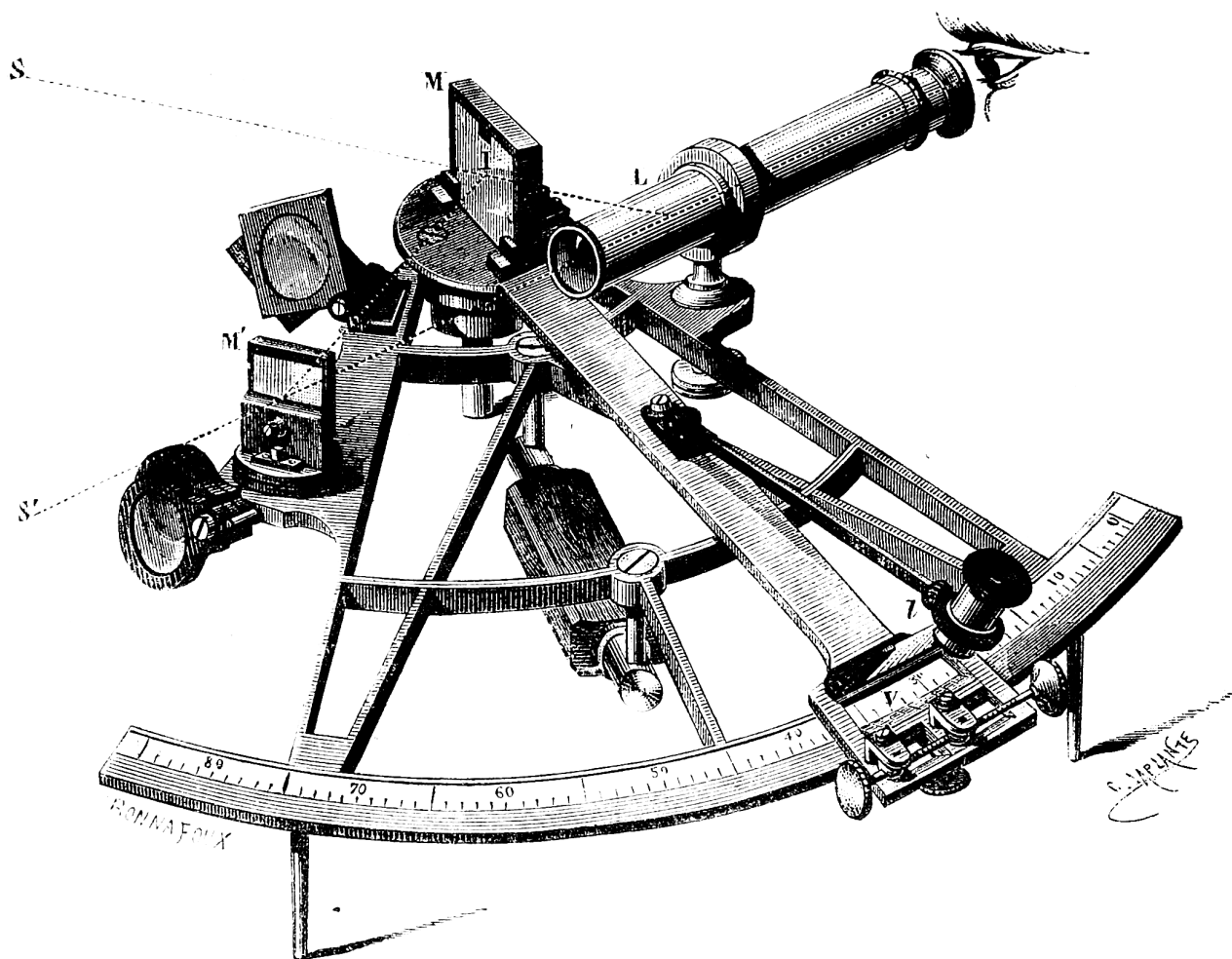




ALMANAQUE NÁUTICO PERSEIS 2010

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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 5				Edad: 15 ^d 5 PHE { SD: 16'6 PMG: 0 ^h 16 ^m											
					R°: 62 ^m											
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	10.5	-23	01.6	356	04.6	+23	30.0	60 N	7 09	8 06	9 02	16 09	109	9 38	15
1	194	10.2		01.4	10	26.6		22.7	58	7 02	7 54	8 45	25	103	21	21
2	209	09.9		01.2	24	48.8		15.3	56	6 56	44	31	39	99	9 07	24
3	224	09.6		01.0	39	11.0	+23	07.7	54	50	36	19	16	51	95	8 54
4	239	09.3		00.8	53	33.3	+22	59.9	52	44	28	8 08	17	01	92	43
5	254	09.0	-23	00.6	67	55.6	+22	52.0	50	6 39	7 20	7 59	17	11	89	8 33
6	269	08.7	-23	00.4	82	18.0	+22	43.8	45	6 28	7 05	7 38	17	30	84	8 13
7	284	08.4	-23	00.2	96	40.5		35.6	40	18	6 51	22	46	79	7 56	43
8	299	08.1	-23	00.0	111	03.1		27.1	35	08	40	7 08	17	59	76	41
9	314	07.8	-22	59.8	125	25.7		18.5	30	6 00	30	6 56	18	11	72	29
10	329	07.5		59.6	139	48.4		09.7	20	5 44	6 11	35	31	67	7 08	53
11	344	07.2	-22	59.4	154	11.2	+22	00.8	10 N	5 28	5 54	6 17	18	48	63	6 49
12	359	06.9	-22	59.2	168	34.0	+21	51.7	0	5 11	5 37	6 00	19	04	59	6 31
13	14	06.6		59.0	182	57.0		42.4	10 S	4 53	5 20	5 43	20	54	6 14	64
14	29	06.3		58.8	197	20.0		33.0	20	30	4 59	24	37	50	5 55	68
15	44	06.0		58.6	211	43.1		23.4	30	4 02	35	5 02	19	56	45	33
16	59	05.8		58.3	226	06.3		13.7	35	3 43	20	4 50	20	07	43	20
17	74	05.5	-22	58.1	240	29.5	+21	03.8	40	3 21	4 02	4 35	20	20	39	5 05
18	89	05.2	-22	57.9	254	52.9	+20	53.8	45	2 51	3 40	4 17	20	36	34	4 47
19	104	04.9		57.7	269	16.3		43.6	50	2 07	3 11	3 55	20	54	29	24
20	119	04.6		57.5	283	39.8		33.3	52	1 41	2 56	45	21	03	26	13
21	134	04.3		57.3	298	03.5		22.8	54	1 00	39	33	13	23	4 01	94
22	149	04.0		57.1	312	27.2		12.2	56	** ** *	2 18	19	23	21	3 47	98
23	164	03.7		56.8	326	51.0	+20	01.5	58	** ** *	1 50	3 03	36	16	31	102
24	179	03.4	-22	56.6	341	14.9	+19	50.6	60 S	** ** *	1 06	2 43	21	50	11	3 11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 15 ^m 0		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: -0.8 PMG: 2 ^h 47 ^m		Mag: -2.1 PMG: 15 ^h 12 ^m		Mag: +0.9 PMG: 5 ^h 37 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	100	32.5	181	58.1	-23	38.5	318	03.9	+18	45.1	131	37.2	-13	36.5	275	29.9	+0	18.6
1	115	35.0	196	57.1		38.4	333	06.8		45.4	146	39.2		36.4	290	32.3		18.5
2	130	37.4	211	56.1		38.3	348	09.6		45.6	161	41.2		36.2	305	34.7		18.5
3	145	39.9	226	55.2		38.2	3	12.4		45.8	176	43.2		36.0	320	37.1		18.5
4	160	42.4	241	54.2		38.1	18	15.2		46.0	191	45.1		35.8	335	39.5		18.5
5	175	44.8	256	53.2	-23	38.0	33	18.0	+18	46.2	206	47.1	-13	35.7	350	41.9	+0	18.5
6	190	47.3	271	52.2	-23	37.9	48	20.9	+18	46.5	221	49.1	-13	35.5	5	44.3	+0	18.5
7	205	49.8	286	51.3		37.8	63	23.7		46.7	236	51.1		35.3	20	46.7		18.5
8	220	52.2	301	50.3		37.7	78	26.5		46.9	251	53.0		35.1	35	49.2		18.5
9	235	54.7	316	49.3		37.6	93	29.4		47.1	266	55.0		35.0	50	51.6		18.4
10	250	57.2	331	48.4		37.5	108	32.2		47.3	281	57.0		34.8	65	54.0		18.4
11	265	59.6	346	47.4	-23	37.4	123	35.0	+18	47.6	296	59.0	-13	34.6	80	56.4	+0	18.4
12	281	02.1	1	46.4	-23	37.3	138	37.8	+18	47.8	312	00.9	-13	34.4	95	58.8	+0	18.4
13	296	04.5	16	45.5		37.2	153	40.7		48.0	327	02.9		34.3	111	01.2		18.4
14	311	07.0	31	44.5		37.1	168	43.5		48.2	342	04.9		34.1	126	03.6		18.4
15	326	09.5	46	43.5		37.0	183	46.4		48.5	357	06.9		33.9	141	06.0		18.4
16	341	11.9	61	42.6		36.9	198	49.2		48.7	12	08.8		33.7	156	08.4		18.4
17	356	14.4	76	41.6	-23	36.8	213	52.0	+18	48.9	27	10.8	-13	33.6	171	10.8	+0	18.4
18	11	16.9	91	40.6	-23	36.7	228	54.9	+18	49.1	42	12.8	-13	33.4	186	13.2	+0	18.4
19	26	19.3	106	39.7		36.6	243	57.7		49.4	57	14.7		33.2	201	15.7		18.3
20	41	21.8	121	38.7		36.4	259	00.6		49.6	72	16.7		33.0	216	18.1		18.3
21	56	24.3	136	37.7		36.3	274	03.4		49.8	87	18.7		32.9	231	20.5		18.3
22	71	26.7	151	36.8		36.2	289	06.2		50.0	102	20.7		32.7	246	22.9		18.3
23	86	29.2	166	35.8		36.1	304	09.1		50.3	117	22.6		32.5	261	25.3		18.3
24	101	31.7	181	34.8	-23	36.0	319	11.9	+18	50.5	132	24.6	-13	32.3	276	27.7	+0	18.3
Dif	—		-10		+1		+28		+2		+20		+2		+24		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 16 ^d 5	PHE {	4 ^h : 61'1 12 ^h : 61'1 20 ^h : 61'0			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 0								R°: 58 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	179	03.4	-22 56.6	341	14.9	+19 50.6	110	60 N	15 06	16 03	16 59	17 58	105	9 53 9	
1	194	03.1	56.4	355	38.8	49 39.6	110	58	23	14	17 06	18 08	101	42 13	
2	209	02.8	56.2	10	02.9	51 28.4	112	56	37	24	13	18 96		31 18	
3	224	02.5	56.0	24	27.1	52 17.1	113	54	15 49	33	19	26 93		22 21	
4	239	02.3	55.7	38	51.4	53 +19 05.7	114	52	16 00	41	24	33 90		14 24	
5	254	02.0	-22 55.5	53	15.7	53 +18 54.2	115	50	16 10	16 48	17 29	18 40	87	9 07 26	
6	269	01.7	-22 55.3	67	40.2	55 +18 42.5	117	45	16 30	17 03	17 41	18 54	81	8 51 32	
7	284	01.4	55.1	82	04.7	55 30.7	118	40	16 46	17	17 50	19 05	77	39 35	
8	299	01.1	54.8	96	29.4	57 18.7	120	35	17 00	28	18 00	15 73		28 39	
9	314	00.8	54.6	110	54.1	57 +18 06.7	120	30	12	38	08	23 70		18 42	
10	329	00.5	54.4	125	19.0	59 +17 54.5	122	20	33	17 57	24	38 64		8 01 48	
11	344	00.2	-22 54.2	139	43.9	59 +17 42.3	122	10 N	17 51	18 13	18 40	19 51	59	7 46 53	
12	358	59.9	-22 53.9	154	08.9	60 +17 29.9	124	0	18 08	18 30	18 56	20 03	54	7 32 57	
13	13	59.6	53.7	168	34.1	62 17.3	126	10 S	25	18 48	19 15	14 51		18 61	
14	28	59.3	53.5	182	59.3	62 +17 04.7	126	20	18 43	19 08	19 37	27 45		7 03 66	
15	43	59.1	53.3	197	24.6	63 +16 52.0	127	30	19 05	32	20 05	41 40		6 46 71	
16	58	58.8	53.0	211	50.1	65 39.2	128	35	17	19 47	23	50 36		35 75	
17	73	58.5	-22 52.8	226	15.6	65 +16 26.2	130	40	19 32	20 05	20 46	20 59	33	6 24 78	
18	88	58.2	-22 52.6	240	41.2	66 +16 13.2	130	45	19 50	20 27	21 15	21 10	28	6 10 83	
19	103	57.9	52.3	255	06.9	67 +16 00.0	132	50	20 11	20 55	21 59	23 23		5 52 89	
20	118	57.6	52.1	269	32.7	68 +15 46.8	132	52	22	21 10	22 24	29 21		44 92	
21	133	57.3	51.9	283	58.7	70 33.5	133	54	34	27	23 03	36 18		35 95	
22	148	57.0	51.6	298	24.7	70 20.0	135	56	20 47	21 48	** **	44 14		25 99	
23	163	56.7	51.4	312	50.8	71 +15 06.5	135	58	21 03	22 15	** **	21 52	11	13 103	
24	178	56.5	-22 51.1	327	17.0	72 +14 52.9	136	60 S	21 23	22 57	** **	22 01	7	5 00 108	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 11 ^m 1		Mag: -4.0 PMG: 11 ^h 54 ^m			Mag: -0.8 PMG: 2 ^h 43 ^m			Mag: -2.1 PMG: 15 ^h 08 ^m			Mag: +0.9 PMG: 5 ^h 33 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	101	31.7	181 34.8	-23 36.0	319 11.9	+18 50.5	132 24.6	-13 32.3	276 27.7	+0 18.3					
1	116	34.1	196 33.9	35.8	334 14.8	50.7	147 26.6	32.2	291 30.1	18.3					
2	131	36.6	211 32.9	35.7	349 17.7	51.0	162 28.6	32.0	306 32.5	18.3					
3	146	39.0	226 31.9	35.6	4 20.5	51.2	177 30.5	31.8	321 34.9	18.3					
4	161	41.5	241 31.0	35.5	19 23.4	51.4	192 32.5	31.6	336 37.4	18.2					
5	176	44.0	256 30.0	-23 35.3	34 26.2	+18 51.6	207 34.5	-13 31.5	351 39.8	+0 18.2					
6	191	46.4	271 29.0	-23 35.2	49 29.1	+18 51.9	222 36.4	-13 31.3	6 42.2	+0 18.2					
7	206	48.9	286 28.1	35.1	64 31.9	52.1	237 38.4	31.1	21 44.6	18.2					
8	221	51.4	301 27.1	34.9	79 34.8	52.3	252 40.4	30.9	36 47.0	18.2					
9	236	53.8	316 26.1	34.8	94 37.7	52.6	267 42.4	30.8	51 49.4	18.2					
10	251	56.3	331 25.2	34.7	109 40.5	52.8	282 44.3	30.6	66 51.8	18.2					
11	266	58.8	346 24.2	-23 34.5	124 43.4	+18 53.0	297 46.3	-13 30.4	81 54.2	+0 18.2					
12	282	01.2	1 23.2	-23 34.4	139 46.3	+18 53.3	312 48.3	-13 30.2	96 56.7	+0 18.2					
13	297	03.7	16 22.3	34.3	154 49.1	53.5	327 50.2	30.1	111 59.1	18.2					
14	312	06.1	31 21.3	34.1	169 52.0	53.7	342 52.2	29.9	127 01.5	18.2					
15	327	08.6	46 20.3	34.0	184 54.9	54.0	357 54.2	29.7	142 03.9	18.1					
16	342	11.1	61 19.4	33.8	199 57.7	54.2	12 56.2	29.5	157 06.3	18.1					
17	357	13.5	76 18.4	-23 33.7	215 00.6	+18 54.4	27 58.1	-13 29.3	172 08.7	+0 18.1					
18	12	16.0	91 17.4	-23 33.6	230 03.5	+18 54.7	43 00.1	-13 29.2	187 11.1	+0 18.1					
19	27	18.5	106 16.5	33.4	245 06.4	54.9	58 02.1	29.0	202 13.5	18.1					
20	42	20.9	121 15.5	33.3	260 09.2	55.1	73 04.0	28.8	217 16.0	18.1					
21	57	23.4	136 14.5	33.1	275 12.1	55.4	88 06.0	28.6	232 18.4	18.1					
22	72	25.9	151 13.6	33.0	290 15.0	55.6	103 08.0	28.5	247 20.8	18.1					
23	87	28.3	166 12.6	32.8	305 17.9	55.9	118 10.0	28.3	262 23.2	18.1					
24	102	30.8	181 11.6	-23 32.7	320 20.8	+18 56.1	133 11.9	-13 28.1	277 25.6	+0 18.1					
Dif	—		-10	+1	+29	+2	+20	+2	+24	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 5				Edad: 17 ^d 5 PHE { SD: 16'6 PMG: 2 ^h 16 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	56.5	-22	51.1	327	17.0	+14	52.9	60 N	7	09	8	05	9	01	19	43	101
1	193	56.2		50.9	341	43.3	73	39.2 ¹³⁷	58	7	02	7	54	8	45	49	97	9 55 10
2	208	55.9		50.7	356	09.7	74	25.4 ¹³⁸	56	6	55	44	31	54	93	49	13	
3	223	55.6		50.4	10	36.2	75	+14 11.6 ¹³⁸	54	49	35	18	19	59	90	43	16	
4	238	55.3		50.2	25	02.8	76	+13 57.6 ¹⁴⁰	52	44	27	8	08	20	03	87	38	19
5	253	55.0	-22	49.9	39	29.4	76	+13 43.6 ¹⁴⁰	50	6	39	7	20	7	58	20	07	85
6	268	54.7	-22	49.7	53	56.2	78	+13 29.5 ¹⁴¹	45	6	28	7	05	7	38	20	15	79
7	283	54.4		49.5	68	23.1	79	15.3 ¹⁴²	40	18	6	52	22	22	75	14	31	
8	298	54.2		49.2	82	50.0	79	+13 01.0 ¹⁴³	35	09	40	7	08	28	71	07	34	
9	313	53.9		49.0	97	17.1	81	+12 46.7 ¹⁴³	30	6	00	30	6	56	33	67	9	00
10	328	53.6		48.7	111	44.2	81	32.3 ¹⁴⁴	20	5	44	6	12	36	42	61	8	49
11	343	53.3	-22	48.5	126	11.4	82	+12 17.9 ¹⁴⁴	10 N	5	29	5	55	6	18	20	50	56
12	358	53.0	-22	48.2	140	38.8	84	+12 03.4 ¹⁴⁵	0	5	12	5	38	6	01	20	57	52
13	13	52.7		48.0	155	06.2	84	+11 48.8 ¹⁴⁶	10 S	4	54	21	5	44	21	05	46	
14	28	52.4		47.7	169	33.7	85	34.1 ¹⁴⁷	20	32	5	01	25	12	42	8	09	
15	43	52.2		47.5	184	01.2	85	19.4 ¹⁴⁷	30	4	03	4	36	5	04	21	36	
16	58	51.9		47.2	198	28.9	87	+11 04.7 ¹⁴⁷	35	3	45	22	4	51	26	33		
17	73	51.6	-22	47.0	212	56.7	88	+10 49.8 ¹⁴⁹	40	3	23	4	04	4	36	21	32	
18	88	51.3	-22	46.7	227	24.5	88	+10 35.0 ¹⁴⁸	45	2	53	3	42	4	19	21	38	
19	103	51.0		46.5	241	52.4	89	20.0 ¹⁵⁰	50	2	10	3	13	3	57	46	20	
20	118	50.7		46.2	256	20.4	90	+10 05.1 ¹⁴⁹	52	1	45	2	59	47	50	17		
21	133	50.4		46.0	270	48.5	91	+9 50.1 ¹⁵⁰	54	1	06	42	35	54	14			
22	148	50.2		45.7	285	16.7	92	35.0 ¹⁵¹	56	** ** *	2	21	21	21	58	12		
23	163	49.9		45.5	299	44.9	92	19.9 ¹⁵¹	58	** ** *	1	54	3	05	22	03		
24	178	49.6	-22	45.2	314	13.2	93	+9 04.7 ¹⁵²	60 S	** ** *	1	12	2	46	22	08		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 07 ^m 1		Mag: -4.0 PMG: 11 ^h 56 ^m		Mag: -0.8 PMG: 2 ^h 38 ^m		Mag: -2.1 PMG: 15 ^h 05 ^m		Mag: +0.9 PMG: 5 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	102	30.8	181	11.6	-23	32.7	320	20.8	+18	56.1
1	117	33.3	196	10.7		32.5	335	23.7		56.3
2	132	35.7	211	09.7		32.4	350	26.5		56.6
3	147	38.2	226	08.7		32.2	5	29.4		56.8
4	162	40.6	241	07.8		32.0	20	32.3		57.0
5	177	43.1	256	06.8	-23	31.9	35	35.2	+18	57.3
6	192	45.6	271	05.9	-23	31.7	50	38.1	+18	57.5
7	207	48.0	286	04.9		31.6	65	41.0		57.8
8	222	50.5	301	03.9		31.4	80	43.9		58.0
9	237	53.0	316	03.0		31.2	95	46.8		58.2
10	252	55.4	331	02.0		31.1	110	49.7		58.5
11	267	57.9	346	01.0	-23	30.9	125	52.6	+18	58.7
12	283	00.4	1	00.1	-23	30.7	140	55.5	+18	59.0
13	298	02.8	15	59.1		30.6	155	58.4		59.2
14	313	05.3	30	58.2		30.4	171	01.3		59.5
15	328	07.8	45	57.2		30.2	186	04.2		59.7
16	343	10.2	60	56.2		30.1	201	07.1	+18	59.9
17	358	12.7	75	55.3	-23	29.9	216	10.0	+19	00.2
18	13	15.1	90	54.3	-23	29.7	231	12.9	+19	00.4
19	28	17.6	105	53.3		29.5	246	15.9		00.7
20	43	20.1	120	52.4		29.4	261	18.8		00.9
21	58	22.5	135	51.4		29.2	276	21.7		01.2
22	73	25.0	150	50.5		29.0	291	24.6		01.4
23	88	27.5	165	49.5		28.8	306	27.5		01.7
24	103	29.9	180	48.5	-23	28.6	321	30.4	+19	01.9
Dif	—		-10 +2		+29 +2		+20 +2		+24 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 04 ^m 9			Edad: 18 ^d 5 PHE { SD: 16:5 PMG: 3 ^h 10 ^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	49.6	-22 45.2	314	13.2	+9 04.7	95	60 N	15 10	16 06	17 02	21 24 96	10 08 5	
1	193	49.3		328	41.7	+8 49.6	151	58	26	17	09	26 92	05 8	
2	208	49.0	44.7	343	10.1		153	56	40	26	15	27 90	10 02 1	
3	223	48.7	44.4	357	38.7		96	54	15 52	35	21	29 86	9 59 1	
4	238	48.5	44.2	12	07.3	+8 03.8	153	52	16 03	43	26	30 84	57 16	
5	253	48.2	-22 43.9	26	36.0	+7 48.4	154	50	16 12	16 50	17 31	21 32 81	9 54 19	
6	268	47.9	-22 43.7	41	04.8	+7 33.1	153	45	16 32	17 05	17 42	21 34 76	9 49 24	
7	283	47.6	43.4	55	33.6		98	40	16 48	18	17 52	37 71	45 28	
8	298	47.3	43.1	70	02.6	+7 02.3	154	35	17 02	30	18 01	39 67	41 32	
9	313	47.0	42.9	84	31.6	+6 46.9	154	30	13	40	09	40 65	38 35	
10	328	46.8	42.6	99	00.6		100	20	34	17 58	25	43 59	32 40	
11	343	46.5	-22 42.3	113	29.7	+6 15.9	155	10 N	17 52	18 15	18 41	21 46 54	9 27 45	
12	358	46.2	-22 42.1	127	58.9	+6 00.4	155	0	18 09	18 31	18 57	21 49 49	9 22 50	
13	13	45.9	41.8	142	28.2	+5 44.9	155	10 S	26	18 49	19 15	51 45	17 55	
14	28	45.6	41.5	156	57.5		155	20	18 44	19 08	19 37	54 39	12 60	
15	43	45.4	41.3	171	26.9	+5 13.8	156	30	19 05	32	20 05	57 34	06 65	
16	58	45.1	41.0	185	56.3	+4 58.2	156	35	18	19 47	23	21 59 30	9 02 69	
17	73	44.8	-22 40.7	200	25.8	+4 42.7	155	40	19 32	20 05	20 46	22 01 27	8 58 73	
18	88	44.5	-22 40.5	214	55.4	+4 27.1	156	45	19 49	20 26	21 15	22 03 23	8 53 78	
19	103	44.2	40.2	229	25.0	+4 11.5	156	50	20 11	20 55	21 57	06 18	48 82	
20	118	43.9	39.9	243	54.7	+3 55.9	156	52	21	21 09	22 22	07 16	45 85	
21	133	43.7	39.7	258	24.4		156	54	33	26	22 58	08 14	42 88	
22	148	43.4	39.4	272	54.2		156	56	20 46	21 46	** **	10 11	39 91	
23	163	43.1	39.1	287	24.0	+3 09.1	156	58	21 02	22 13	** **	12 7	35 95	
24	178	42.8	-22 38.8	301	53.9	+2 53.5	156	60 S	21 21	22 52	** **	22 13 5	8 31 99	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 17 ^h 03 ^m 2		Mag: -4.0 PMG: 11 ^h 58 ^m		Mag: -0.8 PMG: 2 ^h 33 ^m		Mag: -2.1 PMG: 15 ^h 02 ^m		Mag: +0.9 PMG: 5 ^h 26 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	103	29.9	180	48.5	-23 28.6	321 30.4	+19 01.9	133 59.2	-13 23.8	278 23.6	+0 17.9			
1	118	32.4	195	47.6	28.4	336 33.4	02.1	149 01.1	23.7	293 26.0	17.9			
2	133	34.9	210	46.6	28.3	351 36.3	02.4	164 03.1	23.5	308 28.5	17.9			
3	148	37.3	225	45.7	28.1	6 39.2	02.6	179 05.1	23.3	323 30.9	17.9			
4	163	39.8	240	44.7	27.9	21 42.1	02.9	194 07.0	23.1	338 33.3	17.9			
5	178	42.3	255	43.7	-23 27.7	36 45.1	+19 03.1	209 09.0	-13 22.9	353 35.7	+0 17.9			
6	193	44.7	270	42.8	-23 27.5	51 48.0	+19 03.4	224 11.0	-13 22.8	8 38.1	+0 17.9			
7	208	47.2	285	41.8	27.3	66 50.9	03.6	239 12.9	22.6	23 40.6	17.8			
8	223	49.6	300	40.9	27.1	81 53.8	03.9	254 14.9	22.4	38 43.0	17.8			
9	238	52.1	315	39.9	26.9	96 56.8	04.1	269 16.9	22.2	53 45.4	17.8			
10	253	54.6	330	38.9	26.7	111 59.7	04.4	284 18.8	22.1	68 47.8	17.8			
11	268	57.0	345	38.0	-23 26.5	127 02.6	+19 04.6	299 20.8	-13 21.9	83 50.2	+0 17.8			
12	283	59.5	0	37.0	-23 26.3	142 05.6	+19 04.9	314 22.7	-13 21.7	98 52.7	+0 17.8			
13	299	02.0	15	36.1	26.1	157 08.5	05.1	329 24.7	21.5	113 55.1	17.8			
14	314	04.4	30	35.1	25.9	172 11.5	05.4	344 26.7	21.3	128 57.5	17.8			
15	329	06.9	45	34.1	25.7	187 14.4	05.6	359 28.6	21.2	143 59.9	17.8			
16	344	09.4	60	33.2	25.5	202 17.3	05.9	14 30.6	21.0	159 02.4	17.8			
17	359	11.8	75	32.2	-23 25.3	217 20.3	+19 06.1	29 32.6	-13 20.8	174 04.8	+0 17.8			
18	14	14.3	90	31.3	-23 25.1	232 23.2	+19 06.4	44 34.5	-13 20.6	189 07.2	+0 17.8			
19	29	16.7	105	30.3	24.9	247 26.2	06.6	59 36.5	20.4	204 09.6	17.8			
20	44	19.2	120	29.4	24.7	262 29.1	06.9	74 38.5	20.3	219 12.0	17.8			
21	59	21.7	135	28.4	24.5	277 32.1	07.2	89 40.4	20.1	234 14.5	17.8			
22	74	24.1	150	27.4	24.3	292 35.0	07.4	104 42.4	19.9	249 16.9	17.8			
23	89	26.6	165	26.5	24.1	307 38.0	07.7	119 44.4	19.7	264 19.3	17.8			
24	104	29.1	180	25.5	-23 23.9	322 40.9	+19 07.9	134 46.3	-13 19.5	279 21.7	+0 17.8			
Dif	—		-10	+2		+29	+3	+20	+2		+24			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 05 ^m 4			Edad: 19 ^d 5 SD: 16'3 PMG: 4 ^h 00 ^m	PHE { 4 ^h : 59'7 12 ^h : 59'4 20 ^h : 59'2 R°: 49 ^m									
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	42.8	-22	38.8	301	53.9	+2 53.5	60 N	7 08	8 04	9 00	23 00	94	10 13 5
1	193	42.5		38.6	316	23.9 ¹¹⁰	37.9 ¹⁵⁶	58	7 01	7 53	8 43	22 58	91	13 8
2	208	42.3		38.3	330	53.8 ¹⁰⁹	22.3 ¹⁵⁶	56	6 55	43	30	57	87	13 11
3	223	42.0		38.0	345	23.9 ¹¹¹	+2 06.7 ¹⁵⁶	54	49	35	18	55	84	13 11
4	238	41.7		37.7	359	54.0 ¹¹¹	+1 51.1 ¹⁵⁶	52	44	27	8 07	54	82	13 16
5	253	41.4	-22	37.4	14	24.1 ¹¹¹	+1 35.5 ¹⁵⁶	50	6 39	7 20	7 58	22 53	79	10 13 18
6	268	41.1	-22	37.2	28	54.3 ¹¹²	+1 19.9 ¹⁵⁶	45	6 28	7 05	7 38	22 50	74	10 13 23
7	283	40.9		36.9	43	24.5 ¹¹²	+1 04.3 ¹⁵⁶	40	18	6 52	22	48	70	13 27
8	298	40.6		36.6	57	54.7 ¹¹²	+0 48.8 ¹⁵⁵	35	09	41	7 09	46	67	13 30
9	313	40.3		36.3	72	25.0 ¹¹³	33.2 ¹⁵⁶	30	6 01	30	6 57	45	63	13 33
10	328	40.0		36.0	86	55.4 ¹¹⁴	17.7 ¹⁵⁵	20	5 45	6 12	36	42	58	12 39
11	343	39.8	-22	35.8	101	25.8 ¹¹⁴	+0 02.2 ¹⁵⁵	10 N	5 30	5 56	6 18	22 40	52	10 12 44
12	358	39.5	-22	35.5	115	56.2 ¹¹⁴	-0 13.3 ¹⁵⁵	0	5 13	5 39	6 02	22 38	48	10 12 49
13	13	39.2		35.2	130	26.6 ¹¹⁴	28.8 ¹⁵⁵	10 S	4 55	22	5 45	36	43	12 53
14	28	38.9		34.9	144	57.1 ¹¹⁵	44.2 ¹⁵⁴	20	33	5 02	26	33	39	12 58
15	43	38.6		34.6	159	27.6 ¹¹⁵	-0 59.6 ¹⁵⁴	30	4 05	4 38	5 05	31	33	11 64
16	58	38.4		34.3	173	58.2 ¹¹⁶	-1 15.0 ¹⁵⁴	35	3 47	23	4 53	29	31	11 67
17	73	38.1	-22	34.0	188	28.8 ¹¹⁶	-1 30.4 ¹⁵⁴	40	3 25	4 06	4 38	22 28	27	10 11 71
18	88	37.8	-22	33.7	202	59.4 ¹¹⁶	-1 45.8 ¹⁵⁴	45	2 56	3 44	4 21	22 26	23	10 11 75
19	103	37.5		33.5	217	30.0 ¹¹⁶	-2 01.1 ¹⁵³	50	2 13	16	4 00	24	18	10 81
20	118	37.3		33.2	232	00.7 ¹¹⁷	16.4 ¹⁵³	52	1 49	3 02	3 49	23	16	10 83
21	133	37.0		32.9	246	31.4 ¹¹⁷	31.7 ¹⁵³	54	1 12	2 45	38	22	13	10 86
22	148	36.7		32.6	261	02.1 ¹¹⁷	-2 46.9 ¹⁵²	56	** **	2 25	24	21	10	10 88
23	163	36.4		32.3	275	32.9 ¹¹⁸	-3 02.1 ¹⁵²	58	** **	1 58	3 08	19	8	10 91
24	178	36.2	-22	32.0	290	03.6 ¹¹⁷	-3 17.3 ¹⁵²	60 S	** **	1 19	2 50	22 18	4	10 10 95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 59 ^m 3		Mag: -4.0 PMG: 11 ^h 59 ^m		Mag: -0.9 PMG: 2 ^h 29 ^m		Mag: -2.1 PMG: 14 ^h 59 ^m		Mag: +0.9 PMG: 5 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	104	29.1	180	25.5	-23	23.9	322	40.9	+19	07.9
1	119	31.5	195	24.6		23.7	337	43.9		08.2
2	134	34.0	210	23.6		23.4	352	46.8		08.4
3	149	36.5	225	22.7		23.2	7	49.8		08.7
4	164	38.9	240	21.7		23.0	22	52.8		08.9
5	179	41.4	255	20.7	-23	22.8	37	55.7	+19	09.2
6	194	43.9	270	19.8	-23	22.6	52	58.7	+19	09.5
7	209	46.3	285	18.8		22.4	68	01.6		09.7
8	224	48.8	300	17.9		22.1	83	04.6		10.0
9	239	51.2	315	16.9		21.9	98	07.6		10.2
10	254	53.7	330	16.0		21.7	113	10.5		10.5
11	269	56.2	345	15.0	-23	21.5	128	13.5	+19	10.7
12	284	58.6	0	14.1	-23	21.2	143	16.5	+19	11.0
13	300	01.1	15	13.1		21.0	158	19.4		11.3
14	315	03.6	30	12.2		20.8	173	22.4		11.5
15	330	06.0	45	11.2		20.5	188	25.4		11.8
16	345	08.5	60	10.3		20.3	203	28.4		12.0
17	0	11.0	75	09.3	-23	20.1	218	31.4	+19	12.3
18	15	13.4	90	08.3	-23	19.8	233	34.3	+19	12.6
19	30	15.9	105	07.4		19.6	248	37.3		12.8
20	45	18.3	120	06.4		19.4	263	40.3		13.1
21	60	20.8	135	05.5		19.1	278	43.3		13.4
22	75	23.3	150	04.5		18.9	293	46.3		13.6
23	90	25.7	165	03.6		18.6	308	49.2		13.9
24	105	28.2	180	02.6	-23	18.4	323	52.2	+19	14.1
Dif	—		-10		+2		+30		+3	
								+20		+2
									+24	
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 05 ^m 8			Edad: 20 ^d 5 PHE { SD: 16:1 PMG: 4 ^h 49 ^m 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'3 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m
0	178	36.2	-22	32.0	290	03.6	-3	17.3	60 N	15 13	16 09	17 04	** ** *	10 18	5
1	193	35.9		31.7	304	34.4 ¹¹⁸		32.4 ¹⁵¹	58	29	19	11	** ** *	21	8
2	208	35.6		31.4	319	05.2 ¹¹⁸	-3	47.6 ¹⁵²	56	43	29	17	** ** *	24	11
3	223	35.3		31.1	333	36.1 ¹¹⁹	-4	02.6 ¹⁵⁰	54	15 55	37	23	** ** *	26	15
4	238	35.1		30.8	348	06.9 ¹¹⁸		17.6 ¹⁵⁰	52	16 05	45	28	** ** *	29	16
5	253	34.8	-22	30.5	2	37.8 ¹¹⁹	-4	32.6 ¹⁵⁰	50	16 14	16 52	17 33	** ** *	10 31	19
6	268	34.5	-22	30.2	17	08.6 ¹¹⁸	-4	47.6 ¹⁵⁰	45	16 34	17 07	17 44	** ** *	10 36	23
7	283	34.2		29.9	31	39.5 ¹¹⁹	-5	02.5 ¹⁴⁹	40	16 50	20	17 54	23 58	68	40 27
8	298	34.0		29.6	46	10.5 ¹²⁰		17.4 ¹⁴⁹	35	17 03	31	18 03	53 64		43 31
9	313	33.7		29.3	60	41.4 ¹¹⁹		32.2 ¹⁴⁸	30	15	41	11	48 62		46 34
10	328	33.4		29.0	75	12.3 ¹¹⁹	-5	46.9 ¹⁴⁷	20	35	17 59	26	40 56		51 40
11	343	33.1	-22	28.7	89	43.3 ¹²⁰	-6	01.7 ¹⁴⁸	10 N	17 53	18 16	18 42	23 32	53	10 56 44
12	358	32.9	-22	28.4	104	14.2 ¹¹⁹	-6	16.3 ¹⁴⁶	0	18 10	18 32	18 58	23 26	48	11 01 48
13	13	32.6		28.1	118	45.2 ¹²⁰		31.0 ¹⁴⁷	10 S	26	18 49	19 16	19 44		05 52
14	28	32.3		27.8	133	16.1 ¹¹⁹	-6	45.6 ¹⁴⁶	20	18 44	19 09	19 38	12 40		10 57
15	43	32.0		27.5	147	47.1 ¹²⁰	-7	00.1 ¹⁴⁵	30	19 05	33	20 05	04 35		15 62
16	58	31.8		27.2	162	18.1 ¹²⁰		14.6 ¹⁴⁵	35	18	19 47	23	23 00	32	18 66
17	73	31.5	-22	26.9	176	49.1 ¹²⁰	-7	29.0 ¹⁴⁴	40	19 32	20 04	20 45	22 55	28	11 22 69
18	88	31.2	-22	26.6	191	20.1 ¹²⁰	-7	43.4 ¹⁴⁴	45	19 49	20 26	21 14	22 49	24	11 26 73
19	103	31.0		26.3	205	51.1 ¹²⁰	-7	57.7 ¹⁴³	50	20 10	20 54	21 55	42 20		31 78
20	118	30.7		26.0	220	22.0 ¹¹⁹	-8	11.9 ¹⁴²	52	21	21 08	22 19	39 17		33 81
21	133	30.4		25.7	234	53.0 ¹²⁰		26.1 ¹⁴²	54	32	24	22 54	35 15		36 83
22	148	30.1		25.3	249	24.0 ¹²⁰		40.3 ¹⁴²	56	20 45	21 44	** ** *	31 13		38 87
23	163	29.9		25.0	263	55.0 ¹²⁰	-8	54.3 ¹⁴⁰	58	21 01	22 10	** ** *	27 9		41 90
24	178	29.6	-22	24.7	278	26.0 ¹²⁰	-9	08.4 ¹⁴¹	60 S	21 19	22 47	** ** *	22 22	6	11 45 93

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 55 ^m 3		Mag: -4.0 PMG: 12 ^h 01 ^m			Mag: -0.9 PMG: 2 ^h 24 ^m			Mag: -2.1 PMG: 14 ^h 56 ^m			Mag: +0.9 PMG: 5 ^h 18 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	105	28.2	180	02.6	-23	18.4	323	52.2	+19	14.1	135	33.4	-13	15.2	280	19.9	+0	17.7
1	120	30.7	195	01.7		18.2	338	55.2		14.4	150	35.4		15.0	295	22.4		17.7
2	135	33.1	210	00.7		17.9	353	58.2		14.7	165	37.3		14.8	310	24.8		17.7
3	150	35.6	224	59.8		17.7	9	01.2		14.9	180	39.3		14.7	325	27.2		17.7
4	165	38.1	239	58.8		17.4	24	04.2		15.2	195	41.3		14.5	340	29.7		17.7
5	180	40.5	254	57.9	-23	17.2	39	07.2	+19	15.5	210	43.2	-13	14.3	355	32.1	+0	17.7
6	195	43.0	269	56.9	-23	16.9	54	10.2	+19	15.7	225	45.2	-13	14.1	10	34.5	+0	17.7
7	210	45.5	284	56.0		16.7	69	13.2		16.0	240	47.1		13.9	25	36.9		17.7
8	225	47.9	299	55.0		16.4	84	16.2		16.3	255	49.1		13.7	40	39.4		17.6
9	240	50.4	314	54.1		16.2	99	19.2		16.5	270	51.1		13.6	55	41.8		17.6
10	255	52.8	329	53.1		15.9	114	22.2		16.8	285	53.0		13.4	70	44.2		17.6
11	270	55.3	344	52.2	-23	15.6	129	25.2	+19	17.1	300	55.0	-13	13.2	85	46.7	+0	17.6
12	285	57.8	359	51.2	-23	15.4	144	28.2	+19	17.3	315	56.9	-13	13.0	100	49.1	+0	17.6
13	301	00.2	14	50.3		15.1	159	31.2		17.6	330	58.9		12.8	115	51.5		17.6
14	316	02.7	29	49.3		14.9	174	34.2		17.9	346	00.9		12.7	130	53.9		17.6
15	331	05.2	44	48.4		14.6	189	37.2		18.1	1	02.8		12.5	145	56.4		17.6
16	346	07.6	59	47.4		14.3	204	40.2		18.4	16	04.8		12.3	160	58.8		17.6
17	1	10.1	74	46.5	-23	14.1	219	43.2	+19	18.7	31	06.7	-13	12.1	176	01.2	+0	17.6
18	16	12.6	89	45.5	-23	13.8	234	46.3	+19	18.9	46	08.7	-13	11.9	191	03.7	+0	17.6
19	31	15.0	104	44.6		13.5	249	49.3		19.2	61	10.7		11.7	206	06.1		17.6
20	46	17.5	119	43.6		13.3	264	52.3		19.5	76	12.6		11.6	221	08.5		17.6
21	61	20.0	134	42.7		13.0	279	55.3		19.8	91	14.6		11.4	236	11.0		17.6
22	76	22.4	149	41.7		12.7	294	58.3		20.0	106	16.5		11.2	251	13.4		17.6
23	91	24.9	164	40.8		12.5	310	01.3		20.3	121	18.5		11.0	266	15.8		17.6
24	106	27.3	179	39.9	-23	12.2	325	04.4	+19	20.6	136	20.4	-13	10.8	281	18.2	+0	17.6
Dif	—		-9		+3		+30		+3		+20		+2		+24			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 2				Edad: 21 ^d 5 PHE SD: 15 ^h 9 PMG: 5 ^h 37 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	29.6	-22	24.7	278	26.0	-9	08.4	60 N	7 07	8 03	8 58	0 34	93	10 23	6	
1	193	29.3		24.4	292	57.0 ¹²⁰		22.3 ¹³⁹	58	7 00	7 52	42	29	89	29	11	
2	208	29.1		24.1	307	27.9 ¹¹⁹		36.2 ¹³⁹	56	6 54	42	29	24	86	35	14	
3	223	28.8		23.8	321	58.9 ¹²⁰	-9	50.0 ¹³⁸	54		49	34	17	19	83	41	16
4	238	28.5		23.5	336	29.9 ¹²⁰	-10	03.8 ¹³⁸	52		43	26	8 06	16	80	45	19
5	253	28.2	-22	23.1	351	00.8 ¹¹⁹	-10	17.5 ¹³⁷	50	6 39	7 20	7 57	0 12	78	10 50	21	
6	268	28.0	-22	22.8	5	31.8 ¹²⁰	-10	31.1 ¹³⁶	45	6 28	7 04	7 38	0 04	73	10 59	26	
7	283	27.7		22.5	20	02.7 ¹¹⁹		44.7 ¹³⁶	40		18	6 52	22	** ** *	11 07	30	
8	298	27.4		22.2	34	33.6 ¹¹⁹	-10	58.2 ¹³⁵	35		09	41	7 09	** ** *	14	33	
9	313	27.2		21.9	49	04.6 ¹²⁰	-11	11.6 ¹³⁴	30	6 01	31	6 57	** ** *	** ** *	20	36	
10	328	26.9		21.6	63	35.5 ¹¹⁹		25.0 ¹³⁴	20	5 46	6 13	37	** ** *	** ** *	31	40	
11	343	26.6	-22	21.2	78	06.3 ¹¹⁸	-11	38.3 ¹³³	10 N	5 30	5 56	6 19	** ** *	** ** *	11 40	45	
12	358	26.4	-22	20.9	92	37.2 ¹¹⁹	-11	51.5 ¹³²	0	5 14	5 40	6 03	** ** *	** ** *	11 49	48	
13	13	26.1		20.6	107	08.1 ¹¹⁹	-12	04.6 ¹³¹	10 S	4 56	23	5 46	** ** *	** ** *	11 57	53	
14	28	25.8		20.3	121	38.9 ¹¹⁸		17.7 ¹³¹	20		34	5 03	28	23 52	41	12 07	57
15	43	25.6		19.9	136	09.8 ¹¹⁹		30.7 ¹³⁰	30	4 07	4 40	5 07		39 37		17 62	
16	58	25.3		19.6	150	40.6 ¹¹⁸		43.6 ¹²⁹	35	3 49	25	4 54		32 34		24 64	
17	73	25.0	-22	19.3	165	11.4 ¹¹⁸	-12	56.4 ¹²⁸	40	3 27	4 08	4 40	23 23	31	12 31	68	
18	88	24.7	-22	19.0	179	42.1 ¹¹⁷	-13	09.2 ¹²⁸	45	2 58	3 47	4 23	23 13	28	12 39	72	
19	103	24.5		18.6	194	12.9 ¹¹⁸		21.9 ¹²⁷	50	2 17	19	4 02	23 02	23	49	77	
20	118	24.2		18.3	208	43.6 ¹¹⁷		34.5 ¹²⁶	52	1 53	3 05	3 52	22 56	21	54	79	
21	133	23.9		18.0	223	14.4 ¹¹⁸		47.0 ¹²⁵	54	1 19	2 48	40	50	19	12 59	82	
22	148	23.7		17.7	237	45.0 ¹¹⁶	-13	59.4 ¹²⁴	56	** ** *	28	27	44	15	13 05	85	
23	163	23.4		17.3	252	15.7 ¹¹⁷	-14	11.8 ¹²⁴	58	** ** *	2 03	3 12	36	12	11	89	
24	178	23.1	-22	17.0	266	46.4 ¹¹⁷	-14	24.0 ¹²²	60 S	** ** *	1 26	2 53	22 28	8	13 18	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 51 ^m 4		Mag: -4.0 PMG: 12 ^h 02 ^m		Mag: -0.9 PMG: 2 ^h 19 ^m		Mag: -2.1 PMG: 14 ^h 53 ^m		Mag: +0.9 PMG: 5 ^h 14 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	106	27.3	179	39.9	-23	12.2	325	04.4	+19	20.6
1	121	29.8	194	38.9		11.9	340	07.4		20.8
2	136	32.3	209	38.0		11.6	355	10.4		21.1
3	151	34.7	224	37.0		11.4	10	13.4		21.4
4	166	37.2	239	36.1		11.1	25	16.5		21.7
5	181	39.7	254	35.1	-23	10.8	40	19.5	+19	21.9
6	196	42.1	269	34.2	-23	10.5	55	22.5	+19	22.2
7	211	44.6	284	33.2		10.3	70	25.6		22.5
8	226	47.1	299	32.3		10.0	85	28.6		22.7
9	241	49.5	314	31.3		09.7	100	31.6		23.0
10	256	52.0	329	30.4		09.4	115	34.7		23.3
11	271	54.4	344	29.5	-23	09.1	130	37.7	+19	23.6
12	286	56.9	359	28.5	-23	08.8	145	40.7	+19	23.8
13	301	59.4	14	27.6		08.5	160	43.8		24.1
14	317	01.8	29	26.6		08.2	175	46.8		24.4
15	332	04.3	44	25.7		08.0	190	49.9		24.7
16	347	06.8	59	24.7		07.7	205	52.9		24.9
17	2	09.2	74	23.8	-23	07.4	220	55.9	+19	25.2
18	17	11.7	89	22.9	-23	07.1	235	59.0	+19	25.5
19	32	14.2	104	21.9		06.8	251	02.0		25.8
20	47	16.6	119	21.0		06.5	266	05.1		26.1
21	62	19.1	134	20.0		06.2	281	08.1		26.3
22	77	21.6	149	19.1		05.9	296	11.2		26.6
23	92	24.0	164	18.2		05.6	311	14.2		26.9
24	107	26.5	179	17.2	-23	05.3	326	17.3	+19	27.2
