344	47.4	+23	22.4	333	21.1	+18	15.2	10 N	18 22	18 45	19 12	6 24 53		19 17 50		
12	359	47.3	+23	22.4	347	49.1	+18	13.5	0	18 05	18 27	18 53	6 38 52		19 03 52		
13	14	47.2		22.5	2	17.2		11.8	10 S	17 47	18 10	36	6 52 51		18 50 52		
14	29	47.0		22.6	16	45.3		09.9	20	29	17 53	20	7 07 50		35 54		
15	44	46.9		22.6	31	13.4		08.0	30	17 07	34	18 04	24 49		18 56		
16	59	46.8		22.7	45	41.6		06.0	35	16 55	23	17 55	34 49		18 08 57		
17	74	46.6	+23	22.8	60	09.8	+18	03.8	40	16 41	17 11	17 46	7 45 48		17 57 57		
18	89	46.5	+23	22.9	74	38.1	+18	01.6	45	16 24	16 58	17 35	7 58 48		17 44 58		
19	104	46.4		22.9	89	06.4	+17	59.2	50	16 03	42	23	8 15 46		28 60		
20	119	46.2		23.0	103	34.8		56.8	52	15 54	34	18	22 46		21 60		
21	134	46.1		23.1	118	03.2		54.3	54	42	26	12	31 45		12 62		
22	149	45.9		23.1	132	31.7		51.7	56	30	17	06	40 44		17 03 62		
23	164	45.8		23.2	147	00.2		48.9	58	15 15	16 07	17 00	8 51 43		16 52 63		
24	179	45.7	+23	23.2	161	28.7	+17	46.1	60 S	14 58	15 55	16 52	9 04 41		16 40 64		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 19 ^m 2		Mag: -4.5 PMG: 15 ^h 14 ^m		Mag: +1.5 PMG: 11 ^h 57 ^m		Mag: -1.9 PMG: 15 ^h 45 ^m		Mag: +0.2 PMG: 22 ^h 09 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	264	56.0	131	29.0	180	32.5	123	08.4	26	46.0
1	279	58.5	146	29.3	195	33.1	138	10.4	41	48.6
2	295	00.9	161	29.6	210	33.7	153	12.5	56	51.3
3	310	03.4	176	29.9	225	34.3	168	14.5	71	53.9
4	325	05.9	191	30.2	240	34.9	183	16.6	86	56.5
5	340	08.3	206	30.5	255	35.5	198	18.7	101	59.1
6	355	10.8	221	30.8	270	36.1	213	20.7	117	01.8
7	10	13.2	236	31.1	285	36.7	228	22.8	132	04.4
8	25	15.7	251	31.4	300	37.3	243	24.8	147	07.0
9	40	18.2	266	31.7	315	37.9	258	26.9	162	09.6
10	55	20.6	281	32.0	330	38.5	273	28.9	177	12.3
11	70	23.1	296	32.4	345	39.1	288	31.0	192	14.9
12	85	25.6	311	32.7	0	39.8	303	33.0	207	17.5
13	100	28.0	326	33.0	15	40.4	318	35.1	222	20.2
14	115	30.5	341	33.3	30	41.0	333	37.1	237	22.8
15	130	33.0	356	33.6	45	41.6	348	39.2	252	25.4
16	145	35.4	11	34.0	60	42.2	3	41.2	267	28.0
17	160	37.9	26	34.3	75	42.8	18	43.3	282	30.7
18	175	40.4	41	34.6	90	43.4	33	45.3	297	33.3
19	190	42.8	56	34.9	105	44.0	48	47.4	312	35.9
20	205	45.3	71	35.3	120	44.6	63	49.4	327	38.5
21	220	47.7	86	35.6	135	45.2	78	51.5	342	41.2
22	235	50.2	101	35.9	150	45.8	93	53.5	357	43.8
23	250	52.7	116	36.3	165	46.4	108	55.6	12	46.4
24	265	55.1	131	36.6	180	47.0	123	57.6	27	49.0
Dif	—		+3		-8		+21		-1	
					+6		+1		+26	
									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 1			Edad: 1 ^d 4 PHE SD: 15 ^h 4 ^m PMG: 13 ^h 42 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	179	45.7	+23	23.2	161	28.7	+17	46.1	29	60 N	** **	0 50	2 36	5 14	67		
1	194	45.5		23.3	175	57.4	97	43.2	30	58	** **	1 41	2 56	25 66	21 50 31		
2	209	45.4		23.4	190	26.0	96	40.2	31	56	** **	2 10	3 13	35 64	41 32		
3	224	45.3		23.4	204	54.7	97	37.1	31	54	0 46	33	27	44 63	33 34		
4	239	45.1		23.5	219	23.5	98	34.0	31	52	1 32	2 51	39	52 62	26 35		
5	254	45.0	+23	23.6	233	52.3	98	+17	30.7	50	2 00	3 06	3 50	5 59 61	21 19 36		
6	269	44.8	+23	23.6	248	21.2	99	+17	27.3	45	2 46	3 35	4 13	6 15 59	21 05 39		
7	284	44.7		23.7	262	50.1	99	23.9	34	40	3 16	3 58	31	27 58	20 54 40		
8	299	44.6		23.7	277	19.1	100	20.3	36	35	39	4 16	46	38 56	44 42		
9	314	44.4		23.8	291	48.2	101	16.7	36	30	3 58	31	4 59	6 47 55	35 43		
10	329	44.3		23.8	306	17.3	101	13.0	37	20	4 27	4 56	5 21	7 03 53	20 45		
11	344	44.2	+23	23.9	320	46.4	101	+17	09.1	10 N	4 50	5 17	5 40	7 17 52	20 07 47		
12	359	44.0	+23	24.0	335	15.6	102	+17	05.2	0	5 09	5 35	5 57	7 30 50	19 55 49		
13	14	43.9		24.0	349	44.9	103	+17	01.3	10 S	26	5 52	6 15	43 49	42 51		
14	29	43.8		24.1	4	14.2	103	+16	57.2	20	42	6 09	33	7 57 47	29 53		
15	44	43.6		24.1	18	43.5	103	53.0	42	30	5 58	28	6 55	8 13 45	14 55		
16	59	43.5		24.2	33	13.0	105	48.8	42	35	6 07	39	7 07	23 43	19 05 56		
17	74	43.3	+23	24.2	47	42.4	104	+16	44.5	40	6 16	6 51	7 21	8 33 43	18 54 58		
18	89	43.2	+23	24.3	62	12.0	106	+16	40.1	44	6 27	7 04	7 38	8 46 41	18 42 60		
19	104	43.1		24.3	76	41.6	106	35.6	45	50	39	20	7 59	9 01 39	28 62		
20	119	42.9		24.4	91	11.2	106	31.0	46	52	44	28	8 09	08 38	21 63		
21	134	42.8		24.4	105	40.9	107	26.4	46	54	50	36	20	16 36	14 64		
22	149	42.7		24.5	120	10.7	108	21.7	47	56	6 56	45	32	24 36	18 05 66		
23	164	42.5		24.5	134	40.5	108	16.9	48	58	7 02	7 55	8 47	34 34	17 55 68		
24	179	42.4	+23	24.6	149	10.4	109	+16	12.0	60 S	7 10	8 07	9 05	9 45 33	17 44 70		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 6 ^h 15 ^m 3		Mag: -4.5 PMG: 15 ^h 13 ^m			Mag: +1.5 PMG: 11 ^h 56 ^m			Mag: -1.9 PMG: 15 ^h 42 ^m			Mag: +0.2 PMG: 22 ^h 05 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°		
0	265	55.1	131	36.6	+19	08.2	180	47.0	+24	00.4	123	57.6	+15	52.1	27	49.0	
1	280	57.6	146	36.9		07.4	195	47.6		00.5	138	59.6		52.0	42	51.7	
2	296	00.1	161	37.3		06.7	210	48.3		00.5	154	01.7		51.9	57	54.3	
3	311	02.5	176	37.6		05.9	225	48.9		00.6	169	03.7		51.7	72	56.9	
4	326	05.0	191	38.0		05.1	240	49.5		00.7	184	05.8		51.6	87	59.5	
5	341	07.5	206	38.3	+19	04.3	255	50.1	+24	00.8	199	07.8	+15	51.5	103	02.2	
6	356	09.9	221	38.7	+19	03.6	270	50.7	+24	00.8	214	09.9	+15	51.3	118	04.8	
7	11	12.4	236	39.0		02.8	285	51.3		00.9	229	11.9		51.2	133	07.4	
8	26	14.9	251	39.4		02.0	300	51.9		01.0	244	14.0		51.1	148	10.0	
9	41	17.3	266	39.7		01.2	315	52.5		01.1	259	16.0		50.9	163	12.7	
10	56	19.8	281	40.1	+19	00.5	330	53.1		01.1	274	18.1		50.8	178	15.3	
11	71	22.2	296	40.4	+18	59.7	345	53.7	+24	01.2	289	20.1	+15	50.7	193	17.9	
12	86	24.7	311	40.8	+18	58.9	0	54.3	+24	01.3	304	22.2	+15	50.5	208	20.5	
13	101	27.2	326	41.1		58.1	15	54.9		01.4	319	24.2		50.4	223	23.2	
14	116	29.6	341	41.5		57.3	30	55.5		01.4	334	26.3		50.3	238	25.8	
15	131	32.1	356	41.8		56.6	45	56.1		01.5	349	28.3		50.1	253	28.4	
16	146	34.6	11	42.2		55.8	60	56.8		01.6	4	30.4		50.0	268	31.0	
17	161	37.0	26	42.6	+18	55.0	75	57.4	+24	01.6	19	32.4	+15	49.9	283	33.7	
18	176	39.5	41	42.9	+18	54.2	90	58.0	+24	01.7	34	34.4	+15	49.7	298	36.3	
19	191	42.0	56	43.3		53.4	105	58.6		01.8	49	36.5		49.6	313	38.9	
20	206	44.4	71	43.7		52.6	120	59.2		01.9	64	38.5		49.5	328	41.5	
21	221	46.9	86	44.0		51.9	135	59.8		01.9	79	40.6		49.3	343	44.2	
22	236	49.3	101	44.4		51.1	151	00.4		02.0	94	42.6		49.2	358	46.8	
23	251	51.8	116	44.8		50.3	166	01.0		02.1	109	44.7		49.1	13	49.4	
24	266	54.3	131	45.1	+18	49.5	181	01.6	+24	02.1	124	46.7	+15	48.9	28	52.0	
Dif	—		+4			-8	+6			+1	+20			-1	+26		
0																	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 3			Edad: 2 ^d 4 PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/4 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	42.4	+23	24.6	149	10.4	+16	12.0	60 N	21 27	23 13	** **	6 21	70	22 29	23		
1	194	42.2		24.6	163	40.4 ¹¹⁰		07.0 ⁵⁰	58	21 07	22 22	** **	31	68		21 25		
2	209	42.1		24.7	178	10.4 ¹¹⁰	+16	02.0 ⁵⁰	56	20 50	21 52	** **	39	67		13 27		
3	224	42.0		24.7	192	40.4 ¹¹⁰	+15	56.9 ⁵¹	54	36	30	23 18	47	65		07 28		
4	239	41.8		24.7	207	10.5 ¹¹¹		51.7 ⁵²	52	23	21 12	22 31	6 54	63	22 01	29		
5	254	41.7	+23	24.8	221	40.7 ¹¹²	+15	46.4 ⁵³	50	20 12	20 57	22 03	7 00	63	21 55	31		
6	269	41.6	+23	24.8	236	10.9 ¹¹²	+15	41.1 ⁵³	45	19 50	20 27	21 17	7 14	59	21 44	33		
7	284	41.4		24.9	250	41.2 ¹¹³		35.7 ⁵⁴	40	32	20 05	20 46	25	57	34	36		
8	299	41.3		24.9	265	11.6 ¹¹⁴		30.2 ⁵⁵	35	17	19 46	23	34	56	26	37		
9	314	41.2		25.0	279	42.0 ¹¹⁴		24.6 ⁵⁶	30	19 04	31	20 04	42	55	18	39		
10	329	41.0		25.0	294	12.4 ¹¹⁴		19.0 ⁵⁶	20	18 42	19 06	19 35	7 56	52	21 05	42		
11	344	40.9	+23	25.0	308	43.0 ¹¹⁶	+15	13.3 ⁵⁷	10 N	18 23	18 46	19 13	8 09	50	20 54	45		
12	359	40.7	+23	25.1	323	13.5 ¹¹⁵	+15	07.5 ⁵⁸	0	18 05	18 28	18 54	8 20	48	20 44	46		
13	14	40.6		25.1	337	44.2 ¹¹⁷	+15	01.7 ⁵⁸	10 S	17 48	18 10	37	32	46	33	49		
14	29	40.5		25.1	352	14.9 ¹¹⁷	+14	55.8 ⁵⁹	20	29	17 53	20	44	44	22	51		
15	44	40.3		25.2	6	45.6 ¹¹⁷		49.8 ⁶⁰	30	17 08	34	18 04	8 58	41	09	54		
16	59	40.2		25.2	21	16.4 ¹¹⁸		43.8 ⁶⁰	35	16 55	24	17 55	9 06	40	20 01	56		
17	74	40.1	+23	25.3	35	47.3 ¹¹⁹	+14	37.7 ⁶¹	40	16 41	17 12	17 46	9 16	37	19 52	58		
18	89	39.9	+23	25.3	50	18.2 ¹¹⁹	+14	31.5 ⁶²	45	16 24	16 58	17 35	9 27	35	19 42	60		
19	104	39.8		25.3	64	49.2 ¹²⁰		25.3 ⁶²	50	16 04	42	24	40	33	30	62		
20	119	39.6		25.4	79	20.3 ¹²¹		19.0 ⁶³	52	15 54	35	18	46	32	24	64		
21	134	39.5		25.4	93	51.4 ¹²¹		12.7 ⁶³	54	43	26	13	9 52	31	18	65		
22	149	39.4		25.4	108	22.5 ¹²¹	+14	06.2 ⁶⁵	56	30	17	06	10 00	29	11	67		
23	164	39.2		25.4	122	53.8 ¹²³	+13	59.8 ⁶⁴	58	15 15	16 07	17 00	08	28	19 03	68		
24	179	39.1	+23	25.5	137	25.0 ¹²²	+13	53.2 ⁶⁶	60 S	14 58	15 55	16 52	10 18	25	18 54	71		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 6 ^h 11 ^m 4		Mag: -4.5 PMG: 15 ^h 13 ^m			Mag: +1.5 PMG: 11 ^h 55 ^m			Mag: -1.9 PMG: 15 ^h 39 ^m				Mag: +0.2 PMG: 22 ^h 01 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	266	54.3	131	45.1	+18	49.5	181	01.6	+24	02.1	124	46.7	+15	48.9	28	52.0	-18	00.3
1	281	56.7	146	45.5		48.7	196	02.2		02.2	139	48.8		48.8	43	54.7		00.3
2	296	59.2	161	45.9		47.9	211	02.8		02.3	154	50.8		48.6	58	57.3		00.3
3	312	01.7	176	46.3		47.2	226	03.4		02.3	169	52.9		48.5	73	59.9		00.2
4	327	04.1	191	46.7		46.4	241	04.1		02.4	184	54.9		48.4	89	02.5		00.2
5	342	06.6	206	47.0	+18	45.6	256	04.7	+24	02.5	199	56.9	+15	48.2	104	05.1	-18	00.2
6	357	09.1	221	47.4	+18	44.8	271	05.3	+24	02.5	214	59.0	+15	48.1	119	07.8	-18	00.2
7	12	11.5	236	47.8		44.0	286	05.9		02.6	230	01.0		48.0	134	10.4		00.1
8	27	14.0	251	48.2		43.2	301	06.5		02.7	245	03.1		47.8	149	13.0		00.1
9	42	16.5	266	48.6		42.4	316	07.1		02.7	260	05.1		47.7	164	15.6		00.1
10	57	18.9	281	49.0		41.7	331	07.7		02.8	275	07.2		47.6	179	18.3	-18	00.1
11	72	21.4	296	49.4	+18	40.9	346	08.3	+24	02.9	290	09.2	+15	47.4	194	20.9	-18	00.0
12	87	23.8	311	49.8	+18	40.1	1	08.9	+24	02.9	305	11.3	+15	47.3	209	23.5	-18	00.0
13	102	26.3	326	50.1		39.3	16	09.5		03.0	320	13.3		47.2	224	26.1		00.0
14	117	28.8	341	50.5		38.5	31	10.1		03.1	335	15.3		47.0	239	28.7	-18	00.0
15	132	31.2	356	50.9		37.7	46	10.8		03.1	350	17.4		46.9	254	31.4	-17	59.9
16	147	33.7	11	51.3		36.9	61	11.4		03.2	5	19.4		46.7	269	34.0		59.9
17	162	36.2	26	51.7	+18	36.1	76	12.0	+24	03.3	20	21.5	+15	46.6	284	36.6	-17	59.9
18	177	38.6	41	52.1	+18	35.3	91	12.6	+24	03.3	35	23.5	+15	46.5	299	39.2	-17	59.9
19	192	41.1	56	52.6		34.6	106	13.2		03.4	50	25.6		46.3	314	41.9		59.8
20	207	43.6	71	53.0		33.8	121	13.8		03.4	65	27.6		46.2	329	44.5		59.8
21	222	46.0	86	53.4		33.0	136	14.4		03.5	80	29.6		46.1	344	47.1		59.8
22	237	48.5	101	53.8		32.2	151	15.0		03.6	95	31.7		45.9	359	49.7		59.8
23	252	51.0	116	54.2		31.4	166	15.6		03.6	110	33.7		45.8	14	52.3		59.7
24	267	53.4	131	54.6	+18	30.6	181	16.2	+24	03.7	125	35.8	+15	45.7	29	55.0	-17	59.7
Dif	—		+4			-8	+6		+1		+20		-1		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 3 ^d 4	PHE {	4 ^h : 55 ^h /2 12 ^h : 55 ^h /1 20 ^h : 54 ^h /9		Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 01 ^m 5							Rº: 45 ^m								
	hG ☉	Dec						hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	39.1	+23	25.5	137	25.0	+13	53.2	60 N	0 49	2 36	7 31	71	22 52	19	
1	194	39.0		25.5	151	56.3 ¹²³		46.6	58	1 40	2 56	39	69	46	21	
2	209	38.8		25.5	166	27.7 ¹²⁴		40.0	56	2 10	3 13	46	67	40	23	
3	224	38.7		25.6	180	59.2 ¹²⁵		33.2	54	0 45	33	52	65	35	25	
4	239	38.6		25.6	195	30.7 ¹²⁵		26.5	52	1 32	2 51	40	7 57	64	30	26
5	254	38.4	+23	25.6	210	02.2 ¹²⁵	+13	19.6	50	2 00	3 06	3 50	8 03	62	22 26	28
6	269	38.3	+23	25.6	224	33.8 ¹²⁶	+13	12.7	45	2 46	3 36	4 13	8 13	60	22 17	30
7	284	38.1		25.7	239	05.5 ¹²⁷	+13	05.8	40	3 16	3 58	31	22	57	10	32
8	299	38.0		25.7	253	37.2 ¹²⁷	+12	58.8	35	40	4 16	46	30	55	22 03	35
9	314	37.9		25.7	268	09.0 ¹²⁸		51.8	30	3 58	32	4 59	37	53	21 57	37
10	329	37.7		25.7	282	40.8 ¹²⁸		44.7	20	4 27	4 57	5 21	48	51	47	40
11	344	37.6	+23	25.8	297	12.7 ¹²⁹	+12	37.5	10 N	4 50	5 17	5 40	8 59	47	21 39	42
12	359	37.5	+23	25.8	311	44.6 ¹²⁹	+12	30.3	0	5 09	5 35	5 58	9 08	46	21 30	45
13	14	37.3		25.8	326	16.6 ¹³⁰		23.0	10 S	26	5 52	6 15	18	43	22	47
14	29	37.2		25.8	340	48.6 ¹³⁰		15.7	20	42	6 10	34	28	40	13	50
15	44	37.0		25.8	355	20.7 ¹³¹		08.3	30	5 59	29	6 55	39	38	21 03	53
16	59	36.9		25.9	9	52.8 ¹³¹	+12	00.9	35	6 08	39	7 07	46	36	20 57	54
17	74	36.8	+23	25.9	24	25.0 ¹³²	+11	53.5	40	6 17	6 51	7 22	9 53	34	20 50	57
18	89	36.6	+23	25.9	38	57.3 ¹³³	+11	46.0	45	6 27	7 05	7 39	10 02	32	20 42	59
19	104	36.5		25.9	53	29.5 ¹³²		38.4	50	39	21	7 59	13	29	32	63
20	119	36.4		25.9	68	01.9 ¹³⁴		30.8	52	44	28	8 09	18	27	28	64
21	134	36.2		25.9	82	34.3 ¹³⁴		23.2	54	50	36	20	23	26	23	65
22	149	36.1		25.9	97	06.7 ¹³⁴		15.5	56	6 56	46	33	29	24	18	66
23	164	35.9		26.0	111	39.2 ¹³⁵	+11	07.7	58	7 03	7 56	8 48	36	22	11	69
24	179	35.8	+23	26.0	126	11.7 ¹³⁵	+11	00.0	60 S	7 11	8 08	9 05	10 43	21	20 05	71

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG			Mag: -4.6			Mag: +1.5			Mag: -1.9			Mag: +0.2			
	6 ^h 07 ^m 4			PMG: 15 ^h 12 ^m			PMG: 11 ^h 54 ^m			PMG: 15 ^h 35 ^m			PMG: 21 ^h 57 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	267	53.4		131	54.6	+18	181	16.2	+24	125	35.8	+15	29	55.0	-17	59.7
1	282	55.9		146	55.0		196	16.8		140	37.8		44	57.6		59.7
2	297	58.3		161	55.4		211	17.5		155	39.8		60	00.2		59.7
3	313	00.8		176	55.8		226	18.1		170	41.9		75	02.8		59.6
4	328	03.3		191	56.3		241	18.7		185	43.9		90	05.4		59.6
5	343	05.7		206	56.7	+18	256	19.3	+24	200	46.0	+15	105	08.1	-17	59.6
6	358	08.2		221	57.1	+18	271	19.9	+24	215	48.0	+15	120	10.7	-17	59.6
7	13	10.7		236	57.5		286	20.5		230	50.1		135	13.3		59.5
8	28	13.1		251	58.0		301	21.1		245	52.1		150	15.9		59.5
9	43	15.6		266	58.4		316	21.7		260	54.1		165	18.5		59.5
10	58	18.1		281	58.8		331	22.3		275	56.2		180	21.2		59.5
11	73	20.5		296	59.2	+18	346	22.9	+24	290	58.2	+15	195	23.8	-17	59.4
12	88	23.0		311	59.7	+18	1	23.6	+24	306	00.3	+15	210	26.4	-17	59.4
13	103	25.5		327	00.1		16	24.2		321	02.3		225	29.0		59.4
14	118	27.9		342	00.5		31	24.8		336	04.3		240	31.6		59.4
15	133	30.4		357	01.0		46	25.4		351	06.4		255	34.3		59.3
16	148	32.8		12	01.4		61	26.0		6	08.4		270	36.9		59.3
17	163	35.3		27	01.9	+18	76	26.6	+24	21	10.5	+15	285	39.5	-17	59.3
18	178	37.8		42	02.3	+18	91	27.2	+24	36	12.5	+15	300	42.1	-17	59.3
19	193	40.2		57	02.7		106	27.8		51	14.5		315	44.7		59.2
20	208	42.7		72	03.2		121	28.4		66	16.6		330	47.4		59.2
21	223	45.2		87	03.6		136	29.0		81	18.6		345	50.0		59.2
22	238	47.6		102	04.1		151	29.7		96	20.6		0	52.6		59.2
23	253	50.1		117	04.5		166	30.3		111	22.7		15	55.2		59.1
24	268	52.6		132	05.0	+18	181	30.9	+24	126	24.7	+15	30	57.8	-17	59.1
Dif	—			+4	-8		+6	+1		+20	-1		+26	0		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 01 ^m 7			Edad: 4 ^d 4 PHE { 4 ^h : 54 ^m /8 12 ^h : 54 ^m /7 20 ^h : 54 ^m /5 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	179	35.8	+23	26.0	126	11.7	+11 00.0	60 N	21 28	23 14	** **	8 42 71	23 11 17		
1	194	35.7		26.0	140	44.3 ¹³⁶	+10 52.1	58	21 07	22 23	** **	48 68	07 18		
2	209	35.5		26.0	155	16.9 ¹³⁶	44.3	56	20 50	21 53	** **	53 66	03 20		
3	224	35.4		26.0	169	49.6 ¹³⁷	36.4	54	36	31	23 18	8 57 65	23 00 22		
4	239	35.3		26.0	184	22.3 ¹³⁷	28.4	52	24	21 13	22 31	9 01 63	22 56 24		
5	254	35.1	+23	26.0	198	55.1 ¹³⁸	+10 20.4	50	20 13	20 58	22 03	9 05 62	22 54 25		
6	269	35.0	+23	26.0	213	27.9 ¹³⁸	+10 12.4	45	19 50	20 28	21 18	9 13 59	22 47 28		
7	284	34.9		26.0	228	00.8 ¹³⁹	+10 04.4	40	32	20 05	20 47	19 57	42 31		
8	299	34.7		26.0	242	33.7 ¹³⁹	+9 56.2	35	17	19 47	24	25 54	38 32		
9	314	34.6		26.1	257	06.6 ¹³⁹	48.1	30	19 04	32	20 05	30 53	34 34		
10	329	34.4		26.1	271	39.6 ¹⁴⁰	39.9	20	18 42	19 07	19 36	39 49	27 37		
11	344	34.3	+23	26.1	286	12.6 ¹⁴⁰	+9 31.7	10 N	18 23	18 46	19 13	9 46 47	22 21 40		
12	359	34.2	+23	26.1	300	45.7 ¹⁴¹	+9 23.5	0	18 05	18 28	18 54	9 54 43	22 15 43		
13	14	34.0		26.1	315	18.8 ¹⁴¹	15.2	10 S	17 48	18 11	37	10 01 41	09 46		
14	29	33.9		26.1	329	51.9 ¹⁴¹	+9 06.9	20	29	17 53	21	08 39	22 03 48		
15	44	33.8		26.1	344	25.1 ¹⁴²	+8 58.5	30	17 08	35	18 04	17 35	21 56 52		
16	59	33.6		26.1	358	58.4 ¹⁴³	50.1	35	16 56	24	17 56	22 33	51 54		
17	74	33.5	+23	26.1	13	31.6 ¹⁴²	+8 41.7	40	16 42	17 12	17 46	10 27 32	21 47 56		
18	89	33.4	+23	26.1	28	04.9 ¹⁴³	+8 33.2	45	16 25	16 59	17 36	10 34 29	21 41 59		
19	104	33.2		26.1	42	38.3 ¹⁴⁴	24.8	50	16 04	42	24	42 25	35 61		
20	119	33.1		26.1	57	11.7 ¹⁴⁴	16.2	52	15 54	35	19	45 25	32 63		
21	134	32.9		26.1	71	45.1 ¹⁴⁴	+8 07.7	54	43	27	13	49 23	28 65		
22	149	32.8		26.1	86	18.5 ¹⁴⁴	+7 59.1	56	30	18	07	53 22	24 67		
23	164	32.7		26.1	100	52.0 ¹⁴⁵	50.5	58	15 15	16 07	17 00	10 58 20	20 69		
24	179	32.5	+23	26.1	115	25.6 ¹⁴⁶	+7 41.9	60 S	14 58	15 56	16 53	11 04 17	21 16 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 03 ^m 5		Mag: -4.6 PMG: 15 ^h 11 ^m		Mag: +1.5 PMG: 11 ^h 53 ^m		Mag: -1.9 PMG: 15 ^h 32 ^m		Mag: +0.2 PMG: 21 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	268	52.6	132	05.0	+18	11.5	181	30.9	+24	05.0
1	283	55.0	147	05.4		10.7	196	31.5		05.1
2	298	57.5	162	05.9		09.9	211	32.1		05.1
3	313	59.9	177	06.4		09.1	226	32.7		05.2
4	329	02.4	192	06.8		08.3	241	33.3		05.2
5	344	04.9	207	07.3	+18	07.5	256	33.9	+24	05.3
6	359	07.3	222	07.7	+18	06.7	271	34.5	+24	05.3
7	14	09.8	237	08.2		05.9	286	35.2		05.4
8	29	12.3	252	08.7		05.1	301	35.8		05.4
9	44	14.7	267	09.1		04.3	316	36.4		05.5
10	59	17.2	282	09.6		03.5	331	37.0		05.5
11	74	19.7	297	10.1	+18	02.7	346	37.6	+24	05.6
12	89	22.1	312	10.5	+18	01.9	1	38.2	+24	05.6
13	104	24.6	327	11.0		01.0	16	38.8		05.6
14	119	27.1	342	11.5	+18	00.2	31	39.4		05.7
15	134	29.5	357	12.0	+17	59.4	46	40.0		05.7
16	149	32.0	12	12.4		58.6	61	40.7		05.8
17	164	34.4	27	12.9	+17	57.8	76	41.3	+24	05.8
18	179	36.9	42	13.4	+17	57.0	91	41.9	+24	05.9
19	194	39.4	57	13.9		56.2	106	42.5		05.9
20	209	41.8	72	14.4		55.4	121	43.1		06.0
21	224	44.3	87	14.9		54.6	136	43.7		06.0
22	239	46.8	102	15.4		53.8	151	44.3		06.1
23	254	49.2	117	15.8		53.0	166	44.9		06.1
24	269	51.7	132	16.3	+17	52.2	181	45.6	+24	06.1
Dif	—		+5		-8		+6		0	
							+20		-1	
									+26	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 5 ^d 4	PHE { 4 ^h : 54 ^m /5 12 ^h : 54 ^m /4 20 ^h : 54 ^m /3	SD: 14 ^h 8		R°: 42 ^m	R°		R°							
	PMG: 12 ^h 01 ^m 9	PMG: 16 ^h 48 ^m	R°: 42 ^m			Hora			R°		Hora	R°						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m			
0	179	32.5	+23	26.1	115	25.6	+7	41.9	60 N	*** **	0 49	2 36	9 53	70	23 28	15		
1	194	32.4		26.0	129	59.1 ¹⁴⁵		33.2 ⁸⁷	58	*** **	1 41	2 56		56 68		25 18		
2	209	32.3		26.0	144	32.7 ¹⁴⁶		24.5 ⁸⁷	56	*** **	2 11	3 13	9 59	66		23 20		
3	224	32.1		26.0	159	06.3 ¹⁴⁶		15.8 ⁸⁷	54	0 45	33	28	10 02	64		22 22		
4	239	32.0		26.0	173	40.0 ¹⁴⁷	+7	07.1 ⁸⁷	52	1 32	2 51	40		04 63		20 22		
5	254	31.9	+23	26.0	188	13.7 ¹⁴⁷	+6	58.3 ⁸⁸	50	2 00	3 06	3 51	10 07	61	23 19	23		
6	269	31.7	+23	26.0	202	47.4 ¹⁴⁷	+6	49.5 ⁸⁸	45	2 46	3 36	4 13	10 12	58	23 15	27		
7	284	31.6		26.0	217	21.1 ¹⁴⁷		40.7 ⁸⁸	40	3 17	3 59	31	16 56		13 29			
8	299	31.4		26.0	231	54.9 ¹⁴⁸		31.9 ⁸⁸	35	40	4 17	4 47	19 54		10 32			
9	314	31.3		26.0	246	28.7 ¹⁴⁸		23.0 ⁸⁹	30	3 59	32	5 00	23 51		08 33			
10	329	31.2		26.0	261	02.5 ¹⁴⁸		14.1 ⁸⁹	20	4 28	4 57	22	28 48		04 37			
11	344	31.0	+23	26.0	275	36.4 ¹⁴⁹	+6	05.2 ⁸⁹	10 N	4 50	5 18	5 41	10 33	45	23 01	40		
12	359	30.9	+23	25.9	290	10.3 ¹⁴⁹	+5	56.3 ⁸⁹	0	5 09	5 36	5 58	10 37	43	22 58	42		
13	14	30.8		25.9	304	44.2 ¹⁴⁹		47.4 ⁸⁹	10 S	27	5 53	6 16	42 40		55 45			
14	29	30.6		25.9	319	18.1 ¹⁴⁹		38.4 ⁹⁰	20	43	6 10	34	47 37		51 49			
15	44	30.5		25.9	333	52.1 ¹⁵⁰		29.4 ⁹⁰	30	5 59	29	6 56	52 34		48 51			
16	59	30.4		25.9	348	26.1 ¹⁵⁰		20.4 ⁹⁰	35	6 08	40	7 08	55 32		45 54			
17	74	30.2	+23	25.9	3	00.1 ¹⁵⁰	+5	11.4 ⁹⁰	40	6 17	6 52	7 22	10 59	29	22 43	56		
18	89	30.1	+23	25.8	17	34.1 ¹⁵⁰	+5	02.3 ⁹¹	45	6 28	7 05	7 39	11 03	27	22 40	58		
19	104	29.9		25.8	32	08.2 ¹⁵¹	+4	53.2 ⁹¹	50	40	21	8 00	07 25		36 62			
20	119	29.8		25.8	46	42.2 ¹⁵⁰		44.2 ⁹⁰	52	45	29	10	10 23		35 63			
21	134	29.7		25.8	61	16.3 ¹⁵¹		35.1 ⁹¹	54	51	37	21	12 22		33 64			
22	149	29.5		25.8	75	50.4 ¹⁵¹		26.0 ⁹¹	56	6 57	46	33	15 20		31 66			
23	164	29.4		25.7	90	24.6 ¹⁵²		16.8 ⁹²	58	7 04	7 56	8 48	18 18		29 68			
24	179	29.3	+23	25.7	104	58.7 ¹⁵¹	+4	07.7 ⁹¹	60 S	7 11	8 08	9 06	11 21	16	22 26	70		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 59 ^m 6		Mag: -4.6 PMG: 15 ^h 10 ^m				Mag: +1.5 PMG: 11 ^h 52 ^m				Mag: -1.9 PMG: 15 ^h 29 ^m				Mag: +0.2 PMG: 21 ^h 48 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	269	51.7	132	16.3	+17	52.2	181	45.6	+24	06.1	127	13.6	+15	39.0	32	00.6	-17	58.5
1	284	54.2	147	16.8		51.4	196	46.2		06.2	142	15.6		38.9	47	03.2		58.5
2	299	56.6	162	17.3		50.6	211	46.8		06.2	157	17.7		38.8	62	05.9		58.5
3	314	59.1	177	17.8		49.8	226	47.4		06.3	172	19.7		38.6	77	08.5		58.5
4	330	01.6	192	18.3		49.0	241	48.0		06.3	187	21.8		38.5	92	11.1		58.4
5	345	04.0	207	18.8	+17	48.1	256	48.6	+24	06.3	202	23.8	+15	38.3	107	13.7	-17	58.4
6	0	06.5	222	19.3	+17	47.3	271	49.2	+24	06.4	217	25.8	+15	38.2	122	16.3	-17	58.4
7	15	08.9	237	19.8		46.5	286	49.8		06.4	232	27.9		38.1	137	18.9		58.4
8	30	11.4	252	20.3		45.7	301	50.5		06.5	247	29.9		37.9	152	21.6		58.3
9	45	13.9	267	20.8		44.9	316	51.1		06.5	262	31.9		37.8	167	24.2		58.3
10	60	16.3	282	21.4		44.1	331	51.7		06.5	277	34.0		37.6	182	26.8		58.3
11	75	18.8	297	21.9	+17	43.3	346	52.3	+24	06.6	292	36.0	+15	37.5	197	29.4	-17	58.3
12	90	21.3	312	22.4	+17	42.5	1	52.9	+24	06.6	307	38.0	+15	37.4	212	32.0	-17	58.3
13	105	23.7	327	22.9		41.7	16	53.5		06.7	322	40.1		37.2	227	34.6		58.2
14	120	26.2	342	23.4		40.9	31	54.1		06.7	337	42.1		37.1	242	37.2		58.2
15	135	28.7	357	23.9		40.0	46	54.7		06.7	352	44.1		36.9	257	39.9		58.2
16	150	31.1	12	24.4		39.2	61	55.4		06.8	7	46.2		36.8	272	42.5		58.2
17	165	33.6	27	25.0	+17	38.4	76	56.0	+24	06.8	22	48.2	+15	36.7	287	45.1	-17	58.1
18	180	36.0	42	25.5	+17	37.6	91	56.6	+24	06.8	37	50.2	+15	36.5	302	47.7	-17	58.1
19	195	38.5	57	26.0		36.8	106	57.2		06.9	52	52.3		36.4	317	50.3		58.1
20	210	41.0	72	26.5		36.0	121	57.8		06.9	67	54.3		36.2	332	52.9		58.1
21	225	43.4	87	27.1		35.2	136	58.4		06.9	82	56.3		36.1	347	55.5		58.0
22	240	45.9	102	27.6		34.4	151	59.0		07.0	97	58.4		36.0	2	58.1		58.0
23	255	48.4	117	28.1		33.5	166	59.7		07.0	113	00.4		35.8	18	00.8		58.0
24	270	50.8	132	28.7	+17	32.7	182	00.3	+24	07.0	128	02.4	+15	35.7	33	03.4	-17	58.0
Dif	—		+5		-8		+6		0		+20		-1		+26			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 6 ^d 4	PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /3 20 ^h : 54 ^h /3 R°: 42 ^m										
	PMG: 12 ^h 02 ^m 2					SD: 14 ^h 8			PMG: 17 ^h 30 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	29.3	+23 25.7	104	58.7	+4 07.7	92	60 N	21 28	23 14	** **	11 03 70		23 43 16	
1	194	29.1	25.7	119	32.9 ¹⁵²	+3 58.5	92	58	21 07	22 23	** **	04 68		43 17	
2	209	29.0	25.7	134	07.1 ¹⁵²	49.3	92	56	20 51	21 53	** **	05 67		43 19	
3	224	28.9	25.7	148	41.3 ¹⁵²	40.2	91	54	36	31	23 18	06 65		43 20	
4	239	28.7	25.6	163	15.5 ¹⁵²	31.0	92	52	24	21 13	22 31	07 63		42 23	
5	254	28.6	+23 25.6	177	49.7 ¹⁵²	+3 21.7	93	50	20 13	20 58	22 03	11 08 62		23 42 24	
6	269	28.5	+23 25.6	192	24.0 ¹⁵³	+3 12.5	92	45	19 51	20 28	21 18	11 10 58		23 42 27	
7	284	28.3	25.5	206	58.2 ¹⁵²	+3 03.3	92	40	33	20 05	20 47	12 55		42 29	
8	299	28.2	25.5	221	32.5 ¹⁵³	+2 54.0	93	35	18	19 47	24	13 53		42 31	
9	314	28.0	25.5	236	06.7 ¹⁵²	44.8	92	30	19 04	32	20 05	14 52		41 34	
10	329	27.9	25.5	250	41.0 ¹⁵³	35.5	93	20	18 42	19 07	19 36	16 48		41 37	
11	344	27.8	+23 25.4	265	15.3 ¹⁵³	+2 26.2	93	10 N	18 23	18 47	19 14	11 18 45		23 41 39	
12	359	27.6	+23 25.4	279	49.6 ¹⁵³	+2 17.0	92	0	18 06	18 28	18 55	11 20 42		23 40 43	
13	14	27.5	25.4	294	24.0 ¹⁵⁴	+2 07.7	93	10 S	17 48	18 11	38	22 39		40 45	
14	29	27.4	25.3	308	58.3 ¹⁵³	+1 58.4	93	20	30	17 54	21	24 36		40 48	
15	44	27.2	25.3	323	32.6 ¹⁵³	49.1	93	30	17 09	35	18 05	26 33		39 52	
16	59	27.1	25.3	338	07.0 ¹⁵⁴	39.7	94	35	16 56	24	17 56	27 31		39 53	
17	74	27.0	+23 25.2	352	41.3 ¹⁵³	+1 30.4	93	40	16 42	17 13	17 47	11 28 29		23 39 55	
18	89	26.8	+23 25.2	7	15.6 ¹⁵³	+1 21.1	93	45	16 25	16 59	17 36	11 30 26		23 38 59	
19	104	26.7	25.2	21	50.0 ¹⁵⁴	11.8	93	50	16 04	43	25	32 23		38 61	
20	119	26.6	25.1	36	24.3 ¹⁵³	+1 02.4	94	52	15 55	35	19	33 22		38 62	
21	134	26.4	25.1	50	58.7 ¹⁵⁴	+0 53.1	93	54	43	27	14	34 20		37 65	
22	149	26.3	25.1	65	33.1 ¹⁵⁴	43.7	94	56	31	18	07	35 19		37 66	
23	164	26.2	25.0	80	07.4 ¹⁵³	34.4	93	58	15 16	16 08	17 01	36 17		37 68	
24	179	26.0	+23 25.0	94	41.8 ¹⁵⁴	+0 25.0	94	60 S	14 58	15 56	16 53	11 37 15		23 36 71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 55 ^m 6		Mag: -4.6 PMG: 15 ^h 10 ^m		Mag: +1.5 PMG: 11 ^h 51 ^m		Mag: -1.9 PMG: 15 ^h 26 ^m		Mag: +0.2 PMG: 21 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	270	50.8	132 28.7	+17 32.7	182 00.3	+24 07.0	128 02.4	+15 35.7	33 03.4	-17 58.0
1	285	53.3	147 29.2	31.9	197 00.9	07.1	143 04.5	35.5	48 06.0	57.9
2	300	55.8	162 29.7	31.1	212 01.5	07.1	158 06.5	35.4	63 08.6	57.9
3	315	58.2	177 30.3	30.3	227 02.1	07.1	173 08.5	35.3	78 11.2	57.9
4	331	00.7	192 30.8	29.5	242 02.7	07.2	188 10.5	35.1	93 13.8	57.9
5	346	03.2	207 31.4	+17 28.7	257 03.3	+24 07.2	203 12.6	+15 35.0	108 16.4	-17 57.9
6	1	05.6	222 31.9	+17 27.8	272 03.9	+24 07.2	218 14.6	+15 34.8	123 19.0	-17 57.8
7	16	08.1	237 32.5	27.0	287 04.6	07.3	233 16.6	34.7	138 21.7	57.8
8	31	10.5	252 33.0	26.2	302 05.2	07.3	248 18.7	34.5	153 24.3	57.8
9	46	13.0	267 33.6	25.4	317 05.8	07.3	263 20.7	34.4	168 26.9	57.8
10	61	15.5	282 34.1	24.6	332 06.4	07.4	278 22.7	34.3	183 29.5	57.7
11	76	17.9	297 34.7	+17 23.8	347 07.0	+24 07.4	293 24.8	+15 34.1	198 32.1	-17 57.7
12	91	20.4	312 35.2	+17 22.9	2 07.6	+24 07.4	308 26.8	+15 34.0	213 34.7	-17 57.7
13	106	22.9	327 35.8	22.1	17 08.2	07.4	323 28.8	33.8	228 37.3	57.7
14	121	25.3	342 36.3	21.3	32 08.9	07.5	338 30.9	33.7	243 39.9	57.6
15	136	27.8	357 36.9	20.5	47 09.5	07.5	353 32.9	33.6	258 42.6	57.6
16	151	30.3	12 37.5	19.7	62 10.1	07.5	8 34.9	33.4	273 45.2	57.6
17	166	32.7	27 38.0	+17 18.9	77 10.7	+24 07.6	23 36.9	+15 33.3	288 47.8	-17 57.6
18	181	35.2	42 38.6	+17 18.0	92 11.3	+24 07.6	38 39.0	+15 33.1	303 50.4	-17 57.6
19	196	37.6	57 39.1	17.2	107 11.9	07.6	53 41.0	33.0	318 53.0	57.5
20	211	40.1	72 39.7	16.4	122 12.6	07.6	68 43.0	32.9	333 55.6	57.5
21	226	42.6	87 40.3	15.6	137 13.2	07.7	83 45.1	32.7	348 58.2	57.5
22	241	45.0	102 40.9	14.8	152 13.8	07.7	98 47.1	32.6	4 00.8	57.5
23	256	47.5	117 41.4	14.0	167 14.4	07.7	113 49.1	32.4	19 03.4	57.4
24	271	50.0	132 42.0	+17 13.1	182 15.0	+24 07.7	128 51.2	+15 32.3	34 06.1	-17 57.4
Dif	—		+6 -8		+6 0		+20 -1		+26 0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 4				Edad: 7 ^d 4 PHE { SD: 14 ^h 8 PMG: 18 ^h 12 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	26.0	+23	25.0	94	41.8	+0	25.0	93	15.7	60 N	** **	0 51	2 37	12 13	71	23 59	16		
1	194	25.9		24.9	109	16.1 ¹⁵³		15.7	93	58	** **	1 41	2 57		12 69		** **	**		
2	209	25.8		24.9	123	50.5 ¹⁵⁴	+0	06.3	94	56	** **	2 11	3 14		12 66		** **	**		
3	224	25.6		24.9	138	24.8 ¹⁵³	-0	03.0	93	54	0 46	34	28		11 65		** **	**		
4	239	25.5		24.8	152	59.2 ¹⁵⁴		12.4	94	52	1 33	2 52	40		10 63		** **	**		
5	254	25.4	+23	24.8	167	33.5 ¹⁵³	-0	21.7	93	50	2 01	3 07	3 51		12 10	61	** **	**		
6	269	25.2	+23	24.7	182	07.9 ¹⁵⁴	-0	31.1	94	45	2 47	3 36	4 14		12 08	59	** **	**		
7	284	25.1		24.7	196	42.2 ¹⁵³		40.4	93	40	3 17	3 59	32		07 56		** **	**		
8	299	24.9		24.6	211	16.6 ¹⁵⁴		49.8	94	35	41	4 17	4 47		06 54		** **	**		
9	314	24.8		24.6	225	50.9 ¹⁵³	-0	59.2	94	30	3 59	33	5 00		06 52		** **	**		
10	329	24.7		24.5	240	25.2 ¹⁵³	-1	08.5	93	20	4 28	4 58	22		04 49		** **	**		
11	344	24.5	+23	24.5	254	59.5 ¹⁵³	-1	17.9	94	10 N	4 51	5 18	5 41		12 03	46	** **	**		
12	359	24.4	+23	24.5	269	33.8 ¹⁵³	-1	27.2	93	0	5 10	5 36	5 59		12 02	43	** **	**		
13	14	24.3		24.4	284	08.1 ¹⁵³		36.5	93	10 S	27	5 53	6 16		01 40		** **	**		
14	29	24.1		24.4	298	42.4 ¹⁵³		45.9	94	20	5 43	6 11	35		12 00	37	** **	**		
15	44	24.0		24.3	313	16.7 ¹⁵³	-1	55.2	93	30	6 00	30	6 56		11 59	33	** **	**		
16	59	23.9		24.3	327	50.9 ¹⁵²	-2	04.5	93	35	08	40	7 08		58 32		** **	**		
17	74	23.7	+23	24.2	342	25.2 ¹⁵³	-2	13.8	93	40	6 18	6 52	7 22		11 57	30	** **	**		
18	89	23.6	+23	24.2	356	59.4 ¹⁵²	-2	23.2	94	45	6 28	7 05	7 39		11 56	27	** **	**		
19	104	23.5		24.1	11	33.6 ¹⁵²		32.5	93	50	40	22	8 00		55 24		** **	**		
20	119	23.3		24.0	26	07.8 ¹⁵²		41.8	93	52	45	29	10		55 23		** **	**		
21	134	23.2		24.0	40	42.0 ¹⁵²	-2	51.1	93	54	51	37	21		54 22		** **	**		
22	149	23.1		23.9	55	16.2 ¹⁵²	-3	00.3	92	56	6 57	46	34		54 19		** **	**		
23	164	22.9		23.9	69	50.3 ¹⁵¹		09.6	93	58	7 04	7 57	8 48		53 18		** **	**		
24	179	22.8	+23	23.8	84	24.4 ¹⁵¹	-3	18.9	93	60 S	7 11	8 08	9 06		11 52	16	** **	**		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 51 ^m 7				Mag: -4.6 PMG: 15 ^h 09 ^m				Mag: +1.5 PMG: 11 ^h 51 ^m				Mag: -1.9 PMG: 15 ^h 23 ^m				Mag: +0.2 PMG: 21 ^h 40 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	271	50.0	132	42.0	+17	13.1	182	15.0	+24	07.7	128	51.2	+15	32.3	34	06.1	-17	57.4		
1	286	52.4	147	42.6		12.3	197	15.6		07.8	143	53.2		32.1	49	08.7		57.4		
2	301	54.9	162	43.2		11.5	212	16.2		07.8	158	55.2		32.0	64	11.3		57.4		
3	316	57.4	177	43.8		10.7	227	16.9		07.8	173	57.2		31.9	79	13.9		57.4		
4	331	59.8	192	44.3		09.9	242	17.5		07.8	188	59.3		31.7	94	16.5		57.3		
5	347	02.3	207	44.9	+17	09.0	257	18.1	+24	07.9	204	01.3	+15	31.6	109	19.1	-17	57.3		
6	2	04.8	222	45.5	+17	08.2	272	18.7	+24	07.9	219	03.3	+15	31.4	124	21.7	-17	57.3		
7	17	07.2	237	46.1		07.4	287	19.3		07.9	234	05.4		31.3	139	24.3		57.3		
8	32	09.7	252	46.7		06.6	302	19.9		07.9	249	07.4		31.1	154	26.9		57.2		
9	47	12.1	267	47.3		05.8	317	20.6		07.9	264	09.4		31.0	169	29.5		57.2		
10	62	14.6	282	47.9		04.9	332	21.2		08.0	279	11.4		30.9	184	32.1		57.2		
11	77	17.1	297	48.5	+17	04.1	347	21.8	+24	08.0	294	13.5	+15	30.7	199	34.8	-17	57.2		
12	92	19.5	312	49.1	+17	03.3	2	22.4	+24	08.0	309	15.5	+15	30.6	214	37.4	-17	57.2		
13	107	22.0	327	49.7		02.5	17	23.0		08.0	324	17.5		30.4	229	40.0		57.1		
14	122	24.5	342	50.3		01.6	32	23.6		08.1	339	19.5		30.3	244	42.6		57.1		
15	137	26.9	357	50.9	+17	00.8	47	24.3		08.1	354	21.6		30.2	259	45.2		57.1		
16	152	29.4	12	51.5	+17	00.0	62	24.9		08.1	9	23.6		30.0	274	47.8		57.1		
17	167	31.9	27	52.1	+16	59.2	77	25.5	+24	08.1	24	25.6	+15	29.9	289	50.4	-17	57.0		
18	182	34.3	42	52.7	+16	58.4	92	26.1	+24	08.1	39	27.7	+15	29.7	304	53.0	-17	57.0		
19	197	36.8	57	53.3		57.5	107	26.7		08.1	54	29.7		29.6	319	55.6		57.0		
20	212	39.3	72	53.9		56.7	122	27.3		08.2	69	31.7		29.4	334	58.2		57.0		
21	227	41.7	87	54.5		55.9	137	28.0		08.2	84	33.7		29.3	350	00.8		57.0		
22	242	44.2	102	55.2		55.1	152	28.6		08.2	99	35.8		29.2	5	03.4		56.9		
23	257	46.6	117	55.8		54.2	167	29.2		08.2	114	37.8		29.0	20	06.1		56.9		
24	272	49.1	132	56.4	+16	53.4	182	29.8	+24	08.2	129	39.8	+15	28.9	35	08.7	-17	56.9		
Dif	—				+6				+6				+20				+26			
					-8				0				-1				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 6			Edad: 8 ^d 4 PHE { SD: 14'8 PMG: 18 ^h 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	22.8	+23	23.8	84	24.4	-3	18.9	60 N	21 28	23 13	** **	13 24	71	** **	**	
1	194	22.7		23.8	98	58.6 ¹⁵²		28.1	58	21 07	22 23	** **	21 69		0 00	19	
2	209	22.5		23.7	113	32.6 ¹⁵⁰		37.4	56	20 51	21 53	** **	18 67		02	20	
3	224	22.4		23.6	128	06.7 ¹⁵¹		46.6	54		36	31	23 17		03	22	
4	239	22.3		23.6	142	40.8 ¹⁵¹		-3 55.8	52	24	21 13	22 31	13 64		05	23	
5	254	22.1	+23	23.5	157	14.8 ¹⁵⁰		-4 05.0	50	20 13	20 58	22 03	13 11	63	0 06	25	
6	269	22.0	+23	23.5	171	48.8 ¹⁵⁰		-4 14.2	45	19 51	20 28	21 18	13 07	59	0 09	27	
7	284	21.9		23.4	186	22.8 ¹⁵⁰		23.4	40		33	20 06	20 47		11	30	
8	299	21.7		23.3	200	56.8 ¹⁵⁰		32.6	35		18	19 47	24		13	32	
9	314	21.6		23.3	215	30.7 ¹⁴⁹		41.7	30	19 05		32	20 06		12	58	
10	329	21.5		23.2	230	04.6 ¹⁴⁹		-4 50.9	20	18 43	19 07	19 37	53 49		18	37	
11	344	21.3	+23	23.2	244	38.5 ¹⁴⁹		-5 00.0	10 N	18 24	18 47	19 14	12 49	46	0 20	41	
12	359	21.2	+23	23.1	259	12.3 ¹⁴⁸		-5 09.1	0	18 06	18 29	18 55	12 45	44	0 23	43	
13	14	21.1		23.0	273	46.2 ¹⁴⁹		18.2	10 S	17 49	18 12	38	41 41		25	46	
14	29	20.9		23.0	288	20.0 ¹⁴⁸		27.2	20		30	17 54	22		37	38	
15	44	20.8		22.9	302	53.7 ¹⁴⁷		36.3	30	17 09		36	18 05		32	36	
16	59	20.7		22.8	317	27.5 ¹⁴⁸		45.3	35	16 57		25	17 57		30	33	
17	74	20.5	+23	22.8	332	01.2 ¹⁴⁷		-5 54.4	40	16 43	17 13	17 47	12 27	31	0 34	57	
18	89	20.4	+23	22.7	346	34.9 ¹⁴⁷		-6 03.4	45	16 26	17 00	17 37	12 23	29	0 37	58	
19	104	20.3		22.6	1	08.5 ¹⁴⁶		12.3	50	16 05	16 44	25	19 26		39	62	
20	119	20.2		22.5	15	42.1 ¹⁴⁶		21.3	52	15 55		36	20		18	24	
21	134	20.0		22.5	30	15.7 ¹⁴⁶		30.2	54		44	28	14		16	22	
22	149	19.9		22.4	44	49.2 ¹⁴⁵		39.1	56		31	19	08		13	22	
23	164	19.8		22.3	59	22.8 ¹⁴⁶		48.0	58	15 17	16 09	17 01	11 19		45	69	
24	179	19.6	+23	22.3	73	56.2 ¹⁴⁴		-6 56.9	60 S	14 59	15 57	16 54	12 08	17	0 47	71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 47 ^m 8		Mag: -4.6 PMG: 15 ^h 08 ^m			Mag: +1.5 PMG: 11 ^h 50 ^m			Mag: -1.8 PMG: 15 ^h 19 ^m			Mag: +0.2 PMG: 21 ^h 36 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	272	49.1	132	56.4	+16	53.4	182	29.8	+24	08.2	129	39.8	+15	28.9	35	08.7	
1	287	51.6	147	57.0		52.6	197	30.4		08.2	144	41.8		28.7	50	11.3	
2	302	54.0	162	57.6		51.8	212	31.0		08.3	159	43.9		28.6	65	13.9	
3	317	56.5	177	58.3		50.9	227	31.7		08.3	174	45.9		28.4	80	16.5	
4	332	59.0	192	58.9		50.1	242	32.3		08.3	189	47.9		28.3	95	19.1	
5	348	01.4	207	59.5	+16	49.3	257	32.9	+24	08.3	204	49.9	+15	28.1	110	21.7	
6	3	03.9	223	00.1	+16	48.5	272	33.5	+24	08.3	219	52.0	+15	28.0	125	24.3	
7	18	06.4	238	00.8		47.6	287	34.1		08.3	234	54.0		27.9	140	26.9	
8	33	08.8	253	01.4		46.8	302	34.7		08.3	249	56.0		27.7	155	29.5	
9	48	11.3	268	02.1		46.0	317	35.4		08.4	264	58.0		27.6	170	32.1	
10	63	13.7	283	02.7		45.2	332	36.0		08.4	280	00.1		27.4	185	34.7	
11	78	16.2	298	03.3	+16	44.3	347	36.6	+24	08.4	295	02.1	+15	27.3	200	37.3	
12	93	18.7	313	04.0	+16	43.5	2	37.2	+24	08.4	310	04.1	+15	27.1	215	39.9	
13	108	21.1	328	04.6		42.7	17	37.8		08.4	325	06.1		27.0	230	42.5	
14	123	23.6	343	05.3		41.9	32	38.4		08.4	340	08.2		26.9	245	45.2	
15	138	26.1	358	05.9		41.0	47	39.1		08.4	355	10.2		26.7	260	47.8	
16	153	28.5	13	06.6		40.2	62	39.7		08.4	10	12.2		26.6	275	50.4	
17	168	31.0	28	07.2	+16	39.4	77	40.3	+24	08.4	25	14.2	+15	26.4	290	53.0	
18	183	33.5	43	07.9	+16	38.5	92	40.9	+24	08.5	40	16.3	+15	26.3	305	55.6	
19	198	35.9	58	08.5		37.7	107	41.5		08.5	55	18.3		26.1	320	58.2	
20	213	38.4	73	09.2		36.9	122	42.2		08.5	70	20.3		26.0	336	00.8	
21	228	40.9	88	09.8		36.1	137	42.8		08.5	85	22.3		25.8	351	03.4	
22	243	43.3	103	10.5		35.2	152	43.4		08.5	100	24.4		25.7	6	06.0	
23	258	45.8	118	11.2		34.4	167	44.0		08.5	115	26.4		25.6	21	08.6	
24	273	48.2	133	11.8	+16	33.6	182	44.6	+24	08.5	130	28.4	+15	25.4	36	11.2	
Dif	—		+6			-8			+6			+20			-1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 8			Edad: 9 ^d 4 PHE { SD: 14 ^h 9 PMG: 19 ^h 40 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	19.6	+23	73	56.2	-6	56.9	60 N	** **	0 53	2 38	14 35	73	0 15	18
1	194	19.5		88	29.7 ¹⁴⁵	-7	05.7 ⁸⁸	58	** **	1 43	2 58	30 70		19	20
2	209	19.4		103	03.1 ¹⁴⁴		14.6 ⁸⁹	56	** **	2 12	3 15	25 68		22	23
3	224	19.2		117	36.4 ¹⁴³		23.4 ⁸⁸	54	0 49	35	29	21 66		25	26
4	239	19.1		132	09.7 ¹⁴³		32.1 ⁸⁷	52	1 34	2 52	41	17 65		28	26
5	254	19.0	+23	146	43.0 ¹⁴³	-7	40.9 ⁸⁸	50	2 02	3 08	3 52	14 14	63	0 31	27
6	269	18.8	+23	161	16.3 ¹⁴³	-7	49.6 ⁸⁷	45	2 48	3 37	4 15	14 06	61	0 36	30
7	284	18.7		175	49.5 ¹⁴²	-7	58.3 ⁸⁷	40	3 18	4 00	33	14 00	58	41	32
8	299	18.6		190	22.6 ¹⁴¹	-8	06.9 ⁸⁶	35	3 41	18	4 48	13 55	56	45	35
9	314	18.4		204	55.8 ¹⁴²		15.6 ⁸⁷	30	4 00	33	5 01	50 54		49	36
10	329	18.3		219	28.8 ¹⁴⁰		24.2 ⁸⁶	20	29	4 58	23	42 51		0 55	39
11	344	18.2	+23	234	01.9 ¹⁴¹	-8	32.7 ⁸⁵	10 N	4 51	5 19	5 42	13 35	49	1 01	42
12	359	18.0	+23	248	34.9 ¹⁴⁰	-8	41.3 ⁸⁶	0	5 10	5 37	5 59	13 29	46	1 06	45
13	14	17.9		263	07.8 ¹³⁹		49.8 ⁸⁵	10 S	27	5 54	6 17	22 44		11	47
14	29	17.8		277	40.7 ¹³⁹	-8	58.3 ⁸⁵	20	5 44	6 11	35	15 41		17	50
15	44	17.7		292	13.6 ¹³⁹	-9	06.7 ⁸⁴	30	6 00	30	6 56	08 37		23	53
16	59	17.5		306	46.4 ¹³⁸		15.1 ⁸⁴	35	09	40	7 09	13 03	36	27	55
17	74	17.4	+23	321	19.1 ¹³⁷	-9	23.5 ⁸⁴	40	6 18	6 52	7 23	12 58	34	1 31	57
18	89	17.3	+23	335	51.8 ¹³⁷	-9	31.9 ⁸⁴	45	6 28	7 06	7 39	12 52	32	1 35	60
19	104	17.1		350	24.5 ¹³⁷		40.2 ⁸³	50	40	22	8 00	45 29		41	63
20	119	17.0		4	57.1 ¹³⁶		48.4 ⁸²	52	45	29	10	42 27		44	64
21	134	16.9		19	29.7 ¹³⁶	-9	56.7 ⁸³	54	51	37	21	38 26		47	66
22	149	16.7		34	02.2 ¹³⁵	-10	04.9 ⁸²	56	6 57	46	34	35 24		50	68
23	164	16.6		48	34.7 ¹³⁵		13.0 ⁸¹	58	7 04	7 57	8 48	30 23		54	69
24	179	16.5	+23	63	07.1 ¹³⁴	-10	21.2 ⁸²	60 S	7 11	8 08	9 06	12 25	21	1 58	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 5 ^h 43 ^m 8		Mag: -4.6 PMG: 15 ^h 07 ^m		Mag: +1.5 PMG: 11 ^h 49 ^m		Mag: -1.8 PMG: 15 ^h 16 ^m		Mag: +0.2 PMG: 21 ^h 32 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	273	48.2	133	11.8	+16	33.6	182	44.6	+24	08.5	
1	288	50.7	148	12.5		32.8	197	45.3		08.5	
2	303	53.2	163	13.2		31.9	212	45.9		08.5	
3	318	55.6	178	13.8		31.1	227	46.5		08.5	
4	333	58.1	193	14.5		30.3	242	47.1		08.5	
5	349	00.6	208	15.2	+16	29.4	257	47.7	+24	08.5	
6	4	03.0	223	15.9	+16	28.6	272	48.3	+24	08.5	
7	19	05.5	238	16.5		27.8	287	49.0		08.5	
8	34	08.0	253	17.2		27.0	302	49.6		08.6	
9	49	10.4	268	17.9		26.1	317	50.2		08.6	
10	64	12.9	283	18.6		25.3	332	50.8		08.6	
11	79	15.4	298	19.3	+16	24.5	347	51.4	+24	08.6	
12	94	17.8	313	19.9	+16	23.6	2	52.1	+24	08.6	
13	109	20.3	328	20.6		22.8	17	52.7		08.6	
14	124	22.7	343	21.3		22.0	32	53.3		08.6	
15	139	25.2	358	22.0		21.1	47	53.9		08.6	
16	154	27.7	13	22.7		20.3	62	54.5		08.6	
17	169	30.1	28	23.4	+16	19.5	77	55.2	+24	08.6	
18	184	32.6	43	24.1	+16	18.7	92	55.8	+24	08.6	
19	199	35.1	58	24.8		17.8	107	56.4		08.6	
20	214	37.5	73	25.5		17.0	122	57.0		08.6	
21	229	40.0	88	26.2		16.2	137	57.6		08.6	
22	244	42.5	103	26.9		15.3	152	58.3		08.6	
23	259	44.9	118	27.6		14.5	167	58.9		08.6	
24	274	47.4	133	28.3	+16	13.7	182	59.5	+24	08.6	
Dif	—		+7	-8		+6	0	+20	-1	+26	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 4 PHE	SD: 15 ^h 0				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 0				PMG: 20 ^h 26 ^m				Civil		Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	h m m	Hora R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	16.5	+23 20.3	63	07.1	-10 21.2		60 N	21 27	23 10	** **	15 48 72	0 33 22	
1	194	16.3		77	39.4 ¹³³	29.3 ⁸¹		58	21 07	22 22	** **	40 70	39 25	
2	209	16.2		92	11.7 ¹³³	37.3 ⁸⁰		56	20 50	21 53	** **	33 68	45 26	
3	224	16.1		106	44.0 ¹³³	45.3 ⁸⁰		54	36	31	23 15	27 67	49 29	
4	239	16.0		121	16.2 ¹³²	-10 53.3 ⁸⁰		52	24	21 13	22 30	22 65	54 29	
5	254	15.8	+23 19.8	135	48.4 ¹³²	-11 01.2 ⁷⁹		50	20 13	20 58	22 03	15 17 64	0 58 30	
6	269	15.7	+23 19.7	150	20.4 ¹³⁰	-11 09.1 ⁷⁹		45	19 51	20 28	21 18	15 07 61	1 06 33	
7	284	15.6		164	52.5 ¹³¹	16.9 ⁷⁸		40	33	20 06	20 47	14 58 59	13 36	
8	299	15.4		179	24.5 ¹³⁰	24.7 ⁷⁸		35	18	19 48	24	51 57	20 37	
9	314	15.3		193	56.4 ¹²⁹	32.4 ⁷⁷		30	19 05	32	20 06	44 56	25 39	
10	329	15.2		208	28.3 ¹²⁹	40.1 ⁷⁷		20	18 43	19 08	19 37	33 53	34 42	
11	344	15.0	+23 19.2	223	00.1 ¹²⁸	-11 47.8 ⁷⁷		10 N	18 24	18 47	19 14	14 24 50	1 43 44	
12	359	14.9	+23 19.1	237	31.8 ¹²⁷	-11 55.4 ⁷⁶		0	18 07	18 29	18 55	14 15 48	1 51 46	
13	14	14.8		252	03.5 ¹²⁷	-12 03.0 ⁷⁶		10 S	17 49	18 12	38	14 06 46	1 58 50	
14	29	14.7		266	35.2 ¹²⁷	10.5 ⁷⁵		20	31	17 55	22	13 56 44	2 07 51	
15	44	14.5		281	06.7 ¹²⁵	17.9 ⁷⁴		30	17 10	36	18 06	45 41	16 55	
16	59	14.4		295	38.3 ¹²⁶	25.3 ⁷⁴		35	16 57	26	17 57	39 39	22 56	
17	74	14.3	+23 18.6	310	09.7 ¹²⁴	-12 32.7 ⁷⁴		40	16 43	17 14	17 48	13 32 38	2 28 58	
18	89	14.1	+23 18.5	324	41.1 ¹²⁴	-12 40.0 ⁷³		45	16 27	17 00	17 38	13 24 35	2 35 61	
19	104	14.0		339	12.5 ¹²⁴	47.3 ⁷³		50	16 06	16 44	26	14 33	44 64	
20	119	13.9		353	43.7 ¹²²	-12 54.5 ⁷²		52	15 56	37	21	09 32	48 65	
21	134	13.8		8	14.9 ¹²²	-13 01.6 ⁷¹		54	45	29	15	13 04 31	53 66	
22	149	13.6		22	46.1 ¹²²	08.7 ⁷¹		56	33	20	09	12 59 29	2 58 68	
23	164	13.5		37	17.2 ¹²¹	15.7 ⁷⁰		58	18	16 10	17 02	53 27	3 03 70	
24	179	13.4	+23 17.9	51	48.2 ¹²⁰	-13 22.7 ⁷⁰		60 S	15 01	15 58	16 55	12 46 25	3 09 73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 5 ^h 39 ^m 9		Mag: -4.6 PMG: 15 ^h 05 ^m		Mag: +1.6 PMG: 11 ^h 48 ^m		Mag: -1.8 PMG: 15 ^h 13 ^m		Mag: +0.2 PMG: 21 ^h 27 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	274	47.4	133 28.3	+16 13.7	182 59.5	+24 08.6	131 16.9	+15 21.9	37 13.7	-17 55.9	
1	289	49.8	148 29.1	12.8	198 00.1	08.6	146 18.9	21.8	52 16.3	55.8	
2	304	52.3	163 29.8	12.0	213 00.7	08.6	161 21.0	21.6	67 18.9	55.8	
3	319	54.8	178 30.5	11.2	228 01.4	08.6	176 23.0	21.5	82 21.5	55.8	
4	334	57.2	193 31.2	10.3	243 02.0	08.6	191 25.0	21.3	97 24.1	55.8	
5	349	59.7	208 31.9	+16 09.5	258 02.6	+24 08.6	206 27.0	+15 21.2	112 26.7	-17 55.8	
6	5	02.2	223 32.6	+16 08.7	273 03.2	+24 08.6	221 29.0	+15 21.1	127 29.3	-17 55.7	
7	20	04.6	238 33.4	07.8	288 03.9	08.6	236 31.1	20.9	142 31.9	55.7	
8	35	07.1	253 34.1	07.0	303 04.5	08.5	251 33.1	20.8	157 34.5	55.7	
9	50	09.6	268 34.8	06.2	318 05.1	08.5	266 35.1	20.6	172 37.1	55.7	
10	65	12.0	283 35.6	05.3	333 05.7	08.5	281 37.1	20.5	187 39.7	55.7	
11	80	14.5	298 36.3	+16 04.5	348 06.3	+24 08.5	296 39.1	+15 20.3	202 42.3	-17 55.6	
12	95	17.0	313 37.0	+16 03.7	3	07.0	+24 08.5	311 41.2	+15 20.2	217 44.9	-17 55.6
13	110	19.4	328 37.8	02.8	18 07.6	08.5	326 43.2	20.0	232 47.5	55.6	
14	125	21.9	343 38.5	02.0	33 08.2	08.5	341 45.2	19.9	247 50.1	55.6	
15	140	24.3	358 39.2	01.2	48 08.8	08.5	356 47.2	19.7	262 52.7	55.6	
16	155	26.8	13 40.0	+16 00.3	63 09.4	08.5	11 49.2	19.6	277 55.3	55.5	
17	170	29.3	28 40.7	+15 59.5	78 10.1	+24 08.5	26 51.3	+15 19.4	292 57.9	-17 55.5	
18	185	31.7	43 41.5	+15 58.7	93 10.7	+24 08.5	41 53.3	+15 19.3	308 00.5	-17 55.5	
19	200	34.2	58 42.2	57.8	108 11.3	08.5	56 55.3	19.1	323 03.1	55.5	
20	215	36.7	73 43.0	57.0	123 11.9	08.5	71 57.3	19.0	338 05.7	55.5	
21	230	39.1	88 43.7	56.2	138 12.6	08.5	86 59.3	18.9	353 08.3	55.4	
22	245	41.6	103 44.5	55.3	153 13.2	08.5	102 01.3	18.7	8 10.9	55.4	
23	260	44.1	118 45.2	54.5	168 13.8	08.4	117 03.4	18.6	23 13.5	55.4	
24	275	46.5	133 46.0	+15 53.7	183 14.4	+24 08.4	132 05.4	+15 18.4	38 16.1	-17 55.4	
Dif	—		+7	-8	+6	0	+20	-1	+26	0	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 03 ^m 2			Edad: 11 ^d 4 PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/3 PMG: 21 ^h 15 ^m R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	13.4	+23	17.9	51	48.2	-13	22.7	60 N	** **	0 56	2 39	17 00	69	0 55	28
1	194	13.2		17.8	66	19.2 ¹²⁰		29.6	58	** **	1 44	2 59	16 50	68	1 04	29
2	209	13.1		17.7	80	50.1 ¹¹⁹		36.5	56	** **	2 14	3 16	41 67		11 31	
3	224	13.0		17.6	95	20.9 ¹¹⁸		43.3	54	0 52	36	30	34 65		17 33	
4	239	12.9		17.4	109	51.7 ¹¹⁸		50.0	52	1 36	2 54	42	27 64		23 34	
5	254	12.7	+23	17.3	124	22.4 ¹¹⁷	-13	56.7	50	2 03	3 09	3 53	16 21	63	1 28	36
6	269	12.6	+23	17.2	138	53.1 ¹¹⁷	-14	03.3	45	2 49	3 38	4 15	16 08	61	1 39	38
7	284	12.5		17.1	153	23.6 ¹¹⁵		09.9	40	3 19	4 01	33	15 57	59	49	40
8	299	12.3		17.0	167	54.2 ¹¹⁶		16.4	35	3 42	19	4 48	48 58		1 57	42
9	314	12.2		16.9	182	24.6 ¹¹⁴		22.8	30	4 01	34	5 01	40 57		2 04	43
10	329	12.1		16.8	196	55.0 ¹¹⁴		29.2	20	29	4 59	23	26 55		16 46	
11	344	12.0	+23	16.7	211	25.3 ¹¹³	-14	35.5	10 N	4 52	5 19	5 42	15 14	53	2 27	48
12	359	11.8	+23	16.5	225	55.6 ¹¹³	-14	41.8	0	5 11	5 37	6 00	15 03	51	2 37	50
13	14	11.7		16.4	240	25.8 ¹¹²		47.9	10 S	28	5 54	17	14 52	49	48	51
14	29	11.6		16.3	254	55.9 ¹¹¹	-14	54.0	20	5 44	6 11	35	40 47		2 58	54
15	44	11.5		16.2	269	26.0 ¹¹¹	-15	00.1	30	6 00	30	6 56	26 46		3 11	56
16	59	11.3		16.1	283	55.9 ¹⁰⁹		06.0	35	09	41	7 09	18 45		18 58	
17	74	11.2	+23	15.9	298	25.9 ¹¹⁰	-15	11.9	40	6 18	6 52	7 23	14 10	42	3 26	59
18	89	11.1	+23	15.8	312	55.7 ¹⁰⁸	-15	17.7	45	6 28	7 06	7 39	13 59	41	3 36	61
19	104	10.9		15.7	327	25.5 ¹⁰⁸		23.5	50	40	22	8 00	47 39		48 63	
20	119	10.8		15.6	341	55.3 ¹⁰⁸		29.2	52	45	29	10	41 38		53 65	
21	134	10.7		15.5	356	24.9 ¹⁰⁶		34.8	54	51	37	21	35 36		3 59	66
22	149	10.6		15.3	10	54.5 ¹⁰⁶		40.3	56	6 57	46	33	28 35		4 06	67
23	164	10.4		15.2	25	24.0 ¹⁰⁵		45.8	58	7 04	7 56	8 48	20 33		13 69	
24	179	10.3	+23	15.1	39	53.5 ¹⁰⁵	-15	51.1	60 S	7 11	8 08	9 05	13 11	32	4 22	71

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 5 ^h 36 ^m 0		Mag: -4.6 PMG: 15 ^h 04 ^m			Mag: +1.6 PMG: 11 ^h 47 ^m			Mag: -1.8 PMG: 15 ^h 10 ^m			Mag: +0.2 PMG: 21 ^h 23 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	275	46.5	133	46.0	+15	53.7	183	14.4	+24	08.4	132	05.4	+15	18.4	38	16.1	-17	55.4
1	290	49.0	148	46.7		52.8	198	15.0		08.4	147	07.4		18.3	53	18.7		55.4
2	305	51.5	163	47.5		52.0	213	15.7		08.4	162	09.4		18.1	68	21.3		55.3
3	320	53.9	178	48.3		51.2	228	16.3		08.4	177	11.4		18.0	83	23.9		55.3
4	335	56.4	193	49.0		50.3	243	16.9		08.4	192	13.5		17.8	98	26.5		55.3
5	350	58.8	208	49.8	+15	49.5	258	17.5	+24	08.4	207	15.5	+15	17.7	113	29.1	-17	55.3
6	6	01.3	223	50.6	+15	48.7	273	18.2	+24	08.4	222	17.5	+15	17.5	128	31.7	-17	55.3
7	21	03.8	238	51.3		47.8	288	18.8		08.4	237	19.5		17.4	143	34.3		55.2
8	36	06.2	253	52.1		47.0	303	19.4		08.3	252	21.5		17.2	158	36.9		55.2
9	51	08.7	268	52.9		46.2	318	20.0		08.3	267	23.5		17.1	173	39.5		55.2
10	66	11.2	283	53.7		45.3	333	20.7		08.3	282	25.6		16.9	188	42.1		55.2
11	81	13.6	298	54.4	+15	44.5	348	21.3	+24	08.3	297	27.6	+15	16.8	203	44.7	-17	55.2
12	96	16.1	313	55.2	+15	43.7	3	21.9	+24	08.3	312	29.6	+15	16.6	218	47.2	-17	55.1
13	111	18.6	328	56.0		42.8	18	22.5		08.3	327	31.6		16.5	233	49.8		55.1
14	126	21.0	343	56.8		42.0	33	23.2		08.3	342	33.6		16.3	248	52.4		55.1
15	141	23.5	358	57.6		41.2	48	23.8		08.2	357	35.6		16.2	263	55.0		55.1
16	156	25.9	13	58.4		40.3	63	24.4		08.2	12	37.6		16.1	278	57.6		55.1
17	171	28.4	28	59.2	+15	39.5	78	25.0	+24	08.2	27	39.7	+15	15.9	294	00.2	-17	55.0
18	186	30.9	43	59.9	+15	38.7	93	25.6	+24	08.2	42	41.7	+15	15.8	309	02.8	-17	55.0
19	201	33.3	59	00.7		37.8	108	26.3		08.2	57	43.7		15.6	324	05.4		55.0
20	216	35.8	74	01.5		37.0	123	26.9		08.2	72	45.7		15.5	339	08.0		55.0
21	231	38.3	89	02.3		36.1	138	27.5		08.1	87	47.7		15.3	354	10.6		55.0
22	246	40.7	104	03.1		35.3	153	28.1		08.1	102	49.7		15.2	9	13.2		54.9
23	261	43.2	119	03.9		34.5	168	28.8		08.1	117	51.8		15.0	24	15.8		54.9
24	276	45.7	134	04.8	+15	33.6	183	29.4	+24	08.1	132	53.8	+15	14.9	39	18.4	-17	54.9
Dif	—		+8	-8			+6	0			+20	-1			+26	0		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 12 ^d 4 PHE	4 ^h : 56 ^m 6 12 ^h : 56 ^m 8 20 ^h : 57 ^m 0										
	PMG: 12 ^h 03 ^m 4					SD: 15 ^h 4 PMG: 22 ^h 07 ^m										
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	10.3	+23	15.1	39	53.5	-15	51.1	60 N	21 26	23 07	** **	18 09 65		1 23 36	
1	194	10.2		15.0	54	22.9 ¹⁰⁴	-15	56.4	58	21 06	22 20	** **	17 58 63		33 38	
2	209	10.1		14.8	68	52.2 ¹⁰³	-16	01.7	56	20 50	21 52	** **	48 62		42 40	
3	224	09.9		14.7	83	21.5 ¹⁰³		06.8	54	36	30	23 12	39 62		50 41	
4	239	09.8		14.6	97	50.7 ¹⁰²		11.9	52	24	21 12	22 29	31 61		1 57 42	
5	254	09.7	+23	14.4	112	19.8 ¹⁰¹	-16	16.8	50	20 13	20 57	22 02	17 24 60		2 04 42	
6	269	09.6	+23	14.3	126	48.9 ¹⁰¹	-16	21.7	45	19 51	20 28	21 17	17 09 59		2 17 45	
7	284	09.4		14.2	141	17.9 ¹⁰⁰		26.6	40	33	20 06	20 47	16 56 59		29 45	
8	299	09.3		14.1	155	46.8 ⁹⁹		31.3	35	18	19 48	24	46 57		39 46	
9	314	09.2		13.9	170	15.7 ⁹⁹		36.0	30	19 05	33	20 06	37 56		2 47 48	
10	329	09.1		13.8	184	44.5 ⁹⁸		40.5	20	18 43	19 08	19 37	21 55		3 02 49	
11	344	08.9	+23	13.7	199	13.2 ⁹⁷	-16	45.0	10 N	18 25	18 48	19 15	16 07 55		3 15 51	
12	359	08.8	+23	13.5	213	41.9 ⁹⁷	-16	49.4	0	18 07	18 30	18 56	15 54 54		3 27 52	
13	14	08.7		13.4	228	10.5 ⁹⁶		53.7	10 S	17 50	18 13	39	41 53		39 54	
14	29	08.6		13.3	242	39.0 ⁹⁵	-16	58.0	20	31	17 55	23	27 52		3 52 55	
15	44	08.4		13.1	257	07.5 ⁹⁵	-17	02.1	30	17 10	37	18 07	12 50		4 07 57	
16	59	08.3		13.0	271	35.9 ⁹⁴		06.1	35	16 58	26	17 58	15 03 49		16 57	
17	74	08.2	+23	12.9	286	04.3 ⁹⁴	-17	10.1	40	16 44	17 15	17 49	14 52 49		4 25 59	
18	89	08.1	+23	12.7	300	32.6 ⁹³	-17	14.0	45	16 27	17 01	17 38	14 40 48		4 37 60	
19	104	07.9		12.6	315	00.8 ⁹²		17.7	50	16 07	16 45	27	26 46		51 62	
20	119	07.8		12.4	329	28.9 ⁹¹		21.4	52	15 57	38	22	19 46		4 58 62	
21	134	07.7		12.3	343	57.1 ⁹²		25.0	54	46	30	16	11 45		5 05 63	
22	149	07.6		12.2	358	25.1 ⁹⁰		28.5	56	34	21	10	14 03 44		13 64	
23	164	07.4		12.0	12	53.1 ⁹⁰		31.9	58	19	16 11	17 03	13 53 43		22 66	
24	179	07.3	+23	11.9	27	21.0 ⁸⁹	-17	35.2	60 S	15 02	15 59	16 56	13 43 41		5 33 67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 32 ^m 0		Mag: -4.6 PMG: 15 ^h 03 ^m		Mag: +1.6 PMG: 11 ^h 46 ^m		Mag: -1.8 PMG: 15 ^h 06 ^m		Mag: +0.2 PMG: 21 ^h 19 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	276	45.7	134	04.8	+15	33.6	183	29.4	+24	08.1
1	291	48.1	149	05.6		32.8	198	30.0		08.1
2	306	50.6	164	06.4		32.0	213	30.6		08.0
3	321	53.1	179	07.2		31.1	228	31.3		08.0
4	336	55.5	194	08.0		30.3	243	31.9		08.0
5	351	58.0	209	08.8	+15	29.5	258	32.5	+24	08.0
6	7	00.4	224	09.6	+15	28.6	273	33.1	+24	08.0
7	22	02.9	239	10.4		27.8	288	33.8		07.9
8	37	05.4	254	11.3		26.9	303	34.4		07.9
9	52	07.8	269	12.1		26.1	318	35.0		07.9
10	67	10.3	284	12.9		25.3	333	35.6		07.9
11	82	12.8	299	13.7	+15	24.4	348	36.3	+24	07.9
12	97	15.2	314	14.6	+15	23.6	3	36.9	+24	07.8
13	112	17.7	329	15.4		22.8	18	37.5		07.8
14	127	20.2	344	16.2		21.9	33	38.1		07.8
15	142	22.6	359	17.1		21.1	48	38.8		07.8
16	157	25.1	14	17.9		20.3	63	39.4		07.7
17	172	27.6	29	18.8	+15	19.4	78	40.0	+24	07.7
18	187	30.0	44	19.6	+15	18.6	93	40.7	+24	07.7
19	202	32.5	59	20.4		17.7	108	41.3		07.7
20	217	34.9	74	21.3		16.9	123	41.9		07.6
21	232	37.4	89	22.1		16.1	138	42.5		07.6
22	247	39.9	104	23.0		15.2	153	43.2		07.6
23	262	42.3	119	23.8		14.4	168	43.8		07.6
24	277	44.8	134	24.7	+15	13.6	183	44.4	+24	07.5
Dif	—		+8		-8		+6		0	
							+20		-1	
									+26	
									0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7			Edad: 13 ^d 4 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 5 20 ^h : 57 ^m 8 R°: 56 ^m															
	PMG: 12 ^h 03 ^m 6			SD: 15 ^h 6 PMG: 23 ^h 01 ^m															
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m			
0	179	07.3	+23	11.9	27	21.0	-17	35.2	32	60 N	** **	1 00	2 41	19	14	55	1 59	48	
1	194	07.2		11.7	41	48.9	89	38.4	31	58	** **	1 47	3 01	19	01	56	2 11	48	
2	209	07.1		11.6	56	16.7	88	41.5	31	56	** **	2 16	17	18	50	56	22	48	
3	224	06.9		11.4	70	44.4	87	44.5	30	54	0 55	37	31	41	55	31	49		
4	239	06.8		11.3	85	12.1	87	47.4	29	52	1 38	2 55	43	32	56	39	50		
5	254	06.7	+23	11.2	99	39.7	86	-17	50.3	50	2 05	3 10	3 54	18	24	56	2 46	50	
6	269	06.6	+23	11.0	114	07.3	86	-17	53.0	45	2 50	3 39	4 16	18	08	56	3 02	51	
7	284	06.4		10.9	128	34.8	85		55.6	40	3 20	4 01	34	17	55	56	14	52	
8	299	06.3		10.7	143	02.3	85	-17	58.1	35	3 43	19	4 49	43	56	25	53		
9	314	06.2		10.6	157	29.7	84	-18	00.5	30	4 01	35	5 02	33	56	35	53		
10	329	06.1		10.4	171	57.0	83		02.8	20	30	4 59	24	16	56	3 51	54		
11	344	06.0	+23	10.3	186	24.3	83	-18	05.1	10 N	4 52	5 20	5 43	17	02	55	4 06	54	
12	359	05.8	+23	10.1	200	51.5	82	-18	07.2	0	5 11	5 37	6 00	16	48	55	4 19	55	
13	14	05.7		10.0	215	18.7	82		09.2	10 S	28	5 54	17	34	56	33	55		
14	29	05.6		09.8	229	45.9	82		11.1	20	5 44	6 12	36	19	56	4 47	56		
15	44	05.5		09.7	244	12.9	80		12.9	18	6 00	30	6 57	16	02	56	5 04	56	
16	59	05.3		09.5	258	40.0	81		14.5	16	09	41	7 09	15	52	56	13	57	
17	74	05.2	+23	09.4	273	07.0	80	-18	16.1	40	6 18	6 52	7 23	15	41	55	5 24	57	
18	89	05.1	+23	09.2	287	33.9	79	-18	17.6	45	6 28	7 06	7 39	15	28	55	5 37	58	
19	104	05.0		09.0	302	00.8	79		19.0	14	40	21	8 00	12	55	5 53	58		
20	119	04.9		08.9	316	27.6	78		20.2	12	45	29	10	15	05	54	6 00	59	
21	134	04.7		08.7	330	54.4	78		21.4	12	54	37	20	14	56	55	08	59	
22	149	04.6		08.6	345	21.2	78		22.4	10	56	46	33	47	54	17	60		
23	164	04.5		08.4	359	47.9	77		23.3	9	58	7 56	8 47	36	55	28	59		
24	179	04.4	+23	08.3	14	14.6	77	-18	24.1	8	60 S	7 11	8 07	14	24	54	6 40	60	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 5 ^h 28 ^m 1		Mag: -4.6 PMG: 15 ^h 01 ^m			Mag: +1.6 PMG: 11 ^h 45 ^m			Mag: -1.8 PMG: 15 ^h 03 ^m			Mag: +0.2 PMG: 21 ^h 15 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	277	44.8	134	24.7	+15	13.6	183	44.4	+24	07.5	133	42.1	+15	11.3	40	20.7	-17	54.5
1	292	47.3	149	25.6		12.7	198	45.0		07.5	148	44.1		11.1	55	23.2		54.4
2	307	49.7	164	26.4		11.9	213	45.7		07.5	163	46.1		11.0	70	25.8		54.4
3	322	52.2	179	27.3		11.1	228	46.3		07.4	178	48.1		10.8	85	28.4		54.4
4	337	54.7	194	28.1		10.2	243	46.9		07.4	193	50.1		10.7	100	31.0		54.4
5	352	57.1	209	29.0	+15	09.4	258	47.5	+24	07.4	208	52.2	+15	10.5	115	33.6	-17	54.4
6	7	59.6	224	29.9	+15	08.5	273	48.2	+24	07.4	223	54.2	+15	10.4	130	36.2	-17	54.3
7	23	02.1	239	30.7		07.7	288	48.8		07.3	238	56.2		10.2	145	38.8		54.3
8	38	04.5	254	31.6		06.9	303	49.4		07.3	253	58.2		10.1	160	41.4		54.3
9	53	07.0	269	32.5		06.0	318	50.1		07.3	269	00.2		09.9	175	44.0		54.3
10	68	09.4	284	33.4		05.2	333	50.7		07.2	284	02.2		09.8	190	46.6		54.3
11	83	11.9	299	34.2	+15	04.4	348	51.3	+24	07.2	299	04.2	+15	09.6	205	49.2	-17	54.3
12	98	14.4	314	35.1	+15	03.5	3	51.9	+24	07.2	314	06.2	+15	09.5	220	51.8	-17	54.2
13	113	16.8	329	36.0		02.7	18	52.6		07.1	329	08.2		09.3	235	54.3		54.2
14	128	19.3	344	36.9		01.9	33	53.2		07.1	344	10.3		09.2	250	56.9		54.2
15	143	21.8	359	37.8		01.0	48	53.8		07.1	359	12.3		09.0	265	59.5		54.2
16	158	24.2	14	38.7	+15	00.2	63	54.5		07.0	14	14.3		08.9	281	02.1		54.2
17	173	26.7	29	39.6	+14	59.3	78	55.1	+24	07.0	29	16.3	+15	08.7	296	04.7	-17	54.1
18	188	29.2	44	40.4	+14	58.5	93	55.7	+24	07.0	44	18.3	+15	08.6	311	07.3	-17	54.1
19	203	31.6	59	41.3		57.7	108	56.3		06.9	59	20.3		08.4	326	09.9		54.1
20	218	34.1	74	42.2		56.8	123	57.0		06.9	74	22.3		08.3	341	12.5		54.1
21	233	36.6	89	43.1		56.0	138	57.6		06.9	89	24.3		08.1	356	15.1		54.1
22	248	39.0	104	44.0		55.2	153	58.2		06.8	104	26.3		08.0	11	17.7		54.1
23	263	41.5	119	44.9		54.3	168	58.9		06.8	119	28.3		07.8	26	20.2		54.0
24	278	43.9	134	45.8	+14	53.5	183	59.5	+24	06.8	134	30.4	+15	07.7	41	22.8	-17	54.0
Dif	—		+9		-8		+6		0		+20		-2		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 03 ^m 8			Edad: 14 ^d 4 PHE { 4 ^h : 58'0 12 ^h : 58'2 20 ^h : 58'4 R°: 57 ^m SD: 15'8 PMG: 23 ^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	h m m	h m m
0	179	04.4	+23 08.3	14	14.6	-18 24.1	8	60 N	21 25	23 03	** **	20 09 46		2 47 60	
1	194	04.3	08.1	28	41.2	24.9	5	58	21 05	22 19	** **	19 57 46		2 59 60	
2	209	04.1	07.9	43	07.8	25.4	5	56	20 49	21 50	** **	46 48		3 10 60	
3	224	04.0	07.8	57	34.3	25.9	5	54	35	29	23 08	36 49		20 59	
4	239	03.9	07.6	72	00.8	26.3	4	52	23	21 11	22 27	28 49		29 59	
5	254	03.8	+23 07.5	86	27.3	26.6	3	50	20 13	20 57	22 01	19 20 50		3 36 59	
6	269	03.6	+23 07.3	100	53.7	26.7	1	45	19 50	20 28	21 17	19 04 51		3 53 58	
7	284	03.5	07.1	115	20.1	26.8	1	40	33	20 05	20 47	18 51 52		4 06 59	
8	299	03.4	07.0	129	46.4	26.7	1	35	18	19 48	24	39 53		18 58	
9	314	03.3	06.8	144	12.7	26.5	2	30	19 05	33	20 06	29 54		28 58	
10	329	03.2	06.6	158	39.0	26.2	3	20	18 43	19 08	19 37	18 12 55		4 45 57	
11	344	03.0	+23 06.5	173	05.3	25.8	4	10 N	18 25	18 48	19 15	17 57 56		5 00 57	
12	359	02.9	+23 06.3	187	31.5	25.2	6	0	18 07	18 30	18 56	17 43 57		5 14 57	
13	14	02.8	06.1	201	57.7	24.6	6	10 S	17 50	18 13	39	30 57		28 56	
14	29	02.7	06.0	216	23.8	23.8	8	20	32	17 56	23	17 15 58		5 43 56	
15	44	02.6	05.8	230	50.0	22.9	9	30	17 11	37	18 07	16 58 59		6 00 55	
16	59	02.4	05.6	245	16.1	21.9	10	35	16 59	27	17 59	48 60		10 55	
17	74	02.3	+23 05.5	259	42.1	20.8	11	40	16 45	17 15	17 49	16 36 62		6 21 55	
18	89	02.2	+23 05.3	274	08.2	19.6	12	45	16 29	17 02	17 39	16 23 62		6 35 53	
19	104	02.1	05.1	288	34.2	18.3	13	50	16 08	16 46	28	16 07 63		51 53	
20	119	02.0	04.9	303	00.2	16.8	15	52	15 58	39	23	15 59 64		6 59 52	
21	134	01.8	04.8	317	26.2	15.2	16	54	48	31	17	51 64		7 07 52	
22	149	01.7	04.6	331	52.2	13.5	17	56	35	22	11	41 65		17 51	
23	164	01.6	04.4	346	18.1	11.7	18	58	21	12	17 05	31 65		27 51	
24	179	01.5	+23 04.2	0	44.0	09.8	19	60 S	15 04	16 01	16 57	15 18 67		7 40 50	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 24 ^m 2			Mag: -4.6 PMG: 15 ^h 00 ^m			Mag: +1.6 PMG: 11 ^h 44 ^m			Mag: -1.8 PMG: 15 ^h 00 ^m			Mag: +0.2 PMG: 21 ^h 11 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	278	43.9	134 45.8	+14 53.5	183 59.5	+24 06.8	134 30.4	+15 07.7	41 22.8	-17 54.0					
1	293	46.4	149 46.8	52.6	199 00.1	06.7	149 32.4	07.5	56 25.4	54.0					
2	308	48.9	164 47.7	51.8	214 00.7	06.7	164 34.4	07.4	71 28.0	54.0					
3	323	51.3	179 48.6	51.0	229 01.4	06.7	179 36.4	07.2	86 30.6	54.0					
4	338	53.8	194 49.5	50.1	244 02.0	06.6	194 38.4	07.1	101 33.2	54.0					
5	353	56.3	209 50.4	+14 49.3	259 02.6	+24 06.6	209 40.4	+15 06.9	116 35.8	-17 53.9					
6	8	58.7	224 51.3	+14 48.5	274 03.3	+24 06.5	224 42.4	+15 06.8	131 38.4	-17 53.9					
7	24	01.2	239 52.2	47.6	289 03.9	06.5	239 44.4	06.6	146 41.0	53.9					
8	39	03.7	254 53.2	46.8	304 04.5	06.5	254 46.4	06.5	161 43.5	53.9					
9	54	06.1	269 54.1	46.0	319 05.1	06.4	269 48.4	06.3	176 46.1	53.9					
10	69	08.6	284 55.0	45.1	334 05.8	06.4	284 50.4	06.2	191 48.7	53.8					
11	84	11.0	299 56.0	+14 44.3	349 06.4	+24 06.3	299 52.5	+15 06.0	206 51.3	-17 53.8					
12	99	13.5	314 56.9	+14 43.4	4 07.0	+24 06.3	314 54.5	+15 05.9	221 53.9	-17 53.8					
13	114	16.0	329 57.8	42.6	19 07.7	06.3	329 56.5	05.7	236 56.5	53.8					
14	129	18.4	344 58.8	41.8	34 08.3	06.2	344 58.5	05.6	251 59.1	53.8					
15	144	20.9	359 59.7	40.9	49 08.9	06.2	0 00.5	05.4	267 01.7	53.8					
16	159	23.4	15 00.6	40.1	64 09.6	06.1	15 02.5	05.3	282 04.2	53.7					
17	174	25.8	30 01.6	+14 39.3	79 10.2	+24 06.1	30 04.5	+15 05.1	297 06.8	-17 53.7					
18	189	28.3	45 02.5	+14 38.4	94 10.8	+24 06.1	45 06.5	+15 05.0	312 09.4	-17 53.7					
19	204	30.8	60 03.5	37.6	109 11.5	06.0	60 08.5	04.8	327 12.0	53.7					
20	219	33.2	75 04.4	36.8	124 12.1	06.0	75 10.5	04.7	342 14.6	53.7					
21	234	35.7	90 05.4	35.9	139 12.7	05.9	90 12.5	04.5	357 17.2	53.7					
22	249	38.2	105 06.3	35.1	154 13.3	05.9	105 14.5	04.4	12 19.8	53.6					
23	264	40.6	120 07.3	34.2	169 14.0	05.8	120 16.5	04.2	27 22.3	53.6					
24	279	43.1	135 08.2	+14 33.4	184 14.6	+24 05.8	135 18.6	+15 04.1	42 24.9	-17 53.6					
Dif	—			+9	-8	+6	0	+20	-2	+26					

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: 15 ^d 4 PHE { 4 ^h : 58'6 12 ^h : 58'8 20 ^h : 59'0 PMG: **h **m R°: **m												
	hG ☉	Dec			hG ☾	Dif Dec Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	01.5	+23	04.2	0	44.0	-18	09.8	60 N	** **	1 05	2 43	20 55	35	3 47	72	
1	194	01.4		04.1	15	09.9	69	07.8	58	** **	1 49	3 03	43 38		3 59	71	
2	209	01.3		03.9	29	35.8	69	05.6	56	** **	2 18	19	34 39		4 10	69	
3	224	01.1		03.7	44	01.7	69	03.3	54	1 00	39	33	25 41		19	66	
4	239	01.0		03.5	58	27.5	68	-18	52	1 41	2 57	45	17 42		28	67	
5	254	00.9	+23	03.4	72	53.4	69	-17	50	2 07	3 11	3 55	20 10	44	4 35	67	
6	269	00.8	+23	03.2	87	19.2	68	-17	45	2 51	3 40	4 17	19 55	46	4 51	65	
7	284	00.7		03.0	101	45.0	68	53.1	40	3 21	4 02	35	43 48		5 05	63	
8	299	00.5		02.8	116	10.8	68	50.2	35	3 44	20	4 50	32 50		16	62	
9	314	00.4		02.6	130	36.6	68	47.3	30	4 02	4 35	5 03	23 51		26	61	
10	329	00.3		02.5	145	02.4	68	44.2	20	31	5 00	24	19 07	53	42	60	
11	344	00.2	+23	02.3	159	28.2	68	-17	10 N	4 53	5 20	5 43	18 53	55	5 57	58	
12	359	00.1	+23	02.1	173	54.0	68	-17	0	5 12	5 38	6 00	18 40	57	6 11	56	
13	14	00.0		01.9	188	19.8	68	34.2	10 S	28	5 55	17	27 59		24	56	
14	28	59.8		01.7	202	45.5	67	30.7	20	5 44	6 12	36	18 13	61	39	54	
15	43	59.7		01.5	217	11.3	68	27.0	30	6 00	30	6 57	17 57	63	6 55	52	
16	58	59.6		01.3	231	37.1	68	23.3	35	09	41	7 09	48 64		7 05	51	
17	73	59.5	+23	01.2	246	02.8	67	-17	40	6 18	6 52	7 23	17 38	65	7 16	49	
18	88	59.4	+23	01.0	260	28.6	68	-17	45	6 28	7 05	7 39	17 25	67	7 28	49	
19	103	59.3		00.8	274	54.4	68	11.2	50	40	21	7 59	10 70		44	46	
20	118	59.1		00.6	289	20.1	67	07.0	52	45	28	8 09	17 03	71	51	46	
21	133	59.0		00.4	303	45.9	68	-17	54	50	36	20	16 55	72	7 59	45	
22	148	58.9	+23	00.2	318	11.7	68	-16	56	6 56	45	32	46 74		8 08	44	
23	163	58.8	+23	00.0	332	37.5	68	53.7	58	7 03	7 55	8 46	36 75		18	42	
24	178	58.7	+22	59.8	347	03.2	67	-16	60 S	7 10	8 07	9 03	16 25	77	8 30	40	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 20 ^m 3		Mag: -4.7 PMG: 14 ^h 58 ^m		Mag: +1.6 PMG: 11 ^h 43 ^m		Mag: -1.8 PMG: 14 ^h 57 ^m		Mag: +0.3 PMG: 21 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	279	43.1	135	08.2	+14	33.4	184	14.6	+15	04.1
1	294	45.5	150	09.2		32.6	199	15.2		03.9
2	309	48.0	165	10.2		31.7	214	15.9		03.7
3	324	50.5	180	11.1		30.9	229	16.5		03.6
4	339	52.9	195	12.1		30.1	244	17.1		03.4
5	354	55.4	210	13.1	+14	29.2	259	17.8	+24	05.6
6	9	57.9	225	14.0	+14	28.4	274	18.4	+24	05.5
7	25	00.3	240	15.0		27.6	289	19.0		05.5
8	40	02.8	255	16.0		26.7	304	19.7		05.4
9	55	05.3	270	17.0		25.9	319	20.3		05.4
10	70	07.7	285	17.9		25.0	334	20.9		05.3
11	85	10.2	300	18.9	+14	24.2	349	21.6	+24	05.3
12	100	12.7	315	19.9	+14	23.4	4	22.2	+24	05.2
13	115	15.1	330	20.9		22.5	19	22.8		05.2
14	130	17.6	345	21.9		21.7	34	23.5		05.1
15	145	20.0	0	22.9		20.9	49	24.1		05.1
16	160	22.5	15	23.9		20.0	64	24.7		05.0
17	175	25.0	30	24.9	+14	19.2	79	25.3	+24	05.0
18	190	27.4	45	25.8	+14	18.4	94	26.0	+24	04.9
19	205	29.9	60	26.8		17.5	109	26.6		04.9
20	220	32.4	75	27.8		16.7	124	27.2		04.8
21	235	34.8	90	28.9		15.9	139	27.9		04.8
22	250	37.3	105	29.9		15.0	154	28.5		04.7
23	265	39.8	120	30.9		14.2	169	29.1		04.7
24	280	42.2	135	31.9	+14	13.4	184	29.8	+24	04.6
Dif	—		+10		-8		+6		0	
							+20		-2	
									+26	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 16 ^d 4 PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/4										
	PMG: 12 ^h 04 ^m 2			SD: 16 ^h 1 PMG: 0 ^h 54 ^m R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	58.7	+22 59.8	347	03.2	-16 49.0	48	60 N	21 24	22 59	** **	21 30 29	4 59 81	
1	193	58.6	59.6	1	29.0	44.2	48	58	21 04	22 16	** **	21 31	5 10 78	
2	208	58.4	59.4	15	54.8	39.3	49	56	20 48	21 49	** **	13 33	19 77	
3	223	58.3	59.2	30	20.7	34.3	50	54	34	28	23 04	21 06 35	28 75	
4	238	58.2	59.0	44	46.5	29.2	51	52	22	21 10	22 25	20 59 37	35 74	
5	253	58.1	+22 58.9	59	12.3	-16 23.9	53	50	20 12	20 56	21 59	20 54 37	5 42 72	
6	268	58.0	+22 58.7	73	38.2	-16 18.6	53	45	19 50	20 27	21 16	20 41 41	5 56 70	
7	283	57.9	58.5	88	04.0	13.2	54	40	32	20 05	20 46	31 43	6 08 67	
8	298	57.8	58.3	102	29.9	07.6	56	35	18	19 47	24	22 45	18 65	
9	313	57.6	58.1	116	55.8	-16 02.0	56	30	19 05	32	20 06	14 47	27 64	
10	328	57.5	57.9	131	21.7	-15 56.2	58	20	18 44	19 08	19 37	20 00 51	42 61	
11	343	57.4	+22 57.7	145	47.6	-15 50.3	59	10 N	18 25	18 48	19 15	19 48 53	6 55 59	
12	358	57.3	+22 57.5	160	13.5	-15 44.4	59	0	18 08	18 30	18 56	19 37 56	7 07 57	
13	13	57.2	57.3	174	39.5	38.3	61	10 S	17 51	18 14	40	26 58	20 54	
14	28	57.1	57.1	189	05.5	32.1	62	20	33	17 57	24	14 61	33 51	
15	43	57.0	56.9	203	31.4	25.8	63	30	12	38	18 08	19 00 64	47 49	
16	58	56.8	56.7	217	57.5	19.4	64	35	17 00	28	17 59	18 52 66	7 56 47	
17	73	56.7	+22 56.4	232	23.5	-15 13.0	64	40	16 46	17 16	17 50	18 43 68	8 05 46	
18	88	56.6	+22 56.2	246	49.5	-15 06.4	66	45	16 30	17 03	17 40	18 32 71	8 17 43	
19	103	56.5	56.0	261	15.6	-14 59.7	67	50	09	16 48	29	20 73	30 41	
20	118	56.4	55.8	275	41.7	52.9	68	52	16 00	40	24	14 75	37 39	
21	133	56.3	55.6	290	07.8	46.0	69	54	15 49	33	18	07 77	44 38	
22	148	56.2	55.4	304	34.0	39.0	70	56	37	24	13	18 00 78	8 52 36	
23	163	56.0	55.2	319	00.1	32.0	70	58	23	14	17 06	17 51 81	9 00 35	
24	178	55.9	+22 55.0	333	26.3	-14 24.8	72	60 S	15 06	16 03	16 59	17 42 83	9 10 32	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 16 ^m 3		Mag: -4.7 PMG: 14 ^h 57 ^m		Mag: +1.6 PMG: 11 ^h 42 ^m		Mag: -1.8 PMG: 14 ^h 54 ^m		Mag: +0.3 PMG: 21 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	280	42.2	135 31.9	+14 13.4	184 29.8	+24 04.6	136 06.7	+15 00.4	43 27.0	-17 53.2
1	295	44.7	150 32.9	12.5	199 30.4	04.6	151 08.7	00.2	58 29.5	53.2
2	310	47.2	165 33.9	11.7	214 31.0	04.5	166 10.7	+15 00.1	73 32.1	53.2
3	325	49.6	180 34.9	10.9	229 31.7	04.5	181 12.7	+14 59.9	88 34.7	53.2
4	340	52.1	195 35.9	10.0	244 32.3	04.4	196 14.7	59.8	103 37.3	53.1
5	355	54.5	210 37.0	+14 09.2	259 33.0	+24 04.3	211 16.7	+14 59.6	118 39.9	-17 53.1
6	10	57.0	225 38.0	+14 08.4	274 33.6	+24 04.3	226 18.7	+14 59.5	133 42.5	-17 53.1
7	25	59.5	240 39.0	07.5	289 34.2	04.2	241 20.7	59.3	148 45.0	53.1
8	41	01.9	255 40.1	06.7	304 34.9	04.2	256 22.7	59.2	163 47.6	53.1
9	56	04.4	270 41.1	05.9	319 35.5	04.1	271 24.7	59.0	178 50.2	53.1
10	71	06.9	285 42.1	05.0	334 36.1	04.1	286 26.7	58.9	193 52.8	53.0
11	86	09.3	300 43.2	+14 04.2	349 36.8	+24 04.0	301 28.7	+14 58.7	208 55.4	-17 53.0
12	101	11.8	315 44.2	+14 03.4	4 37.4	+24 04.0	316 30.7	+14 58.5	223 57.9	-17 53.0
13	116	14.3	330 45.2	02.5	19 38.0	03.9	331 32.7	58.4	239 00.5	53.0
14	131	16.7	345 46.3	01.7	34 38.7	03.8	346 34.7	58.2	254 03.1	53.0
15	146	19.2	0 47.3	+14 00.9	49 39.3	03.8	1 36.7	58.1	269 05.7	53.0
16	161	21.7	15 48.4	+14 00.0	64 39.9	03.7	16 38.8	57.9	284 08.3	53.0
17	176	24.1	30 49.4	+13 59.2	79 40.6	+24 03.7	31 40.8	+14 57.8	299 10.8	-17 52.9
18	191	26.6	45 50.5	+13 58.4	94 41.2	+24 03.6	46 42.8	+14 57.6	314 13.4	-17 52.9
19	206	29.0	60 51.5	57.5	109 41.8	03.5	61 44.8	57.5	329 16.0	52.9
20	221	31.5	75 52.6	56.7	124 42.5	03.5	76 46.8	57.3	344 18.6	52.9
21	236	34.0	90 53.6	55.9	139 43.1	03.4	91 48.8	57.2	359 21.2	52.9
22	251	36.4	105 54.7	55.0	154 43.7	03.4	106 50.8	57.0	14 23.7	52.9
23	266	38.9	120 55.8	54.2	169 44.4	03.3	121 52.8	56.9	29 26.3	52.8
24	281	41.4	135 56.8	+13 53.4	184 45.0	+24 03.2	136 54.8	+14 56.7	44 28.9	-17 52.8
Dif	—	+10	-8		+6	-1	+20	-2	+26	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 04 ^m 4			Edad: 17 ^d 4 PHE { 4 ^h : 59/5 12 ^h : 59/6 20 ^h : 59/7 PMG: 1 ^h 50 ^m R°: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	55.9	+22	55.0	333	26.3	-14	24.8	60 N	** **	1 10	2 45	21 59	23	6 20	85	
1	193	55.8		54.8	347	52.6	73	17.5	58	** **	1 53	3 05	52	26	28	83	
2	208	55.7		54.6	2	18.8	72	10.2	56	** **	2 20	21	46	28	36	80	
3	223	55.6		54.4	16	45.1	73	-14	54	1 04	41	34	41	30	43	78	
4	238	55.5		54.2	31	11.4	73	-13	52	1 44	2 58	46	36	32	49	76	
5	253	55.4	+22	53.9	45	37.7	73	-13	50	2 09	3 13	3 57	21 31	34	6 54	75	
6	268	55.3	+22	53.7	60	04.0	73	-13	45	2 53	3 42	4 19	21 22	37	7 06	71	
7	283	55.1		53.5	74	30.4	74	32.0	40	3 22	4 04	36	14	40	15	69	
8	298	55.0		53.3	88	56.8	74	24.1	35	3 45	21	4 51	07	42	23	67	
9	313	54.9		53.1	103	23.3	75	16.1	30	4 03	4 36	5 04	21 01	44	31	64	
10	328	54.8		52.9	117	49.8	75	-13	20	32	5 01	25	20 51	48	43	61	
11	343	54.7	+22	52.7	132	16.3	75	-12	10 N	4 54	5 21	5 44	20 41	52	7 54	58	
12	358	54.6	+22	52.4	146	42.8	75	-12	0	5 12	5 38	6 01	20 33	54	8 04	55	
13	13	54.5		52.2	161	09.4	76	43.3	10 S	29	5 55	18	24	58	14	52	
14	28	54.4		52.0	175	36.0	76	34.9	20	5 44	6 12	36	15	61	24	50	
15	43	54.3		51.8	190	02.6	76	26.4	30	6 00	30	6 56	20 04	65	36	46	
16	58	54.1		51.6	204	29.2	76	17.9	35	09	40	7 09	19 58	67	43	44	
17	73	54.0	+22	51.3	218	55.9	77	-12	40	6 18	6 52	7 22	19 51	69	8 51	41	
18	88	53.9	+22	51.1	233	22.6	77	-12	45	6 28	7 05	7 39	19 43	72	9 00	39	
19	103	53.8		50.9	247	49.4	78	-11	50	39	21	7 59	33	76	11	35	
20	118	53.7		50.7	262	16.2	78	42.8	52	44	28	8 08	29	77	16	34	
21	133	53.6		50.5	276	43.0	78	33.9	54	50	36	19	24	79	22	32	
22	148	53.5		50.2	291	09.9	79	24.9	56	6 56	44	31	18	82	28	30	
23	163	53.4		50.0	305	36.8	79	15.8	58	7 02	7 54	8 45	12	84	35	28	
24	178	53.3	+22	49.8	320	03.7	79	-11	60 S	7 09	8 05	9 02	19 05	86	9 42	26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 12 ^m 4		Mag: -4.7 PMG: 14 ^h 55 ^m		Mag: +1.6 PMG: 11 ^h 41 ^m		Mag: -1.8 PMG: 14 ^h 50 ^m		Mag: +0.3 PMG: 20 ^h 58 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	281	41.4	135	56.8	+13	53.4	184	45.0	+24	03.2	136	54.8	+14	56.7	44	28.9	-17	52.8
1	296	43.8	150	57.9		52.5	199	45.7		03.2	151	56.8		56.5	59	31.5		52.8
2	311	46.3	165	59.0		51.7	214	46.3		03.1	166	58.8		56.4	74	34.1		52.8
3	326	48.8	181	00.0		50.9	229	46.9		03.1	182	00.8		56.2	89	36.6		52.8
4	341	51.2	196	01.1		50.0	244	47.6		03.0	197	02.8		56.1	104	39.2		52.8
5	356	53.7	211	02.2	+13	49.2	259	48.2	+24	02.9	212	04.8	+14	55.9	119	41.8	-17	52.8
6	11	56.1	226	03.3	+13	48.4	274	48.8	+24	02.9	227	06.8	+14	55.8	134	44.4	-17	52.7
7	26	58.6	241	04.4		47.5	289	49.5		02.8	242	08.8		55.6	149	47.0		52.7
8	42	01.1	256	05.4		46.7	304	50.1		02.7	257	10.8		55.5	164	49.5		52.7
9	57	03.5	271	06.5		45.9	319	50.7		02.7	272	12.8		55.3	179	52.1		52.7
10	72	06.0	286	07.6		45.0	334	51.4		02.6	287	14.8		55.2	194	54.7		52.7
11	87	08.5	301	08.7	+13	44.2	349	52.0	+24	02.5	302	16.8	+14	55.0	209	57.3	-17	52.7
12	102	10.9	316	09.8	+13	43.4	4	52.7	+24	02.5	317	18.8	+14	54.8	224	59.8	-17	52.6
13	117	13.4	331	10.9		42.6	19	53.3		02.4	332	20.8		54.7	240	02.4		52.6
14	132	15.9	346	12.0		41.7	34	53.9		02.3	347	22.8		54.5	255	05.0		52.6
15	147	18.3	1	13.1		40.9	49	54.6		02.3	2	24.8		54.4	270	07.6		52.6
16	162	20.8	16	14.2		40.1	64	55.2		02.2	17	26.8		54.2	285	10.2		52.6
17	177	23.3	31	15.3	+13	39.2	79	55.8	+24	02.1	32	28.8	+14	54.1	300	12.7	-17	52.6
18	192	25.7	46	16.4	+13	38.4	94	56.5	+24	02.1	47	30.8	+14	53.9	315	15.3	-17	52.6
19	207	28.2	61	17.5		37.6	109	57.1		02.0	62	32.8		53.8	330	17.9		52.5
20	222	30.6	76	18.6		36.7	124	57.8		01.9	77	34.8		53.6	345	20.5		52.5
21	237	33.1	91	19.7		35.9	139	58.4		01.9	92	36.8		53.4	0	23.0		52.5
22	252	35.6	106	20.9		35.1	154	59.0		01.8	107	38.8		53.3	15	25.6		52.5
23	267	38.0	121	22.0		34.3	169	59.7		01.7	122	40.8		53.1	30	28.2		52.5
24	282	40.5	136	23.1	+13	33.4	185	00.3	+24	01.7	137	42.8	+14	53.0	45	30.8	-17	52.5
Dif	—		+11		-8		+6		-1		+20		-2		+26			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 18 ^d 4 PHE { 4 ^h : 59 ^m /7 12 ^h : 59 ^m /7 20 ^h : 59 ^m /7										
	PMG: 12 ^h 04 ^m 5			SD: 16 ^h 3 PMG: 2 ^h 46 ^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	h m	m	
0	178	53.3	+22 49.8	320	03.7	-11 06.6	93	60 N	21 22	22 54	** ** *	22 22 21	7 45 87	
1	193	53.2	49.6	334	30.6	-10 57.3	93	58	21 03	22 13	** ** *	18 23	51 84	
2	208	53.0	49.3	348	57.6	80 48.0	93	56	20 47	21 47	** ** *	14 25	7 56 82	
3	223	52.9	49.1	3	24.6	80 38.7	93	54	33	26	23 00	11 27	8 01 80	
4	238	52.8	48.9	17	51.7	81 29.2	95	52	21	21 09	22 23	08 29	05 78	
5	253	52.7	+22 48.6	32	18.8	81 -10 19.7	95	50	20 11	20 55	21 58	22 05 31	8 09 76	
6	268	52.6	+22 48.4	46	45.9	81 -10 10.1	96	45	19 49	20 26	21 15	21 59 34	8 17 73	
7	283	52.5	48.2	61	13.0	81 -10 00.5	96	40	32	20 05	20 46	54 37	24 69	
8	298	52.4	47.9	75	40.2	82 -9 50.8	97	35	18	19 47	23	49 40	30 67	
9	313	52.3	47.7	90	07.4	82 41.1	97	30	19 05	32	20 05	45 43	35 64	
10	328	52.2	47.5	104	34.7	83 31.2	99	20	18 44	19 08	19 37	39 46	44 60	
11	343	52.1	+22 47.3	119	02.0	83 -9 21.4	98	10 N	18 25	18 48	19 15	21 33 50	8 52 57	
12	358	52.0	+22 47.0	133	29.3	83 -9 11.4	100	0	18 08	18 31	18 57	21 27 53	8 59 54	
13	13	51.9	46.8	147	56.7	84 -9 01.4	100	10 S	17 51	18 14	40	22 56	9 06 50	
14	28	51.7	46.5	162	24.0	83 -8 51.4	100	20	33	17 57	25	16 60	14 47	
15	43	51.6	46.3	176	51.5	85 41.3	101	30	13	39	09	09 64	22 43	
16	58	51.5	46.1	191	18.9	84 31.1	102	35	17 01	29	18 00	05 66	27 41	
17	73	51.4	+22 45.8	205	46.4	85 -8 20.9	102	40	16 47	17 17	17 51	21 00 70	9 32 39	
18	88	51.3	+22 45.6	220	13.9	85 -8 10.7	102	45	16 31	17 04	17 41	20 55 73	9 39 35	
19	103	51.2	45.4	234	41.5	86 -8 00.4	103	50	11	16 49	30	49 76	46 32	
20	118	51.1	45.1	249	09.0	85 -7 50.0	104	52	16 01	42	25	46 78	50 30	
21	133	51.0	44.9	263	36.7	87 39.6	104	54	15 51	34	20	43 80	54 28	
22	148	50.9	44.6	278	04.3	86 29.2	104	56	39	25	14	40 81	9 58 27	
23	163	50.8	44.4	292	32.0	87 18.7	105	58	25	16	08	36 84	10 03 24	
24	178	50.7	+22 44.2	306	59.7	87 -7 08.2	105	60 S	15 08	16 05	17 01	20 31 87	10 08 22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 08 ^m 5		Mag: -4.7 PMG: 14 ^h 53 ^m		Mag: +1.6 PMG: 11 ^h 39 ^m		Mag: -1.8 PMG: 14 ^h 47 ^m		Mag: +0.3 PMG: 20 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	282	40.5	136 23.1	+13 33.4	185 00.3	+24 01.7	137 42.8	+14 53.0	45 30.8	-17 52.5
1	297	43.0	151 24.2	32.6	200 00.9	01.6	152 44.8	52.8	60 33.3	52.5
2	312	45.4	166 25.4	31.8	215 01.6	01.5	167 46.8	52.7	75 35.9	52.4
3	327	47.9	181 26.5	30.9	230 02.2	01.4	182 48.8	52.5	90 38.5	52.4
4	342	50.4	196 27.6	30.1	245 02.9	01.4	197 50.8	52.4	105 41.1	52.4
5	357	52.8	211 28.8	+13 29.3	260 03.5	+24 01.3	212 52.8	+14 52.2	120 43.6	-17 52.4
6	12	55.3	226 29.9	+13 28.5	275 04.1	+24 01.2	227 54.8	+14 52.0	135 46.2	-17 52.4
7	27	57.8	241 31.0	27.6	290 04.8	01.2	242 56.8	51.9	150 48.8	52.4
8	43	00.2	256 32.2	26.8	305 05.4	01.1	257 58.8	51.7	165 51.4	52.4
9	58	02.7	271 33.3	26.0	320 06.1	01.0	273 00.8	51.6	180 53.9	52.3
10	73	05.1	286 34.5	25.2	335 06.7	00.9	288 02.8	51.4	195 56.5	52.3
11	88	07.6	301 35.6	+13 24.3	350 07.3	+24 00.9	303 04.8	+14 51.3	210 59.1	-17 52.3
12	103	10.1	316 36.8	+13 23.5	5 08.0	+24 00.8	318 06.8	+14 51.1	226 01.7	-17 52.3
13	118	12.5	331 37.9	22.7	20 08.6	00.7	333 08.8	51.0	241 04.2	52.3
14	133	15.0	346 39.1	21.8	35 09.3	00.6	348 10.8	50.8	256 06.8	52.3
15	148	17.5	1 40.2	21.0	50 09.9	00.6	3 12.8	50.6	271 09.4	52.3
16	163	19.9	16 41.4	20.2	65 10.5	00.5	18 14.8	50.5	286 12.0	52.2
17	178	22.4	31 42.5	+13 19.4	80 11.2	+24 00.4	33 16.8	+14 50.3	301 14.5	-17 52.2
18	193	24.9	46 43.7	+13 18.5	95 11.8	+24 00.3	48 18.8	+14 50.2	316 17.1	-17 52.2
19	208	27.3	61 44.9	17.7	110 12.5	00.3	63 20.8	50.0	331 19.7	52.2
20	223	29.8	76 46.0	16.9	125 13.1	00.2	78 22.8	49.9	346 22.3	52.2
21	238	32.3	91 47.2	16.1	140 13.7	+24 00.1	93 24.8	49.7	1 24.8	52.2
22	253	34.7	106 48.4	15.2	155 14.4	+24 00.0	108 26.8	49.5	16 27.4	52.2
23	268	37.2	121 49.6	14.4	170 15.0	+24 00.0	123 28.8	49.4	31 30.0	52.1
24	283	39.6	136 50.8	+13 13.6	185 15.7	+23 59.9	138 30.8	+14 49.2	46 32.6	-17 52.1
Dif	—	+12	-8	+6	-1	+20	-2	+26		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 04 ^m 7			Edad: 19 ^d 4 PHE { SD: 16'3 PMG: 3 ^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	m	h m	m
0	178	50.7	+22 44.2	306	59.7	-7 08.2		60 N	** **	1 16	2 48	22 43	19	9 12	87
1	193	50.6		321	27.4	87 -6 57.6	106	58	** **	1 56	3 07	41 22		15 85	
2	208	50.5	43.7	335	55.2	88 47.0	106	56	** **	2 23	23	39 24		18 82	
3	223	50.4	43.4	350	23.0	88 36.3	107	54		1 10	2 43	36	38 26	21	79
4	238	50.3	43.2	4	50.8	88 25.6	107	52		1 47	3 00	48	37 28	23	78
5	253	50.2	+22 42.9	19	18.7	89 -6 14.9	107	50		2 12	3 15	3 58	22 36	29	9 25
6	268	50.0	+22 42.7	33	46.5	88 -6 04.2	107	45		2 55	3 43	4 20	22 33	33	9 30
7	283	49.9	42.4	48	14.4	89 -5 53.4	108	40		3 24	4 05	37	31 36		33 69
8	298	49.8	42.2	62	42.4	90 42.5	109	35		3 46	22	4 52	29 39		37 66
9	313	49.7	42.0	77	10.4	90 31.7	108	30		4 04	4 37	5 04	28 41		39 64
10	328	49.6	41.7	91	38.4	90 20.8	109	20		32	5 01	26	25 45		44 60
11	343	49.5	+22 41.5	106	06.4	90 -5 09.8	110	10 N		4 54	5 21	5 44	22 23	48	9 49
12	358	49.4	+22 41.2	120	34.4	90 -4 58.9	109	0		5 13	5 39	6 01	22 20	52	9 53
13	13	49.3	41.0	135	02.5	91 47.9	110	10 S		29	5 55	18	18 56		9 56
14	28	49.2	40.7	149	30.6	91 36.9	110	20		5 45	6 12	36	16 59	10	01
15	43	49.1	40.4	163	58.7	91 25.9	110	30		6 00	30	6 56	13 63		05 42
16	58	49.0	40.2	178	26.9	92 14.8	111	35		09	40	7 08	11 66		08 39
17	73	48.9	+22 39.9	192	55.1	92 -4 03.7	111	40		6 18	6 52	7 22	22 10	68	10 11
18	88	48.8	+22 39.7	207	23.3	92 -3 52.6	111	45		6 28	7 05	7 38	22 08	71	10 14
19	103	48.7	39.4	221	51.5	92 41.5	111	50		39	20	7 58	05 76		18 30
20	118	48.6	39.2	236	19.7	92 30.4	111	52		44	27	8 07	04 77		20 29
21	133	48.5	38.9	250	48.0	93 19.2	112	54		49	35	18	03 79		22 27
22	148	48.4	38.7	265	16.3	93 -3 08.1	111	56		6 55	43	30	01 82		25 24
23	163	48.3	38.4	279	44.6	93 -2 56.9	112	58		7 01	7 53	8 44	22 00	84	27 22
24	178	48.2	+22 38.1	294	12.9	93 -2 45.7	112	60 S		7 08	8 04	9 00	21 58	87	10 30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 04 ^m 5		Mag: -4.7 PMG: 14 ^h 51 ^m		Mag: +1.6 PMG: 11 ^h 38 ^m		Mag: -1.8 PMG: 14 ^h 44 ^m		Mag: +0.3 PMG: 20 ^h 50 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	283	39.6	136	50.8	+13 13.6	185	15.7	+23 59.9	138	30.8	+14 49.2	46	32.6	-17 52.1	
1	298	42.1	151	51.9	12.8	200	16.3	59.8	153	32.8	49.1	61	35.1	52.1	
2	313	44.6	166	53.1	11.9	215	16.9	59.7	168	34.7	48.9	76	37.7	52.1	
3	328	47.0	181	54.3	11.1	230	17.6	59.6	183	36.7	48.8	91	40.3	52.1	
4	343	49.5	196	55.5	10.3	245	18.2	59.6	198	38.7	48.6	106	42.8	52.1	
5	358	52.0	211	56.7	+13 09.5	260	18.9	+23 59.5	213	40.7	+14 48.4	121	45.4	-17 52.1	
6	13	54.4	226	57.9	+13 08.6	275	19.5	+23 59.4	228	42.7	+14 48.3	136	48.0	-17 52.0	
7	28	56.9	241	59.1	07.8	290	20.1	59.3	243	44.7	48.1	151	50.6	52.0	
8	43	59.4	257	00.3	07.0	305	20.8	59.2	258	46.7	48.0	166	53.1	52.0	
9	59	01.8	272	01.5	06.2	320	21.4	59.2	273	48.7	47.8	181	55.7	52.0	
10	74	04.3	287	02.7	05.4	335	22.1	59.1	288	50.7	47.7	196	58.3	52.0	
11	89	06.7	302	03.9	+13 04.5	350	22.7	+23 59.0	303	52.7	+14 47.5	212	00.8	-17 52.0	
12	104	09.2	317	05.1	+13 03.7	5	23.4	+23 58.9	318	54.7	+14 47.3	227	03.4	-17 52.0	
13	119	11.7	332	06.3	02.9	20	24.0	58.8	333	56.7	47.2	242	06.0	52.0	
14	134	14.1	347	07.5	02.1	35	24.6	58.7	348	58.7	47.0	257	08.6	51.9	
15	149	16.6	2	08.7	01.2	50	25.3	58.7	4	00.7	46.9	272	11.1	51.9	
16	164	19.1	17	10.0	+13 00.4	65	25.9	58.6	19	02.7	46.7	287	13.7	51.9	
17	179	21.5	32	11.2	+12 59.6	80	26.6	+23 58.5	34	04.7	+14 46.6	302	16.3	-17 51.9	
18	194	24.0	47	12.4	+12 58.8	95	27.2	+23 58.4	49	06.7	+14 46.4	317	18.8	-17 51.9	
19	209	26.5	62	13.6	58.0	110	27.9	58.3	64	08.7	46.2	332	21.4	51.9	
20	224	28.9	77	14.9	57.1	125	28.5	58.2	79	10.7	46.1	347	24.0	51.9	
21	239	31.4	92	16.1	56.3	140	29.1	58.1	94	12.7	45.9	2	26.5	51.8	
22	254	33.9	107	17.3	55.5	155	29.8	58.1	109	14.7	45.8	17	29.1	51.8	
23	269	36.3	122	18.6	54.7	170	30.4	58.0	124	16.7	45.6	32	31.7	51.8	
24	284	38.8	137	19.8	+12 53.9	185	31.1	+23 57.9	139	18.7	+14 45.5	47	34.3	-17 51.8	
Dif	—		+12	-8		+6	-1		+20		-2	+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 04 ^m 9			Edad: 20 ^d 4 PHE { 4 ^h : 59'6 12 ^h : 59'5 20 ^h : 59'4 SD: 16'2 PMG: 4 ^h 33 ^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	h m m
0	178	48.2	+22 38.1	294	12.9	-2 45.7	60 N	21 19	22 49	** **	23 02 20	10 39 86		
1	193	48.1		308	41.3	34.5 ¹¹²	58	21 01	22 10	** **	03 22	40 83		
2	208	48.0		323	09.6	23.2 ¹¹³	56	20 45	21 44	** **	03 25	40 81		
3	223	47.9		337	38.0	12.0 ¹¹²	54	32	24	22 55	04 26	40 79		
4	238	47.8		352	06.5	-2 00.8 ¹¹²	52	20	21 08	22 20	05 28	41 77		
5	253	47.7	+22 36.8	6	34.9	-1 49.5 ¹¹³	50	20 10	20 53	21 56	23 05 30	10 41 75		
6	268	47.6	+22 36.6	21	03.3	-1 38.2 ¹¹³	45	19 49	20 25	21 14	23 06 33	10 42 71		
7	283	47.5		35	31.8	27.0 ¹¹²	40	32	20 04	20 45	07 36	42 69		
8	298	47.4		50	00.3	15.7 ¹¹³	35	17	19 47	23	08 39	43 65		
9	313	47.3		64	28.8	-1 04.4 ¹¹³	30	19 05	32	20 05	09 41	43 63		
10	328	47.2		78	57.3	-0 53.2 ¹¹²	20	18 44	19 08	19 37	10 45	44 59		
11	343	47.1	+22 35.3	93	25.8	-0 41.9 ¹¹³	10 N	18 25	18 48	19 15	23 11 49	10 45 55		
12	358	47.0	+22 35.0	107	54.4	-0 30.6 ¹¹³	0	18 09	18 31	18 57	23 12 52	10 45 52		
13	13	46.9		122	22.9	19.3 ¹¹³	10 S	17 52	18 14	41	14 55	46 48		
14	28	46.8		136	51.5	-0 08.1 ¹¹²	20	34	17 58	25	15 59	46 45		
15	43	46.7		151	20.1	+0 03.2 ¹¹³	30	14	40	10	16 63	47 41		
16	58	46.6		165	48.7	14.5 ¹¹³	35	17 02	30	18 01	17 65	47 39		
17	73	46.5	+22 33.6	180	17.3	+0 25.7 ¹¹²	40	16 48	17 19	17 52	23 18 68	10 48 36		
18	88	46.4	+22 33.4	194	45.9	+0 37.0 ¹¹³	45	16 32	17 06	17 43	23 19 71	10 48 33		
19	103	46.3		209	14.5	48.2 ¹¹²	50	13	16 50	32	21 74	48 30		
20	118	46.2		223	43.2	+0 59.5 ¹¹³	52	16 03	43	27	21 77	49 27		
21	133	46.1		238	11.8	+1 10.7 ¹¹²	54	15 53	36	21	22 78	49 26		
22	148	46.0		252	40.5	21.9 ¹¹²	56	41	27	16	23 80	49 24		
23	163	45.9		267	09.1	33.1 ¹¹²	58	27	18	09	24 83	49 22		
24	178	45.8	+22 31.7	281	37.8	+1 44.3 ¹¹²	60 S	15 11	16 07	17 02	23 25 85	10 50 19		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 00 ^m 6		Mag: -4.7 PMG: 14 ^h 49 ^m		Mag: +1.6 PMG: 11 ^h 37 ^m		Mag: -1.8 PMG: 14 ^h 41 ^m		Mag: +0.3 PMG: 20 ^h 46 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	284	38.8	137	19.8	+12 53.9	185	31.1	+23 57.9	139	18.7	+14 45.5	47	34.3	-17 51.8
1	299	41.2	152	21.0	53.0	200	31.7	57.8	154	20.7	45.3	62	36.8	51.8
2	314	43.7	167	22.3	52.2	215	32.4	57.7	169	22.7	45.1	77	39.4	51.8
3	329	46.2	182	23.5	51.4	230	33.0	57.6	184	24.6	45.0	92	42.0	51.8
4	344	48.6	197	24.8	50.6	245	33.6	57.5	199	26.6	44.8	107	44.5	51.8
5	359	51.1	212	26.0	+12 49.8	260	34.3	+23 57.4	214	28.6	+14 44.7	122	47.1	-17 51.7
6	14	53.6	227	27.3	+12 49.0	275	34.9	+23 57.4	229	30.6	+14 44.5	137	49.7	-17 51.7
7	29	56.0	242	28.5	48.1	290	35.6	57.3	244	32.6	44.3	152	52.2	51.7
8	44	58.5	257	29.8	47.3	305	36.2	57.2	259	34.6	44.2	167	54.8	51.7
9	60	01.0	272	31.1	46.5	320	36.9	57.1	274	36.6	44.0	182	57.4	51.7
10	75	03.4	287	32.3	45.7	335	37.5	57.0	289	38.6	43.9	197	59.9	51.7
11	90	05.9	302	33.6	+12 44.9	350	38.1	+23 56.9	304	40.6	+14 43.7	213	02.5	-17 51.7
12	105	08.3	317	34.9	+12 44.0	5	38.8	+23 56.8	319	42.6	+14 43.6	228	05.1	-17 51.7
13	120	10.8	332	36.1	43.2	20	39.4	56.7	334	44.6	43.4	243	07.6	51.6
14	135	13.3	347	37.4	42.4	35	40.1	56.6	349	46.6	43.2	258	10.2	51.6
15	150	15.7	2	38.7	41.6	50	40.7	56.5	4	48.6	43.1	273	12.8	51.6
16	165	18.2	17	40.0	40.8	65	41.4	56.5	19	50.6	42.9	288	15.3	51.6
17	180	20.7	32	41.2	+12 40.0	80	42.0	+23 56.4	34	52.6	+14 42.8	303	17.9	-17 51.6
18	195	23.1	47	42.5	+12 39.2	95	42.7	+23 56.3	49	54.6	+14 42.6	318	20.5	-17 51.6
19	210	25.6	62	43.8	38.3	110	43.3	56.2	64	56.6	42.4	333	23.0	51.6
20	225	28.1	77	45.1	37.5	125	44.0	56.1	79	58.5	42.3	348	25.6	51.6
21	240	30.5	92	46.4	36.7	140	44.6	56.0	95	00.5	42.1	3	28.2	51.5
22	255	33.0	107	47.7	35.9	155	45.2	55.9	110	02.5	42.0	18	30.7	51.5
23	270	35.5	122	49.0	35.1	170	45.9	55.8	125	04.5	41.8	33	33.3	51.5
24	285	37.9	137	50.3	+12 34.3	185	46.5	+23 55.7	140	06.5	+14 41.7	48	35.9	-17 51.5
Dif	—		+13 -8		+6 -1		-1		+20 -2		+26		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 0				Edad: 21 ^d 4 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 3 20 ^h : 59 ^m 1 PMG: 5 ^h 25 ^m R ^o : 52 ^m												
	hG ☉		Dec		hG ☾		Dif						Náutico	Civil	Hora	R°	Hora
h	°		°		°		°		°	h	m	h	m	h	m	h	m
0	178	45.8	+22	31.7	281	37.8	+1	44.3	60 N	** **	1 22	2 51	23 22	21	12 05	85	
1	193	45.7		31.5	296	06.5	97	+1 55.5	58	** **	2 00	3 09	25 24		03 82		
2	208	45.6		31.2	310	35.2	97	+2 06.6	56	** **	26	25	28 26		12 01	80	
3	223	45.5		30.9	325	03.9	97	17.8	54	1 15	2 46	38	30 28		11 59	78	
4	238	45.4		30.6	339	32.6	97	28.9	52	1 50	3 03	3 50	33 29		58 76		
5	253	45.3	+22	30.4	354	01.3	97	+2 40.0	50	2 15	3 17	4 00	23 35	31	11 56	74	
6	268	45.2	+22	30.1	8	30.0	97	+2 51.1	45	2 56	3 45	4 21	23 39	35	11 53	71	
7	283	45.1		29.8	22	58.7	97	+3 02.2	40	3 25	4 06	39	43 38		51 67		
8	298	45.0		29.5	37	27.4	97	13.2	35	3 47	24	4 53	47 40		48 65		
9	313	44.9		29.2	51	56.1	97	24.2	30	4 05	4 38	5 05	50 42		46 63		
10	328	44.8		29.0	66	24.8	97	35.2	20	33	5 02	26	23 55	46	43 59		
11	343	44.7	+22	28.7	80	53.6	98	+3 46.2	10 N	4 55	5 22	5 45	** ** *	**	11 40	55	
12	358	44.6	+22	28.4	95	22.3	97	+3 57.1	0	5 13	5 39	6 01	** ** *	**	11 37	52	
13	13	44.5		28.1	109	51.0	97	+4 08.0	10 S	29	5 55	18	** ** *	**	34 49		
14	28	44.4		27.8	124	19.7	97	18.9	20	5 45	6 12	36	** ** *	**	31 46		
15	43	44.3		27.5	138	48.5	98	29.8	30	6 00	30	6 56	** ** *	**	28 41		
16	58	44.2		27.2	153	17.2	97	40.6	35	09	40	7 08	** ** *	**	26 39		
17	73	44.1	+22	27.0	167	45.9	97	+4 51.4	40	6 17	6 51	7 21	** ** *	**	11 24	36	
18	88	44.0	+22	26.7	182	14.6	97	+5 02.1	45	6 27	7 04	7 37	** ** *	**	11 21	34	
19	103	43.9		26.4	196	43.3	97	12.8	50	38	19	7 57	** ** *	**	18 30		
20	118	43.8		26.1	211	12.0	97	23.5	52	43	26	8 06	** ** *	**	16 29		
21	133	43.7		25.8	225	40.7	97	34.2	54	48	34	17	** ** *	**	15 27		
22	148	43.6		25.5	240	09.5	98	44.8	56	6 54	42	28	** ** *	**	13 25		
23	163	43.5		25.2	254	38.1	96	+5 55.4	58	7 00	7 52	42	** ** *	**	11 23		
24	178	43.4	+22	24.9	269	06.8	97	+6 05.9	60 S	7 07	8 03	8 58	** ** *	**	11 09	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 4 ^h 56 ^m 7		Mag: -4.7 PMG: 14 ^h 47 ^m		Mag: +1.6 PMG: 11 ^h 36 ^m		Mag: -1.8 PMG: 14 ^h 38 ^m		Mag: +0.3 PMG: 20 ^h 42 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°		°		°		°		°							
0	285	37.9	137	50.3	+12	185	46.5	+23	140	06.5	+14	48	35.9	-17	51.5	
1	300	40.4	152	51.6		200	47.2		155	08.5		63	38.4		51.5	
2	315	42.8	167	52.9		215	47.8		170	10.5		78	41.0		51.5	
3	330	45.3	182	54.2		230	48.5		185	12.5		93	43.6		51.5	
4	345	47.8	197	55.5		245	49.1		200	14.5		108	46.1		51.5	
5	0	50.2	212	56.8	+12	260	49.8	+23	215	16.5	+14	123	48.7	-17	51.4	
6	15	52.7	227	58.1	+12	275	50.4	+23	230	18.5	+14	138	51.3	-17	51.4	
7	30	55.2	242	59.5		290	51.1		245	20.5		153	53.8		51.4	
8	45	57.6	258	00.8		305	51.7		260	22.5		168	56.4		51.4	
9	61	00.1	273	02.1		320	52.4		275	24.4		183	59.0		51.4	
10	76	02.6	288	03.4		335	53.0		290	26.4		199	01.5		51.4	
11	91	05.0	303	04.8	+12	350	53.7	+23	305	28.4	+14	214	04.1	-17	51.4	
12	106	07.5	318	06.1	+12	5	54.3	+23	320	30.4	+14	229	06.7	-17	51.4	
13	121	10.0	333	07.4		20	54.9		335	32.4		244	09.2		51.3	
14	136	12.4	348	08.8		35	55.6		350	34.4		259	11.8		51.3	
15	151	14.9	3	10.1		50	56.2		5	36.4		274	14.3		51.3	
16	166	17.3	18	11.4		65	56.9		20	38.4		289	16.9		51.3	
17	181	19.8	33	12.8	+12	80	57.5	+23	35	40.4	+14	304	19.5	-17	51.3	
18	196	22.3	48	14.1	+12	95	58.2	+23	50	42.4	+14	319	22.0	-17	51.3	
19	211	24.7	63	15.5		110	58.8		65	44.4		334	24.6		51.3	
20	226	27.2	78	16.8		125	59.5		80	46.4		349	27.2		51.3	
21	241	29.7	93	18.2		141	00.1		95	48.3		4	29.7		51.3	
22	256	32.1	108	19.5		156	00.8		110	50.3		19	32.3		51.2	
23	271	34.6	123	20.9		171	01.4		125	52.3		34	34.8		51.2	
24	286	37.1	138	22.3	+12	186	02.1	+23	140	54.3	+14	49	37.4	-17	51.2	
Dif	—		+13		-8	+6		-1	+20		-2	+26		0		

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 22 ^d 4 PHE { 4 ^h : 59 ^o 0 12 ^h : 58 ^o 9 20 ^h : 58 ^o 8 R ^o : 52 ^m														
	PMG: 12 ^h 05 ^m 2			SD: 16 ^h 1 PMG: 6 ^h 17 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	
0	178	43.4	+22 24.9	269	06.8	+6 05.9			60 N	21 17	22 43	** **	23 43	25	13 30	82		
1	193	43.3	24.6	283	35.5	16.4	105		58	20 59	22 07	** **	49 27	25	80			
2	208	43.2	24.4	298	04.2	26.9	105		56	43	21 42	** **	54 29	21	78			
3	223	43.1	24.1	312	32.9	37.3	104		54	30	22 22	50	23 58	31	76			
4	238	43.0	23.8	327	01.6	47.7	104		52	19	21 06	22 17	** **	** **	14	74		
5	253	43.0	+22 23.5	341	30.2	+6 58.0	103		50	20 09	20 52	21 53	** **	** **	13 10	73		
6	268	42.9	+22 23.2	355	58.9	+7 08.3	103		45	19 48	20 24	21 12	** **	** **	13 04	69		
7	283	42.8	22.9	10	27.5	18.5	102		40	31	20 03	20 44	** **	** **	12 58	66		
8	298	42.7	22.6	24	56.1	28.7	102		35	17	19 46	22	** **	** **	53	64		
9	313	42.6	22.3	39	24.8	38.8	101		30	19 04	31	20 04	** **	** **	49	62		
10	328	42.5	22.0	53	53.4	48.9	101		20	18 43	19 08	19 37	** **	** **	42	58		
11	343	42.4	+22 21.7	68	22.0	+7 59.0	101		10 N	18 25	18 48	19 15	0 00	49	12 35	55		
12	358	42.3	+22 21.4	82	50.6	+8 09.0	100		0	18 09	18 31	18 57	0 04	52	12 29	52		
13	13	42.2	21.1	97	19.2	18.9	99		10 S	17 52	18 15	41	09 55	23	49			
14	28	42.1	20.8	111	47.7	28.8	99		20	35	17 59	26	14 58	17	46			
15	43	42.0	20.5	126	16.3	38.6	98		30	15	41	10	19 62	09	43			
16	58	41.9	20.2	140	44.9	48.4	98		35	17 03	31	18 02	22 65	05	41			
17	73	41.8	+22 19.9	155	13.4	+8 58.1	97		40	16 50	17 20	17 53	0 26	67	12 00	39		
18	88	41.7	+22 19.6	169	41.9	+9 07.8	97		45	16 34	17 07	17 44	0 30	70	11 55	36		
19	103	41.7	19.3	184	10.4	17.4	96		50	14	16 52	33	35 74	48	33			
20	118	41.6	19.0	198	38.9	26.9	95		52	16 05	45	28	38 75	45	31			
21	133	41.5	18.7	213	07.4	36.4	95		54	15 55	38	23	40 77	42	29			
22	148	41.4	18.4	227	35.9	45.9	95		56	43	29	17	43 79	38	28			
23	163	41.3	18.1	242	04.4	+9 55.2	93		58	30	20	11	47 81	34	25			
24	178	41.2	+22 17.8	256	32.8	+10 04.5	93		60 S	15 14	16 09	17 04	0 50	84	11 30	23		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 4 ^h 52 ^m 7		Mag: -4.7 PMG: 14 ^h 45 ^m			Mag: +1.6 PMG: 11 ^h 35 ^m			Mag: -1.8 PMG: 14 ^h 34 ^m				Mag: +0.3 PMG: 20 ^h 38 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃				hG ♄					
h	°	'	°	'	°	°	'	°	h	°	'	°	h	°	'	°		
0	286	37.1	138	22.3	+12 14.8			186	02.1	+23 53.3	140	54.3	+14 37.8	49 37.4	-17 51.2			
1	301	39.5	153	23.6	14.0			201	02.7	53.2	155	56.3	37.7	64 40.0	51.2			
2	316	42.0	168	25.0	13.2			216	03.4	53.1	170	58.3	37.5	79 42.5	51.2			
3	331	44.4	183	26.4	12.4			231	04.0	53.0	186	00.3	37.3	94 45.1	51.2			
4	346	46.9	198	27.7	11.6			246	04.7	52.9	201	02.3	37.2	109 47.7	51.2			
5	1	49.4	213	29.1	+12 10.8			261	05.3	+23 52.8	216	04.3	+14 37.0	124 50.2	-17 51.2			
6	16	51.8	228	30.5	+12 10.0			276	06.0	+23 52.7	231	06.3	+14 36.9	139 52.8	-17 51.1			
7	31	54.3	243	31.9	09.2			291	06.6	52.6	246	08.3	36.7	154 55.3	51.1			
8	46	56.8	258	33.2	08.4			306	07.3	52.5	261	10.2	36.5	169 57.9	51.1			
9	61	59.2	273	34.6	07.6			321	07.9	52.4	276	12.2	36.4	185 00.5	51.1			
10	77	01.7	288	36.0	06.8			336	08.6	52.3	291	14.2	36.2	200 03.0	51.1			
11	92	04.2	303	37.4	+12 06.0			351	09.2	+23 52.2	306	16.2	+14 36.1	215 05.6	-17 51.1			
12	107	06.6	318	38.8	+12 05.2			6	09.9	+23 52.0	321	18.2	+14 35.9	230 08.1	-17 51.1			
13	122	09.1	333	40.2	04.4			21	10.5	51.9	336	20.2	35.7	245 10.7	51.1			
14	137	11.6	348	41.6	03.6			36	11.2	51.8	351	22.2	35.6	260 13.3	51.1			
15	152	14.0	3	43.0	02.8			51	11.8	51.7	6	24.2	35.4	275 15.8	51.0			
16	167	16.5	18	44.4	02.0			66	12.5	51.6	21	26.2	35.3	290 18.4	51.0			
17	182	18.9	33	45.8	+12 01.2			81	13.1	+23 51.5	36	28.1	+14 35.1	305 20.9	-17 51.0			
18	197	21.4	48	47.2	+12 00.4			96	13.8	+23 51.4	51	30.1	+14 34.9	320 23.5	-17 51.0			
19	212	23.9	63	48.6	+11 59.6			111	14.4	51.3	66	32.1	34.8	335 26.1	51.0			
20	227	26.3	78	50.1	58.8			126	15.1	51.2	81	34.1	34.6	350 28.6	51.0			
21	242	28.8	93	51.5	58.0			141	15.7	51.1	96	36.1	34.5	5 31.2	51.0			
22	257	31.3	108	52.9	57.2			156	16.4	51.0	111	38.1	34.3	20 33.7	51.0			
23	272	33.7	123	54.3	56.4			171	17.0	50.8	126	40.1	34.1	35 36.3	51.0			
24	287	36.2	138	55.7	+11 55.6			186	17.7	+23 50.7	141	42.1	+14 34.0	50 38.9	-17 51.0			
Dif	—		+14			-8			+7		-1		+20		-2		+26	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 05 ^m 3			Edad: 23 ^d 4 PHE { 4 ^h : 58'6 12 ^h : 58'5 20 ^h : 58'4 SD: 16'0 PMG: 7 ^h 09 ^m R°: 53 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	41.2	+22	17.8	256	32.8	+10	04.5	60 N	***	1	28	2	54	***	14	52
1	193	41.1		17.4	271	01.2	94	13.8	58	***	2	04	3	12	***	45	76
2	208	41.0		17.1	285	29.6	94	23.0	56	***	29	27		27	***	39	74
3	223	40.9		16.8	299	58.0	94	32.1	54	1	21	2	49	40	***	33	72
4	238	40.8		16.5	314	26.4	94	41.1	52	1	54	3	05	3	52	0	02
5	253	40.7	+22	16.2	328	54.8	94	+10	50.1	50	2	18	3	19	4	06	34
6	268	40.7	+22	15.9	343	23.2	94	+10	59.0	45	2	59	3	46	4	14	37
7	283	40.6		15.6	357	51.5	93	+11	07.9	40	3	27	4	08	40	21	40
8	298	40.5		15.3	12	19.8	93	16.7	35	3	49	25	4	54	27	42	13
9	313	40.4		15.0	26	48.1	93	25.4	30	4	06	4	39	5	06	32	44
10	328	40.3		14.6	41	16.4	93	34.0	20	34	5	03	27		41	47	40
11	343	40.2	+22	14.3	55	44.7	93	+11	42.6	10 N	4	55	5	22	5	49	50
12	358	40.1	+22	14.0	70	12.9	92	+11	51.1	0	5	13	5	39	6	06	53
13	13	40.0		13.7	84	41.2	93	+11	59.5	10 S	29	5	56	18	1	04	55
14	28	39.9		13.4	99	09.4	92	+12	07.8	20	5	45	6	12	36	12	58
15	43	39.9		13.1	113	37.6	92	16.1	30	6	00	30	6	56	21	62	12
16	58	39.8		12.7	128	05.8	92	24.3	35	08	40	7	07		27	63	46
17	73	39.7	+22	12.4	142	34.0	92	+12	32.4	40	6	17	6	51	7	21	1
18	88	39.6	+22	12.1	157	02.1	91	+12	40.5	45	6	26	7	03	7	36	1
19	103	39.5		11.8	171	30.3	92	48.5	50	37	18	7	56		49	71	21
20	118	39.4		11.5	185	58.4	91	+12	56.4	52	42	25	8	05	53	73	16
21	133	39.3		11.1	200	26.5	91	+13	04.2	54	47	32	15		1	57	75
22	148	39.2		10.8	214	54.6	91	11.9	56	53	41	27			2	02	77
23	163	39.2		10.5	229	22.7	91	19.5	58	6	59	7	50	40	08	78	11
24	178	39.1	+22	10.2	243	50.7	90	+13	27.1	60 S	7	05	8	01	8	14	81