Dif	—		-9		+3		+30		+3	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 06 ^m 7			Edad: 22 ^d 5 PHE { 4 ^h : 57:3 12 ^h : 57:0 20 ^h : 56:8 Rº: 49 ^m					Civil		Náutico	Hora	Rº	Hora	Rº			
	hG ☉	Dec		hG ☾	Dif	Dec			Dif									
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	178	23.1	-22	17.0	266	46.4	-14	24.0	60 N	15 17	16 12	17 07	2 07	93	10 29	10		
1	193	22.9		16.7	281	17.0 ¹¹⁶		36.2 ¹²²	58	32	22	14	1 58	88	40	14		
2	208	22.6		16.3	295	47.6 ¹¹⁶	-14	48.3 ¹²¹	56	46	32	20	50	84	49	17		
3	223	22.4		16.0	310	18.2 ¹¹⁶	-15	00.3 ¹²⁰	54	15 57	40	25	42	81	10 57	20		
4	238	22.1		15.7	324	48.7 ¹¹⁵		12.3 ¹²⁰	52	16 08	48	31	36	78	11 04	23		
5	253	21.8	-22	15.3	339	19.3 ¹¹⁶	-15	24.1 ¹¹⁸	50	16 17	16 54	17 35	1 30	76	11 11	25		
6	268	21.6	-22	15.0	353	49.8 ¹¹⁵	-15	35.9 ¹¹⁸	45	16 36	17 09	17 46	1 17	71	11 25	30		
7	283	21.3		14.7	8	20.2 ¹¹⁴		47.5 ¹¹⁶	40	16 52	22	17 56	1 06	68	37	33		
8	298	21.0		14.3	22	50.7 ¹¹⁵	-15	59.1 ¹¹⁶	35	17 05	33	18 04	0 57	65	47	36		
9	313	20.8		14.0	37	21.1 ¹¹⁴	-16	10.6 ¹¹⁵	30	17	17 43	12	50	61	11 56	39		
10	328	20.5		13.7	51	51.5 ¹¹⁴		22.0 ¹¹⁴	20	36	18 00	28	36	57	12 11	43		
11	343	20.2	-22	13.3	66	21.9 ¹¹⁴	-16	33.3 ¹¹³	10 N	17 54	18 17	18 43	0 25	52	12 25	46		
12	358	20.0	-22	13.0	80	52.2 ¹¹³	-16	44.5 ¹¹²	0	18 10	18 33	18 59	0 14	49	12 37	50		
13	13	19.7		12.6	95	22.5 ¹¹³	-16	55.6 ¹¹¹	10 S	27	18 50	19 17	0 03	46	12 50	53		
14	28	19.4		12.3	109	52.8 ¹¹³	-17	06.6 ¹¹⁰	20	18 45	19 09	19 38	** ** *	**	13 04	56		
15	43	19.2		11.9	124	23.0 ¹¹²		17.5 ¹⁰⁹	30	19 06	33	20 05	** ** *	**	19	61		
16	58	18.9		11.6	138	53.3 ¹¹³		28.3 ¹⁰⁸	35	18	19 47	23	** ** *	**	28	64		
17	73	18.7	-22	11.3	153	23.4 ¹¹¹	-17	39.0 ¹⁰⁷	40	19 32	20 04	20 44	23 54	36	13 39	66		
18	88	18.4	-22	10.9	167	53.6 ¹¹²	-17	49.7 ¹⁰⁷	45	19 49	20 25	21 13	23 41	32	13 51	70		
19	103	18.1		10.6	182	23.7 ¹¹¹	-18	00.2 ¹⁰⁵	50	20 09	20 52	21 53	25	28	14 06	75		
20	118	17.9		10.2	196	53.8 ¹¹¹		10.6 ¹⁰⁴	52	19	21 06	22 16	17	26	13	77		
21	133	17.6		09.9	211	23.9 ¹¹¹		20.9 ¹⁰³	54	31	22	22 49	23 09	23	21	79		
22	148	17.3		09.5	225	53.9 ¹¹⁰		31.1 ¹⁰²	56	44	21 42	** ** *	22 59	21	30	82		
23	163	17.1		09.2	240	23.9 ¹¹⁰		41.3 ¹⁰²	58	20 59	22 06	** ** *	48	17	40	86		
24	178	16.8	-22	08.8	254	53.8 ¹⁰⁹	-18	51.3 ¹⁰⁰	60 S	21 17	22 41	** ** *	22 36	12	14 51	91		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 47 ^m 5			Mag: -4.0 PMG: 12 ^h 04 ^m			Mag: -0.9 PMG: 2 ^h 14 ^m			Mag: -2.1 PMG: 14 ^h 50 ^m			Mag: +0.9 PMG: 5 ^h 10 ^m					
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	26.5	179	17.2	-23	05.3	326	17.3	+19	27.2	137	07.4	-13	06.4	282	16.7	+0	17.6
1	122	28.9	194	16.3		05.0	341	20.4		27.4	152	09.4		06.2	297	19.1		17.6
2	137	31.4	209	15.3		04.7	356	23.4		27.7	167	11.3		06.1	312	21.5		17.6
3	152	33.9	224	14.4		04.4	11	26.5		28.0	182	13.3		05.9	327	24.0		17.6
4	167	36.3	239	13.5		04.1	26	29.5		28.3	197	15.2		05.7	342	26.4		17.6
5	182	38.8	254	12.5	-23	03.7	41	32.6	+19	28.6	212	17.2	-13	05.5	357	28.8	+0	17.6
6	197	41.3	269	11.6	-23	03.4	56	35.7	+19	28.8	227	19.1	-13	05.3	12	31.3	+0	17.6
7	212	43.7	284	10.6		03.1	71	38.7		29.1	242	21.1		05.1	27	33.7		17.6
8	227	46.2	299	09.7		02.8	86	41.8		29.4	257	23.0		05.0	42	36.1		17.6
9	242	48.7	314	08.8		02.5	101	44.9		29.7	272	25.0		04.8	57	38.6		17.6
10	257	51.1	329	07.8		02.2	116	47.9		30.0	287	27.0		04.6	72	41.0		17.6
11	272	53.6	344	06.9	-23	01.9	131	51.0	+19	30.3	302	28.9	-13	04.4	87	43.5	+0	17.6
12	287	56.1	359	06.0	-23	01.6	146	54.1	+19	30.5	317	30.9	-13	04.2	102	45.9	+0	17.6
13	302	58.5	14	05.0		01.2	161	57.1		30.8	332	32.8		04.0	117	48.3		17.6
14	318	01.0	29	04.1		00.9	177	00.2		31.1	347	34.8		03.8	132	50.8		17.6
15	333	03.4	44	03.1		00.6	192	03.3		31.4	2	36.7		03.7	147	53.2		17.6
16	348	05.9	59	02.2	-23	00.3	207	06.4		31.7	17	38.7		03.5	162	55.6		17.6
17	3	08.4	74	01.3	-22	59.9	222	09.5	+19	32.0	32	40.6	-13	03.3	177	58.1	+0	17.6
18	18	10.8	89	00.3	-22	59.6	237	12.5	+19	32.2	47	42.6	-13	03.1	193	00.5	+0	17.6
19	33	13.3	103	59.4		59.3	252	15.6		32.5	62	44.5		02.9	208	03.0		17.6
20	48	15.8	118	58.5		59.0	267	18.7		32.8	77	46.5		02.7	223	05.4		17.7
21	63	18.2	133	57.5		58.6	282	21.8		33.1	92	48.4		02.5	238	07.8		17.7
22	78	20.7	148	56.6		58.3	297	24.9		33.4	107	50.4		02.4	253	10.3		17.7
23	93	23.2	163	55.7		58.0	312	28.0		33.7	122	52.4		02.2	268	12.7		17.7
24	108	25.6	178	54.7	-22	57.7	327	31.0	+19	33.9	137	54.3	-13	02.0	283	15.2	+0	17.7
Dif	—		-9		+3		+31		+3		+20		+2		+24			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 07 ^m 1				Edad: 23 ^d 5 PHE { 4 ^h : 56 ^h 6 12 ^h : 56 ^h 3 20 ^h : 56 ^h 1 PMG: 7 ^h 15 ^m R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	16.8	-22	08.8	254	53.8	-18	51.3	60 N	7 06	8 01	8 56	3 40	89	10 39	16				
1	193	16.6		08.5	269	23.8	-19	01.2	58	6 59	7 51	40	26	84	10 54	20				
2	208	16.3		08.1	283	53.7		11.0	56	53	41	27	14	80	11 06	25				
3	223	16.0		07.8	298	23.5		20.7	54	48	33	16	3 03	78	17	28				
4	238	15.8		07.4	312	53.3		30.3	52	43	26	8 05	2 54	75	27	30				
5	253	15.5	-22	07.1	327	23.1	-19	39.8	50	6 38	7 19	7 56	2 46	72	11 36	32				
6	268	15.3	-22	06.7	341	52.9	-19	49.2	45	6 27	7 04	7 37	2 28	68	11 55	35				
7	283	15.0		06.4	356	22.6	-19	58.4	40	18	6 52	22	14	65	12 10	38				
8	298	14.7		06.0	10	52.3	-20	07.6	35	09	41	7 09	2 02	62	23	41				
9	313	14.5		05.7	25	22.0		16.7	30	6 01	31	6 57	1 51	60	35	42				
10	328	14.2		05.3	39	51.6		25.6	20	5 46	6 13	37	33	57	12 54	46				
11	343	14.0	-22	05.0	54	21.2	-20	34.5	10 N	5 31	5 57	6 20	1 17	54	13 11	49				
12	358	13.7	-22	04.6	68	50.7	-20	43.2	0	5 15	5 41	6 03	1 03	51	13 27	51				
13	13	13.5		04.2	83	20.3	-20	51.8	10 S	4 57	24	5 47	0 49	47	13 43	54				
14	28	13.2		03.9	97	49.8	-21	00.3	20	36	5 05	29	33	45	14 00	57				
15	43	12.9		03.5	112	19.2		08.7	30	4 09	4 41	5 08	16	41	20	60				
16	58	12.7		03.2	126	48.6		16.9	35	3 51	27	4 56	0 06	38	32	61				
17	73	12.4	-22	02.8	141	18.0	-21	25.1	40	3 30	4 10	4 42	** ** *	**	14 45	64				
18	88	12.2	-22	02.4	155	47.4	-21	33.1	45	3 01	3 49	4 25	** ** *	**	15 01	67				
19	103	11.9		02.1	170	16.7		41.1	50	2 21	22	4 05	23	53	35	21	70			
20	118	11.7		01.7	184	46.0		48.9	52	1 58	3 08	3 55	43	34	30	72				
21	133	11.4		01.3	199	15.3	-21	56.6	54	1 25	2 52	43	32	32	40	75				
22	148	11.1		01.0	213	44.5	-22	04.2	56	** ** *	33	30	20	29	15	52	78			
23	163	10.9		00.6	228	13.7		11.6	58	** ** *	2 08	3 15	23	05	26	16	06	81		
24	178	10.6	-22	00.2	242	42.9	-22	18.9	60 S	** ** *	1 33	2 57	22	48	21	16	22	86		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 43 ^m 5				Mag: -4.0 PMG: 12 ^h 05 ^m				Mag: -1.0 PMG: 2 ^h 09 ^m				Mag: -2.1 PMG: 14 ^h 46 ^m				Mag: +0.9 PMG: 5 ^h 06 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	108	25.6	178	54.7	-22	57.7	327	31.0	+19	33.9	137	54.3	-13	02.0	283	15.2	+0	17.7		
1	123	28.1	193	53.8		57.3	342	34.1		34.2	152	56.3		01.8	298	17.6		17.7		
2	138	30.5	208	52.9		57.0	357	37.2		34.5	167	58.2		01.6	313	20.0		17.7		
3	153	33.0	223	51.9		56.6	12	40.3		34.8	183	00.2		01.4	328	22.5		17.7		
4	168	35.5	238	51.0		56.3	27	43.4		35.1	198	02.1		01.2	343	24.9		17.7		
5	183	37.9	253	50.1	-22	56.0	42	46.5	+19	35.4	213	04.1	-13	01.1	358	27.4	+0	17.7		
6	198	40.4	268	49.1	-22	55.6	57	49.6	+19	35.7	228	06.0	-13	00.9	13	29.8	+0	17.7		
7	213	42.9	283	48.2		55.3	72	52.7		36.0	243	08.0		00.7	28	32.2		17.7		
8	228	45.3	298	47.3		54.9	87	55.8		36.2	258	09.9		00.5	43	34.7		17.7		
9	243	47.8	313	46.3		54.6	102	58.9		36.5	273	11.9		00.3	58	37.1		17.7		
10	258	50.3	328	45.4		54.3	118	02.0		36.8	288	13.8	-13	00.1	73	39.6		17.7		
11	273	52.7	343	44.5	-22	53.9	133	05.1	+19	37.1	303	15.8	-12	59.9	88	42.0	+0	17.7		
12	288	55.2	358	43.5	-22	53.6	148	08.2	+19	37.4	318	17.7	-12	59.8	103	44.5	+0	17.7		
13	303	57.7	13	42.6		53.2	163	11.3		37.7	333	19.7		59.6	118	46.9		17.7		
14	319	00.1	28	41.7		52.9	178	14.4		38.0	348	21.6		59.4	133	49.3		17.7		
15	334	02.6	43	40.8		52.5	193	17.5		38.3	3	23.6		59.2	148	51.8		17.7		
16	349	05.0	58	39.8		52.2	208	20.6		38.6	18	25.5		59.0	163	54.2		17.7		
17	4	07.5	73	38.9	-22	51.8	223	23.7	+19	38.8	33	27.5	-12	58.8	178	56.7	+0	17.7		
18	19	10.0	88	38.0	-22	51.5	238	26.9	+19	39.1	48	29.4	-12	58.6	193	59.1	+0	17.7		
19	34	12.4	103	37.0		51.1	253	30.0		39.4	63	31.4		58.5	209	01.5		17.7		
20	49	14.9	118	36.1		50.8	268	33.1		39.7	78	33.3		58.3	224	04.0		17.7		
21	64	17.4	133	35.2		50.4	283	36.2		40.0	93	35.3		58.1	239	06.4		17.7		
22	79	19.8	148	34.3		50.0	298	39.3		40.3	108	37.2		57.9	254	08.9		17.7		
23	94	22.3	163	33.3		49.7	313	42.4		40.6	123	39.2		57.7	269	11.3		17.7		
24	109	24.8	178	32.4	-22	49.3	328	45.6	+19	40.9	138	41.1	-12	57.5	284	13.8	+0	17.7		
Dif	—		-9		+3		+31		+3		+20		+2		+24		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 5			Edad: 24 ^d 5 PHE { 4 ^h : 55/9 12 ^h : 55/7 20 ^h : 55/6 SD: 15/3 PMG: 8 ^h 06 ^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	m
0	178	10.6	-22 00.2	242	42.9	-22 18.9	73	60 N	15 21	16 15	17 10	5 09 81		10 55 26	
1	193	10.4	-21 59.9	257	12.0 ¹⁰¹	26.2	71	58	36	25	17	4 50 77		11 14 31	
2	208	10.1	59.5	271	41.1 ¹⁰¹	33.3	69	56	15 49	35	23	34 73		31 34	
3	223	09.9	59.1	286	10.2 ¹⁰¹	40.2	69	54	16 00	43	28	21 70		45 36	
4	238	09.6	58.8	300	39.3 ¹⁰¹	47.1	69	52	10	50	33	4 09 68		11 57 38	
5	253	09.4	-21 58.4	315	08.3 ¹⁰⁰	-22 53.8	67	50	16 19	16 57	17 38	3 58 67		12 08 39	
6	268	09.1	-21 58.0	329	37.3 ¹⁰⁰	-23 00.5	67	45	16 38	17 11	17 48	3 36 64		12 30 43	
7	283	08.8	57.7	344	06.2 ⁹⁹	06.9	64	40	16 54	24	17 57	19 62		12 48 45	
8	298	08.6	57.3	358	35.2 ¹⁰⁰	13.3	64	35	17 07	34	18 06	3 04 60		13 04 46	
9	313	08.3	56.9	13	04.1 ⁹⁹	19.6	63	30	18	17 44	14	2 51 59		17 47	
10	328	08.1	56.5	27	32.9 ⁹⁸	25.7	61	20	38	18 02	29	30 56		13 40 49	
11	343	07.8	-21 56.2	42	01.8 ⁹⁹	-23 31.7	60	10 N	17 55	18 18	18 44	2 11 54		14 00 50	
12	358	07.6	-21 55.8	56	30.6 ⁹⁸	-23 37.6	59	0	18 11	18 33	18 59	1 54 51		14 18 52	
13	13	07.3	55.4	70	59.4 ⁹⁸	43.3	57	10 S	28	18 50	19 17	36 50		37 53	
14	28	07.1	55.0	85	28.2 ⁹⁸	48.9	56	20	18 45	19 09	19 38	1 18 47		14 57 55	
15	43	06.8	54.7	99	57.0 ⁹⁸	54.4	55	30	19 06	32	20 05	0 57 44		15 20 57	
16	58	06.6	54.3	114	25.7 ⁹⁷	-23 59.8	54	35	18	19 47	22	44 43		33 58	
17	73	06.3	-21 53.9	128	54.4 ⁹⁷	-24 05.0	52	40	19 31	20 03	20 44	0 30 41		15 49 59	
18	88	06.1	-21 53.5	143	23.1 ⁹⁷	-24 10.1	51	45	19 48	20 24	21 11	0 13 39		16 08 60	
19	103	05.8	53.1	157	51.8 ⁹⁷	15.1	50	50	20 08	20 51	21 51	** ** *		31 63	
20	118	05.6	52.7	172	20.4 ⁹⁶	20.0	49	52	18	21 04	22 13	** ** *		42 64	
21	133	05.3	52.4	186	49.1 ⁹⁷	24.7	47	54	29	20	22 44	** ** *		16 55 66	
22	148	05.1	52.0	201	17.7 ⁹⁶	29.3	46	56	42	21 39	** ** *	23 49 40		17 10 67	
23	163	04.8	51.6	215	46.3 ⁹⁶	33.8	45	58	20 57	22 03	** ** *	31 38		27 70	
24	178	04.6	-21 51.2	230	14.8 ⁹⁵	-24 38.1	43	60 S	21 14	22 36	** ** *	23 09 35		17 48 74	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 39 ^m 6		Mag: -4.0 PMG: 12 ^h 07 ^m			Mag: -1.0 PMG: 2 ^h 05 ^m			Mag: -2.1 PMG: 14 ^h 43 ^m			Mag: +0.9 PMG: 5 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	109	24.8	178	32.4	-22 49.3	328	45.6	+19 40.9	138	41.1	-12 57.5	284	13.8	+0 17.7	
1	124	27.2	193	31.5	49.0	343	48.7	41.2	153	43.1	57.3	299	16.2	17.7	
2	139	29.7	208	30.5	48.6	358	51.8	41.5	168	45.0	57.1	314	18.7	17.8	
3	154	32.2	223	29.6	48.2	13	54.9	41.8	183	47.0	57.0	329	21.1	17.8	
4	169	34.6	238	28.7	47.9	28	58.1	42.1	198	48.9	56.8	344	23.5	17.8	
5	184	37.1	253	27.8	-22 47.5	44	01.2	+19 42.4	213	50.9	-12 56.6	359	26.0	+0 17.8	
6	199	39.5	268	26.8	-22 47.1	59	04.3	+19 42.6	228	52.8	-12 56.4	14	28.4	+0 17.8	
7	214	42.0	283	25.9	46.8	74	07.4	42.9	243	54.8	56.2	29	30.9	17.8	
8	229	44.5	298	25.0	46.4	89	10.6	43.2	258	56.7	56.0	44	33.3	17.8	
9	244	46.9	313	24.1	46.0	104	13.7	43.5	273	58.7	55.8	59	35.8	17.8	
10	259	49.4	328	23.2	45.6	119	16.8	43.8	289	00.6	55.6	74	38.2	17.8	
11	274	51.9	343	22.2	-22 45.3	134	20.0	+19 44.1	304	02.6	-12 55.5	89	40.7	+0 17.8	
12	289	54.3	358	21.3	-22 44.9	149	23.1	+19 44.4	319	04.5	-12 55.3	104	43.1	+0 17.8	
13	304	56.8	13	20.4	44.5	164	26.3	44.7	334	06.5	55.1	119	45.6	17.8	
14	319	59.3	28	19.5	44.1	179	29.4	45.0	349	08.4	54.9	134	48.0	17.8	
15	335	01.7	43	18.5	43.7	194	32.5	45.3	4	10.4	54.7	149	50.4	17.8	
16	350	04.2	58	17.6	43.4	209	35.7	45.6	19	12.3	54.5	164	52.9	17.8	
17	5	06.7	73	16.7	-22 43.0	224	38.8	+19 45.9	34	14.3	-12 54.3	179	55.3	+0 17.8	
18	20	09.1	88	15.8	-22 42.6	239	42.0	+19 46.2	49	16.2	-12 54.1	194	57.8	+0 17.8	
19	35	11.6	103	14.9	42.2	254	45.1	46.5	64	18.2	54.0	210	00.2	17.8	
20	50	14.0	118	13.9	41.8	269	48.3	46.8	79	20.1	53.8	225	02.7	17.8	
21	65	16.5	133	13.0	41.4	284	51.4	47.1	94	22.1	53.6	240	05.1	17.9	
22	80	19.0	148	12.1	41.1	299	54.6	47.4	109	24.0	53.4	255	07.6	17.9	
23	95	21.4	163	11.2	40.7	314	57.7	47.7	124	26.0	53.2	270	10.0	17.9	
24	110	23.9	178	10.3	-22 40.3	330	00.9	+19 48.0	139	27.9	-12 53.0	285	12.5	+0 17.9	
Dif	—		-9		+4	+31		+3	+19		+2	+24			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 07 ^m 9				Edad: 25 ^d 5 PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'1 SD: 15'1 PMG: 8 ^h 58 ^m R°: 52 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	178	04.6	-21	51.2	230	14.8	-24	38.1	60 N	7 05	7 59	8 53	6 30	64	11 21	45				
1	193	04.3		50.8	244	43.4	96	42.4	58	6 58	49	38	6 07	61	11 45	47				
2	208	04.1		50.4	259	12.0	96	46.4	56	52	40	25	5 47	61	12 05	47				
3	223	03.8		50.1	273	40.5	95	50.4	54	47	32	14	31	60	21	48				
4	238	03.6		49.7	288	09.0	95	54.2	52	42	25	8 04	17	59	35	49				
5	253	03.3	-21	49.3	302	37.5	95	-24 57.9	50	6 37	7 18	7 55	5 05	59	12 47	50				
6	268	03.1	-21	48.9	317	06.0	95	-25 01.5	45	6 27	7 04	7 37	4 40	58	13 13	50				
7	283	02.8		48.5	331	34.5	95	04.9	40	18	6 51	21	21	56	33	50				
8	298	02.6		48.1	346	03.0	95	08.2	35	09	41	7 08	4 04	56	13 50	51				
9	313	02.3		47.7	0	31.4	94	11.4	30	6 01	31	6 57	3 50	55	14 04	52				
10	328	02.1		47.3	14	59.9	95	14.4	20	5 47	6 14	37	26	54	29	52				
11	343	01.8	-21	46.9	29	28.3	94	-25 17.3	10 N	5 32	5 58	6 20	3 05	53	14 50	52				
12	358	01.6	-21	46.5	43	56.8	95	-25 20.1	0	5 16	5 42	6 04	2 45	53	15 10	53				
13	13	01.3		46.1	58	25.2	94	22.8	10 S	4 58	25	5 48	26	51	30	53				
14	28	01.1		45.8	72	53.7	95	25.3	20	37	5 06	30	2 05	51	15 52	52				
15	43	00.9		45.4	87	22.1	94	27.6	23	30	4 10	4 43	5 10	1 41	50	16 17	52			
16	58	00.6		45.0	101	50.5	94	29.9	35	3 53	29	4 58	27	49	31	53				
17	73	00.4	-21	44.6	116	19.0	95	-25 32.0	40	3 32	4 12	4 44	1 11	48	16 48	53				
18	88	00.1	-21	44.2	130	47.4	94	-25 34.0	45	3 04	3 52	4 28	0 52	46	17 08	54				
19	102	59.9		43.8	145	15.8	94	35.8	50	2 25	25	4 07	28	45	34	53				
20	117	59.6		43.4	159	44.3	95	37.6	18	52	2 03	3 11	3 58	17	43	17 46	54			
21	132	59.4		43.0	174	12.7	94	39.1	15	54	1 32	2 56	47	0 04	42	18 01	53			
22	147	59.1		42.6	188	41.2	95	40.6	15	56	0 30	37	34	** ** *	**	17	53			
23	162	58.9		42.2	203	09.6	94	41.9	13	58	** ** *	2 13	19	** ** *	**	18 37	53			
24	177	58.6	-21	41.8	217	38.1	95	-25 43.1	12	60 S	** ** *	1 40	3 02	23 44	55	19 02	53			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 35 ^m 7				Mag: -4.0 PMG: 12 ^h 08 ^m				Mag: -1.0 PMG: 2 ^h 00 ^m				Mag: -2.1 PMG: 14 ^h 40 ^m				Mag: +0.8 PMG: 4 ^h 58 ^m			
	hG ♂		Dec		hG ♀		Dec		hG ♂		Dec		hG ♀		Dec		hG ♀		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	110	23.9	178	10.3	-22	40.3	330	00.9	+19	48.0	139	27.9	-12	53.0	285	12.5	+0	17.9		
1	125	26.4	193	09.3		39.9	345	04.0		48.3	154	29.9		52.8	300	14.9		17.9		
2	140	28.8	208	08.4		39.5	0	07.2		48.6	169	31.8		52.6	315	17.4		17.9		
3	155	31.3	223	07.5		39.1	15	10.3		48.9	184	33.8		52.4	330	19.8		17.9		
4	170	33.8	238	06.6		38.7	30	13.5		49.2	199	35.7		52.3	345	22.3		17.9		
5	185	36.2	253	05.7	-22	38.3	45	16.6	+19	49.5	214	37.6	-12	52.1	0	24.7	+0	17.9		
6	200	38.7	268	04.7	-22	37.9	60	19.8	+19	49.8	229	39.6	-12	51.9	15	27.2	+0	17.9		
7	215	41.2	283	03.8		37.5	75	23.0		50.1	244	41.5		51.7	30	29.6		17.9		
8	230	43.6	298	02.9		37.1	90	26.1		50.4	259	43.5		51.5	45	32.1		17.9		
9	245	46.1	313	02.0		36.7	105	29.3		50.7	274	45.4		51.3	60	34.5		17.9		
10	260	48.5	328	01.1		36.3	120	32.4		51.0	289	47.4		51.1	75	37.0		17.9		
11	275	51.0	343	00.2	-22	35.9	135	35.6	+19	51.3	304	49.3	-12	50.9	90	39.4	+0	17.9		
12	290	53.5	357	59.3	-22	35.5	150	38.8	+19	51.6	319	51.3	-12	50.8	105	41.9	+0	17.9		
13	305	55.9	12	58.3		35.1	165	42.0		51.9	334	53.2		50.6	120	44.3		18.0		
14	320	58.4	27	57.4		34.7	180	45.1		52.2	349	55.2		50.4	135	46.8		18.0		
15	336	00.9	42	56.5		34.3	195	48.3		52.5	4	57.1		50.2	150	49.2		18.0		
16	351	03.3	57	55.6		33.9	210	51.5		52.8	19	59.1		50.0	165	51.7		18.0		
17	6	05.8	72	54.7	-22	33.5	225	54.6	+19	53.1	35	01.0	-12	49.8	180	54.1	+0	18.0		
18	21	08.3	87	53.8	-22	33.0	240	57.8	+19	53.4	50	03.0	-12	49.6	195	56.6	+0	18.0		
19	36	10.7	102	52.9		32.6	256	01.0		53.7	65	04.9		49.4	210	59.0		18.0		
20	51	13.2	117	51.9		32.2	271	04.2		54.0	80	06.8		49.2	226	01.5		18.0		
21	66	15.6	132	51.0		31.8	286	07.4		54.3	95	08.8		49.0	241	03.9		18.0		
22	81	18.1	147	50.1		31.4	301	10.5		54.6	110	10.7		48.9	256	06.4		18.0		
23	96	20.6	162	49.2		31.0	316	13.7		54.9	125	12.7		48.7	271	08.8		18.0		
24	111	23.0	177	48.3	-22	30.5	331	16.9	+19	55.2	140	14.6	-12	48.5	286	11.3	+0	18.0		
Dif	—		-9		+4		+32		+3		+19		+2		+25		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 08 ^m 3			Edad: 26 ^d 5 PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 8 20 ^h : 54 ^m 7 PMG: 9 ^h 50 ^m R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	177	58.6	-21	41.8	217	38.1	-25	43.1	60 N	15 25	16 19	17 13	7 34	42	12 06	65
1	192	58.4		41.4	232	06.5	94	44.2	58	40	29	20	7 08	45	32	62
2	207	58.2		41.0	246	35.0	95	45.1	56	15 52	38	25	6 48	45	12 52	60
3	222	57.9		40.6	261	03.5	95	45.9	54	16 04	46	31	31	46	13 09	60
4	237	57.7		40.1	275	32.0	95	46.6	52	13	53	35	16	48	24	59
5	252	57.4	-21	39.7	290	00.5	95	-25 47.1	50	16 22	16 59	17 40	6 04	47	13 37	58
6	267	57.2	-21	39.3	304	29.0	95	-25 47.5	45	16 41	17 14	17 50	5 38	48	14 03	57
7	282	57.0		38.9	318	57.5	95	47.8	40	16 56	26	17 59	17	49	23	56
8	297	56.7		38.5	333	26.1	96	47.9	35	17 09	36	18 07	5 00	50	41	55
9	312	56.5		38.1	347	54.6	95	47.9	30	20	17 46	15	4 45	50	14 56	54
10	327	56.2		37.7	2	23.2	96	47.8	20	39	18 03	30	4 20	50	15 21	53
11	342	56.0	-21	37.3	16	51.8	96	-25 47.5	10 N	17 56	18 19	18 45	3 58	51	15 42	53
12	357	55.7	-21	36.9	31	20.5	97	-25 47.1	0	18 12	18 34	19 00	3 38	51	16 03	51
13	12	55.5		36.5	45	49.1	96	46.6	10 S	28	18 51	17	3 17	52	23	50
14	27	55.3		36.1	60	17.8	97	46.0	20	18 45	19 09	19 38	2 56	52	16 44	50
15	42	55.0		35.6	74	46.4	96	45.2	30	19 05	32	20 05	31	52	17 09	48
16	57	54.8		35.2	89	15.2	98	44.3	35	17	19 46	22	2 16	53	24	47
17	72	54.5	-21	34.8	103	43.9	97	-25 43.2	40	19 31	20 03	20 43	1 59	53	17 41	46
18	87	54.3	-21	34.4	118	12.7	98	-25 42.1	45	19 47	20 23	21 10	1 38	54	18 02	44
19	102	54.1		34.0	132	41.4	97	40.8	50	20 07	20 49	21 48	13	53	27	43
20	117	53.8		33.6	147	10.3	99	39.4	52	17	21 02	22 10	1 00	54	40	41
21	132	53.6		33.1	161	39.1	98	37.8	54	28	18	22 38	0 46	54	18 54	40
22	147	53.4		32.7	176	08.0	99	36.1	56	40	36	23 28	29	55	19 10	39
23	162	53.1		32.3	190	36.9	99	34.3	58	20 54	21 59	** ** *	0 09	55	30	36
24	177	52.9	-21	31.9	205	05.8	99	-25 32.4	60 S	21 11	22 30	** ** *	** ** *	** ** *	19 55	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 31 ^m 7		Mag: -4.0 PMG: 12 ^h 10 ^m		Mag: -1.0 PMG: 1 ^h 54 ^m		Mag: -2.1 PMG: 14 ^h 37 ^m		Mag: +0.8 PMG: 4 ^h 54 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	111	23.0	177	48.3	-22	30.5	331	16.9	+19	55.2	140	14.6	-12	48.5	286	11.3	+0	18.0
1	126	25.5	192	47.4		30.1	346	20.1		55.5	155	16.6		48.3	301	13.7		18.0
2	141	28.0	207	46.5		29.7	1	23.3		55.8	170	18.5		48.1	316	16.2		18.1
3	156	30.4	222	45.6		29.3	16	26.5		56.1	185	20.5		47.9	331	18.6		18.1
4	171	32.9	237	44.7		28.9	31	29.6		56.4	200	22.4		47.7	346	21.1		18.1
5	186	35.4	252	43.7	-22	28.4	46	32.8	+19	56.7	215	24.3	-12	47.5	1	23.5	+0	18.1
6	201	37.8	267	42.8	-22	28.0	61	36.0	+19	57.0	230	26.3	-12	47.3	16	26.0	+0	18.1
7	216	40.3	282	41.9		27.6	76	39.2		57.3	245	28.2		47.2	31	28.5		18.1
8	231	42.8	297	41.0		27.1	91	42.4		57.6	260	30.2		47.0	46	30.9		18.1
9	246	45.2	312	40.1		26.7	106	45.6		57.9	275	32.1		46.8	61	33.4		18.1
10	261	47.7	327	39.2		26.3	121	48.8		58.3	290	34.1		46.6	76	35.8		18.1
11	276	50.1	342	38.3	-22	25.9	136	52.0	+19	58.6	305	36.0	-12	46.4	91	38.3	+0	18.1
12	291	52.6	357	37.4	-22	25.4	151	55.2	+19	58.9	320	38.0	-12	46.2	106	40.7	+0	18.1
13	306	55.1	12	36.5		25.0	166	58.4		59.2	335	39.9		46.0	121	43.2		18.1
14	321	57.5	27	35.6		24.6	182	01.6		59.5	350	41.8		45.8	136	45.6		18.2
15	337	00.0	42	34.7		24.1	197	04.8	+19	59.8	5	43.8		45.6	151	48.1		18.2
16	352	02.5	57	33.8		23.7	212	08.0	+20	00.1	20	45.7		45.4	166	50.5		18.2
17	7	04.9	72	32.9	-22	23.2	227	11.2	+20	00.4	35	47.7	-12	45.2	181	53.0	+0	18.2
18	22	07.4	87	32.0	-22	22.8	242	14.4	+20	00.7	50	49.6	-12	45.1	196	55.5	+0	18.2
19	37	09.9	102	31.1		22.4	257	17.6		01.0	65	51.6		44.9	211	57.9		18.2
20	52	12.3	117	30.2		21.9	272	20.8		01.3	80	53.5		44.7	227	00.4		18.2
21	67	14.8	132	29.3		21.5	287	24.0		01.6	95	55.4		44.5	242	02.8		18.2
22	82	17.3	147	28.4		21.0	302	27.2		01.9	110	57.4		44.3	257	05.3		18.2
23	97	19.7	162	27.4		20.6	317	30.5		02.2	125	59.3		44.1	272	07.7		18.2
24	112	22.2	177	26.5	-22	20.1	332	33.7	+20	02.6	141	01.3	-12	43.9	287	10.2	+0	18.3
Dif	—		-9		+4		+32		+3		+19		+2		+25			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 27 ^d 5	PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4									
	PMG: 12 ^h 08 ^m 7													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m
0	177	52.9	-21 31.9	205	05.8	-25 32.4	20	60 N	7 03	7 57	8 51	8 16	25	13 11 78
1	192	52.6	31.5	219	34.8 ¹⁰⁰	30.4	20	58	6 57	47	36	7 53	29	34 74
2	207	52.4	31.0	234	03.8 ¹⁰⁰	28.2	22	56	51	39	24	33	33	13 53 71
3	222	52.2	30.6	248	32.8 ¹⁰⁰	25.9	23	54	46	31	13	17	35	14 09 68
4	237	51.9	30.2	263	01.9 ¹⁰¹	23.4	25	52	41	24	8 03	7 04	36	23 66
5	252	51.7	-21 29.8	277	31.0 ¹⁰¹	-25 20.9	25	50	6 36	7 17	7 54	6 51	38	14 35 64
6	267	51.5	-21 29.4	292	00.2 ¹⁰²	-25 18.2	27	45	6 26	7 03	7 36	6 26	41	15 00 61
7	282	51.2	28.9	306	29.4 ¹⁰²	15.4	28	40	17	6 51	21	6 06	42	19 59
8	297	51.0	28.5	320	58.6 ¹⁰²	12.5	29	35	09	40	7 08	5 50	43	36 57
9	312	50.8	28.1	335	27.9 ¹⁰³	09.4	31	30	6 02	31	6 57	35	45	15 50 56
10	327	50.5	27.7	349	57.2 ¹⁰³	06.3	31	20	5 47	6 14	38	5 10	47	16 14 53
11	342	50.3	-21 27.2	4	26.5 ¹⁰³	-25 03.0	33	10 N	5 32	5 58	6 21	4 49	49	16 35 51
12	357	50.1	-21 26.8	18	55.9 ¹⁰⁴	-24 59.5	35	0	5 17	5 43	6 05	4 29	51	16 54 49
13	12	49.8	26.4	33	25.4 ¹⁰⁵	56.0	35	10 S	5 00	26	5 49	4 09	52	17 13 47
14	27	49.6	25.9	47	54.9 ¹⁰⁵	52.4	36	20	4 39	5 08	32	3 48	53	34 45
15	42	49.3	25.5	62	24.4 ¹⁰⁵	48.6	38	30	4 12	4 45	12	23	56	17 57 43
16	57	49.1	25.1	76	54.0 ¹⁰⁶	44.7	39	35	3 55	31	5 00	3 09	56	18 11 41
17	72	48.9	-21 24.6	91	23.6 ¹⁰⁶	-24 40.7	40	40	3 35	4 15	4 46	2 52	58	18 27 39
18	87	48.7	-21 24.2	105	53.3 ¹⁰⁷	-24 36.6	41	45	3 08	3 54	4 30	2 32	59	18 46 37
19	102	48.4	23.8	120	23.0 ¹⁰⁷	32.3	43	50	2 29	28	10	2 06	62	19 10 33
20	117	48.2	23.3	134	52.8 ¹⁰⁸	28.0	43	52	2 08	15	4 01	1 54	63	21 32
21	132	48.0	22.9	149	22.6 ¹⁰⁸	23.5	45	54	1 39	3 00	3 50	40	64	34 30
22	147	47.7	22.5	163	52.5 ¹⁰⁹	18.9	46	56	0 49	2 42	38	24	66	19 49 27
23	162	47.5	22.0	178	22.4 ¹⁰⁹	14.2	47	58	** **	2 19	23	1 04	69	20 06 24
24	177	47.3	-21 21.6	192	52.4 ¹¹⁰	-24 09.4	48	60 S	** **	1 48	3 06	0 39	73	20 28 19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 27 ^m 8		Mag: -4.0 PMG: 12 ^h 11 ^m		Mag: -1.0 PMG: 1 ^h 49 ^m		Mag: -2.1 PMG: 14 ^h 34 ^m		Mag: +0.8 PMG: 4 ^h 51 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	112	22.2	177	26.5	-22	20.1	332	33.7	+20	02.6	141	01.3	-12	43.9	287	10.2	+0	18.3
1	127	24.6	192	25.6		19.7	347	36.9		02.9	156	03.2		43.7	302	12.7		18.3
2	142	27.1	207	24.7		19.2	2	40.1		03.2	171	05.2		43.5	317	15.1		18.3
3	157	29.6	222	23.8		18.8	17	43.3		03.5	186	07.1		43.3	332	17.6		18.3
4	172	32.0	237	22.9		18.3	32	46.5		03.8	201	09.0		43.1	347	20.0		18.3
5	187	34.5	252	22.0	-22	17.9	47	49.8	+20	04.1	216	11.0	-12	43.0	2	22.5	+0	18.3
6	202	37.0	267	21.1	-22	17.4	62	53.0	+20	04.4	231	12.9	-12	42.8	17	24.9	+0	18.3
7	217	39.4	282	20.2		17.0	77	56.2		04.7	246	14.9		42.6	32	27.4		18.3
8	232	41.9	297	19.3		16.5	92	59.4		05.0	261	16.8		42.4	47	29.9		18.3
9	247	44.4	312	18.4		16.0	108	02.6		05.3	276	18.8		42.2	62	32.3		18.3
10	262	46.8	327	17.5		15.6	123	05.9		05.7	291	20.7		42.0	77	34.8		18.4
11	277	49.3	342	16.6	-22	15.1	138	09.1	+20	06.0	306	22.6	-12	41.8	92	37.2	+0	18.4
12	292	51.8	357	15.8	-22	14.7	153	12.3	+20	06.3	321	24.6	-12	41.6	107	39.7	+0	18.4
13	307	54.2	12	14.9		14.2	168	15.6		06.6	336	26.5		41.4	122	42.1		18.4
14	322	56.7	27	14.0		13.7	183	18.8		06.9	351	28.5		41.2	137	44.6		18.4
15	337	59.1	42	13.1		13.3	198	22.0		07.2	6	30.4		41.0	152	47.1		18.4
16	353	01.6	57	12.2		12.8	213	25.2		07.5	21	32.3		40.9	167	49.5		18.4
17	8	04.1	72	11.3	-22	12.3	228	28.5	+20	07.8	36	34.3	-12	40.7	182	52.0	+0	18.4
18	23	06.5	87	10.4	-22	11.9	243	31.7	+20	08.1	51	36.2	-12	40.5	197	54.4	+0	18.4
19	38	09.0	102	09.5		11.4	258	34.9		08.5	66	38.2		40.3	212	56.9		18.4
20	53	11.5	117	08.6		10.9	273	38.2		08.8	81	40.1		40.1	227	59.4		18.5
21	68	13.9	132	07.7		10.4	288	41.4		09.1	96	42.1		39.9	243	01.8		18.5
22	83	16.4	147	06.8		10.0	303	44.7		09.4	111	44.0		39.7	258	04.3		18.5
23	98	18.9	162	05.9		09.5	318	47.9		09.7	126	45.9		39.5	273	06.7		18.5
24	113	21.3	177	05.0	-22	09.0	333	51.1	+20	10.0	141	47.9	-12	39.3	288	09.2	+0	18.5
Dif	—		-9		+5		+32		+3		+19		+2		+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna													
	SD: 16'3 PMG: 12 ^h 09 ^m 0			Edad: 28 ^d 5 SD: 14'8 PMG: 11 ^h 31 ^m					PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 R°: 48 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec			Dif			Civil	Náutico	Hora	R°	Hora	R°										
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m										
0	177	47.3	-21	21.6	192	52.4	-24	09.4	60 N	15 29	16 22	17 17	8 41	14	14 29	83											
1	192	47.0		21.2	207	22.4 ¹¹⁰	-24	04.5 ⁴⁹	58		44	32	23	22	18	14 48	79										
2	207	46.8		20.7	221	52.5 ¹¹¹	-23	59.4 ⁵¹	56	15 56	41	28	8 06	22	15 04	75											
3	222	46.6		20.3	236	22.6 ¹¹¹		54.3 ⁵¹	54	16 07	49	33	7 52	25	17 72												
4	237	46.3		19.8	250	52.8 ¹¹²		49.0 ⁵³	52	16	16 56	38	40	27	29	69											
5	252	46.1	-21	19.4	265	23.0 ¹¹²	-23	43.6 ⁵⁴	50	16 25	17 02	17 42	7 29	29	15 39	68											
6	267	45.9	-21	19.0	279	53.3 ¹¹³	-23	38.1 ⁵⁵	45	16 43	17 16	17 52	7 07	32	16 01	63											
7	282	45.7		18.5	294	23.7 ¹¹⁴		32.6 ⁵⁵	40	16 58	28	18 01	6 48	36	18 61												
8	297	45.4		18.1	308	54.1 ¹¹⁴		26.9 ⁵⁷	35	17 10	38	09	33	38	33 58												
9	312	45.2		17.6	323	24.5 ¹¹⁴		21.0 ⁵⁹	30	21	17 47	17	6 20	40	16 46	55											
10	327	45.0		17.2	337	55.1 ¹¹⁶		15.1 ⁵⁹	20	40	18 04	31	5 57	43	17 07	52											
11	342	44.7	-21	16.7	352	25.6 ¹¹⁵	-23	09.1 ⁶⁰	10 N	17 57	18 20	18 45	5 38	45	17 26	49											
12	357	44.5	-21	16.3	6	56.3 ¹¹⁷	-23	03.0 ⁶¹	0	18 13	18 35	19 01	5 20	47	17 43	47											
13	12	44.3		15.8	21	27.0 ¹¹⁷	-22	56.8 ⁶²	10 S		28	18 51	18	5 01	50	18 00	44										
14	27	44.1		15.4	35	57.7 ¹¹⁷		50.4 ⁶⁴	20	18 45	19 10	19 38	4 41	53	19 40												
15	42	43.8		15.0	50	28.5 ¹¹⁸		44.0 ⁶⁴	30	19 05	32	20 04	19	56	40 37												
16	57	43.6		14.5	64	59.4 ¹¹⁹		37.5 ⁶⁵	35	17	19 46	21	4 05	58	18 52	35											
17	72	43.4	-21	14.1	79	30.3 ¹¹⁹	-22	30.8 ⁶⁷	40	19 30	20 02	20 41	3 50	60	19 06	33											
18	87	43.2	-21	13.6	94	01.3 ¹²⁰	-22	24.1 ⁶⁷	45	19 46	20 22	21 08	3 31	63	19 23	29											
19	102	42.9		13.2	108	32.4 ¹²¹		17.3 ⁶⁸	50	20 06	20 47	21 45	3 08	66	43 26												
20	117	42.7		12.7	123	03.5 ¹²¹		10.3 ⁷⁰	52	15	21 00	22 06	2 57	68	19 53	24											
21	132	42.5		12.3	137	34.7 ¹²²	-22	03.3 ⁷⁰	54	26	15	22 33	44	71	20 04	21											
22	147	42.3		11.8	152	05.9 ¹²²	-21	56.2 ⁷¹	56	38	33	23 16	30	73	16 19												
23	162	42.0		11.3	166	37.2 ¹²³		48.9 ⁷³	58	20 51	21 54	** ** *	2 13	76	30 16												
24	177	41.8	-21	10.9	181	08.5 ¹²³	-21	41.6 ⁷³	60 S	21 08	22 24	** ** *	1 52	81	20 47	11											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 16 ^h 23 ^m 9			Mag: -4.0 PMG: 12 ^h 12 ^m			Mag: -1.1 PMG: 1 ^h 44 ^m			Mag: -2.1 PMG: 14 ^h 31 ^m			Mag: +0.8 PMG: 4 ^h 47 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	113	21.3	177	05.0	-22	09.0	333	51.1	+20	10.0	141	47.9	-12	39.3	288	09.2	+0	18.5									
1	128	23.8	192	04.1		08.5	348	54.4		10.3	156	49.8		39.1	303	11.7		18.5									
2	143	26.3	207	03.2		08.1	3	57.6		10.6	171	51.8		38.9	318	14.1		18.5									
3	158	28.7	222	02.3		07.6	19	00.9		11.0	186	53.7		38.7	333	16.6		18.5									
4	173	31.2	237	01.4		07.1	34	04.1		11.3	201	55.6		38.5	348	19.0		18.6									
5	188	33.6	252	00.6	-22	06.6	49	07.4	+20	11.6	216	57.6	-12	38.4	3	21.5	+0	18.6									
6	203	36.1	266	59.7	-22	06.1	64	10.6	+20	11.9	231	59.5	-12	38.2	18	24.0	+0	18.6									
7	218	38.6	281	58.8		05.7	79	13.9		12.2	247	01.5		38.0	33	26.4		18.6									
8	233	41.0	296	57.9		05.2	94	17.1		12.5	262	03.4		37.8	48	28.9		18.6									
9	248	43.5	311	57.0		04.7	109	20.4		12.8	277	05.3		37.6	63	31.4		18.6									
10	263	46.0	326	56.1		04.2	124	23.6		13.1	292	07.3		37.4	78	33.8		18.6									
11	278	48.4	341	55.2	-22	03.7	139	26.9	+20	13.5	307	09.2	-12	37.2	93	36.3	+0	18.6									
12	293	50.9	356	54.3	-22	03.2	154	30.1	+20	13.8	322	11.2	-12	37.0	108	38.7	+0	18.7									
13	308	53.4	11	53.4		02.7	169	33.4		14.1	337	13.1		36.8	123	41.2		18.7									
14	323	55.8	26	52.6		02.2	184	36.7		14.4	352	15.0		36.6	138	43.7		18.7									
15	338	58.3	41	51.7		01.7	199	39.9		14.7	7	17.0		36.4	153	46.1		18.7									
16	354	00.8	56	50.8		01.3	214	43.2		15.0	22	18.9		36.2	168	48.6		18.7									
17	9	03.2	71	49.9	-22	00.8	229	46.4	+20	15.4	37	20.8	-12	36.0	183	51.1	+0	18.7									
18	24	05.7	86	49.0	-22	00.3	244	49.7	+20	15.7	52	22.8	-12	35.9	198	53.5	+0	18.7									
19	39	08.1	101	48.1	-21	59.8	259	53.0		16.0	67	24.7		35.7	213	56.0		18.7									
20	54	10.6	116	47.2		59.3	274	56.2		16.3	82	26.7		35.5	228	58.5		18.8									
21	69	13.1	131	46.4		58.8	289	59.5		16.6	97	28.6		35.3	244	00.9		18.8									
22	84	15.5	146	45.5		58.3	305	02.8		16.9	112	30.5		35.1	259	03.4		18.8									
23	99	18.0	161	44.6		57.8	320	06.0		17.2	127	32.5		34.9	274	05.9		18.8									
24	114	20.5	176	43.7	-21	57.3	335	09.3	+20	17.6	142	34.4	-12	34.7	289	08.3	+0	18.8									
Dif	—			-9			+5			+33			+3			+19			+2			+25			0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 09 ^m 4			Edad: 29 ^d 5 PHE { SD: 14:7 PMG: 12 ^h 19 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	177	41.8	-21	10.9	181	08.5	-21	41.6	60 N	7 01	7 55	8 48	8 55	9	15 52	84		
1	192	41.6		10.4	195	40.0 ¹²⁵		34.2 ⁷⁴	58	6 55	45	34	40	13	16 07	78		
2	207	41.4		10.0	210	11.4 ¹²⁴		26.7 ⁷⁵	56	49	37	21	28	16	19	75		
3	222	41.1		09.5	224	43.0 ¹²⁶		19.1 ⁷⁶	54	44	29	11	17	18	29	77		
4	237	40.9		09.1	239	14.6 ¹²⁶		11.4 ⁷⁷	52	40	22	8 01	8 07	21	38	71		
5	252	40.7	-21	08.6	253	46.2 ¹²⁶	-21	03.6 ⁷⁸	50	6 35	7 16	7 53	7 58	23	16 47	68		
6	267	40.5	-21	08.2	268	17.9 ¹²⁷	-20	55.8 ⁷⁸	45	6 26	7 02	7 35	7 39	27	17 04	64		
7	282	40.2		07.7	282	49.7 ¹²⁸		47.8 ⁸⁰	40	17	6 50	20	24	30	19	60		
8	297	40.0		07.2	297	21.6 ¹²⁹		39.7 ⁸¹	35	09	40	7 08	11	33	31	57		
9	312	39.8		06.8	311	53.5 ¹²⁹		31.6 ⁸¹	30	6 01	31	6 57	7 00	35	41	56		
10	327	39.6		06.3	326	25.4 ¹²⁹		23.4 ⁸²	20	5 47	6 14	38	6 40	39	17 59	51		
11	342	39.4	-21	05.9	340	57.5 ¹³¹	-20	15.1 ⁸³	10 N	5 33	5 59	6 21	6 23	43	18 15	48		
12	357	39.1	-21	05.4	355	29.6 ¹³¹	-20	06.6 ⁸⁵	0	5 18	5 44	6 06	6 07	46	18 30	44		
13	12	38.9		04.9	10	01.7 ¹³¹	-19	58.2 ⁸⁴	10 S	5 01	27	5 50	5 51	49	44	41		
14	27	38.7		04.5	24	33.9 ¹³²		49.6 ⁸⁶	20	4 40	5 09	33	34	52	18 59	38		
15	42	38.5		04.0	39	06.2 ¹³³		40.9 ⁸⁷	30	4 14	4 47	13	15	55	19 17	33		
16	57	38.3		03.5	53	38.5 ¹³³		32.2 ⁸⁷	35	3 58	33	5 02	5 03	58	27	31		
17	72	38.0	-21	03.1	68	10.9 ¹³⁴	-19	23.4 ⁸⁸	40	3 37	4 17	4 49	4 50	60	19 39	28		
18	87	37.8	-21	02.6	82	43.4 ¹³⁵	-19	14.5 ⁸⁹	45	3 11	3 57	4 33	4 34	64	19 52	25		
19	102	37.6		02.1	97	15.9 ¹³⁵	-19	05.5 ⁹⁰	50	2 34	31	13	14	68	20 09	21		
20	117	37.4		01.7	111	48.5 ¹³⁶	-18	56.5 ⁹⁰	52	2 13	19	4 04	4 05	70	17	18		
21	132	37.2		01.2	126	21.1 ¹³⁶		47.3 ⁹²	54	1 46	3 04	3 53	3 55	72	25	17		
22	147	36.9		00.7	140	53.8 ¹³⁷		38.1 ⁹²	56	1 03	2 46	41	43	75	35	14		
23	162	36.7	-21	00.3	155	26.5 ¹³⁷		28.8 ⁹³	58	** **	2 24	27	29	79	46	10		
24	177	36.5	-20	59.8	169	59.4 ¹³⁹	-18	19.5 ⁹³	60 S	** **	1 55	3 11	3 13	83	20 58	7		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 20 ^m 0			Mag: -4.0 PMG: 12 ^h 14 ^m			Mag: -1.1 PMG: 1 ^h 39 ^m			Mag: -2.1 PMG: 14 ^h 28 ^m			Mag: +0.8 PMG: 4 ^h 43 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	114	20.5	176	43.7	-21	57.3	335	09.3	+20	17.6	142	34.4	-12	34.7	289	08.3	+0	18.8
1	129	22.9	191	42.8		56.7	350	12.6		17.9	157	36.4		34.5	304	10.8		18.8
2	144	25.4	206	41.9		56.2	5	15.9		18.2	172	38.3		34.3	319	13.2		18.8
3	159	27.9	221	41.1		55.7	20	19.1		18.5	187	40.2		34.1	334	15.7		18.8
4	174	30.3	236	40.2		55.2	35	22.4		18.8	202	42.2		33.9	349	18.2		18.9
5	189	32.8	251	39.3	-21	54.7	50	25.7	+20	19.1	217	44.1	-12	33.7	4	20.6	+0	18.9
6	204	35.2	266	38.4	-21	54.2	65	29.0	+20	19.5	232	46.0	-12	33.5	19	23.1	+0	18.9
7	219	37.7	281	37.5		53.7	80	32.2		19.8	247	48.0		33.3	34	25.6		18.9
8	234	40.2	296	36.7		53.2	95	35.5		20.1	262	49.9		33.1	49	28.0		18.9
9	249	42.6	311	35.8		52.7	110	38.8		20.4	277	51.9		32.9	64	30.5		18.9
10	264	45.1	326	34.9		52.2	125	42.1		20.7	292	53.8		32.8	79	33.0		18.9
11	279	47.6	341	34.0	-21	51.6	140	45.4	+20	21.0	307	55.7	-12	32.6	94	35.4	+0	19.0
12	294	50.0	356	33.1	-21	51.1	155	48.6	+20	21.4	322	57.7	-12	32.4	109	37.9	+0	19.0
13	309	52.5	11	32.3		50.6	170	51.9		21.7	337	59.6		32.2	124	40.4		19.0
14	324	55.0	26	31.4		50.1	185	55.2		22.0	353	01.5		32.0	139	42.8		19.0
15	339	57.4	41	30.5		49.6	200	58.5		22.3	8	03.5		31.8	154	45.3		19.0
16	354	59.9	56	29.6		49.0	216	01.8		22.6	23	05.4		31.6	169	47.8		19.0
17	10	02.4	71	28.8	-21	48.5	231	05.1	+20	23.0	38	07.3	-12	31.4	184	50.2	+0	19.0
18	25	04.8	86	27.9	-21	48.0	246	08.4	+20	23.3	53	09.3	-12	31.2	199	52.7	+0	19.1
19	40	07.3	101	27.0		47.5	261	11.6		23.6	68	11.2		31.0	214	55.2		19.1
20	55	09.7	116	26.1		46.9	276	14.9		23.9	83	13.2		30.8	229	57.7		19.1
21	70	12.2	131	25.3		46.4	291	18.2		24.2	98	15.1		30.6	245	00.1		19.1
22	85	14.7	146	24.4		45.9	306	21.5		24.6	113	17.0		30.4	260	02.6		19.1
23	100	17.1	161	23.5		45.3	321	24.8		24.9	128	19.0		30.2	275	05.1		19.1
24	115	19.6	176	22.6	-21	44.8	336	28.1	+20	25.2	143	20.9	-12	30.0	290	07.5	+0	19.1
Dif	—			-9 +5			+33 +3			+19 +2			+25 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 09 ^m 7			Edad: 30 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 13 ^h 03 ^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	m
0	177	36.5	-20 59.8	169	59.4	-18 19.5		60 N	15 34	16 26	17 20	9 04 5		17 16 81	
1	192	36.3		184	32.2 ¹³⁸	10.1	94	58	15 48	36	26	8 53 9		25 78	
2	207	36.1	58.8	199	05.1 ¹³⁹	-18 00.5	96	56	16 00	44	31	44 12		34 75	
3	222	35.9	58.4	213	38.1 ¹⁴⁰	-17 51.0	95	54	10	52	36	35 15		42 72	
4	237	35.6	57.9	228	11.2 ¹⁴¹	41.3	97	52	20	16 59	41	28 17		49 69	
5	252	35.4	-20 57.4	242	44.3 ¹⁴¹	-17 31.6	97	50	16 28	17 05	17 45	8 21 19		17 55 68	
6	267	35.2	-20 56.9	257	17.4 ¹⁴¹	-17 21.8	98	45	16 46	17 18	17 55	8 06 23		18 08 63	
7	282	35.0	56.5	271	50.7 ¹⁴³	11.9	99	40	17 00	30	18 03	7 54 27		19 60	
8	297	34.8	56.0	286	23.9 ¹⁴²	-17 02.0	99	35	12	40	11	44 29		28 57	
9	312	34.6	55.5	300	57.3 ¹⁴⁴	-16 52.0	100	30	23	17 49	18	35 32		37 53	
10	327	34.4	55.0	315	30.6 ¹⁴³	41.9	101	20	42	18 05	32	19 36		18 50 50	
11	342	34.1	-20 54.6	330	04.1 ¹⁴⁵	-16 31.8	101	10 N	17 58	18 20	18 46	7 06 39		19 03 45	
12	357	33.9	-20 54.1	344	37.6 ¹⁴⁵	-16 21.6	102	0	18 13	18 36	19 01	6 53 43		19 14 42	
13	12	33.7	53.6	359	11.1 ¹⁴⁵	11.3	103	10 S	29	18 51	18	40 46		25 39	
14	27	33.5	53.1	13	44.7 ¹⁴⁶	-16 01.0	103	20	18 46	19 10	19 38	26 50		37 35	
15	42	33.3	52.6	28	18.4 ¹⁴⁷	-15 50.6	104	30	19 05	32	20 04	10 55		50 31	
16	57	33.1	52.2	42	52.1 ¹⁴⁷	40.2	104	35	16	19 45	20	6 01 57		19 58 28	
17	72	32.9	-20 51.7	57	25.8 ¹⁴⁷	-15 29.6	106	40	19 29	20 01	20 40	5 50 60		20 07 25	
18	87	32.7	-20 51.2	71	59.6 ¹⁴⁸	-15 19.1	105	45	19 45	20 20	21 06	5 38 63		20 17 22	
19	102	32.4	50.7	86	33.5 ¹⁴⁹	-15 08.4	107	50	20 04	45	21 42	22 68		30 17	
20	117	32.2	50.2	101	07.4 ¹⁴⁹	-14 57.7	107	52	13	20 58	22 02	15 70		35 16	
21	132	32.0	49.7	115	41.4 ¹⁵⁰	47.0	107	54	23	21 12	22 27	5 07 72		42 13	
22	147	31.8	49.2	130	15.4 ¹⁵⁰	36.2	108	56	35	29	23 06	4 58 75		49 10	
23	162	31.6	48.8	144	49.4 ¹⁵⁰	25.3	109	58	20 49	21 50	** ** *	48 78		20 56 8	
24	177	31.4	-20 48.3	159	23.6 ¹⁵²	-14 14.4	109	60 S	21 04	22 18	** ** *	4 36 82		21 05 5	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 16 ^m 0			Mag: -4.0 PMG: 12 ^h 15 ^m			Mag: -1.1 PMG: 1 ^h 34 ^m			Mag: -2.1 PMG: 14 ^h 25 ^m			Mag: +0.8 PMG: 4 ^h 39 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	115	19.6	176 22.6	-21 44.8		336 28.1	+20 25.2		143 20.9	-12 30.0		290 07.5	+0 19.1		
1	130	22.1	191 21.8	44.3		351 31.4	25.5		158 22.8	29.8		305 10.0	19.2		
2	145	24.5	206 20.9	43.8		6 34.7	25.8		173 24.8	29.6		320 12.5	19.2		
3	160	27.0	221 20.0	43.2		21 38.0	26.1		188 26.7	29.5		335 14.9	19.2		
4	175	29.5	236 19.2	42.7		36 41.3	26.5		203 28.6	29.3		350 17.4	19.2		
5	190	31.9	251 18.3	-21 42.1		51 44.6	+20 26.8		218 30.6	-12 29.1		5 19.9	+0 19.2		
6	205	34.4	266 17.4	-21 41.6		66 47.9	+20 27.1		233 32.5	-12 28.9		20 22.3	+0 19.2		
7	220	36.9	281 16.5	41.1		81 51.2	27.4		248 34.5	28.7		35 24.8	19.3		
8	235	39.3	296 15.7	40.5		96 54.5	27.7		263 36.4	28.5		50 27.3	19.3		
9	250	41.8	311 14.8	40.0		111 57.8	28.1		278 38.3	28.3		65 29.8	19.3		
10	265	44.2	326 13.9	39.4		127 01.1	28.4		293 40.3	28.1		80 32.2	19.3		
11	280	46.7	341 13.1	-21 38.9		142 04.5	+20 28.7		308 42.2	-12 27.9		95 34.7	+0 19.3		
12	295	49.2	356 12.2	-21 38.4		157 07.8	+20 29.0		323 44.1	-12 27.7		110 37.2	+0 19.3		
13	310	51.6	11 11.3	37.8		172 11.1	29.3		338 46.1	27.5		125 39.6	19.4		
14	325	54.1	26 10.5	37.3		187 14.4	29.7		353 48.0	27.3		140 42.1	19.4		
15	340	56.6	41 09.6	36.7		202 17.7	30.0		8 49.9	27.1		155 44.6	19.4		
16	355	59.0	56 08.7	36.2		217 21.0	30.3		23 51.9	26.9		170 47.1	19.4		
17	11	01.5	71 07.9	-21 35.6		232 24.3	+20 30.6		38 53.8	-12 26.7		185 49.5	+0 19.4		
18	26	04.0	86 07.0	-21 35.1		247 27.6	+20 30.9		53 55.7	-12 26.5		200 52.0	+0 19.4		
19	41	06.4	101 06.1	34.5		262 31.0	31.3		68 57.7	26.3		215 54.5	19.4		
20	56	08.9	116 05.3	34.0		277 34.3	31.6		83 59.6	26.1		230 56.9	19.5		
21	71	11.4	131 04.4	33.4		292 37.6	31.9		99 01.5	25.9		245 59.4	19.5		
22	86	13.8	146 03.5	32.8		307 40.9	32.2		114 03.5	25.7		261 01.9	19.5		
23	101	16.3	161 02.7	32.3		322 44.2	32.6		129 05.4	25.5		276 04.4	19.5		
24	116	18.7	176 01.8	-21 31.7		337 47.6	+20 32.9		144 07.3	-12 25.4		291 06.8	+0 19.5		
Dif	—			-9	+5	+33	+3	+19			+2	+25			0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 10 ^m 1			Edad: 1 ^d 7 SD: 14:7 PMG: 13 ^h 46 ^m	PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 R°: 41 ^m	Náutico		Civil	Hora		R°	Hora	R°	
	hG ☉	Dec	hG ☾ Dif											Dec
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	31.4	-20 48.3	159	23.6	-14 14.4	110	60 N	6 59	7 52	8 45	9 09 5	18 37 80	
1	192	31.2	47.8	173	57.7 ¹⁵¹	-14 03.4	110	58	53	43	31	9 02 7	43 77	
2	207	31.0	47.3	188	31.9 ¹⁵²	-13 52.4	110	56	48	35	19	8 56 9	49 73	
3	222	30.8	46.8	203	06.2 ¹⁵³	41.3	111	54	43	27	8 09	50 12	54 71	
4	237	30.6	46.3	217	40.5 ¹⁵³	30.2	111	52	38	21	7 59	45 14	18 58 69	
5	252	30.3	-20 45.8	232	14.8 ¹⁵³	-13 19.0	112	50	6 34	7 14	7 51	8 40 16	19 03 66	
6	267	30.1	-20 45.3	246	49.2 ¹⁵⁴	-13 07.7	113	45	6 25	7 01	7 34	8 29 21	19 11 63	
7	282	29.9	44.8	261	23.6 ¹⁵⁴	-12 56.4	113	40	16	6 50	19	21 23	19 59	
8	297	29.7	44.3	275	58.1 ¹⁵⁵	45.1	113	35	09	40	7 07	13 27	25 56	
9	312	29.5	43.9	290	32.6 ¹⁵⁵	33.7	114	30	6 01	31	6 56	8 07 29	30 54	
10	327	29.3	43.4	305	07.2 ¹⁵⁶	22.3	114	20	5 47	6 14	38	7 55 34	40 48	
11	342	29.1	-20 42.9	319	41.7 ¹⁵⁵	-12 10.8	115	10 N	5 33	5 59	6 22	7 45 38	19 48 45	
12	357	28.9	-20 42.4	334	16.4 ¹⁵⁷	-11 59.3	115	0	5 19	5 44	6 06	7 36 41	19 56 41	
13	12	28.7	41.9	348	51.1 ¹⁵⁷	47.7	116	10 S	5 02	28	5 51	26 45	20 04 36	
14	27	28.5	41.4	3	25.8 ¹⁵⁷	36.1	116	20	4 42	5 10	34	16 49	12 33	
15	42	28.3	40.9	18	00.5 ¹⁵⁷	24.4	117	30	16	4 49	15	7 05 53	21 28	
16	57	28.1	40.4	32	35.3 ¹⁵⁸	12.7	117	35	4 00	35	5 04	6 58 56	26 26	
17	72	27.9	-20 39.9	47	10.2 ¹⁵⁹	-11 01.0	117	40	3 40	4 19	4 51	6 50 59	20 32 23	
18	87	27.7	-20 39.4	61	45.0 ¹⁵⁸	-10 49.2	118	45	3 14	4 00	4 35	6 41 63	20 39 19	
19	102	27.5	38.9	76	19.9 ¹⁵⁹	37.3	119	50	2 38	3 35	16	30 67	47 15	
20	117	27.3	38.4	90	54.9 ¹⁶⁰	25.5	118	52	2 18	23	4 07	25 69	51 13	
21	132	27.1	37.9	105	29.8 ¹⁵⁹	13.6	119	54	1 53	3 08	3 57	19 72	55 11	
22	147	26.9	37.4	120	04.8 ¹⁶⁰	-10 01.6	120	56	1 14	2 51	45	13 74	20 59 10	
23	162	26.7	36.9	134	39.9 ¹⁶¹	-9 49.6	120	58	** **	30	32	6 06 77	21 04 7	
24	177	26.5	-20 36.4	149	14.9 ¹⁶⁰	-9 37.6	120	60 S	** **	2 03	3 16	5 58 80	21 10 4	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 12 ^m 1		Mag: -4.0 PMG: 12 ^h 17 ^m			Mag: -1.1 PMG: 1 ^h 29 ^m			Mag: -2.1 PMG: 14 ^h 22 ^m			Mag: +0.8 PMG: 4 ^h 35 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	116	18.7	176 01.8	-21 31.7	337 47.6	+20 32.9	144 07.3	-12 25.4	291 06.8	+0 19.5				
1	131	21.2	191 01.0	31.2	352 50.9	33.2	159 09.3	25.2	306 09.3	19.5				
2	146	23.7	206 00.1	30.6	7 54.2	33.5	174 11.2	25.0	321 11.8	19.6				
3	161	26.1	220 59.2	30.0	22 57.5	33.8	189 13.1	24.8	336 14.3	19.6				
4	176	28.6	235 58.4	29.5	38 00.9	34.2	204 15.1	24.6	351 16.7	19.6				
5	191	31.1	250 57.5	-21 28.9	53 04.2	+20 34.5	219 17.0	-12 24.4	6 19.2	+0 19.6				
6	206	33.5	265 56.7	-21 28.4	68 07.5	+20 34.8	234 18.9	-12 24.2	21 21.7	+0 19.6				
7	221	36.0	280 55.8	27.8	83 10.8	35.1	249 20.9	24.0	36 24.2	19.7				
8	236	38.5	295 54.9	27.2	98 14.2	35.4	264 22.8	23.8	51 26.6	19.7				
9	251	40.9	310 54.1	26.7	113 17.5	35.8	279 24.7	23.6	66 29.1	19.7				
10	266	43.4	325 53.2	26.1	128 20.8	36.1	294 26.7	23.4	81 31.6	19.7				
11	281	45.8	340 52.4	-21 25.5	143 24.2	+20 36.4	309 28.6	-12 23.2	96 34.1	+0 19.7				
12	296	48.3	355 51.5	-21 24.9	158 27.5	+20 36.7	324 30.5	-12 23.0	111 36.5	+0 19.7				
13	311	50.8	10 50.6	24.4	173 30.8	37.1	339 32.5	22.8	126 39.0	19.8				
14	326	53.2	25 49.8	23.8	188 34.2	37.4	354 34.4	22.6	141 41.5	19.8				
15	341	55.7	40 48.9	23.2	203 37.5	37.7	9 36.3	22.4	156 44.0	19.8				
16	356	58.2	55 48.1	22.6	218 40.8	38.0	24 38.3	22.2	171 46.4	19.8				
17	12	00.6	70 47.2	-21 22.1	233 44.2	+20 38.3	39 40.2	-12 22.0	186 48.9	+0 19.8				
18	27	03.1	85 46.4	-21 21.5	248 47.5	+20 38.7	54 42.1	-12 21.8	201 51.4	+0 19.8				
19	42	05.6	100 45.5	20.9	263 50.9	39.0	69 44.1	21.6	216 53.9	19.9				
20	57	08.0	115 44.7	20.3	278 54.2	39.3	84 46.0	21.4	231 56.3	19.9				
21	72	10.5	130 43.8	19.7	293 57.5	39.6	99 47.9	21.2	246 58.8	19.9				
22	87	13.0	145 43.0	19.2	309 00.9	40.0	114 49.9	21.0	262 01.3	19.9				
23	102	15.4	160 42.1	18.6	324 04.2	40.3	129 51.8	20.8	277 03.8	19.9				
24	117	17.9	175 41.3	-21 18.0	339 07.6	+20 40.6	144 53.7	-12 20.6	292 06.3	+0 20.0				
Dif	—		-9	+6	+33	+3	+19	+2	+25	0				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16/3 PMG: 12 ^h 10 ^m 4			Edad: 2 ^d 7 PHE { SD: 14/7 PMG: 14 ^h 27 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	177	26.5	-20	36.4	149	14.9	-9	37.6	60 N	15 38	16 30	17 24	9 14	3	19 57	79			
1	192	26.2		35.9	163	50.0 ¹⁶¹		25.5 ¹²¹	58	15 52	39	29	09	6	20 00	76			
2	207	26.0		35.4	178	25.2 ¹⁶²		13.4 ¹²¹	56	16 04	48	35	05	9	02	74			
3	222	25.8		34.9	193	00.3 ¹⁶¹	-9	01.3 ¹²¹	54	14	16 55	39	9	02	11	05	7		
4	237	25.6		34.3	207	35.5 ¹⁶²	-8	49.1 ¹²²	52	23	17 02	44	8	59	13	07	69		
5	252	25.4	-20	33.8	222	10.7 ¹⁶²	-8	36.9 ¹²²	50	16 31	17 08	17 48	8	56	15	20	09	67	
6	267	25.2	-20	33.3	236	46.0 ¹⁶³	-8	24.7 ¹²²	45	16 48	17 21	17 57	8	50	19	20	14	62	
7	282	25.0		32.8	251	21.2 ¹⁶²		12.4 ¹²³	40	17 02	32	18 05	44	23		18	58		
8	297	24.8		32.3	265	56.5 ¹⁶³	-8	00.1 ¹²³	35	14	42	13	40	25		21	55		
9	312	24.6		31.8	280	31.8 ¹⁶³	-7	47.8 ¹²³	30	25	17 51	20	36	28		24	52		
10	327	24.4		31.3	295	07.2 ¹⁶⁴		35.4 ¹²⁴	20	43	18 07	34	29	32		28	48		
11	342	24.2	-20	30.8	309	42.5 ¹⁶³	-7	23.0 ¹²⁴	10 N	17 59	18 21	18 47	8	23	36	20	33	44	
12	357	24.0	-20	30.3	324	17.9 ¹⁶⁴	-7	10.6 ¹²⁴	0	18 14	18 36	19 02	8	17	40	20	37	40	
13	12	23.8		29.8	338	53.3 ¹⁶⁴	-6	58.2 ¹²⁴	10 S	29	18 52	18	11	44		40	37		
14	27	23.7		29.2	353	28.7 ¹⁶⁴		45.7 ¹²⁵	20	18 46	19 09	19 38	8	05	48	45	32		
15	42	23.5		28.7	8	04.2 ¹⁶⁵		33.2 ¹²⁵	30	19 04	31	20 03	7	58	53	49	28		
16	57	23.3		28.2	22	39.6 ¹⁶⁴		20.7 ¹²⁵	35	16	19 44	19	54	55		52	25		
17	72	23.1	-20	27.7	37	15.1 ¹⁶⁵	-6	08.1 ¹²⁶	40	19 28	20 00	20 39	7	49	59	20	55	22	
18	87	22.9	-20	27.2	51	50.6 ¹⁶⁵	-5	55.5 ¹²⁶	45	19 43	20 19	21 04	7	44	62	20	58	19	
19	102	22.7		26.7	66	26.1 ¹⁶⁵		42.9 ¹²⁶	50	20 02	43	39	37	67		21	02	15	
20	117	22.5		26.1	81	01.6 ¹⁶⁵		30.3 ¹²⁶	52	11	20 55	21 58	34	69		04	13		
21	132	22.3		25.6	95	37.2 ¹⁶⁶		17.7 ¹²⁶	54	21	21 09	22 22	31	71		06	11		
22	147	22.1		25.1	110	12.7 ¹⁶⁵	-5	05.0 ¹²⁷	56	32	25	22 57	27	73		09	8		
23	162	21.9		24.6	124	48.3 ¹⁶⁶	-4	52.3 ¹²⁷	58	20 45	21 45	** **	23	76		11	6		
24	177	21.7	-20	24.1	139	23.9 ¹⁶⁶	-4	39.6 ¹²⁷	60 S	21 01	22 11	** **	7	18	80	21	14	3	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 08 ^m 2		Mag: -4.0 PMG: 12 ^h 18 ^m			Mag: -1.1 PMG: 1 ^h 23 ^m			Mag: -2.1 PMG: 14 ^h 19 ^m			Mag: +0.8 PMG: 4 ^h 31 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	117	17.9	175	41.3	-21	18.0	339	07.6	+20	40.6	144	53.7	-12	20.6	292	06.3	+0	20.0	
1	132	20.3	190	40.4		17.4	354	10.9		40.9	159	55.7		20.4	307	08.7		20.0	
2	147	22.8	205	39.6		16.8	9	14.3		41.2	174	57.6		20.2	322	11.2		20.0	
3	162	25.3	220	38.7		16.2	24	17.6		41.6	189	59.5		20.0	337	13.7		20.0	
4	177	27.7	235	37.9		15.6	39	21.0		41.9	205	01.5		19.9	352	16.2		20.0	
5	192	30.2	250	37.0	-21	15.1	54	24.3	+20	42.2	220	03.4	-12	19.7	7	18.6	+0	20.1	
6	207	32.7	265	36.2	-21	14.5	69	27.7	+20	42.5	235	05.3	-12	19.5	22	21.1	+0	20.1	
7	222	35.1	280	35.3		13.9	84	31.0		42.9	250	07.2		19.3	37	23.6		20.1	
8	237	37.6	295	34.5		13.3	99	34.4		43.2	265	09.2		19.1	52	26.1		20.1	
9	252	40.1	310	33.6		12.7	114	37.7		43.5	280	11.1		18.9	67	28.6		20.1	
10	267	42.5	325	32.8		12.1	129	41.1		43.8	295	13.0		18.7	82	31.0		20.1	
11	282	45.0	340	31.9	-21	11.5	144	44.4	+20	44.2	310	15.0	-12	18.5	97	33.5	+0	20.2	
12	297	47.5	355	31.1	-21	10.9	159	47.8	+20	44.5	325	16.9	-12	18.3	112	36.0	+0	20.2	
13	312	49.9	10	30.2		10.3	174	51.2		44.8	340	18.8		18.1	127	38.5		20.2	
14	327	52.4	25	29.4		09.7	189	54.5		45.1	355	20.8		17.9	142	41.0		20.2	
15	342	54.8	40	28.5		09.1	204	57.9		45.4	10	22.7		17.7	157	43.4		20.2	
16	357	57.3	55	27.7		08.5	220	01.2		45.8	25	24.6		17.5	172	45.9		20.3	
17	12	59.8	70	26.9	-21	07.9	235	04.6	+20	46.1	40	26.6	-12	17.3	187	48.4	+0	20.3	
18	28	02.2	85	26.0	-21	07.3	250	08.0	+20	46.4	55	28.5	-12	17.1	202	50.9	+0	20.3	
19	43	04.7	100	25.2		06.7	265	11.3		46.7	70	30.4		16.9	217	53.4		20.3	
20	58	07.2	115	24.3		06.1	280	14.7		47.1	85	32.3		16.7	232	55.8		20.3	
21	73	09.6	130	23.5		05.5	295	18.1		47.4	100	34.3		16.5	247	58.3		20.4	
22	88	12.1	145	22.6		04.8	310	21.4		47.7	115	36.2		16.3	263	00.8		20.4	
23	103	14.6	160	21.8		04.2	325	24.8		48.0	130	38.1		16.1	278	03.3		20.4	
24	118	17.0	175	21.0	-21	03.6	340	28.2	+20	48.4	145	40.1	-12	15.9	293	05.8	+0	20.4	
Dif	—		-8			+6	+34			+3	+19			+2	+25				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 10 ^m 7			Edad: 3 ^d 7 PHE { SD: 14:7 PMG: 15 ^h 07 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	177	21.7	-20 24.1	139	23.9	-4 39.6	60 N	6 56	7 50	8 41	9 17	3	21 16	79
1	192	21.5	23.6	153	59.4 ¹⁶⁵	26.9 ¹²⁷	58	51	41	28	15	6	16 76	
2	207	21.3	23.0	168	35.0 ¹⁶⁶	14.1 ¹²⁸	56	46	33	16	14	8	16 74	
3	222	21.1	22.5	183	10.6 ¹⁶⁶	-4 01.4 ¹²⁷	54	41	25	8 06	13	10	16 7	
4	237	20.9	22.0	197	46.2 ¹⁶⁶	-3 48.6 ¹²⁸	52	37	19	7 57	12	12	16 69	
5	252	20.7	-20 21.5	212	21.9 ¹⁶⁷	-3 35.8 ¹²⁸	50	6 33	7 13	7 49	9 11	14	21 16	67
6	267	20.5	-20 20.9	226	57.5 ¹⁶⁶	-3 22.9 ¹²⁹	45	6 24	7 00	7 32	9 09	18	21 16	63
7	282	20.3	20.4	241	33.1 ¹⁶⁶	-3 10.1 ¹²⁸	40	16	6 49	18	07	22	16 59	
8	297	20.1	19.9	256	08.7 ¹⁶⁶	-2 57.3 ¹²⁸	35	08	39	7 06	05	25	16 56	
9	312	20.0	19.4	270	44.4 ¹⁶⁷	44.4 ¹²⁹	30	6 01	30	6 56	04	28	16 54	
10	327	19.8	18.8	285	20.0 ¹⁶⁶	31.5 ¹²⁹	20	5 47	14	38	9 01	33	16 49	
11	342	19.6	-20 18.3	299	55.6 ¹⁶⁶	-2 18.6 ¹²⁹	10 N	5 34	6 00	6 22	8 59	37	21 17	44
12	357	19.4	-20 17.8	314	31.3 ¹⁶⁷	-2 05.7 ¹²⁹	0	5 19	5 45	6 07	8 57	41	21 17	40
13	12	19.2	17.3	329	06.9 ¹⁶⁶	-1 52.8 ¹²⁹	10 S	5 03	29	5 52	55	44	17 36	
14	27	19.0	16.7	343	42.5 ¹⁶⁶	39.9 ¹²⁹	20	4 43	5 12	36	53	48	17 32	
15	42	18.8	16.2	358	18.1 ¹⁶⁶	26.9 ¹³⁰	30	18	4 50	17	51	53	17 28	
16	57	18.6	15.7	12	53.8 ¹⁶⁷	14.0 ¹²⁹	35	4 02	37	5 06	49	56	17 25	
17	72	18.4	-20 15.1	27	29.4 ¹⁶⁶	-1 01.0 ¹³⁰	40	3 43	4 22	4 53	8 48	59	21 17	22
18	87	18.2	-20 14.6	42	05.0 ¹⁶⁶	-0 48.1 ¹²⁹	45	3 18	4 03	4 38	8 46	63	21 17	19
19	102	18.1	14.1	56	40.6 ¹⁶⁶	35.1 ¹³⁰	50	2 43	3 39	19	44	67	17 15	
20	117	17.9	13.5	71	16.2 ¹⁶⁶	22.1 ¹³⁰	52	24	26	11	43	69	17 13	
21	132	17.7	13.0	85	51.8 ¹⁶⁶	-0 09.1 ¹³⁰	54	2 00	3 13	4 01	42	71	17 11	
22	147	17.5	12.5	100	27.3 ¹⁶⁵	+0 03.9 ¹³⁰	56	1 25	2 56	3 49	40	74	17 8	
23	162	17.3	11.9	115	02.9 ¹⁶⁶	16.9 ¹³⁰	58	** **	36	36	39	76	17 6	
24	177	17.1	-20 11.4	129	38.5 ¹⁶⁶	+0 29.9 ¹³⁰	60 S	** **	2 10	3 21	8 38	79	21 17	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 04 ^m 2		Mag: -4.0 PMG: 12 ^h 19 ^m		Mag: -1.2 PMG: 1 ^h 18 ^m		Mag: -2.1 PMG: 14 ^h 15 ^m		Mag: +0.8 PMG: 4 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	118	17.0	175	21.0	-21	03.6	340	28.2	+20	48.4	145	40.1	-12	15.9	293	05.8	+0	20.4
1	133	19.5	190	20.1		03.0	355	31.5		48.7	160	42.0		15.7	308	08.3		20.4
2	148	21.9	205	19.3		02.4	10	34.9		49.0	175	43.9		15.5	323	10.7		20.5
3	163	24.4	220	18.4		01.8	25	38.3		49.3	190	45.9		15.3	338	13.2		20.5
4	178	26.9	235	17.6		01.2	40	41.6		49.6	205	47.8		15.1	353	15.7		20.5
5	193	29.3	250	16.8	-21	00.6	55	45.0	+20	50.0	220	49.7	-12	14.9	8	18.2	+0	20.5
6	208	31.8	265	15.9	-20	59.9	70	48.4	+20	50.3	235	51.6	-12	14.7	23	20.7	+0	20.6
7	223	34.3	280	15.1		59.3	85	51.8		50.6	250	53.6		14.5	38	23.1		20.6
8	238	36.7	295	14.3		58.7	100	55.1		50.9	265	55.5		14.3	53	25.6		20.6
9	253	39.2	310	13.4		58.1	115	58.5		51.3	280	57.4		14.1	68	28.1		20.6
10	268	41.7	325	12.6		57.5	131	01.9		51.6	295	59.4		13.9	83	30.6		20.6
11	283	44.1	340	11.8	-20	56.8	146	05.3	+20	51.9	311	01.3	-12	13.7	98	33.1	+0	20.7
12	298	46.6	355	10.9	-20	56.2	161	08.6	+20	52.2	326	03.2	-12	13.5	113	35.6	+0	20.7
13	313	49.1	10	10.1		55.6	176	12.0		52.6	341	05.1		13.3	128	38.0		20.7
14	328	51.5	25	09.3		55.0	191	15.4		52.9	356	07.1		13.1	143	40.5		20.7
15	343	54.0	40	08.4		54.3	206	18.8		53.2	11	09.0		12.9	158	43.0		20.7
16	358	56.4	55	07.6		53.7	221	22.2		53.5	26	10.9		12.7	173	45.5		20.8
17	13	58.9	70	06.8	-20	53.1	236	25.6	+20	53.8	41	12.9	-12	12.5	188	48.0	+0	20.8
18	29	01.4	85	05.9	-20	52.4	251	28.9	+20	54.2	56	14.8	-12	12.3	203	50.5	+0	20.8
19	44	03.8	100	05.1		51.8	266	32.3		54.5	71	16.7		12.1	218	53.0		20.8
20	59	06.3	115	04.3		51.2	281	35.7		54.8	86	18.6		11.9	233	55.4		20.9
21	74	08.8	130	03.4		50.5	296	39.1		55.1	101	20.6		11.7	248	57.9		20.9
22	89	11.2	145	02.6		49.9	311	42.5		55.5	116	22.5		11.5	264	00.4		20.9
23	104	13.7	160	01.8		49.3	326	45.9		55.8	131	24.4		11.3	279	02.9		20.9
24	119	16.2	175	00.9	-20	48.6	341	49.3	+20	56.1	146	26.4	-12	11.1	294	05.4	+0	20.9
Dif	—		-8 +6		+34 +3		+19 +2		+25									

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 11 ^m 0			Edad: 4 ^d 7 PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/7 PMG: 15 ^h 47 ^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	177	17.1	-20	11.4	129	38.5	+0	29.9	60 N	15 43	16 34	17 28	9 20	3	22 35 83		
1	192	16.9		10.9	144	14.0 ¹⁶⁵		42.9 ¹³⁰	58	15 56	43	33	21	7	32 79		
2	207	16.7		10.3	158	49.5 ¹⁶⁵	+0	55.9 ¹³⁰	56	16 08	51	38	22	9	30 76		
3	222	16.6		09.8	173	25.0 ¹⁶⁵	+1	08.9 ¹³⁰	54	17	16 58	42	23	12	27 7		
4	237	16.4		09.2	188	00.5 ¹⁶⁵		21.9 ¹³⁰	52	26	17 05	46	24	14	25 71		
5	252	16.2	-20	08.7	202	36.0 ¹⁶⁵	+1	34.9 ¹³⁰	50	16 34	17 10	17 50	9 25	16	22 23 69		
6	267	16.0	-20	08.2	217	11.5 ¹⁶⁵	+1	47.9 ¹³⁰	45	16 51	17 23	17 59	9 27	20	22 19 65		
7	282	15.8		07.6	231	46.9 ¹⁶⁴	+2	00.9 ¹³⁰	40	17 05	34	18 07	29	23	15 61		
8	297	15.6		07.1	246	22.3 ¹⁶⁴		14.0 ¹³¹	35	16	44	15	30	26	12 58		
9	312	15.4		06.5	260	57.7 ¹⁶⁴		27.0 ¹³⁰	30	27	17 52	21	32	28	10 55		
10	327	15.3		06.0	275	33.1 ¹⁶⁴		40.0 ¹³⁰	20	17 44	18 08	35	34	33	05 50		
11	342	15.1	-20	05.5	290	08.4 ¹⁶³	+2	53.0 ¹³⁰	10 N	18 00	18 22	18 48	9 36	37	22 01 46		
12	357	14.9	-20	04.9	304	43.7 ¹⁶³	+3	06.0 ¹³⁰	0	18 15	18 37	19 02	9 38	41	21 57 42		
13	12	14.7		04.4	319	19.0 ¹⁶³		19.0 ¹³⁰	10 S	29	18 52	18	39	46	53 39		
14	27	14.5		03.8	333	54.3 ¹⁶³		32.0 ¹³⁰	20	18 45	19 09	19 37	41	50	49 34		
15	42	14.3		03.3	348	29.6 ¹⁶³		44.9 ¹²⁹	30	19 04	30	20 02	44	54	45 29		
16	57	14.2		02.7	3	04.8 ¹⁶²	+3	57.9 ¹³⁰	35	15	43	18	45	57	42 27		
17	72	14.0	-20	02.2	17	40.0 ¹⁶²	+4	10.9 ¹³⁰	40	19 27	19 58	20 37	9 47	60	21 39 24		
18	87	13.8	-20	01.6	32	15.1 ¹⁶¹	+4	23.9 ¹³⁰	45	19 42	20 17	21 02	9 49	63	21 36 20		
19	102	13.6		01.1	46	50.2 ¹⁶¹		36.8 ¹²⁹	50	20 00	41	35	51	68	32 15		
20	117	13.4	-20	00.5	61	25.3 ¹⁶¹	+4	49.7 ¹²⁹	52	09	20 52	21 53	52	70	30 14		
21	132	13.3	-20	00.0	76	00.4 ¹⁶¹	+5	02.7 ¹³⁰	54	18	21 06	22 16	53	72	28 11		
22	147	13.1	-19	59.4	90	35.4 ¹⁶⁰		15.6 ¹²⁹	56	29	22	22 48	54	75	25 10		
23	162	12.9		58.9	105	10.4 ¹⁶⁰		28.5 ¹²⁹	58	42	21 41	** **	55	78	23 7		
24	177	12.7	-19	58.3	119	45.3 ¹⁵⁹	+5	41.4 ¹²⁹	60 S	20 57	22 05	** **	9 57	81	21 20 4		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 00 ^m 3		Mag: -4.0 PMG: 12 ^h 21 ^m			Mag: -1.2 PMG: 1 ^h 12 ^m			Mag: -2.1 PMG: 14 ^h 12 ^m			Mag: +0.8 PMG: 4 ^h 23 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	119	16.2	175	00.9	-20	48.6	341	49.3	+20	56.1	146	26.4	-12	11.1	294	05.4	