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 4 ^h 48 ^m 8		Mag: -4.7 PMG: 14 ^h 43 ^m			Mag: +1.6 PMG: 11 ^h 34 ^m			Mag: -1.8 PMG: 14 ^h 31 ^m			Mag: +0.3 PMG: 20 ^h 34 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	287	36.2	138	55.7	+11	186	17.7	+23	50.7	141	42.1	+14	34.0	50			
1	302	38.7	153	57.2		201	18.3		50.6	156	44.1		33.8	65			
2	317	41.1	168	58.6		216	19.0		50.5	171	46.0		33.6	80			
3	332	43.6	184	00.0		231	19.6		50.4	186	48.0		33.5	95			
4	347	46.1	199	01.5		246	20.3		50.3	201	50.0		33.3	110			
5	2	48.5	214	02.9	+11	261	20.9	+23	50.2	216	52.0	+14	33.2	125			
6	17	51.0	229	04.4	+11	276	21.6	+23	50.1	231	54.0	+14	33.0	140			
7	32	53.4	244	05.8		291	22.2		49.9	246	56.0		32.8	155			
8	47	55.9	259	07.3		306	22.9		49.8	261	58.0		32.7	170			
9	62	58.4	274	08.7		321	23.5		49.7	277	00.0		32.5	186			
10	78	00.8	289	10.2		336	24.2		49.6	292	01.9		32.4	201			
11	93	03.3	304	11.6	+11	351	24.9	+23	49.5	307	03.9	+14	32.2	216			
12	108	05.8	319	13.1	+11	6	25.5	+23	49.4	322	05.9	+14	32.0	231			
13	123	08.2	334	14.5		21	26.2		49.3	337	07.9		31.9	246			
14	138	10.7	349	16.0		36	26.8		49.1	352	09.9		31.7	261			
15	153	13.2	4	17.5		51	27.5		49.0	7	11.9		31.5	276			
16	168	15.6	19	18.9		66	28.1		48.9	22	13.9		31.4	291			
17	183	18.1	34	20.4	+11	81	28.8	+23	48.8	37	15.9	+14	31.2	306			
18	198	20.5	49	21.9	+11	96	29.4	+23	48.7	52	17.8	+14	31.1	321			
19	213	23.0	64	23.4		111	30.1		48.5	67	19.8		30.9	336			
20	228	25.5	79	24.8		126	30.7		48.4	82	21.8		30.7	351			
21	243	27.9	94	26.3		141	31.4		48.3	97	23.8		30.6	6			
22	258	30.4	109	27.8		156	32.0		48.2	112	25.8		30.4	21			
23	273	32.9	124	29.3		171	32.7		48.1	127	27.8		30.2	36			
24	288	35.3	139	30.8	+11	186	33.3	+23	48.0	142	29.8	+14	30.1	51			
Dif	—		+15			-8			+7			-2			+26		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 24 ^d 4 PHE { 4 ^h : 58/2 12 ^h : 58/1 20 ^h : 57/9					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 5			SD: 15/9 PMG: 8 ^h 02 ^m R°: 53 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	39.1	+22 10.2	243	50.7	+13 27.1	75	60 N	21 14	22 37	** **	0 08	31	16 11	72
1	193	39.0	09.9	258	18.8	91 34.6	75	58	20 56	22 03	** **	16 33		16 01	71
2	208	38.9	09.5	272	46.8	90 42.0	74	56	41	21 39	** **	23 35		15 53	69
3	223	38.8	09.2	287	14.8	90 49.3	73	54	29	20	22 45	29 37		45	68
4	238	38.7	08.9	301	42.8	90 +13 56.6	73	52	17	21 04	22 13	35 38		39	66
5	253	38.6	+22 08.6	316	10.8	90 +14 03.7	71	50	20 07	20 50	21 51	0 40	39	15 33	65
6	268	38.5	+22 08.2	330	38.7	89 +14 10.8	71	45	19 47	20 23	21 11	0 51	42	15 20	63
7	283	38.5	07.9	345	06.7	90 17.8	70	40	30	20 02	20 43	1 01	43		09 62
8	298	38.4	07.6	359	34.6	89 24.7	69	35	16	19 45	21	09 45		15 00	60
9	313	38.3	07.2	14	02.5	89 31.5	68	30	19 04	31	20 04	16 46		14 52	59
10	328	38.2	06.9	28	30.4	89 38.2	67	20	18 43	19 08	19 36	28 49		38	57
11	343	38.1	+22 06.6	42	58.3	89 +14 44.8	66	10 N	18 26	18 48	19 15	1 39	51	14 26	55
12	358	38.0	+22 06.3	57	26.2	89 +14 51.4	66	0	18 09	18 31	18 57	1 49	53	14 14	54
13	13	38.0	05.9	71	54.0	88 +14 57.8	64	10 S	17 53	18 15	41	1 59	56	14 03	52
14	28	37.9	05.6	86	21.9	89 +15 04.2	64	20	35	17 59	26	2 10	58	13 51	50
15	43	37.8	05.3	100	49.7	88 10.5	63	30	16	42	11	23 60		37	48
16	58	37.7	04.9	115	17.5	88 16.6	61	35	17 04	32	18 03	30 62		29	47
17	73	37.6	+22 04.6	129	45.3	88 +15 22.7	61	40	16 51	17 21	17 55	2 39	63	13 20	46
18	88	37.5	+22 04.3	144	13.1	88 +15 28.7	60	45	16 35	17 09	17 45	2 48	66	13 10	43
19	103	37.5	03.9	158	40.9	88 34.6	59	50	16	16 54	35	3 00	68	12 57	41
20	118	37.4	03.6	173	08.6	87 40.4	58	52	16 07	47	30	06 69		51	40
21	133	37.3	03.2	187	36.4	88 46.1	57	54	15 57	40	25	12 70		45	39
22	148	37.2	02.9	202	04.1	87 51.7	56	56	46	31	19	19 72		37	38
23	163	37.1	02.6	216	31.8	87 +15 57.3	56	58	32	22	13	26 74		29	36
24	178	37.0	+22 02.2	230	59.6	88 +16 02.7	54	60 S	15 17	16 12	17 07	3 35	76	12 20	34
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 44 ^m 9			Mag: -4.7 PMG: 14 ^h 40 ^m			Mag: +1.6 PMG: 11 ^h 33 ^m			Mag: -1.8 PMG: 14 ^h 28 ^m			Mag: +0.3 PMG: 20 ^h 30 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	288	35.3	139 30.8	+11 36.5	186 33.3	+23 48.0	142 29.8	+14 30.1	51 40.2	-17 50.7					
1	303	37.8	154 32.3	35.7	201 34.0	47.8	157 31.8	29.9	66 42.8	50.7					
2	318	40.3	169 33.8	35.0	216 34.7	47.7	172 33.7	29.8	81 45.3	50.7					
3	333	42.7	184 35.3	34.2	231 35.3	47.6	187 35.7	29.6	96 47.9	50.7					
4	348	45.2	199 36.8	33.4	246 36.0	47.5	202 37.7	29.4	111 50.4	50.7					
5	3	47.7	214 38.3	+11 32.6	261 36.6	+23 47.3	217 39.7	+14 29.3	126 53.0	-17 50.7					
6	18	50.1	229 39.8	+11 31.8	276 37.3	+23 47.2	232 41.7	+14 29.1	141 55.5	-17 50.6					
7	33	52.6	244 41.3	31.0	291 37.9	47.1	247 43.7	28.9	156 58.1	50.6					
8	48	55.0	259 42.8	30.2	306 38.6	47.0	262 45.7	28.8	172 00.7	50.6					
9	63	57.5	274 44.3	29.5	321 39.2	46.9	277 47.6	28.6	187 03.2	50.6					
10	79	00.0	289 45.9	28.7	336 39.9	46.7	292 49.6	28.5	202 05.8	50.6					
11	94	02.4	304 47.4	+11 27.9	351 40.6	+23 46.6	307 51.6	+14 28.3	217 08.3	-17 50.6					
12	109	04.9	319 48.9	+11 27.1	6 41.2	+23 46.5	322 53.6	+14 28.1	232 10.9	-17 50.6					
13	124	07.4	334 50.4	26.3	21 41.9	46.4	337 55.6	28.0	247 13.4	50.6					
14	139	09.8	349 52.0	25.5	36 42.5	46.2	352 57.6	27.8	262 16.0	50.6					
15	154	12.3	4 53.5	24.7	51 43.2	46.1	7 59.6	27.6	277 18.5	50.6					
16	169	14.8	19 55.0	24.0	66 43.8	46.0	23 01.5	27.5	292 21.1	50.6					
17	184	17.2	34 56.6	+11 23.2	81 44.5	+23 45.9	38 03.5	+14 27.3	307 23.6	-17 50.5					
18	199	19.7	49 58.1	+11 22.4	96 45.1	+23 45.7	53 05.5	+14 27.2	322 26.2	-17 50.5					
19	214	22.2	64 59.7	21.6	111 45.8	45.6	68 07.5	27.0	337 28.7	50.5					
20	229	24.6	80 01.2	20.8	126 46.5	45.5	83 09.5	26.8	352 31.3	50.5					
21	244	27.1	95 02.8	20.1	141 47.1	45.4	98 11.5	26.7	7 33.8	50.5					
22	259	29.5	110 04.3	19.3	156 47.8	45.2	113 13.4	26.5	22 36.4	50.5					
23	274	32.0	125 05.9	18.5	171 48.4	45.1	128 15.4	26.3	37 38.9	50.5					
24	289	34.5	140 07.4	+11 17.7	186 49.1	+23 45.0	143 17.4	+14 26.2	52 41.5	-17 50.5					
Dif	—		+15	-8	+7	-1	+20	-2	+26	0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 05 ^m 6			Edad: 25 ^d 4 SD: 15'8 PMG: 8 ^h 55 ^m	PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'4 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	37.0	+22	02.2	230	59.6	+16	02.7	60 N	*** **	1 34	2 57	0 39	38	17 23	63	
1	193	37.0		01.9	245	27.3		08.0	53	*** **	2 08	3 15	49	40	12	62	
2	208	36.9		01.5	259	55.0		13.3	53	*** **	33	30	0 58	41	17 02	61	
3	223	36.8		01.2	274	22.6		18.4	51	1 26	2 52	43	1 06	42	16 53	60	
4	238	36.7		00.9	288	50.3		23.4	50	1 58	3 08	3 54	13	43	45	60	
5	253	36.6	+22	00.5	303	18.0	+16	28.4	50	2 21	3 21	4 04	1 19	44	16 38	60	
6	268	36.5	+22	00.2	317	45.6	+16	33.2	48	3 01	3 48	4 25	1 33	46	16 23	59	
7	283	36.5	+21	59.8	332	13.3		38.0	48	29	4 09	41	44	47	11	58	
8	298	36.4		59.5	346	40.9		42.6	46	3 50	26	4 55	1 54	48	16 00	57	
9	313	36.3		59.1	1	08.6		47.2	46	4 08	4 40	5 07	2 02	50	15 51	56	
10	328	36.2		58.8	15	36.2		51.6	44	35	5 04	28	17	51	35	55	
11	343	36.1	+21	58.5	30	03.8	+16	55.9	43	10 N	4 56	5 23	2 30	53	15 21	55	
12	358	36.1	+21	58.1	44	31.5	+17	00.2	43	0	5 14	5 40	2 42	54	15 08	54	
13	13	36.0		57.8	58	59.1		04.3	41	10 S	30	5 56	2 55	55	14 55	53	
14	28	35.9		57.4	73	26.7		08.4	41	20	5 45	6 12	3 08	56	41	52	
15	43	35.8		57.1	87	54.3		12.3	39	30	6 00	29	6 55	23	58	25	51
16	58	35.7		56.7	102	21.9		16.1	38	35	08	39	7 07	32	59	16	50
17	73	35.7	+21	56.4	116	49.5	+17	19.9	38	40	6 16	6 50	7 20	3 42	60	14 06	49
18	88	35.6	+21	56.0	131	17.1	+17	23.5	36	45	6 26	7 02	7 35	3 54	61	13 53	49
19	103	35.5		55.7	145	44.7		27.0	35	50	36	17	7 54	4 08	63	38	47
20	118	35.4		55.3	160	12.3		30.5	35	52	41	24	8 03	15	63	31	47
21	133	35.4		55.0	174	39.9		33.8	33	54	46	31	13	22	65	24	45
22	148	35.3		54.6	189	07.5		37.0	32	56	51	39	25	31	65	15	45
23	163	35.2		54.3	203	35.1		40.1	31	58	6 57	48	38	40	67	13 05	44
24	178	35.1	+21	53.9	218	02.7	+17	43.1	30	60 S	7 04	7 59	8 53	4 51	68	12 54	43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 40 ^m 9		Mag: -4.7 PMG: 14 ^h 38 ^m		Mag: +1.6 PMG: 11 ^h 32 ^m		Mag: -1.8 PMG: 14 ^h 25 ^m		Mag: +0.3 PMG: 20 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	289	34.5	140	07.4	186	49.1	143	17.4	52	41.5
1	304	36.9	155	09.0	201	49.7	158	19.4	67	44.0
2	319	39.4	170	10.6	216	50.4	173	21.4	82	46.6
3	334	41.9	185	12.1	231	51.1	188	23.4	97	49.1
4	349	44.3	200	13.7	246	51.7	203	25.4	112	51.7
5	4	46.8	215	15.3	261	52.4	218	27.3	127	54.2
6	19	49.3	230	16.9	276	53.0	233	29.3	142	56.8
7	34	51.7	245	18.4	291	53.7	248	31.3	157	59.3
8	49	54.2	260	20.0	306	54.4	263	33.3	173	01.9
9	64	56.7	275	21.6	321	55.0	278	35.3	188	04.4
10	79	59.1	290	23.2	336	55.7	293	37.3	203	07.0
11	95	01.6	305	24.8	351	56.3	308	39.2	218	09.5
12	110	04.0	320	26.4	6	57.0	323	41.2	233	12.1
13	125	06.5	335	28.0	21	57.6	338	43.2	248	14.6
14	140	09.0	350	29.6	36	58.3	353	45.2	263	17.2
15	155	11.4	5	31.2	51	59.0	8	47.2	278	19.7
16	170	13.9	20	32.8	66	59.6	23	49.2	293	22.3
17	185	16.4	35	34.4	82	00.3	38	51.1	308	24.8
18	200	18.8	50	36.0	97	00.9	53	53.1	323	27.4
19	215	21.3	65	37.6	112	01.6	68	55.1	338	29.9
20	230	23.8	80	39.2	127	02.3	83	57.1	353	32.5
21	245	26.2	95	40.9	142	02.9	98	59.1	8	35.0
22	260	28.7	110	42.5	157	03.6	114	01.0	23	37.6
23	275	31.1	125	44.1	172	04.2	129	03.0	38	40.1
24	290	33.6	140	45.7	187	04.9	144	05.0	53	42.7
Dif	—		+16		-8		+20		-2	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 26 ^d 4	PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 1 20 ^h : 57 ^m 0	SD: 15 ^h 6									
	PMG: 12 ^h 05 ^m 7					PMG: 9 ^h 49 ^m			R°: 53 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	35.1	+21 53.9	218	02.7	+17 43.1	29	60 N	21 11	22 31	** **	1 17 47	18 26 52		
1	193	35.0	53.5	232	30.3	86 46.0	29	58	20 54	21 59	** **	29 48	14 52		
2	208	35.0	53.2	246	58.0	87 48.9	29	56	39	36	23 37	39 48	18 03 53		
3	223	34.9	52.8	261	25.6	86 51.6	27	54	27	17	22 40	48 49	17 54 52		
4	238	34.8	52.5	275	53.2	86 54.1	25	52	16	21 02	22 10	1 56 49	45 53		
5	253	34.7	+21 52.1	290	20.8	86 +17 56.6	25	50	20 06	20 48	21 48	2 03 50	17 38 53		
6	268	34.7	+21 51.8	304	48.5	87 +17 59.0	24	45	19 46	20 22	21 09	2 19 50	17 22 53		
7	283	34.6	51.4	319	16.1	86 +18 01.3	23	40	29	20 01	20 41	31 52	17 09 52		
8	298	34.5	51.0	333	43.8	87 03.5	22	35	15	19 44	20	42 52	16 57 53		
9	313	34.4	50.7	348	11.4	86 05.6	21	30	19 03	30	20 03	2 52 52	47 53		
10	328	34.4	50.3	2	39.1	87 07.5	19	20	18 43	19 07	19 36	3 08 53	30 54		
11	343	34.3	+21 50.0	17	06.8	87 +18 09.4	19	10 N	18 26	18 48	19 15	3 23 53	16 16 53		
12	358	34.2	+21 49.6	31	34.5	87 +18 11.1	17	0	18 09	18 32	18 58	3 36 54	16 02 53		
13	13	34.1	49.2	46	02.2	87 12.8	15	10 S	17 53	16	42	3 50 54	15 48 53		
14	28	34.1	48.9	60	29.9	87 14.3	15	20	36	18 00	27	4 04 55	33 53		
15	43	34.0	48.5	74	57.6	87 15.8	15	30	17	17 43	12	21 55	16 53		
16	58	33.9	48.1	89	25.3	87 17.1	13	35	17 05	33	18 04	31 55	15 06 53		
17	73	33.8	+21 47.8	103	53.1	88 +18 18.4	13	40	16 52	17 22	17 56	4 42 55	14 55 53		
18	88	33.8	+21 47.4	118	20.9	88 +18 19.5	11	45	16 37	17 10	17 47	4 55 56	14 42 53		
19	103	33.7	47.0	132	48.7	88 20.5	10	50	18	16 56	36	5 11 56	25 53		
20	118	33.6	46.7	147	16.5	88 21.4	9	52	16 09	49	32	18 57	18 53		
21	133	33.5	46.3	161	44.3	88 22.2	8	54	15 59	42	27	27 56	09 53		
22	148	33.5	45.9	176	12.1	88 22.9	7	56	48	34	21	36 57	14 00 53		
23	163	33.4	45.6	190	40.0	89 23.5	6	58	35	24	16	47 57	13 49 53		
24	178	33.3	+21 45.2	205	07.9	89 +18 24.0	5	60 S	15 20	16 14	17 09	5 59 57	13 37 52		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 4 ^h 37 ^m 0		Mag: -4.7 PMG: 14 ^h 35 ^m			Mag: +1.6 PMG: 11 ^h 31 ^m			Mag: -1.8 PMG: 14 ^h 22 ^m			Mag: +0.3 PMG: 20 ^h 22 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	290	33.6	140 45.7	+10 59.2	187 04.9	+23 41.8	144 05.0	+14 22.2	53 42.7	-17 50.3					
1	305	36.1	155 47.4	58.4	202 05.6	41.7	159 07.0	22.1	68 45.2	50.3					
2	320	38.5	170 49.0	57.6	217 06.2	41.5	174 09.0	21.9	83 47.8	50.3					
3	335	41.0	185 50.7	56.9	232 06.9	41.4	189 11.0	21.7	98 50.3	50.3					
4	350	43.5	200 52.3	56.1	247 07.5	41.3	204 12.9	21.6	113 52.9	50.2					
5	5 45.9	215 53.9	+10 55.3	262 08.2	+23 41.1	219 14.9	+14 21.4	128 55.4	-17 50.2						
6	20 48.4	230 55.6	+10 54.6	277 08.9	+23 41.0	234 16.9	+14 21.2	143 58.0	-17 50.2						
7	35 50.9	245 57.2	53.8	292 09.5	40.8	249 18.9	21.1	159 00.5	50.2						
8	50 53.3	260 58.9	53.0	307 10.2	40.7	264 20.9	20.9	174 03.1	50.2						
9	65 55.8	276 00.5	52.3	322 10.8	40.6	279 22.9	20.8	189 05.6	50.2						
10	80 58.3	291 02.2	51.5	337 11.5	40.4	294 24.8	20.6	204 08.1	50.2						
11	96 00.7	306 03.9	+10 50.8	352 12.2	+23 40.3	309 26.8	+14 20.4	219 10.7	-17 50.2						
12	111 03.2	321 05.5	+10 50.0	7 12.8	+23 40.1	324 28.8	+14 20.3	234 13.2	-17 50.2						
13	126 05.6	336 07.2	49.2	22 13.5	40.0	339 30.8	20.1	249 15.8	50.2						
14	141 08.1	351 08.9	48.5	37 14.2	39.9	354 32.8	19.9	264 18.3	50.2						
15	156 10.6	6 10.5	47.7	52 14.8	39.7	9 34.7	19.8	279 20.9	50.2						
16	171 13.0	21 12.2	47.0	67 15.5	39.6	24 36.7	19.6	294 23.4	50.1						
17	186 15.5	36 13.9	+10 46.2	82 16.1	+23 39.4	39 38.7	+14 19.4	309 26.0	-17 50.1						
18	201 18.0	51 15.6	+10 45.4	97 16.8	+23 39.3	54 40.7	+14 19.3	324 28.5	-17 50.1						
19	216 20.4	66 17.3	44.7	112 17.5	39.2	69 42.7	19.1	339 31.1	50.1						
20	231 22.9	81 19.0	43.9	127 18.1	39.0	84 44.6	18.9	354 33.6	50.1						
21	246 25.4	96 20.7	43.2	142 18.8	38.9	99 46.6	18.8	9 36.1	50.1						
22	261 27.8	111 22.3	42.4	157 19.5	38.7	114 48.6	18.6	24 38.7	50.1						
23	276 30.3	126 24.0	41.6	172 20.1	38.6	129 50.6	18.4	39 41.2	50.1						
24	291 32.8	141 25.7	+10 40.9	187 20.8	+23 38.4	144 52.6	+14 18.3	54 43.8	-17 50.1						
Dif	—		+17 -8		+7 -1		+20 -2		+25 0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 05 ^m 8			Edad: 27 ^d 4 PHE { SD: 15'5 PMG: 10 ^h 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	33.3	+21 45.2	205	07.9	+18 24.0	4	60 N	1 40	3 01	2 04	57	19 18	42		
1	193	33.2	44.8	219	35.8 ⁸⁹	24.4	3	58	2 13	18	17 56	19 06	43			
2	208	33.2	44.4	234	03.7 ⁸⁹	24.7	2	56	0 35	36	27 56	18 56	43			
3	223	33.1	44.1	248	31.6 ⁸⁹	24.9	3	54	1 32	2 55	37 56	46	44			
4	238	33.0	43.7	262	59.6 ⁹⁰	25.0	1	52	2 02	3 10	3 56	45 56	38	45		
5	253	33.0	+21 43.3	277	27.6 ⁹⁰	+18 25.0	0	50	2 24	3 24	4 06	2 53	55	18 31	45	
6	268	32.9	+21 43.0	291	55.6 ⁹⁰	+18 24.9	1	45	3 03	3 50	4 26	3 09	55	18 15	46	
7	283	32.8	42.6	306	23.6 ⁹⁰	24.6	3	40	31	4 11	43	23 54	18 01	48		
8	298	32.7	42.2	320	51.7 ⁹¹	24.3	3	35	3 52	27	4 56	34 54	17 50	48		
9	313	32.7	41.8	335	19.8 ⁹¹	23.9	4	30	4 09	4 41	5 08	3 44	54	40	49	
10	328	32.6	41.5	349	47.9 ⁹¹	23.4	5	20	36	5 04	29	4 01	53	24	49	
11	343	32.5	+21 41.1	4	16.0 ⁹¹	+18 22.7	7	10 N	4 57	5 23	5 46	4 16	53	17 09	51	
12	358	32.5	+21 40.7	18	44.2 ⁹²	+18 22.0	7	0	5 14	5 40	6 02	4 30	52	16 55	52	
13	13	32.4	40.3	33	12.4 ⁹²	21.1	9	10 S	30	5 56	18	44 52	41	53		
14	28	32.3	39.9	47	40.6 ⁹²	20.2	9	20	44	6 12	35	4 59	51	26	54	
15	43	32.2	39.6	62	08.9 ⁹³	19.2	10	30	5 59	29	6 55	5 16	51	16 09	55	
16	58	32.2	39.2	76	37.2 ⁹³	18.0	12	35	6 07	38	7 06	26 50	15 59	55		
17	73	32.1	+21 38.8	91	05.5 ⁹³	+18 16.8	12	40	6 15	6 49	7 19	5 37	50	15 48	56	
18	88	32.0	+21 38.4	105	33.9 ⁹⁴	+18 15.5	13	45	6 25	7 01	7 34	5 51	49	15 35	56	
19	103	32.0	38.0	120	02.3 ⁹⁴	14.0	15	50	35	16	7 53	6 07	49	18 58		
20	118	31.9	37.7	134	30.7 ⁹⁴	12.5	15	52	39	22	8 02	15 48	11	58		
21	133	31.8	37.3	148	59.2 ⁹⁵	10.9	16	54	44	29	11	23 48	15 02	59		
22	148	31.8	36.9	163	27.7 ⁹⁵	09.1	18	56	50	37	23	33 47	14 53	59		
23	163	31.7	36.5	177	56.2 ⁹⁵	07.3	18	58	6 55	46	35	44 47	42	60		
24	178	31.6	+21 36.1	192	24.8 ⁹⁶	+18 05.4	19	60 S	7 02	7 57	8 50	6 56	47	14 29	61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 4 ^h 33 ^m 1		Mag: -4.7 PMG: 14 ^h 33 ^m		Mag: +1.6 PMG: 11 ^h 30 ^m		Mag: -1.8 PMG: 14 ^h 19 ^m		Mag: +0.3 PMG: 20 ^h 18 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	291	32.8	141	25.7	+10 40.9	187	20.8	+23 38.4	144	52.6	+14 18.3	54	43.8	-17 50.1		
1	306	35.2	156	27.5	40.1	202	21.5	38.3	159	54.5	18.1	69	46.3	50.1		
2	321	37.7	171	29.2	39.4	217	22.1	38.2	174	56.5	17.9	84	48.9	50.1		
3	336	40.1	186	30.9	38.6	232	22.8	38.0	189	58.5	17.8	99	51.4	50.1		
4	351	42.6	201	32.6	37.9	247	23.4	37.9	205	00.5	17.6	114	53.9	50.1		
5	6	45.1	216	34.3	+10 37.1	262	24.1	+23 37.7	220	02.5	+14 17.4	129	56.5	-17 50.1		
6	21	47.5	231	36.0	+10 36.4	277	24.8	+23 37.6	235	04.4	+14 17.3	144	59.0	-17 50.0		
7	36	50.0	246	37.7	35.6	292	25.4	37.4	250	06.4	17.1	160	01.6	50.0		
8	51	52.5	261	39.5	34.9	307	26.1	37.3	265	08.4	16.9	175	04.1	50.0		
9	66	54.9	276	41.2	34.1	322	26.8	37.1	280	10.4	16.8	190	06.7	50.0		
10	81	57.4	291	42.9	33.4	337	27.4	37.0	295	12.4	16.6	205	09.2	50.0		
11	96	59.9	306	44.7	+10 32.6	352	28.1	+23 36.8	310	14.3	+14 16.5	220	11.7	-17 50.0		
12	112	02.3	321	46.4	+10 31.9	7	28.8	+23 36.7	325	16.3	+14 16.3	235	14.3	-17 50.0		
13	127	04.8	336	48.1	31.1	22	29.4	36.5	340	18.3	16.1	250	16.8	50.0		
14	142	07.3	351	49.9	30.4	37	30.1	36.4	355	20.3	16.0	265	19.4	50.0		
15	157	09.7	6	51.6	29.6	52	30.8	36.2	10	22.3	15.8	280	21.9	50.0		
16	172	12.2	21	53.4	28.9	67	31.4	36.1	25	24.2	15.6	295	24.4	50.0		
17	187	14.6	36	55.1	+10 28.1	82	32.1	+23 35.9	40	26.2	+14 15.5	310	27.0	-17 50.0		
18	202	17.1	51	56.9	+10 27.4	97	32.8	+23 35.8	55	28.2	+14 15.3	325	29.5	-17 50.0		
19	217	19.6	66	58.7	26.7	112	33.4	35.6	70	30.2	15.1	340	32.1	50.0		
20	232	22.0	82	00.4	25.9	127	34.1	35.5	85	32.2	15.0	355	34.6	50.0		
21	247	24.5	97	02.2	25.2	142	34.8	35.3	100	34.1	14.8	10	37.2	49.9		
22	262	27.0	112	03.9	24.4	157	35.4	35.2	115	36.1	14.6	25	39.7	49.9		
23	277	29.4	127	05.7	23.7	172	36.1	35.0	130	38.1	14.5	40	42.2	49.9		
24	292	31.9	142	07.5	+10 22.9	187	36.7	+23 34.9	145	40.1	+14 14.3	55	44.8	-17 49.9		
Dif	—		+17	-7		+7	-1		+20	-2		+25				

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 9				Edad: 28 ^d 4 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 1 20 ^h : 55 ^m 9 PMG: 11 ^h 34 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m
0	178	31.6	+21	36.1	192	24.8	+18	05.4	60 N	21 08	22 25	** **	3 01	64	20 00	32		
1	193	31.6		35.7	206	53.4		03.3	58	20 51	21 55	** **	13	63	19 49	33		
2	208	31.5		35.3	221	22.0	+18	01.2	56	37	32	23 22	23	62	39	35		
3	223	31.4		35.0	235	50.7	+17	59.0	54	24	21 14	22 34	33	60	30	37		
4	238	31.4		34.6	250	19.4		56.7	52	14	20 59	22 06	41	60	23	37		
5	253	31.3	+21	34.2	264	48.2	+17	54.3	50	20 04	20 46	21 45	3	48	19 16	38		
6	268	31.2	+21	33.8	279	17.0	+17	51.8	45	19 44	20 20	21 07	4	04	19 01	41		
7	283	31.2		33.4	293	45.8		49.2	40	28	20 00	20 40	17	57	18 49	42		
8	298	31.1		33.0	308	14.7		46.5	35	14	19 43	19	28	56	38	44		
9	313	31.0		32.6	322	43.6		43.7	30	19 03	30	20 02	38	54	29	45		
10	328	31.0		32.2	337	12.6		40.9	20	18 43	19 07	19 36	4	54	13	47		
11	343	30.9	+21	31.8	351	41.6	+17	37.9	10 N	18 26	18 48	19 15	5	09	18 00	48		
12	358	30.8	+21	31.4	6	10.6	+17	34.8	0	18 10	18 32	18 58	5	22	17	47	49	
13	13	30.8		31.0	20	39.7		31.7	10 S	17 54	16	42	36	49	34	51		
14	28	30.7		30.6	35	08.8		28.4	20	37	18 01	28	5	50	20	53		
15	43	30.6		30.3	49	38.0		25.1	30	18	17 44	13	6	07	17	04	55	
16	58	30.6		29.9	64	07.2		21.7	35	17 06	34	18 05	16	46	16	54	56	
17	73	30.5	+21	29.5	78	36.5	+17	18.2	40	16 54	17 24	17 57	6	27	16	44	57	
18	88	30.4	+21	29.1	93	05.8	+17	14.6	45	16 39	17 12	17 48	6	40	16	31	59	
19	103	30.4		28.7	107	35.2		10.9	50	20	16 57	38	6	56	16	61		
20	118	30.3		28.3	122	04.6		07.2	52	12	51	34	7	03	09	61		
21	133	30.3		27.9	136	34.1	+17	03.3	54	16 02	44	29	11	40	16	01	62	
22	148	30.2		27.5	151	03.6	+16	59.4	56	15 51	36	24	20	39	15	52	64	
23	163	30.1		27.1	165	33.1		55.4	58	38	27	18	31	37	42	65		
24	178	30.1	+21	26.7	180	02.7	+16	51.3	60 S	15 23	16 17	17 12	7	43	15	30	67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 29 ^m 1		Mag: -4.7 PMG: 14 ^h 30 ^m		Mag: +1.6 PMG: 11 ^h 29 ^m		Mag: -1.8 PMG: 14 ^h 15 ^m		Mag: +0.3 PMG: 20 ^h 14 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	292	31.9	142	07.5	+10	22.9	187	36.7	+23	34.9
1	307	34.4	157	09.3		22.2	202	37.4		34.7
2	322	36.8	172	11.1		21.5	217	38.1		34.6
3	337	39.3	187	12.8		20.7	232	38.8		34.4
4	352	41.8	202	14.6		20.0	247	39.4		34.3
5	7	44.2	217	16.4	+10	19.2	262	40.1	+23	34.1
6	22	46.7	232	18.2	+10	18.5	277	40.8	+23	34.0
7	37	49.1	247	20.0		17.8	292	41.4		33.8
8	52	51.6	262	21.8		17.0	307	42.1		33.7
9	67	54.1	277	23.6		16.3	322	42.8		33.5
10	82	56.5	292	25.4		15.6	337	43.4		33.4
11	97	59.0	307	27.2	+10	14.8	352	44.1	+23	33.2
12	113	01.5	322	29.0	+10	14.1	7	44.8	+23	33.0
13	128	03.9	337	30.9		13.4	22	45.4		32.9
14	143	06.4	352	32.7		12.6	37	46.1		32.7
15	158	08.9	7	34.5		11.9	52	46.8		32.6
16	173	11.3	22	36.3		11.2	67	47.4		32.4
17	188	13.8	37	38.2	+10	10.4	82	48.1	+23	32.3
18	203	16.2	52	40.0	+10	09.7	97	48.8	+23	32.1
19	218	18.7	67	41.8		09.0	112	49.4		31.9
20	233	21.2	82	43.7		08.2	127	50.1		31.8
21	248	23.6	97	45.5		07.5	142	50.8		31.6
22	263	26.1	112	47.3		06.8	157	51.5		31.5
23	278	28.6	127	49.2		06.1	172	52.1		31.3
24	293	31.0	142	51.0	+10	05.3	187	52.8	+23	31.1
Dif	—		+18		-7		+7		-2	

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: 29 ^d 4 PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'5 R°: 48 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	30.1	+21	26.7	180	02.7	+16	51.2	60 N	** **	1 47	3 05	4 05	69	20	32	25
1	193	30.0		26.3	194	32.3 ¹⁰⁶		47.1	41	58	** *	2 17	22	16	67	22	28
2	208	29.9		25.9	209	02.0 ¹⁰⁷		42.8	43	56	0 50	40	36	25	65	14	29
3	223	29.9		25.5	223	31.8 ¹⁰⁸		38.4	44	54	1 38	2 58	48	33	64	07	30
4	238	29.8		25.1	238	01.6 ¹⁰⁸		34.0	44	52	2 06	3 13	3 59	41	63	20	00
5	253	29.8	+21	24.7	252	31.4 ¹⁰⁸	+16	29.5	45	50	2 28	3 26	4 08	4 48	61	19	54
6	268	29.7	+21	24.2	267	01.3 ¹⁰⁹	+16	24.9	46	45	3 06	3 52	4 28	5 02	59	19	42
7	283	29.6		23.8	281	31.2 ¹⁰⁹		20.2	47	40	33	4 12	44	14	57	31	38
8	298	29.6		23.4	296	01.2 ¹¹⁰		15.4	48	35	3 53	29	4 58	24	55	22	39
9	313	29.5		23.0	310	31.3 ¹¹¹		10.6	48	30	4 10	4 43	5 09	32	55	14	41
10	328	29.5		22.6	325	01.4 ¹¹¹		05.7	49	20	37	5 05	29	5 47	53	19	00
11	343	29.4	+21	22.2	339	31.5 ¹¹¹	+16	00.7	50	10 N	4 57	5 24	5 47	6 00	51	18	48
12	358	29.3	+21	21.8	354	01.7 ¹¹²	+15	55.6	51	0	5 14	5 40	6 02	6 13	48	18	36
13	13	29.3		21.4	8	31.9 ¹¹²		50.5	51	10 S	30	5 56	18	25	47	25	50
14	28	29.2		21.0	23	02.2 ¹¹³		45.3	52	20	44	6 11	35	38	45	18	13
15	43	29.2		20.6	37	32.6 ¹¹⁴		40.0	53	30	5 59	28	6 54	6 53	43	17	59
16	58	29.1		20.2	52	03.0 ¹¹⁴		34.6	54	35	6 06	38	7 05	7 02	41	50	56
17	73	29.0	+21	19.8	66	33.4 ¹¹⁴	+15	29.2	54	40	6 15	6 48	7 18	7 12	40	17	41
18	88	29.0	+21	19.3	81	03.9 ¹¹⁵	+15	23.7	55	45	6 23	7 00	7 33	7 23	38	17	30
19	103	28.9		18.9	95	34.5 ¹¹⁶		18.1	56	50	34	14	7 51	37	36	17	62
20	118	28.9		18.5	110	05.1 ¹¹⁶		12.4	57	52	38	20	8 00	44	34	10	64
21	133	28.8		18.1	124	35.7 ¹¹⁶		06.7	57	54	43	28	09	51	33	17	03
22	148	28.7		17.7	139	06.4 ¹¹⁷	+15	00.9	58	56	48	35	20	7 59	32	16	56
23	163	28.7		17.3	153	37.2 ¹¹⁸	+14	55.1	58	58	6 54	44	33	8 08	30	47	68
24	178	28.6	+21	16.9	168	08.0 ¹¹⁸	+14	49.1	60	60 S	7 00	7 54	8 47	8 19	28	16	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 25 ^m 2		Mag: -4.7 PMG: 14 ^h 27 ^m		Mag: +1.6 PMG: 11 ^h 28 ^m		Mag: -1.8 PMG: 14 ^h 12 ^m		Mag: +0.3 PMG: 20 ^h 10 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	293	31.0	142	51.0	+10	05.3	187	52.8	+23	31.1	146	27.5	+14	10.3	56	45.7	-17	49.8
1	308	33.5	157	52.9		04.6	202	53.5		31.0	161	29.5		10.1	71	48.2		49.8
2	323	36.0	172	54.8		03.9	217	54.1		30.8	176	31.5		09.9	86	50.8		49.8
3	338	38.4	187	56.6		03.2	232	54.8		30.7	191	33.5		09.8	101	53.3		49.8
4	353	40.9	202	58.5		02.4	247	55.5		30.5	206	35.4		09.6	116	55.8		49.8
5	8	43.4	218	00.3	+10	01.7	262	56.1	+23	30.3	221	37.4	+14	09.4	131	58.4	-17	49.8
6	23	45.8	233	02.2	+10	01.0	277	56.8	+23	30.2	236	39.4	+14	09.3	147	00.9	-17	49.8
7	38	48.3	248	04.1	+10	00.3	292	57.5		30.0	251	41.4		09.1	162	03.4		49.7
8	53	50.7	263	06.0	+9	59.5	307	58.2		29.9	266	43.3		08.9	177	06.0		49.7
9	68	53.2	278	07.8		58.8	322	58.8		29.7	281	45.3		08.8	192	08.5		49.7
10	83	55.7	293	09.7		58.1	337	59.5		29.5	296	47.3		08.6	207	11.0		49.7
11	98	58.1	308	11.6	+9	57.4	353	00.2	+23	29.4	311	49.3	+14	08.4	222	13.6	-17	49.7
12	114	00.6	323	13.5	+9	56.7	8	00.8	+23	29.2	326	51.3	+14	08.3	237	16.1	-17	49.7
13	129	03.1	338	15.4		55.9	23	01.5		29.0	341	53.2		08.1	252	18.6		49.7
14	144	05.5	353	17.3		55.2	38	02.2		28.9	356	55.2		07.9	267	21.2		49.7
15	159	08.0	8	19.2		54.5	53	02.9		28.7	11	57.2		07.8	282	23.7		49.7
16	174	10.5	23	21.1		53.8	68	03.5		28.5	26	59.2		07.6	297	26.2		49.7
17	189	12.9	38	23.0	+9	53.1	83	04.2	+23	28.4	42	01.1	+14	07.4	312	28.8	-17	49.7
18	204	15.4	53	24.9	+9	52.4	98	04.9	+23	28.2	57	03.1	+14	07.3	327	31.3	-17	49.7
19	219	17.9	68	26.8		51.7	113	05.5		28.0	72	05.1		07.1	342	33.8		49.7
20	234	20.3	83	28.7		50.9	128	06.2		27.9	87	07.1		06.9	357	36.4		49.7
21	249	22.8	98	30.7		50.2	143	06.9		27.7	102	09.0		06.8	12	38.9		49.7
22	264	25.2	113	32.6		49.5	158	07.6		27.5	117	11.0		06.6	27	41.4		49.7
23	279	27.7	128	34.5		48.8	173	08.2		27.4	132	13.0		06.4	42	44.0		49.7
24	294	30.2	143	36.4	+9	48.1	188	08.9	+23	27.2	147	15.0	+14	06.2	57	46.5	-17	49.7
Dif	—		+19		-7		+7		-2		+20		-2		+25		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1			Edad: 30 ^d 4 PHE { 4 ^h : 55/3 12 ^h : 55/2 20 ^h : 55/0 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	28.6	+21 16.9	168	08.0	+14 49.1	60	60 N	21 04	22 19	** **	5 14 71	20 57 21	
1	193	28.6	16.4	182	38.9 ¹¹⁹	43.1	60	58	20 48	21 51	** **	23 68	50 22	
2	208	28.5	16.0	197	09.8 ¹¹⁹	37.1	60	56	34	29	23 11	30 67	43 25	
3	223	28.5	15.6	211	40.8 ¹²⁰	31.0	61	54	22	21 11	22 29	37 65	37 27	
4	238	28.4	15.2	226	11.8 ¹²⁰	24.8	62	52	12	20 57	22 02	44 63	32 28	
5	253	28.3	+21 14.8	240	42.8 ¹²⁰	+14 18.5	63	50	20 02	20 44	21 41	5 49 62	20 27 29	
6	268	28.3	+21 14.3	255	14.0 ¹²²	+14 12.2	63	45	19 43	20 18	21 04	6 01 60	20 17 32	
7	283	28.2	13.9	269	45.1 ¹²¹	+14 05.8	64	40	27	19 58	20 38	11 57	09 34	
8	298	28.2	13.5	284	16.4 ¹²³	+13 59.4	64	35	14	42	18	19 56	20 01 36	
9	313	28.1	13.1	298	47.6 ¹²²	52.9	65	30	19 02	29	20 01	27 54	19 55 37	
10	328	28.1	12.7	313	19.0 ¹²⁴	46.3	66	20	18 42	19 06	19 35	40 51	43 41	
11	343	28.0	+21 12.2	327	50.4 ¹²⁴	+13 39.7	66	10 N	18 25	18 48	19 15	6 51 49	19 34 43	
12	358	28.0	+21 11.8	342	21.8 ¹²⁴	+13 33.0	67	0	18 10	18 32	18 58	7 01 47	19 24 46	
13	13	27.9	11.4	356	53.3 ¹²⁵	26.2	68	10 S	17 54	17	43	12 44	15 48	
14	28	27.9	11.0	11	24.8 ¹²⁵	19.4	68	20	38	18 01	28	23 42	19 05 50	
15	43	27.8	10.5	25	56.4 ¹²⁶	12.6	68	30	19	17 45	14	36 39	18 53 54	
16	58	27.7	10.1	40	28.0 ¹²⁶	+13 05.6	70	35	17 08	35	18 06	43 38	46 56	
17	73	27.7	+21 09.7	54	59.7 ¹²⁷	+12 58.7	69	40	16 55	17 25	17 58	7 52 35	18 39 57	
18	88	27.6	+21 09.3	69	31.4 ¹²⁷	+12 51.6	71	45	16 40	17 13	17 50	8 01 34	18 30 59	
19	103	27.6	08.8	84	03.2 ¹²⁸	44.6	70	50	22	16 59	40	13 31	19 62	
20	118	27.5	08.4	98	35.0 ¹²⁸	37.4	72	52	14	53	36	18 30	14 64	
21	133	27.5	08.0	113	06.9 ¹²⁹	30.2	72	54	16 04	46	31	24 28	08 66	
22	148	27.4	07.5	127	38.8 ¹²⁹	23.0	72	56	15 54	38	26	31 26	18 02 67	
23	163	27.4	07.1	142	10.8 ¹³⁰	15.7	73	58	41	30	20	38 25	17 55 69	
24	178	27.3	+21 06.7	156	42.9 ¹³¹	+12 08.4	73	60 S	15 27	16 20	17 14	8 47 22	17 47 71	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 21 ^m 3		Mag: -4.7 PMG: 14 ^h 24 ^m		Mag: +1.6 PMG: 11 ^h 27 ^m		Mag: -1.8 PMG: 14 ^h 09 ^m		Mag: +0.3 PMG: 20 ^h 06 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	294	30.2	143 36.4	+9 48.1	188 08.9	+23 27.2	147 15.0	+14 06.2	57 46.5	-17 49.7				
1	309	32.6	158 38.4	47.4	203 09.6	27.0	162 16.9	06.1	72 49.0	49.7				
2	324	35.1	173 40.3	46.7	218 10.3	26.9	177 18.9	05.9	87 51.6	49.7				
3	339	37.6	188 42.2	46.0	233 10.9	26.7	192 20.9	05.7	102 54.1	49.7				
4	354	40.0	203 44.2	45.3	248 11.6	26.5	207 22.9	05.6	117 56.6	49.6				
5	9	42.5	218 46.1	+9 44.6	263 12.3	+23 26.4	222 24.8	+14 05.4	132 59.2	-17 49.6				
6	24	45.0	233 48.1	+9 43.8	278 13.0	+23 26.2	237 26.8	+14 05.2	148 01.7	-17 49.6				
7	39	47.4	248 50.0	43.1	293 13.6	26.0	252 28.8	05.1	163 04.2	49.6				
8	54	49.9	263 52.0	42.4	308 14.3	25.9	267 30.8	04.9	178 06.8	49.6				
9	69	52.4	278 53.9	41.7	323 15.0	25.7	282 32.7	04.7	193 09.3	49.6				
10	84	54.8	293 55.9	41.0	338 15.7	25.5	297 34.7	04.6	208 11.8	49.6				
11	99	57.3	308 57.9	+9 40.3	353 16.3	+23 25.3	312 36.7	+14 04.4	223 14.3	-17 49.6				
12	114	59.7	323 59.8	+9 39.6	8 17.0	+23 25.2	327 38.7	+14 04.2	238 16.9	-17 49.6				
13	130	02.2	339 01.8	38.9	23 17.7	25.0	342 40.6	04.0	253 19.4	49.6				
14	145	04.7	354 03.8	38.2	38 18.4	24.8	357 42.6	03.9	268 21.9	49.6				
15	160	07.1	9 05.8	37.5	53 19.0	24.7	12 44.6	03.7	283 24.5	49.6				
16	175	09.6	24 07.7	36.8	68 19.7	24.5	27 46.6	03.5	298 27.0	49.6				
17	190	12.1	39 09.7	+9 36.1	83 20.4	+23 24.3	42 48.5	+14 03.4	313 29.5	-17 49.6				
18	205	14.5	54 11.7	+9 35.4	98 21.1	+23 24.1	57 50.5	+14 03.2	328 32.1	-17 49.6				
19	220	17.0	69 13.7	34.7	113 21.7	24.0	72 52.5	03.0	343 34.6	49.6				
20	235	19.5	84 15.7	34.0	128 22.4	23.8	87 54.4	02.9	358 37.1	49.6				
21	250	21.9	99 17.7	33.3	143 23.1	23.6	102 56.4	02.7	13 39.6	49.6				
22	265	24.4	114 19.7	32.6	158 23.8	23.4	117 58.4	02.5	28 42.2	49.6				
23	280	26.8	129 21.7	32.0	173 24.4	23.3	133 00.4	02.4	43 44.7	49.6				
24	295	29.3	144 23.7	+9 31.3	188 25.1	+23 23.1	148 02.3	+14 02.2	58 47.2	-17 49.6				
Dif	—		+20		-7		+20		-2		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 06 ^m 2			Edad: 1 ^d 9 PHE { SD: 15'0 PMG: 13 ^h 59 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	27.3	+21	06.7	156	42.9	+12	08.4	60 N	** *	1 54	3 09	6 25	71	21 18	17		
1	193	27.3		06.3	171	14.9 ¹³⁰	+12	01.0	58	** *	2 22	25	31	69	12	20		
2	208	27.2		05.8	185	47.1 ¹³²	+11	53.5	56	1 02	2 44	39	37	67	08	21		
3	223	27.2		05.4	200	19.2 ¹³¹		46.0	54	1 44	3 02	3 51	42	66	04	23		
4	238	27.1		05.0	214	51.4 ¹³²		38.5	52	2 11	16	4 01	47	64	21	00		
5	253	27.1	+21	04.5	229	23.7 ¹³³	+11	30.9	50	2 31	3 29	4 10	6 51	63	20 56	26		
6	268	27.0	+21	04.1	243	56.0 ¹³³	+11	23.3	45	3 08	3 54	4 30	7 01	59	20 49	29		
7	283	27.0		03.7	258	28.4 ¹³⁴		15.6	40	35	4 14	46	08	57	43	31		
8	298	26.9		03.2	273	00.8 ¹³⁴		07.9	35	3 55	30	4 59	15	55	37	34		
9	313	26.9		02.8	287	33.2 ¹³⁴	+11	00.1	30	4 11	4 44	5 11	21	53	32	36		
10	328	26.8		02.3	302	05.7 ¹³⁵	+10	52.3	20	38	5 06	30	31	50	24	38		
11	343	26.8	+21	01.9	316	38.3 ¹³⁶	+10	44.4	10 N	4 58	5 24	5 47	7 40	47	20 17	41		
12	358	26.7	+21	01.5	331	10.9 ¹³⁶	+10	36.5	0	5 15	5 40	6 03	7 48	45	20 10	44		
13	13	26.7		01.0	345	43.5 ¹³⁶		28.6	10 S	30	5 56	18	7 56	42	20 03	46		
14	28	26.6		00.6	0	16.2 ¹³⁷		20.6	20	44	6 11	35	8 05	39	19 55	50		
15	43	26.6	+21	00.2	14	48.9 ¹³⁷		12.6	30	5 58	28	6 53	15	36	47	52		
16	58	26.5	+20	59.7	29	21.6 ¹³⁷	+10	04.5	35	6 06	37	7 04	21	34	42	54		
17	73	26.5	+20	59.3	43	54.4 ¹³⁸	+9	56.4	40	6 14	6 47	7 17	8 27	33	19 36	57		
18	88	26.4	+20	58.8	58	27.3 ¹³⁹	+9	48.3	45	6 22	6 59	7 31	8 35	30	19 29	59		
19	103	26.4		58.4	73	00.2 ¹³⁹		40.1	50	32	7 12	49	44	27	21	63		
20	118	26.3		57.9	87	33.1 ¹³⁹		31.9	52	36	19	7 58	48	26	18	63		
21	133	26.3		57.5	102	06.1 ¹⁴⁰		23.7	54	41	26	8 07	52	25	14	65		
22	148	26.2		57.1	116	39.1 ¹⁴⁰		15.4	56	46	33	18	8 57	23	09	67		
23	163	26.2		56.6	131	12.1 ¹⁴⁰	+9	07.1	58	51	42	30	9 03	21	19 04	69		
24	178	26.2	+20	56.2	145	45.2 ¹⁴¹	+8	58.7	60 S	6 57	7 51	8 44	9 09	19	18 58	71		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 4 ^h 17 ^m 3			Mag: -4.7 PMG: 14 ^h 20 ^m			Mag: +1.7 PMG: 11 ^h 26 ^m			Mag: -1.8 PMG: 14 ^h 06 ^m			Mag: +0.3 PMG: 20 ^h 01 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	295	29.3	144	23.7	+9	31.3	188	25.1	+23	23.1	148	02.3	+14	02.2	58	47.2		
1	310	31.8	159	25.7		30.6	203	25.8		22.9	163	04.3		02.0	73	49.8		
2	325	34.2	174	27.7		29.9	218	26.5		22.7	178	06.3		01.8	88	52.3		
3	340	36.7	189	29.8		29.2	233	27.1		22.6	193	08.3		01.7	103	54.8		
4	355	39.2	204	31.8		28.5	248	27.8		22.4	208	10.2		01.5	118	57.3		
5	10	41.6	219	33.8	+9	27.8	263	28.5	+23	22.2	223	12.2	+14	01.3	133	59.9		
6	25	44.1	234	35.8	+9	27.1	278	29.2	+23	22.0	238	14.2	+14	01.2	149	02.4		
7	40	46.6	249	37.9		26.4	293	29.9		21.9	253	16.2		01.0	164	04.9		
8	55	49.0	264	39.9		25.7	308	30.5		21.7	268	18.1		00.8	179	07.4		
9	70	51.5	279	41.9		25.1	323	31.2		21.5	283	20.1		00.7	194	10.0		
10	85	54.0	294	44.0		24.4	338	31.9		21.3	298	22.1		00.5	209	12.5		
11	100	56.4	309	46.0	+9	23.7	353	32.6	+23	21.1	313	24.0	+14	00.3	224	15.0		
12	115	58.9	324	48.1	+9	23.0	8	33.2	+23	21.0	328	26.0	+14	00.1	239	17.6		
13	131	01.3	339	50.1		22.3	23	33.9		20.8	343	28.0	+14	00.0	254	20.1		
14	146	03.8	354	52.2		21.6	38	34.6		20.6	358	30.0	+13	59.8	269	22.6		
15	161	06.3	9	54.3		21.0	53	35.3		20.4	13	31.9		59.6	284	25.1		
16	176	08.7	24	56.3		20.3	68	36.0		20.2	28	33.9		59.5	299	27.7		
17	191	11.2	39	58.4	+9	19.6	83	36.6	+23	20.1	43	35.9	+13	59.3	314	30.2		
18	206	13.7	55	00.5	+9	18.9	98	37.3	+23	19.9	58	37.8	+13	59.1	329	32.7		
19	221	16.1	70	02.5		18.2	113	38.0		19.7	73	39.8		59.0	344	35.2		
20	236	18.6	85	04.6		17.6	128	38.7		19.5	88	41.8		58.8	359	37.8		
21	251	21.1	100	06.7		16.9	143	39.4		19.3	103	43.8		58.6	14	40.3		
22	266	23.5	115	08.8		16.2	158	40.0		19.1	118	45.7		58.4	29	42.8		
23	281	26.0	130	10.9		15.5	173	40.7		19.0	133	47.7		58.3	44	45.3		
24	296	28.5	145	12.9	+9	14.9	188	41.4	+23	18.8	148	49.7	+13	58.1	59	47.9		
Dif	—			+21			-7			+7			-2			+25		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 2 ^d 9 PHE {	4 ^h : 54 ^h /5 12 ^h : 54 ^h /4 20 ^h : 54 ^h /4										
	PMG: 12 ^h 06 ^m 3				R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m
0	178	26.2	+20 56.2	145	45.2	+8 58.7	84	60 N	21 00	22 13	** **	7 36 70	21 35 16		
1	193	26.1	55.7	160	18.3 ¹⁴¹	50.3	84	58	20 44	21 46	** **	40 69	32 18		
2	208	26.1	55.3	174	51.5 ¹⁴²	41.9	84	56	31	25	23 01	44 67	29 20		
3	223	26.0	54.8	189	24.7 ¹⁴²	33.5	84	54	19	21 08	22 23	48 64	27 22		
4	238	26.0	54.4	203	57.9 ¹⁴²	25.0	85	52	09	20 54	21 58	51 63	25 22		
5	253	25.9	+20 53.9	218	31.2 ¹⁴³	+8 16.5	85	50	20 00	20 41	21 38	7 54 62	21 22 25		
6	268	25.9	+20 53.5	233	04.5 ¹⁴³	+8 07.9	86	45	19 41	20 16	21 02	8 00 59	21 18 27		
7	283	25.8	53.0	247	37.9 ¹⁴⁴	+7 59.3	86	40	26	19 57	20 36	05 57	14 30		
8	298	25.8	52.6	262	11.3 ¹⁴⁴	50.7	86	35	13	41	16	10 54	11 31		
9	313	25.8	52.1	276	44.7 ¹⁴⁴	42.1	86	30	19 01	28	20 00	14 52	08 33		
10	328	25.7	51.7	291	18.2 ¹⁴⁵	33.4	87	20	18 42	19 06	19 34	21 49	21 02 38		
11	343	25.7	+20 51.2	305	51.6 ¹⁴⁴	+7 24.8	86	10 N	18 25	18 48	19 14	8 27 46	20 58 40		
12	358	25.6	+20 50.8	320	25.2 ¹⁴⁶	+7 16.0	88	0	18 10	18 32	18 58	8 33 43	20 54 42		
13	13	25.6	50.3	334	58.7 ¹⁴⁵	+7 07.3	87	10 S	17 55	17	43	38 41	49 46		
14	28	25.5	49.9	349	32.3 ¹⁴⁶	+6 58.5	88	20	38	18 02	29	44 38	45 48		
15	43	25.5	49.4	4	05.9 ¹⁴⁶	49.7	88	30	20	17 46	15	51 35	39 52		
16	58	25.5	48.9	18	39.6 ¹⁴⁷	40.9	88	35	17 09	37	08	8 55 33	36 54		
17	73	25.4	+20 48.5	33	13.2 ¹⁴⁶	+6 32.1	88	40	16 57	17 26	18 00	9 00 30	20 33 55		
18	88	25.4	+20 48.0	47	47.0 ¹⁴⁸	+6 23.2	89	45	16 42	17 15	17 51	9 05 28	20 28 59		
19	103	25.3	47.6	62	20.7 ¹⁴⁷	14.3	89	50	25	17 02	42	11 25	24 61		
20	118	25.3	47.1	76	54.5 ¹⁴⁸	+6 05.4	89	52	16	16 55	38	14 23	21 63		
21	133	25.2	46.7	91	28.3 ¹⁴⁸	+5 56.5	89	54	16 07	49	33	17 22	19 64		
22	148	25.2	46.2	106	02.1 ¹⁴⁸	47.6	89	56	15 57	41	28	20 21	16 66		
23	163	25.2	45.7	120	35.9 ¹⁴⁸	38.6	90	58	45	33	23	24 19	13 68		
24	178	25.1	+20 45.3	135	09.8 ¹⁴⁹	+5 29.6	90	60 S	15 31	16 23	17 17	9 28 17	20 09 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 13 ^m 4		Mag: -4.7 PMG: 14 ^h 17 ^m		Mag: +1.7 PMG: 11 ^h 25 ^m		Mag: -1.8 PMG: 14 ^h 03 ^m		Mag: +0.4 PMG: 19 ^h 57 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	296	28.5	145 12.9	+9 14.9	188 41.4	+23 18.8	148 49.7	+13 58.1	59 47.9	-17 49.5
1	311	30.9	160 15.0	14.2	203 42.1	18.6	163 51.7	57.9	74 50.4	49.5
2	326	33.4	175 17.1	13.5	218 42.8	18.4	178 53.6	57.8	89 52.9	49.5
3	341	35.8	190 19.2	12.9	233 43.4	18.2	193 55.6	57.6	104 55.4	49.5
4	356	38.3	205 21.3	12.2	248 44.1	18.0	208 57.6	57.4	119 58.0	49.5
5	11	40.8	220 23.5	+9 11.5	263 44.8	+23 17.9	223 59.5	+13 57.3	135 00.5	-17 49.5
6	26	43.2	235 25.6	+9 10.8	278 45.5	+23 17.7	239 01.5	+13 57.1	150 03.0	-17 49.5
7	41	45.7	250 27.7	10.2	293 46.2	17.5	254 03.5	56.9	165 05.5	49.5
8	56	48.2	265 29.8	09.5	308 46.9	17.3	269 05.5	56.7	180 08.0	49.5
9	71	50.6	280 31.9	08.8	323 47.5	17.1	284 07.4	56.6	195 10.6	49.5
10	86	53.1	295 34.0	08.2	338 48.2	16.9	299 09.4	56.4	210 13.1	49.5
11	101	55.6	310 36.2	+9 07.5	353 48.9	+23 16.7	314 11.4	+13 56.2	225 15.6	-17 49.5
12	116	58.0	325 38.3	+9 06.8	8 49.6	+23 16.6	329 13.3	+13 56.1	240 18.1	-17 49.5
13	132	00.5	340 40.4	06.2	23 50.3	16.4	344 15.3	55.9	255 20.7	49.5
14	147	02.9	355 42.6	05.5	38 50.9	16.2	359 17.3	55.7	270 23.2	49.5
15	162	05.4	10 44.7	04.9	53 51.6	16.0	14 19.2	55.5	285 25.7	49.4
16	177	07.9	25 46.9	04.2	68 52.3	15.8	29 21.2	55.4	300 28.2	49.4
17	192	10.3	40 49.0	+9 03.5	83 53.0	+23 15.6	44 23.2	+13 55.2	315 30.7	-17 49.4
18	207	12.8	55 51.2	+9 02.9	98 53.7	+23 15.4	59 25.2	+13 55.0	330 33.3	-17 49.4
19	222	15.3	70 53.3	02.2	113 54.4	15.2	74 27.1	54.9	345 35.8	49.4
20	237	17.7	85 55.5	01.6	128 55.0	15.1	89 29.1	54.7	0 38.3	49.4
21	252	20.2	100 57.7	00.9	143 55.7	14.9	104 31.1	54.5	15 40.8	49.4
22	267	22.7	115 59.8	+9 00.3	158 56.4	14.7	119 33.0	54.3	30 43.4	49.4
23	282	25.1	131 02.0	+8 59.6	173 57.1	14.5	134 35.0	54.2	45 45.9	49.4
24	297	27.6	146 04.2	+8 58.9	188 57.8	+23 14.3	149 37.0	+13 54.0	60 48.4	-17 49.4
Dif	—	+21	-7	+7	-2	+20	-2	+25	0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 4			Edad: 3 ^d 9 SD: 14 ^h 8 PMG: 15 ^h 26 ^m	PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 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	25.1	+20 45.3	135	09.8	+5 29.6	90	60 N	2 00	3 13	8 46	70	21 51	16		
1	193	25.1	44.8	149	43.7 ¹⁴⁹	20.6	90	58	27	29	49	68	50	18		
2	208	25.0	44.4	164	17.6 ¹⁴⁹	11.6	90	56	1 12	2 48	51	66	49	19		
3	223	25.0	43.9	178	51.6 ¹⁵⁰	+5 02.6	91	54	1 50	3 05	52	65	48	21		
4	238	25.0	43.4	193	25.6 ¹⁵⁰	+4 53.5	91	52	2 15	19	54	63	47	23		
5	253	24.9	+20 43.0	207	59.6 ¹⁵⁰	+4 44.4	91	50	2 35	3 32	4 13	8 56	61	21 47	23	
6	268	24.9	+20 42.5	222	33.6 ¹⁵⁰	+4 35.3	91	45	3 11	3 57	4 32	8 59	58	21 45	27	
7	283	24.9	42.0	237	07.6 ¹⁵⁰	26.2	91	40	37	4 16	4 47	9 02	55	44	29	
8	298	24.8	41.6	251	41.7 ¹⁵¹	17.1	91	35	3 57	32	5 00	04 53	42	32		
9	313	24.8	41.1	266	15.8 ¹⁵¹	+4 08.0	91	30	4 13	4 45	12	06 52	41	34		
10	328	24.7	40.6	280	49.9 ¹⁵¹	+3 58.8	92	20	38	5 07	31	10 48	40	36		
11	343	24.7	+20 40.2	295	24.0 ¹⁵¹	+3 49.7	91	10 N	4 58	5 25	5 47	9 13	45	21 38	39	
12	358	24.7	+20 39.7	309	58.1 ¹⁵¹	+3 40.5	92	0	5 15	5 41	6 03	9 16	42	21 36	42	
13	13	24.6	39.2	324	32.3 ¹⁵²	31.3	92	10 S	30	5 56	18	19 39	35	45		
14	28	24.6	38.8	339	06.5 ¹⁵²	22.1	92	20	44	6 11	34	22 37	33	48		
15	43	24.6	38.3	353	40.7 ¹⁵²	12.9	92	30	5 58	27	6 53	26 33	31	51		
16	58	24.5	37.8	8	14.9 ¹⁵²	+3 03.7	92	35	6 05	36	7 03	28 31	30	53		
17	73	24.5	+20 37.4	22	49.1 ¹⁵²	+2 54.5	92	40	6 13	6 46	7 15	9 30	29	21 28	56	
18	88	24.4	+20 36.9	37	23.3 ¹⁵²	+2 45.2	93	45	6 21	6 57	7 30	9 33	26	21 27	58	
19	103	24.4	36.4	51	57.6 ¹⁵³	36.0	92	50	30	7 11	47	36 24	25	61		
20	118	24.4	35.9	66	31.9 ¹⁵³	26.7	93	52	35	17	7 55	37 23	24	63		
21	133	24.3	35.5	81	06.2 ¹⁵³	17.5	92	54	39	23	8 05	39 21	23	65		
22	148	24.3	35.0	95	40.4 ¹⁵²	+2 08.2	93	56	44	31	15	41 19	22	66		
23	163	24.3	34.5	110	14.7 ¹⁵³	+1 58.9	93	58	49	39	27	43 17	21	68		
24	178	24.2	+20 34.1	124	49.1 ¹⁵⁴	+1 49.6	93	60 S	6 55	7 48	8 40	9 45 15	21 20	70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 09 ^m 5		Mag: -4.7 PMG: 14 ^h 14 ^m		Mag: +1.7 PMG: 11 ^h 24 ^m		Mag: -1.8 PMG: 14 ^h 00 ^m		Mag: +0.4 PMG: 19 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	297	27.6	146 04.2	+8 58.9	188 57.8	+23 14.3	149 37.0	+13 54.0	60 48.4	-17 49.4
1	312	30.1	161 06.3	58.3	203 58.5	14.1	164 39.0	53.8	75 50.9	49.4
2	327	32.5	176 08.5	57.6	218 59.1	13.9	179 40.9	53.7	90 53.4	49.4
3	342	35.0	191 10.7	57.0	233 59.8	13.7	194 42.9	53.5	105 56.0	49.4
4	357	37.4	206 12.9	56.3	249 00.5	13.5	209 44.9	53.3	120 58.5	49.4
5	12	39.9	221 15.1	+8 55.7	264 01.2	+23 13.3	224 46.8	+13 53.1	136 01.0	-17 49.4
6	27	42.4	236 17.3	+8 55.0	279 01.9	+23 13.1	239 48.8	+13 53.0	151 03.5	-17 49.4
7	42	44.8	251 19.5	54.4	294 02.6	12.9	254 50.8	52.8	166 06.0	49.4
8	57	47.3	266 21.7	53.7	309 03.3	12.8	269 52.7	52.6	181 08.6	49.4
9	72	49.8	281 23.9	53.1	324 03.9	12.6	284 54.7	52.5	196 11.1	49.4
10	87	52.2	296 26.1	52.5	339 04.6	12.4	299 56.7	52.3	211 13.6	49.4
11	102	54.7	311 28.3	+8 51.8	354 05.3	+23 12.2	314 58.7	+13 52.1	226 16.1	-17 49.4
12	117	57.2	326 30.5	+8 51.2	9 06.0	+23 12.0	330 00.6	+13 51.9	241 18.6	-17 49.4
13	132	59.6	341 32.8	50.5	24 06.7	11.8	345 02.6	51.8	256 21.1	49.4
14	148	02.1	356 35.0	49.9	39 07.4	11.6	0 04.6	51.6	271 23.7	49.4
15	163	04.6	11 37.2	49.2	54 08.1	11.4	15 06.5	51.4	286 26.2	49.4
16	178	07.0	26 39.5	48.6	69 08.7	11.2	30 08.5	51.3	301 28.7	49.4
17	193	09.5	41 41.7	+8 48.0	84 09.4	+23 11.0	45 10.5	+13 51.1	316 31.2	-17 49.4
18	208	11.9	56 43.9	+8 47.3	99 10.1	+23 10.8	60 12.4	+13 50.9	331 33.7	-17 49.4
19	223	14.4	71 46.2	46.7	114 10.8	10.6	75 14.4	50.7	346 36.3	49.4
20	238	16.9	86 48.4	46.1	129 11.5	10.4	90 16.4	50.6	1 38.8	49.4
21	253	19.3	101 50.7	45.4	144 12.2	10.2	105 18.3	50.4	16 41.3	49.4
22	268	21.8	116 52.9	44.8	159 12.9	10.0	120 20.3	50.2	31 43.8	49.4
23	283	24.3	131 55.2	44.2	174 13.5	09.8	135 22.3	50.0	46 46.3	49.4
24	298	26.7	146 57.4	+8 43.5	189 14.2	+23 09.6	150 24.2	+13 49.9	61 48.8	-17 49.4
Dif	—	+22	-6	+7	-2	+20	-2	+25		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 4 ^d 9	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2										
	PMG: 12 ^h 06 ^m 4														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	24.2	+20	124	49.1	+1	49.6	60 N	20 56	22 07	** **	9 56	70	22 07	15
1	193	24.2		139	23.4 ¹⁵³		40.4	58	41	21 41	** **	57	67	08	17
2	208	24.2		153	57.7 ¹⁵³		31.1	56	28	21	22 52	57	66	08	20
3	223	24.1		168	32.1 ¹⁵⁴		21.8	54	17	21 05	22 17	57	64	09	22
4	238	24.1		183	06.4 ¹⁵³		12.5	52	20 07	20 51	21 53	57	63	10	22
5	253	24.1	+20	197	40.8 ¹⁵⁴	+1	03.2	50	19 58	20 39	21 34	9 57	61	22 10	24
6	268	24.0	+20	212	15.1 ¹⁵³	+0	53.9	45	19 39	20 14	21 00	9 57	58	22 12	27
7	283	24.0		226	49.5 ¹⁵⁴		44.6	40	24	19 55	20 34	57	56	13	29
8	298	24.0		241	23.9 ¹⁵⁴		35.3	35	11	40	20 15	57	54	14	31
9	313	23.9		255	58.3 ¹⁵⁴		25.9	30	19 00	27 19	59 59	58	51	15	33
10	328	23.9		270	32.6 ¹⁵³		16.6	20	18 41	19 05	34	58	48	16	37
11	343	23.9	+20	285	07.0 ¹⁵⁴	+0	07.3	10 N	18 25	18 48	19 14	9 58	45	22 17	40
12	358	23.8	+20	299	41.4 ¹⁵⁴	-0	02.0	0	18 10	18 32	18 58	9 58	42	22 18	43
13	13	23.8		314	15.8 ¹⁵⁴		11.3	10 S	17 55	17	43	58	40	20	45
14	28	23.8		328	50.2 ¹⁵⁴		20.6	20	39	18 03	30	59	36	21	48
15	43	23.8		343	24.6 ¹⁵⁴		29.9	30	21	17 47	16	59	33	22	52
16	58	23.7		357	59.0 ¹⁵⁴		39.2	35	17 10	38	09	59	31	23	54
17	73	23.7	+20	12	33.4 ¹⁵⁴	-0	48.5	40	16 58	17 28	18 01	9 59	29	22 24	56
18	88	23.7	+20	27	07.8 ¹⁵⁴	-0	57.8	45	16 44	17 17	17 53	9 59	27	22 25	58
19	103	23.6		24.9	41 42.2 ¹⁵⁴	-1	07.1	50	27	17 04	44	10 00	23	26	62
20	118	23.6		56	16.5 ¹⁵³		16.4	52	19	16 58	40	00	22	27	63
21	133	23.6		70	50.9 ¹⁵⁴		25.7	54	10	51	35	00	21	28	64
22	148	23.6		85	25.3 ¹⁵⁴		35.0	56	16 00	44	31	00	19	28	66
23	163	23.5		99	59.7 ¹⁵⁴		44.2	58	15 48	36	26	00	18	29	68
24	178	23.5	+20	114	34.0 ¹⁵³	-1	53.5	60 S	15 35	16 27	17 20	10 00	16	22 30	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 05 ^m 5		Mag: -4.6 PMG: 14 ^h 10 ^m		Mag: +1.7 PMG: 11 ^h 23 ^m		Mag: -1.8 PMG: 13 ^h 57 ^m		Mag: +0.4 PMG: 19 ^h 49 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	298	26.7	146	57.4	+8	43.5	189	14.2	+23	09.6	150	24.2	+13	49.9	61	48.8	-17	49.4
1	313	29.2	161	59.7		42.9	204	14.9		09.4	165	26.2		49.7	76	51.4		49.4
2	328	31.7	177	02.0		42.3	219	15.6		09.2	180	28.2		49.5	91	53.9		49.4
3	343	34.1	192	04.2		41.6	234	16.3		09.0	195	30.2		49.4	106	56.4		49.4
4	358	36.6	207	06.5		41.0	249	17.0		08.8	210	32.1		49.2	121	58.9		49.4
5	13	39.0	222	08.8	+8	40.4	264	17.7	+23	08.6	225	34.1	+13	49.0	137	01.4	-17	49.4
6	28	41.5	237	11.1	+8	39.8	279	18.4	+23	08.4	240	36.1	+13	48.8	152	03.9	-17	49.4
7	43	44.0	252	13.4		39.1	294	19.1		08.2	255	38.0		48.7	167	06.4		49.4
8	58	46.4	267	15.7		38.5	309	19.7		08.0	270	40.0		48.5	182	09.0		49.4
9	73	48.9	282	17.9		37.9	324	20.4		07.8	285	42.0		48.3	197	11.5		49.4
10	88	51.4	297	20.2		37.3	339	21.1		07.6	300	43.9		48.1	212	14.0		49.4
11	103	53.8	312	22.5	+8	36.6	354	21.8	+23	07.4	315	45.9	+13	48.0	227	16.5	-17	49.4
12	118	56.3	327	24.8	+8	36.0	9	22.5	+23	07.2	330	47.9	+13	47.8	242	19.0	-17	49.4
13	133	58.8	342	27.2		35.4	24	23.2		07.0	345	49.8		47.6	257	21.5		49.4
14	149	01.2	357	29.5		34.8	39	23.9		06.8	0	51.8		47.5	272	24.0		49.4
15	164	03.7	12	31.8		34.2	54	24.6		06.6	15	53.8		47.3	287	26.6		49.4
16	179	06.2	27	34.1		33.5	69	25.3		06.4	30	55.7		47.1	302	29.1		49.4
17	194	08.6	42	36.4	+8	32.9	84	25.9	+23	06.2	45	57.7	+13	46.9	317	31.6	-17	49.4
18	209	11.1	57	38.8	+8	32.3	99	26.6	+23	06.0	60	59.7	+13	46.8	332	34.1	-17	49.4
19	224	13.5	72	41.1		31.7	114	27.3		05.8	76	01.6		46.6	347	36.6		49.4
20	239	16.0	87	43.4		31.1	129	28.0		05.6	91	03.6		46.4	2	39.1		49.4
21	254	18.5	102	45.8		30.5	144	28.7		05.4	106	05.6		46.2	17	41.6		49.4
22	269	20.9	117	48.1		29.9	159	29.4		05.2	121	07.5		46.1	32	44.2		49.4
23	284	23.4	132	50.4		29.3	174	30.1		05.0	136	09.5		45.9	47	46.7		49.4
24	299	25.9	147	52.8	+8	28.6	189	30.8	+23	04.8	151	11.5	+13	45.7	62	49.2	-17	49.4
Dif	—		+23	-6		+7	-2			+20		-2		+25				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 5 ^d 9	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /3 R°: 43 ^m									
	PMG: 12 ^h 06 ^m 5													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	178	23.5	+20	22.5	114	34.0	-1	53.5	60 N	** *	2 07	3 17	11 06	71
1	193	23.5		22.0	129	08.4 ¹⁵⁴	-2	02.7	58	** *	32	32	04 69	25 20
2	208	23.4		21.5	143	42.7 ¹⁵³		12.0	56	1 21	2 52	45	03 66	28 21
3	223	23.4		21.0	158	17.1 ¹⁵⁴		21.2	54	1 56	3 09	3 57	01 64	30 23
4	238	23.4		20.5	172	51.4 ¹⁵³		30.5	52	2 20	23	4 07	11 00	62 32 25
5	253	23.4	+20	20.0	187	25.7 ¹⁵³	-2	39.7	50	2 39	3 35	4 15	10 58	62 22 34 26
6	268	23.3	+20	19.5	202	00.0 ¹⁵³	-2	48.9	45	3 14	3 59	4 34	10 55	59 22 39 28
7	283	23.3		19.0	216	34.3 ¹⁵³	-2	58.1	40	39	4 18	4 49	53 56	42 31
8	298	23.3		18.5	231	08.6 ¹⁵³	-3	07.3	35	3 58	33	5 02	51 53	45 33
9	313	23.3		18.0	245	42.9 ¹⁵³		16.5	30	4 14	4 46	13	49 52	48 35
10	328	23.2		17.6	260	17.1 ¹⁵²		25.7	20	39	5 08	32	46 48	53 38
11	343	23.2	+20	17.1	274	51.4 ¹⁵³	-3	34.8	10 N	4 59	5 25	5 48	10 43	46 22 57 41
12	358	23.2	+20	16.6	289	25.6 ¹⁵²	-3	44.0	0	5 15	5 41	6 03	10 40	43 23 01 43
13	13	23.2		16.1	303	59.8 ¹⁵²	-3	53.1	10 S	30	5 55	18	38 40	05 46
14	28	23.1		15.6	318	34.0 ¹⁵²	-4	02.2	20	43	6 10	34	35 37	09 49
15	43	23.1		15.1	333	08.2 ¹⁵²		11.3	30	5 57	26	6 52	32 34	14 52
16	58	23.1		14.6	347	42.4 ¹⁵²		20.4	35	6 04	35	7 02	30 33	17 54
17	73	23.1	+20	14.1	2	16.5 ¹⁵¹	-4	29.5	40	6 11	6 44	7 14	10 28	30 23 20 56
18	88	23.0	+20	13.6	16	50.6 ¹⁵¹	-4	38.5	45	6 19	6 56	7 28	10 26	28 23 23 59
19	103	23.0		13.1	31	24.7 ¹⁵¹		47.6	50	29	7 09	45	23 25	28 61
20	118	23.0		12.6	45	58.8 ¹⁵¹	-4	56.6	52	33	15	7 53	22 24	30 63
21	133	23.0		12.1	60	32.9 ¹⁵¹	-5	05.6	54	37	21	8 02	21 22	32 64
22	148	22.9		11.6	75	06.9 ¹⁵⁰		14.6	56	42	28	12	19 21	34 67
23	163	22.9		11.1	89	40.9 ¹⁵⁰		23.6	58	47	36	23	18 18	37 68
24	178	22.9	+20	10.6	104	14.9 ¹⁵⁰	-5	32.5	60 S	6 52	7 45	8 37	10 16	16 23 40 70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 01 ^m 6		Mag: -4.6 PMG: 14 ^h 06 ^m		Mag: +1.7 PMG: 11 ^h 21 ^m		Mag: -1.8 PMG: 13 ^h 53 ^m		Mag: +0.4 PMG: 19 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	299	25.9	147	52.8	+8	28.6	189	30.8	+23	04.8
1	314	28.3	162	55.1		28.0	204	31.5		04.6
2	329	30.8	177	57.5		27.4	219	32.2		04.3
3	344	33.3	192	59.9		26.8	234	32.9		04.1
4	359	35.7	208	02.2		26.2	249	33.6		03.9
5	14	38.2	223	04.6	+8	25.6	264	34.2	+23	03.7
6	29	40.6	238	07.0	+8	25.0	279	34.9	+23	03.5
7	44	43.1	253	09.3		24.4	294	35.6		03.3
8	59	45.6	268	11.7		23.8	309	36.3		03.1
9	74	48.0	283	14.1		23.2	324	37.0		02.9
10	89	50.5	298	16.5		22.6	339	37.7		02.7
11	104	53.0	313	18.9	+8	22.0	354	38.4	+23	02.5
12	119	55.4	328	21.3	+8	21.4	9	39.1	+23	02.3
13	134	57.9	343	23.7		20.8	24	39.8		02.1
14	150	00.4	358	26.1		20.2	39	40.5		01.8
15	165	02.8	13	28.5		19.6	54	41.2		01.6
16	180	05.3	28	30.9		19.0	69	41.9		01.4
17	195	07.8	43	33.3	+8	18.4	84	42.6	+23	01.2
18	210	10.2	58	35.7	+8	17.9	99	43.3	+23	01.0
19	225	12.7	73	38.1		17.3	114	44.0		00.8
20	240	15.1	88	40.5		16.7	129	44.6		00.6
21	255	17.6	103	43.0		16.1	144	45.3		00.4
22	270	20.1	118	45.4		15.5	159	46.0	+23	00.1
23	285	22.5	133	47.8		14.9	174	46.7	+22	59.9
24	300	25.0	148	50.3	+8	14.3	189	47.4	+22	59.7
Dif	—		+24		-6		+7		-2	
							+20		-2	
									+25	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7				Edad: 6 ^d 9	PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6	Latitud	Puesta de Sol			Final del crepúsculo			Salida de Luna		Puesta de Luna					
	PMG: 12 ^h 06 ^m 5										PMG: 17 ^h 34 ^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	22.9	+20	10.6	104	14.9	-5	32.5	60 N	20 52	22 00	** **	12 17 71	22 40 20							
1	193	22.9		10.1	118	48.9 ¹⁵⁰		41.5 ⁹⁰	58	37	21 36	** **	13 68	45 22							
2	208	22.9		09.6	133	22.9 ¹⁵⁰		50.4 ⁸⁹	56	25	17	22 43	09 67	49 24							
3	223	22.8		09.1	147	56.8 ¹⁴⁹	-5	59.3 ⁸⁹	54	14	21 01	22 12	05 65	53 26							
4	238	22.8		08.5	162	30.7 ¹⁴⁹	-6	08.1 ⁸⁸	52	20 04	20 48	21 49	02 64	22 57 27							
5	253	22.8	+20	08.0	177	04.5 ¹⁴⁸	-6	17.0 ⁸⁹	50	19 56	20 36	21 31	12 00 62	23 00 28							
6	268	22.8	+20	07.5	191	38.4 ¹⁴⁹	-6	25.8 ⁸⁸	45	19 37	20 12	20 57	11 54 59	23 07 31							
7	283	22.8		07.0	206	12.2 ¹⁴⁸		34.6 ⁸⁸	40	23	19 54	32	49 56	13 33							
8	298	22.7		06.5	220	46.0 ¹⁴⁸		43.4 ⁸⁸	35	19 10	39	20 13	44 55	18 36							
9	313	22.7		06.0	235	19.7 ¹⁴⁷	-6	52.1 ⁸⁷	30	18 59	26	19 58	41 52	23 37							
10	328	22.7		05.5	249	53.4 ¹⁴⁷	-7	00.9 ⁸⁸	20	41	19 05	33	34 50	31 40							
11	343	22.7	+20	05.0	264	27.1 ¹⁴⁷	-7	09.6 ⁸⁷	10 N	18 25	18 47	19 14	11 29 46	23 38 42							
12	358	22.7	+20	04.5	279	00.8 ¹⁴⁷	-7	18.3 ⁸⁷	0	18 10	18 32	18 58	11 23 44	23 44 45							
13	13	22.6		04.0	293	34.4 ¹⁴⁶		26.9 ⁸⁶	10 S	17 55	18	43	18 42	51 47							
14	28	22.6		03.5	308	08.0 ¹⁴⁶		35.5 ⁸⁶	20	40	18 03	30	12 39	23 58 50							
15	43	22.6		02.9	322	41.5 ¹⁴⁵		44.1 ⁸⁶	30	22	17 48	17	06 36	** ** *							
16	58	22.6		02.4	337	15.1 ¹⁴⁶	-7	52.7 ⁸⁶	35	12	39	10	11 03 34	** ** *							
17	73	22.6	+20	01.9	351	48.6 ¹⁴⁵	-8	01.2 ⁸⁵	40	17 00	17 30	18 03	10 58 33	** ** *							
18	88	22.5	+20	01.4	6	22.0 ¹⁴⁴	-8	09.8 ⁸⁶	45	16 46	17 19	17 55	10 54 29	** ** *							
19	103	22.5		00.9	20	55.4 ¹⁴⁴		18.2 ⁸⁴	50	30	06	46	48 27	** ** *							
20	118	22.5	+20	00.4	35	28.8 ¹⁴⁴		26.7 ⁸⁵	52	22	17 00	42	46 25	** ** *							
21	133	22.5	+19	59.9	50	02.1 ¹⁴³		35.1 ⁸⁴	54	13	16 54	38	43 24	** ** *							
22	148	22.5		59.3	64	35.4 ¹⁴³		43.5 ⁸⁴	56	16 03	47	33	40 22	** ** *							
23	163	22.5		58.8	79	08.7 ¹⁴³	-8	51.9 ⁸⁴	58	15 52	39	28	36 21	** ** *							
24	178	22.4	+19	58.3	93	41.9 ¹⁴²	-9	00.2 ⁸³	60 S	15 39	16 30	17 23	10 32 19	** ** *							
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 3 ^h 57 ^m 7				Mag: -4.6 PMG: 14 ^h 02 ^m				Mag: +1.7 PMG: 11 ^h 20 ^m				Mag: -1.8 PMG: 13 ^h 50 ^m				Mag: +0.4 PMG: 19 ^h 41 ^m				
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	300	25.0	148	50.3	+8	14.3	189	47.4	+22	59.7	151	58.7	+13	41.6	63	49.4	-17	49.4			
1	315	27.5	163	52.7		13.7	204	48.1		59.5	167	00.6		41.4	78	51.9		49.4			
2	330	29.9	178	55.2		13.2	219	48.8		59.3	182	02.6		41.2	93	54.4		49.4			
3	345	32.4	193	57.6		12.6	234	49.5		59.1	197	04.6		41.0	108	57.0		49.4			
4	0	34.9	209	00.1		12.0	249	50.2		58.9	212	06.5		40.9	123	59.5		49.4			
5	15	37.3	224	02.5	+8	11.4	264	50.9	+22	58.6	227	08.5	+13	40.7	139	02.0	-17	49.4			
6	30	39.8	239	05.0	+8	10.8	279	51.6	+22	58.4	242	10.5	+13	40.5	154	04.5	-17	49.4			
7	45	42.3	254	07.4		10.3	294	52.3		58.2	257	12.4		40.3	169	07.0		49.4			
8	60	44.7	269	09.9		09.7	309	53.0		58.0	272	14.4		40.2	184	09.5		49.4			
9	75	47.2	284	12.4		09.1	324	53.7		57.8	287	16.4		40.0	199	12.0		49.4			
10	90	49.6	299	14.9		08.5	339	54.4		57.6	302	18.3		39.8	214	14.5		49.4			
11	105	52.1	314	17.3	+8	08.0	354	55.1	+22	57.4	317	20.3	+13	39.6	229	17.0	-17	49.4			
12	120	54.6	329	19.8	+8	07.4	9	55.8	+22	57.1	332	22.3	+13	39.5	244	19.5	-17	49.4			
13	135	57.0	344	22.3		06.8	24	56.5		56.9	347	24.2		39.3	259	22.0		49.4			
14	150	59.5	359	24.8		06.3	39	57.2		56.7	2	26.2		39.1	274	24.5		49.4			
15	166	02.0	14	27.3		05.7	54	57.9		56.5	17	28.2		38.9	289	27.0		49.4			
16	181	04.4	29	29.8		05.1	69	58.6		56.3	32	30.1		38.8	304	29.5		49.4			
17	196	06.9	44	32.3	+8	04.6	84	59.3	+22	56.0	47	32.1	+13	38.6	319	32.0	-17	49.4			
18	211	09.4	59	34.8	+8	04.0	100	00.0	+22	55.8	62	34.0	+13	38.4	334	34.6	-17	49.4			
19	226	11.8	74	37.3		03.4	115	00.7		55.6	77	36.0		38.2	349	37.1		49.4			
20	241	14.3	89	39.8		02.9	130	01.4		55.4	92	38.0		38.1	4	39.6		49.4			
21	256	16.7	104	42.3		02.3	145	02.1		55.2	107	39.9		37.9	19	42.1		49.4			
22	271	19.2	119	44.9		01.7	160	02.8		54.9	122	41.9		37.7	34	44.6		49.4			
23	286	21.7	134	47.4		01.2	175	03.5		54.7	137	43.9		37.5	49	47.1		49.4			
24	301	24.1	149	49.9	+8	00.6	190	04.2	+22	54.5	152	45.8	+13	37.4	64	49.6	-17	49.4			
Dif	—				+25	-6	+7				-2	+20				-2	+25				0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 5			Edad: 7 ^d 9 PHE { SD: 14'9 PMG: 18 ^h 18 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.4	+19 58.3	93	41.9	-9 00.2	60 N	** **	2 13	3 21	13 28	71	23 00	24	
1	193	22.4	57.8	108	15.1 ¹⁴²	08.5 ⁸³	58	** **	37	36	21 69		07 26		
2	208	22.4	57.3	122	48.2 ¹⁴¹	16.7 ⁸²	56	1 30	2 57	3 49	16 67		13 28		
3	223	22.4	56.8	137	21.3 ¹⁴¹	25.0 ⁸³	54	2 02	3 12	4 00	10 66		19 29		
4	238	22.4	56.2	151	54.4 ¹⁴¹	33.2 ⁸²	52	25	26	09	06 64		24 31		
5	253	22.4	+19 55.7	166	27.4 ¹⁴⁰	-9 41.3 ⁸¹	50	2 43	3 37	4 18	13 02	62	23 28	33	
6	268	22.4	+19 55.2	181	00.3 ¹³⁹	-9 49.4 ⁸¹	45	3 16	4 01	4 36	12 53	60	23 38	35	
7	283	22.3	54.7	195	33.2 ¹³⁹	-9 57.5 ⁸¹	40	3 41	20	4 51	45 58		46 38		
8	298	22.3	54.2	210	06.1 ¹³⁹	-10 05.6 ⁸¹	35	4 00	35	5 03	39 56		23 54	38	
9	313	22.3	53.6	224	38.9 ¹³⁸	13.6 ⁸⁰	30	16	4 48	14	33 54		** ** *	**	
10	328	22.3	53.1	239	11.7 ¹³⁸	21.5 ⁷⁹	20	40	5 09	32	24 51		** ** *	**	
11	343	22.3	+19 52.6	253	44.5 ¹³⁸	-10 29.4 ⁷⁹	10 N	4 59	5 26	5 48	12 15	49	** ** *	**	
12	358	22.3	+19 52.1	268	17.1 ¹³⁶	-10 37.3 ⁷⁹	0	5 15	5 41	6 03	12 07	47	** ** *	**	
13	13	22.3	51.5	282	49.8 ¹³⁷	45.2 ⁷⁹	10 S	30	5 55	18	12 00	44	** ** *	**	
14	28	22.3	51.0	297	22.4 ¹³⁶	-10 53.0 ⁷⁸	20	43	6 10	33	11 51	42	** ** *	**	
15	43	22.2	50.5	311	54.9 ¹³⁵	-11 00.7 ⁷⁷	30	5 56	25	6 51	42 39		0 06	53	
16	58	22.2	50.0	326	27.4 ¹³⁵	08.5 ⁷⁸	35	6 03	34	7 01	37 37		11 55		
17	73	22.2	+19 49.4	340	59.8 ¹³⁴	-11 16.1 ⁷⁶	40	6 10	6 43	7 12	11 31	35	0 16	57	
18	88	22.2	+19 48.9	355	32.2 ¹³⁴	-11 23.8 ⁷⁷	45	6 18	6 54	7 26	11 23	33	0 22	59	
19	103	22.2	48.4	10	04.5 ¹³³	31.4 ⁷⁶	50	27	7 06	43	15 30		29 63		
20	118	22.2	47.8	24	36.8 ¹³³	38.9 ⁷⁵	52	31	12	50	11 29		33 63		
21	133	22.2	47.3	39	09.0 ¹³²	46.4 ⁷⁵	54	35	19	7 59	07 27		36 66		
22	148	22.2	46.8	53	41.2 ¹³²	-11 53.8 ⁷⁴	56	39	26	8 09	11 02	26	41	66	
23	163	22.2	46.3	68	13.3 ¹³¹	-12 01.2 ⁷⁴	58	44	33	20	10 57	24	45	69	
24	178	22.2	+19 45.7	82	45.4 ¹³¹	-12 08.6 ⁷⁴	60 S	6 49	7 42	8 33	10 51	22	0 50	71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 3 ^h 53 ^m 8		Mag: -4.6 PMG: 13 ^h 58 ^m		Mag: +1.7 PMG: 11 ^h 19 ^m		Mag: -1.8 PMG: 13 ^h 47 ^m		Mag: +0.4 PMG: 19 ^h 37 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	301	24.1	149	49.9	+8 00.6	190	04.2	+22 54.5	152	45.8	+13 37.4
1	316	26.6	164	52.5	+8 00.1	205	04.9	54.3	167	47.8	37.2
2	331	29.1	179	55.0	+7 59.5	220	05.6	54.1	182	49.8	37.0
3	346	31.5	194	57.5	59.0	235	06.3	53.8	197	51.7	36.8
4	1	34.0	210	00.1	58.4	250	07.0	53.6	212	53.7	36.7
5	16	36.5	225	02.6	+7 57.8	265	07.7	+22 53.4	227	55.7	+13 36.5
6	31	38.9	240	05.2	+7 57.3	280	08.4	+22 53.2	242	57.6	+13 36.3
7	46	41.4	255	07.7	56.7	295	09.1	52.9	257	59.6	36.1
8	61	43.9	270	10.3	56.2	310	09.8	52.7	273	01.6	36.0
9	76	46.3	285	12.9	55.6	325	10.5	52.5	288	03.5	35.8
10	91	48.8	300	15.4	55.1	340	11.2	52.3	303	05.5	35.6
11	106	51.2	315	18.0	+7 54.6	355	11.9	+22 52.1	318	07.4	+13 35.4
12	121	53.7	330	20.6	+7 54.0	10	12.6	+22 51.8	333	09.4	+13 35.3
13	136	56.2	345	23.1	53.5	25	13.3	51.6	348	11.4	35.1
14	151	58.6	0	25.7	52.9	40	14.0	51.4	3	13.3	34.9
15	167	01.1	15	28.3	52.4	55	14.7	51.2	18	15.3	34.7
16	182	03.6	30	30.9	51.8	70	15.4	50.9	33	17.3	34.6
17	197	06.0	45	33.5	+7 51.3	85	16.1	+22 50.7	48	19.2	+13 34.4
18	212	08.5	60	36.1	+7 50.8	100	16.8	+22 50.5	63	21.2	+13 34.2
19	227	11.0	75	38.7	50.2	115	17.5	50.2	78	23.2	34.0
20	242	13.4	90	41.3	49.7	130	18.2	50.0	93	25.1	33.9
21	257	15.9	105	43.9	49.2	145	18.9	49.8	108	27.1	33.7
22	272	18.4	120	46.5	48.6	160	19.6	49.6	123	29.0	33.5
23	287	20.8	135	49.1	48.1	175	20.3	49.3	138	31.0	33.3
24	302	23.3	150	51.8	+7 47.6	190	21.0	+22 49.1	153	33.0	+13 33.2
Dif	—		+26	-5	+7	-2	+20	-2	+25	0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 06 ^m 5			Edad: 8 ^d 9 PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/7 R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	22.2	+19 45.7	82	45.4	-12 08.6	73	60 N	20 48	21 54	** **	14 39 70		23 24 31	
1	193	22.1	45.2	97	17.4 ¹³⁰	15.9	73	58	34	31	23 26	30 68		33 33	
2	208	22.1	44.7	111	49.4 ¹³⁰	23.2	72	56	21	21 13	22 35	23 66		41 35	
3	223	22.1	44.1	126	21.3 ¹²⁹	30.4	71	54	11	20 57	22 06	16 65		48 36	
4	238	22.1	43.6	140	53.1 ¹²⁸	37.5	71	52	20 01	44	21 44	10 63		23 55 37	
5	253	22.1	+19 43.1	155	24.9 ¹²⁸	-12 44.6	71	50	19 53	20 33	21 27	14 04 63		** * *	**
6	268	22.1	+19 42.5	169	56.6 ¹²⁷	-12 51.7	71	45	19 35	20 10	20 54	13 53 60		** * *	**
7	283	22.1	42.0	184	28.3 ¹²⁷	-12 58.7	70	40	21	19 52	30	43 58		** * *	**
8	298	22.1	41.5	198	59.9 ¹²⁶	-13 05.6	69	35	19 09	37	20 11	35 56		** * *	**
9	313	22.1	40.9	213	31.4 ¹²⁵	12.5	69	30	18 58	24	19 56	27 55		0 00 40	
10	328	22.1	40.4	228	02.9 ¹²⁵	19.3	68	20	40	19 04	32	15 53		11 43	
11	343	22.1	+19 39.9	242	34.3 ¹²⁴	-13 26.1	68	10 N	18 25	18 47	19 13	13 04 51		0 20 46	
12	358	22.1	+19 39.3	257	05.7 ¹²⁴	-13 32.8	67	0	18 10	18 32	18 58	12 54 49		0 29 48	
13	13	22.1	38.8	271	37.0 ¹²³	39.5	67	10 S	17 56	18	44	44 47		38 50	
14	28	22.0	38.2	286	08.3 ¹²³	46.1	66	20	41	18 04	31	33 45		48 52	
15	43	22.0	37.7	300	39.5 ¹²²	52.7	66	30	23	17 49	18	21 42		0 59 55	
16	58	22.0	37.2	315	10.6 ¹²¹	-13 59.2	65	35	13	40	11	14 41		1 06 56	
17	73	22.0	+19 36.6	329	41.6 ¹²⁰	-14 05.6	64	40	17 02	17 31	18 04	12 06 39		1 13 58	
18	88	22.0	+19 36.1	344	12.6 ¹²⁰	-14 12.0	64	45	16 48	17 21	17 56	11 56 38		1 21 60	
19	103	22.0	35.5	358	43.6 ¹²⁰	18.3	63	50	32	08	48	45 36		32 62	
20	118	22.0	35.0	13	14.4 ¹¹⁸	24.5	62	52	24	17 02	44	40 34		36 64	
21	133	22.0	34.4	27	45.2 ¹¹⁸	30.7	62	54	16	16 56	40	34 33		42 65	
22	148	22.0	33.9	42	16.0 ¹¹⁸	36.8	61	56	16 06	49	36	28 32		47 67	
23	163	22.0	33.4	56	46.7 ¹¹⁷	42.9	61	58	15 55	42	31	21 30		1 54 68	
24	178	22.0	+19 32.8	71	17.3 ¹¹⁶	-14 48.8	59	60 S	15 43	16 33	17 26	11 13 28		2 01 71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 49 ^m 8		Mag: -4.6 PMG: 13 ^h 54 ^m			Mag: +1.7 PMG: 11 ^h 18 ^m			Mag: -1.8 PMG: 13 ^h 44 ^m			Mag: +0.4 PMG: 19 ^h 33 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	302	23.3	150 51.8	+7 47.6	190 21.0	+22 49.1	153 33.0	+13 33.2	65 49.6	-17 49.5					
1	317	25.7	165 54.4	47.0	205 21.7	48.9	168 34.9	33.0	80 52.1	49.5					
2	332	28.2	180 57.0	46.5	220 22.4	48.6	183 36.9	32.8	95 54.6	49.5					
3	347	30.7	195 59.7	46.0	235 23.1	48.4	198 38.9	32.6	110 57.1	49.5					
4	2	33.1	211 02.3	45.4	250 23.8	48.2	213 40.8	32.4	125 59.6	49.5					
5	17	35.6	226 04.9	+7 44.9	265 24.5	+22 48.0	228 42.8	+13 32.3	141 02.1	-17 49.5					
6	32	38.1	241 07.6	+7 44.4	280 25.2	+22 47.7	243 44.7	+13 32.1	156 04.6	-17 49.5					
7	47	40.5	256 10.2	43.9	295 25.9	47.5	258 46.7	31.9	171 07.1	49.5					
8	62	43.0	271 12.9	43.4	310 26.6	47.3	273 48.7	31.7	186 09.6	49.5					
9	77	45.5	286 15.5	42.8	325 27.3	47.0	288 50.6	31.6	201 12.1	49.5					
10	92	47.9	301 18.2	42.3	340 28.0	46.8	303 52.6	31.4	216 14.6	49.5					
11	107	50.4	316 20.9	+7 41.8	355 28.7	+22 46.6	318 54.6	+13 31.2	231 17.1	-17 49.5					
12	122	52.8	331 23.5	+7 41.3	10 29.4	+22 46.3	333 56.5	+13 31.0	246 19.6	-17 49.5					
13	137	55.3	346 26.2	40.8	25 30.1	46.1	348 58.5	30.9	261 22.1	49.5					
14	152	57.8	1 28.9	40.3	40 30.8	45.9	4 00.4	30.7	276 24.6	49.5					
15	168	00.2	16 31.6	39.7	55 31.5	45.6	19 02.4	30.5	291 27.1	49.5					
16	183	02.7	31 34.2	39.2	70 32.3	45.4	34 04.4	30.3	306 29.6	49.5					
17	198	05.2	46 36.9	+7 38.7	85 33.0	+22 45.2	49 06.3	+13 30.2	321 32.1	-17 49.5					
18	213	07.6	61 39.6	+7 38.2	100 33.7	+22 44.9	64 08.3	+13 30.0	336 34.6	-17 49.5					
19	228	10.1	76 42.3	37.7	115 34.4	44.7	79 10.3	29.8	351 37.1	49.5					
20	243	12.6	91 45.0	37.2	130 35.1	44.5	94 12.2	29.6	6 39.6	49.5					
21	258	15.0	106 47.7	36.7	145 35.8	44.2	109 14.2	29.4	21 42.1	49.5					
22	273	17.5	121 50.4	36.2	160 36.5	44.0	124 16.1	29.3	36 44.6	49.5					
23	288	20.0	136 53.1	35.7	175 37.2	43.8	139 18.1	29.1	51 47.1	49.5					
24	303	22.4	151 55.8	+7 35.2	190 37.9	+22 43.5	154 20.1	+13 28.9	66 49.6	-17 49.5					
Dif	—		+27	-5	+7	-2	+20	-2	+25						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 06 ^m 5			Edad: 9 ^d 9 PHE { SD: 15/2 PMG: 19 ^h 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	22.0	+19 32.8	71	17.3	-14 48.8	60 N	** ** *	2 20	3 26	15 49	66	23 55	41	
1	193	22.0	32.3	85	47.8 ¹¹⁵	-14 54.8	58	0 47	2 43	40	38 65	** ** *	** ** *	**	
2	208	22.0	31.7	100	18.3 ¹¹⁵	-15 00.6	58	1 39	3 01	3 52	29 64	** ** *	** ** *	**	
3	223	22.0	31.2	114	48.7 ¹¹⁴	06.4	58	2 08	16	4 03	21 62	** ** *	** ** *	**	
4	238	22.0	30.6	129	19.1 ¹¹⁴	12.1	57	29	29	12	13 62	** ** *	** ** *	**	
5	253	22.0	+19 30.1	143	49.4 ¹¹³	-15 17.8	57	2 47	3 41	4 21	15 07	61	0 01	38	
6	268	22.0	+19 29.5	158	19.6 ¹¹²	-15 23.3	55	3 19	4 04	4 38	14 53	59	0 13	41	
7	283	22.0	29.0	172	49.7 ¹¹¹	28.8	55	3 43	22	4 53	41 58		24	42	
8	298	22.0	28.4	187	19.8 ¹¹¹	34.3	55	4 02	36	5 05	31 57		32	44	
9	313	22.0	27.9	201	49.8 ¹¹⁰	39.6	53	17	4 49	15	22 57		40	45	
10	328	22.0	27.3	216	19.8 ¹¹⁰	44.9	53	4 41	5 09	33	14 08	54	0 54	47	
11	343	22.0	+19 26.8	230	49.7 ¹⁰⁹	-15 50.1	52	5 00	5 26	5 49	13 55	53	1 06	48	
12	358	22.0	+19 26.2	245	19.5 ¹⁰⁸	-15 55.3	52	5 16	5 41	6 03	13 43	51	1 17	50	
13	13	22.0	25.7	259	49.3 ¹⁰⁸	-16 00.4	51	29	5 55	17	31 50		28	52	
14	28	22.0	25.1	274	18.9 ¹⁰⁶	05.3	49	42	6 09	32	18 49		40	54	
15	43	22.0	24.6	288	48.6 ¹⁰⁷	10.3	50	30	5 55	24	13 03	47	1 54	55	
16	58	22.0	24.0	303	18.1 ¹⁰⁵	15.1	48	35	6 02	32	12 55	46	2 02	56	
17	73	22.0	+19 23.5	317	47.6 ¹⁰⁵	-16 19.8	47	40	6 09	6 42	12 45	45	2 11	58	
18	88	22.0	+19 22.9	332	17.0 ¹⁰⁴	-16 24.5	47	45	6 16	6 52	12 34	44	2 21	60	
19	103	22.0	22.4	346	46.3 ¹⁰³	29.1	46	50	25	7 04	40	21	41	34	
20	118	22.0	21.8	1	15.6 ¹⁰³	33.6	45	52	28	10	14	41		40	
21	133	22.0	21.3	15	44.8 ¹⁰²	38.1	45	54	32	16	7 56	07	40	47	
22	148	22.0	20.7	30	14.0 ¹⁰²	42.4	43	56	36	23	8 06	12	00	39	
23	163	22.0	20.1	44	43.1 ¹⁰¹	46.7	43	58	41	30	16	11 51	37	3 02	
24	178	22.0	+19 19.6	59	12.1 ¹⁰⁰	-16 50.9	42	60 S	6 46	7 39	11 41	36	3 12	68	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 45 ^m 9		Mag: -4.6 PMG: 13 ^h 50 ^m		Mag: +1.7 PMG: 11 ^h 17 ^m		Mag: -1.7 PMG: 13 ^h 41 ^m		Mag: +0.4 PMG: 19 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	303	22.4	151 55.8	+7 35.2	190 37.9	+22 43.5	154 20.1	+13 28.9	66 49.6	-17 49.5
1	318	24.9	166 58.6	34.7	205 38.6	43.3	169 22.0	28.7	81 52.1	49.5
2	333	27.3	182 01.3	34.2	220 39.3	43.1	184 24.0	28.6	96 54.6	49.5
3	348	29.8	197 04.0	33.7	235 40.0	42.8	199 26.0	28.4	111 57.1	49.5
4	3	32.3	212 06.7	33.2	250 40.7	42.6	214 27.9	28.2	126 59.6	49.5
5	18	34.7	227 09.5	+7 32.7	265 41.4	+22 42.4	229 29.9	+13 28.0	142 02.1	-17 49.6
6	33	37.2	242 12.2	+7 32.2	280 42.1	+22 42.1	244 31.8	+13 27.9	157 04.6	-17 49.6
7	48	39.7	257 15.0	31.7	295 42.9	41.9	259 33.8	27.7	172 07.1	49.6
8	63	42.1	272 17.7	31.2	310 43.6	41.6	274 35.8	27.5	187 09.6	49.6
9	78	44.6	287 20.5	30.7	325 44.3	41.4	289 37.7	27.3	202 12.0	49.6
10	93	47.1	302 23.2	30.2	340 45.0	41.2	304 39.7	27.1	217 14.5	49.6
11	108	49.5	317 26.0	+7 29.7	355 45.7	+22 40.9	319 41.7	+13 27.0	232 17.0	-17 49.6
12	123	52.0	332 28.7	+7 29.2	10 46.4	+22 40.7	334 43.6	+13 26.8	247 19.5	-17 49.6
13	138	54.5	347 31.5	28.8	25 47.1	40.4	349 45.6	26.6	262 22.0	49.6
14	153	56.9	2 34.3	28.3	40 47.8	40.2	4 47.5	26.4	277 24.5	49.6
15	168	59.4	17 37.0	27.8	55 48.5	40.0	19 49.5	26.3	292 27.0	49.6
16	184	01.8	32 39.8	27.3	70 49.2	39.7	34 51.5	26.1	307 29.5	49.6
17	199	04.3	47 42.6	+7 26.8	85 49.9	+22 39.5	49 53.4	+13 25.9	322 32.0	-17 49.6
18	214	06.8	62 45.4	+7 26.3	100 50.7	+22 39.2	64 55.4	+13 25.7	337 34.5	-17 49.6
19	229	09.2	77 48.2	25.9	115 51.4	39.0	79 57.3	25.6	352 37.0	49.6
20	244	11.7	92 51.0	25.4	130 52.1	38.8	94 59.3	25.4	7 39.5	49.6
21	259	14.2	107 53.8	24.9	145 52.8	38.5	110 01.3	25.2	22 42.0	49.6
22	274	16.6	122 56.6	24.4	160 53.5	38.3	125 03.2	25.0	37 44.5	49.6
23	289	19.1	137 59.4	24.0	175 54.2	38.0	140 05.2	24.8	52 47.0	49.6
24	304	21.6	153 02.2	+7 23.5	190 54.9	+22 37.8	155 07.1	+13 24.7	67 49.4	-17 49.6
Dif	—		+28	-5	+7	-2	+20	-2	+25	0

UT	SOL			LUNA						Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 9 PHE { 4 ^h : 56 ^m /12 ^h : 57 ^m /20 ^h : 57 ^m /R°: 55 ^m													
	PMG: 12 ^h 06 ^m 5			SD: 15 ^h 4 PMG: 20 ^h 47 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m
0	178	22.0	+19	59	12.1	-16	50.9	40	60 N	20	43	21	48	**	**	16	55
1	193	22.0		73	41.0	99	54.9	40	58	30	26	23	10	43	60	0	06
2	208	22.0		88	09.9	99	-16	59.0	41	56	18	21	08	22	27	33	59
3	223	22.0		102	38.7	98	-17	02.9	39	54	20	08	20	53	22	33	59
4	238	22.0		117	07.4	97	06.7	38	52	19	58	41	21	40	20	23	59
5	253	22.0	+19	131	36.1	97	-17	10.5	38	50	19	50	20	30	21	23	59
6	268	22.0	+19	146	04.7	96	-17	14.1	36	45	19	33	20	07	20	51	59
7	283	22.0		160	33.3	96	17.7	36	40	19	19	50	28	39	57	1	06
8	298	22.0		175	01.7	94	21.2	35	35	19	07	35	20	10	28	57	16
9	313	22.1		189	30.2	95	24.6	34	30	18	57	23	19	55	19	56	25
10	328	22.1		203	58.5	93	27.9	33	20	39	19	03	31	15	02	56	41
11	343	22.1	+19	218	26.8	93	-17	31.1	32	10 N	18	24	18	47	19	13	52
12	358	22.1	+19	232	55.0	92	-17	34.2	31	0	18	10	18	32	18	57	53
13	13	22.1		247	23.2	92	37.2	30	10 S	17	56	18	44	21	54	20	54
14	28	22.1		261	51.2	90	40.1	29	20	41	18	05	31	14	07	53	54
15	43	22.1		276	19.3	91	42.9	28	30	24	17	50	19	13	50	53	56
16	58	22.1		290	47.2	89	45.7	28	35	15	42	12	12	41	52	2	58
17	73	22.1	+19	305	15.1	89	-17	48.3	26	40	17	03	17	33	18	06	57
18	88	22.1	+19	319	42.9	88	-17	50.8	25	45	16	50	17	22	17	58	58
19	103	22.1		334	10.7	88	53.3	25	50	35	10	50	50	13	02	50	59
20	118	22.1		348	38.4	87	55.6	23	52	27	17	05	47	12	55	50	60
21	133	22.1		3	06.1	87	-17	57.9	23	54	19	16	59	43	47	50	61
22	148	22.2		17	33.7	86	-18	00.0	21	56	16	10	52	39	39	48	62
23	163	22.2		32	01.2	85	-18	02.0	20	58	15	59	45	34	28	48	62
24	178	22.2	+19	46	28.7	85	-18	04.0	20	60 S	15	47	16	37	17	29	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 42 ^m 0		Mag: -4.5 PMG: 13 ^h 45 ^m		Mag: +1.7 PMG: 11 ^h 16 ^m		Mag: -1.7 PMG: 13 ^h 38 ^m		Mag: +0.4 PMG: 19 ^h 25 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	304	21.6	153	02.2	190	54.9	155	07.1	67	49.4
1	319	24.0	168	05.0	205	55.6	170	09.1	82	51.9
2	334	26.5	183	07.8	220	56.3	185	11.1	97	54.4
3	349	28.9	198	10.6	235	57.0	200	13.0	112	56.9
4	4	31.4	213	13.4	250	57.8	215	15.0	127	59.4
5	19	33.9	228	16.3	265	58.5	230	16.9	143	01.9
6	34	36.3	243	19.1	280	59.2	245	18.9	158	04.4
7	49	38.8	258	21.9	295	59.9	260	20.9	173	06.9
8	64	41.3	273	24.8	311	00.6	275	22.8	188	09.4
9	79	43.7	288	27.6	326	01.3	290	24.8	203	11.9
10	94	46.2	303	30.5	341	02.0	305	26.8	218	14.4
11	109	48.7	318	33.3	356	02.7	320	28.7	233	16.8
12	124	51.1	333	36.2	11	03.5	335	30.7	248	19.3
13	139	53.6	348	39.0	26	04.2	350	32.6	263	21.8
14	154	56.1	3	41.9	41	04.9	5	34.6	278	24.3
15	169	58.5	18	44.8	56	05.6	20	36.6	293	26.8
16	185	01.0	33	47.6	71	06.3	35	38.5	308	29.3
17	200	03.4	48	50.5	86	07.0	50	40.5	323	31.8
18	215	05.9	63	53.4	101	07.7	65	42.4	338	34.3
19	230	08.4	78	56.3	116	08.5	80	44.4	353	36.8
20	245	10.8	93	59.2	131	09.2	95	46.4	8	39.3
21	260	13.3	109	02.1	146	09.9	110	48.3	23	41.7
22	275	15.8	124	05.0	161	10.6	125	50.3	38	44.2
23	290	18.2	139	07.9	176	11.3	140	52.2	53	46.7
24	305	20.7	154	10.8	191	12.0	155	54.2	68	49.2
Dif	—		+29		-5		+20		-2	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 11 ^d 9 PHE	$\left\{ \begin{array}{l} 4^h: 57/6 \\ 12^h: 57/9 \\ 20^h: 58/2 \end{array} \right.$											
	PMG: 12 ^h 06 ^m 5				SD: 15 ^h 6					Rº: 57 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.2	+19	06.0	46	28.7	84	-18	04.0	18	60 N	** * *	2 26	3 30	17 55	51
1	193	22.2		05.5	60	56.1	84		05.8	18	58	1 04	2 48	44	43	51
2	208	22.2		04.9	75	23.4	83		07.5	17	56	1 47	3 05	3 56	32	52
3	223	22.2		04.3	89	50.7	83		09.2	17	54	2 14	20	4 06	22	53
4	238	22.2		03.7	104	17.9	82		10.7	15	52	34	33	15	14	52
5	253	22.2	+19	03.2	118	45.1	82	-18	12.1	14	50	2 51	3 44	4 23	17 06	53
6	268	22.2	+19	02.6	133	12.2	81	-18	13.4	13	45	3 22	4 06	4 40	16 49	54
7	283	22.2		02.0	147	39.3	81		14.6	11	40	3 46	24	4 54	36	54
8	298	22.3		01.4	162	06.3	80		15.7	11	35	4 04	38	5 06	25	54
9	313	22.3		00.9	176	33.3	80		16.7	10	30	19	4 50	16	16 15	55
10	328	22.3	+19	00.3	191	00.2	79		17.6	9	20	4 42	5 10	34	15 58	55
11	343	22.3	+18	59.7	205	27.0	78	-18	18.3	7	10 N	5 00	5 27	5 49	15 43	56
12	358	22.3	+18	59.1	219	53.8	78	-18	19.0	7	0	5 16	5 41	6 03	15 29	56
13	13	22.3		58.6	234	20.6	78		19.6	6	10 S	29	5 55	17	15	57
14	28	22.3		58.0	248	47.2	76		20.0	4	20	42	6 08	32	15 00	57
15	43	22.4		57.4	263	13.9	77		20.4	4	30	5 54	23	48	14 43	58
16	58	22.4		56.8	277	40.5	76		20.6	2	35	6 00	31	6 58	33	58
17	73	22.4	+18	56.2	292	07.0	75	-18	20.7	1	40	6 07	6 40	7 09	14 22	58
18	88	22.4	+18	55.7	306	33.5	75	-18	20.7	0	45	6 14	6 50	7 22	14 09	58
19	103	22.4		55.1	321	00.0	75		20.6	1	50	22	7 02	38	13 52	59
20	118	22.4		54.5	335	26.4	74		20.4	2	52	26	07	45	45	59
21	133	22.4		53.9	349	52.8	74		20.0	4	54	30	13	7 53	37	59
22	148	22.5		53.3	4	19.1	73		19.6	4	56	34	20	8 02	27	60
23	163	22.5		52.7	18	45.3	72		19.0	6	58	38	27	13	16	60
24	178	22.5	+18	52.2	33	11.6	73	-18	18.3	7	60 S	6 43	7 35	8 24	13 04	60

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 38 ^m 0		Mag: -4.5 PMG: 13 ^h 41 ^m		Mag: +1.7 PMG: 11 ^h 15 ^m		Mag: -1.7 PMG: 13 ^h 35 ^m		Mag: +0.4 PMG: 19 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	305	20.7	154	10.8	+7	12.6	191	12.0	+22	31.9
1	320	23.2	169	13.7		12.1	206	12.7		31.6
2	335	25.6	184	16.6		11.7	221	13.5		31.4
3	350	28.1	199	19.5		11.3	236	14.2		31.1
4	5	30.6	214	22.4		10.8	251	14.9		30.9
5	20	33.0	229	25.3	+7	10.4	266	15.6	+22	30.6
6	35	35.5	244	28.3	+7	10.0	281	16.3	+22	30.4
7	50	37.9	259	31.2		09.5	296	17.0		30.1
8	65	40.4	274	34.1		09.1	311	17.7		29.9
9	80	42.9	289	37.1		08.7	326	18.5		29.6
10	95	45.3	304	40.0		08.2	341	19.2		29.4
11	110	47.8	319	42.9	+7	07.8	356	19.9	+22	29.1
12	125	50.3	334	45.9	+7	07.4	11	20.6	+22	28.8
13	140	52.7	349	48.9		07.0	26	21.3		28.6
14	155	55.2	4	51.8		06.5	41	22.0		28.3
15	170	57.7	19	54.8		06.1	56	22.8		28.1
16	186	00.1	34	57.7		05.7	71	23.5		27.8
17	201	02.6	50	00.7	+7	05.3	86	24.2	+22	27.6
18	216	05.1	65	03.7	+7	04.9	101	24.9	+22	27.3
19	231	07.5	80	06.7		04.5	116	25.6		27.1
20	246	10.0	95	09.6		04.1	131	26.4		26.8
21	261	12.4	110	12.6		03.6	146	27.1		26.6
22	276	14.9	125	15.6		03.2	161	27.8		26.3
23	291	17.4	140	18.6		02.8	176	28.5		26.0
24	306	19.8	155	21.6	+7	02.4	191	29.2	+22	25.8
Dif	—		+30		-4		+7		-3	
								+20		-2
									+25	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5			Edad: 12 ^d 9 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 7 20 ^h : 59 ^m 0 R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	h m	h m	h m	h m	h m	h m	
0	178	22.5	+18 52.2	33	11.6	-18 18.3	8	60 N	20 39	21 41	** **	18 46	41	
1	193	22.5		47	37.8	17.5	8	58	25	20	22 57	34	43	
2	208	22.5		62	03.9	16.6	9	56	14	21 04	22 19	24	44	
3	223	22.5		76	30.0	15.6	10	54	20 04	20 49	21 54	15	45	
4	238	22.6		90	56.1	14.5	11	52	19 55	37	35	18 06	47	
5	253	22.6	+18 49.2	105	22.1	-18 13.2	13	50	19 48	20 27	21 19	17 59	47	
6	268	22.6	+18 48.6	119	48.1	-18 11.8	14	45	19 31	20 05	20 48	17 43	49	
7	283	22.6		134	14.1	10.3	15	40	17	19 48	25	30	51	
8	298	22.6		148	40.0	08.7	16	35	19 06	34	20 08	19	52	
9	313	22.6		163	05.9	07.0	17	30	18 56	22	19 53	17 10	53	
10	328	22.7		177	31.8	05.2	18	20	39	19 02	30	16 53	55	
11	343	22.7	+18 45.7	191	57.6	-18 03.2	20	10 N	18 24	18 46	19 12	16 39	56	
12	358	22.7	+18 45.1	206	23.4	-18 01.2	22	0	18 10	18 32	18 57	16 25	58	
13	13	22.7		220	49.2	-17 59.0	20	10 S	17 56	18	44	16 12	58	
14	28	22.7		235	14.9	56.7	23	20	42	18 05	32	15 57	61	
15	43	22.8		249	40.6	54.2	25	30	26	17 51	20	41	62	
16	58	22.8		264	06.3	51.7	25	35	16	43	14	31	63	
17	73	22.8	+18 42.1	278	32.0	-17 49.0	27	40	17 05	17 34	18 07	15 20	64	
18	88	22.8	+18 41.6	292	57.6	-17 46.3	27	45	16 53	17 24	18 00	15 07	66	
19	103	22.8		307	23.2	43.4	29	50	37	13	17 52	14 51	67	
20	118	22.9		321	48.8	40.3	31	52	30	08	49	44	68	
21	133	22.9		336	14.4	37.2	31	54	22	17 02	45	36	69	
22	148	22.9		350	39.9	34.0	32	56	13	16 56	41	27	69	
23	163	22.9		5	05.5	30.6	34	58	16 03	49	37	16	71	
24	178	23.0	+18 38.0	19	31.0	-17 27.1	35	60 S	15 51	16 41	17 33	14 04	73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 34 ^m 1		Mag: -4.5 PMG: 13 ^h 36 ^m		Mag: +1.7 PMG: 11 ^h 14 ^m		Mag: -1.7 PMG: 13 ^h 31 ^m		Mag: +0.4 PMG: 19 ^h 18 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	306	19.8	155	21.6	+7 02.4	191	29.2	+22 25.8	156	41.2	
1	321	22.3	170	24.6	02.0	206	29.9	25.5	171	43.2	
2	336	24.8	185	27.6	01.6	221	30.7	25.3	186	45.1	
3	351	27.2	200	30.6	01.2	236	31.4	25.0	201	47.1	
4	6	29.7	215	33.6	00.8	251	32.1	24.7	216	49.0	
5	21	32.2	230	36.6	+7 00.4	266	32.8	+22 24.5	231	51.0	
6	36	34.6	245	39.7	+7 00.0	281	33.5	+22 24.2	246	53.0	
7	51	37.1	260	42.7	+6 59.6	296	34.3	24.0	261	54.9	
8	66	39.6	275	45.7	59.2	311	35.0	23.7	276	56.9	
9	81	42.0	290	48.8	58.8	326	35.7	23.5	291	58.8	
10	96	44.5	305	51.8	58.4	341	36.4	23.2	307	00.8	
11	111	46.9	320	54.8	+6 58.0	356	37.1	+22 22.9	322	02.8	
12	126	49.4	335	57.9	+6 57.6	11	37.9	+22 22.7	337	04.7	
13	141	51.9	351	00.9	57.3	26	38.6	22.4	352	06.7	
14	156	54.3	6	04.0	56.9	41	39.3	22.2	7	08.6	
15	171	56.8	21	07.0	56.5	56	40.0	21.9	22	10.6	
16	186	59.3	36	10.1	56.1	71	40.8	21.6	37	12.5	
17	202	01.7	51	13.2	+6 55.7	86	41.5	+22 21.4	52	14.5	
18	217	04.2	66	16.2	+6 55.3	101	42.2	+22 21.1	67	16.5	
19	232	06.7	81	19.3	55.0	116	42.9	20.8	82	18.4	
20	247	09.1	96	22.4	54.6	131	43.6	20.6	97	20.4	
21	262	11.6	111	25.4	54.2	146	44.4	20.3	112	22.3	
22	277	14.0	126	28.5	53.8	161	45.1	20.0	127	24.3	
23	292	16.5	141	31.6	53.4	176	45.8	19.8	142	26.2	
24	307	19.0	156	34.7	+6 53.1	191	46.5	+22 19.5	157	28.2	
Dif	—		+30		-4	+7		-3	+20		-2

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: 13 ^d 9 PHE { SD: 16 ^h 1 PMG: 23 ^h 36 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	23.0	+18	38.0	19	31.0	-17	27.1	60 N	** *	2	33	3	35	19	27
1	193	23.0		37.4	33	56.5		23.5	58	1	17	2	53		17	35
2	208	23.0		36.8	48	22.0		19.8	56	1	54	3	10	3	59	08
3	223	23.0		36.2	62	47.4		16.0	54	2	19		24	4	09	19
4	238	23.1		35.6	77	12.9		12.0	52		39		36	18	18	53
5	253	23.1	+18	35.0	91	38.3	-17	08.0	50	2	55	3	47	4	26	18
6	268	23.1	+18	34.4	106	03.7	-17	03.8	45	3	25	4	08	4	43	18
7	283	23.1		33.8	120	29.1	-16	59.5	40	3	48		26	4	56	21
8	298	23.1		33.2	134	54.5		55.1	35	4	06		40	5	08	11
9	313	23.2		32.6	149	19.9		50.5	30		20	4	51	18	18	03
10	328	23.2		32.0	163	45.3		45.9	20	4	43	5	11	35	17	48
11	343	23.2	+18	31.4	178	10.7	-16	41.1	10 N	5	01	5	27	5	49	17
12	358	23.3	+18	30.8	192	36.1	-16	36.2	0	5	16	5	41	6	03	17
13	13	23.3		30.2	207	01.5		31.2	10 S		29	5	54	16	17	10
14	28	23.3		29.6	221	26.8		26.1	20		41	6	08	31	16	58
15	43	23.3		29.0	235	52.2		20.9	30		53		22	47	43	65
16	58	23.4		28.4	250	17.5		15.6	35	5	59		30	6	56	34
17	73	23.4	+18	27.8	264	42.9	-16	10.2	40	6	05	6	38	7	07	16
18	88	23.4	+18	27.1	279	08.3	-16	04.6	45	6	12	6	48	7	20	16
19	103	23.4		26.5	293	33.6	-15	58.9	50		20	6	59	35	15	58
20	118	23.5		25.9	307	59.0		53.2	52		23	7	05	42	52	75
21	133	23.5		25.3	322	24.4		47.3	54		27		10	50	45	76
22	148	23.5		24.7	336	49.7		41.3	56		31		16	7	59	36
23	163	23.6		24.1	351	15.1		35.2	58		35	23	8	09	27	80
24	178	23.6	+18	23.5	5	40.5	-15	29.0	60 S	6	39	7	31	8	20	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 30 ^m 2		Mag: -4.5 PMG: 13 ^h 31 ^m		Mag: +1.7 PMG: 11 ^h 12 ^m		Mag: -1.7 PMG: 13 ^h 28 ^m		Mag: +0.4 PMG: 19 ^h 14 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	307	19.0	156	34.7	+6	53.1	191	46.5	+22	19.5
1	322	21.4	171	37.8		52.7	206	47.3		19.3
2	337	23.9	186	40.9		52.3	221	48.0		19.0
3	352	26.4	201	44.0		52.0	236	48.7		18.7
4	7	28.8	216	47.1		51.6	251	49.4		18.5
5	22	31.3	231	50.2	+6	51.2	266	50.1	+22	18.2
6	37	33.8	246	53.3	+6	50.9	281	50.9	+22	17.9
7	52	36.2	261	56.5		50.5	296	51.6		17.7
8	67	38.7	276	59.6		50.1	311	52.3		17.4
9	82	41.2	292	02.7		49.8	326	53.0		17.1
10	97	43.6	307	05.8		49.4	341	53.8		16.9
11	112	46.1	322	09.0	+6	49.1	356	54.5	+22	16.6
12	127	48.5	337	12.1	+6	48.7	11	55.2	+22	16.3
13	142	51.0	352	15.2		48.4	26	55.9		16.1
14	157	53.5	7	18.4		48.0	41	56.7		15.8
15	172	55.9	22	21.5		47.7	56	57.4		15.5
16	187	58.4	37	24.7		47.3	71	58.1		15.3
17	203	00.9	52	27.8	+6	47.0	86	58.8	+22	15.0
18	218	03.3	67	31.0	+6	46.6	101	59.6	+22	14.7
19	233	05.8	82	34.2		46.3	117	00.3		14.4
20	248	08.3	97	37.3		45.9	132	01.0		14.2
21	263	10.7	112	40.5		45.6	147	01.7		13.9
22	278	13.2	127	43.7		45.2	162	02.5		13.6
23	293	15.7	142	46.9		44.9	177	03.2		13.4
24	308	18.1	157	50.0	+6	44.6	192	03.9	+22	13.1
Dif	—		+31		-4		+7		-3	
							+20		-2	
									+25	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4			Edad: 14 ^d 9 PHE { 4 ^h : 59/9 12 ^h : 60/1 20 ^h : 60/2 R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	23.6	+18 23.5	5	40.5	-15 29.0	64	60 N	20 34	21 35	** **	19 59 27		3 54 85	
1	193	23.6		20	05.9		64	58	21	21 15	22 45	52 29		4 03 83	
2	208	23.6		34	31.3		64	56	10	20 59	22 12	45 31		12 80	
3	223	23.7		48	56.7		64	54	20 01	45	21 48	38 34		19 79	
4	238	23.7		63	22.1	-15 03.0	67	52	19 52	34	30	33 35		26 77	
5	253	23.7	+18 20.4	77	47.5	-14 56.3	67	50	19 45	20 23	21 14	19 28 36		4 32 76	
6	268	23.8	+18 19.8	92	12.9	-14 49.4	69	45	19 28	20 02	20 45	19 17 40		4 45 73	
7	283	23.8		106	38.4		69	40	15	19 46	23	07 43		4 56 70	
8	298	23.8		121	03.8		71	35	19 04	32	20 06	19 00 45		5 05 68	
9	313	23.9		135	29.3		71	30	18 54	20	19 51	18 53 47		13 66	
10	328	23.9		149	54.8		73	20	38	19 01	29	41 50		27 62	
11	343	23.9	+18 16.8	164	20.3	-14 13.7	73	10 N	18 23	18 45	19 11	18 30 54		5 39 60	
12	358	23.9	+18 16.1	178	45.8	-14 06.2	75	0	18 10	18 32	18 57	18 20 57		5 50 57	
13	13	24.0		193	11.3	-13 58.6	76	10 S	17 57	19	44	10 60		6 01 55	
14	28	24.0		207	36.9		76	20	43	18 06	32	18 00 62		13 52	
15	43	24.0		222	02.4		78	30	27	17 52	21	17 48 66		26 49	
16	58	24.1		236	28.0		78	35	17	44	15	40 69		34 47	
17	73	24.1	+18 13.1	250	53.6	-13 27.4	80	40	17 07	17 36	18 09	17 32 71		6 43 44	
18	88	24.1	+18 12.4	265	19.2	-13 19.4	80	45	16 55	17 26	18 02	17 23 74		6 53 42	
19	103	24.2		279	44.9		81	50	40	15	17 55	12 77		7 05 39	
20	118	24.2		294	10.5	-13 03.1	82	52	33	10	51	07 78		11 37	
21	133	24.3		308	36.2	-12 54.8	83	54	25	17 05	48	17 01 80		17 36	
22	148	24.3		323	01.9		84	56	17	16 59	44	16 54 83		24 34	
23	163	24.3		337	27.6		85	58	16 07	52	40	47 85		32 32	
24	178	24.4	+18 08.7	351	53.4	-12 29.3	86	60 S	15 56	16 44	17 36	16 39 87		7 41 29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 26 ^m 2		Mag: -4.4 PMG: 13 ^h 26 ^m		Mag: +1.7 PMG: 11 ^h 11 ^m		Mag: -1.7 PMG: 13 ^h 25 ^m		Mag: +0.4 PMG: 19 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	308	18.1	157 50.0	+6 44.6	192 03.9	+22 13.1	158 15.2	+13 07.5	71 47.9	-17 50.2
1	323	20.6	172 53.2	44.2	207 04.7	12.8	173 17.1	07.3	86 50.4	50.2
2	338	23.0	187 56.4	43.9	222 05.4	12.6	188 19.1	07.1	101 52.8	50.2
3	353	25.5	202 59.6	43.6	237 06.1	12.3	203 21.0	06.9	116 55.3	50.2
4	8	28.0	218 02.8	43.2	252 06.8	12.0	218 23.0	06.7	131 57.8	50.3
5	23	30.4	233 06.0	+6 42.9	267 07.6	+22 11.7	233 25.0	+13 06.5	147 00.3	-17 50.3
6	38	32.9	248 09.2	+6 42.6	282 08.3	+22 11.5	248 26.9	+13 06.4	162 02.7	-17 50.3
7	53	35.4	263 12.4	42.3	297 09.0	11.2	263 28.9	06.2	177 05.2	50.3
8	68	37.8	278 15.7	41.9	312 09.8	10.9	278 30.8	06.0	192 07.7	50.3
9	83	40.3	293 18.9	41.6	327 10.5	10.6	293 32.8	05.8	207 10.2	50.3
10	98	42.8	308 22.1	41.3	342 11.2	10.4	308 34.7	05.6	222 12.6	50.3
11	113	45.2	323 25.3	+6 41.0	357 11.9	+22 10.1	323 36.7	+13 05.5	237 15.1	-17 50.3
12	128	47.7	338 28.5	+6 40.6	12 12.7	+22 09.8	338 38.6	+13 05.3	252 17.6	-17 50.3
13	143	50.2	353 31.8	40.3	27 13.4	09.5	353 40.6	05.1	267 20.1	50.3
14	158	52.6	8 35.0	40.0	42 14.1	09.3	8 42.6	04.9	282 22.5	50.3
15	173	55.1	23 38.3	39.7	57 14.9	09.0	23 44.5	04.7	297 25.0	50.3
16	188	57.5	38 41.5	39.4	72 15.6	08.7	38 46.5	04.6	312 27.5	50.4
17	204	00.0	53 44.7	+6 39.1	87 16.3	+22 08.4	53 48.4	+13 04.4	327 30.0	-17 50.4
18	219	02.5	68 48.0	+6 38.8	102 17.0	+22 08.2	68 50.4	+13 04.2	342 32.4	-17 50.4
19	234	04.9	83 51.3	38.5	117 17.8	07.9	83 52.3	04.0	357 34.9	50.4
20	249	07.4	98 54.5	38.1	132 18.5	07.6	98 54.3	03.8	12 37.4	50.4
21	264	09.9	113 57.8	37.8	147 19.2	07.3	113 56.3	03.6	27 39.8	50.4
22	279	12.3	129 01.0	37.5	162 20.0	07.1	128 58.2	03.5	42 42.3	50.4
23	294	14.8	144 04.3	37.2	177 20.7	06.8	144 00.2	03.3	57 44.8	50.4
24	309	17.3	159 07.6	+6 36.9	192 21.4	+22 06.5	159 02.1	+13 03.1	72 47.3	-17 50.4
Dif	—		+32 -3		+7 -3		+20 -2		+25 0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3				Edad: 15 ^d 9 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 4 20 ^h : 60 ^h 5 PMG: 0 ^h 34 ^m R°: 56 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m		
0	178	24.4	+18	08.7	351	53.4	-12	29.3	87	60 N	** *	2 39	3 40	20 26	22	5 19	89			
1	193	24.4		08.1	6	19.1		20.6	87	58	1 28	2 58	3 52	21 25		26	86			
2	208	24.4		07.5	20	44.9		11.9	87	56	2 01	3 14	4 03	16 27		32	84			
3	223	24.5		06.8	35	10.7		03.0	89	54	25	28	13	12 29		38	82			
4	238	24.5		06.2	49	36.6		54.1	89	52	43	40	21	08 31		43	80			
5	253	24.5	+18	05.6	64	02.4		45.1	90	50	2 59	3 50	4 29	20 04	33	5 48	78			
6	268	24.6	+18	05.0	78	28.3		36.1	90	45	3 28	4 11	4 45	19 57	36	5 58	74			
7	283	24.6		04.3	92	54.2		26.9	92	40	3 50	28	4 58	50 40		6 06	71			
8	298	24.6		03.7	107	20.2		17.7	92	35	4 07	41	5 09	45 42		13	69			
9	313	24.7		03.1	121	46.2		08.3	94	30	22	4 53	19	40 44		19	66			
10	328	24.7		02.5	136	12.1		59.0	93	20	4 44	5 12	35	31 49		29	63			
11	343	24.8	+18	01.8	150	38.2		49.5	95	10 N	5 01	5 27	5 50	19 24	52	6 39	59			
12	358	24.8	+18	01.2	165	04.2		39.9	96	0	5 16	5 41	6 03	19 17	55	6 47	56			
13	13	24.8	+18	00.6	179	30.3		30.3	96	10 S	28	5 54	16	10 59		6 56	53			
14	28	24.9	+18	00.0	193	56.4		20.7	96	20	40	6 07	30	19 02	63	7 05	49			
15	43	24.9	+17	59.3	208	22.5		10.9	98	30	52	20	46	18 54	66	15	46			
16	58	25.0		58.7	222	48.7		01.1	98	35	5 58	28	6 55	49 69		21	43			
17	73	25.0	+17	58.1	237	14.9		51.2	99	40	6 04	6 36	7 05	18 43	72	7 27	41			
18	88	25.0	+17	57.4	251	41.1		41.2	100	45	6 10	6 46	7 17	18 37	74	7 35	38			
19	103	25.1		56.8	266	07.3		31.2	100	50	18	6 57	32	29 78		44	35			
20	118	25.1		56.2	280	33.6		21.1	101	52	21	7 02	39	25 80		48	33			
21	133	25.2		55.5	294	59.9		11.0	101	54	24	07	46	21 82		53	31			
22	148	25.2		54.9	309	26.2		00.8	102	56	28	13	7 55	17 84		7 58	29			
23	163	25.2		54.3	323	52.6		50.5	103	58	32	20	8 05	12 87		8 04	27			
24	178	25.3	+17	53.6	338	19.0		40.2	103	60 S	6 36	7 27	8 16	18 06	90	8 10	25			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 22 ^m 3				Mag: -4.4 PMG: 13 ^h 21 ^m				Mag: +1.7 PMG: 11 ^h 10 ^m				Mag: -1.7 PMG: 13 ^h 22 ^m				Mag: +0.4 PMG: 19 ^h 06 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	309	17.3	159	07.6	+6	36.9	192	21.4	+22	06.5	159	02.1	+13	03.1	72	47.3	-17	50.4		
1	324	19.7	174	10.9		36.6	207	22.2		06.2	174	04.1		02.9	87	49.7		50.4		
2	339	22.2	189	14.1		36.3	222	22.9		05.9	189	06.0		02.7	102	52.2		50.4		
3	354	24.6	204	17.4		36.0	237	23.6		05.7	204	08.0		02.6	117	54.7		50.4		
4	9	27.1	219	20.7		35.8	252	24.4		05.4	219	09.9		02.4	132	57.1		50.5		
5	24	29.6	234	24.0	+6	35.5	267	25.1	+22	05.1	234	11.9	+13	02.2	147	59.6	-17	50.5		
6	39	32.0	249	27.3	+6	35.2	282	25.8	+22	04.8	249	13.9	+13	02.0	163	02.1	-17	50.5		
7	54	34.5	264	30.6		34.9	297	26.5		04.5	264	15.8		01.8	178	04.6		50.5		
8	69	37.0	279	33.9		34.6	312	27.3		04.3	279	17.8		01.7	193	07.0		50.5		
9	84	39.4	294	37.2		34.3	327	28.0		04.0	294	19.7		01.5	208	09.5		50.5		
10	99	41.9	309	40.5		34.0	342	28.7		03.7	309	21.7		01.3	223	12.0		50.5		
11	114	44.4	324	43.8	+6	33.7	357	29.5	+22	03.4	324	23.6	+13	01.1	238	14.4	-17	50.5		
12	129	46.8	339	47.2	+6	33.5	12	30.2	+22	03.1	339	25.6	+13	00.9	253	16.9	-17	50.5		
13	144	49.3	354	50.5		33.2	27	30.9		02.9	354	27.5		00.7	268	19.4		50.5		
14	159	51.8	9	53.8		32.9	42	31.7		02.6	9	29.5		00.6	283	21.9		50.6		
15	174	54.2	24	57.1		32.6	57	32.4		02.3	24	31.4		00.4	298	24.3		50.6		
16	189	56.7	40	00.5		32.3	72	33.1		02.0	39	33.4	+13	00.2	313	26.8		50.6		
17	204	59.1	55	03.8	+6	32.1	87	33.9	+22	01.7	54	35.4	+13	00.0	328	29.3	-17	50.6		
18	220	01.6	70	07.2	+6	31.8	102	34.6	+22	01.4	69	37.3	+12	59.8	343	31.7	-17	50.6		
19	235	04.1	85	10.5		31.5	117	35.3		01.2	84	39.3		59.7	358	34.2		50.6		
20	250	06.5	100	13.8		31.3	132	36.1		00.9	99	41.2		59.5	13	36.7		50.6		
21	265	09.0	115	17.2		31.0	147	36.8		00.6	114	43.2		59.3	28	39.1		50.6		
22	280	11.5	130	20.6		30.7	162	37.6	+22	00.3	129	45.1		59.1	43	41.6		50.6		
23	295	13.9	145	23.9		30.5	177	38.3	+22	00.0	144	47.1		58.9	58	44.1		50.6		
24	310	16.4	160	27.3	+6	30.2	192	39.0	+21	59.7	159	49.0	+12	58.7	73	46.5	-17	50.6		
Dif	—		+33		-3		+7		-3		+20		-2		+25					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3			Edad: 16 ^d 9 PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 5 20 ^h : 60 ^s 5 R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	25.3	+17	53.6	338	19.0	-8 40.2	60 N	20 29	21 28	23 30	20 48 21	6 48 90				
1	193	25.3		53.0	352	45.4	74 29.8	58	17	21 09	22 35	46 23	52 87				
2	208	25.4		52.4	7	11.9	75 19.3	56	20 06	20 54	22 04	43 26	6 56 85				
3	223	25.4		51.7	21	38.3	74 -8 08.9	54	19 57	41	21 42	41 27	7 00 82				
4	238	25.5		51.1	36	04.9	76 -7 58.3	52	49	30	25	39 29	03 80				
5	253	25.5	+17	50.5	50	31.4	75 -7 47.7	50	19 41	20 20	21 10	20 37 31	7 06 78				
6	268	25.5	+17	49.8	64	58.0	76 -7 37.1	45	19 26	19 59	20 42	20 33 35	7 12 75				
7	283	25.6		49.2	79	24.6	76 26.4	40	13	43	20	30 38	17 72				
8	298	25.6		48.5	93	51.2	76 15.6	35	19 02	30	20 04	27 40	22 68				
9	313	25.7		47.9	108	17.8	76 -7 04.8	30	18 53	19	19 50	24 43	25 67				
10	328	25.7		47.3	122	44.5	77 -6 54.0	20	37	19 00	28	20 47	32 62				
11	343	25.8	+17	46.6	137	11.2	77 -6 43.1	10 N	18 23	18 45	19 11	20 16 51	7 38 58				
12	358	25.8	+17	46.0	151	38.0	78 -6 32.2	0	18 10	18 31	18 57	20 12 55	7 43 55				
13	13	25.8		45.3	166	04.7	77 21.2	10 S	17 57	19	44	09 57	49 51				
14	28	25.9		44.7	180	31.5	78 -6 10.2	20	43	18 06	33	05 61	7 54 48				
15	43	25.9		44.1	194	58.4	79 -5 59.2	30	28	17 53	22	20 00 66	8 01 43				
16	58	26.0		43.4	209	25.2	78 48.1	35	19	46	16	19 58 68	04 42				
17	73	26.0	+17	42.8	223	52.1	79 -5 37.0	40	17 09	17 38	18 10	19 55 71	8 08 39				
18	88	26.1	+17	42.1	238	19.0	79 -5 25.8	45	16 57	17 28	18 04	19 51 75	8 13 36				
19	103	26.1		41.5	252	46.0	80 14.7	50	43	18	17 57	47 79	19 32				
20	118	26.2		40.8	267	12.9	79 -5 03.5	52	36	13	54	45 81	21 31				
21	133	26.2		40.2	281	39.9	80 -4 52.2	54	28	08	51	43 82	24 29				
22	148	26.3		39.6	296	07.0	81 40.9	56	20	17 02	47	41 84	27 27				
23	163	26.3		38.9	310	34.0	80 29.7	58	11	16 55	44	39 86	31 24				
24	178	26.4	+17	38.3	325	01.1	81 -4 18.3	60 S	16 00	16 48	17 40	19 36 89	8 35 21				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 18 ^m 4		Mag: -4.4 PMG: 13 ^h 15 ^m			Mag: +1.7 PMG: 11 ^h 09 ^m			Mag: -1.7 PMG: 13 ^h 19 ^m			Mag: +0.4 PMG: 19 ^h 02 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	310	16.4	160	27.3	+6 30.2	192	39.0	+21 59.7	159	49.0	+12 58.7	73	46.5	-17 50.6			
1	325	18.9	175	30.6	29.9	207	39.8	59.5	174	51.0	58.6	88	49.0	50.7			
2	340	21.3	190	34.0	29.7	222	40.5	59.2	189	53.0	58.4	103	51.5	50.7			
3	355	23.8	205	37.4	29.4	237	41.2	58.9	204	54.9	58.2	118	53.9	50.7			
4	10	26.3	220	40.8	29.2	252	42.0	58.6	219	56.9	58.0	133	56.4	50.7			
5	25	28.7	235	44.1	+6 28.9	267	42.7	+21 58.3	234	58.8	+12 57.8	148	58.9	-17 50.7			
6	40	31.2	250	47.5	+6 28.7	282	43.4	+21 58.0	250	00.8	+12 57.6	164	01.3	-17 50.7			
7	55	33.6	265	50.9	28.4	297	44.2	57.7	265	02.7	57.5	179	03.8	50.7			
8	70	36.1	280	54.3	28.2	312	44.9	57.5	280	04.7	57.3	194	06.3	50.7			
9	85	38.6	295	57.7	27.9	327	45.6	57.2	295	06.6	57.1	209	08.7	50.7			
10	100	41.0	311	01.1	27.7	342	46.4	56.9	310	08.6	56.9	224	11.2	50.7			
11	115	43.5	326	04.5	+6 27.4	357	47.1	+21 56.6	325	10.5	+12 56.7	239	13.7	-17 50.8			
12	130	46.0	341	07.9	+6 27.2	12	47.9	+21 56.3	340	12.5	+12 56.6	254	16.1	-17 50.8			
13	145	48.4	356	11.3	26.9	27	48.6	56.0	355	14.4	56.4	269	18.6	50.8			
14	160	50.9	11	14.7	26.7	42	49.3	55.7	10	16.4	56.2	284	21.1	50.8			
15	175	53.4	26	18.1	26.4	57	50.1	55.4	25	18.4	56.0	299	23.5	50.8			
16	190	55.8	41	21.6	26.2	72	50.8	55.1	40	20.3	55.8	314	26.0	50.8			
17	205	58.3	56	25.0	+6 26.0	87	51.5	+21 54.9	55	22.3	+12 55.6	329	28.5	-17 50.8			
18	221	00.7	71	28.4	+6 25.7	102	52.3	+21 54.6	70	24.2	+12 55.5	344	30.9	-17 50.8			
19	236	03.2	86	31.8	25.5	117	53.0	54.3	85	26.2	55.3	359	33.4	50.8			
20	251	05.7	101	35.3	25.3	132	53.8	54.0	100	28.1	55.1	14	35.8	50.8			
21	266	08.1	116	38.7	25.0	147	54.5	53.7	115	30.1	54.9	29	38.3	50.9			
22	281	10.6	131	42.2	24.8	162	55.2	53.4	130	32.0	54.7	44	40.8	50.9			
23	296	13.1	146	45.6	24.6	177	56.0	53.1	145	34.0	54.5	59	43.2	50.9			
24	311	15.5	161	49.1	+6 24.4	192	56.7	+21 52.8	160	35.9	+12 54.4	74	45.7	-17 50.9			
Dif	—		+34			-2		+7		-3		+20		-2		+25	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 9 PHE { 4 ^h : 60 ^m 5 12 ^h : 60 ^m 4 20 ^h : 60 ^m 3												
	PMG: 12 ^h 06 ^m 2			SD: 16 ^h 5 PMG: 2 ^h 25 ^m R ^o : 54 ^m												
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	26.4	+17 38.3	325	01.1	-4 18.3		60 N	0 44	2 45	3 44	21 09	20	8 18	89	
1	193	26.4		339	28.2 81	-4 07.0	113	58	1 39	3 04	3 57		09 23	19 87		
2	208	26.5		353	55.3 81	-3 55.6	114	56	2 09	19	4 07		09 25	21 84		
3	223	26.5		8	22.5 82		44.2	54		31	32	16		08 27	22 82	
4	238	26.6		22	49.7 82		32.8	52	2 48	43	24		08 29	23 80		
5	253	26.6	+17 35.0	37	16.9 82	-3 21.4	114	50	3 03	3 53	4 32	21 08	31	8 24	78	
6	268	26.7	+17 34.4	51	44.1 82	-3 10.0	114	45	3 31	4 14	4 47	21 08	34	8 27	74	
7	283	26.7		66	11.4 83	-2 58.5	115	40	3 53	30	5 00		08 37	29 70		
8	298	26.8		80	38.7 83		47.0	35	4 09	43	11		07 40	30 68		
9	313	26.8		95	06.0 83		35.5	30		23	4 54	20		07 42	32 65	
10	328	26.9		109	33.3 83		24.0	20	4 45	5 13	36		07 46	34 61		
11	343	26.9	+17 31.1	124	00.7 84	-2 12.5	115	10 N	5 02	5 28	5 50	21 07	50	8 36	58	
12	358	27.0	+17 30.5	138	28.0 83	-2 01.0	115	0	5 16	5 41	6 03	21 07	53	8 38	54	
13	13	27.0		152	55.4 84	-1 49.5	115	10 S		5 53	15		06 57	40 50		
14	28	27.1		167	22.9 85		38.0	20	39	6 06	29		06 61	42 47		
15	43	27.1		181	50.3 84		26.4	30	50	19	44		06 65	44 43		
16	58	27.2		196	17.8 85		14.9	35	5 56	26	6 53		06 67	46 40		
17	73	27.2	+17 27.2	210	45.3 85	-1 03.4	115	40	6 02	6 34	7 03	21 06	70	8 47	38	
18	88	27.3	+17 26.5	225	12.8 85	-0 51.8	116	45	6 08	6 43	7 15	21 06	73	8 49	34	
19	103	27.3		239	40.3 85		40.3	50	15	54	29		06 77	51 30		
20	118	27.4		254	07.9 86		28.7	52	18	6 59	36		06 78	52 29		
21	133	27.4		268	35.4 85		17.2	54	21	7 04	43		05 81	53 27		
22	148	27.5		283	03.0 86	-0 05.7	115	56	24	10	7 51		05 83	54 25		
23	163	27.5		297	30.6 86	+0 05.9	116	58	28	16	8 00		05 86	55 23		
24	178	27.6	+17 22.6	311	58.3 87	+0 17.4	115	60 S	6 32	7 23	8 11	21 05	88	8 56	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 3 ^h 14 ^m 4		Mag: -4.3 PMG: 13 ^h 10 ^m		Mag: +1.7 PMG: 11 ^h 08 ^m		Mag: -1.7 PMG: 13 ^h 16 ^m		Mag: +0.4 PMG: 18 ^h 58 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	311	15.5	161	49.1	+6 24.4	192	56.7	+21 52.8	160	35.9	+12 54.4					
1	326	18.0	176	52.5	24.1	207	57.5	52.5	175	37.9	54.2					
2	341	20.5	191	56.0	23.9	222	58.2	52.2	190	39.9	54.0					
3	356	22.9	206	59.4	23.7	237	58.9	51.9	205	41.8	53.8					
4	11	25.4	222	02.9	23.5	252	59.7	51.7	220	43.8	53.6					
5	26	27.9	237	06.3	+6 23.3	268	00.4	+21 51.4	235	45.7	+12 53.4					
6	41	30.3	252	09.8	+6 23.1	283	01.2	+21 51.1	250	47.7	+12 53.3					
7	56	32.8	267	13.3	22.8	298	01.9	50.8	265	49.6	53.1					
8	71	35.2	282	16.8	22.6	313	02.6	50.5	280	51.6	52.9					
9	86	37.7	297	20.2	22.4	328	03.4	50.2	295	53.5	52.7					
10	101	40.2	312	23.7	22.2	343	04.1	49.9	310	55.5	52.5					
11	116	42.6	327	27.2	+6 22.0	358	04.9	+21 49.6	325	57.4	+12 52.3					
12	131	45.1	342	30.7	+6 21.8	13	05.6	+21 49.3	340	59.4	+12 52.2					
13	146	47.6	357	34.2	21.6	28	06.3	49.0	356	01.3	52.0					
14	161	50.0	12	37.7	21.4	43	07.1	48.7	11	03.3	51.8					
15	176	52.5	27	41.2	21.2	58	07.8	48.4	26	05.2	51.6					
16	191	55.0	42	44.7	21.0	73	08.6	48.1	41	07.2	51.4					
17	206	57.4	57	48.2	+6 20.8	88	09.3	+21 47.8	56	09.2	+12 51.2					
18	221	59.9	72	51.7	+6 20.6	103	10.1	+21 47.5	71	11.1	+12 51.1					
19	237	02.3	87	55.2	20.4	118	10.8	47.2	86	13.1	50.9					
20	252	04.8	102	58.7	20.2	133	11.5	46.9	101	15.0	50.7					
21	267	07.3	118	02.3	20.0	148	12.3	46.6	116	17.0	50.5					
22	282	09.7	133	05.8	19.8	163	13.0	46.3	131	18.9	50.3					
23	297	12.2	148	09.3	19.7	178	13.8	46.0	146	20.9	50.1					
24	312	14.7	163	12.8	+6 19.5	193	14.5	+21 45.7	161	22.8	+12 50.0					
Dif	—		+35		-2	+7		-3	+20		-2	+25		0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1			Edad: 18 ^d 9 PHE { SD: 16 ^h 4 PMG: 3 ^h 19 ^m 4 ^h : 60 ^m 2 12 ^h : 60 ^m 1 20 ^h : 59 ^m 9 R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	178	27.6	+17	22.6	311	58.3	+0	17.4	60 N	20 24	21 21	23 09	21 29	22	9	47	87	
1	193	27.6		21.9	326	25.9		28.9 ¹¹⁵	58	12	21 04	22 25	32	23	46	84		
2	208	27.7		21.3	340	53.6		40.4 ¹¹⁵	56	20 02	20 49	21 57	34	26	45	82		
3	223	27.7		20.6	355	21.3	+0	51.9 ¹¹⁵	54	19 53	37	37	35	28	44	80		
4	238	27.8		20.0	9	49.0	+1	03.4 ¹¹⁵	52	45	26	20	37	30	43	78		
5	253	27.9	+17	19.3	24	16.7	+1	14.8 ¹¹⁴	50	19 38	20 16	21 06	21 39	31	9	42	77	
6	268	27.9	+17	18.6	38	44.4	+1	26.3 ¹¹⁵	45	19 23	19 57	20 38	21 42	35	9	41	72	
7	283	28.0		18.0	53	12.2		37.7 ¹¹⁴	40	11	41	18	45	38	39	70		
8	298	28.0		17.3	67	39.9	+1	49.1 ¹¹⁴	35	19 00	28	20 01	47	41	38	67		
9	313	28.1		16.7	82	07.7	+2	00.5 ¹¹⁴	30	18 51	19 17	19 48	49	43	37	64		
10	328	28.1		16.0	96	35.5		11.9 ¹¹⁴	20	36	18 59	27	53	47	35	60		
11	343	28.2	+17	15.3	111	03.3	+2	23.2 ¹¹³	10 N	18 22	18 44	19 10	21 57	50	9	34	56	
12	358	28.3	+17	14.7	125	31.1	+2	34.6 ¹¹⁴	0	18 10	18 31	18 56	22 00	53	9	32	53	
13	13	28.3		14.0	139	58.9		45.9 ¹¹³	10 S	17 57	19	44	03	57	30	50		
14	28	28.4		13.3	154	26.8	+2	57.2 ¹¹³	20	44	18 07	33	07	60	29	46		
15	43	28.4		12.7	168	54.6	+3	08.4 ¹¹²	30	29	17 54	23	11	64	27	42		
16	58	28.5		12.0	183	22.5		19.7 ¹¹³	35	20	47	17	13	66	26	40		
17	73	28.5	+17	11.3	197	50.4	+3	30.9 ¹¹²	40	17 11	17 39	18 12	22 16	68	9	25	37	
18	88	28.6	+17	10.7	212	18.3	+3	42.0 ¹¹¹	45	16 59	17 31	18 06	22 19	72	9	23	34	
19	103	28.7		10.0	226	46.2	+3	53.2 ¹¹²	50	45	20	17 59	23	75	21	31		
20	118	28.7		09.3	241	14.1	+4	04.3 ¹¹¹	52	39	16	56	24	78	21	29		
21	133	28.8		08.7	255	42.0		15.4 ¹¹¹	54	32	11	53	26	79	20	27		
22	148	28.8		08.0	270	09.9		26.4 ¹¹⁰	56	24	17 05	50	28	82	19	25		
23	163	28.9		07.3	284	37.9		37.4 ¹¹⁰	58	15	16 59	47	31	83	18	23		
24	178	29.0	+17	06.7	299	05.8	+4	48.4 ¹¹⁰	60 S	16 05	16 52	17 43	22 33	87	9	16	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 10 ^m 5		Mag: -4.3 PMG: 13 ^h 04 ^m		Mag: +1.7 PMG: 11 ^h 06 ^m		Mag: -1.7 PMG: 13 ^h 13 ^m		Mag: +0.4 PMG: 18 ^h 54 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	312	14.7	163	12.8	+6	19.5	193	14.5	+12	50.0	75	44.8	-17	51.2				
1	327	17.1	178	16.4		19.3	208	15.3		45.4	176	24.8		49.8	90	47.2	51.2	
2	342	19.6	193	19.9		19.1	223	16.0		45.1	191	26.7		49.6	105	49.7	51.2	
3	357	22.1	208	23.4		18.9	238	16.7		44.8	206	28.7		49.4	120	52.2	51.2	
4	12	24.5	223	27.0		18.8	253	17.5		44.5	221	30.6		49.2	135	54.6	51.2	
5	27	27.0	238	30.5	+6	18.6	268	18.2	+21	44.2	236	32.6	+12	49.0	150	57.1	-17	51.2
6	42	29.5	253	34.1	+6	18.4	283	19.0	+21	43.9	251	34.5	+12	48.9	165	59.5	-17	51.2
7	57	31.9	268	37.6		18.2	298	19.7		43.6	266	36.5		48.7	181	02.0		51.2
8	72	34.4	283	41.2		18.1	313	20.5		43.3	281	38.4		48.5	196	04.4		51.3
9	87	36.8	298	44.8		17.9	328	21.2		43.0	296	40.4		48.3	211	06.9		51.3
10	102	39.3	313	48.3		17.7	343	22.0		42.7	311	42.4		48.1	226	09.4		51.3
11	117	41.8	328	51.9	+6	17.5	358	22.7	+21	42.4	326	44.3	+12	47.9	241	11.8	-17	51.3
12	132	44.2	343	55.5	+6	17.4	13	23.4	+21	42.1	341	46.3	+12	47.7	256	14.3	-17	51.3
13	147	46.7	358	59.0		17.2	28	24.2		41.8	356	48.2		47.6	271	16.7		51.3
14	162	49.2	14	02.6		17.1	43	24.9		41.5	11	50.2		47.4	286	19.2		51.3
15	177	51.6	29	06.2		16.9	58	25.7		41.2	26	52.1		47.2	301	21.6		51.3
16	192	54.1	44	09.8		16.7	73	26.4		40.9	41	54.1		47.0	316	24.1		51.3
17	207	56.6	59	13.3	+6	16.6	88	27.2	+21	40.6	56	56.0	+12	46.8	331	26.6	-17	51.4
18	222	59.0	74	16.9	+6	16.4	103	27.9	+21	40.3	71	58.0	+12	46.6	346	29.0	-17	51.4
19	238	01.5	89	20.5		16.3	118	28.7		40.0	86	59.9		46.5	1	31.5		51.4
20	253	04.0	104	24.1		16.1	133	29.4		39.7	102	01.9		46.3	16	33.9		51.4
21	268	06.4	119	27.7		16.0	148	30.2		39.4	117	03.8		46.1	31	36.4		51.4
22	283	08.9	134	31.3		15.8	163	30.9		39.1	132	05.8		45.9	46	38.8		51.4
23	298	11.3	149	34.9		15.7	178	31.7		38.8	147	07.7		45.7	61	41.3		51.4
24	313	13.8	164	38.5	+6	15.5	193	32.4	+21	38.5	162	09.7	+12	45.5	76	43.7	-17	51.4
Dif	—		+36		-2		+7		-3		+20		-2		+25		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 0				Edad: 19 ^d 9 PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 6 20 ^h : 59 ^m 4 PMG: 4 ^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	178	29.0	+17	06.7	299	05.8	+4	48.4	60 N	1 04	2 51	3 49	21 51	24	11 14	85	
1	193	29.0		06.0	313	33.8	90	+4 59.4	58	1 48	3 09	4 01	21 55	27	10	82	
2	208	29.1		05.3	328	01.7	89	+5 10.2	56	2 16	24	11	22 00	28	07	80	
3	223	29.1		04.6	342	29.7	90	21.1	54	36	36	20	03 31		04	78	
4	238	29.2		04.0	356	57.7	90	31.9	52	2 53	47	27	07 32		11 01	76	
5	253	29.3	+17	03.3	11	25.6	89	+5 42.7	50	3 07	3 56	4 34	22 10	34	10 59	74	
6	268	29.3	+17	02.6	25	53.6	90	+5 53.4	45	3 34	4 16	4 49	22 17	37	10 53	71	
7	283	29.4		02.0	40	21.6	90	+6 04.1	40	3 55	32	5 02	23 39		49	67	
8	298	29.4		01.3	54	49.6	90	14.8	35	4 11	45	12	28 41		45	65	
9	313	29.5	+17	00.6	69	17.6	90	25.4	30	25	4 55	21	32 44		41	63	
10	328	29.6	+16	59.9	83	45.6	90	35.9	20	4 46	5 13	37	40 47		35	60	
11	343	29.6	+16	59.3	98	13.6	90	+6 46.4	10 N	5 02	5 28	5 50	22 47	50	10 30	56	
12	358	29.7	+16	58.6	112	41.6	90	+6 56.9	0	5 16	5 41	6 03	22 53	53	10 25	53	
13	13	29.8		57.9	127	09.7	91	+7 07.3	10 S	28	5 53	15	23 00	55	20	50	
14	28	29.8		57.2	141	37.7	90	17.6	20	39	6 05	28	07 58		15	47	
15	43	29.9		56.6	156	05.7	90	27.9	30	49	18	43	15 62		09	43	
16	58	30.0		55.9	170	33.7	90	38.2	35	5 54	25	6 51	19 65		06	41	
17	73	30.0	+16	55.2	185	01.8	91	+7 48.3	40	6 00	6 32	7 01	23 24	67	10 02	38	
18	88	30.1	+16	54.5	199	29.8	90	+7 58.5	45	6 06	6 41	7 12	23 31	69	9 57	36	
19	103	30.1		53.8	213	57.8	90	+8 08.6	50	12	51	26	38 73		52	32	
20	118	30.2		53.2	228	25.9	91	18.6	52	15	6 56	32	42 74		50	30	
21	133	30.3		52.5	242	53.9	90	28.6	54	18	7 01	39	45 76		47	29	
22	148	30.3		51.8	257	21.9	90	38.5	56	21	06	47	50 78		44	27	
23	163	30.4		51.1	271	50.0	91	48.3	58	24	12	7 56	23 54	80	41	25	
24	178	30.5	+16	50.4	286	18.0	90	+8 58.1	60 S	6 28	7 19	8 06	** ** *		9 37	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 06 ^m 6		Mag: -4.2 PMG: 12 ^h 58 ^m		Mag: +1.7 PMG: 11 ^h 05 ^m		Mag: -1.7 PMG: 13 ^h 10 ^m		Mag: +0.4 PMG: 18 ^h 50 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	313	13.8	164	38.5	+6	15.5	193	32.4	+21	38.5
1	328	16.3	179	42.1		15.4	208	33.2		38.2
2	343	18.7	194	45.8		15.2	223	33.9		37.9
3	358	21.2	209	49.4		15.1	238	34.6		37.6
4	13	23.7	224	53.0		15.0	253	35.4		37.3
5	28	26.1	239	56.6	+6	14.8	268	36.1	+21	37.0
6	43	28.6	255	00.2	+6	14.7	283	36.9	+21	36.7
7	58	31.1	270	03.9		14.6	298	37.6		36.3
8	73	33.5	285	07.5		14.4	313	38.4		36.0
9	88	36.0	300	11.1		14.3	328	39.1		35.7
10	103	38.4	315	14.8		14.2	343	39.9		35.4
11	118	40.9	330	18.4	+6	14.0	358	40.6	+21	35.1
12	133	43.4	345	22.1	+6	13.9	13	41.4	+21	34.8
13	148	45.8	0	25.7		13.8	28	42.1		34.5
14	163	48.3	15	29.4		13.7	43	42.9		34.2
15	178	50.8	30	33.0		13.5	58	43.6		33.9
16	193	53.2	45	36.7		13.4	73	44.4		33.6
17	208	55.7	60	40.3	+6	13.3	88	45.1	+21	33.3
18	223	58.2	75	44.0	+6	13.2	103	45.9	+21	33.0
19	239	00.6	90	47.7		13.1	118	46.6		32.6
20	254	03.1	105	51.3		13.0	133	47.4		32.3
21	269	05.6	120	55.0		12.9	148	48.1		32.0
22	284	08.0	135	58.7		12.7	163	48.9		31.7
23	299	10.5	151	02.3		12.6	178	49.6		31.4
24	314	12.9	166	06.0	+6	12.5	193	50.4	+21	31.1
Dif	—		+36		-1		+7		-3	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 20 ^d 9 PHE { 4 ^h : 59/2 12 ^h : 58/9 20 ^h : 58/7											
	PMG: 12 ^h 05 ^m 9			SD: 16 ^h 1 PMG: 5 ^h 06 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	30.5	+16 50.4	286	18.0	+8 58.1	97	60 N	20 19	21 15	22 53	22 15 28		12 39 80	
1	193	30.5	49.8	300	46.0	+9 07.8	97	58	20 07	20 58	22 15	22 31		32 78	
2	208	30.6	49.1	315	14.1	17.5	97	56	19 58	44	21 50	28 33		27 76	
3	223	30.7	48.4	329	42.1	27.1	96	54	49	32	31	34 34		22 74	
4	238	30.7	47.7	344	10.1	36.6	95	52	42	22	15	39 36		17 73	
5	253	30.8	+16 47.0	358	38.1	+9 46.1	95	50	19 35	20 13	21 01	22 44 37		12 13 71	
6	268	30.9	+16 46.3	13	06.2	+9 55.5	94	45	19 21	19 54	20 35	22 54 40		12 04 68	
7	283	30.9	45.7	27	34.2	+10 04.8	93	40	19 09	38	20 15	23 02 42		11 56 66	
8	298	31.0	45.0	42	02.2	14.1	93	35	18 58	26	19 59	09 45		50 63	
9	313	31.1	44.3	56	30.2	23.3	92	30	50	19 15	46	16 46		44 62	
10	328	31.1	43.6	70	58.3	32.4	91	20	35	18 58	25	27 49		35 58	
11	343	31.2	+16 42.9	85	26.3	+10 41.4	90	10 N	18 21	18 44	19 09	23 37 51		11 26 56	
12	358	31.3	+16 42.2	99	54.3	+10 50.4	90	0	18 09	18 31	18 56	23 46 53		11 18 53	
13	13	31.4	41.5	114	22.3	+10 59.3	89	10 S	17 57	19	44	23 55 56		10 51	
14	28	31.4	40.8	128	50.3	+11 08.2	89	20	45	18 08	34	** ** *		11 02 48	
15	43	31.5	40.2	143	18.3	16.9	87	30	30	17 55	24	** ** *		10 52 45	
16	58	31.6	39.5	157	46.3	25.6	87	35	22	48	19	** ** *		47 43	
17	73	31.6	+16 38.8	172	14.3	+11 34.3	87	40	17 12	17 41	18 13	** ** *		10 40 41	
18	88	31.7	+16 38.1	186	42.3	+11 42.8	85	45	17 01	17 33	18 08	** ** *		10 33 39	
19	103	31.8	37.4	201	10.3	51.3	85	50	16 48	23	18 02	** ** *		24 36	
20	118	31.8	36.7	215	38.3	+11 59.6	83	52	42	18	17 59	** ** *		20 34	
21	133	31.9	36.0	230	06.2	+12 08.0	84	54	35	14	56	** ** *		16 32	
22	148	32.0	35.3	244	34.2	16.2	82	56	27	08	53	** ** *		11 31	
23	163	32.1	34.6	259	02.2	24.3	81	58	19	17 03	50	** ** *		06 28	
24	178	32.1	+16 33.9	273	30.2	+12 32.4	81	60 S	16 09	16 56	17 47	0 00 82		10 00 26	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 02 ^m 6		Mag: -4.2 PMG: 12 ^h 52 ^m			Mag: +1.7 PMG: 11 ^h 04 ^m			Mag: -1.7 PMG: 13 ^h 07 ^m			Mag: +0.4 PMG: 18 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	314	12.9	166 06.0	+6 12.5	193 50.4	+21 31.1	162 56.5	+12 41.1	77 42.6	-17 51.8					
1	329	15.4	181 09.7	12.4	208 51.1	30.8	177 58.5	40.9	92 45.1	51.8					
2	344	17.9	196 13.4	12.3	223 51.9	30.5	193 00.4	40.7	107 47.5	51.8					
3	359	20.3	211 17.1	12.2	238 52.7	30.2	208 02.4	40.5	122 50.0	51.8					
4	14	22.8	226 20.8	12.1	253 53.4	29.8	223 04.3	40.4	137 52.4	51.8					
5	29	25.3	241 24.5	+6 12.0	268 54.2	+21 29.5	238 06.3	+12 40.2	152 54.9	-17 51.8					
6	44	27.7	256 28.2	+6 11.9	283 54.9	+21 29.2	253 08.2	+12 40.0	167 57.3	-17 51.8					
7	59	30.2	271 31.9	11.8	298 55.7	28.9	268 10.2	39.8	182 59.8	51.9					
8	74	32.7	286 35.6	11.7	313 56.4	28.6	283 12.1	39.6	198 02.2	51.9					
9	89	35.1	301 39.3	11.7	328 57.2	28.3	298 14.1	39.4	213 04.7	51.9					
10	104	37.6	316 43.0	11.6	343 57.9	28.0	313 16.0	39.3	228 07.1	51.9					
11	119	40.0	331 46.7	+6 11.5	358 58.7	+21 27.6	328 18.0	+12 39.1	243 09.6	-17 51.9					
12	134	42.5	346 50.4	+6 11.4	13 59.4	+21 27.3	343 19.9	+12 38.9	258 12.0	-17 51.9					
13	149	45.0	1 54.1	11.3	29 00.2	27.0	358 21.9	38.7	273 14.5	51.9					
14	164	47.4	16 57.9	11.2	44 00.9	26.7	13 23.8	38.5	288 16.9	51.9					
15	179	49.9	32 01.6	11.1	59 01.7	26.4	28 25.8	38.3	303 19.4	52.0					
16	194	52.4	47 05.3	11.1	74 02.4	26.1	43 27.7	38.1	318 21.8	52.0					
17	209	54.8	62 09.0	+6 11.0	89 03.2	+21 25.7	58 29.7	+12 38.0	333 24.3	-17 52.0					
18	224	57.3	77 12.8	+6 10.9	104 04.0	+21 25.4	73 31.7	+12 37.8	348 26.7	-17 52.0					
19	239	59.8	92 16.5	10.8	119 04.7	25.1	88 33.6	37.6	3 29.2	52.0					
20	255	02.2	107 20.2	10.8	134 05.5	24.8	103 35.6	37.4	18 31.6	52.0					
21	270	04.7	122 24.0	10.7	149 06.2	24.5	118 37.5	37.2	33 34.0	52.0					
22	285	07.2	137 27.7	10.6	164 07.0	24.2	133 39.5	37.0	48 36.5	52.1					
23	300	09.6	152 31.5	10.6	179 07.7	23.8	148 41.4	36.8	63 38.9	52.1					
24	315	12.1	167 35.2	+6 10.5	194 08.5	+21 23.5	163 43.4	+12 36.7	78 41.4	-17 52.1					
Dif	—		+37	-1	+8	-3	+20	-2	+24		0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 8			Edad: 21 ^d 9 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 3 20 ^h : 58 ^m 1 PMG: 5 ^h 59 ^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	32.1	+16	33.9	273	30.2	+12	32.4	60 N	1	20	2	58	3	54	22	43	
1	193	32.2		33.2	287	58.1	89	40.4	58	1	57	3	14	4	05	22	53	
2	208	32.3		32.6	302	26.1	90	48.3	56	2	22		28	15		23	01	
3	223	32.4		31.9	316	54.0	89	+12 56.1	54		42		40	23		08	40	
4	238	32.4		31.2	331	22.0	90	+13 03.9	52	2	58	3	51	30		15	41	
5	253	32.5	+16	30.5	345	49.9	89	+13 11.5	50	3	11	4	00	4	37	23	21	
6	268	32.6	+16	29.8	0	17.9	90	+13 19.1	45	3	37	4	19	4	52	23	34	
7	283	32.6		29.1	14	45.8	89	26.6	40	3	57		34	5	04		44	
8	298	32.7		28.4	29	13.8	90	34.0	35	4	13		46	14		23	54	
9	313	32.8		27.7	43	41.7	89	41.3	30		26	4	57	22		**	**	
10	328	32.9		27.0	58	09.6	89	48.6	20	4	47	5	14	37		**	**	
11	343	32.9	+16	26.3	72	37.6	90	+13 55.7	10 N	5	03	5	28	5	50	**	**	
12	358	33.0	+16	25.6	87	05.5	89	+14 02.8	0	5	16	5	41	6	02	**	**	
13	13	33.1		24.9	101	33.4	89	09.8	10 S		27	5	52	14		**	**	
14	28	33.2		24.2	116	01.3	89	16.6	20		38	6	04	27		0	05	
15	43	33.2		23.5	130	29.2	89	23.4	30		48		16	41		17	61	
16	58	33.3		22.8	144	57.1	89	30.1	35		53		23	49		24	62	
17	73	33.4	+16	22.1	159	25.0	89	+14 36.8	40	5	58	6	30	6	59	0	31	
18	88	33.5	+16	21.4	173	52.9	89	+14 43.3	45	6	03	6	38	7	10	0	40	
19	103	33.6		20.7	188	20.8	89	49.7	50		09		48	23		51	69	
20	118	33.6		20.0	202	48.7	89	+14 56.1	52		12		52	29		0	56	
21	133	33.7		19.3	217	16.6	89	+15 02.3	54		15	6	57	35		1	01	
22	148	33.8		18.6	231	44.5	89	08.5	56		18	7	02	43		08	73	
23	163	33.9		17.9	246	12.4	89	14.5	58		21		08	7	51	14	76	
24	178	33.9	+16	17.2	260	40.3	89	+15 20.5	60 S	6	24	7	14	8	01	1	22	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 58 ^m 7			Mag: -4.1 PMG: 12 ^h 46 ^m			Mag: +1.7 PMG: 11 ^h 03 ^m			Mag: -1.7 PMG: 13 ^h 03 ^m			Mag: +0.4 PMG: 18 ^h 42 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	315	12.1	167	35.2	+6	10.5	194	08.5	+21	23.5	163	43.4	+12	36.7	78	41.4		
1	330	14.5	182	39.0		10.4	209	09.2		23.2	178	45.3		36.5	93	43.8		
2	345	17.0	197	42.7		10.4	224	10.0		22.9	193	47.3		36.3	108	46.3		
3	0	19.5	212	46.5		10.3	239	10.8		22.6	208	49.2		36.1	123	48.7		
4	15	21.9	227	50.2		10.3	254	11.5		22.3	223	51.2		35.9	138	51.2		
5	30	24.4	242	54.0	+6	10.2	269	12.3	+21	21.9	238	53.1	+12	35.7	153	53.6		
6	45	26.9	257	57.7	+6	10.1	284	13.0	+21	21.6	253	55.1	+12	35.5	168	56.1		
7	60	29.3	273	01.5		10.1	299	13.8		21.3	268	57.0		35.4	183	58.5		
8	75	31.8	288	05.3		10.0	314	14.5		21.0	283	59.0		35.2	199	01.0		
9	90	34.3	303	09.0		10.0	329	15.3		20.7	299	00.9		35.0	214	03.4		
10	105	36.7	318	12.8		09.9	344	16.1		20.3	314	02.9		34.8	229	05.8		
11	120	39.2	333	16.6	+6	09.9	359	16.8	+21	20.0	329	04.8	+12	34.6	244	08.3		
12	135	41.7	348	20.4	+6	09.8	14	17.6	+21	19.7	344	06.8	+12	34.4	259	10.7		
13	150	44.1	3	24.2		09.8	29	18.3		19.4	359	08.7		34.2	274	13.2		
14	165	46.6	18	27.9		09.8	44	19.1		19.0	14	10.7		34.0	289	15.6		
15	180	49.0	33	31.7		09.7	59	19.8		18.7	29	12.6		33.9	304	18.1		
16	195	51.5	48	35.5		09.7	74	20.6		18.4	44	14.6		33.7	319	20.5		
17	210	54.0	63	39.3	+6	09.6	89	21.4	+21	18.1	59	16.5	+12	33.5	334	23.0		
18	225	56.4	78	43.1	+6	09.6	104	22.1	+21	17.8	74	18.5	+12	33.3	349	25.4		
19	240	58.9	93	46.9		09.6	119	22.9		17.4	89	20.4		33.1	4	27.8		
20	256	01.4	108	50.7		09.5	134	23.6		17.1	104	22.4		32.9	19	30.3		
21	271	03.8	123	54.5		09.5	149	24.4		16.8	119	24.3		32.7	34	32.7		
22	286	06.3	138	58.3		09.5	164	25.2		16.5	134	26.3		32.6	49	35.2		
23	301	08.8	154	02.1		09.4	179	25.9		16.1	149	28.2		32.4	64	37.6		
24	316	11.2	169	05.9	+6	09.4	194	26.7	+21	15.8	164	30.2	+12	32.2	79	40.1		
Dif	—			+38			0			+8			-3			+20		
																-2		
																+24		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 7			Edad: 22 ^d 9 PHE { 4 ^h : 57'9 12 ^h : 57'7 20 ^h : 57'5 SD: 15'8 PMG: 6 ^h 52 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	33.9	+16	17.2	260	40.3	+15	20.5	60 N	20 13	21 08	22 39	23 19 43	15 13 66	
1	193	34.0		16.5	275	08.2	89	26.4	58	20 03	20 52	22 06	30 45	15 03 64	
2	208	34.1		15.8	289	36.1	89	32.1	56	19 54	39	21 43	40 45	14 53 64	
3	223	34.2		15.1	304	03.9	88	37.8	54	45	28	25	48 46	45 62	
4	238	34.3		14.4	318	31.8	89	43.4	52	38	18	21 10	23 56 47	37 62	
5	253	34.3	+16	13.7	332	59.7	89	+15 48.9	50	19 32	20 09	20 57	** ** *	14 31 61	
6	268	34.4	+16	12.9	347	27.6	89	+15 54.3	45	19 18	19 50	20 31	** ** *	14 16 60	
7	283	34.5		12.2	1	55.5	89	+15 59.6	40	19 06	36	20 12	** ** *	14 05 58	
8	298	34.6		11.5	16	23.3	88	+16 04.8	35	18 56	24	19 57	** ** *	13 54 58	
9	313	34.7		10.8	30	51.2	89	09.9	30	48	19 13	44	0 02 48	46 57	
10	328	34.7		10.1	45	19.1	89	14.9	20	33	18 57	24	16 50	30 56	
11	343	34.8	+16	09.4	59	47.0	89	+16 19.9	10 N	18 21	18 43	19 08	0 28 51	13 17 54	
12	358	34.9	+16	08.7	74	14.9	89	+16 24.7	0	18 09	18 31	18 56	0 39 54	13 05 53	
13	13	35.0		08.0	88	42.8	89	29.4	10 S	17 58	19	45	0 51 55	12 52 52	
14	28	35.1		07.3	103	10.7	89	34.0	20	45	18 08	34	1 03 57	39 51	
15	43	35.1		06.6	117	38.5	88	38.5	30	31	17 56	25	18 58	24 49	
16	58	35.2		05.9	132	06.4	89	43.0	35	23	50	20	26 59	15 49	
17	73	35.3	+16	05.1	146	34.3	89	+16 47.3	40	17 14	17 43	18 15	1 35 61	12 05 48	
18	88	35.4	+16	04.4	161	02.2	89	+16 51.5	45	17 04	17 35	18 10	1 46 63	11 53 47	
19	103	35.5		03.7	175	30.2	90	55.6	50	16 51	25	04	2 00 64	39 45	
20	118	35.6		03.0	189	58.1	89	+16 59.6	52	45	21	18 02	06 65	33 44	
21	133	35.6		02.3	204	26.0	89	+17 03.6	40	54	38	17 59	13 66	25 43	
22	148	35.7		01.6	218	53.9	89	07.4	56	31	12	56	21 67	17 42	
23	163	35.8		00.9	233	21.8	89	11.1	58	23	06	54	30 68	11 08 41	
24	178	35.9	+16	00.2	247	49.8	90	+17 14.7	60 S	16 14	17 00	17 50	2 40 70	10 58 39	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 2 ^h 54 ^m 8		Mag: -4.1 PMG: 12 ^h 40 ^m		Mag: +1.7 PMG: 11 ^h 02 ^m		Mag: -1.7 PMG: 13 ^h 00 ^m		Mag: +0.5 PMG: 18 ^h 38 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	316	11.2	169	05.9	+6 09.4	194	26.7	+21 15.8	164	30.2	+12 32.2	79	40.1	-17 52.4	
1	331	13.7	184	09.7	09.4	209	27.4	15.5	179	32.1	32.0	94	42.5	52.5	
2	346	16.2	199	13.5	09.4	224	28.2	15.2	194	34.1	31.8	109	44.9	52.5	
3	1	18.6	214	17.3	09.4	239	29.0	14.8	209	36.0	31.6	124	47.4	52.5	
4	16	21.1	229	21.2	09.3	254	29.7	14.5	224	38.0	31.4	139	49.8	52.5	
5	31	23.5	244	25.0	+6 09.3	269	30.5	+21 14.2	239	39.9	+12 31.3	154	52.3	-17 52.5	
6	46	26.0	259	28.8	+6 09.3	284	31.2	+21 13.9	254	41.9	+12 31.1	169	54.7	-17 52.5	
7	61	28.5	274	32.6	09.3	299	32.0	13.5	269	43.8	30.9	184	57.2	52.5	
8	76	30.9	289	36.5	09.3	314	32.8	13.2	284	45.8	30.7	199	59.6	52.6	
9	91	33.4	304	40.3	09.3	329	33.5	12.9	299	47.7	30.5	215	02.0	52.6	
10	106	35.9	319	44.1	09.3	344	34.3	12.6	314	49.7	30.3	230	04.5	52.6	
11	121	38.3	334	47.9	+6 09.2	359	35.0	+21 12.2	329	51.6	+12 30.1	245	06.9	-17 52.6	
12	136	40.8	349	51.8	+6 09.2	14	35.8	+21 11.9	344	53.6	+12 29.9	260	09.4	-17 52.6	
13	151	43.3	4	55.6	09.2	29	36.6	11.6	359	55.5	29.8	275	11.8	52.6	
14	166	45.7	19	59.5	09.2	44	37.3	11.2	14	57.5	29.6	290	14.2	52.7	
15	181	48.2	35	03.3	09.2	59	38.1	10.9	29	59.4	29.4	305	16.7	52.7	
16	196	50.6	50	07.2	09.2	74	38.9	10.6	45	01.4	29.2	320	19.1	52.7	
17	211	53.1	65	11.0	+6 09.2	89	39.6	+21 10.3	60	03.3	+12 29.0	335	21.6	-17 52.7	
18	226	55.6	80	14.8	+6 09.2	104	40.4	+21 09.9	75	05.3	+12 28.8	350	24.0	-17 52.7	
19	241	58.0	95	18.7	09.2	119	41.2	09.6	90	07.2	28.6	5	26.4	52.7	
20	257	00.5	110	22.6	09.3	134	41.9	09.3	105	09.2	28.5	20	28.9	52.7	
21	272	03.0	125	26.4	09.3	149	42.7	08.9	120	11.1	28.3	35	31.3	52.8	
22	287	05.4	140	30.3	09.3	164	43.4	08.6	135	13.1	28.1	50	33.8	52.8	
23	302	07.9	155	34.1	09.3	179	44.2	08.3	150	15.0	27.9	65	36.2	52.8	
24	317	10.4	170	38.0	+6 09.3	194	45.0	+21 07.9	165	17.0	+12 27.7	80	38.6	-17 52.8	
Dif	—		+38		0	+8		-3	+19		-2	+24			