1	134	18.6	190	00.1		48.0	356	52.6		56.4	161	28.3		10.9	309	07.9	
2	149	21.1	204	59.3		47.3	11	56.0		56.8	176	30.2		10.7	324	10.4	
3	164	23.5	219	58.5		46.7	26	59.4		57.1	191	32.1		10.5	339	12.8	
4	179	26.0	234	57.6		46.1	42	02.8		57.4	206	34.1		10.3	354	15.3	
5	194	28.5	249	56.8	-20	45.4	57	06.2	+20	57.7	221	36.0	-12	10.1	9	17.8	
6	209	30.9	264	56.0	-20	44.8	72	09.6	+20	58.0	236	37.9	-12	09.9	24	20.3	
7	224	33.4	279	55.2		44.1	87	13.0		58.4	251	39.8		09.7	39	22.8	
8	239	35.9	294	54.3		43.5	102	16.4		58.7	266	41.8		09.5	54	25.3	
9	254	38.3	309	53.5		42.8	117	19.8		59.0	281	43.7		09.3	69	27.8	
10	269	40.8	324	52.7		42.2	132	23.2		59.3	296	45.6		09.1	84	30.2	
11	284	43.3	339	51.9	-20	41.5	147	26.6	+20	59.7	311	47.6	-12	08.9	99	32.7	
12	299	45.7	354	51.0	-20	40.9	162	30.0	+21	00.0	326	49.5	-12	08.7	114	35.2	
13	314	48.2	9	50.2		40.2	177	33.4	+21	00.3	341	51.4		08.5	129	37.7	
14	329	50.7	24	49.4		39.6	192	36.8		00.6	356	53.3		08.3	144	40.2	
15	344	53.1	39	48.6		38.9	207	40.2		01.0	11	55.3		08.1	159	42.7	
16	359	55.6	54	47.8		38.3	222	43.6		01.3	26	57.2		07.9	174	45.2	
17	14	58.0	69	46.9	-20	37.6	237	47.0	+21	01.6	41	59.1	-12	07.7	189	47.7	
18	30	00.5	84	46.1	-20	37.0	252	50.4	+21	01.9	57	01.0	-12	07.5	204	50.2	
19	45	03.0	99	45.3		36.3	267	53.8		02.2	72	03.0		07.3	219	52.6	
20	60	05.4	114	44.5		35.7	282	57.2		02.6	87	04.9		07.1	234	55.1	
21	75	07.9	129	43.7		35.0	298	00.6		02.9	102	06.8		06.9	249	57.6	
22	90	10.4	144	42.8		34.3	313	04.0		03.2	117	08.7		06.7	265	00.1	
23	105	12.8	159	42.0		33.7	328	07.4		03.5	132	10.7		06.5	280	02.6	
24	120	15.3	174	41.2	-20	33.0	343	10.8	+21	03.9	147	12.6	-12	06.3	295	05.1	
Dif	—		-8			+7			+34			+19			+2		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 11 ^m 3			Edad: 5 ^d 7 PHE { 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'3 R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	12.7	-19	58.3	119	45.3	+5	41.4	60 N	6 54	7 47	8 38	9 23	5	23 58	86
1	192	12.5		57.8	134	20.2 ¹⁵⁹	+5	54.3 ¹²⁹	58	49	38	25	28	7	51	83
2	207	12.4		57.2	148	55.1 ¹⁵⁹	+6	07.2 ¹²⁹	56	44	30	14	31	11	46	79
3	222	12.2		56.7	163	29.9 ¹⁵⁸		20.0 ¹²⁸	54	39	23	8 04	35	13	41	76
4	237	12.0		56.1	178	04.7 ¹⁵⁸		32.9 ¹²⁹	52	35	17	7 55	38	15	36	74
5	252	11.8	-19	55.6	192	39.5 ¹⁵⁸	+6	45.7 ¹²⁸	50	6 31	7 11	7 47	9 41	17	23 32	72
6	267	11.7	-19	55.0	207	14.2 ¹⁵⁷	+6	58.5 ¹²⁸	45	6 23	6 59	7 31	9 47	21	23 24	67
7	282	11.5		54.5	221	48.8 ¹⁵⁶	+7	11.3 ¹²⁸	40	15	48	17	52	25	16	64
8	297	11.3		53.9	236	23.4 ¹⁵⁶		24.0 ¹²⁷	35	07	38	7 06	9 56	28	10	60
9	312	11.1		53.3	250	58.0 ¹⁵⁶		36.8 ¹²⁸	30	6 01	30	6 55	10 00	31	23 05	57
10	327	11.0		52.8	265	32.5 ¹⁵⁵	+7	49.5 ¹²⁷	20	5 47	14	38	07	35	22 55	53
11	342	10.8	-19	52.2	280	06.9 ¹⁵⁴	+8	02.2 ¹²⁷	10 N	5 34	6 00	6 22	10 13	40	22 47	48
12	357	10.6	-19	51.7	294	41.4 ¹⁵⁵	+8	14.9 ¹²⁷	0	5 20	5 46	6 08	10 19	43	22 39	45
13	12	10.4		51.1	309	15.7 ¹⁵³		27.6 ¹²⁷	10 S	5 04	30	5 53	25	47	32	40
14	27	10.3		50.5	323	50.0 ¹⁵³		40.2 ¹²⁶	20	4 45	5 13	37	31	51	23	37
15	42	10.1		50.0	338	24.3 ¹⁵³	+8	52.8 ¹²⁶	30	20	4 52	19	38	56	14	32
16	57	09.9		49.4	352	58.5 ¹⁵²	+9	05.4 ¹²⁶	35	4 05	39	5 08	42	59	09	29
17	72	09.7	-19	48.9	7	32.6 ¹⁵¹	+9	18.0 ¹²⁶	40	3 46	4 24	4 55	10 47	62	22 03	26
18	87	09.6	-19	48.3	22	06.7 ¹⁵¹	+9	30.5 ¹²⁵	45	3 21	4 06	4 41	10 52	66	21 56	23
19	102	09.4		47.7	36	40.7 ¹⁵⁰		43.0 ¹²⁵	50	2 47	3 42	23	10 59	70	47	19
20	117	09.2		47.2	51	14.7 ¹⁵⁰	+9	55.5 ¹²⁵	52	29	31	14	11 02	73	44	16
21	132	09.0		46.6	65	48.6 ¹⁴⁹	+10	07.9 ¹²⁴	54	2 07	17	4 04	05	75	39	15
22	147	08.9		46.0	80	22.4 ¹⁴⁸		20.4 ¹²⁵	56	1 35	3 01	3 53	09	78	35	11
23	162	08.7		45.5	94	56.2 ¹⁴⁸		32.7 ¹²³	58	** **	2 42	41	13	81	30	8
24	177	08.5	-19	44.9	109	30.0 ¹⁴⁸	+10	45.1 ¹²⁴	60 S	** **	2 18	3 26	11 18	84	21 24	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 56 ^m 4		Mag: -4.0 PMG: 12 ^h 22 ^m		Mag: -1.2 PMG: 1 ^h 07 ^m		Mag: -2.1 PMG: 14 ^h 09 ^m		Mag: +0.8 PMG: 4 ^h 19 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	120	15.3	174	41.2	-20	33.0	343	10.8	+21	03.9	147	12.6	-12	06.3	295	05.1	+0	21.5
1	135	17.8	189	40.4		32.3	358	14.2		04.2	162	14.5		06.1	310	07.6		21.5
2	150	20.2	204	39.6		31.7	13	17.6		04.5	177	16.4		05.9	325	10.1		21.5
3	165	22.7	219	38.8		31.0	28	21.1		04.8	192	18.4		05.7	340	12.6		21.6
4	180	25.2	234	37.9		30.4	43	24.5		05.1	207	20.3		05.5	355	15.1		21.6
5	195	27.6	249	37.1	-20	29.7	58	27.9	+21	05.5	222	22.2	-12	05.3	10	17.5	+0	21.6
6	210	30.1	264	36.3	-20	29.0	73	31.3	+21	05.8	237	24.2	-12	05.1	25	20.0	+0	21.6
7	225	32.5	279	35.5		28.3	88	34.7		06.1	252	26.1		04.9	40	22.5		21.7
8	240	35.0	294	34.7		27.7	103	38.1		06.4	267	28.0		04.7	55	25.0		21.7
9	255	37.5	309	33.9		27.0	118	41.5		06.8	282	29.9		04.5	70	27.5		21.7
10	270	39.9	324	33.1		26.3	133	44.9		07.1	297	31.9		04.3	85	30.0		21.7
11	285	42.4	339	32.3	-20	25.7	148	48.4	+21	07.4	312	33.8	-12	04.1	100	32.5	+0	21.8
12	300	44.9	354	31.4	-20	25.0	163	51.8	+21	07.7	327	35.7	-12	03.9	115	35.0	+0	21.8
13	315	47.3	9	30.6		24.3	178	55.2		08.0	342	37.6		03.7	130	37.5		21.8
14	330	49.8	24	29.8		23.6	193	58.6		08.4	357	39.6		03.5	145	40.0		21.8
15	345	52.3	39	29.0		22.9	209	02.0		08.7	12	41.5		03.3	160	42.5		21.9
16	0	54.7	54	28.2		22.3	224	05.5		09.0	27	43.4		03.1	175	45.0		21.9
17	15	57.2	69	27.4	-20	21.6	239	08.9	+21	09.3	42	45.3	-12	02.9	190	47.5	+0	21.9
18	30	59.6	84	26.6	-20	20.9	254	12.3	+21	09.6	57	47.3	-12	02.7	205	49.9	+0	21.9
19	46	02.1	99	25.8		20.2	269	15.7		10.0	72	49.2		02.5	220	52.4		22.0
20	61	04.6	114	25.0		19.5	284	19.1		10.3	87	51.1		02.3	235	54.9		22.0
21	76	07.0	129	24.2		18.9	299	22.6		10.6	102	53.0		02.1	250	57.4		22.0
22	91	09.5	144	23.4		18.2	314	26.0		10.9	117	55.0		01.9	265	59.9		22.0
23	106	12.0	159	22.6		17.5	329	29.4		11.2	132	56.9		01.7	281	02.4		22.1
24	121	14.4	174	21.8	-20	16.8	344	32.8	+21	11.6	147	58.8	-12	01.5	296	04.9	+0	22.1
Dif	—		-8		+7		+34		+3		+19		+2		+25			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3		Edad: 6 ^d 7	PHE { 4 ^h : 55/5 12 ^h : 55/7 20 ^h : 55/9	SD: 15/1	PMG: 17 ^h 13 ^m			R°: 47 ^m						
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	177	08.5	-19	44.9	109	30.0	+10 45.1	60 N	15 48	16 39	17 31	9 28 7	** ** *		
1	192	08.4		44.3	124	03.6 ¹⁴⁶	+10 57.4 ¹²³	58	16 01	47	36	35 11	** ** *		
2	207	08.2		43.8	138	37.2 ¹⁴⁶	+11 09.7 ¹²³	56	12	16 55	41	42 13	** ** *		
3	222	08.0		43.2	153	10.7 ¹⁴⁵	22.0 ¹²³	54	21	17 02	45	48 16	** ** *		
4	237	07.9		42.6	167	44.2 ¹⁴⁵	34.2 ¹²²	52	30	08	49	53 19	** ** *		
5	252	07.7	-19	42.1	182	17.6 ¹⁴⁴	+11 46.4 ¹²²	50	16 37	17 13	17 53	9 58 20	** ** *		
6	267	07.5	-19	41.5	196	50.9 ¹⁴³	+11 58.5 ¹²¹	45	16 54	17 26	18 02	10 08 25	** ** *		
7	282	07.3		40.9	211	24.1 ¹⁴²	+12 10.6 ¹²¹	40	17 07	36	09	17 29	** ** *		
8	297	07.2		40.3	225	57.3 ¹⁴²	22.7 ¹²¹	35	18	46	16	24 32	** ** *		
9	312	07.0		39.8	240	30.4 ¹⁴¹	34.7 ¹²⁰	30	28	17 54	23	31 34	** ** *		
10	327	06.8		39.2	255	03.4 ¹⁴⁰	46.7 ¹²⁰	20	17 46	18 09	36	42 39	23 48 55		
11	342	06.7	-19	38.6	269	36.3 ¹³⁹	+12 58.6 ¹¹⁹	10 N	18 01	18 23	18 49	10 53 42	23 35 52		
12	357	06.5	-19	38.0	284	09.2 ¹³⁹	+13 10.5 ¹¹⁹	0	18 15	18 37	19 03	11 02 47	23 24 48		
13	12	06.3		37.5	298	42.0 ¹³⁸	22.3 ¹¹⁸	10 S	30	18 52	18	12 50	12 45		
14	27	06.2		36.9	313	14.7 ¹³⁷	34.1 ¹¹⁸	20	18 45	19 09	19 37	22 54	23 00 41		
15	42	06.0		36.3	327	47.3 ¹³⁶	45.9 ¹¹⁸	30	19 03	30	20 01	34 59	22 46 37		
16	57	05.8		35.7	342	19.9 ¹³⁶	+13 57.6 ¹¹⁷	35	14	42	16	41 61	38 35		
17	72	05.7	-19	35.2	356	52.4 ¹³⁵	+14 09.3 ¹¹⁷	40	19 26	19 57	20 35	11 49 65	22 29 32		
18	87	05.5	-19	34.6	11	24.8 ¹³⁴	+14 20.9 ¹¹⁶	45	19 40	20 15	20 59	11 58 69	22 19 27		
19	102	05.3		34.0	25	57.1 ¹³³	32.4 ¹¹⁵	50	19 58	38	21 32	12 09 74	06 23		
20	117	05.2		33.4	40	29.3 ¹³²	44.0 ¹¹⁶	52	20 06	20 49	21 49	15 75	22 00 21		
21	132	05.0		32.8	55	01.4 ¹³¹	+14 55.4 ¹¹⁴	54	16	21 02	22 11	20 79	21 54 18		
22	147	04.9		32.3	69	33.5 ¹³¹	+15 06.8 ¹¹⁴	56	26	17	22 40	27 81	46 16		
23	162	04.7		31.7	84	05.4 ¹²⁹	18.1 ¹¹³	58	38	36	23 30	34 85	38 12		
24	177	04.5	-19	31.1	98	37.3 ¹²⁹	+15 29.4 ¹¹³	60 S	20 53	21 59	** **	12 42 89	21 29 8		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 52 ^m 4		Mag: -4.0 PMG: 12 ^h 23 ^m		Mag: -1.2 PMG: 1 ^h 02 ^m		Mag: -2.1 PMG: 14 ^h 06 ^m		Mag: +0.8 PMG: 4 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	121	14.4	174	21.8	-20	16.8	344	32.8	+21	11.6
1	136	16.9	189	21.0		16.1	359	36.3		11.9
2	151	19.4	204	20.1		15.4	14	39.7		12.2
3	166	21.8	219	19.3		14.7	29	43.1		12.5
4	181	24.3	234	18.5		14.0	44	46.5		12.9
5	196	26.8	249	17.7	-20	13.3	59	50.0	+21	13.2
6	211	29.2	264	16.9	-20	12.6	74	53.4	+21	13.5
7	226	31.7	279	16.1		11.9	89	56.8		13.8
8	241	34.1	294	15.3		11.3	105	00.3		14.1
9	256	36.6	309	14.5		10.6	120	03.7		14.5
10	271	39.1	324	13.7		09.9	135	07.1		14.8
11	286	41.5	339	12.9	-20	09.2	150	10.6	+21	15.1
12	301	44.0	354	12.1	-20	08.5	165	14.0	+21	15.4
13	316	46.5	9	11.3		07.8	180	17.4		15.7
14	331	48.9	24	10.5		07.1	195	20.9		16.1
15	346	51.4	39	09.8		06.4	210	24.3		16.4
16	1	53.9	54	09.0		05.6	225	27.7		16.7
17	16	56.3	69	08.2	-20	04.9	240	31.2	+21	17.0
18	31	58.8	84	07.4	-20	04.2	255	34.6	+21	17.3
19	47	01.3	99	06.6		03.5	270	38.0		17.6
20	62	03.7	114	05.8		02.8	285	41.5		18.0
21	77	06.2	129	05.0		02.1	300	44.9		18.3
22	92	08.6	144	04.2		01.4	315	48.4		18.6
23	107	11.1	159	03.4	-20	00.7	330	51.8		18.9
24	122	13.6	174	02.6	-20	00.0	345	55.2	+21	19.2
Dif	—		-8	+7		+34	+3	+19	+2	

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: 7 ^d 7 PHE { 4 ^h : 56'2 12 ^h : 56'5 20 ^h : 56'7 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	04.5	-19 31.1	98	37.3	+15 29.4	60 N	6 51	7 44	8 34		9 35	11	1 24	91
1	192	04.4		113	09.1 ¹²⁸	40.7 ¹¹³	58	46	35	21		46	15	14	86
2	207	04.2		127	40.7 ¹²⁶	+15 51.8 ¹¹¹	56	41	28	11		9 55	19	1 05	82
3	222	04.0		142	12.3 ¹²⁶	+16 02.9 ¹¹¹	54	37	21	8 01		10 04	22	0 57	80
4	237	03.9		156	43.8 ¹²⁵	14.0 ¹¹¹	52	33	15	7 53		12 24	50	50	77
5	252	03.7	-19 28.2	171	15.2 ¹²⁴	+16 25.0 ¹¹⁰	50	6 30	7 09	7 45		10 18	27	0 44	74
6	267	03.6	-19 27.6	185	46.6 ¹²⁴	+16 35.9 ¹⁰⁹	45	6 21	6 57	7 29		10 33	31	0 31	69
7	282	03.4		200	17.8 ¹²²	46.8 ¹⁰⁹	40	14	47	16		46	34	20	65
8	297	03.2		214	48.9 ¹²¹	+16 57.6 ¹⁰⁸	35	07	37	7 05		10 56	37	10	63
9	312	03.1		229	19.9 ¹²⁰	+17 08.3 ¹⁰⁷	30	6 00	29	6 55		11 05	40	0 02	60
10	327	02.9		243	50.9 ¹²⁰	18.9 ¹⁰⁶	20	5 47	14	38		21 44		** ** *	
11	342	02.8	-19 24.7	258	21.7 ¹¹⁸	+17 29.5 ¹⁰⁶	10 N	5 35	6 00	6 22		11 35	48	** ** *	
12	357	02.6	-19 24.1	272	52.4 ¹¹⁷	+17 40.0 ¹⁰⁵	0	5 21	5 46	6 08		11 49	50	** ** *	
13	12	02.4		287	23.0 ¹¹⁶	+17 50.5 ¹⁰⁵	10 S	5 05	31	5 54		12 02	54	23 57	50
14	27	02.3		301	53.6 ¹¹⁶	+18 00.9 ¹⁰⁴	20	4 47	5 15	38		16 58	41	47	
15	42	02.1		316	24.0 ¹¹⁴	11.2 ¹⁰³	30	23	4 54	20		33 62		23	43
16	57	02.0		330	54.3 ¹¹³	21.4 ¹⁰²	35	4 07	42	5 10		42 65		13	40
17	72	01.8	-19 21.1	345	24.5 ¹¹²	+18 31.5 ¹⁰¹	40	3 49	4 27	4 58		12 54	67	23 01	38
18	87	01.7	-19 20.5	359	54.6 ¹¹¹	+18 41.6 ¹⁰¹	45	3 25	4 09	4 44		13 07	70	22 46	35
19	102	01.5		14	24.6 ¹¹⁰	+18 51.6 ¹⁰⁰	50	2 52	3 46	26		23 75	29	30	
20	117	01.4		28	54.5 ¹⁰⁹	+19 01.5 ⁹⁹	52	35	35	18		30 78		21	28
21	132	01.2		43	24.3 ¹⁰⁸	11.3 ⁹⁸	54	2 13	22	4 08		39 80		12	26
22	147	01.0		57	54.0 ¹⁰⁷	21.0 ⁹⁷	56	1 44	3 07	3 58		48 84		22	02
23	162	00.9		72	23.6 ¹⁰⁶	30.7 ⁹⁷	58	0 54	2 48	46		13 59	88	21 50	19
24	177	00.7	-19 16.9	86	53.1 ¹⁰⁵	+19 40.3 ⁹⁶	60 S	** ** *	2 25	3 31		14 11	93	21 37	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 15 ^h 48 ^m 5		Mag: -4.0 PMG: 12 ^h 24 ^m		Mag: -1.2 PMG: 0 ^h 56 ^m		Mag: -2.1 PMG: 14 ^h 03 ^m		Mag: +0.8 PMG: 4 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	122	13.6	174	02.6	-20 00.0	345	55.2	+21 19.2	148	45.0	-11 56.7	297	04.8	+0 22.7	
1	137	16.0	189	01.8	-19 59.3	0	58.7	19.6	163	46.9	56.5	312	07.3	22.8	
2	152	18.5	204	01.0	58.5	16	02.1	19.9	178	48.8	56.3	327	09.8	22.8	
3	167	21.0	219	00.2	57.8	31	05.6	20.2	193	50.7	56.1	342	12.3	22.8	
4	182	23.4	233	59.4	57.1	46	09.0	20.5	208	52.7	55.9	357	14.8	22.8	
5	197	25.9	248	58.6	-19 56.4	61	12.5	+21 20.8	223	54.6	-11 55.7	12	17.3	+0 22.9	
6	212	28.4	263	57.9	-19 55.7	76	15.9	+21 21.1	238	56.5	-11 55.5	27	19.8	+0 22.9	
7	227	30.8	278	57.1	55.0	91	19.3	21.5	253	58.4	55.3	42	22.3	22.9	
8	242	33.3	293	56.3	54.2	106	22.8	21.8	269	00.3	55.1	57	24.8	22.9	
9	257	35.7	308	55.5	53.5	121	26.2	22.1	284	02.3	54.8	72	27.3	23.0	
10	272	38.2	323	54.7	52.8	136	29.7	22.4	299	04.2	54.6	87	29.8	23.0	
11	287	40.7	338	53.9	-19 52.1	151	33.1	+21 22.7	314	06.1	-11 54.4	102	32.3	+0 23.0	
12	302	43.1	353	53.1	-19 51.3	166	36.6	+21 23.1	329	08.0	-11 54.2	117	34.8	+0 23.1	
13	317	45.6	8	52.4	50.6	181	40.0	23.4	344	09.9	54.0	132	37.3	23.1	
14	332	48.1	23	51.6	49.9	196	43.5	23.7	359	11.9	53.8	147	39.8	23.1	
15	347	50.5	38	50.8	49.2	211	46.9	24.0	14	13.8	53.6	162	42.3	23.1	
16	2	53.0	53	50.0	48.4	226	50.4	24.3	29	15.7	53.4	177	44.8	23.2	
17	17	55.5	68	49.2	-19 47.7	241	53.8	+21 24.6	44	17.6	-11 53.2	192	47.3	+0 23.2	
18	32	57.9	83	48.4	-19 47.0	256	57.3	+21 25.0	59	19.6	-11 53.0	207	49.8	+0 23.2	
19	48	00.4	98	47.7	46.2	272	00.7	25.3	74	21.5	52.8	222	52.3	23.3	
20	63	02.9	113	46.9	45.5	287	04.2	25.6	89	23.4	52.6	237	54.8	23.3	
21	78	05.3	128	46.1	44.8	302	07.6	25.9	104	25.3	52.4	252	57.3	23.3	
22	93	07.8	143	45.3	44.0	317	11.1	26.2	119	27.2	52.2	267	59.8	23.3	
23	108	10.2	158	44.5	43.3	332	14.5	26.5	134	29.2	52.0	283	02.3	23.4	
24	123	12.7	173	43.7	-19 42.6	347	18.0	+21 26.8	149	31.1	-11 51.8	298	04.8	+0 23.4	
Dif	—		-8		+7		+34	+3		+19	+2		+25		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 1			Edad: 8 ^d 7 PHE { 4 ^h : 57:0 12 ^h : 57:3 20 ^h : 57:7 R°: 57 ^m					Civil			Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	177	00.7	-19 16.9	86	53.1	+19 40.3	60 N	15 53	16 43	17 35	9 46	19	2 55	92			
1	192	00.6		101	22.4 ¹⁰³	49.7 ⁹⁴	58	16 05		51	40	10 01	25	40	87		
2	207	00.4		115	51.7 ¹⁰³	+19 59.1 ⁹⁴	56	16	16 58	45	14 29	27	84				
3	222	00.3		130	20.8 ¹⁰¹	+20 08.4 ⁹³	54	25	17 05	49	26 31	17	80				
4	237	00.1		144	49.9 ¹⁰¹	17.6 ⁹²	52	33	11	52	36 34	2 07	77				
5	252	00.0	-19 14.0	159	18.8 ⁹⁹	+20 26.7 ⁹¹	50	16 41	17 16	17 56	10 45	36	1 58	76			
6	266	59.8	-19 13.4	173	47.6 ⁹⁸	+20 35.7 ⁹⁰	45	16 56	17 28	18 04	11 04	40	1 40	71			
7	281	59.7	12.8	188	16.3 ⁹⁷	44.7 ⁹⁰	40	17 09	38	11	20 43	25	68				
8	296	59.5	12.2	202	44.9 ⁹⁶	+20 53.5 ⁸⁸	35	20	47	18	33 46	13	65				
9	311	59.4	11.5	217	13.4 ⁹⁵	+21 02.2 ⁸⁷	30	30	17 56	25	11 45	47	1 02	63			
10	326	59.2	10.9	231	41.7 ⁹³	10.8 ⁸⁶	20	17 47	18 10	37	12 05	51	0 43	60			
11	341	59.1	-19 10.3	246	10.0 ⁹³	+21 19.3 ⁸⁵	10 N	18 02	18 24	18 50	12 23	53	0 27	56			
12	356	58.9	-19 09.7	260	38.1 ⁹¹	+21 27.7 ⁸⁴	0	18 16	18 38	19 03	12 39	56	0 12	53			
13	11	58.8	09.1	275	06.2 ⁹¹	36.0 ⁸³	10 S	30	18 52	18	12 56	58	** ** *	**			
14	26	58.6	08.5	289	34.1 ⁸⁹	44.2 ⁸²	20	18 45	19 09	19 37	13 14	61	** ** *	**			
15	41	58.5	07.9	304	01.9 ⁸⁸	+21 52.3 ⁸¹	30	19 02	29	20 00	35	63	** ** *	**			
16	56	58.3	07.3	318	29.6 ⁸⁷	+22 00.3 ⁸⁰	35	13	41	15	13 47	66	23 53	50			
17	71	58.2	-19 06.7	332	57.1 ⁸⁵	+22 08.2 ⁷⁹	40	19 24	19 55	20 33	14 01	68	23 39	47			
18	86	58.0	-19 06.1	347	24.6 ⁸⁵	+22 15.9 ⁷⁷	45	19 38	20 13	20 56	14 17	71	23 21	45			
19	101	57.9	05.5	1	51.9 ⁸³	23.6 ⁷⁷	50	19 56	35	21 28	38 75	22 59	42				
20	116	57.7	04.9	16	19.1 ⁸²	31.1 ⁷⁵	52	20 04	46	21 45	48 77	49	40				
21	131	57.6	04.3	30	46.3 ⁸²	38.5 ⁷⁴	54	13	20 59	22 05	14 59	79	38	37			
22	146	57.4	03.7	45	13.3 ⁸⁰	45.8 ⁷³	56	23	21 13	22 32	15 12	82	24	35			
23	161	57.3	03.0	59	40.2 ⁷⁹	+22 53.0 ⁷²	58	35	31	23 14	27 86	22 09	31				
24	176	57.1	-19 02.4	74	06.9 ⁷⁷	+23 00.0 ⁷⁰	60 S	20 48	21 52	** ** *	15 44	92	21 51	26			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 44 ^m 6		Mag: -3.9 PMG: 12 ^h 26 ^m		Mag: -1.2 PMG: 0 ^h 51 ^m		Mag: -2.1 PMG: 14 ^h 00 ^m		Mag: +0.8 PMG: 4 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	123	12.7	173	43.7	347	18.0	149	31.1	298	04.8
1	138	15.2	188	43.0	2	21.5	164	33.0	313	07.3
2	153	17.6	203	42.2	17	24.9	179	34.9	328	09.8
3	168	20.1	218	41.4	32	28.4	194	36.8	343	12.3
4	183	22.6	233	40.6	47	31.8	209	38.8	358	14.8
5	198	25.0	248	39.9	62	35.3	224	40.7	13	17.3
6	213	27.5	263	39.1	77	38.7	239	42.6	28	19.8
7	228	30.0	278	38.3	92	42.2	254	44.5	43	22.3
8	243	32.4	293	37.5	107	45.7	269	46.4	58	24.8
9	258	34.9	308	36.8	122	49.1	284	48.4	73	27.4
10	273	37.4	323	36.0	137	52.6	299	50.3	88	29.9
11	288	39.8	338	35.2	152	56.0	314	52.2	103	32.4
12	303	42.3	353	34.4	167	59.5	329	54.1	118	34.9
13	318	44.7	8	33.7	183	03.0	344	56.0	133	37.4
14	333	47.2	23	32.9	198	06.4	359	58.0	148	39.9
15	348	49.7	38	32.1	213	09.9	14	59.9	163	42.4
16	3	52.1	53	31.3	228	13.3	30	01.8	178	44.9
17	18	54.6	68	30.6	243	16.8	45	03.7	193	47.4
18	33	57.1	83	29.8	258	20.3	60	05.6	208	49.9
19	48	59.5	98	29.0	273	23.7	75	07.6	223	52.4
20	64	02.0	113	28.3	288	27.2	90	09.5	238	54.9
21	79	04.5	128	27.5	303	30.7	105	11.4	253	57.4
22	94	06.9	143	26.7	318	34.1	120	13.3	268	59.9
23	109	09.4	158	26.0	333	37.6	135	15.2	284	02.4
24	124	11.8	173	25.2	348	41.1	150	17.2	299	04.9
Dif	—		-8	+7	+35	+3	+19	+2	+25	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 12 ^m 3			Edad: 9 ^d 7 SD: 15:7 PMG: 19 ^h 49 ^m	PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6 R°: 61 ^m	Dif											
	hG ☉	Dec	hG ☾				Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	57.1	-19	02.4	74	06.9	+23	00.0	60 N	6 48	7 40	8 30	10 05	37	4 27	86	
1	191	57.0		01.8	88	33.6	+23	07.0	58	43	32	18	26	41	4 07	81	
2	206	56.8		01.2	103	00.1		13.7	56	39	25	8 07	43	44	3 51	78	
3	221	56.7	-19	00.6	117	26.6		20.4	54	35	18	7 58	10 57	46	37	75	
4	236	56.6	-19	00.0	131	52.9		27.0	52	31	13	50	11 10	47	24	74	
5	251	56.4	-18	59.4	146	19.1	+23	33.4	50	6 28	7 07	7 43	11 21	49	3 14	72	
6	266	56.3	-18	58.8	160	45.2	+23	39.7	45	6 20	6 55	7 27	11 44	52	2 51	70	
7	281	56.1		58.1	175	11.2		45.8	40	13	45	15	12 03	53	33	67	
8	296	56.0		57.5	189	37.1		51.8	35	06	37	7 04	19	54	18	66	
9	311	55.8		56.9	204	02.9	+23	57.7	30	6 00	29	6 54	32	56	2 05	64	
10	326	55.7		56.3	218	28.5	+24	03.4	20	5 47	14	37	12 56	57	1 43	61	
11	341	55.6	-18	55.7	232	54.1	+24	09.0	10 N	5 35	6 00	6 23	13 16	59	1 23	60	
12	356	55.4	-18	55.1	247	19.5	+24	14.5	0	5 21	5 47	6 09	13 35	60	1 05	58	
13	11	55.3		54.4	261	44.9		19.8	10 S	5 06	32	5 55	13 54	61	0 47	56	
14	26	55.1		53.8	276	10.1		25.0	20	4 48	5 16	40	14 15	62	28	54	
15	41	55.0		53.2	290	35.2		30.0	30	25	4 56	22	38	65	0 06	51	
16	56	54.8		52.6	305	00.3		34.9	35	4 10	44	12	14 53	65	** ** *	**	
17	71	54.7	-18	51.9	319	25.2	+24	39.7	40	3 52	4 30	5 00	15 09	66	** ** *	**	
18	86	54.6	-18	51.3	333	50.0	+24	44.3	45	3 28	4 12	4 46	15 28	68	** ** *	**	
19	101	54.4		50.7	348	14.7		48.7	50	2 57	3 50	29	15 53	69	23 41	56	
20	116	54.3		50.1	2	39.4		53.0	52	40	39	21	16 05	70	29	56	
21	131	54.2		49.5	17	03.9	+24	57.1	54	2 20	26	12	18	72	23 15	55	
22	146	54.0		48.8	31	28.3	+25	01.1	56	1 53	3 12	4 02	34	73	22 59	54	
23	161	53.9		48.2	45	52.7		04.9	58	1 11	2 54	3 50	16 53	74	40	52	
24	176	53.7	-18	47.6	60	16.9	+25	08.6	60 S	** ** *	2 33	3 37	17 16	78	22 17	49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 40 ^m 6		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: -1.3 PMG: 0 ^h 45 ^m		Mag: -2.1 PMG: 13 ^h 57 ^m		Mag: +0.8 PMG: 4 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	124	11.8	173	25.2	-19	24.6	348	41.1	+21	34.4	150	17.2	-11	46.9	299	04.9	+0	24.1
1	139	14.3	188	24.4		23.8	3	44.5		34.7	165	19.1		46.7	314	07.4		24.1
2	154	16.8	203	23.7		23.1	18	48.0		35.0	180	21.0		46.5	329	09.9		24.2
3	169	19.2	218	22.9		22.3	33	51.5		35.3	195	22.9		46.3	344	12.5		24.2
4	184	21.7	233	22.1		21.6	48	54.9		35.6	210	24.8		46.1	359	15.0		24.2
5	199	24.2	248	21.4	-19	20.8	63	58.4	+21	35.9	225	26.8	-11	45.9	14	17.5	+0	24.3
6	214	26.6	263	20.6	-19	20.0	79	01.9	+21	36.2	240	28.7	-11	45.7	29	20.0	+0	24.3
7	229	29.1	278	19.8		19.3	94	05.3		36.5	255	30.6		45.5	44	22.5		24.3
8	244	31.6	293	19.1		18.5	109	08.8		36.9	270	32.5		45.3	59	25.0		24.4
9	259	34.0	308	18.3		17.7	124	12.3		37.2	285	34.4		45.1	74	27.5		24.4
10	274	36.5	323	17.6		16.9	139	15.8		37.5	300	36.4		44.9	89	30.0		24.4
11	289	39.0	338	16.8	-19	16.2	154	19.2	+21	37.8	315	38.3	-11	44.7	104	32.5	+0	24.5
12	304	41.4	353	16.0	-19	15.4	169	22.7	+21	38.1	330	40.2	-11	44.4	119	35.0	+0	24.5
13	319	43.9	8	15.3		14.6	184	26.2		38.4	345	42.1		44.2	134	37.5		24.5
14	334	46.3	23	14.5		13.9	199	29.6		38.7	0	44.0		44.0	149	40.0		24.6
15	349	48.8	38	13.8		13.1	214	33.1		39.0	15	45.9		43.8	164	42.5		24.6
16	4	51.3	53	13.0		12.3	229	36.6		39.3	30	47.9		43.6	179	45.1		24.6
17	19	53.7	68	12.2	-19	11.5	244	40.1	+21	39.6	45	49.8	-11	43.4	194	47.6	+0	24.6
18	34	56.2	83	11.5	-19	10.8	259	43.5	+21	40.0	60	51.7	-11	43.2	209	50.1	+0	24.7
19	49	58.7	98	10.7		10.0	274	47.0		40.3	75	53.6		43.0	224	52.6		24.7
20	65	01.1	113	10.0		09.2	289	50.5		40.6	90	55.5		42.8	239	55.1		24.7
21	80	03.6	128	09.2		08.4	304	54.0		40.9	105	57.5		42.6	254	57.6		24.8
22	95	06.1	143	08.5		07.6	319	57.4		41.2	120	59.4		42.4	270	00.1		24.8
23	110	08.5	158	07.7		06.8	335	00.9		41.5	136	01.3		42.2	285	02.6		24.8
24	125	11.0	173	07.0	-19	06.1	350	04.4	+21	41.8	151	03.2	-11	42.0	300	05.1	+0	24.9
Dif	—		-8		+8		+35		+3		+19		+2		+25			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^d 2 PMG: 12 ^h 12 ^m 5			Edad: 10 ^d 7 PHE { SD: 16 ^d 0 PMG: 20 ^h 50 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	53.7	-18 47.6	60	16.9	+25 08.6	35	60 N	15 58	16 47	17 39	10 42 66	5 53 64		
1	191	53.6	47.0	74	41.0	12.1	35	58	16 10	16 55	44	11 07 65	28 65		
2	206	53.5	46.3	89	05.1	15.5	34	56	20	17 02	48	27 65	5 09 64		
3	221	53.3	45.7	103	29.1	18.6	31	54	29	09	52	43 65	4 52 65		
4	236	53.2	45.1	117	52.9	21.7	31	52	37	14	55	11 57 65	38 64		
5	251	53.1	-18 44.4	132	16.7	+25 24.5	28	50	16 44	17 19	17 59	12 10 65	4 26 64		
6	266	52.9	-18 43.8	146	40.4	+25 27.2	27	45	16 59	17 31	18 07	12 36 64	4 01 63		
7	281	52.8	43.2	161	04.0	29.8	26	40	17 12	41	13	12 56 64	3 40 64		
8	296	52.7	42.6	175	27.6	32.1	23	35	22	49	20	13 13 64	24 63		
9	311	52.5	41.9	189	51.0	34.3	22	30	32	17 57	26	28 64	3 09 63		
10	326	52.4	41.3	204	14.4	36.3	20	20	17 48	18 11	38	13 53 64	2 44 63		
11	341	52.2	-18 40.7	218	37.7	+25 38.2	19	10 N	18 03	18 25	18 50	14 15 63	2 23 62		
12	356	52.1	-18 40.0	233	01.0	+25 39.9	17	0	18 16	18 38	19 03	14 35 63	2 03 62		
13	11	52.0	39.4	247	24.1	41.4	15	10 S	30	18 52	18	14 55 63	1 43 61		
14	26	51.9	38.8	261	47.2	42.7	13	20	18 44	19 08	36	15 17 62	1 22 60		
15	41	51.7	38.1	276	10.2	43.9	12	30	19 02	28	19 59	43 61	0 57 60		
16	56	51.6	37.5	290	33.2	44.9	10	35	12	39	20 13	15 58 60	43 59		
17	71	51.5	-18 36.8	304	56.0	+25 45.7	8	40	19 23	19 53	20 31	16 15 60	0 26 59		
18	86	51.3	-18 36.2	319	18.9	+25 46.3	6	45	19 36	20 11	20 54	16 36 59	0 06 58		
19	101	51.2	35.6	333	41.6	46.8	5	50	19 53	32	21 24	17 02 58	** ** *		
20	116	51.1	34.9	348	04.3	47.0	2	52	20 01	43	40	15 57	** ** *		
21	131	50.9	34.3	2	27.0	47.1	1	54	10	20 55	21 59	30 56	** ** *		
22	146	50.8	33.7	16	49.6	47.1	0	56	19	21 09	22 24	17 47 55	23 53 76		
23	161	50.7	33.0	31	12.1	46.8	3	58	31	25	23 00	18 07 54	32 78		
24	176	50.5	-18 32.4	45	34.6	+25 46.3	5	60 S	20 44	21 46	** **	18 34 51	23 06 81		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 36 ^m 7		Mag: -3.9 PMG: 12 ^h 28 ^m		Mag: -1.3 PMG: 0 ^h 40 ^m		Mag: -2.1 PMG: 13 ^h 54 ^m		Mag: +0.8 PMG: 3 ^h 59 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	125	11.0	173	07.0	350	04.4	+21 41.8	151	03.2	-11 42.0
1	140	13.5	188	06.2	5	07.9	42.1	166	05.1	41.8
2	155	15.9	203	05.4	20	11.3	42.4	181	07.0	41.6
3	170	18.4	218	04.7	35	14.8	42.7	196	09.0	41.4
4	185	20.8	233	03.9	50	18.3	43.0	211	10.9	41.2
5	200	23.3	248	03.2	65	21.8	+21 43.3	226	12.8	-11 41.0
6	215	25.8	263	02.4	80	25.2	+21 43.6	241	14.7	-11 40.8
7	230	28.2	278	01.7	95	28.7	43.9	256	16.6	40.5
8	245	30.7	293	00.9	110	32.2	44.3	271	18.5	40.3
9	260	33.2	308	00.2	125	35.7	44.6	286	20.5	40.1
10	275	35.6	322	59.4	140	39.2	44.9	301	22.4	39.9
11	290	38.1	337	58.7	155	42.6	+21 45.2	316	24.3	-11 39.7
12	305	40.6	352	58.0	170	46.1	+21 45.5	331	26.2	-11 39.5
13	320	43.0	7	57.2	185	49.6	45.8	346	28.1	39.3
14	335	45.5	22	56.5	200	53.1	46.1	1	30.0	39.1
15	350	48.0	37	55.7	215	56.6	46.4	16	32.0	38.9
16	5	50.4	52	55.0	231	00.1	46.7	31	33.9	38.7
17	20	52.9	67	54.2	246	03.5	+21 47.0	46	35.8	-11 38.5
18	35	55.3	82	53.5	261	07.0	+21 47.3	61	37.7	-11 38.3
19	50	57.8	97	52.7	276	10.5	47.6	76	39.6	38.1
20	66	00.3	112	52.0	291	14.0	47.9	91	41.6	37.9
21	81	02.7	127	51.2	306	17.5	48.2	106	43.5	37.7
22	96	05.2	142	50.5	321	20.9	48.5	121	45.4	37.5
23	111	07.7	157	49.8	336	24.4	48.8	136	47.3	37.2
24	126	10.1	172	49.0	351	27.9	+21 49.1	151	49.2	-11 37.0
Dif	—		-7	+8	+35	+3		+19	+2	
									+25	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 12 ^m 7			Edad: 11 ^d 7 PHE { 4 ^h : 59'9 12 ^h : 60'2 20 ^h : 60'4 Rº: 63 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	176	50.5	-18	32.4	45	34.6	+25	46.3	60 N	6 45	7 37	8 25	11 48	94	6 57	39
1	191	50.4		31.7	59	57.0		45.7	58	40	29	14	12 12	89	33	43
2	206	50.3		31.1	74	19.4		44.9	56	36	22	8 04		32 85	6 13	46
3	221	50.2		30.5	88	41.8		43.9	54	33	16	7 55	12 48	83	5 57	48
4	236	50.0		29.8	103	04.1		42.7	52	29	10	48	13 02	81	42	51
5	251	49.9	-18	29.2	117	26.4	+25	41.3	50	6 26	7 05	7 41	13 15	79	5 30	52
6	266	49.8	-18	28.5	131	48.6	+25	39.8	45	6 18	6 54	7 25	13 40	76	5 04	55
7	281	49.7		27.9	146	10.8		38.0	40	11	44	13	14 00	74	4 44	56
8	296	49.5		27.2	160	33.0		36.1	35	6 05	35	7 02		17 72	27	57
9	311	49.4		26.6	174	55.2		34.0	30	5 59	28	6 53	32 70		4 12	59
10	326	49.3		25.9	189	17.3		31.7	20	47	14	37	14 57	67	3 47	60
11	341	49.2	-18	25.3	203	39.4	+25	29.2	10 N	5 35	6 01	6 23	15 18	65	3 25	62
12	356	49.0	-18	24.7	218	01.5	+25	26.5	0	5 22	5 47	6 09	15 38	63	3 05	63
13	11	48.9		24.0	232	23.5		23.7	10 S	5 07	33	5 56	15 58	61	2 44	65
14	26	48.8		23.4	246	45.6		20.6	20	4 49	5 17	41	16 19	59	2 22	66
15	41	48.7		22.7	261	07.6		17.4	30	27	4 58	24	44	56	1 57	67
16	56	48.5		22.1	275	29.6		13.9	35	4 12	46	14	16 58	54	42	68
17	71	48.4	-18	21.4	289	51.6	+25	10.3	40	3 55	4 32	5 03	17 15	52	1 25	69
18	86	48.3	-18	20.8	304	13.6	+25	06.5	45	3 32	4 15	4 49	17 35	49	1 04	71
19	101	48.2		20.1	318	35.6	+25	02.5	50	3 02	3 54	33	18 00	46	0 37	73
20	116	48.0		19.5	332	57.7	+24	58.4	52	2 46	43	25	12	44	25	73
21	131	47.9		18.8	347	19.7		54.0	54	27	31	16	26	41	0 10	74
22	146	47.8		18.2	1	41.7		49.4	56	2 02	17	4 06	18 42	38	***	***
23	161	47.7		17.5	16	03.7		44.7	58	1 25	3 00	3 55	19 01	34	***	***
24	176	47.6	-18	16.8	30	25.7	+24	39.8	60 S	** **	2 40	3 42	19 25	28	***	***

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 32 ^m 8		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: -1.3 PMG: 0 ^h 34 ^m		Mag: -2.1 PMG: 13 ^h 51 ^m		Mag: +0.8 PMG: 3 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	126	10.1	172	49.0	351	27.9	+21	49.1	151	49.2
1	141	12.6	187	48.3	6	31.4		49.4	166	51.1
2	156	15.1	202	47.5	21	34.9		49.7	181	53.0
3	171	17.5	217	46.8	36	38.4		50.0	196	55.0
4	186	20.0	232	46.1	51	41.9		50.3	211	56.9
5	201	22.5	247	45.3	66	45.3	+21	50.6	226	58.8
6	216	24.9	262	44.6	81	48.8	+21	50.9	242	00.7
7	231	27.4	277	43.9	96	52.3		51.2	257	02.6
8	246	29.8	292	43.1	111	55.8		51.5	272	04.5
9	261	32.3	307	42.4	126	59.3		51.8	287	06.5
10	276	34.8	322	41.6	142	02.8		52.1	302	08.4
11	291	37.2	337	40.9	157	06.3	+21	52.4	317	10.3
12	306	39.7	352	40.2	172	09.7	+21	52.7	332	12.2
13	321	42.2	7	39.4	187	13.2		53.0	347	14.1
14	336	44.6	22	38.7	202	16.7		53.3	2	16.0
15	351	47.1	37	38.0	217	20.2		53.6	17	18.0
16	6	49.6	52	37.2	232	23.7		53.9	32	19.9
17	21	52.0	67	36.5	247	27.2	+21	54.2	47	21.8
18	36	54.5	82	35.8	262	30.7	+21	54.5	62	23.7
19	51	57.0	97	35.1	277	34.2		54.8	77	25.6
20	66	59.4	112	34.3	292	37.7		55.1	92	27.5
21	82	01.9	127	33.6	307	41.1		55.4	107	29.4
22	97	04.3	142	32.9	322	44.6		55.7	122	31.4
23	112	06.8	157	32.1	337	48.1		56.0	137	33.3
24	127	09.3	172	31.4	352	51.6	+21	56.3	152	35.2
Dif	—		-7	+8	+35	+3		+19	+2	

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: 12 ^d 7 PHE { 4 ^h : 60:7 12 ^h : 60:9 20 ^h : 61:1 R°: 60 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m					
0	176	47.6	-18	16.8	30	25.7	+24	39.8	60 N	16 03	16 52	17 43	13 22	107 7 36	21				
1	191	47.4		16.2	44	47.7	30	34.7	58	14	16 59	48	41	102 7 16	27				
2	206	47.3		15.5	59	09.8	31	29.4	56	24	17 06	52	13 57	98 6 59	31				
3	221	47.2		14.9	73	31.8	30	23.9	54	33	12	55	14 11	94 45	35				
4	236	47.1		14.2	87	53.9	31	18.3	52	40	18	17 59	23 91	33	37				
5	251	47.0	-18	13.6	102	16.0	31	+24 12.4	50	16 47	17 23	18 02	14 34	88 6 22	39				
6	266	46.8	-18	12.9	116	38.2	32	+24 06.4	45	17 02	17 34	18 09	14 56	83 5 59	44				
7	281	46.7		12.3	131	00.3	31	+24 00.2	40	14	43	16	15 14	79 40	47				
8	296	46.6		11.6	145	22.5	32	+23 53.8	35	24	51	22	29 76	24	51				
9	311	46.5		10.9	159	44.7	32	47.2	30	34	17 59	28	15 42	73 5 11	52				
10	326	46.4		10.3	174	06.9	32	40.5	20	17 49	18 13	39	16 04	69 4 47	57				
11	341	46.3	-18	09.6	188	29.2	33	+23 33.5	10 N	18 03	18 25	18 51	16 23	65 4 27	60				
12	356	46.1	-18	09.0	202	51.5	33	+23 26.4	0	18 16	18 38	19 04	16 41	61 4 08	62				
13	11	46.0		08.3	217	13.8	33	19.1	10 S	30	18 52	18	16 59	58 3 49	65				
14	26	45.9		07.6	231	36.2	34	11.7	20	18 44	19 08	35	17 18	54 28	69				
15	41	45.8		07.0	245	58.6	34	+23 04.0	30	19 01	26	19 58	40 49	3 04	73				
16	56	45.7		06.3	260	21.1	35	+22 56.2	35	10	38	20 12	17 52	47 2 50	75				
17	71	45.6	-18	05.6	274	43.6	35	+22 48.2	40	19 21	19 52	20 29	18 07	43 2 34	77				
18	86	45.5	-18	05.0	289	06.2	36	+22 40.1	45	19 34	20 08	20 51	18 24	40 2 15	80				
19	101	45.3		04.3	303	28.8	36	31.8	50	50	29	21 20	46 34	1 50	85				
20	116	45.2		03.7	317	51.4	36	23.3	52	19 58	39	35	18 56	31 38	87				
21	131	45.1		03.0	332	14.1	37	14.6	54	20 06	20 51	21 53	19 07	29 24	90				
22	146	45.0		02.3	346	36.9	38	+22 05.8	56	16	21 04	22 17	20 25	1 09	93				
23	161	44.9		01.7	0	59.7	38	+21 56.8	58	27	20	22 49	35 21	0 50	97				
24	176	44.8	-18	01.0	15	22.6	39	+21 47.6	60 S	20 39	21 40	** **	19 53	15 0 27	103				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 15 ^h 28 ^m 8		Mag: -3.9 PMG: 12 ^h 31 ^m			Mag: -1.3 PMG: 0 ^h 28 ^m			Mag: -2.1 PMG: 13 ^h 48 ^m			Mag: +0.8 PMG: 3 ^h 51 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	127	09.3	172	31.4	-18	27.4	352	51.6	+21	56.3	152	35.2	-11	32.1	302	05.8	+0	26.5	
1	142	11.7	187	30.7		26.5	7	55.1		56.6	167	37.1		31.9	317	08.3		26.5	
2	157	14.2	202	30.0		25.7	22	58.6		56.9	182	39.0		31.7	332	10.9		26.6	
3	172	16.7	217	29.2		24.9	38	02.1		57.2	197	40.9		31.5	347	13.4		26.6	
4	187	19.1	232	28.5		24.0	53	05.6		57.5	212	42.8		31.2	2	15.9		26.6	
5	202	21.6	247	27.8	-18	23.2	68	09.1	+21	57.8	227	44.8	-11	31.0	17	18.4	+0	26.7	
6	217	24.1	262	27.1	-18	22.4	83	12.6	+21	58.1	242	46.7	-11	30.8	32	20.9	+0	26.7	
7	232	26.5	277	26.3		21.5	98	16.1		58.4	257	48.6		30.6	47	23.5		26.8	
8	247	29.0	292	25.6		20.7	113	19.5		58.7	272	50.5		30.4	62	26.0		26.8	
9	262	31.5	307	24.9		19.9	128	23.0		59.0	287	52.4		30.2	77	28.5		26.8	
10	277	33.9	322	24.2		19.0	143	26.5		59.3	302	54.3		30.0	92	31.0		26.9	
11	292	36.4	337	23.4	-18	18.2	158	30.0	+21	59.6	317	56.3	-11	29.8	107	33.5	+0	26.9	
12	307	38.8	352	22.7	-18	17.3	173	33.5	+21	59.8	332	58.2	-11	29.6	122	36.1	+0	26.9	
13	322	41.3	7	22.0		16.5	188	37.0	+22	00.1	348	00.1		29.4	137	38.6		27.0	
14	337	43.8	22	21.3		15.7	203	40.5		00.4	3	02.0		29.2	152	41.1		27.0	
15	352	46.2	37	20.6		14.8	218	44.0		00.7	18	03.9		29.0	167	43.6		27.0	
16	7	48.7	52	19.8		14.0	233	47.5		01.0	33	05.8		28.8	182	46.1		27.1	
17	22	51.2	67	19.1	-18	13.1	248	51.0	+22	01.3	48	07.7	-11	28.5	197	48.7	+0	27.1	
18	37	53.6	82	18.4	-18	12.3	263	54.5	+22	01.6	63	09.6	-11	28.3	212	51.2	+0	27.2	
19	52	56.1	97	17.7		11.4	278	58.0		01.9	78	11.6		28.1	227	53.7		27.2	
20	67	58.6	112	17.0		10.6	294	01.5		02.2	93	13.5		27.9	242	56.2		27.2	
21	83	01.0	127	16.2		09.7	309	05.0		02.5	108	15.4		27.7	257	58.7		27.3	
22	98	03.5	142	15.5		08.9	324	08.4		02.8	123	17.3		27.5	273	01.3		27.3	
23	113	05.9	157	14.8		08.1	339	11.9		03.1	138	19.2		27.3	288	03.8		27.3	
24	128	08.4	172	14.1	-18	07.2	354	15.4	+22	03.4	153	21.1	-11	27.1	303	06.3	+0	27.4	
Dif	—		-7			+8	+35			+3	+19		+2		+25			0	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 13 ^d 7 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 4 20 ^h : 61 ^m 4 PMG: 23 ^h 56 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	176	44.8	-18	01.0	15	22.6	+21	47.6	60 N	6 41	7 33	8 21	15 09	110	7 57	12
1	191	44.7	-18	00.3	29	45.5	39	38.3	58	37	25	10	23	104	43	17
2	206	44.6	-17	59.6	44	08.5	40	28.8	56	34	19	8 01	35	100	30	22
3	221	44.4		59.0	58	31.5	40	19.1	54	30	13	7 52	45	96	20	24
4	236	44.3		58.3	72	54.7	42	+21 09.3	52	27	08	45	15 54	93	10	27
5	251	44.2	-17	57.6	87	17.8	41	+20 59.4	50	6 24	7 03	7 38	16 02	90	7 01	30
6	266	44.1	-17	57.0	101	41.1	43	+20 49.2	45	6 16	6 52	7 23	16 19	85	6 43	35
7	281	44.0		56.3	116	04.4	43	39.0	40	10	43	11	33	80	27	40
8	296	43.9		55.6	130	27.8	44	28.5	35	6 04	34	7 01	45	76	15	43
9	311	43.8		55.0	144	51.2	44	18.0	30	5 58	27	6 52	16 55	73	6 03	46
10	326	43.7		54.3	159	14.7	45	+20 07.2	20	47	13	36	17 13	67	5 44	51
11	341	43.6	-17	53.6	173	38.3	46	+19 56.4	10 N	5 35	6 01	6 23	17 28	63	5 27	55
12	356	43.5	-17	52.9	188	02.0	47	+19 45.3	0	5 23	5 48	6 10	17 42	58	5 10	60
13	11	43.4		52.3	202	25.7	47	34.2	10 S	5 08	34	5 56	17 57	53	4 54	64
14	26	43.2		51.6	216	49.5	48	22.9	20	4 51	19	42	18 12	49	37	68
15	41	43.1		50.9	231	13.4	49	+19 11.4	30	29	5 00	26	29	43	17	73
16	56	43.0		50.2	245	37.4	50	+18 59.8	35	4 15	4 48	16	39	40	4 05	76
17	71	42.9	-17	49.6	260	01.4	50	+18 48.1	40	3 58	4 35	5 05	18 50	37	3 51	80
18	86	42.8	-17	48.9	274	25.5	51	+18 36.3	45	3 36	4 18	4 52	19 04	32	3 35	84
19	101	42.7		48.2	288	49.7	52	24.3	50	3 07	3 57	36	20	26	15	90
20	116	42.6		47.5	303	13.9	52	+18 12.2	52	2 51	47	29	27	24	3 05	93
21	131	42.5		46.8	317	38.3	54	+17 59.9	54	33	36	20	36	21	2 54	96
22	146	42.4		46.2	332	02.7	54	47.5	56	2 10	22	11	45	18	42	100
23	161	42.3		45.5	346	27.2	55	35.0	58	1 38	3 07	4 00	19 56	13	27	105
24	176	42.2	-17	44.8	0	51.8	56	+17 22.4	60 S	** **	2 47	3 48	20 08	9	2 10	111
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 24 ^m 9		Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: -1.3 PMG: 0 ^h 23 ^m			Mag: -2.1 PMG: 13 ^h 45 ^m			Mag: +0.8 PMG: 3 ^h 47 ^m				
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	128	08.4	172	14.1	-18	07.2	354	15.4	+22	03.4	153	21.1	-11	27.1	303	06.3
1	143	10.9	187	13.4		06.4	9	18.9		03.6	168	23.0		26.9	318	08.8
2	158	13.3	202	12.7		05.5	24	22.4		03.9	183	25.0		26.7	333	11.4
3	173	15.8	217	12.0		04.6	39	25.9		04.2	198	26.9		26.5	348	13.9
4	188	18.3	232	11.2		03.8	54	29.4		04.5	213	28.8		26.3	3	16.4
5	203	20.7	247	10.5	-18	02.9	69	32.9	+22	04.8	228	30.7	-11	26.0	18	18.9
6	218	23.2	262	09.8	-18	02.1	84	36.4	+22	05.1	243	32.6	-11	25.8	33	21.4
7	233	25.7	277	09.1		01.2	99	39.9		05.4	258	34.5		25.6	48	24.0
8	248	28.1	292	08.4	-18	00.4	114	43.4		05.7	273	36.4		25.4	63	26.5
9	263	30.6	307	07.7	-17	59.5	129	46.9		06.0	288	38.4		25.2	78	29.0
10	278	33.1	322	07.0		58.7	144	50.4		06.2	303	40.3		25.0	93	31.5
11	293	35.5	337	06.3	-17	57.8	159	53.9	+22	06.5	318	42.2	-11	24.8	108	34.1
12	308	38.0	352	05.6	-17	56.9	174	57.4	+22	06.8	333	44.1	-11	24.6	123	36.6
13	323	40.4	7	04.9		56.1	190	00.9		07.1	348	46.0		24.4	138	39.1
14	338	42.9	22	04.2		55.2	205	04.4		07.4	3	47.9		24.2	153	41.6
15	353	45.4	37	03.4		54.3	220	07.9		07.7	18	49.8		24.0	168	44.2
16	8	47.8	52	02.7		53.5	235	11.4		08.0	33	51.7		23.7	183	46.7
17	23	50.3	67	02.0	-17	52.6	250	14.9	+22	08.3	48	53.7	-11	23.5	198	49.2
18	38	52.8	82	01.3	-17	51.7	265	18.3	+22	08.5	63	55.6	-11	23.3	213	51.7
19	53	55.2	97	00.6		50.9	280	21.8		08.8	78	57.5		23.1	228	54.3
20	68	57.7	111	59.9		50.0	295	25.3		09.1	93	59.4		22.9	243	56.8
21	84	00.2	126	59.2		49.1	310	28.8		09.4	109	01.3		22.7	258	59.3
22	99	02.6	141	58.5		48.3	325	32.3		09.7	124	03.2		22.5	274	01.8
23	114	05.1	156	57.8		47.4	340	35.8		10.0	139	05.1		22.3	289	04.4
24	129	07.6	171	57.1	-17	46.5	355	39.3	+22	10.2	154	07.0	-11	22.1	304	06.9
Dif	—		-7		+9		+35		+3		+19		+2		+25	
															0	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 3				Edad: 14 ^d 7 PHE { 4 ^h : 61 ⁵ / ₅ 12 ^h : 61 ⁵ / ₅ 20 ^h : 61 ⁵ / ₅ R°: ***m																
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora R°		Hora R°
h	°		'		°		'		°		'		h	m	h	m	h	m	h	m	m
0	176	42.2	-17	44.8	0	51.8	+17	22.4	60 N	16 09	16 57	17 48	16 59	106	8 09	8					
1	191	42.1		44.1	15	16.5	+17	09.7 ⁵⁷	58	19	17 04	52	17 07	102	8 00	12					
2	206	42.0		43.4	29	41.2	+16	56.8 ¹²⁹	56	28		55	15	98	7 52	15					
3	221	41.9		42.8	44	06.0		43.8 ¹³⁰	54	37	16	17 59	21	95	44	19					
4	236	41.8		42.1	58	30.9		30.7 ¹³¹	52	44	21	18 02	27	92	37	22					
5	251	41.7	-17	41.4	72	55.9	+16	17.5 ¹³²	50	16 51	17 26	18 05	17 32	89	7 31	24					
6	266	41.6	-17	40.7	87	21.0	+16	04.2 ¹³³	45	17 05	17 36	18 12	17 44	83	7 18	30					
7	281	41.5		40.0	101	46.1	+15	50.8 ¹³⁴	40	16	45	18	17 53	78	7 07	34					
8	296	41.4		39.3	116	11.3		37.3 ¹³⁵	35	26	17 53	24	18 01	74	6 58	38					
9	311	41.3		38.7	130	36.6		23.6 ¹³⁷	30	35	18 00	29	08	71	49	41					
10	326	41.2		38.0	145	02.0	+15	09.9 ¹³⁷	20	17 51	14	40	20	65	35	47					
11	341	41.1	-17	37.3	159	27.5	+14	56.1 ¹³⁸	10 N	18 04	18 26	18 51	18 31	59	6 22	52					
12	356	41.0	-17	36.6	173	53.1	+14	42.1 ¹⁴⁰	0	18 17	18 38	19 04	18 40	55	6 10	57					
13	11	40.9		35.9	188	18.7		28.1 ¹⁴⁰	10 S	30	18 52	18	18 50	50	5 58	61					
14	26	40.8		35.2	202	44.4	+14	14.0 ¹⁴¹	20	43	19 07	35	19 01	44	45	66					
15	41	40.7		34.5	217	10.2	+13	59.7 ¹⁴³	30	18 59	25	19 56	12	39	30	72					
16	56	40.6		33.8	231	36.1		45.4 ¹⁴³	35	19 09	36	20 10	19	36	21	76					
17	71	40.5	-17	33.1	246	02.0	+13	31.0 ¹⁴⁴	40	19 20	19 50	20 27	19 27	31	5 11	79					
18	86	40.4	-17	32.5	260	28.1	+13	16.6 ¹⁴⁴	45	19 32	20 06	20 48	19 36	27	4 59	84					
19	101	40.3		31.8	274	54.2	+13	02.0 ¹⁴⁶	50	48	26	21 16	46	22	45	90					
20	116	40.2		31.1	289	20.4	+12	47.3 ¹⁴⁷	52	19 55	36	30	51	20	38	93					
21	131	40.1		30.4	303	46.7		32.6 ¹⁴⁷	54	20 03	20 47	21 48	19 57	16	30	96					
22	146	40.0		29.7	318	13.0		17.8 ¹⁴⁸	56	12	21 00	22 09	20 03	13	22	99					
23	161	39.9		29.0	332	39.4	+12	02.9 ¹⁴⁹	58	22	15	22 38	09	11	12	104					
24	176	39.8	-17	28.3	347	06.0	+11	48.0 ¹⁴⁹	60 S	20 34	21 33	23 29	20 17	6	4 01	108					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 15 ^h 21 ^m 0				Mag: -3.9 PMG: 12 ^h 33 ^m				Mag: -1.3 PMG: 0 ^h 17 ^m				Mag: -2.1 PMG: 13 ^h 42 ^m				Mag: +0.8 PMG: 3 ^h 43 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°		'		°		'		°		'		°		'		°		'		
0	129	07.6	171	57.1	-17	46.5	355	39.3	+22	10.2	154	07.0	-11	22.1	304	06.9	+0	28.3			
1	144	10.0	186	56.4		45.7	10	42.8		10.5	169	09.0		21.9	319	09.4		28.3			
2	159	12.5	201	55.7		44.8	25	46.3		10.8	184	10.9		21.7	334	11.9		28.4			
3	174	14.9	216	55.0		43.9	40	49.8		11.1	199	12.8		21.4	349	14.5		28.4			
4	189	17.4	231	54.3		43.0	55	53.3		11.4	214	14.7		21.2	4	17.0		28.4			
5	204	19.9	246	53.6	-17	42.2	70	56.8	+22	11.7	229	16.6	-11	21.0	19	19.5	+0	28.5			
6	219	22.3	261	52.9	-17	41.3	86	00.3	+22	11.9	244	18.5	-11	20.8	34	22.1	+0	28.5			
7	234	24.8	276	52.2		40.4	101	03.8		12.2	259	20.4		20.6	49	24.6		28.6			
8	249	27.3	291	51.5		39.5	116	07.3		12.5	274	22.3		20.4	64	27.1		28.6			
9	264	29.7	306	50.8		38.7	131	10.8		12.8	289	24.2		20.2	79	29.6		28.6			
10	279	32.2	321	50.1		37.8	146	14.3		13.1	304	26.2		20.0	94	32.2		28.7			
11	294	34.7	336	49.4	-17	36.9	161	17.8	+22	13.4	319	28.1	-11	19.8	109	34.7	+0	28.7			
12	309	37.1	351	48.7	-17	36.0	176	21.3	+22	13.6	334	30.0	-11	19.6	124	37.2	+0	28.8			
13	324	39.6	6	48.0		35.1	191	24.8		13.9	349	31.9		19.4	139	39.7		28.8			
14	339	42.1	21	47.3		34.2	206	28.3		14.2	4	33.8		19.1	154	42.3		28.8			
15	354	44.5	36	46.7		33.4	221	31.8		14.5	19	35.7		18.9	169	44.8		28.9			
16	9	47.0	51	46.0		32.5	236	35.3		14.7	34	37.6		18.7	184	47.3		28.9			
17	24	49.4	66	45.3	-17	31.6	251	38.8	+22	15.0	49	39.5	-11	18.5	199	49.9	+0	29.0			
18	39	51.9	81	44.6	-17	30.7	266	42.3	+22	15.3	64	41.5	-11	18.3	214	52.4	+0	29.0			
19	54	54.4	96	43.9		29.8	281	45.8		15.6	79	43.4		18.1	229	54.9		29.0			
20	69	56.8	111	43.2		28.9	296	49.3		15.9	94	45.3		17.9	244	57.5		29.1			
21	84	59.3	126	42.5		28.0	311	52.7		16.1	109	47.2		17.7	260	00.0		29.1			
22	100	01.8	141	41.8		27.1	326	56.2		16.4	124	49.1		17.5	275	02.5		29.2			
23	115	04.2	156	41.1		26.3	341	59.7		16.7	139	51.0		17.3	290	05.0		29.2			
24	130	06.7	171	40.4	-17	25.4	357	03.2	+22	17.0	154	52.9	-11	17.0	305	07.6	+0	29.2			
Dif	—		-7		+9		+35		+3		+19		+2		+25		0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2			Edad: 15 ^d 7	PHE {	4 ^h : 61 ^m 4	12 ^h : 61 ^m 3	20 ^h : 61 ^m 1		PMG: 12 ^h 13 ^m 4			R°: 54 ^m	Hora		R°	Hora		R°
	hG ☉	Dec								hG ☾	Dif			Dec	Dif	Náutico	Civil		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	176	39.8	-17 28.3	347	06.0	+11 48.0		60 N	6 38	7 29	8 16	18 45	102	8 17	6				
1	191	39.7	27.6	1	32.5	75	33.0	58	34	22	8 06	49	98	12	9				
2	206	39.6	26.9	15	59.2	77	17.9	56	31	16	7 57	53	94	07	13				
3	221	39.5	26.2	30	25.9	77	+11 02.7	54	27	10	49	56	91	8 03	15				
4	236	39.5	25.5	44	52.7	78	+10 47.5	52	24	05	42	18 59	88	7 59	18				
5	251	39.4	-17 24.8	59	19.6	79	+10 32.3	50	6 21	7 00	7 35	19 01	86	7 55	21				
6	266	39.3	-17 24.1	73	46.6	80	+10 16.9	45	6 15	6 50	7 21	19 07	80	7 48	25				
7	281	39.2	23.4	88	13.6	80	+10 01.5	40	08	41	10	11	76	41	30				
8	296	39.1	22.7	102	40.7	81	+9 46.1	35	6 03	33	7 00	15	72	36	34				
9	311	39.0	22.0	117	07.9	82	30.6	30	5 57	26	6 51	19 68		30	38				
10	326	38.9	21.3	131	35.2	83	+9 15.0	20	46	13	36	25	62	22	43				
11	341	38.8	-17 20.6	146	02.5	83	+8 59.4	10 N	5 35	6 01	6 23	19 30	57	7 14	48				
12	356	38.7	-17 19.9	160	29.9	84	+8 43.8	0	5 23	5 48	6 10	19 35	52	7 07	53				
13	11	38.6	19.2	174	57.3	84	28.1	10 S	5 09	35	5 57	40	47	6 59	58				
14	26	38.5	18.5	189	24.8	85	+8 12.3	20	4 52	20	43	45	42	51	64				
15	41	38.4	17.8	203	52.4	86	+7 56.6	30	31	5 02	28	51	36	42	70				
16	56	38.4	17.1	218	20.1	87	40.8	35	17	4 51	18	55	32	37	73				
17	71	38.3	-17 16.4	232	47.8	87	+7 24.9	40	4 00	4 37	5 08	19 58	29	6 30	78				
18	86	38.2	-17 15.7	247	15.6	88	+7 09.0	45	3 39	4 22	4 55	20 03	25	6 23	82				
19	101	38.1	15.0	261	43.4	88	+6 53.1	50	3 11	4 01	40	08	20	15	87				
20	116	38.0	14.3	276	11.4	90	37.2	52	2 57	3 52	32	11	17	11	90				
21	131	37.9	13.6	290	39.3	89	21.2	54	40	41	24	13	15	06	93				
22	146	37.8	12.9	305	07.4	91	+6 05.2	56	2 18	28	15	16	12	6 01	97				
23	161	37.7	12.2	319	35.5	91	+5 49.1	58	1 49	3 13	4 05	20	8	5 56	100				
24	176	37.7	-17 11.5	334	03.6	91	+5 33.1	60 S	0 58	2 54	3 53	20 23	5	5 49	105				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 17 ^m 0		Mag: -3.9 PMG: 12 ^h 34 ^m		Mag: -1.3 PMG: 0 ^h 12 ^m		Mag: -2.1 PMG: 13 ^h 39 ^m		Mag: +0.7 PMG: 3 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	130	06.7	171	40.4	357	03.2	154	52.9	305	07.6
1	145	09.2	186	39.8	12	06.7	169	54.8	320	10.1
2	160	11.6	201	39.1	27	10.2	184	56.7	335	12.6
3	175	14.1	216	38.4	42	13.7	199	58.7	350	15.2
4	190	16.5	231	37.7	57	17.2	215	00.6	5	17.7
5	205	19.0	246	37.0	72	20.7	230	02.5	20	20.2
6	220	21.5	261	36.3	87	24.2	245	04.4	35	22.8
7	235	23.9	276	35.6	102	27.7	260	06.3	50	25.3
8	250	26.4	291	35.0	117	31.2	275	08.2	65	27.8
9	265	28.9	306	34.3	132	34.7	290	10.1	80	30.3
10	280	31.3	321	33.6	147	38.2	305	12.0	95	32.9
11	295	33.8	336	32.9	162	41.7	320	13.9	110	35.4
12	310	36.3	351	32.2	177	45.2	335	15.8	125	37.9
13	325	38.7	6	31.5	192	48.7	350	17.8	140	40.5
14	340	41.2	21	30.9	207	52.2	5	19.7	155	43.0
15	355	43.7	36	30.2	222	55.7	20	21.6	170	45.5
16	10	46.1	51	29.5	237	59.2	35	23.5	185	48.1
17	25	48.6	66	28.8	253	02.7	50	25.4	200	50.6
18	40	51.0	81	28.1	268	06.2	65	27.3	215	53.1
19	55	53.5	96	27.5	283	09.7	80	29.2	230	55.7
20	70	56.0	111	26.8	298	13.2	95	31.1	245	58.2
21	85	58.4	126	26.1	313	16.6	110	33.0	261	00.7
22	101	00.9	141	25.4	328	20.1	125	34.9	276	03.3
23	116	03.4	156	24.8	343	23.6	140	36.9	291	05.8
24	131	05.8	171	24.1	358	27.1	155	38.8	306	08.3
Dif	—		-7	+9	+35	+3	+19	+2	+25	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 16 ^d 7 PHE { 4 ^h : 61'0 12 ^h : 60'7 20 ^h : 60'5 PMG: 1 ^h 48 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	176	37.7	-17	11.5	334	03.6	+5 33.1	60 N	16 14	17 01	17 52	20 27	99		8 23	5		
1	191	37.6		10.8	348	31.8	17.0 ¹⁶¹	58	24		08 56		27 96		21	9		
2	206	37.5		10.1	3	00.1	+5 00.9 ¹⁶¹	56	33	14	17 59		27 92		20	11		
3	221	37.4		09.4	17	28.4	+4 44.8 ¹⁶¹	54	41	19	18 02		27 89		18	15		
4	236	37.3		08.7	31	56.8	28.7 ¹⁶¹	52	48	24	05		27 86		17	17		
5	251	37.2	-17	08.0	46	25.2	+4 12.6 ¹⁶¹	50	16 54	17 29	18 08		20 27	84	8 16	19		
6	266	37.1	-17	07.2	60	53.7	+3 56.5 ¹⁶¹	45	17 08	17 39	18 14		20 27	78	8 13	25		
7	281	37.1		06.5	75	22.2	40.3 ¹⁶²	40	19	48	20		27 74		11	29		
8	296	37.0		05.8	89	50.8	24.1 ¹⁶²	35	29	17 55	25		27 70		10	32		
9	311	36.9		05.1	104	19.5	+3 08.0 ¹⁶¹	30	37	18 02	31		27 66		08	35		
10	326	36.8		04.4	118	48.2	+2 51.8 ¹⁶²	20	17 52	15	41		27 60		05	41		
11	341	36.7	-17	03.7	133	16.9	+2 35.7 ¹⁶¹	10 N	18 05	18 27	18 52		20 27	55	8 02	47		
12	356	36.7	-17	03.0	147	45.7	+2 19.5 ¹⁶²	0	18 17	18 39	19 04		20 27	51	8 00	51		
13	11	36.6		02.3	162	14.5	+2 03.3 ¹⁶²	10 S	29	18 52	17		27 46		7 57	56		
14	26	36.5		01.5	176	43.4	+1 47.2 ¹⁶¹	20	43	19 06	34		27 41		55	61		
15	41	36.4		00.8	191	12.3	31.0 ¹⁶²	30	18 58	24	19 55		27 35		52	67		
16	56	36.3	-17	00.1	205	41.2	+1 14.9 ¹⁶¹	35	19 07	35	20 08		27 32		50	70		
17	71	36.2	-16	59.4	220	10.2	+0 58.7 ¹⁶²	40	19 18	19 48	20 24		20 27	29	7 48	74		
18	86	36.2	-16	58.7	234	39.3	+0 42.6 ¹⁶¹	45	19 30	20 03	20 45		20 28	23	7 45	80		
19	101	36.1		58.0	249	08.4	26.5 ¹⁶¹	50	45	22	21 12		28 19		42	85		
20	116	36.0		57.3	263	37.5	+0 10.4 ¹⁶¹	52	52	32	25		28 16		41	87		
21	131	35.9		56.5	278	06.6	-0 05.7 ¹⁶¹	54	19 59	43	21 42		28 14		39	91		
22	146	35.8		55.8	292	35.8	21.7 ¹⁶⁰	56	20 08	20 55	22 02		28 11		38	93		
23	161	35.8		55.1	307	05.0	37.8 ¹⁶¹	58	18	21 09	22 29		28 8		36	97		
24	176	35.7	-16	54.4	321	34.3	-0 53.8 ¹⁶⁰	60 S	20 29	21 27	23 10		20 28	5	7 34	100		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 13 ^m 1		Mag: -3.9 PMG: 12 ^h 35 ^m		Mag: -1.3 PMG: 0 ^h 06 ^m		Mag: -2.0 PMG: 13 ^h 36 ^m		Mag: +0.7 PMG: 3 ^h 35 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	131	05.8	171	24.1	358	27.1	+22 23.5	155 38.8	-11 12.0	306 08.3	+0 30.2							
1	146	08.3	186	23.4	13	30.6	23.8	170 40.7	11.8	321 10.9	30.3							
2	161	10.8	201	22.7	28	34.1	24.1	185 42.6	11.6	336 13.4	30.3							
3	176	13.2	216	22.1	-17 01.0	43 37.6	24.3	200 44.5	11.4	351 15.9	30.4							
4	191	15.7	231	21.4	-17 00.0	58 41.1	24.6	215 46.4	11.1	6 18.5	30.4							
5	206	18.2	246	20.7	-16 59.1	73 44.6	+22 24.9	230 48.3	-11 10.9	21 21.0	+0 30.4							
6	221	20.6	261	20.0	-16 58.2	88 48.1	+22 25.1	245 50.2	-11 10.7	36 23.5	+0 30.5							
7	236	23.1	276	19.4	57.3	103 51.6	25.4	260 52.1	10.5	51 26.1	30.5							
8	251	25.5	291	18.7	56.4	118 55.1	25.7	275 54.0	10.3	66 28.6	30.6							
9	266	28.0	306	18.0	55.5	133 58.6	25.9	290 56.0	10.1	81 31.2	30.6							
10	281	30.5	321	17.4	54.5	149 02.1	26.2	305 57.9	09.9	96 33.7	30.6							
11	296	32.9	336	16.7	-16 53.6	164 05.6	+22 26.5	320 59.8	-11 09.7	111 36.2	+0 30.7							
12	311	35.4	351	16.0	-16 52.7	179 09.1	+22 26.7	336 01.7	-11 09.5	126 38.8	+0 30.7							
13	326	37.9	6 15.3	51.8	194 12.5	27.0		351 03.6	09.2	141 41.3	30.8							
14	341	40.3	21 14.7	50.8	209 16.0	27.3		6 05.5	09.0	156 43.8	30.8							
15	356	42.8	36 14.0	49.9	224 19.5	27.5		21 07.4	08.8	171 46.4	30.9							
16	11	45.3	51 13.3	49.0	239 23.0	27.8		36 09.3	08.6	186 48.9	30.9							
17	26	47.7	66 12.7	-16 48.1	254 26.5	+22 28.0		51 11.2	-11 08.4	201 51.4	+0 30.9							
18	41	50.2	81 12.0	-16 47.1	269 30.0	+22 28.3		66 13.1	-11 08.2	216 54.0	+0 31.0							
19	56	52.6	96 11.3	46.2	284 33.5	28.6		81 15.0	08.0	231 56.5	31.0							
20	71	55.1	111 10.7	45.3	299 37.0	28.8		96 17.0	07.8	246 59.0	31.1							
21	86	57.6	126 10.0	44.4	314 40.5	29.1		111 18.9	07.6	262 01.6	31.1							
22	102	00.0	141 09.4	43.4	329 44.0	29.4		126 20.8	07.3	277 04.1	31.2							
23	117	02.5	156 08.7	42.5	344 47.5	29.6		141 22.7	07.1	292 06.7	31.2							
24	132	05.0	171 08.0	-16 41.6	359 51.0	+22 29.9		156 24.6	-11 06.9	307 09.2	+0 31.3							
Dif	—		-7		+9		+35		+3		+19		+2		+25		0	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 17 ^d 7 PHE { 4 ^h : 60'/3 12 ^h : 60'/0 20 ^h : 59'/7 PMG: 2 ^h 39 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	35.7	-16	54.4	321	34.3	-0	53.8	60 N	6 34	7 25	8 12	22 06	98	8 28	5
1	191	35.6		53.7	336	03.6 ¹⁰³	-1	09.8 ¹⁶⁰	58	31	18	8 02	22 03	93	30	8
2	206	35.5		52.9	350	32.9 ¹⁰³		25.7 ¹⁵⁹	56	27	12	7 53	21 59	90	31	12
3	221	35.5		52.2	5	02.3 ¹⁰⁴		41.7 ¹⁶⁰	54	24	07	45	56	87	33	14
4	236	35.4		51.5	19	31.6 ¹⁰³	-1	57.6 ¹⁵⁹	52	22	7 02	39	53	84	34	17
5	251	35.3	-16	50.8	34	01.0 ¹⁰⁴	-2	13.5 ¹⁵⁹	50	6 19	6 58	7 32	21 51	81	8 35	19
6	266	35.2	-16	50.1	48	30.5 ¹⁰⁵	-2	29.3 ¹⁵⁸	45	6 13	6 48	7 19	21 45	76	8 38	24
7	281	35.2		49.3	62	59.9 ¹⁰⁴	-2	45.2 ¹⁵⁹	40	07	39	7 08	41	71	40	28
8	296	35.1		48.6	77	29.4 ¹⁰⁵	-3	00.9 ¹⁵⁷	35	6 01	32	6 58	37	68	42	32
9	311	35.0		47.9	91	59.0 ¹⁰⁶		16.7 ¹⁵⁸	30	5 56	25	50	33	65	43	35
10	326	34.9		47.2	106	28.5 ¹⁰⁵		32.4 ¹⁵⁷	20	46	12	35	27	60	46	41
11	341	34.9	-16	46.4	120	58.0 ¹⁰⁵	-3	48.1 ¹⁵⁷	10 N	5 35	6 00	6 22	21 22	55	8 49	45
12	356	34.8	-16	45.7	135	27.6 ¹⁰⁶	-4	03.7 ¹⁵⁶	0	5 23	5 49	6 10	21 18	50	8 51	50
13	11	34.7		45.0	149	57.2 ¹⁰⁶		19.3 ¹⁵⁶	10 S	5 10	36	5 58	13	45	53	55
14	26	34.6		44.3	164	26.8 ¹⁰⁶		34.8 ¹⁵⁵	20	4 54	21	45	08	41	56	60
15	41	34.6		43.5	178	56.5 ¹⁰⁷	-4	50.4 ¹⁵⁶	30	33	5 04	29	21 02	36	8 59	65
16	56	34.5		42.8	193	26.1 ¹⁰⁶	-5	05.8 ¹⁵⁴	35	20	4 53	20	20 59	33	9 00	69
17	71	34.4	-16	42.1	207	55.8 ¹⁰⁷	-5	21.2 ¹⁵⁴	40	4 03	4 40	5 10	20 56	28	9 02	73
18	86	34.3	-16	41.3	222	25.5 ¹⁰⁷	-5	36.6 ¹⁵⁴	45	3 43	4 25	4 58	20 51	25	9 05	77
19	101	34.3		40.6	236	55.2 ¹⁰⁷	-5	51.9 ¹⁵³	50	16	4 05	43	47	19	07	83
20	116	34.2		39.9	251	24.9 ¹⁰⁷	-6	07.1 ¹⁵²	52	3 02	3 56	36	44	18	08	85
21	131	34.1		39.2	265	54.6 ¹⁰⁷		22.3 ¹⁵²	54	2 46	45	29	42	15	10	87
22	146	34.1		38.4	280	24.4 ¹⁰⁸		37.5 ¹⁵²	56	2 26	33	20	39	12	11	91
23	161	34.0		37.7	294	54.1 ¹⁰⁷	-6	52.6 ¹⁵¹	58	1 59	19	4 10	36	9	13	94
24	176	33.9	-16	37.0	309	23.9 ¹⁰⁸	-7	07.6 ¹⁵⁰	60 S	1 18	3 01	3 59	20 33	5	9 14	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 09 ^m 2		Mag: -3.9 PMG: 12 ^h 36 ^m		Mag: -1.2 PMG: 0 ^h 01 ^m		Mag: -2.0 PMG: 13 ^h 33 ^m		Mag: +0.7 PMG: 3 ^h 31 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	132	05.0	171	08.0	-16	41.6	359	51.0	+22	29.9
1	147	07.4	186	07.4		40.6	14	54.4		30.1
2	162	09.9	201	06.7		39.7	29	57.9		30.4
3	177	12.4	216	06.0		38.8	45	01.4		30.7
4	192	14.8	231	05.4		37.8	60	04.9		30.9
5	207	17.3	246	04.7	-16	36.9	75	08.4	+22	31.2
6	222	19.8	261	04.1	-16	36.0	90	11.9	+22	31.4
7	237	22.2	276	03.4		35.0	105	15.4		31.7
8	252	24.7	291	02.8		34.1	120	18.9		32.0
9	267	27.1	306	02.1		33.1	135	22.4		32.2
10	282	29.6	321	01.4		32.2	150	25.9		32.5
11	297	32.1	336	00.8	-16	31.3	165	29.3	+22	32.7
12	312	34.5	351	00.1	-16	30.3	180	32.8	+22	33.0
13	327	37.0	5	59.5		29.4	195	36.3		33.2
14	342	39.5	20	58.8		28.4	210	39.8		33.5
15	357	41.9	35	58.2		27.5	225	43.3		33.7
16	12	44.4	50	57.5		26.5	240	46.8		34.0
17	27	46.9	65	56.9	-16	25.6	255	50.3	+22	34.3
18	42	49.3	80	56.2	-16	24.7	270	53.8	+22	34.5
19	57	51.8	95	55.5		23.7	285	57.2		34.8
20	72	54.2	110	54.9		22.8	301	00.7		35.0
21	87	56.7	125	54.2		21.8	316	04.2		35.3
22	102	59.2	140	53.6		20.9	331	07.7		35.5
23	118	01.6	155	52.9		19.9	346	11.2		35.8
24	133	04.1	170	52.3	-16	19.0	1	14.7	+22	36.0
Dif	—		-7		+9		-8965		+3	
							+19		+2	
									+25	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 8				Edad: 18 ^d 7 PHE { SD: 16:2 PMG: 3 ^h 29 ^m 4 ^h : 59/4 12 ^h : 59/1 20 ^h : 58/8 R°: 50 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	176	33.9	-16	37.0	309	23.9	-7	07.6	60 N	16 19	17 06	17 56	23 44 96		8 33 6		
1	191	33.9		36.2	323	53.7 ¹⁰⁸		22.6 ¹⁵⁰	58	29	12	18 00	36 91		38 10		
2	206	33.8		35.5	338	23.4 ¹⁰⁷		37.5 ¹⁴⁹	56	37	18	03	29 87		43 13		
3	221	33.7		34.8	352	53.2 ¹⁰⁸	-7	52.4 ¹⁴⁹	54	45	23	06	23 84		47 16		
4	236	33.6		34.0	7	23.0 ¹⁰⁸	-8	07.2 ¹⁴⁸	52	51	28	08	17 82		51 18		
5	251	33.6	-16	33.3	21	52.8 ¹⁰⁸	-8	21.9 ¹⁴⁷	50	16 57	17 32	18 11	23 12 79		8 54 21		
6	266	33.5	-16	32.6	36	22.6 ¹⁰⁸	-8	36.6 ¹⁴⁷	45	17 10	17 42	18 17	23 01 74		9 02 26		
7	281	33.4		31.8	50	52.4 ¹⁰⁸	-8	51.1 ¹⁴⁵	40	21	50	22	22 52 70		08 30		
8	296	33.4		31.1	65	22.2 ¹⁰⁸	-9	05.7 ¹⁴⁶	35	31	17 57	27	45 66		14 33		
9	311	33.3		30.4	79	52.0 ¹⁰⁸		20.1 ¹⁴⁴	30	39	18 04	32	38 64		18 37		
10	326	33.2		29.6	94	21.8 ¹⁰⁸		34.5 ¹⁴⁴	20	17 53	16	42	27 58		27 41		
11	341	33.2	-16	28.9	108	51.6 ¹⁰⁸	-9	48.9 ¹⁴⁴	10 N	18 05	18 27	18 53	22 17 54		9 34 46		
12	356	33.1	-16	28.2	123	21.4 ¹⁰⁸	-10	03.1 ¹⁴²	0	18 17	18 39	19 04	22 08 50		9 41 50		
13	11	33.1		27.4	137	51.2 ¹⁰⁸		17.3 ¹⁴²	10 S	29	18 51	17	21 58 47		48 55		
14	26	33.0		26.7	152	21.0 ¹⁰⁸		31.4 ¹⁴¹	20	42	19 05	33	49 42		9 56 59		
15	41	32.9		25.9	166	50.8 ¹⁰⁸		45.4 ¹⁴⁰	30	18 57	23	19 53	38 37		10 04 65		
16	56	32.9		25.2	181	20.5 ¹⁰⁷	-10	59.3 ¹³⁹	35	19 06	33	20 06	32 34		09 68		
17	71	32.8	-16	24.5	195	50.3 ¹⁰⁸	-11	13.2 ¹³⁹	40	19 16	19 45	20 22	21 24 32		10 15 71		
18	86	32.7	-16	23.7	210	20.1 ¹⁰⁸	-11	27.0 ¹³⁸	45	19 27	20 00	20 41	21 16 27		10 22 75		
19	101	32.7		23.0	224	49.9 ¹⁰⁸		40.7 ¹³⁷	50	42	19	21 07	06 23		30 80		
20	116	32.6		22.2	239	19.6 ¹⁰⁷	-11	54.3 ¹³⁶	52	48	28	21	21 02 20		33 83		
21	131	32.5		21.5	253	49.4 ¹⁰⁸	-12	07.9 ¹³⁶	54	19 56	38	36	20 57 17		37 86		
22	146	32.5		20.8	268	19.1 ¹⁰⁷		21.4 ¹³⁵	56	20 04	20 50	21 55	51 15		42 89		