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: 23 ^d 9 PHE { SD: 15'6 PMG: 7 ^h 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	m
0	178	35.9	+16	00.2	247	49.8	+17	14.7	60 N	1 33	3 04	3 59	** ** *	16 19 55
1	193	36.0	+15	59.4	262	17.7	89	18.2	58	2 05	19	4 09	** ** *	16 07 55
2	208	36.1		58.7	276	45.7	90	21.7	56	29	33	18	** ** *	15 57 54
3	223	36.1		58.0	291	13.6	89	25.0	54	2 47	44	26	** ** *	47 55
4	238	36.2		57.3	305	41.6	90	28.2	52	3 02	3 54	34	** ** *	39 55
5	253	36.3	+15	56.6	320	09.6	90	+17 31.3	50	3 15	4 03	4 40	0 03	47 15 32 54
6	268	36.4	+15	55.9	334	37.5	89	+17 34.3	45	3 40	4 21	4 54	0 18	48 15 16 54
7	283	36.5		55.1	349	05.5	90	37.2	40	4 00	36	5 05	30	49 15 03 54
8	298	36.6		54.4	3	33.5	90	40.0	35	15	48	15	40	50 14 52 54
9	313	36.7		53.7	18	01.5	90	42.7	30	28	4 58	24	0 50	50 43 53
10	328	36.7		53.0	32	29.6	91	45.3	20	4 48	5 15	38	1 06	51 26 53
11	343	36.8	+15	52.3	46	57.6	90	+17 47.8	10 N	5 03	5 29	5 51	1 19	53 14 11 53
12	358	36.9	+15	51.5	61	25.6	90	+17 50.2	0	5 16	5 41	6 02	1 33	52 13 58 53
13	13	37.0		50.8	75	53.7	91	52.5	10 S	27	5 52	14	1 46	53 44 53
14	28	37.1		50.1	90	21.8	91	54.7	20	37	6 03	26	2 00	54 30 52
15	43	37.2		49.4	104	49.9	91	56.8	30	46	15	39	16	55 13 52
16	58	37.3		48.7	119	18.0	91	+17 58.8	35	51	21	47	25	56 13 04 51
17	73	37.4	+15	47.9	133	46.1	91	+18 00.7	40	5 56	6 28	6 56	2 36	56 12 53 51
18	88	37.4	+15	47.2	148	14.2	91	+18 02.5	45	6 01	6 36	7 07	2 49	56 12 40 50
19	103	37.5		46.5	162	42.4	92	04.2	50	06	45	19	3 04	58 24 50
20	118	37.6		45.8	177	10.5	91	05.8	52	09	49	25	11	58 17 49
21	133	37.7		45.0	191	38.7	92	07.2	54	11	54	32	19	59 12 08 50
22	148	37.8		44.3	206	06.9	92	08.6	56	14	6 58	39	28	59 11 59 49
23	163	37.9		43.6	220	35.1	92	09.9	58	17	7 04	47	38	60 49 49
24	178	38.0	+15	42.9	235	03.3	92	+18 11.1	60 S	6 20	7 10	7 56	3 50	61 11 37 48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 2 ^h 50 ^m 8		Mag: -4.0 PMG: 12 ^h 34 ^m		Mag: +1.7 PMG: 11 ^h 00 ^m		Mag: -1.7 PMG: 12 ^h 57 ^m		Mag: +0.5 PMG: 18 ^h 34 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	317	10.4	170	38.0	+6	194	45.0	+21	165	17.0	+12	80	38.6	-17	52.8
1	332	12.8	185	41.9		209	45.7		180	18.9		95	41.1		52.8
2	347	15.3	200	45.7		224	46.5		195	20.9		110	43.5		52.8
3	2	17.8	215	49.6		239	47.3		210	22.8		125	46.0		52.9
4	17	20.2	230	53.5		254	48.0		225	24.8		140	48.4		52.9
5	32	22.7	245	57.3	+6	269	48.8	+21	240	26.7	+12	155	50.8	-17	52.9
6	47	25.1	261	01.2	+6	284	49.6	+21	255	28.7	+12	170	53.3	-17	52.9
7	62	27.6	276	05.1		299	50.3		270	30.6		185	55.7		52.9
8	77	30.1	291	09.0		314	51.1		285	32.6		200	58.1		52.9
9	92	32.5	306	12.8		329	51.9		300	34.5		216	00.6		53.0
10	107	35.0	321	16.7		344	52.6		315	36.4		231	03.0		53.0
11	122	37.5	336	20.6	+6	359	53.4	+21	330	38.4	+12	246	05.4	-17	53.0
12	137	39.9	351	24.5	+6	14	54.2	+21	345	40.3	+12	261	07.9	-17	53.0
13	152	42.4	6	28.4		29	54.9		0	42.3		276	10.3		53.0
14	167	44.9	21	32.3		44	55.7		15	44.2		291	12.8		53.0
15	182	47.3	36	36.2		59	56.5		30	46.2		306	15.2		53.1
16	197	49.8	51	40.1		74	57.2		45	48.1		321	17.6		53.1
17	212	52.3	66	44.0	+6	89	58.0	+21	60	50.1	+12	336	20.1	-17	53.1
18	227	54.7	81	47.8	+6	104	58.8	+21	75	52.0	+12	351	22.5	-17	53.1
19	242	57.2	96	51.7		119	59.5		90	54.0		6	24.9		53.1
20	257	59.6	111	55.6		135	00.3		105	55.9		21	27.4		53.1
21	273	02.1	126	59.6		150	01.1		120	57.9		36	29.8		53.2
22	288	04.6	142	03.5		165	01.8		135	59.8		51	32.2		53.2
23	303	07.0	157	07.4		180	02.6	+21	151	01.8		66	34.7		53.2
24	318	09.5	172	11.3	+6	195	03.4	+20	166	03.7	+12	81	37.1	-17	53.2
Dif	—		+39		0	+8		-3	+19		-2	+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 24 ^d 9 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 5 20 ^h : 56 ^m 3										
	PMG: 12 ^h 05 ^m 4			SD: 15 ^h 5 PMG: 8 ^h 38 ^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	178	38.0	+15 42.9	235	03.3	+18 11.1	10	60 N	20 08	21 02	22 27	0 02 53	17 14 45	
1	193	38.1	42.1	249	31.6	12.1	10	58	19 58	20 47	21 58	15 52	17 02 45	
2	208	38.2	41.4	263	59.9	13.1	10	56	49	34	36	25 53	16 51 46	
3	223	38.2	40.7	278	28.2	14.0	9	54	41	23	19	34 53	42 46	
4	238	38.3	40.0	292	56.5	14.8	8	52	34	13	21 04	43 52	34 47	
5	253	38.4	+15 39.2	307	24.8	15.4	6	50	19 28	20 05	20 52	0 50 53	16 26 47	
6	268	38.5	+15 38.5	321	53.2	16.0	6	45	19 15	19 47	20 28	1 06 53	16 10 48	
7	283	38.6	37.8	336	21.5	16.4	4	40	19 04	33	20 09	19 53	15 57 49	
8	298	38.7	37.1	350	49.9	16.8	4	35	18 54	22	19 54	30 53	46 49	
9	313	38.8	36.3	5	18.4	17.1	3	30	46	19 12	42	40 52	36 50	
10	328	38.9	35.6	19	46.8	17.2	1	20	32	18 55	23	1 57 52	19 50	
11	343	39.0	+15 34.9	34	15.3	17.3	1	10 N	18 20	18 42	19 08	2 12 52	15 04 51	
12	358	39.1	+15 34.1	48	43.8	17.3	0	0	18 09	18 30	18 55	2 25 52	14 51 51	
13	13	39.2	33.4	63	12.3	17.1	2	10 S	17 58	19	45	39 52	37 52	
14	28	39.3	32.7	77	40.9	16.9	2	20	46	18 09	35	2 54 52	22 52	
15	43	39.4	31.9	92	09.4	16.6	3	30	33	17 57	26	3 11 51	14 05 53	
16	58	39.4	31.2	106	38.0	16.1	5	35	25	51	21	21 51	13 55 54	
17	73	39.5	+15 30.5	121	06.7	15.6	5	40	17 16	17 44	18 17	3 32 51	13 44 54	
18	88	39.6	+15 29.7	135	35.3	15.0	6	45	17 06	17 37	18 12	3 45 51	13 30 55	
19	103	39.7	29.0	150	04.0	14.2	8	50	16 54	28	07	4 02 50	14 55	
20	118	39.8	28.3	164	32.7	13.4	8	52	48	24	04	09 51	13 06 56	
21	133	39.9	27.5	179	01.5	12.5	9	54	42	20	02	18 50	12 58 56	
22	148	40.0	26.8	193	30.3	11.5	10	56	35	15	18 00	27 50	48 56	
23	163	40.1	26.1	207	59.1	10.4	11	58	27	10	17 57	38 50	38 56	
24	178	40.2	+15 25.3	222	27.9	09.1	13	60 S	16 18	17 04	17 54	4 51 49	12 25 57	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 46 ^m 9		Mag: -4.1 PMG: 12 ^h 28 ^m		Mag: +1.7 PMG: 10 ^h 59 ^m		Mag: -1.7 PMG: 12 ^h 54 ^m		Mag: +0.5 PMG: 18 ^h 31 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	318	09.5	172	11.3	+6 10.1	195 03.4	+20 59.9	166 03.7	+12 23.2	81 37.1	-17 53.2			
1	333	12.0	187	15.2	10.2	210 04.1	59.6	181 05.7	23.0	96 39.5	53.2			
2	348	14.4	202	19.1	10.2	225 04.9	59.3	196 07.6	22.8	111 42.0	53.2			
3	3	16.9	217	23.0	10.3	240 05.7	58.9	211 09.6	22.6	126 44.4	53.3			
4	18	19.4	232	26.9	10.3	255 06.4	58.6	226 11.5	22.5	141 46.8	53.3			
5	33	21.8	247	30.8	+6 10.4	270 07.2	+20 58.2	241 13.5	+12 22.3	156 49.3	-17 53.3			
6	48	24.3	262	34.8	+6 10.5	285 08.0	+20 57.9	256 15.4	+12 22.1	171 51.7	-17 53.3			
7	63	26.8	277	38.7	10.5	300 08.7	57.6	271 17.4	21.9	186 54.1	53.3			
8	78	29.2	292	42.6	10.6	315 09.5	57.2	286 19.3	21.7	201 56.6	53.3			
9	93	31.7	307	46.5	10.7	330 10.3	56.9	301 21.3	21.5	216 59.0	53.4			
10	108	34.1	322	50.5	10.7	345 11.1	56.5	316 23.2	21.3	232 01.4	53.4			
11	123	36.6	337	54.4	+6 10.8	0 11.8	+20 56.2	331 25.2	+12 21.1	247 03.9	-17 53.4			
12	138	39.1	352	58.3	+6 10.9	15 12.6	+20 55.9	346 27.1	+12 21.0	262 06.3	-17 53.4			
13	153	41.5	8	02.2	11.0	30 13.4	55.5	1 29.1	20.8	277 08.7	53.4			
14	168	44.0	23	06.2	11.0	45 14.1	55.2	16 31.0	20.6	292 11.2	53.4			
15	183	46.5	38	10.1	11.1	60 14.9	54.8	31 33.0	20.4	307 13.6	53.5			
16	198	48.9	53	14.0	11.2	75 15.7	54.5	46 34.9	20.2	322 16.0	53.5			
17	213	51.4	68	18.0	+6 11.3	90 16.5	+20 54.2	61 36.9	+12 20.0	337 18.5	-17 53.5			
18	228	53.9	83	21.9	+6 11.3	105 17.2	+20 53.8	76 38.8	+12 19.8	352 20.9	-17 53.5			
19	243	56.3	98	25.9	11.4	120 18.0	53.5	91 40.8	19.6	7 23.3	53.5			
20	258	58.8	113	29.8	11.5	135 18.8	53.1	106 42.7	19.4	22 25.8	53.6			
21	274	01.2	128	33.7	11.6	150 19.5	52.8	121 44.7	19.3	37 28.2	53.6			
22	289	03.7	143	37.7	11.7	165 20.3	52.4	136 46.6	19.1	52 30.6	53.6			
23	304	06.2	158	41.6	11.8	180 21.1	52.1	151 48.6	18.9	67 33.1	53.6			
24	319	08.6	173	45.6	+6 11.9	195 21.9	+20 51.8	166 50.5	+12 18.7	82 35.5	-17 53.6			
Dif	—		+39	+1		+8	-3	+19	-2		+24	0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 2				Edad: 25 ^d 9 PHE { 4 ^h : 56/1 12 ^h : 55/9 20 ^h : 55/8 SD: 15/3 PMG: 9 ^h 30 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	40.2	+15	25.3	222	27.9	+18	09.1	60 N	1 44	3 10	4 04	0 55	61	17 59	34		
1	193	40.3		24.6	236	56.8		07.8	58	2 13	25	14	1 07	60	47	37		
2	208	40.4		23.9	251	25.7		06.4	56	35	37	22	18	58	37	38		
3	223	40.5		23.1	265	54.6		04.9	54	2 52	48	30	27	58	28	39		
4	238	40.6		22.4	280	23.6		03.3	52	3 07	3 58	37	35	58	21	39		
5	253	40.7	+15	21.7	294	52.6	+18	01.6	50	3 19	4 06	4 43	1 43	57	17 13	41		
6	268	40.8	+15	20.9	309	21.6	+17	59.9	45	3 44	4 24	4 56	1 59	55	16 58	42		
7	283	40.9		20.2	323	50.7		58.0	40	4 02	38	5 07	2 12	55	46	43		
8	298	41.0		19.4	338	19.8		56.0	35	17	49	17	23	54	35	45		
9	313	41.1		18.7	352	48.9		53.9	30	29	4 59	25	32	54	26	45		
10	328	41.2		18.0	7	18.1		51.8	20	4 48	5 16	39	2 49	53	16 09	48		
11	343	41.3	+15	17.2	21	47.3	+17	49.5	10 N	5 03	5 29	5 51	3 04	51	15 55	49		
12	358	41.4	+15	16.5	36	16.6	+17	47.2	0	5 15	5 40	6 02	3 17	51	15 42	50		
13	13	41.5		15.7	50	45.8		44.7	10 S	26	5 51	13	31	50	29	51		
14	28	41.6		15.0	65	15.2		42.2	20	36	6 02	25	3 46	48	15 14	53		
15	43	41.7		14.2	79	44.5		39.6	30	45	13	38	4 02	48	14 58	54		
16	58	41.8		13.5	94	13.9		36.9	35	49	19	45	12	47	49	54		
17	73	41.9	+15	12.8	108	43.4	+17	34.1	40	5 54	6 26	6 54	4 23	46	14 38	56		
18	88	42.0	+15	12.0	123	12.8	+17	31.2	45	5 58	6 33	7 04	4 36	45	14 25	57		
19	103	42.1		11.3	137	42.3		28.2	50	6 03	42	16	4 52	44	09	59		
20	118	42.2		10.5	152	11.9		25.2	52	06	46	21	5 00	43	14 02	59		
21	133	42.3		09.8	166	41.5		22.0	54	08	50	28	08	42	13 54	60		
22	148	42.4		09.0	181	11.1		18.8	56	10	54	34	17	42	44	62		
23	163	42.5		08.3	195	40.8		15.5	58	13	6 59	42	28	40	34	63		
24	178	42.6	+15	07.6	210	10.5	+17	12.1	60 S	6 15	7 05	7 51	5 40	39	13 22	64		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 2 ^h 43 ^m 0		Mag: -4.1 PMG: 12 ^h 22 ^m				Mag: +1.7 PMG: 10 ^h 58 ^m				Mag: -1.7 PMG: 12 ^h 51 ^m				Mag: +0.5 PMG: 18 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	319	08.6	173	45.6	+6	11.9	195	21.9	+20	51.8	166	50.5	+12	18.7	82	35.5	-17	53.6
1	334	11.1	188	49.5		12.0	210	22.6		51.4	181	52.4		18.5	97	37.9		53.6
2	349	13.6	203	53.5		12.1	225	23.4		51.1	196	54.4		18.3	112	40.3		53.7
3	4	16.0	218	57.4		12.1	240	24.2		50.7	211	56.3		18.1	127	42.8		53.7
4	19	18.5	234	01.4		12.2	255	25.0		50.4	226	58.3		17.9	142	45.2		53.7
5	34	21.0	249	05.3	+6	12.3	270	25.7	+20	50.0	242	00.2	+12	17.8	157	47.6	-17	53.7
6	49	23.4	264	09.3	+6	12.4	285	26.5	+20	49.7	257	02.2	+12	17.6	172	50.1	-17	53.7
7	64	25.9	279	13.3		12.5	300	27.3		49.3	272	04.1		17.4	187	52.5		53.7
8	79	28.4	294	17.2		12.6	315	28.1		49.0	287	06.1		17.2	202	54.9		53.8
9	94	30.8	309	21.2		12.8	330	28.8		48.7	302	08.0		17.0	217	57.3		53.8
10	109	33.3	324	25.1		12.9	345	29.6		48.3	317	10.0		16.8	232	59.8		53.8
11	124	35.7	339	29.1	+6	13.0	0	30.4	+20	48.0	332	11.9	+12	16.6	248	02.2	-17	53.8
12	139	38.2	354	33.1	+6	13.1	15	31.2	+20	47.6	347	13.9	+12	16.4	263	04.6	-17	53.8
13	154	40.7	9	37.0		13.2	30	31.9		47.3	2	15.8		16.2	278	07.1		53.9
14	169	43.1	24	41.0		13.3	45	32.7		46.9	17	17.8		16.1	293	09.5		53.9
15	184	45.6	39	45.0		13.4	60	33.5		46.6	32	19.7		15.9	308	11.9		53.9
16	199	48.1	54	48.9		13.5	75	34.3		46.2	47	21.7		15.7	323	14.3		53.9
17	214	50.5	69	52.9	+6	13.6	90	35.0	+20	45.9	62	23.6	+12	15.5	338	16.8	-17	53.9
18	229	53.0	84	56.9	+6	13.8	105	35.8	+20	45.5	77	25.6	+12	15.3	353	19.2	-17	53.9
19	244	55.5	100	00.8		13.9	120	36.6		45.2	92	27.5		15.1	8	21.6		54.0
20	259	57.9	115	04.8		14.0	135	37.4		44.8	107	29.5		14.9	23	24.1		54.0
21	275	00.4	130	08.8		14.1	150	38.1		44.5	122	31.4		14.7	38	26.5		54.0
22	290	02.9	145	12.8		14.3	165	38.9		44.1	137	33.4		14.5	53	28.9		54.0
23	305	05.3	160	16.7		14.4	180	39.7		43.8	152	35.3		14.4	68	31.3		54.0
24	320	07.8	175	20.7	+6	14.5	195	40.5	+20	43.4	167	37.3	+12	14.2	83	33.8	-17	54.1
Dif	—		+40		+1		+8		-3		+19		-2		+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 1			Edad: 26 ^d 9 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 5 20 ^h : 55 ^m 3 R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	42.6	+15 07.6	210	10.5	+17 12.1	60 N	20 02	20 55	22 16	1 56	66	18 33	28
1	193	42.7	06.8	224	40.3 ¹⁰⁸	08.6 ³⁵	58	19 53	41	21 50	2 07	64	24 29	
2	208	42.8	06.1	239	10.1 ¹⁰⁸	05.0 ³⁶	56	45	29	29	16 64		15 31	
3	223	42.9	05.3	253	39.9 ¹⁰⁸	+17 01.3 ³⁷	54	37	18	21 13	25 62		07 33	
4	238	43.0	04.6	268	09.8 ¹⁰⁹	+16 57.6 ³⁷	52	31	09	20 59	33 61		18 00	34
5	253	43.1	+15 03.8	282	39.7 ¹⁰⁹	+16 53.8 ³⁸	50	19 25	20 01	20 47	2 40 60		17 54 35	
6	268	43.2	+15 03.1	297	09.7 ¹¹⁰	+16 49.8 ⁴⁰	45	19 12	19 44	20 24	2 54 59		17 40 37	
7	283	43.3	02.3	311	39.7 ¹¹⁰	45.8 ⁴⁰	40	19 01	30	20 06	3 07 56		29 39	
8	298	43.4	01.6	326	09.7 ¹¹⁰	41.8 ⁴⁰	35	18 52	19	19 52	17 55		20 40	
9	313	43.5	00.8	340	39.8 ¹¹¹	37.6 ⁴²	30	44	19 10	40	26 54		17 11 42	
10	328	43.6	+15 00.1	355	10.0 ¹¹²	33.4 ⁴²	20	31	18 54	21	42 52		16 57 44	
11	343	43.7	+14 59.3	9	40.2 ¹¹²	+16 29.1 ⁴³	10 N	18 19	18 41	19 07	3 55 51		16 44 46	
12	358	43.8	+14 58.6	24	10.4 ¹¹²	+16 24.7 ⁴⁴	0	18 08	18 30	18 55	4 08 49		16 32 48	
13	13	43.9	57.8	38	40.7 ¹¹³	20.2 ⁴⁵	10 S	17 58	19	45	21 47		20 50	
14	28	44.0	57.1	53	11.0 ¹¹³	15.6 ⁴⁶	20	46	18 09	35	34 46		16 07 52	
15	43	44.1	56.3	67	41.3 ¹¹³	11.0 ⁴⁶	30	34	17 58	27	50 44		15 52 54	
16	58	44.2	55.6	82	11.7 ¹¹⁴	06.3 ⁴⁷	35	26	53	23	4 59 42		43 56	
17	73	44.3	+14 54.8	96	42.2 ¹¹⁵	+16 01.5 ⁴⁸	40	17 18	17 46	18 18	5 09 41		15 34 56	
18	88	44.4	+14 54.1	111	12.7 ¹¹⁵	+15 56.6 ⁴⁹	45	17 08	17 39	18 14	5 21 40		15 22 59	
19	103	44.5	53.3	125	43.2 ¹¹⁵	51.7 ⁴⁹	50	16 57	31	09	36 37		08 61	
20	118	44.7	52.5	140	13.8 ¹¹⁶	46.7 ⁵⁰	52	51	27	07	43 36		15 01 62	
21	133	44.8	51.8	154	44.4 ¹¹⁶	41.6 ⁵¹	54	45	23	05	50 36		14 54 63	
22	148	44.9	51.0	169	15.1 ¹¹⁷	36.4 ⁵²	56	39	19	03	5 59 34		46 65	
23	163	45.0	50.3	183	45.8 ¹¹⁷	31.2 ⁵²	58	31	14	18 00	6 08 33		37 66	
24	178	45.1	+14 49.5	198	16.6 ¹¹⁸	+15 25.9 ⁵³	60 S	16 23	17 08	17 58	6 19 31		14 26 68	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 2 ^h 39 ^m 0		Mag: -4.1 PMG: 12 ^h 15 ^m		Mag: +1.7 PMG: 10 ^h 57 ^m		Mag: -1.7 PMG: 12 ^h 48 ^m		Mag: +0.5 PMG: 18 ^h 23 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	320	07.8	175	20.7	+6 14.5	195 40.5	+20 43.4	167 37.3	+12 14.2	83 33.8	-17 54.1
1	335	10.2	190	24.7	14.6	210 41.2	43.1	182 39.2	14.0	98 36.2	54.1
2	350	12.7	205	28.7	14.8	225 42.0	42.7	197 41.1	13.8	113 38.6	54.1
3	5 15.2	220 32.7	14.9	240 42.8	42.4	240 42.8	42.4	212 43.1	13.6	128 41.0	54.1
4	20 17.6	235 36.6	15.0	255 43.6	42.0	255 43.6	42.0	227 45.0	13.4	143 43.5	54.1
5	35 20.1	250 40.6	+6 15.2	270 44.4	+20 41.7	270 44.4	+20 41.7	242 47.0	+12 13.2	158 45.9	-17 54.2
6	50 22.6	265 44.6	+6 15.3	285 45.1	+20 41.3	285 45.1	+20 41.3	257 48.9	+12 13.0	173 48.3	-17 54.2
7	65 25.0	280 48.6	15.5	300 45.9	41.0	300 45.9	41.0	272 50.9	12.9	188 50.7	54.2
8	80 27.5	295 52.6	15.6	315 46.7	40.6	315 46.7	40.6	287 52.8	12.7	203 53.2	54.2
9	95 30.0	310 56.6	15.7	330 47.5	40.3	330 47.5	40.3	302 54.8	12.5	218 55.6	54.2
10	110 32.4	326 00.5	15.9	345 48.2	39.9	345 48.2	39.9	317 56.7	12.3	233 58.0	54.2
11	125 34.9	341 04.5	+6 16.0	0 49.0	+20 39.6	0 49.0	+20 39.6	332 58.7	+12 12.1	249 00.4	-17 54.3
12	140 37.3	356 08.5	+6 16.2	15 49.8	+20 39.2	15 49.8	+20 39.2	348 00.6	+12 11.9	264 02.9	-17 54.3
13	155 39.8	11 12.5	16.3	30 50.6	38.9	30 50.6	38.9	3 02.6	11.7	279 05.3	54.3
14	170 42.3	26 16.5	16.5	45 51.4	38.5	45 51.4	38.5	18 04.5	11.5	294 07.7	54.3
15	185 44.7	41 20.5	16.6	60 52.1	38.2	60 52.1	38.2	33 06.5	11.3	309 10.1	54.3
16	200 47.2	56 24.5	16.8	75 52.9	37.8	75 52.9	37.8	48 08.4	11.1	324 12.6	54.4
17	215 49.7	71 28.5	+6 16.9	90 53.7	+20 37.5	90 53.7	+20 37.5	63 10.4	+12 11.0	339 15.0	-17 54.4
18	230 52.1	86 32.5	+6 17.1	105 54.5	+20 37.1	105 54.5	+20 37.1	78 12.3	+12 10.8	354 17.4	-17 54.4
19	245 54.6	101 36.5	17.2	120 55.3	36.8	120 55.3	36.8	93 14.3	10.6	9 19.8	54.4
20	260 57.1	116 40.5	17.4	135 56.0	36.4	135 56.0	36.4	108 16.2	10.4	24 22.2	54.4
21	275 59.5	131 44.5	17.5	150 56.8	36.0	150 56.8	36.0	123 18.2	10.2	39 24.7	54.5
22	291 02.0	146 48.5	17.7	165 57.6	35.7	165 57.6	35.7	138 20.1	10.0	54 27.1	54.5
23	306 04.5	161 52.5	17.9	180 58.4	35.3	180 58.4	35.3	153 22.0	09.8	69 29.5	54.5
24	321 06.9	176 56.5	+6 18.0	195 59.2	+20 35.0	195 59.2	+20 35.0	168 24.0	+12 09.6	84 31.9	-17 54.5
Dif	—	+40	+1	+8	-4	+8	-4	+19	-2	+24	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15'8 PMG: 12 ^h 04 ^m 9				Edad: 27 ^d 9 PHE { 4 ^h : 55'2 12 ^h : 55'0 20 ^h : 54'9 R°: 47 ^m																			
	hG ☉		Dec		hG ☾		Dif																	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	178	45.1	+14	49.5	198	16.6	+15	25.9	60 N	1 55	3 16	4 08	3 02	69	19 01	22								
1	193	45.2		48.8	212	47.4 ¹¹⁸		20.5 ⁵⁴	58	2 21	30	18	11	68	18 53	24								
2	208	45.3		48.0	227	18.3 ¹¹⁹		15.1 ⁵⁵	56	41	42	26	20	65	46	26								
3	223	45.4		47.3	241	49.2 ¹¹⁹		09.6 ⁵⁴	54	2 58	3 52	34	27	64	40	26								
4	238	45.5		46.5	256	20.1 ¹¹⁹	+15	04.0 ⁵⁶	52	3 11	4 01	40	34	62	34	29								
5	253	45.6	+14	45.7	270	51.1 ¹²⁰	+14	58.3 ⁵⁷	50	3 23	4 10	4 46	3 40	61	18 29	30								
6	268	45.7	+14	45.0	285	22.2 ¹²¹	+14	52.6 ⁵⁷	45	3 47	4 27	4 59	3 53	59	18 17	33								
7	283	45.8		44.2	299	53.3 ¹²¹		46.8 ⁵⁸	40	4 04	40	5 09	4 03	57	08	35								
8	298	45.9		43.5	314	24.4 ¹²¹		40.9 ⁵⁹	35	19	4 51	18	12	55	18 00	37								
9	313	46.1		42.7	328	55.6 ¹²²		35.0 ⁵⁹	30	31	5 01	26	20	54	17 53	39								
10	328	46.2		41.9	343	26.8 ¹²²		29.0 ⁶⁰	20	4 49	16	39	34	51	41	41								
11	343	46.3	+14	41.2	357	58.1 ¹²³	+14	23.0 ⁶⁰	10 N	5 04	5 29	5 51	4 46	49	17 30	44								
12	358	46.4	+14	40.4	12	29.4 ¹²³	+14	16.8 ⁶²	0	5 15	5 40	6 02	4 57	47	17 20	46								
13	13	46.5		39.7	27	00.7 ¹²³		10.7 ⁶¹	10 S	25	5 50	12	5 08	45	17 10	48								
14	28	46.6		38.9	41	32.2 ¹²⁵	+14	04.4 ⁶³	20	34	6 01	23	20	43	16 59	50								
15	43	46.7		38.1	56	03.6 ¹²⁴	+13	58.1 ⁶³	30	43	11	36	34	40	46	54								
16	58	46.8		37.4	70	35.1 ¹²⁵		51.7 ⁶⁴	35	47	17	43	41	39	39	55								
17	73	46.9	+14	36.6	85	06.6 ¹²⁵	+13	45.3 ⁶⁴	40	5 51	6 23	6 51	5 50	37	16 30	58								
18	88	47.1	+14	35.9	99	38.2 ¹²⁶	+13	38.8 ⁶⁵	45	5 56	6 30	7 01	6 01	35	16 21	59								
19	103	47.2		35.1	114	09.9 ¹²⁷		32.3 ⁶⁵	50	6 00	38	12	13	33	09	62								
20	118	47.3		34.3	128	41.5 ¹²⁶		25.7 ⁶⁶	52	02	42	18	19	31	16 03	64								
21	133	47.4		33.6	143	13.3 ¹²⁸		19.0 ⁶⁷	54	04	46	24	26	29	15 57	65								
22	148	47.5		32.8	157	45.0 ¹²⁷		12.3 ⁶⁷	56	06	50	30	33	28	51	66								
23	163	47.6		32.0	172	16.9 ¹²⁹	+13	05.5 ⁶⁸	58	09	6 55	37	41	26	43	68								
24	178	47.7	+14	31.3	186	48.7 ¹²⁸	+12	58.6 ⁶⁹	60 S	6 11	7 00	7 46	6 50	24	15 34	71								
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 2 ^h 35 ^m 1				Mag: -4.1 PMG: 12 ^h 09 ^m				Mag: +1.7 PMG: 10 ^h 55 ^m				Mag: -1.7 PMG: 12 ^h 45 ^m				Mag: +0.5 PMG: 18 ^h 19 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	321	06.9	176	56.5	+6	18.0	195	59.2	+20	35.0	168	24.0	+12	09.6	84	31.9	-17	54.5						
1	336	09.4	192	00.5		18.2	211	00.0		34.6	183	25.9		09.4	99	34.4		54.5						
2	351	11.8	207	04.5		18.4	226	00.7		34.3	198	27.9		09.3	114	36.8		54.6						
3	6	14.3	222	08.5		18.5	241	01.5		33.9	213	29.8		09.1	129	39.2		54.6						
4	21	16.8	237	12.5		18.7	256	02.3		33.6	228	31.8		08.9	144	41.6		54.6						
5	36	19.2	252	16.5	+6	18.9	271	03.1	+20	33.2	243	33.7	+12	08.7	159	44.0	-17	54.6						
6	51	21.7	267	20.5	+6	19.0	286	03.9	+20	32.8	258	35.7	+12	08.5	174	46.5	-17	54.6						
7	66	24.2	282	24.5		19.2	301	04.6		32.5	273	37.6		08.3	189	48.9		54.7						
8	81	26.6	297	28.5		19.4	316	05.4		32.1	288	39.6		08.1	204	51.3		54.7						
9	96	29.1	312	32.5		19.6	331	06.2		31.8	303	41.5		07.9	219	53.7		54.7						
10	111	31.6	327	36.5		19.7	346	07.0		31.4	318	43.5		07.7	234	56.1		54.7						
11	126	34.0	342	40.5	+6	19.9	1	07.8	+20	31.1	333	45.4	+12	07.6	249	58.6	-17	54.7						
12	141	36.5	357	44.5	+6	20.1	16	08.6	+20	30.7	348	47.4	+12	07.4	265	01.0	-17	54.8						
13	156	39.0	12	48.5		20.3	31	09.3		30.3	3	49.3		07.2	280	03.4		54.8						
14	171	41.4	27	52.5		20.5	46	10.1		30.0	18	51.3		07.0	295	05.8		54.8						
15	186	43.9	42	56.5		20.7	61	10.9		29.6	33	53.2		06.8	310	08.2		54.8						
16	201	46.3	58	00.5		20.8	76	11.7		29.3	48	55.2		06.6	325	10.7		54.8						
17	216	48.8	73	04.5	+6	21.0	91	12.5	+20	28.9	63	57.1	+12	06.4	340	13.1	-17	54.9						
18	231	51.3	88	08.6	+6	21.2	106	13.3	+20	28.5	78	59.0	+12	06.2	355	15.5	-17	54.9						
19	246	53.7	103	12.6		21.4	121	14.1		28.2	94	01.0		06.0	10	17.9		54.9						
20	261	56.2	118	16.6		21.6	136	14.8		27.8	109	02.9		05.8	25	20.3		54.9						
21	276	58.7	133	20.6		21.8	151	15.6		27.5	124	04.9		05.7	40	22.8		54.9						
22	292	01.1	148	24.6		22.0	166	16.4		27.1	139	06.8		05.5	55	25.2		55.0						
23	307	03.6	163	28.6		22.2	181	17.2		26.7	154	08.8		05.3	70	27.6		55.0						
24	322	06.1	178	32.6	+6	22.4	196	18.0	+20	26.4	169	10.7	+12	05.1	85	30.0	-17	55.0						
Dif	—				+40				+8				+19				-2				+24			
					+2				-4															

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: 28 ^d 9 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6 R°: 45 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	178	47.7	+14	31.3	186	48.7	+12	58.6	60 N	19 57	20 49	22 06	4 11 71	19 23 19						
1	193	47.8		30.5	201	20.6 ¹²⁹		51.7 ⁶⁹	58	48	35	21 41	19 68	17 21						
2	208	48.0		29.7	215	52.6 ¹³⁰		44.8 ⁶⁹	56	40	24	23	25 67	12 23						
3	223	48.1		29.0	230	24.5 ¹²⁹		37.8 ⁷⁰	54	33	14	21 07	31 65	07 25						
4	238	48.2		28.2	244	56.6 ¹³¹		30.7 ⁷¹	52	27	20 05	20 54	36 64	19 03 26						
5	253	48.3	+14	27.4	259	28.7 ¹³¹	+12	23.6 ⁷¹	50	19 21	19 57	20 43	4 41 62	18 59 27						
6	268	48.4	+14	26.7	274	00.8 ¹³¹	+12	16.5 ⁷¹	45	19 09	19 41	20 20	4 52 59	18 50 30						
7	283	48.5		25.9	288	32.9 ¹³¹		09.2 ⁷²	40	18 59	28	20 03	5 00 57	43 33						
8	298	48.6		25.1	303	05.1 ¹³²	+12	02.0 ⁷³	35	50	17	19 49	07 55	37 34						
9	313	48.8		24.4	317	37.4 ¹³³	+11	54.7 ⁷³	30	42	19 08	38	14 53	32 36						
10	328	48.9		23.6	332	09.7 ¹³³		47.3 ⁷⁴	20	30	18 53	20	25 50	22 39						
11	343	49.0	+14	22.8	346	42.0 ¹³³	+11	39.9 ⁷⁴	10 N	18 18	18 40	19 06	5 35 47	18 14 42						
12	358	49.1	+14	22.1	1	14.4 ¹³⁴	+11	32.4 ⁷⁵	0	18 08	18 29	18 54	5 44 45	18 06 44						
13	13	49.2		21.3	15	46.8 ¹³⁴		24.9 ⁷⁵	10 S	17 58	19	45	5 53 43	17 58 47						
14	28	49.3		20.5	30	19.3 ¹³⁵		17.4 ⁷⁵	20	47	10	36	6 03 40	49 50						
15	43	49.4		19.7	44	51.8 ¹³⁵		09.8 ⁷⁶	30	35	18 00	28	14 37	40 52						
16	58	49.6		19.0	59	24.3 ¹³⁵	+11	02.1 ⁷⁷	35	28	17 54	24	20 35	34 55						
17	73	49.7	+14	18.2	73	56.9 ¹³⁶	+10	54.4 ⁷⁷	40	17 20	17 48	18 20	6 27 34	17 28 56						
18	88	49.8	+14	17.4	88	29.5 ¹³⁶	+10	46.7 ⁷⁷	45	17 11	17 41	18 16	6 36 31	17 20 59						
19	103	49.9		16.6	103	02.2 ¹³⁷		38.9 ⁷⁸	50	17 00	33	12	46 28	11 62						
20	118	50.0		15.9	117	34.9 ¹³⁷		31.1 ⁷⁸	52	16 54	30	10	50 27	07 63						
21	133	50.1		15.1	132	07.6 ¹³⁷		23.2 ⁷⁹	54	49	26	08	6 55 26	17 02 65						
22	148	50.3		14.3	146	40.4 ¹³⁸		15.3 ⁷⁹	56	42	22	06	7 01 24	16 57 67						
23	163	50.4		13.6	161	13.2 ¹³⁸	+10	07.4 ⁷⁹	58	35	18	04	07 23	51 69						
24	178	50.5	+14	12.8	175	46.1 ¹³⁹	+9	59.4 ⁸⁰	60 S	16 27	17 12	18 02	7 14 21	16 45 70						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 31 ^m 2				Mag: -4.1 PMG: 12 ^h 03 ^m				Mag: +1.7 PMG: 10 ^h 54 ^m				Mag: -1.7 PMG: 12 ^h 42 ^m				Mag: +0.5 PMG: 18 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	322	06.1	178	32.6	+6	22.4	196	18.0	+20	26.4	169	10.7	+12	05.1	85	30.0	-17	55.0		
1	337	08.5	193	36.6		22.6	211	18.8		26.0	184	12.7		04.9	100	32.4		55.0		
2	352	11.0	208	40.6		22.8	226	19.6		25.7	199	14.6		04.7	115	34.8		55.0		
3	7	13.5	223	44.7		23.0	241	20.3		25.3	214	16.6		04.5	130	37.3		55.1		
4	22	15.9	238	48.7		23.2	256	21.1		24.9	229	18.5		04.3	145	39.7		55.1		
5	37	18.4	253	52.7	+6	23.4	271	21.9	+20	24.6	244	20.5	+12	04.1	160	42.1	-17	55.1		
6	52	20.8	268	56.7	+6	23.6	286	22.7	+20	24.2	259	22.4	+12	03.9	175	44.5	-17	55.1		
7	67	23.3	284	00.7		23.8	301	23.5		23.8	274	24.4		03.8	190	46.9		55.1		
8	82	25.8	299	04.7		24.0	316	24.3		23.5	289	26.3		03.6	205	49.3		55.2		
9	97	28.2	314	08.7		24.2	331	25.1		23.1	304	28.3		03.4	220	51.8		55.2		
10	112	30.7	329	12.8		24.4	346	25.8		22.8	319	30.2		03.2	235	54.2		55.2		
11	127	33.2	344	16.8	+6	24.7	1	26.6	+20	22.4	334	32.1	+12	03.0	250	56.6	-17	55.2		
12	142	35.6	359	20.8	+6	24.9	16	27.4	+20	22.0	349	34.1	+12	02.8	265	59.0	-17	55.2		
13	157	38.1	14	24.8		25.1	31	28.2		21.7	4	36.0		02.6	281	01.4		55.3		
14	172	40.6	29	28.8		25.3	46	29.0		21.3	19	38.0		02.4	296	03.8		55.3		
15	187	43.0	44	32.8		25.5	61	29.8		20.9	34	39.9		02.2	311	06.3		55.3		
16	202	45.5	59	36.8		25.7	76	30.6		20.6	49	41.9		02.0	326	08.7		55.3		
17	217	47.9	74	40.9	+6	26.0	91	31.4	+20	20.2	64	43.8	+12	01.9	341	11.1	-17	55.4		
18	232	50.4	89	44.9	+6	26.2	106	32.2	+20	19.8	79	45.8	+12	01.7	356	13.5	-17	55.4		
19	247	52.9	104	48.9		26.4	121	32.9		19.5	94	47.7		01.5	11	15.9		55.4		
20	262	55.3	119	52.9		26.6	136	33.7		19.1	109	49.7		01.3	26	18.3		55.4		
21	277	57.8	134	56.9		26.9	151	34.5		18.7	124	51.6		01.1	41	20.7		55.4		
22	293	00.3	150	00.9		27.1	166	35.3		18.4	139	53.6		00.9	56	23.2		55.5		
23	308	02.7	165	05.0		27.3	181	36.1		18.0	154	55.5		00.7	71	25.6		55.5		
24	323	05.2	180	09.0	+6	27.5	196	36.9	+20	17.6	169	57.5	+12	00.5	86	28.0	-17	55.5		
Dif	—		+40		+2		+8		-4		+19		-2		+24					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 5			Edad: 0 ^d 4 PHE { SD: 14 ^h 9 PMG: 12 ^h 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	50.5	+14	12.8	175	46.1	+9	59.4	60 N	2 04	3 22	4 13	5 22	70	19 42	17
1	193	50.6		12.0	190	19.0 ¹³⁹		51.3 ⁸¹	58	29	35	22	27	68	38	19
2	208	50.7		11.2	204	51.9 ¹³⁹		43.3 ⁸⁰	56	2 47	46	30	32	66	35	20
3	223	50.9		10.4	219	24.9 ¹⁴⁰		35.2 ⁸¹	54	3 03	3 56	37	36	65	32	22
4	238	51.0		09.7	233	57.9 ¹⁴⁰		27.0 ⁸²	52	16	4 05	43	40	63	29	23
5	253	51.1	+14	08.9	248	30.9 ¹⁴⁰	+9	18.8 ⁸²	50	3 27	4 13	4 49	5 43	62	19 26	25
6	268	51.2	+14	08.1	263	04.0 ¹⁴¹	+9	10.6 ⁸²	45	3 50	4 29	5 01	5 51	59	19 20	28
7	283	51.3		07.3	277	37.1 ¹⁴¹	+9	02.4 ⁸³	40	4 07	42	11	5 57	56	16	30
8	298	51.5		06.6	292	10.3 ¹⁴²	+8	54.1 ⁸³	35	21	4 53	20	6 02	55	11	33
9	313	51.6		05.8	306	43.4 ¹⁴¹		45.8 ⁸³	30	32	5 02	27	07	52	08	34
10	328	51.7		05.0	321	16.7 ¹⁴³		37.4 ⁸⁴	20	4 50	17	40	15	49	19 01	38
11	343	51.8	+14	04.2	335	49.9 ¹⁴²	+8	29.0 ⁸⁴	10 N	5 04	5 29	5 51	6 22	47	18 56	40
12	358	51.9	+14	03.4	350	23.2 ¹⁴³	+8	20.6 ⁸⁴	0	5 15	5 40	6 01	6 29	44	18 50	43
13	13	52.1		02.7	4	56.5 ¹⁴³		12.2 ⁸⁴	10 S	25	50	11	36	41	45	46
14	28	52.2		01.9	19	29.9 ¹⁴⁴	+8	03.7 ⁸⁵	20	33	5 59	22	43	38	39	49
15	43	52.3		01.1	34	03.3 ¹⁴⁴	+7	55.2 ⁸⁵	30	41	6 09	34	51	35	32	52
16	58	52.4	+14	00.3	48	36.7 ¹⁴⁴		46.6 ⁸⁶	35	45	15	41	6 55	34	29	53
17	73	52.6	+13	59.5	63	10.1 ¹⁴⁴	+7	38.1 ⁸⁵	40	5 49	6 21	6 49	7 01	31	18 24	56
18	88	52.7	+13	58.8	77	43.6 ¹⁴⁵	+7	29.5 ⁸⁶	45	5 53	6 27	6 58	7 07	29	18 19	59
19	103	52.8		58.0	92	17.1 ¹⁴⁵		20.8 ⁸⁷	50	57	35	7 09	14	26	13	62
20	118	52.9		57.2	106	50.7 ¹⁴⁶		12.2 ⁸⁶	52	5 59	38	14	17	25	10	63
21	133	53.0		56.4	121	24.2 ¹⁴⁵	+7	03.5 ⁸⁷	54	6 00	42	19	21	23	07	65
22	148	53.2		55.6	135	57.8 ¹⁴⁶	+6	54.8 ⁸⁷	56	02	46	26	25	22	04	66
23	163	53.3		54.8	150	31.5 ¹⁴⁷		46.1 ⁸⁷	58	04	51	32	30	19	18 00	68
24	178	53.4	+13	54.1	165	05.1 ¹⁴⁶	+6	37.3 ⁸⁸	60 S	6 06	6 55	7 40	7 35	17	17 55	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 27 ^m 3		Mag: -4.1 PMG: 11 ^h 56 ^m		Mag: +1.7 PMG: 10 ^h 53 ^m		Mag: -1.7 PMG: 12 ^h 39 ^m		Mag: +0.5 PMG: 18 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	323	05.2	180	09.0	+6	27.5	196	36.9	+20	17.6	169	57.5	+12	00.5	86	28.0	-17	55.5
1	338	07.7	195	13.0		27.8	211	37.7		17.3	184	59.4		00.3	101	30.4		55.5
2	353	10.1	210	17.0		28.0	226	38.5		16.9	200	01.3	+12	00.1	116	32.8		55.5
3	8	12.6	225	21.0		28.2	241	39.3		16.5	215	03.3	+12	00.0	131	35.2		55.6
4	23	15.1	240	25.0		28.5	256	40.1		16.2	230	05.2	+11	59.8	146	37.6		55.6
5	38	17.5	255	29.0	+6	28.7	271	40.9	+20	15.8	245	07.2	+11	59.6	161	40.0	-17	55.6
6	53	20.0	270	33.1	+6	28.9	286	41.6	+20	15.4	260	09.1	+11	59.4	176	42.5	-17	55.6
7	68	22.4	285	37.1		29.2	301	42.4		15.1	275	11.1		59.2	191	44.9		55.6
8	83	24.9	300	41.1		29.4	316	43.2		14.7	290	13.0		59.0	206	47.3		55.7
9	98	27.4	315	45.1		29.7	331	44.0		14.3	305	15.0		58.8	221	49.7		55.7
10	113	29.8	330	49.1		29.9	346	44.8		13.9	320	16.9		58.6	236	52.1		55.7
11	128	32.3	345	53.1	+6	30.2	1	45.6	+20	13.6	335	18.9	+11	58.4	251	54.5	-17	55.7
12	143	34.8	0	57.1	+6	30.4	16	46.4	+20	13.2	350	20.8	+11	58.2	266	56.9	-17	55.8
13	158	37.2	16	01.2		30.6	31	47.2		12.8	5	22.8		58.0	281	59.3		55.8
14	173	39.7	31	05.2		30.9	46	48.0		12.5	20	24.7		57.9	297	01.8		55.8
15	188	42.2	46	09.2		31.1	61	48.8		12.1	35	26.7		57.7	312	04.2		55.8
16	203	44.6	61	13.2		31.4	76	49.6		11.7	50	28.6		57.5	327	06.6		55.8
17	218	47.1	76	17.2	+6	31.6	91	50.4	+20	11.4	65	30.5	+11	57.3	342	09.0	-17	55.9
18	233	49.5	91	21.2	+6	31.9	106	51.2	+20	11.0	80	32.5	+11	57.1	357	11.4	-17	55.9
19	248	52.0	106	25.2		32.2	121	51.9		10.6	95	34.4		56.9	12	13.8		55.9
20	263	54.5	121	29.2		32.4	136	52.7		10.2	110	36.4		56.7	27	16.2		55.9
21	278	56.9	136	33.3		32.7	151	53.5		09.9	125	38.3		56.5	42	18.6		56.0
22	293	59.4	151	37.3		32.9	166	54.3		09.5	140	40.3		56.3	57	21.0		56.0
23	309	01.9	166	41.3		33.2	181	55.1		09.1	155	42.2		56.1	72	23.4		56.0
24	324	04.3	181	45.3	+6	33.4	196	55.9	+20	08.7	170	44.2	+11	55.9	87	25.9	-17	56.0
Dif	—		+40		+2		+8		-4		+19		-2		+24			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 3		Edad: 1 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1 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	178	53.4	+13 54.1		165	05.1	+6 37.3	60 N	19 51	20 42	21 56	6 32 71	19 59 16	
1	193	53.5		53.3	179	38.8 ¹⁴⁷	28.5 ⁸⁸	58	43	29	34	35 68	57 18	
2	208	53.7		52.5	194	12.5 ¹⁴⁷	19.7 ⁸⁸	56	35	18	16	38 66	55 20	
3	223	53.8		51.7	208	46.2 ¹⁴⁷	10.9 ⁸⁸	54	29	09	21 01	41 64	54 21	
4	238	53.9		50.9	223	20.0 ¹⁴⁸	+6 02.0 ⁸⁹	52	23	20 00	20 49	43 63	52 23	
5	253	54.0	+13 50.1		237	53.8 ¹⁴⁸	+5 53.2 ⁸⁸	50	19 17	19 53	20 38	6 45 62	19 51 24	
6	268	54.2	+13 49.3		252	27.6 ¹⁴⁸	+5 44.3 ⁸⁹	45	19 06	19 37	20 16	6 50 58	19 48 27	
7	283	54.3		48.6	267	01.5 ¹⁴⁹	35.4 ⁸⁹	40	18 56	25	20 00	53 56	46 29	
8	298	54.4		47.8	281	35.3 ¹⁴⁸	26.4 ⁹⁰	35	48	14	19 46	57 53	44 31	
9	313	54.5		47.0	296	09.2 ¹⁴⁹	17.5 ⁸⁹	30	41	19 06	35	6 59 52	42 33	
10	328	54.7		46.2	310	43.1 ¹⁴⁹	+5 08.5 ⁹⁰	20	28	18 51	18	7 04 49	39 37	
11	343	54.8	+13 45.4		325	17.1 ¹⁵⁰	+4 59.5 ⁹⁰	10 N	18 18	18 39	19 05	7 09 45	19 36 40	
12	358	54.9	+13 44.6		339	51.0 ¹⁴⁹	+4 50.5 ⁹⁰	0	18 08	18 29	18 54	7 13 42	19 33 43	
13	13	55.1		43.8	354	25.0 ¹⁵⁰	41.5 ⁹⁰	10 S	17 58	20	44	17 40	31 45	
14	28	55.2		43.0	8	59.0 ¹⁵⁰	32.5 ⁹⁰	20	48	10	36	21 37	28 48	
15	43	55.3		42.2	23	33.0 ¹⁵⁰	23.4 ⁹¹	30	36	18 01	29	26 34	24 52	
16	58	55.4		41.5	38	07.1 ¹⁵¹	14.3 ⁹¹	35	29	17 55	25	29 32	22 54	
17	73	55.6	+13 40.7		52	41.1 ¹⁵⁰	+4 05.3 ⁹⁰	40	17 22	17 50	18 22	7 32 30	19 20 56	
18	88	55.7	+13 39.9		67	15.2 ¹⁵¹	+3 56.2 ⁹¹	45	17 13	17 43	18 18	7 36 27	19 18 58	
19	103	55.8		39.1	81	49.3 ¹⁵¹	47.1 ⁹¹	50	17 02	36	14	40 24	15 61	
20	118	55.9		38.3	96	23.4 ¹⁵¹	37.9 ⁹²	52	16 58	33	13	42 23	13 63	
21	133	56.1		37.5	110	57.6 ¹⁵²	28.8 ⁹¹	54	52	29	11	44 22	12 64	
22	148	56.2		36.7	125	31.7 ¹⁵¹	19.7 ⁹¹	56	46	26	09	47 19	10 66	
23	163	56.3		35.9	140	05.9 ¹⁵²	10.5 ⁹²	58	40	21	08	49 18	08 68	
24	178	56.5	+13 35.1		154	40.1 ¹⁵²	+3 01.3 ⁹²	60 S	16 32	17 17	18 06	7 52 16	19 06 70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 23 ^m 3		Mag: -4.1 PMG: 11 ^h 50 ^m			Mag: +1.7 PMG: 10 ^h 52 ^m			Mag: -1.7 PMG: 12 ^h 35 ^m			Mag: +0.5 PMG: 18 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	324	04.3	181	45.3	+6 33.4		196 55.9	+20 08.7	170 44.2	+11 55.9		87 25.9	-17 56.0	
1	339	06.8	196	49.3		33.7	211 56.7	08.4	185 46.1		55.8	102 28.3		56.0
2	354	09.3	211	53.3		34.0	226 57.5	08.0	200 48.1		55.6	117 30.7		56.1
3	9	11.7	226	57.3		34.2	241 58.3	07.6	215 50.0		55.4	132 33.1		56.1
4	24	14.2	242	01.3		34.5	256 59.1	07.3	230 52.0		55.2	147 35.5		56.1
5	39	16.7	257	05.3	+6 34.8		271 59.9	+20 06.9	245 53.9	+11 55.0		162 37.9	-17 56.1	
6	54	19.1	272	09.3	+6 35.0		287 00.7	+20 06.5	260 55.8	+11 54.8		177 40.3	-17 56.2	
7	69	21.6	287	13.3		35.3	302 01.5	06.1	275 57.8		54.6	192 42.7		56.2
8	84	24.0	302	17.3		35.6	317 02.3	05.8	290 59.7		54.4	207 45.1		56.2
9	99	26.5	317	21.3		35.8	332 03.1	05.4	306 01.7		54.2	222 47.5		56.2
10	114	29.0	332	25.3		36.1	347 03.9	05.0	321 03.6		54.0	237 49.9		56.2
11	129	31.4	347	29.3	+6 36.4		2 04.7	+20 04.6	336 05.6	+11 53.8		252 52.4	-17 56.3	
12	144	33.9	2 33.3		+6 36.7		17 05.5	+20 04.3	351 07.5	+11 53.7		267 54.8	-17 56.3	
13	159	36.4	17 37.4		36.9		32 06.3	03.9	6 09.5		53.5	282 57.2		56.3
14	174	38.8	32 41.4		37.2		47 07.1	03.5	21 11.4		53.3	297 59.6		56.3
15	189	41.3	47 45.4		37.5		62 07.9	03.1	36 13.4		53.1	313 02.0		56.4
16	204	43.8	62 49.4		37.8		77 08.7	02.7	51 15.3		52.9	328 04.4		56.4
17	219	46.2	77 53.4	+6 38.0			92 09.5	+20 02.4	66 17.3	+11 52.7		343 06.8	-17 56.4	
18	234	48.7	92 57.4	+6 38.3			107 10.3	+20 02.0	81 19.2	+11 52.5		358 09.2	-17 56.4	
19	249	51.2	108 01.3		38.6		122 11.1	01.6	96 21.2		52.3	13 11.6		56.4
20	264	53.6	123 05.3		38.9		137 11.9	01.2	111 23.1		52.1	28 14.0		56.5
21	279	56.1	138 09.3		39.2		152 12.7	00.9	126 25.0		51.9	43 16.4		56.5
22	294	58.5	153 13.3		39.5		167 13.4	00.5	141 27.0		51.7	58 18.8		56.5
23	310	01.0	168 17.3		39.8		182 14.2	+20 00.1	156 28.9		51.6	73 21.2		56.5
24	325	03.5	183 21.3	+6 40.0			197 15.0	+19 59.7	171 30.9	+11 51.4		88 23.6	-17 56.6	
Dif	—		+40		+3		+8		-4			+24		0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 1				Edad: 2 ^d 4 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 R°: 43 ^m																
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	178	56.5	+13	35.1	154	40.1	+3	01.3	60 N	2	13	3	27	4	18	7	43	69	20 15 15		
1	193	56.6		34.3	169	14.3 ¹⁵²	+2	52.2	91	58		36		40		27		43	68	15 17	
2	208	56.7		33.5	183	48.5 ¹⁵²		43.0	92	56	2	53	3	51		34		44	66	15 19	
3	223	56.9		32.7	198	22.7 ¹⁵²		33.8	92	54	3	08	4	00		41		45	64	15 22	
4	238	57.0		31.9	212	57.0 ¹⁵³		24.6	92	52		20		09		47		46	62	15 22	
5	253	57.1	+13	31.2	227	31.2 ¹⁵²	+2	15.4	92	50	3	31	4	16	4	52	7	47	61	20 15 24	
6	268	57.2	+13	30.4	242	05.5 ¹⁵³	+2	06.2	92	45	3	53	4	32	5	04	7	48	58	20 15 27	
7	283	57.4		29.6	256	39.8 ¹⁵³	+1	56.9	93	40	4	09		44		13		49	56	15 30	
8	298	57.5		28.8	271	14.0 ¹⁵²		47.7	92	35		22	4	54		21		50	53	15 32	
9	313	57.6		28.0	285	48.3 ¹⁵³		38.5	92	30		33	5	03		28		51	51	15 34	
10	328	57.8		27.2	300	22.7 ¹⁵⁴		29.3	92	20	4	51		18		40		53	48	16 36	
11	343	57.9	+13	26.4	314	57.0 ¹⁵³	+1	20.0	93	10 N	5	04		5	29	5	51	7	54	45	20 16 39
12	358	58.0	+13	25.6	329	31.3 ¹⁵³	+1	10.8	92	0	5	15		5	40	6	01	7	55	43	20 16 42
13	13	58.2		24.8	344	05.6 ¹⁵³	+1	01.5	92	10 S		24		49		10		57	39	16 45	
14	28	58.3		24.0	358	40.0 ¹⁵⁴	+0	52.3	92	20		32	5	58		21		7	58	37	16 48
15	43	58.4		23.2	13	14.3 ¹⁵³		43.0	93	30		39	6	08		32		8	00	33	16 51
16	58	58.6		22.4	27	48.7 ¹⁵⁴		33.8	92	35		43		13		39		01	31	16 53	
17	73	58.7	+13	21.6	42	23.1 ¹⁵⁴	+0	24.5	93	40	5	46		6	18	6	46	8	02	29	20 16 55
18	88	58.8	+13	20.8	56	57.4 ¹⁵³	+0	15.3	92	45	5	50		6	24	6	55	8	03	27	20 16 58
19	103	59.0		20.0	71	31.8 ¹⁵⁴	+0	06.0	93	50		54		31		7	05	04	24	16	61
20	118	59.1		19.2	86	06.2 ¹⁵⁴	-0	03.2	92	52		55		35		10		05	22	16	62
21	133	59.2		18.4	100	40.6 ¹⁵⁴		12.5	93	54		57		38		15		06	21	16	64
22	148	59.4		17.6	115	14.9 ¹⁵³		21.7	92	56	5	58		42		21		06	20	16	66
23	163	59.5		16.8	129	49.3 ¹⁵⁴		31.0	93	58	6	00		46		27		07	18	16	68
24	178	59.6	+13	16.0	144	23.7 ¹⁵⁴	-0	40.2	92	60 S	6	02		6	50	7	35	8	08	16	20 16 70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 2 ^h 19 ^m 4		Mag: -4.1 PMG: 11 ^h 43 ^m		Mag: +1.7 PMG: 10 ^h 50 ^m		Mag: -1.7 PMG: 12 ^h 32 ^m		Mag: +0.5 PMG: 18 ^h 04 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	325	03.5	183	21.3	+6	40.0	197	15.0	+19	59.7	171	30.9	+11	51.4	88	23.6	-17	56.6
1	340	05.9	198	25.3		40.3	212	15.8		59.3	186	32.8		51.2	103	26.0		56.6
2	355	08.4	213	29.3		40.6	227	16.6		59.0	201	34.8		51.0	118	28.4		56.6
3	10	10.9	228	33.3		40.9	242	17.4		58.6	216	36.7		50.8	133	30.9		56.6
4	25	13.3	243	37.3		41.2	257	18.2		58.2	231	38.7		50.6	148	33.3		56.7
5	40	15.8	258	41.3	+6	41.5	272	19.0	+19	57.8	246	40.6	+11	50.4	163	35.7	-17	56.7
6	55	18.3	273	45.3	+6	41.8	287	19.8	+19	57.4	261	42.6	+11	50.2	178	38.1	-17	56.7
7	70	20.7	288	49.3		42.1	302	20.6		57.1	276	44.5		50.0	193	40.5		56.7
8	85	23.2	303	53.2		42.4	317	21.4		56.7	291	46.5		49.8	208	42.9		56.7
9	100	25.6	318	57.2		42.7	332	22.2		56.3	306	48.4		49.6	223	45.3		56.8
10	115	28.1	334	01.2		43.0	347	23.0		55.9	321	50.3		49.4	238	47.7		56.8
11	130	30.6	349	05.2	+6	43.3	2	23.9	+19	55.5	336	52.3	+11	49.3	253	50.1	-17	56.8
12	145	33.0	4	09.2	+6	43.6	17	24.7	+19	55.2	351	54.2	+11	49.1	268	52.5	-17	56.8
13	160	35.5	19	13.2		43.9	32	25.5		54.8	6	56.2		48.9	283	54.9		56.9
14	175	38.0	34	17.1		44.2	47	26.3		54.4	21	58.1		48.7	298	57.3		56.9
15	190	40.4	49	21.1		44.5	62	27.1		54.0	37	00.1		48.5	313	59.7		56.9
16	205	42.9	64	25.1		44.8	77	27.9		53.6	52	02.0		48.3	329	02.1		56.9
17	220	45.4	79	29.1	+6	45.1	92	28.7	+19	53.3	67	04.0	+11	48.1	344	04.5	-17	57.0
18	235	47.8	94	33.1	+6	45.4	107	29.5	+19	52.9	82	05.9	+11	47.9	359	06.9	-17	57.0
19	250	50.3	109	37.0		45.7	122	30.3		52.5	97	07.9		47.7	14	09.3		57.0
20	265	52.8	124	41.0		46.0	137	31.1		52.1	112	09.8		47.5	29	11.7		57.0
21	280	55.2	139	45.0		46.3	152	31.9		51.7	127	11.8		47.3	44	14.1		57.0
22	295	57.7	154	48.9		46.7	167	32.7		51.3	142	13.7		47.1	59	16.5		57.1
23	311	00.1	169	52.9		47.0	182	33.5		51.0	157	15.6		47.0	74	18.9		57.1
24	326	02.6	184	56.9	+6	47.3	197	34.3	+19	50.6	172	17.6	+11	46.8	89	21.3	-17	57.1
Dif	—		+40		+3		+8		-4		+19		-2		+24			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8				Edad: 3 ^d 4 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 1 R°: 42 ^m													
	PMG: 12 ^h 03 ^m 9				SD: 14 ^h 48 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	59.6	+13	16.0	144	23.7	-0	40.2	92	60 N	19	46	20	35	8	52	70	
1	193	59.8		15.2	158	58.1 ¹⁵⁴		49.4	92	58	38	23	26	51	68	32	19	
2	208	59.9		14.4	173	32.5 ¹⁵⁴		58.7	93	56	30	13	21	09	50	66	34	
3	224	00.1		13.6	188	06.9 ¹⁵⁴		07.9	92	54	24	20	04	20	55	49	64	
4	239	00.2		12.8	202	41.3 ¹⁵⁴		17.1	92	52	18	19	56	44	48	63	37	
5	254	00.3	+13	12.0	217	15.7 ¹⁵⁴		26.3	92	50	19	13	19	49	20	33	25	
6	269	00.5	+13	11.2	231	50.1 ¹⁵⁴		35.6	93	45	19	02	19	34	8	46	28	
7	284	00.6		10.3	246	24.4 ¹⁵³		44.8	92	40	18	53	22	19	57	45	30	
8	299	00.7		09.5	260	58.8 ¹⁵⁴		53.9	91	35	45	12	44	43	54	47	32	
9	314	00.9		08.7	275	33.2 ¹⁵⁴		03.1	92	30	39	19	03	33	42	52	34	
10	329	01.0		07.9	290	07.6 ¹⁵⁴		12.3	92	20	27	18	50	16	41	48	37	
11	344	01.1	+13	07.1	304	41.9 ¹⁵³		21.5	92	10 N	18	17	18	38	8	39	40	
12	359	01.3	+13	06.3	319	16.3 ¹⁵⁴		30.6	91	0	18	07	18	28	8	38	43	
13	14	01.4		05.5	333	50.6 ¹⁵³		39.8	92	10 S	17	58	19	44	36	40	45	
14	29	01.6		04.7	348	25.0 ¹⁵⁴		48.9	91	20	48	11	37	35	36	04	48	
15	44	01.7		03.9	2	59.3 ¹⁵³		58.0	91	30	37	18	02	30	33	33	52	
16	59	01.8		03.1	17	33.7 ¹⁵⁴		07.2	92	35	31	17	57	26	32	32	53	
17	74	02.0	+13	02.3	32	08.0 ¹⁵³		16.3	91	40	17	24	17	51	8	31	56	
18	89	02.1	+13	01.5	46	42.3 ¹⁵³		25.4	91	45	17	15	17	46	8	30	58	
19	104	02.3	+13	00.7	61	16.6 ¹⁵³		34.4	90	50	05	39	17	28	24	17	61	
20	119	02.4	+12	59.9	75	50.9 ¹⁵³		43.5	91	52	17	01	36	15	27	23	63	
21	134	02.5		59.0	90	25.2 ¹⁵³		52.5	91	54	16	56	33	14	27	21	64	
22	149	02.7		58.2	104	59.5 ¹⁵³		01.6	91	56	50	29	13	26	20	22	65	
23	164	02.8		57.4	119	33.7 ¹⁵²		10.6	90	58	44	25	11	25	18	24	67	
24	179	03.0	+12	56.6	134	08.0 ¹⁵³		19.6	90	60 S	16	37	17	21	8	24	69	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 15 ^m 5		Mag: -4.1 PMG: 11 ^h 37 ^m				Mag: +1.7 PMG: 10 ^h 49 ^m				Mag: -1.7 PMG: 12 ^h 29 ^m				Mag: +0.5 PMG: 18 ^h 00 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	326	02.6	184	56.9	+6	47.3	197	34.3	+19	50.6	172	17.6	+11	46.8	89	21.3	-17	57.1
1	341	05.1	200	00.9		47.6	212	35.1		50.2	187	19.5		46.6	104	23.7		57.1
2	356	07.5	215	04.8		47.9	227	35.9		49.8	202	21.5		46.4	119	26.1		57.2
3	11	10.0	230	08.8		48.2	242	36.7		49.4	217	23.4		46.2	134	28.5		57.2
4	26	12.5	245	12.8		48.6	257	37.5		49.0	232	25.4		46.0	149	30.9		57.2
5	41	14.9	260	16.7	+6	48.9	272	38.3	+19	48.6	247	27.3	+11	45.8	164	33.3	-17	57.2
6	56	17.4	275	20.7	+6	49.2	287	39.1	+19	48.3	262	29.3	+11	45.6	179	35.7	-17	57.3
7	71	19.9	290	24.6		49.5	302	39.9		47.9	277	31.2		45.4	194	38.1		57.3
8	86	22.3	305	28.6		49.8	317	40.7		47.5	292	33.2		45.2	209	40.5		57.3
9	101	24.8	320	32.6		50.2	332	41.5		47.1	307	35.1		45.0	224	42.9		57.3
10	116	27.2	335	36.5		50.5	347	42.3		46.7	322	37.0		44.8	239	45.3		57.4
11	131	29.7	350	40.5	+6	50.8	2	43.1	+19	46.3	337	39.0	+11	44.7	254	47.7	-17	57.4
12	146	32.2	5	44.4	+6	51.1	17	43.9	+19	45.9	352	40.9	+11	44.5	269	50.1	-17	57.4
13	161	34.6	20	48.4		51.5	32	44.7		45.5	7	42.9		44.3	284	52.5		57.4
14	176	37.1	35	52.3		51.8	47	45.6		45.2	22	44.8		44.1	299	54.9		57.5
15	191	39.6	50	56.3		52.1	62	46.4		44.8	37	46.8		43.9	314	57.3		57.5
16	206	42.0	66	00.2		52.4	77	47.2		44.4	52	48.7		43.7	329	59.7		57.5
17	221	44.5	81	04.2	+6	52.8	92	48.0	+19	44.0	67	50.7	+11	43.5	345	02.1	-17	57.5
18	236	47.0	96	08.1	+6	53.1	107	48.8	+19	43.6	82	52.6	+11	43.3	0	04.5	-17	57.6
19	251	49.4	111	12.1		53.4	122	49.6		43.2	97	54.6		43.1	15	06.9		57.6
20	266	51.9	126	16.0		53.8	137	50.4		42.8	112	56.5		42.9	30	09.3		57.6
21	281	54.4	141	19.9		54.1	152	51.2		42.4	127	58.5		42.7	45	11.7		57.6
22	296	56.8	156	23.9		54.4	167	52.0		42.1	143	00.4		42.5	60	14.1		57.7
23	311	59.3	171	27.8		54.8	182	52.8		41.7	158	02.3		42.4	75	16.5		57.7
24	327	01.7	186	31.7	+6	55.1	197	53.6	+19	41.3	173	04.3	+11	42.2	90	18.9	-17	57.7
Dif	—		+40		+3		+8		-4		+19		-2		+24		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 7			Edad: 4 ^d 4 PHE { 4 ^h : 54 ^m /1 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2 PMG: 15 ^h 30 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	179	03.0	+12 56.6	134	08.0	-4 19.6	60 N	2 22	3 33	4 23	10 02 70	20 47 19		
1	194	03.1	55.8	148	42.2 ¹⁵²	28.6 90	58	43	45	31	9 59 67	51 21		
2	209	03.2	55.0	163	16.4 ¹⁵²	37.5 89	56	2 59	3 55	38	56 66	55 22		
3	224	03.4	54.2	177	50.6 ¹⁵²	46.5 90	54	3 13	4 04	44	53 64	20 58 24		
4	239	03.5	53.4	192	24.8 ¹⁵²	-4 55.4 89	52	25	12	50	51 62	21 01 25		
5	254	03.7	+12 52.6	206	58.9 ¹⁵¹	-5 04.3 89	50	3 35	4 19	4 55	9 49 61	21 04 26		
6	269	03.8	+12 51.7	221	33.1 ¹⁵²	-5 13.2 89	45	3 56	4 34	5 06	9 44 58	21 10 29		
7	284	03.9	50.9	236	07.2 ¹⁵¹	22.1 88	40	4 12	46	15	40 56	15 32		
8	299	04.1	50.1	250	41.3 ¹⁵¹	30.9 88	35	24	4 56	23	37 53	19 34		
9	314	04.2	49.3	265	15.4 ¹⁵¹	39.7 88	30	35	5 04	29	34 51	23 35		
10	329	04.4	48.5	279	49.5 ¹⁵¹	48.6 89	20	4 51	18	41	29 48	29 39		
11	344	04.5	+12 47.7	294	23.6 ¹⁵¹	-5 57.3 87	10 N	5 04	5 29	5 51	9 24 46	21 35 42		
12	359	04.7	+12 46.9	308	57.6 ¹⁵⁰	-6 06.1 88	0	5 14	5 39	6 00	9 20 43	21 41 43		
13	14	04.8	46.0	323	31.6 ¹⁵⁰	14.8 87	10 S	23	48	09	16 40	46 46		
14	29	04.9	45.2	338	05.6 ¹⁵⁰	23.6 88	20	31	5 57	19	11 38	52 49		
15	44	05.1	44.4	352	39.6 ¹⁵⁰	32.2 86	30	37	6 06	30	06 35	21 59 52		
16	59	05.2	43.6	7	13.5 ¹⁴⁹	40.9 87	35	41	10	36	04 33	22 02 54		
17	74	05.4	+12 42.8	21	47.5 ¹⁵⁰	-6 49.6 87	40	5 44	6 16	6 43	9 00 31	22 07 56		
18	89	05.5	+12 42.0	36	21.4 ¹⁴⁹	-6 58.2 86	45	5 47	6 21	6 52	8 57 28	22 12 58		
19	104	05.7	41.1	50	55.2 ¹⁴⁸	-7 06.8 86	50	50	28	7 01	52 26	18 61		
20	119	05.8	40.3	65	29.1 ¹⁴⁹	15.3 85	52	51	31	06	50 25	21 62		
21	134	06.0	39.5	80	02.9 ¹⁴⁸	23.8 85	54	53	34	11	48 23	24 64		
22	149	06.1	38.7	94	36.7 ¹⁴⁸	32.4 86	56	54	37	16	46 21	27 66		
23	164	06.2	37.9	109	10.5 ¹⁴⁸	40.8 84	58	55	41	22	43 19	31 68		
24	179	06.4	+12 37.0	123	44.2 ¹⁴⁷	-7 49.3 85	60 S	5 57	6 45	7 29	8 40 17	22 35 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 2 ^h 11 ^m 5		Mag: -4.1 PMG: 11 ^h 31 ^m		Mag: +1.8 PMG: 10 ^h 48 ^m		Mag: -1.7 PMG: 12 ^h 26 ^m		Mag: +0.5 PMG: 17 ^h 56 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	327	01.7	186	31.7	+6 55.1	197	53.6	+19 41.3	173	04.3	+11 42.2	90	18.9	-17 57.7
1	342	04.2	201	35.7	55.5	212	54.4	40.9	188	06.2	42.0	105	21.3	57.7
2	357	06.7	216	39.6	55.8	227	55.2	40.5	203	08.2	41.8	120	23.7	57.7
3	12	09.1	231	43.5	56.1	242	56.1	40.1	218	10.1	41.6	135	26.1	57.8
4	27	11.6	246	47.5	56.5	257	56.9	39.7	233	12.1	41.4	150	28.5	57.8
5	42	14.1	261	51.4	+6 56.8	272	57.7	+19 39.3	248	14.0	+11 41.2	165	30.9	-17 57.8
6	57	16.5	276	55.3	+6 57.2	287	58.5	+19 38.9	263	16.0	+11 41.0	180	33.3	-17 57.8
7	72	19.0	291	59.2	57.5	302	59.3	38.5	278	17.9	40.8	195	35.7	57.9
8	87	21.5	307	03.2	57.8	318	00.1	38.1	293	19.9	40.6	210	38.1	57.9
9	102	23.9	322	07.1	58.2	333	00.9	37.8	308	21.8	40.4	225	40.5	57.9
10	117	26.4	337	11.0	58.5	348	01.7	37.4	323	23.8	40.2	240	42.9	57.9
11	132	28.8	352	14.9	+6 58.9	3	02.5	+19 37.0	338	25.7	+11 40.0	255	45.3	-17 58.0
12	147	31.3	7	18.8	+6 59.2	18	03.3	+19 36.6	353	27.6	+11 39.9	270	47.6	-17 58.0
13	162	33.8	22	22.8	59.6	33	04.1	36.2	8	29.6	39.7	285	50.0	58.0
14	177	36.2	37	26.7	+6 59.9	48	05.0	35.8	23	31.5	39.5	300	52.4	58.0
15	192	38.7	52	30.6	+7 00.3	63	05.8	35.4	38	33.5	39.3	315	54.8	58.1
16	207	41.2	67	34.5	00.6	78	06.6	35.0	53	35.4	39.1	330	57.2	58.1
17	222	43.6	82	38.4	+7 01.0	93	07.4	+19 34.6	68	37.4	+11 38.9	345	59.6	-17 58.1
18	237	46.1	97	42.3	+7 01.3	108	08.2	+19 34.2	83	39.3	+11 38.7	1	02.0	-17 58.1
19	252	48.6	112	46.2	01.7	123	09.0	33.8	98	41.3	38.5	16	04.4	58.2
20	267	51.0	127	50.1	02.0	138	09.8	33.4	113	43.2	38.3	31	06.8	58.2
21	282	53.5	142	54.0	02.4	153	10.6	33.0	128	45.2	38.1	46	09.2	58.2
22	297	56.0	157	57.9	02.8	168	11.5	32.6	143	47.1	37.9	61	11.6	58.2
23	312	58.4	173	01.8	03.1	183	12.3	32.2	158	49.0	37.7	76	14.0	58.3
24	328	00.9	188	05.7	+7 03.5	198	13.1	+19 31.8	173	51.0	+11 37.5	91	16.4	-17 58.3
Dif	—		+39	+3	+8	-4	+19		-2	+24				

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: 5 ^d 4 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 Rº: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	06.4	+12 37.0		123	44.2	-7 49.3	60 N	19 40	20 29	21 37	11 12 70	21 06 22	
1	194	06.5		36.2	138	17.9 ¹⁴⁷	-7 57.7 ⁸⁴	58	32	17	18	06 68	12 24	
2	209	06.7		35.4	152	51.6 ¹⁴⁷	-8 06.1 ⁸⁴	56	26	20 08	21 03	11 02 65	17 26	
3	224	06.8		34.6	167	25.2 ¹⁴⁶	14.4 ⁸³	54	20	19 59	20 49	10 57 64	22 27	
4	239	07.0		33.8	181	58.9 ¹⁴⁷	22.8 ⁸⁴	52	14	51	38	53 63	26 29	
5	254	07.1	+12 32.9		196	32.4 ¹⁴⁵	-8 31.1 ⁸³	50	19 09	19 45	20 28	10 50 61	21 30 31	
6	269	07.3	+12 32.1		211	06.0 ¹⁴⁶	-8 39.3 ⁸²	45	18 59	19 30	20 09	10 42 59	21 39 33	
7	284	07.4		31.3	225	39.5 ¹⁴⁵	47.5 ⁸²	40	50	19	19 53	36 56	47 34	
8	299	07.6		30.5	240	13.0 ¹⁴⁵	-8 55.7 ⁸²	35	43	09	41	30 55	53 36	
9	314	07.7		29.7	254	46.5 ¹⁴⁵	-9 03.9 ⁸²	30	36	19 01	31	25 53	21 58 39	
10	329	07.9		28.8	269	19.9 ¹⁴⁴	12.0 ⁸¹	20	25	18 48	15	17 50	22 08 41	
11	344	08.0	+12 28.0		283	53.3 ¹⁴⁴	-9 20.1 ⁸¹	10 N	18 16	18 37	19 02	10 10 47	22 17 43	
12	359	08.2	+12 27.2		298	26.6 ¹⁴³	-9 28.2 ⁸¹	0	18 07	18 28	18 53	10 03 45	22 24 46	
13	14	08.3		26.4	313	00.0 ¹⁴⁴	36.2 ⁸⁰	10 S	17 58	19	44	9 56 43	32 48	
14	29	08.4		25.5	327	33.2 ¹⁴²	44.2 ⁸⁰	20	49	11	37	49 40	41 50	
15	44	08.6		24.7	342	06.5 ¹⁴³	-9 52.1 ⁷⁹	30	38	18 03	31	41 37	51 53	
16	59	08.7		23.9	356	39.7 ¹⁴²	-10 00.0 ⁷⁹	35	32	17 58	28	37 35	22 56 55	
17	74	08.9	+12 23.1		11	12.9 ¹⁴²	-10 07.9 ⁷⁹	40	17 25	17 53	18 25	9 31 34	23 03 56	
18	89	09.0	+12 22.2		25	46.0 ¹⁴¹	-10 15.7 ⁷⁸	45	17 18	17 48	18 22	9 25 31	23 10 59	
19	104	09.2		21.4	40	19.1 ¹⁴¹	23.5 ⁷⁸	50	08	42	19	18 28	19 61	
20	119	09.3		20.6	54	52.1 ¹⁴⁰	31.2 ⁷⁷	52	17 04	39	18	15 27	23 63	
21	134	09.5		19.8	69	25.2 ¹⁴¹	38.9 ⁷⁷	54	16 59	36	17	11 26	28 64	
22	149	09.6		18.9	83	58.1 ¹³⁹	46.6 ⁷⁷	56	54	33	16	07 24	33 65	
23	164	09.8		18.1	98	31.1 ¹⁴⁰	-10 54.2 ⁷⁶	58	48	29	15	9 02 23	39 67	
24	179	09.9	+12 17.3		113	03.9 ¹³⁸	-11 01.8 ⁷⁶	60 S	16 41	17 25	18 14	8 57 21	23 45 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 07 ^m 6		Mag: -4.1 PMG: 11 ^h 25 ^m			Mag: +1.8 PMG: 10 ^h 47 ^m			Mag: -1.7 PMG: 12 ^h 23 ^m			Mag: +0.5 PMG: 17 ^h 52 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	328	00.9	188	05.7	+7 03.5	198	13.1	+19 31.8	173	51.0	+11 37.5	91	16.4	-17 58.3
1	343	03.3	203	09.6	03.8	213	13.9	31.5	188	52.9	37.3	106	18.8	58.3
2	358	05.8	218	13.5	04.2	228	14.7	31.1	203	54.9	37.2	121	21.2	58.4
3	13	08.3	233	17.4	04.5	243	15.5	30.7	218	56.8	37.0	136	23.6	58.4
4	28	10.7	248	21.2	04.9	258	16.3	30.3	233	58.8	36.8	151	25.9	58.4
5	43	13.2	263	25.1	+7 05.3	273	17.1	+19 29.9	249	00.7	+11 36.6	166	28.3	-17 58.4
6	58	15.7	278	29.0	+7 05.6	288	18.0	+19 29.5	264	02.7	+11 36.4	181	30.7	-17 58.5
7	73	18.1	293	32.9	06.0	303	18.8	29.1	279	04.6	36.2	196	33.1	58.5
8	88	20.6	308	36.8	06.4	318	19.6	28.7	294	06.6	36.0	211	35.5	58.5
9	103	23.1	323	40.6	06.7	333	20.4	28.3	309	08.5	35.8	226	37.9	58.5
10	118	25.5	338	44.5	07.1	348	21.2	27.9	324	10.5	35.6	241	40.3	58.6
11	133	28.0	353	48.4	+7 07.4	3	22.0	+19 27.5	339	12.4	+11 35.4	256	42.7	-17 58.6
12	148	30.5	8	52.2	+7 07.8	18	22.8	+19 27.1	354	14.3	+11 35.2	271	45.1	-17 58.6
13	163	32.9	23	56.1	08.2	33	23.7	26.7	9	16.3	35.0	286	47.5	58.6
14	178	35.4	39	00.0	08.6	48	24.5	26.3	24	18.2	34.8	301	49.9	58.7
15	193	37.8	54	03.8	08.9	63	25.3	25.9	39	20.2	34.7	316	52.3	58.7
16	208	40.3	69	07.7	09.3	78	26.1	25.5	54	22.1	34.5	331	54.6	58.7
17	223	42.8	84	11.6	+7 09.7	93	26.9	+19 25.1	69	24.1	+11 34.3	346	57.0	-17 58.7
18	238	45.2	99	15.4	+7 10.0	108	27.7	+19 24.7	84	26.0	+11 34.1	1	59.4	-17 58.8
19	253	47.7	114	19.3	10.4	123	28.6	24.3	99	28.0	33.9	17	01.8	58.8
20	268	50.2	129	23.1	10.8	138	29.4	23.9	114	29.9	33.7	32	04.2	58.8
21	283	52.6	144	27.0	11.2	153	30.2	23.5	129	31.9	33.5	47	06.6	58.8
22	298	55.1	159	30.8	11.5	168	31.0	23.1	144	33.8	33.3	62	09.0	58.9
23	313	57.6	174	34.7	11.9	183	31.8	22.7	159	35.7	33.1	77	11.4	58.9
24	329	00.0	189	38.5	+7 12.3	198	32.6	+19 22.3	174	37.7	+11 32.9	92	13.8	-17 58.9
Dif	—		+39		+4	+8		-4	+19		-2	+24		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 6 ^d 4	PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0											
	PMG: 12 ^h 03 ^m 2					SD: 14 ^h 9		PMG: 16 ^h 59 ^m			R ^o : 47 ^m					
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	
0	179	09.9	+12 17.3	113	03.9	-11 01.8	60 N	2 30	3 39	4 28	12 22	69	21 28	27		
1	194	10.1	16.5	127	36.8 ¹³⁹	09.3 ⁷⁵	58	2 49	3 50	35	14	67	36	29		
2	209	10.2	15.6	142	09.6 ¹³⁸	16.8 ⁷⁵	56	3 05	4 00	42	07	66	43	31		
3	224	10.4	14.8	156	42.3 ¹³⁷	24.2 ⁷⁴	54	18	08	48	12	01	64	49	33	
4	239	10.6	14.0	171	15.1 ¹³⁸	31.6 ⁷⁴	52	29	16	53	11	56	62	21	55	34
5	254	10.7	+12 13.1	185	47.7 ¹³⁶	-11 39.0 ⁷⁴	50	3 39	4 23	4 58	11	51	61	22	01	34
6	269	10.9	+12 12.3	200	20.4 ¹³⁷	-11 46.3 ⁷³	45	3 59	4 37	5 08	11	41	58	22	12	37
7	284	11.0	11.5	214	52.9 ¹³⁵	-11 53.6 ⁷²	40	4 14	48	17	32	57	21	39		
8	299	11.2	10.6	229	25.5 ¹³⁶	-12 00.8 ⁷¹	35	26	4 58	24	25	55	29	41		
9	314	11.3	09.8	243	57.9 ¹³⁴	07.9 ⁷²	30	36	5 06	31	18	54	37	41		
10	329	11.5	09.0	258	30.4 ¹³⁵	15.1 ⁷⁰	20	4 52	19	42	11	07	51	22	49	44
11	344	11.6	+12 08.2	273	02.8 ¹³⁴	-12 22.1 ⁷⁰	10 N	5 04	5 30	5 51	10	57	49	23	00	46
12	359	11.8	+12 07.3	287	35.1 ¹³³	-12 29.1 ⁷⁰	0	5 14	5 39	6 00	10	48	47	23	10	48
13	14	11.9	06.5	302	07.4 ¹³³	36.1 ⁶⁹	10 S	22	47	09	39	44	20	50		
14	29	12.1	05.7	316	39.7 ¹³³	43.0 ⁶⁹	20	29	5 55	18	29	43	31	52		
15	44	12.2	04.8	331	11.9 ¹³²	49.9 ⁶⁹	30	36	6 04	28	18	40	44	53		
16	59	12.4	04.0	345	44.0 ¹³¹	-12 56.7 ⁶⁸	35	38	08	34	12	38	51	55		
17	74	12.5	+12 03.2	0	16.1 ¹³¹	-13 03.4 ⁶⁷	40	5 41	6 13	6 41	10	05	36	23	59	57
18	89	12.7	+12 02.3	14	48.1 ¹³⁰	-13 10.1 ⁶⁷	45	5 44	6 18	6 48	9	56	35	**	**	**
19	104	12.9	01.5	29	20.1 ¹³⁰	16.8 ⁶⁷	50	47	24	6 57	46	33	**	**	**	
20	119	13.0	+12 00.7	43	52.1 ¹³⁰	23.4 ⁶⁶	52	48	27	7 02	42	31	**	**	**	
21	134	13.2	+11 59.8	58	24.0 ¹²⁹	29.9 ⁶⁵	54	49	30	06	37	30	**	**	**	
22	149	13.3	59.0	72	55.8 ¹²⁸	36.4 ⁶⁵	56	50	33	12	31	29	**	**	**	
23	164	13.5	58.2	87	27.6 ¹²⁸	42.8 ⁶⁴	58	51	36	17	25	27	**	**	**	
24	179	13.6	+11 57.3	101	59.3 ¹²⁷	-13 49.1 ⁶³	60 S	5 52	6 40	7 24	9	18	25	**	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 03 ^m 7		Mag: -4.1 PMG: 11 ^h 19 ^m		Mag: +1.8 PMG: 10 ^h 45 ^m		Mag: -1.7 PMG: 12 ^h 20 ^m		Mag: +0.5 PMG: 17 ^h 48 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	329	00.0	189	38.5	+7 12.3	198	32.6	+19 22.3	174	37.7	+11 32.9	92	13.8	-17 58.9
1	344	02.5	204	42.3	12.7	213	33.5	21.9	189	39.6	32.7	107	16.2	58.9
2	359	04.9	219	46.2	13.0	228	34.3	21.5	204	41.6	32.5	122	18.5	59.0
3	14	07.4	234	50.0	13.4	243	35.1	21.1	219	43.5	32.3	137	20.9	59.0
4	29	09.9	249	53.8	13.8	258	35.9	20.7	234	45.5	32.1	152	23.3	59.0
5	44	12.3	264	57.7	+7 14.2	273	36.7	+19 20.3	249	47.4	+11 31.9	167	25.7	-17 59.1
6	59	14.8	280	01.5	+7 14.5	288	37.5	+19 19.9	264	49.4	+11 31.8	182	28.1	-17 59.1
7	74	17.3	295	05.3	14.9	303	38.4	19.5	279	51.3	31.6	197	30.5	59.1
8	89	19.7	310	09.2	15.3	318	39.2	19.1	294	53.3	31.4	212	32.9	59.1
9	104	22.2	325	13.0	15.7	333	40.0	18.7	309	55.2	31.2	227	35.3	59.2
10	119	24.7	340	16.8	16.1	348	40.8	18.3	324	57.2	31.0	242	37.6	59.2
11	134	27.1	355	20.6	+7 16.4	3	41.6	+19 17.9	339	59.1	+11 30.8	257	40.0	-17 59.2
12	149	29.6	10	24.4	+7 16.8	18	42.5	+19 17.5	355	01.0	+11 30.6	272	42.4	-17 59.2
13	164	32.1	25	28.2	17.2	33	43.3	17.1	10	03.0	30.4	287	44.8	59.3
14	179	34.5	40	32.1	17.6	48	44.1	16.7	25	04.9	30.2	302	47.2	59.3
15	194	37.0	55	35.9	18.0	63	44.9	16.2	40	06.9	30.0	317	49.6	59.3
16	209	39.4	70	39.7	18.4	78	45.7	15.8	55	08.8	29.8	332	52.0	59.3
17	224	41.9	85	43.5	+7 18.8	93	46.6	+19 15.4	70	10.8	+11 29.6	347	54.4	-17 59.4
18	239	44.4	100	47.3	+7 19.1	108	47.4	+19 15.0	85	12.7	+11 29.4	2	56.7	-17 59.4
19	254	46.8	115	51.1	19.5	123	48.2	14.6	100	14.7	29.2	17	59.1	59.4
20	269	49.3	130	54.9	19.9	138	49.0	14.2	115	16.6	29.1	33	01.5	59.5
21	284	51.8	145	58.6	20.3	153	49.8	13.8	130	18.6	28.9	48	03.9	59.5
22	299	54.2	161	02.4	20.7	168	50.7	13.4	145	20.5	28.7	63	06.3	59.5
23	314	56.7	176	06.2	21.1	183	51.5	13.0	160	22.4	28.5	78	08.7	59.5
24	329	59.2	191	10.0	+7 21.5	198	52.3	+19 12.6	175	24.4	+11 28.3	93	11.1	-17 59.6
Dif	—		+38		+4	+8		-4	+19		-2	+24		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 7 ^d 4	PHE { 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/6 Rº: 50 ^m									
	PMG: 12 ^h 03 ^m 0													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	13.6	+11 57.3	101	59.3	-13 49.1	63	60 N	19 34	20 22	21 29	13 31 66	21 55 36	
1	194	13.8	56.5	116	31.0 ¹²⁷	-13 55.4	63	58	27	11	21 11	21 65	22 05 37	
2	209	13.9	55.7	131	02.6 ¹²⁶	-14 01.7	63	56	21	20 02	20 56	13 63	14 38	
3	224	14.1	54.8	145	34.2 ¹²⁶	07.9	62	54	15	19 54	44	13 05 62	22 39	
4	239	14.3	54.0	160	05.7 ¹²⁵	14.0	61	52	10	47	33	12 58 62	29 40	
5	254	14.4	+11 53.1	174	37.1 ¹²⁴	-14 20.1	61	50	19 05	19 40	20 24	12 52 61	22 35 41	
6	269	14.6	+11 52.3	189	08.5 ¹²⁴	-14 26.1	60	45	18 56	19 27	20 05	12 39 59	22 49 43	
7	284	14.7	51.5	203	39.9 ¹²⁴	32.0	59	40	47	16	19 50	29 56	23 00 44	
8	299	14.9	50.6	218	11.2 ¹²³	37.9	59	35	40	19 07	38	20 55	10 45	
9	314	15.0	49.8	232	42.4 ¹²²	43.7	58	30	34	18 59	28	12 12 54	18 47	
10	329	15.2	49.0	247	13.6 ¹²²	49.4	57	20	24	46	13	11 58 52	33 48	
11	344	15.4	+11 48.1	261	44.7 ¹²¹	-14 55.1	57	10 N	18 15	18 36	19 01	11 46 50	23 46 49	
12	359	15.5	+11 47.3	276	15.8 ¹²¹	-15 00.7	56	0	18 06	18 27	18 52	11 35 49	23 58 50	
13	14	15.7	46.4	290	46.8 ¹²⁰	06.3	56	10 S	17 58	19	44	23 48	** ** *	
14	29	15.8	45.6	305	17.7 ¹¹⁹	11.7	54	20	49	12	38	11 12 45	** ** *	
15	44	16.0	44.8	319	48.6 ¹¹⁹	17.2	55	30	39	04	32	10 58 44	** ** *	
16	59	16.1	43.9	334	19.4 ¹¹⁸	22.5	53	35	34	18 00	29	50 43	** ** *	
17	74	16.3	+11 43.1	348	50.2 ¹¹⁸	-15 27.8	53	40	17 27	17 55	18 27	10 41 42	** ** *	
18	89	16.5	+11 42.2	3	20.9 ¹¹⁷	-15 33.0	52	45	17 20	17 50	18 24	10 31 40	0 09 58	
19	104	16.6	41.4	17	51.5 ¹¹⁶	38.1	51	50	11	44	22	19 38	20 61	
20	119	16.8	40.5	32	22.1 ¹¹⁶	43.2	51	52	07	42	21	13 37	26 62	
21	134	16.9	39.7	46	52.7 ¹¹⁶	48.2	50	54	17 03	39	20	07 35	32 63	
22	149	17.1	38.9	61	23.1 ¹¹⁴	53.1	49	56	16 58	36	20	10 00 34	38 65	
23	164	17.3	38.0	75	53.5 ¹¹⁴	-15 57.9	48	58	52	33	19	9 52 33	46 66	
24	179	17.4	+11 37.2	90	23.9 ¹¹⁴	-16 02.7	48	60 S	16 46	17 29	18 18	9 43 31	0 54 68	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -4.1			Mag: +1.8			Mag: -1.7			Mag: +0.5		
	1 ^h 59 ^m 7		PMG: 11 ^h 13 ^m			PMG: 10 ^h 44 ^m			PMG: 12 ^h 17 ^m			PMG: 17 ^h 44 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	329	59.2	191	10.0	+7 21.5	198	52.3	+19 12.6	175	24.4	+11 28.3	93	11.1	-17 59.6
1	345	01.6	206	13.8	21.9	213	53.1	12.2	190	26.3	28.1	108	13.4	59.6
2	0	04.1	221	17.6	22.3	228	53.9	11.8	205	28.3	27.9	123	15.8	59.6
3	15	06.6	236	21.3	22.7	243	54.8	11.4	220	30.2	27.7	138	18.2	59.6
4	30	09.0	251	25.1	23.0	258	55.6	11.0	235	32.2	27.5	153	20.6	59.7
5	45	11.5	266	28.9	+7 23.4	273	56.4	+19 10.6	250	34.1	+11 27.3	168	23.0	-17 59.7
6	60	13.9	281	32.7	+7 23.8	288	57.2	+19 10.2	265	36.1	+11 27.1	183	25.4	-17 59.7
7	75	16.4	296	36.4	24.2	303	58.1	09.8	280	38.0	26.9	198	27.7	59.7
8	90	18.9	311	40.2	24.6	318	58.9	09.3	295	40.0	26.7	213	30.1	59.8
9	105	21.3	326	43.9	25.0	333	59.7	08.9	310	41.9	26.5	228	32.5	59.8
10	120	23.8	341	47.7	25.4	349	00.5	08.5	325	43.9	26.3	243	34.9	59.8
11	135	26.3	356	51.5	+7 25.8	4	01.4	+19 08.1	340	45.8	+11 26.2	258	37.3	-17 59.9
12	150	28.7	11	55.2	+7 26.2	19	02.2	+19 07.7	355	47.7	+11 26.0	273	39.7	-17 59.9
13	165	31.2	26	59.0	26.6	34	03.0	07.3	10	49.7	25.8	288	42.0	59.9
14	180	33.7	42	02.7	27.0	49	03.8	06.9	25	51.6	25.6	303	44.4	-17 59.9
15	195	36.1	57	06.5	27.4	64	04.6	06.5	40	53.6	25.4	318	46.8	-18 00.0
16	210	38.6	72	10.2	27.8	79	05.5	06.1	55	55.5	25.2	333	49.2	00.0
17	225	41.0	87	13.9	+7 28.2	94	06.3	+19 05.7	70	57.5	+11 25.0	348	51.6	-18 00.0
18	240	43.5	102	17.7	+7 28.6	109	07.1	+19 05.3	85	59.4	+11 24.8	3	54.0	-18 00.1
19	255	46.0	117	21.4	29.0	124	07.9	04.8	101	01.4	24.6	18	56.3	00.1
20	270	48.4	132	25.1	29.4	139	08.8	04.4	116	03.3	24.4	33	58.7	00.1
21	285	50.9	147	28.9	29.8	154	09.6	04.0	131	05.3	24.2	49	01.1	00.1
22	300	53.4	162	32.6	30.2	169	10.4	03.6	146	07.2	24.0	64	03.5	00.2
23	315	55.8	177	36.3	30.6	184	11.2	03.2	161	09.1	23.8	79	05.9	00.2
24	330	58.3	192	40.0	+7 31.0	199	12.1	+19 02.8	176	11.1	+11 23.6	94	08.2	-18 00.2
Dif	—		+38		+4	+8		-4	+19		-2	+24		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 7			Edad: 8 ^d 4 PHE { 4 ^h : 55 ^m 9 12 ^h : 56 ^m 1 20 ^h : 56 ^m 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	179	17.4	+11	37.2	90	23.9	-16	02.7	60 N	2	38	3	44	4	33	14	37	62
1	194	17.6		36.3	104	54.2 ¹¹³		07.4 ⁴⁷	58	2	56	3	55		40	26	61	42
2	209	17.7		35.5	119	24.4 ¹¹²		12.0 ⁴⁶	56	3	10	4	04		46	16	60	22
3	224	17.9		34.6	133	54.6 ¹¹²		16.6 ⁴⁶	54		23		12		51	07	60	23
4	239	18.1		33.8	148	24.7 ¹¹¹		21.1 ⁴⁵	52		33		20		4	56	14	00
5	254	18.2	+11	33.0	162	54.7 ¹¹⁰		-16 25.4 ⁴³	50	3	43	4	26	5	01	13	53	58
6	269	18.4	+11	32.1	177	24.7 ¹¹⁰		-16 29.8 ⁴⁴	45	4	02	4	40	5	11	13	38	57
7	284	18.6		31.3	191	54.6 ¹⁰⁹		34.0 ⁴²	40		16		50		19	25	56	
8	299	18.7		30.4	206	24.5 ¹⁰⁹		38.1 ⁴¹	35		28	4	59	26		15	55	23
9	314	18.9		29.6	220	54.3 ¹⁰⁸		42.2 ⁴¹	30		38	5	07	32		13	06	55
10	329	19.0		28.7	235	24.0 ¹⁰⁷		46.2 ⁴⁰	20	4	53		19		42	12	50	54
11	344	19.2	+11	27.9	249	53.7 ¹⁰⁷		-16 50.1 ³⁹	10 N	5	05		5	30	5	51	12	36
12	359	19.4	+11	27.0	264	23.3 ¹⁰⁶		-16 54.0 ³⁹	0	5	14		5	38	5	59	12	24
13	14	19.5		26.2	278	52.9 ¹⁰⁶		-16 57.7 ³⁷	10 S		21		46		6	08	12	11
14	29	19.7		25.3	293	22.4 ¹⁰⁵		-17 01.4 ³⁷	20		28		5	54	16	11	57	50
15	44	19.9		24.5	307	51.8 ¹⁰⁴		05.0 ³⁶	30		34		6	02	26	42	49	37
16	59	20.0		23.6	322	21.2 ¹⁰⁴		08.5 ³⁵	35		36		06		31	33	48	46
17	74	20.2	+11	22.8	336	50.5 ¹⁰³		-17 11.9 ³⁴	40	5	39		6	10	6	38	11	23
18	89	20.4	+11	21.9	351	19.8 ¹⁰³		-17 15.2 ³³	45	5	41		6	15	6	45	11	11
19	104	20.5		21.1	5	49.0 ¹⁰²		18.4 ³²	50		43		20		54	10	57	44
20	119	20.7		20.3	20	18.1 ¹⁰¹		21.6 ³²	52		44		23		6	58	50	44
21	134	20.8		19.4	34	47.1 ¹⁰⁰		24.6 ³⁰	54		44		26		7	02	42	44
22	149	21.0		18.6	49	16.2 ¹⁰¹		27.6 ³⁰	56		45		28		07	34	43	43
23	164	21.2		17.7	63	45.1 ⁹⁹		30.5 ²⁹	58		46		32		12	25	41	1
24	179	21.3	+11	16.9	78	14.0 ⁹⁹		-17 33.3 ²⁸	60 S	5	47		6	35	7	18	10	14
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 55 ^m 8			Mag: -4.2 PMG: 11 ^h 07 ^m			Mag: +1.8 PMG: 10 ^h 43 ^m			Mag: -1.7 PMG: 12 ^h 14 ^m			Mag: +0.5 PMG: 17 ^h 41 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	330	58.3	192	40.0	+7	31.0	199	12.1	+19	02.8	176	11.1	+11	23.6	94	08.2		
1	346	00.8	207	43.7		31.4	214	12.9		02.4	191	13.0		23.4	109	10.6		
2	1	03.2	222	47.4		31.8	229	13.7		02.0	206	15.0		23.2	124	13.0		
3	16	05.7	237	51.2		32.2	244	14.6		01.6	221	16.9		23.1	139	15.4		
4	31	08.2	252	54.9		32.6	259	15.4		01.1	236	18.9		22.9	154	17.8		
5	46	10.6	267	58.6	+7	33.0	274	16.2	+19	00.7	251	20.8	+11	22.7	169	20.1		
6	61	13.1	283	02.3	+7	33.4	289	17.0	+19	00.3	266	22.8	+11	22.5	184	22.5		
7	76	15.5	298	06.0		33.8	304	17.9	+18	59.9	281	24.7		22.3	199	24.9		
8	91	18.0	313	09.7		34.3	319	18.7		59.5	296	26.7		22.1	214	27.3		
9	106	20.5	328	13.4		34.7	334	19.5		59.1	311	28.6		21.9	229	29.7		
10	121	22.9	343	17.0		35.1	349	20.3		58.7	326	30.6		21.7	244	32.0		
11	136	25.4	358	20.7	+7	35.5	4	21.2	+18	58.2	341	32.5	+11	21.5	259	34.4		
12	151	27.9	13	24.4	+7	35.9	19	22.0	+18	57.8	356	34.4	+11	21.3	274	36.8		
13	166	30.3	28	28.1		36.3	34	22.8		57.4	11	36.4		21.1	289	39.2		
14	181	32.8	43	31.8		36.7	49	23.7		57.0	26	38.3		20.9	304	41.6		
15	196	35.3	58	35.4		37.1	64	24.5		56.6	41	40.3		20.7	319	43.9		
16	211	37.7	73	39.1		37.5	79	25.3		56.2	56	42.2		20.5	334	46.3		
17	226	40.2	88	42.8	+7	37.9	94	26.1	+18	55.8	71	44.2	+11	20.3	349	48.7		
18	241	42.7	103	46.4	+7	38.3	109	27.0	+18	55.3	86	46.1	+11	20.1	4	51.1		
19	256	45.1	118	50.1		38.8	124	27.8		54.9	101	48.1		20.0	19	53.5		
20	271	47.6	133	53.8		39.2	139	28.6		54.5	116	50.0		19.8	34	55.8		
21	286	50.0	148	57.4		39.6	154	29.5		54.1	131	52.0		19.6	49	58.2		
22	301	52.5	164	01.1		40.0	169	30.3		53.7	146	53.9		19.4	65	00.6		
23	316	55.0	179	04.7		40.4	184	31.1		53.3	161	55.9		19.2	80	03.0		
24	331	57.4	194	08.4	+7	40.8	199	32.0	+18	52.8	176	57.8	+11	19.0	95	05.3		
Dif	—		+37		+4		+8		-4		+19		-2		+24			

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 4			Edad: 9 ^d 4 PHE { 4 ^h : 56/7 12 ^h : 57/0 20 ^h : 57/3 PMG: 19 ^h 28 ^m R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	21.3	+11	16.9	78	14.0	-17	33.3	60 N	19 28	20 16	21 20	15 39 54	23 16 59		
1	194	21.5		16.0	92	42.8	98	36.0	58	22	20 06	21 03	27 54	29 58		
2	209	21.7		15.1	107	11.6	98	38.6	56	16	19 57	20 50	16 54	40 57		
3	224	21.8		14.3	121	40.3	97	41.1	54	10	49	38	15 07 54	49 58		
4	239	22.0		13.4	136	08.9	96	43.5	52	06	42	28	14 58 55	23 57 58		
5	254	22.2	+11	12.6	150	37.5	96	-17 45.9	50	19 01	19 36	20 19	14 51 54	*** ** *		
6	269	22.3	+11	11.7	165	06.0	95	-17 48.1	45	18 52	19 23	20 01	14 35 54	*** ** *		
7	284	22.5		10.9	179	34.5	95	50.2	40	44	13	19 47	21 55	*** ** *		
8	299	22.7		10.0	194	02.9	94	52.3	35	38	19 04	35	10 55	*** ** *		
9	314	22.8		09.2	208	31.3	94	54.2	30	32	18 57	26	14 01 54	0 05 51		
10	329	23.0		08.3	222	59.5	92	56.1	20	22	45	11	13 44 54	21 52		
11	344	23.2	+11	07.5	237	27.8	93	-17 57.8	10 N	18 14	18 35	19 00	13 29 54	0 35 52		
12	359	23.3	+11	06.6	251	55.9	91	-17 59.5	0	18 06	18 27	18 51	13 15 55	0 48 53		
13	14	23.5		05.8	266	24.1	92	-18 01.1	10 S	17 58	19	44	13 02 54	1 02 53		
14	29	23.7		04.9	280	52.1	90	02.5	20	50	12	38	12 47 54	16 54		
15	44	23.8		04.1	295	20.1	90	03.9	30	40	05	33	31 53	32 54		
16	59	24.0		03.2	309	48.1	90	05.2	35	35	18 01	30	21 54	41 55		
17	74	24.2	+11	02.3	324	16.0	89	-18 06.3	40	17 29	17 57	18 28	12 10 54	1 52 55		
18	89	24.4	+11	01.5	338	43.8	88	-18 07.4	45	17 22	17 52	18 26	11 57 54	2 05 56		
19	104	24.5	+11	00.6	353	11.6	88	08.3	50	14	47	25	41 54	20 56		
20	119	24.7	+10	59.8	7	39.3	87	09.2	52	10	45	24	34 53	27 57		
21	134	24.9		58.9	22	07.0	87	09.9	54	06	42	24	26 53	36 56		
22	149	25.0		58.1	36	34.6	86	10.6	56	17 01	40	23	17 53	45 57		
23	164	25.2		57.2	51	02.2	86	11.1	58	16 56	37	23	11 06 53	2 55 57		
24	179	25.4	+10	56.3	65	29.7	85	-18 11.6	60 S	16 51	17 34	18 22	10 55 52	3 06 58		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 51 ^m 9		Mag: -4.2 PMG: 11 ^h 01 ^m			Mag: +1.8 PMG: 10 ^h 41 ^m			Mag: -1.7 PMG: 12 ^h 11 ^m			Mag: +0.5 PMG: 17 ^h 37 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	331	57.4	194	08.4	+7 40.8	199	32.0	+18 52.8	176	57.8	+11 19.0	95	05.3	-18 00.9		
1	346	59.9	209	12.0	41.2	214	32.8	52.4	191	59.7	18.8	110	07.7	00.9		
2	2	02.4	224	15.7	41.6	229	33.6	52.0	207	01.7	18.6	125	10.1	01.0		
3	17	04.8	239	19.3	42.1	244	34.4	51.6	222	03.6	18.4	140	12.5	01.0		
4	32	07.3	254	22.9	42.5	259	35.3	51.2	237	05.6	18.2	155	14.8	01.0		
5	47	09.8	269	26.6	+7 42.9	274	36.1	+18 50.8	252	07.5	+11 18.0	170	17.2	-18 01.0		
6	62	12.2	284	30.2	+7 43.3	289	36.9	+18 50.3	267	09.5	+11 17.8	185	19.6	-18 01.1		
7	77	14.7	299	33.8	43.7	304	37.8	49.9	282	11.4	17.6	200	22.0	01.1		
8	92	17.1	314	37.4	44.1	319	38.6	49.5	297	13.4	17.4	215	24.3	01.1		
9	107	19.6	329	41.0	44.5	334	39.4	49.1	312	15.3	17.2	230	26.7	01.2		
10	122	22.1	344	44.7	45.0	349	40.3	48.7	327	17.3	17.0	245	29.1	01.2		
11	137	24.5	359	48.3	+7 45.4	4	41.1	+18 48.3	342	19.2	+11 16.8	260	31.5	-18 01.2		
12	152	27.0	14	51.9	+7 45.8	19	41.9	+18 47.8	357	21.2	+11 16.7	275	33.9	-18 01.2		
13	167	29.5	29	55.5	46.2	34	42.8	47.4	12	23.1	16.5	290	36.2	01.3		
14	182	31.9	44	59.1	46.6	49	43.6	47.0	27	25.0	16.3	305	38.6	01.3		
15	197	34.4	60	02.7	47.0	64	44.4	46.6	42	27.0	16.1	320	41.0	01.3		
16	212	36.9	75	06.3	47.5	79	45.3	46.2	57	28.9	15.9	335	43.3	01.4		
17	227	39.3	90	09.9	+7 47.9	94	46.1	+18 45.7	72	30.9	+11 15.7	350	45.7	-18 01.4		
18	242	41.8	105	13.5	+7 48.3	109	46.9	+18 45.3	87	32.8	+11 15.5	5	48.1	-18 01.4		
19	257	44.3	120	17.0	48.7	124	47.8	44.9	102	34.8	15.3	20	50.5	01.4		
20	272	46.7	135	20.6	49.1	139	48.6	44.5	117	36.7	15.1	35	52.8	01.5		
21	287	49.2	150	24.2	49.6	154	49.4	44.1	132	38.7	14.9	50	55.2	01.5		
22	302	51.6	165	27.8	50.0	169	50.3	43.6	147	40.6	14.7	65	57.6	01.5		
23	317	54.1	180	31.3	50.4	184	51.1	43.2	162	42.6	14.5	81	00.0	01.6		
24	332	56.6	195	34.9	+7 50.8	199	51.9	+18 42.8	177	44.5	+11 14.3	96	02.3	-18 01.6		
Dif	—		+36		+4	+8		-4	+19		-2	+24		0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'8 PMG: 12 ^h 02 ^m 2			Edad: 10 ^d 4 PHE { 4 ^h : 57'6 12 ^h : 57'9 20 ^h : 58'2 R°: 56 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	179	25.4	+10	56.3	65	29.7	-18	11.6	3	60 N	2	45	3	50	4	37	16	33	45	*** ** *	
1	194	25.5		55.5	79	57.2		85	3	58	3	02	4	00		44		21	46	*** ** *	
2	209	25.7		54.6	94	24.6		84	1	56		16		09		50		10	48	*** ** *	
3	224	25.9		53.8	108	51.9		83	1	54		28	16		4	55		16	01	48	*** ** *
4	239	26.1		52.9	123	19.2		83	0	52		38	23		5	00		15	53	49	*** ** *
5	254	26.2	+10	52.1	137	46.5	-18	12.2	1	50	3	46	4	29	5	04	15	45	50		0 05 57
6	269	26.4	+10	51.2	152	13.7	-18	12.0	2	45	4	04	4	42	5	13	15	29	51		0 21 57
7	284	26.6		50.3	166	40.9		82	3	40		18	4	52		21		16	52		34 57
8	299	26.7		49.5	181	08.0		81	4	35		30	5	01		27		15	05	52	46 56
9	314	26.9		48.6	195	35.0		80	5	30		39		08		33		14	55	53	0 56 56
10	329	27.1		47.7	210	02.1		81	6	20	4	54		20		43		38	54		1 13 55
11	344	27.3	+10	46.9	224	29.0	-18	09.4	8	10 N	5	05		5	30	5	51	14	23	56	1 27 56
12	359	27.4	+10	46.0	238	56.0	-18	08.6	8	0	5	13		5	38	5	59	14	10	56	1 41 55
13	14	27.6		45.2	253	22.8		78	10	10 S		21		45		6	07	13	56	57	1 55 55
14	29	27.8		44.3	267	49.7		79	11	20		26		52		15		41	58		2 10 54
15	44	27.9		43.4	282	16.5		78	11	30		32	5	59		24		24	59		26 54
16	59	28.1		42.6	296	43.2		77	13	35		34		6	03		29		15	59	36 54
17	74	28.3	+10	41.7	311	09.9	-18	02.7	14	40	5	36		6	07	6	35	13	04	60	2 47 53
18	89	28.5	+10	40.9	325	36.6	-18	01.2	15	45	5	38		6	12	6	42	12	51	60	3 01 52
19	104	28.6		40.0	340	03.2	-17	59.5	17	50		39		17		50		35	61		16 52
20	119	28.8		39.1	354	29.8		76	17	52		40		19		53		27	62		24 52
21	134	29.0		38.3	8	56.3		75	18	54		40		21	6	57		19	63		32 52
22	149	29.2		37.4	23	22.8		75	20	56		41		24	7	02		12	10	63	42 50
23	164	29.3		36.5	37	49.3		75	21	58		41		27		07		11	59	64	3 52 50
24	179	29.5	+10	35.7	52	15.7	-17	49.7	22	60 S	5	41		6	30	7	13	11	47	65	4 04 50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 47 ^m 9		Mag: -4.3 PMG: 10 ^h 55 ^m		Mag: +1.8 PMG: 10 ^h 40 ^m		Mag: -1.7 PMG: 12 ^h 07 ^m		Mag: +0.5 PMG: 17 ^h 33 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	332	56.6	195	34.9	+7	50.8	199	51.9	+18	42.8	177	44.5	+11	14.3	96	02.3	-18	01.6
1	347	59.0	210	38.5		51.2	214	52.8		42.4	192	46.5		14.1	111	04.7		01.6
2	3	01.5	225	42.0		51.7	229	53.6		41.9	207	48.4		13.9	126	07.1		01.7
3	18	04.0	240	45.6		52.1	244	54.4		41.5	222	50.3		13.7	141	09.5		01.7
4	33	06.4	255	49.1		52.5	259	55.3		41.1	237	52.3		13.5	156	11.8		01.7
5	48	08.9	270	52.7	+7	52.9	274	56.1	+18	40.7	252	54.2	+11	13.4	171	14.2	-18	01.7
6	63	11.4	285	56.2	+7	53.3	289	57.0	+18	40.3	267	56.2	+11	13.2	186	16.6	-18	01.8
7	78	13.8	300	59.8		53.8	304	57.8		39.8	282	58.1		13.0	201	18.9		01.8
8	93	16.3	316	03.3		54.2	319	58.6		39.4	298	00.1		12.8	216	21.3		01.8
9	108	18.8	331	06.9		54.6	334	59.5		39.0	313	02.0		12.6	231	23.7		01.9
10	123	21.2	346	10.4		55.0	350	00.3		38.6	328	04.0		12.4	246	26.1		01.9
11	138	23.7	1	13.9	+7	55.4	5	01.1	+18	38.1	343	05.9	+11	12.2	261	28.4	-18	01.9
12	153	26.1	16	17.5	+7	55.9	20	02.0	+18	37.7	358	07.9	+11	12.0	276	30.8	-18	01.9
13	168	28.6	31	21.0		56.3	35	02.8		37.3	13	09.8		11.8	291	33.2		02.0
14	183	31.1	46	24.5		56.7	50	03.6		36.9	28	11.8		11.6	306	35.5		02.0
15	198	33.5	61	28.0		57.1	65	04.5		36.4	43	13.7		11.4	321	37.9		02.0
16	213	36.0	76	31.5		57.6	80	05.3		36.0	58	15.6		11.2	336	40.3		02.1
17	228	38.5	91	35.0	+7	58.0	95	06.2	+18	35.6	73	17.6	+11	11.0	351	42.7	-18	02.1
18	243	40.9	106	38.5	+7	58.4	110	07.0	+18	35.2	88	19.5	+11	10.8	6	45.0	-18	02.1
19	258	43.4	121	42.0		58.8	125	07.8		34.7	103	21.5		10.6	21	47.4		02.2
20	273	45.9	136	45.5		59.3	140	08.7		34.3	118	23.4		10.4	36	49.8		02.2
21	288	48.3	151	49.0	+7	59.7	155	09.5		33.9	133	25.4		10.2	51	52.1		02.2
22	303	50.8	166	52.5	+8	00.1	170	10.4		33.5	148	27.3		10.0	66	54.5		02.2
23	318	53.3	181	56.0		00.5	185	11.2		33.0	163	29.3		09.9	81	56.9		02.3
24	333	55.7	196	59.5	+8	00.9	200	12.0	+18	32.6	178	31.2	+11	09.7	96	59.2	-18	02.3
Dif	—		+35		+4		+8		-4		+19		-2		+24			

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 4 PHE { 4 ^h : 58/5 12 ^h : 58/9 20 ^h : 59/2 R°: 57 ^m											
	PMG: 12 ^h 01 ^m 9			SD: 15 ^h 9 PMG: 21 ^h 19 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	29.5	+10 35.7	52	15.7	-17 49.7	74	60 N	19 22	20 09	21 12	17 18 37		0 15 71	
1	194	29.7	34.8	66	42.1	47.4	23	58	16	20 00	20 56	17 07 39		27 69	
2	209	29.9	33.9	81	08.5	45.0	24	56	11	19 51	43	16 58 40		37 69	
3	224	30.0	33.1	95	34.8	42.5	25	54	06	44	32	49 42		47 66	
4	239	30.2	32.2	110	01.1	39.9	26	52	19 01	37	22	42 43	0 55	66	
5	254	30.4	+10 31.3	124	27.3	37.1	28	50	18 57	19 32	20 14	16 35 44	1 02	66	
6	269	30.6	+10 30.5	138	53.6	34.2	29	45	18 49	19 19	19 57	16 20 46	1 18	64	
7	284	30.7	29.6	153	19.7	31.2	30	40	41	10	43	16 08 48	31	63	
8	299	30.9	28.7	167	45.9	28.2	30	35	35	19 01	32	15 57 50	42	62	
9	314	31.1	27.9	182	12.0	24.9	33	30	30	18 54	24	48 51	1 52	61	
10	329	31.3	27.0	196	38.1	21.6	33	20	21	43	19 10	32 54	2 08	60	
11	344	31.4	+10 26.1	211	04.2	18.2	34	10 N	18 13	18 34	18 59	15 19 55	2 23	58	
12	359	31.6	+10 25.3	225	30.2	14.6	36	0	18 05	18 26	18 51	15 06 57	2 36	57	
13	14	31.8	24.4	239	56.3	11.0	36	10 S	17 58	19	44	14 53 59	2 50	55	
14	29	32.0	23.5	254	22.2	07.2	38	20	50	13	38	39 61	3 04	54	
15	44	32.1	22.7	268	48.2	03.3	39	30	42	06	34	23 63	20	52	
16	59	32.3	21.8	283	14.1	59.3	40	35	37	18 02	32	14 64	30	51	
17	74	32.5	+10 20.9	297	40.0	55.1	42	40	17 31	17 59	18 30	14 04 65	3 40	50	
18	89	32.7	+10 20.1	312	05.9	50.9	42	45	17 25	17 54	18 29	13 51 68	3 53	49	
19	104	32.9	19.2	326	31.8	46.5	44	50	17	50	27	36 70	4 08	47	
20	119	33.0	18.3	340	57.7	42.1	44	52	13	48	27	29 71	16	45	
21	134	33.2	17.4	355	23.5	37.5	46	54	10	46	27	22 71	24	44	
22	149	33.4	16.6	9	49.3	32.8	47	56	05	43	27	13 73	32	44	
23	164	33.6	15.7	24	15.1	28.0	48	58	17 01	41	26	13 03 75	42	43	
24	179	33.7	+10 14.8	38	40.8	23.1	49	60 S	16 55	17 38	18 26	12 52 76	4 54	41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 44 ^m 0		Mag: -4.3 PMG: 10 ^h 50 ^m		Mag: +1.8 PMG: 10 ^h 39 ^m		Mag: -1.7 PMG: 12 ^h 04 ^m		Mag: +0.5 PMG: 17 ^h 29 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	333	55.7	196	59.5	+8 00.9	200 12.0	+18 32.6	178 31.2	+11 09.7	96 59.2	-18 02.3
1	348	58.2	212	03.0	01.4	215 12.9	32.2	193 33.2	09.5	112 01.6	02.3
2	4	00.6	227	06.5	01.8	230 13.7	31.8	208 35.1	09.3	127 04.0	02.4
3	19	03.1	242	09.9	02.2	245 14.6	31.3	223 37.1	09.1	142 06.4	02.4
4	34	05.6	257	13.4	02.6	260 15.4	30.9	238 39.0	08.9	157 08.7	02.4
5	49	08.0	272	16.9	+8 03.1	275 16.2	+18 30.5	253 40.9	+11 08.7	172 11.1	-18 02.5
6	64	10.5	287	20.3	+8 03.5	290 17.1	+18 30.0	268 42.9	+11 08.5	187 13.5	-18 02.5
7	79	13.0	302	23.8	03.9	305 17.9	29.6	283 44.8	08.3	202 15.8	02.5
8	94	15.4	317	27.2	04.3	320 18.8	29.2	298 46.8	08.1	217 18.2	02.6
9	109	17.9	332	30.7	04.8	335 19.6	28.8	313 48.7	07.9	232 20.6	02.6
10	124	20.4	347	34.1	05.2	350 20.4	28.3	328 50.7	07.7	247 22.9	02.6
11	139	22.8	2	37.6	+8 05.6	5 21.3	+18 27.9	343 52.6	+11 07.5	262 25.3	-18 02.6
12	154	25.3	17	41.0	+8 06.0	20 22.1	+18 27.5	358 54.6	+11 07.3	277 27.7	-18 02.7
13	169	27.7	32	44.5	06.5	35 23.0	27.0	13 56.5	07.1	292 30.0	02.7
14	184	30.2	47	47.9	06.9	50 23.8	26.6	28 58.5	06.9	307 32.4	02.7
15	199	32.7	62	51.3	07.3	65 24.6	26.2	44 00.4	06.7	322 34.8	02.8
16	214	35.1	77	54.8	07.8	80 25.5	25.7	59 02.4	06.5	337 37.1	02.8
17	229	37.6	92	58.2	+8 08.2	95 26.3	+18 25.3	74 04.3	+11 06.4	352 39.5	-18 02.8
18	244	40.1	108	01.6	+8 08.6	110 27.2	+18 24.9	89 06.3	+11 06.2	7 41.9	-18 02.9
19	259	42.5	123	05.0	09.0	125 28.0	24.5	104 08.2	06.0	22 44.2	02.9
20	274	45.0	138	08.4	09.5	140 28.9	24.0	119 10.1	05.8	37 46.6	02.9
21	289	47.5	153	11.8	09.9	155 29.7	23.6	134 12.1	05.6	52 49.0	03.0
22	304	49.9	168	15.2	10.3	170 30.5	23.2	149 14.0	05.4	67 51.3	03.0
23	319	52.4	183	18.6	10.7	185 31.4	22.7	164 16.0	05.2	82 53.7	03.0
24	334	54.9	198	22.0	+8 11.2	200 32.2	+18 22.3	179 17.9	+11 05.0	97 56.1	-18 03.0
Dif	—		+34		+4	+8	-4	+19	-2	+24	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 6			Edad: 12 ^d 4 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 8 20 ^h : 60 ^m 0 R°: 58 ^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	h m		
0	179	33.7	+10	14.8	38	40.8	-16	23.1	60 N	2 53	3 55	4 42	17 55	30	1 26	81		
1	194	33.9		14.0	53	06.6	68	18.1	58	3 08	4 05	48	46	32	36	79		
2	209	34.1		13.1	67	32.3	67	12.9	52	21	13	54	38	34	46	77		
3	224	34.3		12.2	81	58.0	67	07.7	52	32	20	4 59	31	36	1 54	75		
4	239	34.5		11.3	96	23.7	67	-16	02.3	42	27	5 03	25	37	2 01	74		
5	254	34.6	+10	10.5	110	49.4	67	-15	56.8	50	3 50	4 33	5 07	17 19	39	2 08	73	
6	269	34.8	+10	09.6	125	15.1	67	-15	51.2	45	4 07	4 45	5 15	17 06	43	2 22	70	
7	284	35.0		08.7	139	40.8	67	45.5	57	40	21	4 54	23	16	56	45	34	68
8	299	35.2		07.8	154	06.4	66	39.7	58	35	31	5 03	29	47	47	44	66	
9	314	35.4		07.0	168	32.1	67	33.8	59	30	40	09	34	39	49	2 53	64	
10	329	35.5		06.1	182	57.7	66	27.8	60	20	4 54	21	43	26	52	3 08	61	
11	344	35.7	+10	05.2	197	23.3	66	-15	21.6	10 N	5 05	5 30	5 51	16 14	55	3 21	59	
12	359	35.9	+10	04.3	211	48.9	66	-15	15.4	0	5 13	5 37	5 58	16 03	57	3 33	57	
13	14	36.1		03.5	226	14.5	66	09.0	62	10 S	20	44	6 05	15 52	59	45	55	
14	29	36.3		02.6	240	40.1	66	-15	02.6	20	25	51	13	40	62	3 58	52	
15	44	36.4		01.7	255	05.7	66	-14	56.0	30	29	5 57	21	26	66	4 12	50	
16	59	36.6	+10	00.8	269	31.3	66	49.3	67	35	31	6 01	26	18	68	21	48	
17	74	36.8	+10	00.0	283	56.9	66	-14	42.5	40	5 33	6 04	6 32	15 09	70	4 30	47	
18	89	37.0	+9	59.1	298	22.4	65	-14	35.7	45	5 34	6 08	6 38	14 59	72	4 42	44	
19	104	37.2		58.2	312	48.0	66	28.7	70	50	35	13	46	46	75	4 55	42	
20	119	37.4		57.3	327	13.6	66	21.6	71	52	36	15	49	40	77	5 01	41	
21	134	37.5		56.5	341	39.1	65	14.4	72	54	36	17	53	33	79	08	39	
22	149	37.7		55.6	356	04.7	66	-14	07.1	56	36	19	6 57	26	80	16	37	
23	164	37.9		54.7	10	30.2	65	-13	59.7	58	36	21	7 02	18	82	25	35	
24	179	38.1	+9	53.8	24	55.8	66	-13	52.2	60 S	5 36	6 24	7 07	14 08	85	5 35	33	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 1 ^h 40 ^m 1		Mag: -4.4 PMG: 10 ^h 44 ^m			Mag: +1.8 PMG: 10 ^h 37 ^m			Mag: -1.7 PMG: 12 ^h 01 ^m			Mag: +0.5 PMG: 17 ^h 26 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	334	54.9	198	22.0	+8	11.2	200	32.2	+18	22.3	179	17.9	+11	05.0	97	56.1	-18	03.0
1	349	57.3	213	25.4		11.6	215	33.1		21.9	194	19.9		04.8	112	58.4		03.1
2	4	59.8	228	28.8		12.0	230	33.9		21.4	209	21.8		04.6	128	00.8		03.1
3	20	02.2	243	32.2		12.4	245	34.8		21.0	224	23.8		04.4	143	03.2		03.1
4	35	04.7	258	35.6		12.9	260	35.6		20.6	239	25.7		04.2	158	05.5		03.2
5	50	07.2	273	39.0	+8	13.3	275	36.5	+18	20.1	254	27.7	+11	04.0	173	07.9	-18	03.2
6	65	09.6	288	42.3	+8	13.7	290	37.3	+18	19.7	269	29.6	+11	03.8	188	10.2	-18	03.2
7	80	12.1	303	45.7		14.1	305	38.1		19.3	284	31.6		03.6	203	12.6		03.3
8	95	14.6	318	49.1		14.6	320	39.0		18.8	299	33.5		03.4	218	15.0		03.3
9	110	17.0	333	52.4		15.0	335	39.8		18.4	314	35.5		03.2	233	17.3		03.3
10	125	19.5	348	55.8		15.4	350	40.7		18.0	329	37.4		03.0	248	19.7		03.4
11	140	22.0	3	59.1	+8	15.9	5	41.5	+18	17.5	344	39.4	+11	02.8	263	22.1	-18	03.4
12	155	24.4	19	02.5	+8	16.3	20	42.4	+18	17.1	359	41.3	+11	02.7	278	24.4	-18	03.4
13	170	26.9	34	05.8		16.7	35	43.2		16.7	14	43.2		02.5	293	26.8		03.4
14	185	29.4	49	09.2		17.1	50	44.1		16.2	29	45.2		02.3	308	29.2		03.5
15	200	31.8	64	12.5		17.6	65	44.9		15.8	44	47.1		02.1	323	31.5		03.5
16	215	34.3	79	15.9		18.0	80	45.8		15.4	59	49.1		01.9	338	33.9		03.5
17	230	36.7	94	19.2	+8	18.4	95	46.6	+18	14.9	74	51.0	+11	01.7	353	36.2	-18	03.6
18	245	39.2	109	22.5	+8	18.8	110	47.5	+18	14.5	89	53.0	+11	01.5	8	38.6	-18	03.6
19	260	41.7	124	25.8		19.3	125	48.3		14.1	104	54.9		01.3	23	41.0		03.6
20	275	44.1	139	29.2		19.7	140	49.1		13.6	119	56.9		01.1	38	43.3		03.7
21	290	46.6	154	32.5		20.1	155	50.0		13.2	134	58.8		00.9	53	45.7		03.7
22	305	49.1	169	35.8		20.5	170	50.8		12.8	150	00.8		00.7	68	48.1		03.7
23	320	51.5	184	39.1		21.0	185	51.7		12.3	165	02.7		00.5	83	50.4		03.8
24	335	54.0	199	42.4	+8	21.4	200	52.5	+18	11.9	180	04.7	+11	00.3	98	52.8	-18	03.8
Dif	—		+33			+4	+8			-4	+19			-2	+24			

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8		Edad: 13 ^d 4 PHE { 4 ^h : 60 ^m /3 12 ^h : 60 ^m /5 20 ^h : 60 ^m /7												
	PMG: 12 ^h 01 ^m 3		SD: 16 ^h 4		PMG: 23 ^h 14 ^m				R°: 56 ^m		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	179	38.1	+9	53.8	24	55.8	-13	52.2	60 N	19 17	20 03	21 04	18 25	25	2 47 88
1	194	38.3		52.9	39	21.4	66	44.6	58	11	19 54	20 49	18 28		2 55 85
2	209	38.5		52.1	53	46.9	65	36.9	56	06	46	37	12 30		3 03 83
3	224	38.6		51.2	68	12.5	66	29.1	54	19 01	39	26	07 32		09 81
4	239	38.8		50.3	82	38.0	65	21.2	52	18 57	33	17	18 02	34	15 79
5	254	39.0	+9	49.4	97	03.6	66	-13	50	18 53	19 27	20 09	17 58	35	3 21 77
6	269	39.2	+9	48.5	111	29.2	66	-13	45	18 45	19 16	19 53	17 49	38	3 32 74
7	284	39.4		47.7	125	54.7	65	-12	40	38	19 06	40	41 42		42 71
8	299	39.6		46.8	140	20.3	66	48.6	35	33	18 59	30	34 44		50 69
9	314	39.7		45.9	154	45.9	66	40.3	30	28	52	21	28 47		3 57 67
10	329	39.9		45.0	169	11.5	66	31.8	20	19	41	19 08	18 50		4 09 63
11	344	40.1	+9	44.1	183	37.1	66	-12	10 N	18 12	18 33	18 58	17 09	53	4 20 60
12	359	40.3	+9	43.3	198	02.7	66	-12	0	18 05	18 26	18 50	17 00	57	4 30 57
13	14	40.5		42.4	212	28.3	66	-12	10 S	17 58	19	44	16 51	60	40 54
14	29	40.7		41.5	226	53.9	66	-11	20	51	13	39	42 64		4 50 51
15	44	40.8		40.6	241	19.5	66	48.1	30	43	07	35	32 67		5 02 48
16	59	41.0		39.7	255	45.1	66	39.1	35	38	04	33	26 69		09 46
17	74	41.2	+9	38.8	270	10.8	67	-11	40	17 33	18 00	18 32	16 19	72	5 17 43
18	89	41.4	+9	38.0	284	36.4	66	-11	45	17 27	17 57	18 31	16 11	75	5 26 40
19	104	41.6		37.1	299	02.1	67	11.6	50	20	53	30	16 01	79	37 37
20	119	41.8		36.2	313	27.7	66	-11	52	17	51	30	15 57	80	42 35
21	134	42.0		35.3	327	53.4	67	-10	54	13	49	30	52 82		47 34
22	149	42.1		34.4	342	19.1	67	43.4	56	09	47	30	46 85		5 53 32
23	164	42.3		33.5	356	44.8	67	33.8	58	05	45	30	40 87		6 00 30
24	179	42.5	+9	32.7	11	10.5	67	-10	60 S	17 00	17 42	18 31	15 33	90	6 08 27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 36 ^m 1		Mag: -4.4 PMG: 10 ^h 39 ^m		Mag: +1.8 PMG: 10 ^h 36 ^m		Mag: -1.7 PMG: 11 ^h 58 ^m		Mag: +0.5 PMG: 17 ^h 22 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	335	54.0	199 42.4	+8 21.4	200 52.5	+18 11.9	180 04.7	+11 00.3	98 52.8	-18 03.8
1	350	56.5	214 45.7	21.8	215 53.4	11.4	195 06.6	+11 00.1	113 55.1	03.8
2	5	58.9	229 49.0	22.2	230 54.2	11.0	210 08.6	+10 59.9	128 57.5	03.9
3	21	01.4	244 52.3	22.7	245 55.1	10.6	225 10.5	59.7	143 59.9	03.9
4	36	03.8	259 55.6	23.1	260 55.9	10.1	240 12.5	59.5	159 02.2	03.9
5	51	06.3	274 58.8	+8 23.5	275 56.8	+18 09.7	255 14.4	+10 59.3	174 04.6	-18 04.0
6	66	08.8	290 02.1	+8 23.9	290 57.6	+18 09.3	270 16.3	+10 59.1	189 06.9	-18 04.0
7	81	11.2	305 05.4	24.4	305 58.5	08.8	285 18.3	58.9	204 09.3	04.0
8	96	13.7	320 08.7	24.8	320 59.3	08.4	300 20.2	58.7	219 11.7	04.1
9	111	16.2	335 11.9	25.2	336 00.2	07.9	315 22.2	58.6	234 14.0	04.1
10	126	18.6	350 15.2	25.6	351 01.0	07.5	330 24.1	58.4	249 16.4	04.1
11	141	21.1	5 18.5	+8 26.1	6 01.9	+18 07.1	345 26.1	+10 58.2	264 18.7	-18 04.1
12	156	23.6	20 21.7	+8 26.5	21 02.7	+18 06.6	0 28.0	+10 58.0	279 21.1	-18 04.2
13	171	26.0	35 25.0	26.9	36 03.6	06.2	15 30.0	57.8	294 23.5	04.2
14	186	28.5	50 28.2	27.3	51 04.4	05.7	30 31.9	57.6	309 25.8	04.2
15	201	31.0	65 31.5	27.8	66 05.3	05.3	45 33.9	57.4	324 28.2	04.3
16	216	33.4	80 34.7	28.2	81 06.1	04.9	60 35.8	57.2	339 30.5	04.3
17	231	35.9	95 37.9	+8 28.6	96 07.0	+18 04.4	75 37.8	+10 57.0	354 32.9	-18 04.3
18	246	38.3	110 41.2	+8 29.0	111 07.8	+18 04.0	90 39.7	+10 56.8	9 35.3	-18 04.4
19	261	40.8	125 44.4	29.5	126 08.7	03.5	105 41.7	56.6	24 37.6	04.4
20	276	43.3	140 47.6	29.9	141 09.5	03.1	120 43.6	56.4	39 40.0	04.4
21	291	45.7	155 50.9	30.3	156 10.4	02.7	135 45.6	56.2	54 42.3	04.5
22	306	48.2	170 54.1	30.7	171 11.2	02.2	150 47.5	56.0	69 44.7	04.5
23	321	50.7	185 57.3	31.2	186 12.1	01.8	165 49.5	55.8	84 47.0	04.5
24	336	53.1	201 00.5	+8 31.6	201 12.9	+18 01.3	180 51.4	+10 55.6	99 49.4	-18 04.6
Dif	—		+33	+4	+9	-4	+19	-2	+24	