23	161	32.4		20.0	282	48.9 ¹⁰⁸		34.7 ¹³³	58	13	21 04	22 19	45 12		47 92		
24	176	32.4	-16	19.3	297	18.6 ¹⁰⁷	-12	48.0 ¹³³	60 S	20 24	21 20	22 55	20 38 8		10 53 96		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 05 ^m 2		Mag: -3.9 PMG: 12 ^h 37 ^m				Mag: -1.2 PMG: 23 ^h 49 ^m				Mag: -2.0 PMG: 13 ^h 30 ^m				Mag: +0.7 PMG: 3 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	133	04.1	170	52.3	-16	19.0	1	14.7	+22	36.0	157	10.4	-11	01.8	308	10.1	+0	32.3
1	148	06.6	185	51.6		18.0	16	18.2		36.3	172	12.3		01.6	323	12.7		32.4
2	163	09.0	200	51.0		17.1	31	21.6		36.5	187	14.2		01.4	338	15.2		32.4
3	178	11.5	215	50.3		16.1	46	25.1		36.8	202	16.1		01.2	353	17.8		32.4
4	193	14.0	230	49.7		15.1	61	28.6		37.0	217	18.0		01.0	8	20.3		32.5
5	208	16.4	245	49.1	-16	14.2	76	32.1	+22	37.3	232	19.9	-11	00.8	23	22.9	+0	32.5
6	223	18.9	260	48.4	-16	13.2	91	35.6	+22	37.5	247	21.8	-11	00.5	38	25.4	+0	32.6
7	238	21.4	275	47.8		12.3	106	39.1		37.8	262	23.7		00.3	53	27.9		32.6
8	253	23.8	290	47.1		11.3	121	42.5		38.0	277	25.6	-11	00.1	68	30.5		32.7
9	268	26.3	305	46.5		10.4	136	46.0		38.3	292	27.6	-10	59.9	83	33.0		32.7
10	283	28.7	320	45.8		09.4	151	49.5		38.5	307	29.5		59.7	98	35.6		32.8
11	298	31.2	335	45.2	-16	08.4	166	53.0	+22	38.8	322	31.4	-10	59.5	113	38.1	+0	32.8
12	313	33.7	350	44.5	-16	07.5	181	56.5	+22	39.0	337	33.3	-10	59.3	128	40.7	+0	32.9
13	328	36.1	5	43.9		06.5	196	59.9		39.3	352	35.2		59.1	143	43.2		32.9
14	343	38.6	20	43.3		05.6	212	03.4		39.5	7	37.1		58.8	158	45.7		33.0
15	358	41.1	35	42.6		04.6	227	06.9		39.8	22	39.0		58.6	173	48.3		33.0
16	13	43.5	50	42.0		03.6	242	10.4		40.0	37	40.9		58.4	188	50.8		33.0
17	28	46.0	65	41.3	-16	02.7	257	13.9	+22	40.3	52	42.8	-10	58.2	203	53.4	+0	33.1
18	43	48.5	80	40.7	-16	01.7	272	17.3	+22	40.5	67	44.7	-10	58.0	218	55.9	+0	33.1
19	58	50.9	95	40.1	-16	00.7	287	20.8		40.8	82	46.6		57.8	233	58.5		33.2
20	73	53.4	110	39.4	-15	59.8	302	24.3		41.0	97	48.5		57.6	249	01.0		33.2
21	88	55.9	125	38.8		58.8	317	27.8		41.2	112	50.4		57.4	264	03.6		33.3
22	103	58.3	140	38.1		57.8	332	31.3		41.5	127	52.3		57.1	279	06.1		33.3
23	119	00.8	155	37.5		56.9	347	34.7		41.7	142	54.2		56.9	294	08.6		33.4
24	134	03.2	170	36.9	-15	55.9	2	38.2	+22	42.0	157	56.2	-10	56.7	309	11.2	+0	33.4
Dif	—		-6		+10		+35		+2		+19		+2		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 9			Edad: 19 ^d 7 PHE { 4 ^h : 58'4 12 ^h : 58'1 20 ^h : 57'8 R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	32.4	-16	19.3	297	18.6	-12	48.0	60 N	6 30	7 20	8 07	** ** *	** ** *	8 39	9
1	191	32.3		18.5	311	48.3 ¹⁰⁷	-13	01.2 ¹³²	58	27	14	7 58	** ** *	** ** *	48	13
2	206	32.2		17.8	326	18.0 ¹⁰⁷		14.4 ¹³²	56	24	09	49	** ** *	** ** *	8 56	17
3	221	32.2		17.0	340	47.7 ¹⁰⁷		27.4 ¹³⁰	54	21	7 04	42	** ** *	** ** *	9 03	21
4	236	32.1		16.3	355	17.4 ¹⁰⁷		40.3 ¹²⁹	52	19	6 59	35	** ** *	** ** *	09	23
5	251	32.1	-16	15.5	9	47.0 ¹⁰⁶	-13	53.2 ¹²⁹	50	6 16	6 55	7 29	** ** *	** ** *	9 15	25
6	266	32.0	-16	14.8	24	16.7 ¹⁰⁷	-14	06.0 ¹²⁸	45	6 10	6 45	7 16	** ** *	** ** *	9 28	29
7	281	31.9		14.0	38	46.3 ¹⁰⁶		18.6 ¹²⁶	40	05	37	7 06	** ** *	** ** *	38	33
8	296	31.9		13.3	53	16.0 ¹⁰⁷		31.2 ¹²⁶	35	6 00	30	6 57	23 51 65		47	36
9	311	31.8		12.6	67	45.6 ¹⁰⁶		43.7 ¹²⁵	30	5 55	24	49	42 62		9 55	38
10	326	31.8		11.8	82	15.2 ¹⁰⁶	-14	56.1 ¹²⁴	20	45	12	34	25 58	10 08 44		
11	341	31.7	-16	11.1	96	44.7 ¹⁰⁵	-15	08.4 ¹²³	10 N	5 35	6 00	6 22	23 11 55	10 20 47		
12	356	31.6	-16	10.3	111	14.3 ¹⁰⁶	-15	20.6 ¹²²	0	5 24	5 49	6 10	22 58 51	10 31 51		
13	11	31.6		09.6	125	43.8 ¹⁰⁵		32.6 ¹²⁰	10 S	5 11	37	5 59	45 48	43 54		
14	26	31.5		08.8	140	13.3 ¹⁰⁵		44.6 ¹²⁰	20	4 55	23	46	31 44	10 55 58		
15	41	31.5		08.1	154	42.9 ¹⁰⁶	-15	56.5 ¹¹⁹	30	35	5 05	31	15 40	11 09 63		
16	56	31.4		07.3	169	12.3 ¹⁰⁴	-16	08.3 ¹¹⁸	35	22	4 55	22	22 06 38	17 66		
17	71	31.4	-16	06.6	183	41.8 ¹⁰⁵	-16	20.0 ¹¹⁷	40	4 06	4 43	5 13	21 56 34	11 26 69		
18	86	31.3	-16	05.8	198	11.3 ¹⁰⁵	-16	31.6 ¹¹⁶	45	3 47	4 28	5 01	21 43 32	11 37 73		
19	101	31.3		05.0	212	40.7 ¹⁰⁴		43.1 ¹¹⁵	50	21	09	4 47	29 27	50 78		
20	116	31.2		04.3	227	10.1 ¹⁰⁴	-16	54.5 ¹¹⁴	52	3 08	4 00	40	22 25	11 56 80		
21	131	31.1		03.5	241	39.5 ¹⁰⁴	-17	05.8 ¹¹³	54	2 52	3 50	33	14 22	12 03 83		
22	146	31.1		02.8	256	08.9 ¹⁰⁴		17.0 ¹¹²	56	33	38	24	21 06 19	11 86		
23	161	31.0		02.0	270	38.2 ¹⁰³		28.1 ¹¹¹	58	2 09	25	15	20 57 15	19 90		
24	176	31.0	-16	01.3	285	07.5 ¹⁰³	-17	39.0 ¹⁰⁹	60 S	1 34	3 08	4 04	20 46 11	12 29 95		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 01 ^m 3			Mag: -3.9 PMG: 12 ^h 38 ^m			Mag: -1.2 PMG: 23 ^h 44 ^m			Mag: -2.0 PMG: 13 ^h 27 ^m			Mag: +0.7 PMG: 3 ^h 23 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	134	03.2	170	36.9	-15	55.9	2	38.2	+22	42.0	157	56.2	-10	56.7	309	11.2
1	149	05.7	185	36.2		54.9	17	41.7		42.2	172	58.1		56.5	324	13.7
2	164	08.2	200	35.6		54.0	32	45.2		42.5	188	00.0		56.3	339	16.3
3	179	10.6	215	35.0		53.0	47	48.6		42.7	203	01.9		56.1	354	18.8
4	194	13.1	230	34.3		52.0	62	52.1		42.9	218	03.8		55.9	9	21.4
5	209	15.6	245	33.7	-15	51.0	77	55.6	+22	43.2	233	05.7	-10	55.6	24	23.9
6	224	18.0	260	33.1	-15	50.1	92	59.1	+22	43.4	248	07.6	-10	55.4	39	26.5
7	239	20.5	275	32.4		49.1	108	02.5		43.7	263	09.5		55.2	54	29.0
8	254	23.0	290	31.8		48.1	123	06.0		43.9	278	11.4		55.0	69	31.6
9	269	25.4	305	31.2		47.1	138	09.5		44.1	293	13.3		54.8	84	34.1
10	284	27.9	320	30.5		46.2	153	13.0		44.4	308	15.2		54.6	99	36.7
11	299	30.3	335	29.9	-15	45.2	168	16.4	+22	44.6	323	17.1	-10	54.4	114	39.2
12	314	32.8	350	29.3	-15	44.2	183	19.9	+22	44.9	338	19.0	-10	54.1	129	41.7
13	329	35.3		28.6		43.2	198	23.4		45.1	353	20.9		53.9	144	44.3
14	344	37.7	20	28.0		42.2	213	26.9		45.3	8	22.8		53.7	159	46.8
15	359	40.2	35	27.4		41.3	228	30.3		45.6	23	24.7		53.5	174	49.4
16	14	42.7	50	26.7		40.3	243	33.8		45.8	38	26.7		53.3	189	51.9
17	29	45.1	65	26.1	-15	39.3	258	37.3	+22	46.1	53	28.6	-10	53.1	204	54.5
18	44	47.6	80	25.5	-15	38.3	273	40.7	+22	46.3	68	30.5	-10	52.9	219	57.0
19	59	50.1	95	24.9		37.3	288	44.2		46.5	83	32.4		52.6	234	59.6
20	74	52.5	110	24.2		36.3	303	47.7		46.8	98	34.3		52.4	250	02.1
21	89	55.0	125	23.6		35.3	318	51.1		47.0	113	36.2		52.2	265	04.7
22	104	57.5	140	23.0		34.4	333	54.6		47.2	128	38.1		52.0	280	07.2
23	119	59.9	155	22.4		33.4	348	58.1		47.5	143	40.0		51.8	295	09.8
24	135	02.4	170	21.7	-15	32.4	4	01.6	+22	47.7	158	41.9	-10	51.6	310	12.3
Dif	—		-6		+10		+35		+2		+19		+2		+25	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 20 ^d 7 PHE { 4 ^h : 57:5 12 ^h : 57:2 20 ^h : 56:9 PMG: 5 ^h 10 ^m R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	176	31.0	-16	01.3	285	07.5	-17	39.0	60 N	16 24	17 11	18 01	1 20 92	8 48 14				
1	191	30.9	-16	00.5	299	36.8 ¹⁰³	-17	49.9 ¹⁰⁹	58	33	17	04	1 07 88	9 01 19				
2	206	30.9	-15	59.8	314	06.1 ¹⁰³	-18	00.6 ¹⁰⁷	56	41	22	06	0 56 84	13 22				
3	221	30.8		59.0	328	35.4 ¹⁰³		11.3 ¹⁰⁷	54	49	27	09	47 81	23 25				
4	236	30.8		58.3	343	04.6 ¹⁰²		21.8 ¹⁰⁵	52	16 55	31	11	39 78	32 27				
5	251	30.7	-15	57.5	357	33.8 ¹⁰²	-18	32.2 ¹⁰⁴	50	17 01	17 35	18 14	0 31 76	9 40 29				
6	266	30.7	-15	56.7	12	03.0 ¹⁰²	-18	42.5 ¹⁰³	45	17 13	17 44	18 19	0 15 71	9 57 34				
7	281	30.6		56.0	26	32.2 ¹⁰²	-18	52.7 ¹⁰²	40	24	52	24	0 02 68	10 11 37				
8	296	30.6		55.2	41	01.3 ¹⁰¹	-19	02.8 ¹⁰¹	35	33	17 59	29	** ** *	23 40				
9	311	30.5		54.5	55	30.5 ¹⁰²		12.8 ¹⁰⁰	30	40	18 05	34	** ** *	33 43				
10	326	30.5		53.7	69	59.6 ¹⁰¹		22.7 ⁹⁹	20	17 54	17	43	** ** *	10 52 45				
11	341	30.4	-15	52.9	84	28.7 ¹⁰¹	-19	32.4 ⁹⁷	10 N	18 06	18 28	18 53	** ** *	11 07 49				
12	356	30.4	-15	52.2	98	57.7 ¹⁰⁰	-19	42.0 ⁹⁶	0	18 17	18 39	19 04	23 49 52	11 22 52				
13	11	30.3		51.4	113	26.8 ¹⁰¹	-19	51.6 ⁹⁶	10 S	29	18 51	16	33 49	37 55				
14	26	30.3		50.7	127	55.8 ¹⁰⁰	-20	01.0 ⁹⁴	20	41	19 04	32	23 15 47	11 53 58				
15	41	30.2		49.9	142	24.8 ¹⁰⁰		10.2 ⁹²	30	18 56	21	19 51	22 55 44	12 12 61				
16	56	30.2		49.1	156	53.7 ⁹⁹		19.4 ⁹²	35	19 04	31	20 04	44 42	23 63				
17	71	30.1	-15	48.4	171	22.7 ¹⁰⁰	-20	28.5 ⁹¹	40	19 14	19 43	20 19	22 30 40	12 35 66				
18	86	30.1	-15	47.6	185	51.6 ⁹⁹	-20	37.4 ⁸⁹	45	19 25	19 57	20 38	22 15 37	12 50 69				
19	101	30.0		46.8	200	20.5 ⁹⁹		46.2 ⁸⁸	50	38	20 15	21 03	21 56 33	13 08 73				
20	116	30.0		46.1	214	49.4 ⁹⁹	-20	54.9 ⁸⁷	52	45	24	16	47 31	16 76				
21	131	30.0		45.3	229	18.2 ⁹⁸	-21	03.5 ⁸⁶	54	19 52	34	30	36 30	26 78				
22	146	29.9		44.5	243	47.1 ⁹⁹		11.9 ⁸⁴	56	20 00	45	21 48	25 26	37 81				
23	161	29.9		43.8	258	15.9 ⁹⁸		20.2 ⁸³	58	09	20 58	22 11	21 12 23	13 49 85				
24	176	29.8	-15	43.0	272	44.7 ⁹⁸	-21	28.4 ⁸²	60 S	20 19	21 14	22 42	20 57 18	14 04 89				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 57 ^m 4		Mag: -3.9 PMG: 12 ^h 39 ^m			Mag: -1.2 PMG: 23 ^h 38 ^m			Mag: -2.0 PMG: 13 ^h 24 ^m			Mag: +0.7 PMG: 3 ^h 19 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	135	02.4	170	21.7	-15	32.4	4	01.6	+22	47.7	158	41.9	-10	51.6	310	12.3	+0	34.5
1	150	04.8	185	21.1		31.4	19	05.0		47.9	173	43.8		51.4	325	14.9		34.6
2	165	07.3	200	20.5		30.4	34	08.5		48.2	188	45.7		51.1	340	17.4		34.6
3	180	09.8	215	19.9		29.4	49	12.0		48.4	203	47.6		50.9	355	20.0		34.7
4	195	12.2	230	19.2		28.4	64	15.4		48.6	218	49.5		50.7	10	22.5		34.7
5	210	14.7	245	18.6	-15	27.4	79	18.9	+22	48.9	233	51.4	-10	50.5	25	25.1	+0	34.8
6	225	17.2	260	18.0	-15	26.4	94	22.3	+22	49.1	248	53.3	-10	50.3	40	27.6	+0	34.8
7	240	19.6	275	17.4		25.5	109	25.8		49.3	263	55.2		50.1	55	30.2		34.9
8	255	22.1	290	16.8		24.5	124	29.3		49.6	278	57.1		49.9	70	32.7		34.9
9	270	24.6	305	16.1		23.5	139	32.7		49.8	293	59.0		49.6	85	35.3		35.0
10	285	27.0	320	15.5		22.5	154	36.2		50.0	309	01.0		49.4	100	37.8		35.0
11	300	29.5	335	14.9	-15	21.5	169	39.7	+22	50.2	324	02.9	-10	49.2	115	40.4	+0	35.1
12	315	32.0	350	14.3	-15	20.5	184	43.1	+22	50.5	339	04.8	-10	49.0	130	42.9	+0	35.1
13	330	34.4	5	13.7		19.5	199	46.6		50.7	354	06.7		48.8	145	45.5		35.2
14	345	36.9	20	13.1		18.5	214	50.0		50.9	9	08.6		48.6	160	48.0		35.2
15	0	39.3	35	12.4		17.5	229	53.5		51.2	24	10.5		48.4	175	50.6		35.3
16	15	41.8	50	11.8		16.5	244	57.0		51.4	39	12.4		48.1	190	53.1		35.3
17	30	44.3	65	11.2	-15	15.5	260	00.4	+22	51.6	54	14.3	-10	47.9	205	55.7	+0	35.4
18	45	46.7	80	10.6	-15	14.5	275	03.9	+22	51.8	69	16.2	-10	47.7	220	58.2	+0	35.4
19	60	49.2	95	10.0		13.5	290	07.3		52.1	84	18.1		47.5	236	00.8		35.5
20	75	51.7	110	09.4		12.5	305	10.8		52.3	99	20.0		47.3	251	03.3		35.5
21	90	54.1	125	08.8		11.5	320	14.3		52.5	114	21.9		47.1	266	05.9		35.6
22	105	56.6	140	08.1		10.5	335	17.7		52.7	129	23.8		46.9	281	08.4		35.6
23	120	59.1	155	07.5		09.5	350	21.2		53.0	144	25.7		46.6	296	11.0		35.7
24	136	01.5	170	06.9	-15	08.5	5	24.6	+22	53.2	159	27.6	-10	46.4	311	13.5	+0	35.7
Dif	—		-6		+10		+35		+2		+19		+2		+26			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 14 ^m 0			Edad: 21 ^d 7 PHE { 4 ^h : 56/6 12 ^h : 56/3 20 ^h : 56/1 PMG: 6 ^h 02 ^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	29.8	-15	43.0	272	44.7	-21	28.4	60 N	6 26	7 16	8 02	2 52	86	9 02	23	
1	191	29.8		42.2	287	13.5	98	36.5	58	23	10	7 53	35	81	20	27	
2	206	29.7		41.5	301	42.2	97	44.5	56	21	05	45	20	77	35	31	
3	221	29.7		40.7	316	11.0	98	-21 52.3	54	18	7 00	38	2 08	74	48	33	
4	236	29.6		39.9	330	39.7	97	-22 00.0	52	16	6 56	32	1 57	72	9 59	36	
5	251	29.6	-15	39.2	345	08.4	97	-22 07.6	50	6 14	6 52	7 26	1 47	70	10 09	38	
6	266	29.6	-15	38.4	359	37.0	96	-22 15.1	45	6 08	6 43	7 14	1 26	67	10 31	40	
7	281	29.5		37.6	14	05.7	97	22.4	40	6 03	35	7 04	1 10	64	10 48	43	
8	296	29.5		36.9	28	34.3	96	29.6	35	5 59	29	6 55	0 56	62	11 03	44	
9	311	29.4		36.1	43	02.9	96	36.7	30	54	22	47	44	60	16	46	
10	326	29.4		35.3	57	31.5	96	43.7	20	45	11	34	23	57	37	49	
11	341	29.3	-15	34.5	72	00.1	96	-22 50.5	10 N	5 35	6 00	6 22	0 06	54	11 56	51	
12	356	29.3	-15	33.8	86	28.7	96	-22 57.2	0	5 24	5 49	6 11	** ** *		12 14	52	
13	11	29.3		33.0	100	57.2	95	-23 03.8	10 S	5 12	37	5 59	** ** *		32	54	
14	26	29.2		32.2	115	25.7	95	10.2	20	4 57	24	47	** ** *		12 51	56	
15	41	29.2		31.5	129	54.3	96	16.5	30	37	5 07	33	23	39	48	13 13	
16	56	29.1		30.7	144	22.8	95	22.7	35	25	4 57	24	26	47	26	60	
17	71	29.1	-15	29.9	158	51.2	94	-23 28.8	40	4 09	4 45	5 15	23	10	46	13 41	
18	86	29.1	-15	29.1	173	19.7	95	-23 34.7	45	3 51	4 31	5 04	22	52	44	13 59	
19	101	29.0		28.4	187	48.2	95	40.5	50	26	13	4 50	29	42	14	21	
20	116	29.0		27.6	202	16.6	94	46.2	52	3 13	4 05	44	18	40	32	67	
21	131	29.0		26.8	216	45.0	94	51.7	54	2 58	3 55	37	22	06	38	44	
22	146	28.9		26.0	231	13.5	95	-23 57.1	56	41	44	29	21	51	37	14 58	
23	161	28.9		25.3	245	41.9	94	-24 02.4	58	2 18	31	20	35	34	15	14	
24	176	28.8	-15	24.5	260	10.3	94	-24 07.6	60 S	1 47	3 15	4 10	21	15	30	15 33	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 53 ^m 5		Mag: -3.9 PMG: 12 ^h 40 ^m			Mag: -1.2 PMG: 23 ^h 33 ^m			Mag: -2.0 PMG: 13 ^h 20 ^m			Mag: +0.7 PMG: 3 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	136	01.5	170	06.9	-15	08.5	5	24.6	+22	53.2	159	27.6	-10	46.4	311	13.5	+0	35.7
1	151	04.0	185	06.3		07.4	20	28.1		53.4	174	29.5		46.2	326	16.1		35.8
2	166	06.4	200	05.7		06.4	35	31.5		53.6	189	31.4		46.0	341	18.6		35.8
3	181	08.9	215	05.1		05.4	50	35.0		53.9	204	33.3		45.8	356	21.2		35.9
4	196	11.4	230	04.5		04.4	65	38.4		54.1	219	35.2		45.6	11	23.8		35.9
5	211	13.8	245	03.9	-15	03.4	80	41.9	+22	54.3	234	37.1	-10	45.3	26	26.3	+0	36.0
6	226	16.3	260	03.3	-15	02.4	95	45.4	+22	54.5	249	39.0	-10	45.1	41	28.9	+0	36.0
7	241	18.8	275	02.7		01.4	110	48.8		54.8	264	40.9		44.9	56	31.4		36.1
8	256	21.2	290	02.0	-15	00.4	125	52.3		55.0	279	42.9		44.7	71	34.0		36.1
9	271	23.7	305	01.4	-14	59.4	140	55.7		55.2	294	44.8		44.5	86	36.5		36.2
10	286	26.2	320	00.8		58.4	155	59.2		55.4	309	46.7		44.3	101	39.1		36.2
11	301	28.6	335	00.2	-14	57.3	171	02.6	+22	55.6	324	48.6	-10	44.1	116	41.6	+0	36.3
12	316	31.1	349	59.6	-14	56.3	186	06.1	+22	55.9	339	50.5	-10	43.8	131	44.2	+0	36.3
13	331	33.6	4	59.0		55.3	201	09.5		56.1	354	52.4		43.6	146	46.7		36.4
14	346	36.0	19	58.4		54.3	216	13.0		56.3	9	54.3		43.4	161	49.3		36.4
15	1	38.5	34	57.8		53.3	231	16.4		56.5	24	56.2		43.2	176	51.8		36.5
16	16	40.9	49	57.2		52.3	246	19.9		56.7	39	58.1		43.0	191	54.4		36.5
17	31	43.4	64	56.6	-14	51.2	261	23.3	+22	56.9	55	00.0	-10	42.8	206	57.0	+0	36.6
18	46	45.9	79	56.0	-14	50.2	276	26.7	+22	57.2	70	01.9	-10	42.5	221	59.5	+0	36.6
19	61	48.3	94	55.4		49.2	291	30.2		57.4	85	03.8		42.3	237	02.1		36.7
20	76	50.8	109	54.8		48.2	306	33.6		57.6	100	05.7		42.1	252	04.6		36.7
21	91	53.3	124	54.2		47.2	321	37.1		57.8	115	07.6		41.9	267	07.2		36.8
22	106	55.7	139	53.6		46.1	336	40.5		58.0	130	09.5		41.7	282	09.7		36.8
23	121	58.2	154	53.0		45.1	351	44.0		58.2	145	11.4		41.5	297	12.3		36.9
24	137	00.7	169	52.4	-14	44.1	6	47.4	+22	58.5	160	13.3	-10	41.3	312	14.8	+0	36.9
Dif	—		-6 +10		+34		+2		+19		+2		+26		+		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2			Edad: 22 ^d 7 PHE { 4 ^h : 55 ^h 9 12 ^h : 55 ^h 6 20 ^h : 55 ^h 4											
	PMG: 12 ^h 14 ^m 1			SD: 15 ^h 2 PMG: 6 ^h 54 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	28.8	-15	24.5	260	10.3	-24	07.6	60 N	16 30	17 15	18 05	4 18 70	9 25 38	
1	191	28.8		23.7	274	38.7	94	12.6	58	38	21	08	3 56 67	9 47 42	
2	206	28.8		22.9	289	07.0	93	17.5	56	46	26	10	37 66	10 06 43	
3	221	28.7		22.1	303	35.4	94	22.2	54	53	30	13	22 64	21 45	
4	236	28.7		21.4	318	03.8	94	26.9	52	16 59	35	15	3 09 62	35 45	
5	251	28.7	-15	20.6	332	32.1	93	-24	50	17 04	17 38	18 17	2 57 62	10 47 46	
6	266	28.6	-15	19.8	347	00.5	94	-24	45	17 16	17 47	18 22	2 33 60	11 11 48	
7	281	28.6		19.0	1	28.8	93	39.9	40	26	17 54	26	2 14 58	31 49	
8	296	28.6		18.2	15	57.2	94	44.0	35	35	18 01	31	1 58 57	11 47 50	
9	311	28.5		17.5	30	25.5	93	48.0	30	42	07	35	44 56	12 02 50	
10	326	28.5		16.7	44	53.8	93	51.8	20	17 55	18	44	20 55	26 51	
11	341	28.5	-15	15.9	59	22.2	94	-24	10 N	18 07	18 28	18 53	1 00 54	12 47 52	
12	356	28.4	-15	15.1	73	50.5	93	-24	0	18 18	18 39	19 04	0 41 53	13 06 53	
13	11	28.4		14.3	88	18.8	93	-25	10 S	29	18 50	16	22 52	26 53	
14	26	28.4		13.5	102	47.2	94	05.8	30	40	19 04	31	0 02 50	13 47 54	
15	41	28.3		12.8	117	15.5	93	09.0	30	18 54	19	19 50	*** ** *	14 11 55	
16	56	28.3		12.0	131	43.8	93	12.0	35	19 02	29	20 02	*** ** *	26 55	
17	71	28.3	-15	11.2	146	12.2	94	-25	40	19 11	19 41	20 16	23 56 51	14 42 56	
18	86	28.2	-15	10.4	160	40.5	93	-25	45	19 22	19 54	20 35	23 36 51	15 02 56	
19	101	28.2		09.6	175	08.9	94	20.3	50	35	20 12	20 59	23 11 50	27 57	
20	116	28.2		08.8	189	37.2	93	22.8	52	41	20	21 11	22 58 51	39 57	
21	131	28.1		08.0	204	05.6	94	25.2	54	48	29	25	44 51	15 53 58	
22	146	28.1		07.3	218	33.9	93	27.4	56	19 56	40	21 41	28 50	16 09 58	
23	161	28.1		06.5	233	02.3	94	29.5	58	20 04	20 52	22 02	22 09 49	28 59	
24	176	28.1	-15	05.7	247	30.7	94	-25	60 S	20 14	21 07	22 30	21 45 48	16 52 60	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 49 ^m 5		Mag: -3.9 PMG: 12 ^h 41 ^m		Mag: -1.2 PMG: 23 ^h 27 ^m		Mag: -2.0 PMG: 13 ^h 17 ^m		Mag: +0.7 PMG: 3 ^h 10 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	137	00.7	169	52.4	-14	44.1	6	47.4	+22	58.5	160	13.3	-10	41.3	312	14.8	+0	36.9
1	152	03.1	184	51.8		43.1	21	50.8		58.7	175	15.2		41.0	327	17.4		37.0
2	167	05.6	199	51.2		42.1	36	54.3		58.9	190	17.1		40.8	342	20.0		37.0
3	182	08.1	214	50.6		41.0	51	57.7		59.1	205	19.0		40.6	357	22.5		37.1
4	197	10.5	229	50.0		40.0	67	01.2		59.3	220	20.9		40.4	12	25.1		37.1
5	212	13.0	244	49.4	-14	39.0	82	04.6	+22	59.5	235	22.8	-10	40.2	27	27.6	+0	37.2
6	227	15.4	259	48.8	-14	38.0	97	08.0	+22	59.7	250	24.7	-10	40.0	42	30.2	+0	37.2
7	242	17.9	274	48.2		36.9	112	11.5	+22	59.9	265	26.6		39.7	57	32.7		37.3
8	257	20.4	289	47.6		35.9	127	14.9	+23	00.2	280	28.5		39.5	72	35.3		37.3
9	272	22.8	304	47.0		34.9	142	18.4		00.4	295	30.4		39.3	87	37.9		37.4
10	287	25.3	319	46.4		33.8	157	21.8		00.6	310	32.3		39.1	102	40.4		37.4
11	302	27.8	334	45.8	-14	32.8	172	25.2	+23	00.8	325	34.3	-10	38.9	117	43.0	+0	37.5
12	317	30.2	349	45.2	-14	31.8	187	28.7	+23	01.0	340	36.2	-10	38.7	132	45.5	+0	37.5
13	332	32.7	4	44.7		30.7	202	32.1		01.2	355	38.1		38.4	147	48.1		37.6
14	347	35.2	19	44.1		29.7	217	35.5		01.4	10	40.0		38.2	162	50.7		37.6
15	2	37.6	34	43.5		28.7	232	39.0		01.6	25	41.9		38.0	177	53.2		37.7
16	17	40.1	49	42.9		27.6	247	42.4		01.8	40	43.8		37.8	192	55.8		37.7
17	32	42.6	64	42.3	-14	26.6	262	45.8	+23	02.0	55	45.7	-10	37.6	207	58.3	+0	37.8
18	47	45.0	79	41.7	-14	25.6	277	49.3	+23	02.2	70	47.6	-10	37.4	223	00.9	+0	37.8
19	62	47.5	94	41.1		24.5	292	52.7		02.4	85	49.5		37.1	238	03.4		37.9
20	77	49.9	109	40.5		23.5	307	56.1		02.7	100	51.4		36.9	253	06.0		38.0
21	92	52.4	124	39.9		22.5	322	59.5		02.9	115	53.3		36.7	268	08.6		38.0
22	107	54.9	139	39.3		21.4	338	03.0		03.1	130	55.2		36.5	283	11.1		38.1
23	122	57.3	154	38.8		20.4	353	06.4		03.3	145	57.1		36.3	298	13.7		38.1
24	137	59.8	169	38.2	-14	19.3	8	09.8	+23	03.5	160	59.0	-10	36.1	313	16.2	+0	38.2
Dif	—		-6		+10		+34		+2		+19		+2		+26		+1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 23 ^d 7 PHE { 4 ^h : 55:2 12 ^h : 55:0 20 ^h : 54:9 PMG: 7 ^h 46 ^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	28.1	-15	05.7	247	30.7	-25	31.5	60 N	6 22	7 11	7 57	5 28	49	10 03	59	
1	191	28.0		04.9	261	59.1		33.3	58	19	06	48	5 03	50	29	57	
2	206	28.0		04.1	276	27.5		35.0	56	17	7 01	41	4 43	50	10 49	57	
3	221	28.0		03.3	290	55.9		36.6	54	15	6 57	34	26	50	11 06	56	
4	236	27.9		02.5	305	24.3		38.0	52	13	53	28	4 11	51	20	56	
5	251	27.9	-15	01.7	319	52.8	-25	39.3	50	6 11	6 49	7 23	3 59	51	11 33	55	
6	266	27.9	-15	00.9	334	21.2	-25	40.5	45	6 06	6 41	7 11	3 33	51	11 59	55	
7	281	27.9	-15	00.1	348	49.7		41.6	40	6 01	33	7 02	3 12	52	12 20	54	
8	296	27.8	-14	59.3	3	18.2		42.5	35	5 57	27	6 53	2 55	52	37	54	
9	311	27.8		58.6	17	46.7		43.2	30	53	21	46	40	52	12 52	53	
10	326	27.8		57.8	32	15.2		43.9	20	44	10	33	2 15	52	13 17	53	
11	341	27.8	-14	57.0	46	43.8	-25	44.4	10 N	5 35	6 00	6 21	1 54	52	13 39	52	
12	356	27.7	-14	56.2	61	12.3	-25	44.8	0	5 24	5 49	6 11	1 34	52	13 59	51	
13	11	27.7		55.4	75	40.9		45.0	10 S	5 12	38	6 00	1 14	52	14 19	51	
14	26	27.7		54.6	90	09.5		45.2	20	4 58	25	5 48	0 52	52	14 41	50	
15	41	27.7		53.8	104	38.2		45.2	30	39	5 09	34	27	52	15 06	49	
16	56	27.6		53.0	119	06.8		45.0	35	27	4 59	27	0 13	51	21	48	
17	71	27.6	-14	52.2	133	35.5	-25	44.7	40	4 12	4 48	5 17	** ** *	**	15 38	48	
18	86	27.6	-14	51.4	148	04.2	-25	44.3	45	3 54	4 34	5 07	** ** *	**	15 58	47	
19	101	27.6		50.6	162	32.9		43.8	50	30	17	4 54	** ** *	**	16 24	46	
20	116	27.6		49.8	177	01.7		43.2	52	18	09	48	23	49	60	36	45
21	131	27.5		49.0	191	30.5		42.4	54	3 04	4 00	41	35	61	16 51	44	
22	146	27.5		48.2	205	59.3		41.5	56	2 48	3 49	33	23	18	62	17 07	43
23	161	27.5		47.4	220	28.1		40.4	58	2 27	37	25	22	58	64	27	42
24	176	27.5	-14	46.6	234	57.0	-25	39.3	60 S	1 59	3 22	4 15	22	33	67	17 52	39

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 45 ^m 6		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: -1.1 PMG: 23 ^h 22 ^m		Mag: -2.0 PMG: 13 ^h 14 ^m		Mag: +0.7 PMG: 3 ^h 06 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	137	59.8	169	38.2	-14	19.3	8	09.8	+23	03.5	160	59.0	-10	36.1	313	16.2	+0	38.2
1	153	02.3	184	37.6		18.3	23	13.3		03.7	176	00.9		35.8	328	18.8		38.2
2	168	04.7	199	37.0		17.3	38	16.7		03.9	191	02.8		35.6	343	21.4		38.3
3	183	07.2	214	36.4		16.2	53	20.1		04.1	206	04.7		35.4	358	23.9		38.3
4	198	09.7	229	35.8		15.2	68	23.5		04.3	221	06.6		35.2	13	26.5		38.4
5	213	12.1	244	35.2	-14	14.1	83	27.0	+23	04.5	236	08.5	-10	35.0	28	29.0	+0	38.4
6	228	14.6	259	34.7	-14	13.1	98	30.4	+23	04.7	251	10.4	-10	34.8	43	31.6	+0	38.5
7	243	17.0	274	34.1		12.1	113	33.8		04.9	266	12.3		34.5	58	34.2		38.5
8	258	19.5	289	33.5		11.0	128	37.2		05.1	281	14.2		34.3	73	36.7		38.6
9	273	22.0	304	32.9		10.0	143	40.6		05.3	296	16.1		34.1	88	39.3		38.6
10	288	24.4	319	32.3		08.9	158	44.1		05.5	311	18.0		33.9	103	41.8		38.7
11	303	26.9	334	31.7	-14	07.9	173	47.5	+23	05.7	326	19.9	-10	33.7	118	44.4	+0	38.7
12	318	29.4	349	31.2	-14	06.8	188	50.9	+23	05.9	341	21.8	-10	33.5	133	47.0	+0	38.8
13	333	31.8	4	30.6		05.8	203	54.3		06.1	356	23.7		33.2	148	49.5		38.8
14	348	34.3	19	30.0		04.7	218	57.7		06.3	11	25.6		33.0	163	52.1		38.9
15	3	36.8	34	29.4		03.7	234	01.1		06.5	26	27.5		32.8	178	54.7		39.0
16	18	39.2	49	28.8		02.6	249	04.6		06.7	41	29.4		32.6	193	57.2		39.0
17	33	41.7	64	28.3	-14	01.6	264	08.0	+23	06.9	56	31.3	-10	32.4	208	59.8	+0	39.1
18	48	44.2	79	27.7	-14	00.5	279	11.4	+23	07.1	71	33.2	-10	32.2	224	02.3	+0	39.1
19	63	46.6	94	27.1	-13	59.5	294	14.8		07.3	86	35.1		31.9	239	04.9		39.2
20	78	49.1	109	26.5		58.4	309	18.2		07.5	101	37.0		31.7	254	07.5		39.2
21	93	51.5	124	26.0		57.4	324	21.6		07.7	116	38.9		31.5	269	10.0		39.3
22	108	54.0	139	25.4		56.3	339	25.0		07.8	131	40.8		31.3	284	12.6		39.3
23	123	56.5	154	24.8		55.3	354	28.5		08.0	146	42.7		31.1	299	15.2		39.4
24	138	58.9	169	24.2	-13	54.2	9	31.9	+23	08.2	161	44.6	-10	30.9	314	17.7	+0	39.4
Dif	—		-6 +10		+34		+2		+19		+2		+26		+		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			Edad: 24 ^d 7 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	176	27.5	-14	46.6	234	57.0	-25	39.3	60 N	16 35	17 20	18 10	6 17 30	11 02 74				
1	191	27.5		45.8	249	25.9	99	38.0	58	43	25	12	5 53 33	26 70				
2	206	27.4		45.0	263	54.9	100	36.5	56	50	30	14	33 36	11 46 67				
3	221	27.4		44.2	278	23.8	99	35.0	54	16 57	34	16	16 38	12 02 65				
4	236	27.4		43.4	292	52.8	100	33.3	52	17 02	38	18	5 02 39	16 64				
5	251	27.4	-14	42.6	307	21.9	101	-25	50	17 08	17 42	18 20	4 50 40	12 28 63				
6	266	27.4	-14	41.8	321	51.0	101	-25	45	17 19	17 50	18 24	4 24 43	12 54 59				
7	281	27.3		41.0	336	20.1	101	27.6	40	28	17 57	29	4 04 44	13 14 58				
8	296	27.3		40.2	350	49.2	101	25.4	35	37	18 03	33	3 47 45	31 56				
9	311	27.3		39.4	5	18.4	102	23.1	30	44	08	37	32 47	13 45 55				
10	326	27.3		38.6	19	47.7	103	20.7	20	17 56	19	45	3 07 48	14 10 53				
11	341	27.3	-14	37.8	34	16.9	102	-25	10 N	18 07	18 29	18 54	2 46 49	14 31 51				
12	356	27.3	-14	37.0	48	46.2	103	-25	0	18 18	18 39	19 04	2 26 50	14 50 50				
13	11	27.2		36.2	63	15.6	104	12.7	10 S	28	18 50	15	2 06 51	15 10 48				
14	26	27.2		35.4	77	45.0	104	09.8	20	40	19 02	30	1 44 53	31 46				
15	41	27.2		34.6	92	14.4	104	06.7	30	18 53	18	48	19 54	15 55 44				
16	56	27.2		33.8	106	43.9	105	03.6	35	19 00	27	19 59	1 04 56	16 09 43				
17	71	27.2	-14	33.0	121	13.4	105	-25	40	19 09	19 38	20 14	0 47 57	16 26 40				
18	86	27.2	-14	32.2	135	43.0	106	-24	45	19 19	19 51	20 31	0 27 57	16 45 39				
19	101	27.1		31.4	150	12.6	106	53.4	50	32	20 08	20 54	0 01 59	17 10 36				
20	116	27.1		30.5	164	42.3	107	49.8	52	38	16	21 05	** ** *	21 35				
21	131	27.1		29.7	179	12.0	107	46.1	54	44	25	19	** ** *	35 32				
22	146	27.1		28.9	193	41.7	107	42.2	56	51	35	35	** ** *	17 50 31				
23	161	27.1		28.1	208	11.5	108	38.2	58	19 59	20 47	21 54	** ** *	18 09 27				
24	176	27.1	-14	27.3	222	41.4	109	-24	60 S	20 08	21 01	22 19	23 40 79	18 31 23				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 41 ^m 7		Mag: -3.9 PMG: 12 ^h 43 ^m				Mag: -1.1 PMG: 23 ^h 17 ^m				Mag: -2.0 PMG: 13 ^h 11 ^m				Mag: +0.7 PMG: 3 ^h 02 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	138	58.9	169	24.2	-13	54.2	9	31.9	+23	08.2	161	44.6	-10	30.9	314	17.7	+0	39.4
1	154	01.4	184	23.7		53.1	24	35.3		08.4	176	46.5		30.6	329	20.3		39.5
2	169	03.9	199	23.1		52.1	39	38.7		08.6	191	48.5		30.4	344	22.8		39.5
3	184	06.3	214	22.5		51.0	54	42.1		08.8	206	50.4		30.2	359	25.4		39.6
4	199	08.8	229	21.9		50.0	69	45.5		09.0	221	52.3		30.0	14	28.0		39.6
5	214	11.3	244	21.4	-13	48.9	84	48.9	+23	09.2	236	54.2	-10	29.8	29	30.5	+0	39.7
6	229	13.7	259	20.8	-13	47.9	99	52.3	+23	09.4	251	56.1	-10	29.6	44	33.1	+0	39.8
7	244	16.2	274	20.2		46.8	114	55.7		09.6	266	58.0		29.3	59	35.7		39.8
8	259	18.7	289	19.6		45.7	129	59.1		09.8	281	59.9		29.1	74	38.2		39.9
9	274	21.1	304	19.1		44.7	145	02.5		10.0	297	01.8		28.9	89	40.8		39.9
10	289	23.6	319	18.5		43.6	160	05.9		10.1	312	03.7		28.7	104	43.4		40.0
11	304	26.0	334	17.9	-13	42.6	175	09.3	+23	10.3	327	05.6	-10	28.5	119	45.9	+0	40.0
12	319	28.5	349	17.4	-13	41.5	190	12.7	+23	10.5	342	07.5	-10	28.2	134	48.5	+0	40.1
13	334	31.0	4	16.8		40.4	205	16.1		10.7	357	09.4		28.0	149	51.1		40.1
14	349	33.4	19	16.2		39.4	220	19.5		10.9	12	11.3		27.8	164	53.6		40.2
15	4	35.9	34	15.7		38.3	235	22.9		11.1	27	13.2		27.6	179	56.2		40.2
16	19	38.4	49	15.1		37.2	250	26.3		11.3	42	15.1		27.4	194	58.8		40.3
17	34	40.8	64	14.5	-13	36.2	265	29.7	+23	11.5	57	17.0	-10	27.2	210	01.3	+0	40.4
18	49	43.3	79	14.0	-13	35.1	280	33.1	+23	11.6	72	18.9	-10	26.9	225	03.9	+0	40.4
19	64	45.8	94	13.4		34.0	295	36.5		11.8	87	20.8		26.7	240	06.5		40.5
20	79	48.2	109	12.8		33.0	310	39.9		12.0	102	22.7		26.5	255	09.0		40.5
21	94	50.7	124	12.3		31.9	325	43.3		12.2	117	24.6		26.3	270	11.6		40.6
22	109	53.2	139	11.7		30.8	340	46.7		12.4	132	26.5		26.1	285	14.2		40.6
23	124	55.6	154	11.1		29.8	355	50.1		12.6	147	28.4		25.9	300	16.7		40.7