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: 14 ^d 4 PHE { SD: 16'6 PMG: **h **m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	42.5	+9	32.7	11	10.5	-10	24.1	60 N	3 00	4 01	4 47	18 50	22	4 15	91
1	194	42.7		31.8	25	36.2		14.4	58	14	10	53	46	25	20	89
2	209	42.9		30.9	40	02.0	-10	04.6	56	26	17	4 58	42	27	26	85
3	224	43.1		30.0	54	27.7	-9	54.7	54	37	24	5 02	39	29	30	84
4	239	43.3		29.1	68	53.5		44.8	52	46	30	06	36	31	34	82
5	254	43.5	+9	28.2	83	19.2	-9	34.8	50	3 54	4 36	5 10	18 33	33	4 38	80
6	269	43.6	+9	27.3	97	45.0	-9	24.7	45	4 10	4 47	5 18	18 27	37	4 46	76
7	284	43.8		26.5	112	10.8		14.5	40	23	4 56	24	23	39	53	73
8	299	44.0		25.6	126	36.6	-9	04.3	35	33	5 04	30	18	43	4 59	70
9	314	44.2		24.7	141	02.4	-8	54.0	30	42	11	35	15	44	5 04	67
10	329	44.4		23.8	155	28.3		43.6	20	4 55	21	44	08	49	12	64
11	344	44.6	+9	22.9	169	54.1	-8	33.2	10 N	5 05	5 30	5 51	18 02	53	5 20	60
12	359	44.8	+9	22.0	184	20.0	-8	22.7	0	5 12	5 37	5 58	17 57	56	5 27	57
13	14	45.0		21.1	198	45.9		12.1	10 S	19	43	6 04	51	60	34	53
14	29	45.1		20.2	213	11.8	-8	01.5	20	23	49	11	46	63	41	50
15	44	45.3		19.4	227	37.7	-7	50.9	30	27	55	19	39	68	50	45
16	59	45.5		18.5	242	03.6		40.1	35	29	5 58	24	35	71	5 55	43
17	74	45.7	+9	17.6	256	29.5	-7	29.3	40	5 30	6 01	6 29	17 31	73	6 00	41
18	89	45.9	+9	16.7	270	55.5	-7	18.5	45	5 31	6 05	6 35	17 26	77	6 06	38
19	104	46.1		15.8	285	21.5	-7	07.6	50	31	09	41	20	80	14	34
20	119	46.3		14.9	299	47.5	-6	56.7	52	31	10	45	17	83	17	32
21	134	46.5		14.0	314	13.5		45.7	54	31	12	48	14	85	21	30
22	149	46.7		13.1	328	39.5		34.7	56	31	14	52	11	86	25	28
23	164	46.9		12.2	343	05.5		23.6	58	31	16	6 56	07	89	30	26
24	179	47.0	+9	11.3	357	31.6	-6	12.4	60 S	5 31	6 19	7 01	17 03	92	6 35	23
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 1 ^h 32 ^m 2		Mag: -4.4 PMG: 10 ^h 34 ^m			Mag: +1.8 PMG: 10 ^h 35 ^m			Mag: -1.7 PMG: 11 ^h 55 ^m			Mag: +0.5 PMG: 17 ^h 18 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	336	53.1	201	00.5	+8	31.6	201	12.9	+18	01.3	180	51.4	+10	55.6	99	49.4
1	351	55.6	216	03.7		32.0	216	13.8		00.9	195	53.3		55.4	114	51.8
2	6	58.1	231	06.9		32.4	231	14.6	+18	00.5	210	55.3		55.2	129	54.1
3	22	00.5	246	10.1		32.9	246	15.5	+18	00.0	225	57.2		55.0	144	56.5
4	37	03.0	261	13.3		33.3	261	16.4	+17	59.6	240	59.2		54.8	159	58.8
5	52	05.5	276	16.5	+8	33.7	276	17.2	+17	59.1	256	01.1	+10	54.6	175	01.2
6	67	07.9	291	19.7	+8	34.1	291	18.1	+17	58.7	271	03.1	+10	54.4	190	03.5
7	82	10.4	306	22.8		34.5	306	18.9		58.3	286	05.0		54.3	205	05.9
8	97	12.8	321	26.0		35.0	321	19.8		57.8	301	07.0		54.1	220	08.3
9	112	15.3	336	29.2		35.4	336	20.6		57.4	316	08.9		53.9	235	10.6
10	127	17.8	351	32.4		35.8	351	21.5		56.9	331	10.9		53.7	250	13.0
11	142	20.2	6	35.5	+8	36.2	6	22.3	+17	56.5	346	12.8	+10	53.5	265	15.3
12	157	22.7	21	38.7	+8	36.6	21	23.2	+17	56.0	1	14.8	+10	53.3	280	17.7
13	172	25.2	36	41.8		37.1	36	24.0		55.6	16	16.7		53.1	295	20.0
14	187	27.6	51	45.0		37.5	51	24.9		55.1	31	18.7		52.9	310	22.4
15	202	30.1	66	48.1		37.9	66	25.8		54.7	46	20.6		52.7	325	24.7
16	217	32.6	81	51.3		38.3	81	26.6		54.3	61	22.6		52.5	340	27.1
17	232	35.0	96	54.4	+8	38.8	96	27.5	+17	53.8	76	24.5	+10	52.3	355	29.5
18	247	37.5	111	57.5	+8	39.2	111	28.3	+17	53.4	91	26.5	+10	52.1	10	31.8
19	262	39.9	127	00.7		39.6	126	29.2		52.9	106	28.4		51.9	25	34.2
20	277	42.4	142	03.8		40.0	141	30.0		52.5	121	30.3		51.7	40	36.5
21	292	44.9	157	06.9		40.4	156	30.9		52.0	136	32.3		51.5	55	38.9
22	307	47.3	172	10.0		40.8	171	31.7		51.6	151	34.2		51.3	70	41.2
23	322	49.8	187	13.2		41.3	186	32.6		51.1	166	36.2		51.1	85	43.6
24	337	52.3	202	16.3	+8	41.7	201	33.5	+17	50.7	181	38.1	+10	50.9	100	45.9
Dif	—		+32		+4		+9		-4		+19		-2		+24	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:8		Edad: 15 ^d 4 PHE { 4 ^h : 61:2 12 ^h : 61:2 20 ^h : 61:2											
	PMG: 12 ^h 00 ^m 7		SD: 16:6 PMG: 0 ^h 10 ^m R°: 56 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	47.0	+9 11.3	357	31.6	-6 12.4	60 N	19 11	19 56	20 56	19 12 21	5 46 92		
1	194	47.2	10.5	11	57.6	-6 01.3	58	05	48	42	11 23	49 89		
2	209	47.4	09.6	26	23.7	-5 50.0	56	19 01	40	30	09 26	51 87		
3	224	47.6	08.7	40	49.8	38.8	54	18 56	34	20	08 28	54 84		
4	239	47.8	07.8	55	15.9	27.5	52	53	28	12	07 30	56 82		
5	254	48.0	+9 06.9	69	42.0	-5 16.1	50	18 49	19 23	20 04	19 06 32	5 58 80		
6	269	48.2	+9 06.0	84	08.2	-5 04.8	45	18 42	19 12	19 49	19 04 36	6 02 77		
7	284	48.4	05.1	98	34.4	-4 53.4	40	35	19 03	36	02 39	06 73		
8	299	48.6	04.2	113	00.5	41.9	35	30	18 56	27	19 01 41	09 70		
9	314	48.8	03.3	127	26.7	30.4	30	25	50	19	18 59 44	11 68		
10	329	49.0	02.4	141	52.9	18.9	20	17	40	19 06	57 48	16 63		
11	344	49.1	+9 01.5	156	19.1	-4 07.4	10 N	18 10	18 32	18 56	18 55 52	6 20 59		
12	359	49.3	+9 00.6	170	45.4	-3 55.8	0	18 04	18 25	18 49	18 53 56	6 24 56		
13	14	49.5	+8 59.7	185	11.6	44.2	10 S	17 58	19	44	51 59	27 53		
14	29	49.7	58.8	199	37.9	32.6	20	51	13	39	49 63	31 49		
15	44	49.9	57.9	214	04.2	21.0	30	44	08	36	47 67	35 45		
16	59	50.1	57.1	228	30.5	-3 09.3	35	40	05	34	46 70	38 42		
17	74	50.3	+8 56.2	242	56.8	-2 57.6	40	17 35	18 02	18 34	18 44 73	6 41 39		
18	89	50.5	+8 55.3	257	23.1	-2 45.9	45	17 29	17 59	18 33	18 43 76	6 44 36		
19	104	50.7	54.4	271	49.5	34.2	50	23	55	33	40 81	48 32		
20	119	50.9	53.5	286	15.8	22.5	52	20	54	33	40 82	49 31		
21	134	51.1	52.6	300	42.2	-2 10.7	54	17	52	33	39 84	51 29		
22	149	51.3	51.7	315	08.6	-1 59.0	56	13	51	34	37 87	53 27		
23	164	51.5	50.8	329	35.0	47.2	58	09	49	34	36 89	56 24		
24	179	51.7	+8 49.9	344	01.4	-1 35.4	60 S	17 04	17 47	18 35	18 35 91	6 58 22		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 28 ^m 3		Mag: -4.5 PMG: 10 ^h 29 ^m		Mag: +1.8 PMG: 10 ^h 33 ^m		Mag: -1.7 PMG: 11 ^h 52 ^m			Mag: +0.5 PMG: 17 ^h 14 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	337	52.3	202 16.3	+8 41.7	201 33.5	+17 50.7	181 38.1	+10 50.9	100 45.9	-18 05.4				
1	352	54.7	217 19.4	42.1	216 34.3	50.2	196 40.1	50.7	115 48.3	05.4				
2	7	57.2	232 22.5	42.5	231 35.2	49.8	211 42.0	50.5	130 50.6	05.4				
3	22	59.7	247 25.6	42.9	246 36.0	49.4	226 44.0	50.3	145 53.0	05.5				
4	38	02.1	262 28.7	43.4	261 36.9	48.9	241 45.9	50.1	160 55.3	05.5				
5	53	04.6	277 31.8	+8 43.8	276 37.7	+17 48.5	256 47.9	+10 50.0	175 57.7	-18 05.5				
6	68	07.1	292 34.8	+8 44.2	291 38.6	+17 48.0	271 49.8	+10 49.8	191 00.0	-18 05.6				
7	83	09.5	307 37.9	44.6	306 39.5	47.6	286 51.8	49.6	206 02.4	05.6				
8	98	12.0	322 41.0	45.0	321 40.3	47.1	301 53.7	49.4	221 04.8	05.6				
9	113	14.4	337 44.1	45.4	336 41.2	46.7	316 55.7	49.2	236 07.1	05.7				
10	128	16.9	352 47.1	45.9	351 42.0	46.2	331 57.6	49.0	251 09.5	05.7				
11	143	19.4	7 50.2	+8 46.3	6 42.9	+17 45.8	346 59.6	+10 48.8	266 11.8	-18 05.7				
12	158	21.8	22 53.3	+8 46.7	21 43.8	+17 45.3	2 01.5	+10 48.6	281 14.2	-18 05.8				
13	173	24.3	37 56.3	47.1	36 44.6	44.9	17 03.5	48.4	296 16.5	05.8				
14	188	26.8	52 59.4	47.5	51 45.5	44.4	32 05.4	48.2	311 18.9	05.8				
15	203	29.2	68 02.4	47.9	66 46.3	44.0	47 07.4	48.0	326 21.2	05.9				
16	218	31.7	83 05.5	48.3	81 47.2	43.5	62 09.3	47.8	341 23.6	05.9				
17	233	34.2	98 08.5	+8 48.8	96 48.0	+17 43.1	77 11.2	+10 47.6	356 25.9	-18 05.9				
18	248	36.6	113 11.5	+8 49.2	111 48.9	+17 42.6	92 13.2	+10 47.4	11 28.3	-18 06.0				
19	263	39.1	128 14.6	49.6	126 49.8	42.2	107 15.1	47.2	26 30.6	06.0				
20	278	41.5	143 17.6	50.0	141 50.6	41.7	122 17.1	47.0	41 33.0	06.0				
21	293	44.0	158 20.6	50.4	156 51.5	41.3	137 19.0	46.8	56 35.3	06.1				
22	308	46.5	173 23.6	50.8	171 52.3	40.8	152 21.0	46.6	71 37.7	06.1				
23	323	48.9	188 26.7	51.2	186 53.2	40.4	167 22.9	46.4	86 40.0	06.1				
24	338	51.4	203 29.7	+8 51.6	201 54.1	+17 39.9	182 24.9	+10 46.2	101 42.4	-18 06.2				
Dif	—	—	+31	+4	+9	-4	+19	-2	+24	0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 16 ^d 4 PHE { 4 ^h : 61 ^m /2 12 ^h : 61 ^m /1 20 ^h : 61 ^m /0												
	PMG: 12 ^h 00 ^m 4			SD: 16 ^d 7 PMG: 1 ^h 06 ^m R°: 56 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m		h m m	
0	179	51.7	+8 49.9	344	01.4	-1 35.4			60 N	3 06	4 06	4 52	19 33 22		7 18 91	
1	194	51.9		358	27.8	23.6	118		58	20	14	4 57	34 25		18 88	
2	209	52.0		12	54.3	-1 11.8	118		56	32	22	5 01	35 27		18 86	
3	224	52.2		27	20.7	-1 00.0	118		54	41	28	06	36 29		18 84	
4	239	52.4		41	47.2	-0 48.2	118		52	50	34	09	37 31		18 82	
5	254	52.6	+8 45.4	56	13.7	-0 36.4	118		50	3 58	4 39	5 13	19 38 32		7 18 80	
6	269	52.8	+8 44.5	70	40.2	-0 24.6	118		45	4 13	4 50	5 20	19 40 36		7 19 75	
7	284	53.0		85	06.7	12.8	118		40	25	4 58	26	41 39		19 72	
8	299	53.2		99	33.2	-0 01.0	118		35	35	5 06	32	42 42		19 70	
9	314	53.4		113	59.7	+0 10.8	118		30	43	12	36	43 44		19 67	
10	329	53.6		128	26.3	22.6	118		20	4 55	22	44	45 49		19 63	
11	344	53.8	+8 40.0	142	52.8	+0 34.4	118		10 N	5 05	5 30	5 51	19 47 52		7 19 59	
12	359	54.0	+8 39.1	157	19.4	+0 46.2	118		0	5 12	5 36	5 57	19 49 55		7 20 55	
13	14	54.2		171	46.0	+0 57.9	117		10 S	18	42	6 03	50 59		20 52	
14	29	54.4		186	12.6	+1 09.7	118		20	22	48	10	52 63		20 48	
15	44	54.6		200	39.2	21.4	117		30	25	53	17	54 67		20 44	
16	59	54.8		215	05.8	33.1	117		35	26	56	21	56 69		20 41	
17	74	55.0	+8 34.6	229	32.4	+1 44.9	118		40	5 27	5 58	6 26	19 57 72		7 20 39	
18	89	55.2	+8 33.7	243	59.0	+1 56.6	117		45	5 27	6 01	6 31	19 59 75		7 20 35	
19	104	55.4		258	25.7	+2 08.2	116		50	27	05	37	20 01 79		20 32	
20	119	55.6		272	52.3	19.9	117		52	27	06	40	02 80		20 30	
21	134	55.8		287	19.0	31.5	116		54	27	08	43	03 82		20 28	
22	149	56.0		301	45.7	43.1	116		56	26	09	47	04 85		20 26	
23	164	56.1		316	12.3	+2 54.7	116		58	26	11	51	05 87		20 24	
24	179	56.3	+8 28.3	330	39.0	+3 06.3	116		60 S	5 25	6 13	6 55	20 06 91		7 20 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 24 ^m 3		Mag: -4.5 PMG: 10 ^h 24 ^m		Mag: +1.8 PMG: 10 ^h 32 ^m		Mag: -1.7 PMG: 11 ^h 49 ^m		Mag: +0.5 PMG: 17 ^h 10 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	338	51.4	203	29.7	+8 51.6	201	54.1	+17 39.9	182	24.9	+10 46.2	101	42.4	-18 06.2		
1	353	53.9	218	32.7	52.1	216	54.9	39.5	197	26.8	46.0	116	44.7	06.2		
2	8	56.3	233	35.7	52.5	231	55.8	39.0	212	28.8	45.8	131	47.1	06.2		
3	23	58.8	248	38.7	52.9	246	56.7	38.6	227	30.7	45.6	146	49.4	06.3		
4	39	01.3	263	41.7	53.3	261	57.5	38.1	242	32.7	45.5	161	51.8	06.3		
5	54	03.7	278	44.7	+8 53.7	276	58.4	+17 37.7	257	34.6	+10 45.3	176	54.1	-18 06.3		
6	69	06.2	293	47.6	+8 54.1	291	59.2	+17 37.2	272	36.6	+10 45.1	191	56.5	-18 06.4		
7	84	08.7	308	50.6	54.5	307	00.1	36.8	287	38.5	44.9	206	58.8	06.4		
8	99	11.1	323	53.6	54.9	322	01.0	36.3	302	40.5	44.7	222	01.2	06.4		
9	114	13.6	338	56.6	55.3	337	01.8	35.9	317	42.4	44.5	237	03.5	06.5		
10	129	16.0	353	59.5	55.7	352	02.7	35.4	332	44.4	44.3	252	05.9	06.5		
11	144	18.5	9	02.5	+8 56.2	7	03.6	+17 35.0	347	46.3	+10 44.1	267	08.2	-18 06.5		
12	159	21.0	24	05.5	+8 56.6	22	04.4	+17 34.5	2	48.3	+10 43.9	282	10.6	-18 06.6		
13	174	23.4	39	08.4	57.0	37	05.3	34.1	17	50.2	43.7	297	12.9	06.6		
14	189	25.9	54	11.4	57.4	52	06.1	33.6	32	52.2	43.5	312	15.3	06.6		
15	204	28.4	69	14.3	57.8	67	07.0	33.1	47	54.1	43.3	327	17.6	06.7		
16	219	30.8	84	17.3	58.2	82	07.9	32.7	62	56.1	43.1	342	19.9	06.7		
17	234	33.3	99	20.2	+8 58.6	97	08.7	+17 32.2	77	58.0	+10 42.9	357	22.3	-18 06.7		
18	249	35.8	114	23.1	+8 59.0	112	09.6	+17 31.8	93	00.0	+10 42.7	12	24.6	-18 06.8		
19	264	38.2	129	26.1	59.4	127	10.5	31.3	108	01.9	42.5	27	27.0	06.8		
20	279	40.7	144	29.0	+8 59.8	142	11.3	30.9	123	03.8	42.3	42	29.3	06.8		
21	294	43.2	159	31.9	+9 00.2	157	12.2	30.4	138	05.8	42.1	57	31.7	06.9		
22	309	45.6	174	34.8	00.6	172	13.1	30.0	153	07.7	41.9	72	34.0	06.9		
23	324	48.1	189	37.7	01.0	187	13.9	29.5	168	09.7	41.7	87	36.4	06.9		
24	339	50.5	204	40.6	+9 01.4	202	14.8	+17 29.1	183	11.6	+10 41.5	102	38.7	-18 07.0		
Dif	—		+30		+4	+9		-5	+19		-2	+23				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 4 PHE { 4 ^h : 60 ^m 8 12 ^h : 60 ^m 7 20 ^h : 60 ^m 5					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 1			PMG: 2 ^h 02 ^m R°: 55 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾ Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h m	h m	h m	h m m		h m m		
0	179	56.3	+8 28.3	330	39.0	+3 06.3	77	60 N	19 05	19 50	20 48	19 55 24	8 49 89		
1	194	56.5		345	05.7	17.8	115	58	19 00	42	35	19 59 26	46 86		
2	209	56.7		359	32.4	29.3	115	56	18 55	35	24	20 02 29	44 84		
3	224	56.9		13	59.2	40.8	115	54	52	29	15	05 31	42 81		
4	239	57.1		28	25.9	52.2	114	52	48	23	20 07	08 32	40 80		
5	254	57.3	+8 23.8	42	52.6	03.6	114	50	18 45	19 18	19 59	20 10 34	8 38 78		
6	269	57.5	+8 22.9	57	19.4	15.0	114	45	18 38	19 08	19 45	20 16 37	8 34 75		
7	284	57.7		71	46.1	26.4	114	40	32	19 00	33	20 40	31 71		
8	299	57.9		86	12.9	37.7	113	35	27	18 53	24	24 43	29 68		
9	314	58.1		100	39.6	48.9	112	30	23	47	16	27 45	26 66		
10	329	58.3		115	06.4	00.2	113	20	16	38	19 04	34 48	22 62		
11	344	58.5	+8 18.3	129	33.2	11.3	111	10 N	18 09	18 30	18 55	20 39 52	8 18 59		
12	359	58.7	+8 17.4	144	00.0	22.5	112	0	18 03	18 24	18 48	20 44 55	8 15 55		
13	14	58.9		158	26.8	33.6	111	10 S	17 58	19	43	49 58	12 51		
14	29	59.1		172	53.5	44.6	110	20	52	14	39	20 55 61	08 48		
15	44	59.3		187	20.4	55.6	110	30	45	09	37	21 01 65	04 44		
16	59	59.5		201	47.2	06.6	110	35	41	06	36	05 67	8 01 42		
17	74	59.7	+8 12.9	216	14.0	17.5	109	40	17 37	18 04	18 35	21 09 70	7 59 39		
18	89	59.9	+8 12.0	230	40.8	28.4	109	45	17 32	18 01	18 35	21 14 73	7 55 37		
19	105	00.1		245	07.6	39.2	108	50	26	17 58	36	20 76	52 33		
20	120	00.3		259	34.5	49.9	107	52	23	57	36	22 79	50 31		
21	135	00.5		274	01.3	00.7	108	54	20	56	37	25 80	48 30		
22	150	00.7		288	28.1	11.3	106	56	17	54	37	29 82	46 28		
23	165	00.9		302	55.0	21.9	106	58	13	53	38	32 85	44 25		
24	180	01.1	+8 06.5	317	21.8	32.4	105	60 S	17 09	17 51	18 39	21 37 87	7 41 23		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 1 ^h 20 ^m 4		Mag: -4.5 PMG: 10 ^h 19 ^m		Mag: +1.8 PMG: 10 ^h 30 ^m		Mag: -1.7 PMG: 11 ^h 46 ^m		Mag: +0.5 PMG: 17 ^h 07 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	339	50.5	204	40.6	+9 01.4	202	14.8	+17 29.1	183	11.6	+10 41.5	102	38.7	-18 07.0
1	354	53.0	219	43.5	01.8	217	15.7	28.6	198	13.6	41.3	117	41.1	07.0
2	9	55.5	234	46.4	02.2	232	16.5	28.1	213	15.5	41.1	132	43.4	07.1
3	24	57.9	249	49.3	02.6	247	17.4	27.7	228	17.5	41.0	147	45.8	07.1
4	40	00.4	264	52.2	03.0	262	18.2	27.2	243	19.4	40.8	162	48.1	07.1
5	55	02.9	279	55.1	+9 03.4	277	19.1	+17 26.8	258	21.4	+10 40.6	177	50.4	-18 07.2
6	70	05.3	294	58.0	+9 03.8	292	20.0	+17 26.3	273	23.3	+10 40.4	192	52.8	-18 07.2
7	85	07.8	310	00.9	04.2	307	20.8	25.9	288	25.3	40.2	207	55.1	07.2
8	100	10.3	325	03.8	04.6	322	21.7	25.4	303	27.2	40.0	222	57.5	07.3
9	115	12.7	340	06.6	05.0	337	22.6	24.9	318	29.2	39.8	237	59.8	07.3
10	130	15.2	355	09.5	05.4	352	23.4	24.5	333	31.1	39.6	253	02.2	07.3
11	145	17.6	10	12.4	+9 05.8	7	24.3	+17 24.0	348	33.1	+10 39.4	268	04.5	-18 07.4
12	160	20.1	25	15.2	+9 06.2	22	25.2	+17 23.6	3	35.0	+10 39.2	283	06.9	-18 07.4
13	175	22.6	40	18.1	06.6	37	26.0	23.1	18	37.0	39.0	298	09.2	07.4
14	190	25.0	55	20.9	07.0	52	26.9	22.7	33	38.9	38.8	313	11.5	07.5
15	205	27.5	70	23.8	07.4	67	27.8	22.2	48	40.9	38.6	328	13.9	07.5
16	220	30.0	85	26.6	07.8	82	28.7	21.7	63	42.8	38.4	343	16.2	07.5
17	235	32.4	100	29.4	+9 08.2	97	29.5	+17 21.3	78	44.8	+10 38.2	358	18.6	-18 07.6
18	250	34.9	115	32.3	+9 08.6	112	30.4	+17 20.8	93	46.7	+10 38.0	13	20.9	-18 07.6
19	265	37.4	130	35.1	09.0	127	31.3	20.4	108	48.7	37.8	28	23.3	07.6
20	280	39.8	145	37.9	09.4	142	32.1	19.9	123	50.6	37.6	43	25.6	07.7
21	295	42.3	160	40.7	09.8	157	33.0	19.4	138	52.6	37.4	58	28.0	07.7
22	310	44.8	175	43.6	10.2	172	33.9	19.0	153	54.5	37.2	73	30.3	07.8
23	325	47.2	190	46.4	10.6	187	34.7	18.5	168	56.5	37.0	88	32.6	07.8
24	340	49.7	205	49.2	+9 11.0	202	35.6	+17 18.1	183	58.4	+10 36.8	103	35.0	-18 07.8
Dif	—		+29	+4		+9	-5		+19	-2		+23		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 59 ^m 8			Edad: 18 ^d 4 PHE { 4 ^h : 60/3 12 ^h : 60/1 20 ^h : 59/8 PMG: 2 ^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	h	m
0	180	01.1	+8	06.5	317	21.8	+7	32.4	60 N	3 13	4 11	4 56	20 19	28	10 18	85
1	195	01.3		05.6	331	48.7		42.9	58	26	19	5 01	25 30		12 83	
2	210	01.5		04.7	346	15.6		53.3	56	37	26	05	31 32		08 80	
3	225	01.7		03.8	0	42.4		03.7	54	46	32	09	36 34		03 79	
4	240	01.9		02.9	15	09.3		14.0	52	3 54	37	13	40 36	10 00	76	
5	255	02.1	+8	02.0	29	36.2	+8	24.2	50	4 01	4 42	5 16	20 44	37	9 56	75
6	270	02.3	+8	01.1	44	03.1	+8	34.4	45	4 16	4 52	5 23	20 53	40	9 49	71
7	285	02.5	+8	00.2	58	29.9		44.5	40	27	5 00	28	21 00	43	42 69	
8	300	02.7	+7	59.3	72	56.8	+8	54.6	35	37	07	33	07 44		37 66	
9	315	02.9		58.4	87	23.7	+9	04.5	30	44	13	37	12 47		32 65	
10	330	03.1		57.5	101	50.6		14.4	20	4 56	22	44	22 50		24 61	
11	345	03.3	+7	56.5	116	17.5	+9	24.3	10 N	5 05	5 29	5 51	21 31	52	9 17	58
12	0	03.5	+7	55.6	130	44.4	+9	34.1	0	5 11	5 36	5 56	21 39	55	9 10	55
13	15	03.7		54.7	145	11.3		43.8	10 S	16	41	6 02	47 58		9 03	53
14	30	03.9		53.8	159	38.2	+9	53.4	20	20	46	08	21 56	60	8 56	49
15	45	04.1		52.9	174	05.1	+10	02.9	30	23	51	15	22 06	63	48 46	
16	60	04.3		52.0	188	32.1		12.4	35	24	53	18	12 65		43 44	
17	75	04.5	+7	51.1	202	59.0	+10	21.8	40	5 24	5 55	6 23	22 19	67	8 38	41
18	90	04.7	+7	50.2	217	25.9	+10	31.2	45	5 24	5 58	6 27	22 27	69	8 32	39
19	105	04.9		49.2	231	52.8		40.4	50	23	6 01	33	36 73		25 35	
20	120	05.1		48.3	246	19.8		49.6	52	23	02	36	41 74		21 34	
21	135	05.3		47.4	260	46.7	+10	58.7	54	22	03	39	45 76		18 32	
22	150	05.5		46.5	275	13.7	+11	07.7	56	22	04	42	51 77		14 30	
23	165	05.7		45.6	289	40.6		16.7	58	21	06	45	22 57	79	09 28	
24	180	05.9	+7	44.7	304	07.6	+11	25.5	60 S	5 19	6 07	6 49	23 04	82	8 04	26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 16 ^m 5		Mag: -4.6 PMG: 10 ^h 15 ^m		Mag: +1.8 PMG: 10 ^h 29 ^m		Mag: -1.7 PMG: 11 ^h 43 ^m		Mag: +0.5 PMG: 17 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	340	49.7	205	49.2	+9	11.0	202	35.6	+17	18.1
1	355	52.1	220	52.0		11.4	217	36.5		17.6
2	10	54.6	235	54.8		11.7	232	37.3		17.2
3	25	57.1	250	57.6		12.1	247	38.2		16.7
4	40	59.5	266	00.4		12.5	262	39.1		16.2
5	56	02.0	281	03.2	+9	12.9	277	40.0	+17	15.8
6	71	04.5	296	05.9	+9	13.3	292	40.8	+17	15.3
7	86	06.9	311	08.7		13.7	307	41.7		14.8
8	101	09.4	326	11.5		14.1	322	42.6		14.4
9	116	11.9	341	14.3		14.5	337	43.4		13.9
10	131	14.3	356	17.0		14.9	352	44.3		13.5
11	146	16.8	11	19.8	+9	15.2	7	45.2	+17	13.0
12	161	19.2	26	22.5	+9	15.6	22	46.0	+17	12.5
13	176	21.7	41	25.3		16.0	37	46.9		12.1
14	191	24.2	56	28.0		16.4	52	47.8		11.6
15	206	26.6	71	30.8		16.8	67	48.7		11.2
16	221	29.1	86	33.5		17.2	82	49.5		10.7
17	236	31.6	101	36.2	+9	17.6	97	50.4	+17	10.2
18	251	34.0	116	39.0	+9	17.9	112	51.3	+17	09.8
19	266	36.5	131	41.7		18.3	127	52.2		09.3
20	281	39.0	146	44.4		18.7	142	53.0		08.8
21	296	41.4	161	47.1		19.1	157	53.9		08.4
22	311	43.9	176	49.9		19.5	172	54.8		07.9
23	326	46.4	191	52.6		19.8	187	55.6		07.4
24	341	48.8	206	55.3	+9	20.2	202	56.5	+17	07.0
Dif	—		+28 +4		+9 -5		+19 -2		+23 0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 19 ^d 4 PHE { 4 ^h : 59/5 12 ^h : 59/3 20 ^h : 59/0						Civil		Náutico		Hora R°	
	PMG: 11 ^h 59 ^m 4	PMG: 3 ^h 52 ^m	R°: 55 ^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	180	05.9	+7 44.7	304	07.6	+11 25.5	88	60 N	18 59	19 43	20 40	20 47 34	11 43 78	
1	195	06.1	43.8	318	34.5	79	34.3	58	54	36	28	20 55 36	35 76	
2	210	06.3	42.8	333	01.5	80	43.0	56	50	29	18	21 03 37	28 74	
3	225	06.6	41.9	347	28.4	79	+11 51.6	54	47	24	09	10 38	22 72	
4	240	06.8	41.0	1	55.4	80	+12 00.1	52	43	19	20 01	16 40	16 71	
5	255	07.0	+7 40.1	16	22.4	80	+12 08.6	50	18 41	19 14	19 55	21 21 41	11 11 70	
6	270	07.2	+7 39.2	30	49.3	79	+12 16.9	43	18 34	19 04	19 40	21 33 43	11 00 68	
7	285	07.4	38.3	45	16.3	80	25.2	40	29	18 57	30	43 45	10 51 65	
8	300	07.6	37.4	59	43.3	80	33.4	35	25	50	21	51 47	43 64	
9	315	07.8	36.4	74	10.3	80	41.5	30	21	45	13	21 59 48	37 61	
10	330	08.0	35.5	88	37.3	80	49.5	20	14	36	19 02	22 12 50	25 59	
11	345	08.2	+7 34.6	103	04.3	80	+12 57.4	10 N	18 08	18 29	18 54	22 23 53	10 15 57	
12	0	08.4	+7 33.7	117	31.3	80	+13 05.3	0	18 03	18 24	18 48	22 34 54	10 05 55	
13	15	08.6	32.8	131	58.3	80	13.0	10 S	17 57	19	43	45 56	9 56 52	
14	30	08.8	31.9	146	25.3	80	20.7	20	52	14	40	22 56 58	45 50	
15	45	09.0	30.9	160	52.3	80	28.2	30	46	10	38	23 09 61	34 47	
16	60	09.2	30.0	175	19.4	81	35.7	35	42	08	37	17 62	27 46	
17	75	09.4	+7 29.1	189	46.4	80	+13 43.1	40	17 38	18 06	18 37	23 26 63	9 19 44	
18	90	09.6	+7 28.2	204	13.4	80	+13 50.4	45	17 34	18 03	18 37	23 36 65	9 11 41	
19	105	09.8	27.3	218	40.5	81	+13 57.5	50	29	01	39	49 67	9 00 39	
20	120	10.0	26.4	233	07.5	80	+14 04.6	52	26	18 00	39	23 55 68	8 55 38	
21	135	10.2	25.4	247	34.6	81	11.6	54	24	17 59	40	** ** *	50 36	
22	150	10.4	24.5	262	01.7	81	18.5	56	21	58	41	** ** *	44 34	
23	165	10.6	23.6	276	28.7	80	25.4	58	17	57	42	** ** *	37 33	
24	180	10.8	+7 22.7	290	55.8	81	+14 32.1	60 S	17 14	17 56	18 44	** ** *	8 30 30	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 12 ^m 5		Mag: -4.6 PMG: 10 ^h 10 ^m		Mag: +1.8 PMG: 10 ^h 28 ^m		Mag: -1.7 PMG: 11 ^h 39 ^m			Mag: +0.5 PMG: 16 ^h 59 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	341	48.8	206 55.3	+9 20.2	202 56.5	+17 07.0	184 45.2	+10 32.1	104 31.1	-18 08.7				
1	356	51.3	221 58.0	20.6	217 57.4	06.5	199 47.1	31.9	119 33.5	08.7				
2	11	53.7	237 00.7	21.0	232 58.3	06.0	214 49.1	31.7	134 35.8	08.8				
3	26	56.2	252 03.4	21.4	247 59.1	05.6	229 51.0	31.5	149 38.2	08.8				
4	41	58.7	267 06.0	21.7	263 00.0	05.1	244 53.0	31.3	164 40.5	08.8				
5	57	01.1	282 08.7	+9 22.1	278 00.9	+17 04.7	259 54.9	+10 31.1	179 42.8	-18 08.9				
6	72	03.6	297 11.4	+9 22.5	293 01.8	+17 04.2	274 56.9	+10 31.0	194 45.2	-18 08.9				
7	87	06.1	312 14.1	22.9	308 02.6	03.7	289 58.8	30.8	209 47.5	08.9				
8	102	08.5	327 16.8	23.3	323 03.5	03.3	305 00.8	30.6	224 49.8	09.0				
9	117	11.0	342 19.4	23.6	338 04.4	02.8	320 02.7	30.4	239 52.2	09.0				
10	132	13.5	357 22.1	24.0	353 05.3	02.3	335 04.7	30.2	254 54.5	09.0				
11	147	15.9	12 24.7	+9 24.4	8 06.1	+17 01.9	350 06.6	+10 30.0	269 56.9	-18 09.1				
12	162	18.4	27 27.4	+9 24.7	23 07.0	+17 01.4	5 08.6	+10 29.8	284 59.2	-18 09.1				
13	177	20.9	42 30.0	25.1	38 07.9	00.9	20 10.5	29.6	300 01.5	09.1				
14	192	23.3	57 32.7	25.5	53 08.8	+17 00.5	35 12.5	29.4	315 03.9	09.2				
15	207	25.8	72 35.3	25.9	68 09.6	+17 00.0	50 14.4	29.2	330 06.2	09.2				
16	222	28.2	87 38.0	26.2	83 10.5	+16 59.5	65 16.4	29.0	345 08.5	09.3				
17	237	30.7	102 40.6	+9 26.6	98 11.4	+16 59.1	80 18.3	+10 28.8	0 10.9	-18 09.3				
18	252	33.2	117 43.2	+9 27.0	113 12.3	+16 58.6	95 20.3	+10 28.6	15 13.2	-18 09.3				
19	267	35.6	132 45.8	27.4	128 13.1	58.1	110 22.2	28.4	30 15.5	09.4				
20	282	38.1	147 48.5	27.7	143 14.0	57.7	125 24.2	28.2	45 17.9	09.4				
21	297	40.6	162 51.1	28.1	158 14.9	57.2	140 26.1	28.0	60 20.2	09.4				
22	312	43.0	177 53.7	28.5	173 15.8	56.7	155 28.1	27.8	75 22.6	09.5				
23	327	45.5	192 56.3	28.8	188 16.7	56.2	170 30.0	27.6	90 24.9	09.5				
24	342	48.0	207 58.9	+9 29.2	203 17.5	+16 55.8	185 32.0	+10 27.4	105 27.2	-18 09.6				
Dif	—		+27	+4	+9	-5	+19	-2	+23	0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 20 ^d 4	PHE { 4 ^h : 58 ^h /7 12 ^h : 58 ^h /4 20 ^h : 58 ^h /2										
	PMG: 11 ^h 59 ^m 1					SD: 16 ^h 0		PMG: 4 ^h 47 ^m			R°: 54 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	10.8	+7 22.7	290	55.8	+14 32.1	60 N	3 19	4 17	5 01	21 21	41	13 01	70	
1	195	11.0	21.8	305	22.9	38.7	58	31	24	05	31 43		12 51	68	
2	210	11.2	20.8	319	50.0	45.2	56	42	30	09	40 44		42 67		
3	225	11.5	19.9	334	17.1	51.6	54	50	36	13	48 45		34 66		
4	240	11.7	19.0	348	44.2	+14 58.0	52	3 58	41	16	21 56	45	27 65		
5	255	11.9	+7 18.1	3	11.4	+15 04.2	50	4 05	4 45	5 19	22 02	46	12 21	64	
6	270	12.1	+7 17.2	17	38.5	+15 10.3	45	4 19	4 55	5 25	22 16	48	12 08	62	
7	285	12.3	16.2	32	05.7	16.3	40	30	5 02	30	28 49		11 56	61	
8	300	12.5	15.3	46	32.8	22.3	35	38	09	35	38 50		47 60		
9	315	12.7	14.4	61	00.0	28.1	30	46	14	38	22 47	50	38 59		
10	330	12.9	13.5	75	27.2	33.8	20	4 57	23	45	23 02	52	24 57		
11	345	13.1	+7 12.6	89	54.4	+15 39.4	10 N	5 05	5 29	5 51	23 16	52	11 12	55	
12	0	13.3	+7 11.6	104	21.6	+15 45.0	0	5 11	5 35	5 56	23 28	54	11 00	54	
13	15	13.5	10.7	118	48.8	50.4	10 S	15	40	6 01	41 54		10 48	53	
14	30	13.7	09.8	133	16.0	+15 55.7	20	19	44	06	23 54	56	35 52		
15	45	13.9	08.9	147	43.2	+16 00.9	30	20	48	12	** ** *		21 50		
16	60	14.1	07.9	162	10.5	06.1	35	21	50	16	** ** *		13 48		
17	75	14.3	+7 07.0	176	37.8	+16 11.1	40	5 21	5 52	6 19	** ** *		10 03	48	
18	90	14.6	+7 06.1	191	05.0	+16 16.0	45	5 20	5 54	6 24	** ** *		9 52	46	
19	105	14.8	05.2	205	32.3	20.8	50	19	57	29	** ** *		39 44		
20	120	15.0	04.3	219	59.6	25.5	52	19	57	31	** ** *		33 43		
21	135	15.2	03.3	234	27.0	30.1	54	18	58	34	0 01	70	26 42		
22	150	15.4	02.4	248	54.3	34.6	56	17	5 59	37	08 71		18 41		
23	165	15.6	01.5	263	21.6	39.0	58	15	6 01	40	16 73		10 39		
24	180	15.8	+7 00.6	277	49.0	+16 43.3	60 S	5 14	6 02	6 43	0 26	74	9 00	37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 08 ^m 6		Mag: -4.6 PMG: 10 ^h 06 ^m		Mag: +1.8 PMG: 10 ^h 26 ^m		Mag: -1.7 PMG: 11 ^h 36 ^m		Mag: +0.5 PMG: 16 ^h 56 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	342	48.0	207	58.9	+9 29.2	203	17.5	+16 55.8	185	32.0	+10 27.4	105	27.2	-18 09.6
1	357	50.4	223	01.5	29.6	218	18.4	55.3	200	33.9	27.2	120	29.6	09.6
2	12	52.9	238	04.1	29.9	233	19.3	54.8	215	35.9	27.0	135	31.9	09.6
3	27	55.3	253	06.7	30.3	248	20.2	54.4	230	37.8	26.8	150	34.2	09.7
4	42	57.8	268	09.3	30.7	263	21.0	53.9	245	39.8	26.6	165	36.6	09.7
5	58	00.3	283	11.9	+9 31.0	278	21.9	+16 53.4	260	41.7	+10 26.4	180	38.9	-18 09.7
6	73	02.7	298	14.4	+9 31.4	293	22.8	+16 53.0	275	43.7	+10 26.2	195	41.2	-18 09.8
7	88	05.2	313	17.0	31.7	308	23.7	52.5	290	45.6	26.0	210	43.6	09.8
8	103	07.7	328	19.6	32.1	323	24.6	52.0	305	47.6	25.8	225	45.9	09.8
9	118	10.1	343	22.1	32.5	338	25.4	51.6	320	49.5	25.7	240	48.2	09.9
10	133	12.6	358	24.7	32.8	353	26.3	51.1	335	51.5	25.5	255	50.6	09.9
11	148	15.1	13	27.3	+9 33.2	8	27.2	+16 50.6	350	53.4	+10 25.3	270	52.9	-18 10.0
12	163	17.5	28	29.8	+9 33.5	23	28.1	+16 50.1	5	55.4	+10 25.1	285	55.2	-18 10.0
13	178	20.0	43	32.4	33.9	38	29.0	49.7	20	57.3	24.9	300	57.6	10.0
14	193	22.5	58	34.9	34.3	53	29.8	49.2	35	59.3	24.7	315	59.9	10.1
15	208	24.9	73	37.4	34.6	68	30.7	48.7	51	01.2	24.5	331	02.2	10.1
16	223	27.4	88	40.0	35.0	83	31.6	48.3	66	03.2	24.3	346	04.6	10.1
17	238	29.8	103	42.5	+9 35.3	98	32.5	+16 47.8	81	05.1	+10 24.1	1	06.9	-18 10.2
18	253	32.3	118	45.0	+9 35.7	113	33.4	+16 47.3	96	07.1	+10 23.9	16	09.2	-18 10.2
19	268	34.8	133	47.6	36.0	128	34.2	46.8	111	09.0	23.7	31	11.6	10.3
20	283	37.2	148	50.1	36.4	143	35.1	46.4	126	11.0	23.5	46	13.9	10.3
21	298	39.7	163	52.6	36.8	158	36.0	45.9	141	12.9	23.3	61	16.2	10.3
22	313	42.2	178	55.1	37.1	173	36.9	45.4	156	14.9	23.1	76	18.5	10.4
23	328	44.6	193	57.6	37.5	188	37.8	45.0	171	16.8	22.9	91	20.9	10.4
24	343	47.1	209	00.1	+9 37.8	203	38.6	+16 44.5	186	18.8	+10 22.7	106	23.2	-18 10.4
Dif	—		+26	+4		+9	-5		+20	-2		+23		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 21 ^d 4 PHE { 4 ^h : 57/9 12 ^h : 57/6 20 ^h : 57/3										
	PMG: 11 ^h 58 ^m 8			SD: 15°8 PMG: 5 ^h 41 ^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	180	15.8	+7 00.6	277	49.0	+16 43.3	42	60 N	18 53	19 37	20 32	22 02 50	14 11 59	
1	195	16.0	+6 59.6	292	16.4 84	47.5 42		58	49	30	21	14 50	13 59 59	
2	210	16.2	58.7	306	43.8 84	51.6 41		56	45	24	12	24 51	49 58	
3	225	16.4	57.8	321	11.2 84	55.6 40		54	42	18	20 03	33 51	40 58	
4	240	16.6	56.9	335	38.7 85	+16 59.4 38		52	39	14	19 56	41 51	32 58	
5	255	16.8	+6 55.9	350	06.1 84	+17 03.2 38		50	18 36	19 09	19 50	22 48 52	13 25 57	
6	270	17.0	+6 55.0	4	33.6 85	+17 06.9 37		45	18 31	19 01	19 36	23 04 51	13 10 56	
7	285	17.3	54.1	19	01.1 85	10.5 36		40	26	18 53	26	17 52	12 57 56	
8	300	17.5	53.2	33	28.6 85	13.9 34		35	22	47	18	28 52	47 55	
9	315	17.7	52.2	47	56.2 86	17.3 34		30	18	42	11	37 52	37 55	
10	330	17.9	51.3	62	23.7 85	20.5 32		20	12	34	19 00	23 54 52	21 55	
11	345	18.1	+6 50.4	76	51.3 86	+17 23.7 32		10 N	18 07	18 28	18 53	** ** *	12 07 54	
12	0	18.3	+6 49.5	91	18.9 86	+17 26.7 30		0	18 02	18 23	18 47	** ** *	11 54 53	
13	15	18.5	48.5	105	46.5 86	29.6 29		10 S	17 57	18	43	** ** *	41 52	
14	30	18.7	47.6	120	14.1 86	32.5 29		20	52	15	40	** ** *	27 52	
15	45	18.9	46.7	134	41.8 87	35.2 27		30	47	11	39	0 10 57	11 51	
16	60	19.1	45.8	149	09.5 87	37.8 26		35	44	09	39	19 57	11 01 51	
17	75	19.3	+6 44.8	163	37.2 87	+17 40.4 26		40	17 40	18 07	18 39	0 29 59	10 51 50	
18	90	19.5	+6 43.9	178	05.0 88	+17 42.8 24		45	17 36	18 06	18 40	0 41 60	10 38 50	
19	105	19.8	43.0	192	32.7 87	45.1 23		50	32	04	41	0 56 61	23 49	
20	120	20.0	42.0	207	00.5 88	47.3 22		52	29	03	42	1 03 61	16 48	
21	135	20.2	41.1	221	28.3 88	49.4 21		54	27	03	43	11 61	10 08 48	
22	150	20.4	40.2	235	56.2 89	51.4 20		56	24	02	45	19 63	9 59 47	
23	165	20.6	39.3	250	24.0 88	53.3 19		58	22	01	46	29 63	49 47	
24	180	20.8	+6 38.3	264	51.9 89	+17 55.1 18		60 S	17 18	18 00	18 48	1 40 65	9 37 46	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 04 ^m 7		Mag: -4.6 PMG: 10 ^h 02 ^m		Mag: +1.8 PMG: 10 ^h 25 ^m		Mag: -1.7 PMG: 11 ^h 33 ^m		Mag: +0.5 PMG: 16 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	343	47.1	209 00.1	+9 37.8	203 38.6	+16 44.5	186 18.8	+10 22.7	106 23.2	-18 10.4
1	358	49.6	224 02.6	38.2	218 39.5	44.0	201 20.7	22.5	121 25.5	10.5
2	13	52.0	239 05.1	38.5	233 40.4	43.5	216 22.7	22.3	136 27.9	10.5
3	28	54.5	254 07.6	38.9	248 41.3	43.1	231 24.6	22.1	151 30.2	10.6
4	43	57.0	269 10.1	39.2	263 42.2	42.6	246 26.6	21.9	166 32.5	10.6
5	58	59.4	284 12.6	+9 39.6	278 43.1	+16 42.1	261 28.5	+10 21.7	181 34.9	-18 10.6
6	74	01.9	299 15.0	+9 39.9	293 43.9	+16 41.6	276 30.5	+10 21.5	196 37.2	-18 10.7
7	89	04.3	314 17.5	40.3	308 44.8	41.2	291 32.4	21.3	211 39.5	10.7
8	104	06.8	329 20.0	40.6	323 45.7	40.7	306 34.4	21.1	226 41.9	10.7
9	119	09.3	344 22.4	41.0	338 46.6	40.2	321 36.3	20.9	241 44.2	10.8
10	134	11.7	359 24.9	41.3	353 47.5	39.7	336 38.3	20.7	256 46.5	10.8
11	149	14.2	14 27.4	+9 41.6	8 48.4	+16 39.3	351 40.3	+10 20.5	271 48.8	-18 10.9
12	164	16.7	29 29.8	+9 42.0	23 49.2	+16 38.8	6 42.2	+10 20.3	286 51.2	-18 10.9
13	179	19.1	44 32.3	42.3	38 50.1	38.3	21 44.2	20.2	301 53.5	10.9
14	194	21.6	59 34.7	42.7	53 51.0	37.8	36 46.1	20.0	316 55.8	11.0
15	209	24.1	74 37.1	43.0	68 51.9	37.4	51 48.1	19.8	331 58.2	11.0
16	224	26.5	89 39.6	43.4	83 52.8	36.9	66 50.0	19.6	347 00.5	11.0
17	239	29.0	104 42.0	+9 43.7	98 53.7	+16 36.4	81 52.0	+10 19.4	2 02.8	-18 11.1
18	254	31.4	119 44.4	+9 44.0	113 54.5	+16 35.9	96 53.9	+10 19.2	17 05.1	-18 11.1
19	269	33.9	134 46.9	44.4	128 55.4	35.5	111 55.9	19.0	32 07.5	11.2
20	284	36.4	149 49.3	44.7	143 56.3	35.0	126 57.8	18.8	47 09.8	11.2
21	299	38.8	164 51.7	45.1	158 57.2	34.5	141 59.8	18.6	62 12.1	11.2
22	314	41.3	179 54.1	45.4	173 58.1	34.0	157 01.7	18.4	77 14.5	11.3
23	329	43.8	194 56.5	45.7	188 59.0	33.6	172 03.7	18.2	92 16.8	11.3
24	344	46.2	209 58.9	+9 46.1	203 59.9	+16 33.1	187 05.6	+10 18.0	107 19.1	-18 11.3
Dif	—		+25	+3	+9	-5	+20	-2	+23	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 4			Edad: 22 ^d 4 PHE { SD: 15'6 PMG: 6 ^h 35 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	20.8	+6 38.3	264	51.9	+17 55.1	60 N	3 26	4 22	5 06	22 52	58	15 10	48
1	195	21.0		279	19.8	89 56.8	58	37	29	10	23 04	57	14 58	48
2	210	21.2	36.5	293	47.8	90 58.3	56	46	34	13	15 56		47 49	
3	225	21.4	35.5	308	15.8	90 +17 59.8	54	3 55	40	16	24 56		38 49	
4	240	21.6	34.6	322	43.8	90 +18 01.2	52	4 02	44	19	32 56		30 49	
5	255	21.9	+6 33.7	337	11.8	90 +18 02.5	50	4 08	4 49	5 22	23 40	55	14 22	50
6	270	22.1	+6 32.8	351	39.9	91 +18 03.6	45	4 21	4 57	5 27	23 55	55	14 06	50
7	285	22.3	31.8	6 08.0	91 04.7	11 40	40	32	5 04	32	** ** *	**	13 53	51
8	300	22.5	30.9	20 36.1	91 05.7	10 35	35	40	10	36	** ** *	**	42 51	
9	315	22.7	30.0	35 04.2	91 06.6	9 30	30	47	15	39	** ** *	**	32 51	
10	330	22.9	29.0	49 32.4	92 07.3	7 20	20	4 57	23	45	** ** *	**	16 51	
11	345	23.1	+6 28.1	64 00.6	92 +18 08.0	7 10 N	10 N	5 05	5 29	5 50	0 08	53	13 01	52
12	0	23.3	+6 27.2	78 28.9	93 +18 08.5	5 0	0	5 10	5 34	5 55	0 22	52	12 47	52
13	15	23.5	26.2	92 57.2	93 09.0	5 10 S	10 S	14	39	6 00	35 53		33 53	
14	30	23.8	25.3	107 25.5	93 09.4	4 20	20	17	42	05	0 50	53	19 52	
15	45	24.0	24.4	121 53.8	93 09.6	2 2	30	18	46	10	1 07	53	12 02	53
16	60	24.2	23.4	136 22.2	94 09.8	2 35	35	18	48	13	16 53		11 52	53
17	75	24.4	+6 22.5	150 50.6	94 +18 09.8	0 40	40	5 18	5 49	6 16	1 28	52	11 41	53
18	90	24.6	+6 21.6	165 19.1	95 +18 09.8	0 45	45	5 17	5 51	6 20	1 41	53	11 28	53
19	105	24.8	20.7	179 47.6	95 09.6	2 50	50	15	52	25	1 57	53	12 53	
20	120	25.0	19.7	194 16.1	95 09.4	2 3	52	14	53	27	2 04	53	11 04	54
21	135	25.2	18.8	208 44.7	96 09.1	3 5	54	13	54	29	12 53		10 56	53
22	150	25.4	17.9	223 13.3	96 08.6	5 56	56	12	54	32	22 53		46 54	
23	165	25.7	16.9	237 41.9	96 08.1	5 58	58	10	55	34	32 53		36 54	
24	180	25.9	+6 16.0	252 10.6	97 +18 07.4	7 60 S	60 S	5 08	5 56	6 37	2 45	53	10 23	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 00 ^m 8		Mag: -4.7 PMG: 9 ^h 58 ^m		Mag: +1.8 PMG: 10 ^h 23 ^m		Mag: -1.7 PMG: 11 ^h 30 ^m		Mag: +0.5 PMG: 16 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	344	46.2	209 58.9	+9 46.1	203 59.9	+16 33.1	187 05.6	+10 18.0	107 19.1	-18 11.3
1	359	48.7	225 01.3	46.4	219 00.7	32.6	202 07.6	17.8	122 21.4	11.4
2	14	51.2	240 03.7	46.7	234 01.6	32.1	217 09.5	17.6	137 23.8	11.4
3	29	53.6	255 06.1	47.1	249 02.5	31.6	232 11.5	17.4	152 26.1	11.5
4	44	56.1	270 08.5	47.4	264 03.4	31.2	247 13.4	17.2	167 28.4	11.5
5	59	58.6	285 10.9	+9 47.7	279 04.3	+16 30.7	262 15.4	+10 17.0	182 30.7	-18 11.5
6	75	01.0	300 13.2	+9 48.1	294 05.2	+16 30.2	277 17.3	+10 16.8	197 33.1	-18 11.6
7	90	03.5	315 15.6	48.4	309 06.1	29.7	292 19.3	16.6	212 35.4	11.6
8	105	05.9	330 18.0	48.7	324 06.9	29.3	307 21.2	16.4	227 37.7	11.7
9	120	08.4	345 20.4	49.1	339 07.8	28.8	322 23.2	16.2	242 40.0	11.7
10	135	10.9	0 22.7	49.4	354 08.7	28.3	337 25.1	16.0	257 42.4	11.7
11	150	13.3	15 25.1	+9 49.7	9 09.6	+16 27.8	352 27.1	+10 15.8	272 44.7	-18 11.8
12	165	15.8	30 27.4	+9 50.1	24 10.5	+16 27.3	7 29.0	+10 15.6	287 47.0	-18 11.8
13	180	18.3	45 29.8	50.4	39 11.4	26.9	22 31.0	15.4	302 49.3	11.8
14	195	20.7	60 32.1	50.7	54 12.3	26.4	37 32.9	15.2	317 51.7	11.9
15	210	23.2	75 34.5	51.0	69 13.2	25.9	52 34.9	15.0	332 54.0	11.9
16	225	25.7	90 36.8	51.4	84 14.0	25.4	67 36.8	14.8	347 56.3	12.0
17	240	28.1	105 39.1	+9 51.7	99 14.9	+16 24.9	82 38.8	+10 14.7	2 58.6	-18 12.0
18	255	30.6	120 41.5	+9 52.0	114 15.8	+16 24.5	97 40.7	+10 14.5	18 01.0	-18 12.0
19	270	33.1	135 43.8	52.3	129 16.7	24.0	112 42.7	14.3	33 03.3	12.1
20	285	35.5	150 46.1	52.7	144 17.6	23.5	127 44.6	14.1	48 05.6	12.1
21	300	38.0	165 48.4	53.0	159 18.5	23.0	142 46.6	13.9	63 07.9	12.2
22	315	40.4	180 50.7	53.3	174 19.4	22.5	157 48.5	13.7	78 10.3	12.2
23	330	42.9	195 53.0	53.6	189 20.3	22.1	172 50.5	13.5	93 12.6	12.2
24	345	45.4	210 55.3	+9 53.9	204 21.2	+16 21.6	187 52.5	+10 13.3	108 14.9	-18 12.3
Dif	—		+24	+3	+9	-5	+20	-2	+23	0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 23 ^d 4 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 1 20 ^h : 55 ^m 9					Civil			Hora R°		Hora R°	
	PMG: 11 ^h 58 ^m 1	hG ☉	Dec	hG ☾	Dif	Dec			Dif	h m	h m	h m	h m m	m	h m m
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	25.9	+6 16.0	252	10.6	+18 07.4	7	60 N	18 47	19 30	20 25	23 50 64	15 58 37		
1	195	26.1	15.1	266	39.3	06.7	8	58	43	24	15	*** ** *	46 39		
2	210	26.3	14.1	281	08.0	05.9	9	56	40	18	20 06	*** ** *	36 40		
3	225	26.5	13.2	295	36.8	05.0	10	54	37	13	19 58	*** ** *	27 40		
4	240	26.7	12.3	310	05.6	03.9	11	52	34	09	51	*** ** *	19 42		
5	255	26.9	+6 11.3	324	34.5	+18 02.8	11	50	18 32	19 05	19 45	*** ** *	15 12 42		
6	270	27.1	+6 10.4	339	03.4	+18 01.6	12	45	18 27	18 57	19 32	*** ** *	14 56 44		
7	285	27.3	09.5	353	32.3	+18 00.3	13	40	23	50	23	0 09 54	44 44		
8	300	27.6	08.5	8	01.3	+17 58.9	14	35	19	45	15	20 53	33 46		
9	315	27.8	07.6	22	30.3	57.4	15	30	16	40	19 08	29 53	23 47		
10	330	28.0	06.6	36	59.4	55.8	16	20	10	33	18 58	0 46 52	14 07 48		
11	345	28.2	+6 05.7	51	28.5	+17 54.1	17	10 N	18 06	18 27	18 51	1 01 51	13 53 49		
12	0	28.4	+6 04.8	65	57.6	+17 52.3	18	0	18 01	18 22	18 46	1 14 51	13 39 50		
13	15	28.6	03.8	80	26.8	50.5	18	10 S	17 57	18	43	28 50	26 51		
14	30	28.8	02.9	94	56.0	48.5	20	20	53	15	41	1 43 49	13 11 52		
15	45	29.1	02.0	109	25.3	46.5	20	30	48	12	40	2 00 48	12 55 53		
16	60	29.3	01.0	123	54.6	44.3	22	35	45	11	40	09 48	45 54		
17	75	29.5	+6 00.1	138	23.9	+17 42.1	22	40	17 42	18 09	18 41	2 20 48	12 34 55		
18	90	29.7	+5 59.2	152	53.3	+17 39.7	24	45	17 39	18 08	18 42	2 34 46	12 21 56		
19	105	29.9	58.2	167	22.8	37.3	24	50	35	07	44	50 45	12 05 57		
20	120	30.1	57.3	181	52.3	34.8	25	52	33	06	45	2 57 45	11 58 58		
21	135	30.3	56.4	196	21.8	32.2	26	54	31	06	47	3 05 45	49 59		
22	150	30.5	55.4	210	51.3	29.6	26	56	28	05	49	15 44	40 60		
23	165	30.8	54.5	225	21.0	26.8	28	58	26	05	51	25 44	30 60		
24	180	31.0	+5 53.5	239	50.6	+17 23.9	29	60 S	17 23	18 05	18 53	3 38 42	11 18 61		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 0 ^h 56 ^m 8	Mag: -4.7 PMG: 9 ^h 55 ^m	Mag: +1.8 PMG: 10 ^h 22 ^m	Mag: -1.7 PMG: 11 ^h 27 ^m	Mag: +0.6 PMG: 16 ^h 44 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	345	45.4	210	55.3	+9 53.9	204	21.2	+16 21.6	187	52.5	+10 13.3	108	14.9	-18 12.3
1	0	47.8	225	57.6	54.3	219	22.1	21.1	202	54.4	13.1	123	17.2	12.3
2	15	50.3	240	59.9	54.6	234	22.9	20.6	217	56.4	12.9	138	19.6	12.3
3	30	52.8	256	02.2	54.9	249	23.8	20.1	232	58.3	12.7	153	21.9	12.4
4	45	55.2	271	04.5	55.2	264	24.7	19.6	248	00.3	12.5	168	24.2	12.4
5	60	57.7	286	06.8	+9 55.5	279	25.6	+16 19.2	263	02.2	+10 12.3	183	26.5	-18 12.5
6	76	00.2	301	09.1	+9 55.8	294	26.5	+16 18.7	278	04.2	+10 12.1	198	28.9	-18 12.5
7	91	02.6	316	11.4	56.1	309	27.4	18.2	293	06.1	11.9	213	31.2	12.5
8	106	05.1	331	13.6	56.5	324	28.3	17.7	308	08.1	11.7	228	33.5	12.6
9	121	07.5	346	15.9	56.8	339	29.2	17.2	323	10.0	11.5	243	35.8	12.6
10	136	10.0	1	18.2	57.1	354	30.1	16.7	338	12.0	11.3	258	38.1	12.7
11	151	12.5	16	20.4	+9 57.4	9	31.0	+16 16.3	353	13.9	+10 11.1	273	40.5	-18 12.7
12	166	14.9	31	22.7	+9 57.7	24	31.9	+16 15.8	8	15.9	+10 10.9	288	42.8	-18 12.7
13	181	17.4	46	24.9	58.0	39	32.7	15.3	23	17.8	10.7	303	45.1	12.8
14	196	19.9	61	27.2	58.3	54	33.6	14.8	38	19.8	10.5	318	47.4	12.8
15	211	22.3	76	29.4	58.6	69	34.5	14.3	53	21.7	10.3	333	49.8	12.9
16	226	24.8	91	31.7	58.9	84	35.4	13.8	68	23.7	10.1	348	52.1	12.9
17	241	27.3	106	33.9	+9 59.3	99	36.3	+16 13.4	83	25.6	+10 09.9	3	54.4	-18 12.9
18	256	29.7	121	36.1	+9 59.6	114	37.2	+16 12.9	98	27.6	+10 09.7	18	56.7	-18 13.0
19	271	32.2	136	38.4	+9 59.9	129	38.1	12.4	113	29.5	09.5	33	59.0	13.0
20	286	34.7	151	40.6	+10 00.2	144	39.0	11.9	128	31.5	09.3	49	01.4	13.0
21	301	37.1	166	42.8	00.5	159	39.9	11.4	143	33.4	09.1	64	03.7	13.1
22	316	39.6	181	45.0	00.8	174	40.8	10.9	158	35.4	09.0	79	06.0	13.1
23	331	42.0	196	47.2	01.1	189	41.7	10.5	173	37.4	08.8	94	08.3	13.2
24	346	44.5	211	49.4	+10 01.4	204	42.6	+16 10.0	188	39.3	+10 08.6	109	10.6	-18 13.2
Dif	—		+23	+3		+9	-5		+20	-2		+23		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 57 ^m 8			Edad: 24 ^d 4	PHE { 4 ^h : 55°7 12 ^h : 55°5 20 ^h : 55°4 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	31.0	+5 53.5	239	50.6	+17 23.9	60 N	3 32	4 27	5 10	***	***	***	16 35	30
1	195	31.2		254	20.3 ¹⁰⁷	21.0 ²⁹	58	42	33	14	0 01	63	25	31	
2	210	31.4		268	50.1 ¹⁰⁸	18.0 ³⁰	56	51	39	17	11	62	16	33	
3	225	31.6		283	19.8 ¹⁰⁷	14.8 ³²	54	3 59	43	20	20	60	08	34	
4	240	31.8		297	49.7 ¹⁰⁹	11.6 ³²	52	4 06	48	22	28	59	16	01	35
5	255	32.0	+5 48.9	312	19.5 ¹⁰⁸	+17 08.3 ³³	50	4 12	4 52	5 25	0 35	59	15	54	36
6	270	32.3	+5 47.9	326	49.5 ¹¹⁰	+17 05.0 ³³	45	4 24	5 00	5 30	0 50	57	15	40	38
7	285	32.5		341	19.4 ¹⁰⁹	+17 01.5 ³⁵	40	34	06	34	1 03	55	28	41	
8	300	32.7		355	49.5 ¹¹¹	+16 58.0 ³⁵	35	42	12	37	13	55	19	41	
9	315	32.9		10	19.5 ¹¹⁰	54.4 ³⁶	30	48	16	41	22	54	15	10	42
10	330	33.1		24	49.6 ¹¹¹	50.7 ³⁷	20	4 58	24	46	38	52	14	55	44
11	345	33.3	+5 43.2	39	19.8 ¹¹²	+16 46.9 ³⁸	10 N	5 05	5 29	5 50	1 52	51	14	42	46
12	0	33.5	+5 42.3	53	50.0 ¹¹²	+16 43.0 ³⁹	0	5 10	5 34	5 55	2 05	49	14	29	48
13	15	33.8		68	20.2 ¹¹²	39.1 ³⁹	10 S	13	37	5 59	18	48	17	49	
14	30	34.0		82	50.5 ¹¹³	35.1 ⁴⁰	20	15	41	6 03	32	46	14	03	52
15	45	34.2		97	20.8 ¹¹³	31.0 ⁴¹	30	16	43	07	48	45	13	48	54
16	60	34.4		111	51.2 ¹¹⁴	26.8 ⁴²	35	15	45	10	2 57	44	39	55	
17	75	34.6	+5 37.6	126	21.6 ¹¹⁴	+16 22.5 ⁴³	40	5 15	5 46	6 13	3 08	42	13	29	56
18	90	34.8	+5 36.6	140	52.1 ¹¹⁵	+16 18.2 ⁴³	45	5 13	5 47	6 16	3 20	41	13	17	58
19	105	35.0		155	22.6 ¹¹⁵	13.8 ⁴⁴	50	11	48	20	35	39	13	02	60
20	120	35.3		169	53.2 ¹¹⁶	09.3 ⁴⁵	52	10	49	22	42	39	12	56	60
21	135	35.5		184	23.8 ¹¹⁶	04.7 ⁴⁶	54	08	49	24	50	37	48	62	
22	150	35.7		198	54.4 ¹¹⁶	+16 00.1 ⁴⁶	56	06	49	26	3 59	36	40	63	
23	165	35.9		213	25.1 ¹¹⁷	+15 55.3 ⁴⁸	58	04	50	29	4 09	34	30	65	
24	180	36.1	+5 31.0	227	55.9 ¹¹⁸	+15 50.5 ⁴⁸	60 S	5 02	5 50	6 32	4 20	33	12	19	66

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 52 ^m 9		Mag: -4.7 PMG: 9 ^h 51 ^m			Mag: +1.8 PMG: 10 ^h 21 ^m			Mag: -1.7 PMG: 11 ^h 24 ^m			Mag: +0.6 PMG: 16 ^h 41 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	346	44.5	211	49.4	+10 01.4	204	42.6	+16 10.0	188	39.3	+10 08.6	109	10.6	-18 13.2
1	1	47.0	226	51.6	01.7	219	43.5	09.5	203	41.3	08.4	124	13.0	13.2
2	16	49.4	241	53.8	02.0	234	44.4	09.0	218	43.2	08.2	139	15.3	13.3
3	31	51.9	256	56.0	02.3	249	45.3	08.5	233	45.2	08.0	154	17.6	13.3
4	46	54.4	271	58.2	02.6	264	46.1	08.0	248	47.1	07.8	169	19.9	13.4
5	61	56.8	287	00.4	+10 02.9	279	47.0	+16 07.5	263	49.1	+10 07.6	184	22.2	-18 13.4
6	76	59.3	302	02.6	+10 03.2	294	47.9	+16 07.1	278	51.0	+10 07.4	199	24.6	-18 13.4
7	92	01.8	317	04.8	03.5	309	48.8	06.6	293	53.0	07.2	214	26.9	13.5
8	107	04.2	332	07.0	03.8	324	49.7	06.1	308	54.9	07.0	229	29.2	13.5
9	122	06.7	347	09.1	04.1	339	50.6	05.6	323	56.9	06.8	244	31.5	13.6
10	137	09.2	2	11.3	04.4	354	51.5	05.1	338	58.8	06.6	259	33.8	13.6
11	152	11.6	17	13.5	+10 04.6	9	52.4	+16 04.6	354	00.8	+10 06.4	274	36.2	-18 13.6
12	167	14.1	32	15.6	+10 04.9	24	53.3	+16 04.1	9	02.7	+10 06.2	289	38.5	-18 13.7
13	182	16.5	47	17.8	05.2	39	54.2	03.6	24	04.7	06.0	304	40.8	13.7
14	197	19.0	62	19.9	05.5	54	55.1	03.2	39	06.6	05.8	319	43.1	13.8
15	212	21.5	77	22.1	05.8	69	56.0	02.7	54	08.6	05.6	334	45.4	13.8
16	227	23.9	92	24.2	06.1	84	56.9	02.2	69	10.6	05.4	349	47.7	13.8
17	242	26.4	107	26.4	+10 06.4	99	57.8	+16 01.7	84	12.5	+10 05.2	4	50.1	-18 13.9
18	257	28.9	122	28.5	+10 06.7	114	58.7	+16 01.2	99	14.5	+10 05.0	19	52.4	-18 13.9
19	272	31.3	137	30.7	07.0	129	59.6	00.7	114	16.4	04.8	34	54.7	14.0
20	287	33.8	152	32.8	07.2	145	00.5	+16 00.2	129	18.4	04.6	49	57.0	14.0
21	302	36.3	167	34.9	07.5	160	01.4	+15 59.7	144	20.3	04.4	64	59.3	14.0
22	317	38.7	182	37.0	07.8	175	02.3	59.3	159	22.3	04.2	80	01.6	14.1
23	332	41.2	197	39.1	08.1	190	03.2	58.8	174	24.2	04.0	95	04.0	14.1
24	347	43.7	212	41.3	+10 08.4	205	04.1	+15 58.3	189	26.2	+10 03.8	110	06.3	-18 14.2
Dif	—		+22	+3		+9	-5		+20	-2		+23	0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9			Edad: 25 ^d 4 PHE	SD: 15°1				R°: 47 ^m						
	PMG: 11 ^h 57 ^m 4				PMG: 9 ^h 06 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	36.1	+5 31.0	227	55.9	+15 50.5		60 N	18 41	19 24	20 18	0 54 68	17 05 24		
1	195	36.3		242	26.7 ¹¹⁸	45.7 ⁴⁸		58	37	18	08	1 04 66	16 56 26		
2	210	36.5	29.1	256	57.5 ¹¹⁸	40.7 ⁵⁰		56	35	13	20 00	13 64	49 27		
3	225	36.8	28.2	271	28.4 ¹¹⁹	35.7 ⁵⁰		54	32	08	19 52	20 63	42 29		
4	240	37.0	27.2	285	59.3 ¹¹⁹	30.7 ⁵⁰		52	30	04	46	27 62	36 30		
5	255	37.2	+5 26.3	300	30.3 ¹²⁰	+15 25.5 ⁵²		50	18 28	19 00	19 40	1 34 60	16 30 32		
6	270	37.4	+5 25.3	315	01.3 ¹²⁰	+15 20.3 ⁵²		45	18 23	18 53	19 28	1 47 58	16 18 34		
7	285	37.6	24.4	329	32.4 ¹²¹	15.0 ⁵³		40	19	47	19	1 58 57	09 36		
8	300	37.8	23.5	344	03.5 ¹²¹	09.6 ⁵⁴		35	16	42	12	2 08 54	16 00 38		
9	315	38.1	22.5	358	34.7 ¹²²	+15 04.2 ⁵⁴		30	13	37	19 06	16 53	15 52 40		
10	330	38.3	21.6	13	05.9 ¹²²	+14 58.7 ⁵⁵		20	09	31	18 57	30 51	39 42		
11	345	38.5	+5 20.6	27	37.2 ¹²³	+14 53.1 ⁵⁶		10 N	18 04	18 26	18 50	2 43 49	15 28 44		
12	0	38.7	+5 19.7	42	08.5 ¹²³	+14 47.5 ⁵⁶		0	18 01	18 21	18 46	2 54 47	15 17 47		
13	15	38.9	18.7	56	39.8 ¹²³	41.8 ⁵⁷		10 S	17 57	18	43	3 06 45	15 06 49		
14	30	39.1	17.8	71	11.2 ¹²⁴	36.0 ⁵⁸		20	53	15	41	18 44	14 55 51		
15	45	39.4	16.9	85	42.6 ¹²⁴	30.2 ⁵⁸		30	49	13	41	33 40	42 53		
16	60	39.6	15.9	100	14.1 ¹²⁵	24.3 ⁵⁹		35	47	12	41	41 39	34 55		
17	75	39.8	+5 15.0	114	45.6 ¹²⁵	+14 18.4 ⁵⁹		40	17 44	18 11	18 42	3 50 38	14 25 57		
18	90	40.0	+5 14.0	129	17.2 ¹²⁶	+14 12.3 ⁶¹		45	17 41	18 10	18 44	4 01 36	14 15 58		
19	105	40.2	13.1	143	48.8 ¹²⁶	06.3 ⁶⁰		50	37	10	47	14 34	14 02 61		
20	120	40.4	12.1	158	20.5 ¹²⁷	+14 00.1 ⁶²		52	36	10	49	21 32	13 56 63		
21	135	40.7	11.2	172	52.2 ¹²⁷	+13 53.9 ⁶²		54	34	09	50	27 32	50 64		
22	150	40.9	10.2	187	23.9 ¹²⁷	47.6 ⁶³		56	32	09	52	35 30	43 65		
23	165	41.1	09.3	201	55.7 ¹²⁸	41.3 ⁶³		58	30	09	55	43 29	35 67		
24	180	41.3	+5 08.4	216	27.5 ¹²⁸	+13 34.9 ⁶⁴		60 S	17 28	18 09	18 57	4 53 26	13 25 70		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 49 ^m 0		Mag: -4.7 PMG: 9 ^h 48 ^m			Mag: +1.8 PMG: 10 ^h 19 ^m			Mag: -1.7 PMG: 11 ^h 21 ^m			Mag: +0.6 PMG: 16 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	347	43.7	212	41.3	+10 08.4	205	04.1	+15 58.3	189	26.2	+10 03.8	110	06.3	-18 14.2	
1	2	46.1	227	43.4	08.7	220	05.0	57.8	204	28.1	03.6	125	08.6	14.2	
2	17	48.6	242	45.5	08.9	235	05.9	57.3	219	30.1	03.5	140	10.9	14.2	
3	32	51.0	257	47.6	09.2	250	06.8	56.8	234	32.0	03.3	155	13.2	14.3	
4	47	53.5	272	49.7	09.5	265	07.7	56.3	249	34.0	03.1	170	15.5	14.3	
5	62	56.0	287	51.8	+10 09.8	280	08.6	+15 55.8	264	35.9	+10 02.9	185	17.9	-18 14.4	
6	77	58.4	302	53.9	+10 10.1	295	09.5	+15 55.3	279	37.9	+10 02.7	200	20.2	-18 14.4	
7	93	00.9	317	56.0	10.3	310	10.4	54.8	294	39.9	02.5	215	22.5	14.4	
8	108	03.4	332	58.0	10.6	325	11.3	54.4	309	41.8	02.3	230	24.8	14.5	
9	123	05.8	348	00.1	10.9	340	12.2	53.9	324	43.8	02.1	245	27.1	14.5	
10	138	08.3	3	02.2	11.2	355	13.1	53.4	339	45.7	01.9	260	29.4	14.6	
11	153	10.8	18	04.3	+10 11.4	10	14.0	+15 52.9	354	47.7	+10 01.7	275	31.7	-18 14.6	
12	168	13.2	33	06.3	+10 11.7	25	14.9	+15 52.4	9	49.6	+10 01.5	290	34.1	-18 14.6	
13	183	15.7	48	08.4	12.0	40	15.8	51.9	24	51.6	01.3	305	36.4	14.7	
14	198	18.1	63	10.5	12.3	55	16.7	51.4	39	53.5	01.1	320	38.7	14.7	
15	213	20.6	78	12.5	12.5	70	17.6	50.9	54	55.5	00.9	335	41.0	14.8	
16	228	23.1	93	14.6	12.8	85	18.5	50.4	69	57.4	00.7	350	43.3	14.8	
17	243	25.5	108	16.6	+10 13.1	100	19.4	+15 49.9	84	59.4	+10 00.5	5	45.6	-18 14.8	
18	258	28.0	123	18.7	+10 13.3	115	20.3	+15 49.4	100	01.3	+10 00.3	20	47.9	-18 14.9	
19	273	30.5	138	20.7	13.6	130	21.2	48.9	115	03.3	+10 00.1	35	50.3	14.9	
20	288	32.9	153	22.7	13.9	145	22.1	48.5	130	05.3	+9 59.9	50	52.6	15.0	
21	303	35.4	168	24.8	14.1	160	23.0	48.0	145	07.2	59.7	65	54.9	15.0	
22	318	37.9	183	26.8	14.4	175	23.9	47.5	160	09.2	59.5	80	57.2	15.0	
23	333	40.3	198	28.8	14.7	190	24.8	47.0	175	11.1	59.3	95	59.5	15.1	
24	348	42.8	213	30.8	+10 14.9	205	25.7	+15 46.5	190	13.1	+9 59.1	111	01.8	-18 15.1	
Dif	—		+21	+3		+9	-5		+20	-2		+23	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 1			Edad: 26 ^d 4 PHE { SD: 14'9 PMG: 9 ^h 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	41.3	+5	08.4	216	27.5	+13	34.9	60 N	3 38	4 32	5 15	2 02	69	17 29 20			
1	195	41.5		07.4	230	59.4 ¹²⁹		28.5 ⁶⁴	58	48	38	18	10	67	22 22			
2	210	41.7		06.5	245	31.3 ¹²⁹		22.0 ⁶⁵	56	3 56	43	21	17	66	16 24			
3	225	42.0		05.5	260	03.3 ¹³⁰		15.4 ⁶⁶	54	4 03	47	23	23	64	11 25			
4	240	42.2		04.6	274	35.3 ¹³⁰		08.8 ⁶⁶	52	10	51	26	29	63	06 27			
5	255	42.4	+5	03.6	289	07.4 ¹³¹	+13	02.1 ⁶⁷	50	4 15	4 55	5 28	2 34	61	17 02 28			
6	270	42.6	+5	02.7	303	39.5 ¹³¹	+12	55.4 ⁶⁷	45	4 27	5 02	5 32	2 45	59	16 52 31			
7	285	42.8		01.7	318	11.6 ¹³¹		48.6 ⁶⁸	40	36	08	36	2 55	56	45 33			
8	300	43.0	+5	00.8	332	43.8 ¹³²		41.8 ⁶⁸	35	43	13	39	3 02	55	38 35			
9	315	43.3	+4	59.8	347	16.0 ¹³²		34.9 ⁶⁹	30	49	17	42	09	53	32 36			
10	330	43.5		58.9	1	48.3 ¹³³		27.9 ⁷⁰	20	4 58	24	46	21	50	21 40			
11	345	43.7	+4	57.9	16	20.6 ¹³³	+12	20.9 ⁷⁰	10 N	5 05	5 29	5 50	3 32	47	16 12 42			
12	0	43.9	+4	57.0	30	52.9 ¹³³	+12	13.9 ⁷¹	0	5 09	5 33	5 54	3 41	46	16 04 44			
13	15	44.1		56.1	45	25.3 ¹³⁴	+12	06.8 ⁷²	10 S	12	36	5 57	3 51	43	15 55 47			
14	30	44.3		55.1	59	57.7 ¹³⁴	+11	59.6 ⁷²	20	13	39	6 01	4 02	40	46 49			
15	45	44.6		54.2	74	30.2 ¹³⁵		52.4 ⁷²	30	13	41	05	13	38	35 53			
16	60	44.8		53.2	89	02.7 ¹³⁵		45.2 ⁷²	35	13	42	07	20	37	29 54			
17	75	45.0	+4	52.3	103	35.2 ¹³⁵	+11	37.9 ⁷³	40	5 11	5 43	6 10	4 28	34	15 22 56			
18	90	45.2	+4	51.3	118	07.8 ¹³⁶	+11	30.5 ⁷⁴	45	5 09	5 43	6 13	4 37	32	15 13 59			
19	105	45.4		50.4	132	40.4 ¹³⁶		23.1 ⁷⁴	50	07	44	16	48	29	15 03 62			
20	120	45.7		49.4	147	13.1 ¹³⁷		15.7 ⁷⁴	52	05	44	18	53	28	14 59 63			
21	135	45.9		48.5	161	45.8 ¹³⁷		08.2 ⁷⁵	54	03	44	19	4 59	26	54 64			
22	150	46.1		47.5	176	18.5 ¹³⁷	+11	00.7 ⁷⁵	56	5 01	44	21	5 05	25	48 66			
23	165	46.3		46.6	190	51.3 ¹³⁸	+10	53.1 ⁷⁶	58	4 59	44	23	12	23	42 68			
24	180	46.5	+4	45.6	205	24.1 ¹³⁸	+10	45.5 ⁷⁶	60 S	4 56	5 44	6 26	5 19	22	14 35 70			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 45 ^m 0			Mag: -4.7 PMG: 9 ^h 45 ^m			Mag: +1.8 PMG: 10 ^h 18 ^m			Mag: -1.7 PMG: 11 ^h 18 ^m			Mag: +0.6 PMG: 16 ^h 33 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	348	42.8	213	30.8	+10	14.9	205	25.7	+15	46.5	190	13.1	+9	59.1	111	01.8	-18	15.1
1	3	45.3	228	32.9		15.2	220	26.6		46.0	205	15.0		58.9	126	04.1		15.2
2	18	47.7	243	34.9		15.5	235	27.5		45.5	220	17.0		58.7	141	06.4		15.2
3	33	50.2	258	36.9		15.7	250	28.4		45.0	235	18.9		58.5	156	08.8		15.2
4	48	52.6	273	38.9		16.0	265	29.3		44.5	250	20.9		58.3	171	11.1		15.3
5	63	55.1	288	40.9	+10	16.2	280	30.2	+15	44.0	265	22.8	+9	58.1	186	13.4	-18	15.3
6	78	57.6	303	42.9	+10	16.5	295	31.1	+15	43.5	280	24.8	+9	58.0	201	15.7	-18	15.4
7	94	00.0	318	44.9		16.8	310	32.0		43.0	295	26.7		57.8	216	18.0		15.4
8	109	02.5	333	46.9		17.0	325	32.9		42.5	310	28.7		57.6	231	20.3		15.5
9	124	05.0	348	48.9		17.3	340	33.8		42.0	325	30.7		57.4	246	22.6		15.5
10	139	07.4	3	50.9		17.5	355	34.7		41.5	340	32.6		57.2	261	24.9		15.5
11	154	09.9	18	52.8	+10	17.8	10	35.6	+15	41.0	355	34.6	+9	57.0	276	27.3	-18	15.6
12	169	12.4	33	54.8	+10	18.0	25	36.5	+15	40.6	10	36.5	+9	56.8	291	29.6	-18	15.6
13	184	14.8	48	56.8		18.3	40	37.4		40.1	25	38.5		56.6	306	31.9		15.7
14	199	17.3	63	58.8		18.5	55	38.3		39.6	40	40.4		56.4	321	34.2		15.7
15	214	19.7	79	00.7		18.8	70	39.2		39.1	55	42.4		56.2	336	36.5		15.7
16	229	22.2	94	02.7		19.0	85	40.1		38.6	70	44.3		56.0	351	38.8		15.8
17	244	24.7	109	04.7	+10	19.3	100	41.0	+15	38.1	85	46.3	+9	55.8	6	41.1	-18	15.8
18	259	27.1	124	06.6	+10	19.5	115	41.9	+15	37.6	100	48.3	+9	55.6	21	43.4	-18	15.9
19	274	29.6	139	08.6		19.8	130	42.8		37.1	115	50.2		55.4	36	45.7		15.9
20	289	32.1	154	10.5		20.0	145	43.7		36.6	130	52.2		55.2	51	48.0		15.9
21	304	34.5	169	12.4		20.3	160	44.7		36.1	145	54.1		55.0	66	50.4		16.0
22	319	37.0	184	14.4		20.5	175	45.6		35.6	160	56.1		54.8	81	52.7		16.0
23	334	39.5	199	16.3		20.8	190	46.5		35.1	175	58.0		54.6	96	55.0		16.1
24	349	41.9	214	18.3	+10	21.0	205	47.4	+15	34.6	191	00.0	+9	54.4	111	57.3	-18	16.1
Dif	—			+20	+3		+9	-5			+20	-2		+23				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 27 ^d 4	PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 3 20 ^h : 54 ^m 3										
	PMG: 11 ^h 56 ^m 7					SD: 14 ^h 8			PMG: 10 ^h 38 ^m			R°: 43 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	46.5	+4 45.6	205	24.1	+10 45.5	77	60 N	18 34	19 17	20 11	3 11 70	17 49 17		
1	195	46.7		219	56.9 ¹³⁸	37.8	77	58	32	12	20 01	17 68	44 19		
2	210	47.0		234	29.8 ¹³⁹	30.1	77	56	29	07	19 53	23 66	40 21		
3	225	47.2		249	02.7 ¹³⁹	22.3	78	54	27	19 03	47	27 65	36 23		
4	240	47.4		263	35.7 ¹⁴⁰	14.5	78	52	25	18 59	41	32 62	33 24		
5	255	47.6	+4 40.9	278	08.6 ¹³⁹	+10 06.7	78	50	18 23	18 56	19 35	3 35 62	17 30 25		
6	270	47.8	+4 39.9	292	41.7 ¹⁴¹	+9 58.8	79	45	18 19	18 49	19 24	3 44 58	17 23 29		
7	285	48.1		307	14.7 ¹⁴⁰	50.9	79	40	16	43	16	51 56	18 30		
8	300	48.3		321	47.8 ¹⁴¹	42.9	80	35	13	39	09	3 57 54	13 33		
9	315	48.5		336	20.9 ¹⁴¹	34.9	80	30	11	35	19 03	4 02 52	08 35		
10	330	48.7		350	54.1 ¹⁴²	26.9	80	20	07	29	18 55	11 49	17 01 38		
11	345	48.9	+4 35.2	5	27.3 ¹⁴²	+9 18.8	81	10 N	18 03	18 24	18 49	4 19 47	16 54 41		
12	0	49.1	+4 34.2	20	00.5 ¹⁴²	+9 10.7	81	0	18 00	18 21	18 45	4 27 44	16 48 43		
13	15	49.4		34	33.8 ¹⁴³	+9 02.6	81	10 S	17 57	18	42	34 42	42 46		
14	30	49.6		49	07.1 ¹⁴³	+8 54.4	82	20	54	16	41	42 39	35 49		
15	45	49.8		63	40.4 ¹⁴³	46.2	82	30	50	14	42	51 36	28 52		
16	60	50.0		78	13.7 ¹⁴³	38.0	82	35	48	13	43	4 57 33	23 54		
17	75	50.2	+4 29.5	92	47.1 ¹⁴⁴	+8 29.7	83	40	17 46	18 13	18 44	5 02 32	16 18 56		
18	90	50.5	+4 28.5	107	20.5 ¹⁴⁴	+8 21.4	83	45	17 43	18 13	18 47	5 09 30	16 12 59		
19	105	50.7		121	54.0 ¹⁴⁵	13.0	84	50	40	13	50	17 27	05 61		
20	120	50.9		136	27.4 ¹⁴⁴	+8 04.6	84	52	39	13	52	21 25	16 02 63		
21	135	51.1		151	00.9 ¹⁴⁵	+7 56.2	84	54	38	13	54	25 24	15 58 65		
22	150	51.3		165	34.5 ¹⁴⁶	47.8	84	56	36	13	56	30 22	54 66		
23	165	51.6		180	08.0 ¹⁴⁵	39.3	85	58	34	13	18 59	35 20	50 68		
24	180	51.8	+4 22.8	194	41.6 ¹⁴⁶	+7 30.8	85	60 S	17 32	18 14	19 02	5 41 18	15 45 70		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 41 ^m 1		Mag: -4.7 PMG: 9 ^h 42 ^m			Mag: +1.8 PMG: 10 ^h 16 ^m			Mag: -1.7 PMG: 11 ^h 15 ^m			Mag: +0.6 PMG: 16 ^h 30 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	349	41.9	214	18.3	+10 21.0	205	47.4	+15 34.6	191	00.0	+9 54.4	111	57.3	-18 16.1	
1	4	44.4	229	20.2	21.2	220	48.3	34.1	206	01.9	54.2	126	59.6	16.1	
2	19	46.9	244	22.1	21.5	235	49.2	33.6	221	03.9	54.0	142	01.9	16.2	
3	34	49.3	259	24.0	21.7	250	50.1	33.1	236	05.8	53.8	157	04.2	16.2	
4	49	51.8	274	26.0	22.0	265	51.0	32.6	251	07.8	53.6	172	06.5	16.3	
5	64	54.2	289	27.9	+10 22.2	280	51.9	+15 32.1	266	09.8	+9 53.4	187	08.8	-18 16.3	
6	79	56.7	304	29.8	+10 22.4	295	52.8	+15 31.6	281	11.7	+9 53.2	202	11.1	-18 16.4	
7	94	59.2	319	31.7	22.7	310	53.7	31.1	296	13.7	53.0	217	13.4	16.4	
8	110	01.6	334	33.6	22.9	325	54.6	30.6	311	15.6	52.8	232	15.8	16.4	
9	125	04.1	349	35.5	23.2	340	55.5	30.1	326	17.6	52.6	247	18.1	16.5	
10	140	06.6	4	37.4	23.4	355	56.4	29.6	341	19.5	52.5	262	20.4	16.5	
11	155	09.0	19	39.3	+10 23.6	10	57.3	+15 29.1	356	21.5	+9 52.3	277	22.7	-18 16.6	
12	170	11.5	34	41.2	+10 23.9	25	58.3	+15 28.6	11	23.4	+9 52.1	292	25.0	-18 16.6	
13	185	14.0	49	43.1	24.1	40	59.2	28.1	26	25.4	51.9	307	27.3	16.6	
14	200	16.4	64	44.9	24.3	56	00.1	27.6	41	27.4	51.7	322	29.6	16.7	
15	215	18.9	79	46.8	24.6	71	01.0	27.1	56	29.3	51.5	337	31.9	16.7	
16	230	21.4	94	48.7	24.8	86	01.9	26.6	71	31.3	51.3	352	34.2	16.8	
17	245	23.8	109	50.6	+10 25.0	101	02.8	+15 26.1	86	33.2	+9 51.1	7	36.5	-18 16.8	
18	260	26.3	124	52.4	+10 25.2	116	03.7	+15 25.6	101	35.2	+9 50.9	22	38.8	-18 16.9	
19	275	28.7	139	54.3	25.5	131	04.6	25.1	116	37.1	50.7	37	41.1	16.9	
20	290	31.2	154	56.1	25.7	146	05.5	24.6	131	39.1	50.5	52	43.4	16.9	
21	305	33.7	169	58.0	25.9	161	06.4	24.1	146	41.0	50.3	67	45.7	17.0	
22	320	36.1	184	59.9	26.1	176	07.3	23.6	161	43.0	50.1	82	48.1	17.0	
23	335	38.6	200	01.7	26.4	191	08.3	23.1	176	45.0	49.9	97	50.4	17.1	
24	350	41.1	215	03.6	+10 26.6	206	09.2	+15 22.6	191	46.9	+9 49.7	112	52.7	-18 17.1	
Dif	—		+19	+2		+9	-5		+20	-2		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 56 ^m 4			Edad: 28 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'1 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	180	51.8	+4	22.8	194	41.6	+7 30.8	60 N	3 44	4 37	5 20	4 21	70	18 06	16			
1	195	52.0		21.9	209	15.2 ¹⁴⁶	22.3 ⁸⁵	58	3 53	42	22	25	68	03	19			
2	210	52.2		20.9	223	48.9 ¹⁴⁷	13.7 ⁸⁶	56	4 00	47	25	29	66	18 01	20			
3	225	52.4		20.0	238	22.5 ¹⁴⁶	+7 05.1 ⁸⁶	54	07	51	27	32	64	17 59	22			
4	240	52.7		19.0	252	56.2 ¹⁴⁷	+6 56.5 ⁸⁶	52	13	55	29	34	63	57	23			
5	255	52.9	+4	18.1	267	29.9 ¹⁴⁷	+6 47.9 ⁸⁶	50	4 19	4 58	5 31	4 37	61	17 55	25			
6	270	53.1	+4	17.1	282	03.7 ¹⁴⁸	+6 39.2 ⁸⁷	45	4 30	5 05	5 35	4 42	59	17 52	27			
7	285	53.3		16.1	296	37.4 ¹⁴⁷	30.5 ⁸⁷	40	38	10	38	47	56	48	30			
8	300	53.5		15.2	311	11.2 ¹⁴⁸	21.8 ⁸⁷	35	45	15	40	51	54	46	31			
9	315	53.7		14.2	325	45.0 ¹⁴⁸	13.0 ⁸⁸	30	50	19	43	4 54	52	43	34			
10	330	54.0		13.3	340	18.9 ¹⁴⁹	+6 04.3 ⁸⁷	20	4 59	25	47	5 00	49	39	37			
11	345	54.2	+4	12.3	354	52.7 ¹⁴⁸	+5 55.5 ⁸⁸	10 N	5 04	5 29	5 50	5 06	45	17 35	40			
12	0	54.4	+4	11.4	9	26.6 ¹⁴⁹	+5 46.7 ⁸⁸	0	5 08	5 32	5 53	5 11	43	17 31	43			
13	15	54.6		10.4	24	00.5 ¹⁴⁹	37.9 ⁸⁸	10 S	11	35	56	16	40	28	45			
14	30	54.8		09.5	38	34.4 ¹⁴⁹	29.0 ⁸⁹	20	12	37	5 59	21	37	24	48			
15	45	55.1		08.5	53	08.4 ¹⁵⁰	20.1 ⁸⁹	30	11	39	6 03	27	34	20	51			
16	60	55.3		07.6	67	42.3 ¹⁴⁹	11.2 ⁸⁹	35	10	39	04	30	32	17	53			
17	75	55.5	+4	06.6	82	16.3 ¹⁵⁰	+5 02.3 ⁸⁹	40	5 08	5 40	6 07	5 34	30	17 14	56			
18	90	55.7	+4	05.7	96	50.3 ¹⁵⁰	+4 53.4 ⁸⁹	45	5 06	5 40	6 09	5 39	27	17 11	58			
19	105	55.9		04.7	111	24.4 ¹⁵¹	44.5 ⁸⁹	50	02	40	12	44	25	06	62			
20	120	56.2		03.8	125	58.4 ¹⁵⁰	35.5 ⁹⁰	52	5 00	39	13	46	24	05	62			
21	135	56.4		02.8	140	32.5 ¹⁵¹	26.5 ⁹⁰	54	4 58	39	14	49	22	03	64			
22	150	56.6		01.8	155	06.5 ¹⁵⁰	17.5 ⁹⁰	56	56	39	16	52	20	17 00	66			
23	165	56.8	+4	00.9	169	40.6 ¹⁵¹	+4 08.5 ⁹⁰	58	53	39	18	55	19	16 58	68			
24	180	57.0	+3	59.9	184	14.7 ¹⁵¹	+3 59.5 ⁹⁰	60 S	4 50	5 38	6 20	5 59	17	16 55	70			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 37 ^m 2			Mag: -4.7 PMG: 9 ^h 39 ^m			Mag: +1.8 PMG: 10 ^h 15 ^m			Mag: -1.7 PMG: 11 ^h 11 ^m			Mag: +0.6 PMG: 16 ^h 26 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	350	41.1	215	03.6	+10	26.6	206	09.2	+15	22.6	191	46.9	+9	49.7	112	52.7	-18	17.1
1	5	43.5	230	05.4		26.8	221	10.1		22.1	206	48.9		49.5	127	55.0		17.1
2	20	46.0	245	07.2		27.0	236	11.0		21.6	221	50.8		49.3	142	57.3		17.2
3	35	48.5	260	09.1		27.3	251	11.9		21.1	236	52.8		49.1	157	59.6		17.2
4	50	50.9	275	10.9		27.5	266	12.8		20.6	251	54.7		48.9	173	01.9		17.3
5	65	53.4	290	12.7	+10	27.7	281	13.7	+15	20.1	266	56.7	+9	48.7	188	04.2	-18	17.3
6	80	55.8	305	14.6	+10	27.9	296	14.6	+15	19.6	281	58.7	+9	48.5	203	06.5	-18	17.4
7	95	58.3	320	16.4		28.1	311	15.5		19.1	297	00.6		48.3	218	08.8		17.4
8	111	00.8	335	18.2		28.3	326	16.4		18.6	312	02.6		48.1	233	11.1		17.4
9	126	03.2	350	20.0		28.6	341	17.4		18.1	327	04.5		47.9	248	13.4		17.5
10	141	05.7	5	21.8		28.8	356	18.3		17.6	342	06.5		47.7	263	15.7		17.5
11	156	08.2	20	23.6	+10	29.0	11	19.2	+15	17.1	357	08.4	+9	47.5	278	18.0	-18	17.6
12	171	10.6	35	25.4	+10	29.2	26	20.1	+15	16.6	12	10.4	+9	47.3	293	20.3	-18	17.6
13	186	13.1	50	27.2		29.4	41	21.0		16.1	27	12.3		47.2	308	22.6		17.7
14	201	15.6	65	29.0		29.6	56	21.9		15.6	42	14.3		47.0	323	24.9		17.7
15	216	18.0	80	30.8		29.8	71	22.8		15.1	57	16.3		46.8	338	27.2		17.7
16	231	20.5	95	32.6		30.0	86	23.7		14.6	72	18.2		46.6	353	29.5		17.8
17	246	23.0	110	34.4	+10	30.2	101	24.7	+15	14.1	87	20.2	+9	46.4	8	31.8	-18	17.8
18	261	25.4	125	36.2	+10	30.5	116	25.6	+15	13.6	102	22.1	+9	46.2	23	34.1	-18	17.9
19	276	27.9	140	37.9		30.7	131	26.5		13.1	117	24.1		46.0	38	36.4		17.9
20	291	30.3	155	39.7		30.9	146	27.4		12.6	132	26.0		45.8	53	38.7		17.9
21	306	32.8	170	41.5		31.1	161	28.3		12.1	147	28.0		45.6	68	41.0		18.0
22	321	35.3	185	43.3		31.3	176	29.2		11.6	162	30.0		45.4	83	43.4		18.0
23	336	37.7	200	45.0		31.5	191	30.1		11.1	177	31.9		45.2	98	45.7		18.1
24	351	40.2	215	46.8	+10	31.7	206	31.1	+15	10.6	192	33.9	+9	45.0	113	48.0	-18	18.1
Dif	—			+18	+2		+9	-5		+20	-2		+23					

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9		Edad: 29 ^d 4 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0						Civil		Náutico	Hora	R°	Hora	R°
	PMG: 11 ^h 56 ^m 0	PMG: 12 ^h 04 ^m	R°: 42 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m	
0	180	57.0	+3 59.9	184	14.7	+3 59.5	60 N	18 28	19 11	20 03	5 31 70	18 22 16			
1	195	57.3		198	48.9 ¹⁵²	50.4 ⁹¹	58	26	06	19 55	33 68	22 17			
2	210	57.5		213	23.0 ¹⁵¹	41.4 ⁹⁰	56	24	19 02	48	35 65	21 20			
3	225	57.7		227	57.1 ¹⁵¹	32.3 ⁹¹	54	22	18 58	41	36 64	21 21			
4	240	57.9		242	31.3 ¹⁵²	23.2 ⁹¹	52	20	55	35	37 63	20 23			
5	255	58.2	+3 55.2	257	05.5 ¹⁵²	+3 14.1 ⁹¹	50	18 19	18 51	19 30	5 38 61	18 20 24			
6	270	58.4	+3 54.2	271	39.7 ¹⁵²	+3 05.0 ⁹¹	45	18 16	18 45	19 20	5 41 58	18 19 27			
7	285	58.6		286	13.9 ¹⁵²	+2 55.9 ⁹¹	40	13	40	12	43 55	18 29			
8	300	58.8		300	48.1 ¹⁵²	46.8 ⁹¹	35	10	36	06	45 53	17 32			
9	315	59.0		315	22.4 ¹⁵³	37.6 ⁹²	30	08	32	19 00	46 52	17 33			
10	330	59.3		329	56.6 ¹⁵²	28.5 ⁹¹	20	05	27	18 53	49 48	16 36			
11	345	59.5	+3 49.4	344	30.8 ¹⁵²	+2 19.4 ⁹¹	10 N	18 02	18 23	18 47	5 51 45	18 15 39			
12	0	59.7	+3 48.5	359	05.1 ¹⁵³	+2 10.2 ⁹²	0	17 59	18 20	18 44	5 54 42	18 14 42			
13	15	59.9		13	39.4 ¹⁵³	+2 01.0 ⁹²	10 S	57	18	42	56 39	13 45			
14	31	00.1		46.5	28 13.7 ¹⁵³	+1 51.8 ⁹²	20	54	16	42	5 58 37	12 48			
15	46	00.4		45.6	42 48.0 ¹⁵³	42.7 ⁹¹	30	51	15	43	6 01 33	11 51			
16	61	00.6		44.6	57 22.3 ¹⁵³	33.5 ⁹²	35	50	15	44	02 32	10 54			
17	76	00.8	+3 43.7	71	56.6 ¹⁵³	+1 24.3 ⁹²	40	17 48	18 15	18 46	6 04 30	18 10 55			
18	91	01.0	+3 42.7	86	30.9 ¹⁵³	+1 15.1 ⁹²	45	17 46	18 15	18 49	6 06 27	18 09 58			
19	106	01.2		41.8	101 05.2 ¹⁵³	+1 05.9 ⁹²	50	43	16	53	09 24	08 61			
20	121	01.5		40.8	115 39.5 ¹⁵³	+0 56.7 ⁹²	52	42	16	55	10 23	07 63			
21	136	01.7		39.8	130 13.9 ¹⁵⁴	47.5 ⁹²	54	41	16	18 58	11 21	07 64			
22	151	01.9		38.9	144 48.2 ¹⁵³	38.3 ⁹²	56	40	17	19 00	12 20	06 66			
23	166	02.1		37.9	159 22.5 ¹⁵³	29.0 ⁹³	58	38	17	03	14 18	06 67			
24	181	02.3	+3 37.0	173	56.9 ¹⁵⁴	+0 19.8 ⁹²	60 S	17 37	18 18	19 07	6 16 15	18 05 70			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 33 ^m 2		Mag: -4.7 PMG: 9 ^h 36 ^m			Mag: +1.8 PMG: 10 ^h 13 ^m			Mag: -1.7 PMG: 11 ^h 08 ^m			Mag: +0.6 PMG: 16 ^h 22 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	351	40.2	215	46.8	+10 31.7	206	31.1	+15 10.6	192	33.9	+9 45.0	113	48.0		
1	6	42.7	230	48.5	31.9	221	32.0	10.1	207	35.8	44.8	128	50.3		
2	21	45.1	245	50.3	32.1	236	32.9	09.6	222	37.8	44.6	143	52.6		
3	36	47.6	260	52.1	32.3	251	33.8	09.1	237	39.7	44.4	158	54.9		
4	51	50.1	275	53.8	32.5	266	34.7	08.5	252	41.7	44.2	173	57.2		
5	66	52.5	290	55.5	+10 32.7	281	35.6	+15 08.0	267	43.7	+9 44.0	188	59.5		
6	81	55.0	305	57.3	+10 32.9	296	36.5	+15 07.5	282	45.6	+9 43.8	204	01.8		
7	96	57.4	320	59.0	33.1	311	37.5	07.0	297	47.6	43.6	219	04.1		
8	111	59.9	336	00.8	33.3	326	38.4	06.5	312	49.5	43.4	234	06.4		
9	127	02.4	351	02.5	33.4	341	39.3	06.0	327	51.5	43.2	249	08.7		
10	142	04.8	6	04.2	33.6	356	40.2	05.5	342	53.4	43.0	264	11.0		
11	157	07.3	21	05.9	+10 33.8	11	41.1	+15 05.0	357	55.4	+9 42.8	279	13.3		
12	172	09.8	36	07.7	+10 34.0	26	42.0	+15 04.5	12	57.4	+9 42.6	294	15.6		
13	187	12.2	51	09.4	34.2	41	42.9	04.0	27	59.3	42.4	309	17.9		
14	202	14.7	66	11.1	34.4	56	43.9	03.5	43	01.3	42.2	324	20.2		
15	217	17.2	81	12.8	34.6	71	44.8	03.0	58	03.2	42.0	339	22.5		
16	232	19.6	96	14.5	34.8	86	45.7	02.5	73	05.2	41.9	354	24.8		
17	247	22.1	111	16.2	+10 35.0	101	46.6	+15 02.0	88	07.1	+9 41.7	9	27.1		
18	262	24.6	126	17.9	+10 35.1	116	47.5	+15 01.5	103	09.1	+9 41.5	24	29.4		
19	277	27.0	141	19.6	35.3	131	48.4	01.0	118	11.1	41.3	39	31.7		
20	292	29.5	156	21.3	35.5	146	49.4	+15 00.4	133	13.0	41.1	54	34.0		
21	307	31.9	171	23.0	35.7	161	50.3	+14 59.9	148	15.0	40.9	69	36.3		
22	322	34.4	186	24.7	35.9	176	51.2	59.4	163	16.9	40.7	84	38.6		
23	337	36.9	201	26.4	36.1	191	52.1	58.9	178	18.9	40.5	99	40.9		
24	352	39.3	216	28.0	+10 36.2	206	53.0	+14 58.4	193	20.9	+9 40.3	114	43.2		
Dif	—		+17	+2		+9	-5		+20	-2		+23	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15'9 PMG: 11 ^h 55 ^m 7			Edad: 0 ^d 7 PHE { SD: 14'7 PMG: 12 ^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	181	02.3	+3	37.0	173	56.9	+0	19.8	60 N	3	49	4	42	5	25	6	41	70	18	38	16			
1	196	02.6		36.0	188	31.2	153	10.6	92	58	3	58	47	27		41	67		39	19				
2	211	02.8		35.1	203	05.6	154	+0	01.4	92	56	4	05	51	29	40	66		41	20				
3	226	03.0		34.1	217	39.9	153	-0	07.8	92	54		11	55	31	40	64		42	21				
4	241	03.2		33.1	232	14.3	154		17.0	92	52		17	4	58	32	40	62		43	23			
5	256	03.5	+3	32.2	246	48.6	153	-0	26.2	92	50		4	22	5	01	5	34	6	39	61	18	44	24
6	271	03.7	+3	31.2	261	23.0	154	-0	35.4	92	45		4	32	5	07	5	37	6	39	58	18	46	27
7	286	03.9		30.3	275	57.4	154		44.6	92	40		40	12	40		38	56		47	30			
8	301	04.1		29.3	290	31.7	153	-0	53.8	92	35		47	16	42		38	53		49	32			
9	316	04.3		28.3	305	06.1	154	-1	03.0	92	30		52	20	44		38	51		50	34			
10	331	04.6		27.4	319	40.4	153		12.2	92	20		4	59	25	47	37	48		52	37			
11	346	04.8	+3	26.4	334	14.8	154	-1	21.4	92	10 N		5	04	5	29	5	50	6	36	45	18	54	40
12	1	05.0	+3	25.5	348	49.1	153	-1	30.6	92	0		5	08	5	32	5	52	6	36	42	18	56	43
13	16	05.2		24.5	3	23.5	154		39.8	92	10 S		09	34	55		35	40		18	58	45		
14	31	05.4		23.6	17	57.8	153		48.9	91	20		10	35	5	57	35	37		19	00	48		
15	46	05.7		22.6	32	32.2	154	-1	58.1	92	30		08	36	6	00	34	34		02	52			
16	61	05.9		21.6	47	06.5	153	-2	07.2	91	35		07	36	02		34	32		04	53			
17	76	06.1	+3	20.7	61	40.8	153	-2	16.4	92	40		5	05	5	36	6	03	6	34	29	19	05	56
18	91	06.3	+3	19.7	76	15.2	154	-2	25.5	91	45		5	02	5	36	6	05	6	33	27	19	07	58
19	106	06.6		18.8	90	49.5	153		34.6	91	50		4	58	35	07	33	24		09	61			
20	121	06.8		17.8	105	23.8	153		43.7	91	52		56	35	08		33	22		10	62			
21	136	07.0		16.8	119	58.1	153	-2	52.8	91	54		53	34	09		32	22		11	64			
22	151	07.2		15.9	134	32.4	153	-3	01.9	91	56		51	34	11		32	20		12	66			
23	166	07.4		14.9	149	06.7	153		11.0	91	58		47	33	12		32	18		13	68			
24	181	07.7	+3	14.0	163	41.0	153	-3	20.1	91	60 S		4	44	5	32	6	13	6	31	16	19	15	69

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 0 ^h 29 ^m 3		Mag: -4.7 PMG: 9 ^h 33 ^m			Mag: +1.8 PMG: 10 ^h 12 ^m			Mag: -1.7 PMG: 11 ^h 05 ^m			Mag: +0.6 PMG: 16 ^h 19 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	352	39.3	216	28.0	+10	36.2	206	53.0	+14	58.4	193	20.9	+9	40.3	114	43.2	-18	19.1	
1	7	41.8	231	29.7		36.4	221	54.0		57.9	208	22.8		40.1	129	45.5		19.2	
2	22	44.3	246	31.4		36.6	236	54.9		57.4	223	24.8		39.9	144	47.8		19.2	
3	37	46.7	261	33.1		36.8	251	55.8		56.9	238	26.7		39.7	159	50.1		19.3	
4	52	49.2	276	34.7		37.0	266	56.7		56.4	253	28.7		39.5	174	52.4		19.3	
5	67	51.7	291	36.4	+10	37.1	281	57.6	+14	55.9	268	30.6	+9	39.3	189	54.7	-18	19.4	
6	82	54.1	306	38.0	+10	37.3	296	58.5	+14	55.4	283	32.6	+9	39.1	204	57.0	-18	19.4	
7	97	56.6	321	39.7		37.5	311	59.5		54.9	298	34.6		38.9	219	59.2		19.4	
8	112	59.0	336	41.4		37.6	327	00.4		54.4	313	36.5		38.7	235	01.5		19.5	
9	128	01.5	351	43.0		37.8	342	01.3		53.8	328	38.5		38.5	250	03.8		19.5	
10	143	04.0	6	44.7		38.0	357	02.2		53.3	343	40.4		38.3	265	06.1		19.6	
11	158	06.4	21	46.3	+10	38.2	12	03.1	+14	52.8	358	42.4	+9	38.1	280	08.4	-18	19.6	
12	173	08.9	36	47.9	+10	38.3	27	04.1	+14	52.3	13	44.4	+9	37.9	295	10.7	-18	19.7	
13	188	11.4	51	49.6		38.5	42	05.0		51.8	28	46.3		37.7	310	13.0		19.7	
14	203	13.8	66	51.2		38.7	57	05.9		51.3	43	48.3		37.5	325	15.3		19.7	
15	218	16.3	81	52.8		38.8	72	06.8		50.8	58	50.2		37.3	340	17.6		19.8	
16	233	18.8	96	54.5		39.0	87	07.7		50.3	73	52.2		37.1	355	19.9		19.8	
17	248	21.2	111	56.1	+10	39.2	102	08.7	+14	49.8	88	54.1	+9	37.0	10	22.2	-18	19.9	
18	263	23.7	126	57.7	+10	39.3	117	09.6	+14	49.3	103	56.1	+9	36.8	25	24.5	-18	19.9	
19	278	26.2	141	59.3		39.5	132	10.5		48.7	118	58.1		36.6	40	26.8		20.0	
20	293	28.6	157	00.9		39.6	147	11.4		48.2	134	00.0		36.4	55	29.1		20.0	
21	308	31.1	172	02.5		39.8	162	12.4		47.7	149	02.0		36.2	70	31.4		20.0	
22	323	33.5	187	04.2		40.0	177	13.3		47.2	164	03.9		36.0	85	33.7		20.1	
23	338	36.0	202	05.8		40.1	192	14.2		46.7	179	05.9		35.8	100	36.0		20.1	
24	353	38.5	217	07.4	+10	40.3	207	15.1	+14	46.2	194	07.9	+9	35.6	115	38.3	-18	20.2	
Dif	—		+16		+2		+9		-5		+20		-2		+23				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 1 ^d 7 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 55 ^m 3			SD: 14'7 PMG: 13 ^h 28 ^m R°: 44 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	181	07.7	+3 14.0	163	41.0	-3 20.1	90	60 N	18 22	19 05	19 56	7 51 70	18 54 18		
1	196	07.9	13.0	178	15.2 ¹⁵²	29.1	90	58	20	19 00	48	48 68	18 58 19		
2	211	08.1	12.0	192	49.5 ¹⁵³	38.2	91	56	19	18 56	42	46 66	19 01 21		
3	226	08.3	11.1	207	23.7 ¹⁵²	47.2	90	54	17	53	36	44 64	03 24		
4	241	08.5	10.1	221	58.0 ¹⁵³	-3 56.2	90	52	16	50	30	42 63	06 25		
5	256	08.8	+3 09.2	236	32.2 ¹⁵²	-4 05.2	90	50	18 14	18 47	19 26	7 40 61	19 08 26		
6	271	09.0	+3 08.2	251	06.4 ¹⁵²	-4 14.1	89	45	18 12	18 41	19 16	7 37 58	19 13 29		
7	286	09.2	07.2	265	40.6 ¹⁵²	23.1	90	40	09	37	09	34 55	17 31		
8	301	09.4	06.3	280	14.8 ¹⁵²	32.0	89	35	08	33	19 03	31 54	21 33		
9	316	09.7	05.3	294	49.0 ¹⁵²	41.0	90	30	06	30	18 58	29 51	24 35		
10	331	09.9	04.3	309	23.2 ¹⁵²	49.9	89	20	03	25	51	25 48	29 38		
11	346	10.1	+3 03.4	323	57.3 ¹⁵¹	-4 58.8	89	10 N	18 01	18 22	18 46	7 21 46	19 34 41		
12	1	10.3	+3 02.4	338	31.5 ¹⁵²	-5 07.6	88	0	17 59	18 19	18 43	7 18 43	19 39 43		
13	16	10.5	01.5	353	05.6 ¹⁵¹	16.5	89	10 S	57	18	42	15 40	43 46		
14	31	10.8	+3 00.5	7	39.7 ¹⁵¹	25.3	88	20	54	16	42	12 37	48 49		
15	46	11.0	+2 59.5	22	13.8 ¹⁵¹	34.1	88	30	52	16	44	08 34	54 51		
16	61	11.2	58.6	36	47.8 ¹⁵⁰	42.9	88	35	51	16	46	06 32	19 57 53		
17	76	11.4	+2 57.6	51	21.9 ¹⁵¹	-5 51.7	88	40	17 50	18 17	18 48	7 03 30	20 01 55		
18	91	11.7	+2 56.6	65	55.9 ¹⁵⁰	-6 00.4	87	45	17 48	18 17	18 52	7 00 28	20 05 58		
19	106	11.9	55.7	80	29.9 ¹⁵⁰	09.1	87	50	46	19	56	6 57 25	10 61		
20	121	12.1	54.7	95	03.9 ¹⁵⁰	17.8	87	52	46	19	58 59	55 24	12 62		
21	136	12.3	53.8	109	37.9 ¹⁵⁰	26.5	87	54	45	20	19 01	54 22	15 64		
22	151	12.5	52.8	124	11.8 ¹⁴⁹	35.1	86	56	44	21	04	52 21	18 65		
23	166	12.8	51.8	138	45.8 ¹⁵⁰	43.7	86	58	43	22	08	50 19	21 67		
24	181	13.0	+2 50.9	153	19.7 ¹⁴⁹	-6 52.3	86	60 S	17 41	18 23	19 12	6 47 17	20 24 70		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 25 ^m 4			Mag: -4.8 PMG: 9 ^h 31 ^m			Mag: +1.8 PMG: 10 ^h 10 ^m			Mag: -1.7 PMG: 11 ^h 02 ^m			Mag: +0.6 PMG: 16 ^h 15 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	353	38.5	217 07.4	+10 40.3	207 15.1	+14 46.2	194 07.9	+9 35.6	115 38.3	-18 20.2					
1	8	40.9	232 09.0	40.4	222 16.0	45.7	209 09.8	35.4	130 40.6	20.2					
2	23	43.4	247 10.5	40.6	237 17.0	45.2	224 11.8	35.2	145 42.9	20.3					
3	38	45.9	262 12.1	40.8	252 17.9	44.7	239 13.7	35.0	160 45.2	20.3					
4	53	48.3	277 13.7	40.9	267 18.8	44.1	254 15.7	34.8	175 47.5	20.4					
5	68	50.8	292 15.3	+10 41.1	282 19.7	+14 43.6	269 17.7	+9 34.6	190 49.8	-18 20.4					
6	83	53.3	307 16.9	+10 41.2	297 20.7	+14 43.1	284 19.6	+9 34.4	205 52.1	-18 20.4					
7	98	55.7	322 18.5	41.4	312 21.6	42.6	299 21.6	34.2	220 54.4	20.5					
8	113	58.2	337 20.0	41.5	327 22.5	42.1	314 23.5	34.0	235 56.6	20.5					
9	129	00.6	352 21.6	41.7	342 23.4	41.6	329 25.5	33.8	250 58.9	20.6					
10	144	03.1	7 23.2	41.8	357 24.3	41.1	344 27.5	33.6	266 01.2	20.6					
11	159	05.6	22 24.7	+10 42.0	12 25.3	+14 40.6	359 29.4	+9 33.4	281 03.5	-18 20.7					
12	174	08.0	37 26.3	+10 42.1	27 26.2	+14 40.0	14 31.4	+9 33.2	296 05.8	-18 20.7					
13	189	10.5	52 27.9	42.3	42 27.1	39.5	29 33.3	33.0	311 08.1	20.7					
14	204	13.0	67 29.4	42.4	57 28.0	39.0	44 35.3	32.8	326 10.4	20.8					
15	219	15.4	82 31.0	42.5	72 29.0	38.5	59 37.3	32.6	341 12.7	20.8					
16	234	17.9	97 32.5	42.7	87 29.9	38.0	74 39.2	32.4	356 15.0	20.9					
17	249	20.4	112 34.1	+10 42.8	102 30.8	+14 37.5	89 41.2	+9 32.3	11 17.3	-18 20.9					
18	264	22.8	127 35.6	+10 43.0	117 31.7	+14 37.0	104 43.1	+9 32.1	26 19.6	-18 21.0					
19	279	25.3	142 37.2	43.1	132 32.7	36.4	119 45.1	31.9	41 21.9	21.0					
20	294	27.8	157 38.7	43.2	147 33.6	35.9	134 47.1	31.7	56 24.2	21.1					
21	309	30.2	172 40.2	43.4	162 34.5	35.4	149 49.0	31.5	71 26.5	21.1					
22	324	32.7	187 41.8	43.5	177 35.4	34.9	164 51.0	31.3	86 28.7	21.1					
23	339	35.1	202 43.3	43.7	192 36.4	34.4	179 52.9	31.1	101 31.0	21.2					
24	354	37.6	217 44.8	+10 43.8	207 37.3	+14 33.9	194 54.9	+9 30.9	116 33.3	-18 21.2					
Dif	—	+16	+1	+9	-5	+20	-2	+23	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 55 ^m 0			Edad: 2 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	181	13.0	+2 50.9	153	19.7	-6 52.3	60 N	3 55	4 47	5 29		9 01	69	19 12	21
1	196	13.2		167	53.6 ¹⁴⁹	-7 00.9 ⁸⁶	58	4 03	51	31		8 56	67	17	23
2	211	13.4		182	27.5 ¹⁴⁹	09.4 ⁸⁵	56	10	55	33		52	65	22	25
3	226	13.7		197	01.3 ¹⁴⁸	17.9 ⁸⁵	54	15	4 58	34		48	64	27	26
4	241	13.9		211	35.1 ¹⁴⁸	26.4 ⁸⁵	52	21	5 01	35		45	62	31	27
5	256	14.1	+2 46.1	226	08.9 ¹⁴⁸	-7 34.8 ⁸⁴	50	4 25	5 04	5 37		8 41	61	19 34	29
6	271	14.3	+2 45.1	240	42.7 ¹⁴⁸	-7 43.3 ⁸⁵	45	4 35	5 10	5 39		8 35	58	19 42	31
7	286	14.5		255	16.4 ¹⁴⁷	-7 51.7 ⁸⁴	40	42	14	41		29	56	48	34
8	301	14.8		269	50.2 ¹⁴⁸	-8 00.0 ⁸³	35	48	18	43		25	53	54	35
9	316	15.0		284	23.9 ¹⁴⁷	-8 08.3 ⁸³	30	4 53	21	45		20	52	19 59	37
10	331	15.2		298	57.5 ¹⁴⁶	16.6 ⁸³	20	5 00	25	47		13	49	20 07	40
11	346	15.4	+2 40.3	313	31.2 ¹⁴⁷	-8 24.9 ⁸³	10 N	5 04	5 29	5 50		8 07	46	20 15	42
12	1	15.7	+2 39.3	328	04.8 ¹⁴⁶	-8 33.1 ⁸²	0	5 07	5 31	5 52		8 01	44	20 22	45
13	16	15.9		342	38.4 ¹⁴⁶	41.3 ⁸²	10 S	08	33	54		7 55	42	29	47
14	31	16.1		357	12.0 ¹⁴⁶	49.5 ⁸²	20	08	34	56		49	39	37	49
15	46	16.3		11	45.5 ¹⁴⁵	-8 57.6 ⁸¹	30	06	34	58		42	36	45	53
16	61	16.5		26	19.0 ¹⁴⁵	-9 05.7 ⁸¹	35	04	33	5 59		38	34	50	54
17	76	16.8	+2 34.5	40	52.5 ¹⁴⁵	-9 13.7 ⁸⁰	40	5 02	5 33	6 00		7 33	33	20 56	56
18	91	17.0	+2 33.5	55	25.9 ¹⁴⁴	-9 21.8 ⁸¹	45	4 58	5 32	6 01		7 28	30	21 03	58
19	106	17.2		69	59.3 ¹⁴⁴	29.7 ⁷⁹	50	53	31	03		22	27	11	61
20	121	17.4		84	32.7 ¹⁴⁴	37.7 ⁸⁰	52	51	30	04		19	26	14	63
21	136	17.7		99	06.1 ¹⁴⁴	45.6 ⁷⁹	54	48	29	05		16	25	19	63
22	151	17.9		113	39.4 ¹⁴³	-9 53.5 ⁷⁹	56	45	28	05		13	23	23	65
23	166	18.1		128	12.7 ¹⁴³	-10 01.3 ⁷⁸	58	42	27	06		09	21	28	67
24	181	18.3	+2 27.7	142	46.0 ¹⁴³	-10 09.1 ⁷⁸	60 S	4 37	5 26	6 07		7 04	20	21 34	69
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 0 ^h 21 ^m 4		Mag: -4.8 PMG: 9 ^h 28 ^m			Mag: +1.8 PMG: 10 ^h 09 ^m			Mag: -1.7 PMG: 10 ^h 59 ^m			Mag: +0.6 PMG: 16 ^h 11 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	354	37.6	217	44.8	+10 43.8	207	37.3	+14 33.9	194	54.9	+9 30.9	116	33.3	-18 21.2	
1	9	40.1	232	46.3	43.9	222	38.2	33.4	209	56.9	30.7	131	35.6	21.3	
2	24	42.5	247	47.8	44.1	237	39.1	32.8	224	58.8	30.5	146	37.9	21.3	
3	39	45.0	262	49.4	44.2	252	40.1	32.3	240	00.8	30.3	161	40.2	21.4	
4	54	47.5	277	50.9	44.3	267	41.0	31.8	255	02.7	30.1	176	42.5	21.4	
5	69	49.9	292	52.4	+10 44.5	282	41.9	+14 31.3	270	04.7	+9 29.9	191	44.8	-18 21.5	
6	84	52.4	307	53.9	+10 44.6	297	42.8	+14 30.8	285	06.7	+9 29.7	206	47.1	-18 21.5	
7	99	54.9	322	55.4	44.7	312	43.8	30.3	300	08.6	29.5	221	49.4	21.5	
8	114	57.3	337	56.9	44.8	327	44.7	29.7	315	10.6	29.3	236	51.7	21.6	
9	129	59.8	352	58.4	45.0	342	45.6	29.2	330	12.5	29.1	251	54.0	21.6	
10	145	02.3	7	59.9	45.1	357	46.6	28.7	345	14.5	28.9	266	56.2	21.7	
11	160	04.7	23	01.4	+10 45.2	12	47.5	+14 28.2	0	16.5	+9 28.7	281	58.5	-18 21.7	
12	175	07.2	38	02.9	+10 45.3	27	48.4	+14 27.7	15	18.4	+9 28.5	297	00.8	-18 21.8	
13	190	09.6	53	04.3	45.5	42	49.3	27.2	30	20.4	28.3	312	03.1	21.8	
14	205	12.1	68	05.8	45.6	57	50.3	26.6	45	22.3	28.1	327	05.4	21.9	
15	220	14.6	83	07.3	45.7	72	51.2	26.1	60	24.3	27.9	342	07.7	21.9	
16	235	17.0	98	08.8	45.8	87	52.1	25.6	75	26.3	27.8	357	10.0	21.9	
17	250	19.5	113	10.2	+10 46.0	102	53.1	+14 25.1	90	28.2	+9 27.6	12	12.3	-18 22.0	
18	265	22.0	128	11.7	+10 46.1	117	54.0	+14 24.6	105	30.2	+9 27.4	27	14.6	-18 22.0	
19	280	24.4	143	13.2	46.2	132	54.9	24.1	120	32.1	27.2	42	16.8	22.1	
20	295	26.9	158	14.6	46.3	147	55.8	23.5	135	34.1	27.0	57	19.1	22.1	
21	310	29.4	173	16.1	46.4	162	56.8	23.0	150	36.1	26.8	72	21.4	22.2	
22	325	31.8	188	17.6	46.5	177	57.7	22.5	165	38.0	26.6	87	23.7	22.2	
23	340	34.3	203	19.0	46.7	192	58.6	22.0	180	40.0	26.4	102	26.0	22.3	
24	355	36.7	218	20.5	+10 46.8	207	59.6	+14 21.5	195	42.0	+9 26.2	117	28.3	-18 22.3	
Dif	—		+15		+1	+9		-5	+20		-2	+23		0	

UT	SOL		● LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'9		Edad: 3 ^d 7	PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5	SD: 14'8	PMG: 14 ^h 56 ^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	181	18.3	+2	27.7	142	46.0	-10	09.1	60 N	18	16	18	58	19	49	10	10	
1	196	18.5		26.8	157	19.2 ¹⁴²		16.8 ⁷⁷	58	15		54	42		10	03		
2	211	18.8		25.8	171	52.4 ¹⁴²		24.5 ⁷⁷	56	13		51	36		9	57		
3	226	19.0		24.8	186	25.5 ¹⁴¹		32.2 ⁷⁷	54	12		48	30		52	63		
4	241	19.2		23.9	200	58.7 ¹⁴²		39.8 ⁷⁶	52	11		45	25		47	62		
5	256	19.4	+2	22.9	215	31.7 ¹⁴⁰	-10	47.4 ⁷⁶	50	18	10	18	42	19	21	9	42	
6	271	19.7	+2	21.9	230	04.8 ¹⁴¹	-10	54.9 ⁷⁵	45	18	08	18	37	19	12	9	33	
7	286	19.9		21.0	244	37.8 ¹⁴⁰	-11	02.4 ⁷⁵	40	06		33	05		25	56		
8	301	20.1		20.0	259	10.8 ¹⁴⁰		09.9 ⁷⁵	35	05		30	19	00	18	55		
9	316	20.3		19.1	273	43.7 ¹³⁹		17.3 ⁷⁴	30	03		27	18	55	12	53		
10	331	20.6		18.1	288	16.6 ¹³⁹		24.6 ⁷³	20	18	01	23	49		9	02		
11	346	20.8	+2	17.1	302	49.5 ¹³⁹	-11	31.9 ⁷³	10 N	17	59	18	20	18	45	8	53	
12	1	21.0	+2	16.2	317	22.3 ¹³⁸	-11	39.2 ⁷³	0	17	58	18	19	18	43	8	45	
13	16	21.2		15.2	331	55.1 ¹³⁸		46.4 ⁷²	10 S	56		17	42		37	43		
14	31	21.4		14.2	346	27.9 ¹³⁸	-11	53.5 ⁷¹	20	55		17	42		28	41		
15	46	21.7		13.3	1	00.6 ¹³⁷	-12	00.7 ⁷²	30	53		17	45		18	38		
16	61	21.9		12.3	15	33.3 ¹³⁷		07.7 ⁷⁰	35	52		18	47		12	37		
17	76	22.1	+2	11.3	30	05.9 ¹³⁶	-12	14.7 ⁷⁰	40	17	52	18	19	18	50	8	06	
18	91	22.3	+2	10.4	44	38.5 ¹³⁶	-12	21.7 ⁷⁰	45	17	51	18	20	18	54	7	58	
19	106	22.6		09.4	59	11.1 ¹³⁶		28.6 ⁶⁹	50	49		22	18	59	49	31		
20	121	22.8		08.4	73	43.6 ¹³⁵		35.5 ⁶⁹	52	49		22	19	02	45	29		
21	136	23.0		07.5	88	16.1 ¹³⁵		42.3 ⁶⁸	54	48		23	05		41	28		
22	151	23.2		06.5	102	48.5 ¹³⁴		49.1 ⁶⁸	56	48		25	08		36	26		
23	166	23.4		05.5	117	20.9 ¹³⁴	-12	55.8 ⁶⁷	58	47		26	12		30	25		
24	181	23.7	+2	04.6	131	53.3 ¹³⁴	-13	02.4 ⁶⁶	60 S	17	46	18	28	19	17	7	24	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 17 ^m 5		Mag: -4.8 PMG: 9 ^h 26 ^m			Mag: +1.8 PMG: 10 ^h 07 ^m			Mag: -1.7 PMG: 10 ^h 56 ^m			Mag: +0.6 PMG: 16 ^h 08 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	355	36.7	218	20.5	+10	46.8	207	59.6	+14	21.5	195	42.0	+9	26.2	117	28.3	-18	22.3
1	10	39.2	233	21.9		46.9	223	00.5		21.0	210	43.9		26.0	132	30.6		22.3
2	25	41.7	248	23.3		47.0	238	01.4		20.4	225	45.9		25.8	147	32.9		22.4
3	40	44.1	263	24.8		47.1	253	02.3		19.9	240	47.8		25.6	162	35.2		22.4
4	55	46.6	278	26.2		47.2	268	03.3		19.4	255	49.8		25.4	177	37.4		22.5
5	70	49.1	293	27.7	+10	47.3	283	04.2	+14	18.9	270	51.8	+9	25.2	192	39.7	-18	22.5
6	85	51.5	308	29.1	+10	47.4	298	05.1	+14	18.4	285	53.7	+9	25.0	207	42.0	-18	22.6
7	100	54.0	323	30.5		47.5	313	06.1		17.8	300	55.7		24.8	222	44.3		22.6
8	115	56.5	338	31.9		47.6	328	07.0		17.3	315	57.6		24.6	237	46.6		22.7
9	130	58.9	353	33.4		47.7	343	07.9		16.8	330	59.6		24.4	252	48.9		22.7
10	146	01.4	8	34.8		47.8	358	08.9		16.3	346	01.6		24.2	267	51.2		22.7
11	161	03.9	23	36.2	+10	47.9	13	09.8	+14	15.8	1	03.5	+9	24.0	282	53.5	-18	22.8
12	176	06.3	38	37.6	+10	48.0	28	10.7	+14	15.2	16	05.5	+9	23.8	297	55.7	-18	22.8
13	191	08.8	53	39.0		48.1	43	11.7		14.7	31	07.5		23.6	312	58.0		22.9
14	206	11.2	68	40.4		48.2	58	12.6		14.2	46	09.4		23.4	328	00.3		22.9
15	221	13.7	83	41.8		48.3	73	13.5		13.7	61	11.4		23.3	343	02.6		23.0
16	236	16.2	98	43.3		48.4	88	14.5		13.2	76	13.3		23.1	358	04.9		23.0
17	251	18.6	113	44.7	+10	48.5	103	15.4	+14	12.6	91	15.3	+9	22.9	13	07.2	-18	23.1
18	266	21.1	128	46.0	+10	48.6	118	16.3	+14	12.1	106	17.3	+9	22.7	28	09.5	-18	23.1
19	281	23.6	143	47.4		48.7	133	17.3		11.6	121	19.2		22.5	43	11.7		23.1
20	296	26.0	158	48.8		48.8	148	18.2		11.1	136	21.2		22.3	58	14.0		23.2
21	311	28.5	173	50.2		48.9	163	19.1		10.6	151	23.2		22.1	73	16.3		23.2
22	326	31.0	188	51.6		49.0	178	20.1		10.0	166	25.1		21.9	88	18.6		23.3
23	341	33.4	203	53.0		49.1	193	21.0		09.5	181	27.1		21.7	103	20.9		23.3
24	356	35.9	218	54.4	+10	49.2	208	21.9	+14	09.0	196	29.0	+9	21.5	118	23.2	-18	23.4
Dif	—		+14		+1		+9		-5		+20		-2		+23		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 54 ^m 2			Edad: 4 ^d 7 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 55'0 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	181	23.7	+2	04.6	131	53.3	-13	02.4	66	60 N	4 00	4 52	5 34	11 19	66	19 58
1	196	23.9		03.6	146	25.6 ¹³³		09.0	66	58	08	56	35	10	64	20 07
2	211	24.1		02.6	160	57.8 ¹³²		15.5	65	56	14	4 59	37	11 02	63	15 35
3	226	24.3		01.7	175	30.1 ¹³³		22.0	65	54	20	5 02	38	10 55	62	23 36
4	241	24.6	+2	00.7	190	02.2 ¹³¹		28.5	65	52	24	05	39	49	60	29 37
5	256	24.8	+1	59.7	204	34.4 ¹³²	-13	34.8	63	50	4 29	5 07	5 40	10 43	60	20 35
6	271	25.0	+1	58.8	219	06.5 ¹³¹	-13	41.1	63	45	4 37	5 12	5 42	10 31	57	20 48
7	286	25.2		57.8	233	38.5 ¹³⁰		47.4	63	40	44	16	43	21	56	20 59
8	301	25.5		56.8	248	10.5 ¹³⁰		53.6	62	35	50	19	45	13	54	21 08
9	316	25.7		55.9	262	42.5 ¹³⁰	-13	59.7	61	30	4 54	22	46	10 05	53	16 43
10	331	25.9		54.9	277	14.4 ¹²⁹	-14	05.8	61	20	5 00	26	48	9 52	51	30 45
11	346	26.1	+1	53.9	291	46.3 ¹²⁹	-14	11.8	60	10 N	5 04	5 29	5 50	9 41	49	21 42
12	1	26.3	+1	52.9	306	18.1 ¹²⁸	-14	17.8	60	0	5 06	5 30	5 51	9 31	47	21 53
13	16	26.6		52.0	320	49.9 ¹²⁸		23.7	59	10 S	07	31	52	20	46	22 04
14	31	26.8		51.0	335	21.6 ¹²⁷		29.5	58	20	06	32	54	9 09	44	17 51
15	46	27.0		50.0	349	53.3 ¹²⁷		35.3	58	30	03	31	55	8 56	42	31 53
16	61	27.2		49.1	4	24.9 ¹²⁶		41.0	57	35	5 01	31	56	49	41	39 54
17	76	27.5	+1	48.1	18	56.5 ¹²⁶	-14	46.6	56	40	4 58	5 30	5 57	8 41	39	22 48
18	91	27.7	+1	47.1	33	28.0 ¹²⁵	-14	52.2	56	45	4 54	5 28	5 58	8 31	38	22 59
19	106	27.9		46.2	47	59.5 ¹²⁵	-14	57.7	55	50	49	26	59	20	35	23 12
20	121	28.1		45.2	62	31.0 ¹²⁵	-15	03.1	54	52	46	26	5 59	14	35	18 59
21	136	28.3		44.2	77	02.4 ¹²⁴		08.5	54	54	43	24	6 00	09	33	24 61
22	151	28.6		43.3	91	33.7 ¹²³		13.8	53	56	40	23	00	8 02	32	32 62
23	166	28.8		42.3	106	05.0 ¹²³		19.1	53	58	36	22	01	7 55	30	41 62
24	181	29.0	+1	41.3	120	36.3 ¹²³	-15	24.2	51	60 S	4 31	5 20	6 01	7 46	29	23 50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 13 ^m 6		Mag: -4.8 PMG: 9 ^h 24 ^m		Mag: +1.8 PMG: 10 ^h 06 ^m		Mag: -1.7 PMG: 10 ^h 53 ^m		Mag: +0.6 PMG: 16 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	356	35.9	218	54.4	+10	208	21.9	+14	196	29.0
1	11	38.3	233	55.7		223	22.9		211	31.0
2	26	40.8	248	57.1		238	23.8		226	33.0
3	41	43.3	263	58.5		253	24.7		241	34.9
4	56	45.7	278	59.9		268	25.7		256	36.9
5	71	48.2	294	01.2	+10	283	26.6	+14	271	38.9
6	86	50.7	309	02.6	+10	298	27.5	+14	286	40.8
7	101	53.1	324	03.9		313	28.5		301	42.8
8	116	55.6	339	05.3		328	29.4		316	44.7
9	131	58.1	354	06.6		343	30.3		331	46.7
10	147	00.5	9	08.0		358	31.3		346	48.7
11	162	03.0	24	09.3	+10	13	32.2	+14	1	50.6
12	177	05.5	39	10.7	+10	28	33.1	+14	16	52.6
13	192	07.9	54	12.0		43	34.1		31	54.6
14	207	10.4	69	13.4		58	35.0		46	56.5
15	222	12.8	84	14.7		73	35.9		61	58.5
16	237	15.3	99	16.0		88	36.9		77	00.5
17	252	17.8	114	17.4	+10	103	37.8	+14	92	02.4
18	267	20.2	129	18.7	+10	118	38.8	+13	107	04.4
19	282	22.7	144	20.0		133	39.7		122	06.3
20	297	25.2	159	21.3		148	40.6		137	08.3
21	312	27.6	174	22.7		163	41.6		152	10.3
22	327	30.1	189	24.0		178	42.5		167	12.2
23	342	32.6	204	25.3		193	43.4		182	14.2
24	357	35.0	219	26.6	+10	208	44.4	+13	197	16.2
Dif	—		+13	+1		+9	-5		+20	-2

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9			Edad: 5 ^d 7	PHE	SD: 15°0			R°: 50 ^m						
	PMG: 11 ^h 53 ^m 9														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	29.0	+1 41.3	120	36.3	-15 24.2	51	60 N	18 10	18 52	19 43	12 25 62	20 29 41		
1	196	29.2	40.4	135	07.5 ¹²²	29.3	51	58	09	48	36	14 61	40 42		
2	211	29.5	39.4	149	38.6 ¹²¹	34.4	51	56	08	45	30	12 05 60	50 42		
3	226	29.7	38.4	164	09.8 ¹²²	39.3	49	54	07	43	25	11 57 59	20 59 43		
4	241	29.9	37.5	178	40.8 ¹²⁰	44.2	49	52	06	40	20	49 59	21 06 44		
5	256	30.1	+1 36.5	193	11.8 ¹²⁰	-15 49.1	49	50	18 06	18 38	19 16	11 43 57	21 13 44		
6	271	30.3	+1 35.5	207	42.8 ¹²⁰	-15 53.8	47	45	18 04	18 33	19 08	11 28 57	21 28 45		
7	286	30.6	34.6	222	13.7 ¹¹⁹	-15 58.5	47	40	03	30	19 02	17 55	40 46		
8	301	30.8	33.6	236	44.6 ¹¹⁹	-16 03.1	46	35	02	27	18 57	11 07 54	50 47		
9	316	31.0	32.6	251	15.4 ¹¹⁸	07.6	45	30	18 01	25	53	10 58 53	21 59 48		
10	331	31.2	31.6	265	46.1 ¹¹⁷	12.1	45	20	17 59	21	47	43 52	22 15 49		
11	346	31.5	+1 30.7	280	16.9 ¹¹⁸	-16 16.5	44	10 N	17 58	18 19	18 44	10 30 51	22 29 49		
12	1	31.7	+1 29.7	294	47.5 ¹¹⁶	-16 20.8	43	0	17 57	18 18	18 42	10 18 49	22 42 50		
13	16	31.9	28.7	309	18.1 ¹¹⁶	25.0	42	10 S	56	17	42	10 06 48	22 54 52		
14	31	32.1	27.8	323	48.7 ¹¹⁶	29.2	42	20	55	17	43	9 53 47	23 08 52		
15	46	32.3	26.8	338	19.2 ¹¹⁵	33.2	40	30	54	18	46	38 46	24 53		
16	61	32.6	25.8	352	49.7 ¹¹⁵	37.2	40	35	54	19	49	30 44	33 53		
17	76	32.8	+1 24.9	7	20.1 ¹¹⁴	-16 41.2	40	40	17 53	18 20	18 52	9 20 44	23 43 54		
18	91	33.0	+1 23.9	21	50.4 ¹¹³	-16 45.0	38	45	17 53	18 22	18 56	9 09 42	23 55 55		
19	106	33.2	22.9	36	20.8 ¹¹⁴	48.8	38	50	52	25	19 02	8 55 41	** ** *		
20	121	33.5	22.0	50	51.0 ¹¹²	52.5	37	52	52	26	05	49 40	** ** *		
21	136	33.7	21.0	65	21.2 ¹¹²	56.1	36	54	52	27	09	42 39	** ** *		
22	151	33.9	20.0	79	51.4 ¹¹²	-16 59.6	35	56	51	29	12	34 38	** ** *		
23	166	34.1	19.0	94	21.5 ¹¹¹	-17 03.0	34	58	51	30	17	25 37	** ** *		
24	181	34.4	+1 18.1	108	51.6 ¹¹¹	-17 06.4	34	60 S	17 51	18 32	19 22	8 15 36	** ** *		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 0 ^h 09 ^m 6		Mag: -4.8 PMG: 9 ^h 21 ^m		Mag: +1.8 PMG: 10 ^h 04 ^m		Mag: -1.7 PMG: 10 ^h 50 ^m		Mag: +0.6 PMG: 16 ^h 00 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	°	'	°	'	°	'						
0	357	35.0	219 26.6	+10 51.0	208 44.4	+13 56.4	197 16.2	+9 16.8	119 18.0						
1	12	37.5	234 27.9	51.1	223 45.3	55.9	212 18.1	16.6	134 20.3						
2	27	40.0	249 29.2	51.2	238 46.3	55.4	227 20.1	16.4	149 22.5						
3	42	42.4	264 30.5	51.2	253 47.2	54.9	242 22.1	16.2	164 24.8						
4	57	44.9	279 31.8	51.3	268 48.1	54.3	257 24.0	16.0	179 27.1						
5	72	47.3	294 33.1	+10 51.4	283 49.1	+13 53.8	272 26.0	+9 15.8	194 29.4						
6	87	49.8	309 34.4	+10 51.4	298 50.0	+13 53.3	287 27.9	+9 15.6	209 31.7						
7	102	52.3	324 35.7	51.5	313 50.9	52.8	302 29.9	15.4	224 33.9						
8	117	54.7	339 37.0	51.5	328 51.9	52.2	317 31.9	15.3	239 36.2						
9	132	57.2	354 38.3	51.6	343 52.8	51.7	332 33.8	15.1	254 38.5						
10	147	59.7	9 39.5	51.7	358 53.8	51.2	347 35.8	14.9	269 40.8						
11	163	02.1	24 40.8	+10 51.7	13 54.7	+13 50.7	2 37.8	+9 14.7	284 43.1						
12	178	04.6	39 42.1	+10 51.8	28 55.6	+13 50.1	17 39.7	+9 14.5	299 45.3						
13	193	07.1	54 43.4	51.8	43 56.6	49.6	32 41.7	14.3	314 47.6						
14	208	09.5	69 44.7	51.9	58 57.5	49.1	47 43.7	14.1	329 49.9						
15	223	12.0	84 45.9	51.9	73 58.5	48.6	62 45.6	13.9	344 52.2						
16	238	14.4	99 47.2	52.0	88 59.4	48.0	77 47.6	13.7	359 54.5						
17	253	16.9	114 48.4	+10 52.0	104 00.3	+13 47.5	92 49.6	+9 13.5	14 56.7						
18	268	19.4	129 49.7	+10 52.1	119 01.3	+13 47.0	107 51.5	+9 13.3	29 59.0						
19	283	21.8	144 51.0	52.1	134 02.2	46.5	122 53.5	13.1	45 01.3						
20	298	24.3	159 52.2	52.2	149 03.2	45.9	137 55.5	12.9	60 03.6						
21	313	26.8	174 53.5	52.2	164 04.1	45.4	152 57.4	12.7	75 05.9						
22	328	29.2	189 54.7	52.3	179 05.0	44.9	167 59.4	12.5	90 08.1						
23	343	31.7	204 56.0	52.3	194 06.0	44.3	183 01.4	12.3	105 10.4						
24	358	34.2	219 57.2	+10 52.4	209 06.9	+13 43.8	198 03.3	+9 12.1	120 12.7						
Dif	—	+13	+1	+9	-5	+20	-2	+23	0						

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15/9 PMG: 11 ^h 53 ^m 5			Edad: 6 ^d 7 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/3 R°: 52 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°							
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	181	34.4	+1	18.1	108	51.6	-17	06.4	60 N	4	06	4	57	5	39	13	27	56				
1	196	34.6		17.1	123	21.6		09.7	58		13	5	00		40	15	56	22	51			
2	211	34.8		16.1	137	51.6		12.8	56		18		03		40	13	05	55	32	52		
3	226	35.0		15.2	152	21.5		16.0	54		23		06		41	12	56	55	42	55		
4	241	35.2		14.2	166	51.3		19.0	52		28		08		42	48	54		50	52		
5	256	35.5	+1	13.2	181	21.1	-17	21.9	50	4	32	5	10	5	43	12	40	55	21	57	52	
6	271	35.7	+1	12.3	195	50.9	-17	24.8	45	4	40	5	15	5	44	12	25	54	22	13	52	
7	286	35.9		11.3	210	20.6		27.5	40		46		18		45	12		53		26	53	
8	301	36.1		10.3	224	50.3		30.2	35		51		21		46	12	01	53		37	53	
9	316	36.4		09.3	239	19.9		32.8	30	4	55	23		47	11	51	53		22	47	52	
10	331	36.6		08.4	253	49.5		35.3	20	5	01	26		48		35	52		23	04	52	
11	346	36.8	+1	07.4	268	19.0	-17	37.7	10 N	5	04	5	28	5	49	11	21	52		23	18	53
12	1	37.0	+1	06.4	282	48.4	-17	40.1	0	5	06	5	30	5	50	11	07	52		23	32	52
13	16	37.2		05.5	297	17.9		42.3	10 S		06	30		51	10	54	51		23	46	52	
14	31	37.5		04.5	311	47.2		44.4	20		04	30		52		40	51		**	**	**	
15	46	37.7		03.5	326	16.6		46.5	30	5	01	29		53		24	50		**	**	**	
16	61	37.9		02.5	340	45.8		48.5	35	4	58	28		53		14	50		**	**	**	
17	76	38.1	+1	01.6	355	15.0	-17	50.3	40	4	55	5	26	5	53	10	04	49		**	**	**
18	91	38.3	+1	00.6	9	44.2	-17	52.1	45	4	50	5	25	5	54	9	51	49		**	**	**
19	106	38.6	+0	59.6	24	13.4		53.8	50		44	22		54		36	48		0	10	56	
20	121	38.8		58.7	38	42.4		55.4	52		41	21		54		29	48			17	57	
21	136	39.0		57.7	53	11.5		56.9	54		38	19		55		21	47			25	57	
22	151	39.2		56.7	67	40.5		58.3	56		34	18		55		12	47			34	57	
23	166	39.5		55.8	82	09.4	-17	59.6	58		30	16		55		9	02	47		43	59	
24	181	39.7	+0	54.8	96	38.3	-18	00.9	60 S	4	25	5	14	5	55	8	51	46		0	55	59

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 05 ^m 7		Mag: -4.8 PMG: 9 ^h 19 ^m			Mag: +1.8 PMG: 10 ^h 03 ^m			Mag: -1.7 PMG: 10 ^h 46 ^m			Mag: +0.6 PMG: 15 ^h 57 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'			
0	358	34.2	219	57.2	+10	52.4	209	06.9	+13	43.8	198	03.3	+9	12.1	120	12.7	-18	25.6
1	13	36.6	234	58.5		52.4	224	07.9		43.3	213	05.3		11.9	135	15.0		25.6
2	28	39.1	249	59.7		52.4	239	08.8		42.8	228	07.2		11.7	150	17.3		25.7
3	43	41.6	265	00.9		52.5	254	09.7		42.2	243	09.2		11.5	165	19.5		25.7
4	58	44.0	280	02.2		52.5	269	10.7		41.7	258	11.2		11.4	180	21.8		25.8
5	73	46.5	295	03.4	+10	52.6	284	11.6	+13	41.2	273	13.1	+9	11.2	195	24.1	-18	25.8
6	88	48.9	310	04.6	+10	52.6	299	12.6	+13	40.6	288	15.1	+9	11.0	210	26.4	-18	25.8
7	103	51.4	325	05.9		52.6	314	13.5		40.1	303	17.1		10.8	225	28.6		25.9
8	118	53.9	340	07.1		52.7	329	14.5		39.6	318	19.0		10.6	240	30.9		25.9
9	133	56.3	355	08.3		52.7	344	15.4		39.1	333	21.0		10.4	255	33.2		26.0
10	148	58.8	10	09.5		52.7	359	16.3		38.5	348	23.0		10.2	270	35.5		26.0
11	164	01.3	25	10.7	+10	52.8	14	17.3	+13	38.0	3	24.9	+9	10.0	285	37.8	-18	26.1
12	179	03.7	40	11.9	+10	52.8	29	18.2	+13	37.5	18	26.9	+9	09.8	300	40.0	-18	26.1
13	194	06.2	55	13.1		52.8	44	19.2		36.9	33	28.9		09.6	315	42.3		26.2
14	209	08.7	70	14.4		52.9	59	20.1		36.4	48	30.8		09.4	330	44.6		26.2
15	224	11.1	85	15.6		52.9	74	21.1		35.9	63	32.8		09.2	345	46.9		26.3
16	239	13.6	100	16.8		52.9	89	22.0		35.4	78	34.8		09.0	0	49.1		26.3
17	254	16.1	115	18.0	+10	52.9	104	22.9	+13	34.8	93	36.7	+9	08.8	15	51.4	-18	26.4
18	269	18.5	130	19.2	+10	53.0	119	23.9	+13	34.3	108	38.7	+9	08.6	30	53.7	-18	26.4
19	284	21.0	145	20.4		53.0	134	24.8		33.8	123	40.7		08.4	45	56.0		26.4
20	299	23.4	160	21.5		53.0	149	25.8		33.2	138	42.6		08.2	60	58.2		26.5
21	314	25.9	175	22.7		53.0	164	26.7		32.7	153	44.6		08.0	76	00.5		26.5
22	329	28.4	190	23.9		53.1	179	27.7		32.2	168	46.6		07.8	91	02.8		26.6
23	344	30.8	205	25.1		53.1	194	28.6		31.6	183	48.5		07.7	106	05.1		26.6
24	359	33.3	220	26.3	+10	53.1	209	29.6	+13	31.1	198	50.5	+9	07.5	121	07.3	-18	26.7
Dif	—		+12 0			+9 -5			+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 2			Edad: 7 ^d 7 PHE { 4 ^h : 56'5 12 ^h : 56'8 20 ^h : 57'1 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	39.7	+0 54.8	96	38.3	-18 00.9	11	60 N	18 04	18 46	19 36	14 23 48	22 01 63		
1	196	39.9		111	07.1	02.0	10	58	03	43	30	11 48	13 63		
2	211	40.1		125	35.9	03.0	10	56	03	40	24	14 00 49	24 62		
3	226	40.3		140	04.7	04.0	10	54	02	37	19	13 51 49	33 61		
4	241	40.6		154	33.4	04.8	8	52	02	35	15	42 50	42 60		
5	256	40.8	+0 49.9	169	02.1	-18 05.5	7	50	18 01	18 33	19 12	13 35 50	22 49 60		
6	271	41.0	+0 49.0	183	30.7	-18 06.2	7	45	18 00	18 30	19 04	13 19 50	23 05 59		
7	286	41.2		197	59.2	06.7	5	40	18 00	27	18 58	13 05 52	19 58		
8	301	41.5		212	27.8	07.2	5	35	17 59	24	54	12 54 52	30 57		
9	316	41.7		226	56.3	07.5	3	30	58	22	50	44 52	39 57		
10	331	41.9		241	24.7	07.8	3	20	58	20	45	27 53	23 56 56		
11	346	42.1	+0 44.1	255	53.1	-18 07.9	1	10 N	17 57	18 18	18 42	12 13 53	** ** *		
12	1	42.3	+0 43.1	270	21.5	-18 08.0	1	0	17 56	18 17	18 41	11 59 53	** ** *		
13	16	42.6		284	49.8	07.9	1	10 S	56	17	41	45 54	** ** *		
14	31	42.8		299	18.0	07.8	1	20	56	18	43	31 54	0 00 53		
15	46	43.0		313	46.3	07.5	3	30	56	19	47	14 55	17 52		
16	61	43.2		328	14.5	07.2	3	35	55	21	50	11 04 55	26 53		
17	76	43.4	+0 38.3	342	42.6	-18 06.7	5	40	17 55	18 22	18 54	10 53 55	0 37 53		
18	91	43.7	+0 37.3	357	10.7	-18 06.2	5	45	17 55	18 25	18 59	10 40 56	0 50 53		
19	106	43.9		371	38.8	05.5	7	50	55	28	19 06	24 56	1 06 52		
20	121	44.1		386	06.8	04.8	7	52	55	29	09	17 56	14 52		
21	136	44.3		401	34.8	03.9	9	54	55	31	12	10 08 57	22 52		
22	151	44.6		416	02.7	02.9	9	56	55	32	17	9 59 57	31 52		
23	166	44.8		431	30.7	01.9	10	58	55	35	21	49 57	42 51		
24	181	45.0	+0 31.5	446	58.5	-18 00.7	12	60 S	17 55	18 37	19 27	9 37 57	1 54 51		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 01 ^m 8		Mag: -4.8 PMG: 9 ^h 18 ^m			Mag: +1.8 PMG: 10 ^h 01 ^m			Mag: -1.7 PMG: 10 ^h 43 ^m			Mag: +0.6 PMG: 15 ^h 53 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	'		
0	359	33.3	220 26.3	+10 53.1	209 29.6	+13 31.1	198 50.5	+9 07.5	121 07.3	-18 26.7					
1	14	35.8	235 27.5	53.1	224 30.5	30.6	213 52.5	07.3	136 09.6	26.7					
2	29	38.2	250 28.6	53.1	239 31.4	30.1	228 54.4	07.1	151 11.9	26.8					
3	44	40.7	265 29.8	53.2	254 32.4	29.5	243 56.4	06.9	166 14.2	26.8					
4	59	43.2	280 31.0	53.2	269 33.3	29.0	258 58.4	06.7	181 16.4	26.9					
5	74	45.6	295 32.1	+10 53.2	284 34.3	+13 28.5	274 00.3	+9 06.5	196 18.7	-18 26.9					
6	89	48.1	310 33.3	+10 53.2	299 35.2	+13 27.9	289 02.3	+9 06.3	211 21.0	-18 27.0					
7	104	50.5	325 34.5	53.2	314 36.2	27.4	304 04.3	06.1	226 23.3	27.0					
8	119	53.0	340 35.6	53.2	329 37.1	26.9	319 06.2	05.9	241 25.5	27.1					
9	134	55.5	355 36.8	53.2	344 38.1	26.3	334 08.2	05.7	256 27.8	27.1					
10	149	57.9	10 37.9	53.2	359 39.0	25.8	349 10.2	05.5	271 30.1	27.1					
11	165	00.4	25 39.1	+10 53.2	14 40.0	+13 25.3	4 12.1	+9 05.3	286 32.4	-18 27.2					
12	180	02.9	40 40.2	+10 53.3	29 40.9	+13 24.7	19 14.1	+9 05.1	301 34.6	-18 27.2					
13	195	05.3	55 41.4	53.3	44 41.9	24.2	34 16.1	04.9	316 36.9	27.3					
14	210	07.8	70 42.5	53.3	59 42.8	23.7	49 18.0	04.7	331 39.2	27.3					
15	225	10.3	85 43.7	53.3	74 43.7	23.1	64 20.0	04.5	346 41.5	27.4					
16	240	12.7	100 44.8	53.3	89 44.7	22.6	79 22.0	04.3	1 43.7	27.4					
17	255	15.2	115 46.0	+10 53.3	104 45.6	+13 22.1	94 23.9	+9 04.2	16 46.0	-18 27.5					
18	270	17.7	130 47.1	+10 53.3	119 46.6	+13 21.5	109 25.9	+9 04.0	31 48.3	-18 27.5					
19	285	20.1	145 48.2	53.3	134 47.5	21.0	124 27.9	03.8	46 50.5	27.6					
20	300	22.6	160 49.4	53.3	149 48.5	20.5	139 29.8	03.6	61 52.8	27.6					
21	315	25.0	175 50.5	53.3	164 49.4	19.9	154 31.8	03.4	76 55.1	27.7					
22	330	27.5	190 51.6	53.3	179 50.4	19.4	169 33.8	03.2	91 57.4	27.7					
23	345	30.0	205 52.7	53.3	194 51.3	18.9	184 35.8	03.0	106 59.6	27.8					
24	0	32.4	220 53.8	+10 53.3	209 52.3	+13 18.3	199 37.7	+9 02.8	122 01.9	-18 27.8					
Dif	—		+11 0		+9 -5		+20 -2		+23 0						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 8			Edad: 8 ^d 7 PHE { 4 ^h : 57'4 12 ^h : 57'7 20 ^h : 58'0 R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m
0	181	45.0	+0 31.5	83	58.5	−18	00.7	60 N	4 11	5 02	5 43	15 11	39	23 04	74	
1	196	45.2	30.5	98	26.4	89	−17 59.4	58	17	05	44	14 59	41	16	72	
2	211	45.4	29.5	112	54.2	88	58.0	56	23	07	44	49	42	26	70	
3	226	45.7	28.5	127	21.9	87	56.5	54	27	09	45	40	43	34	70	
4	241	45.9	27.6	141	49.6	87	55.0	52	32	12	45	32	44	42	68	
5	256	46.1	+0 26.6	156	17.3	87	−17 53.3	50	4 35	5 13	5 46	14 25	45	23 49	67	
6	271	46.3	+0 25.6	170	45.0	87	−17 51.5	45	4 43	5 17	5 46	14 09	47	***	***	***
7	286	46.5	24.7	185	12.6	86	49.6	40	48	20	47	13 57	48	***	***	***
8	301	46.8	23.7	199	40.2	86	47.5	35	53	22	48	46	49	***	***	***
9	316	47.0	22.7	214	07.7	85	45.4	30	4 56	24	48	36	51	***	***	***
10	331	47.2	21.7	228	35.2	85	43.2	20	5 01	27	49	20	52	***	***	***
11	346	47.4	+0 20.8	243	02.7	85	−17 40.9	10 N	5 04	5 28	5 49	13 06	53	0 11	55	
12	1	47.6	+0 19.8	257	30.2	85	−17 38.4	0	5 05	5 29	5 50	12 52	55	0 24	54	
13	16	47.9	18.8	271	57.6	84	35.9	10 S	04	29	50	39	56	38	53	
14	31	48.1	17.9	286	25.0	84	33.2	20	5 02	28	50	25	57	0 53	52	
15	46	48.3	16.9	300	52.3	83	30.5	30	4 58	26	50	12 09	59	1 09	51	
16	61	48.5	15.9	315	19.6	83	27.6	35	55	25	50	11 59	60	19	50	
17	76	48.8	+0 14.9	329	46.9	83	−17 24.6	40	4 51	5 23	5 50	11 48	61	1 30	49	
18	91	49.0	+0 14.0	344	14.2	83	−17 21.6	45	4 46	5 21	5 50	11 36	62	1 43	48	
19	106	49.2	13.0	358	41.4	82	18.4	50	40	18	50	20	64	1 58	48	
20	121	49.4	12.0	13	08.6	82	15.1	52	36	16	50	13	65	2 06	47	
21	136	49.6	11.0	27	35.8	82	11.7	54	33	14	50	11 05	65	14	46	
22	151	49.9	10.1	42	03.0	82	08.2	56	29	12	50	10 56	66	23	45	
23	166	50.1	09.1	56	30.1	81	04.6	58	24	10	49	46	67	33	45	
24	181	50.3	+0 08.1	70	57.2	81	−17 00.8	60 S	4 18	5 08	5 49	10 34	69	2 45	43	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 53 ^m 9		Mag: −4.8 PMG: 9 ^h 16 ^m			Mag: +1.8 PMG: 10 ^h 00 ^m			Mag: −1.7 PMG: 10 ^h 40 ^m			Mag: +0.6 PMG: 15 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	0	32.4	220	53.8	+10 53.3	209	52.3	+13 18.3	199	37.7	+9 02.8	122	01.9	−18 27.8
1	15	34.9	235	55.0	53.3	224	53.2	17.8	214	39.7	02.6	137	04.2	27.9
2	30	37.4	250	56.1	53.3	239	54.2	17.3	229	41.7	02.4	152	06.5	27.9
3	45	39.8	265	57.2	53.3	254	55.1	16.7	244	43.6	02.2	167	08.7	27.9
4	60	42.3	280	58.3	53.2	269	56.1	16.2	259	45.6	02.0	182	11.0	28.0
5	75	44.8	295	59.4	+10 53.2	284	57.0	+13 15.7	274	47.6	+9 01.8	197	13.3	−18 28.0
6	90	47.2	311	00.5	+10 53.2	299	58.0	+13 15.1	289	49.5	+9 01.6	212	15.5	−18 28.1
7	105	49.7	326	01.6	53.2	314	58.9	14.6	304	51.5	01.4	227	17.8	28.1
8	120	52.2	341	02.7	53.2	329	59.9	14.1	319	53.5	01.2	242	20.1	28.2
9	135	54.6	356	03.8	53.2	345	00.8	13.5	334	55.4	01.0	257	22.4	28.2
10	150	57.1	11	04.9	53.2	0	01.8	13.0	349	57.4	00.9	272	24.6	28.3
11	165	59.5	26	06.0	+10 53.2	15	02.7	+13 12.5	4	59.4	+9 00.7	287	26.9	−18 28.3
12	181	02.0	41	07.1	+10 53.1	30	03.7	+13 11.9	20	01.3	+9 00.5	302	29.2	−18 28.4
13	196	04.5	56	08.2	53.1	45	04.6	11.4	35	03.3	00.3	317	31.4	28.4
14	211	06.9	71	09.3	53.1	60	05.6	10.9	50	05.3	+9 00.1	332	33.7	28.5
15	226	09.4	86	10.3	53.1	75	06.5	10.3	65	07.2	+8 59.9	347	36.0	28.5
16	241	11.9	101	11.4	53.1	90	07.5	09.8	80	09.2	59.7	2	38.2	28.6
17	256	14.3	116	12.5	+10 53.1	105	08.4	+13 09.3	95	11.2	+8 59.5	17	40.5	−18 28.6
18	271	16.8	131	13.6	+10 53.0	120	09.4	+13 08.7	110	13.2	+8 59.3	32	42.8	−18 28.7
19	286	19.3	146	14.7	53.0	135	10.3	08.2	125	15.1	59.1	47	45.1	28.7
20	301	21.7	161	15.7	53.0	150	11.3	07.6	140	17.1	58.9	62	47.3	28.8
21	316	24.2	176	16.8	53.0	165	12.2	07.1	155	19.1	58.7	77	49.6	28.8
22	331	26.7	191	17.9	52.9	180	13.2	06.6	170	21.0	58.5	92	51.9	28.8
23	346	29.1	206	18.9	52.9	195	14.1	06.0	185	23.0	58.3	107	54.1	28.9
24	1	31.6	221	20.0	+10 52.9	210	15.1	+13 05.5	200	25.0	+8 58.1	122	56.4	−18 28.9
Dif	—		+11 0			+10 −5			+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 52 ^m 5		Edad: 9 ^d 7 SD: 15'8 PMG: 20 ^h 00 ^m	PHE { 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'9 Rº: 56 ^m															
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m					
0	181	50.3	+0	08.1	70	57.2	-17 00.8	60 N	17 58	18 39	19 29	15 50 32	** ** *	**					
1	196	50.5		07.2	85	24.3	81 -16 57.0	38 58	58	37	24	40 34	** ** *	**					
2	211	50.7		06.2	99	51.3	80 53.1	39 56	57	34	19	31 36	** ** *	**					
3	226	51.0		05.2	114	18.3	80 49.0	41 54	57	32	14	23 38	** ** *	**					
4	241	51.2		04.2	128	45.3	80 44.9	41 52	57	31	10	16 39	** ** *	**					
5	256	51.4	+0	03.3	143	12.3	80 -16 40.6	43 50	17 57	18 29	19 07	15 10 40	** ** *	**					
6	271	51.6	+0	02.3	157	39.2	79 -16 36.3	43 45	17 56	18 26	19 00	14 56 43	0 04 65						
7	286	51.8		01.3	172	06.2	80 31.8	45 40	56	23	18 55	45 45	17 63						
8	301	52.1	+0	00.3	186	33.1	79 27.2	46 35	56	21	51	35 47	27 62						
9	316	52.3	-0	00.6	201	00.0	79 22.5	47 30	56	20	48	27 48	36 61						
10	331	52.5		01.6	215	26.8	78 17.7	48 20	56	18	43	14 12 51	0 52 59						
11	346	52.7	-0	02.6	229	53.7	79 -16 12.8	49 10 N	17 56	18 17	18 41	13 59 54	1 06 57						
12	1	52.9	-0	03.5	244	20.5	78 -16 07.8	50 0	17 56	18 16	18 40	13 47 56	1 18 56						
13	16	53.2		04.5	258	47.3	78 -16 02.7	51 10 S	56	17	41	35 58	31 54						
14	31	53.4		05.5	273	14.0	77 -15 57.5	52 20	56	18	44	22 60	1 45 51						
15	46	53.6		06.5	287	40.8	78 52.2	53 30	57	20	48	13 08 62	2 00 50						
16	61	53.8		07.4	302	07.5	77 46.8	54 35	57	22	52	12 59 64	09 48						
17	76	54.0	-0	08.4	316	34.3	78 -15 41.2	56 40	17 57	18 24	18 56	12 49 66	2 19 47						
18	91	54.3	-0	09.4	331	01.0	77 -15 35.6	56 45	17 58	18 27	19 01	12 38 68	2 31 45						
19	106	54.5		10.4	345	27.7	77 29.9	57 50	58	31	09	24 71	46 42						
20	121	54.7		11.3	359	54.3	76 24.0	59 52	59	32	12	18 71	2 53 41						
21	136	54.9		12.3	14	21.0	77 18.1	59 54	59	34	16	10 74	3 00 40						
22	151	55.1		13.3	28	47.6	76 12.0	61 56	17 59	36	21	12 02 75	08 39						
23	166	55.3		14.2	43	14.2	76 -15 05.9	61 58	18 00	39	26	11 53 77	18 37						
24	181	55.6	-0	15.2	57	40.8	76 -14 59.6	63 60 S	18 00	18 42	19 32	11 43 79	3 28 36						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 23 ^h 50 ^m 0		Mag: -4.8 PMG: 9 ^h 14 ^m			Mag: +1.8 PMG: 9 ^h 58 ^m			Mag: -1.7 PMG: 10 ^h 37 ^m			Mag: +0.6 PMG: 15 ^h 46 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	1	31.6	221	20.0	+10	52.9	210	15.1	+13	05.5	200	25.0	+8	58.1	122	56.4	-18	28.9	
1	16	34.0	236	21.0		52.8	225	16.0		05.0	215	26.9		57.9	137	58.7		29.0	
2	31	36.5	251	22.1		52.8	240	17.0		04.4	230	28.9		57.8	153	00.9		29.0	
3	46	39.0	266	23.1		52.8	255	18.0		03.9	245	30.9		57.6	168	03.2		29.1	
4	61	41.4	281	24.2		52.8	270	18.9		03.4	260	32.9		57.4	183	05.5		29.1	
5	76	43.9	296	25.2	+10	52.7	285	19.9	+13	02.8	275	34.8	+8	57.2	198	07.7	-18	29.2	
6	91	46.4	311	26.3	+10	52.7	300	20.8	+13	02.3	290	36.8	+8	57.0	213	10.0	-18	29.2	
7	106	48.8	326	27.3		52.7	315	21.8		01.7	305	38.8		56.8	228	12.3		29.3	
8	121	51.3	341	28.4		52.6	330	22.7		01.2	320	40.7		56.6	243	14.6		29.3	
9	136	53.8	356	29.4		52.6	345	23.7		00.7	335	42.7		56.4	258	16.8		29.4	
10	151	56.2	11	30.5		52.5	0	24.6	+13	00.1	350	44.7		56.2	273	19.1		29.4	
11	166	58.7	26	31.5	+10	52.5	15	25.6	+12	59.6	5	46.6	+8	56.0	288	21.4	-18	29.5	
12	182	01.1	41	32.5	+10	52.5	30	26.5	+12	59.1	20	48.6	+8	55.8	303	23.6	-18	29.5	
13	197	03.6	56	33.6		52.4	45	27.5		58.5	35	50.6		55.6	318	25.9		29.6	
14	212	06.1	71	34.6		52.4	60	28.4		58.0	50	52.6		55.4	333	28.2		29.6	
15	227	08.5	86	35.6		52.3	75	29.4		57.4	65	54.5		55.2	348	30.4		29.7	
16	242	11.0	101	36.6		52.3	90	30.4		56.9	80	56.5		55.0	3	32.7		29.7	
17	257	13.5	116	37.6	+10	52.3	105	31.3	+12	56.4	95	58.5	+8	54.8	18	35.0	-18	29.8	
18	272	15.9	131	38.7	+10	52.2	120	32.3	+12	55.8	111	00.4	+8	54.7	33	37.2	-18	29.8	
19	287	18.4	146	39.7		52.2	135	33.2		55.3	126	02.4		54.5	48	39.5		29.9	
20	302	20.9	161	40.7		52.1	150	34.2		54.7	141	04.4		54.3	63	41.8		29.9	
21	317	23.3	176	41.7		52.1	165	35.1		54.2	156	06.4		54.1	78	44.0		29.9	
22	332	25.8	191	42.7		52.0	180	36.1		53.7	171	08.3		53.9	93	46.3		30.0	
23	347	28.3	206	43.7		52.0	195	37.0		53.1	186	10.3		53.7	108	48.6		30.0	
24	2	30.7	221	44.7	+10	51.9	210	38.0	+12	52.6	201	12.3	+8	53.5	123	50.8	-18	30.1	
Dif	—		+10			0	+10			-5			+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 1			Edad: 10 ^d 7 PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 6 20 ^h : 59 ^h 9 PMG: 20 ^h 56 ^m R°: 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	55.6	-0	15.2	57	40.8	-14	59.6	63	60 N	4 16	5 06	5 48	16 22 27	0 18 83	
1	196	55.8		16.2	72	07.4	76	53.3	63	58	22	09	48	14 29	28 80	
2	211	56.0		17.2	86	34.0	76	46.8	65	56	27	11	48	07 32	36 78	
3	226	56.2		18.1	101	00.6	76	40.3	65	54	31	13	48	16 01 33	44 76	
4	241	56.4		19.1	115	27.1	75	33.6	67	52	35	15	49	15 55 35	50 75	
5	256	56.7	-0	20.1	129	53.7	76	-14	26.8	68	50	4 38	5 16	5 49	15 50 37	
6	271	56.9	-0	21.1	144	20.2	75	-14	20.0	68	45	4 45	5 20	5 49	15 39 40	
7	286	57.1		22.0	158	46.7	75	13.0	70	40	50	22	49	30 42	20 68	
8	301	57.3		23.0	173	13.2	75	-14	05.9	71	35	54	24	49	22 45	
9	316	57.5		24.0	187	39.7	75	-13	58.8	71	30	4 57	25	49	15 47	
10	331	57.8		25.0	202	06.2	75	51.5	73	20	5 02	27	49	15 03 50	1 51 61	
11	346	58.0	-0	25.9	216	32.7	75	-13	44.2	73	10 N	5 04	5 28	5 49	14 53 53	
12	1	58.2	-0	26.9	230	59.1	74	-13	36.7	75	0	5 04	5 28	5 49	14 43 56	
13	16	58.4		27.9	245	25.6	75	29.2	75	10 S	03	28	49	33 59	25 53	
14	31	58.6		28.8	259	52.0	74	21.5	77	20	5 01	26	48	22 62	36 51	
15	46	58.8		29.8	274	18.5	75	13.8	77	30	4 56	24	48	10 65	50 47	
16	61	59.1		30.8	288	44.9	74	-13	06.0	78	35	52	22	47	14 03 67	
17	76	59.3	-0	31.8	303	11.3	74	-12	58.0	80	40	4 48	5 20	5 47	13 55 70	
18	91	59.5	-0	32.7	317	37.7	74	-12	50.0	80	45	4 42	5 17	5 46	13 46 72	
19	106	59.7		33.7	332	04.1	74	41.9	81	50	35	13	45	35 75	28 39	
20	121	59.9		34.7	346	30.5	74	33.7	82	52	31	11	45	29 78	34 37	
21	137	00.2		35.7	0	56.9	74	25.4	83	54	27	09	45	24 78	40 36	
22	152	00.4		36.6	15	23.3	74	17.0	84	56	23	07	44	17 81	47 34	
23	167	00.6		37.6	29	49.6	73	-12	08.6	84	58	18	05	44	10 83	
24	182	00.8	-0	38.6	44	16.0	74	-12	00.0	86	60 S	4 11	5 02	5 43	13 02 85	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 23 ^h 46 ^m 0		Mag: -4.8 PMG: 9 ^h 12 ^m			Mag: +1.8 PMG: 9 ^h 57 ^m			Mag: -1.7 PMG: 10 ^h 34 ^m			Mag: +0.6 PMG: 15 ^h 42 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	2	30.7	221	44.7	+10 51.9	210	38.0	+12 52.6	201	12.3	+8 53.5	123	50.8	-18 30.1
1	17	33.2	236	45.7	51.9	225	39.0	52.0	216	14.2	53.3	138	53.1	30.1
2	32	35.6	251	46.7	51.8	240	39.9	51.5	231	16.2	53.1	153	55.4	30.2
3	47	38.1	266	47.7	51.8	255	40.9	51.0	246	18.2	52.9	168	57.6	30.2
4	62	40.6	281	48.7	51.7	270	41.8	50.4	261	20.1	52.7	183	59.9	30.3
5	77	43.0	296	49.7	+10 51.6	285	42.8	+12 49.9	276	22.1	+8 52.5	199	02.1	-18 30.3
6	92	45.5	311	50.7	+10 51.6	300	43.7	+12 49.3	291	24.1	+8 52.3	214	04.4	-18 30.4
7	107	48.0	326	51.7	51.5	315	44.7	48.8	306	26.1	52.1	229	06.7	30.4
8	122	50.4	341	52.7	51.5	330	45.7	48.3	321	28.0	51.9	244	08.9	30.5
9	137	52.9	356	53.7	51.4	345	46.6	47.7	336	30.0	51.8	259	11.2	30.5
10	152	55.4	11	54.6	51.3	0	47.6	47.2	351	32.0	51.6	274	13.5	30.6
11	167	57.8	26	55.6	+10 51.3	15	48.5	+12 46.6	6	34.0	+8 51.4	289	15.7	-18 30.6
12	183	00.3	41	56.6	+10 51.2	30	49.5	+12 46.1	21	35.9	+8 51.2	304	18.0	-18 30.7
13	198	02.8	56	57.6	51.1	45	50.4	45.6	36	37.9	51.0	319	20.3	30.7
14	213	05.2	71	58.5	51.1	60	51.4	45.0	51	39.9	50.8	334	22.5	30.8
15	228	07.7	86	59.5	51.0	75	52.4	44.5	66	41.8	50.6	349	24.8	30.8
16	243	10.1	102	00.5	50.9	90	53.3	43.9	81	43.8	50.4	4	27.1	30.9
17	258	12.6	117	01.4	+10 50.9	105	54.3	+12 43.4	96	45.8	+8 50.2	19	29.3	-18 30.9
18	273	15.1	132	02.4	+10 50.8	120	55.2	+12 42.9	111	47.8	+8 50.0	34	31.6	-18 31.0
19	288	17.5	147	03.4	50.7	135	56.2	42.3	126	49.7	49.8	49	33.8	31.0
20	303	20.0	162	04.3	50.7	150	57.2	41.8	141	51.7	49.6	64	36.1	31.1
21	318	22.5	177	05.3	50.6	165	58.1	41.2	156	53.7	49.4	79	38.4	31.1
22	333	24.9	192	06.2	50.5	180	59.1	40.7	171	55.6	49.2	94	40.6	31.2
23	348	27.4	207	07.2	50.4	196	00.0	40.2	186	57.6	49.0	109	42.9	31.2
24	3	29.9	222	08.1	+10 50.4	211	01.0	+12 39.6	201	59.6	+8 48.9	124	45.2	-18 31.3
Dif	—		+10 -1			+10 -5			+20 -2			+23 0		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 11 ^d 7 PHE { 4 ^h : 60'1 12 ^h : 60'4 20 ^h : 60'6 R°: 56 ^m											
	PMG: 11 ^h 51 ^m 8		SD: 16'3 PMG: 21 ^h 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	182	00.8	-0 38.6	44	16.0	-12 00.0	60 N	17 52	18 33	19 23	16 49 23	1 41 88		
1	197	01.0	39.6	58	42.4	-11 51.3	58	52	31	17	43 26	48 85		
2	212	01.2	40.5	73	08.7	73	56	52	29	13	39 28	1 54 83		
3	227	01.5	41.5	87	35.1	74	54	52	27	09	34 30	2 00 81		
4	242	01.7	42.5	102	01.4	73	52	52	26	05	30 32	05 79		
5	257	01.9	-0 43.4	116	27.7	73	50	17 52	18 25	19 02	16 27 34	2 10 77		
6	272	02.1	-0 44.4	130	54.1	74	45	17 53	18 22	18 56	16 19 37	2 20 73		
7	287	02.3	45.4	145	20.4	73	40	53	20	51	12 41	28 71		
8	302	02.6	46.4	159	46.7	73	35	53	18	48	07 43	35 68		
9	317	02.8	47.3	174	13.0	73	30	53	17	45	16 02 45	41 66		
10	332	03.0	48.3	188	39.3	73	20	54	16	41	15 53 50	2 52 62		
11	347	03.2	-0 49.3	203	05.7	74	10 N	17 54	18 15	18 40	15 46 53	3 01 59		
12	2	03.4	-0 50.3	217	32.0	73	0	17 55	18 16	18 40	15 39 56	3 09 56		
13	17	03.6	51.2	231	58.3	73	10 S	56	17	41	32 59	18 53		
14	32	03.9	52.2	246	24.6	73	20	57	19	44	24 63	27 50		
15	47	04.1	53.2	260	50.9	73	30	58	22	50	15 67	37 46		
16	62	04.3	54.2	275	17.2	73	35	58	24	53	10 70	43 44		
17	77	04.5	-0 55.1	289	43.4	72	40	17 59	18 26	18 58	15 05 72	3 50 41		
18	92	04.7	-0 56.1	304	09.7	73	45	18 00	18 30	19 04	14 58 75	3 57 39		
19	107	04.9	57.1	318	36.0	73	50	01	34	12	50 79	4 07 35		
20	122	05.2	58.0	333	02.3	73	52	02	36	16	47 80	11 33		
21	137	05.4	-0 59.0	347	28.6	73	54	03	38	20	42 83	16 31		
22	152	05.6	-1 00.0	1	54.9	73	56	03	41	25	38 85	21 29		
23	167	05.8	-1 01.0	16	21.1	72	58	04	43	31	33 87	27 27		
24	182	06.0	-1 01.9	30	47.4	73	60 S	18 05	18 47	19 37	14 27 90	4 33 25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 23 ^h 42 ^m 1		Mag: -4.7 PMG: 9 ^h 11 ^m		Mag: +1.8 PMG: 9 ^h 55 ^m		Mag: -1.7 PMG: 10 ^h 31 ^m		Mag: +0.6 PMG: 15 ^h 39 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	3	29.9	222	08.1	+10 50.4	211 01.0	+12 39.6	201 59.6	+8 48.9	124 45.2	-18 31.3
1	18	32.3	237	09.1	50.3	226 01.9	39.1	217 01.6	48.7	139 47.4	31.3
2	33	34.8	252	10.0	50.2	241 02.9	38.5	232 03.5	48.5	154 49.7	31.4
3	48	37.2	267	11.0	50.1	256 03.9	38.0	247 05.5	48.3	169 52.0	31.4
4	63	39.7	282	11.9	50.1	271 04.8	37.4	262 07.5	48.1	184 54.2	31.4
5	78	42.2	297	12.9	+10 50.0	286 05.8	+12 36.9	277 09.5	+8 47.9	199 56.5	-18 31.5
6	93	44.6	312	13.8	+10 49.9	301 06.7	+12 36.4	292 11.4	+8 47.7	214 58.7	-18 31.5
7	108	47.1	327	14.7	49.8	316 07.7	35.8	307 13.4	47.5	230 01.0	31.6
8	123	49.6	342	15.7	49.7	331 08.7	35.3	322 15.4	47.3	245 03.3	31.6
9	138	52.0	357	16.6	49.6	346 09.6	34.7	337 17.3	47.1	260 05.5	31.7
10	153	54.5	12	17.5	49.6	1	10.6	352 19.3	46.9	275 07.8	31.7
11	168	57.0	27	18.4	+10 49.5	16 11.6	+12 33.6	7 21.3	+8 46.7	290 10.0	-18 31.8
12	183	59.4	42	19.4	+10 49.4	31 12.5	+12 33.1	22 23.3	+8 46.5	305 12.3	-18 31.8
13	199	01.9	57	20.3	49.3	46 13.5	32.6	37 25.2	46.3	320 14.6	31.9
14	214	04.4	72	21.2	49.2	61 14.4	32.0	52 27.2	46.2	335 16.8	31.9
15	229	06.8	87	22.1	49.1	76 15.4	31.5	67 29.2	46.0	350 19.1	32.0
16	244	09.3	102	23.0	49.0	91 16.4	30.9	82 31.2	45.8	5 21.4	32.0
17	259	11.7	117	24.0	+10 48.9	106 17.3	+12 30.4	97 33.1	+8 45.6	20 23.6	-18 32.1
18	274	14.2	132	24.9	+10 48.8	121 18.3	+12 29.8	112 35.1	+8 45.4	35 25.9	-18 32.1
19	289	16.7	147	25.8	48.7	136 19.2	29.3	127 37.1	45.2	50 28.1	32.2
20	304	19.1	162	26.7	48.6	151 20.2	28.7	142 39.1	45.0	65 30.4	32.2
21	319	21.6	177	27.6	48.6	166 21.2	28.2	157 41.0	44.8	80 32.7	32.3
22	334	24.1	192	28.5	48.5	181 22.1	27.7	172 43.0	44.6	95 34.9	32.3
23	349	26.5	207	29.4	48.4	196 23.1	27.1	187 45.0	44.4	110 37.2	32.4
24	4	29.0	222	30.3	+10 48.3	211 24.1	+12 26.6	202 47.0	+8 44.2	125 39.4	-18 32.4
Dif	—		+9 -1		+10 -5		+20 -2		+23 0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 51 ^m 4			Edad: 12 ^d 7 PHE { 4 ^h : 60'8 12 ^h : 61'0 20 ^h : 61'2 Rº: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	06.0	-1	01.9	30	47.4	-8	10.3	60 N	4	22	5	11	5	53	17	12
1	197	06.2		02.9	45	13.7	-7	59.8	58		27		13	52	09	25	
2	212	06.5		03.9	59	39.9		49.3	56		31		15	52	07	26	
3	227	06.7		04.9	74	06.2		38.7	54		35		17	52	04	29	
4	242	06.9		05.8	88	32.5		28.1	52		39		18	52	02	31	
5	257	07.1	-1	06.8	102	58.7	-7	17.3	50	4	42	5	19	5	52	17	01
6	272	07.3	-1	07.8	117	25.0	-7	06.6	45	4	48	5	22	5	51	16	56
7	287	07.5		08.7	131	51.2	-6	55.8	40		52		24	51	53	39	
8	302	07.8		09.7	146	17.5		44.9	35		56		25	51	50	42	
9	317	08.0		10.7	160	43.7		33.9	30	4	59	26		50	47	45	
10	332	08.2		11.7	175	10.0		23.0	20	5	02	28		50	43	49	
11	347	08.4	-1	12.6	189	36.2	-6	11.9	10 N	5	04	5	28	5	49	16	39
12	2	08.6	-1	13.6	204	02.5	-6	00.8	0	5	04	5	28	5	48	16	35
13	17	08.8		14.6	218	28.7	-5	49.7	10 S	5	02		26	47	31	60	
14	32	09.0		15.6	232	55.0		38.5	20	4	59	24		46	27	64	
15	47	09.3		16.5	247	21.2		27.3	30		53	21		45	22	68	
16	62	09.5		17.5	261	47.4		16.0	35		49	19		44	20	70	
17	77	09.7	-1	18.5	276	13.7	-5	04.7	40	4	45	5	16	5	43	16	17
18	92	09.9	-1	19.5	290	39.9	-4	53.4	45	4	38	5	13	5	42	16	13
19	107	10.1		20.4	305	06.1		42.0	50		30	09		41	09	81	
20	122	10.3		21.4	319	32.3		30.6	52		27	07		40	07	83	
21	137	10.5		22.4	333	58.6		19.1	54		22	04		40	05	85	
22	152	10.8		23.3	348	24.8	-4	07.6	56		17	5	02	39	03	87	
23	167	11.0		24.3	2	51.0	-3	56.0	58		11	4	59	38	16	00	
24	182	11.2	-1	25.3	17	17.2	-3	44.5	60 S	4	05	4	55	5	37	15	57
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 23 ^h 38 ^m 2		Mag: -4.7 PMG: 9 ^h 09 ^m			Mag: +1.8 PMG: 9 ^h 54 ^m			Mag: -1.7 PMG: 10 ^h 27 ^m			Mag: +0.6 PMG: 15 ^h 35 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	4	29.0	222	30.3	+10	48.3	211	24.1	+12	26.6	202	47.0	+8	44.2	125	39.4	
1	19	31.5	237	31.2		48.2	226	25.0		26.0	217	48.9		44.0	140	41.7	
2	34	33.9	252	32.1		48.1	241	26.0		25.5	232	50.9		43.8	155	44.0	
3	49	36.4	267	33.0		48.0	256	27.0		24.9	247	52.9		43.7	170	46.2	
4	64	38.8	282	33.9		47.8	271	27.9		24.4	262	54.9		43.5	185	48.5	
5	79	41.3	297	34.7	+10	47.7	286	28.9	+12	23.8	277	56.8	+8	43.3	200	50.7	
6	94	43.8	312	35.6	+10	47.6	301	29.8	+12	23.3	292	58.8	+8	43.1	215	53.0	
7	109	46.2	327	36.5		47.5	316	30.8		22.7	308	00.8		42.9	230	55.3	
8	124	48.7	342	37.4		47.4	331	31.8		22.2	323	02.8		42.7	245	57.5	
9	139	51.2	357	38.3		47.3	346	32.7		21.7	338	04.7		42.5	260	59.8	
10	154	53.6	12	39.1		47.2	1	33.7		21.1	353	06.7		42.3	276	02.0	
11	169	56.1	27	40.0	+10	47.1	16	34.7	+12	20.6	8	08.7	+8	42.1	291	04.3	
12	184	58.6	42	40.9	+10	47.0	31	35.6	+12	20.0	23	10.7	+8	41.9	306	06.5	
13	200	01.0	57	41.8		46.9	46	36.6		19.5	38	12.6		41.7	321	08.8	
14	215	03.5	72	42.6		46.8	61	37.6		18.9	53	14.6		41.5	336	11.1	
15	230	06.0	87	43.5		46.6	76	38.5		18.4	68	16.6		41.3	351	13.3	
16	245	08.4	102	44.4		46.5	91	39.5		17.8	83	18.6		41.1	6	15.6	
17	260	10.9	117	45.2	+10	46.4	106	40.5	+12	17.3	98	20.5	+8	41.0	21	17.8	
18	275	13.3	132	46.1	+10	46.3	121	41.4	+12	16.7	113	22.5	+8	40.8	36	20.1	
19	290	15.8	147	46.9		46.2	136	42.4		16.2	128	24.5		40.6	51	22.4	
20	305	18.3	162	47.8		46.1	151	43.4		15.6	143	26.5		40.4	66	24.6	
21	320	20.7	177	48.6		45.9	166	44.3		15.1	158	28.4		40.2	81	26.9	
22	335	23.2	192	49.5		45.8	181	45.3		14.6	173	30.4		40.0	96	29.1	
23	350	25.7	207	50.3		45.7	196	46.3		14.0	188	32.4		39.8	111	31.4	
24	5	28.1	222	51.2	+10	45.6	211	47.2	+12	13.5	203	34.4	+8	39.6	126	33.6	
Dif	—		+9 -1			+10 -5			+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: 13 ^d 7 PHE { 4 ^h : 61'3 12 ^h : 61'4 20 ^h : 61'4 R°: 57 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	11.2	-1	25.3	17	17.2	-3 44.5	60 N	17 46	18 27	19 16	17 34 22	4 40 93	
1	197	11.4		26.3	31	43.4 72	32.9 ¹¹⁶	58	46	25	11	34 24	42 90	
2	212	11.6		27.2	46	09.6 72	21.2 ¹¹⁷	56	47	24	07	33 27	43 88	
3	227	11.8		28.2	60	35.8 72	-3 09.6 ¹¹⁶	54	47	22	04	33 29	45 85	
4	242	12.0		29.2	75	02.0 72	-2 57.9 ¹¹⁷	52	48	21	19 01	33 31	46 83	
5	257	12.3	-1	30.2	89	28.2 72	-2 46.2 ¹¹⁷	50	17 48	18 20	18 58	17 33 32	4 47 81	
6	272	12.5	-1	31.1	103	54.4 72	-2 34.5 ¹¹⁷	45	17 49	18 18	18 52	17 33 36	4 49 78	
7	287	12.7		32.1	118	20.6 72	22.7 ¹¹⁸	40	50	17	48	32 40	51 74	
8	302	12.9		33.1	132	46.8 72	-2 10.9 ¹¹⁸	35	50	15	45	32 42	53 71	
9	317	13.1		34.0	147	13.0 72	-1 59.1 ¹¹⁸	30	51	15	42	32 45	55 68	
10	332	13.3		35.0	161	39.2 72	47.3 ¹¹⁸	20	52	14	40	32 49	57 64	
11	347	13.5	-1	36.0	176	05.3 71	-1 35.5 ¹¹⁸	10 N	17 53	18 14	18 39	17 31 53	4 59 60	
12	2	13.8	-1	37.0	190	31.5 72	-1 23.7 ¹¹⁸	0	17 54	18 15	18 39	17 31 56	5 01 57	
13	17	14.0		37.9	204	57.7 72	-1 11.8 ¹¹⁹	10 S	56	17	41	31 60	03 53	
14	32	14.2		38.9	219	23.8 71	-0 59.9 ¹¹⁹	20	57	19	45	31 64	06 48	
15	47	14.4		39.9	233	50.0 72	48.1 ¹¹⁸	30	17 59	23	51	30 69	08 44	
16	62	14.6		40.9	248	16.1 71	36.2 ¹¹⁹	35	18 00	25	18 55	30 71	09 42	
17	77	14.8	-1	41.8	262	42.3 72	-0 24.3 ¹¹⁹	40	18 01	18 28	19 00	17 30 74	5 11 39	
18	92	15.0	-1	42.8	277	08.4 71	-0 12.4 ¹¹⁹	45	18 03	18 32	19 07	17 30 77	5 13 36	
19	107	15.3		43.8	291	34.6 72	-0 00.5 ¹¹⁹	50	04	37	15	30 81	15 32	
20	122	15.5		44.7	306	00.7 71	+0 11.4 ¹¹⁹	52	05	39	19	30 83	15 31	
21	137	15.7		45.7	320	26.8 71	23.3 ¹¹⁹	54	06	42	24	30 85	17 28	
22	152	15.9		46.7	334	53.0 72	35.2 ¹¹⁹	56	07	45	30	30 87	18 26	
23	167	16.1		47.7	349	19.1 71	47.1 ¹¹⁹	58	08	48	36	30 90	19 24	
24	182	16.3	-1	48.6	3	45.2 71	+0 59.0 ¹¹⁹	60 S	18 10	18 52	19 43	17 30 92	5 20 22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 23 ^h 34 ^m 3		Mag: -4.7 PMG: 9 ^h 08 ^m		Mag: +1.8 PMG: 9 ^h 52 ^m		Mag: -1.7 PMG: 10 ^h 24 ^m		Mag: +0.6 PMG: 15 ^h 31 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	5	28.1	222	51.2	+10	45.6	203	34.4	+8	39.6	126	33.6	-18	33.6				
1	20	30.6	237	52.0		45.4	218	36.3		39.4	141	35.9		33.7				
2	35	33.1	252	52.9		45.3	241	49.2		12.4	233	38.3		33.7				
3	50	35.5	267	53.7		45.2	256	50.1		11.8	248	40.3		33.7				
4	65	38.0	282	54.6		45.1	271	51.1		11.3	263	42.3		33.8				
5	80	40.5	297	55.4	+10	44.9	286	52.1	+12	10.7	278	44.2	+8	38.7	201	44.9	-18	33.8
6	95	42.9	312	56.2	+10	44.8	301	53.0	+12	10.2	293	46.2	+8	38.5	216	47.2	-18	33.9
7	110	45.4	327	57.1		44.7	316	54.0		09.6	308	48.2		38.3	231	49.4		33.9
8	125	47.8	342	57.9		44.5	331	55.0		09.1	323	50.2		38.1	246	51.7		34.0
9	140	50.3	357	58.7		44.4	346	55.9		08.5	338	52.1		37.9	261	53.9		34.0
10	155	52.8	12	59.6		44.3	1	56.9		08.0	353	54.1		37.7	276	56.2		34.1
11	170	55.2	28	00.4	+10	44.1	16	57.9	+12	07.4	8	56.1	+8	37.5	291	58.5	-18	34.1
12	185	57.7	43	01.2	+10	44.0	31	58.8	+12	06.9	23	58.1	+8	37.3	307	00.7	-18	34.2
13	201	00.2	58	02.0		43.9	46	59.8		06.3	39	00.1		37.1	322	03.0		34.2
14	216	02.6	73	02.8		43.7	62	00.8		05.8	54	02.0		36.9	337	05.2		34.3
15	231	05.1	88	03.7		43.6	77	01.7		05.2	69	04.0		36.7	352	07.5		34.3
16	246	07.6	103	04.5		43.5	92	02.7		04.7	84	06.0		36.5	7	09.7		34.4
17	261	10.0	118	05.3	+10	43.3	107	03.7	+12	04.1	99	08.0	+8	36.3	22	12.0	-18	34.4
18	276	12.5	133	06.1	+10	43.2	122	04.6	+12	03.6	114	09.9	+8	36.2	37	14.2	-18	34.5
19	291	14.9	148	06.9		43.0	137	05.6		03.0	129	11.9		36.0	52	16.5		34.5
20	306	17.4	163	07.7		42.9	152	06.6		02.5	144	13.9		35.8	67	18.7		34.6
21	321	19.9	178	08.5		42.7	167	07.5		01.9	159	15.9		35.6	82	21.0		34.6
22	336	22.3	193	09.3		42.6	182	08.5		01.4	174	17.8		35.4	97	23.3		34.7
23	351	24.8	208	10.1		42.4	197	09.5		00.8	189	19.8		35.2	112	25.5		34.7
24	6	27.3	223	10.9	+10	42.3	212	10.5	+12	00.3	204	21.8	+8	35.0	127	27.8	-18	34.8
Dif	—		+8		-1		+10		-5		+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 7			Edad: 14 ^d 7 PHE { SD: 16'7 PMG: *** **m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	182	16.3	-1	48.6	3	45.2	+0	59.0	60 N	4	27	5	16	5	57	17	56		
1	197	16.5		49.6	18	11.3	+1	10.9 ¹¹⁹	58	31	18	57	17	58	26	12	89		
2	212	16.7		50.6	32	37.4		22.7 ¹¹⁸	56	35	19	56	18	00	28	11	87		
3	227	17.0		51.6	47	03.5		34.6 ¹¹⁹	54	39	20	56	02	30		10	85		
4	242	17.2		52.5	61	29.6		46.5 ¹¹⁹	52	42	22	55	04	32		09	83		
5	257	17.4	-1	53.5	75	55.6	+1	58.3 ¹¹⁸	50	4	45	5	23	5	55	18	05		
6	272	17.6	-1	54.5	90	21.7	+2	10.1 ¹¹⁸	45	4	50	5	24	5	54	18	09		
7	287	17.8		55.4	104	47.8		21.9 ¹¹⁸	40	54	26	53	12	40		05	74		
8	302	18.0		56.4	119	13.9		33.7 ¹¹⁸	35	4	57	27	52	14	44		04	71	
9	317	18.2		57.4	133	39.9		45.5 ¹¹⁸	30	5	00	28	51	17	45		03	68	
10	332	18.4		58.4	148	06.0	+2	57.3 ¹¹⁸	20	03	28	50	21	49		6	01	64	
11	347	18.6	-1	59.3	162	32.0	+3	09.0 ¹¹⁷	10 N	5	03	5	28	5	49	18	24	53	
12	2	18.9	-2	00.3	176	58.0	+3	20.7 ¹¹⁷	0	5	03	5	27	5	47	18	27	57	
13	17	19.1		01.3	191	24.1		32.4 ¹¹⁷	10 S	5	01	25	46	31	60		56	53	
14	32	19.3		02.3	205	50.1		44.1 ¹¹⁷	20	4	57	22	45	35	63		54	50	
15	47	19.5		03.2	220	16.1	+3	55.7 ¹¹⁶	30	51	19	43	39	68		52	46		
16	62	19.7		04.2	234	42.1	+4	07.3 ¹¹⁶	35	47	16	41	41	70		51	43		
17	77	19.9	-2	05.2	249	08.1	+4	18.9 ¹¹⁶	40	4	41	5	13	5	40	18	44	73	
18	92	20.1	-2	06.1	263	34.1	+4	30.4 ¹¹⁵	45	4	34	5	09	5	38	18	47	76	
19	107	20.3		07.1	278	00.1		41.9 ¹¹⁵	50	26	04	37	51	80		47	33		
20	122	20.5		08.1	292	26.1	+4	53.4 ¹¹⁵	52	22	5	02	36	53	82		46	31	
21	137	20.8		09.1	306	52.0	+5	04.8 ¹¹⁴	54	17	4	59	35	55	84		45	29	
22	152	21.0		10.0	321	18.0		16.2 ¹¹⁴	56	11	56	34	18	57	86		44	27	
23	167	21.2		11.0	335	44.0		27.6 ¹¹⁴	58	4	05	53	32	19	00	88		43	25
24	182	21.4	-2	12.0	350	09.9	+5	38.9 ¹¹³	60 S	3	58	4	49	5	31	19	02	92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 30 ^m 3		Mag: -4.7 PMG: 9 ^h 07 ^m		Mag: +1.8 PMG: 9 ^h 51 ^m		Mag: -1.7 PMG: 10 ^h 21 ^m		Mag: +0.6 PMG: 15 ^h 28 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	6	27.3	223	10.9	+10	42.3	212	10.5	+12	00.3	204	21.8	+8	35.0	127	27.8	-18	34.8
1	21	29.7	238	11.7		42.2	227	11.4	+11	59.7	219	23.8		34.8	142	30.0		34.8
2	36	32.2	253	12.5		42.0	242	12.4		59.2	234	25.8		34.6	157	32.3		34.9
3	51	34.7	268	13.3		41.9	257	13.4		58.6	249	27.7		34.4	172	34.5		34.9
4	66	37.1	283	14.1		41.7	272	14.3		58.1	264	29.7		34.2	187	36.8		35.0
5	81	39.6	298	14.9	+10	41.5	287	15.3	+11	57.5	279	31.7	+8	34.0	202	39.0	-18	35.0
6	96	42.1	313	15.7	+10	41.4	302	16.3	+11	57.0	294	33.7	+8	33.9	217	41.3	-18	35.1
7	111	44.5	328	16.5		41.2	317	17.3		56.4	309	35.6		33.7	232	43.5		35.1
8	126	47.0	343	17.3		41.1	332	18.2		55.9	324	37.6		33.5	247	45.8		35.2
9	141	49.4	358	18.0		40.9	347	19.2		55.3	339	39.6		33.3	262	48.0		35.2
10	156	51.9	13	18.8		40.8	2	20.2		54.8	354	41.6		33.1	277	50.3		35.3
11	171	54.4	28	19.6	+10	40.6	17	21.1	+11	54.2	9	43.6	+8	32.9	292	52.5	-18	35.3
12	186	56.8	43	20.4	+10	40.5	32	22.1	+11	53.7	24	45.5	+8	32.7	307	54.8	-18	35.4
13	201	59.3	58	21.1		40.3	47	23.1		53.1	39	47.5		32.5	322	57.1		35.4
14	217	01.8	73	21.9		40.1	62	24.1		52.6	54	49.5		32.3	337	59.3		35.5
15	232	04.2	88	22.7		40.0	77	25.0		52.0	69	51.5		32.1	353	01.6		35.5
16	247	06.7	103	23.5		39.8	92	26.0		51.5	84	53.5		31.9	8	03.8		35.6
17	262	09.2	118	24.2	+10	39.6	107	27.0	+11	50.9	99	55.4	+8	31.8	23	06.1	-18	35.6
18	277	11.6	133	25.0	+10	39.5	122	27.9	+11	50.4	114	57.4	+8	31.6	38	08.3	-18	35.7
19	292	14.1	148	25.8		39.3	137	28.9		49.8	129	59.4		31.4	53	10.6		35.7
20	307	16.5	163	26.5		39.1	152	29.9		49.3	145	01.4		31.2	68	12.8		35.8
21	322	19.0	178	27.3		39.0	167	30.9		48.7	160	03.4		31.0	83	15.1		35.8
22	337	21.5	193	28.0		38.8	182	31.8		48.2	175	05.3		30.8	98	17.3		35.9
23	352	23.9	208	28.8		38.6	197	32.8		47.6	190	07.3		30.6	113	19.6		35.9
24	7	26.4	223	29.5	+10	38.5	212	33.8	+11	47.1	205	09.3	+8	30.4	128	21.8	-18	36.0
Dif	—		+8		-2		+10		-6		+20		-2		+23		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 50 ^m 4			Edad: 15 ^d 7 PHE { 4 ^h : 61'2 12 ^h : 61'1 20 ^h : 60'9 PMG: 0 ^h 41 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	21.4	-2 12.0	350	09.9	+5 38.9	70	60 N	17 40	18 21	19 10	18 19 27	7 45 90		
1	197	21.6	12.9	4	35.9	+5 50.2	113	58	41	20	06	24 29	41 87		
2	212	21.8	13.9	19	01.8	+6 01.4	112	56	42	18	19 02	28 32	38 84		
3	227	22.0	14.9	33	27.7		112	54	42	17	18 59	32 34	35 8		
4	242	22.2	15.9	47	53.7		111	52	43	17	56	36 35	32 80		
5	257	22.4	-2 16.8	62	19.6	+6 34.8	111	50	17 44	18 16	18 53	18 39 37	7 29 79		
6	272	22.6	-2 17.8	76	45.5	+6 45.8	110	45	17 45	18 14	18 48	18 46 41	7 23 76		
7	287	22.8	18.8	91	11.4	+6 56.8	110	40	46	13	45	52 43	19 72		
8	302	23.1	19.7	105	37.3	+7 07.7	109	35	47	13	42	18 58 45	15 69		
9	317	23.3	20.7	120	03.2		109	30	48	12	40	19 02 48	11 67		
10	332	23.5	21.7	134	29.1		108	20	50	12	38	10 51	7 05 63		
11	347	23.7	-2 22.7	148	54.9	+7 40.2	108	10 N	17 52	18 13	18 37	19 17 54	6 59 60		
12	2	23.9	-2 23.6	163	20.8	+7 50.9	107	0	17 54	18 14	18 38	19 24 57	6 54 57		
13	17	24.1	24.6	177	46.7	+8 01.5	106	10 S	55	16	41	31 60	49 54		
14	32	24.3	25.6	192	12.5		106	20	17 58	20	45	38 63	44 50		
15	47	24.5	26.5	206	38.4		105	30	18 00	24	52	47 66	38 46		
16	62	24.7	27.5	221	04.2		105	35	01	27	18 56	51 69	34 44		
17	77	24.9	-2 28.5	235	30.1	+8 43.5	104	40	18 03	18 30	19 02	19 57 71	6 30 42		
18	92	25.1	-2 29.5	249	55.9	+8 53.8	103	45	18 05	18 35	19 09	20 03 74	6 25 39		
19	107	25.4	30.4	264	21.7	+9 04.1	103	50	07	40	19	11 78	20 35		
20	122	25.6	31.4	278	47.5		101	52	09	43	23	15 79	17 34		
21	137	25.8	32.4	293	13.4		102	54	10	45	28	19 81	14 32		
22	152	26.0	33.3	307	39.2		100	56	11	49	34	23 83	11 30		
23	167	26.2	34.3	322	05.0		100	58	13	52	41	28 85	08 27		
24	182	26.4	-2 35.3	336	30.8	+9 54.3	99	60 S	18 14	18 57	19 48	20 34 87	6 04 25		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 26 ^m 4		Mag: -4.7 PMG: 9 ^h 06 ^m			Mag: +1.8 PMG: 9 ^h 49 ^m			Mag: -1.7 PMG: 10 ^h 18 ^m			Mag: +0.6 PMG: 15 ^h 24 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	7	26.4	223 29.5	+10 38.5		212 33.8	+11 47.1		205 09.3	+8 30.4		128 21.8	-18 36.0		
1	22	28.9	238 30.3	38.3		227 34.7	46.5		220 11.3	30.2		143 24.1	36.0		
2	37	31.3	253 31.0	38.1		242 35.7	46.0		235 13.2	30.0		158 26.3	36.1		
3	52	33.8	268 31.8	37.9		257 36.7	45.4		250 15.2	29.8		173 28.6	36.1		
4	67	36.3	283 32.5	37.8		272 37.7	44.8		265 17.2	29.6		188 30.8	36.2		
5	82	38.7	298 33.3	+10 37.6		287 38.6	+11 44.3		280 19.2	+8 29.5		203 33.1	-18 36.2		
6	97	41.2	313 34.0	+10 37.4		302 39.6	+11 43.7		295 21.2	+8 29.3		218 35.3	-18 36.3		
7	112	43.7	328 34.8	37.2		317 40.6	43.2		310 23.1	29.1		233 37.6	36.3		
8	127	46.1	343 35.5	37.0		332 41.6	42.6		325 25.1	28.9		248 39.8	36.4		
9	142	48.6	358 36.2	36.9		347 42.5	42.1		340 27.1	28.7		263 42.1	36.4		
10	157	51.0	13 37.0	36.7		2 43.5	41.5		355 29.1	28.5		278 44.3	36.5		
11	172	53.5	28 37.7	+10 36.5		17 44.5	+11 41.0		10 31.1	+8 28.3		293 46.6	-18 36.5		
12	187	56.0	43 38.4	+10 36.3		32 45.5	+11 40.4		25 33.0	+8 28.1		308 48.8	-18 36.6		
13	202	58.4	58 39.2	36.1		47 46.4	39.9		40 35.0	27.9		323 51.1	36.6		
14	218	00.9	73 39.9	36.0		62 47.4	39.3		55 37.0	27.7		338 53.3	36.7		
15	233	03.4	88 40.6	35.8		77 48.4	38.8		70 39.0	27.5		353 55.6	36.7		
16	248	05.8	103 41.3	35.6		92 49.4	38.2		85 41.0	27.4		8 57.8	36.8		
17	263	08.3	118 42.1	+10 35.4		107 50.3	+11 37.7		100 42.9	+8 27.2		24 00.1	-18 36.8		
18	278	10.8	133 42.8	+10 35.2		122 51.3	+11 37.1		115 44.9	+8 27.0		39 02.3	-18 36.9		
19	293	13.2	148 43.5	35.0		137 52.3	36.5		130 46.9	26.8		54 04.6	36.9		
20	308	15.7	163 44.2	34.8		152 53.3	36.0		145 48.9	26.6		69 06.8	37.0		
21	323	18.1	178 44.9	34.6		167 54.2	35.4		160 50.9	26.4		84 09.1	37.0		
22	338	20.6	193 45.6	34.4		182 55.2	34.9		175 52.9	26.2		99 11.3	37.1		
23	353	23.1	208 46.4	34.2		197 56.2	34.3		190 54.8	26.0		114 13.6	37.1		
24	8	25.5	223 47.1	+10 34.0		212 57.2	+11 33.8		205 56.8	+8 25.8		129 15.8	-18 37.2		
Dif	—		+7 -2		+10 -6		-6		+20 -2		+22		-1		