24	139	58.1	169	10.6	-13	28.7	10	53.5	+23	12.7	162	30.3	-10	25.6	315	19.3	+0	40.7
Dif	—		-6		+11		+34		+2		+19		+2		+26		+	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 25 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 SD: 14'8 PMG: 9 ^h 28 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	27.1	-14	27.3	222	41.4	-24	34.1	42	60 N	6 18	7 07	7 52	6 47	17
1	191	27.1		26.5	237	11.3 ¹⁰⁹		29.9	42	58	15	7 02	44	26	21
2	206	27.1		25.7	251	41.3 ¹¹⁰		25.6	43	56	13	6 57	37	6 09	25
3	221	27.0		24.9	266	11.3 ¹¹⁰		21.2	44	54	11	53	30	5 54	28
4	236	27.0		24.1	280	41.3 ¹¹⁰		16.7	45	52	09	49	25	41	30
5	251	27.0	-14	23.3	295	11.4 ¹¹¹	-24	12.0	47	50	6 08	6 46	7 20	5 30	32
6	266	27.0	-14	22.4	309	41.6 ¹¹²	-24	07.2	48	45	6 03	6 38	7 09	5 07	35
7	281	27.0		21.6	324	11.8 ¹¹²	-24	02.3	49	40	5 59	31	6 59	4 48	38
8	296	27.0		20.8	338	42.0 ¹¹²	-23	57.4	49	35	55	25	51	32	40
9	311	27.0		20.0	353	12.3 ¹¹³		52.3	51	30	51	20	44	4 19	41
10	326	27.0		19.2	7	42.7 ¹¹⁴		47.0	53	20	43	6 09	32	3 55	44
11	341	27.0	-14	18.4	22	13.1 ¹¹⁴	-23	41.7	53	10 N	5 34	5 59	6 21	3 35	46
12	356	27.0	-14	17.6	36	43.6 ¹¹⁵	-23	36.3	54	0	5 25	5 49	6 11	3 16	49
13	11	26.9		16.7	51	14.1 ¹¹⁵		30.8	55	10 S	5 13	39	6 00	2 57	51
14	26	26.9		15.9	65	44.7 ¹¹⁶		25.1	57	20	4 59	26	5 49	37	53
15	41	26.9		15.1	80	15.3 ¹¹⁶		19.4	57	30	41	11	36	13	56
16	56	26.9		14.3	94	46.0 ¹¹⁷		13.5	59	35	29	5 02	29	2 00	57
17	71	26.9	-14	13.5	109	16.8 ¹¹⁸	-23	07.6	59	40	4 15	4 51	5 20	1 44	59
18	86	26.9	-14	12.7	123	47.6 ¹¹⁸	-23	01.5	61	45	3 58	4 38	5 10	1 24	62
19	101	26.9		11.9	138	18.5 ¹¹⁹	-22	55.4	61	50	35	21	4 57	1 00	65
20	116	26.9		11.0	152	49.4 ¹¹⁹		49.1	63	52	24	13	52	0 49	66
21	131	26.9		10.2	167	20.3 ¹¹⁹		42.7	64	54	3 10	4 04	45	36	68
22	146	26.9		09.4	181	51.4 ¹²¹		36.3	64	56	2 55	3 54	38	20	71
23	161	26.9		08.6	196	22.5 ¹²¹		29.7	66	58	35	42	30	0 02	74
24	176	26.9	-14	07.8	210	53.6 ¹²¹	-22	23.0	67	60 S	2 10	3 29	4 21	** ** *	18 54 13
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 37 ^m 7		Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: -1.1 PMG: 23 ^h 11 ^m			Mag: -2.0 PMG: 13 ^h 08 ^m			Mag: +0.7 PMG: 2 ^h 58 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	139	58.1	169	10.6	-13	28.7	10	53.5	+23	12.7	162	30.3	-10	25.6	
1	155	00.5	184	10.0		27.6	25	56.8		12.9	177	32.2		25.4	
2	170	03.0	199	09.5		26.5	41	00.2		13.1	192	34.1		25.2	
3	185	05.5	214	08.9		25.5	56	03.6		13.3	207	36.0		25.0	
4	200	07.9	229	08.3		24.4	71	07.0		13.5	222	37.9		24.8	
5	215	10.4	244	07.8	-13	23.3	86	10.4	+23	13.7	237	39.8	-10	24.5	
6	230	12.9	259	07.2	-13	22.2	101	13.8	+23	13.8	252	41.7	-10	24.3	
7	245	15.3	274	06.6		21.2	116	17.2		14.0	267	43.6		24.1	
8	260	17.8	289	06.1		20.1	131	20.5		14.2	282	45.5		23.9	
9	275	20.3	304	05.5		19.0	146	23.9		14.4	297	47.4		23.7	
10	290	22.7	319	05.0		17.9	161	27.3		14.6	312	49.3		23.5	
11	305	25.2	334	04.4	-13	16.9	176	30.7	+23	14.7	327	51.2	-10	23.2	
12	320	27.7	349	03.9	-13	15.8	191	34.1	+23	14.9	342	53.1	-10	23.0	
13	335	30.1	4	03.3		14.7	206	37.5		15.1	357	55.0		22.8	
14	350	32.6	19	02.7		13.6	221	40.8		15.3	12	56.9		22.6	
15	5	35.0	34	02.2		12.5	236	44.2		15.4	27	58.8		22.4	
16	20	37.5	49	01.6		11.5	251	47.6		15.6	43	00.7		22.1	
17	35	40.0	64	01.1	-13	10.4	266	51.0	+23	15.8	58	02.6	-10	21.9	
18	50	42.4	79	00.5	-13	09.3	281	54.3	+23	16.0	73	04.5	-10	21.7	
19	65	44.9	94	00.0		08.2	296	57.7		16.1	88	06.4		21.5	
20	80	47.4	108	59.4		07.1	312	01.1		16.3	103	08.3		21.3	
21	95	49.8	123	58.9		06.0	327	04.5		16.5	118	10.2		21.1	
22	110	52.3	138	58.3		05.0	342	07.8		16.7	133	12.1		20.8	
23	125	54.8	153	57.8		03.9	357	11.2		16.8	148	14.0		20.6	
24	140	57.2	168	57.2	-13	02.8	12	14.6	+23	17.0	163	15.9	-10	20.4	
Dif	—		-6			+11	+34			+2	+19		+2	+26	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 14 ^m 2		Edad: 26 ^d 7 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:0 R°: 45 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	176	26.9	-14	07.8	210	53.6	-22 23.0	60 N	16 40	17 25	18 14	7 04	10	13 38	83			
1	191	26.9		06.9	225	24.8 ¹²²	16.3 ⁶⁷	58	48	30	16	6 47	15	13 53	79			
2	206	26.9		06.1	239	56.1 ¹²³	09.4 ⁶⁹	56	16 55	34	18	34	17	14 06	76			
3	221	26.9		05.3	254	27.4 ¹²³	-22 02.4 ⁷⁰	54	17 01	38	20	22	20	18	72			
4	236	26.9		04.5	268	58.8 ¹²⁴	-21 55.4 ⁷⁰	52	06	42	21	11	23	28	70			
5	251	26.9	-14	03.7	283	30.2 ¹²⁴	-21 48.2 ⁷²	50	17 11	17 45	18 23	6 02	24	14 37	68			
6	266	26.9	-14	02.8	298	01.7 ¹²⁵	-21 41.0 ⁷²	45	17 22	17 52	18 27	5 42	29	14 56	64			
7	281	26.9		02.0	312	33.3 ¹²⁶	33.7 ⁷³	40	31	17 59	31	26	31	15 12	60			
8	296	26.9		01.2	327	04.9 ¹²⁶	26.2 ⁷⁵	35	39	18 05	35	12	34	24	58			
9	311	26.9	-14	00.4	341	36.5 ¹²⁶	18.7 ⁷⁵	30	45	10	38	5 00	36	36	55			
10	326	26.8	-13	59.5	356	08.3 ¹²⁸	11.1 ⁷⁶	20	17 57	20	46	4 39	40	15 55	51			
11	341	26.8	-13	58.7	10	40.0 ¹²⁷	-21 03.4 ⁷⁷	10 N	18 08	18 29	18 54	4 21	44	16 12	48			
12	356	26.8	-13	57.9	25	11.9 ¹²⁹	-20 55.6 ⁷⁸	0	18 18	18 39	19 04	4 05	46	16 27	45			
13	11	26.8		57.1	39	43.8 ¹²⁹	47.7 ⁷⁹	10 S	28	18 49	15	3 48	49	43	41			
14	26	26.8		56.2	54	15.7 ¹²⁹	39.7 ⁸⁰	20	39	19 01	28	30	52	16 59	38			
15	41	26.8		55.4	68	47.8 ¹³¹	31.7 ⁸⁰	30	51	16	46	3 09	55	17 18	34			
16	56	26.8		54.6	83	19.8 ¹³⁰	23.5 ⁸²	35	18 58	25	19 57	2 57	57	29	32			
17	71	26.8	-13	53.8	97	52.0 ¹³²	-20 15.3 ⁸²	40	19 07	19 36	20 11	2 43	60	17 41	30			
18	86	26.9	-13	52.9	112	24.2 ¹³²	-20 06.9 ⁸⁴	45	19 16	19 48	20 27	2 26	63	17 56	26			
19	101	26.9		52.1	126	56.4 ¹³²	-19 58.5 ⁸⁴	50	28	20 04	20 49	2 05	67	18 13	23			
20	116	26.9		51.3	141	28.7 ¹³³	50.1 ⁸⁴	52	34	12	21 00	1 55	69	22	20			
21	131	26.9		50.5	156	01.1 ¹³⁴	41.5 ⁸⁶	54	40	20	13	44	72	31	18			
22	146	26.9		49.6	170	33.5 ¹³⁴	32.8 ⁸⁷	56	47	30	28	31	75	42	15			
23	161	26.9		48.8	185	06.0 ¹³⁵	24.1 ⁸⁷	58	19 54	41	21 46	1 16	78	18 54	12			
24	176	26.9	-13	48.0	199	38.5 ¹³⁵	-19 15.3 ⁸⁸	60 S	20 03	20 54	22 09	0 59	82	19 07	9			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 33 ^m 8		Mag: -3.9 PMG: 12 ^h 45 ^m			Mag: -1.1 PMG: 23 ^h 06 ^m			Mag: -2.0 PMG: 13 ^h 05 ^m			Mag: +0.7 PMG: 2 ^h 54 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	140	57.2	168	57.2	-13	02.8	12	14.6	+23	17.0	163	15.9	-10	20.4	316	20.9	+0	42.1
1	155	59.7	183	56.7		01.7	27	17.9		17.2	178	17.8		20.2	331	23.5		42.1
2	171	02.1	198	56.1	-13	00.6	42	21.3		17.3	193	19.7		20.0	346	26.1		42.2
3	186	04.6	213	55.6	-12	59.5	57	24.7		17.5	208	21.6		19.7	1	28.6		42.2
4	201	07.1	228	55.0		58.4	72	28.0		17.7	223	23.5		19.5	16	31.2		42.3
5	216	09.5	243	54.5	-12	57.4	87	31.4	+23	17.9	238	25.4	-10	19.3	31	33.8	+0	42.4
6	231	12.0	258	53.9	-12	56.3	102	34.8	+23	18.0	253	27.3	-10	19.1	46	36.4	+0	42.4
7	246	14.5	273	53.4		55.2	117	38.1		18.2	268	29.2		18.9	61	38.9		42.5
8	261	16.9	288	52.8		54.1	132	41.5		18.4	283	31.1		18.6	76	41.5		42.5
9	276	19.4	303	52.3		53.0	147	44.9		18.5	298	33.0		18.4	91	44.1		42.6
10	291	21.9	318	51.7		51.9	162	48.2		18.7	313	34.9		18.2	106	46.6		42.6
11	306	24.3	333	51.2	-12	50.8	177	51.6	+23	18.9	328	36.8	-10	18.0	121	49.2	+0	42.7
12	321	26.8	348	50.6	-12	49.7	192	54.9	+23	19.0	343	38.7	-10	17.8	136	51.8	+0	42.8
13	336	29.3	3	50.1		48.6	207	58.3		19.2	358	40.6		17.6	151	54.4		42.8
14	351	31.7	18	49.5		47.5	223	01.7		19.4	13	42.5		17.3	166	56.9		42.9
15	6	34.2	33	49.0		46.4	238	05.0		19.5	28	44.4		17.1	181	59.5		42.9
16	21	36.6	48	48.4		45.3	253	08.4		19.7	43	46.3		16.9	197	02.1		43.0
17	36	39.1	63	47.9	-12	44.2	268	11.7	+23	19.9	58	48.2	-10	16.7	212	04.6	+0	43.0
18	51	41.6	78	47.4	-12	43.1	283	15.1	+23	20.0	73	50.1	-10	16.5	227	07.2	+0	43.1
19	66	44.0	93	46.8		42.1	298	18.4		20.2	88	52.0		16.2	242	09.8		43.2
20	81	46.5	108	46.3		41.0	313	21.8		20.4	103	53.9		16.0	257	12.4		43.2
21	96	49.0	123	45.7		39.9	328	25.1		20.5	118	55.8		15.8	272	14.9		43.3
22	111	51.4	138	45.2		38.8	343	28.5		20.7	133	57.7		15.6	287	17.5		43.3
23	126	53.9	153	44.7		37.7	358	31.8		20.8	148	59.6		15.4	302	20.1		43.4
24	141	56.4	168	44.1	-12	36.6	13	35.2	+23	21.0	164	01.5	-10	15.1	317	22.7	+0	43.4
Dif	—		-5		+11		+34		+2		+19		+2		+26		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 27 ^d 7 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 53'9 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	26.9	-13 48.0	199	38.5	-19 15.3	60 N	6 13	7 02	7 47		7 14	7	15 01	82
1	191	26.9		214	11.1 ¹³⁶	-19 06.4 ⁸⁹	58	11	6 57	39		7 02	10	12 78	
2	206	26.9		228	43.7 ¹³⁶	-18 57.4 ⁹⁰	56	09	53	32		6 51	14	22 75	
3	221	26.9		243	16.4 ¹³⁷	48.3 ⁹¹	54	08	49	26		42	16	30 73	
4	236	26.9		257	49.2 ¹³⁸	39.2 ⁹¹	52	06	46	21		34	18	38 70	
5	251	26.9	-13 43.8	272	22.0 ¹³⁸	-18 30.0 ⁹²	50	6 05	6 43	7 16		6 26	21	15 45	68
6	266	26.9	-13 43.0	286	54.9 ¹³⁹	-18 20.7 ⁹³	45	6 01	6 35	7 06		6 11	24	16 00	63
7	281	26.9		301	27.8 ¹³⁹	11.3 ⁹⁴	40	5 57	29	6 57		5 57	28	12 60	
8	296	26.9		316	00.8 ¹⁴⁰	-18 01.9 ⁹⁴	35	53	23	49		46	31	22 57	
9	311	26.9		330	33.8 ¹⁴⁰	-17 52.4 ⁹⁵	30	50	18	43		36	33	31 54	
10	326	26.9		345	06.9 ¹⁴¹	42.8 ⁹⁶	20	42	6 08	31		19	37	16 46	50
11	341	26.9	-13 38.8	359	40.0 ¹⁴¹	-17 33.2 ⁹⁶	10 N	5 34	5 59	6 21		5 05	40	17 00	46
12	356	26.9	-13 38.0	14	13.2 ¹⁴²	-17 23.4 ⁹⁸	0	5 25	5 49	6 11		4 51	43	17 12	43
13	11	26.9		28	46.5 ¹⁴³	13.6 ⁹⁸	10 S	14	39	6 01		37	47	24 40	
14	26	26.9		43	19.8 ¹⁴³	-17 03.8 ⁹⁸	20	5 00	27	5 50		22	50	37 36	
15	41	27.0		57	53.1 ¹⁴³	-16 53.8 ¹⁰⁰	30	4 43	13	38		4 04	55	17 52	32
16	56	27.0		72	26.5 ¹⁴⁴	43.8 ¹⁰⁰	35	32	5 04	31		3 54	57	18 01	29
17	71	27.0	-13 33.8	87	00.0 ¹⁴⁵	-16 33.8 ¹⁰⁰	40	4 18	4 53	5 22		3 43	60	18 11	26
18	86	27.0	-13 33.0	101	33.5 ¹⁴⁵	-16 23.6 ¹⁰²	45	4 01	4 41	5 13		3 29	64	18 22	23
19	101	27.0		116	07.0 ¹⁴⁵	13.4 ¹⁰²	50	3 40	25	5 01		12	68	36 18	
20	116	27.0		130	40.6 ¹⁴⁶	-16 03.2 ¹⁰²	52	29	17	4 55		3 04	70	42 17	
21	131	27.0		145	14.3 ¹⁴⁷	-15 52.8 ¹⁰⁴	54	16	4 09	49		2 56	72	49 14	
22	146	27.0		159	48.0 ¹⁴⁷	42.4 ¹⁰⁴	56	3 01	3 59	43		46	75	18 57	12
23	161	27.0		174	21.7 ¹⁴⁷	32.0 ¹⁰⁴	58	2 43	48	35		34	79	19 06	9
24	176	27.0	-13 28.0	188	55.5 ¹⁴⁸	-15 21.5 ¹⁰⁵	60 S	2 20	3 35	4 26		2 21	83	19 16	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 14 ^h 29 ^m 9		Mag: -3.9 PMG: 12 ^h 46 ^m		Mag: -1.0 PMG: 23 ^h 01 ^m		Mag: -2.0 PMG: 13 ^h 02 ^m		Mag: +0.7 PMG: 2 ^h 50 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	141	56.4	168	44.1	-12 36.6	13 35.2	+23 21.0	164 01.5	-10 15.1	317 22.7	+0 43.4
1	156	58.8	183	43.6	35.5	28 38.5	21.2	179 03.4	14.9	332 25.2	43.5
2	172	01.3	198	43.0	34.4	43 41.9	21.3	194 05.3	14.7	347 27.8	43.6
3	187	03.8	213	42.5	33.3	58 45.2	21.5	209 07.2	14.5	2 30.4	43.6
4	202	06.2	228	42.0	32.2	73 48.5	21.6	224 09.1	14.3	17 33.0	43.7
5	217	08.7	243	41.4	-12 31.0	88 51.9	+23 21.8	239 11.0	-10 14.0	32 35.5	+0 43.7
6	232	11.1	258	40.9	-12 29.9	103 55.2	+23 22.0	254 12.9	-10 13.8	47 38.1	+0 43.8
7	247	13.6	273	40.3	28.8	118 58.6	22.1	269 14.8	13.6	62 40.7	43.9
8	262	16.1	288	39.8	27.7	134 01.9	22.3	284 16.7	13.4	77 43.3	43.9
9	277	18.5	303	39.3	26.6	149 05.3	22.4	299 18.6	13.2	92 45.8	44.0
10	292	21.0	318	38.7	25.5	164 08.6	22.6	314 20.5	12.9	107 48.4	44.0
11	307	23.5	333	38.2	-12 24.4	179 11.9	+23 22.7	329 22.4	-10 12.7	122 51.0	+0 44.1
12	322	25.9	348	37.7	-12 23.3	194 15.3	+23 22.9	344 24.3	-10 12.5	137 53.6	+0 44.1
13	337	28.4	3	37.1	22.2	209 18.6	23.1	359 26.2	12.3	152 56.1	44.2
14	352	30.9	18	36.6	21.1	224 21.9	23.2	14 28.1	12.1	167 58.7	44.3
15	7	33.3	33	36.1	20.0	239 25.3	23.4	29 30.0	11.8	183 01.3	44.3
16	22	35.8	48	35.5	18.9	254 28.6	23.5	44 31.9	11.6	198 03.9	44.4
17	37	38.2	63	35.0	-12 17.8	269 31.9	+23 23.7	59 33.8	-10 11.4	213 06.4	+0 44.4
18	52	40.7	78	34.5	-12 16.7	284 35.3	+23 23.8	74 35.7	-10 11.2	228 09.0	+0 44.5
19	67	43.2	93	33.9	15.5	299 38.6	24.0	89 37.6	11.0	243 11.6	44.6
20	82	45.6	108	33.4	14.4	314 41.9	24.1	104 39.5	10.8	258 14.2	44.6
21	97	48.1	123	32.9	13.3	329 45.2	24.3	119 41.4	10.5	273 16.7	44.7
22	112	50.6	138	32.3	12.2	344 48.6	24.4	134 43.3	10.3	288 19.3	44.7
23	127	53.0	153	31.8	11.1	359 51.9	24.6	149 45.2	10.1	303 21.9	44.8
24	142	55.5	168	31.3	-12 10.0	14 55.2	+23 24.7	164 47.1	-10 09.9	318 24.5	+0 44.8
Dif	—		-5 +11		+33 +2		+19 +2		+26 +1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 28 ^d 7 PHE { SD: 14:7 PMG: 11 ^h 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	176	27.0	-13	28.0	188	55.5	-15	21.5	60 N	16 45	17 30	18 19	7 21	4	16 23 80
1	191	27.1		27.1	203	29.4 ¹⁴⁹		10.9 ¹⁰⁶	58	53	34	20	12	8	30 77
2	206	27.1		26.3	218	03.2 ¹⁴⁸	-15	00.3 ¹⁰⁶	56	16 59	38	22	7 05	10	37 74
3	221	27.1		25.4	232	37.2 ¹⁵⁰	-14	49.6 ¹⁰⁷	54	17 05	42	23	6 58	13	43 71
4	236	27.1		24.6	247	11.2 ¹⁵⁰		38.8 ¹⁰⁸	52	10	45	25	52	15	48 69
5	251	27.1	-13	23.8	261	45.2 ¹⁵⁰	-14	28.0 ¹⁰⁸	50	17 15	17 48	18 26	6 47	17	16 53 67
6	266	27.1	-13	22.9	276	19.3 ¹⁵¹	-14	17.1 ¹⁰⁹	45	17 25	17 55	18 30	6 35	21	17 03 63
7	281	27.1		22.1	290	53.4 ¹⁵¹	-14	06.2 ¹⁰⁹	40	33	18 01	33	25	25	12 59
8	296	27.1		21.2	305	27.6 ¹⁵²	-13	55.2 ¹¹⁰	35	41	07	36	17	27	19 56
9	311	27.2		20.4	320	01.8 ¹⁵²		44.2 ¹¹⁰	30	47	12	40	6 09	30	25 54
10	326	27.2		19.6	334	36.0 ¹⁵²		33.1 ¹¹¹	20	17 58	21	47	5 56	35	36 49
11	341	27.2	-13	18.7	349	10.3 ¹⁵³	-13	21.9 ¹¹²	10 N	18 08	18 30	18 55	5 45	38	17 46 45
12	356	27.2	-13	17.9	3	44.6 ¹⁵³	-13	10.7 ¹¹²	0	18 18	18 39	19 03	5 34	42	17 55 41
13	11	27.2		17.0	18	19.0 ¹⁵⁴	-12	59.5 ¹¹²	10 S	27	18 49	14	24	45	18 04 37
14	26	27.2		16.2	32	53.4 ¹⁵⁴		48.2 ¹¹³	20	37	19 00	27	5 12	50	13 34
15	41	27.2		15.3	47	27.9 ¹⁵⁵		36.8 ¹¹⁴	30	49	14	44	4 59	54	24 29
16	56	27.3		14.5	62	02.3 ¹⁵⁴		25.4 ¹¹⁴	35	18 56	23	19 55	51	57	30 26
17	71	27.3	-13	13.7	76	36.9 ¹⁵⁶	-12	14.0 ¹¹⁴	40	19 04	19 33	20 08	4 43	59	18 37 23
18	86	27.3	-13	12.8	91	11.4 ¹⁵⁵	-12	02.5 ¹¹⁵	45	19 13	19 45	20 24	4 33	63	18 45 20
19	101	27.3		12.0	105	46.0 ¹⁵⁶	-11	50.9 ¹¹⁶	50	25	20 00	45	20	68	54 16
20	116	27.3		11.1	120	20.7 ¹⁵⁷		39.3 ¹¹⁶	52	30	07	20 55	14	70	18 59 14
21	131	27.3		10.3	134	55.4 ¹⁵⁷		27.7 ¹¹⁶	54	36	16	21 07	08	72	19 03 13
22	146	27.4		09.4	149	30.1 ¹⁵⁷		16.0 ¹¹⁷	56	42	25	21	4 01	74	09 10
23	161	27.4		08.6	164	04.8 ¹⁵⁷	-11	04.3 ¹¹⁷	58	49	35	38	3 53	77	15 7
24	176	27.4	-13	07.7	178	39.6 ¹⁵⁸	-10	52.5 ¹¹⁸	60 S	19 57	20 47	21 59	3 44	80	19 21 5
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 25 ^m 9		Mag: -3.9 PMG: 12 ^h 46 ^m		Mag: -1.0 PMG: 22 ^h 55 ^m		Mag: -2.0 PMG: 12 ^h 59 ^m		Mag: +0.7 PMG: 2 ^h 46 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	142	55.5	168	31.3	14	55.2	164	47.1	318	24.5					
1	157	58.0	183	30.8	29	58.5	179	49.0	333	27.0					
2	173	00.4	198	30.2	45	01.9	194	50.9	348	29.6					
3	188	02.9	213	29.7	60	05.2	209	52.8	3	32.2					
4	203	05.4	228	29.2	75	08.5	224	54.7	18	34.8					
5	218	07.8	243	28.6	90	11.8	239	56.6	33	37.4					
6	233	10.3	258	28.1	105	15.1	254	58.5	48	39.9					
7	248	12.7	273	27.6	120	18.4	270	00.4	63	42.5					
8	263	15.2	288	27.1	135	21.8	285	02.3	78	45.1					
9	278	17.7	303	26.5	150	25.1	300	04.2	93	47.7					
10	293	20.1	318	26.0	165	28.4	315	06.1	108	50.2					
11	308	22.6	333	25.5	180	31.7	330	08.0	123	52.8					
12	323	25.1	348	25.0	195	35.0	345	09.9	138	55.4					
13	338	27.5	3	24.5	210	38.3	0	11.8	153	58.0					
14	353	30.0	18	23.9	225	41.6	15	13.7	169	00.6					
15	8	32.5	33	23.4	240	44.9	30	15.6	184	03.1					
16	23	34.9	48	22.9	255	48.2	45	17.5	199	05.7					
17	38	37.4	63	22.4	270	51.5	60	19.4	214	08.3					
18	53	39.9	78	21.8	285	54.9	75	21.3	229	10.9					
19	68	42.3	93	21.3	300	58.2	90	23.2	244	13.5					
20	83	44.8	108	20.8	316	01.5	105	25.1	259	16.0					
21	98	47.2	123	20.3	331	04.8	120	27.0	274	18.6					
22	113	49.7	138	19.8	346	08.1	135	28.9	289	21.2					
23	128	52.2	153	19.2	1	11.4	150	30.8	304	23.8					
24	143	54.6	168	18.7	16	14.7	165	32.7	319	26.4					
Dif	—		-5		+11		+19		+26						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 29 ^d 7 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	176	27.4	-13 07.7	178	39.6	-10 52.5	60 N	6 08	6 57	7 41	7 25	4	17 43	79
1	191	27.4	06.9	193	14.4 ¹⁵⁸	40.7 ¹¹⁸	58	07	53	34	20	6	47	76
2	206	27.4	06.0	207	49.2 ¹⁵⁸	28.9 ¹¹⁸	56	05	49	28	15	9	51	73
3	221	27.5	05.2	222	24.1 ¹⁵⁹	17.0 ¹¹⁹	54	04	45	22	11	11	54	71
4	236	27.5	04.3	236	59.0 ¹⁵⁹	-10 05.0 ¹²⁰	52	03	42	17	07	14	17 57	69
5	251	27.5	-13 03.5	251	34.0 ¹⁶⁰	-9 53.1 ¹¹⁹	50	6 01	6 39	7 13	7 04	15	18 00	67
6	266	27.5	-13 02.6	266	08.9 ¹⁵⁹	-9 41.1 ¹²⁰	45	5 58	6 32	7 03	6 56	19	18 06	62
7	281	27.5	01.8	280	43.9 ¹⁶⁰	29.0 ¹²¹	40	55	27	6 54	50	22	11	59
8	296	27.6	00.9	295	18.9 ¹⁶⁰	16.9 ¹²¹	35	52	21	47	44	26	15	56
9	311	27.6	-13 00.1	309	54.0 ¹⁶¹	-9 04.8 ¹²¹	30	48	16	41	39	29	19	53
10	326	27.6	-12 59.2	324	29.1 ¹⁶¹	-8 52.7 ¹²¹	20	41	6 07	30	31	33	25	48
11	341	27.6	-12 58.4	339	04.2 ¹⁶¹	-8 40.5 ¹²²	10 N	5 34	5 59	6 20	6 23	37	18 31	44
12	356	27.7	-12 57.5	353	39.3 ¹⁶¹	-8 28.2 ¹²³	0	5 25	5 50	6 11	6 16	41	18 36	40
13	11	27.7	56.7	8	14.4 ¹⁶¹	16.0 ¹²²	10 S	14	40	6 01	09	45	41	37
14	26	27.7	55.8	22	49.6 ¹⁶²	-8 03.7 ¹²³	20	5 02	28	5 51	6 02	48	47	32
15	41	27.7	55.0	37	24.8 ¹⁶²	-7 51.4 ¹²³	30	4 45	14	39	5 53	53	53	28
16	56	27.7	54.1	52	00.0 ¹⁶²	39.0 ¹²⁴	35	34	5 06	33	48	56	18 56	26
17	71	27.8	-12 53.3	66	35.3 ¹⁶³	-7 26.6 ¹²⁴	40	4 21	4 56	5 25	5 42	59	19 00	23
18	86	27.8	-12 52.4	81	10.5 ¹⁶²	-7 14.2 ¹²⁴	45	4 05	4 44	5 16	5 36	62	19 05	19
19	101	27.8	51.6	95	45.8 ¹⁶³	-7 01.7 ¹²⁵	50	3 44	29	5 04	28	67	10	15
20	116	27.8	50.7	110	21.1 ¹⁶³	-6 49.3 ¹²⁴	52	34	22	4 59	24	69	13	13
21	131	27.9	49.8	124	56.4 ¹⁶³	36.8 ¹²⁵	54	22	14	54	20	71	16	10
22	146	27.9	49.0	139	31.7 ¹⁶³	24.2 ¹²⁶	56	3 08	4 04	47	15	74	19	8
23	161	27.9	48.1	154	07.1 ¹⁶⁴	-6 11.7 ¹²⁵	58	2 51	3 54	40	10	77	22	6
24	176	28.0	-12 47.3	168	42.5 ¹⁶⁴	-5 59.1 ¹²⁶	60 S	2 30	3 42	4 32	5 04	80	19 26	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 14 ^h 22 ^m 0		Mag: -3.9 PMG: 12 ^h 47 ^m		Mag: -1.0 PMG: 22 ^h 50 ^m		Mag: -2.0 PMG: 12 ^h 56 ^m		Mag: +0.7 PMG: 2 ^h 42 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	°	'	°	°	°	'					
0	143	54.6	168	18.7	-11 43.1	16	14.7	+23 28.2	165	32.7	-10 04.6	319	26.4	+0 46.3	
1	158	57.1	183	18.2	42.0	31	18.0	28.3	180	34.6	04.4	334	28.9	46.3	
2	173	59.6	198	17.7	40.8	46	21.3	28.5	195	36.5	04.1	349	31.5	46.4	
3	189	02.0	213	17.2	39.7	61	24.5	28.6	210	38.4	03.9	4	34.1	46.5	
4	204	04.5	228	16.7	38.6	76	27.8	28.8	225	40.3	03.7	19	36.7	46.5	
5	219	07.0	243	16.1	-11 37.4	91	31.1	+23 28.9	240	42.2	-10 03.5	34	39.3	+0 46.6	
6	234	09.4	258	15.6	-11 36.3	106	34.4	+23 29.0	255	44.1	-10 03.3	49	41.8	+0 46.6	
7	249	11.9	273	15.1	35.2	121	37.7	29.2	270	46.0	03.0	64	44.4	46.7	
8	264	14.3	288	14.6	34.0	136	41.0	29.3	285	47.9	02.8	79	47.0	46.8	
9	279	16.8	303	14.1	32.9	151	44.3	29.4	300	49.8	02.6	94	49.6	46.8	
10	294	19.3	318	13.6	31.8	166	47.6	29.6	315	51.7	02.4	109	52.2	46.9	
11	309	21.7	333	13.1	-11 30.6	181	50.9	+23 29.7	330	53.6	-10 02.2	124	54.7	+0 46.9	
12	324	24.2	348	12.5	-11 29.5	196	54.2	+23 29.8	345	55.5	-10 01.9	139	57.3	+0 47.0	
13	339	26.7	3	12.0	28.4	211	57.4	30.0	0	57.4	01.7	154	59.9	47.1	
14	354	29.1	18	11.5	27.2	227	00.7	30.1	15	59.3	01.5	170	02.5	47.1	
15	9	31.6	33	11.0	26.1	242	04.0	30.2	31	01.2	01.3	185	05.1	47.2	
16	24	34.1	48	10.5	25.0	257	07.3	30.4	46	03.1	01.1	200	07.7	47.3	
17	39	36.5	63	10.0	-11 23.8	272	10.6	+23 30.5	61	05.0	-10 00.8	215	10.2	+0 47.3	
18	54	39.0	78	09.5	-11 22.7	287	13.8	+23 30.6	76	06.9	-10 00.6	230	12.8	+0 47.4	
19	69	41.5	93	09.0	21.6	302	17.1	30.8	91	08.8	00.4	245	15.4	47.4	
20	84	43.9	108	08.5	20.4	317	20.4	30.9	106	10.7	-10 00.2	260	18.0	47.5	
21	99	46.4	123	07.9	19.3	332	23.7	31.0	121	12.5	-10 00.0	275	20.6	47.6	
22	114	48.8	138	07.4	18.1	347	26.9	31.1	136	14.4	-9 59.7	290	23.2	47.6	
23	129	51.3	153	06.9	17.0	2	30.2	31.3	151	16.3	59.5	305	25.7	47.7	
24	144	53.8	168	06.4	-11 15.9	17	33.5	+23 31.4	166	18.2	-9 59.3	320	28.3	+0 47.7	
Dif	—		-5	+11		+33	+1		+19		+2		+26		+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 30 ^d 7 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:3 R°: 40 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	28.0	-12 47.3	168	42.5	-5 59.1		60 N	16 51	17 35	18 24	7 29 3	19 02 80	
1	191	28.0		183	17.8 ¹⁶³	46.5 ¹²⁶		58	16 58	39	25	26 6	03 77	
2	206	28.0		197	53.2 ¹⁶⁴	33.9 ¹²⁶		56	17 03	42	26	24 9	04 74	
3	221	28.0		212	28.6 ¹⁶⁴	21.2 ¹²⁷		54	09	46	27	22 11	05 72	
4	236	28.1		227	04.1 ¹⁶⁵	-5 08.5 ¹²⁷		52	14	49	28	21 12	06 69	
5	251	28.1	-12 43.0	241	39.5 ¹⁶⁴	-4 55.8 ¹²⁷		50	17 18	17 52	18 29	7 19 15	19 07 67	
6	266	28.1	-12 42.1	256	14.9 ¹⁶⁴	-4 43.1 ¹²⁷		45	17 28	17 58	18 32	7 15 19	19 08 63	
7	281	28.1		270	50.4 ¹⁶⁵	30.4 ¹²⁷		40	36	18 03	35	12 23	10 59	
8	296	28.2		285	25.8 ¹⁶⁴	17.6 ¹²⁸		35	42	08	38	10 25	11 56	
9	311	28.2		300	01.3 ¹⁶⁵	-4 04.9 ¹²⁷		30	49	13	41	08 27	12 53	
10	326	28.2		314	36.8 ¹⁶⁵	-3 52.1 ¹²⁸		20	17 59	22	48	04 32	13 49	
11	341	28.3	-12 37.8	329	12.3 ¹⁶⁵	-3 39.3 ¹²⁸		10 N	18 09	18 30	18 55	7 00 37	19 15 44	
12	356	28.3	-12 37.0	343	47.7 ¹⁶⁴	-3 26.4 ¹²⁹		0	18 18	18 39	19 03	6 57 40	19 16 41	
13	11	28.3		358	23.2 ¹⁶⁵	13.6 ¹²⁸		10 S	27	48	13	54 44	18 36	
14	26	28.4		12	58.7 ¹⁶⁵	-3 00.7 ¹²⁹		20	36	18 59	26	50 48	19 33	
15	41	28.4		27	34.2 ¹⁶⁵	-2 47.9 ¹²⁸		30	48	19 12	42	46 53	21 28	
16	56	28.4		42	09.7 ¹⁶⁵	35.0 ¹²⁹		35	18 54	21	19 52	44 56	22 25	
17	71	28.4	-12 32.7	56	45.2 ¹⁶⁵	-2 22.1 ¹²⁹		40	19 02	19 30	20 05	6 41 59	19 23 22	
18	86	28.5	-12 31.8	71	20.8 ¹⁶⁶	-2 09.2 ¹²⁹		45	19 10	19 42	20 20	6 38 63	19 24 19	
19	101	28.5		85	56.3 ¹⁶⁵	-1 56.2 ¹³⁰		50	21	19 56	40	35 66	25 15	
20	116	28.5		100	31.8 ¹⁶⁵	43.3 ¹²⁹		52	26	20 03	20 50	33 69	26 13	
21	131	28.6		115	07.3 ¹⁶⁵	30.4 ¹²⁹		54	31	11	21 01	31 71	26 11	
22	146	28.6		129	42.8 ¹⁶⁵	17.4 ¹³⁰		56	37	19	15	29 74	27 9	
23	161	28.6		144	18.2 ¹⁶⁴	-1 04.4 ¹³⁰		58	44	29	31	27 76	28 6	
24	176	28.7	-12 26.6	158	53.7 ¹⁶⁵	-0 51.5 ¹²⁹		60 S	19 52	20 41	21 50	6 24 79	19 29 3	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG 14 ^h 18 ^m 1		Mag: -3.9 PMG: 12 ^h 48 ^m			Mag: -1.0 PMG: 22 ^h 45 ^m			Mag: -2.0 PMG: 12 ^h 53 ^m		Mag: +0.7 PMG: 2 ^h 38 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	
0	144	53.8	168	06.4	-11 15.9	17 33.5	+23 31.4	166	18.2	-9 59.3	320	28.3	+0 47.7	
1	159	56.2	183	05.9	14.7	32 36.8	31.5	181	20.1	59.1	335	30.9	47.8	
2	174	58.7	198	05.4	13.6	47 40.0	31.7	196	22.0	58.8	350	33.5	47.9	
3	190	01.2	213	04.9	12.4	62 43.3	31.8	211	23.9	58.6	5	36.1	47.9	
4	205	03.6	228	04.4	11.3	77 46.6	31.9	226	25.8	58.4	20	38.7	48.0	
5	220	06.1	243	03.9	-11 10.2	92 49.8	+23 32.0	241	27.7	-9 58.2	35	41.2	+0 48.0	
6	235	08.6	258	03.4	-11 09.0	107 53.1	+23 32.2	256	29.6	-9 58.0	50	43.8	+0 48.1	
7	250	11.0	273	02.9	07.9	122 56.4	32.3	271	31.5	57.7	65	46.4	48.2	
8	265	13.5	288	02.4	06.7	137 59.6	32.4	286	33.4	57.5	80	49.0	48.2	
9	280	16.0	303	01.9	05.6	153 02.9	32.5	301	35.3	57.3	95	51.6	48.3	
10	295	18.4	318	01.4	04.4	168 06.1	32.7	316	37.2	57.1	110	54.2	48.4	
11	310	20.9	333	00.9	-11 03.3	183 09.4	+23 32.8	331	39.1	-9 56.9	125	56.7	+0 48.4	
12	325	23.3	348	00.4	-11 02.2	198 12.7	+23 32.9	346	41.0	-9 56.6	140	59.3	+0 48.5	
13	340	25.8	2	59.9	-11 01.0	213 15.9	33.0	1	42.9	56.4	156	01.9	48.5	
14	355	28.3	17	59.4	-10 59.9	228 19.2	33.1	16	44.8	56.2	171	04.5	48.6	
15	10	30.7	32	58.9	58.7	243 22.4	33.3	31	46.7	56.0	186	07.1	48.7	
16	25	33.2	47	58.4	57.6	258 25.7	33.4	46	48.6	55.8	201	09.7	48.7	
17	40	35.7	62	57.9	-10 56.4	273 28.9	+23 33.5	61	50.5	-9 55.5	216	12.3	+0 48.8	
18	55	38.1	77	57.4	-10 55.3	288 32.2	+23 33.6	76	52.4	-9 55.3	231	14.8	+0 48.9	
19	70	40.6	92	56.9	54.1	303 35.4	33.8	91	54.3	55.1	246	17.4	48.9	
20	85	43.1	107	56.4	53.0	318 38.7	33.9	106	56.2	54.9	261	20.0	49.0	
21	100	45.5	122	55.9	51.8	333 41.9	34.0	121	58.1	54.6	276	22.6	49.0	
22	115	48.0	137	55.4	50.7	348 45.2	34.1	137	00.0	54.4	291	25.2	49.1	
23	130	50.4	152	54.9	49.5	3	48.4	152	01.9	54.2	306	27.8	49.2	
24	145	52.9	167	54.4	-10 48.4	18 51.7	+23 34.3	167	03.8	-9 54.0	321	30.4	+0 49.2	
Dif	—		-5 +11		+33 +1		+19 +2		+26 +1					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 14 ^m 1				Edad: 1 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: 41 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	28.7	-12	26.6	158	53.7	-0	51.5	60 N	6 03	6 52	7 36	7 32	4	20 22	81		
1	191	28.7		25.8	173	29.2 ¹⁶⁵		38.5 ¹³⁰	58	02	48	29	32	7	20 78			
2	206	28.7		24.9	188	04.7 ¹⁶⁵		25.5 ¹³⁰	56	01	45	23	33	9	18 75			
3	221	28.8		24.0	202	40.2 ¹⁶⁵		-0 12.5 ¹³⁰	54	6 00	41	18	33	11	17 72			
4	236	28.8		23.2	217	15.6 ¹⁶⁴		+0 00.5 ¹³⁰	52	5 59	39	13	33	14	15 71			
5	251	28.9	-12	22.3	231	51.1 ¹⁶⁵		+0 13.5 ¹³⁰	50	5 58	6 36	7 09	7 34	15	20 14	68		
6	266	28.9	-12	21.4	246	26.5 ¹⁶⁴		+0 26.5 ¹³⁰	45	5 55	6 30	7 00	7 34	19	20 11	64		
7	281	28.9		20.6	261	02.0 ¹⁶⁵		39.5 ¹³⁰	40	53	24	6 52	35	22	09 60			
8	296	29.0		19.7	275	37.4 ¹⁶⁴		+0 52.5 ¹³⁰	35	50	19	45	35	26	07 57			
9	311	29.0		18.8	290	12.8 ¹⁶⁴		+1 05.5 ¹³⁰	30	47	15	39	35	29	05 54			
10	326	29.0		18.0	304	48.2 ¹⁶⁴		18.5 ¹³⁰	20	40	6 06	29	36	33	20 02	49		
11	341	29.1	-12	17.1	319	23.6 ¹⁶⁴		+1 31.5 ¹³⁰	10 N	5 33	5 58	6 19	7 37	37	19 59	46		
12	356	29.1	-12	16.2	333	58.9 ¹⁶³		+1 44.5 ¹³⁰	0	5 25	5 50	6 11	7 37	41	19 57	41		
13	11	29.2		15.4	348	34.3 ¹⁶⁴		+1 57.5 ¹³⁰	10 S	15	40	6 02	38	45	54 38			
14	26	29.2		14.5	3	09.6 ¹⁶³		+2 10.5 ¹³⁰	20	5 03	29	5 52	38	49	52 33			
15	41	29.2		13.6	17	44.9 ¹⁶³		23.5 ¹³⁰	30	4 47	16	41	39	54	49 28			
16	56	29.3		12.7	32	20.2 ¹⁶³		36.5 ¹³⁰	35	36	5 08	35	40	56	47 26			
17	71	29.3	-12	11.9	46	55.5 ¹⁶³		+2 49.5 ¹³⁰	40	4 24	4 59	5 27	7 40	60	19 45	23		
18	86	29.3	-12	11.0	61	30.7 ¹⁶²		+3 02.4 ¹²⁹	45	4 09	4 47	5 18	7 41	63	19 43	19		
19	101	29.4		10.1	76	05.9 ¹⁶²		15.4 ¹³⁰	50	3 49	33	08	41	68	40 15			
20	116	29.4		09.3	90	41.1 ¹⁶²		28.4 ¹³⁰	52	39	26	5 03	42	69	39 13			
21	131	29.5		08.4	105	16.3 ¹⁶²		41.3 ¹²⁹	54	27	18	4 58	42	72	37 12			
22	146	29.5		07.5	119	51.5 ¹⁶²		+3 54.3 ¹³⁰	56	3 14	10	52	43	74	36 9			
23	161	29.5		06.6	134	26.6 ¹⁶¹		+4 07.2 ¹²⁹	58	2 58	4 00	45	43	77	34 7			
24	176	29.6	-12	05.8	149	01.7 ¹⁶¹		+4 20.2 ¹³⁰	60 S	2 39	3 48	4 37	7 43	81	19 32	4		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 14 ^m 1		Mag: -3.9 PMG: 12 ^h 49 ^m				Mag: -0.9 PMG: 22 ^h 40 ^m				Mag: -2.0 PMG: 12 ^h 50 ^m				Mag: +0.7 PMG: 2 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	145	52.9	167	54.4	-10	48.4	18	51.7	+23	34.3	167	03.8	-9	54.0	321	30.4	+0	49.2
1	160	55.4	182	53.9		47.2	33	54.9		34.5	182	05.7		53.8	336	32.9		49.3
2	175	57.8	197	53.4		46.1	48	58.1		34.6	197	07.6		53.5	351	35.5		49.4
3	191	00.3	212	52.9		44.9	64	01.4		34.7	212	09.5		53.3	6	38.1		49.4
4	206	02.8	227	52.4		43.7	79	04.6		34.8	227	11.4		53.1	21	40.7		49.5
5	221	05.2	242	51.9	-10	42.6	94	07.9	+23	34.9	242	13.3	-9	52.9	36	43.3	+0	49.5
6	236	07.7	257	51.4	-10	41.4	109	11.1	+23	35.0	257	15.2	-9	52.7	51	45.9	+0	49.6
7	251	10.2	272	50.9		40.3	124	14.3		35.1	272	17.1		52.4	66	48.5		49.7
8	266	12.6	287	50.4		39.1	139	17.6		35.3	287	19.0		52.2	81	51.1		49.7
9	281	15.1	302	49.9		38.0	154	20.8		35.4	302	20.9		52.0	96	53.6		49.8
10	296	17.6	317	49.4		36.8	169	24.0		35.5	317	22.8		51.8	111	56.2		49.9
11	311	20.0	332	48.9	-10	35.7	184	27.3	+23	35.6	332	24.7	-9	51.5	126	58.8	+0	49.9
12	326	22.5	347	48.4	-10	34.5	199	30.5	+23	35.7	347	26.6	-9	51.3	142	01.4	+0	50.0