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: 16 ^d 7 PHE { 4 ^h : 60'7 12 ^h : 60'5 20 ^h : 60'2 SD: 16'6 PMG: 1 ^h 38 ^m R°: 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil			Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	26.4	-2	35.3	336	30.8	+9	54.3	60 N	4 32	5 21	6 02	18 46	32	9 15	85	
1	197	26.6		36.3	350	56.6	+10	04.1	58		22	01	18 53	35	08	83	
2	212	26.8		37.2	5	22.4		13.8	56	40	23	6 00	19 00	36	9 02	81	
3	227	27.0		38.2	19	48.2		23.5	54	43	24	5 59	06	38	8 57	78	
4	242	27.2		39.2	34	14.0		33.1	52	45	25	58	11	40	52	77	
5	257	27.4	-2	40.1	48	39.7	+10	42.6	50	4 48	5 26	5 58	19 16	41	8 48	75	
6	272	27.6	-2	41.1	63	05.5	+10	52.0	45	4 53	5 27	5 56	19 27	43	8 39	72	
7	287	27.8		42.1	77	31.3	+11	01.4	40	56	28	55	35	46	31	69	
8	302	28.0		43.1	91	57.1		10.7	35	4 59	28	54	43	48	24	68	
9	317	28.3		44.0	106	22.8		19.8	30	5 01	29	53	19 50	49	18	66	
10	332	28.5		45.0	120	48.6		28.9	20	03	29	51	20 01	52	8 08	63	
11	347	28.7	-2	46.0	135	14.4	+11	38.0	10 N	5 03	5 28	5 49	20 11	55	7 59	60	
12	2	28.9	-2	46.9	149	40.2	+11	46.9	0	5 02	5 26	5 47	20 21	57	7 51	57	
13	17	29.1		47.9	164	05.9	+11	55.7	10 S	4 59	24	45	31	59	43	54	
14	32	29.3		48.9	178	31.7	+12	04.5	20	55	21	43	41	61	34	52	
15	47	29.5		49.8	192	57.5		13.1	30	48	16	40	20 53	64	24	48	
16	62	29.7		50.8	207	23.2		21.7	35	44	13	39	21 00	66	18	47	
17	77	29.9	-2	51.8	221	49.0	+12	30.2	40	4 38	5 10	5 37	21 08	68	7 12	44	
18	92	30.1	-2	52.8	236	14.8	+12	38.6	45	4 30	5 05	5 35	21 17	70	7 04	42	
19	107	30.3		53.7	250	40.6		46.9	50	21	5 00	32	29	72	6 55	39	
20	122	30.5		54.7	265	06.3	+12	55.1	52	17	4 57	31	34	73	51	37	
21	137	30.7		55.7	279	32.1	+13	03.2	54	11	54	30	40	75	46	36	
22	152	30.9		56.6	293	57.9		11.2	56	4 06	51	28	46	77	41	34	
23	167	31.1		57.6	308	23.7		19.1	58	3 59	47	27	21 53	79	35	32	
24	182	31.3	-2	58.6	322	49.5	+13	26.9	60 S	3 51	4 43	5 25	22 01	81	6 29	29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 23 ^h 22 ^m 5		Mag: -4.7 PMG: 9 ^h 04 ^m		Mag: +1.8 PMG: 9 ^h 48 ^m		Mag: -1.7 PMG: 10 ^h 15 ^m		Mag: +0.6 PMG: 15 ^h 21 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	8	25.5	223	47.1	+10	34.0	212	57.2	+11	33.8
1	23	28.0	238	47.8		33.8	227	58.2		33.2
2	38	30.5	253	48.5		33.6	242	59.1		32.7
3	53	32.9	268	49.2		33.4	258	00.1		32.1
4	68	35.4	283	49.9		33.2	273	01.1		31.5
5	83	37.9	298	50.6	+10	33.0	288	02.1	+11	31.0
6	98	40.3	313	51.3	+10	32.8	303	03.0	+11	30.4
7	113	42.8	328	52.0		32.6	318	04.0		29.9
8	128	45.3	343	52.7		32.4	333	05.0		29.3
9	143	47.7	358	53.4		32.2	348	06.0		28.8
10	158	50.2	13	54.1		32.0	3	06.9		28.2
11	173	52.6	28	54.7	+10	31.8	18	07.9	+11	27.7
12	188	55.1	43	55.4	+10	31.6	33	08.9	+11	27.1
13	203	57.6	58	56.1		31.4	48	09.9		26.5
14	219	00.0	73	56.8		31.2	63	10.9		26.0
15	234	02.5	88	57.5		31.0	78	11.8		25.4
16	249	05.0	103	58.2		30.8	93	12.8		24.9
17	264	07.4	118	58.8	+10	30.6	108	13.8	+11	24.3
18	279	09.9	133	59.5	+10	30.4	123	14.8	+11	23.8
19	294	12.4	149	00.2		30.1	138	15.8		23.2
20	309	14.8	164	00.9		29.9	153	16.7		22.7
21	324	17.3	179	01.5		29.7	168	17.7		22.1
22	339	19.8	194	02.2		29.5	183	18.7		21.5
23	354	22.2	209	02.9		29.3	198	19.7		21.0
24	9	24.7	224	03.5	+10	29.1	213	20.6	+11	20.4
Dif	—		+7		-2		+10		-6	
							+20		-2	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 17 ^d 7 PHE { 4 ^h : 60°0 12 ^h : 59°7 20 ^h : 59°4					Civil			Hora		Hora	
	PMG: 11 ^h 49 ^m 8			PMG: 2 ^h 35 ^m	R°: 56 ^m							R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m
0	182	31.3	-2 58.6	322	49.5	+13 26.9	77	60 N	17 34	18 15	19 04	19 18 40	10 40 76		
1	197	31.5	-2 59.5	337	15.3	34.6	77	58	35	14	19 00	28 41	31 74		
2	212	31.7	-3 00.5	351	41.1	42.2	76	56	36	13	18 56	36 43	23 73		
3	227	31.9	01.5	6	06.9	49.8	76	54	37	13	54	44 44	15 72		
4	242	32.1	02.5	20	32.7	+13 57.2	74	52	38	12	51	51 45	09 70		
5	257	32.4	-3 03.4	34	58.5	+14 04.5	73	50	17 39	18 11	18 49	19 57 46	10 03 70		
6	272	32.6	-3 04.4	49	24.3	+14 11.7	72	45	17 41	18 11	18 45	20 10 48	9 51 67		
7	287	32.8	05.4	63	50.2	18.8	71	40	43	10	41	21 49	40 66		
8	302	33.0	06.3	78	16.0	25.9	71	35	45	10	39	31 50	32 63		
9	317	33.2	07.3	92	41.9	32.8	69	30	46	10	38	39 51	24 62		
10	332	33.4	08.3	107	07.7	39.6	68	20	48	10	36	20 53 53	9 11 60		
11	347	33.6	-3 09.2	121	33.6	+14 46.3	67	10 N	17 51	18 12	18 36	21 06 55	8 59 58		
12	2	33.8	-3 10.2	135	59.5	+14 52.9	66	0	17 53	18 14	18 38	21 18 56	8 48 57		
13	17	34.0	11.2	150	25.3	+14 59.4	65	10 S	55	16	41	30 57	37 55		
14	32	34.2	12.2	164	51.2	+15 05.8	64	20	17 58	20	46	42 59	26 52		
15	47	34.4	13.1	179	17.2	12.0	62	30	18 01	25	53	21 57 61	12 51		
16	62	34.6	14.1	193	43.1	18.2	62	35	03	28	18 58	22 06 61	8 05 49		
17	77	34.8	-3 15.1	208	09.0	+15 24.3	61	40	18 05	18 32	19 04	22 16 62	7 56 48		
18	92	35.0	-3 16.0	222	35.0	+15 30.2	59	45	18 07	18 37	19 12	22 27 64	7 46 46		
19	107	35.2	17.0	237	00.9	36.1	59	50	10	43	22	41 66	34 43		
20	122	35.4	18.0	251	26.9	41.8	57	52	12	46	27	47 67	28 42		
21	137	35.6	18.9	265	52.9	47.5	57	54	13	49	32	22 55 67	22 41		
22	152	35.8	19.9	280	18.9	53.0	55	56	15	53	39	23 03 68	15 39		
23	167	36.0	20.9	294	45.0	+15 58.4	54	58	17	18 57	46	12 70	7 07 38		
24	182	36.2	-3 21.8	309	11.0	+16 03.7	53	60 S	18 19	19 02	19 54	23 22 72	6 58 36		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 18 ^m 5		Mag: -4.7 PMG: 9 ^h 03 ^m		Mag: +1.8 PMG: 9 ^h 46 ^m		Mag: -1.8 PMG: 10 ^h 12 ^m		Mag: +0.6 PMG: 15 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	9	24.7	224 03.5	+10 29.1	213 20.6	+11 20.4	206 44.4	+8 21.3	130 09.7	-18 38.4
1	24	27.1	239 04.2	28.8	228 21.6	19.9	221 46.4	21.1	145 12.0	38.5
2	39	29.6	254 04.9	28.6	243 22.6	19.3	236 48.4	20.9	160 14.2	38.5
3	54	32.1	269 05.5	28.4	258 23.6	18.8	251 50.3	20.7	175 16.5	38.6
4	69	34.5	284 06.2	28.2	273 24.6	18.2	266 52.3	20.5	190 18.7	38.6
5	84	37.0	299 06.9	+10 27.9	288 25.5	+11 17.6	281 54.3	+8 20.3	205 21.0	-18 38.7
6	99	39.5	314 07.5	+10 27.7	303 26.5	+11 17.1	296 56.3	+8 20.1	220 23.2	-18 38.7
7	114	41.9	329 08.2	27.5	318 27.5	16.5	311 58.3	19.9	235 25.4	38.8
8	129	44.4	344 08.8	27.3	333 28.5	16.0	327 00.3	19.7	250 27.7	38.8
9	144	46.9	359 09.5	27.0	348 29.5	15.4	342 02.2	19.5	265 29.9	38.9
10	159	49.3	14 10.1	26.8	3 30.5	14.8	357 04.2	19.4	280 32.2	38.9
11	174	51.8	29 10.8	+10 26.6	18 31.4	+11 14.3	12 06.2	+8 19.2	295 34.4	-18 39.0
12	189	54.2	44 11.4	+10 26.3	33 32.4	+11 13.7	27 08.2	+8 19.0	310 36.7	-18 39.0
13	204	56.7	59 12.1	26.1	48 33.4	13.2	42 10.2	18.8	325 38.9	39.1
14	219	59.2	74 12.7	25.9	63 34.4	12.6	57 12.2	18.6	340 41.1	39.1
15	235	01.6	89 13.3	25.6	78 35.4	12.1	72 14.1	18.4	355 43.4	39.2
16	250	04.1	104 14.0	25.4	93 36.3	11.5	87 16.1	18.2	10 45.6	39.2
17	265	06.6	119 14.6	+10 25.2	108 37.3	+11 10.9	102 18.1	+8 18.0	25 47.9	-18 39.3
18	280	09.0	134 15.3	+10 24.9	123 38.3	+11 10.4	117 20.1	+8 17.8	40 50.1	-18 39.3
19	295	11.5	149 15.9	24.7	138 39.3	09.8	132 22.1	17.7	55 52.4	39.4
20	310	14.0	164 16.5	24.5	153 40.3	09.3	147 24.1	17.5	70 54.6	39.4
21	325	16.4	179 17.2	24.2	168 41.3	08.7	162 26.0	17.3	85 56.9	39.5
22	340	18.9	194 17.8	24.0	183 42.2	08.1	177 28.0	17.1	100 59.1	39.5
23	355	21.4	209 18.4	23.7	198 43.2	07.6	192 30.0	16.9	116 01.3	39.6
24	10	23.8	224 19.0	+10 23.5	213 44.2	+11 07.0	207 32.0	+8 16.7	131 03.6	-18 39.6
Dif	—		+6 -2		+10 -6		+20 -2		+22 -1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna												
	SD: 16:0 PMG: 11 ^h 49 ^m 4			Edad: 18 ^d 7 PHE { 4 ^h : 59:1 12 ^h : 58:8 20 ^h : 58:4 PMG: 3 ^h 31 ^m R°: 56 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°											
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m											
0	182	36.2	-3	21.8		309	11.0	+16	03.7	52	4	37	5	25	6	07											
1	197	36.4		22.8		323	37.1	71	08.9	52	40	26	05		19	58											
2	212	36.6		23.8		338	03.2	71	14.0	51	44	27	04		20	09											
3	227	36.8		24.7		352	29.3	71	19.0	50	46	28	03		19	49											
4	242	37.0		25.7		6	55.4	71	23.9	49	49	28	02		36	50											
5	257	37.2	-3	26.7		21	21.6	72	+16	28.6	47	5	29	6	01	20											
6	272	37.4	-3	27.6		35	47.7	71	+16	33.3	47	4	55	5	29	5											
7	287	37.6		28.6		50	13.9	72	37.8	45	4	58	30	57	20	58											
8	302	37.8		29.6		64	40.1	72	42.2	44	5	01	30	55	10	58											
9	317	38.0		30.6		79	06.4	73	46.6	44	02	30	54		58	61											
10	332	38.2		31.5		93	32.6	72	50.8	42	03	29	51		51	60											
11	347	38.4	-3	32.5		107	58.9	73	+16	54.8	40	5	03	5	28	5											
12	2	38.6	-3	33.5		122	25.2	73	+16	58.8	40	5	01	5	25	5											
13	17	38.8		34.4		136	51.6	74	+17	02.7	39	4	58	23	44	5											
14	32	39.0		35.4		151	17.9	73	06.5	38	53	19	41	41	56	18											
15	47	39.2		36.4		165	44.3	74	10.1	36	46	14	38	22	58	32											
16	62	39.4		37.3		180	10.7	74	13.6	35	41	10	36	23	07	54											
17	77	39.6	-3	38.3		194	37.2	75	+17	17.1	35	4	34	5	06	8											
18	92	39.8	-3	39.3		209	03.7	75	+17	20.4	33	4	26	5	01	8											
19	107	40.0		40.2		223	30.2	75	23.6	32	50	16	4	55	28	32											
20	122	40.2		41.2		237	56.7	75	26.6	30	52	11	52	26	47	49											
21	137	40.4		42.2		252	23.3	76	29.6	30	54	06	49	25	58	48											
22	152	40.6		43.1		266	49.9	76	32.5	29	56	4	00	45	23	10											
23	167	40.8		44.1		281	16.5	76	35.2	27	58	3	52	41	21	48											
24	182	41.0	-3	45.1		295	43.2	77	+17	37.9	27	3	44	4	36	45											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 23 ^h 14 ^m 6			Mag: -4.7 PMG: 9 ^h 02 ^m			Mag: +1.8 PMG: 9 ^h 44 ^m			Mag: -1.8 PMG: 10 ^h 09 ^m			Mag: +0.6 PMG: 15 ^h 13 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°									
0	10	23.8	224	19.0	+10	23.5	213	44.2	+11	07.0	207	32.0	+8	16.7	131	03.6	-18	39.6									
1	25	26.3	239	19.7		23.2	228	45.2		06.5	222	34.0		16.5	146	05.8		39.7									
2	40	28.7	254	20.3		23.0	243	46.2		05.9	237	36.0		16.3	161	08.1		39.7									
3	55	31.2	269	20.9		22.8	258	47.1		05.3	252	38.0		16.1	176	10.3		39.8									
4	70	33.7	284	21.5		22.5	273	48.1		04.8	267	39.9		15.9	191	12.5		39.8									
5	85	36.1	299	22.2	+10	22.3	288	49.1	+11	04.2	282	41.9	+8	15.8	206	14.8	-18	39.9									
6	100	38.6	314	22.8	+10	22.0	303	50.1	+11	03.7	297	43.9	+8	15.6	221	17.0	-18	39.9									
7	115	41.1	329	23.4		21.8	318	51.1		03.1	312	45.9		15.4	236	19.3		40.0									
8	130	43.5	344	24.0		21.5	333	52.1		02.5	327	47.9		15.2	251	21.5		40.0									
9	145	46.0	359	24.6		21.3	348	53.1		02.0	342	49.9		15.0	266	23.8		40.1									
10	160	48.5	14	25.2		21.0	3	54.0		01.4	357	51.8		14.8	281	26.0		40.1									
11	175	50.9	29	25.8	+10	20.8	18	55.0	+11	00.9	12	53.8	+8	14.6	296	28.2	-18	40.2									
12	190	53.4	44	26.4	+10	20.5	33	56.0	+11	00.3	27	55.8	+8	14.4	311	30.5	-18	40.2									
13	205	55.9	59	27.0		20.2	48	57.0	+10	59.7	42	57.8		14.2	326	32.7		40.3									
14	220	58.3	74	27.6		20.0	63	58.0		59.2	57	59.8		14.1	341	35.0		40.3									
15	236	00.8	89	28.2		19.7	78	59.0		58.6	73	01.8		13.9	356	37.2		40.4									
16	251	03.2	104	28.8		19.5	93	59.9		58.1	88	03.8		13.7	11	39.4		40.5									
17	266	05.7	119	29.4	+10	19.2	109	00.9	+10	57.5	103	05.8	+8	13.5	26	41.7	-18	40.5									
18	281	08.2	134	30.0	+10	19.0	124	01.9	+10	56.9	118	07.7	+8	13.3	41	43.9	-18	40.6									
19	296	10.6	149	30.6		18.7	139	02.9		56.4	133	09.7		13.1	56	46.2		40.6									
20	311	13.1	164	31.2		18.4	154	03.9		55.8	148	11.7		12.9	71	48.4		40.7									
21	326	15.6	179	31.8		18.2	169	04.9		55.2	163	13.7		12.7	86	50.6		40.7									
22	341	18.0	194	32.4		17.9	184	05.9		54.7	178	15.7		12.5	101	52.9		40.8									
23	356	20.5	209	33.0		17.6	199	06.8		54.1	193	17.7		12.3	116	55.1		40.8									
24	11	23.0	224	33.6	+10	17.4	214	07.8	+10	53.6	208	19.7	+8	12.2	131	57.4	-18	40.9									
Dif	—			+6			-3			+10			-6			+20			-2			+22			-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 49 ^m 1			Edad: 19 ^d 7 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 8 20 ^h : 57 ^m 5 SD: 15:9 PMG: 4 ^h 27 ^m R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	182	41.0	-3 45.1	295	43.2	+17 37.9	25	60 N	17 28	18 09	18 57	20 46	56	13 02 53
1	197	41.2	46.0	310	09.9	77 40.4	25	58	29	08	54	20 58	56	12 50 53
2	212	41.4	47.0	324	36.6	77 42.8	24	56	31	08	51	21 08	56	39 54
3	227	41.6	48.0	339	03.4	78 45.1	23	54	32	08	49	18 55	30	53
4	242	41.8	48.9	353	30.2	78 47.3	22	52	34	07	46	26 55	22	53
5	257	42.0	-3 49.9	7 57.0	78	+17 49.4	21	50	17 35	18 07	18 45	21 33	56	12 14 54
6	272	42.2	-3 50.9	22 23.9	79	+17 51.4	20	45	17 38	18 07	18 41	21 49	55	11 59 53
7	287	42.4	51.8	36 50.8	79	53.3	19	40	40	07	38	22 02	55	46 53
8	302	42.6	52.8	51 17.8	80	55.0	17	35	42	07	36	13 55	35	53
9	317	42.8	53.8	65 44.8	80	56.7	17	30	44	07	35	23 54	25	54
10	332	43.0	54.7	80 11.8	80	58.2	15	20	47	09	34	40 53	11 08	54
11	347	43.2	-3 55.7	94 38.9	81	+17 59.6	14	10 N	17 50	18 11	18 35	22 55	53	10 54 54
12	2 43.4	-3 56.7	109 06.0	81	+18 00.9	13	12	0	17 52	18 13	18 37	23 08	53	10 40 54
13	17 43.6	57.6	123 33.2	82	02.1	12	10	10 S	55	16	41	22 52	52	26 54
14	32 43.7	58.6	138 00.4	82	03.3	12	20	17 58	21	46	37	52	10 12	54
15	47 43.9	-3 59.6	152 27.6	82	04.2	9	9	30	18 02	26	18 54	23 54	51	9 55 54
16	62 44.1	-4 00.5	166 54.9	83	05.1	9	35	04	30	19 00	*** ** *	*** ** *	45	54
17	77 44.3	-4 01.5	181 22.2	83	+18 05.9	8	40	18 07	18 34	19 06	*** ** *	*** ** *	9 34	54
18	92 44.5	-4 02.5	195 49.6	84	+18 06.6	7	45	18 10	18 40	19 15	*** ** *	*** ** *	9 21	54
19	107 44.7	03.4	210 17.0	84	07.1	5	50	14	46	26	*** ** *	*** ** *	9 05	54
20	122 44.9	04.4	224 44.5	85	07.6	5	52	15	50	31	*** ** *	*** ** *	8 58	53
21	137 45.1	05.4	239 12.0	85	08.0	4	54	17	53	37	0 02	58	50	53
22	152 45.3	06.3	253 39.5	85	08.2	2	56	19	18 57	43	11 59	40	53	
23	167 45.5	07.3	268 07.1	86	08.4	2	58	21	19 02	19 51	22 58	30	53	
24	182 45.7	-4 08.2	282 34.7	86	+18 08.4	0	60 S	18 24	19 07	20 00	0 34	59	8 18	52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 10 ^m 7		Mag: -4.7 PMG: 9 ^h 01 ^m		Mag: +1.8 PMG: 9 ^h 43 ^m		Mag: -1.8 PMG: 10 ^h 05 ^m		Mag: +0.6 PMG: 15 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	11 23.0	224 33.6	+10 17.4	214 07.8	+10 53.6	208 19.7	+8 12.2	131 57.4	-18 40.9	
1	26 25.4	239 34.2	17.1	229 08.8	53.0	223 21.6	12.0	146 59.6	40.9	
2	41 27.9	254 34.8	16.8	244 09.8	52.4	238 23.6	11.8	162 01.8	41.0	
3	56 30.3	269 35.4	16.6	259 10.8	51.9	253 25.6	11.6	177 04.1	41.0	
4	71 32.8	284 35.9	16.3	274 11.8	51.3	268 27.6	11.4	192 06.3	41.1	
5	86 35.3	299 36.5	+10 16.0	289 12.8	+10 50.8	283 29.6	+8 11.2	207 08.6	-18 41.1	
6	101 37.7	314 37.1	+10 15.7	304 13.7	+10 50.2	298 31.6	+8 11.0	222 10.8	-18 41.2	
7	116 40.2	329 37.7	15.5	319 14.7	49.6	313 33.6	10.8	237 13.0	41.2	
8	131 42.7	344 38.2	15.2	334 15.7	49.1	328 35.6	10.6	252 15.3	41.3	
9	146 45.1	359 38.8	14.9	349 16.7	48.5	343 37.5	10.5	267 17.5	41.3	
10	161 47.6	14 39.4	14.6	4 17.7	47.9	358 39.5	10.3	282 19.8	41.4	
11	176 50.1	29 40.0	+10 14.4	19 18.7	+10 47.4	13 41.5	+8 10.1	297 22.0	-18 41.4	
12	191 52.5	44 40.5	+10 14.1	34 19.7	+10 46.8	28 43.5	+8 09.9	312 24.2	-18 41.5	
13	206 55.0	59 41.1	13.8	49 20.7	46.3	43 45.5	09.7	327 26.5	41.5	
14	221 57.5	74 41.7	13.5	64 21.6	45.7	58 47.5	09.5	342 28.7	41.6	
15	236 59.9	89 42.2	13.3	79 22.6	45.1	73 49.5	09.3	357 30.9	41.6	
16	252 02.4	104 42.8	13.0	94 23.6	44.6	88 51.5	09.1	12 33.2	41.7	
17	267 04.8	119 43.4	+10 12.7	109 24.6	+10 44.0	103 53.4	+8 09.0	27 35.4	-18 41.7	
18	282 07.3	134 43.9	+10 12.4	124 25.6	+10 43.4	118 55.4	+8 08.8	42 37.7	-18 41.8	
19	297 09.8	149 44.5	12.1	139 26.6	42.9	133 57.4	08.6	57 39.9	41.8	
20	312 12.2	164 45.0	11.8	154 27.6	42.3	148 59.4	08.4	72 42.1	41.9	
21	327 14.7	179 45.6	11.5	169 28.6	41.7	164 01.4	08.2	87 44.4	41.9	
22	342 17.2	194 46.1	11.3	184 29.5	41.2	179 03.4	08.0	102 46.6	42.0	
23	357 19.6	209 46.7	11.0	199 30.5	40.6	194 05.4	07.8	117 48.8	42.1	
24	12 22.1	224 47.2	+10 10.7	214 31.5	+10 40.1	209 07.4	+8 07.6	132 51.1	-18 42.1	
Dif	—	+6	-3	+10	-6	+20	-2	+22	-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 48 ^m 8			Edad: 20 ^d 7 PHE { 4 ^h : 57'2 12 ^h : 56'9 20 ^h : 56'6 PMG: 5 ^h 21 ^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	182	45.7	-4	08.2	282	34.7	+18	08.4	60 N	4	42	5	30	6	12	21	42	
1	197	45.9		09.2	297	02.4	87	08.3	58	45	31	10			21	54		
2	212	46.1		10.2	311	30.2	88	08.2	56	48	31	08			22	04		
3	227	46.3		11.1	325	58.0	88	07.9	54	50	31	07			13	60		
4	242	46.5		12.1	340	25.8	88	07.5	52	52	32	05			21	60		
5	257	46.7	-4	13.1	354	53.7	89	+18 07.0	50	4	54	5	32	6	04	22	29	
6	272	46.9	-4	14.0	9	21.6	89	+18 06.5	45	4	58	5	32	6	01	22	44	
7	287	47.1		15.0	23	49.6	90	05.8	40	5	00	32	5	59	22	57		
8	302	47.2		16.0	38	17.6	90	05.0	35	02	31	57			23	08		
9	317	47.4		16.9	52	45.7	91	04.1	30	03	31	55			17	54		
10	332	47.6		17.9	67	13.8	91	03.1	20	04	29	51			33	53		
11	347	47.8	-4	18.9	81	42.0	92	+18 02.0	10 N	5	03	5	27	5	48	23	48	
12	2	48.0	-4	19.8	96	10.2	92	+18 00.9	0	5	01	5	25	5	46	** ** *	11	
13	17	48.2		20.8	110	38.5	93	+17 59.6	10 S	4	57	21	42		** ** *	20	53	
14	32	48.4		21.8	125	06.9	94	58.2	20	51	17	39			** ** *	11	06	
15	47	48.6		22.7	139	35.2	93	56.7	30	43	11	35			** ** *	10	49	
16	62	48.8		23.7	154	03.7	95	55.2	35	38	07	33			0	04	50	
17	77	49.0	-4	24.6	168	32.2	95	+17 53.5	40	4	31	5	03	5	30	0	15	
18	92	49.2	-4	25.6	183	00.7	95	+17 51.7	45	4	22	4	58	5	27	0	28	
19	107	49.4		26.6	197	29.3	96	49.9	50	12	51	23			44	49	9	
20	122	49.6		27.5	211	58.0	97	47.9	52	06	48	22			0	52	49	
21	137	49.7		28.5	226	26.7	97	45.9	20	54	4	00	44	20	1	00	49	
22	152	49.9		29.5	240	55.5	98	43.7	22	56	3	54	40	18	10	48	33	
23	167	50.1		30.4	255	24.3	98	41.5	22	58		46	35	15	20	48	23	
24	182	50.3	-4	31.4	269	53.2	99	+17 39.2	23	60 S	3	37	4	30	5	13	1	33
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 06 ^m 7			Mag: -4.7 PMG: 9 ^h 01 ^m			Mag: +1.8 PMG: 9 ^h 41 ^m			Mag: -1.8 PMG: 10 ^h 02 ^m			Mag: +0.6 PMG: 15 ^h 06 ^m					
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	12	22.1	224	47.2	+10	10.7	214	31.5	+10	40.1	209	07.4	+8	07.6	132	51.1		
1	27	24.6	239	47.8		10.4	229	32.5		39.5	224	09.3		07.4	147	53.3		
2	42	27.0	254	48.3		10.1	244	33.5		38.9	239	11.3		07.3	162	55.6		
3	57	29.5	269	48.9		09.8	259	34.5		38.4	254	13.3		07.1	177	57.8		
4	72	32.0	284	49.4		09.5	274	35.5		37.8	269	15.3		06.9	193	00.0		
5	87	34.4	299	50.0	+10	09.2	289	36.5	+10	37.2	284	17.3	+8	06.7	208	02.3		
6	102	36.9	314	50.5	+10	08.9	304	37.5	+10	36.7	299	19.3	+8	06.5	223	04.5		
7	117	39.3	329	51.1		08.6	319	38.5		36.1	314	21.3		06.3	238	06.7		
8	132	41.8	344	51.6		08.3	334	39.4		35.5	329	23.3		06.1	253	09.0		
9	147	44.3	359	52.1		08.0	349	40.4		35.0	344	25.3		05.9	268	11.2		
10	162	46.7	14	52.7		07.7	4	41.4		34.4	359	27.3		05.7	283	13.4		
11	177	49.2	29	53.2	+10	07.4	19	42.4	+10	33.8	14	29.2	+8	05.6	298	15.7		
12	192	51.7	44	53.7	+10	07.1	34	43.4	+10	33.3	29	31.2	+8	05.4	313	17.9		
13	207	54.1	59	54.3		06.8	49	44.4		32.7	44	33.2		05.2	328	20.2		
14	222	56.6	74	54.8		06.5	64	45.4		32.2	59	35.2		05.0	343	22.4		
15	237	59.1	89	55.3		06.2	79	46.4		31.6	74	37.2		04.8	358	24.6		
16	253	01.5	104	55.9		05.9	94	47.4		31.0	89	39.2		04.6	13	26.9		
17	268	04.0	119	56.4	+10	05.6	109	48.4	+10	30.5	104	41.2	+8	04.4	28	29.1		
18	283	06.5	134	56.9	+10	05.3	124	49.4	+10	29.9	119	43.2	+8	04.2	43	31.3		
19	298	08.9	149	57.4		05.0	139	50.3		29.3	134	45.2		04.1	58	33.6		
20	313	11.4	164	58.0		04.7	154	51.3		28.8	149	47.2		03.9	73	35.8		
21	328	13.8	179	58.5		04.4	169	52.3		28.2	164	49.1		03.7	88	38.0		
22	343	16.3	194	59.0		04.1	184	53.3		27.6	179	51.1		03.5	103	40.3		
23	358	18.8	209	59.5		03.7	199	54.3		27.1	194	53.1		03.3	118	42.5		
24	13	21.2	225	00.0	+10	03.4	214	55.3	+10	26.5	209	55.1	+8	03.1	133	44.7		
Dif	—			+5 -3			+10 -6			+20 -2			+22 -1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°0 PMG: 11 ^h 48 ^m 5			Edad: 21 ^d 7 PHE { 4 ^h : 56/3 12 ^h : 56/1 20 ^h : 55/8 PMG: 6 ^h 13 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	182	50.3	-4	31.4	269	53.2	+ 17 39.2	60 N	17 22	18 03	18 51	22 45	67	14 36	33	
1	197	50.5		32.3	284	22.1	36.7	58	24	03	48	22 56	65	26	34	
2	212	50.7		33.3	298	51.1	34.2	56	26	03	46	23 05	64	16	35	
3	227	50.9		34.3	313	20.1	31.6	54	28	03	44	13 63		08	36	
4	242	51.1		35.2	327	49.2	28.9	52	29	03	42	21 61		14	00	
5	257	51.3	-4	36.2	342	18.4	+ 17 26.2	50	17 31	18 03	18 40	23 27	60	13 53	39	
6	272	51.5	-4	37.2	356	47.6	+ 17 23.3	45	17 34	18 03	18 37	23 41	58	13 39	40	
7	287	51.6		38.1	11	16.8	20.3	40	37	04	35	23 53	56	27	42	
8	302	51.8		39.1	25	46.1	17.3	35	39	04	34	** ** *		16	44	
9	317	52.0		40.0	40	15.5	14.2	30	41	05	33	** ** *		13	07	
10	332	52.2		41.0	54	44.9	10.9	20	45	07	33	** ** *		12	52	
11	347	52.4	-4	42.0	69	14.4	+ 17 07.6	10 N	17 48	18 09	18 34	** ** *		12	38	
12	2	52.6	-4	42.9	83	44.0	+ 17 04.2	0	17 52	18 13	18 37	0 01	50	12	25	
13	17	52.8		43.9	98	13.6	+ 17 00.8	10 S	55	16	41	14 49		12	13	
14	32	53.0		44.9	112	43.2	+ 16 57.2	20	17 59	21	47	29 47		11	59	
15	47	53.2		45.8	127	12.9	53.6	30	18 03	28	18 56	45 46		43	54	
16	62	53.3		46.8	141	42.7	49.8	35	06	32	19 02	0 54	46	34	55	
17	77	53.5	-4	47.7	156	12.5	+ 16 46.0	40	18 09	18 36	19 09	1 05	45	11	23	
18	92	53.7	-4	48.7	170	42.4	+ 16 42.1	45	18 12	18 42	19 18	1 18	43	11	11	
19	107	53.9		49.7	185	12.3	38.2	50	17	50	29	33 42		10	56	
20	122	54.1		50.6	199	42.3	34.1	52	19	53	35	41 40		49	60	
21	137	54.3		51.6	214	12.4	30.0	54	21	18 57	41	49 40		41	62	
22	152	54.5		52.5	228	42.5	25.8	56	23	19 01	48	1 58	38	32	63	
23	167	54.7		53.5	243	12.6	21.5	58	26	06	19 56	2 08	37	22	64	
24	182	54.8	-4	54.5	257	42.8	+ 16 17.1	60 S	18 29	19 12	20 06	2 19	37	10	11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 02 ^m 8		Mag: -4.7 PMG: 9 ^h 00 ^m			Mag: +1.8 PMG: 9 ^h 40 ^m			Mag: -1.8 PMG: 9 ^h 59 ^m			Mag: +0.6 PMG: 15 ^h 03 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	13	21.2	225	00.0	+10	03.4	214	55.3	+10	26.5	209	55.1	+8	03.1	133	44.7
1	28	23.7	240	00.5		03.1	229	56.3		25.9	224	57.1		02.9	148	47.0
2	43	26.2	255	01.1		02.8	244	57.3		25.4	239	59.1		02.7	163	49.2
3	58	28.6	270	01.6		02.5	259	58.3		24.8	255	01.1		02.6	178	51.4
4	73	31.1	285	02.1		02.2	274	59.3		24.2	270	03.1		02.4	193	53.7
5	88	33.6	300	02.6	+10	01.9	290	00.3	+10	23.7	285	05.1	+8	02.2	208	55.9
6	103	36.0	315	03.1	+10	01.5	305	01.3	+10	23.1	300	07.1	+8	02.0	223	58.1
7	118	38.5	330	03.6		01.2	320	02.2		22.5	315	09.0		01.8	239	00.4
8	133	40.9	345	04.1		00.9	335	03.2		22.0	330	11.0		01.6	254	02.6
9	148	43.4	0	04.6		00.6	350	04.2		21.4	345	13.0		01.4	269	04.8
10	163	45.9	15	05.1	+10	00.3	5	05.2		20.8	0	15.0		01.2	284	07.1
11	178	48.3	30	05.6	+9	59.9	20	06.2	+10	20.3	15	17.0	+8	01.1	299	09.3
12	193	50.8	45	06.1	+9	59.6	35	07.2	+10	19.7	30	19.0	+8	00.9	314	11.5
13	208	53.3	60	06.6		59.3	50	08.2		19.1	45	21.0		00.7	329	13.8
14	223	55.7	75	07.1		59.0	65	09.2		18.6	60	23.0		00.5	344	16.0
15	238	58.2	90	07.6		58.6	80	10.2		18.0	75	25.0		00.3	359	18.2
16	254	00.7	105	08.1		58.3	95	11.2		17.4	90	27.0	+8	00.1	14	20.5
17	269	03.1	120	08.6	+9	58.0	110	12.2	+10	16.9	105	29.0	+7	59.9	29	22.7
18	284	05.6	135	09.1	+9	57.6	125	13.2	+10	16.3	120	31.0	+7	59.7	44	24.9
19	299	08.1	150	09.6		57.3	140	14.2		15.7	135	33.0		59.6	59	27.2
20	314	10.5	165	10.1		57.0	155	15.2		15.2	150	34.9		59.4	74	29.4
21	329	13.0	180	10.5		56.6	170	16.2		14.6	165	36.9		59.2	89	31.6
22	344	15.4	195	11.0		56.3	185	17.2		14.0	180	38.9		59.0	104	33.9
23	359	17.9	210	11.5		56.0	200	18.2		13.5	195	40.9		58.8	119	36.1
24	14	20.4	225	12.0	+9	55.6	215	19.1	+10	12.9	210	42.9	+7	58.6	134	38.3
Dif	—		+5		-3		+10		-6		+20		-2		+22	

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: 22 ^d 7 PHE { 4 ^h : 55'6 12 ^h : 55'4 20 ^h : 55'2 PMG: 7 ^h 03 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	54.8	-4	54.5	257	42.8	+16	17.1	44	60 N	4 46	5 35	6 16	23 52	70	15 09 25
1	197	55.0		55.4	272	13.1 ¹¹³		12.7	44	58	49	35	14	** ** *		15 00 27
2	212	55.2		56.4	286	43.4 ¹¹³		08.2	45	56	52	35	12	** ** *		14 51 30
3	227	55.4		57.3	301	13.8 ¹¹⁴	+16	03.6	46	54	54	35	10	** ** *		44 31
4	242	55.6		58.3	315	44.3 ¹¹⁵	+15	58.9	47	52	56	35	09	** ** *		38 32
5	257	55.8	-4	59.3	330	14.8 ¹¹⁵	+15	54.2	47	50	4 57	5 35	6 07	** ** *		14 32 33
6	272	56.0	-5	00.2	344	45.3 ¹¹⁵	+15	49.4	48	45	5 00	5 34	6 04	** ** *		14 19 36
7	287	56.1		01.2	359	15.9 ¹¹⁶		44.5	49	40	02	34	6 01	** ** *		09 37
8	302	56.3		02.1	13	46.6 ¹¹⁷		39.5	50	35	04	33	5 58	0 03	55	14 00 39
9	317	56.5		03.1	28	17.3 ¹¹⁷		34.5	50	30	04	32	56	11 54		13 52 40
10	332	56.7		04.1	42	48.0 ¹¹⁷		29.4	51	20	04	30	52	26 52		38 43
11	347	56.9	-5	05.0	57	18.9 ¹¹⁹	+15	24.2	52	10 N	5 03	5 27	5 48	0 39	50	13 26 45
12	2	57.1	-5	06.0	71	49.7 ¹¹⁸	+15	19.0	52	0	5 00	5 24	5 45	0 51	48	13 15 47
13	17	57.2		06.9	86	20.7 ¹²⁰		13.6	54	10 S	4 56	20	41	1 03	47	13 03 49
14	32	57.4		07.9	100	51.7 ¹²⁰		08.3	53	20	49	15	37	16 45		12 51 51
15	47	57.6		08.9	115	22.7 ¹²⁰	+15	02.8	55	30	41	09	33	31 42		37 54
16	62	57.8		09.8	129	53.8 ¹²¹	+14	57.3	55	35	35	05	30	40 41		29 55
17	77	58.0	-5	10.8	144	24.9 ¹²¹	+14	51.7	56	40	4 27	5 00	5 27	1 50	39	12 20 56
18	92	58.2	-5	11.7	158	56.1 ¹²²	+14	46.1	56	45	4 18	4 54	5 23	2 01	38	12 09 58
19	107	58.4		12.7	173	27.4 ¹²³		40.3	58	50	07	46	19	15 35		11 56 61
20	122	58.5		13.7	187	58.7 ¹²³		34.6	57	52	4 01	43	17	21 35		49 63
21	137	58.7		14.6	202	30.1 ¹²⁴		28.7	59	54	3 55	39	15	29 33		43 63
22	152	58.9		15.6	217	01.5 ¹²⁴		22.8	59	56	48	34	12	36 32		35 65
23	167	59.1		16.5	231	32.9 ¹²⁴		16.8	60	58	39	29	10	45 31		26 67
24	182	59.3	-5	17.5	246	04.4 ¹²⁵	+14	10.8	60	60 S	3 30	4 24	5 07	2 56	28	11 16 69
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 58 ^m 9		Mag: -4.7 PMG: 8 ^h 59 ^m			Mag: +1.8 PMG: 9 ^h 38 ^m			Mag: -1.8 PMG: 9 ^h 56 ^m			Mag: +0.6 PMG: 14 ^h 59 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	14	20.4	225	12.0	+9	55.6	215	19.1	+10	12.9	210	42.9	+7	58.6	134	38.3
1	29	22.8	240	12.5		55.3	230	20.1		12.3	225	44.9		58.4	149	40.6
2	44	25.3	255	13.0		55.0	245	21.1		11.8	240	46.9		58.2	164	42.8
3	59	27.8	270	13.4		54.6	260	22.1		11.2	255	48.9		58.1	179	45.0
4	74	30.2	285	13.9		54.3	275	23.1		10.6	270	50.9		57.9	194	47.2
5	89	32.7	300	14.4	+9	53.9	290	24.1	+10	10.1	285	52.9	+7	57.7	209	49.5
6	104	35.2	315	14.9	+9	53.6	305	25.1	+10	09.5	300	54.9	+7	57.5	224	51.7
7	119	37.6	330	15.3		53.3	320	26.1		08.9	315	56.9		57.3	239	53.9
8	134	40.1	345	15.8		52.9	335	27.1		08.3	330	58.9		57.1	254	56.2
9	149	42.6	0	16.3		52.6	350	28.1		07.8	346	00.9		56.9	269	58.4
10	164	45.0	15	16.7		52.2	5	29.1		07.2	1	02.8		56.8	285	00.6
11	179	47.5	30	17.2	+9	51.9	20	30.1	+10	06.6	16	04.8	+7	56.6	300	02.9
12	194	49.9	45	17.7	+9	51.5	35	31.1	+10	06.1	31	06.8	+7	56.4	315	05.1
13	209	52.4	60	18.1		51.2	50	32.1		05.5	46	08.8		56.2	330	07.3
14	224	54.9	75	18.6		50.8	65	33.1		04.9	61	10.8		56.0	345	09.5
15	239	57.3	90	19.1		50.5	80	34.1		04.4	76	12.8		55.8	0	11.8
16	254	59.8	105	19.5		50.1	95	35.1		03.8	91	14.8		55.6	15	14.0
17	270	02.3	120	20.0	+9	49.8	110	36.1	+10	03.2	106	16.8	+7	55.4	30	16.2
18	285	04.7	135	20.5	+9	49.4	125	37.1	+10	02.7	121	18.8	+7	55.3	45	18.5
19	300	07.2	150	20.9		49.1	140	38.1		02.1	136	20.8		55.1	60	20.7
20	315	09.7	165	21.4		48.7	155	39.1		01.5	151	22.8		54.9	75	22.9
21	330	12.1	180	21.8		48.4	170	40.1		00.9	166	24.8		54.7	90	25.2
22	345	14.6	195	22.3		48.0	185	41.1	+10	00.4	181	26.8		54.5	105	27.4
23	0	17.0	210	22.7		47.6	200	42.1	+9	59.8	196	28.8		54.3	120	29.6
24	15	19.5	225	23.2	+9	47.3	215	43.1	+9	59.2	211	30.8	+7	54.1	135	31.8
Dif	—		+5	-3			+10	-6			+20	-2		+22		-1

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: 23 ^d 7 PHE { 4 ^h : 55:0 12 ^h : 54:9 20 ^h : 54:7 SD: 15:0 PMG: 7 ^h 50 ^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	h m	h m	h m	h m
0	182	59.3	-5	17.5	246	04.4	+14 10.8	60 N	17 16	17 57	18 45	** ** *		15 34	21
1	197	59.4		18.4	260	36.0 ¹²⁶	+14 04.7	58	18	57	43	0 01	67	27	23
2	212	59.6		19.4	275	07.6 ¹²⁶	+13 58.6	56	21	58	41	09	65	21	24
3	227	59.8		20.4	289	39.3 ¹²⁷	52.3	54	23	58	39	16	63	15	26
4	243	00.0		21.3	304	11.0 ¹²⁷	46.1	52	25	58	37	22	62	10	27
5	258	00.2	-5	22.3	318	42.8 ¹²⁸	+13 39.7	50	17 26	17 59	18 36	0 27	62	15 05	29
6	273	00.4	-5	23.2	333	14.6 ¹²⁸	+13 33.3	45	17 30	17 59	18 33	0 39	59	14 55	31
7	288	00.5		24.2	347	46.4 ¹²⁸	26.9	40	33	18 00	32	49	57	46	34
8	303	00.7		25.2	2	18.3 ¹²⁹	20.4	35	36	02	31	0 58	54	39	35
9	318	00.9		26.1	16	50.3 ¹³⁰	13.8	30	39	03	30	1 05	53	32	37
10	333	01.1		27.1	31	22.3 ¹³⁰	07.2	20	43	05	31	18	50	21	40
11	348	01.3	-5	28.0	45	54.4 ¹³¹	+13 00.5	10 N	17 47	18 08	18 33	1 29	48	14 11	43
12	3	01.4	-5	29.0	60	26.5 ¹³¹	+12 53.8	0	17 51	18 12	18 36	1 39	46	14 02	45
13	18	01.6		29.9	74	58.6 ¹³¹	47.0	10 S	17 55	16	41	1 50	43	13 52	48
14	33	01.8		30.9	89	30.8 ¹³²	40.2	20	18 00	22	48	2 01	41	42	50
15	48	02.0		31.8	104	03.1 ¹³³	33.3	30	05	29	18 57	13	39	31	52
16	63	02.2		32.8	118	35.4 ¹³³	26.3	35	08	33	19 03	21	37	24	54
17	78	02.3	-5	33.8	133	07.7 ¹³³	+12 19.4	40	18 11	18 38	19 11	2 29	35	13 16	57
18	93	02.5	-5	34.7	147	40.1 ¹³⁴	+12 12.3	45	18 15	18 45	19 21	2 39	33	13 07	59
19	108	02.7		35.7	162	12.5 ¹³⁴	+12 05.2	50	20	53	33	50	31	12 57	61
20	123	02.9		36.6	176	45.0 ¹³⁵	+11 58.1	52	22	18 57	39	2 56	29	52	62
21	138	03.1		37.6	191	17.5 ¹³⁵	50.9	54	25	19 01	45	3 02	28	46	64
22	153	03.2		38.5	205	50.0 ¹³⁵	43.6	56	27	06	19 53	08	27	40	66
23	168	03.4		39.5	220	22.6 ¹³⁶	36.4	58	30	11	20 02	16	24	33	67
24	183	03.6	-5	40.4	234	55.3 ¹³⁷	+11 29.0	60 S	18 34	19 17	20 12	3 24	23	12 25	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 54 ^m 9		Mag: -4.7 PMG: 8 ^h 58 ^m		Mag: +1.8 PMG: 9 ^h 36 ^m		Mag: -1.8 PMG: 9 ^h 53 ^m		Mag: +0.6 PMG: 14 ^h 56 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	15	19.5	225	23.2	+9	47.3	211	30.8	+7	54.1	135	31.8	-18	45.9				
1	30	22.0	240	23.6		46.9	230	44.1		58.7	226	32.8		45.9				
2	45	24.4	255	24.1		46.6	245	45.1		58.1	241	34.8		46.0				
3	60	26.9	270	24.5		46.2	260	46.1		57.5	256	36.7		46.0				
4	75	29.4	285	25.0		45.8	275	47.1		57.0	271	38.7		46.1				
5	90	31.8	300	25.4	+9	45.5	290	48.1	+9	56.4	286	40.7	+7	53.2	210	43.0	-18	46.1
6	105	34.3	315	25.9	+9	45.1	305	49.1	+9	55.8	301	42.7	+7	53.0	225	45.2	-18	46.2
7	120	36.8	330	26.3		44.8	320	50.1		55.2	316	44.7		52.8	240	47.4		46.2
8	135	39.2	345	26.7		44.4	335	51.1		54.7	331	46.7		52.7	255	49.7		46.3
9	150	41.7	0	27.2		44.0	350	52.1		54.1	346	48.7		52.5	270	51.9		46.3
10	165	44.2	15	27.6		43.7	5	53.1		53.5	1	50.7		52.3	285	54.1		46.4
11	180	46.6	30	28.1	+9	43.3	20	54.1	+9	53.0	16	52.7	+7	52.1	300	56.4	-18	46.5
12	195	49.1	45	28.5	+9	42.9	35	55.1	+9	52.4	31	54.7	+7	51.9	315	58.6	-18	46.5
13	210	51.5	60	28.9		42.5	50	56.1		51.8	46	56.7		51.7	331	00.8		46.6
14	225	54.0	75	29.4		42.2	65	57.1		51.3	61	58.7		51.5	346	03.0		46.6
15	240	56.5	90	29.8		41.8	80	58.0		50.7	77	00.7		51.3	1	05.3		46.7
16	255	58.9	105	30.2		41.4	95	59.0		50.1	92	02.7		51.2	16	07.5		46.7
17	271	01.4	120	30.6	+9	41.1	111	00.1	+9	49.5	107	04.7	+7	51.0	31	09.7	-18	46.8
18	286	03.9	135	31.1	+9	40.7	126	01.1	+9	49.0	122	06.7	+7	50.8	46	11.9	-18	46.8
19	301	06.3	150	31.5		40.3	141	02.1		48.4	137	08.7		50.6	61	14.2		46.9
20	316	08.8	165	31.9		39.9	156	03.1		47.8	152	10.7		50.4	76	16.4		46.9
21	331	11.3	180	32.3		39.5	171	04.1		47.3	167	12.7		50.2	91	18.6		47.0
22	346	13.7	195	32.8		39.2	186	05.1		46.7	182	14.7		50.0	106	20.9		47.0
23	1	16.2	210	33.2		38.8	201	06.1		46.1	197	16.7		49.9	121	23.1		47.1
24	16	18.7	225	33.6	+9	38.4	216	07.1	+9	45.5	212	18.7	+7	49.7	136	25.3	-18	47.1
Dif	—		+4		-4		+10		-6		+20		-2		+22		-8	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 6			Edad: 24 ^d 7 PHE { 4 ^h : 54'6 12 ^h : 54'4 20 ^h : 54'3 PMG: 8 ^h 36 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	03.6	-5	40.4	234	55.3	+11	29.0	60 N	4 51	5 40	6 21	1 02	69	15 55	18
1	198	03.8		41.4	249	27.9 ¹³⁶		21.6	74	54	39	19	08	68	50	20
2	213	03.9		42.4	264	00.7 ¹³⁸		14.2	74	56	39	16	14	66	45	22
3	228	04.1		43.3	278	33.4 ¹³⁷	+11	06.7	75	54	58	39	14	19	65	41
4	243	04.3		44.3	293	06.2 ¹³⁸	+10	59.2	75	52	4 59	38	12	24	63	37
5	258	04.5	-5	45.2	307	39.1 ¹³⁹	+10	51.7	75	50	5 00	5 38	6 10	1 29	61	15
6	273	04.6	-5	46.2	322	12.0 ¹³⁹	+10	44.1	76	45	5 03	5 37	6 06	1 38	58	15
7	288	04.8		47.1	336	44.9 ¹³⁹		36.4	77	40	04	36	03	46	56	20
8	303	05.0		48.1	351	17.9 ¹⁴⁰		28.7	77	35	05	34	6 00	52	54	14
9	318	05.2		49.0	5	50.9 ¹⁴⁰		21.0	77	30	05	33	5 57	1 58	52	09
10	333	05.4		50.0	20	23.9 ¹⁴⁰		13.2	78	20	05	30	53	2 08	49	15
11	348	05.5	-5	50.9	34	57.0 ¹⁴¹	+10	05.4	78	10 N	5 03	5 27	5 48	2 17	46	14
12	3	05.7	-5	51.9	49	30.1 ¹⁴¹	+9	57.5	79	0	4 59	5 24	5 44	2 25	44	14
13	18	05.9		52.9	64	03.2 ¹⁴¹		49.7	78	10 S	55	19	40	33	42	40
14	33	06.1		53.8	78	36.4 ¹⁴²		41.7	80	20	48	14	36	42	39	32
15	48	06.2		54.8	93	09.6 ¹⁴²		33.7	80	30	38	06	30	52	36	23
16	63	06.4		55.7	107	42.9 ¹⁴³		25.7	80	35	32	5 02	27	2 58	34	18
17	78	06.6	-5	56.7	122	16.2 ¹⁴³	+9	17.7	80	40	4 24	4 56	5 24	3 04	33	14
18	93	06.8	-5	57.6	136	49.5 ¹⁴³	+9	09.6	81	45	4 14	4 50	5 20	3 12	30	14
19	108	06.9		58.6	151	22.9 ¹⁴⁴	+9	01.5	81	50	4 02	42	15	21	27	13
20	123	07.1	-5	59.5	165	56.3 ¹⁴⁴	+8	53.4	81	52	3 56	38	13	25	26	54
21	138	07.3	-6	00.5	180	29.7 ¹⁴⁴		45.2	82	54	49	34	10	30	24	50
22	153	07.5		01.4	195	03.1 ¹⁴⁴		36.9	83	56	42	29	07	35	23	46
23	168	07.6		02.4	209	36.6 ¹⁴⁵		28.7	82	58	33	23	04	40	22	40
24	183	07.8	-6	03.3	224	10.1 ¹⁴⁵	+8	20.4	83	60 S	3 23	4 17	5 01	3 47	19	13
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 22 ^h 51 ^m 0		Mag: -4.7 PMG: 8 ^h 58 ^m			Mag: +1.8 PMG: 9 ^h 35 ^m			Mag: -1.8 PMG: 9 ^h 49 ^m			Mag: +0.6 PMG: 14 ^h 52 ^m				
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	16	18.7	225	33.6	+9	38.4	216	07.1	+9	45.5	212	18.7	+7	49.7	136	25.3
1	31	21.1	240	34.0		38.0	231	08.1		45.0	227	20.7		49.5	151	27.5
2	46	23.6	255	34.5		37.6	246	09.1		44.4	242	22.7		49.3	166	29.8
3	61	26.0	270	34.9		37.3	261	10.1		43.8	257	24.7		49.1	181	32.0
4	76	28.5	285	35.3		36.9	276	11.1		43.3	272	26.7		48.9	196	34.2
5	91	31.0	300	35.7	+9	36.5	291	12.1	+9	42.7	287	28.7	+7	48.7	211	36.4
6	106	33.4	315	36.1	+9	36.1	306	13.1	+9	42.1	302	30.7	+7	48.6	226	38.7
7	121	35.9	330	36.5		35.7	321	14.1		41.5	317	32.6		48.4	241	40.9
8	136	38.4	345	36.9		35.3	336	15.1		41.0	332	34.6		48.2	256	43.1
9	151	40.8	0	37.3		34.9	351	16.1		40.4	347	36.6		48.0	271	45.3
10	166	43.3	15	37.8		34.5	6	17.1		39.8	2	38.6		47.8	286	47.6
11	181	45.8	30	38.2	+9	34.2	21	18.1	+9	39.2	17	40.6	+7	47.6	301	49.8
12	196	48.2	45	38.6	+9	33.8	36	19.1	+9	38.7	32	42.6	+7	47.5	316	52.0
13	211	50.7	60	39.0		33.4	51	20.1		38.1	47	44.6		47.3	331	54.2
14	226	53.1	75	39.4		33.0	66	21.1		37.5	62	46.6		47.1	346	56.5
15	241	55.6	90	39.8		32.6	81	22.1		37.0	77	48.6		46.9	1	58.7
16	256	58.1	105	40.2		32.2	96	23.1		36.4	92	50.6		46.7	17	00.9
17	272	00.5	120	40.6	+9	31.8	111	24.1	+9	35.8	107	52.6	+7	46.5	32	03.1
18	287	03.0	135	41.0	+9	31.4	126	25.1	+9	35.2	122	54.6	+7	46.3	47	05.4
19	302	05.5	150	41.4		31.0	141	26.1		34.7	137	56.6		46.2	62	07.6
20	317	07.9	165	41.8		30.6	156	27.1		34.1	152	58.6		46.0	77	09.8
21	332	10.4	180	42.2		30.2	171	28.1		33.5	168	00.6		45.8	92	12.0
22	347	12.9	195	42.6		29.8	186	29.1		32.9	183	02.6		45.6	107	14.3
23	2	15.3	210	43.0		29.4	201	30.1		32.4	198	04.6		45.4	122	16.5
24	17	17.8	225	43.3	+9	29.0	216	31.1	+9	31.8	213	06.6	+7	45.2	137	18.7
Dif	—		+4 -4			+10 -6			+20 -2			+22 -1				

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 25 ^d 7 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1															
	PMG: 11 ^h 47 ^m 3		SD: 14'8 PMG: 9 ^h 20 ^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	183	07.8	-6 03.3	224	10.1	+8 20.4	83	60 N	17 10	17 51	18 39	2 11 70	16 13 16					
1	198	08.0	04.3	238	43.7 ¹⁴⁶	12.1	83	58	13	52	37	16 68	10 18					
2	213	08.1	05.2	253	17.3 ¹⁴⁶	+8 03.7	84	56	15	53	36	20 66	07 20					
3	228	08.3	06.2	267	50.9 ¹⁴⁶	+7 55.4	83	54	18	53	34	24 64	04 22					
4	243	08.5	07.1	282	24.5 ¹⁴⁶	46.9	85	52	20	54	33	27 62	02 23					
5	258	08.7	-6 08.1	296	58.2 ¹⁴⁷	+7 38.5	84	50	17 22	17 54	18 32	2 30 61	16 00 24					
6	273	08.8	-6 09.0	311	31.8 ¹⁴⁶	+7 30.0	85	45	17 27	17 56	18 30	2 36 58	15 55 28					
7	288	09.0	10.0	326	05.6 ¹⁴⁸	21.5	85	40	30	57	29	42 55	51 30					
8	303	09.2	10.9	340	39.3 ¹⁴⁷	13.0	85	35	34	17 59	28	46 54	48 32					
9	318	09.4	11.9	355	13.1 ¹⁴⁸	+7 04.4	86	30	36	18 00	28	50 52	45 33					
10	333	09.5	12.8	9	46.9 ¹⁴⁸	+6 55.9	85	20	42	04	29	2 57 49	39 37					
11	348	09.7	-6 13.8	24	20.7 ¹⁴⁸	+6 47.3	86	10 N	17 46	18 07	18 32	3 03 46	15 35 39					
12	3	09.9	-6 14.7	38	54.5 ¹⁴⁸	+6 38.6	87	0	17 51	18 11	18 36	3 09 43	15 30 43					
13	18	10.0	15.7	53	28.4 ¹⁴⁹	30.0	86	10 S	17 55	16	41	15 40	26 45					
14	33	10.2	16.6	68	02.3 ¹⁴⁹	21.3	87	20	18 00	22	48	21 38	21 48					
15	48	10.4	17.6	82	36.2 ¹⁴⁹	12.6	87	30	06	30	18 59	28 34	15 52					
16	63	10.5	18.5	97	10.1 ¹⁴⁹	+6 03.8	88	35	09	35	19 05	32 33	12 54					
17	78	10.7	-6 19.5	111	44.1 ¹⁵⁰	+5 55.1	87	40	18 13	18 41	19 13	3 37 30	15 08 56					
18	93	10.9	-6 20.4	126	18.1 ¹⁵⁰	+5 46.3	88	45	18 18	18 48	19 23	3 42 28	15 04 58					
19	108	11.1	21.4	140	52.1 ¹⁵⁰	37.5	88	50	23	18 56	36	48 25	14 59 61					
20	123	11.2	22.3	155	26.1 ¹⁵⁰	28.7	88	52	26	19 00	43	51 24	57 62					
21	138	11.4	23.3	170	00.1 ¹⁵⁰	19.8	89	54	28	05	50	54 23	54 64					
22	153	11.6	24.2	184	34.2 ¹⁵¹	11.0	88	56	31	10	19 58	3 58 21	51 66					
23	168	11.7	25.2	199	08.3 ¹⁵¹	+5 02.1	89	58	35	16	20 07	4 02 19	48 68					
24	183	11.9	-6 26.1	213	42.4 ¹⁵¹	+4 53.2	89	60 S	18 39	19 22	20 18	4 06 17	14 45 70					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 47 ^m 1		Mag: -4.7 PMG: 8 ^h 57 ^m		Mag: +1.8 PMG: 9 ^h 33 ^m		Mag: -1.8 PMG: 9 ^h 46 ^m		Mag: +0.6 PMG: 14 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	17	17.8	225	43.3	+9 29.0	216	31.1	+9 31.8	213	06.6	+7 45.2	137	18.7	-18 48.4				
1	32	20.3	240	43.7	28.6	231	32.1	31.2	228	08.6	45.0	152	20.9	48.5				
2	47	22.7	255	44.1	28.2	246	33.1	30.7	243	10.6	44.9	167	23.2	48.5				
3	62	25.2	270	44.5	27.8	261	34.1	30.1	258	12.6	44.7	182	25.4	48.6				
4	77	27.6	285	44.9	27.4	276	35.1	29.5	273	14.6	44.5	197	27.6	48.6				
5	92	30.1	300	45.3	+9 27.0	291	36.1	+9 28.9	288	16.6	+7 44.3	212	29.8	-18 48.7				
6	107	32.6	315	45.7	+9 26.5	306	37.1	+9 28.4	303	18.6	+7 44.1	227	32.0	-18 48.7				
7	122	35.0	330	46.1	26.1	321	38.1	27.8	318	20.6	43.9	242	34.3	48.8				
8	137	37.5	345	46.4	25.7	336	39.1	27.2	333	22.6	43.8	257	36.5	48.8				
9	152	40.0	0	46.8	25.3	351	40.2	26.6	348	24.6	43.6	272	38.7	48.9				
10	167	42.4	15	47.2	24.9	6	41.2	26.1	3	26.6	43.4	287	40.9	48.9				
11	182	44.9	30	47.6	+9 24.5	21	42.2	+9 25.5	18	28.6	+7 43.2	302	43.2	-18 49.0				
12	197	47.4	45	48.0	+9 24.1	36	43.2	+9 24.9	33	30.6	+7 43.0	317	45.4	-18 49.1				
13	212	49.8	60	48.3	23.7	51	44.2	24.3	48	32.6	42.8	332	47.6	49.1				
14	227	52.3	75	48.7	23.2	66	45.2	23.8	63	34.6	42.6	347	49.8	49.2				
15	242	54.7	90	49.1	22.8	81	46.2	23.2	78	36.6	42.5	2	52.0	49.2				
16	257	57.2	105	49.5	22.4	96	47.2	22.6	93	38.6	42.3	17	54.3	49.3				
17	272	59.7	120	49.8	+9 22.0	111	48.2	+9 22.0	108	40.6	+7 42.1	32	56.5	-18 49.3				
18	288	02.1	135	50.2	+9 21.6	126	49.2	+9 21.5	123	42.6	+7 41.9	47	58.7	-18 49.4				
19	303	04.6	150	50.6	21.1	141	50.2	20.9	138	44.6	41.7	63	00.9	49.4				
20	318	07.1	165	50.9	20.7	156	51.2	20.3	153	46.6	41.5	78	03.2	49.5				
21	333	09.5	180	51.3	20.3	171	52.2	19.7	168	48.6	41.4	93	05.4	49.5				
22	348	12.0	195	51.7	19.9	186	53.2	19.2	183	50.6	41.2	108	07.6	49.6				
23	3	14.5	210	52.0	19.5	201	54.2	18.6	198	52.6	41.0	123	09.8	49.6				
24	18	16.9	225	52.4	+9 19.0	216	55.2	+9 18.0	213	54.6	+7 40.8	138	12.0	-18 49.7				
Dif	—		+4		-4		+10		-6		+20		-2		+22		-1	

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: 26 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 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	11.9	-6 26.1	213	42.4	+4 53.2	60 N	4 56	5 44	6 26	3 21	70	16 29	16	
1	198	12.1		228	16.5 ¹⁵¹	44.3 ⁸⁹	58	4 58	44	23	24 67		28 18		
2	213	12.2		242	50.6 ¹⁵¹	35.3 ⁹⁰	56	5 00	43	20	26 65		27 20		
3	228	12.4		257	24.7 ¹⁵¹	26.4 ⁹⁰	54	01	42	18	28 64		26 21		
4	243	12.6		271	58.9 ¹⁵²	17.4 ⁹⁰	52	02	42	15	29 63		25 23		
5	258	12.7	-6 30.9	286	33.1 ¹⁵²	+4 08.4 ⁹⁰	50	5 03	5 41	6 13	3 31	61	16 24	24	
6	273	12.9	-6 31.8	301	07.3 ¹⁵²	+3 59.4 ⁹⁰	45	5 05	5 39	6 09	3 34	58	16 23	26	
7	288	13.1		315	41.5 ¹⁵²	50.4 ⁹⁰	40	06	38	05	37 56		21 29		
8	303	13.2		330	15.7 ¹⁵²	41.4 ⁹⁰	35	07	36	6 01	40 53		20 31		
9	318	13.4		344	49.9 ¹⁵²	32.3 ⁹¹	30	07	34	5 58	42 51		18 34		
10	333	13.6		359	24.1 ¹⁵²	23.3 ⁹⁰	20	05	31	53	46 48		16 37		
11	348	13.7	-6 36.6	13	58.4 ¹⁵³	+3 14.2 ⁹¹	10 N	5 03	5 27	5 48	3 49	45	16 14	40	
12	3	13.9	-6 37.5	28	32.7 ¹⁵³	+3 05.1 ⁹¹	0	4 59	5 23	5 44	3 52	43	16 13	42	
13	18	14.1		38.5	43 06.9 ¹⁵²	+2 56.0 ⁹¹	10 S	53	18	39	55 40		11 45		
14	33	14.2		57	41.2 ¹⁵³	46.9 ⁹¹	20	46	12	34	3 59	36	09 48		
15	48	14.4		72	15.5 ¹⁵³	37.8 ⁹¹	30	36	5 04	28	4 02	34	07 51		
16	63	14.6		86	49.8 ¹⁵³	28.6 ⁹²	35	29	4 59	25	05 31		06 53		
17	78	14.7	-6 42.2	101	24.1 ¹⁵³	+2 19.5 ⁹¹	40	4 21	4 53	5 21	4 07	30	16 04	55	
18	93	14.9	-6 43.2	115	58.4 ¹⁵³	+2 10.3 ⁹²	45	4 10	4 46	5 16	4 10	27	16 02	58	
19	108	15.1		130	32.8 ¹⁵⁴	+2 01.2 ⁹¹	50	3 57	37	11	13 24		16 00	61	
20	123	15.2		145	07.1 ¹⁵³	+1 52.0 ⁹²	52	51	33	08	15 23		15 59	63	
21	138	15.4		159	41.4 ¹⁵³	42.9 ⁹¹	54	44	29	05	17 21		58 64		
22	153	15.6		174	15.8 ¹⁵⁴	33.7 ⁹²	56	36	23	5 02	19 19		57 66		
23	168	15.7		188	50.1 ¹⁵³	24.5 ⁹²	58	26	18	4 59	21 17		56 68		
24	183	15.9	-6 48.9	203	24.5 ¹⁵⁴	+1 15.3 ⁹²	60 S	3 15	4 11	4 55	4 23	16	15 55	69	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 43 ^m 1			Mag: -4.6 PMG: 8 ^h 56 ^m			Mag: +1.8 PMG: 9 ^h 32 ^m			Mag: -1.8 PMG: 9 ^h 43 ^m			Mag: +0.6 PMG: 14 ^h 45 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	18	16.9	225 52.4	+9 19.0	216 55.2	+9 18.0	213 54.6	+7 40.8	138 12.0	-18 49.7					
1	33	19.4	240 52.8	18.6	231 56.3	17.4	228 56.6	40.6	153 14.3	49.7					
2	48	21.9	255 53.1	18.2	246 57.3	16.9	243 58.6	40.4	168 16.5	49.8					
3	63	24.3	270 53.5	17.7	261 58.3	16.3	259 00.6	40.3	183 18.7	49.9					
4	78	26.8	285 53.8	17.3	276 59.3	15.7	274 02.6	40.1	198 20.9	49.9					
5	93	29.2	300 54.2	+9 16.9	292 00.3	+9 15.1	289 04.6	+7 39.9	213 23.1	-18 50.0					
6	108	31.7	315 54.6	+9 16.5	307 01.3	+9 14.6	304 06.6	+7 39.7	228 25.4	-18 50.0					
7	123	34.2	330 54.9	16.0	322 02.3	14.0	319 08.6	39.5	243 27.6	50.1					
8	138	36.6	345 55.3	15.6	337 03.3	13.4	334 10.6	39.3	258 29.8	50.1					
9	153	39.1	0 55.6	15.2	352 04.3	12.8	349 12.7	39.2	273 32.0	50.2					
10	168	41.6	15 56.0	14.7	7 05.3	12.3	4 14.7	39.0	288 34.2	50.2					
11	183	44.0	30 56.3	+9 14.3	22 06.3	+9 11.7	19 16.7	+7 38.8	303 36.5	-18 50.3					
12	198	46.5	45 56.7	+9 13.9	37 07.3	+9 11.1	34 18.7	+7 38.6	318 38.7	-18 50.3					
13	213	49.0	60 57.0	13.4	52 08.3	10.5	49 20.7	38.4	333 40.9	50.4					
14	228	51.4	75 57.4	13.0	67 09.4	10.0	64 22.7	38.2	348 43.1	50.4					
15	243	53.9	90 57.7	12.5	82 10.4	09.4	79 24.7	38.1	3 45.3	50.5					
16	258	56.3	105 58.1	12.1	97 11.4	08.8	94 26.7	37.9	18 47.6	50.6					
17	273	58.8	120 58.4	+9 11.7	112 12.4	+9 08.2	109 28.7	+7 37.7	33 49.8	-18 50.6					
18	289	01.3	135 58.8	+9 11.2	127 13.4	+9 07.7	124 30.7	+7 37.5	48 52.0	-18 50.7					
19	304	03.7	150 59.1	10.8	142 14.4	07.1	139 32.7	37.3	63 54.2	50.7					
20	319	06.2	165 59.5	10.3	157 15.4	06.5	154 34.7	37.1	78 56.4	50.8					
21	334	08.7	180 59.8	09.9	172 16.4	05.9	169 36.7	37.0	93 58.7	50.8					
22	349	11.1	196 00.1	09.4	187 17.4	05.4	184 38.7	36.8	109 00.9	50.9					
23	4	13.6	211 00.5	09.0	202 18.4	04.8	199 40.7	36.6	124 03.1	50.9					
24	19	16.1	226 00.8	+9 08.6	217 19.4	+9 04.2	214 42.7	+7 36.4	139 05.3	-18 51.0					
Dif	—		+4	-4	+10	-6	+20	-2	+22	-1					

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 27 ^d 7 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0											
	PMG: 11 ^h 46 ^m 8		SD: 14'7 PMG: 10 ^h 45 ^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	183	15.9	-6	48.9	203	24.5	+1 15.3	60 N	17 04	17 46	18 34	4 31 70	16 45 16	
1	198	16.1		49.8	217	58.8 ¹⁵³	+1 06.1 ⁹²	58	07	47	32	31 68	46 18	
2	213	16.2		50.8	232	33.2 ¹⁵⁴	+0 56.9 ⁹²	56	10	48	31	31 66	47 19	
3	228	16.4		51.7	247	07.5 ¹⁵³	47.7 ⁹²	54	13	49	29	32 64	47 22	
4	243	16.5		52.6	261	41.9 ¹⁵⁴	38.5 ⁹²	52	16	49	28	32 62	48 23	
5	258	16.7	-6	53.6	276	16.3 ¹⁵⁴	+0 29.3 ⁹²	50	17 18	17 50	18 28	4 32 61	16 48 24	
6	273	16.9	-6	54.5	290	50.6 ¹⁵³	+0 20.1 ⁹²	45	17 23	17 52	18 26	4 32 58	16 49 27	
7	288	17.0		55.5	305	25.0 ¹⁵⁴	10.9 ⁹²	40	27	54	26	33 55	50 30	
8	303	17.2		56.4	319	59.4 ¹⁵⁴	+0 01.7 ⁹²	35	31	56	26	33 53	51 32	
9	318	17.4		57.4	334	33.8 ¹⁵⁴	-0 07.6 ⁹³	30	34	17 58	26	33 52	52 33	
10	333	17.5		58.3	349	08.1 ¹⁵³	16.8 ⁹²	20	40	18 02	28	34 48	53 37	
11	348	17.7	-6	59.2	3	42.5 ¹⁵⁴	-0 26.0 ⁹²	10 N	17 45	18 06	18 31	4 34 45	16 54 40	
12	3	17.8	-7	00.2	18	16.9 ¹⁵⁴	-0 35.2 ⁹²	0	17 50	18 11	18 35	4 35 42	16 55 42	
13	18	18.0		01.1	32	51.2 ¹⁵³	44.4 ⁹²	10 S	17 55	16	41	35 39	56 45	
14	33	18.2		02.1	47	25.6 ¹⁵⁴	-0 53.6 ⁹²	20	18 01	23	18 49	35 37	57 48	
15	48	18.3		03.0	61	59.9 ¹⁵³	-1 02.8 ⁹²	30	07	31	19 00	36 33	58 52	
16	63	18.5		04.0	76	34.3 ¹⁵⁴	12.0 ⁹²	35	11	37	07	36 32	59 53	
17	78	18.6	-7	04.9	91	08.6 ¹⁵³	-1 21.2 ⁹²	40	18 15	18 43	19 16	4 37 29	16 59 56	
18	93	18.8	-7	05.8	105	43.0 ¹⁵⁴	-1 30.4 ⁹²	45	18 20	18 50	19 26	4 37 27	17 00 58	
19	108	19.0		06.8	120	17.3 ¹⁵³	39.6 ⁹²	50	26	19 00	40	37 24	01 62	
20	123	19.1		07.7	134	51.6 ¹⁵³	48.8 ⁹²	52	29	04	47	38 22	02 62	
21	138	19.3		08.7	149	25.9 ¹⁵³	-1 58.0 ⁹²	54	32	09	19 54	38 21	02 64	
22	153	19.4		09.6	164	00.3 ¹⁵⁴	-2 07.1 ⁹¹	56	35	14	20 03	38 20	03 66	
23	168	19.6		10.6	178	34.6 ¹⁵³	16.3 ⁹²	58	39	21	13	38 18	04 67	
24	183	19.8	-7	11.5	193	08.9 ¹⁵³	-2 25.4 ⁹¹	60 S	18 44	19 28	20 25	4 39 16	17 04 70	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 39 ^m 2		Mag: -4.6 PMG: 8 ^h 56 ^m		Mag: +1.8 PMG: 9 ^h 30 ^m		Mag: -1.8 PMG: 9 ^h 40 ^m		Mag: +0.6 PMG: 14 ^h 41 ^m					
	hG ♈		hG ♀	Dec	hG ♂		hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	19	16.1	226	00.8	217	19.4	214	42.7	139	05.3	-18	51.0		
1	34	18.5	241	01.2	232	20.5	229	44.7	154	07.5		51.0		
2	49	21.0	256	01.5	247	21.5	244	46.7	169	09.8		51.1		
3	64	23.5	271	01.8	262	22.5	259	48.7	184	12.0		51.1		
4	79	25.9	286	02.2	277	23.5	274	50.7	199	14.2		51.2		
5	94	28.4	301	02.5	292	24.5	289	52.7	214	16.4	-18	51.2		
6	109	30.8	316	02.8	307	25.5	304	54.7	229	18.6	-18	51.3		
7	124	33.3	331	03.2	322	26.5	319	56.7	244	20.8		51.4		
8	139	35.8	346	03.5	337	27.5	334	58.7	259	23.1		51.4		
9	154	38.2	1	03.8	352	28.5	350	00.7	274	25.3		51.5		
10	169	40.7	16	04.1	7	29.5	5	02.7	289	27.5		51.5		
11	184	43.2	31	04.5	22	30.6	20	04.7	304	29.7	-18	51.6		
12	199	45.6	46	04.8	37	31.6	35	06.8	319	31.9	-18	51.6		
13	214	48.1	61	05.1	52	32.6	50	08.8	334	34.2		51.7		
14	229	50.6	76	05.4	67	33.6	65	10.8	349	36.4		51.7		
15	244	53.0	91	05.8	82	34.6	80	12.8	4	38.6		51.8		
16	259	55.5	106	06.1	97	35.6	95	14.8	19	40.8		51.8		
17	274	57.9	121	06.4	112	36.6	110	16.8	34	43.0	-18	51.9		
18	290	00.4	136	06.7	127	37.6	125	18.8	49	45.2	-18	51.9		
19	305	02.9	151	07.0	142	38.6	140	20.8	64	47.5		52.0		
20	320	05.3	166	07.4	157	39.7	155	22.8	79	49.7		52.1		
21	335	07.8	181	07.7	172	40.7	170	24.8	94	51.9		52.1		
22	350	10.3	196	08.0	187	41.7	185	26.8	109	54.1		52.2		
23	5	12.7	211	08.3	202	42.7	200	28.8	124	56.3		52.2		
24	20	15.2	226	08.6	217	43.7	215	30.8	139	58.5	-18	52.3		
Dif	—		+3		+10		+20		+22		-1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 46 ^m 6			Edad: 28 ^d 7 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 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	19.8	-7	193	08.9	-2	25.4	60 N	5	01	5	49	6	31	5	41		
1	198	19.9		207	43.1 ¹⁵²		34.6	58	03	48	27		39	68		04		
2	213	20.1		222	17.4 ¹⁵³		43.7	56	04	47	24		37	66		06		
3	228	20.2		236	51.7 ¹⁵³	-2	52.8	54	05	46	21		36	64		09		
4	243	20.4		251	25.9 ¹⁵²	-3	02.0	52	06	45	19		34	63		11		
5	258	20.5	-7	266	00.2 ¹⁵³	-3	11.1	50	5	07	5	44	6	16	5	33		
6	273	20.7	-7	280	34.4 ¹⁵²	-3	20.1	45	5	08	5	42	6	11	5	30		
7	288	20.9		295	08.6 ¹⁵²		29.2	40	08	40	07		28	56		20		
8	303	21.0		309	42.9 ¹⁵³		38.3	35	08	38	03		26	54		23		
9	318	21.2		324	17.1 ¹⁵²		47.3	30	08	36	6	00	25	51		25		
10	333	21.3		338	51.2 ¹⁵¹	-3	56.4	20	06	32	5	54	22	48		30		
11	348	21.5	-7	353	25.4 ¹⁵²	-4	05.4	10 N	5	03	5	27	5	48	5	19		
12	3	21.6	-7	7	59.6 ¹⁵²	-4	14.4	0	4	58	5	22	5	43	5	17		
13	18	21.8		22	33.7 ¹⁵¹		23.4	10 S	52	17	38		14	41		41		
14	33	22.0		37	07.8 ¹⁵¹		32.4	20	44	10	32		12	37		45		
15	48	22.1		51	41.9 ¹⁵¹		41.3	30	33	5	02	26	09	34		50		
16	63	22.3		66	16.0 ¹⁵¹		50.3	35	26	4	56	22	08	32		52		
17	78	22.4	-7	80	50.1 ¹⁵¹	-4	59.2	40	4	17	4	50	5	18	5	06		
18	93	22.6	-7	95	24.2 ¹⁵¹	-5	08.1	45	4	06	4	42	5	13	5	04		
19	108	22.7		109	58.2 ¹⁵⁰		17.0	50	3	52	33	06	01	25		17		
20	123	22.9		124	32.2 ¹⁵⁰		25.9	52	46	29	03		5	00	24	18		
21	138	23.0		139	06.2 ¹⁵⁰		34.7	54	38	24	5	00	4	59	22	03		
22	153	23.2		153	40.2 ¹⁵⁰		43.5	56	30	18	4	57	58	20		04		
23	168	23.3		168	14.2 ¹⁵⁰	-5	52.3	58	19	12	53		56	19		06		
24	183	23.5	-7	182	48.1 ¹⁴⁹	-6	01.1	60 S	3	08	4	04	4	49	4	55		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 35 ^m 3			Mag: -4.6 PMG: 8 ^h 55 ^m			Mag: +1.8 PMG: 9 ^h 28 ^m			Mag: -1.8 PMG: 9 ^h 37 ^m			Mag: +0.6 PMG: 14 ^h 38 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	°	'	
0	20	15.2	226	08.6	+8	57.6	217	43.7	+8	50.3	215	30.8	+7	32.0	139	58.5	-18	
1	35	17.7	241	08.9		57.1	232	44.7		49.8	230	32.8		31.8	155	00.8		
2	50	20.1	256	09.2		56.6	247	45.7		49.2	245	34.8		31.7	170	03.0		
3	65	22.6	271	09.6		56.1	262	46.7		48.6	260	36.8		31.5	185	05.2		
4	80	25.1	286	09.9		55.7	277	47.8		48.0	275	38.8		31.3	200	07.4		
5	95	27.5	301	10.2	+8	55.2	292	48.8	+8	47.4	290	40.9	+7	31.1	215	09.6	-18	
6	110	30.0	316	10.5	+8	54.7	307	49.8	+8	46.9	305	42.9	+7	30.9	230	11.8	-18	
7	125	32.4	331	10.8		54.3	322	50.8		46.3	320	44.9		30.7	245	14.0		
8	140	34.9	346	11.1		53.8	337	51.8		45.7	335	46.9		30.6	260	16.3		
9	155	37.4	1	11.4		53.3	352	52.8		45.1	350	48.9		30.4	275	18.5		
10	170	39.8	16	11.7		52.8	7	53.8		44.6	5	50.9		30.2	290	20.7		
11	185	42.3	31	12.0	+8	52.4	22	54.9	+8	44.0	20	52.9	+7	30.0	305	22.9	-18	
12	200	44.8	46	12.3	+8	51.9	37	55.9	+8	43.4	35	54.9	+7	29.8	320	25.1	-18	
13	215	47.2	61	12.6		51.4	52	56.9		42.8	50	56.9		29.6	335	27.3		
14	230	49.7	76	12.9		50.9	67	57.9		42.2	65	58.9		29.5	350	29.6		
15	245	52.2	91	13.2		50.4	82	58.9		41.7	81	00.9		29.3	5	31.8		
16	260	54.6	106	13.5		49.9	97	59.9		41.1	96	02.9		29.1	20	34.0		
17	275	57.1	121	13.8	+8	49.5	113	00.9	+8	40.5	111	04.9	+7	28.9	35	36.2	-18	
18	290	59.6	136	14.1	+8	49.0	128	02.0	+8	39.9	126	07.0	+7	28.7	50	38.4	-18	
19	306	02.0	151	14.4		48.5	143	03.0		39.3	141	09.0		28.6	65	40.6		
20	321	04.5	166	14.7		48.0	158	04.0		38.8	156	11.0		28.4	80	42.8		
21	336	06.9	181	15.0		47.5	173	05.0		38.2	171	13.0		28.2	95	45.1		
22	351	09.4	196	15.3		47.0	188	06.0		37.6	186	15.0		28.0	110	47.3		
23	6	11.9	211	15.6		46.5	203	07.0		37.0	201	17.0		27.8	125	49.5		
24	21	14.3	226	15.8	+8	46.1	218	08.0	+8	36.4	216	19.0	+7	27.7	140	51.7	-18	
Dif	—			+3			+10			+20			+22			-1		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna								
	SD: 16'0		Edad: 29 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 44 ^m																		
	PMG: 11 ^h 46 ^m 3	PMG: 12 ^h 10 ^m	hG ☉	Dec	hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	183	23.5	-7	34.0	182	48.1	-6	01.1	60 N	16	58	17	40	18	28	6	51	70			
1	198	23.6		35.0	197	22.0 ¹⁴⁹		09.9 ⁸⁸	58	17	02		41	27		47	67	23	22		
2	213	23.8		35.9	211	55.9 ¹⁴⁹		18.6 ⁸⁷	56		05		43	26		43	66	27	24		
3	228	24.0		36.8	226	29.8 ¹⁴⁹		27.3 ⁸⁷	54		08		44	25		40	64	31	25		
4	243	24.1		37.8	241	03.7 ¹⁴⁹		36.0 ⁸⁷	52		11		45	24		37	63	35	26		
5	258	24.3	-7	38.7	255	37.5 ¹⁴⁸	-6	44.7 ⁸⁷	50	17	14	17	46	18	24	6	34	62	17	38	28
6	273	24.4	-7	39.6	270	11.3 ¹⁴⁸	-6	53.3 ⁸⁶	45	17	19	17	49	18	23	6	29	58	17	45	30
7	288	24.6		40.6	284	45.1 ¹⁴⁸	-7	01.9 ⁸⁶	40		24		51	23		24	56		51	32	
8	303	24.7		41.5	299	18.9 ¹⁴⁸		10.5 ⁸⁶	35		28		54	23		20	54		17	56	34
9	318	24.9		42.5	313	52.6 ¹⁴⁷		19.1 ⁸⁶	30		32	17	56	24		16	52		18	00	36
10	333	25.0		43.4	328	26.3 ¹⁴⁷		27.6 ⁸⁵	20		38	18	01	26		10	49		08	39	
11	348	25.2	-7	44.3	343	00.0 ¹⁴⁷	-7	36.1 ⁸⁵	10 N	17	44	18	05	18	30	6	05	46	18	14	42
12	3	25.3	-7	45.3	357	33.7 ¹⁴⁷	-7	44.5 ⁸⁴	0	17	50	18	10	18	35	6	00	43	18	21	44
13	18	25.5		46.2	12	07.3 ¹⁴⁶	-7	53.0 ⁸⁵	10 S	17	55		16	41		5	55	41		27	47
14	33	25.6		47.1	26	40.9 ¹⁴⁶	-8	01.4 ⁸⁴	20	18	01		24	18	50		49	39		34	49
15	48	25.8		48.1	41	14.5 ¹⁴⁶		09.8 ⁸⁴	30		08		33	19	01		43	36		41	53
16	63	25.9		49.0	55	48.0 ¹⁴⁵		18.1 ⁸³	35		13		38	09		40	34		46	54	
17	78	26.1	-7	49.9	70	21.6 ¹⁴⁶	-8	26.4 ⁸³	40	18	17	18	45	19	18	5	36	32	18	51	56
18	93	26.2	-7	50.9	84	55.1 ¹⁴⁵	-8	34.7 ⁸³	45	18	23	18	53	19	29	5	31	30	18	57	58
19	108	26.4		51.8	99	28.5 ¹⁴⁴		42.9 ⁸²	50		29	19	03	44		26	27		19	04	61
20	123	26.5		52.7	114	02.0 ¹⁴⁵		51.2 ⁸³	52		33		08	51		24	25		07	63	
21	138	26.7		53.7	128	35.4 ¹⁴⁴	-8	59.3 ⁸¹	54		36		13	19	59	21	24		11	64	
22	153	26.8		54.6	143	08.8 ¹⁴⁴	-9	07.5 ⁸²	56		40		19	20	08	18	22		15	65	
23	168	27.0		55.5	157	42.1 ¹⁴³		15.6 ⁸¹	58		44		26	19		15	20		19	68	
24	183	27.1	-7	56.5	172	15.4 ¹⁴³	-9	23.6 ⁸⁰	60 S	18	49	19	33	20	31	5	11	19	19	24	70
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 22 ^h 31 ^m 3		Mag: -4.6 PMG: 8 ^h 55 ^m			Mag: +1.8 PMG: 9 ^h 27 ^m			Mag: -1.8 PMG: 9 ^h 33 ^m			Mag: +0.6 PMG: 14 ^h 34 ^m									
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	21	14.3	226	15.8	+8	46.1	218	08.0	+8	36.4	216	19.0	+7	27.7	140	51.7	-18	53.6			
1	36	16.8	241	16.1		45.6	233	09.1		35.9	231	21.0		27.5	155	53.9		53.6			
2	51	19.3	256	16.4		45.1	248	10.1		35.3	246	23.0		27.3	170	56.1		53.7			
3	66	21.7	271	16.7		44.6	263	11.1		34.7	261	25.0		27.1	185	58.3		53.7			
4	81	24.2	286	17.0		44.1	278	12.1		34.1	276	27.0		26.9	201	00.6		53.8			
5	96	26.7	301	17.3	+8	43.6	293	13.1	+8	33.5	291	29.1	+7	26.7	216	02.8	-18	53.8			
6	111	29.1	316	17.6	+8	43.1	308	14.1	+8	33.0	306	31.1	+7	26.6	231	05.0	-18	53.9			
7	126	31.6	331	17.8		42.6	323	15.2		32.4	321	33.1		26.4	246	07.2		53.9			
8	141	34.0	346	18.1		42.1	338	16.2		31.8	336	35.1		26.2	261	09.4		54.0			
9	156	36.5	1	18.4		41.6	353	17.2		31.2	351	37.1		26.0	276	11.6		54.1			
10	171	39.0	16	18.7		41.1	8	18.2		30.6	6	39.1		25.8	291	13.8		54.1			
11	186	41.4	31	19.0	+8	40.6	23	19.2	+8	30.1	21	41.1	+7	25.7	306	16.0	-18	54.2			
12	201	43.9	46	19.3	+8	40.1	38	20.2	+8	29.5	36	43.1	+7	25.5	321	18.3	-18	54.2			
13	216	46.4	61	19.5		39.6	53	21.3		28.9	51	45.1		25.3	336	20.5		54.3			
14	231	48.8	76	19.8		39.1	68	22.3		28.3	66	47.1		25.1	351	22.7		54.3			
15	246	51.3	91	20.1		38.6	83	23.3		27.7	81	49.1		24.9	6	24.9		54.4			
16	261	53.8	106	20.4		38.1	98	24.3		27.2	96	51.2		24.8	21	27.1		54.4			
17	276	56.2	121	20.6	+8	37.6	113	25.3	+8	26.6	111	53.2	+7	24.6	36	29.3	-18	54.5			
18	291	58.7	136	20.9	+8	37.1	128	26.3	+8	26.0	126	55.2	+7	24.4	51	31.5	-18	54.5			
19	307	01.2	151	21.2		36.6	143	27.4		25.4	141	57.2		24.2	66	33.7		54.6			
20	322	03.6	166	21.4		36.1	158	28.4		24.8	156	59.2		24.0	81	36.0		54.7			
21	337	06.1	181	21.7		35.6	173	29.4		24.3	172	01.2		23.8	96	38.2		54.7			
22	352	08.5	196	22.0		35.1	188	30.4		23.7	187	03.2		23.7	111	40.4		54.8			
23	7	11.0	211	22.3		34.6	203	31.4		23.1	202	05.2		23.5	126	42.6		54.8			
24	22	13.5	226	22.5	+8	34.1	218	32.4	+8	22.5	217	07.2	+7	23.3	141	44.8	-18	54.9			
Dif	—		+3 -5			+10 -6			+20 -2			+22 -1									

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 46 ^m 1			Edad: 1 ^d 0	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 R°: 46 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	27.1	-7	56.5	172	15.4	-9	23.6	81	60 N	5 06	5 54	6 36	8 01	69	17 38	24	
1	198	27.3		57.4	186	48.7 ¹⁴³		31.7	81	58	07	52	32	7 54	68	45	25	
2	213	27.4		58.3	201	22.0 ¹⁴³		39.7	80	56	08	51	28	49	65	51	27	
3	228	27.5	-7	59.3	215	55.2 ¹⁴²		47.6	79	54	09	49	25	44	64	17	56	29
4	243	27.7	-8	00.2	230	28.4 ¹⁴²		-9 55.5	79	52	09	48	22	40	62	18	01	30
5	258	27.8	-8	01.1	245	01.6 ¹⁴²		-10 03.4	79	50	5 10	5 47	6 20	7 36	61	18	06	31
6	273	28.0	-8	02.0	259	34.7 ¹⁴¹		-10 11.2	78	45	5 10	5 44	6 14	7 27	58	18	15	34
7	288	28.1		03.0	274	07.8 ¹⁴¹		19.0	78	40	10	42	09	20	56	23	36	
8	303	28.3		03.9	288	40.9 ¹⁴¹		26.8	78	35	10	39	05	14	54	30	38	
9	318	28.4		04.8	303	13.9 ¹⁴⁰		34.5	77	30	09	37	6 01	7 08	53	36	39	
10	333	28.6		05.8	317	46.9 ¹⁴⁰		42.1	76	20	06	32	5 54	6 59	50	47	42	
11	348	28.7	-8	06.7	332	19.9 ¹⁴⁰		-10 49.8	77	10 N	5 03	5 27	5 48	6 51	47	18	56	44
12	3	28.9	-8	07.6	346	52.8 ¹³⁹		-10 57.3	76	0	4 58	5 22	5 43	6 43	46	19	05	46
13	18	29.0		08.6	1	25.7 ¹³⁹		-11 04.9	75	10 S	51	16	37	36	43	14	48	
14	33	29.2		09.5	15	58.5 ¹³⁸		12.4	75	20	42	5 08	31	28	40	23	50	
15	48	29.3		10.4	30	31.4 ¹³⁹		19.8	74	30	31	4 59	24	19	37	34	52	
16	63	29.4		11.4	45	04.1 ¹³⁷		27.2	74	35	23	54	19	14	36	40	54	
17	78	29.6	-8	12.3	59	36.9 ¹³⁸		-11 34.5	73	40	4 14	4 47	5 15	6 08	34	19	47	56
18	93	29.7	-8	13.2	74	09.6 ¹³⁷		-11 41.8	73	45	4 02	4 39	5 09	6 01	32	19	55	58
19	108	29.9		14.1	88	42.3 ¹³⁷		49.1	73	50	3 48	29	5 02	5 53	29	20	05	61
20	123	30.0		15.1	103	14.9 ¹³⁶		-11 56.3	72	52	41	24	4 59	49	28	10	61	
21	138	30.2		16.0	117	47.5 ¹³⁶		-12 03.5	72	54	33	18	56	45	27	15	63	
22	153	30.3		16.9	132	20.1 ¹³⁶		10.6	71	56	23	13	52	40	26	20	65	
23	168	30.4		17.9	146	52.6 ¹³⁵		17.6	70	58	13	4 06	48	35	24	27	66	
24	183	30.6	-8	18.8	161	25.1 ¹³⁵		-12 24.6	70	60 S	3 00	3 58	4 43	5 30	21	20	34	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 22 ^h 27 ^m 4		Mag: -4.6 PMG: 8 ^h 54 ^m		Mag: +1.8 PMG: 9 ^h 25 ^m		Mag: -1.8 PMG: 9 ^h 30 ^m		Mag: +0.6 PMG: 14 ^h 31 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	22	13.5	226	22.5	+8	34.1	218	32.4	+8	22.5	
1	37	15.9	241	22.8		33.5	233	33.5		21.9	
2	52	18.4	256	23.1		33.0	248	34.5		21.4	
3	67	20.9	271	23.3		32.5	263	35.5		20.8	
4	82	23.3	286	23.6		32.0	278	36.5		20.2	
5	97	25.8	301	23.8	+8	31.5	293	37.5	+8	19.6	
6	112	28.3	316	24.1	+8	31.0	308	38.6	+8	19.0	
7	127	30.7	331	24.4		30.5	323	39.6		18.4	
8	142	33.2	346	24.6		29.9	338	40.6		17.9	
9	157	35.6	1	24.9		29.4	353	41.6		17.3	
10	172	38.1	16	25.1		28.9	8	42.6		16.7	
11	187	40.6	31	25.4	+8	28.4	23	43.7	+8	16.1	
12	202	43.0	46	25.7	+8	27.9	38	44.7	+8	15.5	
13	217	45.5	61	25.9		27.3	53	45.7		15.0	
14	232	48.0	76	26.2		26.8	68	46.7		14.4	
15	247	50.4	91	26.4		26.3	83	47.7		13.8	
16	262	52.9	106	26.7		25.8	98	48.8		13.2	
17	277	55.4	121	26.9	+8	25.3	113	49.8	+8	12.6	
18	292	57.8	136	27.2	+8	24.7	128	50.8	+8	12.0	
19	308	00.3	151	27.4		24.2	143	51.8		11.5	
20	323	02.8	166	27.7		23.7	158	52.8		10.9	
21	338	05.2	181	27.9		23.1	173	53.9		10.3	
22	353	07.7	196	28.2		22.6	188	54.9		09.7	
23	8	10.1	211	28.4		22.1	203	55.9		09.1	
24	23	12.6	226	28.7	+8	21.6	218	56.9	+8	08.6	
Dif	—		+3	-5			+10	-6			
									+20	-2	
										+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna				
	SD: 16'0		Edad: 2 ^d 0	PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7	SD: 14'8	PMG: 13 ^h 40 ^m							R°: 47 ^m			
	hG ☉	Dec							hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	30.6	-8	18.8	161	25.1	-12 24.6	60 N	16 52	17 34	18 22	9 10 67	18 02 29			
1	198	30.7		19.7	175	57.6 ¹³⁵	31.6	58	16 56	36	21	9 02 65	10 31			
2	213	30.9		20.6	190	30.0 ¹³⁴	38.5	56	17 00	38	21	8 54 64	18 33			
3	228	31.0		21.6	205	02.3 ¹³³	45.3	54	04	39	20	48 62	25 34			
4	243	31.2		22.5	219	34.7 ¹³⁴	52.1	52	07	41	20	42 61	31 35			
5	258	31.3	-8	23.4	234	07.0 ¹³³	-12 58.8	50	17 10	17 42	18 20	8 37 60	18 37 36			
6	273	31.4	-8	24.3	248	39.2 ¹³²	-13 05.5	45	17 16	17 45	18 19	8 25 58	18 49 38			
7	288	31.6		25.3	263	11.5 ¹³³	12.1	40	21	48	20	16 56	18 59 40			
8	303	31.7		26.2	277	43.6 ¹³¹	18.7	35	26	51	20	08 54	19 08 41			
9	318	31.9		27.1	292	15.8 ¹³²	25.2	30	30	54	22	8 01 53	15 43			
10	333	32.0		28.0	306	47.9 ¹³¹	31.6	20	37	17 59	25	7 49 51	29 44			
11	348	32.1	-8	29.0	321	19.9 ¹³⁰	-13 38.0	10 N	17 43	18 04	18 29	7 38 49	19 40 46			
12	3	32.3	-8	29.9	335	51.9 ¹³⁰	-13 44.4	0	17 49	18 10	18 34	7 29 46	19 51 48			
13	18	32.4		30.8	350	23.9 ¹³⁰	50.7	10 S	17 55	17	41	19 45	20 02 49			
14	33	32.6		31.7	4	55.9 ¹³⁰	-13 56.9	20	18 02	24	18 51	7 08 43	13 51			
15	48	32.7		32.7	19	27.7 ¹²⁸	-14 03.0	30	10	34	19 03	6 56 41	26 54			
16	63	32.8		33.6	33	59.6 ¹²⁹	09.1	35	14	40	11	50 39	34 54			
17	78	33.0	-8	34.5	48	31.4 ¹²⁸	-14 15.1	40	18 19	18 47	19 20	6 42 38	20 43 55			
18	93	33.1	-8	35.4	63	03.2 ¹²⁸	-14 21.1	45	18 25	18 56	19 32	6 33 36	20 53 57			
19	108	33.2		36.4	77	34.9 ¹²⁷	27.0	50	33	19 06	48	22 34	21 06 59			
20	123	33.4		37.3	92	06.6 ¹²⁷	32.9	52	36	12	19 55	17 33	11 60			
21	138	33.5		38.2	106	38.2 ¹²⁶	38.6	54	40	17	20 04	12 31	18 61			
22	153	33.7		39.1	121	09.9 ¹²⁷	44.4	56	44	24	14	6 06 29	25 62			
23	168	33.8		40.1	135	41.4 ¹²⁵	50.0	58	48	31	25	5 59 28	33 64			
24	183	33.9	-8	41.0	150	12.9 ¹²⁵	-14 55.6	60 S	18 54	19 39	20 38	5 51 26	21 42 66			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 22 ^h 23 ^m 5		Mag: -4.6 PMG: 8 ^h 54 ^m		Mag: +1.8 PMG: 9 ^h 24 ^m		Mag: -1.8 PMG: 9 ^h 27 ^m		Mag: +0.6 PMG: 14 ^h 27 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	23	12.6	226	28.7	+8	21.6	217	55.6	+7	19.0		
1	38	15.1	241	28.9		21.0	232	57.6		18.8		
2	53	17.5	256	29.2		20.5	247	59.6		18.6		
3	68	20.0	271	29.4		20.0	263	01.6		18.4		
4	83	22.5	286	29.6		19.4	278	03.6		18.3		
5	98	24.9	301	29.9	+8	18.9	293	05.6	+7	18.1		
6	113	27.4	316	30.1	+8	18.4	308	07.6	+7	17.9		
7	128	29.9	331	30.4		17.8	323	09.7		17.7		
8	143	32.3	346	30.6		17.3	338	11.7		17.5		
9	158	34.8	1	30.8		16.7	353	13.7		17.4		
10	173	37.3	16	31.1		16.2	8	15.7		17.2		
11	188	39.7	31	31.3	+8	15.7	23	17.7	+7	17.0		
12	203	42.2	46	31.5	+8	15.1	38	19.7	+7	16.8		
13	218	44.6	61	31.8		14.6	53	21.7		16.7		
14	233	47.1	76	32.0		14.0	68	23.8		16.5		
15	248	49.6	91	32.2		13.5	83	25.8		16.3		
16	263	52.0	106	32.5		13.0	98	27.8		16.1		
17	278	54.5	121	32.7	+8	12.4	113	29.8	+7	15.9		
18	293	57.0	136	32.9	+8	11.9	128	31.8	+7	15.8		
19	308	59.4	151	33.2		11.3	143	33.8		15.6		
20	324	01.9	166	33.4		10.8	158	35.9		15.4		
21	339	04.4	181	33.6		10.2	173	37.9		15.2		
22	354	06.8	196	33.9		09.7	188	39.9		15.0		
23	9	09.3	211	34.1		09.1	203	41.9		14.9		
24	24	11.7	226	34.3	+8	08.6	218	43.9	+7	14.7		
Dif	—		+2	-5		+10	-6	+20		-2	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 45 ^m 6			Edad: 3 ^d 0 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'1 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	183	33.9	-8	41.0	150	12.9	-14 55.6	60 N	5 10	5 58	6 41	10 17	64	18 31	37			
1	198	34.1		41.9	164	44.4 ¹²⁵	-15 01.1 ⁵⁵	58	11	57	36	10 07	62	41	39			
2	213	34.2		42.8	179	15.9 ¹²⁵	06.6 ⁵⁵	56	12	55	32	9 58	61	51	39			
3	228	34.3		43.7	193	47.2 ¹²³	11.9 ⁵³	54	12	53	29	50	60	18 59	40			
4	243	34.5		44.7	208	18.6 ¹²⁴	17.2 ⁵³	52	12	52	26	43	59	19 06	41			
5	258	34.6	-8	45.6	222	49.9 ¹²³	-15 22.5 ⁵³	50	5 13	5 50	6 23	9 37	58	19 13	42			
6	273	34.7	-8	46.5	237	21.2 ¹²³	-15 27.7 ⁵²	45	5 13	5 47	6 16	9 23	57	19 27	43			
7	288	34.9		47.4	251	52.4 ¹²²	32.8 ⁵¹	40	12	44	11	12	55	39	44			
8	303	35.0		48.4	266	23.6 ¹²²	37.8 ⁵⁰	35	11	41	06	9 02	54	49	45			
9	318	35.2		49.3	280	54.7 ¹²¹	42.8 ⁵⁰	30	10	38	6 02	8 54	53	19 58	46			
10	333	35.3		50.2	295	25.8 ¹²¹	47.7 ⁴⁹	20	07	33	5 55	40	51	20 13	47			
11	348	35.4	-8	51.1	309	56.9 ¹²¹	-15 52.5 ⁴⁸	10 N	5 03	5 27	5 48	8 27	50	20 26	48			
12	3	35.6	-8	52.0	324	27.9 ¹²⁰	-15 57.2 ⁴⁷	0	4 57	5 21	5 42	8 15	49	20 39	49			
13	18	35.7		53.0	338	58.9 ¹²⁰	-16 01.9 ⁴⁷	10 S	50	15	36	8 04	47	20 51	50			
14	33	35.8		53.9	353	29.8 ¹¹⁹	06.5 ⁴⁶	20	41	5 07	29	7 51	46	21 04	52			
15	48	36.0		54.8	8	00.7 ¹¹⁹	11.0 ⁴⁵	30	28	4 57	21	37	44	20	52			
16	63	36.1		55.7	22	31.5 ¹¹⁸	15.5 ⁴⁵	35	20	51	17	29	43	28	54			
17	78	36.2	-8	56.6	37	02.3 ¹¹⁸	-16 19.8 ⁴³	40	4 10	4 44	5 12	7 20	42	21 38	55			
18	93	36.4	-8	57.6	51	33.1 ¹¹⁸	-16 24.1 ⁴³	45	3 58	4 35	5 05	7 09	40	21 50	56			
19	108	36.5		58.5	66	03.8 ¹¹⁷	28.4 ⁴³	50	43	24	4 58	6 56	38	22 05	56			
20	123	36.6	-8	59.4	80	34.5 ¹¹⁷	32.5 ⁴¹	52	35	19	55	50	37	11	58			
21	138	36.7	-9	00.3	95	05.1 ¹¹⁶	36.6 ⁴¹	54	27	13	51	43	37	19	58			
22	153	36.9		01.2	109	35.7 ¹¹⁶	40.6 ⁴⁰	56	17	07	47	35	36	27	59			
23	168	37.0		02.1	124	06.3 ¹¹⁶	44.5 ³⁹	58	3 06	4 00	42	27	34	37	59			
24	183	37.1	-9	03.1	138	36.8 ¹¹⁵	-16 48.3 ³⁸	60 S	2 52	3 52	4 37	6 17	33	22 48	60			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 19 ^m 5			Mag: -4.6 PMG: 8 ^h 54 ^m			Mag: +1.8 PMG: 9 ^h 22 ^m			Mag: -1.8 PMG: 9 ^h 24 ^m			Mag: +0.6 PMG: 14 ^h 24 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	24	11.7	226 34.3	+8 08.6	219 21.5	+7 54.6	218 43.9	+7 14.7	143 30.8	-18 57.5			143 30.8	-18 57.5				
1	39	14.2	241 34.5	08.0	234 22.5	54.0	233 45.9	14.5	158 33.1	57.5			158 33.1	57.5				
2	54	16.7	256 34.8	07.5	249 23.5	53.4	248 48.0	14.3	173 35.3	57.6			173 35.3	57.6				
3	69	19.1	271 35.0	06.9	264 24.5	52.8	263 50.0	14.2	188 37.5	57.7			188 37.5	57.7				
4	84	21.6	286 35.2	06.4	279 25.5	52.2	278 52.0	14.0	203 39.7	57.7			203 39.7	57.7				
5	99	24.1	301 35.4	+8 05.8	294 26.6	+7 51.6	293 54.0	+7 13.8	218 41.9	-18 57.8			218 41.9	-18 57.8				
6	114	26.5	316 35.6	+8 05.2	309 27.6	+7 51.1	308 56.0	+7 13.6	233 44.1	-18 57.8			233 44.1	-18 57.8				
7	129	29.0	331 35.9	04.7	324 28.6	50.5	323 58.0	13.4	248 46.3	57.9			248 46.3	57.9				
8	144	31.5	346 36.1	04.1	339 29.6	49.9	339 00.1	13.3	263 48.5	57.9			263 48.5	57.9				
9	159	33.9	1 36.3	03.6	354 30.7	49.3	354 02.1	13.1	278 50.7	58.0			278 50.7	58.0				
10	174	36.4	16 36.5	03.0	9 31.7	48.7	9 04.1	12.9	293 52.9	58.0			293 52.9	58.0				
11	189	38.9	31 36.7	+8 02.5	24 32.7	+7 48.1	24 06.1	+7 12.7	308 55.1	-18 58.1			308 55.1	-18 58.1				
12	204	41.3	46 36.9	+8 01.9	39 33.7	+7 47.6	39 08.1	+7 12.5	323 57.3	-18 58.1			323 57.3	-18 58.1				
13	219	43.8	61 37.2	01.3	54 34.8	47.0	54 10.1	12.4	338 59.5	58.2			338 59.5	58.2				
14	234	46.2	76 37.4	00.8	69 35.8	46.4	69 12.2	12.2	354 01.7	58.3			354 01.7	58.3				
15	249	48.7	91 37.6	+8 00.2	84 36.8	45.8	84 14.2	12.0	9 03.9	58.3			9 03.9	58.3				
16	264	51.2	106 37.8	+7 59.6	99 37.8	45.2	99 16.2	11.8	24 06.1	58.4			24 06.1	58.4				
17	279	53.6	121 38.0	+7 59.1	114 38.9	+7 44.6	114 18.2	+7 11.7	39 08.4	-18 58.4			39 08.4	-18 58.4				
18	294	56.1	136 38.2	+7 58.5	129 39.9	+7 44.1	129 20.2	+7 11.5	54 10.6	-18 58.5			54 10.6	-18 58.5				
19	309	58.6	151 38.4	58.0	144 40.9	43.5	144 22.3	11.3	69 12.8	58.5			69 12.8	58.5				
20	325	01.0	166 38.6	57.4	159 41.9	42.9	159 24.3	11.1	84 15.0	58.6			84 15.0	58.6				
21	340	03.5	181 38.9	56.8	174 43.0	42.3	174 26.3	10.9	99 17.2	58.6			99 17.2	58.6				
22	355	06.0	196 39.1	56.2	189 44.0	41.7	189 28.3	10.8	114 19.4	58.7			114 19.4	58.7				
23	10	08.4	211 39.3	55.7	204 45.0	41.1	204 30.3	10.6	129 21.6	58.7			129 21.6	58.7				
24	25	10.9	226 39.5	+7 55.1	219 46.1	+7 40.5	219 32.4	+7 10.4	144 23.8	-18 58.8			144 23.8	-18 58.8				
Dif	—		+2	-6	+10		-6	+20	-2	+22		-1						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16'0			Edad: 4 ^d 0	PHE	SD: 15'0			PMG: 15 ^h 16 ^m	R°: 51 ^m			Hora	R°	Hora	R°				
	hG ☉	Dec								hG ☾	Dif	Dec					Dif	Civil	Náutico	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	183	37.1	-9	03.1	138	36.8	-16 48.3	60 N	16 46	17 29	18 17	11 21	57		19 08	46				
1	198	37.3		04.0	153	07.3 ¹¹⁵	52.1 ³⁸	58	51	31	16	11 09	57		20	47				
2	213	37.4		04.9	167	37.7 ¹¹⁴	55.7 ³⁶	56	55	33	16	10 59	56		30	48				
3	228	37.5		05.8	182	08.1 ¹¹⁴	-16 59.3 ³⁶	54	16 59	35	16	50 56			39	48				
4	243	37.7		06.7	196	38.4 ¹¹³	-17 02.8 ³⁵	52	17 03	37	16	42 55			47	48				
5	258	37.8	-9	07.6	211	08.8 ¹¹⁴	-17 06.3 ³⁵	50	17 06	17 38	18 16	10 35	55		19 55	48				
6	273	37.9	-9	08.6	225	39.0 ¹¹²	-17 09.6 ³³	45	17 12	17 42	18 16	10 20	54		20 10	49				
7	288	38.0		09.5	240	09.2 ¹¹²	12.9 ³³	40	18	45	17	10 07	54		23	49				
8	303	38.2		10.4	254	39.4 ¹¹²	16.0 ³¹	35	23	49	18	9 56	53		34	50				
9	318	38.3		11.3	269	09.6 ¹¹²	19.1 ³¹	30	28	52	20	47 52			20 44	50				
10	333	38.4		12.2	283	39.7 ¹¹¹	22.1 ³⁰	20	35	17 58	23	31 52			21 00	50				
11	348	38.6	-9	13.1	298	09.8 ¹¹¹	-17 25.1 ³⁰	10 N	17 42	18 03	18 28	9 17	51		21 14	51				
12	3	38.7	-9	14.1	312	39.8 ¹¹⁰	-17 27.9 ²⁸	0	17 49	18 10	18 34	9 04	50		21 28	51				
13	18	38.8		15.0	327	09.8 ¹¹⁰	30.7 ²⁸	10 S	17 55	17	42	8 51	50		41	52				
14	33	38.9		15.9	341	39.7 ¹⁰⁹	33.3 ²⁶	20	18 03	25	18 51	37	49		21 56	51				
15	48	39.1		16.8	356	09.6 ¹⁰⁹	35.9 ²⁶	30	11	36	19 04	21	48		22 12	52				
16	63	39.2		17.7	10	39.5 ¹⁰⁹	38.4 ²⁵	35	16	42	13	12	47		22	52				
17	78	39.3	-9	18.6	25	09.3 ¹⁰⁸	-17 40.8 ²⁴	40	18 22	18 50	19 23	8 02	46		22 33	52				
18	93	39.5	-9	19.5	39	39.1 ¹⁰⁸	-17 43.1 ²³	45	18 28	18 59	19 36	7 49	46		22 46	52				
19	108	39.6		20.5	54	08.9 ¹⁰⁸	45.4 ²³	50	36	19 10	19 52	34	46		23 01	53				
20	123	39.7		21.4	68	38.6 ¹⁰⁷	47.5 ²¹	52	40	15	20 00	27	45		09	52				
21	138	39.8		22.3	83	08.3 ¹⁰⁷	49.6 ²¹	54	44	21	09	20	44		17	53				
22	153	40.0		23.2	97	37.9 ¹⁰⁶	51.5 ¹⁹	56	48	28	19	11	44		26	53				
23	168	40.1		24.1	112	07.5 ¹⁰⁶	53.4 ¹⁹	58	53	36	31	7 01	43		36	53				
24	183	40.2	-9	25.0	126	37.1 ¹⁰⁶	-17 55.2 ¹⁸	60 S	18 59	19 45	20 45	6 50	42		23 48	54				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 22 ^h 15 ^m 6		Mag: -4.6 PMG: 8 ^h 53 ^m			Mag: +1.7 PMG: 9 ^h 20 ^m			Mag: -1.8 PMG: 9 ^h 21 ^m			Mag: +0.6 PMG: 14 ^h 20 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'	°	'	'			
0	25	10.9	226	39.5	+7	55.1	219	46.1	+7	40.5	219	32.4	+7	10.4	144	23.8	-18	58.8		
1	40	13.4	241	39.7		54.5	234	47.1		40.0	234	34.4		10.2	159	26.0		58.9		
2	55	15.8	256	39.9		54.0	249	48.1		39.4	249	36.4		10.1	174	28.2		58.9		
3	70	18.3	271	40.1		53.4	264	49.1		38.8	264	38.4		09.9	189	30.4		59.0		
4	85	20.7	286	40.3		52.8	279	50.2		38.2	279	40.4		09.7	204	32.6		59.0		
5	100	23.2	301	40.5	+7	52.2	294	51.2	+7	37.6	294	42.4	+7	09.5	219	34.8	-18	59.1		
6	115	25.7	316	40.7	+7	51.7	309	52.2	+7	37.0	309	44.5	+7	09.3	234	37.0	-18	59.1		
7	130	28.1	331	40.9		51.1	324	53.2		36.4	324	46.5		09.2	249	39.2		59.2		
8	145	30.6	346	41.1		50.5	339	54.3		35.9	339	48.5		09.0	264	41.4		59.2		
9	160	33.1	1	41.3		49.9	354	55.3		35.3	354	50.5		08.8	279	43.6		59.3		
10	175	35.5	16	41.5		49.4	9	56.3		34.7	9	52.6		08.6	294	45.8		59.3		
11	190	38.0	31	41.7	+7	48.8	24	57.4	+7	34.1	24	54.6	+7	08.5	309	48.0	-18	59.4		
12	205	40.5	46	41.9	+7	48.2	39	58.4	+7	33.5	39	56.6	+7	08.3	324	50.2	-18	59.5		
13	220	42.9	61	42.1		47.6	54	59.4		32.9	54	58.6		08.1	339	52.4		59.5		
14	235	45.4	76	42.3		47.0	70	00.4		32.4	70	00.6		07.9	354	54.6		59.6		
15	250	47.8	91	42.5		46.5	85	01.5		31.8	85	02.7		07.8	9	56.8		59.6		
16	265	50.3	106	42.7		45.9	100	02.5		31.2	100	04.7		07.6	24	59.1		59.7		
17	280	52.8	121	42.9	+7	45.3	115	03.5	+7	30.6	115	06.7	+7	07.4	40	01.3	-18	59.7		
18	295	55.2	136	43.0	+7	44.7	130	04.5	+7	30.0	130	08.7	+7	07.2	55	03.5	-18	59.8		
19	310	57.7	151	43.2		44.1	145	05.6		29.4	145	10.7		07.0	70	05.7		59.8		
20	326	00.2	166	43.4		43.5	160	06.6		28.8	160	12.8		06.9	85	07.9	-18	59.9		
21	341	02.6	181	43.6		42.9	175	07.6		28.3	175	14.8		06.7	100	10.1	-19	00.0		
22	356	05.1	196	43.8		42.4	190	08.7		27.7	190	16.8		06.5	115	12.3	-19	00.0		
23	11	07.6	211	44.0		41.8	205	09.7		27.1	205	18.8		06.3	130	14.5	-19	00.1		
24	26	10.0	226	44.2	+7	41.2	220	10.7	+7	26.5	220	20.8	+7	06.2	145	16.7	-19	00.1		
Dif	—		+2			-6	+10			-6			+20			-2	+22			-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/0			Edad: 5 ^d 0	PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/3 R°: 51 ^m										
	PMG: 11 ^h 45 ^m 2														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	183	40.2	-9 25.0	126	37.1	-17 55.2		5 15	6 03	6 46	12 18	50	19 54	58	
1	198	40.3	25.9	141	06.6	56.9	17	15	6 01	41	12 06	50	20 07	57	
2	213	40.5	26.8	155	36.1	58.5	16	16	5 59	37	11 55	50	18 56		
3	228	40.6	27.7	170	05.6	00.0	15	16	57	33	46	50	27 56		
4	243	40.7	28.7	184	35.0	01.4	14	16	55	29	37	51	35 56		
5	258	40.8	-9 29.6	199	04.4	02.7	13	5 16	5 53	6 26	11 30	50	20 43	56	
6	273	40.9	-9 30.5	213	33.8	04.0	13	5 15	5 49	6 19	11 14	50	20 59	55	
7	288	41.1	31.4	228	03.1	05.1	11	14	46	13	11 01	50	21 12	55	
8	303	41.2	32.3	242	32.4	06.1	10	13	42	08	10 49	51	24 54		
9	318	41.3	33.2	257	01.7	07.1	10	12	39	6 04	39	52	34 53		
10	333	41.4	34.1	271	30.9	07.9	8	08	33	5 56	23	51	21 50	54	
11	348	41.6	-9 35.0	286	00.1	08.7	8	5 03	5 27	5 49	10 08	51	22 05	53	
12	3	41.7	-9 35.9	300	29.2	09.4	7	4 57	5 21	5 42	9 54	52	22 19	52	
13	18	41.8	36.8	314	58.4	10.0	6	49	14	35	41	51	33 51		
14	33	41.9	37.8	329	27.5	10.4	4	39	5 05	28	26	52	22 47	51	
15	48	42.0	38.7	343	56.5	10.8	3	26	4 55	19	9 09	52	23 04	50	
16	63	42.2	39.6	358	25.5	11.1	3	17	48	14	8 59	53	14 50		
17	78	42.3	-9 40.5	12	54.5	11.3	2	4 07	4 41	5 09	8 48	52	23 25	49	
18	93	42.4	-9 41.4	27	23.5	11.4	1	3 54	4 31	5 02	8 35	53	23 38	49	
19	108	42.5	42.3	41	52.5	11.4	0	38	20	4 54	20	52	23 54	48	
20	123	42.6	43.2	56	21.4	11.3	1	30	14	50	12	52	***	***	
21	138	42.8	44.1	70	50.2	11.1	2	21	08	46	8 04	52	***	***	
22	153	42.9	45.0	85	19.1	10.8	3	3 11	4 02	42	7 55	52	***	***	
23	168	43.0	45.9	99	47.9	10.4	4	2 59	3 54	37	44	52	***	***	
24	183	43.1	-9 46.8	114	16.7	09.9	5	2 44	3 45	4 31	7 32	52	***	***	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 11 ^m 7		Mag: -4.6 PMG: 8 ^h 53 ^m		Mag: +1.7 PMG: 9 ^h 19 ^m		Mag: -1.8 PMG: 9 ^h 17 ^m		Mag: +0.6 PMG: 14 ^h 17 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	26	10.0	226	44.2	+7 41.2		220	20.8	+7 06.2	145	16.7			
1	41	12.5	241	44.4	40.6	235	11.7	25.9	06.0	160	18.9			
2	56	15.0	256	44.6	40.0	250	12.8	25.3	05.8	175	21.1			
3	71	17.4	271	44.7	39.4	265	13.8	24.7	05.6	190	23.3			
4	86	19.9	286	44.9	38.8	280	14.8	24.2	05.5	205	25.5			
5	101	22.3	301	45.1	+7 38.2	295	15.9	+7 23.6	05.3	220	27.7			
6	116	24.8	316	45.3	+7 37.6	310	16.9	+7 23.0	05.1	235	29.9			
7	131	27.3	331	45.5	37.0	325	17.9	22.4	04.9	250	32.1			
8	146	29.7	346	45.7	36.4	340	19.0	21.8	04.8	265	34.3			
9	161	32.2	1	45.8	35.8	355	20.0	21.2	04.6	280	36.5			
10	176	34.7	16	46.0	35.2	10	21.0	20.6	04.4	295	38.7			
11	191	37.1	31	46.2	+7 34.6	25	22.0	+7 20.0	04.2	310	40.9			
12	206	39.6	46	46.4	+7 34.0	40	23.1	+7 19.5	04.0	325	43.1			
13	221	42.1	61	46.6	33.4	55	24.1	18.9	03.9	340	45.3			
14	236	44.5	76	46.7	32.8	70	25.1	18.3	03.7	355	47.5			
15	251	47.0	91	46.9	32.2	85	26.2	17.7	03.5	10	49.7			
16	266	49.5	106	47.1	31.6	100	27.2	17.1	03.3	25	51.9			
17	281	51.9	121	47.3	+7 31.0	115	28.2	+7 16.5	03.2	40	54.1			
18	296	54.4	136	47.4	+7 30.4	130	29.3	+7 15.9	03.0	55	56.3			
19	311	56.8	151	47.6	29.8	145	30.3	15.4	02.8	70	58.5			
20	326	59.3	166	47.8	29.2	160	31.3	14.8	02.6	86	00.7			
21	342	01.8	181	47.9	28.6	175	32.4	14.2	02.5	101	02.9			
22	357	04.2	196	48.1	28.0	190	33.4	13.6	02.3	116	05.1			
23	12	06.7	211	48.3	27.4	205	34.4	13.0	02.1	131	07.3			
24	27	09.2	226	48.5	+7 26.8	220	35.4	+7 12.4	01.9	146	09.5			
Dif	—		+2		-6	+10		-6	+20		+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 6 ^d 0	PHE { 4 ^h : 56 ^s /5 12 ^h : 56 ^s /7 20 ^h : 57 ^s /0 R°: 53 ^m									
	PMG: 11 ^h 45 ^m 0					SD: 15 ^h 4			PMG: 16 ^h 58 ^m		R°: 53 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m
0	183	43.1	-9 46.8	114	16.7	-18 09.9	6	60 N	16 41	17 23	18 11	41	20 52	68
1	198	43.2	47.7	128	45.5	09.3	6	58	46	26	11	42	56	66
2	213	43.4	48.6	143	14.2	08.6	7	56	50	28	11	45	43	65
3	228	43.5	49.5	157	42.9	07.9	7	54	55	31	11	36	44	64
4	243	43.6	50.4	172	11.6	07.0	9	52	16 58	33	12	28	45	64
5	258	43.7	-9 51.4	186	40.3	-18 06.0	10	50	17 02	17 34	18 12	46	21 39	62
6	273	43.8	-9 52.3	201	08.9	-18 04.9	11	45	17 09	17 39	18 13	47	21 54	61
7	288	43.9	53.2	215	37.5	03.7	12	40	15	43	14	51	48	59
8	303	44.1	54.1	230	06.1	02.5	12	35	21	46	16	40	49	58
9	318	44.2	55.0	244	34.6	-18 01.1	14	30	25	50	18	31	49	58
10	333	44.3	55.9	259	03.2	-17 59.6	15	20	34	17 56	22	11 14	51	55
11	348	44.4	-9 56.8	273	31.7	-17 58.0	16	10 N	17 41	18 03	18 27	52	22 58	54
12	3	44.5	-9 57.7	288	00.2	-17 56.3	17	0	17 48	18 09	18 34	53	23 11	53
13	18	44.6	58.6	302	28.6	54.6	17	10 S	17 56	17	42	32	54	52
14	33	44.8	-9 59.5	316	57.1	52.7	19	20	18 03	26	18 52	54	38	50
15	48	44.9	-10 00.4	331	25.5	50.7	20	30	12	37	19 06	56	23 54	49
16	63	45.0	01.3	345	53.9	48.6	21	35	18	44	15	52	56	***
17	78	45.1	-10 02.2	0	22.3	-17 46.4	22	40	18 24	18 52	19 26	58	56	***
18	93	45.2	-10 03.1	14	50.6	-17 44.2	22	45	18 31	19 01	19 39	58	58	***
19	108	45.3	04.0	29	19.0	41.8	24	50	39	14	19 56	59	59	***
20	123	45.4	04.9	43	47.3	39.3	25	52	43	19	20 04	60	0 01	48
21	138	45.6	05.8	58	15.6	36.7	26	54	47	26	14	56	61	10
22	153	45.7	06.7	72	43.8	34.0	27	56	52	33	25	61	62	19
23	168	45.8	07.6	87	12.1	31.2	28	58	18 58	41	37	62	63	29
24	183	45.9	-10 08.5	101	40.3	-17 28.3	29	60 S	19 04	19 50	20 53	63	0 42	45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 07 ^m 8		Mag: -4.6 PMG: 8 ^h 53 ^m		Mag: +1.7 PMG: 9 ^h 17 ^m		Mag: -1.8 PMG: 9 ^h 14 ^m		Mag: +0.6 PMG: 14 ^h 13 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	27	09.2	226 48.5	+7 26.8	220 35.4	+7 12.4	221 09.4	+7 01.9	146 09.5	
1	42	11.6	241 48.6	26.2	235 36.5	11.8	236 11.4	01.8	161 11.7	
2	57	14.1	256 48.8	25.6	250 37.5	11.2	251 13.5	01.6	176 13.9	
3	72	16.6	271 49.0	24.9	265 38.5	10.7	266 15.5	01.4	191 16.1	
4	87	19.0	286 49.1	24.3	280 39.6	10.1	281 17.5	01.2	206 18.3	
5	102	21.5	301 49.3	+7 23.7	295 40.6	+7 09.5	296 19.5	+7 01.1	221 20.5	
6	117	23.9	316 49.5	+7 23.1	310 41.6	+7 08.9	311 21.6	+7 00.9	236 22.7	
7	132	26.4	331 49.6	22.5	325 42.7	08.3	326 23.6	00.7	251 24.9	
8	147	28.9	346 49.8	21.9	340 43.7	07.7	341 25.6	00.5	266 27.1	
9	162	31.3	1 50.0	21.3	355 44.7	07.1	356 27.6	00.4	281 29.3	
10	177	33.8	16 50.1	20.6	10 45.8	06.5	11 29.7	+7 00.2	296 31.5	
11	192	36.3	31 50.3	+7 20.0	25 46.8	+7 06.0	26 31.7	+7 00.0	311 33.7	
12	207	38.7	46 50.4	+7 19.4	40 47.8	+7 05.4	41 33.7	+6 59.8	326 35.9	
13	222	41.2	61 50.6	18.8	55 48.9	04.8	56 35.7	59.7	341 38.1	
14	237	43.7	76 50.8	18.2	70 49.9	04.2	71 37.8	59.5	356 40.3	
15	252	46.1	91 50.9	17.5	85 50.9	03.6	86 39.8	59.3	11 42.5	
16	267	48.6	106 51.1	16.9	100 52.0	03.0	101 41.8	59.1	26 44.7	
17	282	51.1	121 51.2	+7 16.3	115 53.0	+7 02.4	116 43.9	+6 59.0	41 46.9	
18	297	53.5	136 51.4	+7 15.7	130 54.0	+7 01.8	131 45.9	+6 58.8	56 49.1	
19	312	56.0	151 51.5	15.1	145 55.1	01.3	146 47.9	58.6	71 51.3	
20	327	58.4	166 51.7	14.4	160 56.1	00.7	161 49.9	58.4	86 53.5	
21	343	00.9	181 51.9	13.8	175 57.1	+7 00.1	176 52.0	58.3	101 55.7	
22	358	03.4	196 52.0	13.2	190 58.2	+6 59.5	191 54.0	58.1	116 57.9	
23	13	05.8	211 52.2	12.6	205 59.2	58.9	206 56.0	57.9	132 00.1	
24	28	08.3	226 52.3	+7 11.9	221 00.2	+6 58.3	221 58.0	+6 57.7	147 02.3	
Dif	—		+2	-6	+10	-6	+20	-2	+22	-1

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 9				Edad: 7 ^d 0 PHE { 4 ^h : 57'2 12 ^h : 57'5 20 ^h : 57'7 R°: 54 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	45.9	-10	08.5	101	40.3	-17	28.3	60 N	5	20	6	08	6	51	13	49	33
1	198	46.0		09.4	116	08.5	92	25.4	58	20	05	45	38	35	22	00	76	
2	213	46.1		10.3	130	36.7	92	22.3	56	20	03	41	28	37	19	73		
3	228	46.2		11.2	145	04.9	92	19.1	54	19	6	00	37	20	38	27	7	
4	243	46.3		12.1	159	33.1	92	15.8	52	19	5	58	33	13	39	35	69	
5	258	46.4	-10	13.0	174	01.2	91	-17	50	5	19	5	56	6	29	13	06	40
6	273	46.6	-10	13.9	188	29.4	92	-17	45	5	18	5	52	6	22	12	51	43
7	288	46.7		14.8	202	57.5	91	05.3	40	16	48	15	39	45	23	06	64	
8	303	46.8		15.7	217	25.6	91	-17	35	15	44	10	29	46	16	62		
9	318	46.9		16.6	231	53.6	90	-16	30	13	41	6	05	20	48	25	60	
10	333	47.0		17.5	246	21.7	91	53.9	20	08	34	5	56	12	05	49	39	58
11	348	47.1	-10	18.4	260	49.8	91	-16	10 N	5	03	5	27	5	49	11	51	52
12	3	47.2	-10	19.3	275	17.8	90	-16	0	4	56	5	21	5	42	11	39	53
13	18	47.3		20.2	289	45.8	90	41.7	10 S	48	13	34	26	55	***	***	***	
14	33	47.4		21.1	304	13.8	90	37.4	20	37	5	04	26	11	12	57	***	***
15	48	47.5		22.0	318	41.8	90	33.0	30	23	4	52	17	10	57	59	***	***
16	63	47.6		22.9	333	09.8	90	28.5	35	15	46	12	48	60	0	04	47	
17	78	47.8	-10	23.8	347	37.8	90	-16	40	4	04	4	38	5	06	10	38	61
18	93	47.9	-10	24.7	2	05.8	90	-16	45	3	51	4	28	4	58	10	26	63
19	108	48.0		25.5	16	33.7	89	14.4	50	33	16	50	11	66	42	43		
20	123	48.1		26.4	31	01.6	89	09.5	52	25	10	46	10	04	67	49	42	
21	138	48.2		27.3	45	29.6	90	-16	54	15	4	03	42	9	57	67	0	57
22	153	48.3		28.2	59	57.5	89	-15	56	3	04	3	56	37	48	69	1	05
23	168	48.4		29.1	74	25.4	89	54.3	58	2	52	48	31	38	71	15	39	
24	183	48.5	-10	30.0	88	53.3	89	-15	60 S	2	36	3	39	4	25	9	27	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 03 ^m 8		Mag: -4.6 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 9 ^h 15 ^m		Mag: -1.8 PMG: 9 ^h 11 ^m		Mag: +0.6 PMG: 14 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	08.3	226	52.3	+7	11.9	221	58.0	+6	57.7
1	43	10.8	241	52.5		11.3	236	00.1		57.6
2	58	13.2	256	52.6		10.7	251	02.1		57.4
3	73	15.7	271	52.8		10.0	266	04.1		57.2
4	88	18.2	286	52.9		09.4	281	06.2		57.0
5	103	20.6	301	53.1	+7	08.8	296	08.2	+6	56.9
6	118	23.1	316	53.2	+7	08.1	311	10.2	+6	56.7
7	133	25.6	331	53.4		07.5	326	12.2		56.5
8	148	28.0	346	53.5		06.9	341	14.3		56.3
9	163	30.5	1	53.7		06.2	356	16.3		56.2
10	178	32.9	16	53.8		05.6	11	18.3		56.0
11	193	35.4	31	54.0	+7	05.0	26	20.4	+6	55.8
12	208	37.9	46	54.1	+7	04.3	41	22.4	+6	55.6
13	223	40.3	61	54.2		03.7	56	24.4		55.5
14	238	42.8	76	54.4		03.1	71	26.4		55.3
15	253	45.3	91	54.5		02.4	86	28.5		55.1
16	268	47.7	106	54.7		01.8	101	30.5		55.0
17	283	50.2	121	54.8	+7	01.1	116	32.5	+6	54.8
18	298	52.7	136	55.0	+7	00.5	131	34.6	+6	54.6
19	313	55.1	151	55.1	+6	59.9	146	36.6		54.4
20	328	57.6	166	55.2		59.2	161	38.6		54.3
21	344	00.1	181	55.4		58.6	176	40.7		54.1
22	359	02.5	196	55.5		57.9	191	42.7		53.9
23	14	05.0	211	55.6		57.3	206	44.7		53.7
24	29	07.4	226	55.8	+6	56.6	221	46.8	+6	53.6
Dif	—		+1		-6		+10		-6	
							+20		-2	
									+22	
									-1	

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: 8 ^d 0 PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6 R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	48.5	-10	30.0	88	53.3	-15	49.0	60 N	16 35	17 18	18 06	14 22 28	23 16 83	
1	198	48.6		30.9	103	21.1	88	43.6	58	41	21	06	13 30	25 80	
2	213	48.7		31.8	117	49.0	89	38.1	56	46	24	07	14 05 32	32 78	
3	228	48.8		32.7	132	16.9	89	32.6	54	50	26	07	13 58 34	38 76	
4	243	48.9		33.6	146	44.7	88	26.9	52	54	28	08	13 52 35	44 75	
5	258	49.0	-10	34.5	161	12.6	89	-15 21.1	50	16 58	17 31	18 08	13 46 37	23 49 73	
6	273	49.1	-10	35.4	175	40.4	88	-15 15.3	45	17 06	17 36	18 10	13 34 40	*** ** *	
7	288	49.2		36.3	190	08.2	88	09.3	40	12	40	11	24 42	*** ** *	
8	303	49.3		37.2	204	36.0	88	-15 03.3	35	18	44	13	15 44	*** ** *	
9	318	49.4		38.1	219	03.8	88	-14 57.1	30	23	48	16	13 08 45	*** ** *	
10	333	49.5		38.9	233	31.6	88	50.9	20	32	17 55	21	12 54 49	*** ** *	
11	348	49.6	-10	39.8	247	59.4	88	-14 44.5	10 N	17 40	18 02	18 26	12 43 51	*** ** *	
12	3	49.7	-10	40.7	262	27.2	88	-14 38.1	0	17 48	18 09	18 34	12 32 54	0 04 53	
13	18	49.9		41.6	276	55.0	88	31.6	10 S	17 56	17	42	21 56	16 51	
14	33	50.0		42.5	291	22.7	87	25.0	20	18 04	27	18 53	12 09 59	28 50	
15	48	50.1		43.4	305	50.5	88	18.3	30	14	38	19 08	11 56 62	43 46	
16	63	50.2		44.3	320	18.2	87	11.5	35	19	46	17	48 64	0 51 45	
17	78	50.3	-10	45.2	334	46.0	88	-14 04.6	40	18 26	18 54	19 28	11 39 66	1 01 43	
18	93	50.4	-10	46.1	349	13.7	87	-13 57.6	45	18 33	19 04	19 42	11 29 68	1 12 41	
19	108	50.5		46.9	3	41.4	87	50.5	50	43	17	20 00	17 70	25 38	
20	123	50.6		47.8	18	09.1	87	43.4	52	47	23	09	11 72	31 37	
21	138	50.7		48.7	32	36.9	88	36.1	54	51	30	19	11 04 74	38 36	
22	153	50.8		49.6	47	04.6	87	28.8	56	18 57	38	30	10 57 76	45 34	
23	168	50.9		50.5	61	32.3	87	21.3	58	19 02	46	20 44	49 78	1 54 32	
24	183	51.0	-10	51.4	76	00.0	87	-13 13.8	60 S	19 09	19 56	21 00	10 40 80	2 04 30	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 59 ^m 9		Mag: -4.6 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 9 ^h 14 ^m		Mag: -1.8 PMG: 9 ^h 08 ^m		Mag: +0.6 PMG: 14 ^h 06 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	29	07.4	226	55.8	221	25.1	222	46.8	147	55.0					
1	44	09.9	241	55.9	236	26.1	237	48.8	162	57.2					
2	59	12.4	256	56.1	251	27.2	252	50.8	177	59.4					
3	74	14.8	271	56.2	266	28.2	267	52.8	193	01.6					
4	89	17.3	286	56.3	281	29.2	282	54.9	208	03.8					
5	104	19.8	301	56.5	296	30.3	297	56.9	223	06.0					
6	119	22.2	316	56.6	311	31.3	312	58.9	238	08.2					
7	134	24.7	331	56.7	326	32.3	328	01.0	253	10.4					
8	149	27.2	346	56.9	341	33.4	343	03.0	268	12.6					
9	164	29.6	1	57.0	356	34.4	358	05.0	283	14.8					
10	179	32.1	16	57.1	11	35.5	13	07.1	298	17.0					
11	194	34.5	31	57.2	26	36.5	28	09.1	313	19.2					
12	209	37.0	46	57.4	41	37.5	43	11.1	328	21.4					
13	224	39.5	61	57.5	56	38.6	58	13.2	343	23.6					
14	239	41.9	76	57.6	71	39.6	73	15.2	358	25.8					
15	254	44.4	91	57.8	86	40.6	88	17.2	13	28.0					
16	269	46.9	106	57.9	101	41.7	103	19.3	28	30.2					
17	284	49.3	121	58.0	116	42.7	118	21.3	43	32.4					
18	299	51.8	136	58.1	131	43.8	133	23.3	58	34.6					
19	314	54.3	151	58.3	146	44.8	148	25.4	73	36.8					
20	329	56.7	166	58.4	161	45.8	163	27.4	88	38.9					
21	344	59.2	181	58.5	176	46.9	178	29.4	103	41.1					
22	0	01.7	196	58.6	191	47.9	193	31.5	118	43.3					
23	15	04.1	211	58.7	206	49.0	208	33.5	133	45.5					
24	30	06.6	226	58.9	221	50.0	223	35.5	148	47.7					
Dif	—		+1		-7		+10		-2						

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: 9 ^d 0 PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'4 R°: 54 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	51.0	-10	51.4	76	00.0	-13	13.8	60 N	5	24	6	13	6	56	14	50
1	198	51.1		52.3	90	27.6	86	-13	06.2	58	24	10		50	43	26	
2	213	51.2		53.2	104	55.3	87	-12	58.5	56	23	07		45	37	29	
3	228	51.3		54.0	119	23.0	87		50.7	54	23	04		40	32	30	
4	243	51.4		54.9	133	50.7	87		42.8	52	22	6	02	36	27	32	
5	258	51.4	-10	55.8	148	18.3	86	-12	34.9	50	5	22	5	59	6	32	
6	273	51.5	-10	56.7	162	46.0	87	-12	26.9	45	5	20	5	54	6	24	
7	288	51.6		57.6	177	13.6	86		18.7	40	18		50	17	14	06	
8	303	51.7		58.5	191	41.3	87		10.5	35	16		46	12	13	59	
9	318	51.8	-10	59.4	206	08.9	86	-12	02.2	30	14		42	6	06	53	
10	333	51.9	-11	00.2	220	36.5	86	-11	53.9	20	09		35	5	57	43	
11	348	52.0	-11	01.1	235	04.2	87	-11	45.4	10 N	5	03		5	28	5	
12	3	52.1	-11	02.0	249	31.8	86	-11	36.9	0	4	56		5	20	5	
13	18	52.2		02.9	263	59.4	86		28.3	10 S	47		12	33	17	57	
14	33	52.3		03.8	278	27.0	86		19.6	20	36		5	02	25	13	
15	48	52.4		04.7	292	54.6	86		10.8	30	21		4	50	15	12	
16	63	52.5		05.5	307	22.2	86	-11	02.0	35	12		43	09	52	66	
17	78	52.6	-11	06.4	321	49.8	86	-10	53.0	40	4	01		4	35	5	
18	93	52.7	-11	07.3	336	17.4	86	-10	44.0	45	3	47		4	24	4	
19	108	52.8		08.2	350	44.9	85		34.9	50	29		11	46	27	75	
20	123	52.9		09.1	5	12.5	86		25.8	52	20		4	05	42	23	
21	138	53.0		09.9	19	40.0	85		16.6	54	3	10		3	58	37	
22	153	53.1		10.8	34	07.6	86	-10	07.3	56	2	58		51	32	13	
23	168	53.2		11.7	48	35.1	85	-9	57.9	58	44		42	26	26	07	
24	183	53.3	-11	12.6	63	02.7	86	-9	48.4	60 S	2	28		3	32	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 56 ^m 0		Mag: -4.5 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 9 ^h 12 ^m		Mag: -1.8 PMG: 9 ^h 04 ^m		Mag: +0.6 PMG: 14 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	06.6	226	58.9	+6	40.9	221	50.0	+6	30.1
1	45	09.0	241	59.0		40.2	236	51.0		29.5
2	60	11.5	256	59.1		39.6	251	52.1		28.9
3	75	14.0	271	59.2		38.9	266	53.1		28.3
4	90	16.4	286	59.3		38.2	281	54.2		27.7
5	105	18.9	301	59.5	+6	37.6	296	55.2	+6	27.1
6	120	21.4	316	59.6	+6	36.9	311	56.2	+6	26.5
7	135	23.8	331	59.7		36.2	326	57.3		25.9
8	150	26.3	346	59.8		35.6	341	58.3		25.3
9	165	28.8	1	59.9		34.9	356	59.3		24.8
10	180	31.2	17	00.0		34.2	12	00.4		24.2
11	195	33.7	32	00.2	+6	33.6	27	01.4	+6	23.6
12	210	36.2	47	00.3	+6	32.9	42	02.5	+6	23.0
13	225	38.6	62	00.4		32.2	57	03.5		22.4
14	240	41.1	77	00.5		31.5	72	04.6		21.8
15	255	43.5	92	00.6		30.9	87	05.6		21.2
16	270	46.0	107	00.7		30.2	102	06.6		20.6
17	285	48.5	122	00.8	+6	29.5	117	07.7	+6	20.0
18	300	50.9	137	00.9	+6	28.8	132	08.7	+6	19.4
19	315	53.4	152	01.0		28.2	147	09.8		18.9
20	330	55.9	167	01.2		27.5	162	10.8		18.3
21	345	58.3	182	01.3		26.8	177	11.8		17.7
22	1	00.8	197	01.4		26.1	192	12.9		17.1
23	16	03.3	212	01.5		25.4	207	13.9		16.5
24	31	05.7	227	01.6	+6	24.8	222	15.0	+6	15.9
Dif	—		+1		-7		+10		-6	

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: 10 ^d 0 PHE { 4 ^h : 59'6 12 ^h : 59'9 20 ^h : 60'1 R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	183	53.3	-11	12.6	63	02.7	-9 48.4	60 N	16 29	17 13	18 01	15 13 22	0 39 87		
1	198	53.3		13.5	77	30.2	85 38.9	58	35	16	02	09 24	45 84		
2	213	53.4		14.3	91	57.7	85 29.3	56	41	19	02	06 26	50 82		
3	228	53.5		15.2	106	25.2	85 19.7	54	46	22	03	15 02 29	54 80		
4	243	53.6		16.1	120	52.8	86 10.0	52	50	25	04	14 59 30	0 59 78		
5	258	53.7	-11	17.0	135	20.3	85 -9 00.2	50	16 54	17 27	18 05	14 56 32	1 02 77		
6	273	53.8	-11	17.9	149	47.7	84 -8 50.3	45	17 02	17 32	18 07	14 51 35	1 10 73		
7	288	53.9		18.7	164	15.2	85 40.4	40	10	37	09	46 38	17 70		
8	303	54.0		19.6	178	42.7	85 30.4	35	16	42	11	41 41	23 67		
9	318	54.1		20.5	193	10.2	85 20.4	30	21	46	14	37 44	28 65		
10	333	54.2		21.4	207	37.6	84 10.3	20	31	17 53	19	31 47	37 60		
11	348	54.2	-11	22.2	222	05.1	85 -8 00.1	10 N	17 40	18 01	18 26	14 25 51	1 44 57		
12	3	54.3	-11	23.1	236	32.5	84 -7 49.9	0	17 48	18 09	18 33	14 20 54	1 51 54		
13	18	54.4		24.0	250	59.9	84 39.6	10 S	17 56	17	43	14 58	1 58 51		
14	33	54.5		24.9	265	27.4	85 29.2	20	18 05	28	18 54	08 62	2 06 47		
15	48	54.6		25.8	279	54.8	84 18.8	30	15	40	19 09	14 02 65	14 44		
16	63	54.7		26.6	294	22.2	84 -7 08.3	35	21	48	19	13 58 68	19 41		
17	78	54.8	-11	27.5	308	49.6	84 -6 57.8	40	18 28	18 57	19 31	13 53 71	2 24 39		
18	93	54.9	-11	28.4	323	16.9	83 -6 47.2	45	18 36	19 07	19 45	13 48 74	2 30 36		
19	108	54.9		29.3	337	44.3	84 36.6	50	46	21	20 04	42 78	38 32		
20	123	55.0		30.1	352	11.7	84 25.9	52	50	27	13	39 80	41 31		
21	138	55.1		31.0	6	39.0	83 15.2	54	18 55	34	24	36 82	45 29		
22	153	55.2		31.9	21	06.4	84 -6 04.4	56	19 01	42	36	33 83	49 27		
23	168	55.3		32.7	35	33.7	83 -5 53.6	58	07	19 52	20 51	29 86	54 25		
24	183	55.4	-11	33.6	50	01.0	83 -5 42.7	60 S	19 14	20 02	21 08	13 25 88	2 59 22		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 52 ^m 0		Mag: -4.5 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 9 ^h 10 ^m		Mag: -1.8 PMG: 9 ^h 01 ^m		Mag: +0.6 PMG: 13 ^h 59 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	31	05.7	227	01.6	+6	24.8	222	24.4	+6	45.3					
1	46	08.2	242	01.7		24.1	237	26.4		45.1					
2	61	10.6	257	01.8		23.4	252	28.4		45.0					
3	76	13.1	272	01.9		22.7	267	30.5		44.8					
4	91	15.6	287	02.0		22.0	282	32.5		44.6					
5	106	18.0	302	02.1	+6	21.3	297	34.6	+6	44.5					
6	121	20.5	317	02.2	+6	20.6	312	36.6	+6	44.3					
7	136	23.0	332	02.3		20.0	327	38.6		44.1					
8	151	25.4	347	02.4		19.3	342	40.7		43.9					
9	166	27.9	2	02.5		18.6	357	42.7		43.8					
10	181	30.4	17	02.6		17.9	12	44.7		43.6					
11	196	32.8	32	02.7	+6	17.2	27	46.8	+6	43.4					
12	211	35.3	47	02.8	+6	16.5	42	48.8	+6	43.3					
13	226	37.8	62	02.9		15.8	57	50.9		43.1					
14	241	40.2	77	03.0		15.1	72	52.9		42.9					
15	256	42.7	92	03.1		14.4	87	54.9		42.7					
16	271	45.1	107	03.2		13.7	102	57.0		42.6					
17	286	47.6	122	03.3	+6	13.1	117	59.0	+6	42.4					
18	301	50.1	137	03.4	+6	12.4	132	01.1	+6	42.2					
19	316	52.5	152	03.5		11.7	147	03.1		42.1					
20	331	55.0	167	03.6		11.0	162	05.1		41.9					
21	346	57.5	182	03.7		10.3	177	07.2		41.7					
22	1	59.9	197	03.8		09.6	192	09.2		41.6					
23	17	02.4	212	03.9		08.9	207	11.3		41.4					
24	32	04.9	227	03.9	+6	08.2	222	13.3	+6	41.2					
Dif	—		+1		-7		+10		-6						
							+20		-2						
									+22						
									-1						

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 2			Edad: 11 ^d 0 PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'7 Rº: 55 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	55.4	-11	33.6	50	01.0	-5	42.7	60 N	5	29	6	17	7	01	15	35	
1	198	55.5		34.5	64	28.3	83	31.8	58	28	14	6	55		33	24	09	
2	213	55.5		35.4	78	55.6	83	20.8	56	27	11		49		32	26	12	
3	228	55.6		36.2	93	22.8	82	-5	54	26	08		44		31	27	14	
4	243	55.7		37.1	107	50.1	83	-4	52	26	05		40		29	30	17	
5	258	55.8	-11	38.0	122	17.4	83	-4	50	5	25	6	03	6	36	15	28	
6	273	55.9	-11	38.8	136	44.6	82	-4	45	5	23	5	57	6	27	15	26	
7	288	56.0		39.7	151	11.8	82	25.3	40	20	52		20		24	38	27	
8	303	56.1		40.6	165	39.0	82	14.1	35	18	47		13		22	41	30	
9	318	56.1		41.5	180	06.2	82	-4	30	15	43		6	08	21	43	33	
10	333	56.2		42.3	194	33.4	82	-3	20	10	35		5	58	18	48	37	
11	348	56.3	-11	43.2	209	00.5	81	-3	10 N	5	03	5	28	5	49	15	16	
12	3	56.4	-11	44.1	223	27.7	82	-3	0	4	55	5	20	5	41	15	14	
13	18	56.5		44.9	237	54.8	81	17.5	10 S	46	11		32		12	58	49	
14	33	56.5		45.8	252	21.9	81	-3	20	34	5	01	23		10	62	53	
15	48	56.6		46.7	266	49.0	81	-2	30	19	4	48	13		07	67	2	
16	63	56.7		47.5	281	16.1	81	43.2	35	4	09		07		06	69	3	
17	78	56.8	-11	48.4	295	43.2	81	-2	40	3	57	4	32	5	00	15	04	
18	93	56.9	-11	49.3	310	10.2	80	-2	45	3	43	4	21	4	52	15	02	
19	108	56.9		50.1	324	37.2	80	-2	50	24	07		42		15	00	79	
20	123	57.0		51.0	339	04.2	80	-1	52	15	4	01	37		14	59	81	
21	138	57.1		51.9	353	31.2	80	45.4	54	3	04	3	54	32		58	83	
22	153	57.2		52.7	7	58.2	80	33.8	56	2	52		45	27		56	86	
23	168	57.3		53.6	22	25.2	80	22.2	58	37	36		21		55	88	19	
24	183	57.3	-11	54.5	36	52.1	79	-1	60 S	2	19	3	25	4	13	14	53	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 48 ^m 1		Mag: -4.5 PMG: 8 ^h 52 ^m			Mag: +1.7 PMG: 9 ^h 09 ^m			Mag: -1.8 PMG: 8 ^h 58 ^m			Mag: +0.5 PMG: 13 ^h 56 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	32	04.9	227	03.9	+6	08.2	222	40.0	+6	01.7	225	13.3	+6	41.2	150	33.0	-19	08.1
1	47	07.3	242	04.0		07.5	237	41.0		01.1	240	15.3		41.0	165	35.2		08.1
2	62	09.8	257	04.1		06.8	252	42.1	+6	00.5	255	17.4		40.9	180	37.3		08.2
3	77	12.2	272	04.2		06.1	267	43.1	+5	59.9	270	19.4		40.7	195	39.5		08.3
4	92	14.7	287	04.3		05.4	282	44.2		59.4	285	21.5		40.5	210	41.7		08.3
5	107	17.2	302	04.4	+6	04.7	297	45.2	+5	58.8	300	23.5	+6	40.4	225	43.9	-19	08.4
6	122	19.6	317	04.5	+6	04.0	312	46.3	+5	58.2	315	25.5	+6	40.2	240	46.1	-19	08.4
7	137	22.1	332	04.6		03.3	327	47.3		57.6	330	27.6		40.0	255	48.3		08.5
8	152	24.6	347	04.7		02.6	342	48.3		57.0	345	29.6		39.9	270	50.5		08.5
9	167	27.0	2	04.7		01.9	357	49.4		56.4	0	31.7		39.7	285	52.7		08.6
10	182	29.5	17	04.8		01.1	12	50.4		55.8	15	33.7		39.5	300	54.9		08.6
11	197	32.0	32	04.9	+6	00.4	27	51.5	+5	55.2	30	35.7	+6	39.4	315	57.1	-19	08.7
12	212	34.4	47	05.0	+5	59.7	42	52.5	+5	54.6	45	37.8	+6	39.2	330	59.3	-19	08.8
13	227	36.9	62	05.1		59.0	57	53.6		54.0	60	39.8		39.0	346	01.4		08.8
14	242	39.4	77	05.2		58.3	72	54.6		53.4	75	41.9		38.8	1	03.6		08.9
15	257	41.8	92	05.3		57.6	87	55.7		52.9	90	43.9		38.7	16	05.8		08.9
16	272	44.3	107	05.3		56.9	102	56.7		52.3	105	45.9		38.5	31	08.0		09.0
17	287	46.7	122	05.4	+5	56.2	117	57.7	+5	51.7	120	48.0	+6	38.3	46	10.2	-19	09.0
18	302	49.2	137	05.5	+5	55.5	132	58.8	+5	51.1	135	50.0	+6	38.2	61	12.4	-19	09.1
19	317	51.7	152	05.6		54.8	147	59.8		50.5	150	52.1		38.0	76	14.6		09.1
20	332	54.1	167	05.7		54.1	163	00.9		49.9	165	54.1		37.8	91	16.8		09.2
21	347	56.6	182	05.7		53.3	178	01.9		49.3	180	56.2		37.7	106	19.0		09.3
22	2	59.1	197	05.8		52.6	193	03.0		48.7	195	58.2		37.5	121	21.1		09.3
23	18	01.5	212	05.9		51.9	208	04.0		48.1	211	00.2		37.3	136	23.3		09.4
24	33	04.0	227	06.0	+5	51.2	223	05.1	+5	47.5	226	02.3	+6	37.2	151	25.5	-19	09.4
Dif	—		+1 -7			+10 -6			+20 -2			+22 -1						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 44 ^m 1			Edad: 12 ^d 0 PHE { SD: 16'6 PMG: 22 ^h 22 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	57.3	-11	54.5	36	52.1	-1 10.5	60 N	16 24	17 07	17 56	15 56 22	3 36 91	
1	198	57.4		55.3	51	19.0	-0 58.8 ¹¹⁷	58	30	11	57	57 24	36 89	
2	213	57.5		56.2	65	45.9	47.2 ¹¹⁶	56	36	15	58	58 26	36 87	
3	228	57.6		57.1	80	12.8	35.5 ¹¹⁷	54	41	18	17 59	58 29	37 87	
4	243	57.6		57.9	94	39.7	23.8 ¹¹⁷	52	46	21	18 00	15 59 31	37 82	
5	258	57.7	-11	58.8	109	06.5	-0 12.1 ¹¹⁷	50	16 50	17 23	18 01	16 00 32	3 37 80	
6	273	57.8	-11	59.7	123	33.3	-0 00.3 ¹¹⁸	45	16 59	17 29	18 04	16 01 37	3 38 76	
7	288	57.9	-12	00.5	138	00.1	+0 11.4 ¹¹⁷	40	17 07	35	06	02 40	38 73	
8	303	58.0		01.4	152	26.9	23.1 ¹¹⁷	35	14	39	09	03 43	38 70	
9	318	58.0		02.2	166	53.6	34.9 ¹¹⁸	30	19	44	12	04 45	39 67	
10	333	58.1		03.1	181	20.4	46.6 ¹¹⁷	20	30	17 52	18	06 49	39 63	
11	348	58.2	-12	04.0	195	47.1	+0 58.4 ¹¹⁸	10 N	17 39	18 00	18 25	16 08 52	3 40 59	
12	3	58.3	-12	04.8	210	13.8	+1 10.1 ¹¹⁷	0	17 48	18 09	18 33	16 09 56	3 40 55	
13	18	58.3		05.7	224	40.4	21.9 ¹¹⁸	10 S	17 56	18	43	10 60	40 52	
14	33	58.4		06.6	239	07.1	33.6 ¹¹⁷	20	18 06	28	18 55	12 63	41 48	
15	48	58.5		07.4	253	33.7	45.3 ¹¹⁷	30	17	42	19 11	14 68	41 44	
16	63	58.5		08.3	268	00.3	+1 57.1 ¹¹⁸	35	23	50	21	15 70	41 42	
17	78	58.6	-12	09.1	282	26.8	+2 08.8 ¹¹⁷	40	18 30	18 59	19 33	16 16 73	3 41 39	
18	93	58.7	-12	10.0	296	53.4	+2 20.5 ¹¹⁷	45	18 39	19 10	19 49	16 18 76	3 42 35	
19	108	58.8		10.9	311	19.9	32.2 ¹¹⁷	50	49	24	20 08	19 81	42 32	
20	123	58.8		11.7	325	46.4	43.9 ¹¹⁷	52	54	31	18	20 82	42 30	
21	138	58.9		12.6	340	12.9	+2 55.6 ¹¹⁷	54	18 59	39	29	21 84	42 28	
22	153	59.0		13.4	354	39.3	+3 07.2 ¹¹⁶	56	19 05	47	42	22 87	42 26	
23	168	59.1		14.3	9	05.8	18.9 ¹¹⁷	58	12	19 57	20 58	23 89	42 24	
24	183	59.1	-12	15.1	23	32.2	+3 30.5 ¹¹⁶	60 S	19 19	20 08	21 17	16 24 92	3 42 22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 44 ^m 2		Mag: -4.5 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 9 ^h 07 ^m		Mag: -1.8 PMG: 8 ^h 55 ^m		Mag: +0.5 PMG: 13 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	33	04.0	227	06.0	+5	51.2	223	05.1	+5	47.5
1	48	06.5	242	06.1		50.5	238	06.1		46.9
2	63	08.9	257	06.1		49.8	253	07.2		46.3
3	78	11.4	272	06.2		49.0	268	08.2		45.7
4	93	13.9	287	06.3		48.3	283	09.3		45.2
5	108	16.3	302	06.4	+5	47.6	298	10.3	+5	44.6
6	123	18.8	317	06.4	+5	46.9	313	11.3	+5	44.0
7	138	21.2	332	06.5		46.2	328	12.4		43.4
8	153	23.7	347	06.6		45.4	343	13.4		42.8
9	168	26.2	2	06.6		44.7	358	14.5		42.2
10	183	28.6	17	06.7		44.0	13	15.5		41.6
11	198	31.1	32	06.8	+5	43.3	28	16.6	+5	41.0
12	213	33.6	47	06.9	+5	42.6	43	17.6	+5	40.4
13	228	36.0	62	06.9		41.8	58	18.7		39.8
14	243	38.5	77	07.0		41.1	73	19.7		39.2
15	258	41.0	92	07.1		40.4	88	20.8		38.6
16	273	43.4	107	07.1		39.6	103	21.8		38.1
17	288	45.9	122	07.2	+5	38.9	118	22.9	+5	37.5
18	303	48.3	137	07.3	+5	38.2	133	23.9	+5	36.9
19	318	50.8	152	07.3		37.5	148	25.0		36.3
20	333	53.3	167	07.4		36.7	163	26.0		35.7
21	348	55.7	182	07.5		36.0	178	27.1		35.1
22	3	58.2	197	07.5		35.3	193	28.1		34.5
23	19	00.7	212	07.6		34.5	208	29.2		33.9
24	34	03.1	227	07.7	+5	33.8	223	30.2	+5	33.3
Dif	—		+1		-7		+10		-6	

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: 13 ^d 0 PHE { 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'2 Rº: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	59.1	-12	15.1	23	32.2	+3 30.5	60 N	5 33	6 22	7 06	16 18	25	5 07	92
1	198	59.2		16.0	37	58.6	74 42.1	58	32	18	6 59	21 28		05	89
2	213	59.3		16.9	52	24.9	73 +3 53.7	56	31	15	53	24 30		03	86
3	228	59.3		17.7	66	51.2	73 +4 05.3	54	30	11	48	27 32		5 01	84
4	243	59.4		18.6	81	17.5	73 16.8	52	29	08	43	30 33		4 59	82
5	258	59.5	-12	19.4	95	43.8	73 +4 28.3	50	5 28	6 06	6 39	16 32	35	4 57	80
6	273	59.5	-12	20.3	110	10.1	73 +4 39.8	45	5 25	5 59	6 30	16 38	38	4 54	76
7	288	59.6		21.1	124	36.3	72 +4 51.3	40	22	54	22	42 42		51	73
8	303	59.7		22.0	139	02.5	72 +5 02.7	35	20	49	15	46 44		48	71
9	318	59.7		22.9	153	28.7	72 14.1	30	17	45	6 09	49 47		46	68
10	333	59.8		23.7	167	54.8	71 25.4	20	10	36	5 59	16 55	50	42	64
11	348	59.9	-12	24.6	182	20.9	71 +5 36.8	10 N	5 03	5 28	5 49	17 00	54	4 39	60
12	3	59.9	-12	25.4	196	47.0	71 +5 48.1	0	4 55	5 19	5 41	17 05	57	4 35	57
13	19	00.0		26.3	211	13.1	71 +5 59.3	10 S	45	5 10	32	10 60		32	53
14	34	00.1		27.1	225	39.1	70 +6 10.5	20	33	4 59	22	15 64		29	49
15	49	00.1		28.0	240	05.1	70 21.7	30	17	46	11	22 67		25	45
16	64	00.2		28.8	254	31.1	70 32.8	35	4 07	38	5 05	25 70		23	43
17	79	00.3	-12	29.7	268	57.1	70 +6 43.9	40	3 54	4 29	4 57	17 29	73	4 20	40
18	94	00.3	-12	30.5	283	23.0	69 +6 55.0	45	3 39	4 17	4 49	17 34	76	4 17	37
19	109	00.4		31.4	297	49.0	70 +7 05.9	50	19	4 03	38	40 79		14	33
20	124	00.5		32.2	312	14.8	68 16.9	52	3 09	3 56	33	42 82		12	32
21	139	00.5		33.1	326	40.7	69 27.8	54	2 58	49	28	45 84		10	30
22	154	00.6		33.9	341	06.5	68 38.6	56	45	40	22	49 85		08	28
23	169	00.7		34.8	355	32.3	68 +7 49.4	58	30	30	15	52 88		06	26
24	184	00.7	-12	35.6	9	58.1	68 +8 00.2	60 S	2 10	3 19	4 08	17 56	91	4 04	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 40 ^m 2		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 9 ^h 05 ^m		Mag: -1.8 PMG: 8 ^h 51 ^m		Mag: +0.5 PMG: 13 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	34	03.1	227	07.7	+5	33.8	226	51.4	+6	33.1
1	49	05.6	242	07.7		33.1	241	53.4		33.0
2	64	08.1	257	07.8		32.3	256	55.5		32.8
3	79	10.5	272	07.9		31.6	271	57.5		32.6
4	94	13.0	287	07.9		30.9	286	59.5		32.5
5	109	15.5	302	08.0	+5	30.1	302	01.6	+6	32.3
6	124	17.9	317	08.0	+5	29.4	317	03.6	+6	32.1
7	139	20.4	332	08.1		28.7	332	05.7		32.0
8	154	22.8	347	08.2		27.9	347	07.7		31.8
9	169	25.3	2	08.2		27.2	2	09.8		31.6
10	184	27.8	17	08.3		26.5	17	11.8		31.5
11	199	30.2	32	08.3	+5	25.7	32	13.9	+6	31.3
12	214	32.7	47	08.4	+5	25.0	47	15.9	+6	31.1
13	229	35.2	62	08.5		24.2	62	18.0		31.0
14	244	37.6	77	08.5		23.5	77	20.0		30.8
15	259	40.1	92	08.6		22.7	92	22.1		30.6
16	274	42.6	107	08.6		22.0	107	24.1		30.5
17	289	45.0	122	08.7	+5	21.3	122	26.2	+6	30.3
18	304	47.5	137	08.7	+5	20.5	137	28.2	+6	30.1
19	319	49.9	152	08.8		19.8	152	30.3		30.0
20	334	52.4	167	08.8		19.0	167	32.3		29.8
21	349	54.9	182	08.9		18.3	182	34.4		29.6
22	4	57.3	197	09.0		17.5	197	36.4		29.5
23	19	59.8	212	09.0		16.8	212	38.5		29.3
24	35	02.3	227	09.1	+5	16.0	227	40.5	+6	29.1
Dif	—		+1		-7		+10		-2	

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: 14 ^d 0 PHE { SD: 16'7 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	h m m			
0	184	00.7	-12	35.6	9	58.1	+8	00.2	60 N	16 18	17 02	17 51	16 43 29	6 39 89			
1	199	00.8		36.5	24	23.9		10.8	58	25	07	52	49 32	34 86			
2	214	00.9		37.3	38	49.6		21.5	56	31	10	54	54 34	29 84			
3	229	00.9		38.2	53	15.3		32.0	54	37	14	55	16 59 36	25 82			
4	244	01.0		39.0	67	41.0		42.5	52	42	17	56	17 03 38	21 80			
5	259	01.0	-12	39.9	82	06.7	+8	53.0	50	16 46	17 20	17 58	17 07 40	6 17 79			
6	274	01.1	-12	40.7	96	32.3	+9	03.4	45	16 56	17 26	18 01	17 16 43	6 10 75			
7	289	01.2		41.6	110	57.9		13.7	40	17 04	32	04	24 45	6 04 72			
8	304	01.2		42.4	125	23.5		23.9	35	11	37	07	30 47	5 59 69			
9	319	01.3		43.3	139	49.1		34.1	30	18	42	10	36 49	54 67			
10	334	01.3		44.1	154	14.6		44.2	20	28	17 51	17	45 53	46 64			
11	349	01.4	-12	45.0	168	40.1	+9	54.3	10 N	17 38	18 00	18 25	17 54 55	5 39 60			
12	4	01.5	-12	45.8	183	05.6	+10	04.3	0	17 47	18 09	18 33	18 02 58	5 32 58			
13	19	01.5		46.6	197	31.1		14.2	10 S	17 57	18	43	10 61	25 55			
14	34	01.6		47.5	211	56.5		24.0	20	18 07	29	18 56	19 64	18 52			
15	49	01.6		48.3	226	22.0		33.7	30	18	43	19 13	29 67	10 48			
16	64	01.7		49.2	240	47.4		43.4	35	25	18 51	23	35 69	06 45			
17	79	01.8	-12	50.0	255	12.8	+10	53.0	40	18 33	19 01	19 36	18 42 71	5 00 44			
18	94	01.8	-12	50.9	269	38.1	+11	02.5	45	18 42	19 13	19 52	18 50 74	4 54 41			
19	109	01.9		51.7	284	03.5		12.0	50	53	28	20 13	18 59 77	47 37			
20	124	01.9		52.6	298	28.8		21.4	52	18 58	35	23	19 04 78	44 35			
21	139	02.0		53.4	312	54.1		30.6	54	19 03	43	35	09 80	40 34			
22	154	02.0		54.2	327	19.4		39.8	56	10	19 52	20 48	14 82	36 32			
23	169	02.1		55.1	341	44.6		48.9	58	17	20 02	21 05	20 85	32 29			
24	184	02.2	-12	55.9	356	09.9	+11	58.0	60 S	19 25	20 14	21 25	19 27 87	4 27 26			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 36 ^m 3		Mag: -4.5 PMG: 8 ^h 51 ^m			Mag: +1.7 PMG: 9 ^h 04 ^m			Mag: -1.8 PMG: 8 ^h 48 ^m			Mag: +0.5 PMG: 13 ^h 45 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	35	02.3	227	09.1	+5	16.0	223	55.4	+5	19.1	227	40.5	+6	29.1			
1	50	04.7	242	09.1		15.3	238	56.4		18.5	242	42.6		29.0			
2	65	07.2	257	09.2		14.5	253	57.5		17.9	257	44.6		28.8			
3	80	09.7	272	09.2		13.8	268	58.5		17.3	272	46.7		28.6			
4	95	12.1	287	09.3		13.0	283	59.6		16.7	287	48.7		28.5			
5	110	14.6	302	09.3	+5	12.3	299	00.6	+5	16.1	302	50.8	+6	28.3			
6	125	17.1	317	09.4	+5	11.5	314	01.7	+5	15.5	317	52.8	+6	28.1			
7	140	19.5	332	09.4		10.8	329	02.7		14.9	332	54.9		28.0			
8	155	22.0	347	09.5		10.0	344	03.8		14.3	347	56.9		27.8			
9	170	24.4	2	09.5		09.3	359	04.8		13.8	2	59.0		27.6			
10	185	26.9	17	09.5		08.5	14	05.9		13.2	18	01.0		27.5			
11	200	29.4	32	09.6	+5	07.8	29	06.9	+5	12.6	33	03.1	+6	27.3			
12	215	31.8	47	09.6	+5	07.0	44	08.0	+5	12.0	48	05.1	+6	27.1			
13	230	34.3	62	09.7		06.3	59	09.1		11.4	63	07.2		27.0			
14	245	36.8	77	09.7		05.5	74	10.1		10.8	78	09.2		26.8			
15	260	39.2	92	09.8		04.7	89	11.2		10.2	93	11.3		26.7			
16	275	41.7	107	09.8		04.0	104	12.2		09.6	108	13.3		26.5			
17	290	44.2	122	09.9	+5	03.2	119	13.3	+5	09.0	123	15.4	+6	26.3			
18	305	46.6	137	09.9	+5	02.5	134	14.3	+5	08.4	138	17.4	+6	26.2			
19	320	49.1	152	09.9		01.7	149	15.4		07.8	153	19.5		26.0			
20	335	51.6	167	10.0		00.9	164	16.4		07.2	168	21.5		25.8			
21	350	54.0	182	10.0	+5	00.2	179	17.5		06.6	183	23.6		25.7			
22	5	56.5	197	10.1	+4	59.4	194	18.5		06.0	198	25.6		25.5			
23	20	58.9	212	10.1		58.7	209	19.6		05.4	213	27.7		25.3			
24	36	01.4	227	10.1	+4	57.9	224	20.6	+5	04.9	228	29.7	+6	25.2			
Dif	—		0			-8	+11			-6	+21		-2		+22		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 15 ^d 0 PHE { 4 ^h : 60'8 12 ^h : 60'6 20 ^h : 60'4 PMG: 0 ^h 16 ^m R°: 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	02.2	-12	55.9	356	09.9	+11	58.0	60 N	5 38	6 27	7 11	17 12	36	8 08	84	
1	199	02.2		56.8	10	35.1	+12	06.9	58	36	22	7 04	21	38	8 00	81	
2	214	02.3		57.6	25	00.3		15.7	56	35	19	6 58	28	41	7 53	79	
3	229	02.3		58.4	39	25.5		24.5	54	34	15	52	35	42	47	77	
4	244	02.4	-12	59.3	53	50.7		33.2	52	32	12	47	41	43	41	76	
5	259	02.4	-13	00.1	68	15.9	+12	41.7	50	5 31	6 09	6 42	17 47	44	7 36	75	
6	274	02.5	-13	01.0	82	41.0	+12	50.2	45	5 28	6 02	6 32	17 59	46	7 25	72	
7	289	02.5		01.8	97	06.2	+12	58.6	40	24	5 56	24	18 09	48	16	69	
8	304	02.6		02.6	111	31.3	+13	06.9	35	21	51	17	17 51		08	68	
9	319	02.6		03.5	125	56.4		15.1	30	18	46	6 11	25 52		7 01	66	
10	334	02.7		04.3	140	21.5		23.2	20	11	37	5 59	38 54		6 50	63	
11	349	02.7	-13	05.2	154	46.6	+13	31.2	10 N	5 03	5 28	5 50	18 49	57	6 39	61	
12	4	02.8	-13	06.0	169	11.7	+13	39.1	0	4 55	5 19	5 40	19 00	58	6 30	58	
13	19	02.8		06.8	183	36.8		46.9	10 S	44	5 09	31	11 60		20	56	
14	34	02.9		07.7	198	01.8	+13	54.6	20	31	4 58	21	23 62		6 10	53	
15	49	02.9		08.5	212	26.9	+14	02.2	30	15	44	09	36 65		5 58	51	
16	64	03.0		09.3	226	51.9		09.7	35	4 04	36	5 02	44 66		51	49	
17	79	03.0	-13	10.2	241	16.9	+14	17.1	40	3 51	4 26	4 55	19 53	67	5 44	47	
18	94	03.1	-13	11.0	255	42.0	+14	24.4	45	3 35	4 14	4 45	20 04	69	5 35	44	
19	109	03.1		11.8	270	07.0		31.6	50	14	3 59	34	16 72		24	42	
20	124	03.2		12.7	284	32.0		38.7	52	3 04	52	29	22 73		19	40	
21	139	03.2		13.5	298	57.0		45.7	54	2 52	44	24	29 74		14	39	
22	154	03.3		14.3	313	22.1		52.6	56	39	35	17	36 76		08	37	
23	169	03.3		15.2	327	47.1	+14	59.3	58	22	24	10	45 77		5 01	35	
24	184	03.4	-13	16.0	342	12.1	+15	06.0	60 S	2 01	3 12	4 02	20 54	79	4 53	33	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 32 ^m 4		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 9 ^h 02 ^m		Mag: -1.8 PMG: 8 ^h 45 ^m		Mag: +0.5 PMG: 13 ^h 42 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	36	01.4	227	10.1	+4	57.9	224	20.6	+5	04.9
1	51	03.9	242	10.2		57.1	239	21.7		04.3
2	66	06.3	257	10.2		56.4	254	22.7		03.7
3	81	08.8	272	10.3		55.6	269	23.8		03.1
4	96	11.3	287	10.3		54.8	284	24.8		02.5
5	111	13.7	302	10.3	+4	54.1	299	25.9	+5	01.9
6	126	16.2	317	10.4	+4	53.3	314	26.9	+5	01.3
7	141	18.7	332	10.4		52.5	329	28.0		00.7
8	156	21.1	347	10.4		51.8	344	29.0	+5	00.1
9	171	23.6	2	10.5		51.0	359	30.1	+4	59.5
10	186	26.0	17	10.5		50.2	14	31.2		58.9
11	201	28.5	32	10.5	+4	49.4	29	32.2	+4	58.3
12	216	31.0	47	10.6	+4	48.7	44	33.3	+4	57.7
13	231	33.4	62	10.6		47.9	59	34.3		57.1
14	246	35.9	77	10.6		47.1	74	35.4		56.5
15	261	38.4	92	10.7		46.4	89	36.4		56.0
16	276	40.8	107	10.7		45.6	104	37.5		55.4
17	291	43.3	122	10.7	+4	44.8	119	38.5	+4	54.8
18	306	45.8	137	10.8	+4	44.0	134	39.6	+4	54.2
19	321	48.2	152	10.8		43.3	149	40.6		53.6
20	336	50.7	167	10.8		42.5	164	41.7		53.0
21	351	53.2	182	10.8		41.7	179	42.7		52.4
22	6	55.6	197	10.9		40.9	194	43.8		51.8
23	21	58.1	212	10.9		40.1	209	44.9		51.2
24	37	00.5	227	10.9	+4	39.4	224	45.9	+4	50.6
Dif	—		0		-8		+11		-6	
									+21	
									-2	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 16 ^d 0 PHE { SD: 16'4 PMG: 1 ^h 14 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	184	03.4	-13	16.0	342	12.1	+15	06.0	60 N	16 13	16 57	17 46	17 48 46	9 32 73
1	199	03.4		16.8	356	37.1		12.5	58	20	17 02	48	17 59 47	21 72
2	214	03.5		17.7	11	02.1		19.0	56	27	06	50	18 09 47	12 71
3	229	03.5		18.5	25	27.1		25.3	54	33	10	51	17 48	9 04 70
4	244	03.6		19.3	39	52.1		31.5	52	38	13	53	24 50	8 57 69
5	259	03.6	-13	20.2	54	17.1	+15	37.6	50	16 43	17 16	17 54	18 31 50	8 51 68
6	274	03.7	-13	21.0	68	42.2	+15	43.6	45	16 53	17 23	17 58	18 45 52	8 37 66
7	289	03.7		21.8	83	07.2		49.5	40	17 02	30	18 01	18 57 53	25 65
8	304	03.8		22.7	97	32.2	+15	55.2	35	09	35	05	19 08 53	16 63
9	319	03.8		23.5	111	57.3	+16	00.9	30	16	40	09	17 54	8 07 63
10	334	03.8		24.3	126	22.3		06.4	20	27	50	16	32 55	7 53 61
11	349	03.9	-13	25.1	140	47.4	+16	11.8	10 N	17 37	17 59	18 24	19 46 56	7 40 59
12	4	03.9	-13	26.0	155	12.4	+16	17.2	0	17 47	18 08	18 33	19 58 58	7 28 58
13	19	04.0		26.8	169	37.5		22.3	10 S	17 57	19	44	20 11 58	16 56
14	34	04.0		27.6	184	02.6		27.4	20	18 07	30	18 57	25 59	7 03 55
15	49	04.1		28.5	198	27.7		32.4	30	20	45	19 15	41 60	6 49 53
16	64	04.1		29.3	212	52.8		37.2	35	27	18 53	25	20 50 61	40 52
17	79	04.1	-13	30.1	227	18.0	+16	41.9	40	18 35	19 04	19 39	21 00 62	6 31 50
18	94	04.2	-13	30.9	241	43.1	+16	46.6	45	18 44	19 16	19 55	21 13 62	6 19 50
19	109	04.2		31.8	256	08.3		51.1	50	18 56	32	20 17	28 64	6 06 47
20	124	04.3		32.6	270	33.5		55.4	52	19 01	39	28	35 64	5 59 47
21	139	04.3		33.4	284	58.7	+16	59.7	54	07	48	40	43 65	53 45
22	154	04.3		34.2	299	23.9	+17	03.8	56	14	19 57	20 55	21 52 65	45 44
23	169	04.4		35.1	313	49.1		07.8	58	21	20 08	21 12	22 02 66	36 43
24	184	04.4	-13	35.9	328	14.4	+17	11.7	60 S	19 30	20 21	21 35	22 13 67	5 26 41
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 28 ^m 4		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 9 ^h 00 ^m		Mag: -1.8 PMG: 8 ^h 42 ^m		Mag: +0.5 PMG: 13 ^h 38 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	37	00.5	227	10.9	+4	39.4	229	19.0	+6	21.2				
1	52	03.0	242	10.9		38.6	239	47.0		21.1				
2	67	05.5	257	11.0		37.8	254	48.0		20.9				
3	82	07.9	272	11.0		37.0	269	49.1		20.7				
4	97	10.4	287	11.0		36.2	284	50.1		20.6				
5	112	12.9	302	11.0	+4	35.5	299	51.2	+4	20.4				
6	127	15.3	317	11.1	+4	34.7	314	52.2	+4	20.3				
7	142	17.8	332	11.1		33.9	329	53.3		20.1				
8	157	20.3	347	11.1		33.1	344	54.4		19.9				
9	172	22.7	2	11.1		32.3	359	55.4		19.8				
10	187	25.2	17	11.2		31.5	14	56.5		19.6				
11	202	27.7	32	11.2	+4	30.8	29	57.5	+4	19.4				
12	217	30.1	47	11.2	+4	30.0	44	58.6	+4	19.3				
13	232	32.6	62	11.2		29.2	59	59.6		19.1				
14	247	35.0	77	11.2		28.4	75	00.7		19.0				
15	262	37.5	92	11.3		27.6	90	01.7		18.8				
16	277	40.0	107	11.3		26.8	105	02.8		18.6				
17	292	42.4	122	11.3	+4	26.0	120	03.9	+4	18.5				
18	307	44.9	137	11.3	+4	25.2	135	04.9	+4	18.3				
19	322	47.4	152	11.3		24.4	150	06.0		18.1				
20	337	49.8	167	11.4		23.7	165	07.0		18.0				
21	352	52.3	182	11.4		22.9	180	08.1		17.8				
22	7	54.8	197	11.4		22.1	195	09.1		17.7				
23	22	57.2	212	11.4		21.3	210	10.2		17.5				
24	37	59.7	227	11.4	+4	20.5	225	11.2	+4	17.3				
Dif	—		0		-8		+11		-6					
			</											

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 17 ^d 0 PHE { 4 ^h : 59'3 12 ^h : 59'0 20 ^h : 58'7													
	PMG: 11 ^h 43 ^m 7			SD: 16'2 PMG: 2 ^h 12 ^m R°: 57 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m		h m m	m	
0	184	04.4	-13 35.9	328	14.4	+17 11.7			60 N	5 42	6 31	7 16	18 34 54		10 45 61		
1	199	04.5		342	39.7		15.5	38	58	40	27	09	46 55		33 61		
2	214	04.5		357	05.0		19.2	37	56	39	23	7 02	18 56 55		23 60		
3	229	04.5		11	30.3		22.7	35	54	37	19	6 56	19 05 56		14 60		
4	244	04.6		25	55.7		26.2	35	52	35	15	51	14 55		10 06 60		
5	259	04.6	-13 40.0	40	21.0	63	+17 29.5	33	50	5 34	6 12	6 46	19 21 55		9 59 59		
6	274	04.7	-13 40.8	54	46.5	65	+17 32.7	32	45	5 30	6 05	6 35	19 37 55		9 43 59		
7	289	04.7		69	11.9	64		35.7	30	26	5 58	26	19 50 55		30 59		
8	304	04.7		83	37.4	65		38.7	30	23	53	19	20 01 55		19 59		
9	319	04.8		98	02.9	65		41.5	28	19	47	12	11 55		9 10 58		
10	334	04.8		112	28.4	65		44.2	27	12	38	6 00	27 56		8 54 57		
11	349	04.8	-13 44.9	126	54.0	66	+17 46.8	26	10 N	5 04	5 28	5 50	20 42 55		8 39 57		
12	4	04.9	-13 45.8	141	19.6	66	+17 49.3	25	0	4 54	5 19	5 40	20 56 55		8 26 56		
13	19	04.9		155	45.2	66		51.7	24	43	5 09	30	21 09 56		8 12 57		
14	34	04.9		170	10.9	67		53.9	22	30	4 57	20	24 56		7 58 56		
15	49	05.0		184	36.6	67		56.1	22	13	42	07	41 55		42 55		
16	64	05.0		199	02.3	67	+17 58.1	20	35	4 01	34	5 00	21 51 55		32 55		
17	79	05.0	-13 49.8	213	28.1	68	+18 00.0	19	40	3 48	4 23	4 52	22 02 55		7 21 55		
18	94	05.1	-13 50.7	227	53.9	68	+18 01.7	17	45	3 31	4 11	4 42	22 15 55		7 09 53		
19	109	05.1		51.5	242 19.8	69		03.4	17	50	3 10	3 55	31	32 54		6 53 53	
20	124	05.1		52.3	256 45.7	69		04.9	15	52	2 59	47	25	39 55		46 52	
21	139	05.2		53.1	271 11.6	69		06.3	14	54	47	39	19	48 54		38 52	
22	154	05.2		53.9	285 37.6	70		07.7	14	56	32	30	13	22 57 55		29 51	
23	169	05.2		54.7	300 03.6	70		08.8	11	58	2 14	19	4 05	23 08 54		19 51	
24	184	05.3	-13 55.6	314	29.7	71	+18 09.9	11	60 S	1 52	3 06	3 57	23 20 54		6 07 50		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 24 ^m 5		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 8 ^h 59 ^m		Mag: -1.8 PMG: 8 ^h 38 ^m		Mag: +0.5 PMG: 13 ^h 35 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	37	59.7	227	11.4	+4	20.5	225	11.2	+4	36.3
1	53	02.1	242	11.4		19.7	240	12.3		35.8
2	68	04.6	257	11.5		18.9	255	13.4		35.2
3	83	07.1	272	11.5		18.1	270	14.4		34.6
4	98	09.5	287	11.5		17.3	285	15.5		34.0
5	113	12.0	302	11.5	+4	16.5	300	16.5	+4	33.4
6	128	14.5	317	11.5	+4	15.7	315	17.6	+4	32.8
7	143	16.9	332	11.5		14.9	330	18.6		32.2
8	158	19.4	347	11.5		14.1	345	19.7		31.6
9	173	21.9	2	11.5		13.3	0	20.8		31.0
10	188	24.3	17	11.5		12.5	15	21.8		30.4
11	203	26.8	32	11.6	+4	11.7	30	22.9	+4	29.8
12	218	29.3	47	11.6	+4	10.9	45	23.9	+4	29.2
13	233	31.7	62	11.6		10.1	60	25.0		28.6
14	248	34.2	77	11.6		09.3	75	26.0		28.0
15	263	36.6	92	11.6		08.5	90	27.1		27.4
16	278	39.1	107	11.6		07.7	105	28.2		26.8
17	293	41.6	122	11.6	+4	06.9	120	29.2	+4	26.2
18	308	44.0	137	11.6	+4	06.1	135	30.3	+4	25.7
19	323	46.5	152	11.6		05.3	150	31.3		25.1
20	338	49.0	167	11.6		04.5	165	32.4		24.5
21	353	51.4	182	11.6		03.7	180	33.5		23.9
22	8	53.9	197	11.6		02.9	195	34.5		23.3
23	23	56.4	212	11.6		02.1	210	35.6		22.7
24	38	58.8	227	11.6	+4	01.2	225	36.6	+4	22.1
Dif	—		0		-8		+11		-6	
							+21		-2	
									+22	
									-	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/1 PMG: 11 ^h 43 ^m 6			Edad: 18 ^d 0 PHE { 4 ^h : 58/4 12 ^h : 58/0 20 ^h : 57/7 R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	184	05.3	-13 55.6	314	29.7	+18 09.9	10	60 N	16 08	16 53	17 42	19 28 63	11 46 48		
1	199	05.3	56.4	328	55.8	71	10.9	58	16	16 57	44	41 61	34 49		
2	214	05.3	57.2	343	22.0	72	11.7	56	22	17 02	46	19 51 61	23 50		
3	229	05.4	58.0	357	48.2	72	12.5	54	29	06	48	20 01 60	14 50		
4	244	05.4	58.8	12	14.4	72	13.1	52	34	10	49	09 59	11 06 50		
5	259	05.4	-13 59.6	26	40.8	74	+18 13.6	50	16 39	17 13	17 51	20 16 59	10 58 51		
6	274	05.5	-14 00.4	41	07.1	73	+18 14.0	45	16 50	17 21	17 55	20 32 58	10 42 51		
7	289	05.5	01.3	55	33.5	74	14.2	40	16 59	27	17 59	45 57	29 52		
8	304	05.5	02.1	70	00.0	75	14.4	35	17 07	33	18 03	20 56 57	18 52		
9	319	05.5	02.9	84	26.5	75	14.5	30	14	39	07	21 06 56	10 08 53		
10	334	05.6	03.7	98	53.0	75	14.4	20	26	49	15	23 55	9 51 53		
11	349	05.6	-14 04.5	113	19.7	77	+18 14.2	10 N	17 37	17 59	18 24	21 37 54	9 36 54		
12	4	05.6	-14 05.3	127	46.3	76	+18 13.9	0	17 47	18 08	18 33	21 51 53	9 22 55		
13	19	05.6	06.1	142	13.0	77	13.6	10 S	17 57	19	44	22 05 52	9 09 55		
14	34	05.7	06.9	156	39.8	78	13.1	20	18 08	31	18 58	20 51	8 54 55		
15	49	05.7	07.7	171	06.6	78	12.4	30	21	46	19 16	36 50	37 56		
16	64	05.7	08.5	185	33.5	79	11.7	35	29	18 56	28	46 49	27 56		
17	79	05.8	-14 09.4	200	00.5	80	+18 10.9	40	18 37	19 06	19 42	22 57 49	8 16 56		
18	94	05.8	-14 10.2	214	27.5	80	+18 10.0	45	18 47	19 19	19 59	23 10 48	8 02 57		
19	109	05.8	11.0	228	54.5	80	08.9	50	18 59	36	20 21	26 46	7 46 58		
20	124	05.8	11.8	243	21.7	82	07.8	52	19 05	43	33	34 45	38 58		
21	139	05.8	12.6	257	48.8	81	06.5	54	11	19 52	20 46	42 45	30 58		
22	154	05.9	13.4	272	16.1	83	05.2	56	18	20 02	21 01	23 52 43	20 59		
23	169	05.9	14.2	286	43.4	83	03.7	58	26	14	20	** ** *	7 10 58		
24	184	05.9	-14 15.0	301	10.7	83	+18 02.2	60 S	19 35	20 27	21 44	** ** *	6 57 59		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 20 ^m 6		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 8 ^h 57 ^m		Mag: -1.9 PMG: 8 ^h 35 ^m		Mag: +0.5 PMG: 13 ^h 31 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	38	58.8	227	11.6	+4 01.2	225	36.6	+4 22.1	230	57.9	+6 13.5	156	40.0	-19 17.4
1	54	01.3	242	11.6	+4 00.4	240	37.7	21.5	246	00.0	13.3	171	42.1	17.5
2	69	03.8	257	11.7	+3 59.6	255	38.7	20.9	261	02.0	13.1	186	44.3	17.5
3	84	06.2	272	11.7	58.8	270	39.8	20.3	276	04.1	13.0	201	46.5	17.6
4	99	08.7	287	11.7	58.0	285	40.9	19.7	291	06.2	12.8	216	48.7	17.7
5	114	11.1	302	11.7	+3 57.2	300	41.9	+4 19.1	306	08.2	+6 12.7	231	50.9	-19 17.7
6	129	13.6	317	11.7	+3 56.4	315	43.0	+4 18.5	321	10.3	+6 12.5	246	53.0	-19 17.8
7	144	16.1	332	11.7	55.6	330	44.0	17.9	336	12.3	12.3	261	55.2	17.8
8	159	18.5	347	11.7	54.8	345	45.1	17.3	351	14.4	12.2	276	57.4	17.9
9	174	21.0	2	11.7	53.9	0	46.2	16.7	6	16.5	12.0	291	59.6	17.9
10	189	23.5	17	11.7	53.1	15	47.2	16.1	21	18.5	11.9	307	01.7	18.0
11	204	25.9	32	11.7	+3 52.3	30	48.3	+4 15.5	36	20.6	+6 11.7	322	03.9	-19 18.0
12	219	28.4	47	11.7	+3 51.5	45	49.3	+4 14.9	51	22.7	+6 11.5	337	06.1	-19 18.1
13	234	30.9	62	11.7	50.7	60	50.4	14.4	66	24.7	11.4	352	08.3	18.2
14	249	33.3	77	11.7	49.9	75	51.5	13.8	81	26.8	11.2	7	10.5	18.2
15	264	35.8	92	11.6	49.1	90	52.5	13.2	96	28.9	11.1	22	12.6	18.3
16	279	38.3	107	11.6	48.2	105	53.6	12.6	111	30.9	10.9	37	14.8	18.3
17	294	40.7	122	11.6	+3 47.4	120	54.6	+4 12.0	126	33.0	+6 10.7	52	17.0	-19 18.4
18	309	43.2	137	11.6	+3 46.6	135	55.7	+4 11.4	141	35.1	+6 10.6	67	19.2	-19 18.4
19	324	45.6	152	11.6	45.8	150	56.8	10.8	156	37.1	10.4	82	21.3	18.5
20	339	48.1	167	11.6	45.0	165	57.8	10.2	171	39.2	10.3	97	23.5	18.5
21	354	50.6	182	11.6	44.1	180	58.9	09.6	186	41.3	10.1	112	25.7	18.6
22	9	53.0	197	11.6	43.3	195	59.9	09.0	201	43.3	09.9	127	27.9	18.7
23	24	55.5	212	11.6	42.5	211	01.0	08.4	216	45.4	09.8	142	30.1	18.7
24	39	58.0	227	11.6	+3 41.7	226	02.1	+4 07.8	231	47.5	+6 09.6	157	32.2	-19 18.8
Dif	—		0	-8	+11	-6			+21	-2		+22	-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 19 ^d 0 PHE { 4 ^h : 57'4 12 ^h : 57'1 20 ^h : 56'8 SD: 15'7 PMG: 4 ^h 04 ^m R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	184	05.9	-14	15.0	301	10.7	+18	02.2	60 N	5 47	6 36	7 21	20 31	68	12 34	37		
1	199	05.9		15.8	315	38.2	85	+18	00.5	58	44	31	42	66	23	38		
2	214	06.0		16.6	330	05.6	84	+17	58.7	56	42	26	20	52	65	13	39	
3	229	06.0		17.4	344	33.2	86		56.9	54	40	22	21	01	63	12	04	
4	244	06.0		18.2	359	00.8	86		54.9	52	39	19	6	54	08	63	11	56
5	259	06.0	-14	19.0	13	28.5	87	+17	52.8	50	5 37	6 15	6 49	21 15	62	11 49	42	
6	274	06.0	-14	19.8	27	56.2	87	+17	50.6	45	5 33	6 07	6 38	21 30	60	11 33	44	
7	289	06.1		20.6	42	24.0	88		48.4	40	28	6 00	29	42	58	21	45	
8	304	06.1		21.4	56	51.9	89		46.0	35	25	5 54	21	21	53	56	10	47
9	319	06.1		22.2	71	19.8	89		43.5	30	21	49	14	22	02	55	11	01
10	334	06.1		23.0	85	47.8	90		41.0	20	12	39	6 01	18	53	10	44	
11	349	06.1	-14	23.8	100	15.8	90	+17	38.3	10 N	5 04	5 29	5 50	22 31	52	10 30	51	
12	4	06.2	-14	24.6	114	44.0	92	+17	35.6	0	4 54	5 19	5 40	22 44	50	10 17	52	
13	19	06.2		25.4	129	12.1	91		32.7	10 S	43	5 08	30	22 57	48	10 04	52	
14	34	06.2		26.2	143	40.4	93		29.8	20	29	4 56	19	23 11	46	9 49	54	
15	49	06.2		27.0	158	08.7	93		26.8	30	4 11	40	5 06	26	45	33	56	
16	64	06.2		27.8	172	37.1	94		23.6	32	3 59	31	4 58	35	44	23	57	
17	79	06.3	-14	28.6	187	05.6	95	+17	20.4	40	3 45	4 20	4 50	23 46	42	9 12	58	
18	94	06.3	-14	29.4	201	34.1	95	+17	17.1	45	3 28	4 07	4 39	23 58	40	8 59	59	
19	109	06.3		30.2	216	02.7	96		13.7	50	3 05	3 51	27	** ** *	**	44	60	
20	124	06.3		31.0	230	31.3	96		10.2	52	2 54	43	21	** ** *	**	36	62	
21	139	06.3		31.8	245	00.0	97		06.6	54	41	34	15	** ** *	**	28	62	
22	154	06.3		32.6	259	28.8	98	+17	03.0	56	25	24	08	** ** *	**	19	63	
23	169	06.3		33.4	273	57.7	99	+16	59.2	58	2 06	3 13	4 00	0 02	43	8 08	65	
24	184	06.4	-14	34.2	288	26.6	99	+16	55.4	60 S	1 42	2 59	3 51	0 14	42	7 56	66	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 16 ^m 6		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 8 ^h 55 ^m		Mag: -1.9 PMG: 8 ^h 32 ^m		Mag: +0.5 PMG: 13 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	39	58.0	227	11.6	+3	41.7	231	47.5	+6	09.6
1	55	00.4	242	11.6		40.9	246	49.5		09.5
2	70	02.9	257	11.6		40.0	261	51.6		09.3
3	85	05.4	272	11.6		39.2	276	53.7		09.2
4	100	07.8	287	11.6		38.4	291	55.7		09.0
5	115	10.3	302	11.6	+3	37.6	306	57.8	+6	08.8
6	130	12.8	317	11.5	+3	36.7	321	59.9	+6	08.7
7	145	15.2	332	11.5		35.9	337	01.9		08.5
8	160	17.7	347	11.5		35.1	352	04.0		08.4
9	175	20.1	2	11.5		34.3	7	06.1		08.2
10	190	22.6	17	11.5		33.4	16	08.1		08.0
11	205	25.1	32	11.5	+3	32.6	31	10.2	+6	07.9
12	220	27.5	47	11.5	+3	31.8	46	14.8	+6	07.7
13	235	30.0	62	11.5		30.9	61	15.8	+4	00.1
14	250	32.5	77	11.5		30.1	76	16.9	+3	59.5
15	265	34.9	92	11.4		29.3	91	18.0		58.9
16	280	37.4	107	11.4		28.4	106	19.0		58.3
17	295	39.9	122	11.4	+3	27.6	121	20.1	+3	57.7
18	310	42.3	137	11.4	+3	26.8	136	21.2	+3	57.1
19	325	44.8	152	11.4		26.0	151	22.2		56.5
20	340	47.2	167	11.4		25.1	166	23.3		55.9
21	355	49.7	182	11.3		24.3	181	24.3		55.3
22	10	52.2	197	11.3		23.5	196	25.4		54.7
23	25	54.6	212	11.3		22.6	211	26.5		54.1
24	40	57.1	227	11.3	+3	21.8	226	27.5	+3	53.5
Dif	—		0		-8		+11		-6	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 6				Edad: 20 ^d 0 PHE { 4 ^h : 56/5 12 ^h : 56/2 20 ^h : 56/0 PMG: 4 ^h 56 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	184	06.4	-14	34.2	288	26.6	+16	55.4	60 N	16	02	16	48	17	37	21	39	70
1	199	06.4		35.0	302	55.6 ¹⁰⁰		51.4	58	11		53		40		48	68	13 01 30
2	214	06.4		35.8	317	24.6 ¹⁰⁰		47.4	56	18		16 58		42		21	57	66
3	229	06.4		36.6	331	53.8 ¹⁰²		43.3	54	25		17 02		44		22	04	65
4	244	06.4		37.4	346	23.0 ¹⁰²		39.2	52	30		06		46		11	63	37 35
5	259	06.4	-14	38.2	0	52.2 ¹⁰²	+16	34.9	50	16	36	17	10	17	48	22	17	62
6	274	06.4	-14	39.0	15	21.5 ¹⁰³	+16	30.6	45	16	47	17	18	17	53	22	30	59
7	289	06.5		39.8	29	50.9 ¹⁰⁴		26.1	40	16	57		25	17	57	40	58	12 06 40
8	304	06.5		40.6	44	20.4 ¹⁰⁵		21.6	35	17	05		31	18	01	49	56	11 57 41
9	319	06.5		41.4	58	49.9 ¹⁰⁵		17.1	30	12		37		06		22	57	55
10	334	06.5		42.2	73	19.5 ¹⁰⁶		12.4	20	25		48		14		23	11	52
11	349	06.5	-14	43.0	87	49.2 ¹⁰⁷	+16	07.6	10 N	17	36	17	58	18	23	23	23	49
12	4	06.5	-14	43.7	102	18.9 ¹⁰⁷	+16	02.8	0	17	47	18	08	18	33	23	34	48
13	19	06.5		44.5	116	48.7 ¹⁰⁸	+15	57.9	10 S	17	58		20		45	45	46	10 56 51
14	34	06.5		45.3	131	18.6 ¹⁰⁹		53.0	20	18	09		32	18	59	23	57	43
15	49	06.5		46.1	145	48.5 ¹⁰⁹		47.9	30		23		48	19	18	**	*	*
16	64	06.5		46.9	160	18.5 ¹¹⁰		42.8	35		31	18	58		30	**	*	*
17	79	06.6	-14	47.7	174	48.6 ¹¹¹	+15	37.6	40	18	39	19	09	19	44	**	*	*
18	94	06.6	-14	48.5	189	18.7 ¹¹¹	+15	32.3	45	18	50	19	22	20	02	**	*	*
19	109	06.6		49.3	203	48.9 ¹¹²		27.0	50	19	03		39		26	0	12	39
20	124	06.6		50.1	218	19.2 ¹¹³		21.6	52		09		47		38	19	38	
21	139	06.6		50.9	232	49.5 ¹¹³		16.1	54		15	19	57	20	51	27	36	
22	154	06.6		51.6	247	19.9 ¹¹⁴		10.6	55		23	20	07	21	08	35	36	
23	169	06.6		52.4	261	50.4 ¹¹⁵	+15	05.0	56		31		19		28	45	34	
24	184	06.6	-14	53.2	276	20.9 ¹¹⁵	+14	59.3	57		19	41	20	33	21	55	0	56

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO									
	PMG: 21 ^h 12 ^m 7		Mag: -4.4 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 8 ^h 54 ^m		Mag: -1.9 PMG: 8 ^h 28 ^m			Mag: +0.5 PMG: 13 ^h 24 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃			hG ♄									
h	°	'	°	'	°	'	°	'	°	'	°	'							
0	40	57.1	227	11.3	+3	21.8	226	27.5	+3	53.5	232	37.1							
1	55	59.6	242	11.3		20.9	241	28.6		52.9	247	39.2							
2	71	02.0	257	11.3		20.1	256	29.7		52.3	262	41.2							
3	86	04.5	272	11.2		19.3	271	30.7		51.8	277	43.3							
4	101	07.0	287	11.2		18.4	286	31.8		51.2	292	45.4							
5	116	09.4	302	11.2	+3	17.6	301	32.8	+3	50.6	307	47.4							
6	131	11.9	317	11.2	+3	16.8	316	33.9	+3	50.0	322	49.5							
7	146	14.4	332	11.2		15.9	331	35.0		49.4	337	51.6							
8	161	16.8	347	11.1		15.1	346	36.0		48.8	352	53.7							
9	176	19.3	2	11.1		14.2	1	37.1		48.2	7	55.7							
10	191	21.7	17	11.1		13.4	16	38.2		47.6	22	57.8							
11	206	24.2	32	11.1	+3	12.6	31	39.2	+3	47.0	37	59.9							
12	221	26.7	47	11.1	+3	11.7	46	40.3	+3	46.4	53	01.9							
13	236	29.1	62	11.0		10.9	61	41.3		45.8	68	04.0							
14	251	31.6	77	11.0		10.0	76	42.4		45.2	83	06.1							
15	266	34.1	92	11.0		09.2	91	43.5		44.6	98	08.2							
16	281	36.5	107	11.0		08.3	106	44.5		44.0	113	10.2							
17	296	39.0	122	10.9	+3	07.5	121	45.6	+3	43.4	128	12.3							
18	311	41.5	137	10.9	+3	06.7	136	46.7	+3	42.8	143	14.4							
19	326	43.9	152	10.9		05.8	151	47.7		42.2	158	16.5							
20	341	46.4	167	10.9		05.0	166	48.8		41.6	173	18.5							
21	356	48.9	182	10.8		04.1	181	49.9		41.0	188	20.6							
22	11	51.3	197	10.8		03.3	196	50.9		40.4	203	22.7							
23	26	53.8	212	10.8		02.4	211	52.0		39.9	218	24.7							
24	41	56.2	227	10.7	+3	01.6	226	53.0	+3	39.3	233	26.8							
Dif	—		0		-8		+11		-6			+21		-2		+22		-1	

ALMANAQUE NÁUTICO PERSEIS

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: 22 ^d 0 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'7 SD: 15'0 PMG: 6 ^h 33 ^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	184	06.6	-15	12.0	264	52.1	+12	24.3	60 N	15 57	16 43	17 33	23 59 70	14 02 19				
1	199	06.6		12.7	279	24.1 ¹³⁰		17.1	58	16 06	49	36	*** ** *	13 56 21				
2	214	06.6		13.5	293	56.2 ¹³¹		09.9	56	14	54	38	*** ** *	50 23				
3	229	06.6		14.3	308	28.4 ¹³²	+12	02.6	54	21	16 59	41	*** ** *	45 25				
4	244	06.6		15.1	323	00.5 ¹³¹	+11	55.3	52	27	17 03	43	*** ** *	41 26				
5	259	06.6	-15	15.8	337	32.8 ¹³³	+11	48.0	50	16 33	17 07	17 45	*** ** *	13 37 27				
6	274	06.6	-15	16.6	352	05.1 ¹³³	+11	40.6	45	16 45	17 15	17 50	*** ** *	13 28 30				
7	289	06.6		17.4	6	37.4 ¹³³		33.1	40	16 55	23	17 55	*** ** *	21 32				
8	304	06.6		18.2	21	09.8 ¹³⁴		25.7	35	17 03	30	18 00	*** ** *	15 34				
9	319	06.6		18.9	35	42.3 ¹³⁵		18.1	30	11	36	04	*** ** *	10 36				
10	334	06.6		19.7	50	14.8 ¹³⁵		10.5	20	24	47	13	0 03 50	13 00 39				
11	349	06.6	-15	20.5	64	47.3 ¹³⁵	+11	02.9	10 N	17 36	17 58	18 23	0 12 48	12 52 41				
12	4	06.6	-15	21.2	79	19.9 ¹³⁶	+10	55.3	0	17 47	18 08	18 33	0 22 45	12 44 44				
13	19	06.6		22.0	93	52.6 ¹³⁷		47.6	10 S	17 58	20	18 46	31 42	36 46				
14	34	06.6		22.8	108	25.3 ¹³⁷		39.8	20	18 10	33	19 01	40 41	27 50				
15	49	06.5		23.5	122	58.0 ¹³⁷		32.0	30	24	18 50	20	52 37	17 53				
16	64	06.5		24.3	137	30.8 ¹³⁸		24.2	35	32	19 00	32	0 58 35	12 54				
17	79	06.5	-15	25.1	152	03.6 ¹³⁸	+10	16.3	40	18 42	19 11	19 47	1 05 34	12 05 57				
18	94	06.5	-15	25.9	166	36.5 ¹³⁹	+10	08.4	45	18 53	19 25	20 06	1 14 31	11 57 59				
19	109	06.5		26.6	181	09.4 ¹³⁹	+10	00.4	50	19 06	43	30	24 28	48 62				
20	124	06.5		27.4	195	42.4 ¹⁴⁰	+9	52.5	52	12	19 52	43	28 28	44 63				
21	139	06.5		28.2	210	15.4 ¹⁴⁰		44.4	54	19	20 01	20 57	34 25	39 65				
22	154	06.5		28.9	224	48.4 ¹⁴⁰		36.4	56	27	12	21 15	39 24	34 67				
23	169	06.5		29.7	239	21.5 ¹⁴¹		28.3	58	36	25	21 37	46 22	29 68				
24	184	06.5	-15	30.5	253	54.6 ¹⁴¹	+9	20.1	60 S	19 46	20 40	22 06	1 53 20	11 22 70				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 21 ^h 04 ^m 8		Mag: -4.4 PMG: 8 ^h 51 ^m			Mag: +1.7 PMG: 8 ^h 50 ^m			Mag: -1.9 PMG: 8 ^h 22 ^m			Mag: +0.5 PMG: 13 ^h 17 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	42	55.4	227	09.9	+2	41.1	227	18.6	+3	25.0	234	16.6	+5	58.3	160	08.8	-19	22.8
1	57	57.8	242	09.9		40.2	242	19.7		24.4	249	18.7		58.2	175	11.0		22.8
2	73	00.3	257	09.9		39.3	257	20.7		23.8	264	20.8		58.0	190	13.2		22.9
3	88	02.8	272	09.8		38.5	272	21.8		23.2	279	22.9		57.9	205	15.3		22.9
4	103	05.2	287	09.8		37.6	287	22.9		22.6	294	24.9		57.7	220	17.5		23.0
5	118	07.7	302	09.8	+2	36.7	302	23.9	+3	22.0	309	27.0	+5	57.6	235	19.7	-19	23.0
6	133	10.2	317	09.7	+2	35.9	317	25.0	+3	21.4	324	29.1	+5	57.4	250	21.9	-19	23.1
7	148	12.6	332	09.7		35.0	332	26.1		20.8	339	31.2		57.3	265	24.0		23.2
8	163	15.1	347	09.6		34.2	347	27.1		20.2	354	33.3		57.1	280	26.2		23.2
9	178	17.6	2	09.6		33.3	2	28.2		19.6	9	35.3		57.0	295	28.4		23.3
10	193	20.0	17	09.5		32.4	17	29.3		19.0	24	37.4		56.8	310	30.6		23.3
11	208	22.5	32	09.5	+2	31.6	32	30.3	+3	18.4	39	39.5	+5	56.6	325	32.7	-19	23.4
12	223	25.0	47	09.5	+2	30.7	47	31.4	+3	17.8	54	41.6	+5	56.5	340	34.9	-19	23.4
13	238	27.4	62	09.4		29.8	62	32.5		17.2	69	43.7		56.3	355	37.1		23.5
14	253	29.9	77	09.4		29.0	77	33.5		16.6	84	45.7		56.2	10	39.2		23.5
15	268	32.3	92	09.3		28.1	92	34.6		16.1	99	47.8		56.0	25	41.4		23.6
16	283	34.8	107	09.3		27.2	107	35.7		15.5	114	49.9		55.9	40	43.6		23.6
17	298	37.3	122	09.2	+2	26.3	122	36.7	+3	14.9	129	52.0	+5	55.7	55	45.8	-19	23.7
18	313	39.7	137	09.2	+2	25.5	137	37.8	+3	14.3	144	54.1	+5	55.6	70	47.9	-19	23.8
19	328	42.2	152	09.1		24.6	152	38.9		13.7	159	56.1		55.4	85	50.1		23.8
20	343	44.7	167	09.1		23.7	167	39.9		13.1	174	58.2		55.3	100	52.3		23.9
21	358	47.1	182	09.1		22.9	182	41.0		12.5	190	00.3		55.1	115	54.4		23.9
22	13	49.6	197	09.0		22.0	197	42.1		11.9	205	02.4		55.0	130	56.6		24.0
23	28	52.1	212	09.0		21.1	212	43.1		11.3	220	04.5		54.8	145	58.8		24.0
24	43	54.5	227	08.9	+2	20.2	227	44.2	+3	10.7	235	06.5	+5	54.7	161	01.0	-19	24.1
Dif	—		0		-9		+11		-6		+21		-2		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 23 ^d 0 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'3 SD: 14'9 PMG: 7 ^h 17 ^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	184	06.5	-15 30.5	253	54.6	+9 20.1	60 N	5 55	6 45	7 31	***	***	***	14 21	16
1	199	06.4	31.2	268	27.8 ¹⁴²	12.0 ⁸¹	58	53	40	23	0 04	68	17	18	
2	214	06.4	32.0	283	01.0 ¹⁴²	+9 03.8 ⁸²	56	50	34	15	09	66	13	20	
3	229	06.4	32.7	297	34.3 ¹⁴³	+8 55.5 ⁸³	54	47	30	08	13	65	10	22	
4	244	06.4	33.5	312	07.6 ¹⁴³	47.3 ⁸²	52	45	25	7 01	17	63	07	23	
5	259	06.4	-15 34.3	326	40.9 ¹⁴³	+8 39.0 ⁸³	50	5 43	6 21	6 56	0 21	61	14	04	25
6	274	06.4	-15 35.0	341	14.3 ¹⁴⁴	+8 30.6 ⁸⁴	45	5 38	6 12	6 43	0 28	59	13	58	28
7	289	06.4	35.8	355	47.7 ¹⁴⁴	22.3 ⁸³	40	33	6 05	33	34	56	53	31	
8	304	06.4	36.6	10	21.1 ¹⁴⁴	13.9 ⁸⁴	35	28	5 58	24	40	54	49	33	
9	319	06.3	37.3	24	54.6 ¹⁴⁵	+8 05.4 ⁸⁵	30	23	52	17	45	52	46	34	
10	334	06.3	38.1	39	28.1 ¹⁴⁵	+7 57.0 ⁸⁴	20	14	40	6 03	0 53	49	39	37	
11	349	06.3	-15 38.8	54	01.7 ¹⁴⁶	+7 48.5 ⁸⁵	10 N	5 04	5 30	5 51	1 00	46	13	33	41
12	4	06.3	-15 39.6	68	35.3 ¹⁴⁶	+7 40.0 ⁸⁵	0	4 54	5 19	5 40	1 07	43	13	28	43
13	19	06.3	40.4	83	08.9 ¹⁴⁶	31.4 ⁸⁶	10 S	41	5 07	29	13	41	22	46	
14	34	06.3	41.1	97	42.5 ¹⁴⁶	22.9 ⁸⁵	20	26	4 53	17	21	38	17	48	
15	49	06.2	41.9	112	16.2 ¹⁴⁷	14.3 ⁸⁶	30	4 07	37	5 02	29	35	10	52	
16	64	06.2	42.6	126	49.9 ¹⁴⁷	+7 05.6 ⁸⁷	35	3 54	27	4 54	33	34	06	54	
17	79	06.2	-15 43.4	141	23.7 ¹⁴⁸	+6 57.0 ⁸⁶	40	3 40	4 15	4 45	1 39	31	13	02	55
18	94	06.2	-15 44.2	155	57.4 ¹⁴⁷	+6 48.3 ⁸⁷	45	3 21	4 01	4 34	1 45	29	12	56	59
19	109	06.2	44.9	170	31.2 ¹⁴⁸	39.6 ⁸⁷	50	2 56	3 43	20	52	26	50	62	
20	124	06.1	45.7	185	05.1 ¹⁴⁹	30.9 ⁸⁷	52	44	35	14	56	24	47	63	
21	139	06.1	46.4	199	38.9 ¹⁴⁸	22.1 ⁸⁸	54	29	25	4 07	1 59	23	44	64	
22	154	06.1	47.2	214	12.8 ¹⁴⁹	13.4 ⁸⁷	56	2 12	14	3 59	2 03	22	41	66	
23	169	06.1	47.9	228	46.7 ¹⁴⁹	+6 04.6 ⁸⁸	58	1 50	3 01	50	08	19	37	68	
24	184	06.1	-15 48.7	243	20.6 ¹⁴⁹	+5 55.7 ⁸⁹	60 S	1 20	2 46	3 40	2 13	18	12	32	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 00 ^m 9		Mag: -4.4 PMG: 8 ^h 51 ^m		Mag: +1.7 PMG: 8 ^h 48 ^m		Mag: -1.9 PMG: 8 ^h 18 ^m		Mag: +0.5 PMG: 13 ^h 14 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	43	54.5	227	08.9	+2 20.2	227	44.2	+3 10.7	235	06.5	+5 54.7	161	01.0	-19 24.1	
1	58	57.0	242	08.9	19.4	242	45.3	10.1	250	08.6	54.5	176	03.1	24.1	
2	73	59.4	257	08.8	18.5	257	46.3	09.5	265	10.7	54.3	191	05.3	24.2	
3	89	01.9	272	08.8	17.6	272	47.4	08.9	280	12.8	54.2	206	07.5	24.3	
4	104	04.4	287	08.7	16.8	287	48.5	08.3	295	14.9	54.0	221	09.6	24.3	
5	119	06.8	302	08.7	+2 15.9	302	49.6	+3 07.7	310	17.0	+5 53.9	236	11.8	-19 24.4	
6	134	09.3	317	08.6	+2 15.0	317	50.6	+3 07.1	325	19.0	+5 53.7	251	14.0	-19 24.4	
7	149	11.8	332	08.6	14.1	332	51.7	06.5	340	21.1	53.6	266	16.2	24.5	
8	164	14.2	347	08.5	13.3	347	52.8	05.9	355	23.2	53.4	281	18.3	24.5	
9	179	16.7	2	08.5	12.4	2	53.8	05.3	10	25.3	53.3	296	20.5	24.6	
10	194	19.2	17	08.4	11.5	17	54.9	04.8	25	27.4	53.1	311	22.7	24.6	
11	209	21.6	32	08.4	+2 10.6	32	56.0	+3 04.2	40	29.4	+5 53.0	326	24.8	-19 24.7	
12	224	24.1	47	08.3	+2 09.7	47	57.0	+3 03.6	55	31.5	+5 52.8	341	27.0	-19 24.8	
13	239	26.6	62	08.3	08.9	62	58.1	03.0	70	33.6	52.7	356	29.2	24.8	
14	254	29.0	77	08.2	08.0	77	59.2	02.4	85	35.7	52.5	11	31.4	24.9	
15	269	31.5	92	08.2	07.1	93	00.2	01.8	100	37.8	52.4	26	33.5	24.9	
16	284	33.9	107	08.1	06.2	108	01.3	01.2	115	39.9	52.2	41	35.7	25.0	
17	299	36.4	122	08.0	+2 05.3	123	02.4	+3 00.6	130	41.9	+5 52.1	56	37.9	-19 25.0	
18	314	38.9	137	08.0	+2 04.5	138	03.4	+3 00.0	145	44.0	+5 51.9	71	40.0	-19 25.1	
19	329	41.3	152	07.9	03.6	153	04.5	+2 59.4	160	46.1	51.8	86	42.2	25.1	
20	344	43.8	167	07.9	02.7	168	05.6	58.8	175	48.2	51.6	101	44.4	25.2	
21	359	46.3	182	07.8	01.8	183	06.7	58.2	190	50.3	51.5	116	46.5	25.3	
22	14	48.7	197	07.8	+2 00.9	198	07.7	57.6	205	52.4	51.3	131	48.7	25.3	
23	29	51.2	212	07.7	+2 00.0	213	08.8	57.0	220	54.5	51.2	146	50.9	25.4	
24	44	53.7	227	07.7	+1 59.2	228	09.9	+2 56.4	235	56.5	+5 51.0	161	53.1	-19 25.4	
Dif	—		-1	-9		+11	-6		+21	-2		+22	-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 24 ^d 0 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1					Civil			Hora R°		Hora R°	
	PMG: 11 ^h 43 ^m 6			SD: 14'8 PMG: 8 ^h 00 ^m R°: 43 ^m					Náutico						
	hG ☉	Dec		hG ☾ Dif	Dec	Dif									
h	°	'	°	°	'	°	°	h m	h m	h m	h m	h m	m	h m	m
0	184	06.1	-15 48.7	243	20.6	+5 55.7	60 N	15 52	16 39	17 29	1 09 70	14 37 16			
1	199	06.0	49.5	257	54.6 ¹⁵⁰	46.9	58	16 02	45	32	12 68	35 18			
2	214	06.0	50.2	272	28.6 ¹⁵⁰	38.1	56	10	50	35	15 66	33 20			
3	229	06.0	51.0	287	02.6 ¹⁵⁰	29.2	54	17	16 55	37	18 64	32 21			
4	244	06.0	51.7	301	36.6 ¹⁵⁰	20.3	52	23	17 00	40	20 63	30 23			
5	259	06.0	-15 52.5	316	10.7 ¹⁵¹	+5 11.4	50	16 29	17 04	17 42	1 22 61	14 29 24			
6	274	05.9	-15 53.2	330	44.8 ¹⁵¹	+5 02.4	45	16 42	17 13	17 48	1 27 58	14 26 27			
7	289	05.9	54.0	345	18.9 ¹⁵¹	+4 53.5	40	16 53	21	53	30 56	24 29			
8	304	05.9	54.7	359	53.0 ¹⁵¹	44.5	35	17 02	28	17 58	34 53	22 31			
9	319	05.9	55.5	14	27.1 ¹⁵¹	35.5	30	09	34	18 03	37 51	20 33			
10	334	05.8	56.2	29	01.3 ¹⁵²	26.5	20	23	46	12	42 48	16 37			
11	349	05.8	-15 57.0	43	35.4 ¹⁵¹	+4 17.5	10 N	17 36	17 57	18 23	1 46 45	14 14 39			
12	4	05.8	-15 57.7	58	09.6 ¹⁵²	+4 08.4	0	17 47	18 09	18 34	1 50 43	14 11 42			
13	19	05.8	58.5	72	43.8 ¹⁵²	+3 59.4	10 S	17 59	21	18 46	54 40	08 45			
14	34	05.7	-15 59.2	87	18.1 ¹⁵³	50.3	20	18 11	35	19 02	1 59 37	05 48			
15	49	05.7	-16 00.0	101	52.3 ¹⁵²	41.2	30	26	18 51	22	2 04 33	02 51			
16	64	05.7	-16 00.7	116	26.6 ¹⁵³	32.1	35	34	19 02	35	07 31	14 00 53			
17	79	05.7	-16 01.5	131	00.8 ¹⁵²	+3 23.0	40	18 44	19 14	19 50	2 10 29	13 57 56			
18	94	05.6	-16 02.2	145	35.1 ¹⁵³	+3 13.9	45	18 56	19 28	20 09	2 14 27	13 55 58			
19	109	05.6	03.0	160	09.4 ¹⁵³	+3 04.8	50	19 10	47	35	18 24	52 61			
20	124	05.6	03.7	174	43.7 ¹⁵³	+2 55.7	52	16	19 56	20 48	20 23	50 63			
21	139	05.6	04.4	189	18.0 ¹⁵³	46.5	54	23	20 06	21 03	22 22	48 65			
22	154	05.5	05.2	203	52.4 ¹⁵⁴	37.3	56	32	17	22	25 20	47 66			
23	169	05.5	05.9	218	26.7 ¹⁵³	28.2	58	41	31	21 45	27 18	45 67			
24	184	05.5	-16 06.7	233	01.1 ¹⁵⁴	+2 19.0	60 S	19 51	20 47	22 19	2 31 15	13 43 69			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 57 ^m 0		Mag: -4.4 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 8 ^h 47 ^m		Mag: -1.9 PMG: 8 ^h 15 ^m		Mag: +0.5 PMG: 13 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	44	53.7	227	07.7	+1 59.2	228	09.9	+2 56.4	235	56.5	+5 51.0	161	53.1	-19 25.4				
1	59	56.1	242	07.6	58.3	243	10.9	55.8	250	58.6	50.9	176	55.2	25.5				
2	74	58.6	257	07.5	57.4	258	12.0	55.2	266	00.7	50.7	191	57.4	25.5				
3	90	01.1	272	07.5	56.5	273	13.1	54.6	281	02.8	50.5	206	59.6	25.6				
4	105	03.5	287	07.4	55.6	288	14.1	54.0	296	04.9	50.4	222	01.7	25.6				
5	120	06.0	302	07.4	+1 54.7	303	15.2	+2 53.4	311	07.0	+5 50.2	237	03.9	-19 25.7				
6	135	08.4	317	07.3	+1 53.9	318	16.3	+2 52.9	326	09.1	+5 50.1	252	06.1	-19 25.8				
7	150	10.9	332	07.2	53.0	333	17.4	52.3	341	11.1	49.9	267	08.2	25.8				
8	165	13.4	347	07.2	52.1	348	18.4	51.7	356	13.2	49.8	282	10.4	25.9				
9	180	15.8	2 07.1	51.2	3 19.5	51.1	11 15.3	49.6	297	12.6	49.6	297	12.6	25.9				
10	195	18.3	17 07.1	50.3	18 20.6	50.5	26 17.4	49.5	312	14.8	49.5	312	14.8	26.0				
11	210	20.8	32 07.0	+1 49.4	33 21.6	+2 49.9	41 19.5	+5 49.3	327	16.9	-19 25.7	327	16.9	-19 26.0				
12	225	23.2	47 06.9	+1 48.5	48 22.7	+2 49.3	56 21.6	+5 49.2	342	19.1	-19 26.1	342	19.1	-19 26.1				
13	240	25.7	62 06.9	47.6	63 23.8	48.7	71 23.7	49.0	357	21.3	26.1	357	21.3	26.1				
14	255	28.2	77 06.8	46.7	78 24.8	48.1	86 25.8	48.9	12 23.4	26.2		12 23.4	26.2					
15	270	30.6	92 06.7	45.8	93 25.9	47.5	101 27.8	48.7	27 25.6	26.2		27 25.6	26.2					
16	285	33.1	107 06.7	45.0	108 27.0	46.9	116 29.9	48.6	42 27.8	26.3		42 27.8	26.3					
17	300	35.5	122 06.6	+1 44.1	123 28.1	+2 46.3	131 32.0	+5 48.4	57 29.9	-19 26.4		57 29.9	-19 26.4					
18	315	38.0	137 06.6	+1 43.2	138 29.1	+2 45.7	146 34.1	+5 48.3	72 32.1	-19 26.4		72 32.1	-19 26.4					
19	330	40.5	152 06.5	42.3	153 30.2	45.1	161 36.2	48.1	87 34.3	26.5		87 34.3	26.5					
20	345	42.9	167 06.4	41.4	168 31.3	44.5	176 38.3	48.0	102 36.5	26.5		102 36.5	26.5					
21	0	45.4	182 06.4	40.5	183 32.3	43.9	191 40.4	47.8	117 38.6	26.6		117 38.6	26.6					
22	15	47.9	197 06.3	39.6	198 33.4	43.3	206 42.5	47.7	132 40.8	26.6		132 40.8	26.6					
23	30	50.3	212 06.2	38.7	213 34.5	42.7	221 44.5	47.5	147 43.0	26.7		147 43.0	26.7					
24	45	52.8	227 06.2	+1 37.8	228 35.6	+2 42.1	236 46.6	+5 47.4	162 45.1	-19 26.7		162 45.1	-19 26.7					
Dif	—		-1		-9		+11		-6		+21		-2		+22		-	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 25 ^d 0	PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0									
	PMG: 11 ^h 43 ^m 7					SD: 14'7		PMG: 8 ^h 43 ^m			R°: 42 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m		h	m
0	184	05.5	-16 06.7	233	01.1	+2 19.0	92	60 N	6 00	6 50	7 37	2 19	70	14 53 15
1	199	05.4	07.4	247	35.4 ¹⁵³	09.8	92	58	5 56	44	27	20	68	53 17
2	214	05.4	08.2	262	09.8 ¹⁵⁴	+2 00.6	92	56	54	38	19	21	66	53 19
3	229	05.4	08.9	276	44.2 ¹⁵⁴	+1 51.4	92	54	51	33	12	22	64	53 22
4	244	05.3	09.6	291	18.6 ¹⁵⁴	42.2	92	52	48	29	7 05	23	62	53 22
5	259	05.3	-16 10.4	305	53.0 ¹⁵⁴	+1 33.0	92	50	5 46	6 24	6 59	2 23	61	14 53 24
6	274	05.3	-16 11.1	320	27.4 ¹⁵⁴	+1 23.7	93	45	5 40	6 15	6 46	2 25	58	14 53 27
7	289	05.3	11.9	335	01.8 ¹⁵⁴	14.5	92	40	35	07	35	26	55	53 29
8	304	05.2	12.6	349	36.2 ¹⁵⁴	+1 05.3	92	35	30	6 00	26	27	53	53 31
9	319	05.2	13.4	4	10.6 ¹⁵⁴	+0 56.0	93	30	25	5 53	18	28	51	53 33
10	334	05.2	14.1	18	45.0 ¹⁵⁴	46.8	92	20	15	41	6 04	30	48	53 37
11	349	05.1	-16 14.8	33	19.4 ¹⁵⁴	+0 37.5	93	10 N	5 05	5 30	5 52	2 31	45	14 53 39
12	4	05.1	-16 15.6	47	53.8 ¹⁵⁴	+0 28.3	92	0	4 54	5 19	5 40	2 33	42	14 53 42
13	19	05.1	16.3	62	28.2 ¹⁵⁴	19.0	92	10 S	41	5 06	28	34	39	53 45
14	34	05.0	17.0	77	02.6 ¹⁵⁴	09.8	92	20	25	4 52	16	36	36	53 48
15	49	05.0	17.8	91	37.1 ¹⁵⁵	+0 00.5	93	30	4 05	35	5 01	37	33	53 51
16	64	05.0	18.5	106	11.5 ¹⁵⁴	-0 08.7	92	35	3 52	25	4 52	38	31	53 53
17	79	04.9	-16 19.3	120	45.9 ¹⁵⁴	-0 18.0	93	40	3 37	4 13	4 43	2 39	29	14 53 55
18	94	04.9	-16 20.0	135	20.3 ¹⁵⁴	-0 27.2	92	45	3 17	3 58	4 31	2 41	26	14 53 58
19	109	04.8	20.7	149	54.7 ¹⁵⁴	36.5	93	50	2 52	40	17	42	24	53 61
20	124	04.8	21.5	164	29.1 ¹⁵⁴	45.7	92	52	39	31	10	43	22	53 62
21	139	04.8	22.2	179	03.5 ¹⁵⁴	-0 55.0	92	54	23	21	4 03	44	21	53 64
22	154	04.7	22.9	193	37.9 ¹⁵⁴	-1 04.2	93	56	2 05	3 09	3 55	45	19	53 65
23	169	04.7	23.7	208	12.3 ¹⁵⁴	13.5	93	58	1 41	2 56	46	45	18	52 68
24	184	04.7	-16 24.4	222	46.7 ¹⁵⁴	-1 22.7	92	60 S	1 08	2 40	3 35	2 46	16	14 52 70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 53 ^m 0		Mag: -4.4 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 8 ^h 45 ^m		Mag: -1.9 PMG: 8 ^h 12 ^m		Mag: +0.5 PMG: 13 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	45	52.8	227	06.2	+1	37.8	236	46.6	+5	47.4
1	60	55.3	242	06.1		36.9	243	36.6		41.6
2	75	57.7	257	06.0		36.0	258	37.7		41.0
3	91	00.2	272	06.0		35.1	273	38.8		40.4
4	106	02.7	287	05.9		34.2	288	39.8		39.8
5	121	05.1	302	05.8	+1	33.3	303	40.9	+2	39.2
6	136	07.6	317	05.8	+1	32.4	318	42.0	+2	38.6
7	151	10.0	332	05.7		31.5	333	43.1		38.0
8	166	12.5	347	05.6		30.6	348	44.1		37.4
9	181	15.0	2	05.6		29.7	3	45.2		36.8
10	196	17.4	17	05.5		28.8	18	46.3		36.2
11	211	19.9	32	05.4	+1	27.9	33	47.3	+2	35.6
12	226	22.4	47	05.3	+1	27.0	48	48.4	+2	35.0
13	241	24.8	62	05.3		26.1	63	49.5		34.4
14	256	27.3	77	05.2		25.2	78	50.6		33.8
15	271	29.8	92	05.1		24.3	93	51.6		33.2
16	286	32.2	107	05.1		23.4	108	52.7		32.6
17	301	34.7	122	05.0	+1	22.5	123	53.8	+2	32.0
18	316	37.1	137	04.9	+1	21.6	138	54.8	+2	31.4
19	331	39.6	152	04.8		20.7	153	55.9		30.9
20	346	42.1	167	04.8		19.8	168	57.0		30.3
21	1	44.5	182	04.7		18.9	183	58.1		29.7
22	16	47.0	197	04.6		18.0	198	59.1		29.1
23	31	49.5	212	04.5		17.1	214	00.2		28.5
24	46	51.9	227	04.5	+1	16.2	229	01.3	+2	27.9
Dif	—		-1		-9		+11		-6	
					</					

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: 26 ^d 0 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 1 20 ^h : 54 ^o 1 Rº: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	184	04.7	-16	24.4	222	46.7	-1 22.7	60 N	15 47	16 34	17 25	3 29	70	15 08	17
1	199	04.6		25.1	237	21.1 ¹⁵⁴	31.9 ⁹²	58	15 57	41	28	28	68	10	19
2	214	04.6		25.9	251	55.5 ¹⁵⁴	41.2 ⁹³	56	16 06	46	31	27	66	12	21
3	229	04.5		26.6	266	29.8 ¹⁵³	50.4 ⁹²	54	13	52	34	26	64	14	22
4	244	04.5		27.3	281	04.2 ¹⁵⁴	-1 59.6 ⁹²	52	20	16 56	37	25	63	15	24
5	259	04.5	-16	28.0	295	38.5 ¹⁵³	-2 08.8 ⁹²	50	16 26	17 01	17 40	3 24	62	15 17	25
6	274	04.4	-16	28.8	310	12.9 ¹⁵⁴	-2 18.0 ⁹²	45	16 39	17 11	17 46	3 23	58	15 20	27
7	289	04.4		29.5	324	47.2 ¹⁵³	27.2 ⁹²	40	16 50	19	51	21	56	22	30
8	304	04.3		30.2	339	21.5 ¹⁵³	36.4 ⁹²	35	17 00	26	17 57	20	54	24	33
9	319	04.3		31.0	353	55.8 ¹⁵³	45.6 ⁹²	30	08	33	18 02	19	52	26	34
10	334	04.3		31.7	8	30.1 ¹⁵³	-2 54.8 ⁹²	20	23	45	12	18	48	30	37
11	349	04.2	-16	32.4	23	04.4 ¹⁵³	-3 03.9 ⁹¹	10 N	17 35	17 57	18 22	3 16	45	15 32	41
12	4	04.2	-16	33.1	37	38.6 ¹⁵²	-3 13.1 ⁹²	0	17 47	18 09	18 34	3 15	42	15 35	43
13	19	04.1		33.9	52	12.9 ¹⁵³	22.2 ⁹¹	10 S	17 59	21	18 47	13	40	38	46
14	34	04.1		34.6	66	47.1 ¹⁵²	31.4 ⁹²	20	18 12	36	19 03	12	37	41	48
15	49	04.0		35.3	81	21.4 ¹⁵³	40.5 ⁹¹	30	28	18 53	24	10	34	44	52
16	64	04.0		36.0	95	55.6 ¹⁵²	49.6 ⁹¹	35	36	19 04	37	09	32	46	54
17	79	04.0	-16	36.8	110	29.8 ¹⁵²	-3 58.7 ⁹¹	40	18 47	19 16	19 53	3 08	30	15 48	56
18	94	03.9	-16	37.5	125	03.9 ¹⁵¹	-4 07.8 ⁹¹	45	18 58	19 32	20 13	3 07	27	15 51	58
19	109	03.9		38.2	139	38.1 ¹⁵²	16.8 ⁹⁰	50	19 13	19 51	40	06	24	54	61
20	124	03.8		38.9	154	12.2 ¹⁵¹	25.9 ⁹¹	52	20	20 00	20 53	05	23	55	63
21	139	03.8		39.7	168	46.3 ¹⁵¹	34.9 ⁹⁰	54	27	10	21 09	05	21	57	64
22	154	03.7		40.4	183	20.4 ¹⁵¹	43.9 ⁹⁰	56	36	22	29	04	20	15 58	66
23	169	03.7		41.1	197	54.5 ¹⁵¹	-4 52.9 ⁹⁰	58	46	37	21 55	03	18	16 00	68
24	184	03.6	-16	41.8	212	28.6 ¹⁵¹	-5 01.9 ⁹⁰	60 S	19 57	20 54	22 33	3 02	16	16 02	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 49 ^m 1		Mag: -4.4 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 8 ^h 43 ^m		Mag: -1.9 PMG: 8 ^h 08 ^m		Mag: +0.5 PMG: 13 ^h 04 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	46	51.9	227	04.5	+1	16.2	237	36.8	+5	43.8
1	61	54.4	242	04.4		15.3	244	02.4		27.3
2	76	56.9	257	04.3		14.4	259	03.4		26.7
3	91	59.3	272	04.2		13.5	274	04.5		26.1
4	107	01.8	287	04.2		12.6	289	05.6		25.5
5	122	04.3	302	04.1	+1	11.7	304	06.7	+2	24.9
6	137	06.7	317	04.0	+1	10.8	319	07.7	+2	24.3
7	152	09.2	332	03.9		09.9	334	08.8		23.7
8	167	11.6	347	03.8		08.9	349	09.9		23.1
9	182	14.1	2	03.8		08.0	4	10.9		22.5
10	197	16.6	17	03.7		07.1	19	12.0		21.9
11	212	19.0	32	03.6	+1	06.2	34	13.1	+2	21.3
12	227	21.5	47	03.5	+1	05.3	49	14.2	+2	20.8
13	242	24.0	62	03.4		04.4	64	15.2		20.2
14	257	26.4	77	03.4		03.5	79	16.3		19.6
15	272	28.9	92	03.3		02.6	94	17.4		19.0
16	287	31.4	107	03.2		01.7	109	18.5		18.4
17	302	33.8	122	03.1	+1	00.7	124	19.5	+2	17.8
18	317	36.3	137	03.0	+0	59.8	139	20.6	+2	17.2
19	332	38.7	152	03.0		58.9	154	21.7		16.6
20	347	41.2	167	02.9		58.0	169	22.8		16.0
21	2	43.7	182	02.8		57.1	184	23.8		15.4
22	17	46.1	197	02.7		56.2	199	24.9		14.8
23	32	48.6	212	02.6		55.3	214	26.0		14.2
24	47	51.1	227	02.5	+0	54.3	229	27.1	+2	13.6
Dif	—		-1	-9	+11	-6	+21	-1	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 27 ^d 0 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3												
	PMG: 11 ^h 43 ^m 8			SD: 14'7												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	03.6	-16	41.8	212	28.6	-5	01.9	60 N	6 04	6 55	7 42	4 39	70	15 25	19
1	199	03.6		42.6	227	02.6 ¹⁵⁰		10.9 ⁹⁰	58	6 00	48	32	36	68	29	21
2	214	03.5		43.3	241	36.6 ¹⁵⁰		19.8 ⁹⁰	56	5 57	42	23	33	66	33	22
3	229	03.5		44.0	256	10.6 ¹⁵⁰		28.8 ⁹⁰	54	54	37	15	30	65	36	24
4	244	03.4		44.7	270	44.6 ¹⁵⁰		37.7 ⁸⁹	52	51	32	09	28	63	39	25
5	259	03.4	-16	45.4	285	18.6 ¹⁵⁰	-5	46.6 ⁸⁹	50	5 49	6 27	7 02	4 26	61	15 42	26
6	274	03.3	-16	46.1	299	52.5 ¹⁴⁹	-5	55.4 ⁸⁸	45	5 42	6 18	6 49	4 21	59	15 47	30
7	289	03.3		46.9	314	26.4 ¹⁴⁹	-6	04.3 ⁸⁹	40	37	09	38	17	56	52	32
8	304	03.2		47.6	329	00.3 ¹⁴⁹		13.1 ⁸⁸	35	31	6 02	28	14	54	15 57	34
9	319	03.2		48.3	343	34.1 ¹⁴⁸		21.9 ⁸⁸	30	26	5 55	20	11	52	16 00	36
10	334	03.1		49.0	358	08.0 ¹⁴⁹		30.7 ⁸⁸	20	16	42	6 05	06	49	07	39
11	349	03.1	-16	49.7	12	41.8 ¹⁴⁸	-6	39.4 ⁸⁷	10 N	5 05	5 31	5 52	4 01	47	16 13	41
12	4	03.0	-16	50.4	27	15.5 ¹⁴⁷	-6	48.2 ⁸⁸	0	4 54	5 19	5 40	3 57	44	16 18	44
13	19	03.0		51.2	41	49.3 ¹⁴⁸	-6	56.9 ⁸⁷	10 S	40	5 06	28	53	41	24	46
14	34	02.9		51.9	56	23.0 ¹⁴⁷	-7	05.6 ⁸⁷	20	24	4 52	15	49	38	29	50
15	49	02.9		52.6	70	56.7 ¹⁴⁷		14.2 ⁸⁶	30	4 03	34	5 00	44	35	36	52
16	64	02.8		53.3	85	30.4 ¹⁴⁷		22.8 ⁸⁶	35	3 50	23	4 51	41	33	40	54
17	79	02.8	-16	54.0	100	04.0 ¹⁴⁶	-7	31.4 ⁸⁶	40	3 34	4 11	4 41	3 38	31	16 44	56
18	94	02.7	-16	54.7	114	37.6 ¹⁴⁶	-7	40.0 ⁸⁶	45	3 14	3 55	4 29	3 34	29	16 49	59
19	109	02.7		55.4	129	11.2 ¹⁴⁶		48.6 ⁸⁶	50	2 47	36	14	30	26	55	62
20	124	02.6		56.1	143	44.7 ¹⁴⁵	-7	57.1 ⁸⁵	52	34	27	4 07	28	25	16 58	63
21	139	02.6		56.9	158	18.3 ¹⁴⁶	-8	05.6 ⁸⁵	54	2 18	16	3 59	26	23	17 01	65
22	154	02.5		57.6	172	51.7 ¹⁴⁴		14.0 ⁸⁴	56	1 58	3 04	51	24	21	04	67
23	169	02.4		58.3	187	25.2 ¹⁴⁵		22.4 ⁸⁴	58	1 32	2 50	41	21	19	08	68
24	184	02.4	-16	59.0	201	58.6 ¹⁴⁴	-8	30.8 ⁸⁴	60 S	0 54	2 33	3 30	3 18	17	17 12	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 45 ^m 2		Mag: -4.4 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 8 ^h 42 ^m		Mag: -1.9 PMG: 8 ^h 05 ^m		Mag: +0.5 PMG: 13 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	47	51.1	227	02.5	+0	54.3	229	27.1	+5	40.3
1	62	53.5	242	02.5		53.4	244	28.1		40.1
2	77	56.0	257	02.4		52.5	259	29.2		40.0
3	92	58.5	272	02.3		51.6	274	30.3		39.9
4	108	00.9	287	02.2		50.7	289	31.4		39.7
5	123	03.4	302	02.1	+0	49.8	304	32.4	+2	39.6
6	138	05.9	317	02.0	+0	48.8	319	33.5	+2	39.4
7	153	08.3	332	01.9		47.9	334	34.6		39.3
8	168	10.8	347	01.8		47.0	349	35.7		39.1
9	183	13.2	2	01.8		46.1	4	36.7		39.0
10	198	15.7	17	01.7		45.2	19	37.8		38.8
11	213	18.2	32	01.6	+0	44.3	34	38.9	+2	38.7
12	228	20.6	47	01.5	+0	43.3	49	40.0	+2	38.5
13	243	23.1	62	01.4		42.4	64	41.0		38.4
14	258	25.6	77	01.3		41.5	79	42.1		38.3
15	273	28.0	92	01.2		40.6	94	43.2		38.1
16	288	30.5	107	01.1		39.7	109	44.3		38.0
17	303	33.0	122	01.0	+0	38.7	124	45.3	+2	37.8
18	318	35.4	137	01.0	+0	37.8	139	46.4	+2	37.7
19	333	37.9	152	00.9		36.9	154	47.5		37.5
20	348	40.4	167	00.8		36.0	169	48.6		37.4
21	3	42.8	182	00.7		35.0	184	49.6		37.2
22	18	45.3	197	00.6		34.1	199	50.7	+2	37.1
23	33	47.7	212	00.5		33.2	214	51.8	+2	36.9
24	48	50.2	227	00.4	+0	32.3	229	52.9	+1	36.8
Dif	—		-1		-9		+11		-6	
									+21	
									-1	
									+22	
									-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 28 ^d 0	PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5													
	PMG: 11 ^h 43 ^m 9												SD: 14 ^h 8			PMG: 10 ^h 51 ^m		
	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	184	02.4	-16	201	58.6	-8	30.8	60 N	15 43	16 30	17 21	5 49	71	15 44	21			
1	199	02.3	-16	216	32.0 ¹⁴⁴		39.2 ⁸⁴	58	15 53	37	25	44	68	50	24			
2	214	02.3	-17	231	05.4 ¹⁴⁴		47.5 ⁸³	56	16 02	43	28	39	66	15 55	26			
3	229	02.2		245	38.7 ¹⁴³	-8	55.8 ⁸³	54	10	49	31	35	64	16 00	27			
4	244	02.2		260	12.0 ¹⁴³	-9	04.1 ⁸³	52	17	54	34	31	63	04	29			
5	259	02.1	-17	274	45.2 ¹⁴²	-9	12.3 ⁸²	50	16 23	16 58	17 37	5 27	62	16 08	30			
6	274	02.1	-17	289	18.4 ¹⁴²	-9	20.5 ⁸²	45	16 37	17 08	17 44	5 20	59	16 17	33			
7	289	02.0		303	51.6 ¹⁴²		28.6 ⁸¹	40	48	17	50	13	57	24	35			
8	304	01.9		318	24.8 ¹⁴²		36.8 ⁸²	35	16 58	25	17 55	08	54	31	36			
9	319	01.9		332	57.9 ¹⁴¹		44.8 ⁸⁰	30	17 07	32	18 01	5 03	53	36	39			
10	334	01.8		347	31.0 ¹⁴¹	-9	52.9 ⁸¹	20	22	45	11	4 55	50	46	41			
11	349	01.8	-17	2	04.0 ¹⁴⁰	-10	00.9 ⁸⁰	10 N	17 35	17 57	18 22	4 48	47	16 54	44			
12	4	01.7	-17	16	37.0 ¹⁴⁰	-10	08.8 ⁷⁹	0	17 47	18 09	18 34	4 41	45	17 02	46			
13	19	01.6		31	10.0 ¹⁴⁰		16.8 ⁸⁰	10 S	18 00	22	18 48	34	43	10	48			
14	34	01.6		45	42.9 ¹³⁹		24.7 ⁷⁹	20	14	37	19 04	27	40	19	50			
15	49	01.5		60	15.8 ¹³⁹		32.5 ⁷⁸	30	29	18 55	26	19	37	28	54			
16	64	01.4		74	48.6 ¹³⁸		40.3 ⁷⁸	35	38	19 06	39	14	36	34	55			
17	79	01.4	-17	89	21.5 ¹³⁹	-10	48.0 ⁷⁷	40	18 49	19 19	19 56	4 09	33	17 40	57			
18	94	01.3	-17	103	54.2 ¹³⁷	-10	55.8 ⁷⁸	45	19 01	19 35	20 17	4 03	31	17 48	59			
19	109	01.3		118	27.0 ¹³⁸	-11	03.4 ⁷⁶	50	16	19 55	44	3 56	28	17 57	61			
20	124	01.2		132	59.7 ¹³⁷		11.1 ⁷⁷	52	24	20 04	20 58	53	27	18 01	63			
21	139	01.1		147	32.3 ¹³⁶		18.6 ⁷⁵	54	31	15	21 15	49	26	06	64			
22	154	01.1		162	04.9 ¹³⁶		26.2 ⁷⁶	56	40	28	21 36	45	24	11	66			
23	169	01.0		176	37.5 ¹³⁶		33.7 ⁷⁵	58	19 50	20 43	22 05	40	23	16	68			
24	184	00.9	-17	191	10.0 ¹³⁵	-11	41.1 ⁷⁴	60 S	20 02	21 00	22 51	3 35	21	18 23	70			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 20 ^h 41 ^m 3		Mag: -4.4 PMG: 8 ^h 52 ^m		Mag: +1.7 PMG: 8 ^h 40 ^m		Mag: -1.9 PMG: 8 ^h 02 ^m		Mag: +0.5 PMG: 12 ^h 57 ^m									
	hG ♈		hG ♀	Dec	hG ♂		hG ♃	Dec	hG ♄		hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	48	50.2	227	00.4	+0	32.3	229	52.9	+1	59.4	239	17.5	+5	36.8	165	21.1	-19	30.7
1	63	52.7	242	00.3		31.3	244	54.0		58.8	254	19.6		36.7	180	23.3		30.8
2	78	55.1	257	00.2		30.4	259	55.0		58.2	269	21.7		36.5	195	25.5		30.8
3	93	57.6	272	00.1		29.5	274	56.1		57.6	284	23.8		36.4	210	27.6		30.9
4	109	00.1	287	00.0		28.6	289	57.2		57.0	299	25.9		36.2	225	29.8		30.9
5	124	02.5	301	59.9	+0	27.6	304	58.3	+1	56.4	314	28.0	+5	36.1	240	32.0	-19	31.0
6	139	05.0	316	59.8	+0	26.7	319	59.3	+1	55.8	329	30.1	+5	35.9	255	34.1	-19	31.0
7	154	07.5	331	59.7		25.8	335	00.4		55.2	344	32.2		35.8	270	36.3		31.1
8	169	09.9	346	59.6		24.9	350	01.5		54.6	359	34.3		35.7	285	38.5		31.1
9	184	12.4	1	59.5		23.9	5	02.6		54.0	14	36.4		35.5	300	40.6		31.2
10	199	14.8	16	59.5		23.0	20	03.6		53.4	29	38.5		35.4	315	42.8		31.3
11	214	17.3	31	59.4	+0	22.1	35	04.7	+1	52.8	44	40.6	+5	35.2	330	45.0	-19	31.3
12	229	19.8	46	59.3	+0	21.1	50	05.8	+1	52.2	59	42.7	+5	35.1	345	47.1	-19	31.4
13	244	22.2	61	59.2		20.2	65	06.9		51.7	74	44.8		34.9	0	49.3		31.4
14	259	24.7	76	59.1		19.3	80	08.0		51.1	89	46.9		34.8	15	51.5		31.5
15	274	27.2	91	59.0		18.3	95	09.0		50.5	104	49.0		34.6	30	53.6		31.5
16	289	29.6	106	58.9		17.4	110	10.1		49.9	119	51.1		34.5	45	55.8		31.6
17	304	32.1	121	58.8	+0	16.5	125	11.2	+1	49.3	134	53.2	+5	34.4	60	58.0	-19	31.6
18	319	34.6	136	58.7	+0	15.6	140	12.3	+1	48.7	149	55.3	+5	34.2	76	00.1	-19	31.7
19	334	37.0	151	58.6		14.6	155	13.3		48.1	164	57.4		34.1	91	02.3		31.7
20	349	39.5	166	58.5		13.7	170	14.4		47.5	179	59.6		33.9	106	04.4		31.8
21	4	42.0	181	58.4		12.8	185	15.5		46.9	195	01.7		33.8	121	06.6		31.9
22	19	44.4	196	58.3		11.8	200	16.6		46.3	210	03.8		33.6	136	08.8		31.9
23	34	46.9	211	58.2		10.9	215	17.7		45.7	225	05.9		33.5	151	10.9		32.0
24	49	49.3	226	58.1	+0	10.0	230	18.7	+1	45.1	240	08.0	+5	33.4	166	13.1	-19	32.0
Dif	—		-1	-9		+11	-6		+21	-1		+22	-1					-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44 ^m 0			Edad: 29 ^d 0 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'8 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	00.9	-17	15.9	191	10.0	-11	41.1	60 N	6 08	6 59	7 47	7 00	69	16 05	28
1	199	00.9		16.6	205	42.5 ¹³⁵		48.5 ⁷⁴	58	04	52	36	6 52	67	14	29
2	214	00.8		17.2	220	15.0 ¹³⁵	-11	55.8 ⁷³	56	6 01	46	27	45	66	21	31
3	229	00.7		17.9	234	47.4 ¹³⁴	-12	03.1 ⁷³	54	5 57	40	19	39	64	27	32
4	244	00.7		18.6	249	19.7 ¹³³		10.4 ⁷³	52	54	35	12	34	62	33	33
5	259	00.6	-17	19.3	263	52.1 ¹³⁴	-12	17.6 ⁷²	50	5 52	6 31	7 06	6 29	61	16 38	35
6	274	00.5	-17	20.0	278	24.4 ¹³³	-12	24.7 ⁷¹	45	5 45	6 20	6 52	6 19	58	16 50	37
7	289	00.5		20.7	292	56.6 ¹³²		31.8 ⁷¹	40	39	11	40	10	57	16 59	39
8	304	00.4		21.4	307	28.8 ¹³²		38.8 ⁷⁰	35	33	6 03	30	6 02	55	17 07	41
9	319	00.3		22.1	322	00.9 ¹³¹		45.8 ⁷⁰	30	28	5 56	21	5 56	53	15	41
10	334	00.3		22.8	336	33.1 ¹³²		52.8 ⁷⁰	20	17	43	6 06	45	51	27	44
11	349	00.2	-17	23.5	351	05.1 ¹³⁰	-12	59.6 ⁶⁸	10 N	5 06	5 31	5 53	5 35	49	17 38	46
12	4	00.1	-17	24.2	5	37.2 ¹³¹	-13	06.5 ⁶⁹	0	4 54	5 19	5 40	5 26	46	17 48	48
13	19	00.1		24.9	20	09.1 ¹²⁹		13.2 ⁶⁷	10 S	40	5 06	28	17	44	17 58	50
14	34	00.0		25.6	34	41.1 ¹³⁰		19.9 ⁶⁷	20	23	4 51	5 14	5 07	42	18 09	52
15	48	59.9		26.3	49	13.0 ¹²⁹		26.6 ⁶⁷	30	4 02	33	4 58	4 56	40	22	53
16	63	59.9		26.9	63	44.8 ¹²⁸		33.2 ⁶⁶	35	3 48	22	49	50	38	29	55
17	78	59.8	-17	27.6	78	16.6 ¹²⁸	-13	39.7 ⁶⁵	40	3 32	4 09	4 39	4 42	37	18 37	57
18	93	59.7	-17	28.3	92	48.4 ¹²⁸	-13	46.2 ⁶⁵	45	3 11	3 53	4 26	4 34	35	18 47	58
19	108	59.6		29.0	107	20.1 ¹²⁷		52.6 ⁶⁴	50	2 43	33	11	24	32	18 58	61
20	123	59.6		29.7	121	51.8 ¹²⁷	-13	59.0 ⁶⁴	52	29	23	4 04	20	31	19 04	62
21	138	59.5		30.4	136	23.4 ¹²⁶	-14	05.3 ⁶³	54	2 12	12	3 56	15	29	10	63
22	153	59.4		31.1	150	55.0 ¹²⁶		11.5 ⁶²	56	1 51	3 00	47	09	28	17	64
23	168	59.4		31.7	165	26.5 ¹²⁵		17.7 ⁶²	58	1 23	2 45	37	4 03	26	24	66
24	183	59.3	-17	32.4	179	58.0 ¹²⁵	-14	23.8 ⁶¹	60 S	0 36	2 27	3 25	3 56	24	19 33	67
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 20 ^h 37 ^m 3			Mag: -4.4 PMG: 8 ^h 52 ^m			Mag: +1.7 PMG: 8 ^h 38 ^m			Mag: -1.9 PMG: 7 ^h 58 ^m			Mag: +0.5 PMG: 12 ^h 53 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	49	49.3	226	58.1	+0	10.0	230	18.7	+1	45.1	240	08.0	+5	33.4	166	13.1
1	64	51.8	241	58.0		09.0	245	19.8		44.5	255	10.1		33.2	181	15.3
2	79	54.3	256	57.9		08.1	260	20.9		43.9	270	12.2		33.1	196	17.4
3	94	56.7	271	57.8		07.2	275	22.0		43.3	285	14.3		32.9	211	19.6
4	109	59.2	286	57.7		06.2	290	23.0		42.8	300	16.4		32.8	226	21.8
5	125	01.7	301	57.5	+0	05.3	305	24.1	+1	42.2	315	18.5	+5	32.6	241	23.9
6	140	04.1	316	57.4	+0	04.4	320	25.2	+1	41.6	330	20.6	+5	32.5	256	26.1
7	155	06.6	331	57.3		03.4	335	26.3		41.0	345	22.7		32.4	271	28.3
8	170	09.1	346	57.2		02.5	350	27.4		40.4	0	24.8		32.2	286	30.4
9	185	11.5	1	57.1		01.5	5	28.4		39.8	15	26.9		32.1	301	32.6
10	200	14.0	16	57.0	+0	00.6	20	29.5		39.2	30	29.0		31.9	316	34.7
11	215	16.5	31	56.9	-0	00.3	35	30.6	+1	38.6	45	31.1	+5	31.8	331	36.9
12	230	18.9	46	56.8	-0	01.3	50	31.7	+1	38.0	60	33.3	+5	31.7	346	39.1
13	245	21.4	61	56.7		02.2	65	32.8		37.4	75	35.4		31.5	1	41.2
14	260	23.8	76	56.6		03.1	80	33.8		36.8	90	37.5		31.4	16	43.4
15	275	26.3	91	56.5		04.1	95	34.9		36.2	105	39.6		31.2	31	45.6
16	290	28.8	106	56.4		05.0	110	36.0		35.6	120	41.7		31.1	46	47.7
17	305	31.2	121	56.3	-0	06.0	125	37.1	+1	35.0	135	43.8	+5	30.9	61	49.9
18	320	33.7	136	56.2	-0	06.9	140	38.2	+1	34.5	150	45.9	+5	30.8	76	52.1
19	335	36.2	151	56.1		07.8	155	39.2		33.9	165	48.0		30.7	91	54.2
20	350	38.6	166	56.0		08.8	170	40.3		33.3	180	50.1		30.5	106	56.4
21	5	41.1	181	55.8		09.7	185	41.4		32.7	195	52.2		30.4	121	58.5
22	20	43.6	196	55.7		10.7	200	42.5		32.1	210	54.3		30.2	137	00.7
23	35	46.0	211	55.6		11.6	215	43.6		31.5	225	56.5		30.1	152	02.9
24	50	48.5	226	55.5	-0	12.6	230	44.6	+1	30.9	240	58.6	+5	30.0	167	05.0
Dif	—			-1 -9			+11 -6			+21 -1			+22 -1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 44 ^m 1			Edad: 30 ^d 0 PHE { SD: 14:9 PMG: 12 ^h 24 ^m					4 ^h : 54:9 12 ^h : 55:1 20 ^h : 55:2 Rº: 49 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	59.3	-17	32.4	179	58.0	-14	23.8	60 N	15 38	16 26	17 17	8 09 66	16 33 34				
1	198	59.2		33.1	194	29.5 ¹²⁵		29.8	60	49	33	21	7 59 65	43 36				
2	213	59.1		33.8	209	00.9 ¹²⁴		35.8	60	58	40	25	51 63	52 37				
3	228	59.1		34.5	223	32.3 ¹²⁴		41.7	59	54	45	28	43 62	16 59 39				
4	243	59.0		35.2	238	03.6 ¹²³		47.6	59	52	14	32	36 61	17 06 40				
5	258	58.9	-17	35.8	252	34.8 ¹²²	-14	53.4	58	50	16 20	16 56	17 35	7 30 60	17 13 40			
6	273	58.8	-17	36.5	267	06.1 ¹²³	-14	59.1	57	45	16 35	17 06	17 42	7 17 58	17 27 41			
7	288	58.8		37.2	281	37.3 ¹²²	-15	04.7	56	40	47	15	48	7 07 56	38 43			
8	303	58.7		37.9	296	08.4 ¹²¹		10.3	56	35	16 57	23	17 54	6 57 55	48 44			
9	318	58.6		38.6	310	39.5 ¹²¹		15.8	55	30	17 06	31	18 00	49 54	17 56 45			
10	333	58.5		39.2	325	10.5 ¹²⁰		21.3	55	20	21	44	11	36 51	18 11 46			
11	348	58.4	-17	39.9	339	41.5 ¹²⁰	-15	26.6	53	10 N	17 35	17 57	18 22	6 24 50	18 24 48			
12	3	58.4	-17	40.6	354	12.5 ¹²⁰	-15	31.9	53	0	17 48	18 09	18 35	6 12 49	18 36 49			
13	18	58.3		41.3	8	43.4 ¹¹⁹		37.2	53	10 S	18 01	23	18 49	6 01 47	18 48 50			
14	33	58.2		42.0	23	14.3 ¹¹⁹		42.3	51	20	15	38	19 06	5 49 46	19 01 52			
15	48	58.1		42.6	37	45.1 ¹¹⁸		47.4	51	30	31	18 57	28	36 43	15 54			
16	63	58.0		43.3	52	15.9 ¹¹⁸		52.4	50	35	40	19 08	42	28 42	24 54			
17	78	58.0	-17	44.0	66	46.6 ¹¹⁷	-15	57.4	50	40	18 51	19 21	19 59	5 19 41	19 34 55			
18	93	57.9	-17	44.7	81	17.3 ¹¹⁷	-16	02.2	48	45	19 04	19 38	20 20	5 09 39	19 45 57			
19	108	57.8		45.3	95	48.0 ¹¹⁷		07.0	48	50	20	19 58	20 49	4 56 38	19 59 58			
20	123	57.7		46.0	110	18.6 ¹¹⁶		11.7	47	52	27	20 08	21 04	51 36	20 06 59			
21	138	57.6		46.7	124	49.2 ¹¹⁶		16.4	47	54	35	20	22	44 35	13 60			
22	153	57.6		47.4	139	19.7 ¹¹⁵		20.9	45	56	45	33	21 44	37 34	21 61			
23	168	57.5		48.0	153	50.2 ¹¹⁵		25.4	45	58	19 55	20 48	22 15	29 33	30 62			
24	183	57.4	-17	48.7	168	20.6 ¹¹⁴	-16	29.8	44	60 S	20 08	21 07	23 17	4 20 31	20 40 64			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 20 ^h 33 ^m 4		Mag: -4.4 PMG: 8 ^h 52 ^m			Mag: +1.7 PMG: 8 ^h 36 ^m			Mag: -1.9 PMG: 7 ^h 55 ^m			Mag: +0.5 PMG: 12 ^h 50 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	50	48.5	226	55.5	-0	12.6	230	44.6	+1	30.9	240	58.6	+5	30.0	167	05.0	-19	33.3
1	65	50.9	241	55.4		13.5	245	45.7		30.3	256	00.7		29.8	182	07.2		33.4
2	80	53.4	256	55.3		14.4	260	46.8		29.7	271	02.8		29.7	197	09.4		33.4
3	95	55.9	271	55.2		15.4	275	47.9		29.1	286	04.9		29.5	212	11.5		33.5
4	110	58.3	286	55.1		16.3	290	49.0		28.5	301	07.0		29.4	227	13.7		33.5
5	126	00.8	301	55.0	-0	17.3	305	50.0	+1	27.9	316	09.1	+5	29.3	242	15.8	-19	33.6
6	141	03.3	316	54.8	-0	18.2	320	51.1	+1	27.3	331	11.2	+5	29.1	257	18.0	-19	33.7
7	156	05.7	331	54.7		19.2	335	52.2		26.8	346	13.3		29.0	272	20.2		33.7
8	171	08.2	346	54.6		20.1	350	53.3		26.2	1	15.4		28.8	287	22.3		33.8
9	186	10.7	1	54.5		21.0	5	54.4		25.6	16	17.6		28.7	302	24.5		33.8
10	201	13.1	16	54.4		22.0	20	55.4		25.0	31	19.7		28.6	317	26.7		33.9
11	216	15.6	31	54.3	-0	22.9	35	56.5	+1	24.4	46	21.8	+5	28.4	332	28.8	-19	33.9
12	231	18.1	46	54.2	-0	23.9	50	57.6	+1	23.8	61	23.9	+5	28.3	347	31.0	-19	34.0
13	246	20.5	61	54.0		24.8	65	58.7		23.2	76	26.0		28.1	2	33.1		34.0
14	261	23.0	76	53.9		25.8	80	59.8		22.6	91	28.1		28.0	17	35.3		34.1
15	276	25.4	91	53.8		26.7	96	00.8		22.0	106	30.2		27.9	32	37.5		34.1
16	291	27.9	106	53.7		27.7	111	01.9		21.4	121	32.3		27.7	47	39.6		34.2
17	306	30.4	121	53.6	-0	28.6	126	03.0	+1	20.8	136	34.5	+5	27.6	62	41.8	-19	34.3
18	321	32.8	136	53.5	-0	29.6	141	04.1	+1	20.2	151	36.6	+5	27.4	77	44.0	-19	34.3
19	336	35.3	151	53.4		30.5	156	05.2		19.6	166	38.7		27.3	92	46.1		34.4
20	351	37.8	166	53.2		31.5	171	06.2		19.1	181	40.8		27.2	107	48.3		34.4
21	6	40.2	181	53.1		32.4	186	07.3		18.5	196	42.9		27.0	122	50.4		34.5
22	21	42.7	196	53.0		33.4	201	08.4		17.9	211	45.0		26.9	137	52.6		34.5
23	36	45.2	211	52.9		34.3	216	09.5		17.3	226	47.1		26.7	152	54.8		34.6
24	51	47.6	226	52.8	-0	35.3	231	10.6	+1	16.7	241	49.3	+5	26.6	167	56.9	-19	34.6
Dif	—		-1		-9		+11		-6		+21		-1		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 44 ^m 2			Edad: 1 ^d 3 PHE { SD: 15/1 PMG: 13 ^h 13 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	57.4	-17	48.7	168	20.6	-16	29.8	60 N	6	12	7	04	7	52	9	15
1	198	57.3		49.4	182	51.0 ¹¹⁴		34.2 ⁴⁴	58	08	6	56	41		9	04	
2	213	57.2		50.0	197	21.4 ¹¹⁴		38.4 ⁴²	56	04		50	32		8	54	
3	228	57.1		50.7	211	51.7 ¹¹³		42.6 ⁴¹	54	6	01	44	23		45	58	
4	243	57.1		51.4	226	21.9 ¹¹²		46.7 ⁴⁰	52	5	58	38	16		37	57	
5	258	57.0	-17	52.1	240	52.2 ¹¹³	-16	50.7 ⁴⁰	50	5	54	6	34	7	09	8	30
6	273	56.9	-17	52.7	255	22.3 ¹¹¹	-16	54.6 ³⁹	45	5	47	6	23	6	54	8	15
7	288	56.8		53.4	269	52.5 ¹¹²	-16	58.5 ³⁹	40		41	13	42		8	03	
8	303	56.7		54.1	284	22.6 ¹¹¹	-17	02.2 ³⁷	35		35	6	05	32	7	52	
9	318	56.6		54.7	298	52.7 ¹¹¹		05.9 ³⁷	30		29	5	58	23	43	53	
10	333	56.6		55.4	313	22.7 ¹¹⁰		09.5 ³⁶	20		18	44	6	07	27	53	
11	348	56.5	-17	56.1	327	52.7 ¹¹⁰	-17	13.0 ³⁵	10 N	5	06	5	32	5	54	7	14
12	3	56.4	-17	56.7	342	22.6 ¹⁰⁹	-17	16.4 ³⁴	0	4	54	5	19	5	41	7	01
13	18	56.3		57.4	356	52.5 ¹⁰⁹		19.8 ³⁴	10 S		39	5	05	28	6	48	
14	33	56.2		58.1	11	22.4 ¹⁰⁹		23.1 ³³	20		22	4	50	5	13	35	
15	48	56.1		58.7	25	52.2 ¹⁰⁸		26.2 ³¹	30	4	00	31	4	57	19	47	
16	63	56.0	-17	59.4	40	22.0 ¹⁰⁸		29.3 ³⁰	35	3	46	20	48		10	47	
17	78	55.9	-18	00.0	54	51.8 ¹⁰⁸	-17	32.3 ³⁰	40	3	29	4	06	4	37	6	00
18	93	55.9	-18	00.7	69	21.5 ¹⁰⁷	-17	35.2 ²⁹	45	3	08	3	50	4	24	5	48
19	108	55.8		01.4	83	51.1 ¹⁰⁶		38.0 ²⁸	50	2	39	29	08		34	43	
20	123	55.7		02.0	98	20.8 ¹⁰⁷		40.8 ²⁸	52		24	19	4	01	27	42	
21	138	55.6		02.7	112	50.4 ¹⁰⁶		43.4 ²⁶	54	2	06	3	08	3	52	19	42
22	153	55.5		03.3	127	20.0 ¹⁰⁶		46.0 ²⁶	56		1	44	2	55	43	11	41
23	168	55.4		04.0	141	49.5 ¹⁰⁵		48.5 ²⁵	58	1	12	39	32		5	02	
24	183	55.3	-18	04.7	156	19.0 ¹⁰⁵	-17	50.8 ²³	60 S	0	11	2	20	3	20	4	51
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 29 ^m 5			Mag: -4.4 PMG: 8 ^h 53 ^m			Mag: +1.6 PMG: 8 ^h 35 ^m			Mag: -1.9 PMG: 7 ^h 52 ^m			Mag: +0.5 PMG: 12 ^h 46 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	51	47.6	226	52.8	-0	35.3	231	10.6	+1	16.7	241	49.3	+5	26.6	167	56.9	
1	66	50.1	241	52.6		36.2	246	11.7		16.1	256	51.4		26.5	182	59.1	
2	81	52.6	256	52.5		37.2	261	12.7		15.5	271	53.5		26.3	198	01.3	
3	96	55.0	271	52.4		38.1	276	13.8		14.9	286	55.6		26.2	213	03.4	
4	111	57.5	286	52.3		39.1	291	14.9		14.3	301	57.7		26.0	228	05.6	
5	126	59.9	301	52.2	-0	40.0	306	16.0	+1	13.7	316	59.8	+5	25.9	243	07.7	
6	142	02.4	316	52.0	-0	41.0	321	17.1	+1	13.1	332	01.9	+5	25.8	258	09.9	
7	157	04.9	331	51.9		41.9	336	18.1		12.5	347	04.1		25.6	273	12.1	
8	172	07.3	346	51.8		42.9	351	19.2		11.9	2	06.2		25.5	288	14.2	
9	187	09.8	1	51.7		43.8	6	20.3		11.4	17	08.3		25.3	303	16.4	
10	202	12.3	16	51.6		44.8	21	21.4		10.8	32	10.4		25.2	318	18.6	
11	217	14.7	31	51.4	-0	45.7	36	22.5	+1	10.2	47	12.5	+5	25.1	333	20.7	
12	232	17.2	46	51.3	-0	46.7	51	23.6	+1	09.6	62	14.6	+5	24.9	348	22.9	
13	247	19.7	61	51.2		47.6	66	24.6		09.0	77	16.8		24.8	3	25.0	
14	262	22.1	76	51.1		48.6	81	25.7		08.4	92	18.9		24.7	18	27.2	
15	277	24.6	91	50.9		49.5	96	26.8		07.8	107	21.0		24.5	33	29.4	
16	292	27.1	106	50.8		50.5	111	27.9		07.2	122	23.1		24.4	48	31.5	
17	307	29.5	121	50.7	-0	51.5	126	29.0	+1	06.6	137	25.2	+5	24.2	63	33.7	
18	322	32.0	136	50.6	-0	52.4	141	30.1	+1	06.0	152	27.3	+5	24.1	78	35.8	
19	337	34.4	151	50.4		53.4	156	31.1		05.4	167	29.5		24.0	93	38.0	
20	352	36.9	166	50.3		54.3	171	32.2		04.8	182	31.6		23.8	108	40.2	
21	7	39.4	181	50.2		55.3	186	33.3		04.3	197	33.7		23.7	123	42.3	
22	22	41.8	196	50.1		56.2	201	34.4		03.7	212	35.8		23.6	138	44.5	
23	37	44.3	211	49.9		57.2	216	35.5		03.1	227	37.9		23.4	153	46.7	
24	52	46.8	226	49.8	-0	58.1	231	36.6	+1	02.5	242	40.1	+5	23.3	168	48.8	
Dif	—		-1	-10			+11	-6			+21	-1			+22	-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 2 ^d 3	PHE {	4 ^h : 55°8 12 ^h : 55°9 20 ^h : 56°1			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 44 ^m 4								SD: 15°2			PMG: 14 ^h 04 ^m			R°: 51 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	183	55.3	-18 04.7	156	19.0	-17 50.8	23	60 N	15 34	16 22	17 14	10 15 53	17 50 55		
1	198	55.2	05.3	170	48.5 ¹⁰⁵	53.1	22	58	45	30	18	10 03 52	18 03 54		
2	213	55.1	06.0	185	17.9 ¹⁰⁴	55.3	21	56	15 54	36	22	9 52 53	14 54		
3	228	55.0	06.6	199	47.3 ¹⁰⁴	57.4	22	54	16 03	43	26	43 52	23 54		
4	243	54.9	07.3	214	16.6 ¹⁰³	-17 59.4	20	52	11	48	29	34 53	32 53		
5	258	54.8	-18 08.0	228	46.0 ¹⁰⁴	-18 01.4	20	50	16 18	16 53	17 32	9 27 52	18 39 54		
6	273	54.8	-18 08.6	243	15.3 ¹⁰³	-18 03.2	18	45	16 33	17 04	17 40	9 11 52	18 56 53		
7	288	54.7	09.3	257	44.5 ¹⁰²	04.9	17	40	45	14	46	8 57 53	19 09 53		
8	303	54.6	09.9	272	13.8 ¹⁰³	06.6	17	35	16 55	22	53	46 52	20 53		
9	318	54.5	10.6	286	43.0 ¹⁰²	08.1	15	30	17 05	30	17 59	36 52	30 53		
10	333	54.4	11.2	301	12.2 ¹⁰²	09.6	15	20	21	44	18 10	20 51	19 47 53		
11	348	54.3	-18 11.9	315	41.3 ¹⁰¹	-18 10.9	13	10 N	17 35	17 57	18 22	8 05 52	20 02 52		
12	3	54.2	-18 12.5	330	10.4 ¹⁰¹	-18 12.2	13	0	17 48	18 10	18 35	7 51 52	20 16 52		
13	18	54.1	13.2	344	39.5 ¹⁰¹	13.4	12	10 S	18 01	24	18 50	38 51	30 51		
14	33	54.0	13.8	359	08.6 ¹⁰¹	14.4	10	20	16	39	19 07	23 51	20 45 51		
15	48	53.9	14.5	13	37.6 ¹⁰⁰	15.4	10	30	33	18 59	30	7 06 51	21 01 51		
16	63	53.8	15.1	28	06.6 ¹⁰⁰	16.3	9	35	42	19 10	19 44	6 57 50	11 51		
17	78	53.7	-18 15.8	42	35.6 ¹⁰⁰	-18 17.1	8	40	18 54	19 24	20 02	6 46 50	21 23 50		
18	93	53.6	-18 16.4	57	04.5 ⁹⁹	-18 17.8	7	45	19 07	19 41	20 24	6 33 50	21 36 50		
19	108	53.5	17.1	71	33.5 ¹⁰⁰	18.4	6	50	23	20 02	20 54	17 50	52 50		
20	123	53.4	17.7	86	02.4 ⁹⁹	18.9	5	52	31	13	21 09	09 50	21 59 50		
21	138	53.3	18.4	100	31.2 ⁹⁸	19.3	4	54	39	24	28	6 01 50	22 08 49		
22	153	53.2	19.0	115	00.1 ⁹⁹	19.6	3	56	19 49	38	21 52	5 52 50	17 49		
23	168	53.1	19.7	129	28.9 ⁹⁸	19.8	2	58	20 00	20 54	22 27	42 49	28 48		
24	183	53.0	-18 20.3	143	57.7 ⁹⁸	-18 19.9	1	60 S	20 13	21 14	** **	5 30 49	22 40 48		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 25 ^m 5			Mag: -4.3 PMG: 8 ^h 53 ^m			Mag: +1.6 PMG: 8 ^h 33 ^m			Mag: -1.9 PMG: 7 ^h 48 ^m			Mag: +0.5 PMG: 12 ^h 43 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	52	46.8	226	49.8	-0 58.1	231	36.6	+1 02.5	242	40.1	+5 23.3	168	48.8	-19 35.9	
1	67	49.2	241	49.7	-0 59.1	246	37.6	01.9	257	42.2	23.1	183	51.0	36.0	
2	82	51.7	256	49.6	-1 00.1	261	38.7	01.3	272	44.3	23.0	198	53.1	36.0	
3	97	54.2	271	49.4	01.0	276	39.8	00.7	287	46.4	22.9	213	55.3	36.1	
4	112	56.6	286	49.3	02.0	291	40.9	+1 00.1	302	48.5	22.7	228	57.5	36.2	
5	127	59.1	301	49.2	-1 02.9	306	42.0	+0 59.5	317	50.6	+5 22.6	243	59.6	-19 36.2	
6	143	01.5	316	49.0	-1 03.9	321	43.1	+0 58.9	332	52.8	+5 22.5	259	01.8	-19 36.3	
7	158	04.0	331	48.9	04.9	336	44.1	58.3	347	54.9	22.3	274	03.9	36.3	
8	173	06.5	346	48.8	05.8	351	45.2	57.8	2	57.0	22.2	289	06.1	36.4	
9	188	08.9	1	48.6	06.8	6	46.3	57.2	17	59.1	22.1	304	08.3	36.4	
10	203	11.4	16	48.5	07.7	21	47.4	56.6	33	01.2	21.9	319	10.4	36.5	
11	218	13.9	31	48.4	-1 08.7	36	48.5	+0 56.0	48	03.4	+5 21.8	334	12.6	-19 36.5	
12	233	16.3	46	48.3	-1 09.7	51	49.6	+0 55.4	63	05.5	+5 21.6	349	14.7	-19 36.6	
13	248	18.8	61	48.1	10.6	66	50.6	54.8	78	07.6	21.5	4	16.9	36.6	
14	263	21.3	76	48.0	11.6	81	51.7	54.2	93	09.7	21.4	19	19.1	36.7	
15	278	23.7	91	47.9	12.5	96	52.8	53.6	108	11.9	21.2	34	21.2	36.7	
16	293	26.2	106	47.7	13.5	111	53.9	53.0	123	14.0	21.1	49	23.4	36.8	
17	308	28.7	121	47.6	-1 14.5	126	55.0	+0 52.4	138	16.1	+5 21.0	64	25.6	-19 36.9	
18	323	31.1	136	47.5	-1 15.4	141	56.1	+0 51.8	153	18.2	+5 20.8	79	27.7	-19 36.9	
19	338	33.6	151	47.3	16.4	156	57.1	51.3	168	20.3	20.7	94	29.9	37.0	
20	353	36.0	166	47.2	17.3	171	58.2	50.7	183	22.5	20.6	109	32.0	37.0	
21	8	38.5	181	47.1	18.3	186	59.3	50.1	198	24.6	20.4	124	34.2	37.1	
22	23	41.0	196	46.9	19.3	202	00.4	49.5	213	26.7	20.3	139	36.4	37.1	
23	38	43.4	211	46.8	20.2	217	01.5	48.9	228	28.8	20.1	154	38.5	37.2	
24	53	45.9	226	46.7	-1 21.2	232	02.6	+0 48.3	243	31.0	+5 20.0	169	40.7	-19 37.2	
Dif	—		-1	-10		+11	-6		+21	-1		+22	-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 3 ^d 3	PHE {	4 ^h : 56'3 12 ^h : 56'4 20 ^h : 56'6										
	PMG: 11 ^h 44 ^m 5							SD: 15'3			PMG: 14 ^h 55 ^m		Rº: 53 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	53.0	–18 20.3	143	57.7	–18 19.9	0	60 N	6 16	7 08	7 57	11 08	43	18 45	64	
1	198	52.9	21.0	158	26.5	19.9	0	58	12	7 00	46	10 55	45	18 57	63	
2	213	52.8	21.6	172	55.3	19.8	1	56	08	6 54	36	45	45	19 08	62	
3	228	52.7	22.2	187	24.0	19.6	2	54	04	47	27	35	46	17	61	
4	243	52.6	22.9	201	52.7	19.3	3	52	6 01	42	19	27	46	25	61	
5	258	52.5	–18 23.5	216	21.4	18.9	4	50	5 57	6 37	7 12	10 19	47	19 33	60	
6	273	52.4	–18 24.2	230	50.1	18.5	4	45	5 50	6 25	6 57	10 03	48	19 49	59	
7	288	52.3	24.8	245	18.8	17.9	6	40	43	16	45	9 50	48	20 02	58	
8	303	52.2	25.5	259	47.4	17.2	7	35	37	6 07	34	38	50	13	57	
9	318	52.1	26.1	274	16.0	16.4	8	30	31	5 59	25	28	50	23	56	
10	333	52.0	26.7	288	44.6	15.5	9	20	19	45	6 09	9 11	51	40	54	
11	348	51.9	–18 27.4	303	13.2	14.5	10	10 N	5 07	5 32	5 54	8 57	51	20 54	54	
12	3	51.8	–18 28.0	317	41.8	13.5	10	0	4 54	5 19	5 41	8 43	52	21 08	52	
13	18	51.7	28.7	332	10.3	12.3	12	10 S	39	5 05	27	29	53	21	52	
14	33	51.6	29.3	346	38.9	11.0	13	20	4 22	4 49	5 13	8 14	54	36	50	
15	48	51.5	29.9	1	07.4	9.6	14	30	3 59	30	4 56	7 57	55	21 52	49	
16	63	51.4	30.6	15	35.9	8.1	15	35	44	18	46	47	55	22 02	48	
17	78	51.3	–18 31.2	30	04.4	06.6	15	40	3 27	4 04	4 35	7 36	56	22 13	47	
18	93	51.2	–18 31.8	44	32.9	04.9	17	45	3 05	3 48	4 22	7 23	56	22 26	46	
19	108	51.0	32.5	59	01.4	03.1	18	50	2 35	26	4 05	7 07	57	42	44	
20	123	50.9	33.1	73	29.9	01.2	19	52	19	16	3 57	6 59	58	49	43	
21	138	50.8	33.7	87	58.3	59.2	20	54	2 00	3 04	49	51	58	22 57	43	
22	153	50.7	34.4	102	26.8	57.2	20	56	1 36	2 50	39	42	58	23 06	42	
23	168	50.6	35.0	116	55.2	55.0	22	58	1 01	34	28	31	59	16	41	
24	183	50.5	–18 35.6	131	23.6	52.7	23	60 S	** **	2 14	3 15	6 19	59	23 28	39	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: –4.3		Mag: +1.6		Mag: –1.9		Mag: +0.5									
	20 ^h 21 ^m 6		PMG: 8 ^h 53 ^m		PMG: 8 ^h 31 ^m		PMG: 7 ^h 45 ^m		PMG: 12 ^h 39 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	53	45.9	226	46.7	–1	21.2	232	02.6	+0	48.3	243	31.0	+5	20.0	169	40.7	–19	37.2
1	68	48.4	241	46.5		22.2	247	03.7		47.7	258	33.1		19.9	184	42.8		37.3
2	83	50.8	256	46.4		23.1	262	04.7		47.1	273	35.2		19.7	199	45.0		37.3
3	98	53.3	271	46.2		24.1	277	05.8		46.5	288	37.3		19.6	214	47.2		37.4
4	113	55.8	286	46.1		25.1	292	06.9		45.9	303	39.4		19.5	229	49.3		37.5
5	128	58.2	301	46.0	–1	26.0	307	08.0	+0	45.3	318	41.6	+5	19.3	244	51.5	–19	37.5
6	144	00.7	316	45.8	–1	27.0	322	09.1	+0	44.8	333	43.7	+5	19.2	259	53.6	–19	37.6
7	159	03.2	331	45.7		28.0	337	10.2		44.2	348	45.8		19.1	274	55.8		37.6
8	174	05.6	346	45.6		28.9	352	11.2		43.6	3	47.9		18.9	289	58.0		37.7
9	189	08.1	1	45.4		29.9	7	12.3		43.0	18	50.1		18.8	305	00.1		37.7
10	204	10.5	16	45.3		30.9	22	13.4		42.4	33	52.2		18.7	320	02.3		37.8
11	219	13.0	31	45.1	–1	31.8	37	14.5	+0	41.8	48	54.3	+5	18.5	335	04.4	–19	37.8
12	234	15.5	46	45.0	–1	32.8	52	15.6	+0	41.2	63	56.4	+5	18.4	350	06.6	–19	37.9
13	249	17.9	61	44.9		33.8	67	16.7		40.6	78	58.6		18.3	5	08.8		37.9
14	264	20.4	76	44.7		34.7	82	17.8		40.0	94	00.7		18.1	20	10.9		38.0
15	279	22.9	91	44.6		35.7	97	18.8		39.4	109	02.8		18.0	35	13.1		38.0
16	294	25.3	106	44.4		36.7	112	19.9		38.9	124	05.0		17.9	50	15.2		38.1
17	309	27.8	121	44.3	–1	37.6	127	21.0	+0	38.3	139	07.1	+5	17.7	65	17.4	–19	38.2
18	324	30.3	136	44.2	–1	38.6	142	22.1	+0	37.7	154	09.2	+5	17.6	80	19.6	–19	38.2
19	339	32.7	151	44.0		39.6	157	23.2		37.1	169	11.3		17.5	95	21.7		38.3
20	354	35.2	166	43.9		40.5	172	24.3		36.5	184	13.5		17.3	110	23.9		38.3
21	9	37.7	181	43.7		41.5	187	25.4		35.9	199	15.6		17.2	125	26.0		38.4
22	24	40.1	196	43.6		42.5	202	26.5		35.3	214	17.7		17.1	140	28.2		38.4
23	39	42.6	211	43.4		43.4	217	27.5		34.7	229	19.8		16.9	155	30.4		38.5
24	54	45.0	226	43.3	–1	44.4	232	28.6	+0	34.1	244	22.0	+5	16.8	170	32.5	–19	38.5
Dif	—		–1		–10		+11		–6		+21		–1		+22		–1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 44 ^m 7			Edad: 4 ^d 3 PHE { SD: 15/4 PMG: 15 ^h 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	183	50.5	-18	35.6	131	23.6	-17	52.7	60 N	15 29	16 18	17 10	11 51 35	19 49 73				
1	198	50.4		36.3	145	52.0		50.3	58	41	26	15	40 37	20 00 71				
2	213	50.3		36.9	160	20.4		47.8	56	15 51	33	19	30 38	10 69				
3	228	50.2		37.5	174	48.8		45.3	54	16 00	40	23	21 40	18 68				
4	243	50.1		38.2	189	17.2		42.6	52	08	46	27	13 41	26 67				
5	258	50.0	-18	38.8	203	45.6	-17	39.8	50	16 15	16 51	17 30	11 06 42	20 33 65				
6	273	49.8	-18	39.4	218	14.0	-17	36.9	45	16 31	17 02	17 38	10 51 44	20 48 63				
7	288	49.7		40.0	232	42.3		33.9	40	43	12	45	38 46	21 00 61				
8	303	49.6		40.7	247	10.7		30.9	35	16 54	21	52	28 46	10 60				
9	318	49.5		41.3	261	39.1		27.7	30	17 04	29	17 58	18 48	19 58				
10	333	49.4		41.9	276	07.4		24.4	20	20	43	18 10	10 02 50	34 57				
11	348	49.3	-18	42.6	290	35.8	-17	21.0	10 N	17 35	17 57	18 22	9 48 51	21 48 54				
12	3	49.2	-18	43.2	305	04.1	-17	17.6	0	17 48	18 10	18 36	9 35 53	22 00 53				
13	18	49.1		43.8	319	32.4		14.0	10 S	18 02	24	18 51	22 54	13 50				
14	33	48.9		44.4	334	00.8		10.3	20	17	18 41	19 09	9 08 56	26 49				
15	48	48.8		45.1	348	29.1		06.6	30	34	19 00	32	8 52 57	41 47				
16	63	48.7		45.7	2	57.5	-17	02.7	35	44	12	19 47	42 59	22 50 45				
17	78	48.6	-18	46.3	17	25.8	-16	58.7	40	18 56	19 27	20 04	8 32 59	23 00 43				
18	93	48.5	-18	46.9	31	54.1	-16	54.7	45	19 10	19 44	20 27	8 19 61	23 12 41				
19	108	48.4		47.5	46	22.4		50.5	50	27	20 06	20 58	8 04 63	26 39				
20	123	48.3		48.2	60	50.8		46.2	52	34	17	21 15	7 57 64	32 38				
21	138	48.1		48.8	75	19.1		41.9	54	43	29	21 35	49 65	40 36				
22	153	48.0		49.4	89	47.4		37.4	56	19 53	20 43	22 00	40 66	48 35				
23	168	47.9		50.0	104	15.8		32.9	58	20 05	21 00	22 40	30 67	23 57 33				
24	183	47.8	-18	50.6	118	44.1	-16	28.3	60 S	20 18	21 22	** **	7 18 69	** ** **				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 17 ^m 7		Mag: -4.3 PMG: 8 ^h 53 ^m			Mag: +1.6 PMG: 8 ^h 29 ^m			Mag: -1.9 PMG: 7 ^h 41 ^m			Mag: +0.5 PMG: 12 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	54	45.0	226	43.3	-1	44.4	232	28.6	+0	34.1	244	22.0	+5	16.8	170	32.5	-19	38.5
1	69	47.5	241	43.2		45.4	247	29.7		33.5	259	24.1		16.7	185	34.7		38.6
2	84	50.0	256	43.0		46.4	262	30.8		33.0	274	26.2		16.5	200	36.8		38.6
3	99	52.4	271	42.9		47.3	277	31.9		32.4	289	28.4		16.4	215	39.0		38.7
4	114	54.9	286	42.7		48.3	292	33.0		31.8	304	30.5		16.3	230	41.2		38.7
5	129	57.4	301	42.6	-1	49.3	307	34.1	+0	31.2	319	32.6	+5	16.1	245	43.3	-19	38.8
6	144	59.8	316	42.4	-1	50.2	322	35.1	+0	30.6	334	34.7	+5	16.0	260	45.5	-19	38.9
7	160	02.3	331	42.3		51.2	337	36.2		30.0	349	36.9		15.9	275	47.6		38.9
8	175	04.8	346	42.1		52.2	352	37.3		29.4	4	39.0		15.7	290	49.8		39.0
9	190	07.2	1	42.0		53.2	7	38.4		28.8	19	41.1		15.6	305	52.0		39.0
10	205	09.7	16	41.8		54.1	22	39.5		28.2	34	43.3		15.5	320	54.1		39.1
11	220	12.1	31	41.7	-1	55.1	37	40.6	+0	27.6	49	45.4	+5	15.3	335	56.3	-19	39.1
12	235	14.6	46	41.5	-1	56.1	52	41.7	+0	27.1	64	47.5	+5	15.2	350	58.4	-19	39.2
13	250	17.1	61	41.4		57.1	67	42.8		26.5	79	49.6		15.1	6	00.6		39.2
14	265	19.5	76	41.2		58.0	82	43.8		25.9	94	51.8		14.9	21	02.7		39.3
15	280	22.0	91	41.1	-1	59.0	97	44.9		25.3	109	53.9		14.8	36	04.9		39.3
16	295	24.5	106	40.9	-2	00.0	112	46.0		24.7	124	56.0		14.7	51	07.1		39.4
17	310	26.9	121	40.8	-2	00.9	127	47.1	+0	24.1	139	58.2	+5	14.5	66	09.2	-19	39.4
18	325	29.4	136	40.6	-2	01.9	142	48.2	+0	23.5	155	00.3	+5	14.4	81	11.4	-19	39.5
19	340	31.9	151	40.5		02.9	157	49.3		22.9	170	02.4		14.3	96	13.5		39.6
20	355	34.3	166	40.3		03.9	172	50.4		22.3	185	04.6		14.1	111	15.7		39.6
21	10	36.8	181	40.2		04.8	187	51.5		21.8	200	06.7		14.0	126	17.9		39.7
22	25	39.3	196	40.0		05.8	202	52.5		21.2	215	08.8		13.9	141	20.0		39.7
23	40	41.7	211	39.9		06.8	217	53.6		20.6	230	11.0		13.7	156	22.2		39.8
24	55	44.2	226	39.7	-2	07.8	232	54.7	+0	20.0	245	13.1	+5	13.6	171	24.3	-19	39.8
Dif	—		-1		-10		+11		-6		+21		-1		+22		-	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 44 ^m 9			Edad: 5 ^d 3 PHE { 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/7 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	183	47.8	-18	50.6	118	44.1	-16	28.3	60 N	6 20	7 12	8 02	12 26	29	21 02	79	
1	198	47.7		51.3	133	12.4	93	23.5	58	16	7 04	7 50	17 30		11 77		
2	213	47.6		51.9	147	40.8	94	18.7	56	11	6 57	40	08 33		19 75		
3	228	47.4		52.5	162	09.1	93	13.8	54	07	51	31	12 01	34	26 73		
4	243	47.3		53.1	176	37.4	93	08.7	52	04	45	23	11 54	35	33 71		
5	258	47.2	-18	53.7	191	05.8	94	-16	50	6 00	6 40	7 15	11 48	37	21 38	70	
6	273	47.1	-18	54.3	205	34.1	93	-15	45	5 52	6 28	7 00	11 35	39	21 51	67	
7	288	47.0		54.9	220	02.5	94	53.1	40	45	18	6 47	24 41		22 01	64	
8	303	46.8		55.6	234	30.8	93	47.7	35	38	09	36	14 44		10 62		
9	318	46.7		56.2	248	59.2	94	42.2	30	32	6 01	26	11 06	45	17 61		
10	333	46.6		56.8	263	27.5	93	36.7	20	20	5 46	6 10	10 52	48	31 57		
11	348	46.5	-18	57.4	277	55.9	94	-15	10 N	5 07	5 33	5 55	10 39	51	22 42	55	
12	3	46.4	-18	58.0	292	24.2	93	-15	0	4 54	5 19	5 41	10 28	52	22 53	52	
13	18	46.2		58.6	306	52.6	94	19.4	10 S	39	5 05	5 27	16 55		23 03	50	
14	33	46.1		59.2	321	21.0	94	13.4	20	4 21	4 49	5 12	10 04	56	15 47		
15	48	46.0	-18	59.8	335	49.4	94	07.4	30	3 58	29	4 55	9 49	60	28 44		
16	63	45.9	-19	00.4	350	17.8	94	-15	35	43	17	45	41 61		35 42		
17	78	45.7	-19	01.1	4	46.1	93	-14	40	3 25	4 03	4 33	9 31	63	23 43	41	
18	93	45.6	-19	01.7	19	14.5	94	-14	45	3 02	3 45	4 19	9 20	66	23 53	38	
19	108	45.5		02.3	33	42.9	94	42.3	50	2 31	23	4 03	07 68		** ** *	**	
20	123	45.4		02.9	48	11.3	94	35.9	52	2 14	12	3 55	9 01	69	** ** *	**	
21	138	45.2		03.5	62	39.8	95	29.3	54	1 55	3 00	46	8 54	70	** ** *	**	
22	153	45.1		04.1	77	08.2	94	22.6	56	1 29	2 46	36	46 72		** ** *	**	
23	168	45.0		04.7	91	36.6	94	15.9	58	0 49	29	24	37 74		** ** *	**	
24	183	44.9	-19	05.3	106	05.0	94	-14	60 S	** **	2 07	3 11	8 27	76	0 07	32	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 13 ^m 7		Mag: -4.3 PMG: 8 ^h 53 ^m		Mag: +1.6 PMG: 8 ^h 28 ^m		Mag: -1.9 PMG: 7 ^h 38 ^m		Mag: +0.5 PMG: 12 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	55	44.2	226	39.7	-2	07.8	232	54.7	+0	20.0
1	70	46.6	241	39.6		08.7	247	55.8		19.4
2	85	49.1	256	39.4		09.7	262	56.9		18.8
3	100	51.6	271	39.3		10.7	277	58.0		18.2
4	115	54.0	286	39.1		11.7	292	59.1		17.6
5	130	56.5	301	39.0	-2	12.7	308	00.2	+0	17.0
6	145	59.0	316	38.8	-2	13.6	323	01.2	+0	16.5
7	161	01.4	331	38.7		14.6	338	02.3		15.9
8	176	03.9	346	38.5		15.6	353	03.4		15.3
9	191	06.4	1	38.4		16.6	8	04.5		14.7
10	206	08.8	16	38.2		17.5	23	05.6		14.1
11	221	11.3	31	38.0	-2	18.5	38	06.7	+0	13.5
12	236	13.8	46	37.9	-2	19.5	53	07.8	+0	12.9
13	251	16.2	61	37.7		20.5	68	08.9		12.3
14	266	18.7	76	37.6		21.5	83	10.0		11.7
15	281	21.1	91	37.4		22.4	98	11.0		11.2
16	296	23.6	106	37.3		23.4	113	12.1		10.6
17	311	26.1	121	37.1	-2	24.4	128	13.2	+0	10.0
18	326	28.5	136	36.9	-2	25.4	143	14.3	+0	09.4
19	341	31.0	151	36.8		26.4	158	15.4		08.8
20	356	33.5	166	36.6		27.3	173	16.5		08.2
21	11	35.9	181	36.5		28.3	188	17.6		07.6
22	26	38.4	196	36.3		29.3	203	18.7		07.0
23	41	40.9	211	36.1		30.3	218	19.8		06.4
24	56	43.3	226	36.0	-2	31.3	233	20.9	+0	05.9
Dif	—		-2		-10		+11		-6	
									+21	-1
										+22
										-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 45 ^m 1			Edad: 6 ^d 3 PHE { 4 ^h : 57 ^m 9 12 ^h : 58 ^m 1 20 ^h : 58 ^m 3 PMG: 17 ^h 33 ^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	183	44.9	-19 05.3	106	05.0	-14 09.1	69	60 N	15 25	16 15	17 07	12 55 24	22 21 83	
1	198	44.7	05.9	120	33.5	-14 02.2	70	58	37	23	12	47 27	28 80	
2	213	44.6	06.5	135	01.9	-13 55.2	71	56	48	31	17	41 28	34 78	
3	228	44.5	07.1	149	30.3	-13 48.1	72	54	15 57	37	21	35 30	39 76	
4	243	44.4	07.7	163	58.8	-13 40.9	72	52	16 05	43	25	29 32	44 74	
5	258	44.2	-19 08.3	178	27.3	-13 33.7	72	50	16 13	16 49	17 28	12 25 33	22 48 73	
6	273	44.1	-19 08.9	192	55.7	-13 26.3	74	45	16 29	17 01	17 36	12 14 36	22 58 69	
7	288	44.0	09.5	207	24.2	-13 18.9	74	40	42	11	44	12 05 39	23 05 67	
8	303	43.9	10.1	221	52.7	-13 11.4	75	35	16 53	20	51	11 58 41	12 64	
9	318	43.7	10.7	236	21.2	-13 03.8	76	30	17 03	28	17 57	51 43	18 62	
10	333	43.6	11.3	250	49.7	-12 56.2	76	20	20	43	18 10	40 46	28 58	
11	348	43.5	-19 11.9	265	18.2	-12 48.4	78	10 N	17 35	17 57	18 22	11 30 49	23 37 55	
12	3	43.3	-19 12.5	279	46.7	-12 40.6	78	0	17 49	18 11	18 36	11 20 52	23 45 52	
13	18	43.2	13.1	294	15.2	-12 32.7	79	10 S	18 03	25	18 51	11 54	23 53 49	
14	33	43.1	13.7	308	43.7	-12 24.8	79	20	18	18 42	19 10	11 00 58	** * *	
15	48	42.9	14.3	323	12.2	-12 16.7	81	30	36	19 02	34	10 49 61	** * *	
16	63	42.8	14.9	337	40.7	-12 08.6	81	35	46	15	19 49	42 63	** * *	
17	78	42.7	-19 15.5	352	09.3	-12 00.4	82	40	18 58	19 29	20 07	10 34 66	** * *	
18	93	42.5	-19 16.1	6	37.8	-11 52.1	83	45	19 12	19 47	20 31	10 26 68	** * *	
19	108	42.4	16.7	21	06.4	-11 43.7	84	50	30	20 10	21 03	15 71	0 05 35	
20	123	42.3	17.3	35	34.9	-11 35.3	84	52	38	21	20	10 73	10 34	
21	138	42.2	17.8	50	03.5	-11 26.8	85	54	47	34	21 41	10 04 75	16 32	
22	153	42.0	18.4	64	32.0	-11 18.3	85	56	19 58	20 48	22 09	9 58 76	23 30	
23	168	41.9	19.0	79	00.6	-11 09.6	87	58	20 10	21 06	22 56	51 79	30 29	
24	183	41.8	-19 19.6	93	29.1	-11 00.9	87	60 S	20 23	21 29	** **	9 43 81	0 39 26	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 20 ^h 09 ^m 8		Mag: -4.3 PMG: 8 ^h 54 ^m		Mag: +1.6 PMG: 8 ^h 26 ^m		Mag: -1.9 PMG: 7 ^h 35 ^m		Mag: +0.5 PMG: 12 ^h 29 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	56	43.3	226	36.0	-2	31.3	233	20.9	+0	05.9				
1	71	45.8	241	35.8		32.2	248	21.9		05.3				
2	86	48.3	256	35.7		33.2	263	23.0		04.7				
3	101	50.7	271	35.5		34.2	278	24.1		04.1				
4	116	53.2	286	35.3		35.2	293	25.2		03.5				
5	131	55.6	301	35.2	-2	36.2	308	26.3	+0	02.9				
6	146	58.1	316	35.0	-2	37.2	323	27.4	+0	02.3				
7	162	00.6	331	34.8		38.1	338	28.5		01.7				
8	177	03.0	346	34.7		39.1	353	29.6		01.2				
9	192	05.5	1	34.5		40.1	8	30.7	+0	00.6				
10	207	08.0	16	34.4		41.1	23	31.8	+0	00.0				
11	222	10.4	31	34.2	-2	42.1	38	32.8	-0	00.6				
12	237	12.9	46	34.0	-2	43.1	53	33.9	-0	01.2				
13	252	15.4	61	33.9		44.0	68	35.0		01.8				
14	267	17.8	76	33.7		45.0	83	36.1		02.4				
15	282	20.3	91	33.5		46.0	98	37.2		03.0				
16	297	22.7	106	33.4		47.0	113	38.3		03.5				
17	312	25.2	121	33.2	-2	48.0	128	39.4	-0	04.1				
18	327	27.7	136	33.0	-2	49.0	143	40.5	-0	04.7				
19	342	30.1	151	32.9		49.9	158	41.6		05.3				
20	357	32.6	166	32.7		50.9	173	42.7		05.9				
21	12	35.1	181	32.5		51.9	188	43.7		06.5				
22	27	37.5	196	32.4		52.9	203	44.8		07.1				
23	42	40.0	211	32.2		53.9	218	45.9		07.7				
24	57	42.5	226	32.0	-2	54.9	233	47.0	-0	08.2				
Dif	—		-2	-10		+11	-6		+21	-1				

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: 7 ^d 3	PHE { 4 ^h : 58'6 12 ^h : 58'8 20 ^h : 59'0 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	41.8	-19	93	29.1	-11	00.9	60 N	6	24	7	17	8	07	13	19
1	198	41.6		107	57.7	-10	52.1	58	19	08	7	55	14	23	23	44
2	213	41.5		122	26.3		43.3	56	15	7	01	44	09	26	48	83
3	228	41.3		136	54.9		34.3	54	10	6	54	34	05	27	52	80
4	243	41.2		151	23.5		25.3	52	06	48	26		13	01	23	58
5	258	41.1	-19	165	52.0	-10	16.3	50	6	03	6	43	7	19	23	58
6	273	40.9	-19	180	20.6	-10	07.2	45	5	54	6	30	7	02	23	58
7	288	40.8		194	49.2	-9	58.0	40	47	20	6	49	44	38	23	58
8	303	40.7		209	17.8		48.7	35	40	11	38		39	40	23	58
9	318	40.5		223	46.4		39.4	30	33	6	03	28	34	42	23	58
10	333	40.4		238	15.0		30.0	20	21	5	48	6	11	26	23	58
11	348	40.3	-19	252	43.6	-9	20.6	10 N	5	08	5	56	12	19	23	58
12	3	40.1	-19	267	12.2	-9	11.1	0	4	54	5	20	5	42	23	58
13	18	40.0		281	40.8	-9	01.5	10 S	39	5	05	27	12	05	23	58
14	33	39.8		296	09.4	-8	51.9	20	4	20	4	48	5	12	02	46
15	48	39.7		310	38.0		42.2	30	3	56	28	4	54	50	63	12
16	63	39.6		325	06.6		32.4	35	41	16	44		45	65	17	40
17	78	39.4	-19	339	35.2	-8	22.6	40	3	23	4	01	4	32	0	24
18	93	39.3	-19	354	03.8	-8	12.8	45	2	59	3	43	4	18	0	31
19	108	39.1		8	32.4	-8	02.9	50	27	20	4	00	11	26	74	40
20	123	39.0		23	01.0	-7	52.9	52	2	10	3	09	3	52	40	32
21	138	38.9		37	29.6		42.9	54	1	49	2	56	43	19	77	48
22	153	38.7		51	58.2		32.8	56	1	21	41		32	14	80	53
23	168	38.6		66	26.8		22.7	58	0	34	23		20	10	81	0
24	183	38.4	-19	80	55.4	-7	12.5	60 S	**	**	2	01	3	06	1	05

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 05 ^m 9		Mag: -4.3 PMG: 8 ^h 54 ^m		Mag: +1.6 PMG: 8 ^h 24 ^m		Mag: -1.9 PMG: 7 ^h 31 ^m		Mag: +0.5 PMG: 12 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	57	42.5	226	32.0	-2	54.9	233	47.0	-0	08.2	246	55.7	+5	07.4	173	07.9	-19	42.4
1	72	44.9	241	31.8		55.9	248	48.1		08.8	261	57.8		07.3	188	10.1		42.4
2	87	47.4	256	31.7		56.8	263	49.2		09.4	277	00.0		07.2	203	12.2		42.5
3	102	49.9	271	31.5		57.8	278	50.3		10.0	292	02.1		07.0	218	14.4		42.5
4	117	52.3	286	31.3		58.8	293	51.4		10.6	307	04.2		06.9	233	16.6		42.6
5	132	54.8	301	31.2	-2	59.8	308	52.5	-0	11.2	322	06.4	+5	06.8	248	18.7	-19	42.6
6	147	57.2	316	31.0	-3	00.8	323	53.6	-0	11.8	337	08.5	+5	06.7	263	20.9	-19	42.7
7	162	59.7	331	30.8		01.8	338	54.7		12.4	352	10.7		06.5	278	23.0		42.8
8	178	02.2	346	30.6		02.8	353	55.8		12.9	7	12.8		06.4	293	25.2		42.8
9	193	04.6	1	30.5		03.8	8	56.8		13.5	22	15.0		06.3	308	27.3		42.9
10	208	07.1	16	30.3		04.7	23	57.9		14.1	37	17.1		06.1	323	29.5		42.9
11	223	09.6	31	30.1	-3	05.7	38	59.0	-0	14.7	52	19.3	+5	06.0	338	31.7	-19	43.0
12	238	12.0	46	30.0	-3	06.7	54	00.1	-0	15.3	67	21.4	+5	05.9	353	33.8	-19	43.0
13	253	14.5	61	29.8		07.7	69	01.2		15.9	82	23.5		05.8	8	36.0		43.1
14	268	17.0	76	29.6		08.7	84	02.3		16.5	97	25.7		05.6	23	38.1		43.1
15	283	19.4	91	29.4		09.7	99	03.4		17.0	112	27.8		05.5	38	40.3		43.2
16	298	21.9	106	29.3		10.7	114	04.5		17.6	127	30.0		05.4	53	42.4		43.2
17	313	24.4	121	29.1	-3	11.7	129	05.6	-0	18.2	142	32.1	+5	05.3	68	44.6	-19	43.3
18	328	26.8	136	28.9	-3	12.7	144	06.7	-0	18.8	157	34.3	+5	05.1	83	46.8	-19	43.3
19	343	29.3	151	28.7		13.6	159	07.8		19.4	172	36.4		05.0	98	48.9		43.4
20	358	31.7	166	28.6		14.6	174	08.9		20.0	187	38.6		04.9	113	51.1		43.4
21	13	34.2	181	28.4		15.6	189	09.9		20.6	202	40.7		04.8	128	53.2		43.5
22	28	36.7	196	28.2		16.6	204	11.0		21.1	217	42.9		04.6	143	55.4		43.6
23	43	39.1	211	28.0		17.6	219	12.1		21.7	232	45.0		04.5	158	57.5		43.6
24	58	41.6	226	27.8	-3	18.6	234	13.2	-0	22.3	247	47.1	+5	04.4	173	59.7	-19	43.7
Dif	—		-2	-10			+11	-6			+21	-1			+22	-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 45 ^m 6			Edad: 8 ^d 3 PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/5 R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	183	38.4	-19	33.6	80	55.4	-7 12.5	60 N	15 21	16 12	17 04	13 40 20	** ** *				
1	198	38.3		34.2	95	24.0	-7 02.3 ¹⁰²	58	34	20	09	37 22	** ** *				
2	213	38.1		34.7	109	52.6	-6 52.0 ¹⁰³	56	45	28	14	35 24	** ** *				
3	228	38.0		35.3	124	21.2	41.7 ¹⁰³	54	15 54	35	19	32 27	** ** *				
4	243	37.9		35.9	138	49.8	31.3 ¹⁰⁴	52	16 03	41	23	31 28	** ** *				
5	258	37.7	-19	36.5	153	18.3	-6 20.9 ¹⁰⁴	50	16 11	16 47	17 26	13 29 30	0 01 75				
6	273	37.6	-19	37.0	167	46.9	-6 10.4 ¹⁰⁵	45	16 27	16 59	17 35	13 25 33	0 07 71				
7	288	37.4		37.6	182	15.4	-5 59.9 ¹⁰⁵	40	40	17 10	43	22 36	12 68				
8	303	37.3		38.2	196	44.0	49.3 ¹⁰⁶	35	16 52	19	50	19 39	16 65				
9	318	37.1		38.7	211	12.5	38.7 ¹⁰⁶	30	17 02	28	17 57	16 42	20 63				
10	333	37.0		39.3	225	41.1	28.1 ¹⁰⁶	20	19	43	18 10	12 45	26 59				
11	348	36.8	-19	39.9	240	09.6	-5 17.4 ¹⁰⁷	10 N	17 35	17 57	18 23	13 08 49	0 32 55				
12	3	36.7	-19	40.4	254	38.1	-5 06.7 ¹⁰⁷	0	17 49	18 11	18 37	13 04 53	0 37 52				
13	18	36.5		41.0	269	06.6	-4 55.9 ¹⁰⁸	10 S	18 04	26	18 52	13 01 56	42 49				
14	33	36.4		41.6	283	35.1	45.1 ¹⁰⁸	20	19	18 43	19 11	12 57 59	48 45				
15	48	36.3		42.1	298	03.6	34.3 ¹⁰⁸	30	38	19 04	36	53 63	54 41				
16	63	36.1		42.7	312	32.1	23.4 ¹⁰⁹	35	18 48	17	19 51	50 66	0 57 40				
17	78	36.0	-19	43.3	327	00.6	-4 12.5 ¹⁰⁹	40	19 01	19 32	20 10	12 47 69	1 01 37				
18	93	35.8	-19	43.8	341	29.0	-4 01.6 ¹⁰⁹	45	19 15	19 50	20 34	12 44 72	1 06 34				
19	108	35.7		44.4	355	57.5	-3 50.6 ¹¹⁰	50	33	20 13	21 08	40 76	12 30				
20	123	35.5		45.0	10	25.9	39.6 ¹¹⁰	52	42	25	25	38 78	14 29				
21	138	35.4		45.5	24	54.3	28.6 ¹¹⁰	54	19 51	38	21 48	36 80	17 27				
22	153	35.2		46.1	39	22.8	17.5 ¹¹¹	56	20 02	20 54	22 18	34 81	20 25				
23	168	35.1		46.6	53	51.1	-3 06.4 ¹¹¹	58	14	21 12	23 18	31 84	23 23				
24	183	34.9	-19	47.2	68	19.5	-2 55.3 ¹¹¹	60 S	20 29	21 36	** ** *	12 29 86	1 27 20				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 01 ^m 9		Mag: -4.3 PMG: 8 ^h 54 ^m		Mag: +1.6 PMG: 8 ^h 23 ^m		Mag: -2.0 PMG: 7 ^h 28 ^m		Mag: +0.5 PMG: 12 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	58	41.6	226	27.8	-3	18.6	247	47.1	+5	04.4
1	73	44.1	241	27.7		19.6	262	49.3		04.3
2	88	46.5	256	27.5		20.6	277	51.4		04.1
3	103	49.0	271	27.3		21.6	292	53.6		04.0
4	118	51.5	286	27.1		22.6	307	55.7		03.9
5	133	53.9	301	26.9	-3	23.5	322	57.9	+5	03.8
6	148	56.4	316	26.8	-3	24.5	338	00.0	+5	03.6
7	163	58.8	331	26.6		25.5	353	02.2		03.5
8	179	01.3	346	26.4		26.5	8	04.3		03.4
9	194	03.8	1	26.2		27.5	23	06.5		03.3
10	209	06.2	16	26.0		28.5	38	08.6		03.1
11	224	08.7	31	25.9	-3	29.5	53	10.8	+5	03.0
12	239	11.2	46	25.7	-3	30.5	68	12.9	+5	02.9
13	254	13.6	61	25.5		31.5	83	15.1		02.8
14	269	16.1	76	25.3		32.5	98	17.2		02.6
15	284	18.6	91	25.1		33.5	113	19.4		02.5
16	299	21.0	106	24.9		34.5	128	21.5		02.4
17	314	23.5	121	24.8	-3	35.4	143	23.7	+5	02.3
18	329	26.0	136	24.6	-3	36.4	158	25.8	+5	02.1
19	344	28.4	151	24.4		37.4	173	28.0		02.0
20	359	30.9	166	24.2		38.4	188	30.1		01.9
21	14	33.3	181	24.0		39.4	203	32.3		01.8
22	29	35.8	196	23.8		40.4	218	34.4		01.7
23	44	38.3	211	23.6		41.4	233	36.6		01.5
24	59	40.7	226	23.5	-3	42.4	248	38.7	+5	01.4
Dif	—		-2		-10		+11		-1	

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: 9 ^d 3 PHE { SD: 16:2 PMG: 20 ^h 09 ^m 4 ^h : 59/7 12 ^h : 59/9 20 ^h : 60/0 R°: 54 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	34.9	-19	47.2	68	19.5	-2	55.3	60 N	6	28	7	21	8	12	14 00 20	
1	198	34.8		47.8	82	47.9	94	44.2	58	23	12		7	59	13 59 23	11 84	
2	213	34.6		48.3	97	16.2	93	33.0	56	18	7	04		48	59 25	12 82	
3	228	34.5		48.9	111	44.6	94	21.8	54	13	6	57		38	59 27	13 81	
4	243	34.3		49.4	126	12.9	93	-2	52	09		51		29	59 29	14 79	
5	258	34.1	-19	50.0	140	41.2	93	-1	50	06	6	45	7	22	13 59 30	1 16 76	
6	273	34.0	-19	50.6	155	09.5	93	-1	45	57	6	33	7	05	13 58 34	1 18 72	
7	288	33.8		51.1	169	37.7	92	36.9	40	49		22	6	51	58 37	20 69	
8	303	33.7		51.7	184	06.0	93	25.6	35	42		13		40	58 40	21 67	
9	318	33.5		52.2	198	34.2	92	14.3	30	35	6	04		30	58 42	23 64	
10	333	33.4		52.8	213	02.4	92	-1	20	22	5	49	6	12	57 47	25 60	
11	348	33.2	-19	53.3	227	30.6	92	-0	10 N	5	09	5	34	5	57	13 57 50	1 27 57
12	3	33.1	-19	53.9	241	58.8	92	-0	0	4	55	5	20	5	42	13 57 53	1 29 53
13	18	32.9		54.4	256	26.9	91	28.9	10 S	39	5	05		28	57 57	31 50	
14	33	32.8		55.0	270	55.0	91	17.5	20	4	20	4	48	5	12	56 61	33 46
15	48	32.6		55.5	285	23.1	91	-0	30	3	55	27	4	53	56 65	35 42	
16	63	32.4		56.1	299	51.2	91	+0	35	40	4	14		43	56 67	37 39	
17	78	32.3	-19	56.6	314	19.3	91	+0	40	3	21	3	59	4	30	13 56 70	1 38 37
18	93	32.1	-19	57.2	328	47.3	90	+0	45	2	57	3	41	4	16	13 56 73	1 40 33
19	108	32.0		57.7	343	15.3	90	39.5	50	23		18	3	58	56 77	42 30	
20	123	31.8		58.3	357	43.3	90	+0	52	2	05	3	06		49	56 79	43 28
21	138	31.7		58.8	12	11.2	89	+1	54	1	43	2	53		40	56 81	44 26
22	153	31.5		59.4	26	39.2	90	13.7	56	1	13		37		29	55 84	45 24
23	168	31.3	-19	59.9	41	07.1	89	25.2	58	0	13	2	18		17	55 86	46 22
24	183	31.2	-20	00.5	55	34.9	88	+1	60 S	**	**	1	55	3	02	13 55 89	1 47 20

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 58 ^m 0		Mag: -4.3 PMG: 8 ^h 55 ^m			Mag: +1.6 PMG: 8 ^h 21 ^m			Mag: -2.0 PMG: 7 ^h 24 ^m			Mag: +0.5 PMG: 12 ^h 19 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	59	40.7	226	23.5	-3	42.4	234	39.5	-0	36.4	248	38.7	+5	01.4	174	51.5	-19	44.9	
1	74	43.2	241	23.3		43.4	249	40.6		37.0	263	40.9		01.3	189	53.6		45.0	
2	89	45.7	256	23.1		44.4	264	41.7		37.5	278	43.0		01.2	204	55.8		45.0	
3	104	48.1	271	22.9		45.4	279	42.7		38.1	293	45.2		01.0	219	57.9		45.1	
4	119	50.6	286	22.7		46.4	294	43.8		38.7	308	47.3		00.9	235	00.1		45.1	
5	134	53.1	301	22.5	-3	47.4	309	44.9	-0	39.3	323	49.5	+5	00.8	250	02.2	-19	45.2	
6	149	55.5	316	22.3	-3	48.4	324	46.0	-0	39.9	338	51.6	+5	00.7	265	04.4	-19	45.2	
7	164	58.0	331	22.1		49.4	339	47.1		40.5	353	53.8		00.5	280	06.5		45.3	
8	180	00.5	346	22.0		50.4	354	48.2		41.0	8	55.9		00.4	295	08.7		45.3	
9	195	02.9	1	21.8		51.3	9	49.3		41.6	23	58.1		00.3	310	10.9		45.4	
10	210	05.4	16	21.6		52.3	24	50.4		42.2	39	00.3		00.2	325	13.0		45.4	
11	225	07.8	31	21.4	-3	53.3	39	51.5	-0	42.8	54	02.4	+5	00.1	340	15.2	-19	45.5	
12	240	10.3	46	21.2	-3	54.3	54	52.6	-0	43.4	69	04.6	+4	59.9	355	17.3	-19	45.6	
13	255	12.8	61	21.0		55.3	69	53.7		44.0	84	06.7		59.8	10	19.5		45.6	
14	270	15.2	76	20.8		56.3	84	54.8		44.6	99	08.9		59.7	25	21.6		45.7	
15	285	17.7	91	20.6		57.3	99	55.9		45.1	114	11.0		59.6	40	23.8		45.7	
16	300	20.2	106	20.4		58.3	114	57.0		45.7	129	13.2		59.4	55	26.0		45.8	
17	315	22.6	121	20.2	-3	59.3	129	58.1	-0	46.3	144	15.3	+4	59.3	70	28.1	-19	45.8	
18	330	25.1	136	20.0	-4	00.3	144	59.2	-0	46.9	159	17.5	+4	59.2	85	30.3	-19	45.9	
19	345	27.6	151	19.8		01.3	160	00.3		47.5	174	19.6		59.1	100	32.4		45.9	
20	0	30.0	166	19.7		02.3	175	01.4		48.1	189	21.8		59.0	115	34.6		46.0	
21	15	32.5	181	19.5		03.3	190	02.5		48.6	204	24.0		58.8	130	36.7		46.0	
22	30	34.9	196	19.3		04.3	205	03.5		49.2	219	26.1		58.7	145	38.9		46.1	
23	45	37.4	211	19.1		05.3	220	04.6		49.8	234	28.3		58.6	160	41.0		46.1	
24	60	39.9	226	18.9	-4	06.3	235	05.7	-0	50.4	249	30.4	+4	58.5	175	43.2	-19	46.2	
Dif	—		-2		-10		+11		-6		+22		-1		+22		-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 46 ^m 0			Edad: 10 ^d 3 PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'3 R°: 55 ^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	183	31.2	-20 00.5	55	34.9	+1 36.6	89	60 N	15 17	16 09	17 02	14 20	22	2 37 88
1	198	31.0	01.0	70	02.8	48.0	114	58	30	17 07	22 25	22	25	35 87
2	213	30.9	01.5	84	30.6	+1 59.4	114	56	42	25 12	24 27	24	27	34 84
3	228	30.7	02.1	98	58.4	+2 10.8	114	54	15 52	32 17	26 29	26	29	34 81
4	243	30.5	02.6	113	26.2	22.2	114	52	16 01	39 21	28 30	28	30	33 79
5	258	30.4	-20 03.2	127	53.9	+2 33.6	114	50	16 08	16 45	17 25	14 29	33	2 32 78
6	273	30.2	-20 03.7	142	21.6	+2 45.0	114	45	16 25	16 58	17 34	14 32	37	2 30 74
7	288	30.1	04.3	156	49.3	+2 56.4	114	40	39	17 09	42 35	39	39	29 71
8	303	29.9	04.8	171	16.9	+3 07.7	113	35	16 51	18 49	38 41	38	41	28 68
9	318	29.7	05.3	185	44.6	19.1	114	30	17 01	27 17	56 40	44	44	27 65
10	333	29.6	05.9	200	12.1	30.4	113	20	19	43 18	10 44	48	48	25 61
11	348	29.4	-20 06.4	214	39.7	+3 41.7	113	10 N	17 35	17 57	18 23	14 47	52	2 24 57
12	3	29.3	-20 06.9	229	07.2	+3 53.0	113	0	17 50	18 12	18 37	14 50	55	2 22 54
13	18	29.1	07.5	243	34.7	+4 04.3	113	10 S	18 05	27 18	53 54	58	58	21 50
14	33	28.9	08.0	258	02.2	15.6	113	20	21	18 45	19 13	14 57	62	19 47
15	48	28.8	08.6	272	29.6	26.8	112	30	39	19 06	38 15	01 66	66	17 43
16	63	28.6	09.1	286	57.0	38.0	112	35	18 50	19 19	54 03	69	69	16 41
17	78	28.4	-20 09.6	301	24.3	+4 49.2	112	40	19 03	19 34	20 13	15 06	71	2 15 38
18	93	28.3	-20 10.2	315	51.6	+5 00.4	112	45	19 18	19 53	20 38	15 09	74	2 13 35
19	108	28.1	10.7	330	18.9	11.5	111	50	36	20 17	21 12	13 78	78	12 31
20	123	27.9	11.2	344	46.2	22.6	111	52	45	29 31	15 80	80	80	11 29
21	138	27.8	11.8	359	13.4	33.7	111	54	19 55	42 21	54 17	81	81	10 28
22	153	27.6	12.3	13	40.6	44.8	111	56	20 06	20 59	22 28	19 84	84	09 26
23	168	27.4	12.8	28	07.7	+5 55.8	110	58	19	21 18	** **	21 86	86	08 23
24	183	27.3	-20 13.3	42	34.8	+6 06.8	110	60 S	20 34	21 43	** **	15 24	89	2 07 21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 54 ^m 1		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.6 PMG: 8 ^h 19 ^m		Mag: -2.0 PMG: 7 ^h 21 ^m		Mag: +0.5 PMG: 12 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	60	39.9	226 18.9	-4 06.3	235 05.7	-0 50.4	249 30.4	+4 58.5	175 43.2	-19 46.2
1	75	42.3	241 18.7	07.3	250 06.8	51.0	264 32.6	58.4	190 45.4	46.2
2	90	44.8	256 18.5	08.3	265 07.9	51.6	279 34.7	58.2	205 47.5	46.3
3	105	47.3	271 18.3	09.3	280 09.0	52.1	294 36.9	58.1	220 49.7	46.3
4	120	49.7	286 18.1	10.3	295 10.1	52.7	309 39.1	58.0	235 51.8	46.4
5	135	52.2	301 17.9	-4 11.3	310 11.2	-0 53.3	324 41.2	+4 57.9	250 54.0	-19 46.4
6	150	54.7	316 17.7	-4 12.3	325 12.3	-0 53.9	339 43.4	+4 57.8	265 56.1	-19 46.5
7	165	57.1	331 17.5	13.3	340 13.4	54.5	354 45.5	57.6	280 58.3	46.6
8	180	59.6	346 17.3	14.3	355 14.5	55.1	9 47.7	57.5	296 00.4	46.6
9	196	02.1	1 17.1	15.3	10 15.6	55.6	24 49.8	57.4	311 02.6	46.7
10	211	04.5	16 16.9	16.3	25 16.7	56.2	39 52.0	57.3	326 04.8	46.7
11	226	07.0	31 16.7	-4 17.3	40 17.8	-0 56.8	54 54.2	+4 57.2	341 06.9	-19 46.8
12	241	09.4	46 16.5	-4 18.3	55 18.9	-0 57.4	69 56.3	+4 57.0	356 09.1	-19 46.8
13	256	11.9	61 16.3	19.3	70 20.0	58.0	84 58.5	56.9	11 11.2	46.9
14	271	14.4	76 16.1	20.3	85 21.1	58.6	100 00.6	56.8	26 13.4	46.9
15	286	16.8	91 15.9	21.3	100 22.2	59.1	115 02.8	56.7	41 15.5	47.0
16	301	19.3	106 15.7	22.3	115 23.3	-0 59.7	130 05.0	56.6	56 17.7	47.0
17	316	21.8	121 15.5	-4 23.3	130 24.4	-1 00.3	145 07.1	+4 56.4	71 19.8	-19 47.1
18	331	24.2	136 15.3	-4 24.3	145 25.5	-1 00.9	160 09.3	+4 56.3	86 22.0	-19 47.1
19	346	26.7	151 15.1	25.3	160 26.6	01.5	175 11.4	56.2	101 24.2	47.2
20	1	29.2	166 14.9	26.3	175 27.7	02.1	190 13.6	56.1	116 26.3	47.2
21	16	31.6	181 14.7	27.3	190 28.8	02.6	205 15.8	56.0	131 28.5	47.3
22	31	34.1	196 14.5	28.3	205 29.9	03.2	220 17.9	55.8	146 30.6	47.3
23	46	36.5	211 14.3	29.3	220 31.0	03.8	235 20.1	55.7	161 32.8	47.4
24	61	39.0	226 14.1	-4 30.3	235 32.0	-1 04.4	250 22.2	+4 55.6	176 34.9	-19 47.4
Dif	—		-2	-10	+11	-6	+22	-1	+22	-1

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 46 ^m 3			Edad: 11 ^d 3 PHE { 4 ^h : 60'4 12 ^h : 60'4 20 ^h : 60'4 R°: 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	27.3	-20	13.3	42	34.8	+6	06.8	60 N	6	32	7	25	8	16	14	42
1	198	27.1		13.9	57	01.9	81	17.8	58	26	16	8	03		47	28	4
2	213	26.9		14.4	71	29.0	81	28.7	56	21	08	7	52		51	31	3
3	228	26.8		14.9	85	56.0	80	39.6	54	16	7	01	42		55	32	55
4	243	26.6		15.5	100	22.9	79	+6	50.4	12	6	54	33		14	58	52
5	258	26.4	-20	16.0	114	49.9	80	+7	01.2	6	08	6	48	7	25	15	02
6	273	26.3	-20	16.5	129	16.7	78	+7	12.0	5	59	6	35	7	08	15	09
7	288	26.1		17.0	143	43.6	79	22.7	40	51	24	6	54		14	43	40
8	303	25.9		17.6	158	10.4	78	33.4	35	44	14	42			19	45	36
9	318	25.8		18.1	172	37.2	78	44.0	30	36	6	06	31		24	47	32
10	333	25.6		18.6	187	03.9	77	+7	54.6	23	5	50	6	13		32	50
11	348	25.4	-20	19.1	201	30.6	77	+8	05.1	5	09	5	35	5	58	15	39
12	3	25.2	-20	19.7	215	57.3	77	+8	15.6	4	55	5	21	5	43	15	45
13	18	25.1		20.2	230	23.9	76	26.1	10 S	39	5	05	28		52	59	11
14	33	24.9		20.7	244	50.5	76	36.4	20	4	19	4	48	5	12	15	59
15	48	24.7		21.2	259	17.1	76	46.8	30	3	54	26	4	53		16	07
16	63	24.6		21.7	273	43.6	75	+8	57.1	38	4	13	42		12	68	2
17	78	24.4	-20	22.3	288	10.1	75	+9	07.3	3	19	3	58	4	29	16	17
18	93	24.2	-20	22.8	302	36.5	74	+9	17.4	2	54	3	39	4	14	16	23
19	108	24.0		23.3	317	02.9	74	27.5	50	20	15	3	56		31	77	43
20	123	23.9		23.8	331	29.3	74	37.6	52	2	01	3	03	47		35	79
21	138	23.7		24.3	345	55.6	73	47.6	54	1	37	2	49	37		38	81
22	153	23.5		24.8	0	21.9	73	+9	57.5	1	04	33	26		43	83	35
23	168	23.3		25.3	14	48.1	72	+10	07.3	** **	2	14	3	13		47	86
24	183	23.2	-20	25.9	29	14.3	72	+10	17.1	** **	1	48	2	58		16	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 50 ^m 1		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.6 PMG: 8 ^h 17 ^m		Mag: -2.0 PMG: 7 ^h 17 ^m		Mag: +0.5 PMG: 12 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	61	39.0	226	14.1	235	32.0	250	22.2	176	34.9
1	76	41.5	241	13.9	250	33.1	265	24.4	191	37.1
2	91	43.9	256	13.7	265	34.2	280	26.6	206	39.2
3	106	46.4	271	13.4	280	35.3	295	28.7	221	41.4
4	121	48.9	286	13.2	295	36.4	310	30.9	236	43.6
5	136	51.3	301	13.0	310	37.5	325	33.1	251	45.7
6	151	53.8	316	12.8	325	38.6	340	35.2	266	47.9
7	166	56.3	331	12.6	340	39.7	355	37.4	281	50.0
8	181	58.7	346	12.4	355	40.8	10	39.5	296	52.2
9	197	01.2	1	12.2	10	41.9	25	41.7	311	54.3
10	212	03.7	16	12.0	25	43.0	40	43.9	326	56.5
11	227	06.1	31	11.8	40	44.1	55	46.0	341	58.6
12	242	08.6	46	11.6	55	45.2	70	48.2	357	00.8
13	257	11.0	61	11.4	70	46.3	85	50.4	12	03.0
14	272	13.5	76	11.2	85	47.4	100	52.5	27	05.1
15	287	16.0	91	10.9	100	48.5	115	54.7	42	07.3
16	302	18.4	106	10.7	115	49.6	130	56.9	57	09.4
17	317	20.9	121	10.5	130	50.7	145	59.0	72	11.6
18	332	23.4	136	10.3	145	51.8	161	01.2	87	13.7
19	347	25.8	151	10.1	160	52.9	176	03.4	102	15.9
20	2	28.3	166	09.9	175	54.0	191	05.5	117	18.0
21	17	30.8	181	09.7	190	55.1	206	07.7	132	20.2
22	32	33.2	196	09.5	205	56.2	221	09.9	147	22.3
23	47	35.7	211	09.3	220	57.3	236	12.0	162	24.5
24	62	38.2	226	09.0	235	58.4	251	14.2	177	26.7
Dif	—		-2		+11		+22		+22	
			-10		-6		-1		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 46 ^m 6			Edad: 12 ^d 3 PHE { 4 ^h : 60'4 12 ^h : 60'4 20 ^h : 60'3 PMG: 22 ^h 55 ^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	183	23.2	-20	25.9	29	14.3	+10	17.1	60 N	15 14	16 06	16 59	15 08 32	5 34 87
1	198	23.0		26.4	43	40.5		26.8	58	27	15	17 05	15 34	28 83
2	213	22.8		26.9	58	06.6		36.5	56	39	23	10	22 36	22 81
3	228	22.6		27.4	72	32.7		46.1	54	49	30	15	27 38	17 79
4	243	22.5		27.9	86	58.8	+10	55.6	52	15 58	37	19	33 39	12 78
5	258	22.3	-20	28.4	101	24.8	+11	05.0	50	16 07	16 43	17 23	15 37 41	5 08 76
6	273	22.1	-20	28.9	115	50.8	+11	14.4	45	16 24	16 56	17 33	15 48 44	4 58 74
7	288	21.9		29.4	130	16.8		23.7	40	38	17 08	41	15 57 46	51 70
8	303	21.8		30.0	144	42.7		32.9	35	16 50	18	49	16 04 48	44 68
9	318	21.6		30.5	159	08.5		42.1	30	17 01	27	17 56	11 49	39 66
10	333	21.4		31.0	173	34.4	+11	51.1	20	19	43	18 10	22 53	29 62
11	348	21.2	-20	31.5	188	00.2	+12	00.1	10 N	17 35	17 57	18 23	16 32 56	4 20 60
12	3	21.0	-20	32.0	202	26.0	+12	09.0	0	17 50	18 12	18 38	16 42 57	4 12 57
13	18	20.9		32.5	216	51.7		17.8	10 S	18 05	28	18 55	16 51 60	4 04 54
14	33	20.7		33.0	231	17.4		26.6	20	22	18 46	19 14	17 02 62	3 55 52
15	48	20.5		33.5	245	43.1		35.2	30	41	19 08	40	13 66	45 48
16	63	20.3		34.0	260	08.8		43.8	35	18 52	21	19 56	20 68	40 46
17	78	20.1	-20	34.5	274	34.4	+12	52.3	40	19 05	19 37	20 16	17 28 69	3 33 44
18	93	20.0	-20	35.0	288	59.9	+13	00.7	45	19 20	19 56	20 41	17 37 72	3 26 41
19	108	19.8		35.5	303	25.5		09.0	50	39	20 20	21 17	48 75	17 38
20	123	19.6		36.0	317	51.0		17.2	52	48	33	21 36	54 76	13 36
21	138	19.4		36.5	332	16.5		25.3	54	19 58	20 47	22 01	17 59 78	08 35
22	153	19.2		37.0	346	42.0		33.3	56	20 10	21 04	22 38	18 06 79	3 03 33
23	168	19.1		37.5	1	07.4		41.3	58	23	24	** **	13 81	2 58 30
24	183	18.9	-20	38.0	15	32.8	+13	49.1	60 S	20 39	21 51	** **	18 21 84	2 51 29
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 46 ^m 2		Mag: -4.3 PMG: 8 ^h 56 ^m		Mag: +1.6 PMG: 8 ^h 16 ^m		Mag: -2.0 PMG: 7 ^h 14 ^m		Mag: +0.5 PMG: 12 ^h 08 ^m					
h	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
0	62 38.2	226 09.0	-4 54.3	235 58.4	-1 18.4	251 14.2	+4 52.8	177 26.7	-19 48.7					
1	77 40.6	241 08.8		250 59.5		266 16.4		192 28.8						
2	92 43.1	256 08.6		266 00.6		281 18.5		207 31.0						
3	107 45.5	271 08.4		281 01.7		296 20.7		222 33.1						
4	122 48.0	286 08.2		296 02.8		311 22.9		237 35.3						
5	137 50.5	301 08.0	-4 59.3	311 03.9	-1 21.3	326 25.0	+4 52.2	252 37.4	-19 48.9					
6	152 52.9	316 07.7	-5 00.3	326 05.0	-1 21.8	341 27.2	+4 52.1	267 39.6	-19 49.0					
7	167 55.4	331 07.5		341 06.1		356 29.4		282 41.7						
8	182 57.9	346 07.3		356 07.2		11 31.5		297 43.9						
9	198 00.3	1 07.1		11 08.3		26 33.7		312 46.1						
10	213 02.8	16 06.9		26 09.4		41 35.9		327 48.2						
11	228 05.3	31 06.7	-5 05.3	41 10.5	-1 24.8	56 38.0	+4 51.5	342 50.4	-19 49.3					
12	243 07.7	46 06.4	-5 06.3	56 11.6	-1 25.3	71 40.2	+4 51.4	357 52.5	-19 49.3					
13	258 10.2	61 06.2		71 12.7		86 42.4		12 54.7						
14	273 12.6	76 06.0		86 13.8		101 44.5		27 56.8						
15	288 15.1	91 05.8		101 14.9		116 46.7		42 59.0						
16	303 17.6	106 05.6		116 16.0		131 48.9		58 01.1						
17	318 20.0	121 05.3	-5 11.3	131 17.1	-1 28.2	146 51.0	+4 50.8	73 03.3	-19 49.6					
18	333 22.5	136 05.1	-5 12.3	146 18.2	-1 28.8	161 53.2	+4 50.7	88 05.4	-19 49.6					
19	348 25.0	151 04.9		161 19.3		176 55.4		103 07.6						
20	3 27.4	166 04.7		176 20.4		191 57.6		118 09.8						
21	18 29.9	181 04.5		191 21.5		206 59.7		133 11.9						
22	33 32.4	196 04.2		206 22.6		222 01.9		148 14.1						
23	48 34.8	211 04.0		221 23.7		237 04.1		163 16.2						
24	63 37.3	226 03.8	-5 18.3	236 24.8	-1 32.3	252 06.2	+4 50.0	178 18.4	-19 49.9					
Dif	—	-2	-10	+11	-6	+22	-1	+22	-1					

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: 13 ^d 3 PHE { SD: 16/4 PMG: 23 ^h 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	18.9	-20	38.0	15	32.8	+13	49.1	60 N	6 35	7 29	8 21	15 40	40	7 01	79
1	198	18.7		38.5	29	58.2	64	+13	56.9	78	29	20	8 07	49	42	6 51
2	213	18.5		39.0	44	23.5	63	+14	04.5	76	24	11	7 56	15 58	43	43
3	228	18.3		39.5	58	48.8	63		12.1	76	19	7 04	45	16 05	45	36
4	243	18.1		40.0	73	14.1	63		19.6	75	15	6 57	36	12	46	30
5	258	17.9	-20	40.5	87	39.4	63	+14	26.9	73	6 11	6 51	7 28	16 18	47	6 24
6	273	17.8	-20	41.0	102	04.6	62	+14	34.2	73	6 01	6 38	7 10	16 32	49	6 12
7	288	17.6		41.5	116	29.9	63		41.3	71	5 53	26	6 56	43	50	6 01
8	303	17.4		42.0	130	55.1	62		48.4	71	45	16	44	16 52	52	5 52
9	318	17.2		42.5	145	20.2	61	+14	55.3	69	38	6 07	33	17 00	54	45
10	333	17.0		42.9	159	45.4	62	+15	02.2	69	24	5 51	6 15	15 55		31
11	348	16.8	-20	43.4	174	10.5	61	+15	08.9	67	10 N	5 10	5 36	5 58	17 28	56
12	3	16.6	-20	43.9	188	35.7	62	+15	15.6	67	0	4 55	5 21	5 43	17 39	59
13	18	16.5		44.4	203	00.8	61		22.1	65	10 S	39	5 05	28	17 51	60
14	33	16.3		44.9	217	25.8	60		28.5	64	20	4 19	4 47	5 11	18 04	62
15	48	16.1		45.4	231	50.9	61		34.9	64	30	3 54	26	4 52	19 63	33
16	63	15.9		45.9	246	16.0	61		41.1	62	35	37	4 12	41	28 64	26
17	78	15.7	-20	46.4	260	41.0	60	+15	47.2	61	40	3 17	3 57	4 28	18 37	66
18	93	15.5	-20	46.9	275	06.0	60	+15	53.1	59	45	2 52	3 37	4 13	18 49	67
19	108	15.3		47.3	289	31.0	60	+15	59.0	59	50	2 16	13	3 54	19 03	69
20	123	15.1		47.8	303	56.0	60	+16	04.8	58	52	1 57	3 00	45	10 69	49
21	138	15.0		48.3	318	21.0	60		10.5	57	54	1 32	2 46	35	17 71	43
22	153	14.8		48.8	332	46.0	60		16.0	55	56	0 55	29	23	25 72	36
23	168	14.6		49.3	347	11.0	60		21.4	54	58	** **	2 09	3 10	34 74	28
24	183	14.4	-20	49.8	1	35.9	59	+16	26.7	53	60 S	** **	1 42	2 54	19 45	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 42 ^m 3		Mag: -4.3 PMG: 8 ^h 56 ^m		Mag: +1.6 PMG: 8 ^h 14 ^m		Mag: -2.0 PMG: 7 ^h 11 ^m		Mag: +0.5 PMG: 12 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	63	37.3	226	03.8	-5	18.3	236	24.8	-1	32.3
1	78	39.8	241	03.6		19.3	251	25.9		32.9
2	93	42.2	256	03.3		20.3	266	27.0		33.5
3	108	44.7	271	03.1		21.3	281	28.1		34.0
4	123	47.1	286	02.9		22.3	296	29.2		34.6
5	138	49.6	301	02.7	-5	23.4	311	30.3	-1	35.2
6	153	52.1	316	02.4	-5	24.4	326	31.4	-1	35.8
7	168	54.5	331	02.2		25.4	341	32.4		36.4
8	183	57.0	346	02.0		26.4	356	33.5		36.9
9	198	59.5	1	01.8		27.4	11	34.6		37.5
10	214	01.9	16	01.5		28.4	26	35.7		38.1
11	229	04.4	31	01.3	-5	29.4	41	36.8	-1	38.7
12	244	06.9	46	01.1	-5	30.4	56	37.9	-1	39.3
13	259	09.3	61	00.8		31.4	71	39.0		39.8
14	274	11.8	76	00.6		32.4	86	40.1		40.4
15	289	14.3	91	00.4		33.4	101	41.2		41.0
16	304	16.7	106	00.2		34.4	116	42.3		41.6
17	319	19.2	120	59.9	-5	35.4	131	43.4	-1	42.2
18	334	21.6	135	59.7	-5	36.4	146	44.5	-1	42.7
19	349	24.1	150	59.5		37.4	161	45.6		43.3
20	4	26.6	165	59.2		38.4	176	46.7		43.9
21	19	29.0	180	59.0		39.4	191	47.9		44.5
22	34	31.5	195	58.8		40.4	206	49.0		45.0
23	49	34.0	210	58.5		41.4	221	50.1		45.6
24	64	36.4	225	58.3	-5	42.4	236	51.2	-1	46.2
Dif	—		-2		-10		+11		-6	
							+22		-1	
									+22	
									-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 11 ^h 47 ^m 2			Edad: 14 ^d 3 PHE { SD: 16'3 PMG: **h **m																
	hG ☉	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	14.4	-20	49.8	1	35.9	+16	26.7	60 N	15 10	16 03	16 57	16 20 50	8 20 70						
1	198	14.2		50.2	16	00.9	60	31.9	58	24	13	17 03	31 52	8 09 68						
2	213	14.0		50.7	30	25.8	59	37.0	56	37	21	08	41 52	7 59 68						
3	228	13.8		51.2	44	50.8	60	42.0	54	47	29	13	50 53	51 66						
4	243	13.6		51.7	59	15.7	59	46.9	52	15 56	35	18	16 58 53	43 66						
5	258	13.4	-20	52.2	73	40.7	60	+16 51.6	50	16 05	16 42	17 22	17 05 54	7 36 65						
6	273	13.2	-20	52.6	88	05.6	59	+16 56.2	45	16 23	16 55	17 32	17 21 54	7 21 64						
7	288	13.0		53.1	102	30.5	59	+17 00.7	40	37	17 07	40	33 55	7 09 63						
8	303	12.8		53.6	116	55.5	60	05.1	35	16 50	17	48	44 56	6 59 62						
9	318	12.7		54.1	131	20.4	59	09.4	30	17 00	26	17 55	17 54 55	49 62						
10	333	12.5		54.5	145	45.4	60	13.5	20	19	43	18 10	18 10 57	34 60						
11	348	12.3	-20	55.0	160	10.3	59	+17 17.5	10 N	17 35	17 58	18 24	18 24 57	6 20 59						
12	3	12.1	-20	55.5	174	35.3	60	+17 21.5	0	17 51	18 13	18 39	18 38 57	6 07 58						
13	18	11.9		56.0	189	00.3	60	25.2	10 S	18 06	29	18 56	18 51 58	5 54 58						
14	33	11.7		56.4	203	25.2	59	28.9	20	23	18 47	19 16	19 06 58	41 56						
15	48	11.5		56.9	217	50.2	60	32.5	30	43	19 09	42	22 59	25 55						
16	63	11.3		57.4	232	15.2	60	35.9	35	18 54	23	19 58	32 59	16 54						
17	78	11.1	-20	57.9	246	40.2	60	+17 39.2	40	19 07	19 39	20 18	19 43 60	5 06 53						
18	93	10.9	-20	58.3	261	05.3	61	+17 42.4	45	19 23	19 59	20 45	19 56 60	4 54 51						
19	108	10.7		58.8	275	30.3	60	45.5	50	42	20 24	21 21	20 12 61	39 50						
20	123	10.5		59.3	289	55.4	61	48.4	52	19 52	37	21 42	19 62	32 50						
21	138	10.3	-20	59.7	304	20.4	60	51.2	54	20 02	20 51	22 08	28 61	24 49						
22	153	10.1	-21	00.2	318	45.5	61	54.0	56	14	21 08	22 49	37 62	16 48						
23	168	09.9		00.7	333	10.6	61	56.5	58	28	30	** **	20 48 62	4 06 47						
24	183	09.7	-21	01.1	347	35.7	61	+17 59.0	60 S	20 44	21 58	** **	21 00 62	3 55 46						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 19 ^h 38 ^m 3		Mag: -4.3 PMG: 8 ^h 56 ^m			Mag: +1.6 PMG: 8 ^h 12 ^m			Mag: -2.0 PMG: 7 ^h 07 ^m			Mag: +0.4 PMG: 12 ^h 02 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	64	36.4	225	58.3	-5	42.4	236	51.2	-1	46.2	252	58.4	+4	47.3	179	10.1	-19	51.2		
1	79	38.9	240	58.1		43.4	251	52.3		46.8	268	00.6		47.2	194	12.2		51.2		
2	94	41.4	255	57.8		44.4	266	53.4		47.4	283	02.8		47.1	209	14.4		51.3		
3	109	43.8	270	57.6		45.4	281	54.5		47.9	298	05.0		47.0	224	16.5		51.3		
4	124	46.3	285	57.4		46.4	296	55.6		48.5	313	07.1		46.8	239	18.7		51.4		
5	139	48.8	300	57.1	-5	47.5	311	56.7	-1	49.1	328	09.3	+4	46.7	254	20.8	-19	51.4		
6	154	51.2	315	56.9	-5	48.5	326	57.8	-1	49.7	343	11.5	+4	46.6	269	23.0	-19	51.5		
7	169	53.7	330	56.7		49.5	341	58.9		50.3	358	13.7		46.5	284	25.2		51.5		
8	184	56.1	345	56.4		50.5	357	00.0		50.8	13	15.9		46.4	299	27.3		51.6		
9	199	58.6	0	56.2		51.5	12	01.1		51.4	28	18.0		46.3	314	29.5		51.6		
10	215	01.1	15	56.0		52.5	27	02.2		52.0	43	20.2		46.2	329	31.6		51.7		
11	230	03.5	30	55.7	-5	53.5	42	03.3	-1	52.6	58	22.4	+4	46.1	344	33.8	-19	51.7		
12	245	06.0	45	55.5	-5	54.5	57	04.4	-1	53.1	73	24.6	+4	46.0	359	35.9	-19	51.8		
13	260	08.5	60	55.2		55.5	72	05.5		53.7	88	26.8		45.8	14	38.1		51.8		
14	275	10.9	75	55.0		56.5	87	06.6		54.3	103	28.9		45.7	29	40.2		51.9		
15	290	13.4	90	54.8		57.5	102	07.7		54.9	118	31.1		45.6	44	42.4		51.9		
16	305	15.9	105	54.5		58.5	117	08.8		55.5	133	33.3		45.5	59	44.5		52.0		
17	320	18.3	120	54.3	-5	59.5	132	09.9	-1	56.0	148	35.5	+4	45.4	74	46.7	-19	52.0		
18	335	20.8	135	54.1	-6	00.5	147	11.0	-1	56.6	163	37.7	+4	45.3	89	48.8	-19	52.1		
19	350	23.2	150	53.8		01.5	162	12.1		57.2	178	39.8		45.2	104	51.0		52.1		
20	5	25.7	165	53.6		02.5	177	13.2		57.8	193	42.0		45.1	119	53.2		52.2		
21	20	28.2	180	53.3		03.5	192	14.3		58.3	208	44.2		45.0	134	55.3		52.2		
22	35	30.6	195	53.1		04.5	207	15.4		58.9	223	46.4		44.8	149	57.5		52.3		
23	50	33.1	210	52.8		05.5	222	16.5	-1	59.5	238	48.6		44.7	164	59.6		52.3		
24	65	35.6	225	52.6	-6	06.5	237	17.6	-2	00.1	253	50.7	+4	44.6	180	01.8	-19	52.4		
Dif	—		-2			-10			+11			-6			+22			-1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 47 ^m 5			Edad: 15 ^d 3 PHE { SD: 16'1 PMG: 0 ^h 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	09.7	-21	01.1	347	35.7	+17	59.0	60 N	6	39	7	33	8	26	17	10	60
1	198	09.5		01.6	2	00.9	62	+18	01.3	58	33		23		8	23	59	
2	213	09.3		02.1	16	26.1	62		03.6	56	27	15	7	59	33	60	9	
3	228	09.1		02.5	30	51.3	62		05.7	54	22	07	49	43	59	8	57	
4	243	08.9		03.0	45	16.5	62		07.7	52	18	7	00	39	51	59	49	
5	258	08.7	-21	03.4	59	41.7	62	+18	09.5	50	6	13	6	54	7	31	17	
6	273	08.5	-21	03.9	74	07.0	63	+18	11.3	45	6	04	6	40	7	13	18	
7	288	08.3		04.4	88	32.3	63		12.9	40	5	55	28	6	58	28	58	
8	303	08.1		04.8	102	57.6	63		14.4	35	47	18		46	40	57	8	
9	318	07.9		05.3	117	23.0	64		15.7	30	39	6	09	35	18	49	58	
10	333	07.7		05.7	131	48.4	64		17.0	20	25	5	52	6	16	19	07	
11	348	07.5	-21	06.2	146	13.8	64	+18	18.1	10 N	5	11	5	37	5	59	19	
12	3	07.3	-21	06.7	160	39.3	65	+18	19.2	0	4	56	5	22	5	44	19	
13	18	07.1		07.1	175	04.8	65		20.1	10 S		39	5	06	28		19	
14	33	06.9		07.6	189	30.4	66		20.8	20	4	19	4	47	5	11	20	
15	48	06.7		08.0	203	55.9	65		21.5	30	3	53	25	4	52	21	55	
16	63	06.5		08.5	218	21.5	66		22.0	35	36	4	12	40	31	54	6	
17	78	06.3	-21	08.9	232	47.2	67	+18	22.5	40	3	16	3	55	4	27	20	
18	93	06.1	-21	09.4	247	12.9	67	+18	22.8	45	2	50	3	36	4	11	20	
19	108	05.9		09.8	261	38.6	67		23.0	50	2	13	3	10	3	52	21	
20	123	05.7		10.3	276	04.4	68		23.0	52	1	53	2	58	43	21	51	
21	138	05.5		10.7	290	30.3	69		23.0	54	1	26		43	32	29	51	
22	153	05.3		11.2	304	56.1	68		22.8	56	0	45		26	20	39	50	
23	168	05.1		11.7	319	22.0	69		22.5	58	** **	**	2	04	3	07	21	
24	183	04.8	-21	12.1	333	48.0	70	+18	22.2	60 S	** **	**	1	36	2	50	22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 34 ^m 4		Mag: -4.3 PMG: 8 ^h 57 ^m		Mag: +1.6 PMG: 8 ^h 10 ^m		Mag: -2.0 PMG: 7 ^h 04 ^m		Mag: +0.4 PMG: 11 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	65	35.6	225	52.6	-6	06.5	253	50.7	+4	44.6
1	80	38.0	240	52.4		07.5	268	52.9		44.5
2	95	40.5	255	52.1		08.6	283	55.1		44.4
3	110	43.0	270	51.9		09.6	298	57.3		44.3
4	125	45.4	285	51.6		10.6	313	59.5		44.2
5	140	47.9	300	51.4	-6	11.6	329	01.7	+4	44.1
6	155	50.4	315	51.1	-6	12.6	344	03.8	+4	44.0
7	170	52.8	330	50.9		13.6	359	06.0		43.9
8	185	55.3	345	50.6		14.6	14	08.2		43.8
9	200	57.7	0	50.4		15.6	29	10.4		43.6
10	216	00.2	15	50.2		16.6	44	12.6		43.5
11	231	02.7	30	49.9	-6	17.6	59	14.8	+4	43.4
12	246	05.1	45	49.7	-6	18.6	74	16.9	+4	43.3
13	261	07.6	60	49.4		19.6	89	19.1		43.2
14	276	10.1	75	49.2		20.6	104	21.3		43.1
15	291	12.5	90	48.9		21.6	119	23.5		43.0
16	306	15.0	105	48.7		22.6	134	25.7		42.9
17	321	17.5	120	48.4	-6	23.6	149	27.9	+4	42.8
18	336	19.9	135	48.2	-6	24.6	164	30.1	+4	42.7
19	351	22.4	150	47.9		25.6	179	32.2		42.6
20	6	24.9	165	47.7		26.6	194	34.4		42.5
21	21	27.3	180	47.4		27.6	209	36.6		42.3
22	36	29.8	195	47.2		28.7	224	38.8		42.2
23	51	32.2	210	46.9		29.7	239	41.0		42.1
24	66	34.7	225	46.7	-6	30.7	254	43.2	+4	42.0
Dif	—		-2		-10		+11		-6	

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: 16 ^d 3 PHE { SD: 15:9 PMG: 1 ^h 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	04.8	-21	12.1	333	48.0	+18	22.2	60 N	15 07	16 01	16 55	18 10	68	10 26	43
1	198	04.6		12.5	348	14.0	70	21.6	58	22	10	17 01	22	66	13	45
2	213	04.4		13.0	2	40.1	71	21.0	56	34	19	07	33	65	10 03	45
3	228	04.2		13.4	17	06.2	71	20.3	54	45	27	12	42	64	9	54
4	243	04.0		13.9	31	32.4	72	19.4	52	15 55	34	16	50	63	45	47
5	258	03.8	-21	14.3	45	58.6	72	+18	18.5	16 03	16 40	17 21	18 58	62	9	38
6	273	03.6	-21	14.8	60	24.9	73	+18	17.4	16 21	16 54	17 31	19 13	61	9	22
7	288	03.4		15.2	74	51.2	73	16.2	40	36	17 06	40	26	59	9	09
8	303	03.2		15.7	89	17.6	74	14.9	35	16 49	17	48	37	58	8	58
9	318	03.0		16.1	103	44.0	74	13.5	30	17 00	26	17 55	19 47	57	48	51
10	333	02.8		16.6	118	10.5	75	12.0	20	19	43	18 10	20 03	56	31	53
11	348	02.6	-21	17.0	132	37.1	76	+18	10.4	17 36	17 58	18 24	20 18	54	8	16
12	3	02.4	-21	17.4	147	03.7	76	+18	08.7	17 52	18 14	18 40	20 31	53	8	02
13	18	02.1		17.9	161	30.3	76	06.8	10 S	18 07	30	18 57	45	51	7	48
14	33	01.9		18.3	175	57.1	78	04.9	20	24	18 49	19 17	20 59	50	34	56
15	48	01.7		18.8	190	23.9	78	02.8	30	44	19 11	19 44	21 16	48	17	57
16	63	01.5		19.2	204	50.7	78	+18	00.7	18 56	25	20 00	25	48	7	07
17	78	01.3	-21	19.6	219	17.6	79	+17	58.4	19 09	19 41	20 21	21 36	47	6	55
18	93	01.1	-21	20.1	233	44.6	80	+17	56.0	19 25	20 01	20 48	21 49	45	6	42
19	108	00.9		20.5	248	11.6	80	53.5	50	45	27	21 26	22 05	43	26	60
20	123	00.7		20.9	262	38.7	81	51.0	52	19 55	40	21 47	12	42	18	61
21	138	00.4		21.4	277	05.9	82	48.3	54	20 05	20 55	22 15	20	41	09	62
22	153	00.2		21.8	291	33.1	82	45.5	56	18	21 13	23 01	29	40	6	00
23	168	00.0		22.2	306	00.4	83	42.6	58	32	21 36	** **	40	38	5	49
24	182	59.8	-21	22.7	320	27.8	84	+17	39.7	20 48	22 06	** **	22 51	38	5	36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 30 ^m 5		Mag: -4.2 PMG: 8 ^h 57 ^m		Mag: +1.6 PMG: 8 ^h 08 ^m		Mag: -2.0 PMG: 7 ^h 00 ^m		Mag: +0.4 PMG: 11 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	66	34.7	225	46.7	-6	30.7	237	44.0	-2	13.9
1	81	37.2	240	46.4		31.7	252	45.1		14.5
2	96	39.6	255	46.2		32.7	267	46.2		15.1
3	111	42.1	270	45.9		33.7	282	47.3		15.6
4	126	44.6	285	45.6		34.7	297	48.4		16.2
5	141	47.0	300	45.4	-6	35.7	312	49.5	-2	16.8
6	156	49.5	315	45.1	-6	36.7	327	50.7	-2	17.4
7	171	52.0	330	44.9		37.7	342	51.8		17.9
8	186	54.4	345	44.6		38.7	357	52.9		18.5
9	201	56.9	0	44.4		39.7	12	54.0		19.1
10	216	59.4	15	44.1		40.7	27	55.1		19.7
11	232	01.8	30	43.9	-6	41.7	42	56.2	-2	20.2
12	247	04.3	45	43.6	-6	42.7	57	57.3	-2	20.8
13	262	06.7	60	43.3		43.7	72	58.4		21.4
14	277	09.2	75	43.1		44.7	87	59.5		22.0
15	292	11.7	90	42.8		45.7	103	00.6		22.5
16	307	14.1	105	42.6		46.7	118	01.7		23.1
17	322	16.6	120	42.3	-6	47.7	133	02.8	-2	23.7
18	337	19.1	135	42.0	-6	48.7	148	03.9	-2	24.3
19	352	21.5	150	41.8		49.8	163	05.0		24.8
20	7	24.0	165	41.5		50.8	178	06.1		25.4
21	22	26.5	180	41.3		51.8	193	07.2		26.0
22	37	28.9	195	41.0		52.8	208	08.3		26.6
23	52	31.4	210	40.7		53.8	223	09.4		27.1
24	67	33.9	225	40.5	-6	54.8	238	10.5	-2	27.7
Dif	—		-3		-10		+11		-6	
									+22	
									-1	
									+22	
									-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 17 ^d 3 PHE { 4 ^h : 57'5 12 ^h : 57'2 20 ^h : 56'9													
	PMG: 11 ^h 48 ^m 2			SD: 15'7 PMG: 2 ^h 44 ^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	182	59.8	-21	22.7	320	27.8	+17	39.7	60 N	6	42	7	36	8	30	19	18
1	197	59.6		23.1	334	55.2		36.6	58		36		27	15		28	70
2	212	59.4		23.5	349	22.7		33.4	56		30		18	8	03	38	67
3	227	59.2		24.0	3	50.3		30.1	54		25		10	7	52	46	66
4	242	59.0		24.4	18	17.9		26.8	52		20		7	03	42	19	53
5	257	58.7	-21	24.8	32	45.6	+17	23.3	50		6	16	6	56	7	33	20
6	272	58.5	-21	25.3	47	13.3	+17	19.7	45		6	06	6	42	7	15	20
7	287	58.3		25.7	61	41.2		16.1	40		5	57		30	7	00	25
8	302	58.1		26.1	76	09.1		12.3	38		49		20	6	47	35	58
9	317	57.9		26.5	90	37.1		08.5	30		41		6	10	36	44	56
10	332	57.7		27.0	105	05.1		04.5	20		26		5	53	17	20	59
11	347	57.4	-21	27.4	119	33.2	+17	00.5	10 N		5	12	5	38	6	00	21
12	2	57.2	-21	27.8	134	01.4	+16	56.4	0		4	56	5	22	5	45	21
13	17	57.0		28.2	148	29.7		52.2	10 S		39		5	06	29	36	48
14	32	56.8		28.7	162	58.0		47.9	20		4	19	4	47	5	11	21
15	47	56.6		29.1	177	26.4		43.5	30		3	52		25	4	51	22
16	62	56.3		29.5	191	54.8		39.1	35		35		4	11	40	13	42
17	77	56.1	-21	29.9	206	23.4	+16	34.5	40		3	15	3	55	4	26	22
18	92	55.9	-21	30.3	220	52.0	+16	29.9	45		2	48	3	34	4	10	22
19	107	55.7		30.8	235	20.7		25.1	50		2	10	3	08	3	50	48
20	122	55.5		31.2	249	49.4		20.3	52		1	49	2	55	41	22	54
21	137	55.3		31.6	264	18.3		15.5	54		1	21		40	30	23	01
22	152	55.0		32.0	278	47.2		10.5	56		0	34		22	18	09	33
23	167	54.8		32.4	293	16.1		05.4	58		** **		2	00	3	04	18
24	182	54.6	-21	32.8	307	45.2	+16	00.3	60 S		** **		1	30	2	47	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 26 ^m 5		Mag: -4.2 PMG: 8 ^h 57 ^m		Mag: +1.6 PMG: 8 ^h 07 ^m		Mag: -2.0 PMG: 6 ^h 57 ^m		Mag: +0.4 PMG: 11 ^h 51 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	67	33.9	225	40.5	-6	54.8	238	10.5	-2	27.7
1	82	36.3	240	40.2		55.8	253	11.6		28.3
2	97	38.8	255	39.9		56.8	268	12.7		28.9
3	112	41.2	270	39.7		57.8	283	13.8		29.4
4	127	43.7	285	39.4		58.8	298	14.9		30.0
5	142	46.2	300	39.2	-6	59.8	313	16.0	-2	30.6
6	157	48.6	315	38.9	-7	00.8	328	17.1	-2	31.2
7	172	51.1	330	38.6		01.8	343	18.2		31.7
8	187	53.6	345	38.4		02.8	358	19.3		32.3
9	202	56.0	0	38.1		03.8	13	20.5		32.9
10	217	58.5	15	37.8		04.8	28	21.6		33.5
11	233	01.0	30	37.6	-7	05.8	43	22.7	-2	34.0
12	248	03.4	45	37.3	-7	06.8	58	23.8	-2	34.6
13	263	05.9	60	37.0		07.8	73	24.9		35.2
14	278	08.4	75	36.8		08.8	88	26.0		35.8
15	293	10.8	90	36.5		09.8	103	27.1		36.3
16	308	13.3	105	36.2		10.8	118	28.2		36.9
17	323	15.7	120	35.9	-7	11.8	133	29.3	-2	37.5
18	338	18.2	135	35.7	-7	12.8	148	30.4	-2	38.0
19	353	20.7	150	35.4		13.8	163	31.5		38.6
20	8	23.1	165	35.1		14.9	178	32.6		39.2
21	23	25.6	180	34.9		15.9	193	33.7		39.8
22	38	28.1	195	34.6		16.9	208	34.8		40.3
23	53	30.5	210	34.3		17.9	223	35.9		40.9
24	68	33.0	225	34.0	-7	18.9	238	37.0	-2	41.5

Dif	—	-3	-10	+11	-6	+22	-1	+22	-

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: 18 ^d 3 PHE { SD: 15:5 PMG: 3 ^h 36 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	54.6	-21 32.8	307	45.2	+16 00.3	52	60 N	15 05	15 58	16 53	20 29 72	11 42 25	
1	197	54.4	33.3	322	14.3 ¹⁰¹	+15 55.1	52	58	19	16 08	16 59	38 70	32 28	
2	212	54.1	33.7	336	43.5 ¹⁰²	49.8	53	56	32	17	17 05	45 68	24 30	
3	227	53.9	34.1	351	12.8 ¹⁰³	44.5	53	54	43	25	10	52 66	17 31	
4	242	53.7	34.5	5	42.1 ¹⁰³	39.0	55	52	15 53	33	15	20 58 65	11 32	
5	257	53.5	-21 34.9	20	11.5 ¹⁰⁴	+15 33.5	55	50	16 02	16 39	17 20	21 03 64	11 05 34	
6	272	53.3	-21 35.3	34	41.0 ¹⁰⁵	+15 27.9	56	45	16 21	16 54	17 30	21 15 61	10 53 36	
7	287	53.0	35.7	49	10.5 ¹⁰⁵	22.2	57	40	36	17 06	39	25 58	42 38	
8	302	52.8	36.1	63	40.2 ¹⁰⁷	16.5	57	35	16 49	16	47	33 57	33 40	
9	317	52.6	36.6	78	09.8 ¹⁰⁶	10.7	58	30	17 00	26	17 55	40 55	25 42	
10	332	52.4	37.0	92	39.6 ¹⁰⁸	+15 04.8	59	20	19	43	18 10	21 53 52	12 44	
11	347	52.1	-21 37.4	107	09.5 ¹⁰⁹	+14 58.9	59	10 N	17 36	17 59	18 25	22 04 49	10 00 46	
12	2	51.9	-21 37.8	121	39.4 ¹⁰⁹	+14 52.9	60	0	17 52	18 14	18 40	22 14 47	9 48 49	
13	17	51.7	38.2	136	09.3 ¹⁰⁹	46.8	61	10 S	18 08	31	18 58	24 45	37 51	
14	32	51.5	38.6	150	39.4 ¹¹¹	40.6	62	20	26	18 50	19 19	35 43	25 53	
15	47	51.2	39.0	165	09.5 ¹¹¹	34.4	62	30	46	19 13	19 45	48 39	11 56	
16	62	51.0	39.4	179	39.7 ¹¹²	28.1	63	35	18 58	27	20 03	22 55 38	9 03 57	
17	77	50.8	-21 39.8	194	10.0 ¹¹³	+14 21.7	64	40	19 12	19 44	20 24	23 03 36	8 54 59	
18	92	50.6	-21 40.2	208	40.3 ¹¹³	+14 15.3	64	45	19 28	20 04	20 51	23 13 33	8 43 61	
19	107	50.3	40.6	223	10.7 ¹¹⁴	08.9	64	50	48	31	21 30	24 31	30 64	
20	122	50.1	41.0	237	41.2 ¹¹⁵	+14 02.3	66	52	19 58	44	21 52	29 30	24 65	
21	137	49.9	41.4	252	11.7 ¹¹⁵	+13 55.7	66	54	20 09	20 59	22 21	35 28	17 66	
22	152	49.7	41.8	266	42.3 ¹¹⁶	49.0	67	56	21	21 18	23 17	42 26	09 68	
23	167	49.4	42.2	281	13.0 ¹¹⁷	42.3	67	58	36	21 41	** **	49 24	8 01 70	
24	182	49.2	-21 42.6	295	43.7 ¹¹⁷	+13 35.5	68	60 S	20 53	22 13	** **	23 57 23	7 51 72	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 22 ^m 6		Mag: -4.2 PMG: 8 ^h 58 ^m		Mag: +1.5 PMG: 8 ^h 05 ^m		Mag: -2.0 PMG: 6 ^h 53 ^m		Mag: +0.4 PMG: 11 ^h 48 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	68	33.0	225	34.0	-7 18.9	238	37.0	-2 41.5	256	28.4	+4 37.0	182	36.8	-19 56.0
1	83	35.5	240	33.8	19.9	253	38.1	42.1	271	30.6	36.9	197	39.0	56.1
2	98	37.9	255	33.5	20.9	268	39.2	42.6	286	32.8	36.8	212	41.1	56.1
3	113	40.4	270	33.2	21.9	283	40.3	43.2	301	35.0	36.7	227	43.3	56.2
4	128	42.8	285	33.0	22.9	298	41.4	43.8	316	37.2	36.6	242	45.4	56.2
5	143	45.3	300	32.7	-7 23.9	313	42.5	-2 44.3	331	39.4	+4 36.5	257	47.6	-19 56.3
6	158	47.8	315	32.4	-7 24.9	328	43.7	-2 44.9	346	41.6	+4 36.4	272	49.8	-19 56.3
7	173	50.2	330	32.1	25.9	343	44.8	45.5	1	43.8	36.3	287	51.9	56.4
8	188	52.7	345	31.9	26.9	358	45.9	46.1	16	46.0	36.2	302	54.1	56.4
9	203	55.2	0	31.6	27.9	13	47.0	46.6	31	48.2	36.1	317	56.2	56.5
10	218	57.6	15	31.3	28.9	28	48.1	47.2	46	50.4	36.0	332	58.4	56.5
11	234	00.1	30	31.0	-7 29.9	43	49.2	-2 47.8	61	52.6	+4 35.8	348	00.5	-19 56.6
12	249	02.6	45	30.7	-7 30.9	58	50.3	-2 48.4	76	54.8	+4 35.7	3	02.7	-19 56.6
13	264	05.0	60	30.5	31.9	73	51.4	48.9	91	57.0	35.6	18	04.8	56.7
14	279	07.5	75	30.2	32.9	88	52.5	49.5	106	59.2	35.5	33	07.0	56.7
15	294	10.0	90	29.9	33.9	103	53.6	50.1	122	01.4	35.4	48	09.1	56.8
16	309	12.4	105	29.6	34.9	118	54.7	50.6	137	03.6	35.3	63	11.3	56.8
17	324	14.9	120	29.3	-7 35.9	133	55.8	-2 51.2	152	05.8	+4 35.2	78	13.4	-19 56.9
18	339	17.3	135	29.1	-7 36.9	148	56.9	-2 51.8	167	08.0	+4 35.1	93	15.6	-19 56.9
19	354	19.8	150	28.8	37.9	163	58.0	52.4	182	10.3	35.0	108	17.7	57.0
20	9	22.3	165	28.5	38.9	178	59.1	52.9	197	12.5	34.9	123	19.9	57.0
21	24	24.7	180	28.2	39.9	194	00.2	53.5	212	14.7	34.8	138	22.1	57.1
22	39	27.2	195	27.9	40.9	209	01.3	54.1	227	16.9	34.7	153	24.2	57.1
23	54	29.7	210	27.7	41.9	224	02.5	54.6	242	19.1	34.6	168	26.4	57.2
24	69	32.1	225	27.4	-7 42.9	239	03.6	-2 55.2	257	21.3	+4 34.5	183	28.5	-19 57.2
Dif	—		-3		-10	+11		-6	+22		-1	+22		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 48 ^m 9			Edad: 19 ^d 3 PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/4 PMG: 4 ^h 26 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	182	49.2	-21	42.6	295	43.7	+13	35.5	60 N	6 45	7 40	8 34	21 41	72	12 07	21		
1	197	49.0		43.0	310	14.6 ¹¹⁹		28.7 ⁶⁸	58	39	30	19	48	69	12 00	23		
2	212	48.7		43.4	324	45.4 ¹¹⁸		21.8 ⁶⁹	56	33	21	8 06	53	68	11 54	24		
3	227	48.5		43.8	339	16.4 ¹²⁰		14.8 ⁷⁰	54	28	13	7 55	21 58	66	48	26		
4	242	48.3		44.2	353	47.4 ¹²⁰		07.8 ⁷⁰	52	23	7 05	45	22 03	64	43	28		
5	257	48.1	-21	44.6	8	18.5 ¹²¹	+13	00.7 ⁷¹	50	6 18	6 59	7 36	22 07	63	11 39	28		
6	272	47.8	-21	45.0	22	49.6 ¹²¹	+12	53.6 ⁷¹	45	6 08	6 44	7 17	22 16	60	11 29	31		
7	287	47.6		45.4	37	20.8 ¹²²		46.4 ⁷²	40	5 59	32	7 02	23 58		20	34		
8	302	47.4		45.8	51	52.1 ¹²³		39.2 ⁷²	35	50	21	6 49	30 55		13	36		
9	317	47.1		46.2	66	23.4 ¹²³		31.9 ⁷³	30	42	6 12	38	35 54		11 07	38		
10	332	46.9		46.6	80	54.8 ¹²⁴		24.6 ⁷³	20	27	5 55	18	45 50		10 56	41		
11	347	46.7	-21	46.9	95	26.3 ¹²⁵	+12	17.2 ⁷⁴	10 N	5 13	5 39	6 01	22 53	48	10 46	44		
12	2	46.4	-21	47.3	109	57.8 ¹²⁵	+12	09.8 ⁷⁴	0	4 57	5 23	5 45	23 01	45	10 37	46		
13	17	46.2		47.7	124	29.4 ¹²⁶	+12	02.3 ⁷⁵	10 S	40	5 06	29	09 42		28	48		
14	32	46.0		48.1	139	01.1 ¹²⁷	+11	54.8 ⁷⁵	20	4 19	4 47	5 12	18 39		18	51		
15	47	45.7		48.5	153	32.8 ¹²⁷		47.2 ⁷⁶	30	3 52	24	4 51	27 36		07	54		
16	62	45.5		48.9	168	04.6 ¹²⁸		39.5 ⁷⁷	35	35	4 10	39	33 34		10 00	56		
17	77	45.3	-21	49.3	182	36.4 ¹²⁸	+11	31.9 ⁷⁷	40	3 14	3 54	4 26	23 39	32	9 53	58		
18	92	45.0	-21	49.7	197	08.3 ¹²⁹	+11	24.2 ⁷⁷	45	2 46	3 33	4 09	23 46	30	9 44	61		
19	107	44.8		50.0	211	40.2 ¹²⁹		16.4 ⁷⁸	50	2 07	3 07	3 49	55 27		34	63		
20	122	44.6		50.4	226	12.2 ¹³⁰		08.6 ⁷⁸	52	1 45	2 53	39	23 59	26	29	65		
21	137	44.3		50.8	240	44.3 ¹³¹	+11	00.7 ⁷⁹	54	1 16	38	28	** ** *	**	23	67		
22	152	44.1		51.2	255	16.4 ¹³¹	+10	52.8 ⁷⁹	56	0 20	2 19	16	** ** *	**	17	68		
23	167	43.9		51.6	269	48.6 ¹³²		44.9 ⁷⁹	58	** ** *	1 56	3 01	** ** *	**	11	70		
24	182	43.6	-21	52.0	284	20.9 ¹³³	+10	36.9 ⁸⁰	60 S	** ** *	1 24	2 44	** ** *	**	9 03	72		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 18 ^m 7			Mag: -4.2 PMG: 8 ^h 58 ^m			Mag: +1.5 PMG: 8 ^h 03 ^m			Mag: -2.0 PMG: 6 ^h 50 ^m			Mag: +0.4 PMG: 11 ^h 44 ^m					
h	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
0	69	32.1	225 27.4	-7	42.9		239	03.6	-2 55.2	257	21.3	+4 34.5	183	28.5	-19 57.2			
1	84	34.6	240 27.1		43.9		254	04.7	55.8	272	23.5	34.4	198	30.7	57.3			
2	99	37.1	255 26.8		44.9		269	05.8	56.4	287	25.7	34.3	213	32.8	57.3			
3	114	39.5	270 26.5		45.9		284	06.9	56.9	302	27.9	34.2	228	35.0	57.4			
4	129	42.0	285 26.2		46.9		299	08.0	57.5	317	30.1	34.1	243	37.1	57.4			
5	144	44.5	300 26.0	-7	47.9		314	09.1	-2 58.1	332	32.3	+4 34.0	258	39.3	-19 57.5			
6	159	46.9	315 25.7	-7	48.9		329	10.2	-2 58.6	347	34.5	+4 33.9	273	41.4	-19 57.5			
7	174	49.4	330 25.4		49.9		344	11.3	59.2	2	36.7	33.8	288	43.6	57.6			
8	189	51.8	345 25.1		50.9		359	12.4	-2 59.8	17	38.9	33.7	303	45.7	57.6			
9	204	54.3	0 24.8		51.9		14	13.5	-3 00.3	32	41.1	33.6	318	47.9	57.7			
10	219	56.8	15 24.5		52.9		29	14.6	00.9	47	43.3	33.5	333	50.0	57.7			
11	234	59.2	30 24.2	-7	53.9		44	15.7	-3 01.5	62	45.5	+4 33.4	348	52.2	-19 57.8			
12	250	01.7	45 23.9	-7	54.9		59	16.8	-3 02.1	77	47.7	+4 33.3	3	54.4	-19 57.8			
13	265	04.2	60 23.7		55.9		74	17.9	02.6	92	49.9	33.2	18	56.5	57.9			
14	280	06.6	75 23.4		56.9		89	19.1	03.2	107	52.1	33.1	33	58.7	57.9			
15	295	09.1	90 23.1		57.9		104	20.2	03.8	122	54.4	33.0	49	00.8	58.0			
16	310	11.6	105 22.8		58.9		119	21.3	04.3	137	56.6	32.9	64	03.0	58.0			
17	325	14.0	120 22.5	-7	59.9		134	22.4	-3 04.9	152	58.8	+4 32.8	79	05.1	-19 58.1			
18	340	16.5	135 22.2	-8	00.9		149	23.5	-3 05.5	168	01.0	+4 32.7	94	07.3	-19 58.1			
19	355	18.9	150 21.9		01.9		164	24.6	06.0	183	03.2	32.6	109	09.4	58.2			
20	10	21.4	165 21.6		02.9		179	25.7	06.6	198	05.4	32.5	124	11.6	58.2			
21	25	23.9	180 21.3		03.9		194	26.8	07.2	213	07.6	32.5	139	13.7	58.3			
22	40	26.3	195 21.0		04.9		209	27.9	07.8	228	09.8	32.4	154	15.9	58.3			
23	55	28.8	210 20.8		05.9		224	29.0	08.3	243	12.0	32.3	169	18.0	58.4			
24	70	31.3	225 20.5	-8	06.9		239	30.1	-3 08.9	258	14.2	+4 32.2	184	20.2	-19 58.4			
Dif	—		-3	-10	+11		-6		+22		-1		+22					

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16°2 PMG: 11 ^h 49 ^m 3				Edad: 20 ^d 3 PHE { 4 ^h : 55°2 12 ^h : 55°0 20 ^h : 54°8 SD: 15°1 PMG: 5 ^h 12 ^m R°: 45 ^m														
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	182	43.6	-21	52.0	284	20.9	+10	36.9	60 N	15	02	15	56	16	51		22	53	71
1	197	43.4		52.3	298	53.1 ¹³²		28.9 ⁸⁰	58	17	16	07	16	58		22	57	68	
2	212	43.2		52.7	313	25.5 ¹³⁴		20.9 ⁸⁰	56	30		16	17	04		23	01	66	
3	227	42.9		53.1	327	57.9 ¹³⁴		12.8 ⁸¹	54	42	24	09				04	65	14	
4	242	42.7		53.5	342	30.4 ¹³⁵	+10	04.6 ⁸²	52	15	52	31	14			07	63	11	
5	257	42.5	-21	53.8	357	02.9 ¹³⁵	+9	56.5 ⁸¹	50	16	01	16	38	17	19	23	10	62	
6	272	42.2	-21	54.2	11	35.4 ¹³⁵	+9	48.3 ⁸²	45	16	20	16	53	17	30	23	16	58	
7	287	42.0		54.6	26	08.0 ¹³⁶		40.0 ⁸³	40	35	17	05		39		21	56		
8	302	41.7		55.0	40	40.7 ¹³⁷		31.8 ⁸²	35	16	48	16		47		25	54		
9	317	41.5		55.4	55	13.4 ¹³⁷		23.4 ⁸⁴	30	17	00	26	17	55		29	52		
10	332	41.3		55.7	69	46.2 ¹³⁸		15.1 ⁸³	20	19		43	18	10		35	49		
11	347	41.0	-21	56.1	84	19.0 ¹³⁸	+9	06.7 ⁸⁴	10 N	17	37	17	59	18	25	23	41	46	
12	2	40.8	-21	56.5	98	51.8 ¹³⁸	+8	58.3 ⁸⁴	0	17	53	18	15	18	41	23	46	43	
13	17	40.6		56.8	113	24.7 ¹³⁹		49.9 ⁸⁴	10 S	18	09	32	18	59		51	41		
14	32	40.3		57.2	127	57.7 ¹⁴⁰		41.4 ⁸⁵	20	27	18	51	19	20		23	57	38	
15	47	40.1		57.6	142	30.7 ¹⁴⁰		32.9 ⁸⁵	30	18	48	19	15	19	47	***	***	***	
16	62	39.8		58.0	157	03.7 ¹⁴⁰		24.3 ⁸⁶	35	19	00	29	20	05		***	***	***	
17	77	39.6	-21	58.3	171	36.8 ¹⁴¹	+8	15.8 ⁸⁵	40	19	14	19	46	20	26	***	***	***	
18	92	39.4	-21	58.7	186	10.0 ¹⁴²	+8	07.2 ⁸⁶	45	19	30	20	07	20	54	***	***	***	
19	107	39.1		59.1	200	43.1 ¹⁴¹	+7	58.6 ⁸⁶	50	19	51	34	21	34		***	***	***	
20	122	38.9		59.4	215	16.4 ¹⁴³		49.9 ⁸⁷	52	20	01	20	47	21	57	***	***	***	
21	137	38.6	-21	59.8	229	49.6 ¹⁴²		41.2 ⁸⁷	54	12	21	03	22	28		0	03	24	
22	152	38.4	-22	00.2	244	22.9 ¹⁴³		32.5 ⁸⁷	56	25		22	***	***		08	23		
23	167	38.2		00.5	258	56.3 ¹⁴⁴		23.8 ⁸⁷	58	40	21	46	***	***		13	21		
24	182	37.9	-22	00.9	273	29.6 ¹⁴³	+7	15.0 ⁸⁸	60 S	20	57	22	20	***	***	0	20	18	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 14 ^m 8		Mag: -4.2 PMG: 8 ^h 59 ^m			Mag: +1.5 PMG: 8 ^h 01 ^m			Mag: -2.0 PMG: 6 ^h 46 ^m			Mag: +0.4 PMG: 11 ^h 41 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	70	31.3	225	20.5	-8	06.9	239	30.1	-3	08.9	258	14.2	+4	32.2					
1	85	33.7	240	20.2		07.9	254	31.2		09.5	273	16.4		32.1					
2	100	36.2	255	19.9		08.9	269	32.3		10.0	288	18.6		32.0					
3	115	38.7	270	19.6		09.9	284	33.4		10.6	303	20.9		31.9					
4	130	41.1	285	19.3		10.9	299	34.6		11.2	318	23.1		31.8					
5	145	43.6	300	19.0	-8	11.9	314	35.7	-3	11.7	333	25.3	+4	31.7					
6	160	46.1	315	18.7	-8	12.9	329	36.8	-3	12.3	348	27.5	+4	31.6					
7	175	48.5	330	18.4		13.9	344	37.9		12.9	3	29.7		31.5					
8	190	51.0	345	18.1		14.9	359	39.0		13.4	18	31.9		31.4					
9	205	53.4	0	17.8		15.9	14	40.1		14.0	33	34.1		31.3					
10	220	55.9	15	17.5		16.9	29	41.2		14.6	48	36.3		31.2					
11	235	58.4	30	17.2	-8	17.9	44	42.3	-3	15.2	63	38.5	+4	31.1					
12	251	00.8	45	16.9	-8	18.9	59	43.4	-3	15.7	78	40.8	+4	31.0					
13	266	03.3	60	16.6		19.9	74	44.5		16.3	93	43.0		30.9					
14	281	05.8	75	16.3		20.9	89	45.6		16.9	108	45.2		30.8					
15	296	08.2	90	16.0		21.9	104	46.7		17.4	123	47.4		30.7					
16	311	10.7	105	15.7		22.9	119	47.8		18.0	138	49.6		30.6					
17	326	13.2	120	15.4	-8	23.9	134	49.0	-3	18.6	153	51.8	+4	30.5					
18	341	15.6	135	15.1	-8	24.9	149	50.1	-3	19.1	168	54.0	+4	30.4					
19	356	18.1	150	14.8		25.9	164	51.2		19.7	183	56.3		30.3					
20	11	20.6	165	14.5		26.9	179	52.3		20.3	198	58.5		30.2					
21	26	23.0	180	14.2		27.9	194	53.4		20.8	214	00.7		30.1					
22	41	25.5	195	13.9		28.9	209	54.5		21.4	229	02.9		30.0					
23	56	27.9	210	13.6		29.9	224	55.6		22.0	244	05.1		29.9					
24	71	30.4	225	13.3	-8	30.9	239	56.7	-3	22.5	259	07.3	+4	29.8					
Dif	—		-3			-10			+11			+22			-1				

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 49 ^m 7				Edad: 21 ^d 3 PHE { 4 ^h : 54'7 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 5 ^h 57 ^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	182	37.9	-22	00.9	273	29.6	+7	15.0	60 N	6	48	7	43	8	38	** ** *	12 45 16	
1	197	37.7		01.2	288	03.1 ¹⁴⁵	+7	06.3 ⁸⁷	58	42	33	23			** ** *	42 18		
2	212	37.4		01.6	302	36.5 ¹⁴⁴	+6	57.5 ⁸⁸	56	36	24	8	09			** ** *	40 19	
3	227	37.2		02.0	317	10.0 ¹⁴⁵		48.6 ⁸⁹	54	30	15	7	58			** ** *	37 22	
4	242	36.9		02.3	331	43.6 ¹⁴⁶		39.8 ⁸⁸	52	25	08	48				** ** *	35 23	
5	257	36.7	-22	02.7	346	17.1 ¹⁴⁵	+6	30.9 ⁸⁹	50	6	20	7	01	7	39	** ** *	12 33 24	
6	272	36.5	-22	03.0	0	50.7 ¹⁴⁶	+6	22.0 ⁸⁹	45	6	10	6	46	7	20	** ** *	12 29 27	
7	287	36.2		03.4	15	24.4 ¹⁴⁷		13.1 ⁸⁹	40	6	00	34	7	04		** ** *	26 29	
8	302	36.0		03.8	29	58.0 ¹⁴⁶	+6	04.2 ⁸⁹	35	5	52	23	6	51		** ** *	23 31	
9	317	35.7		04.1	44	31.8 ¹⁴⁸	+5	55.2 ⁹⁰	30	44	6	13	39			** ** *	20 33	
10	332	35.5		04.5	59	05.5 ¹⁴⁷		46.2 ⁹⁰	20	29	5	56	20			** ** *	15 37	
11	347	35.2	-22	04.8	73	39.3 ¹⁴⁸	+5	37.2 ⁹⁰	10 N	5	14	5	40	6	02	** ** *	12 11 40	
12	2	35.0	-22	05.2	88	13.1 ¹⁴⁸	+5	28.2 ⁹⁰	0	4	58	5	24	5	46	** ** *	12 07 43	
13	17	34.7		05.5	102	46.9 ¹⁴⁸		19.2 ⁹⁰	10 S	40	5	07	30		** ** *	12 03 45		
14	32	34.5		05.9	117	20.8 ¹⁴⁹		10.1 ⁹¹	20	4	19	4	48	5	12	** ** *	11 59 48	
15	47	34.3		06.2	131	54.7 ¹⁴⁹	+5	01.1 ⁹⁰	30	3	51	24	4	51	0	03 35	54 52	
16	62	34.0		06.6	146	28.6 ¹⁴⁹	+4	52.0 ⁹¹	35	34	4	10	39		07 32	51 54		
17	77	33.8	-22	07.0	161	02.5 ¹⁴⁹	+4	42.9 ⁹¹	40	3	13	3	53	4	25	0	11 31	11 48 56
18	92	33.5	-22	07.3	175	36.5 ¹⁵⁰	+4	33.8 ⁹¹	45	2	45	3	32	4	08	0	16 28	11 44 58
19	107	33.3		07.7	190	10.5 ¹⁵⁰		24.7 ⁹¹	50	2	05	3	05	3	48	22 25	39 32	
20	122	33.0		08.0	204	44.5 ¹⁵⁰		15.5 ⁹²	52	1	42	2	51	38		25 23	37 63	
21	137	32.8		08.3	219	18.6 ¹⁵¹	+4	06.4 ⁹¹	54	1	10	36	27		27 22	35 65		
22	152	32.5		08.7	233	52.6 ¹⁵⁰	+3	57.2 ⁹²	56	** ** *	2	16	3	14		31 20	33 66	
23	167	32.3		09.0	248	26.7 ¹⁵¹		48.0 ⁹²	58	** ** *	1	52	2	59		34 19	30 68	
24	182	32.0	-22	09.4	263	00.8 ¹⁵¹	+3	38.8 ⁹²	60 S	** ** *	1	18	2	41	0	38 17	11 27 70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 10 ^m 8		Mag: -4.2 PMG: 8 ^h 59 ^m		Mag: +1.5 PMG: 8 ^h 00 ^m		Mag: -2.0 PMG: 6 ^h 43 ^m		Mag: +0.4 PMG: 11 ^h 38 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	71	30.4	225	13.3	-8	30.9	239	07.3	+4	29.8
1	86	32.9	240	13.0		31.9	254	09.5		29.7
2	101	35.3	255	12.7		32.9	269	11.8		29.6
3	116	37.8	270	12.4		33.9	285	14.0		29.6
4	131	40.3	285	12.1		34.9	300	16.2		29.5
5	146	42.7	300	11.8	-8	35.9	315	18.4	+4	29.4
6	161	45.2	315	11.4	-8	36.8	330	20.6	+4	29.3
7	176	47.7	330	11.1		37.8	345	22.8		29.2
8	191	50.1	345	10.8		38.8	0	25.1		29.1
9	206	52.6	0	10.5		39.8	15	27.3		29.0
10	221	55.0	15	10.2		40.8	30	29.5		28.9
11	236	57.5	30	09.9	-8	41.8	45	31.7	+4	28.8
12	252	00.0	45	09.6	-8	42.8	60	33.9	+4	28.7
13	267	02.4	60	09.3		43.8	75	36.1		28.6
14	282	04.9	75	09.0		44.8	90	38.4		28.5
15	297	07.4	90	08.7		45.8	105	40.6		28.4
16	312	09.8	105	08.4		46.8	120	42.8		28.3
17	327	12.3	120	08.0	-8	47.8	135	45.0	+4	28.2
18	342	14.8	135	07.7	-8	48.8	150	47.2	+4	28.1
19	357	17.2	150	07.4		49.8	165	49.5		28.0
20	12	19.7	165	07.1		50.8	180	51.7		28.0
21	27	22.2	180	06.8		51.8	195	53.9		27.9
22	42	24.6	195	06.5		52.8	210	56.1		27.8
23	57	27.1	210	06.2		53.7	225	58.3		27.7
24	72	29.5	225	05.9	-8	54.7	240	00.6	+4	27.6
Dif	—		-3		-10		+11		-6	
							+22		-1	
									+22	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 22 ^d 3	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2										
	PMG: 11 ^h 50 ^m 1					SD: 14'8			PMG: 6 ^h 39 ^m	Rº: 43 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	182	32.0	-22 09.4	263	00.8	+3 38.8	92	60 N	15 00	15 55	16 50	0 04	70	13 01	15
1	197	31.8	09.7	277	35.0 ¹⁵²	29.6	92	58	15	16 05	16 57	05 68	13 00	17	
2	212	31.5	10.1	292	09.1 ¹⁵¹	20.4	92	56	29	15	17 03	07 66	12 59	20	
3	227	31.3	10.4	306	43.3 ¹⁵²	11.2	92	54	40	23	08	09 64	59 20		
4	242	31.0	10.8	321	17.5 ¹⁵²	+3 02.0	92	52	15 51	31	14	10 63	58 22		
5	257	30.8	-22 11.1	335	51.7 ¹⁵²	+2 52.7	93	50	16 00	16 37	17 18	0 12	61	12 57	24
6	272	30.5	-22 11.4	350	25.9 ¹⁵²	+2 43.5	92	45	16 19	16 52	17 29	0 14	59	12 56	27
7	287	30.3	11.8	5	00.2 ¹⁵³	34.2	93	40	35	17 05	39	17 55	55 29		
8	302	30.0	12.1	19	34.4 ¹⁵²	25.0	92	35	16 48	16	47	19 53	54 32		
9	317	29.8	12.5	34	08.7 ¹⁵³	15.7	93	30	17 00	26	17 55	21 51	53 34		
10	332	29.5	12.8	48	43.0 ¹⁵³	+2 06.4	93	20	20	17 44	18 11	24 48	52 37		
11	347	29.3	-22 13.1	63	17.3 ¹⁵³	+1 57.1	93	10 N	17 37	18 00	18 26	0 27	45	12 51	39
12	2	29.0	-22 13.5	77	51.6 ¹⁵³	+1 47.9	92	0	17 54	18 16	18 42	0 29	42	12 50	42
13	17	28.8	13.8	92	25.9 ¹⁵³	38.6	93	10 S	18 10	33	19 00	32 39	48 45		
14	32	28.5	14.2	107	00.3 ¹⁵⁴	29.3	93	20	28	18 53	22	35 36	47 48		
15	47	28.3	14.5	121	34.6 ¹⁵³	20.0	93	30	18 49	19 16	19 49	38 33	46 51		
16	62	28.0	14.8	136	09.0 ¹⁵⁴	10.7	93	35	19 01	31	20 07	39 32	45 53		
17	77	27.8	-22 15.2	150	43.4 ¹⁵⁴	+1 01.3	94	40	19 16	19 48	20 28	0 42	29	12 44	55
18	92	27.5	-22 15.5	165	17.7 ¹⁵³	+0 52.0	93	45	19 32	20 09	20 57	0 44	27	12 42	59
19	107	27.3	15.8	179	52.1 ¹⁵⁴	42.7	93	50	19 54	37	21 38	47 23	41 61		
20	122	27.0	16.2	194	26.5 ¹⁵⁴	33.4	93	52	20 04	20 50	22 01	48 22	40 63		
21	137	26.8	16.5	209	00.9 ¹⁵⁴	24.1	93	54	15	21 07	22 35	49 21	40 64		
22	152	26.5	16.8	223	35.3 ¹⁵⁴	14.8	93	56	28	26	** **	51 19	39 66		
23	167	26.3	17.1	238	09.7 ¹⁵⁴	+0 05.5	93	58	20 43	21 52	** **	53 17	38 68		
24	182	26.0	-22 17.5	252	44.1 ¹⁵⁴	-0 03.9	94	60 S	21 01	22 28	** **	0 55	15	12 37	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 06 ^m 9		Mag: -4.2 PMG: 9 ^h 00 ^m		Mag: +1.5 PMG: 7 ^h 58 ^m		Mag: -2.0 PMG: 6 ^h 39 ^m		Mag: +0.5 PMG: 11 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	72	29.5	225 05.9	-8 54.7	240 23.3	-3 36.1	260 00.6	+4 27.6	186 03.5	-20 00.8
1	87	32.0	240 05.5	55.7	255 24.4	36.7	275 02.8	27.5	201 05.7	00.8
2	102	34.5	255 05.2	56.7	270 25.6	37.3	290 05.0	27.4	216 07.9	00.9
3	117	36.9	270 04.9	57.7	285 26.7	37.8	305 07.2	27.3	231 10.0	00.9
4	132	39.4	285 04.6	58.7	300 27.8	38.4	320 09.4	27.2	246 12.2	01.0
5	147	41.9	300 04.3	-8 59.7	315 28.9	-3 39.0	335 11.7	+4 27.1	261 14.3	-20 01.0
6	162	44.3	315 04.0	-9 00.7	330 30.0	-3 39.5	350 13.9	+4 27.0	276 16.5	-20 01.1
7	177	46.8	330 03.6	01.7	345 31.1	40.1	5 16.1	26.9	291 18.6	01.1
8	192	49.3	345 03.3	02.7	0 32.2	40.7	20 18.3	26.8	306 20.8	01.2
9	207	51.7	0 03.0	03.7	15 33.3	41.2	35 20.6	26.7	321 22.9	01.2
10	222	54.2	15 02.7	04.7	30 34.4	41.8	50 22.8	26.7	336 25.1	01.3
11	237	56.7	30 02.4	-9 05.7	45 35.5	-3 42.4	65 25.0	+4 26.6	351 27.2	-20 01.3
12	252	59.1	45 02.0	-9 06.6	60 36.7	-3 42.9	80 27.2	+4 26.5	6 29.4	-20 01.4
13	268	01.6	60 01.7	07.6	75 37.8	43.5	95 29.5	26.4	21 31.5	01.4
14	283	04.0	75 01.4	08.6	90 38.9	44.1	110 31.7	26.3	36 33.7	01.5
15	298	06.5	90 01.1	09.6	105 40.0	44.6	125 33.9	26.2	51 35.8	01.5
16	313	09.0	105 00.8	10.6	120 41.1	45.2	140 36.1	26.1	66 38.0	01.5
17	328	11.4	120 00.4	-9 11.6	135 42.2	-3 45.7	155 38.4	+4 26.0	81 40.2	-20 01.6
18	343	13.9	135 00.1	-9 12.6	150 43.3	-3 46.3	170 40.6	+4 25.9	96 42.3	-20 01.6
19	358	16.4	149 59.8	13.6	165 44.4	46.9	185 42.8	25.8	111 44.5	01.7
20	13	18.8	164 59.5	14.6	180 45.5	47.4	200 45.0	25.7	126 46.6	01.7
21	28	21.3	179 59.1	15.6	195 46.6	48.0	215 47.3	25.7	141 48.8	01.8
22	43	23.8	194 58.8	16.5	210 47.8	48.6	230 49.5	25.6	156 50.9	01.8
23	58	26.2	209 58.5	17.5	225 48.9	49.1	245 51.7	25.5	171 53.1	01.9
24	73	28.7	224 58.2	-9 18.5	240 50.0	-3 49.7	260 53.9	+4 25.4	186 55.2	-20 01.9
Dif	—		-3	-10	+11	-6	+22	-1	+22	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16/2 PMG: 11 ^h 50 ^m 5			Edad: 23 ^d 3 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 SD: 14/8 PMG: 7 ^h 22 ^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	182	26.0	-22	17.5	252	44.1	-0 03.9	60 N	6 51	7 47	8 42	1 14	70	13 16	16				
1	197	25.7		17.8	267	18.5 ¹⁵⁴	13.2 ⁹³	58	44	36	26	13	68	17	18				
2	212	25.5		18.1	281	52.9 ¹⁵⁴	22.5 ⁹³	56	38	26	12	13	66	19	19				
3	227	25.2		18.4	296	27.3 ¹⁵⁴	31.8 ⁹³	54	33	18	8 01	13	64	19	22				
4	242	25.0		18.8	311	01.8 ¹⁵⁵	41.1 ⁹³	52	27	10	7 50	13	63	20	23				
5	257	24.7	-22	19.1	325	36.2 ¹⁵⁴	-0 50.4 ⁹³	50	6 23	7 04	7 41	1 13	61	13 21	24				
6	272	24.5	-22	19.4	340	10.6 ¹⁵⁴	-0 59.7 ⁹³	45	6 12	6 49	7 22	1 13	58	13 23	27				
7	287	24.2		19.7	354	45.0 ¹⁵⁴	-1 09.0 ⁹³	40	6 02	36	7 06	12	56	24	30				
8	302	24.0		20.1	9	19.4 ¹⁵⁴	18.3 ⁹³	35	5 53	25	6 53	12	54	26	31				
9	317	23.7		20.4	23	53.8 ¹⁵⁴	27.6 ⁹³	30	45	6 15	41	12	51	27	33				
10	332	23.4		20.7	38	28.2 ¹⁵⁴	36.9 ⁹³	20	30	5 57	21	12	48	29	36				
11	347	23.2	-22	21.0	53	02.6 ¹⁵⁴	-1 46.2 ⁹³	10 N	5 14	5 41	6 03	1 12	45	13 30	40				
12	2	22.9	-22	21.3	67	37.0 ¹⁵⁴	-1 55.4 ⁹²	0	4 58	5 24	5 47	1 11	43	13 32	42				
13	17	22.7		21.7	82	11.4 ¹⁵⁴	-2 04.7 ⁹²	10 S	40	5 07	30	11	40	33	46				
14	32	22.4		22.0	96	45.8 ¹⁵⁴	13.9 ⁹²	20	4 19	4 48	5 12	11	37	35	48				
15	47	22.1		22.3	111	20.1 ¹⁵³	23.2 ⁹³	30	3 51	24	4 51	11	33	37	51				
16	62	21.9		22.6	125	54.5 ¹⁵⁴	32.4 ⁹²	35	34	4 10	39	11	31	38	53				
17	77	21.6	-22	22.9	140	28.9 ¹⁵⁴	-2 41.7 ⁹³	40	3 12	3 52	4 25	1 11	29	13 39	56				
18	92	21.4	-22	23.2	155	03.2 ¹⁵³	-2 50.9 ⁹²	45	2 43	3 31	4 08	1 11	26	13 41	58				
19	107	21.1		23.6	169	37.5 ¹⁵³	-3 00.1 ⁹²	50	2 02	3 04	3 47	10	24	42	62				
20	122	20.9		23.9	184	11.9 ¹⁵⁴	09.3 ⁹²	52	1 39	2 50	37	10	23	43	63				
21	137	20.6		24.2	198	46.2 ¹⁵³	18.5 ⁹²	54	1 05	34	25	10	21	44	64				
22	152	20.3		24.5	213	20.5 ¹⁵³	27.6 ⁹¹	56	** **	2 14	3 12	10	20	45	66				
23	167	20.1		24.8	227	54.8 ¹⁵³	36.8 ⁹²	58	** **	1 49	2 57	10	18	46	68				
24	182	19.8	-22	25.1	242	29.0 ¹⁵²	-3 45.9 ⁹¹	60 S	** **	1 13	2 39	1 10	16	13 47	70				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 19 ^h 03 ^m 0			Mag: -4.2 PMG: 9 ^h 00 ^m			Mag: +1.5 PMG: 7 ^h 56 ^m			Mag: -2.0 PMG: 6 ^h 35 ^m			Mag: +0.5 PMG: 11 ^h 31 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°				
0	73	28.7	224	58.2	-9	18.5	240	50.0	-3	49.7	260	53.9	+4	25.4	186	55.2	-20	01.9	
1	88	31.1	239	57.8		19.5	255	51.1		50.3	275	56.2		25.3	201	57.4		02.0	
2	103	33.6	254	57.5		20.5	270	52.2		50.8	290	58.4		25.2	216	59.5		02.0	
3	118	36.1	269	57.2		21.5	285	53.3		51.4	306	00.6		25.1	232	01.7		02.1	
4	133	38.5	284	56.9		22.5	300	54.4		51.9	321	02.8		25.0	247	03.8		02.1	
5	148	41.0	299	56.5	-9	23.5	315	55.5	-3	52.5	336	05.1	+4	24.9	262	06.0	-20	02.2	
6	163	43.5	314	56.2	-9	24.5	330	56.6	-3	53.1	351	07.3	+4	24.8	277	08.1	-20	02.2	
7	178	45.9	329	55.9		25.4	345	57.8		53.6	6	09.5		24.7	292	10.3		02.3	
8	193	48.4	344	55.5		26.4	0	58.9		54.2	21	11.8		24.7	307	12.5		02.3	
9	208	50.9	359	55.2		27.4	16	00.0		54.8	36	14.0		24.6	322	14.6		02.4	
10	223	53.3	14	54.9		28.4	31	01.1		55.3	51	16.2		24.5	337	16.8		02.4	
11	238	55.8	29	54.6	-9	29.4	46	02.2	-3	55.9	66	18.4	+4	24.4	352	18.9	-20	02.5	
12	253	58.3	44	54.2	-9	30.4	61	03.3	-3	56.5	81	20.7	+4	24.3	7	21.1	-20	02.5	
13	269	00.7	59	53.9		31.4	76	04.4		57.0	96	22.9		24.2	22	23.2		02.6	
14	284	03.2	74	53.6		32.3	91	05.5		57.6	111	25.1		24.1	37	25.4		02.6	
15	299	05.6	89	53.2		33.3	106	06.6		58.1	126	27.4		24.0	52	27.5		02.7	
16	314	08.1	104	52.9		34.3	121	07.8		58.7	141	29.6		23.9	67	29.7		02.7	
17	329	10.6	119	52.6	-9	35.3	136	08.9	-3	59.3	156	31.8	+4	23.9	82	31.8	-20	02.8	
18	344	13.0	134	52.2	-9	36.3	151	10.0	-3	59.8	171	34.1	+4	23.8	97	34.0	-20	02.8	
19	359	15.5	149	51.9		37.3	166	11.1	-4	00.4	186	36.3		23.7	112	36.1		02.9	
20	14	18.0	164	51.6		38.3	181	12.2		01.0	201	38.5		23.6	127	38.3		02.9	
21	29	20.4	179	51.2		39.2	196	13.3		01.5	216	40.7		23.5	142	40.4		02.9	
22	44	22.9	194	50.9		40.2	211	14.4		02.1	231	43.0		23.4	157	42.6		03.0	
23	59	25.4	209	50.5		41.2	226	15.5		02.6	246	45.2		23.3	172	44.8		03.0	
24	74	27.8	224	50.2	-9	42.2	241	16.6	-4	03.2	261	47.4	+4	23.2	187	46.9	-20	03.1	
Dif	—		-3	-10			+11	-6			+22	-1			+22				

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: 24 ^d 3 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 SD: 14:8 PMG: 8 ^h 04 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	182	19.8	-22	25.1	242	29.0	-3	45.9	60 N	14 58	15 53	16 49	2 24	70	13 32	17		
1	197	19.6		25.4	257	03.3 ¹⁵³	-3	55.1 ⁹²	58	15 14	16 04	16 56	21	68	35	20		
2	212	19.3		25.7	271	37.5 ¹⁵²	-4	04.2 ⁹¹	56	27	14	17 02	19	66	38	21		
3	227	19.0		26.0	286	11.7 ¹⁵²		13.3 ⁹¹	54	39	22	08	17	65	41	22		
4	242	18.8		26.3	300	46.0 ¹⁵³		22.4 ⁹¹	52	50	30	13	16	63	43	24		
5	257	18.5	-22	26.7	315	20.1 ¹⁵¹	-4	31.5 ⁹¹	50	15 59	16 37	17 18	2 14	62	13 45	26		
6	272	18.2	-22	27.0	329	54.3 ¹⁵²	-4	40.5 ⁹⁰	45	16 19	16 52	17 29	2 11	58	13 50	28		
7	287	18.0		27.3	344	28.5 ¹⁵²		49.6 ⁹¹	40	35	17 05	39	08	56	54	31		
8	302	17.7		27.6	359	02.6 ¹⁵¹	-4	58.6 ⁹¹	35	16 48	16	47	06	53	13 57	33		
9	317	17.5		27.9	13	36.7 ¹⁵¹	-5	07.6 ⁹⁰	30	17 00	26	17 56	03	52	14 00	35		
10	332	17.2		28.2	28	10.8 ¹⁵¹		16.6 ⁹⁰	20	20	17 44	18 11	2 00	48	05	38		
11	347	16.9	-22	28.5	42	44.9 ¹⁵¹	-5	25.6 ⁹⁰	10 N	17 38	18 01	18 27	1 57	45	14 10	41		
12	2	16.7	-22	28.8	57	18.9 ¹⁵⁰	-5	34.5 ⁸⁹	0	17 55	18 17	18 43	1 54	43	14 14	44		
13	17	16.4		29.1	71	53.0 ¹⁵¹		43.5 ⁹⁰	10 S	18 11	34	19 01	51	40	19	46		
14	32	16.1		29.4	86	27.0 ¹⁵⁰	-5	52.4 ⁸⁹	20	30	18 54	23	48	37	23	49		
15	47	15.9		29.7	101	01.0 ¹⁵⁰	-6	01.3 ⁸⁹	30	18 51	19 18	19 51	44	34	28	52		
16	62	15.6		30.0	115	34.9 ¹⁴⁹		10.2 ⁸⁹	35	19 03	32	20 09	42	32	31	54		
17	77	15.4	-22	30.3	130	08.8 ¹⁴⁹	-6	19.0 ⁸⁸	40	19 17	19 50	20 31	1 40	30	14 35	56		
18	92	15.1	-22	30.6	144	42.7 ¹⁴⁹	-6	27.8 ⁸⁸	45	19 35	20 11	21 00	1 37	28	14 39	58		
19	107	14.8		30.9	159	16.6 ¹⁴⁹		36.6 ⁸⁸	50	19 56	39	21 42	34	25	44	61		
20	122	14.6		31.2	173	50.5 ¹⁴⁹		45.4 ⁸⁸	52	20 06	20 53	22 06	33	23	46	63		
21	137	14.3		31.4	188	24.3 ¹⁴⁸	-6	54.2 ⁸⁸	54	18	21 10	22 41	31	22	48	65		
22	152	14.0		31.7	202	58.1 ¹⁴⁸	-7	02.9 ⁸⁷	56	31	30	** **	30	20	51	66		
23	167	13.8		32.0	217	31.9 ¹⁴⁸		11.6 ⁸⁷	58	20 47	21 56	** **	28	18	54	68		
24	182	13.5	-22	32.3	232	05.6 ¹⁴⁷	-7	20.3 ⁸⁷	60 S	21 05	22 35	** **	1 26	16	14 57	71		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 59 ^m 0		Mag: -4.2 PMG: 9 ^h 01 ^m				Mag: +1.5 PMG: 7 ^h 54 ^m				Mag: -2.0 PMG: 6 ^h 32 ^m				Mag: +0.5 PMG: 11 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	74	27.8	224	50.2	-9	42.2	241	16.6	-4	03.2	261	47.4	+4	23.2	187	46.9	-20	03.1
1	89	30.3	239	49.9		43.2	256	17.8		03.8	276	49.7		23.2	202	49.1		03.1
2	104	32.8	254	49.5		44.2	271	18.9		04.3	291	51.9		23.1	217	51.2		03.2
3	119	35.2	269	49.2		45.2	286	20.0		04.9	306	54.1		23.0	232	53.4		03.2
4	134	37.7	284	48.9		46.1	301	21.1		05.4	321	56.4		22.9	247	55.5		03.3
5	149	40.1	299	48.5	-9	47.1	316	22.2	-4	06.0	336	58.6	+4	22.8	262	57.7	-20	03.3
6	164	42.6	314	48.2	-9	48.1	331	23.3	-4	06.6	352	00.8	+4	22.7	277	59.8	-20	03.4
7	179	45.1	329	47.8		49.1	346	24.4		07.1	7	03.1		22.6	293	02.0		03.4
8	194	47.5	344	47.5		50.1	1	25.5		07.7	22	05.3		22.5	308	04.1		03.5
9	209	50.0	359	47.2		51.1	16	26.7		08.3	37	07.6		22.5	323	06.3		03.5
10	224	52.5	14	46.8		52.0	31	27.8		08.8	52	09.8		22.4	338	08.4		03.6
11	239	54.9	29	46.5	-9	53.0	46	28.9	-4	09.4	67	12.0	+4	22.3	353	10.6	-20	03.6
12	254	57.4	44	46.1	-9	54.0	61	30.0	-4	09.9	82	14.3	+4	22.2	8	12.8	-20	03.7
13	269	59.9	59	45.8		55.0	76	31.1		10.5	97	16.5		22.1	23	14.9		03.7
14	285	02.3	74	45.4		56.0	91	32.2		11.1	112	18.7		22.0	38	17.1		03.8
15	300	04.8	89	45.1		56.9	106	33.3		11.6	127	21.0		21.9	53	19.2		03.8
16	315	07.2	104	44.8		57.9	121	34.4		12.2	142	23.2		21.9	68	21.4		03.9
17	330	09.7	119	44.4	-9	58.9	136	35.6	-4	12.7	157	25.4	+4	21.8	83	23.5	-20	03.9
18	345	12.2	134	44.1	-9	59.9	151	36.7	-4	13.3	172	27.7	+4	21.7	98	25.7	-20	04.0
19	0	14.6	149	43.7	-10	00.9	166	37.8		13.9	187	29.9		21.6	113	27.8		04.0
20	15	17.1	164	43.4		01.8	181	38.9		14.4	202	32.2		21.5	128	30.0		04.0
21	30	19.6	179	43.0		02.8	196	40.0		15.0	217	34.4		21.4	143	32.1		04.1
22	45	22.0	194	42.7		03.8	211	41.1		15.5	232	36.6		21.3	158	34.3		04.1
23	60	24.5	209	42.3		04.8	226	42.2		16.1	247	38.9		21.3	173	36.4		04.2
24	75	27.0	224	42.0	-10	05.8	241	43.4	-4	16.7	262	41.1	+4	21.2	188	38.6	-20	04.2
Dif	—		-3		-10		+11		-6		+22		-1		+22			

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: 25 ^d 3 PHE { SD: 14'8 PMG: 8 ^h 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	182	13.5	-22	32.3	232	05.6	-7	20.3	60 N	6 54	7 50	8 45	3 34	71	13 49	21	
1	197	13.2		32.6	246	39.3 ¹⁴⁷		28.9 ⁸⁶	58	47	39	29	29	69	55	22	
2	212	13.0		32.9	261	13.0 ¹⁴⁷		37.6 ⁸⁷	56	41	29	15	25	67	13 59	24	
3	227	12.7		33.2	275	46.6 ¹⁴⁶		46.2 ⁸⁶	54	35	20	8 03	22	65	14 04	25	
4	242	12.4		33.5	290	20.2 ¹⁴⁶	-7	54.7 ⁸⁵	52	30	13	7 53	19	63	07	28	
5	257	12.2	-22	33.8	304	53.8 ¹⁴⁶	-8	03.3 ⁸⁶	50	6 25	7 06	7 44	3 16	61	14 11	28	
6	272	11.9	-22	34.1	319	27.4 ¹⁴⁶	-8	11.8 ⁸⁵	45	6 14	6 50	7 24	3 09	59	14 18	32	
7	287	11.6		34.3	334	00.9 ¹⁴⁵		20.3 ⁸⁵	40	6 04	38	7 08	3 04	56	25	33	
8	302	11.4		34.6	348	34.4 ¹⁴⁵		28.7 ⁸⁴	35	5 55	26	6 54	2 59	55	30	36	
9	317	11.1		34.9	3	07.8 ¹⁴⁴	3	07.8 ⁸⁴	30	47	6 16	42	55	53	35	37	
10	332	10.8		35.2	17	41.2 ¹⁴⁴		45.5 ⁸⁴	20	31	5 58	22	48	50	43	41	
11	347	10.6	-22	35.5	32	14.6 ¹⁴⁴	-8	53.9 ⁸⁴	10 N	5 15	5 42	6 04	2 42	47	14 51	42	
12	2	10.3	-22	35.8	46	47.9 ¹⁴³	-9	02.2 ⁸³	0	4 59	5 25	5 48	2 37	44	14 58	45	
13	17	10.0		36.0	61	21.2 ¹⁴³		10.5 ⁸³	10 S	41	5 08	31	31	42	15 05	47	
14	32	09.7		36.3	75	54.5 ¹⁴³		18.7 ⁸²	20	4 19	4 48	5 13	25	39	12	50	
15	47	09.5		36.6	90	27.7 ¹⁴²		26.9 ⁸²	30	3 51	24	4 51	18	36	20	53	
16	62	09.2		36.9	105	00.9 ¹⁴²		35.1 ⁸²	35	33	4 10	39	14	35	25	55	
17	77	08.9	-22	37.2	119	34.0 ¹⁴¹	-9	43.3 ⁸²	40	3 11	3 52	4 25	2 10	32	15 31	57	
18	92	08.7	-22	37.4	134	07.1 ¹⁴¹	-9	51.4 ⁸¹	45	2 42	3 31	4 07	2 05	30	15 37	59	
19	107	08.4		37.7	148	40.2 ¹⁴¹	-9	59.4 ⁸⁰	50	2 00	3 03	3 46	1 59	27	45	62	
20	122	08.1		38.0	163	13.2 ¹⁴⁰	-10	07.5 ⁸¹	52	1 36	2 48	36	56	26	49	63	
21	137	07.9		38.3	177	46.2 ¹⁴⁰		15.5 ⁸⁰	54	1 01	32	24	53	24	53	64	
22	152	07.6		38.5	192	19.1 ¹³⁹		23.4 ⁷⁹	56	** **	2 12	3 11	50	22	15 57	66	
23	167	07.3		38.8	206	52.0 ¹³⁹		31.3 ⁷⁹	58	** **	1 46	2 55	46	21	16 02	68	
24	182	07.0	-22	39.1	221	24.9 ¹³⁹	-10	39.2 ⁷⁹	60 S	** **	1 07	2 37	1 42	19	16 08	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 55 ^m 1		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: +1.5 PMG: 7 ^h 53 ^m		Mag: -2.1 PMG: 6 ^h 28 ^m		Mag: +0.5 PMG: 11 ^h 24 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	75	27.0	224	42.0	-10	05.8	241	43.4	-4	16.7
1	90	29.4	239	41.6		06.7	256	44.5		17.2
2	105	31.9	254	41.3		07.7	271	45.6		17.8
3	120	34.4	269	40.9		08.7	286	46.7		18.3
4	135	36.8	284	40.6		09.7	301	47.8		18.9
5	150	39.3	299	40.2	-10	10.7	316	48.9	-4	19.5
6	165	41.7	314	39.9	-10	11.6	331	50.0	-4	20.0
7	180	44.2	329	39.5		12.6	346	51.1		20.6
8	195	46.7	344	39.2		13.6	1	52.3	21.1	22
9	210	49.1	359	38.8		14.6	16	53.4	21.7	38
10	225	51.6	14	38.5		15.5	31	54.5	22.3	53
11	240	54.1	29	38.1	-10	16.5	46	55.6	-4	22.8
12	255	56.5	44	37.8	-10	17.5	61	56.7	-4	23.4
13	270	59.0	59	37.4		18.5	76	57.8		23.9
14	286	01.5	74	37.1		19.4	91	58.9		24.5
15	301	03.9	89	36.7		20.4	107	00.1		25.0
16	316	06.4	104	36.4		21.4	122	01.2		25.6
17	331	08.9	119	36.0	-10	22.4	137	02.3	-4	26.2
18	346	11.3	134	35.7	-10	23.3	152	03.4	-4	26.7
19	1	13.8	149	35.3		24.3	167	04.5		27.3
20	16	16.2	164	34.9		25.3	182	05.6		27.8
21	31	18.7	179	34.6		26.3	197	06.7		28.4
22	46	21.2	194	34.2		27.2	212	07.9		29.0
23	61	23.6	209	33.9		28.2	227	09.0		29.5
24	76	26.1	224	33.5	-10	29.2	242	10.1	-4	30.1
Dif	—		-4		-10		+11		-6	
							+22		-1	
									+22	

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: 26 ^d 3 PHE { 4 ^h : 54/6 12 ^h : 54/8 20 ^h : 54/9 SD: 14/9 PMG: 9 ^h 32 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	182	07.0	-22	39.1	221	24.9	-10 39.2	60 N	14 56	15 52	16 48	4 45 70	14 10 24					
1	197	06.8		39.4	235	57.7 ¹³⁸	47.0 78	58	15 13	16 03	16 55	38 68	17 27					
2	212	06.5		39.6	250	30.5 ¹³⁸	-10 54.8 78	56	26	13	17 02	32 66	23 29					
3	227	06.2		39.9	265	03.2 ¹³⁷	-11 02.6 78	54	38	22	07	27 64	29 30					
4	242	06.0		40.2	279	35.9 ¹³⁷	10.3 77	52	49	29	13	22 63	35 31					
5	257	05.7	-22	40.4	294	08.5 ¹³⁶	-11 17.9 76	50	15 59	16 36	17 18	4 17 62	14 39 33					
6	272	05.4	-22	40.7	308	41.1 ¹³⁶	-11 25.5 76	45	16 18	16 52	17 29	4 08 59	14 50 35					
7	287	05.1		41.0	323	13.7 ¹³⁶	33.1 76	40	35	17 05	39	4 00 57	14 58 37					
8	302	04.9		41.3	337	46.2 ¹³⁵	40.6 75	35	16 48	16	48	3 54 55	15 06 38					
9	317	04.6		41.5	352	18.7 ¹³⁵	48.1 75	30	17 00	26	17 56	48 53	12 40					
10	332	04.3		41.8	6	51.1 ¹³⁴	-11 55.5 74	20	21	17 45	18 12	38 51	24 42					
11	347	04.0	-22	42.0	21	23.4 ¹³³	-12 02.9 74	10 N	17 39	18 01	18 28	3 29 48	15 33 45					
12	2	03.8	-22	42.3	35	55.8 ¹³⁴	-12 10.3 74	0	17 55	18 18	18 44	3 21 46	15 43 47					
13	17	03.5		42.6	50	28.0 ¹³²	17.5 72	10 S	18 12	35	19 02	13 43	15 52 49					
14	32	03.2		42.8	65	00.3 ¹³³	24.8 73	20	31	18 55	24	3 04 41	16 02 51					
15	47	02.9		43.1	79	32.4 ¹³¹	31.9 71	30	18 52	19 19	19 53	2 54 39	13 54					
16	62	02.7		43.4	94	04.6 ¹³²	39.1 72	35	19 05	34	20 11	49 37	20 55					
17	77	02.4	-22	43.6	108	36.6 ¹³⁰	-12 46.2 71	40	19 19	19 52	20 33	2 42 35	16 28 57					
18	92	02.1	-22	43.9	123	08.7 ¹³¹	-12 53.2 70	45	19 37	20 14	21 02	2 35 33	16 36 60					
19	107	01.8		44.1	137	40.6 ¹²⁹	-13 00.2 70	50	19 58	42	21 45	26 30	47 62					
20	122	01.6		44.4	152	12.6 ¹³⁰	07.1 69	52	20 09	20 56	22 10	22 29	52 63					
21	137	01.3		44.7	166	44.5 ¹²⁹	13.9 68	54	20	21 13	22 48	17 28	16 57 65					
22	152	01.0		44.9	181	16.3 ¹²⁸	20.7 68	56	34	21 34	** **	12 27	17 03 66					
23	167	00.7		45.2	195	48.1 ¹²⁸	27.5 68	58	20 50	22 01	** **	07 24	10 68					
24	182	00.5	-22	45.4	210	19.8 ¹²⁷	-13 34.2 67	60 S	21 09	22 41	** **	2 01 22	17 18 69					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 51 ^m 2		Mag: -4.2 PMG: 9 ^h 02 ^m			Mag: +1.5 PMG: 7 ^h 51 ^m			Mag: -2.1 PMG: 6 ^h 25 ^m			Mag: +0.5 PMG: 11 ^h 20 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	°	'	°	'	°	'					
0	76	26.1	224	33.5	-10	29.2	242	10.1	-4	30.1	263	34.9	+4	19.2	189	30.3	-20	05.4
1	91	28.6	239	33.1		30.2	257	11.2		30.6	278	37.1		19.1	204	32.4		05.4
2	106	31.0	254	32.8		31.1	272	12.3		31.2	293	39.4		19.0	219	34.6		05.5
3	121	33.5	269	32.4		32.1	287	13.4		31.7	308	41.6		18.9	234	36.8		05.5
4	136	36.0	284	32.1		33.1	302	14.5		32.3	323	43.9		18.8	249	38.9		05.6
5	151	38.4	299	31.7	-10	34.1	317	15.7	-4	32.9	338	46.1	+4	18.7	264	41.1	-20	05.6
6	166	40.9	314	31.3	-10	35.0	332	16.8	-4	33.4	353	48.4	+4	18.7	279	43.2	-20	05.7
7	181	43.3	329	31.0		36.0	347	17.9		34.0	8	50.6		18.6	294	45.4		05.7
8	196	45.8	344	30.6		37.0	2	19.0		34.5	23	52.9		18.5	309	47.5		05.8
9	211	48.3	359	30.3		37.9	17	20.1		35.1	38	55.1		18.4	324	49.7		05.8
10	226	50.7	14	29.9		38.9	32	21.2		35.6	53	57.4		18.3	339	51.8		05.8
11	241	53.2	29	29.5	-10	39.9	47	22.3	-4	36.2	68	59.6	+4	18.3	354	54.0	-20	05.9
12	256	55.7	44	29.2	-10	40.9	62	23.5	-4	36.8	84	01.9	+4	18.2	9	56.1	-20	05.9
13	271	58.1	59	28.8		41.8	77	24.6		37.3	99	04.1		18.1	24	58.3		06.0
14	287	00.6	74	28.4		42.8	92	25.7		37.9	114	06.4		18.0	40	00.4		06.0
15	302	03.1	89	28.1		43.8	107	26.8		38.4	129	08.6		17.9	55	02.6		06.1
16	317	05.5	104	27.7		44.7	122	27.9		39.0	144	10.9		17.8	70	04.8		06.1
17	332	08.0	119	27.3	-10	45.7	137	29.0	-4	39.5	159	13.1	+4	17.8	85	06.9	-20	06.2
18	347	10.5	134	27.0	-10	46.7	152	30.1	-4	40.1	174	15.3	+4	17.7	100	09.1	-20	06.2
19	2	12.9	149	26.6		47.6	167	31.3		40.7	189	17.6		17.6	115	11.2		06.3
20	17	15.4	164	26.2		48.6	182	32.4		41.2	204	19.8		17.5	130	13.4		06.3
21	32	17.8	179	25.9		49.6	197	33.5		41.8	219	22.1		17.4	145	15.5		06.4
22	47	20.3	194	25.5		50.5	212	34.6		42.3	234	24.3		17.4	160	17.7		06.4
23	62	22.8	209	25.1		51.5	227	35.7		42.9	249	26.6		17.3	175	19.8		06.5
24	77	25.2	224	24.7	-10	52.5	242	36.8	-4	43.4	264	28.9	+4	17.2	190	22.0	-20	06.5
Dif	—		-4		-10		+11		-6		+22		-1		+22		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: 27 ^d 3 SD: 15'0 PMG: 10 ^h 18 ^m	PHE { 4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'3 Rº: 49 ^m													
	hG ☉	Dec				Náutico		Civil	Hora		Rº	Hora	Rº					
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m			
0	182	00.5	-22	210	19.8	-13	34.2	60 N	6 56	7 52	8 49	5 55	68	14 34	31			
1	197	00.2		224	51.5 ¹²⁷		40.8 ⁶⁶	58	49	41	32	46	67	44	33			
2	211	59.9		239	23.1 ¹²⁶		47.4 ⁶⁶	56	43	31	18	38	65	52	34			
3	226	59.6		253	54.7 ¹²⁶	-13	53.9 ⁶⁵	54	37	23	8 06	31	64	14 59	36			
4	241	59.4		268	26.2 ¹²⁵	-14	00.4 ⁶⁵	52	32	15	7 55	25	62	15 06	37			
5	256	59.1	-22	282	57.7 ¹²⁵	-14	06.8 ⁶⁴	50	6 27	7 08	7 46	5 19	62	15 12	38			
6	271	58.8	-22	297	29.1 ¹²⁴	-14	13.1 ⁶³	45	6 15	6 52	7 26	5 07	59	15 25	40			
7	286	58.5		312	00.5 ¹²⁴		19.4 ⁶³	40	6 05	39	7 10	4 57	57	35	42			
8	301	58.2		326	31.8 ¹²³		25.6 ⁶²	35	5 56	28	6 56	49	55	44	43			
9	316	58.0		341	03.1 ¹²³		31.8 ⁶²	30	48	6 18	44	41	55	15 52	44			
10	331	57.7		355	34.3 ¹²²		37.8 ⁶⁰	20	32	5 59	23	29	52	16 06	46			
11	346	57.4	-22	10	05.5 ¹²²	-14	43.9 ⁶¹	10 N	5 16	5 43	6 05	4 17	50	16 18	48			
12	1	57.1	-22	24	36.6 ¹²¹	-14	49.8 ⁵⁹	0	5 00	5 26	5 48	4 07	48	16 30	49			
13	16	56.8		39	07.7 ¹²¹	-14	55.7 ⁵⁹	10 S	4 42	5 08	31	3 56	47	41	51			
14	31	56.6		53	38.7 ¹²⁰	-15	01.5 ⁵⁸	20	4 20	4 49	5 13	45	45	16 53	53			
15	46	56.3		68	09.6 ¹¹⁹		07.3 ⁵⁸	30	3 51	24	4 52	33	42	17 07	55			
16	61	56.0		82	40.5 ¹¹⁹		13.0 ⁵⁷	35	33	4 10	39	26	40	15	56			
17	76	55.7	-22	97	11.4 ¹¹⁹	-15	18.6 ⁵⁶	40	3 11	3 52	4 24	3 17	40	17 25	57			
18	91	55.4	-22	111	42.2 ¹¹⁸	-15	24.2 ⁵⁶	45	2 42	3 30	4 07	3 08	37	17 36	58			
19	106	55.2		126	13.0 ¹¹⁸		29.6 ⁵⁴	50	1 59	3 02	3 45	2 56	35	49	60			
20	121	54.9		140	43.7 ¹¹⁷		35.0 ⁵⁴	52	1 34	2 47	35	51	34	17 55	61			
21	136	54.6		155	14.3 ¹¹⁶		40.4 ⁵⁴	54	0 56	30	23	45	33	18 02	62			
22	151	54.3		169	44.9 ¹¹⁶		45.6 ⁵²	56	** ** *	2 10	3 10	39	31	09	64			
23	166	54.0		184	15.4 ¹¹⁵		50.8 ⁵²	58	** ** *	1 43	2 54	31	30	18	65			
24	181	53.8	-22	198	45.9 ¹¹⁵	-15	56.0 ⁵²	60 S	** ** *	1 02	2 35	2 23	28	18 27	67			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 47 ^m 2		Mag: -4.2 PMG: 9 ^h 03 ^m			Mag: +1.5 PMG: 7 ^h 49 ^m			Mag: -2.1 PMG: 6 ^h 21 ^m			Mag: +0.5 PMG: 11 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	'	°	°	'	°	°	'	°				
0	77	25.2	224	24.7	-10	52.5	242	36.8	-4	43.4	264	28.9	+4	17.2	190	22.0	-20	06.5
1	92	27.7	239	24.4		53.4	257	38.0		44.0	279	31.1		17.1	205	24.1		06.6
2	107	30.2	254	24.0		54.4	272	39.1		44.5	294	33.4		17.0	220	26.3		06.6
3	122	32.6	269	23.6		55.4	287	40.2		45.1	309	35.6		17.0	235	28.5		06.6
4	137	35.1	284	23.3		56.3	302	41.3		45.7	324	37.9		16.9	250	30.6		06.7
5	152	37.6	299	22.9	-10	57.3	317	42.4	-4	46.2	339	40.1	+4	16.8	265	32.8	-20	06.7
6	167	40.0	314	22.5	-10	58.3	332	43.5	-4	46.8	354	42.4	+4	16.7	280	34.9	-20	06.8
7	182	42.5	329	22.1	-10	59.2	347	44.6		47.3	9	44.6		16.6	295	37.1		06.8
8	197	45.0	344	21.8	-11	00.2	2	45.8		47.9	24	46.9		16.6	310	39.2		06.9
9	212	47.4	359	21.4		01.2	17	46.9		48.4	39	49.1		16.5	325	41.4		06.9
10	227	49.9	14	21.0		02.1	32	48.0		49.0	54	51.4		16.4	340	43.5		07.0
11	242	52.3	29	20.6	-11	03.1	47	49.1	-4	49.5	69	53.6	+4	16.3	355	45.7	-20	07.0
12	257	54.8	44	20.3	-11	04.1	62	50.2	-4	50.1	84	55.9	+4	16.3	10	47.8	-20	07.1
13	272	57.3	59	19.9		05.0	77	51.3		50.6	99	58.1		16.2	25	50.0		07.1
14	287	59.7	74	19.5		06.0	92	52.5		51.2	115	00.4		16.1	40	52.2		07.2
15	303	02.2	89	19.1		07.0	107	53.6		51.8	130	02.6		16.0	55	54.3		07.2
16	318	04.7	104	18.8		07.9	122	54.7		52.3	145	04.9		15.9	70	56.5		07.3
17	333	07.1	119	18.4	-11	08.9	137	55.8	-4	52.9	160	07.2	+4	15.9	85	58.6	-20	07.3
18	348	09.6	134	18.0	-11	09.8	152	56.9	-4	53.4	175	09.4	+4	15.8	101	00.8	-20	07.3
19	3	12.1	149	17.6		10.8	167	58.0		54.0	190	11.7		15.7	116	02.9		07.4
20	18	14.5	164	17.2		11.8	182	59.2		54.5	205	13.9		15.6	131	05.1		07.4
21	33	17.0	179	16.9		12.7	198	00.3		55.1	220	16.2		15.6	146	07.2		07.5
22	48	19.4	194	16.5		13.7	213	01.4		55.6	235	18.4		15.5	161	09.4		07.5
23	63	21.9	209	16.1		14.6	228	02.5		56.2	250	20.7		15.4	176	11.5		07.6
24	78	24.4	224	15.7	-11	15.6	243	03.6	-4	56.7	265	22.9	+4	15.3	191	13.7	-20	07.6
Dif	—		-4	-10		+11	-6			+23	-1		+22		0			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°2		Edad: 28 ^d 3	PHE {	4 ^h : 55'5	12 ^h : 55'7			20 ^h : 55'8	R°: 51 ^m						
	PMG: 11 ^h 52 ^m 6										SD: 15°1		PMG: 11 ^h 07 ^m			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m		
0	181	53.8	-22	51.3	198	45.9	-15 56.0	60 N	14 55	15 51	16 47	7 03 65	15 05 41			
1	196	53.5		51.5	213	16.4 ¹¹⁵	-16 01.0	50	58	15 12	16 03	16 55	6 53 62	17 41		
2	211	53.2		51.8	227	46.8 ¹¹⁴	06.0	50	56	26	12	17 01	43 62	26 43		
3	226	52.9		52.0	242	17.1 ¹¹³	10.9	49	54	38	21	07	35 60	35 43		
4	241	52.6		52.2	256	47.4 ¹¹³	15.7	48	52	49	29	13	27 60	43 44		
5	256	52.4	-22	52.5	271	17.6 ¹¹²	-16 20.4	47	50	15 58	16 36	17 18	6 21 59	15 50 44		
6	271	52.1	-22	52.7	285	47.8 ¹¹²	-16 25.1	47	45	16 18	16 52	17 29	6 06 58	16 05 45		
7	286	51.8		52.9	300	18.0 ¹¹²	29.7	46	40	35	17 05	39	5 54 57	17 47		
8	301	51.5		53.2	314	48.0 ¹¹⁰	34.2	45	35	16 48	16	48	44 56	27 48		
9	316	51.2		53.4	329	18.1 ¹¹¹	38.6	44	30	17 01	27	17 57	36 54	36 49		
10	331	50.9		53.6	343	48.1 ¹¹⁰	43.0	44	20	21	17 45	18 13	21 52	16 52 50		
11	346	50.7	-22	53.8	358	18.0 ¹⁰⁹	-16 47.2	42	10 N	17 39	18 02	18 28	5 07 52	17 06 50		
12	1	50.4	-22	54.1	12	47.9 ¹⁰⁹	-16 51.4	42	0	17 56	18 19	18 45	4 55 50	17 19 51		
13	16	50.1		54.3	27	17.7 ¹⁰⁸	55.5	41	10 S	18 14	37	19 04	43 49	32 52		
14	31	49.8		54.5	41	47.5 ¹⁰⁸	-16 59.5	40	20	32	18 57	26	30 48	17 46 53		
15	46	49.5		54.7	56	17.2 ¹⁰⁷	-17 03.5	40	30	18 54	19 21	19 54	15 46	18 02 54		
16	61	49.2		55.0	70	46.9 ¹⁰⁷	07.3	38	35	19 06	36	20 12	4 06 46	11 55		
17	76	49.0	-22	55.2	85	16.6 ¹⁰⁷	-17 11.1	38	40	19 21	19 54	20 35	3 57 44	18 22 55		
18	91	48.7	-22	55.4	99	46.2 ¹⁰⁶	-17 14.8	37	45	19 39	20 16	21 05	3 45 43	18 34 56		
19	106	48.4		55.6	114	15.7 ¹⁰⁵	18.4	36	50	20 00	44	21 48	31 42	49 57		
20	121	48.1		55.9	128	45.2 ¹⁰⁵	21.9	35	52	11	20 59	22 14	25 40	18 56 58		
21	136	47.8		56.1	143	14.7 ¹⁰⁵	25.3	34	54	23	21 16	22 54	18 39	19 04 58		
22	151	47.5		56.3	157	44.1 ¹⁰⁴	28.6	33	56	37	21 37	** ** *	10 38	13 59		
23	166	47.2		56.5	172	13.5 ¹⁰⁴	31.9	33	58	20 53	22 05	** ** *	3 01 37	23 59		
24	181	47.0	-22	56.7	186	42.8 ¹⁰³	-17 35.0	31	60 S	21 12	22 48	** ** *	2 51 36	19 34 61		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 43 ^m 3		Mag: -4.2 PMG: 9 ^h 03 ^m		Mag: +1.5 PMG: 7 ^h 47 ^m		Mag: -2.1 PMG: 6 ^h 18 ^m		Mag: +0.5 PMG: 11 ^h 13 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	78	24.4	224	15.7	243	03.6	265	22.9	191	13.7						
1	93	26.8	239	15.3	258	04.7	280	25.2	206	15.9						
2	108	29.3	254	14.9	273	05.9	295	27.5	221	18.0						
3	123	31.8	269	14.6	288	07.0	310	29.7	236	20.2						
4	138	34.2	284	14.2	303	08.1	325	32.0	251	22.3						
5	153	36.7	299	13.8	318	09.2	340	34.2	266	24.5						
6	168	39.2	314	13.4	333	10.3	355	36.5	281	26.6						
7	183	41.6	329	13.0	348	11.4	10	38.8	296	28.8						
8	198	44.1	344	12.6	3	12.6	25	41.0	311	30.9						
9	213	46.6	359	12.2	18	13.7	40	43.3	326	33.1						
10	228	49.0	14	11.9	33	14.8	55	45.5	341	35.2						
11	243	51.5	29	11.5	48	15.9	70	47.8	356	37.4						
12	258	53.9	44	11.1	63	17.0	85	50.0	11	39.6						
13	273	56.4	59	10.7	78	18.2	100	52.3	26	41.7						
14	288	58.9	74	10.3	93	19.3	115	54.6	41	43.9						
15	304	01.3	89	09.9	108	20.4	130	56.8	56	46.0						
16	319	03.8	104	09.5	123	21.5	145	59.1	71	48.2						
17	334	06.3	119	09.1	138	22.6	161	01.4	86	50.3						
18	349	08.7	134	08.8	153	23.7	176	03.6	101	52.5						
19	4	11.2	149	08.4	168	24.9	191	05.9	116	54.6						
20	19	13.7	164	08.0	183	26.0	206	08.1	131	56.8						
21	34	16.1	179	07.6	198	27.1	221	10.4	146	59.0						
22	49	18.6	194	07.2	213	28.2	236	12.7	162	01.1						
23	64	21.1	209	06.8	228	29.3	251	14.9	177	03.3						
24	79	23.5	224	06.4	243	30.4	266	17.2	192	05.4						
Dif	—		-4	-10	+11	-6	+23	-1	+22	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: 29 ^d 3 PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/3 Rº: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	181	47.0	-22	56.7	186	42.8	-17	35.0	60 N	6 59	7 55	8 52	8 08	57	15 46	51		
1	196	46.7		56.9	201	12.0	102	38.1	31	58	51	44	35	7 55	57	15 58	51	
2	211	46.4		57.2	215	41.3	103	41.1	30	56	45	34	21	45	56	16 09	51	
3	226	46.1		57.4	230	10.5	102	44.0	29	54	39	25	8 08	35	56	18	52	
4	241	45.8		57.6	244	39.6	101	46.8	28	52	33	17	7 58	27	56	27	51	
5	256	45.5	-22	57.8	259	08.7	101	-17	49.5	27	50	6 28	7 10	7 48	7 20	55	16 34	52
6	271	45.2	-22	58.0	273	37.8	101	-17	52.1	26	45	6 17	6 54	7 28	7 04	55	16 50	52
7	286	45.0		58.2	288	06.8	100	54.6	25	40	6 07	41	7 11	6 51	54	17 04	52	
8	301	44.7		58.4	302	35.8	100	57.1	25	35	5 58	29	6 57	40	54	15	52	
9	316	44.4		58.7	317	04.7	99	-17	59.4	23	30	49	19	45	30	54	25	52
10	331	44.1		58.9	331	33.6	99	-18	01.6	22	20	33	6 01	25	6 13	54	42	52
11	346	43.8	-22	59.1	346	02.4	98	-18	03.8	22	10 N	5 17	5 44	6 06	5 59	53	17 56	53
12	1	43.5	-22	59.3	0	31.3	99	-18	05.8	20	0	5 01	5 27	5 49	5 45	53	18 10	53
13	16	43.2		59.5	15	00.0	97	07.8	20	10 S	4 42	5 09	32	32	52	24	53	
14	31	42.9		59.7	29	28.8	98	09.6	18	20	4 20	4 49	5 14	18	51	39	53	
15	46	42.7	-22	59.9	43	57.5	97	11.4	18	30	3 52	25	4 52	5 01	51	18 56	53	
16	61	42.4	-23	00.1	58	26.1	96	13.1	17	35	33	4 10	39	4 52	50	19 06	52	
17	76	42.1	-23	00.3	72	54.8	97	-18	14.7	16	40	3 11	3 52	4 25	4 41	49	19 17	53
18	91	41.8	-23	00.5	87	23.4	96	-18	16.1	14	45	2 41	3 30	4 07	4 28	49	19 30	53
19	106	41.5		00.7	101	51.9	95	17.5	14	50	1 57	3 01	3 45	13	48	46	53	
20	121	41.2		00.9	116	20.4	95	18.8	13	52	1 32	2 47	35	4 05	48	19 54	52	
21	136	40.9		01.1	130	48.9	95	20.0	12	54	0 52	29	23	3 57	48	20 02	53	
22	151	40.6		01.3	145	17.4	95	21.0	10	56	** **	2 08	3 09	48	47	12	52	
23	166	40.3		01.5	159	45.8	94	22.0	10	58	** **	1 40	2 53	38	47	22	53	
24	181	40.1	-23	01.7	174	14.2	94	-18	22.9	9	60 S	** **	0 58	2 33	3 27	45	20 35	52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 39 ^m 4		Mag: -4.2 PMG: 9 ^h 04 ^m		Mag: +1.5 PMG: 7 ^h 45 ^m		Mag: -2.1 PMG: 6 ^h 14 ^m		Mag: +0.5 PMG: 11 ^h 10 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	79	23.5	224	06.4	-11	38.6	243	30.4	-5	10.0	266	17.2	+4	13.5	192	05.4	-20	08.7
1	94	26.0	239	06.0		39.5	258	31.6		10.5	281	19.5		13.4	207	07.6		08.8
2	109	28.4	254	05.6		40.5	273	32.7		11.1	296	21.7		13.4	222	09.7		08.8
3	124	30.9	269	05.2		41.4	288	33.8		11.6	311	24.0		13.3	237	11.9		08.9
4	139	33.4	284	04.8		42.4	303	34.9		12.2	326	26.2		13.2	252	14.0		08.9
5	154	35.8	299	04.4	-11	43.3	318	36.0	-5	12.7	341	28.5	+4	13.1	267	16.2	-20	09.0
6	169	38.3	314	04.0	-11	44.3	333	37.2	-5	13.3	356	30.8	+4	13.1	282	18.3	-20	09.0
7	184	40.8	329	03.6		45.2	348	38.3		13.8	11	33.0		13.0	297	20.5		09.1
8	199	43.2	344	03.2		46.2	3	39.4		14.4	26	35.3		12.9	312	22.7		09.1
9	214	45.7	359	02.8		47.1	18	40.5		14.9	41	37.6		12.8	327	24.8		09.1
10	229	48.2	14	02.4		48.1	33	41.6		15.5	56	39.8		12.8	342	27.0		09.2
11	244	50.6	29	02.0	-11	49.0	48	42.7	-5	16.0	71	42.1	+4	12.7	357	29.1	-20	09.2
12	259	53.1	44	01.6	-11	50.0	63	43.9	-5	16.6	86	44.4	+4	12.6	12	31.3	-20	09.3
13	274	55.6	59	01.2		50.9	78	45.0		17.1	101	46.6		12.5	27	33.4		09.3
14	289	58.0	74	00.8		51.9	93	46.1		17.7	116	48.9		12.5	42	35.6		09.4
15	305	00.5	89	00.4		52.8	108	47.2		18.2	131	51.2		12.4	57	37.7		09.4
16	320	02.9	104	00.0		53.8	123	48.3		18.8	146	53.4		12.3	72	39.9		09.5
17	335	05.4	118	59.6	-11	54.7	138	49.5	-5	19.3	161	55.7	+4	12.3	87	42.1	-20	09.5
18	350	07.9	133	59.2	-11	55.7	153	50.6	-5	19.9	176	58.0	+4	12.2	102	44.2	-20	09.6
19	5	10.3	148	58.8		56.6	168	51.7		20.4	192	00.2		12.1	117	46.4		09.6
20	20	12.8	163	58.4		57.6	183	52.8		21.0	207	02.5		12.0	132	48.5		09.7
21	35	15.3	178	58.0		58.5	198	53.9		21.5	222	04.8		12.0	147	50.7		09.7
22	50	17.7	193	57.6	-11	59.4	213	55.1		22.1	237	07.0		11.9	162	52.8		09.7
23	65	20.2	208	57.2	-12	00.4	228	56.2		22.6	252	09.3		11.8	177	55.0		09.8
24	80	22.7	223	56.8	-12	01.3	243	57.3	-5	23.2	267	11.6	+4	11.7	192	57.1	-20	09.8
Dif	—		-4 -9		+11 -5		+23 -1		+22 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 6			Edad: 30 ^d 3 PHE { 4 ^h : 56 ^m 5 12 ^h : 56 ^m 7 20 ^h : 56 ^m 8 PMG: 12 ^h 50 ^m R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	181	40.1	-23	01.7	174	14.2	-18 22.9	60 N	14 54	15 51	16 47	9 05 47	16 37 62	
1	196	39.8		01.9	188	42.6	94 23.7	58	15 11	16 02	16 54	8 52 48	16 49 61	
2	211	39.5		02.1	203	10.9	93 24.4	56	25	12	17 01	41 49	17 00 61	
3	226	39.2		02.3	217	39.2	93 24.9	54	38	21	07	31 50	10 60	
4	241	38.9		02.5	232	07.5	93 25.4	52	48	29	13	23 49	18 60	
5	256	38.6	-23	02.7	246	35.8	93 -18 25.8	50	15 58	16 36	17 18	8 15 50	17 26 59	
6	271	38.3	-23	02.9	261	04.0	92 -18 26.1	45	16 18	16 52	17 29	7 59 50	17 42 58	
7	286	38.0		03.1	275	32.2	92 26.3	40	35	17 05	39	45 51	17 56 57	
8	301	37.7		03.3	290	00.4	92 26.3	35	16 49	17	49	34 51	18 07 57	
9	316	37.4		03.5	304	28.5	91 26.3	30	17 01	27	17 57	24 52	17 56	
10	331	37.1		03.6	318	56.6	91 26.2	20	22	17 46	18 13	7 07 52	34 55	
11	346	36.9	-23	03.8	333	24.7	91 -18 25.9	10 N	17 40	18 03	18 29	6 52 52	18 49 54	
12	1	36.6	-23	04.0	347	52.8	91 -18 25.6	0	17 57	18 20	18 46	6 38 53	19 03 53	
13	16	36.3		04.2	2	20.9	91 25.2	10 S	18 15	38	19 05	24 53	17 52	
14	31	36.0		04.4	16	48.9	90 24.6	20	33	18 58	27	6 09 54	32 51	
15	46	35.7		04.6	31	16.9	90 24.0	30	18 55	19 22	19 56	5 52 54	49 50	
16	61	35.4		04.8	45	44.9	90 23.2	35	19 08	37	20 14	42 54	19 58 50	
17	76	35.1	-23	05.0	60	12.9	90 -18 22.4	40	19 23	19 55	20 37	5 30 55	20 10 49	
18	91	34.8	-23	05.1	74	40.8	89 -18 21.4	45	19 40	20 18	21 07	5 17 55	20 23 48	
19	106	34.5		05.3	89	08.8	90 20.3	50	20 02	20 47	21 51	5 01 55	39 47	
20	121	34.2		05.5	103	36.7	89 19.2	52	13	21 01	22 17	4 53 56	46 47	
21	136	33.9		05.7	118	04.6	89 17.9	54	25	19	22 59	45 56	20 55 46	
22	151	33.6		05.9	132	32.5	89 16.5	56	39	21 40	** **	35 56	21 04 45	
23	166	33.3		06.1	147	00.4	89 15.1	58	20 55	22 09	** **	25 56	15 44	
24	181	33.1	-23	06.2	161	28.3	89 -18 13.5	60 S	21 15	22 54	** **	4 12 57	21 27 43	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 35 ^m 4		Mag: -4.2 PMG: 9 ^h 04 ^m		Mag: +1.4 PMG: 7 ^h 44 ^m		Mag: -2.1 PMG: 6 ^h 10 ^m		Mag: +0.5 PMG: 11 ^h 07 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	80	22.7	223	56.8	-12	01.3	243	57.3	-5	23.2				
1	95	25.1	238	56.4		02.3	258	58.4		23.7				
2	110	27.6	253	56.0		03.2	273	59.5		24.3				
3	125	30.1	268	55.6		04.2	289	00.7		24.8				
4	140	32.5	283	55.2		05.1	304	01.8		25.4				
5	155	35.0	298	54.8	-12	06.1	319	02.9	-5	25.9				
6	170	37.4	313	54.4	-12	07.0	334	04.0	-5	26.5				
7	185	39.9	328	54.0		07.9	349	05.1		27.0				
8	200	42.4	343	53.5		08.9	4	06.3		27.6				
9	215	44.8	358	53.1		09.8	19	07.4		28.1				
10	230	47.3	13	52.7		10.8	34	08.5		28.7				
11	245	49.8	28	52.3	-12	11.7	49	09.6	-5	29.2				
12	260	52.2	43	51.9	-12	12.7	64	10.7	-5	29.8				
13	275	54.7	58	51.5		13.6	79	11.9		30.3				
14	290	57.2	73	51.1		14.5	94	13.0		30.9				
15	305	59.6	88	50.7		15.5	109	14.1		31.4				
16	321	02.1	103	50.2		16.4	124	15.2		32.0				
17	336	04.5	118	49.8	-12	17.4	139	16.3	-5	32.5				
18	351	07.0	133	49.4	-12	18.3	154	17.5	-5	33.0				
19	6 09.5	148	49.0		19.2	169	18.6			33.6				
20	21 11.9	163	48.6		20.2	184	19.7			34.1				
21	36 14.4	178	48.2		21.1	199	20.8			34.7				
22	51 16.9	193	47.8		22.0	214	21.9			35.2				
23	66 19.3	208	47.3		23.0	229	23.1			35.8				
24	81 21.8	223	46.9	-12	23.9	244	24.2	-5		36.3				
Dif	—		-4	-9		+11	-5		+23	-1	+22		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: 1 ^d 6 PHE { 4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'3 R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	33.1	-23	06.2	161	28.3	-18	13.5	60 N	7 01	7 57	8 54	9 52	39	17 39	71
1	196	32.8		06.4	175	56.1		11.8	58	6 53	46	37	40	40	17 50	70
2	211	32.5		06.6	190	24.0		10.0	56	47	36	23	30	41	18 01	68
3	226	32.2		06.8	204	51.8		08.1	54	41	27	10	21	42	10	66
4	241	31.9		06.9	219	19.6		06.1	52	35	19	8 00	12	44	18	65
5	256	31.6	-23	07.1	233	47.4	-18	04.0	50	6 30	7 12	7 50	9 05	44	18 25	65
6	271	31.3	-23	07.3	248	15.2	-18	01.8	45	6 19	6 56	7 29	8 49	46	18 40	63
7	286	31.0		07.5	262	43.0	-17	59.5	40	6 08	42	7 13	36	48	18 53	61
8	301	30.7		07.6	277	10.8		57.1	35	5 59	31	6 59	25	49	19 04	60
9	316	30.4		07.8	291	38.6		54.6	30	51	20	47	8 16	49	13	59
10	331	30.1		08.0	306	06.4		51.9	20	34	6 02	26	7 59	51	29	57
11	346	29.8	-23	08.2	320	34.2	-17	49.2	10 N	5 18	5 45	6 07	7 44	53	19 43	55
12	1	29.5	-23	08.3	335	01.9	-17	46.4	0	5 02	5 28	5 50	7 31	53	19 56	54
13	16	29.2		08.5	349	29.7		43.5	10 S	4 43	5 10	33	17	55	20 09	52
14	31	28.9		08.7	3	57.5		40.4	20	4 21	4 50	5 14	7 03	56	23	50
15	46	28.6		08.8	18	25.2		37.3	30	3 52	25	4 52	6 46	58	39	48
16	61	28.3		09.0	32	53.0		34.0	35	34	4 10	40	36	59	48	47
17	76	28.0	-23	09.2	47	20.7	-17	30.7	40	3 11	3 52	4 25	6 25	60	20 59	45
18	91	27.7	-23	09.3	61	48.5	-17	27.3	45	2 41	3 30	4 07	6 12	61	21 11	44
19	106	27.4		09.5	76	16.3		23.7	50	1 56	3 01	3 45	5 56	63	26	42
20	121	27.2		09.7	90	44.0		20.1	52	1 30	2 46	34	49	63	33	40
21	136	26.9		09.8	105	11.8		16.3	54	0 48	29	22	41	63	41	39
22	151	26.6		10.0	119	39.6		12.5	56	** **	2 07	3 08	31	65	49	38
23	166	26.3		10.1	134	07.3		08.5	58	** **	1 39	2 52	21	66	21 59	36
24	181	26.0	-23	10.3	148	35.1	-17	04.5	60 S	** **	0 53	2 32	5 09	67	22 10	35

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 31 ^m 5		Mag: -4.1 PMG: 9 ^h 05 ^m		Mag: +1.4 PMG: 7 ^h 42 ^m		Mag: -2.1 PMG: 6 ^h 07 ^m		Mag: +0.5 PMG: 11 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	21.8	223	46.9	-12	23.9	244	24.2	-5	36.3
1	96	24.3	238	46.5		24.8	259	25.3		36.9
2	111	26.7	253	46.1		25.8	274	26.4		37.4
3	126	29.2	268	45.7		26.7	289	27.5		38.0
4	141	31.7	283	45.3		27.7	304	28.7		38.5
5	156	34.1	298	44.8	-12	28.6	319	29.8	-5	39.1
6	171	36.6	313	44.4	-12	29.5	334	30.9	-5	39.6
7	186	39.0	328	44.0		30.5	349	32.0		40.2
8	201	41.5	343	43.6		31.4	4	33.1		40.7
9	216	44.0	358	43.1		32.3	19	34.3		41.2
10	231	46.4	13	42.7		33.3	34	35.4		41.8
11	246	48.9	28	42.3	-12	34.2	49	36.5	-5	42.3
12	261	51.4	43	41.9	-12	35.1	64	37.6	-5	42.9
13	276	53.8	58	41.5		36.1	79	38.7		43.4
14	291	56.3	73	41.0		37.0	94	39.9		44.0
15	306	58.8	88	40.6		37.9	109	41.0		44.5
16	322	01.2	103	40.2		38.8	124	42.1		45.1
17	337	03.7	118	39.8	-12	39.8	139	43.2	-5	45.6
18	352	06.2	133	39.3	-12	40.7	154	44.4	-5	46.1
19	7	08.6	148	38.9		41.6	169	45.5		46.7
20	22	11.1	163	38.5		42.6	184	46.6		47.2
21	37	13.5	178	38.0		43.5	199	47.7		47.8
22	52	16.0	193	37.6		44.4	214	48.8		48.3
23	67	18.5	208	37.2		45.3	229	50.0		48.9
24	82	20.9	223	36.8	-12	46.3	244	51.1	-5	49.4
Dif	—		-4 -9		+11 -5		+23 -1		+22 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: 2 ^d 6 PHE { 4 ^h : 57'5 12 ^h : 57'6 20 ^h : 57'8 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	181	26.0	-23 10.3	148	35.1	-17 04.5	42	60 N	14 53	15 51	16 47	10 31 31	18 50 78	
1	196	25.7	10.5	163	02.9	-17 00.3	88	58	15 10	16 02	16 54	20 33	19 00 76	
2	211	25.4	10.6	177	30.7	-16 56.1	42	56	25	12	17 01	11 35	09 73	
3	226	25.1	10.8	191	58.4	51.7	44	54	37	21	07	10 03 36	16 72	
4	241	24.8	10.9	206	26.2	47.3	44	52	48	29	13	9 56 38	23 71	
5	256	24.5	-23 11.1	220	54.0	-16 42.7	46	50	15 58	16 37	17 18	9 49 39	19 30 69	
6	271	24.2	-23 11.2	235	21.8	-16 38.1	46	45	16 19	16 52	17 30	9 35 42	19 43 66	
7	286	23.9	11.4	249	49.7	33.3	48	40	35	17 06	40	24 43	19 54 64	
8	301	23.6	11.5	264	17.5	28.5	48	35	16 49	17	49	14 45	20 04 62	
9	316	23.3	11.7	278	45.3	23.5	50	30	17 02	28	17 58	9 05 46	12 60	
10	331	23.0	11.9	293	13.2	18.5	50	20	23	17 47	18 14	8 50 49	26 57	
11	346	22.7	-23 12.0	307	41.0	-16 13.4	51	10 N	17 41	18 04	18 30	8 37 51	20 38 55	
12	1	22.4	-23 12.2	322	08.9	-16 08.1	53	0	17 58	18 21	18 47	8 24 53	20 50 52	
13	16	22.1	12.3	336	36.8	-16 02.8	53	10 S	18 16	39	19 06	8 12 55	21 01 51	
14	31	21.8	12.5	351	04.7	-15 57.4	54	20	34	18 59	28	7 59 57	13 48	
15	46	21.5	12.6	5	32.6	51.9	55	30	18 56	19 24	19 57	44 59	27 45	
16	61	21.2	12.7	20	00.5	46.2	57	35	19 09	39	20 16	35 61	35 44	
17	76	20.9	-23 12.9	34	28.4	-15 40.5	57	40	19 24	19 57	20 38	7 25 62	21 44 42	
18	91	20.6	-23 13.0	48	56.3	-15 34.7	58	45	19 42	20 19	21 09	7 13 65	21 55 39	
19	106	20.3	13.2	63	24.3	28.9	58	50	20 04	20 49	21 54	6 59 67	22 08 36	
20	121	20.0	13.3	77	52.3	22.9	60	52	15	21 04	22 21	52 68	13 36	
21	136	19.7	13.5	92	20.2	16.8	61	54	27	21	23 04	44 70	20 34	
22	151	19.4	13.6	106	48.2	10.6	62	56	41	21 43	** **	36 71	27 32	
23	166	19.1	13.8	121	16.2	-15 04.4	62	58	20 58	22 12	** **	27 73	35 30	
24	181	18.8	-23 13.9	135	44.3	-14 58.0	64	60 S	21 18	22 59	** **	6 16 75	22 45 27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 27 ^m 6		Mag: -4.1 PMG: 9 ^h 06 ^m		Mag: +1.4 PMG: 7 ^h 40 ^m		Mag: -2.1 PMG: 6 ^h 03 ^m		Mag: +0.5 PMG: 11 ^h 00 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	82	20.9	223 36.8	-12 46.3	244 51.1	-5 49.4	269 00.8	+4 08.4	194 40.6	-20 12.0
1	97	23.4	238 36.3	47.2	259 52.2	50.0	284 03.1	08.4	209 42.8	12.1
2	112	25.9	253 35.9	48.1	274 53.3	50.5	299 05.4	08.3	224 45.0	12.1
3	127	28.3	268 35.5	49.1	289 54.5	51.0	314 07.7	08.2	239 47.1	12.1
4	142	30.8	283 35.0	50.0	304 55.6	51.6	329 10.0	08.2	254 49.3	12.2
5	157	33.3	298 34.6	-12 50.9	319 56.7	-5 52.1	344 12.2	+4 08.1	269 51.4	-20 12.2
6	172	35.7	313 34.2	-12 51.8	334 57.8	-5 52.7	359 14.5	+4 08.0	284 53.6	-20 12.3
7	187	38.2	328 33.7	52.8	349 58.9	53.2	14 16.8	08.0	299 55.7	12.3
8	202	40.7	343 33.3	53.7	5 00.1	53.8	29 19.1	07.9	314 57.9	12.4
9	217	43.1	358 32.9	54.6	20 01.2	54.3	44 21.4	07.9	330 00.1	12.4
10	232	45.6	13 32.4	55.5	35 02.3	54.8	59 23.7	07.8	345 02.2	12.5
11	247	48.0	28 32.0	-12 56.4	50 03.4	-5 55.4	74 26.0	+4 07.7	0 04.4	-20 12.5
12	262	50.5	43 31.6	-12 57.4	65 04.6	-5 55.9	89 28.2	+4 07.7	15 06.5	-20 12.5
13	277	53.0	58 31.1	58.3	80 05.7	56.5	104 30.5	07.6	30 08.7	12.6
14	292	55.4	73 30.7	-12 59.2	95 06.8	57.0	119 32.8	07.5	45 10.8	12.6
15	307	57.9	88 30.3	-13 00.1	110 07.9	57.6	134 35.1	07.5	60 13.0	12.7
16	323	00.4	103 29.8	01.1	125 09.0	58.1	149 37.4	07.4	75 15.2	12.7
17	338	02.8	118 29.4	-13 02.0	140 10.2	-5 58.6	164 39.7	+4 07.3	90 17.3	-20 12.8
18	353	05.3	133 28.9	-13 02.9	155 11.3	-5 59.2	179 42.0	+4 07.3	105 19.5	-20 12.8
19	8 07.8	148 28.5	03.8	170 12.4	-5 59.7	194 44.2	07.2	120 21.6	12.9	
20	23 10.2	163 28.1	04.7	185 13.5	-6 00.3	209 46.5	07.1	135 23.8	12.9	
21	38 12.7	178 27.6	05.7	200 14.7	00.8	224 48.8	07.1	150 25.9	12.9	
22	53 15.2	193 27.2	06.6	215 15.8	01.4	239 51.1	07.0	165 28.1	13.0	
23	68 17.6	208 26.8	07.5	230 16.9	01.9	254 53.4	07.0	180 30.3	13.0	
24	83 20.1	223 26.3	-13 08.4	245 18.0	-6 02.4	269 55.7	+4 06.9	195 32.4	-20 13.1	
Dif	—		-4	-9	+11	-5	+23	-1	+22	0

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 55 ^m 0				Edad: 3 ^d 6 PHE { 4 ^h : 57/9 12 ^h : 58/1 20 ^h : 58/2 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	181	18.8	-23	13.9	135	44.3	-14	58.0	64	58	60 N	7	03	7	59	8	57	11	02	25	20 08 82
1	196	18.5		14.0	150	12.3		51.6	64	58	58	6	55		48	39		10	53	28	16 79
2	211	18.2		14.2	164	40.4		45.1	65	56	56		49		38	25		46	30		22 77
3	226	17.9		14.3	179	08.5		38.5	66	54	54		42		29	12		39	32		28 75
4	241	17.6		14.5	193	36.5		31.8	67	52	52		37		21	8	01	34	32		34 73
5	256	17.3	-23	14.6	208	04.7	-14	25.0	68	50	50	6	32	7	13	7	52	10	28	34	20 39 71
6	271	17.0	-23	14.7	222	32.8	-14	18.1	69	45	45	6	20	6	57	7	31	10	17	37	20 49 69
7	286	16.7		14.9	237	00.9		11.2	69	40	40		10		44	14		10	07	40	20 58 66
8	301	16.4		15.0	251	29.1	-14	04.1	71	35	35	6	00		32	7	00	9	59	42	21 06 63
9	316	16.1		15.1	265	57.3	-13	57.0	71	30	30	5	52		22	6	48		51	44	12 61
10	331	15.8		15.3	280	25.5		49.8	72	20	20		35	6	03	27		39	47		23 58
11	346	15.5	-23	15.4	294	53.7	-13	42.5	73	10 N	10 N	5	19	5	46	6	09	9	28	50	21 33 55
12	1	15.2	-23	15.5	309	21.9	-13	35.2	73	0	0	5	03	5	29	5	51	9	17	53	21 42 52
13	16	14.9		15.7	323	50.2		27.7	75	10 S	10 S	4	44	5	11	34		9	07	55	21 52 49
14	31	14.6		15.8	338	18.4		20.2	75	20	20	4	21	4	50	5	15	8	56	58	22 01 46
15	46	14.3		15.9	352	46.7		12.6	76	30	30	3	52		26	4	53	43	61		12 43
16	61	14.0		16.0	7	15.0	-13	04.9	77	35	35		34	4	11	40		36	63		19 40
17	76	13.7	-23	16.2	21	43.4	-12	57.1	78	40	40	3	11	3	52	4	25	8	27	65	22 26 38
18	91	13.4	-23	16.3	36	11.7	-12	49.3	78	45	45	2	41	3	30	4	07	8	18	67	22 34 36
19	106	13.1		16.4	50	40.1		41.3	80	50	50	1	56	3	01	3	45		06	70	44 32
20	121	12.8		16.5	65	08.5		33.3	80	52	52	1	29	2	46	34		8	00	72	49 31
21	136	12.5		16.7	79	36.9		25.3	80	54	54	0	45		28	22		7	54	74	54 29
22	151	12.2		16.8	94	05.3		17.1	82	56	56	** **	2	06		3	08	47	76		22 59 28
23	166	11.9		16.9	108	33.7		08.9	82	58	58	** **	1	37		2	52	40	77		23 05 26
24	181	11.6	-23	17.0	123	02.2	-12	00.6	83	60 S	60 S	** **	0	50		2	31	7	31	80	23 12 23

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 23 ^m 6		Mag: -4.1 PMG: 9 ^h 07 ^m				Mag: +1.4 PMG: 7 ^h 38 ^m				Mag: -2.1 PMG: 5 ^h 59 ^m				Mag: +0.5 PMG: 10 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	83	20.1	223	26.3	-13	08.4	245	18.0	-6	02.4	269	55.7	+4	06.9	195	32.4	-20	13.1
1	98	22.5	238	25.9		09.3	260	19.2		03.0	284	58.0		06.8	210	34.6		13.1
2	113	25.0	253	25.4		10.2	275	20.3		03.5	300	00.3		06.8	225	36.7		13.2
3	128	27.5	268	25.0		11.2	290	21.4		04.1	315	02.6		06.7	240	38.9		13.2
4	143	29.9	283	24.5		12.1	305	22.5		04.6	330	04.8		06.6	255	41.0		13.3
5	158	32.4	298	24.1	-13	13.0	320	23.6	-6	05.1	345	07.1	+4	06.6	270	43.2	-20	13.3
6	173	34.9	313	23.7	-13	13.9	335	24.8	-6	05.7	0	09.4	+4	06.5	285	45.4	-20	13.3
7	188	37.3	328	23.2		14.8	350	25.9		06.2	15	11.7		06.4	300	47.5		13.4
8	203	39.8	343	22.8		15.7	5	27.0		06.8	30	14.0		06.4	315	49.7		13.4
9	218	42.3	358	22.3		16.6	20	28.1		07.3	45	16.3		06.3	330	51.8		13.5
10	233	44.7	13	21.9		17.6	35	29.3		07.8	60	18.6		06.3	345	54.0		13.5
11	248	47.2	28	21.4	-13	18.5	50	30.4	-6	08.4	75	20.9	+4	06.2	0	56.1	-20	13.6
12	263	49.6	43	21.0	-13	19.4	65	31.5	-6	08.9	90	23.2	+4	06.1	15	58.3	-20	13.6
13	278	52.1	58	20.5		20.3	80	32.6		09.5	105	25.5		06.1	31	00.5		13.7
14	293	54.6	73	20.1		21.2	95	33.8		10.0	120	27.8		06.0	46	02.6		13.7
15	308	57.0	88	19.6		22.1	110	34.9		10.5	135	30.1		06.0	61	04.8		13.7
16	323	59.5	103	19.2		23.0	125	36.0		11.1	150	32.3		05.9	76	06.9		13.8
17	339	02.0	118	18.7	-13	23.9	140	37.1	-6	11.6	165	34.6	+4	05.8	91	09.1	-20	13.8
18	354	04.4	133	18.3	-13	24.8	155	38.3	-6	12.2	180	36.9	+4	05.8	106	11.2	-20	13.9
19	9	06.9	148	17.8		25.8	170	39.4		12.7	195	39.2		05.7	121	13.4		13.9
20	24	09.4	163	17.4		26.7	185	40.5		13.2	210	41.5		05.6	136	15.6		14.0
21	39	11.8	178	16.9		27.6	200	41.6		13.8	225	43.8		05.6	151	17.7		14.0
22	54	14.3	193	16.5		28.5	215	42.8		14.3	240	46.1		05.5	166	19.9		14.0
23	69	16.8	208	16.0		29.4	230	43.9		14.9	255	48.4		05.5	181	22.0		14.1
24	84	19.2	223	15.6	-13	30.3	245	45.0	-6	15.4	270	50.7	+4	05.4	196	24.2	-20	14.1
Dif	—		-4		-9		+11		-5		+23		-1		+22			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 55 ^m 5				Edad: 4 ^d 6 PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 4 20 ^h : 58 ^h 6 PMG: 16 ^h 22 ^m R°: 52 ^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	181	11.6	-23	17.0	123	02.2	-12	00.6	60 N	14 53	15 51	16 47	11 27 21		21 30 83	
1	196	11.3		17.2	137	30.7	95	-11 52.2	58	15 10	16 02	16 55	21 24		35 81	
2	211	11.0		17.3	151	59.2	95	43.8	56	25	12	17 01	16 26		39 79	
3	226	10.7		17.4	166	27.7	95	35.3	54	38	21	08	11 28		43 77	
4	241	10.4		17.5	180	56.2	95	26.7	52	49	29	13	06 30		47 75	
5	256	10.1	-23	17.6	195	24.8	96	-11 18.0	50	15 58	16 37	17 18	11 02 32		21 50 74	
6	271	09.8	-23	17.8	209	53.3	95	-11 09.3	45	16 19	16 53	17 30	10 54 34		21 58 69	
7	286	09.5		17.9	224	21.9	96	-11 00.5	40	36	17 06	40	47 37		22 04 66	
8	301	09.2		18.0	238	50.5	96	-10 51.7	35	16 50	18	50	41 39		09 64	
9	316	08.9		18.1	253	19.1	96	42.8	30	17 02	29	17 58	35 42		13 62	
10	331	08.6		18.2	267	47.8	97	33.8	20	23	17 47	18 15	26 45		21 58	
11	346	08.3	-23	18.3	282	16.4	96	-10 24.8	10 N	17 42	18 05	18 31	10 18 48		22 28 55	
12	1	08.0	-23	18.4	296	45.1	97	-10 15.6	0	17 59	18 22	18 48	10 10 51		22 34 52	
13	16	07.6		18.5	311	13.8	97	-10 06.5	10 S	18 17	18 40	19 07	10 02 55		41 48	
14	31	07.3		18.7	325	42.5	97	-9 57.3	20	36	19 00	29	9 54 58		47 45	
15	46	07.0		18.8	340	11.2	97	48.0	30	18 58	25	19 58	44 62		55 41	
16	61	06.7		18.9	354	40.0	98	38.6	35	19 11	40	20 17	39 63		22 59 39	
17	76	06.4	-23	19.0	9	08.8	98	-9 29.2	40	19 26	19 58	20 40	9 32 67		23 04 37	
18	91	06.1	-23	19.1	23	37.5	97	-9 19.7	45	19 44	20 21	21 10	9 25 69		23 10 33	
19	106	05.8		19.2	38	06.3	98	10.2	50	20 06	20 50	21 56	16 73		16 31	
20	121	05.5		19.3	52	35.1	98	-9 00.6	52	17	21 05	22 23	12 74		20 28	
21	136	05.2		19.4	67	03.9	98	-8 51.0	54	29	23	23 08	08 76		23 27	
22	151	04.9		19.5	81	32.8	99	41.3	56	20 43	21 45	** **	9 03 78		27 25	
23	166	04.6		19.6	96	01.6	98	31.6	58	21 00	22 15	** **	8 57 80		31 23	
24	181	04.3	-23	19.7	110	30.5	99	-8 21.8	60 S	21 20	23 04	** **	8 51 83		23 35 21	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 19 ^m 7		Mag: -4.1 PMG: 9 ^h 07 ^m		Mag: +1.4 PMG: 7 ^h 36 ^m		Mag: -2.1 PMG: 5 ^h 56 ^m		Mag: +0.5 PMG: 10 ^h 53 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	84	19.2	223	15.6	245	45.0	270	50.7	196	24.2						
1	99	21.7	238	15.1	260	46.1	285	53.0	211	26.4						
2	114	24.1	253	14.7	275	47.3	300	55.3	226	28.5						
3	129	26.6	268	14.2	290	48.4	315	57.6	241	30.7						
4	144	29.1	283	13.7	305	49.5	330	59.9	256	32.8						
5	159	31.5	298	13.3	320	50.6	346	02.2	271	35.0						
6	174	34.0	313	12.8	335	51.8	1	04.5	286	37.1						
7	189	36.5	328	12.4	350	52.9	16	06.8	301	39.3						
8	204	38.9	343	11.9	5	54.0	31	09.1	316	41.5						
9	219	41.4	358	11.5	20	55.1	46	11.4	331	43.6						
10	234	43.9	13	11.0	35	56.3	61	13.7	346	45.8						
11	249	46.3	28	10.5	50	57.4	76	16.0	1	47.9						
12	264	48.8	43	10.1	65	58.5	91	18.3	16	50.1						
13	279	51.3	58	09.6	80	59.6	106	20.6	31	52.3						
14	294	53.7	73	09.2	96	00.8	121	22.9	46	54.4						
15	309	56.2	88	08.7	111	01.9	136	25.2	61	56.6						
16	324	58.6	103	08.2	126	03.0	151	27.5	76	58.7						
17	340	01.1	118	07.8	141	04.1	166	29.8	92	00.9						
18	355	03.6	133	07.3	156	05.3	181	32.1	107	03.0						
19	10	06.0	148	06.9	171	06.4	196	34.4	122	05.2						
20	25	08.5	163	06.4	186	07.5	211	36.7	137	07.4						
21	40	11.0	178	05.9	201	08.6	226	39.0	152	09.5						
22	55	13.4	193	05.5	216	09.8	241	41.3	167	11.7						
23	70	15.9	208	05.0	231	10.9	256	43.6	182	13.8						
24	85	18.4	223	04.5	246	12.0	271	45.9	197	16.0						
Dif	—		-5		+11		+23		+22							
			-9		-5		-1		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 0			Edad: 5 ^d 6 SD: 16'0 PMG: 17 ^h 14 ^m	PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 58'9 R°: 51 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	181	04.3	-23	19.7	110	30.5	99	-8	21.8	60 N	7 04	8 01	8 59	11 48	20	22 53 85		
1	196	04.0		19.8	124	59.4	99		11.9	58	6 57	7 50	41	45	22	56 82		
2	211	03.7		19.9	139	28.3	99	-8	02.0	56	50	39	27	42	24	22 58 80		
3	226	03.4		20.0	153	57.2	99	-7	52.1	54	44	30	14	39	26	23 00 78		
4	241	03.1		20.1	168	26.1	99		42.1	52	38	22	8 03	36	28	02 76		
5	256	02.8	-23	20.2	182	55.0	99	-7	32.0	50	6 33	7 15	7 53	11 34	29	23 04 74		
6	271	02.5	-23	20.3	197	23.9	99	-7	22.0	45	6 21	6 59	7 32	11 28	33	23 07 71		
7	286	02.2		20.4	211	52.9	100		11.8	40	11	45	16	24	36	10 68		
8	301	01.9		20.5	226	21.9	100	-7	01.6	35	6 02	33	7 02	20	39	13 65		
9	316	01.6		20.6	240	50.8	99	-6	51.4	30	5 53	23	6 49	17	41	15 63		
10	331	01.3		20.7	255	19.8	100		41.2	20	37	6 04	28	11	45	19 58		
11	346	01.0	-23	20.8	269	48.8	100	-6	30.9	10 N	5 20	5 47	6 10	11 06	48	23 23 54		
12	1	00.6	-23	20.9	284	17.8	100	-6	20.5	0	5 03	5 30	5 52	11 01	52	23 26 51		
13	16	00.3		21.0	298	46.8	100	-6	10.1	10 S	4 45	5 12	35	10 57	54	29 48		
14	31	00.0		21.1	313	15.8	100	-5	59.7	20	4 22	4 51	5 16	52	58	32 45		
15	45	59.7		21.1	327	44.8	100		49.2	30	3 53	26	4 54	46	62	36 40		
16	60	59.4		21.2	342	13.9	101		38.7	35	34	4 11	41	42	65	38 38		
17	75	59.1	-23	21.3	356	42.9	100	-5	28.2	40	3 11	3 53	4 26	10 39	67	23 41 35		
18	90	58.8	-23	21.4	11	11.9	100	-5	17.6	45	2 41	3 30	4 08	10 34	70	23 43 33		
19	105	58.5		21.5	25	41.0	101	-5	07.0	50	1 56	3 01	3 45	29	74	47 29		
20	120	58.2		21.6	40	10.0	100	-4	56.4	52	1 28	2 46	35	26	76	48 27		
21	135	57.9		21.7	54	39.1	101		45.7	54	0 43	28	22	24	77	50 25		
22	150	57.6		21.8	69	08.2	101		35.0	56	** **	2 06	3 08	21	79	52 23		
23	165	57.3		21.8	83	37.2	100		24.3	58	** **	1 36	2 51	17	82	54 21		
24	180	57.0	-23	21.9	98	06.3	101	-4	13.5	60 S	** **	0 47	2 31	10 14	84	23 56 19		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 15 ^m 8		Mag: -4.1 PMG: 9 ^h 08 ^m			Mag: +1.4 PMG: 7 ^h 35 ^m			Mag: -2.1 PMG: 5 ^h 52 ^m			Mag: +0.5 PMG: 10 ^h 49 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°				
0	85	18.4	223	04.5	-13	51.9	246	12.0	-6	28.3	271	45.9	+4	04.0	197	16.0	-20	15.2
1	100	20.8	238	04.1		52.8	261	13.1		28.8	286	48.2		03.9	212	18.2		15.2
2	115	23.3	253	03.6		53.7	276	14.3		29.4	301	50.5		03.9	227	20.3		15.3
3	130	25.8	268	03.1		54.6	291	15.4		29.9	316	52.8		03.8	242	22.5		15.3
4	145	28.2	283	02.7		55.5	306	16.5		30.4	331	55.1		03.8	257	24.6		15.4
5	160	30.7	298	02.2	-13	56.4	321	17.6	-6	31.0	346	57.4	+4	03.7	272	26.8	-20	15.4
6	175	33.1	313	01.7	-13	57.3	336	18.8	-6	31.5	1	59.7	+4	03.6	287	29.0	-20	15.4
7	190	35.6	328	01.3		58.2	351	19.9		32.0	17	02.0		03.6	302	31.1		15.5
8	205	38.1	343	00.8	-13	59.1	6	21.0		32.6	32	04.3		03.5	317	33.3		15.5
9	220	40.5	358	00.3	-14	00.0	21	22.1		33.1	47	06.6		03.5	332	35.4		15.6
10	235	43.0	12	59.8	-14	00.9	36	23.3		33.6	62	08.9		03.4	347	37.6		15.6
11	250	45.5	27	59.4	-14	01.8	51	24.4	-6	34.2	77	11.2	+4	03.4	2	39.8	-20	15.7
12	265	47.9	42	58.9	-14	02.7	66	25.5	-6	34.7	92	13.5	+4	03.3	17	41.9	-20	15.7
13	280	50.4	57	58.4		03.5	81	26.7		35.3	107	15.8		03.3	32	44.1		15.8
14	295	52.9	72	58.0		04.4	96	27.8		35.8	122	18.1		03.2	47	46.2		15.8
15	310	55.3	87	57.5		05.3	111	28.9		36.3	137	20.4		03.1	62	48.4		15.8
16	325	57.8	102	57.0		06.2	126	30.0		36.9	152	22.7		03.1	77	50.5		15.9
17	341	00.2	117	56.5	-14	07.1	141	31.2	-6	37.4	167	25.0	+4	03.0	92	52.7	-20	15.9
18	356	02.7	132	56.1	-14	08.0	156	32.3	-6	37.9	182	27.4	+4	03.0	107	54.9	-20	16.0
19	11	05.2	147	55.6		08.9	171	33.4		38.5	197	29.7		02.9	122	57.0		16.0
20	26	07.6	162	55.1		09.8	186	34.5		39.0	212	32.0		02.9	137	59.2		16.1
21	41	10.1	177	54.6		10.6	201	35.7		39.5	227	34.3		02.8	153	01.3		16.1
22	56	12.6	192	54.1		11.5	216	36.8		40.1	242	36.6		02.8	168	03.5		16.1
23	71	15.0	207	53.7		12.4	231	37.9		40.6	257	38.9		02.7	183	05.7		16.2
24	86	17.5	222	53.2	-14	13.3	246	39.0	-6	41.1	272	41.2	+4	02.6	198	07.8	-20	16.2
Dif	—		-5	-9		+11	-5			+23	-1		+22					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 11 ^h 56 ^m 4			Edad: 6 ^d 6 PHE	SD: 16 ^h 1 PMG: 18 ^h 05 ^m	4 ^h : 59 ⁰ 12 ^h : 59 ¹ 20 ^h : 59 ² Rº: 52 ^m										
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	57.0	-23	21.9	98	06.3	-4	13.5	60 N	14 53	15 51	16 48	12 08	19	**	**
1	195	56.7		22.0	112	35.4 ¹⁰¹	-4	02.7 ¹⁰⁸	58	15 11	16 03	16 55	07 21		**	**
2	210	56.4		22.1	127	04.4 ¹⁰⁰	-3	51.9 ¹⁰⁸	56	25	13	17 02	06 23		**	**
3	225	56.1		22.2	141	33.5 ¹⁰¹		41.0 ¹⁰⁹	54	38	22	08	05 25		**	**
4	240	55.8		22.2	156	02.6 ¹⁰¹		30.2 ¹⁰⁸	52	49	30	14	04 27		**	**
5	255	55.4	-23	22.3	170	31.6 ¹⁰⁰	-3	19.3 ¹⁰⁹	50	15 59	16 37	17 19	12 03	29	**	**
6	270	55.1	-23	22.4	185	00.7 ¹⁰¹	-3	08.4 ¹⁰⁹	45	16 20	16 54	17 31	12 01	33	**	**
7	285	54.8		22.5	199	29.8 ¹⁰¹	-2	57.4 ¹¹⁰	40	37	17 07	41	12 00	36	**	**
8	300	54.5		22.6	213	58.9 ¹⁰¹		46.5 ¹⁰⁹	35	16 51	19	51	11 59	38	**	**
9	315	54.2		22.6	228	27.9 ¹⁰⁰		35.5 ¹¹⁰	30	17 03	29	59	58 40		**	**
10	330	53.9		22.7	242	57.0 ¹⁰¹		24.5 ¹¹⁰	20	24	17 48	18 16	56 44		**	**
11	345	53.6	-23	22.8	257	26.0 ¹⁰⁰	-2	13.5 ¹¹⁰	10 N	17 43	18 06	18 32	11 54	48	**	**
12	0	53.3	-23	22.9	271	55.1 ¹⁰¹	-2	02.4 ¹¹¹	0	18 00	18 23	18 49	11 53	51	**	**
13	15	53.0		22.9	286	24.1 ¹⁰⁰	-1	51.4 ¹¹⁰	10 S	18	18 41	19 08	51 55		**	**
14	30	52.7		23.0	300	53.2 ¹⁰¹		40.3 ¹¹¹	20	37	19 01	19 31	50 58		**	**
15	45	52.4		23.1	315	22.2 ¹⁰⁰		29.3 ¹¹⁰	30	18 59	26	20 00	48 62		**	**
16	60	52.1		23.1	329	51.3 ¹⁰¹		18.2 ¹¹¹	35	19 12	19 42	18	47 65		**	**
17	75	51.8	-23	23.2	344	20.3 ¹⁰⁰	-1	07.1 ¹¹¹	40	19 27	20 00	20 41	11 46	67	**	**
18	90	51.5	-23	23.3	358	49.3 ¹⁰⁰	-0	56.0 ¹¹¹	45	19 45	20 22	21 12	11 44	71	**	**
19	105	51.1		23.3	13	18.3 ¹⁰⁰		44.8 ¹¹²	50	20 07	20 52	21 58	43 74		**	**
20	120	50.8		23.4	27	47.3 ¹⁰⁰		33.7 ¹¹¹	52	18	21 07	22 25	42 76		**	**
21	135	50.5		23.5	42	16.3 ¹⁰⁰		22.6 ¹¹¹	54	31	25	23 12	41 78		**	**
22	150	50.2		23.5	56	45.3 ¹⁰⁰		11.4 ¹¹²	56	20 45	21 47	** **	40 81		**	**
23	165	49.9		23.6	71	14.2 ⁹⁹	-0	00.3 ¹¹¹	58	21 02	22 17	** **	39 83		**	**
24	180	49.6	-23	23.7	85	43.2 ¹⁰⁰	+0	10.9 ¹¹²	60 S	21 22	23 08	** **	11 38	86	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 11 ^m 8		Mag: -4.1 PMG: 9 ^h 09 ^m		Mag: +1.4 PMG: 7 ^h 33 ^m		Mag: -2.1 PMG: 5 ^h 48 ^m		Mag: +0.5 PMG: 10 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	86	17.5	222	53.2	-14	13.3	246	39.0	-6	41.1
1	101	20.0	237	52.7		14.2	261	40.2		41.7
2	116	22.4	252	52.2		15.1	276	41.3		42.2
3	131	24.9	267	51.8		16.0	291	42.4		42.7
4	146	27.4	282	51.3		16.8	306	43.6		43.3
5	161	29.8	297	50.8	-14	17.7	321	44.7	-6	43.8
6	176	32.3	312	50.3	-14	18.6	336	45.8	-6	44.3
7	191	34.7	327	49.8		19.5	351	46.9		44.9
8	206	37.2	342	49.3		20.4	6	48.1		45.4
9	221	39.7	357	48.9		21.2	21	49.2		45.9
10	236	42.1	12	48.4		22.1	36	50.3		46.5
11	251	44.6	27	47.9	-14	23.0	51	51.5	-6	47.0
12	266	47.1	42	47.4	-14	23.9	66	52.6	-6	47.5
13	281	49.5	57	46.9		24.8	81	53.7		48.1
14	296	52.0	72	46.4		25.6	96	54.8		48.6
15	311	54.5	87	46.0		26.5	111	56.0		49.1
16	326	56.9	102	45.5		27.4	126	57.1		49.6
17	341	59.4	117	45.0	-14	28.3	141	58.2	-6	50.2
18	357	01.9	132	44.5	-14	29.1	156	59.3	-6	50.7
19	12	04.3	147	44.0		30.0	172	00.5		51.2
20	27	06.8	162	43.5		30.9	187	01.6		51.8
21	42	09.2	177	43.0		31.8	202	02.7		52.3
22	57	11.7	192	42.5		32.6	217	03.9		52.8
23	72	14.2	207	42.0		33.5	232	05.0		53.4
24	87	16.6	222	41.6	-14	34.4	247	06.1	-6	53.9
Dif	—		-5	-9		+11	-5	+23		-1
									+22	0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 56 ^m 9			Edad: 7 ^d 6 PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/4 R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	49.6	-23	23.7	85	43.2	99	+0	10.9	60 N	7 06	8 03	9 00	12 27	20	0 18	86	
1	195	49.3		23.7	100	12.1	111		22.0	58	6 58	7 51	8 43	28 23		18	83	
2	210	49.0		23.8	114	41.1	100		33.2	56	52	41	28	29 25		18	81	
3	225	48.7		23.8	129	10.0	99		44.3	54	45	32	16	30 27		18	79	
4	240	48.4		23.9	143	38.9	99	+0	55.5	52	40	23	8 04	31 29		18	77	
5	255	48.1	-23	24.0	158	07.8	99	+1	06.6	50	6 34	7 16	7 55	12 32	30	0 18	75	
6	270	47.8	-23	24.0	172	36.6	98	+1	17.8	45	6 23	7 00	7 34	12 34	34	0 18	71	
7	285	47.5		24.1	187	05.5	99		28.9	40	12	6 46	17	36 36		18	68	
8	300	47.1		24.1	201	34.3	98		40.1	35	6 03	35	7 03	37 39		18	65	
9	315	46.8		24.2	216	03.2	99	+1	51.2	30	5 54	24	6 50	38 42		18	62	
10	330	46.5		24.3	230	32.0	98	+2	02.3	20	38	6 05	29	40 46		17	59	
11	345	46.2	-23	24.3	245	00.8	98	+2	13.5	10 N	5 21	5 48	6 11	12 42	49	0 17	55	
12	0	45.9	-23	24.4	259	29.5	97	+2	24.6	0	5 04	5 31	5 53	12 44	53	0 17	52	
13	15	45.6		24.4	273	58.3	98		35.7	10 S	4 45	5 13	36	46 56		17	48	
14	30	45.3		24.5	288	27.0	97		46.8	20	4 23	4 52	5 17	48 59		17	45	
15	45	45.0		24.5	302	55.7	97	+2	57.8	30	3 54	27	4 55	50 64		16	41	
16	60	44.7		24.6	317	24.4	97	+3	08.9	35	35	4 12	42	52 65		16	39	
17	75	44.4	-23	24.6	331	53.1	97	+3	20.0	40	3 12	3 54	4 27	12 53	69	0 16	36	
18	90	44.1	-23	24.7	346	21.7	96	+3	31.0	45	2 41	3 31	4 08	12 55	72	0 16	33	
19	105	43.8		24.7	0	50.3	96		42.0	50	1 56	3 01	3 46	57 76		16	29	
20	120	43.4		24.8	15	18.9	96	+3	53.0	52	1 28	2 46	35	58 77		15	28	
21	135	43.1		24.8	29	47.5	96	+4	04.0	54	0 42	28	23	12 59	79	15	26	
22	150	42.8		24.8	44	16.0	95		14.9	56	** **	2 06	3 09	13 01	81	15	24	
23	165	42.5		24.9	58	44.5	95		25.9	58	** **	1 36	2 52	02 83		15	22	
24	180	42.2	-23	24.9	73	13.0	95	+4	36.8	60 S	** **	0 46	2 31	13 04	86	0 15	19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 07 ^m 9		Mag: -4.1 PMG: 9 ^h 10 ^m			Mag: +1.4 PMG: 7 ^h 31 ^m			Mag: -2.1 PMG: 5 ^h 45 ^m			Mag: +0.5 PMG: 10 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	87	16.6	222	41.6	-14	34.4	247	06.1	-6	53.9	273	36.7	+4	01.4	198	59.7	-20	17.3
1	102	19.1	237	41.1		35.3	262	07.2		54.4	288	39.0		01.3	214	01.8		17.3
2	117	21.6	252	40.6		36.1	277	08.4		55.0	303	41.3		01.3	229	04.0		17.3
3	132	24.0	267	40.1		37.0	292	09.5		55.5	318	43.6		01.2	244	06.2		17.4
4	147	26.5	282	39.6		37.9	307	10.6		56.0	333	46.0		01.2	259	08.3		17.4
5	162	29.0	297	39.1	-14	38.7	322	11.8	-6	56.6	348	48.3	+4	01.1	274	10.5	-20	17.5
6	177	31.4	312	38.6	-14	39.6	337	12.9	-6	57.1	3	50.6	+4	01.1	289	12.6	-20	17.5
7	192	33.9	327	38.1		40.5	352	14.0		57.6	18	52.9		01.0	304	14.8		17.6
8	207	36.3	342	37.6		41.4	7	15.1		58.1	33	55.2		01.0	319	17.0		17.6
9	222	38.8	357	37.1		42.2	22	16.3		58.7	48	57.5		00.9	334	19.1		17.6
10	237	41.3	12	36.6		43.1	37	17.4		59.2	63	59.9		00.9	349	21.3		17.7
11	252	43.7	27	36.1	-14	44.0	52	18.5	-6	59.7	79	02.2	+4	00.8	4	23.4	-20	17.7
12	267	46.2	42	35.6	-14	44.8	67	19.7	-7	00.3	94	04.5	+4	00.8	19	25.6	-20	17.8
13	282	48.7	57	35.1		45.7	82	20.8		00.8	109	06.8		00.7	34	27.8		17.8
14	297	51.1	72	34.6		46.6	97	21.9		01.3	124	09.1		00.7	49	29.9		17.8
15	312	53.6	87	34.1		47.4	112	23.1		01.8	139	11.5		00.6	64	32.1		17.9
16	327	56.1	102	33.6		48.3	127	24.2		02.4	154	13.8		00.6	79	34.2		17.9
17	342	58.5	117	33.1	-14	49.2	142	25.3	-7	02.9	169	16.1	+4	00.5	94	36.4	-20	18.0
18	358	01.0	132	32.6	-14	50.0	157	26.4	-7	03.4	184	18.4	+4	00.5	109	38.6	-20	18.0
19	13	03.5	147	32.1		50.9	172	27.6		04.0	199	20.7		00.4	124	40.7		18.1
20	28	05.9	162	31.6		51.7	187	28.7		04.5	214	23.1		00.4	139	42.9		18.1
21	43	08.4	177	31.1		52.6	202	29.8		05.0	229	25.4		00.3	154	45.1		18.1
22	58	10.8	192	30.6		53.5	217	31.0		05.5	244	27.7		00.3	169	47.2		18.2
23	73	13.3	207	30.1		54.3	232	32.1		06.1	259	30.0		00.2	184	49.4		18.2
24	88	15.8	222	29.6	-14	55.2	247	33.2	-7	06.6	274	32.3	+4	00.2	199	51.5	-20	18.3
Dif	—		-5			-9	+11			-5	+23		-1		+22			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 11 ^h 57 ^m 4				Edad: 8 ^d 6 PHE { SD: 16/2 PMG: 19 ^h 49 ^m 4 ^h : 59/4 12 ^h : 59/5 20 ^h : 59/5 R°: 54 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	42.2	-23	24.9	73	13.0	+4	36.8	60 N	14 54	15 51	16 48	12 47 23	1 44 86		
1	195	41.9		25.0	87	41.5		47.7 ¹⁰⁹	58	15 11	16 03	16 56	51 25	41 83		
2	210	41.6		25.0	102	09.9	94	+4 58.5 ¹⁰⁸	56		26	13	17 03	54 28	39 81	
3	225	41.3		25.1	116	38.4	95	+5 09.4 ¹⁰⁹	54		39	23	09	12 57 30	37 78	
4	240	41.0		25.1	131	06.7	93	20.2 ¹⁰⁸	52	15 50		31	15	13 00 31	35 77	
5	255	40.7	-23	25.1	145	35.1	94	+5 31.0 ¹⁰⁸	50	16 00	16 38	17 20	13 02 33	1 33 75		
6	270	40.4	-23	25.2	160	03.4	93	+5 41.7 ¹⁰⁷	45	16 20	16 54	17 32	13 08 36	1 29 72		
7	285	40.1		25.2	174	31.7	93	+5 52.5 ¹⁰⁸	40		37	17 08	42	12 39	26 68	
8	300	39.7		25.3	189	00.0	93	+6 03.1 ¹⁰⁶	35	16 52		20	17 51	16 42	23 66	
9	315	39.4		25.3	203	28.2	92	13.8 ¹⁰⁷	30	17 04		30	18 00	20 43	20 64	
10	330	39.1		25.3	217	56.4	92	24.4 ¹⁰⁶	20		25	17 49	17	26 47	16 60	
11	345	38.8	-23	25.4	232	24.6	92	+6 35.0 ¹⁰⁶	10 N	17 44	18 07	18 33	13 31 51	1 12 57		
12	0	38.5	-23	25.4	246	52.8	92	+6 45.6 ¹⁰⁶	0	18 01	18 24	18 50	13 37 53	1 09 53		
13	15	38.2		25.4	261	20.9	91	+6 56.1 ¹⁰⁵	10 S		19	18 42	19 09	42 57	05 50	
14	30	37.9		25.5	275	49.0	91	+7 06.6 ¹⁰⁵	20	18 38	19 02	19 32	47 60	1 02 46		
15	45	37.6		25.5	290	17.0	90	17.0 ¹⁰⁴	30	19 00		27	20 01	54 64	0 57 43	
16	60	37.3		25.5	304	45.0	90	27.4 ¹⁰⁴	35		13	19 43	19	13 57 67	55 40	
17	75	37.0	-23	25.6	319	13.0	90	+7 37.7 ¹⁰³	40	19 28	20 01	20 43	14 02 68	0 52 38		
18	90	36.7	-23	25.6	333	41.0	90	+7 48.0 ¹⁰³	45	19 46	20 23	21 13	14 07 71	0 49 35		
19	105	36.3		25.6	348	08.9	89	+7 58.3 ¹⁰³	50	20 09	20 53	21 59	13 75	45 31		
20	120	36.0		25.6	2	36.8	89	+8 08.5 ¹⁰²	52		20	21 08	22 27	15 77	43 30	
21	135	35.7		25.7	17	04.6	88	18.7 ¹⁰²	54		32	26	23 14	18 79	41 28	
22	150	35.4		25.7	31	32.4	88	28.8 ¹⁰¹	56	20 46	21 49	** **	22 80	39 26		
23	165	35.1		25.7	46	00.2	88	38.9 ¹⁰¹	58	21 03	22 19	** **	25 84	37 23		
24	180	34.8	-23	25.7	60	27.9	87	+8 48.9 ¹⁰⁰	60 S	21 23	23 10	** **	14 30 85	0 34 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 04 ^m 0		Mag: -4.1 PMG: 9 ^h 10 ^m		Mag: +1.4 PMG: 7 ^h 29 ^m		Mag: -2.1 PMG: 5 ^h 41 ^m		Mag: +0.5 PMG: 10 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	88	15.8	222	29.6	-14	55.2	247	33.2	-7	06.6
1	103	18.2	237	29.1		56.0	262	34.3		07.1
2	118	20.7	252	28.6		56.9	277	35.5		07.7
3	133	23.2	267	28.1		57.8	292	36.6		08.2
4	148	25.6	282	27.6		58.6	307	37.7		08.7
5	163	28.1	297	27.1	-14	59.5	322	38.9	-7	09.2
6	178	30.6	312	26.6	-15	00.3	337	40.0	-7	09.8
7	193	33.0	327	26.1		01.2	352	41.1		10.3
8	208	35.5	342	25.6		02.0	7	42.3		10.8
9	223	37.9	357	25.1		02.9	22	43.4		11.3
10	238	40.4	12	24.6		03.8	37	44.5		11.9
11	253	42.9	27	24.0	-15	04.6	52	45.7	-7	12.4
12	268	45.3	42	23.5	-15	05.5	67	46.8	-7	12.9
13	283	47.8	57	23.0		06.3	82	47.9		13.5
14	298	50.3	72	22.5		07.2	97	49.0		14.0
15	313	52.7	87	22.0		08.0	112	50.2		14.5
16	328	55.2	102	21.5		08.9	127	51.3		15.0
17	343	57.7	117	21.0	-15	09.7	142	52.4	-7	15.6
18	359	00.1	132	20.5	-15	10.6	157	53.6	-7	16.1
19	14	02.6	147	20.0		11.4	172	54.7		16.6
20	29	05.1	162	19.4		12.3	187	55.8		17.1
21	44	07.5	177	18.9		13.1	202	57.0		17.7
22	59	10.0	192	18.4		14.0	217	58.1		18.2
23	74	12.4	207	17.9		14.8	232	59.2		18.7
24	89	14.9	222	17.4	-15	15.7	248	00.4	-7	19.2
Dif	—		-5 -9		+11 -5		+23 0		+22 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: 9 ^d 6	PHE { 4 ^h : 59/5 12 ^h : 59/5 20 ^h : 59/5 R°: 56 ^m															
	hG ☉	Dec		hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	34.8	-23	25.7	60	27.9	+8	48.9	60 N	7 07	8 04	9 02	13 10	27	3 10	85				
1	195	34.5		25.8	74	55.6	87	+8	58.9	58	7 00	7 52	8 44		16 30	04	83			
2	210	34.2		25.8	89	23.3	87	+9	08.8	56	6 53	42	29	22	32	3 00	80			
3	225	33.9		25.8	103	50.9	86		18.7	54	47	33	17	27	33	2 55	78			
4	240	33.6		25.8	118	18.5	86		28.5	52	41	25	8 06	31	35	52	76			
5	255	33.2	-23	25.8	132	46.1	86	+9	38.2	50	6 36	7 17	7 56	13 35	37	2 48	75			
6	270	32.9	-23	25.9	147	13.6	85	+9	47.9	45	6 24	7 01	7 35	13 44	40	2 41	71			
7	285	32.6		25.9	161	41.1	85	+9	57.5	40	13	6 47	18	51	43	34	69			
8	300	32.3		25.9	176	08.5	84	+10	07.1	35	6 04	36	7 04	13 58	45	29	66			
9	315	32.0		25.9	190	35.9	84		16.6	30	5 55	25	6 51	14 03	47	24	64			
10	330	31.7		25.9	205	03.3	84		26.1	20	39	6 06	30	13	50	16	60			
11	345	31.4	-23	25.9	219	30.6	83	+10	35.5	10 N	5 22	5 49	6 12	14 22	53	2 09	57			
12	0	31.1	-23	26.0	233	57.9	83	+10	44.8	0	5 05	5 32	5 54	14 30	56	2 02	54			
13	15	30.8		26.0	248	25.2	83	+10	54.1	10 S	4 46	5 13	37	39	57	1 55	52			
14	30	30.5		26.0	262	52.4	82	+11	03.3	20	4 24	4 53	5 18	47	61	48	48			
15	45	30.2		26.0	277	19.6	82		12.4	30	3 55	28	4 55	14 58	64	40	45			
16	60	29.8		26.0	291	46.7	81		21.5	35	36	4 13	42	15 04	65	35	43			
17	75	29.5	-23	26.0	306	13.8	81	+11	30.5	40	3 13	3 54	4 27	15 10	68	1 30	40			
18	90	29.2	-23	26.0	320	40.9	81	+11	39.4	45	2 42	3 32	4 09	15 18	71	1 24	38			
19	105	28.9		26.0	335	07.9	80		48.2	50	1 56	3 02	3 47	28 74	16	35				
20	120	28.6		26.0	349	34.9	80	+11	57.0	52	1 28	2 47	36	32 75	13	33				
21	135	28.3		26.1	4	01.9	80	+12	05.7	54	0 41	29	23	37 77	09	31				
22	150	28.0		26.1	18	28.8	79		14.3	56	** **	2 07	3 09	42 79	05	29				
23	165	27.7		26.1	32	55.7	79		22.9	58	** **	1 37	2 52	49 81	1 00	28				
24	180	27.4	-23	26.1	47	22.5	78	+12	31.3	60 S	** **	0 45	2 32	15 55	84	0 55	25			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 18 ^h 00 ^m 0			Mag: -4.1 PMG: 9 ^h 11 ^m			Mag: +1.4 PMG: 7 ^h 27 ^m			Mag: -2.1 PMG: 5 ^h 37 ^m			Mag: +0.5 PMG: 10 ^h 36 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♋	Dec	hG ♌	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	89	14.9	222	17.4	-15	15.7			248	00.4	-7	19.2	275	28.2	+3	59.0	200	43.4	-20	19.3
1	104	17.4	237	16.9		16.5			263	01.5		19.8	290	30.5		59.0	215	45.6		19.3
2	119	19.8	252	16.3		17.4			278	02.6		20.3	305	32.8		58.9	230	47.7		19.4
3	134	22.3	267	15.8		18.2			293	03.7		20.8	320	35.1		58.9	245	49.9		19.4
4	149	24.8	282	15.3		19.1			308	04.9		21.3	335	37.5		58.8	260	52.1		19.4
5	164	27.2	297	14.8	-15	19.9			323	06.0	-7	21.9	350	39.8	+3	58.8	275	54.2	-20	19.5
6	179	29.7	312	14.3	-15	20.7			338	07.1	-7	22.4	5	42.1	+3	58.8	290	56.4	-20	19.5
7	194	32.2	327	13.8		21.6			353	08.3		22.9	20	44.5		58.7	305	58.6		19.6
8	209	34.6	342	13.2		22.4			8	09.4		23.4	35	46.8		58.7	321	00.7		19.6
9	224	37.1	357	12.7		23.3			23	10.5		24.0	50	49.1		58.6	336	02.9		19.7
10	239	39.6	12	12.2		24.1			38	11.7		24.5	65	51.5		58.6	351	05.1		19.7
11	254	42.0	27	11.7	-15	25.0			53	12.8	-7	25.0	80	53.8	+3	58.5	6	07.2	-20	19.7
12	269	44.5	42	11.1	-15	25.8			68	13.9	-7	25.5	95	56.1	+3	58.5	21	09.4	-20	19.8
13	284	46.9	57	10.6		26.6			83	15.1		26.1	110	58.5		58.4	36	11.5		19.8
14	299	49.4	72	10.1		27.5			98	16.2		26.6	126	00.8		58.4	51	13.7		19.9
15	314	51.9	87	09.6		28.3			113	17.3		27.1	141	03.1		58.4	66	15.9		19.9
16	329	54.3	102	09.0		29.1			128	18.5		27.6	156	05.5		58.3	81	18.0		19.9
17	344	56.8	117	08.5	-15	30.0			143	19.6	-7	28.1	171	07.8	+3	58.3	96	20.2	-20	20.0
18	359	59.3	132	08.0	-15	30.8			158	20.7	-7	28.7	186	10.1	+3	58.2	111	22.4	-20	20.0
19	15	01.7	147	07.5		31.7			173	21.9		29.2	201	12.5		58.2	126	24.5		20.1
20	30	04.2	162	06.9		32.5			188	23.0		29.7	216	14.8		58.1	141	26.7		20.1
21	45	06.7	177	06.4		33.3			203	24.1		30.2	231	17.1		58.1	156	28.8		20.1
22	60	09.1	192	05.9		34.2			218	25.3		30.8	246	19.5		58.1	171	31.0		20.2
23	75	11.6	207	05.4		35.0			233	26.4		31.3	261	21.8		58.0	186	33.2		20.2
24	90	14.1	222	04.8	-15	35.8			248	27.5	-7	31.8	276	24.1	+3	58.0	201	35.3	-20	20.3
Dif	—			-5	-8	+11			-5	+23			0	+22						

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: 10 ^d 6 PHE { 4 ^h : 59:5 12 ^h : 59:4 20 ^h : 59:4 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	180	27.4	-23	26.1	47	22.5	+12 31.3	60 N	14 55	15 52	16 49	13 37	35	4 35	81
1	195	27.1		26.1	61	49.3	78 39.7	58	15 12	16 04	16 57	46	37	27	79
2	210	26.7		26.1	76	16.1	78 48.1	56	27	14	17 04	13 54	38	20	77
3	225	26.4		26.1	90	42.8	77 +12 56.3	54	40	24	10	14 00	40	13	76
4	240	26.1		26.1	105	09.5	77 +13 04.4	52	15 51	32	15	06	42	08	74
5	255	25.8	-23	26.1	119	36.2	77 +13 12.5	50	16 01	16 39	17 21	14 12	43	4 03	72
6	270	25.5	-23	26.1	134	02.8	76 +13 20.5	45	16 21	16 55	17 33	14 24	45	3 52	69
7	285	25.2		26.1	148	29.4	76 28.4	40	38	17 09	43	34	47	43	67
8	300	24.9		26.1	162	55.9	75 36.2	35	16 52	21	17 52	43	48	35	65
9	315	24.6		26.1	177	22.5	76 44.0	30	17 05	31	18 01	14 50	50	28	64
10	330	24.3		26.1	191	48.9	74 51.6	20	26	17 50	18	15 03	53	16	61
11	345	24.0	-23	26.1	206	15.4	75 +13 59.2	10 N	17 45	18 08	18 34	15 15	54	3 06	58
12	0	23.6	-23	26.1	220	41.8	74 +14 06.6	0	18 02	18 25	18 51	15 26	56	2 56	56
13	15	23.3		26.0	235	08.2	74 14.0	10 S	20	18 43	19 10	36	59	47	53
14	30	23.0		26.0	249	34.5	73 21.3	20	18 39	19 03	19 33	15 48	61	36	52
15	45	22.7		26.0	264	00.8	73 28.5	30	19 01	28	20 02	16 02	63	25	48
16	60	22.4		26.0	278	27.1	73 35.6	35	14	19 44	20	09	65	18	47
17	75	22.1	-23	26.0	292	53.4	73 +14 42.6	40	19 29	20 02	20 44	16 18	66	2 10	45
18	90	21.8	-23	26.0	307	19.6	72 +14 49.5	45	19 47	20 25	21 14	16 29	68	2 02	42
19	105	21.5		26.0	321	45.8	72 +14 56.3	50	20 10	20 54	22 00	42	70	1 51	39
20	120	21.2		26.0	336	11.9	71 +15 03.0	52	21	21 09	22 28	47	72	46	38
21	135	20.9		26.0	350	38.1	72 09.6	54	33	27	23 15	16 54	73	40	37
22	150	20.5		26.0	5	04.2	71 16.2	56	20 47	21 50	** **	17 01	75	34	35
23	165	20.2		25.9	19	30.2	70 22.6	58	21 04	22 20	** **	10	76	28	33
24	180	19.9	-23	25.9	33	56.3	71 +15 28.9	60 S	21 25	23 11	** **	17 19	78	1 20	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 56 ^m 1		Mag: -4.1 PMG: 9 ^h 12 ^m		Mag: +1.4 PMG: 7 ^h 26 ^m		Mag: -2.1 PMG: 5 ^h 34 ^m		Mag: +0.5 PMG: 10 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	90	14.1	222	04.8	-15	35.8	248	27.5	-7	31.8
1	105	16.5	237	04.3		36.7	263	28.6		32.3
2	120	19.0	252	03.8		37.5	278	29.8		32.9
3	135	21.4	267	03.2		38.3	293	30.9		33.4
4	150	23.9	282	02.7		39.2	308	32.0		33.9
5	165	26.4	297	02.2	-15	40.0	323	33.2	-7	34.4
6	180	28.8	312	01.6	-15	40.8	338	34.3	-7	34.9
7	195	31.3	327	01.1		41.7	353	35.4		35.5
8	210	33.8	342	00.6		42.5	8	36.6		36.0
9	225	36.2	357	00.0		43.3	23	37.7		36.5
10	240	38.7	11	59.5		44.1	38	38.8		37.0
11	255	41.2	26	59.0	-15	45.0	53	40.0	-7	37.5
12	270	43.6	41	58.4	-15	45.8	68	41.1	-7	38.1
13	285	46.1	56	57.9		46.6	83	42.2		38.6
14	300	48.5	71	57.4		47.4	98	43.4		39.1
15	315	51.0	86	56.8		48.3	113	44.5		39.6
16	330	53.5	101	56.3		49.1	128	45.6		40.2
17	345	55.9	116	55.8	-15	49.9	143	46.8	-7	40.7
18	0	58.4	131	55.2	-15	50.7	158	47.9	-7	41.2
19	16	00.9	146	54.7		51.6	173	49.0		41.7
20	31	03.3	161	54.1		52.4	188	50.2		42.2
21	46	05.8	176	53.6		53.2	203	51.3		42.8
22	61	08.3	191	53.1		54.0	218	52.4		43.3
23	76	10.7	206	52.5		54.8	233	53.6		43.8
24	91	13.2	221	52.0	-15	55.7	248	54.7	-7	44.3
Dif	—		-5		-8		+11		-5	

UT	SOL				O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16/3 PMG: 11 ^h 58 ^m 9				Edad: 11 ^d 6 PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/1 R°: 57 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	h	m	m
0	180	19.9	-23	25.9	33	56.3	+15	28.9	62	58	60 N	7	08	8	05	9	03	14	12	44	5	56	74	
1	195	19.6		25.9	48	22.3	70	35.1	62	58		7	01	7	53	8	45		23	45		46	72	
2	210	19.3		25.9	62	48.3	70	41.3	62	56		6	54		43	30		32	47		37	70		
3	225	19.0		25.9	77	14.2	69	47.3	60	54			48		34	18		40	48		29	69		
4	240	18.7		25.9	91	40.2	70	53.2	59	52			42		26	8	07	48	48		22	68		
5	255	18.4	-23	25.8	106	06.1	69	+15	59.0	58	50	6	37	7	18	7	57	14	55	49	5	15	68	
6	270	18.1	-23	25.8	120	32.0	69	+16	04.7	57	45	6	25	7	02	7	36	15	09	51	5	01	66	
7	285	17.8		25.8	134	57.8	68		10.3	56	40		14	6	48	19		21	52		4	50	64	
8	300	17.4		25.8	149	23.7	69		15.8	55	35	6	05		37	7	05	31	53		40	63		
9	315	17.1		25.8	163	49.5	68		21.2	54	30	5	56		26	6	52	40	54		32	62		
10	330	16.8		25.7	178	15.3	68		26.5	53	20		40	6	07	31		15	56	55	17	60		
11	345	16.5	-23	25.7	192	41.1	68	+16	31.7	52	10 N	5	23	5	50	6	13	16	09	56	4	04	59	
12	0	16.2	-23	25.7	207	06.9	68	+16	36.7	50	0	5	06	5	33	5	55	16	22	57	3	52	57	
13	15	15.9		25.7	221	32.6	67		41.7	50	10 S	4	47	5	14	38		35	58		40	56		
14	30	15.6		25.6	235	58.4	68		46.6	49	20	4	25	4	54	5	19	16	49	59		28	54	
15	45	15.3		25.6	250	24.1	67		51.3	47	30	3	56		29	4	56	17	05	60		13	52	
16	60	15.0		25.6	264	49.8	67	+16	55.9	46	35		37	4	14	43		14	61		3	05	51	
17	75	14.7	-23	25.5	279	15.5	67	+17	00.4	45	40	3	14	3	55	4	28	17	24	62	2	55	50	
18	90	14.3	-23	25.5	293	41.2	67	+17	04.9	45	45	2	43	3	33	4	10	17	37	63	2	44	48	
19	105	14.0		25.5	308	06.8	66		09.2	43	50	1	57	3	03	3	48		52	64		30	46	
20	120	13.7		25.4	322	32.5	67		13.3	41	52	1	29	2	48	37		17	59	65		24	45	
21	135	13.4		25.4	336	58.1	66		17.4	41	54	0	42		30	24		18	07	65		17	44	
22	150	13.1		25.4	351	23.7	66		21.4	40	56	** **	2	07		3	10		16	66		09	43	
23	165	12.8		25.3	5	49.4	67		25.2	38	58	** **	1	37		2	53		26	67		2	01	40
24	180	12.5	-23	25.3	20	15.0	66	+17	28.9	37	60 S	** **	0	46		2	33	18	37	69	1	51	39	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 17 ^h 52 ^m 2				Mag: -4.1 PMG: 9 ^h 13 ^m				Mag: +1.3 PMG: 7 ^h 24 ^m				Mag: -2.2 PMG: 5 ^h 30 ^m				Mag: +0.5 PMG: 10 ^h 29 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	91	13.2	221	52.0	-15	55.7	248	54.7	-7	44.3	277	20.3	+3	57.0	202	27.3	-20	21.3						
1	106	15.7	236	51.4		56.5	263	55.8		44.8	292	22.6		56.9	217	29.4		21.3						
2	121	18.1	251	50.9		57.3	278	57.0		45.3	307	25.0		56.9	232	31.6		21.3						
3	136	20.6	266	50.3		58.1	293	58.1		45.9	322	27.3		56.9	247	33.8		21.4						
4	151	23.0	281	49.8		58.9	308	59.2		46.4	337	29.6		56.8	262	35.9		21.4						
5	166	25.5	296	49.3	-15	59.8	324	00.4	-7	46.9	352	32.0	+3	56.8	277	38.1	-20	21.5						
6	181	28.0	311	48.7	-16	00.6	339	01.5	-7	47.4	7	34.3	+3	56.7	292	40.3	-20	21.5						
7	196	30.4	326	48.2		01.4	354	02.7		47.9	22	36.7		56.7	307	42.4		21.5						
8	211	32.9	341	47.6		02.2	9	03.8		48.5	37	39.0		56.7	322	44.6		21.6						
9	226	35.4	356	47.1		03.0	24	04.9		49.0	52	41.4		56.6	337	46.8		21.6						
10	241	37.8	11	46.5		03.8	39	06.1		49.5	67	43.7		56.6	352	48.9		21.7						
11	256	40.3	26	46.0	-16	04.6	54	07.2	-7	50.0	82	46.1	+3	56.5	7	51.1	-20	21.7						
12	271	42.8	41	45.4	-16	05.4	69	08.3	-7	50.5	97	48.4	+3	56.5	22	53.3	-20	21.7						
13	286	45.2	56	44.9		06.3	84	09.5		51.1	112	50.7		56.5	37	55.4		21.8						
14	301	47.7	71	44.3		07.1	99	10.6		51.6	127	53.1		56.4	52	57.6		21.8						
15	316	50.2	86	43.8		07.9	114	11.7		52.1	142	55.4		56.4	67	59.7		21.9						
16	331	52.6	101	43.2		08.7	129	12.9		52.6	157	57.8		56.4	83	01.9		21.9						
17	346	55.1	116	42.7	-16	09.5	144	14.0	-7	53.1	173	00.1	+3	56.3	98	04.1	-20	21.9						
18	1	57.5	131	42.1	-16	10.3	159	15.1	-7	53.6	188	02.5	+3	56.3	113	06.2	-20	22.0						
19	17	00.0	146	41.6		11.1	174	16.3		54.2	203	04.8		56.2	128	08.4		22.0						
20	32	02.5	161	41.0		11.9	189	17.4		54.7	218	07.2		56.2	143	10.6		22.1						
21	47	04.9	176	40.5		12.7	204	18.5		55.2	233	09.5		56.2	158	12.7		22.1						
22	62	07.4	191	39.9		13.5	219	19.7		55.7	248	11.9		56.1	173	14.9		22.1						
23	77	09.9	206	39.4		14.3	234	20.8		56.2	263	14.2		56.1	188	17.1		22.2						
24	92	12.3	221	38.8	-16	15.1	249	21.9	-7	56.7	278	16.6	+3	56.1	203	19.2	-20	22.2						
Dif	—		-5		-8		+11		-5		+23		0		+22									

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: 12 ^d 6 PHE { 4 ^h : 58/9 12 ^h : 58/8 20 ^h : 58/6 Rº: 56 ^m SD: 16:1 PMG: 23 ^h 33 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora Rº		Hora Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	12.5	-23	25.3	20	15.0	+17	28.9	60 N	14 56	15 54	16 50	14 56 55	7 10 62				
1	195	12.2		25.3	34	40.6	66	32.5	58	15 13	16 05	16 58	15 08 55	6 58 62				
2	210	11.9		25.2	49	06.2	66	36.0	56	28	16	17 05	19 55	47 62				
3	225	11.6		25.2	63	31.8	66	39.4	54	41	25	11	28 55	38 62				
4	240	11.2		25.2	77	57.4	66	42.7	52	15 52	33	17	36 56	30 61				
5	255	10.9	-23	25.1	92	23.0	66	+17 45.8	50	16 02	16 40	17 22	15 44 55	6 23 60				
6	270	10.6	-23	25.1	106	48.6	66	+17 48.9	45	16 23	16 56	17 34	16 00 56	6 07 60				
7	285	10.3		25.0	121	14.2	66	51.8	40	39	17 10	44	13 56	5 54 60				
8	300	10.0		25.0	135	39.8	66	54.6	35	16 54	22	17 53	24 56	43 59				
9	315	09.7		25.0	150	05.4	66	57.3	30	17 06	32	18 02	34 56	34 59				
10	330	09.4		24.9	164	31.0	66	+17 59.9	20	27	17 51	19	16 51 56	17 58				
11	345	09.1	-23	24.9	178	56.7	67	+18 02.3	10 N	17 46	18 09	18 35	17 05 57	5 03 58				
12	0	08.8	-23	24.8	193	22.3	66	+18 04.7	0	18 03	18 26	18 52	17 19 57	4 49 58				
13	15	08.5		24.8	207	47.9	66	06.9	10 S	21	18 44	19 11	33 57	36 56				
14	30	08.1		24.7	222	13.5	66	09.0	20	18 40	19 04	19 34	17 48 57	22 55				
15	45	07.8		24.7	236	39.2	67	10.9	30	19 02	29	20 03	18 05 57	4 05 55				
16	60	07.5		24.6	251	04.8	66	12.8	35	15	19 45	21	15 57	3 56 54				
17	75	07.2	-23	24.6	265	30.5	67	+18 14.6	40	19 30	20 03	20 44	18 26 57	3 45 54				
18	90	06.9	-23	24.5	279	56.2	67	+18 16.2	45	19 48	20 25	21 15	18 40 56	3 32 53				
19	105	06.6		24.5	294	21.9	67	17.7	50	20 10	20 55	22 01	18 56 57	16 53				
20	120	06.3		24.4	308	47.6	67	19.1	52	21	21 10	22 29	19 04 56	09 52				
21	135	06.0		24.4	323	13.3	67	20.4	54	34	28	23 15	12 57	3 01 51				
22	150	05.7		24.3	337	39.1	68	21.5	56	20 48	21 50	** **	22 56	2 52 51				
23	165	05.4		24.3	352	04.9	68	22.6	58	21 05	22 20	** **	33 56	41 51				
24	180	05.1	-23	24.2	6	30.6	67	+18 23.5	60 S	21 25	23 11	** **	19 46 56	2 30 49				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 48 ^m 3		Mag: -4.1 PMG: 9 ^h 14 ^m				Mag: +1.3 PMG: 7 ^h 22 ^m				Mag: -2.2 PMG: 5 ^h 26 ^m				Mag: +0.5 PMG: 10 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	12.3	221	38.8	-16	15.1	249	21.9	-7	56.7	278	16.6	+3	56.1	203	19.2	-20	22.2
1	107	14.8	236	38.3		15.9	264	23.1		57.3	293	18.9		56.0	218	21.4		22.3
2	122	17.3	251	37.7		16.8	279	24.2		57.8	308	21.3		56.0	233	23.6		22.3
3	137	19.7	266	37.1		17.6	294	25.3		58.3	323	23.6		55.9	248	25.7		22.3
4	152	22.2	281	36.6		18.4	309	26.5		58.8	338	26.0		55.9	263	27.9		22.4
5	167	24.7	296	36.0	-16	19.2	324	27.6	-7	59.3	353	28.3	+3	55.9	278	30.1	-20	22.4
6	182	27.1	311	35.5	-16	20.0	339	28.8	-7	59.8	8	30.7	+3	55.8	293	32.2	-20	22.5
7	197	29.6	326	34.9		20.8	354	29.9	-8	00.4	23	33.0		55.8	308	34.4		22.5
8	212	32.0	341	34.3		21.6	9	31.0		00.9	38	35.4		55.8	323	36.6		22.5
9	227	34.5	356	33.8		22.4	24	32.2		01.4	53	37.7		55.7	338	38.7		22.6
10	242	37.0	11	33.2		23.2	39	33.3		01.9	68	40.1		55.7	353	40.9		22.6
11	257	39.4	26	32.7	-16	24.0	54	34.4	-8	02.4	83	42.4	+3	55.7	8	43.1	-20	22.7
12	272	41.9	41	32.1	-16	24.8	69	35.6	-8	02.9	98	44.8	+3	55.6	23	45.2	-20	22.7
13	287	44.4	56	31.5		25.5	84	36.7		03.4	113	47.1		55.6	38	47.4		22.7
14	302	46.8	71	31.0		26.3	99	37.8		04.0	128	49.5		55.6	53	49.6		22.8
15	317	49.3	86	30.4		27.1	114	39.0		04.5	143	51.9		55.5	68	51.7		22.8
16	332	51.8	101	29.9		27.9	129	40.1		05.0	158	54.2		55.5	83	53.9		22.9
17	347	54.2	116	29.3	-16	28.7	144	41.2	-8	05.5	173	56.6	+3	55.4	98	56.1	-20	22.9
18	2	56.7	131	28.7	-16	29.5	159	42.4	-8	06.0	188	58.9	+3	55.4	113	58.2	-20	22.9
19	17	59.2	146	28.2		30.3	174	43.5		06.5	204	01.3		55.4	129	00.4		23.0
20	33	01.6	161	27.6		31.1	189	44.7		07.0	219	03.6		55.3	144	02.6		23.0
21	48	04.1	176	27.0		31.9	204	45.8		07.6	234	06.0		55.3	159	04.7		23.1
22	63	06.5	191	26.5		32.7	219	46.9		08.1	249	08.3		55.3	174	06.9		23.1
23	78	09.0	206	25.9		33.5	234	48.1		08.6	264	10.7		55.2	189	09.1		23.1
24	93	11.5	221	25.3	-16	34.3	249	49.2	-8	09.1	279	13.0	+3	55.2	204	11.2	-20	23.2
Dif	—		-6		-8		+11		-5		+24		0		+22		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'3 PMG: 11 ^h 59 ^m 9			Edad: 13 ^d 6 PHE { 4 ^h : 58'4 12 ^h : 58'3 20 ^h : 58'1 R°: ***m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	180	05.1	-23	24.2	6	30.6	+18	23.5	8	60 N	7 09	8 06	9 03	15 51	64	8 12	50				
1	195	04.7		24.2	20	56.5	69	24.3	7	58	7 01	7 54	8 46	16 03	63	8 00	50				
2	210	04.4		24.1	35	22.3	68	25.0	6	56	6 54	44	31	14 62		7 49	51				
3	225	04.1		24.1	49	48.1	68	25.6	5	54	48	35	18	23 62		40	51				
4	240	03.8		24.0	64	14.0	69	26.0	4	52	43	26	8 07	32 61		31	52				
5	255	03.5	-23	23.9	78	39.9	69	+18	26.4	4	50	6 37	7 19	7 57	16 39	61	7 23	53			
6	270	03.2	-23	23.9	93	05.9	70	+18	26.6	2	45	6 26	7 03	7 37	16 56	59	7 07	53			
7	285	02.9		23.8	107	31.8	69	26.7	1	40	15	6 49	20	17 09	59	6 54	53				
8	300	02.6		23.8	121	57.8	70	26.7	0	35	6 06	38	7 06	20 58		42	55				
9	315	02.3		23.7	136	23.8	70	26.6	1	30	5 57	27	6 53	30 58		33	54				
10	330	02.0		23.6	150	49.9	71	26.3	3	20	41	6 08	32	17 47	57	15	55				
11	345	01.7	-23	23.6	165	16.0	71	+18	26.0	3	10 N	5 24	5 51	6 14	18 02	56	6 01	55			
12	0	01.3	-23	23.5	179	42.1	71	+18	25.5	5	0	5 07	5 34	5 56	18 16	55	5 47	55			
13	15	01.0		23.5	194	08.2	71	24.9	6	10 S	4 48	5 16	39	30 54		32	57				
14	30	00.7		23.4	208	34.4	72	24.2	7	20	4 26	4 55	5 20	18 45	53	17	57				
15	45	00.4		23.3	223	00.6	72	23.4	8	30	3 57	30	4 58	19 02	52	5 00	57				
16	60	00.1		23.3	237	26.9	73	22.5	9	35	38	4 15	45	12 51		4 50	58				
17	74	59.8	-23	23.2	251	53.2	73	+18	21.4	11	40	3 15	3 57	4 29	19 23	50	4 39	58			
18	89	59.5	-23	23.1	266	19.5	73	+18	20.3	11	45	2 44	3 34	4 11	19 36	50	4 25	58			
19	104	59.2		23.0	280	45.9	74	19.0	13	50	1 59	3 04	3 49	19 53	48	09	58				
20	119	58.9		23.0	295	12.4	75	17.7	13	52	1 31	2 49	38	20 00	48	4 01	59				
21	134	58.6		22.9	309	38.8	74	16.2	15	54	0 44	31	26	09 46		3 52	59				
22	149	58.3		22.8	324	05.3	75	14.6	16	56	** **	2 09	3 11	18 46		43	59				
23	164	57.9		22.8	338	31.9	76	12.9	17	58	** **	1 39	2 55	29 45		32	59				
24	179	57.6	-23	22.7	352	58.5	76	+18	11.1	18	60 S	** **	0 48	2 34	20 42	43	3 19	60			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG 17 ^h 44 ^m 3		Mag: -4.1 PMG: 9 ^h 15 ^m			Mag: +1.3 PMG: 7 ^h 20 ^m			Mag: -2.2 PMG: 5 ^h 22 ^m			Mag: +0.5 PMG: 10 ^h 22 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	93	11.5	221	25.3	-16	34.3	249	49.2	-8	09.1	279	13.0	+3	55.2	204	11.2	-20	23.2			
1	108	13.9	236	24.8		35.1	264	50.3		09.6	294	15.4		55.2	219	13.4		23.2			
2	123	16.4	251	24.2		35.8	279	51.5		10.1	309	17.8		55.1	234	15.6		23.3			
3	138	18.9	266	23.6		36.6	294	52.6		10.6	324	20.1		55.1	249	17.7		23.3			
4	153	21.3	281	23.0		37.4	309	53.7		11.2	339	22.5		55.1	264	19.9		23.3			
5	168	23.8	296	22.5	-16	38.2	324	54.9	-8	11.7	354	24.8	+3	55.0	279	22.1	-20	23.4			
6	183	26.3	311	21.9	-16	39.0	339	56.0	-8	12.2	9	27.2	+3	55.0	294	24.2	-20	23.4			
7	198	28.7	326	21.3		39.8	354	57.2		12.7	24	29.6		55.0	309	26.4		23.5			
8	213	31.2	341	20.8		40.6	9	58.3		13.2	39	31.9		54.9	324	28.6		23.5			
9	228	33.6	356	20.2		41.3	24	59.4		13.7	54	34.3		54.9	339	30.7		23.5			
10	243	36.1	11	19.6		42.1	40	00.6		14.2	69	36.6		54.9	354	32.9		23.6			
11	258	38.6	26	19.0	-16	42.9	55	01.7	-8	14.7	84	39.0	+3	54.8	9	35.1	-20	23.6			
12	273	41.0	41	18.5	-16	43.7	70	02.8	-8	15.3	99	41.3	+3	54.8	24	37.2	-20	23.7			
13	288	43.5	56	17.9		44.5	85	04.0		15.8	114	43.7		54.8	39	39.4		23.7			
14	303	46.0	71	17.3		45.2	100	05.1		16.3	129	46.1		54.7	54	41.6		23.7			
15	318	48.4	86	16.7		46.0	115	06.3		16.8	144	48.4		54.7	69	43.7		23.8			
16	333	50.9	101	16.2		46.8	130	07.4		17.3	159	50.8		54.7	84	45.9		23.8			
17	348	53.4	116	15.6	-16	47.6	145	08.5	-8	17.8	174	53.2	+3	54.7	99	48.1	-20	23.9			
18	3	55.8	131	15.0	-16	48.4	160	09.7	-8	18.3	189	55.5	+3	54.6	114	50.2	-20	23.9			
19	18	58.3	146	14.4		49.1	175	10.8		18.8	204	57.9		54.6	129	52.4		23.9			
20	34	00.8	161	13.9		49.9	190	11.9		19.3	220	00.2		54.6	144	54.6		24.0			
21	49	03.2	176	13.3		50.7	205	13.1		19.9	235	02.6		54.5	159	56.7		24.0			
22	64	05.7	191	12.7		51.5	220	14.2		20.4	250	05.0		54.5	174	58.9		24.1			
23	79	08.1	206	12.1		52.2	235	15.4		20.9	265	07.3		54.5	190	01.1		24.1			
24	94	10.6	221	11.5	-16	53.0	250	16.5	-8	21.4	280	09.7	+3	54.4	205	03.2	-20	24.1			
Dif	—		-6			-8	+11			-5			+24			0			+22		

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 00 ^m 4				Edad: 14 ^d 6 PHE { 4 ^h : 57 ^m 8 12 ^h : 57 ^m 6 20 ^h : 57 ^m 4 PMG: 0 ^h 29 ^m R°: 54 ^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	57.6	-23	22.7	352	58.5	+18	11.1	60 N	14 57	15 55	16 52	16 55	70	9 02	38		
1	194	57.3		22.6	7	25.1	76	09.1	58	15 15	16 07	16 59	17 06	69	8 50	40		
2	209	57.0		22.5	21	51.8	77	07.1	56	30	17	17 06	16 68		40	41		
3	224	56.7		22.5	36	18.6	78	05.0	54	42	26	12	25 66		31	42		
4	239	56.4		22.4	50	45.4	78	02.7	52	15 53	34	18	33 65		23	43		
5	254	56.1	-23	22.3	65	12.2	78	+18 00.4	50	16 03	16 42	17 23	17 40	64	8 16	44		
6	269	55.8	-23	22.2	79	39.1	79	+17 57.9	45	16 24	16 58	17 35	17 55	62	8 00	46		
7	284	55.5		22.1	94	06.1	80	55.4	40	41	17 11	45	18 08	60	7 47	48		
8	299	55.2		22.1	108	33.1	80	52.7	35	16 55	23	17 55	18 59		37	48		
9	314	54.9		22.0	123	00.1	80	50.0	30	17 07	33	18 03	28 57		27	49		
10	329	54.6		21.9	137	27.2	81	47.1	20	28	17 52	20	44 55		7 10	51		
11	344	54.2	-23	21.8	151	54.4	82	+17 44.1	10 N	17 47	18 10	18 36	18 58	54	6 56	52		
12	359	53.9	-23	21.7	166	21.6	82	+17 41.0	0	18 04	18 27	18 53	19 11	52	6 42	54		
13	14	53.6		21.6	180	48.9	83	37.9	10 S	22	18 45	19 12	24 50		29	55		
14	29	53.3		21.6	195	16.2	83	34.6	20	18 41	19 05	19 34	38 48		6 14	57		
15	44	53.0		21.5	209	43.6	84	31.2	30	19 03	30	20 03	19 54	46	5 57	58		
16	59	52.7		21.4	224	11.0	84	27.7	35	16	19 45	22	20 03	45	48	59		
17	74	52.4	-23	21.3	238	38.5	85	+17 24.2	40	19 31	20 03	20 45	20 13	44	5 37	59		
18	89	52.1	-23	21.2	253	06.1	86	+17 20.5	45	19 49	20 26	21 16	20 26	42	5 23	62		
19	104	51.8		21.1	267	33.7	86	16.7	50	20 11	20 56	22 01	41 40		07	63		
20	119	51.5		21.0	282	01.4	87	12.9	52	22	21 11	22 28	48 39		5 00	63		
21	134	51.2		20.9	296	29.1	87	08.9	54	34	29	23 14	20 55	38	4 51	65		
22	149	50.9		20.8	310	56.9	88	04.9	56	20 48	21 51	** **	21 04	37	42	66		
23	164	50.6		20.8	325	24.8	89	+17 00.8	58	21 05	22 20	** **	14 35		31	67		
24	179	50.2	-23	20.7	339	52.7	89	+16 56.5	60 S	21 25	23 10	** **	21 25	33	4 19	68		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 40 ^m 4		Mag: -4.1 PMG: 9 ^h 16 ^m				Mag: +1.3 PMG: 7 ^h 18 ^m				Mag: -2.2 PMG: 5 ^h 19 ^m				Mag: +0.5 PMG: 10 ^h 18 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	94	10.6	221	11.5	-16	53.0	250	16.5	-8	21.4	280	09.7	+3	54.4	205	03.2	-20	24.1
1	109	13.1	236	11.0		53.8	265	17.6		21.9	295	12.1		54.4	220	05.4		24.2
2	124	15.5	251	10.4		54.6	280	18.8		22.4	310	14.4		54.4	235	07.6		24.2
3	139	18.0	266	09.8		55.3	295	19.9		22.9	325	16.8		54.3	250	09.8		24.3
4	154	20.5	281	09.2		56.1	310	21.0		23.4	340	19.1		54.3	265	11.9		24.3
5	169	22.9	296	08.6	-16	56.9	325	22.2	-8	23.9	355	21.5	+3	54.3	280	14.1	-20	24.3
6	184	25.4	311	08.0	-16	57.6	340	23.3	-8	24.4	10	23.9	+3	54.3	295	16.3	-20	24.4
7	199	27.9	326	07.5		58.4	355	24.5		25.0	25	26.2		54.2	310	18.4		24.4
8	214	30.3	341	06.9		59.2	10	25.6		25.5	40	28.6		54.2	325	20.6		24.5
9	229	32.8	356	06.3	-16	59.9	25	26.7		26.0	55	31.0		54.2	340	22.8		24.5
10	244	35.3	11	05.7	-17	00.7	40	27.9		26.5	70	33.3		54.1	355	24.9		24.5
11	259	37.7	26	05.1	-17	01.5	55	29.0	-8	27.0	85	35.7	+3	54.1	10	27.1	-20	24.6
12	274	40.2	41	04.5	-17	02.2	70	30.1	-8	27.5	100	38.1	+3	54.1	25	29.3	-20	24.6
13	289	42.6	56	03.9		03.0	85	31.3		28.0	115	40.4		54.0	40	31.4		24.6
14	304	45.1	71	03.3		03.8	100	32.4		28.5	130	42.8		54.0	55	33.6		24.7
15	319	47.6	86	02.8		04.5	115	33.6		29.0	145	45.2		54.0	70	35.8		24.7
16	334	50.0	101	02.2		05.3	130	34.7		29.5	160	47.5		54.0	85	37.9		24.8
17	349	52.5	116	01.6	-17	06.1	145	35.8	-8	30.0	175	49.9	+3	53.9	100	40.1	-20	24.8
18	4	55.0	131	01.0	-17	06.8	160	37.0	-8	30.6	190	52.3	+3	53.9	115	42.3	-20	24.8
19	19	57.4	146	00.4		07.6	175	38.1		31.1	205	54.6		53.9	130	44.4		24.9
20	34	59.9	160	59.8		08.3	190	39.3		31.6	220	57.0		53.8	145	46.6		24.9
21	50	02.4	175	59.2		09.1	205	40.4		32.1	235	59.4		53.8	160	48.8		25.0
22	65	04.8	190	58.6		09.9	220	41.5		32.6	251	01.8		53.8	175	51.0		25.0
23	80	07.3	205	58.0		10.6	235	42.7		33.1	266	04.1		53.8	190	53.1		25.0
24	95	09.8	220	57.4	-17	11.4	250	43.8	-8	33.6	281	06.5	+3	53.7	205	55.3	-20	25.1
Dif	—		-6		-8		+11		-5		+24		0		+22		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'3 PMG: 12 ^h 00 ^m 9			Edad: 15 ^d 6 PHE { 4 ^h : 57'2 12 ^h : 56'9 20 ^h : 56'7 SD: 15'6 PMG: 1 ^h 23 ^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	179	50.2	-23	20.7	339	52.7	+16	56.5	60 N	7 09	8 06	9 04	18 05	74	9 40 30					
1	194	49.9		20.6	354	20.7		52.2	58	7 02	7 54	8 46	15 71		30 32					
2	209	49.6		20.5	8	48.8		47.8	56	6 55	44	32	24 69		21 33					
3	224	49.3		20.4	23	16.9		43.3	54	49	35	19	31 68		13 35					
4	239	49.0		20.3	37	45.1		38.7	52	43	27	8 08	38 66		06 36					
5	254	48.7	-23	20.2	52	13.4	+16	34.0	50	6 38	7 20	7 58	18 44	65	9 00 37					
6	269	48.4	-23	20.1	66	41.7	+16	29.2	45	6 26	7 04	7 37	18 57	62	8 46 40					
7	284	48.1		20.0	81	10.1		24.4	40	16	6 50	21	19 08	60	35 41					
8	299	47.8		19.9	95	38.5		19.4	35	6 07	38	7 06	17 59		25 43					
9	314	47.5		19.8	110	07.0		14.4	30	5 58	28	6 54	25 57		16 45					
10	329	47.2		19.7	124	35.6		09.3	20	42	6 09	33	39 54		8 01 47					
11	344	46.9	-23	19.6	139	04.2	+16	04.1	10 N	5 25	5 52	6 15	19 52	51	7 48 49					
12	359	46.6	-23	19.5	153	33.0	+15	58.8	0	5 08	5 35	5 57	20 03	49	7 36 51					
13	14	46.3		19.4	168	01.7		53.5	10 S	4 49	5 17	40	14 48		24 53					
14	29	45.9		19.3	182	30.6		48.0	20	4 27	4 56	5 21	26 45		7 11 54					
15	44	45.6		19.2	196	59.5		42.5	30	3 58	31	4 59	40 42		6 55 58					
16	59	45.3		19.1	211	28.5		36.9	35	39	4 16	46	48 41		47 58					
17	74	45.0	-23	18.9	225	57.5	+15	31.3	40	3 16	3 58	4 31	20 57	39	6 36 61					
18	89	44.7	-23	18.8	240	26.6	+15	25.5	45	2 46	3 35	4 13	21 08	37	6 25 62					
19	104	44.4		18.7	254	55.8		19.7	50	2 00	3 06	3 50	21 34		10 65					
20	119	44.1		18.6	269	25.1		13.8	52	1 33	2 51	39	27 33		6 03 66					
21	134	43.8		18.5	283	54.4		07.8	54	0 47	33	27	33 32		5 56 67					
22	149	43.5		18.4	298	23.8	+15	01.8	56	** **	2 11	3 13	41 29		48 68					
23	164	43.2		18.3	312	53.3	+14	55.7	58	** **	1 41	2 56	49 28		38 70					
24	179	42.9	-23	18.2	327	22.8	+14	49.5	60 S	** **	0 52	2 36	21 58	26	5 27 73					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 17 ^h 36 ^m 5			Mag: -4.1 PMG: 9 ^h 17 ^m			Mag: +1.3 PMG: 7 ^h 17 ^m			Mag: -2.2 PMG: 5 ^h 15 ^m			Mag: +0.5 PMG: 10 ^h 15 ^m							
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°					
0	95	09.8	220	57.4	-17	11.4	250	43.8	-8	33.6	281	06.5	+3	53.7	205	55.3	-20	25.1		
1	110	12.2	235	56.8		12.1	265	44.9		34.1	296	08.9		53.7	220	57.5		25.1		
2	125	14.7	250	56.2		12.9	280	46.1		34.6	311	11.2		53.7	235	59.6		25.2		
3	140	17.1	265	55.6		13.6	295	47.2		35.1	326	13.6		53.6	251	01.8		25.2		
4	155	19.6	280	55.0		14.4	310	48.4		35.6	341	16.0		53.6	266	04.0		25.2		
5	170	22.1	295	54.5	-17	15.2	325	49.5	-8	36.1	356	18.4	+3	53.6	281	06.1	-20	25.3		
6	185	24.5	310	53.9	-17	15.9	340	50.6	-8	36.6	11	20.7	+3	53.6	296	08.3	-20	25.3		
7	200	27.0	325	53.3		16.7	355	51.8		37.2	26	23.1		53.5	311	10.5		25.3		
8	215	29.5	340	52.7		17.4	10	52.9		37.7	41	25.5		53.5	326	12.7		25.4		
9	230	31.9	355	52.1		18.2	25	54.1		38.2	56	27.8		53.5	341	14.8		25.4		
10	245	34.4	10	51.5		18.9	40	55.2		38.7	71	30.2		53.5	356	17.0		25.5		
11	260	36.9	25	50.9	-17	19.7	55	56.3	-8	39.2	86	32.6	+3	53.4	11	19.2	-20	25.5		
12	275	39.3	40	50.3	-17	20.4	70	57.5	-8	39.7	101	35.0	+3	53.4	26	21.3	-20	25.5		
13	290	41.8	55	49.7		21.2	85	58.6		40.2	116	37.3		53.4	41	23.5		25.6		
14	305	44.3	70	49.1		21.9	100	59.8		40.7	131	39.7		53.4	56	25.7		25.6		
15	320	46.7	85	48.5		22.6	116	00.9		41.2	146	42.1		53.3	71	27.8		25.7		
16	335	49.2	100	47.9		23.4	131	02.0		41.7	161	44.5		53.3	86	30.0		25.7		
17	350	51.6	115	47.3	-17	24.1	146	03.2	-8	42.2	176	46.8	+3	53.3	101	32.2	-20	25.7		
18	5	54.1	130	46.6	-17	24.9	161	04.3	-8	42.7	191	49.2	+3	53.3	116	34.4	-20	25.8		
19	20	56.6	145	46.0		25.6	176	05.5		43.2	206	51.6		53.2	131	36.5		25.8		
20	35	59.0	160	45.4		26.4	191	06.6		43.7	221	54.0		53.2	146	38.7		25.8		
21	51	01.5	175	44.8		27.1	206	07.7		44.2	236	56.3		53.2	161	40.9		25.9		
22	66	04.0	190	44.2		27.9	221	08.9		44.7	251	58.7		53.2	176	43.0		25.9		
23	81	06.4	205	43.6		28.6	236	10.0		45.2	267	01.1		53.1	191	45.2		26.0		
24	96	08.9	220	43.0	-17	29.3	251	11.2	-8	45.7	282	03.5	+3	53.1	206	47.4	-20	26.0		
Dif	—			-6			+11			-5			+24			+22			0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 01 ^m 4			Edad: 16 ^d 6 PHE { 4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0 PMG: 2 ^h 15 ^m Rº: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	179	42.9	-23	18.2	327	22.8	+14	49.5	60 N	14 59	15 57	16 54	19 19	73	10 10	23
1	194	42.6		18.1	341	52.4 ¹⁰⁶		43.2 ⁶³	58	15 17	16 08	17 01	26	71	10 02	25
2	209	42.3		17.9	356	22.0 ¹⁰⁶		36.9 ⁶³	56	31	19	08	33	69	9 54	28
3	224	42.0		17.8	10	51.8 ¹⁰⁸		30.5 ⁶⁴	54	44	28	14	39	67	48	29
4	239	41.7		17.7	25	21.6 ¹⁰⁸		24.0 ⁶⁵	52	15 55	36	19	44	66	42	30
5	254	41.4	-23	17.6	39	51.4 ¹⁰⁸	+14	17.5 ⁶⁵	50	16 05	16 43	17 25	19 49	64	9 37	32
6	269	41.1	-23	17.5	54	21.4 ¹¹⁰	+14	10.9 ⁶⁶	45	16 25	16 59	17 36	19 59	62	9 26	34
7	284	40.7		17.4	68	51.4 ¹¹⁰	+14	04.2 ⁶⁷	40	42	17 12	47	20 08	59	16	37
8	299	40.4		17.2	83	21.4 ¹¹⁰	+13	57.5 ⁶⁷	35	16 56	24	17 56	16	56	08	38
9	314	40.1		17.1	97	51.6 ¹¹²		50.7 ⁶⁸	30	17 08	35	18 05	22	55	9 01	40
10	329	39.8		17.0	112	21.8 ¹¹²		43.8 ⁶⁹	20	29	17 53	21	33	52	8 48	43
11	344	39.5	-23	16.9	126	52.0 ¹¹²	+13	36.9 ⁶⁹	10 N	17 48	18 11	18 37	20 43	49	8 37	46
12	359	39.2	-23	16.7	141	22.4 ¹¹⁴	+13	29.9 ⁷⁰	0	18 05	18 28	18 54	20 52	47	8 27	48
13	14	38.9		16.6	155	52.8 ¹¹⁴		22.9 ⁷⁰	10 S	23	18 46	19 13	21 02	44	17	50
14	29	38.6		16.5	170	23.2 ¹¹⁴		15.8 ⁷¹	20	18 41	19 06	19 35	11	42	8 05	54
15	44	38.3		16.4	184	53.8 ¹¹⁶		08.6 ⁷²	30	19 03	31	20 04	22	39	7 53	56
16	59	38.0		16.2	199	24.4 ¹¹⁶	+13	01.4 ⁷²	35	16	19 46	23	29	36	45	58
17	74	37.7	-23	16.1	213	55.0 ¹¹⁶	+12	54.1 ⁷³	40	19 31	20 04	20 46	21 36	35	7 37	60
18	89	37.4	-23	16.0	228	25.8 ¹¹⁸	+12	46.8 ⁷³	45	19 49	20 26	21 16	21 45	32	7 27	62
19	104	37.1		15.9	242	56.6 ¹¹⁸		39.4 ⁷⁴	50	20 11	20 56	22 01	21 55	29	15	65
20	119	36.8		15.7	257	27.4 ¹¹⁸		32.0 ⁷⁴	52	22	21 11	22 28	22 00	27	09	67
21	134	36.5		15.6	271	58.4 ¹²⁰		24.5 ⁷⁵	54	34	29	23 12	05	26	7 03	68
22	149	36.2		15.5	286	29.4 ¹²⁰		17.0 ⁷⁵	56	20 48	21 50	** **	10	25	6 56	70
23	164	35.9		15.3	301	00.4 ¹²⁰		09.4 ⁷⁶	58	21 05	22 20	** **	17	23	48	72
24	179	35.6	-23	15.2	315	31.5 ¹²¹	+12	01.7 ⁷⁷	60 S	21 25	23 07	** **	22 24	21	6 40	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 32 ^m 5		Mag: -4.1 PMG: 9 ^h 18 ^m		Mag: +1.3 PMG: 7 ^h 15 ^m		Mag: -2.2 PMG: 5 ^h 11 ^m		Mag: +0.5 PMG: 10 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	96	08.9	220	43.0	-17	29.3	251	11.2	-8	45.7
1	111	11.4	235	42.4		30.1	266	12.3		46.2
2	126	13.8	250	41.8		30.8	281	13.4		46.8
3	141	16.3	265	41.2		31.6	296	14.6		47.3
4	156	18.7	280	40.6		32.3	311	15.7		47.8
5	171	21.2	295	40.0	-17	33.0	326	16.9	-8	48.3
6	186	23.7	310	39.4	-17	33.8	341	18.0	-8	48.8
7	201	26.1	325	38.8		34.5	356	19.2		49.3
8	216	28.6	340	38.1		35.2	11	20.3		49.8
9	231	31.1	355	37.5		36.0	26	21.4		50.3
10	246	33.5	10	36.9		36.7	41	22.6		50.8
11	261	36.0	25	36.3	-17	37.4	56	23.7	-8	51.3
12	276	38.5	40	35.7	-17	38.2	71	24.9	-8	51.8
13	291	40.9	55	35.1		38.9	86	26.0		52.3
14	306	43.4	70	34.5		39.6	101	27.1		52.8
15	321	45.9	85	33.8		40.4	116	28.3		53.3
16	336	48.3	100	33.2		41.1	131	29.4		53.8
17	351	50.8	115	32.6	-17	41.8	146	30.6	-8	54.3
18	6	53.2	130	32.0	-17	42.5	161	31.7	-8	54.8
19	21	55.7	145	31.4		43.3	176	32.8		55.3
20	36	58.2	160	30.8		44.0	191	34.0		55.8
21	52	00.6	175	30.1		44.7	206	35.1		56.3
22	67	03.1	190	29.5		45.4	221	36.3		56.8
23	82	05.6	205	28.9		46.2	236	37.4		57.3
24	97	08.0	220	28.3	-17	46.9	251	38.6	-8	57.8
Dif	—		-6		-7		+11		-5	

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: 17 ^d 6 PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/4 PMG: 3 ^h 04 ^m R°: 46 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	35.6	-23	15.2	315	31.5	+12	01.7	76	60 N	7 09	8 06	9 03	20 32	72	10 33	19			
1	194	35.3		15.1	330	02.7 ¹²²	+11	54.1	76	58	7 02	7 55	8 46		37 70		27 21			
2	209	35.0		14.9	344	33.9 ¹²²		46.3	78	56	6 55	44	32	42 68		22 23				
3	224	34.7		14.8	359	05.3 ¹²⁴		38.5	78	54	49	35	19	46 66		17 25				
4	239	34.3		14.7	13	36.6 ¹²³		30.7	78	52	44	27	8 08	50 65		12 27				
5	254	34.0	-23	14.5	28	08.0 ¹²⁴	+11	22.8	79	50	6 39	7 20	7 58	20 53	64	10 09	27			
6	269	33.7	-23	14.4	42	39.5 ¹²⁵	+11	14.9	79	45	6 27	7 04	7 38	21 01	60	10 00	31			
7	284	33.4		14.3	57	11.1 ¹²⁶	+11	06.9	80	40	17	6 51	21	07 58		9 53	33			
8	299	33.1		14.1	71	42.7 ¹²⁶	+10	58.9	80	35	6 07	39	7 07	12 56		46 36				
9	314	32.8		14.0	86	14.4 ¹²⁷		50.8	81	30	5 59	29	6 55	17 54		41 37				
10	329	32.5		13.8	100	46.1 ¹²⁷		42.7	81	20	42	6 10	34	25 50		31 41				
11	344	32.2	-23	13.7	115	17.9 ¹²⁸	+10	34.6	81	10 N	5 26	5 53	6 15	21 32	48	9 23	43			
12	359	31.9	-23	13.6	129	49.7 ¹²⁸	+10	26.4	82	0	5 09	5 36	5 58	21 39	45	9 15	46			
13	14	31.6		13.4	144	21.6 ¹²⁹		18.2	82	10 S	4 51	5 18	41	46 42		9 07	48			
14	29	31.3		13.3	158	53.6 ¹³⁰		09.9	83	20	4 28	4 57	22	21 53	39	8 59	51			
15	44	31.0		13.1	173	25.6 ¹³⁰	+10	01.6	83	30	3 59	33	5 00	22 01	36	49 54				
16	59	30.7		13.0	187	57.7 ¹³¹	+9	53.3	83	35	41	4 17	4 47	05 34		43 56				
17	74	30.4	-23	12.8	202	29.8 ¹³¹	+9	44.9	84	40	3 18	3 59	4 32	22 11	31	8 37	58			
18	89	30.1	-23	12.7	217	02.0 ¹³²	+9	36.5	84	45	2 47	3 37	4 14	22 17	29	8 29	61			
19	104	29.8		12.5	231	34.2 ¹³²		28.0	85	50	2 03	3 08	3 52	24 26	20	64				
20	119	29.5		12.4	246	06.5 ¹³³		19.6	84	52	1 35	2 53	41	27 25		16 65				
21	134	29.2		12.2	260	38.8 ¹³³		11.1	85	54	0 52	35	29	31 23		11 67				
22	149	28.9		12.1	275	11.2 ¹³⁴	+9	02.5	86	56	** **	2 13	3 15	35 22		06 69				
23	164	28.6		11.9	289	43.7 ¹³⁵	+8	53.9	86	58	** **	1 44	2 58	40 19		8 00	71			
24	179	28.3	-23	11.8	304	16.2 ¹³⁵	+8	45.3	86	60 S	** **	0 56	2 38	22 45	17	7 53	73			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 28 ^m 6		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: +1.3 PMG: 7 ^h 13 ^m		Mag: -2.2 PMG: 5 ^h 07 ^m		Mag: +0.5 PMG: 10 ^h 08 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	97	08.0	220	28.3	-17	46.9	251	38.6	-8	57.8	283	00.6	+3	52.6	207	39.5	-20	26.9
1	112	10.5	235	27.7		47.6	266	39.7		58.3	298	03.0		52.5	222	41.7		27.0
2	127	13.0	250	27.0		48.3	281	40.8		58.8	313	05.4		52.5	237	43.8		27.0
3	142	15.4	265	26.4		49.1	296	42.0		59.3	328	07.8		52.5	252	46.0		27.0
4	157	17.9	280	25.8		49.8	311	43.1	-8	59.8	343	10.2		52.5	267	48.2		27.1
5	172	20.4	295	25.2	-17	50.5	326	44.3	-9	00.3	358	12.5	+3	52.4	282	50.3	-20	27.1
6	187	22.8	310	24.6	-17	51.2	341	45.4	-9	00.8	13	14.9	+3	52.4	297	52.5	-20	27.1
7	202	25.3	325	23.9		51.9	356	46.5		01.3	28	17.3		52.4	312	54.7		27.2
8	217	27.7	340	23.3		52.6	11	47.7		01.8	43	19.7		52.4	327	56.9		27.2
9	232	30.2	355	22.7		53.4	26	48.8		02.3	58	22.1		52.4	342	59.0		27.3
10	247	32.7	10	22.1		54.1	41	50.0		02.8	73	24.5		52.3	358	01.2		27.3
11	262	35.1	25	21.4	-17	54.8	56	51.1	-9	03.3	88	26.9	+3	52.3	13	03.4	-20	27.3
12	277	37.6	40	20.8	-17	55.5	71	52.3	-9	03.8	103	29.3	+3	52.3	28	05.6	-20	27.4
13	292	40.1	55	20.2		56.2	86	53.4		04.3	118	31.6		52.3	43	07.7		27.4
14	307	42.5	70	19.6		56.9	101	54.5		04.8	133	34.0		52.3	58	09.9		27.4
15	322	45.0	85	18.9		57.6	116	55.7		05.3	148	36.4		52.2	73	12.1		27.5
16	337	47.5	100	18.3		58.4	131	56.8		05.8	163	38.8		52.2	88	14.2		27.5
17	352	49.9	115	17.7	-17	59.1	146	58.0	-9	06.3	178	41.2	+3	52.2	103	16.4	-20	27.6
18	7	52.4	130	17.0	-17	59.8	161	59.1	-9	06.8	193	43.6	+3	52.2	118	18.6	-20	27.6
19	22	54.9	145	16.4	-18	00.5	177	00.3		07.3	208	46.0		52.2	133	20.8		27.6
20	37	57.3	160	15.8		01.2	192	01.4		07.8	223	48.4		52.1	148	22.9		27.7
21	52	59.8	175	15.1		01.9	207	02.5		08.3	238	50.8		52.1	163	25.1		27.7
22	68	02.2	190	14.5		02.6	222	03.7		08.8	253	53.2		52.1	178	27.3		27.7
23	83	04.7	205	13.9		03.3	237	04.8		09.3	268	55.5		52.1	193	29.5		27.8
24	98	07.2	220	13.3	-18	04.0	252	06.0	-9	09.8	283	57.9	+3	52.1	208	31.6	-20	27.8
Dif	—		-6		-7		+11		-5		+24		0		+22		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16:3 PMG: 12 ^h 02 ^m 4			Edad: 18 ^d 6 PHE { SD: 15:1 PMG: 3 ^h 50 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	179	28.3	-23	11.8	304	16.2	+8	45.3	60 N	15	02	15	59	16	55	21	44	71	10	
1	194	28.0		11.6	318	48.7 ¹³⁵		36.7 ⁸⁶	58	19	16	10	17	03	47	69		48	19	
2	209	27.7		11.5	333	21.3 ¹³⁶		28.0 ⁸⁷	56	33	20		09	50	67		45	20		
3	224	27.4		11.3	347	54.0 ¹³⁷		19.3 ⁸⁷	54	46	29	15		52	66		42	22		
4	239	27.1		11.2	2	26.7 ¹³⁷		10.6 ⁸⁷	52	15	57	37	21		55	63		39	24	
5	254	26.8	-23	11.0	16	59.4 ¹³⁷	+8	01.8 ⁸⁸	50	16	06	16	45	17	26	21	57	62	10	
6	269	26.5	-23	10.9	31	32.2 ¹³⁸	+7	53.0 ⁸⁸	45	16	27	17	01	17	38	22	01	59	10	
7	284	26.2		10.7	46	05.0 ¹³⁸		44.2 ⁸⁸	40	43		14	48		05	56		26	30	
8	299	25.9		10.5	60	37.9 ¹³⁹		35.3 ⁸⁹	35	16	57	25	17	57		08	54		22	
9	314	25.6		10.4	75	10.9 ¹⁴⁰		26.5 ⁸⁸	30	17	10	36	18	06		11	52		18	
10	329	25.3		10.2	89	43.8 ¹³⁹		17.6 ⁸⁹	20	31	17	55		22		15	49		12	
11	344	25.0	-23	10.1	104	16.9 ¹⁴¹	+7	08.7 ⁸⁹	10 N	17	49	18	12	18	38	22	20	45	10	
12	359	24.7	-23	09.9	118	49.9 ¹⁴⁰	+6	59.7 ⁹⁰	0	18	06	18	29	18	55	22	24	43	10	
13	14	24.4		09.7	133	23.0 ¹⁴¹		50.8 ⁸⁹	10 S	23		18	46	19	14		28	40	9	
14	29	24.1		09.6	147	56.2 ¹⁴²		41.8 ⁹⁰	20	18	42	19	07	19	36		32	37	50	
15	44	23.8		09.4	162	29.4 ¹⁴²		32.8 ⁹⁰	30	19	04		31	20	05		37	33	43	
16	59	23.5		09.2	177	02.6 ¹⁴²		23.8 ⁹⁰	35	17		19	46		23		39	32	39	
17	74	23.2	-23	09.1	191	35.9 ¹⁴³	+6	14.7 ⁹¹	40	19	32	20	04	20	46	22	42	30	9	
18	89	22.9	-23	08.9	206	09.2 ¹⁴³	+6	05.6 ⁹¹	45	19	49	20	27	21	16	22	46	27	9	
19	104	22.6		08.7	220	42.5 ¹⁴³	+5	56.6 ⁹⁰	50	20	12	20	56	22	00		50	25	24	
20	119	22.3		08.6	235	15.9 ¹⁴⁴		47.5 ⁹¹	52	22		21	11	22	27		52	23	21	
21	134	22.0		08.4	249	49.3 ¹⁴⁴		38.3 ⁹²	54	34		28	23	09		54	22		18	
22	149	21.7		08.2	264	22.8 ¹⁴⁵		29.2 ⁹¹	56	20	48	21	50	** **		57	20		15	
23	164	21.4		08.1	278	56.3 ¹⁴⁵		20.0 ⁹²	58	21	05	22	18	** **		22	59	18	11	
24	179	21.1	-23	07.9	293	29.8 ¹⁴⁵	+5	10.9 ⁹¹	60 S	21	25	23	04	** **		23	02	16	9	
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO							
	PMG: 17 ^h 24 ^m 7		Mag: -4.1 PMG: 9 ^h 20 ^m			Mag: +1.3 PMG: 7 ^h 11 ^m			Mag: -2.2 PMG: 5 ^h 03 ^m				Mag: +0.5 PMG: 10 ^h 04 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec				
h	°	'	°	'	°	'	'	'	°	'	'	°	'	'	°	'	'	'	'	
0	98	07.2	220	13.3	-18	04.0	252	06.0	-9	09.8	283	57.9	+3	52.1	208	31.6	-20	27.8		
1	113	09.6	235	12.6		04.7	267	07.1		10.3	299	00.3		52.1	223	33.8		27.9		
2	128	12.1	250	12.0		05.4	282	08.3		10.8	314	02.7		52.0	238	36.0		27.9		
3	143	14.6	265	11.4		06.1	297	09.4		11.3	329	05.1		52.0	253	38.2		27.9		
4	158	17.0	280	10.7		06.8	312	10.6		11.8	344	07.5		52.0	268	40.3		28.0		
5	173	19.5	295	10.1	-18	07.5	327	11.7	-9	12.3	359	09.9	+3	52.0	283	42.5	-20	28.0		
6	188	22.0	310	09.4	-18	08.2	342	12.8	-9	12.8	14	12.3	+3	52.0	298	44.7	-20	28.0		
7	203	24.4	325	08.8		08.9	357	14.0		13.3	29	14.7		51.9	313	46.8		28.1		
8	218	26.9	340	08.2		09.6	12	15.1		13.8	44	17.1		51.9	328	49.0		28.1		
9	233	29.3	355	07.5		10.3	27	16.3		14.3	59	19.5		51.9	343	51.2		28.2		
10	248	31.8	10	06.9		11.0	42	17.4		14.8	74	21.9		51.9	358	53.4		28.2		
11	263	34.3	25	06.3	-18	11.7	57	18.6	-9	15.3	89	24.3	+3	51.9	13	55.5	-20	28.2		
12	278	36.7	40	05.6	-18	12.4	72	19.7	-9	15.8	104	26.7	+3	51.9	28	57.7	-20	28.3		
13	293	39.2	55	05.0		13.1	87	20.8		16.3	119	29.1		51.8	43	59.9		28.3		
14	308	41.7	70	04.3		13.8	102	22.0		16.8	134	31.5		51.8	59	02.1		28.3		
15	323	44.1	85	03.7		14.5	117	23.1		17.2	149	33.9		51.8	74	04.2		28.4		
16	338	46.6	100	03.1		15.2	132	24.3		17.7	164	36.2		51.8	89	06.4		28.4		
17	353	49.1	115	02.4	-18	15.9	147	25.4	-9	18.2	179	38.6	+3	51.8	104	08.6	-20	28.5		
18	8	51.5	130	01.8	-18	16.6	162	26.6	-9	18.7	194	41.0	+3	51.8	119	10.8	-20	28.5		
19	23	54.0	145	01.1		17.3	177	27.7		19.2	209	43.4		51.7	134	12.9		28.5		
20	38	56.5	160	00.5		17.9	192	28.9		19.7	224	45.8		51.7	149	15.1		28.6		
21	53	58.9	174	59.8		18.6	207	30.0		20.2	239	48.2		51.7	164	17.3		28.6		
22	69	01.4	189	59.2		19.3	222	31.1		20.7	254	50.6		51.7	179	19.5		28.6		
23	84	03.8	204	58.6		20.0	237	32.3		21.2	269	53.0		51.7	194	21.6		28.7		
24	99	06.3	219	57.9	-18	20.7	252	33.4	-9	21.7	284	55.4	+3	51.7	209	23.8	-20	28.7		
Dif	—		-6		-7		+11		-5		+24		0		+22		0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 02 ^m 8			Edad: 19 ^d 6 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 SD: 14'9 PMG: 4 ^h 34 ^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	179	21.1	-23	07.9	293	29.8	+5	10.9	60 N	7 09	8 06	9 03	22 55	71	11 09	15
1	194	20.8		07.7	308	03.4 ¹⁴⁶	+5	01.7	58	7 02	7 54	8 46	56	68	07	18
2	209	20.5		07.6	322	37.0 ¹⁴⁶	+4	52.5	56	6 56	44	31	57	66	05	20
3	224	20.2		07.4	337	10.6 ¹⁴⁶		43.3	54	50	36	19	58	64	04	2
4	239	19.9		07.2	351	44.3 ¹⁴⁷		34.0	52	44	28	8 08	58	63	03	22
5	254	19.6	-23	07.0	6	18.0 ¹⁴⁷	+4	24.8	50	6 39	7 20	7 59	22 59	61	11 01	24
6	269	19.3	-23	06.9	20	51.7 ¹⁴⁷	+4	15.6	45	6 27	7 04	7 38	23 00	59	10 59	27
7	284	19.0		06.7	35	25.5 ¹⁴⁸	+4	06.3	40	17	6 51	22	01	56	56	30
8	299	18.7		06.5	49	59.3 ¹⁴⁸	+3	57.0	35	6 08	40	7 08	02	54	54	32
9	314	18.4		06.3	64	33.1 ¹⁴⁸		47.7	30	5 59	29	6 55	03	51	53	33
10	329	18.1		06.1	79	06.9 ¹⁴⁸		38.4	20	43	6 11	35	04	48	50	37
11	344	17.8	-23	06.0	93	40.8 ¹⁴⁹	+3	29.1	10 N	5 27	5 54	6 16	23 05	46	10 47	40
12	359	17.5	-23	05.8	108	14.7 ¹⁴⁹	+3	19.8	0	5 10	5 37	5 59	23 07	42	10 44	43
13	14	17.2		05.6	122	48.6 ¹⁴⁹		10.5	10 S	4 52	5 19	42	08	39	42	45
14	29	16.9		05.4	137	22.6 ¹⁵⁰	+3	01.2	20	29	4 59	23	09	37	39	49
15	44	16.6		05.2	151	56.5 ¹⁴⁹	+2	51.8	30	4 01	34	5 01	10	34	36	52
16	59	16.3		05.0	166	30.5 ¹⁵⁰		42.5	35	3 42	19	4 48	11	32	34	54
17	74	16.0	-23	04.9	181	04.6 ¹⁵¹	+2	33.1	40	3 19	4 01	4 34	23 12	29	10 32	56
18	89	15.7	-23	04.7	195	38.6 ¹⁵⁰	+2	23.8	45	2 49	3 39	4 16	23 13	27	10 30	58
19	104	15.4		04.5	210	12.7 ¹⁵¹		14.4	50	2 05	3 09	3 54	15	23	27	62
20	119	15.1		04.3	224	46.7 ¹⁵⁰	+2	05.1	52	1 38	2 55	43	15	22	25	64
21	134	14.8		04.1	239	20.8 ¹⁵¹	+1	55.7	54	0 56	37	31	16	21	24	65
22	149	14.5		03.9	253	55.0 ¹⁵²		46.3	56	** ** *	2 16	17	17	19	22	67
23	164	14.2		03.7	268	29.1 ¹⁵¹		37.0	58	** ** *	1 47	3 01	17	18	20	69
24	179	13.9	-23	03.5	283	03.3 ¹⁵²	+1	27.6	60 S	** ** *	1 02	2 41	23 18	16	10 18	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 20 ^m 7		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: +1.3 PMG: 7 ^h 09 ^m		Mag: -2.2 PMG: 5 ^h 00 ^m		Mag: +0.5 PMG: 10 ^h 01 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	99	06.3	219	57.9	-18	20.7	252	33.4	-9	21.7	284	55.4	+3	51.7	209	23.8	-20	28.7
1	114	08.8	234	57.3		21.4	267	34.6		22.2	299	57.8		51.7	224	26.0		28.8
2	129	11.2	249	56.6		22.1	282	35.7		22.7	315	00.2		51.6	239	28.2		28.8
3	144	13.7	264	56.0		22.8	297	36.9		23.2	330	02.6		51.6	254	30.3		28.8
4	159	16.2	279	55.3		23.4	312	38.0		23.7	345	05.0		51.6	269	32.5		28.9
5	174	18.6	294	54.7	-18	24.1	327	39.2	-9	24.2	0	07.4	+3	51.6	284	34.7	-20	28.9
6	189	21.1	309	54.0	-18	24.8	342	40.3	-9	24.7	15	09.8	+3	51.6	299	36.9	-20	28.9
7	204	23.6	324	53.4		25.5	357	41.5		25.2	30	12.2		51.6	314	39.0		29.0
8	219	26.0	339	52.7		26.2	12	42.6		25.7	45	14.6		51.6	329	41.2		29.0
9	234	28.5	354	52.1		26.8	27	43.7		26.1	60	17.0		51.5	344	43.4		29.0
10	249	31.0	9	51.4		27.5	42	44.9		26.6	75	19.4		51.5	359	45.6		29.1
11	264	33.4	24	50.8	-18	28.2	57	46.0	-9	27.1	90	21.8	+3	51.5	14	47.7	-20	29.1
12	279	35.9	39	50.1	-18	28.9	72	47.2	-9	27.6	105	24.2	+3	51.5	29	49.9	-20	29.2
13	294	38.3	54	49.5		29.5	87	48.3		28.1	120	26.6		51.5	44	52.1		29.2
14	309	40.8	69	48.8		30.2	102	49.5		28.6	135	29.1		51.5	59	54.3		29.2
15	324	43.3	84	48.2		30.9	117	50.6		29.1	150	31.5		51.5	74	56.4		29.3
16	339	45.7	99	47.5		31.6	132	51.8		29.6	165	33.9		51.4	89	58.6		29.3
17	354	48.2	114	46.9	-18	32.2	147	52.9	-9	30.1	180	36.3	+3	51.4	105	00.8	-20	29.3
18	9	50.7	129	46.2	-18	32.9	162	54.1	-9	30.6	195	38.7	+3	51.4	120	03.0	-20	29.4
19	24	53.1	144	45.6		33.6	177	55.2		31.1	210	41.1		51.4	135	05.1		29.4
20	39	55.6	159	44.9		34.3	192	56.3		31.6	225	43.5		51.4	150	07.3		29.4
21	54	58.1	174	44.2		34.9	207	57.5		32.1	240	45.9		51.4	165	09.5		29.5
22	70	00.5	189	43.6		35.6	222	58.6		32.5	255	48.3		51.4	180	11.7		29.5
23	85	03.0	204	42.9		36.3	237	59.8		33.0	270	50.7		51.4	195	13.8		29.6
24	100	05.4	219	42.3	-18	36.9	253	00.9	-9	33.5	285	53.1	+3	51.3	210	16.0	-20	29.6
Dif	—		-7		-7		+11		-5		+24		0		+22			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 20 ^d 6 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3										
	PMG: 12 ^h 03 ^m 3			SD: 14°8 PMG: 5 ^h 17 ^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	179	13.9	-23 03.5	283	03.3	+1 27.6	94	60 N	15 04	16 01	16 58	** ** *	** ** *	11 24 16
1	194	13.6	03.4	297	37.4 ¹⁵¹	18.2	94	58	21	13	17 05	** ** *	** ** *	25 17
2	209	13.3	03.2	312	11.6 ¹⁵²	+1 08.8	94	56	36	22	11	** ** *	** ** *	25 19
3	224	13.0	03.0	326	45.8 ¹⁵²	+0 59.5	93	54	48	31	17	** ** *	** ** *	25 21
4	239	12.7	02.8	341	20.0 ¹⁵²	50.1	94	52	15 59	39	23	** ** *	** ** *	25 23
5	254	12.4	-23 02.6	355	54.3 ¹⁵³	+0 40.7	94	50	16 08	16 46	17 28	** ** *	** ** *	11 25 24
6	269	12.1	-23 02.4	10	28.5 ¹⁵²	+0 31.3	94	45	16 29	17 02	17 39	23 59 58	11 26 26	11 26 26
7	284	11.8	02.2	25	02.8 ¹⁵³	21.9	94	40	45	15	49	57 56	26 29	26 29
8	299	11.5	02.0	39	37.0 ¹⁵²	12.6	93	35	16 59	27	17 59	56 53	26 31	26 31
9	314	11.2	01.8	54	11.3 ¹⁵³	+0 03.2	94	30	17 11	37	18 07	54 52	26 34	26 34
10	329	10.9	01.6	68	45.6 ¹⁵³	-0 06.2	94	20	32	17 56	23	52 48	27 36	27 36
11	344	10.6	-23 01.4	83	19.9 ¹⁵³	-0 15.5	93	10 N	17 50	18 13	18 39	23 51 45	11 27 39	11 27 39
12	359	10.3	-23 01.2	97	54.2 ¹⁵³	-0 24.9	94	0	18 07	18 30	18 56	23 49 42	11 27 42	11 27 42
13	14	10.0	01.0	112	28.5 ¹⁵³	34.3	94	10 S	24	18 47	19 14	47 40	27 45	27 45
14	29	09.7	00.8	127	02.8 ¹⁵³	43.6	93	20	18 43	19 07	19 36	46 36	28 48	28 48
15	44	09.5	00.6	141	37.1 ¹⁵³	-0 52.9	93	30	19 05	32	20 05	44 33	28 51	28 51
16	59	09.2	00.4	156	11.4 ¹⁵³	-1 02.3	94	35	17	19 47	23	43 31	28 53	28 53
17	74	08.9	-23 00.2	170	45.8 ¹⁵⁴	-1 11.6	93	40	19 32	20 05	20 46	23 41 30	11 28 56	11 28 56
18	89	08.6	-23 00.0	185	20.1 ¹⁵³	-1 20.9	93	45	19 50	20 27	21 16	23 40 27	11 28 59	11 28 59
19	104	08.3	-22 59.8	199	54.4 ¹⁵³	30.3	94	50	20 12	20 56	21 59	38 24	29 61	29 61
20	119	08.0	59.6	214	28.8 ¹⁵⁴	39.6	93	52	22	21 10	22 25	37 23	29 62	29 62
21	134	07.7	59.4	229	03.1 ¹⁵³	48.9	93	54	34	27	23 05	37 21	29 64	29 64
22	149	07.4	59.2	243	37.5 ¹⁵⁴	-1 58.2	93	56	20 48	21 49	** ** *	36 19	29 66	29 66
23	164	07.1	58.9	258	11.8 ¹⁵³	-2 07.5	93	58	21 04	22 17	** ** *	35 18	29 68	29 68
24	179	06.8	-22 58.7	272	46.1 ¹⁵³	-2 16.7	92	60 S	21 24	23 00	** ** *	23 34 15	11 29 70	11 29 70
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 16 ^m 8		Mag: -4.0 PMG: 9 ^h 22 ^m		Mag: +1.3 PMG: 7 ^h 07 ^m		Mag: -2.2 PMG: 4 ^h 56 ^m		Mag: +0.5 PMG: 9 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	100	05.4	219	42.3	-18	36.9	253	00.9	-9	33.5				
1	115	07.9	234	41.6		37.6	268	02.1		34.0				
2	130	10.4	249	41.0		38.3	283	03.2		34.5				
3	145	12.8	264	40.3		38.9	298	04.4		35.0				
4	160	15.3	279	39.6		39.6	313	05.5		35.5				
5	175	17.8	294	39.0	-18	40.3	328	06.7	-9	36.0				
6	190	20.2	309	38.3	-18	40.9	343	07.8	-9	36.5				
7	205	22.7	324	37.6		41.6	358	09.0		37.0				
8	220	25.2	339	37.0		42.2	13	10.1		37.5				
9	235	27.6	354	36.3		42.9	28	11.3		37.9				
10	250	30.1	9	35.7		43.6	43	12.4		38.4				
11	265	32.6	24	35.0	-18	44.2	58	13.6	-9	38.9				
12	280	35.0	39	34.3	-18	44.9	73	14.7	-9	39.4				
13	295	37.5	54	33.7		45.5	88	15.8		39.9				
14	310	39.9	69	33.0		46.2	103	17.0		40.4				
15	325	42.4	84	32.3		46.8	118	18.1		40.9				
16	340	44.9	99	31.7		47.5	133	19.3		41.4				
17	355	47.3	114	31.0	-18	48.2	148	20.4	-9	41.9				
18	10	49.8	129	30.3	-18	48.8	163	21.6	-9	42.4				
19	25	52.3	144	29.7		49.5	178	22.7		42.8				
20	40	54.7	159	29.0		50.1	193	23.9		43.3				
21	55	57.2	174	28.3		50.8	208	25.0		43.8				
22	70	59.7	189	27.7		51.4	223	26.2		44.3				
23	86	02.1	204	27.0		52.1	238	27.3		44.8				
24	101	04.6	219	26.3	-18	52.7	253	28.5	-9	45.3				
Dif	—		-7		-7		+11		-5					
							+24		0					
									+22					
									0					

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	42.4	42.5	42.6	42.5	42.3	42.1	41.8	41.6	41.5	41.5	41.5	41.6
2 - β Cas	<i>Caph</i>	2.3	357	30.0	30.3	30.3	30.2	30.0	29.6	29.2	28.9	28.8	28.7	28.9	29.1
3 - γ Peg	<i>Algenib</i>	2.8	356	29.8	29.9	29.9	29.9	29.7	29.5	29.3	29.1	28.9	28.9	28.9	29.0
4 - α Phe	<i>Ankaa</i>	2.4	353	14.8	15.0	15.0	15.0	14.8	14.6	14.3	14.0	13.9	13.8	13.9	14.0
5 - α Cas	<i>Schedar</i>	2.2	349	39.3	39.5	39.6	39.5	39.3	39.0	38.6	38.3	38.1	38.0	38.1	38.3
6 - β Cet	<i>Diphda</i>	2.0	348	54.9	55.0	55.0	55.0	54.9	54.7	54.4	54.2	54.1	54.0	54.0	54.1
7 - γ Cas	<i>Navi</i>	1.6	345	35.3	35.6	35.7	35.7	35.5	35.1	34.7	34.4	34.1	34.0	34.1	34.2
8 - β And	<i>Mirach</i>	2.1	342	21.2	21.3	21.4	21.4	21.2	21.0	20.7	20.5	20.3	20.2	20.2	20.3
9 - α Eri	<i>Achernar</i>	0.5	335	26.1	26.3	26.5	26.5	26.5	26.2	25.9	25.5	25.3	25.1	25.2	25.3
10 - γ And	<i>Almak</i>	2.3	328	47.3	47.4	47.6	47.6	47.5	47.3	47.0	46.7	46.5	46.4	46.3	46.3
12 - α Ari	<i>Hamal</i>	2.0	327	59.4	59.5	59.6	59.7	59.6	59.4	59.2	58.9	58.7	58.6	58.6	58.6
11 - α UMi	<i>Polaris</i>	2.0	316	64.3	78.2	89.8	97.2	96.7	88.6	75.8	60.8	46.8	36.8	32.3	35.4
13 - θ Eri	<i>Acamar</i>	3.3	315	17.4	17.6	17.7	17.8	17.8	17.7	17.5	17.2	17.0	16.8	16.7	16.8
14 - α Cet	<i>Menkar</i>	2.5	314	13.8	13.9	14.0	14.1	14.0	13.9	13.7	13.5	13.3	13.1	13.0	13.0
15 - β Per	<i>Algol</i>	2.1	312	42.3	42.5	42.6	42.7	42.7	42.5	42.3	42.0	41.7	41.5	41.4	41.4
16 - α Per	<i>Mirfak</i>	1.8	308	38.5	38.6	38.8	39.0	39.0	38.8	38.5	38.2	37.9	37.6	37.4	37.4
17 - η Tau	<i>Alcyone</i>	2.9	302	53.9	54.1	54.2	54.3	54.3	54.2	54.0	53.7	53.5	53.3	53.2	53.1
18 - γ Eri	<i>Zaurak</i>	3.0	300	18.8	18.9	19.0	19.1	19.1	19.0	18.9	18.7	18.4	18.3	18.1	18.1
19 - α Tau	<i>Aldebaran</i>	0.9	290	47.9	48.0	48.1	48.2	48.2	48.2	48.0	47.8	47.6	47.4	47.2	47.1
20 - β Ori	<i>Rigel</i>	0.1	281	10.7	10.8	10.9	11.1	11.1	11.1	11.0	10.8	10.6	10.4	10.2	10.1
21 - α Aur	<i>Capella</i>	0.1	280	32.4	32.5	32.7	32.9	33.0	32.9	32.7	32.5	32.2	31.9	31.6	31.4
22 - γ Ori	<i>Bellatrix</i>	1.6	278	30.5	30.6	30.7	30.9	30.9	30.9	30.8	30.6	30.4	30.2	30.0	29.9
23 - β Tau	<i>Elnath</i>	1.7	278	10.9	11.0	11.1	11.3	11.3	11.3	11.1	10.9	10.7	10.5	10.2	10.1
24 - δ Ori	<i>Mintaka</i>	2.2	276	48.0	48.1	48.2	48.3	48.4	48.4	48.2	48.1	47.9	47.6	47.5	47.3
25 - ε Ori	<i>Alnilam</i>	1.7	275	45.0	45.0	45.2	45.3	45.4	45.3	45.2	45.0	44.8	44.6	44.4	44.3
26 - ζ Ori	<i>Alnitak</i>	1.9	274	36.8	36.9	37.0	37.2	37.2	37.2	37.1	36.9	36.7	36.5	36.3	36.2
27 - κ Ori	<i>Saiph</i>	2.1	272	52.6	52.6	52.8	52.9	53.0	53.0	52.9	52.7	52.5	52.3	52.1	52.0
28 - α Ori	<i>Betelgeuse</i>	0.4	270	59.8	59.9	60.0	60.1	60.2	60.2	60.1	59.9	59.7	59.5	59.3	59.1
29 - β Aur	<i>Menkalinan</i>	1.9	269	50.0	50.0	50.2	50.4	50.5	50.5	50.4	50.1	49.8	49.5	49.3	49.1
30 - β CMa	<i>Mirzam</i>	2.0	264	9.2	9.2	9.3	9.5	9.6	9.6	9.5	9.4	9.2	9.0	8.8	8.6
31 - α Car	<i>Canopus</i>	-0.7	263	55.1	55.3	55.5	55.8	56.0	56.1	56.0	55.9	55.6	55.3	55.0	54.8
32 - γ Gem	<i>Alhena</i>	1.9	260	20.9	20.9	21.0	21.1	21.2	21.3	21.2	21.0	20.8	20.6	20.4	20.2
33 - α CMa	<i>Sirius</i>	-1.5	258	32.4	32.5	32.6	32.7	32.8	32.9	32.8	32.7	32.5	32.3	32.1	31.9
34 - ε CMa	<i>Adhara</i>	1.5	255	11.3	11.3	11.4	11.6	11.8	11.8	11.8	11.7	11.5	11.2	11.0	10.8
35 - δ CMa	<i>Wezen</i>	1.9	252	44.5	44.5	44.6	44.8	44.9	45.0	45.0	44.8	44.7	44.5	44.2	44.0
36 - η CMa	<i>Aludra</i>	2.5	248	49.2	49.2	49.3	49.5	49.6	49.7	49.7	49.6	49.4	49.2	48.9	48.7
37 - α Gem	<i>Castor</i>	2.0	246	6.2	6.2	6.3	6.4	6.5	6.6	6.5	6.4	6.2	6.0	5.7	5.5
38 - α CMi	<i>Procyon</i>	0.4	244	58.3	58.2	58.3	58.5	58.6	58.6	58.6	58.5	58.3	58.1	57.9	57.7
39 - β Gem	<i>Pollux</i>	1.1	243	26.0	26.0	26.1	26.3	26.4	26.4	26.4	26.3	26.1	25.9	25.6	25.4
40 - ζ Pup	<i>Naos</i>	2.3	238	57.7	57.7	57.9	58.0	58.2	58.3	58.4	58.3	58.1	57.9	57.6	57.4
41 - γ Vel	<i>Regor</i>	1.8	237	29.4	29.4	29.6	29.8	30.0	30.1	30.2	30.1	30.0	29.7	29.4	29.1
42 - ε Car	<i>Avior</i>	1.9	234	16.8	16.9	17.0	17.3	17.6	17.9	18.0	18.0	17.8	17.4	17.1	16.7
43 - δ Velorum		2.0	228	42.5	42.4	42.6	42.8	43.1	43.3	43.4	43.4	43.2	42.9	42.6	42.3
44 - ζ Hydrae		3.1	225	56.8	56.7	56.8	56.9	57.0	57.1	57.1	57.0	56.9	56.7	56.5	56.3
45 - λ Vel	<i>Suhail</i>	2.2	222	51.2	51.1	51.2	51.3	51.5	51.7	51.7	51.7	51.6	51.4	51.1	50.9
46 - β Car	<i>Miaplacidus</i>	1.7	221	38.4	38.3	38.5	38.9	39.4	39.8	40.1	40.1	40.0	39.6	39.1	38.6
47 - ι Car	<i>Aspidiske</i>	2.3	220	36.8	36.7	36.8	37.1	37.3	37.6	37.8	37.8	37.7	37.4	37.0	36.7
48 - α Lyn	<i>Elvashak</i>	3.1	219	30.1	30.0	30.0	30.1	30.3	30.4	30.4	30.4	30.3	30.1	29.8	29.5
49 - α Hyd	<i>Alphard</i>	2.0	217	54.7	54.6	54.6	54.7	54.8	54.9	55.0	54.9	54.9	54.7	54.5	54.2
50 - α Leo	<i>Regulus</i>	1.4	207	42.1	42.0	42.0	42.0	42.1	42.2	42.3	42.3	42.2	42.1	41.9	41.6

ESTRELLAS, 2015
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	+29	10.5	10.5	10.4	10.3	10.3	10.4	10.5	10.6	10.7	10.8	10.9	10.9
2 - β Cas	<i>Caph</i>	2.3	+59	14.2	14.1	14.0	13.9	13.8	13.8	13.9	14.0	14.2	14.4	14.5	14.5
3 - γ Peg	<i>Algenib</i>	2.8	+15	16.1	16.0	16.0	16.0	16.0	16.1	16.2	16.3	16.4	16.4	16.4	16.4
4 - α Phe	<i>Ankaa</i>	2.4	-42	13.7	13.7	13.6	13.4	13.3	13.1	13.1	13.1	13.1	13.2	13.3	13.4
5 - α Cas	<i>Schedar</i>	2.2	+56	37.4	37.3	37.2	37.1	37.0	37.0	37.1	37.2	37.4	37.5	37.7	37.7
6 - β Cet	<i>Diphda</i>	2.0	-17	54.4	54.4	54.4	54.3	54.2	54.1	54.0	53.9	53.9	54.0	54.0	54.1
7 - γ Cas	<i>Navi</i>	1.6	+60	48.1	48.1	47.9	47.8	47.7	47.7	47.7	47.9	48.0	48.2	48.3	48.4
8 - β And	<i>Mirach</i>	2.1	+35	42.1	42.1	42.0	41.9	41.9	41.9	42.0	42.1	42.2	42.3	42.4	42.4
9 - α Eri	<i>Achernar</i>	0.5	-57	10.0	9.9	9.8	9.7	9.5	9.3	9.2	9.2	9.3	9.4	9.6	9.7
10 - γ And	<i>Almak</i>	2.3	+42	24.2	24.2	24.1	24.0	23.9	23.9	24.0	24.0	24.2	24.3	24.4	24.4
12 - α Ari	<i>Hamal</i>	2.0	+23	32.0	32.0	31.9	31.9	31.9	31.9	32.0	32.0	32.1	32.2	32.2	32.3
11 - α UMi	<i>Polaris</i>	2.0	+89	19.9	19.9	19.9	19.7	19.6	19.5	19.4	19.4	19.5	19.7	19.8	20.0
13 - θ Eri	<i>Acamar</i>	3.3	-40	15.0	15.1	15.0	14.9	14.8	14.6	14.5	14.4	14.4	14.5	14.6	14.7
14 - α Cet	<i>Menkar</i>	2.5	+4	8.8	8.7	8.7	8.7	8.8	8.8	8.9	9.0	9.0	9.1	9.0	9.0
15 - β Per	<i>Algol</i>	2.1	+41	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.7	0.7	0.8	0.9	1.0
16 - α Per	<i>Mirfak</i>	1.8	+49	54.9	54.9	54.9	54.8	54.7	54.6	54.6	54.6	54.7	54.8	54.9	55.0
17 - η Tau	<i>Alcyone</i>	2.9	+24	9.0	9.0	8.9	8.9	8.9	8.9	9.0	9.0	9.0	9.1	9.1	9.1
18 - γ Eri	<i>Zaurak</i>	3.0	-13	28.2	28.3	28.3	28.2	28.2	28.0	27.9	27.8	27.8	27.8	27.9	28.0
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.2	32.2	32.2	32.1	32.1	32.2	32.2	32.2	32.3	32.3	32.3	32.3
20 - β Ori	<i>Rigel</i>	0.1	-8	11.3	11.4	11.4	11.4	11.3	11.3	11.2	11.1	11.0	11.1	11.1	11.2
21 - α Aur	<i>Capella</i>	0.1	+46	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.7	21.7	21.6
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.6	17.6	17.6	17.6	17.6	17.5	17.4	17.4	17.3	17.3	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.9	11.9	11.9	11.8	11.8	11.7	11.6	11.6	11.6	11.7	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.4	56.4	56.4	56.4	56.4	56.3	56.2	56.2	56.1	56.1	56.2	56.3
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.2	40.2	40.2	40.2	40.2	40.1	40.0	39.9	39.9	39.9	40.0	40.0
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.3	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.4	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.7	56.8	56.8	56.8	56.8	56.7	56.6	56.6	56.6	56.6	56.6	56.7
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.1	58.2	58.2	58.2	58.2	58.1	58.0	57.9	57.8	57.8	57.9	58.0
31 - α Car	<i>Canopus</i>	-0.7	-52	42.5	42.7	42.7	42.7	42.6	42.5	42.3	42.2	42.1	42.1	42.2	42.4
32 - γ Gem	<i>Alhena</i>	1.9	+16	22.9	22.9	22.9	22.9	22.9	22.9	23.0	23.0	23.0	23.0	22.9	22.9
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.5	44.6	44.6	44.6	44.6	44.5	44.4	44.3	44.2	44.3	44.3	44.5
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.8	60.0	60.0	60.0	60.0	59.9	59.7	59.6	59.5	59.5	59.6	59.8
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.3	25.4	25.5	25.5	25.4	25.3	25.2	25.1	25.0	25.0	25.1	25.2
36 - η CMa	<i>Aludra</i>	2.5	-29	20.2	20.3	20.4	20.4	20.4	20.3	20.2	20.0	20.0	20.0	20.0	20.2
37 - α Gem	<i>Castor</i>	2.0	+31	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.0	51.0	50.9	50.9
38 - α CMi	<i>Procyon</i>	0.4	+5	10.9	10.9	10.9	10.9	10.9	10.9	10.9	11.0	11.0	11.0	10.9	10.8
39 - β Gem	<i>Pollux</i>	1.1	+27	59.1	59.1	59.2	59.2	59.2	59.2	59.2	59.1	59.1	59.0	59.0	59.0
40 - ζ Pup	<i>Naos</i>	2.3	-40	2.9	3.1	3.2	3.2	3.2	3.1	3.0	2.9	2.8	2.7	2.8	2.9
41 - γ Vel	<i>Regor</i>	1.8	-47	23.0	23.2	23.3	23.4	23.4	23.3	23.1	23.0	22.9	22.8	22.9	23.0
42 - ϵ Car	<i>Avior</i>	1.9	-59	33.6	33.8	33.9	34.0	34.0	33.9	33.8	33.6	33.5	33.4	33.5	33.6
43 - δ Velorum		2.0	-54	45.9	46.1	46.3	46.4	46.4	46.3	46.2	46.0	45.9	45.8	45.8	46.0
44 - ζ Hydrae		3.1	+5	53.0	53.0	53.0	53.0	53.0	53.0	53.1	53.1	53.1	53.1	53.0	52.9
45 - λ Vel	<i>Suhail</i>	2.2	-43	29.7	29.9	30.0	30.1	30.1	30.0	29.9	29.8	29.7	29.6	29.6	29.8
46 - β Car	<i>Miaplacidus</i>	1.7	-69	46.8	47.0	47.1	47.2	47.3	47.2	47.1	47.0	46.8	46.7	46.7	46.8
47 - ι Car	<i>Aspidiske</i>	2.3	-59	20.3	20.5	20.7	20.8	20.8	20.8	20.7	20.5	20.4	20.3	20.3	20.4
48 - α Lyn	<i>Elvashak</i>	3.1	+34	19.4	19.5	19.5	19.6	19.6	19.6	19.6	19.5	19.4	19.4	19.3	19.2
49 - α Hyd	<i>Alphard</i>	2.0	-8	43.6	43.7	43.8	43.8	43.8	43.7	43.7	43.6	43.6	43.6	43.6	43.7
50 - α Leo	<i>Regulus</i>	1.4	+11	53.4	53.3	53.3	53.4	53.4	53.4	53.4	53.5	53.4	53.4	53.3	53.2

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	8.1	7.9	7.9	8.0	8.2	8.3	8.5	8.6	8.6	8.4	8.2	7.8
52 - ν	Hydrae	3.1	197	24.1	24.0	23.9	24.0	24.1	24.2	24.2	24.3	24.3	24.2	24.0	23.7
53 - β	UMa Merak	2.4	194	18.7	18.4	18.3	18.4	18.6	18.8	19.0	19.1	19.1	18.9	18.6	18.3
54 - α	UMa Dubhe	1.8	193	50.1	49.8	49.7	49.8	50.1	50.3	50.5	50.6	50.6	50.5	50.1	49.7
55 - β	Leo Denebola	2.1	182	32.4	32.2	32.1	32.1	32.2	32.3	32.4	32.4	32.5	32.4	32.2	32.0
56 - γ	Crv Gienah	2.6	175	51.0	50.8	50.7	50.7	50.7	50.8	50.9	51.0	51.0	51.0	50.8	50.6
57 - α	Cru Acrux	1.4	173	7.7	7.4	7.2	7.1	7.2	7.5	7.7	8.0	8.1	8.1	7.8	7.4
58 - γ	Cru Gacrux	1.6	171	59.4	59.1	58.9	58.9	58.9	59.1	59.3	59.5	59.6	59.6	59.4	59.0
59 - γ	Cen Muhlifain	2.2	169	24.3	24.0	23.9	23.8	23.9	24.0	24.2	24.3	24.4	24.4	24.2	23.9
60 - β	Cru Mimosa	1.3	167	50.4	50.0	49.8	49.7	49.8	50.0	50.2	50.4	50.6	50.6	50.4	50.0
61 - ε	UMa Alioth	1.8	166	19.8	19.4	19.2	19.2	19.3	19.4	19.6	19.8	20.0	20.0	19.9	19.6
62 - α^2	CVn Cor Caroli	2.9	165	49.0	48.8	48.6	48.6	48.6	48.7	48.9	49.0	49.1	49.1	49.0	48.7
63 - ε	Vir Vindemiatrix	2.8	164	16.0	15.8	15.7	15.6	15.6	15.7	15.8	15.9	15.9	15.9	15.8	15.6
64 - ζ	UMa Mizar	2.3	158	52.2	51.9	51.6	51.5	51.6	51.8	52.0	52.2	52.3	52.4	52.3	52.0
65 - α	Vir Spica	1.0	158	30.1	29.8	29.7	29.6	29.6	29.6	29.7	29.8	29.9	29.9	29.8	29.6
66 - η	UMa Alkaid	1.9	152	58.2	57.8	57.6	57.5	57.5	57.6	57.8	58.0	58.2	58.2	58.2	58.0
67 - β	Cen Hadar	0.6	148	46.3	45.9	45.6	45.4	45.3	45.4	45.6	45.8	46.1	46.2	46.1	45.8
68 - θ	Cen Menkent	2.1	148	6.3	6.0	5.8	5.7	5.6	5.7	5.9	6.0	6.1	6.1	6.0	5.8
69 - α	Boo Arcturus	0.0	145	54.8	54.6	54.4	54.3	54.3	54.3	54.4	54.5	54.6	54.7	54.6	54.5
70 - α^1	Cen Rigil Kentaurus	0.0	139	50.4	50.0	49.6	49.4	49.3	49.4	49.6	49.8	50.1	50.2	50.2	49.9
71 - α^2	Lib Zubenelgenubi	2.8	137	4.3	4.1	3.9	3.7	3.6	3.6	3.7	3.8	3.9	4.0	4.0	3.8
72 - β	UMi Kochab	2.1	137	20.7	20.0	19.5	19.1	19.1	19.4	19.8	20.4	21.0	21.4	21.5	21.3
73 - β	Lib Zubeneschamali	2.6	130	32.8	32.5	32.3	32.2	32.1	32.1	32.1	32.2	32.3	32.4	32.4	32.3
74 - α	CrB Alphecca	2.2	126	10.3	10.1	9.8	9.7	9.6	9.6	9.6	9.7	9.9	10.0	10.0	9.9
75 - α	Ser Unukalhai	2.7	123	45.0	44.7	44.5	44.4	44.3	44.2	44.3	44.4	44.5	44.6	44.6	44.5
76 - α	Sco Antares	0.9	112	25.2	24.9	24.7	24.5	24.3	24.2	24.2	24.3	24.5	24.6	24.6	24.5
77 - α	TrA Atria	1.9	107	26.4	25.9	25.3	24.8	24.4	24.2	24.2	24.5	24.9	25.3	25.5	25.4
78 - ε	Scorpii	2.3	107	13.1	12.8	12.6	12.3	12.1	12.0	12.0	12.1	12.3	12.4	12.5	12.4
79 - η	Oph Sabik	2.4	102	11.6	11.3	11.1	10.9	10.7	10.6	10.6	10.7	10.8	10.9	11.0	11.0
80 - α	Her Rasalgethi	3.1	101	10.2	10.0	9.8	9.6	9.4	9.3	9.3	9.4	9.6	9.7	9.8	9.7
81 - λ	Sco Shaula	1.6	96	20.8	20.5	20.3	20.0	19.8	19.6	19.6	19.7	19.8	20.0	20.1	20.0
82 - α	Oph Rasalhague	2.1	96	5.7	5.5	5.3	5.1	5.0	4.9	4.8	4.9	5.0	5.2	5.3	5.2
83 - θ	Sco Sargas	1.9	95	24.3	24.0	23.7	23.4	23.2	23.0	23.0	23.0	23.2	23.4	23.5	23.5
84 - γ	Dra Eltanin	2.2	90	46.1	45.9	45.6	45.3	45.1	45.0	45.0	45.1	45.4	45.6	45.8	45.9
85 - ε	Sgr Kaus Australis	1.9	83	42.8	42.5	42.3	42.0	41.8	41.6	41.5	41.6	41.7	41.9	42.0	42.0
86 - α	Lyr Vega	0.0	80	38.6	38.5	38.3	38.0	37.8	37.6	37.6	37.6	37.8	38.0	38.2	38.2
87 - σ	Sgr Nunki	2.0	75	57.3	57.2	57.0	56.7	56.5	56.3	56.2	56.2	56.3	56.5	56.6	56.6
88 - α	Aql Altair	0.8	62	7.5	7.4	7.2	7.0	6.8	6.6	6.5	6.5	6.6	6.7	6.8	6.9
89 - γ	Cyg Sadr	2.2	54	18.8	18.7	18.6	18.3	18.1	17.8	17.7	17.7	17.8	17.9	18.1	18.2
90 - α	Pav Peacock	1.9	53	18.2	18.1	17.8	17.5	17.1	16.8	16.5	16.4	16.5	16.7	17.0	17.1
91 - α	Cyg Deneb	1.3	49	31.1	31.1	30.9	30.7	30.4	30.2	30.0	30.0	30.1	30.2	30.4	30.6
92 - α	Cep Alderamin	2.4	40	16.3	16.4	16.2	15.9	15.5	15.1	14.9	14.8	14.9	15.2	15.5	15.8
93 - ε	Peg Enif	0.7	33	46.3	46.3	46.2	46.1	45.9	45.6	45.4	45.3	45.3	45.4	45.5	45.6
94 - δ	Cap Deneb Algedi	2.9	33	2.2	2.2	2.1	1.9	1.7	1.5	1.3	1.2	1.2	1.2	1.3	1.4
95 - α	Gru Al Na'ir	1.7	27	42.8	42.8	42.7	42.5	42.3	41.9	41.7	41.5	41.5	41.6	41.7	41.9
96 - β	Gruis	2.1	19	7.0	7.0	7.0	6.8	6.6	6.3	6.0	5.8	5.7	5.8	5.9	6.1
97 - α	PsA Fomalhaut	1.2	15	23.1	23.1	23.1	22.9	22.7	22.5	22.2	22.1	22.0	22.0	22.1	22.2
98 - β	Peg Scheat	2.4	13	52.5	52.5	52.5	52.4	52.2	52.0	51.7	51.6	51.5	51.5	51.6	51.7
99 - α	Peg Markab	2.5	13	37.4	37.5	37.4	37.3	37.1	36.9	36.7	36.5	36.5	36.5	36.6	36.7

ESTRELLAS, 2015
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	29.9	30.1	30.3	30.4	30.5	30.5	30.4	30.3	30.1	30.0	30.0	30.1
52 - ν	Hydrae	3.1	-16	16.4	16.5	16.6	16.7	16.7	16.7	16.6	16.5	16.5	16.5	16.5	16.6
53 - β	UMa Merak	2.4	+56	17.8	17.8	17.9	18.1	18.1	18.2	18.1	18.0	17.9	17.7	17.6	17.5
54 - α	UMa Dubhe	1.8	+61	39.8	39.9	40.0	40.2	40.2	40.3	40.2	40.1	39.9	39.8	39.6	39.5
55 - β	Leo Denebola	2.1	+14	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.1	29.0	28.9
56 - γ	Crv Gienah	2.6	-17	37.5	37.6	37.7	37.8	37.8	37.8	37.7	37.7	37.6	37.6	37.6	37.7
57 - α	Cru Acrux	1.4	-63	10.7	10.8	11.0	11.2	11.3	11.4	11.4	11.3	11.2	11.0	10.9	10.9
58 - γ	Cru Gacrux	1.6	-57	11.6	11.7	11.9	12.1	12.2	12.2	12.2	12.2	12.0	11.9	11.8	11.8
59 - γ	Cen Muhlifain	2.2	-49	2.3	2.5	2.6	2.7	2.8	2.9	2.9	2.8	2.7	2.6	2.5	2.5
60 - β	Cru Mimosas	1.3	-59	46.0	46.1	46.3	46.4	46.6	46.6	46.6	46.6	46.5	46.3	46.2	46.2
61 - ϵ	UMa Alioth	1.8	+55	52.4	52.4	52.5	52.6	52.8	52.9	52.9	52.8	52.7	52.5	52.3	52.2
62 - α^2	CVn Cor Caroli	2.9	+38	14.0	14.0	14.0	14.1	14.2	14.3	14.4	14.3	14.2	14.1	14.0	13.8
63 - ϵ	Vir Vindemiatrix	2.8	+10	52.6	52.5	52.5	52.6	52.6	52.7	52.7	52.7	52.7	52.6	52.5	52.4
64 - ζ	UMa Mizar	2.3	+54	50.5	50.5	50.6	50.7	50.9	51.0	51.0	51.0	50.9	50.7	50.5	50.4
65 - α	Vir Spica	1.0	-11	14.3	14.4	14.5	14.5	14.5	14.5	14.5	14.5	14.4	14.4	14.4	14.5
66 - η	UMa Alkaid	1.9	+49	14.1	14.0	14.1	14.2	14.4	14.5	14.5	14.5	14.4	14.3	14.1	13.9
67 - β	Cen Hadar	0.6	-60	26.4	26.5	26.6	26.7	26.9	27.0	27.0	26.9	26.9	26.8	26.7	26.6
68 - θ	Cen Menkent	2.1	-36	26.4	26.5	26.6	26.7	26.8	26.8	26.8	26.8	26.7	26.7	26.6	26.6
69 - α	Boo Arcturus	0.0	+19	6.2	6.1	6.1	6.1	6.2	6.3	6.4	6.4	6.3	6.3	6.2	6.0
70 - α^1	Cen Rigil Kentaurus	0.0	-60	53.5	53.5	53.6	53.8	53.9	54.0	54.1	54.1	54.0	53.9	53.8	53.7
71 - α^2	Lib Zubenelgenubi	2.8	-16	6.1	6.2	6.2	6.3	6.3	6.3	6.3	6.2	6.2	6.2	6.2	6.2
72 - β	UMi Kochab	2.1	+74	5.4	5.4	5.4	5.5	5.7	5.9	5.9	5.9	5.8	5.7	5.5	5.3
73 - β	Lib Zubeneshamali	2.6	-9	26.2	26.2	26.3	26.3	26.3	26.3	26.2	26.2	26.2	26.2	26.2	26.3
74 - α	CrB Alphecca	2.2	+26	39.8	39.7	39.7	39.8	39.9	40.0	40.1	40.1	40.1	40.1	39.9	39.8
75 - α	Ser Unukalhai	2.7	+6	22.8	22.7	22.7	22.7	22.7	22.8	22.9	22.9	22.9	22.9	22.8	22.7
76 - α	Sco Antares	0.9	-26	27.7	27.7	27.7	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
77 - α	TrA Atria	1.9	-69	2.9	2.8	2.8	2.9	3.0	3.1	3.3	3.3	3.4	3.3	3.2	3.1
78 - ϵ	Scorpii	2.3	-34	18.9	19.0	19.0	19.0	19.1	19.1	19.1	19.2	19.2	19.1	19.1	19.0
79 - η	Oph Sabik	2.4	-15	44.4	44.4	44.5	44.5	44.5	44.4	44.4	44.4	44.4	44.4	44.4	44.4
80 - α	Her Rasalgethi	3.1	+14	22.5	22.4	22.4	22.4	22.5	22.6	22.7	22.7	22.8	22.7	22.7	22.6
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.8	6.8	6.7	6.7	6.7
82 - α	Oph Rasalhague	2.1	+12	33.1	33.0	32.9	33.0	33.0	33.1	33.2	33.3	33.3	33.3	33.2	33.2
83 - θ	Sco Sargas	1.9	-43	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.3	29.1	29.1	29.1	29.2	29.4	29.5	29.7	29.7	29.7	29.6	29.5
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.4	22.4	22.4	22.3	22.3	22.4	22.4	22.4	22.5	22.5	22.4	22.4
86 - α	Lyr Vega	0.0	+38	48.0	47.8	47.8	47.8	47.9	48.0	48.2	48.3	48.4	48.4	48.3	48.2
87 - σ	Sgr Nunki	2.0	-26	16.5	16.5	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
88 - α	Aql Altair	0.8	+8	54.6	54.6	54.5	54.5	54.6	54.7	54.8	54.9	54.9	55.0	54.9	54.9
89 - γ	Cyg Sadr	2.2	+40	18.5	18.3	18.2	18.2	18.3	18.4	18.5	18.7	18.8	18.9	18.9	18.8
90 - α	Pav Peacock	1.9	-56	41.1	41.0	40.9	40.8	40.7	40.7	40.8	40.9	41.0	41.1	41.1	41.0
91 - α	Cyg Deneb	1.3	+45	20.3	20.1	20.0	19.9	20.0	20.1	20.3	20.4	20.6	20.7	20.7	20.6
92 - α	Cep Alderamin	2.4	+62	39.2	39.1	38.9	38.8	38.8	38.9	39.1	39.3	39.5	39.6	39.6	39.6
93 - ϵ	Peg Enif	0.7	+9	56.8	56.7	56.7	56.7	56.7	56.8	56.9	57.0	57.1	57.1	57.1	57.1
94 - δ	Cap Deneb Algedi	2.9	-16	3.5	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.2	3.2	3.2
95 - α	Gru Al Na'ir	1.7	-46	53.4	53.2	53.1	53.0	52.9	52.8	52.8	52.9	53.0	53.1	53.1	53.1
96 - β	Gruis	2.1	-46	48.5	48.4	48.3	48.1	48.0	47.9	47.9	47.9	48.0	48.1	48.2	48.2
97 - α	PsA Fomalhaut	1.2	-29	32.6	32.6	32.5	32.4	32.3	32.2	32.1	32.1	32.2	32.3	32.3	32.4
98 - β	Peg Scheat	2.4	+28	10.0	9.9	9.9	9.8	9.8	9.9	10.0	10.1	10.3	10.4	10.4	10.4
99 - α	Peg Markab	2.5	+15	17.3	17.2	17.2	17.1	17.2	17.3	17.4	17.5	17.6	17.6	17.6	17.6

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 24	17 22	15 32	13 30	11 32	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 23
16 - α Persei	<i>Mirfak</i>	1.8	20 41	18 39	16 49	14 47	12 49	10 47	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 37	10 39
21 - α Aurigae	<i>Capella</i>	0.1	22 33	20 31	18 41	16 39	14 41	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 47
33 - α Canis Majoris	<i>Sirius</i>	-1.5	0 05	21 59	20 09	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 59	22 53	21 03	19 01	17 03	15 01	13 03
39 - β Geminorum	<i>Pollux</i>	1.1	1 05	22 59	21 09	19 07	17 09	15 07	13 09
42 - ϵ Carinae	<i>Avior</i>	1.9	1 41	23 35	21 45	19 43	17 45	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 47	0 45	22 51	20 49	18 51	16 49	14 51
50 - α Leonis	<i>Regulus</i>	1.4	3 27	1 25	23 31	21 30	19 32	17 30	15 32
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	4 23	2 21	0 31	22 25	20 27	18 25	16 27
55 - β Leonis	<i>Denebola</i>	2.1	5 08	3 06	1 16	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 50	19 48	17 50
58 - γ Crucis	<i>Gacrux</i>	1.6	5 50	3 48	1 58	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 11	20 09	18 11
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	6 12	4 10	2 20	0 19	22 17	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 47
65 - α Virginis	<i>Spica</i>	1.0	6 44	4 42	2 52	0 50	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 06	4 16	2 14	0 16	22 10	20 12
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	8 53	6 51	5 01	2 59	1 01	22 55	20 57
76 - α Scorpii	<i>Antares</i>	0.9	9 47	7 46	5 55	3 54	1 56	23 50	21 52
77 - α Trianguli Aust.	<i>Atria</i>	1.9	10 07	8 05	6 15	4 13	2 16	0 14	22 12
81 - λ Scorpii	<i>Shaula</i>	1.6	10 52	8 50	7 00	4 58	3 00	0 58	22 56
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	10 53	8 51	7 01	4 59	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 42	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 01	0 03
87 - σ Sagittarii	<i>Nunki</i>	2.0	12 13	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 50	1 52
91 - α Cygni	<i>Deneb</i>	1.3	13 58	11 56	10 06	8 04	6 07	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 10
95 - α Gruis	<i>Al Na'ir</i>	1.7	15 25	13 23	11 33	9 31	7 34	5 32	3 34
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	16 14	14 13	12 22	10 21	8 23	6 21	4 23
99 - α Pegasi	<i>Markab</i>	2.5	16 21	14 20	12 30	10 28	8 30	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	
1 - α Andromedae	<i>Alpheratz</i>	2.1	3 31	1 30	23 28	21 26	19 28	Se restará para obtener la hora del paso en otro día del mismo mes.
2 - β Cassiopeae	<i>Caph</i>	2.3	3 32	1 30	23 29	21 27	19 29	
6 - β Ceti	<i>Diphda</i>	2.0	4 07	2 05	0 07	22 01	20 03	
9 - α Eridani	<i>Achernar</i>	0.5	5 00	2 58	1 01	22 55	20 57	Día Corr.
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	1 h m
16 - α Persei	<i>Mirfak</i>	1.8	6 47	4 45	2 47	0 46	22 44	2 0 00
19 - α Tauri	<i>Aldebaran</i>	0.9	7 58	5 56	3 59	1 57	23 55	3 0 04
20 - β Orionis	<i>Rigel</i>	0.1	8 37	6 35	4 37	2 35	0 37	4 0 08
21 - α Aurigae	<i>Capella</i>	0.1	8 39	6 37	4 39	2 38	0 40	5 0 12
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 47	6 45	4 48	2 46	0 48	6 0 16
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 17	7 15	5 18	3 16	1 18	7 0 20
31 - α Carinae	<i>Canopus</i>	-0.7	9 46	7 44	5 46	3 44	1 46	8 0 24
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 07	8 05	6 07	4 05	2 07	9 0 28
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 20	8 18	6 21	4 19	2 21	10 0 31
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 01	8 59	7 01	4 59	3 02	11 0 35
39 - β Geminorum	<i>Pollux</i>	1.1	11 07	9 05	7 07	5 06	3 08	12 0 39
42 - ϵ Carinae	<i>Avior</i>	1.9	11 44	9 42	7 44	5 42	3 44	13 0 43
45 - λ Velorum	<i>Suhail</i>	2.2	12 29	10 27	8 30	6 28	4 30	14 0 47
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 34	10 32	8 34	6 32	4 35	15 0 51
49 - α Hydrae	<i>Alphard</i>	2.0	12 49	10 47	8 49	6 47	4 49	16 0 55
50 - α Leonis	<i>Regulus</i>	1.4	13 30	11 28	9 30	7 28	5 30	17 0 59
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 25	12 23	10 25	8 23	6 25	18 1 03
55 - β Leonis	<i>Denebola</i>	2.1	15 10	13 08	11 10	9 08	7 11	19 1 07
57 - α Crucis	<i>Acrux</i>	1.4	15 48	13 46	11 48	9 46	7 48	20 1 11
58 - γ Crucis	<i>Gacrux</i>	1.6	15 52	13 50	11 52	9 51	7 53	21 1 15
60 - β Crucis	<i>Mimosa</i>	1.3	16 09	14 07	12 09	10 07	8 09	22 1 19
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 15	14 13	12 15	10 13	8 15	23 1 23
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 45	14 43	12 45	10 43	8 45	24 1 27
65 - α Virginis	<i>Spica</i>	1.0	16 46	14 44	12 46	10 44	8 46	25 1 30
68 - θ Centauri	<i>Menkent</i>	2.1	17 28	15 26	13 28	11 26	9 28	26 1 34
69 - α Bootis	<i>Arcturus</i>	0.0	17 36	15 34	13 36	11 35	9 37	27 1 38
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	18 01	15 59	14 01	11 59	10 01	28 1 42
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 11	16 09	14 11	12 09	10 11	29 1 46
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 55	16 53	14 55	12 53	10 55	30 1 50
76 - α Scorpii	<i>Antares</i>	0.9	19 50	17 48	15 50	13 48	11 50	31 1 54
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 10	18 08	16 10	14 08	12 10	31 1 58
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 14	17 16	15 15	13 17	
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 45	19 43	17 45	15 43	13 45	
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 14	18 16	16 14	14 16	
88 - α Aquilae	<i>Altair</i>	0.8	23 11	21 09	19 11	17 09	15 11	
90 - α Pavonis	<i>Peacock</i>	1.9	23 46	21 44	19 46	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 08	23 02	21 04	19 02	17 04	
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 32	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, 2015

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
0 00	-29.5	26 00	-38.5	52 00	-39.8	78 00	-33.0	104 00	-19.5	130 00	-2.0	156 00	+15.8
0 30	-29.7	26 30	-38.6	52 30	-39.7	78 30	-32.8	104 30	-19.2	130 30	-1.7	156 30	+16.1
1 00	-30.0	27 00	-38.7	53 00	-39.7	79 00	-32.6	105 00	-18.9	131 00	-1.3	157 00	+16.4
1 30	-30.2	27 30	-38.8	53 30	-39.6	79 30	-32.3	105 30	-18.5	131 30	-1.0	157 30	+16.8
2 00	-30.4	28 00	-38.9	54 00	-39.5	80 00	-32.1	106 00	-18.2	132 00	-0.6	158 00	+17.1
2 30	-30.7	28 30	-39.0	54 30	-39.5	80 30	-31.9	106 30	-17.9	132 30	-0.3	158 30	+17.4
3 00	-30.9	29 00	-39.1	55 00	-39.4	81 00	-31.7	107 00	-17.6	133 00	+0.1	159 00	+17.7
3 30	-31.1	29 30	-39.2	55 30	-39.3	81 30	-31.5	107 30	-17.3	133 30	+0.4	159 30	+18.0
4 00	-31.3	30 00	-39.3	56 00	-39.2	82 00	-31.3	108 00	-17.0	134 00	+0.8	160 00	+18.3
4 30	-31.6	30 30	-39.3	56 30	-39.2	82 30	-31.0	108 30	-16.6	134 30	+1.1	160 30	+18.7
5 00	-31.8	31 00	-39.4	57 00	-39.1	83 00	-30.8	109 00	-16.3	135 00	+1.5	161 00	+19.0
5 30	-32.0	31 30	-39.5	57 30	-39.0	83 30	-30.6	109 30	-16.0	135 30	+1.8	161 30	+19.3
6 00	-32.2	32 00	-39.6	58 00	-38.9	84 00	-30.4	110 00	-15.7	136 00	+2.2	162 00	+19.6
6 30	-32.4	32 30	-39.6	58 30	-38.8	84 30	-30.1	110 30	-15.4	136 30	+2.5	162 30	+19.9
7 00	-32.6	33 00	-39.7	59 00	-38.7	85 00	-29.9	111 00	-15.0	137 00	+2.9	163 00	+20.2
7 30	-32.8	33 30	-39.7	59 30	-38.6	85 30	-29.7	111 30	-14.7	137 30	+3.2	163 30	+20.5
8 00	-33.0	34 00	-39.8	60 00	-38.5	86 00	-29.4	112 00	-14.4	138 00	+3.6	164 00	+20.8
8 30	-33.2	34 30	-39.9	60 30	-38.4	86 30	-29.2	112 30	-14.0	138 30	+3.9	164 30	+21.1
9 00	-33.4	35 00	-39.9	61 00	-38.3	87 00	-28.9	113 00	-13.7	139 00	+4.3	165 00	+21.4
9 30	-33.6	35 30	-39.9	61 30	-38.2	87 30	-28.7	113 30	-13.4	139 30	+4.6	165 30	+21.7
10 00	-33.8	36 00	-40.0	62 00	-38.1	88 00	-28.4	114 00	-13.1	140 00	+5.0	166 00	+22.0
10 30	-34.0	36 30	-40.0	62 30	-38.0	88 30	-28.2	114 30	-12.7	140 30	+5.3	166 30	+22.3
11 00	-34.2	37 00	-40.1	63 00	-37.8	89 00	-27.9	115 00	-12.4	141 00	+5.7	167 00	+22.6
11 30	-34.4	37 30	-40.1	63 30	-37.7	89 30	-27.7	115 30	-12.1	141 30	+6.0	167 30	+22.9
12 00	-34.6	38 00	-40.1	64 00	-37.6	90 00	-27.4	116 00	-11.7	142 00	+6.4	168 00	+23.2
12 30	-34.7	38 30	-40.2	64 30	-37.5	90 30	-27.2	116 30	-11.4	142 30	+6.7	168 30	+23.4
13 00	-34.9	39 00	-40.2	65 00	-37.3	91 00	-26.9	117 00	-11.0	143 00	+7.1	169 00	+23.7
13 30	-35.1	39 30	-40.2	65 30	-37.2	91 30	-26.6	117 30	-10.7	143 30	+7.4	169 30	+24.0
14 00	-35.3	40 00	-40.2	66 00	-37.1	92 00	-26.4	118 00	-10.4	144 00	+7.7	170 00	+24.3
14 30	-35.4	40 30	-40.2	66 30	-36.9	92 30	-26.1	118 30	-10.0	144 30	+8.1	170 30	+24.6
15 00	-35.6	41 00	-40.3	67 00	-36.8	93 00	-25.8	119 00	-9.7	145 00	+8.4	171 00	+24.9
15 30	-35.8	41 30	-40.3	67 30	-36.6	93 30	-25.6	119 30	-9.3	145 30	+8.8	171 30	+25.1
16 00	-35.9	42 00	-40.3	68 00	-36.5	94 00	-25.3	120 00	-9.0	146 00	+9.1	172 00	+25.4
16 30	-36.1	42 30	-40.3	68 30	-36.3	94 30	-25.0	120 30	-8.7	146 30	+9.5	172 30	+25.7
17 00	-36.2	43 00	-40.3	69 00	-36.2	95 00	-24.8	121 00	-8.3	147 00	+9.8	173 00	+25.9
17 30	-36.4	43 30	-40.3	69 30	-36.0	95 30	-24.5	121 30	-8.0	147 30	+10.1	173 30	+26.2
18 00	-36.5	44 00	-40.3	70 00	-35.9	96 00	-24.2	122 00	-7.6	148 00	+10.5	174 00	+26.5
18 30	-36.7	44 30	-40.3	70 30	-35.7	96 30	-23.9	122 30	-7.3	148 30	+10.8	174 30	+26.7
19 00	-36.8	45 00	-40.3	71 00	-35.5	97 00	-23.6	123 00	-6.9	149 00	+11.2	175 00	+27.0
19 30	-37.0	45 30	-40.2	71 30	-35.4	97 30	-23.3	123 30	-6.6	149 30	+11.5	175 30	+27.3
20 00	-37.1	46 00	-40.2	72 00	-35.2	98 00	-23.1	124 00	-6.2	150 00	+11.8	176 00	+27.5
20 30	-37.2	46 30	-40.2	72 30	-35.0	98 30	-22.8	124 30	-5.9	150 30	+12.2	176 30	+27.8
21 00	-37.4	47 00	-40.2	73 00	-34.9	99 00	-22.5	125 00	-5.5	151 00	+12.5	177 00	+28.0
21 30	-37.5	47 30	-40.2	73 30	-34.7	99 30	-22.2	125 30	-5.2	151 30	+12.8	177 30	+28.3
22 00	-37.6	48 00	-40.1	74 00	-34.5	100 00	-21.9	126 00	-4.8	152 00	+13.2	178 00	+28.5
22 30	-37.8	48 30	-40.1	74 30	-34.3	100 30	-21.6	126 30	-4.5	152 30	+13.5	178 30	+28.8
23 00	-37.9	49 00	-40.1	75 00	-34.1	101 00	-21.3	127 00	-4.1	153 00	+13.8	179 00	+29.0
23 30	-38.0	49 30	-40.0	75 30	-33.9	101 30	-21.0	127 30	-3.8	153 30	+14.2	179 30	+29.3
24 00	-38.1	50 00	-40.0	76 00	-33.8	102 00	-20.7	128 00	-3.4	154 00	+14.5	180 00	+29.5
24 30	-38.2	50 30	-39.9	76 30	-33.6	102 30	-20.4	128 30	-3.1	154 30	+14.8	180 30	+29.7
25 00	-38.3	51 00	-39.9	77 00	-33.4	103 00	-20.1	129 00	-2.7	155 00	+15.1	181 00	+30.0
25 30	-38.4	51 30	-39.8	77 30	-33.2	103 30	-19.8	129 30	-2.4	155 30	+15.5	181 30	+30.2
26 00	-38.5	52 00	-39.8	78 00	-33.0	104 00	-19.5	130 00	-2.0	156 00	+15.8	182 00	+30.4

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2015

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+30.4	208 00	+38.9	234 00	+39.5	260 00	+32.1	286 00	+18.2	312 00	+0.6	338 00	-17.1
182 30	+30.7	208 30	+39.0	234 30	+39.5	260 30	+31.9	286 30	+17.9	312 30	+0.3	338 30	-17.4
183 00	+30.9	209 00	+39.1	235 00	+39.4	261 00	+31.7	287 00	+17.6	313 00	-0.1	339 00	-17.7
183 30	+31.1	209 30	+39.2	235 30	+39.3	261 30	+31.5	287 30	+17.3	313 30	-0.4	339 30	-18.0
184 00	+31.3	210 00	+39.3	236 00	+39.2	262 00	+31.3	288 00	+17.0	314 00	-0.8	340 00	-18.3
184 30	+31.6	210 30	+39.3	236 30	+39.2	262 30	+31.0	288 30	+16.6	314 30	-1.1	340 30	-18.7
185 00	+31.8	211 00	+39.4	237 00	+39.1	263 00	+30.8	289 00	+16.3	315 00	-1.5	341 00	-19.0
185 30	+32.0	211 30	+39.5	237 30	+39.0	263 30	+30.6	289 30	+16.0	315 30	-1.8	341 30	-19.3
186 00	+32.2	212 00	+39.6	238 00	+38.9	264 00	+30.4	290 00	+15.7	316 00	-2.2	342 00	-19.6
186 30	+32.4	212 30	+39.6	238 30	+38.8	264 30	+30.1	290 30	+15.4	316 30	-2.5	342 30	-19.9
187 00	+32.6	213 00	+39.7	239 00	+38.7	265 00	+29.9	291 00	+15.0	317 00	-2.9	343 00	-20.2
187 30	+32.8	213 30	+39.7	239 30	+38.6	265 30	+29.7	291 30	+14.7	317 30	-3.2	343 30	-20.5
188 00	+33.0	214 00	+39.8	240 00	+38.5	266 00	+29.4	292 00	+14.4	318 00	-3.6	344 00	-20.8
188 30	+33.2	214 30	+39.9	240 30	+38.4	266 30	+29.2	292 30	+14.0	318 30	-3.9	344 30	-21.1
189 00	+33.4	215 00	+39.9	241 00	+38.3	267 00	+28.9	293 00	+13.7	319 00	-4.3	345 00	-21.4
189 30	+33.6	215 30	+39.9	241 30	+38.2	267 30	+28.7	293 30	+13.4	319 30	-4.6	345 30	-21.7
190 00	+33.8	216 00	+40.0	242 00	+38.1	268 00	+28.4	294 00	+13.1	320 00	-5.0	346 00	-22.0
190 30	+34.0	216 30	+40.0	242 30	+38.0	268 30	+28.2	294 30	+12.7	320 30	-5.3	346 30	-22.3
191 00	+34.2	217 00	+40.1	243 00	+37.8	269 00	+27.9	295 00	+12.4	321 00	-5.7	347 00	-22.6
191 30	+34.4	217 30	+40.1	243 30	+37.7	269 30	+27.7	295 30	+12.1	321 30	-6.0	347 30	-22.9
192 00	+34.6	218 00	+40.1	244 00	+37.6	270 00	+27.4	296 00	+11.7	322 00	-6.4	348 00	-23.2
192 30	+34.7	218 30	+40.2	244 30	+37.5	270 30	+27.2	296 30	+11.4	322 30	-6.7	348 30	-23.4
193 00	+34.9	219 00	+40.2	245 00	+37.3	271 00	+26.9	297 00	+11.0	323 00	-7.1	349 00	-23.7
193 30	+35.1	219 30	+40.2	245 30	+37.2	271 30	+26.6	297 30	+10.7	323 30	-7.4	349 30	-24.0
194 00	+35.3	220 00	+40.2	246 00	+37.1	272 00	+26.4	298 00	+10.4	324 00	-7.7	350 00	-24.3
194 30	+35.4	220 30	+40.2	246 30	+36.9	272 30	+26.1	298 30	+10.0	324 30	-8.1	350 30	-24.6
195 00	+35.6	221 00	+40.3	247 00	+36.8	273 00	+25.8	299 00	+9.7	325 00	-8.4	351 00	-24.9
195 30	+35.8	221 30	+40.3	247 30	+36.6	273 30	+25.6	299 30	+9.3	325 30	-8.8	351 30	-25.1
196 00	+35.9	222 00	+40.3	248 00	+36.5	274 00	+25.3	300 00	+9.0	326 00	-9.1	352 00	-25.4
196 30	+36.1	222 30	+40.3	248 30	+36.3	274 30	+25.0	300 30	+8.7	326 30	-9.5	352 30	-25.7
197 00	+36.2	223 00	+40.3	249 00	+36.2	275 00	+24.8	301 00	+8.3	327 00	-9.8	353 00	-25.9
197 30	+36.4	223 30	+40.3	249 30	+36.0	275 30	+24.5	301 30	+8.0	327 30	-10.1	353 30	-26.2
198 00	+36.5	224 00	+40.3	250 00	+35.9	276 00	+24.2	302 00	+7.6	328 00	-10.5	354 00	-26.5
198 30	+36.7	224 30	+40.3	250 30	+35.7	276 30	+23.9	302 30	+7.3	328 30	-10.8	354 30	-26.7
199 00	+36.8	225 00	+40.3	251 00	+35.5	277 00	+23.6	303 00	+6.9	329 00	-11.2	355 00	-27.0
199 30	+37.0	225 30	+40.2	251 30	+35.4	277 30	+23.3	303 30	+6.6	329 30	-11.5	355 30	-27.3
200 00	+37.1	226 00	+40.2	252 00	+35.2	278 00	+23.1	304 00	+6.2	330 00	-11.8	356 00	-27.5
200 30	+37.2	226 30	+40.2	252 30	+35.0	278 30	+22.8	304 30	+5.9	330 30	-12.2	356 30	-27.8
201 00	+37.4	227 00	+40.2	253 00	+34.9	279 00	+22.5	305 00	+5.5	331 00	-12.5	357 00	-28.0
201 30	+37.5	227 30	+40.2	253 30	+34.7	279 30	+22.2	305 30	+5.2	331 30	-12.8	357 30	-28.3
202 00	+37.6	228 00	+40.1	254 00	+34.5	280 00	+21.9	306 00	+4.8	332 00	-13.2	358 00	-28.5
202 30	+37.8	228 30	+40.1	254 30	+34.3	280 30	+21.6	306 30	+4.5	332 30	-13.5	358 30	-28.8
203 00	+37.9	229 00	+40.1	255 00	+34.1	281 00	+21.3	307 00	+4.1	333 00	-13.8	359 00	-29.0
203 30	+38.0	229 30	+40.0	255 30	+33.9	281 30	+21.0	307 30	+3.8	333 30	-14.2	359 30	-29.3
204 00	+38.1	230 00	+40.0	256 00	+33.8	282 00	+20.7	308 00	+3.4	334 00	-14.5	360 00	-29.5
204 30	+38.2	230 30	+39.9	256 30	+33.6	282 30	+20.4	308 30	+3.1	334 30	-14.8		
205 00	+38.3	231 00	+39.9	257 00	+33.4	283 00	+20.1	309 00	+2.7	335 00	-15.1		
205 30	+38.4	231 30	+39.8	257 30	+33.2	283 30	+19.8	309 30	+2.4	335 30	-15.5		
206 00	+38.5	232 00	+39.8	258 00	+33.0	284 00	+19.5	310 00	+2.0	336 00	-15.8		
206 30	+38.6	232 30	+39.7	258 30	+32.8	284 30	+19.2	310 30	+1.7	336 30	-16.1		
207 00	+38.7	233 00	+39.7	259 00	+32.6	285 00	+18.9	311 00	+1.3	337 00	-16.4		
207 30	+38.8	233 30	+39.6	259 30	+32.3	285 30	+18.5	311 30	+1.0	337 30	-16.8		
208 00	+38.9	234 00	+39.5	260 00	+32.1	286 00	+18.2	312 00	+0.6	338 00	-17.1		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2015

TABLA II

(SIEMPRE POSITIVA)

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

TABLA III

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

Dic 32 corresponde al 1 de enero del año siguiente

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

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2015**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2015)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2			Ene 1	+0'3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Ene 22	+0'2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Feb 27	+0'1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Mar 22	0'0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			Abr 13	-0'1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			May 7	-0'2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jun 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 30	+15.2			Oct 18	+0'1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	46 30	+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	48 30	+15.4			Dic 16	+0'3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	50 30	+15.5			Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	52 30	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	54 30	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	56 30	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	58 30	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	60 30	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1						
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													

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