13	341	24.9	2	47.9		33.3	214	33.7		35.8	2	28.5		51.1	157	04.0		50.1
14	356	27.4	17	47.5		32.2	229	36.9		35.9	17	30.4		50.9	172	06.6		50.1
15	11	29.9	32	47.0		31.0	244	40.2		36.0	32	32.3		50.7	187	09.2		50.2
16	26	32.3	47	46.5		29.9	259	43.4		36.2	47	34.2		50.4	202	11.8		50.2
17	41	34.8	62	46.0	-10	28.7	274	46.6	+23	36.3	62	36.1	-9	50.2	217	14.4	+0	50.3
18	56	37.3	77	45.5	-10	27.5	289	49.8	+23	36.4	77	38.0	-9	50.0	232	16.9	+0	50.4
19	71	39.7	92	45.0		26.4	304	53.1		36.5	92	39.9		49.8	247	19.5		50.4
20	86	42.2	107	44.5		25.2	319	56.3		36.6	107	41.8		49.5	262	22.1		50.5
21	101	44.7	122	44.0		24.1	334	59.5		36.7	122	43.7		49.3	277	24.7		50.6
22	116	47.1	137	43.5		22.9	350	02.7		36.8	137	45.6		49.1	292	27.3		50.6
23	131	49.6	152	43.0		21.7	5	05.9		36.9	152	47.5		48.9	307	29.9		50.7
24	146	52.0	167	42.6	-10	20.6	20	09.1	+23	37.0	167	49.3	-9	48.7	322	32.5	+0	50.8
Dif	—		-5		+12		+32		+1		+19		+2		+26		+	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 2 ^d 9 PHE { 4 ^h : 54 ^m 6 SD: 14:9 12 ^h : 54 ^m 8 PMG: 14 ^h 28 ^m 20 ^h : 54 ^m 9 R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	29.6	-12	05.8	149	01.7	+4 20.2	60 N	16 56	17 40	18 28	7 36	4	21 43	84
1	191	29.6		04.9	163	36.8	33.1	58	17 02		43	29	39	7	38 80
2	206	29.7		04.0	178	11.8	46.0	56		08	46	30	42	10	33 78
3	221	29.7		03.2	192	46.9	+4 58.9	54		13	49	31	44	13	29 75
4	236	29.8		02.3	207	21.9	+5 11.8	52		17	52	32	47	14	26 72
5	251	29.8	-12	01.4	221	56.8	+5 24.6	50	17 22	17 55	18 33	7 49	16	21 22	70
6	266	29.8	-12	00.5	236	31.7	+5 37.5	45	17 30	18 01	18 35	7 53	21	21 15	66
7	281	29.9	-11	59.7	251	06.6	+5 50.3	40		38	06	37	7 57	24	09 62
8	296	29.9		58.8	265	41.5	+6 03.2	35		44	10	40	8 01	27	21 04 58
9	311	30.0		57.9	280	16.3	16.0	30	17 50	15	43	04	30	20 59	56
10	326	30.0		57.0	294	51.1	28.7	20	18 00	23	48	09	34	51	52
11	341	30.1	-11	56.2	309	25.8	+6 41.5	10 N	18 09	18 30	18 55	8 14	38	20 45	47
12	356	30.1	-11	55.3	324	00.6	+6 54.3	0	18 17	18 38	19 03	8 18	42	20 38	44
13	11	30.2		54.4	338	35.2	+7 07.0	10 S		26	47	12	23	46	32 39
14	26	30.2		53.5	353	09.9	19.7	20		35	18 58	24	27	51	25 36
15	41	30.2		52.6	7	44.5	32.4	30		46	19 10	40	33	55	17 31
16	56	30.3		51.8	22	19.0	45.0	35		52	18	19 50	36	58	13 28
17	71	30.3	-11	50.9	36	53.5	+7 57.7	40	18 59	19 27	20 02	8 40	61	20 08	25
18	86	30.4	-11	50.0	51	28.0	+8 10.3	45	19 07	19 38	20 16	8 44	65	20 02	22
19	101	30.4		49.1	66	02.4	22.8	50		17	52	36	49	69	19 55 18
20	116	30.5		48.3	80	36.8	35.4	52		22	19 59	45	51	72	52 16
21	131	30.5		47.4	95	11.1	+8 47.9	54		27	20 06	20 56	54	74	49 13
22	146	30.6		46.5	109	45.4	+9 00.4	56		33	14	21 08	8 57	76	45 11
23	161	30.6		45.6	124	19.6	12.9	58		39	24	23	9 00	79	41 8
24	176	30.7	-11	44.7	138	53.8	+9 25.4	60 S	19 46	20 34	21 41	9 04	82	19 36	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 10 ^m 2		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: -0.9 PMG: 22 ^h 35 ^m		Mag: -2.0 PMG: 12 ^h 47 ^m		Mag: +0.7 PMG: 2 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	146	52.0	167	42.6	20	09.1	167	49.3	322	32.5
1	161	54.5	182	42.1	35	12.4	182	51.2	337	35.1
2	176	57.0	197	41.6	50	15.6	197	53.1	352	37.7
3	191	59.4	212	41.1	65	18.8	212	55.0	7	40.2
4	207	01.9	227	40.6	80	22.0	227	56.9	22	42.8
5	222	04.4	242	40.1	95	25.2	242	58.8	37	45.4
6	237	06.8	257	39.6	110	28.4	258	00.7	52	48.0
7	252	09.3	272	39.2	125	31.6	273	02.6	67	50.6
8	267	11.8	287	38.7	140	34.8	288	04.5	82	53.2
9	282	14.2	302	38.2	155	38.0	303	06.4	97	55.8
10	297	16.7	317	37.7	170	41.2	318	08.3	112	58.4
11	312	19.2	332	37.2	185	44.4	333	10.2	128	01.0
12	327	21.6	347	36.7	200	47.6	348	12.1	143	03.6
13	342	24.1	2	36.3	215	50.8	3	14.0	158	06.2
14	357	26.5	17	35.8	230	54.0	18	15.9	173	08.7
15	12	29.0	32	35.3	245	57.2	33	17.8	188	11.3
16	27	31.5	47	34.8	261	00.4	48	19.7	203	13.9
17	42	33.9	62	34.3	276	03.6	63	21.6	218	16.5
18	57	36.4	77	33.9	291	06.8	78	23.5	233	19.1
19	72	38.9	92	33.4	306	10.0	93	25.4	248	21.7
20	87	41.3	107	32.9	321	13.2	108	27.3	263	24.3
21	102	43.8	122	32.4	336	16.4	123	29.2	278	26.9
22	117	46.3	137	31.9	351	19.5	138	31.1	293	29.5
23	132	48.7	152	31.5	6	22.7	153	33.0	308	32.1
24	147	51.2	167	31.0	21	25.9	168	34.9	323	34.7
Dif	—		-5		+12		+19		+26	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 9			Edad: 3 ^d 9 PHE { 4 ^h : 55:0 12 ^h : 55:2 20 ^h : 55:4 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	176	30.7	-11	44.7	138	53.8	+9 25.4	60 N	5 59	6 47	7 30	7 40	6	23	07 87
1	191	30.7		43.9	153	27.9 ¹⁵¹	37.8 ¹²⁴	58	58	43	24	46	10	22	58 84
2	206	30.8		43.0	168	02.0 ¹⁵¹	+9 50.1 ¹²³	56	57	40	19	52	12	51	79
3	221	30.8		42.1	182	36.0 ¹⁵⁰	+10 02.5 ¹²⁴	54	56	37	14	7 57	14	44	7
4	236	30.9		41.2	197	10.0 ¹⁵⁰	14.8 ¹²³	52	55	35	09	8 01	17	38	74
5	251	30.9	-11	40.3	211	43.9 ¹⁴⁹	+10 27.1 ¹²³	50	5 55	6 32	7 05	8 05	19	22	32 72
6	266	31.0	-11	39.4	226	17.8 ¹⁴⁹	+10 39.3 ¹²²	45	5 52	6 27	6 57	8 14	24	22	21 67
7	281	31.0		38.6	240	51.6 ¹⁴⁸	+10 51.5 ¹²²	40	50	22	49	21	28		11 64
8	296	31.1		37.7	255	25.4 ¹⁴⁸	+11 03.7 ¹²²	35	48	17	43	28	30	22	02 61
9	311	31.1		36.8	269	59.1 ¹⁴⁷	15.9 ¹²²	30	45	13	37	34	32	21	55 58
10	326	31.2		35.9	284	32.7 ¹⁴⁶	28.0 ¹²¹	20	39	6 05	28	43	38	43	53
11	341	31.2	-11	35.0	299	06.3 ¹⁴⁶	+11 40.0 ¹²⁰	10 N	5 33	5 57	6 19	8 52	41	21	32 50
12	356	31.3	-11	34.1	313	39.8 ¹⁴⁵	+11 52.0 ¹²⁰	0	5 25	5 49	6 11	9 00	45	21	22 46
13	11	31.3		33.3	328	13.3 ¹⁴⁵	+12 04.0 ¹²⁰	10 S	16	41	6 02	09	48		11 43
14	26	31.4		32.4	342	46.7 ¹⁴⁴	15.9 ¹¹⁹	20	5 04	30	5 53	18	52	21	01 39
15	41	31.4		31.5	357	20.0 ¹⁴³	27.8 ¹¹⁹	30	4 48	18	43	28	57	20	48 35
16	56	31.5		30.6	11	53.3 ¹⁴³	39.7 ¹¹⁹	35	39	10	36	34	60	41	32
17	71	31.6	-11	29.7	26	26.5 ¹⁴²	+12 51.5 ¹¹⁸	40	4 27	5 01	5 30	9 41	63	20	33 29
18	86	31.6	-11	28.8	40	59.6 ¹⁴¹	+13 03.2 ¹¹⁷	45	4 12	4 50	5 21	9 49	66	20	24 26
19	101	31.7		27.9	55	32.7 ¹⁴¹	14.9 ¹¹⁷	50	3 53	37	11	9 58	72	13	21
20	116	31.7		27.1	70	05.7 ¹⁴⁰	26.6 ¹¹⁷	52	44	30	07	10 03	73	08	19
21	131	31.8		26.2	84	38.6 ¹³⁹	38.2 ¹¹⁶	54	33	23	5 02	08	76	20	02 17
22	146	31.8		25.3	99	11.5 ¹³⁹	+13 49.7 ¹¹⁵	56	20	15	4 56	13	79	19	56 14
23	161	31.9		24.4	113	44.3 ¹³⁸	+14 01.2 ¹¹⁵	58	3 06	4 05	50	19	83	49	10
24	176	31.9	-11	23.5	128	17.0 ¹³⁷	+14 12.7 ¹¹⁵	60 S	2 48	3 54	4 43	10 26	87	19	41 7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 06 ^m 3		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: -0.9 PMG: 22 ^h 30 ^m		Mag: -2.0 PMG: 12 ^h 44 ^m		Mag: +0.7 PMG: 2 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	147	51.2	167	31.0	-9	52.5	21	25.9	+23	39.4
1	162	53.6	182	30.5		51.3	36	29.1		39.5
2	177	56.1	197	30.0		50.1	51	32.3		39.6
3	192	58.6	212	29.6		49.0	66	35.5		39.7
4	208	01.0	227	29.1		47.8	81	38.6		39.8
5	223	03.5	242	28.6	-9	46.6	96	41.8	+23	39.9
6	238	06.0	257	28.1	-9	45.4	111	45.0	+23	40.0
7	253	08.4	272	27.7		44.3	126	48.2		40.1
8	268	10.9	287	27.2		43.1	141	51.3		40.2
9	283	13.4	302	26.7		41.9	156	54.5		40.3
10	298	15.8	317	26.2		40.7	171	57.7		40.4
11	313	18.3	332	25.8	-9	39.5	187	00.9	+23	40.5
12	328	20.8	347	25.3	-9	38.4	202	04.0	+23	40.5
13	343	23.2	2	24.8		37.2	217	07.2		40.6
14	358	25.7	17	24.3		36.0	232	10.4		40.7
15	13	28.1	32	23.9		34.8	247	13.5		40.8
16	28	30.6	47	23.4		33.6	262	16.7		40.9
17	43	33.1	62	22.9	-9	32.5	277	19.9	+23	41.0
18	58	35.5	77	22.5	-9	31.3	292	23.0	+23	41.1
19	73	38.0	92	22.0		30.1	307	26.2		41.2
20	88	40.5	107	21.5		28.9	322	29.3		41.2
21	103	42.9	122	21.0		27.7	337	32.5		41.3
22	118	45.4	137	20.6		26.5	352	35.6		41.4
23	133	47.9	152	20.1		25.4	7	38.8		41.5
24	148	50.3	167	19.6	-9	24.2	22	42.0	+23	41.6
Dif	—		-5		+12		+32		+1	
									</	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2			Edad: 4 ^d 9	PHE {	4 ^h : 55:5 12 ^h : 55:7 20 ^h : 55:9 R°: 49 ^m											
	PMG: 12 ^h 13 ^m 8																
	hG ☉	Dec							hG ☾	Dif	Dec	Dif					
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	176	31.9	-11 23.5	128	17.0	+14 12.7	60 N	17 01	17 44	18 33	7 46	9	**	**	**	**	
1	191	32.0		142	49.7 ¹³⁷	24.1 ¹¹⁴	58	07		48	33	7 56	13	**	**	**	
2	206	32.1		157	22.2 ¹³⁵	35.4 ¹¹³	56	12		51	34	8 04	16	**	**	**	
3	221	32.1		171	54.7 ¹³⁵	46.7 ¹¹³	54	17		53	34	11	20	**	**	**	
4	236	32.2		186	27.2 ¹³⁵	+14 58.0 ¹¹³	52	21		56	35	18 22	23 52	76			
5	251	32.2	-11 19.1	200	59.5 ¹³³	+15 09.1 ¹¹¹	50	17 25	17 58	18 36	8 24	24	23 44	74			
6	266	32.3	-11 18.2	215	31.8 ¹³³	+15 20.3 ¹¹²	45	17 33	18 03	18 37	8 38	28	23 28	69			
7	281	32.3		230	04.0 ¹³²	31.3 ¹¹⁰	40	40	08	39	49	31	15	65			
8	296	32.4		244	36.1 ¹³¹	42.3 ¹¹⁰	35	46	12	42	8 58	35	23 03	63			
9	311	32.5		259	08.2 ¹³¹	+15 53.3 ¹¹⁰	30	17 52	16	44	9 06	37	22 53	61			
10	326	32.5		273	40.2 ¹³⁰	+16 04.1 ¹⁰⁸	20	18 01	23	49	21	41	36	57			
11	341	32.6	-11 13.7	288	12.0 ¹²⁸	+16 14.9 ¹⁰⁸	10 N	18 09	18 31	18 55	9 33	45	22 22	53			
12	356	32.6	-11 12.8	302	43.9 ¹²⁹	+16 25.7 ¹⁰⁸	0	18 17	18 38	19 03	9 45	48	22 08	50			
13	11	32.7		317	15.6 ¹²⁷	36.4 ¹⁰⁷	10 S	25		47	12	9 57	52	21 54	47		
14	26	32.8		331	47.2 ¹²⁶	47.0 ¹⁰⁶	20	34	18 56	23	10 10	55	40	43			
15	41	32.8		346	18.8 ¹²⁶	+16 57.5 ¹⁰⁵	30	44	19 08	38	25	60	23	40			
16	56	32.9		0	50.3 ¹²⁵	+17 08.0 ¹⁰⁵	35	50	16	47	34	62	13	38			
17	71	32.9	-11 08.4	15	21.7 ¹²⁴	+17 18.4 ¹⁰⁴	40	18 56	19 25	19 58	10 44	65	21 02	35			
18	86	33.0	-11 07.5	29	53.0 ¹²³	+17 28.7 ¹⁰³	45	19 04	19 35	20 13	10 55	69	20 50	31			
19	101	33.1		44	24.2 ¹²²	39.0 ¹⁰³	50	13	48	31	11 10	73	34	27			
20	116	33.1		58	55.3 ¹²¹	49.2 ¹⁰²	52	18	19 54	40	16	76	27	24			
21	131	33.2		73	26.4 ¹²¹	+17 59.3 ¹⁰¹	54	23	20 01	20 50	24	78	19	22			
22	146	33.2		87	57.3 ¹¹⁹	+18 09.3 ¹⁰⁰	56	28	09	21 02	32	81	20 10	19			
23	161	33.3		102	28.2 ¹¹⁹	19.3 ¹⁰⁰	58	34	18	16	42	84	19 59	16			
24	176	33.4	-11 02.1	116	59.0 ¹¹⁸	+18 29.2 ⁹⁹	60 S	19 41	20 28	21 33	11 53	89	19 48	11			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 14 ^h 02 ^m 3			Mag: -3.9 PMG: 12 ^h 51 ^m			Mag: -0.9 PMG: 22 ^h 25 ^m			Mag: -2.0 PMG: 12 ^h 41 ^m			Mag: +0.6 PMG: 2 ^h 21 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec								
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'		
0	148	50.3	167 19.6	-9 24.2	22 42.0	+23 41.6	169 20.4	-9 38.0	324 36.9	+0 53.9							
1	163	52.8	182 19.2	23.0	37 45.1	41.7	184 22.3	37.8	339 39.5	53.9							
2	178	55.3	197 18.7	21.8	52 48.3	41.8	199 24.2	37.5	354 42.1	54.0							
3	193	57.7	212 18.2	20.6	67 51.4	41.8	214 26.1	37.3	9 44.7	54.1							
4	209	00.2	227 17.8	19.4	82 54.6	41.9	229 28.0	37.1	24 47.3	54.1							
5	224	02.6	242 17.3	-9 18.2	97 57.7	+23 42.0	244 29.9	-9 36.9	39 49.9	54.2							
6	239	05.1	257 16.8	-9 17.0	113 00.9	+23 42.1	259 31.8	-9 36.6	54 52.5	54.3							
7	254	07.6	272 16.4	15.9	128 04.0	42.2	274 33.7	36.4	69 55.1	54.3							
8	269	10.0	287 15.9	14.7	143 07.1	42.3	289 35.6	36.2	84 57.7	54.4							
9	284	12.5	302 15.4	13.5	158 10.3	42.3	304 37.5	36.0	100 00.3	54.5							
10	299	15.0	317 15.0	12.3	173 13.4	42.4	319 39.4	35.7	115 02.9	54.5							
11	314	17.4	332 14.5	-9 11.1	188 16.6	+23 42.5	334 41.3	-9 35.5	130 05.5	54.6							
12	329	19.9	347 14.1	-9 09.9	203 19.7	+23 42.6	349 43.2	-9 35.3	145 08.1	54.7							
13	344	22.4	2 13.6	08.7	218 22.8	42.6	4 45.1	35.1	160 10.7	54.7							
14	359	24.8	17 13.1	07.5	233 26.0	42.7	19 47.0	34.9	175 13.3	54.8							
15	14	27.3	32 12.7	06.3	248 29.1	42.8	34 48.9	34.6	190 15.9	54.9							
16	29	29.7	47 12.2	05.1	263 32.2	42.9	49 50.8	34.4	205 18.5	54.9							
17	44	32.2	62 11.7	-9 04.0	278 35.4	+23 43.0	64 52.7	-9 34.2	220 21.1	55.0							
18	59	34.7	77 11.3	-9 02.8	293 38.5	+23 43.0	79 54.6	-9 34.0	235 23.7	55.1							
19	74	37.1	92 10.8	01.6	308 41.6	43.1	94 56.5	33.7	250 26.3	55.1							
20	89	39.6	107 10.4	-9 00.4	323 44.8	43.2	109 58.4	33.5	265 28.9	55.2							
21	104	42.1	122 09.9	-8 59.2	338 47.9	43.3	125 00.3	33.3	280 31.5	55.3							
22	119	44.5	137 09.4	58.0	353 51.0	43.3	140 02.2	33.1	295 34.1	55.3							
23	134	47.0	152 09.0	56.8	8 54.1	43.4	155 04.1	32.8	310 36.7	55.4							
24	149	49.5	167 08.5	-8 55.6	23 57.2	+23 43.5	170 05.9	-9 32.6	325 39.2	55.5							
Dif	—			-5	+12	+31	+1	+19	+2	+26	+						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 13 ^m 7			Edad: 5 ^d 9 PHE { 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/6 PMG: 16 ^h 46 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	33.4	-11	02.1	116	59.0	+18	29.2	60 N	5 53	6 42	7 25	7 55	16	0 34	90
1	191	33.4		01.2	131	29.7		39.0	58	53	39	19	8 09	20	22	84
2	206	33.5	-11	00.3	146	00.3		48.7	56	53	36	14	20 24		11	88
3	221	33.6	-10	59.4	160	30.8	+18	58.4	54	52	33	09	31 26		0 01	78
4	236	33.6		58.5	175	01.2	+19	07.9	52	52	31	05	40 29		** **	**
5	251	33.7	-10	57.6	189	31.6	+19	17.4	50	5 51	6 29	7 02	8 48	31	** *	**
6	266	33.8	-10	56.7	204	01.8	+19	26.8	45	5 49	6 24	6 53	9 06	35	** *	**
7	281	33.8		55.8	218	32.0		36.1	40	48	19	47	20 39		** *	**
8	296	33.9		54.9	233	02.0		45.3	35	45	15	41	33 40		** *	**
9	311	34.0		54.0	247	32.0	+19	54.4	30	43	11	35	9 43	43	23	54
10	326	34.0		53.1	262	01.8	+20	03.5	20	38	6 04	26	10 02	46	33	59
11	341	34.1	-10	52.2	276	31.6	+20	12.4	10 N	5 32	5 57	6 18	10 18	50	23	15
12	356	34.2	-10	51.3	291	01.3	+20	21.3	0	5 25	5 49	6 10	10 33	53	22	58
13	11	34.2		50.4	305	30.9		30.0	10 S	16	41	6 02	10 49	55	41	52
14	26	34.3		49.5	320	00.4		38.7	20	5 05	31	5 54	11 05	58	23	50
15	41	34.4		48.6	334	29.8		47.3	30	4 50	19	44	25 61		22	03
16	56	34.4		47.7	348	59.1	+20	55.7	35	41	12	38	36 63		21	51
17	71	34.5	-10	46.8	3	28.3	+21	04.1	40	4 30	5 04	5 32	11 49	66	21	37
18	86	34.6	-10	45.9	17	57.4	+21	12.4	45	4 16	4 53	5 24	12 04	69	21	21
19	101	34.6		45.0	32	26.4		20.6	50	3 57	40	15	23 73		21	01
20	116	34.7		44.1	46	55.3		28.6	52	48	34	11	32 75		20	51
21	131	34.8		43.2	61	24.1		36.6	54	38	27	06	42 78		41	31
22	146	34.8		42.3	75	52.9		44.5	56	27	20	5 01	12 53	81	29	28
23	161	34.9		41.4	90	21.5		52.2	58	3 13	11	4 55	13 06	85	20	15
24	176	35.0	-10	40.5	104	50.0	+21	59.9	60 S	2 56	4 01	4 48	13 22	90	19	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 58 ^m 4		Mag: -3.9 PMG: 12 ^h 52 ^m		Mag: -0.8 PMG: 22 ^h 20 ^m		Mag: -2.0 PMG: 12 ^h 38 ^m		Mag: +0.6 PMG: 2 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	49.5	167	08.5	-8	55.6	23	57.2	170	05.9
1	164	51.9	182	08.1		54.4	+23	43.5	-9	32.6
2	179	54.4	197	07.6		53.2		43.6		32.4
3	194	56.9	212	07.1		52.0		43.7		32.2
4	209	59.3	227	06.7		50.8		43.8		32.0
5	225	01.8	242	06.2	-8	49.6	+23	43.9	230	13.5
6	240	04.2	257	05.8		48.4		43.9	245	15.4
7	255	06.7	272	05.3	-8	47.2	+23	43.9	-9	31.3
8	270	09.2	287	04.9		46.0		44.1		31.1
9	285	11.6	302	04.4		44.8		44.1		30.8
10	300	14.1	317	03.9		43.6		44.2		30.6
11	315	16.6	332	03.5	-8	42.4	+23	44.3	320	24.9
12	330	19.0	347	03.0		41.2		44.3	335	26.8
13	345	21.5	2	02.6	-8	40.0	+23	44.3	-9	30.2
14	0	24.0	17	02.1		38.8		44.4	350	28.7
15	15	26.4	32	01.7		37.6		44.5	-9	29.9
16	30	28.9	47	01.2		36.4		44.6	5	30.6
17	45	31.4	62	00.8	-8	35.2	+23	44.7	20	32.5
18	60	33.8	77	00.3		34.0		44.7	20	32.5
19	75	36.3	91	59.9		32.8		44.8	20	32.5
20	90	38.7	106	59.4		31.6		44.9	20	32.5
21	105	41.2	121	59.0		30.4		44.9	20	32.5
22	120	43.7	136	58.5		29.2		45.0	20	32.5
23	135	46.1	151	58.1		28.0		45.1	20	32.5
24	150	48.6	166	57.6	-8	26.8	+23	45.1	170	51.5
Dif	—		-5		+12		+31		+19	

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: 6 ^d 9 PHE { 4 ^h : 56/9 12 ^h : 57/1 20 ^h : 57/4 R°: 57 ^m SD: 15/5 PMG: 17 ^h 39 ^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	35.0	-10	40.5	104	50.0	+21	59.9	60 N	17 06	17 49	18 38	8 11 27	2 04 86
1	191	35.1		39.6	119	18.4	+22	07.4	58	12	52	38	29 32	1 46 82
2	206	35.1		38.7	133	46.8		14.8	56	17	55	38	44 36	32 78
3	221	35.2		37.8	148	15.0		22.1	54	21	57	38	8 57 39	19 75
4	236	35.3		36.9	162	43.2		29.3	52	25	17 59	39	9 09 40	1 08 73
5	251	35.3	-10	36.0	177	11.2	+22	36.4	50	17 28	18 01	18 39	9 19 42	0 58 71
6	266	35.4	-10	35.1	191	39.1	+22	43.4	45	17 36	18 06	18 40	9 41 45	0 37 68
7	281	35.5		34.2	206	07.0		50.3	40	43	10	42	9 59 46	20 66
8	296	35.6		33.3	220	34.7	+22	57.0	35	48	14	43	10 13 49	0 06 63
9	311	35.6		32.4	235	02.4	+23	03.6	30	17 53	17	45	26 50	** ** **
10	326	35.7		31.5	249	30.0		10.1	20	18 02	24	50	10 48 53	** ** **
11	341	35.8	-10	30.6	263	57.4	+23	16.5	10 N	18 10	18 31	18 56	11 08 54	** ** **
12	356	35.8	-10	29.7	278	24.8	+23	22.8	0	18 17	18 38	19 02	11 26 56	23 52 58
13	11	35.9		28.8	292	52.1		28.9	10 S	24	46	11	11 44 58	33 57
14	26	36.0		27.9	307	19.3		34.9	20	33	18 55	21	12 03 60	23 13 55
15	41	36.1		27.0	321	46.4		40.8	30	42	19 06	35	26 62	22 49 54
16	56	36.1		26.0	336	13.4		46.6	35	47	13	44	39 63	35 53
17	71	36.2	-10	25.1	350	40.3	+23	52.2	40	18 53	19 22	19 55	12 55 64	22 19 52
18	86	36.3	-10	24.2	5	07.1	+23	57.7	45	19 01	19 31	20 09	13 13 67	22 00 50
19	101	36.4		23.3	19	33.8	+24	03.1	50	09	44	26	36 69	21 36 48
20	116	36.4		22.4	34	00.4		08.3	52	14	50	35	13 47 71	25 47
21	131	36.5		21.5	48	27.0		13.4	54	18	19 56	44	14 00 72	21 12 46
22	146	36.6		20.6	62	53.4		18.4	56	23	20 03	20 55	14 75	20 57 44
23	161	36.7		19.7	77	19.8		23.2	58	28	12	21 08	31 78	40 41
24	176	36.8	-10	18.8	91	46.0	+24	27.9	60 S	19 35	20 21	21 24	14 52 82	20 19 37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 54 ^m 5		Mag: -3.9 PMG: 12 ^h 53 ^m		Mag: -0.8 PMG: 22 ^h 15 ^m		Mag: -2.0 PMG: 12 ^h 35 ^m		Mag: +0.6 PMG: 2 ^h 13 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	150	48.6	166	57.6	25	11.8	+23	45.1	170	51.5	-9	27.3	326	41.6	+0	57.1		
1	165	51.1	181	57.2		25.6		45.2	185	53.4		27.0	341	44.2		57.2		
2	180	53.5	196	56.7		24.4		45.3	200	55.3		26.8	356	46.8		57.2		
3	195	56.0	211	56.3		23.2		45.3	215	57.2		26.6	11	49.4		57.3		
4	210	58.5	226	55.8		22.0		45.4	230	59.1		26.4	26	52.0		57.4		
5	226	00.9	241	55.4	-8	20.8	100	27.2	+23	45.4	246	01.0	-9	26.1	41	54.7		
6	241	03.4	256	54.9	-8	19.5	115	30.3	+23	45.5	261	02.9	-9	25.9	56	57.3		
7	256	05.8	271	54.5		18.3	130	33.3		45.6	276	04.8		25.7	71	59.9		
8	271	08.3	286	54.0		17.1	145	36.4		45.6	291	06.6		25.5	87	02.5		
9	286	10.8	301	53.6		15.9	160	39.5		45.7	306	08.5		25.2	102	05.1		
10	301	13.2	316	53.1		14.7	175	42.6		45.8	321	10.4		25.0	117	07.7		
11	316	15.7	331	52.7	-8	13.5	190	45.6	+23	45.8	336	12.3	-9	24.8	132	10.3		
12	331	18.2	346	52.2	-8	12.3	205	48.7	+23	45.9	351	14.2	-9	24.6	147	12.9		
13	346	20.6	1	51.8		11.1	220	51.8		45.9	6	16.1		24.3	162	15.5		
14	1	23.1	16	51.3		09.9	235	54.9		46.0	21	18.0		24.1	177	18.1		
15	16	25.6	31	50.9		08.7	250	57.9		46.0	36	19.9		23.9	192	20.7		
16	31	28.0	46	50.4		07.5	266	01.0		46.1	51	21.8		23.7	207	23.3		
17	46	30.5	61	50.0	-8	06.2	281	04.1	+23	46.2	66	23.7	-9	23.4	222	25.9		
18	61	33.0	76	49.6	-8	05.0	296	07.1	+23	46.2	81	25.6	-9	23.2	237	28.5		
19	76	35.4	91	49.1		03.8	311	10.2		46.3	96	27.5		23.0	252	31.1		
20	91	37.9	106	48.7		02.6	326	13.3		46.3	111	29.4		22.8	267	33.7		
21	106	40.3	121	48.2		01.4	341	16.3		46.4	126	31.3		22.6	282	36.3		
22	121	42.8	136	47.8	-8	00.2	356	19.4		46.4	141	33.2		22.3	297	38.9		
23	136	45.3	151	47.3	-7	59.0	11	22.4		46.5	156	35.1		22.1	312	41.5		
24	151	47.7	166	46.9	-7	57.8	26	25.5	+23	46.5	171	37.0	-9	21.9	327	44.1		
Dif	—		-4		+12		+31		+1		+19		+2		+26		+	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 13 ^m 5			Edad: 7 ^d 9 PHE { 4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'3 R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	176	36.8	-10	18.8	91	46.0	+24	27.9	46	60 N	5	48	6	36	7	19	
1	191	36.8		17.9	106	12.2	72	32.5	46	58	48	34	14		9	01	
2	206	36.9		17.0	120	38.3	71	36.9	44	56	48	31	09		20	53	
3	221	37.0		16.1	135	04.3	70	41.1	42	54	48	29	05		36	54	
4	236	37.1		15.1	149	30.2	69	45.3	42	52	48	27	7	01	9	49	
5	251	37.1	-10	14.2	163	56.1	69	+24	49.3	40	50	5	47	6	25	6	58
6	266	37.2	-10	13.3	178	21.8	67	+24	53.1	38	45	5	46	6	20	6	50
7	281	37.3		12.4	192	47.5	67	+24	56.8	37	40	45	16	44	10	45	
8	296	37.4		11.5	207	13.1	66	+25	00.4	36	35	43	13	38	11	02	
9	311	37.5		10.6	221	38.6	65		03.8	34	30	41	09	33	16	58	
10	326	37.5		09.7	236	04.0	64		07.0	32	20	37	6	03	25	11	
11	341	37.6	-10	08.8	250	29.4	64	+25	10.1	31	10 N	5	31	5	56	6	17
12	356	37.7	-10	07.9	264	54.7	63	+25	13.1	30	0	5	25	5	49	6	10
13	11	37.8		06.9	279	19.9	62		15.9	28	10 S	16	41	6	03	12	42
14	26	37.9		06.0	293	45.0	61		18.5	26	20	5	06	32	5	55	13
15	41	37.9		05.1	308	10.1	61		21.0	25	30	4	52	21	46	28	60
16	56	38.0		04.2	322	35.0	59		23.4	24	35	43	14	40	42	61	28
17	71	38.1	-10	03.3	336	59.9	59	+25	25.6	22	40	4	32	5	06	5	34
18	86	38.2	-10	02.4	351	24.8	59	+25	27.6	20	45	4	19	4	56	5	27
19	101	38.3		01.5	5	49.6	58		29.5	19	50	4	02	44	18	45	61
20	116	38.3	-10	00.5	20	14.3	57		31.2	17	52	3	53	38	14	14	58
21	131	38.4	-9	59.6	34	38.9	56		32.7	15	54	44	32	10	15	12	61
22	146	38.5		58.7	49	03.5	56		34.1	14	56	33	25	05	29	61	41
23	161	38.6		57.8	63	28.0	55		35.4	13	58	19	16	5	00	15	49
24	176	38.7	-9	56.9	77	52.5	55	+25	36.4	10	60 S	3	04	4	07	4	53
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 50 ^m 5			Mag: -3.9 PMG: 12 ^h 53 ^m			Mag: -0.8 PMG: 22 ^h 10 ^m			Mag: -2.0 PMG: 12 ^h 32 ^m			Mag: +0.6 PMG: 2 ^h 09 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	151	47.7		166	46.9	-7	26	25.5	+23	46.5	171	37.0	-9	21.9	327	44.1	
1	166	50.2		181	46.5		41	28.5		46.6	186	38.9		21.7	342	46.7	
2	181	52.7		196	46.0		55.3	56	31.6	46.6	201	40.8		21.4	357	49.3	
3	196	55.1		211	45.6		55.1	71	34.6	46.7	216	42.7		21.2	12	51.9	
4	211	57.6		226	45.1		52.9	86	37.7	46.7	231	44.6		21.0	27	54.5	
5	227	00.1		241	44.7	-7	51.7	101	40.7	+23	46.8	246	46.5	-9	20.8	42	57.1
6	242	02.5		256	44.3	-7	50.5	116	43.8	+23	46.8	261	48.4	-9	20.5	57	59.7
7	257	05.0		271	43.8		49.2	131	46.8		46.9	276	50.3		20.3	73	02.3
8	272	07.5		286	43.4		48.0	146	49.9		46.9	291	52.2		20.1	88	04.9
9	287	09.9		301	42.9		46.8	161	52.9		47.0	306	54.1		19.9	103	07.5
10	302	12.4		316	42.5		45.6	176	56.0		47.0	321	56.0		19.6	118	10.1
11	317	14.8		331	42.1	-7	44.4	191	59.0	+23	47.1	336	57.9	-9	19.4	133	12.8
12	332	17.3		346	41.6	-7	43.2	207	02.0	+23	47.1	351	59.8	-9	19.2	148	15.4
13	347	19.8		1	41.2		41.9	222	05.1		47.2	7	01.7		19.0	163	18.0
14	2	22.2		16	40.7		40.7	237	08.1		47.2	22	03.6		18.7	178	20.6
15	17	24.7		31	40.3		39.5	252	11.2		47.3	37	05.4		18.5	193	23.2
16	32	27.2		46	39.9		38.3	267	14.2		47.3	52	07.3		18.3	208	25.8
17	47	29.6		61	39.4	-7	37.1	282	17.2	+23	47.4	67	09.2	-9	18.1	223	28.4
18	62	32.1		76	39.0	-7	35.8	297	20.3	+23	47.4	82	11.1	-9	17.8	238	31.0
19	77	34.6		91	38.6		34.6	312	23.3		47.5	97	13.0		17.6	253	33.6
20	92	37.0		106	38.1		33.4	327	26.3		47.5	112	14.9		17.4	268	36.2
21	107	39.5		121	37.7		32.2	342	29.3		47.6	127	16.8		17.2	283	38.8
22	122	42.0		136	37.3		31.0	357	32.4		47.6	142	18.7		16.9	298	41.4
23	137	44.4		151	36.8		29.7	12	35.4		47.7	157	20.6		16.7	313	44.0
24	152	46.9		166	36.4	-7	28.5	27	38.4	+23	47.7	172	22.5	-9	16.5	328	46.6
Dif	—			-4	+12		+30	0		+19	+2		+26		+1		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 4		Edad: 8 ^d 9	PHE { 4 ^h : 58/5 12 ^h : 58/8 20 ^h : 59/1 R°: 60 ^m												
	hG ☉	Dec	hG ☾		Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	38.7	-9	56.9	77	52.5	+25	36.4	10	60 N	17	12	17	54	9	28
1	191	38.8		56.0	92	16.9	54	37.4	7	58	17		57	42	9	53
2	206	38.9		55.1	106	41.2	53	38.1	6	56	21		17	59	42	10
3	221	38.9		54.1	121	05.5	53	38.7	6	54	25		18	01	42	30
4	236	39.0		53.2	135	29.7	52	39.1	4	52	28		03	42	44	71
5	251	39.1	-9	52.3	149	53.9	52	+25	39.4	3	50	17	32	18	05	18
6	266	39.2	-9	51.4	164	18.0	51	+25	39.4	0	45	17	39	18	09	18
7	281	39.3		50.5	178	42.1	51	39.4	0	40	45		12	44	11	22
8	296	39.4		49.6	193	06.1	50	39.1	3	35	50		16	45	12	00
9	311	39.4		48.6	207	30.1	50	38.7	4	30	17	55	19	47	14	65
10	326	39.5		47.7	221	54.1	50	38.1	6	20	18	03	25	51	12	39
11	341	39.6	-9	46.8	236	18.0	49	+25	37.3	8	10 N	18	10	18	31	18
12	356	39.7	-9	45.9	250	41.8	48	+25	36.4	9	0	18	17	18	38	19
13	11	39.8		45.0	265	05.6	48	35.3	11	10 S	24		45	10	13	21
14	26	39.9		44.0	279	29.4	48	34.1	12	20	31		18	54	20	14
15	41	40.0		43.1	293	53.2	48	32.6	15	30	40		19	04	33	13
16	56	40.1		42.2	308	16.9	47	31.0	16	35	45		11	42	28	56
17	71	40.1	-9	41.3	322	40.6	47	+25	29.2	18	40	18	51	19	19	15
18	86	40.2	-9	40.4	337	04.2	46	+25	27.3	19	45	18	57	19	28	20
19	101	40.3		39.4	351	27.9	47	25.2	21	50	19	05	40	21	15	20
20	116	40.4		38.5	5	51.5	46	22.9	23	52	09		45	29	46	50
21	131	40.5		37.6	20	15.1	46	20.4	25	54	13		51	39	15	59
22	146	40.6		36.7	34	38.6	45	17.7	27	56	18		19	58	20	49
23	161	40.7		35.8	49	02.2	46	14.9	28	58	23		20	06	21	01
24	176	40.8	-9	34.8	63	25.7	45	+25	11.9	30	60 S	19	29	20	15	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 46 ^m 6		Mag: -3.9 PMG: 12 ^h 54 ^m		Mag: -0.8 PMG: 22 ^h 05 ^m		Mag: -2.0 PMG: 12 ^h 29 ^m		Mag: +0.6 PMG: 2 ^h 05 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	152	46.9	166	36.4	-7	28.5	27	38.4	+23	47.7					
1	167	49.3	181	35.9		27.3	42	41.4		47.7					
2	182	51.8	196	35.5		26.1	57	44.4		47.8					
3	197	54.3	211	35.1		24.8	72	47.5		47.8					
4	212	56.7	226	34.6		23.6	87	50.5		47.9					
5	227	59.2	241	34.2	-7	22.4	102	53.5	+23	47.9					
6	243	01.7	256	33.8	-7	21.2	117	56.5	+23	47.9					
7	258	04.1	271	33.4		20.0	132	59.5		48.0					
8	273	06.6	286	32.9		18.7	148	02.5		48.0					
9	288	09.1	301	32.5		17.5	163	05.5		48.1					
10	303	11.5	316	32.1		16.3	178	08.6		48.1					
11	318	14.0	331	31.6	-7	15.1	193	11.6	+23	48.1					
12	333	16.4	346	31.2	-7	13.8	208	14.6	+23	48.2					
13	348	18.9	1	30.8		12.6	223	17.6		48.2					
14	3	21.4	16	30.3		11.4	238	20.6		48.3					
15	18	23.8	31	29.9		10.1	253	23.6		48.3					
16	33	26.3	46	29.5		08.9	268	26.6		48.3					
17	48	28.8	61	29.0	-7	07.7	283	29.6	+23	48.4					
18	63	31.2	76	28.6	-7	06.5	298	32.6	+23	48.4					
19	78	33.7	91	28.2		05.2	313	35.6		48.4					
20	93	36.2	106	27.8		04.0	328	38.6		48.5					
21	108	38.6	121	27.3		02.8	343	41.5		48.5					
22	123	41.1	136	26.9		01.5	358	44.5		48.5					
23	138	43.6	151	26.5	-7	00.3	13	47.5		48.6					
24	153	46.0	166	26.1	-6	59.1	28	50.5	+23	48.6					
Dif	—		-4	+12		+30		0		+19	+2		+26		+1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 2			Edad: 9 ^d 9 PHE { 4 ^h : 59/4 12 ^h : 59/7 20 ^h : 59/9 PMG: 20 ^h 36 ^m R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	40.8	-9 34.8	63	25.7	+25 11.9	31	60 N	5 43	6 31	7 13	10 47	98	5 31	28
1	191	40.9	33.9	77	49.2	08.8	45	58	43	29	09	11 09	93	5 09	33
2	206	41.0	33.0	92	12.7	05.4	34	56	44	27	04	27 89		4 51	36
3	221	41.0	32.1	106	36.2	+25 01.9	35	54	44	25	7 00	42 86		35	40
4	236	41.1	31.2	120	59.6	+24 58.2	37	52	44	23	6 57	11 55	83	22	42
5	251	41.2	-9 30.2	135	23.1	+24 54.4	38	50	5 44	6 21	6 54	12 06	82	4 10	44
6	266	41.3	-9 29.3	149	46.6	+24 50.3	41	45	5 43	6 17	6 47	12 30	78	3 45	48
7	281	41.4	28.4	164	10.0	46.1	42	40	42	14	41	12 49	75	26	50
8	296	41.5	27.5	178	33.5	41.7	44	35	41	10	36	13 05	72	3 09	52
9	311	41.6	26.5	192	56.9	37.2	45	30	39	07	31	19 70		2 55	54
10	326	41.7	25.6	207	20.4	32.4	48	20	36	6 01	24	13 43	66	31	56
11	341	41.8	-9 24.7	221	43.8	+24 27.5	49	10 N	5 31	5 55	6 17	14 03	63	2 10	59
12	356	41.9	-9 23.8	236	07.3	+24 22.5	50	0	5 25	5 49	6 10	14 22	60	1 50	61
13	11	42.0	22.8	250	30.7	17.2	53	10 S	17	42	6 03	14 41	58	30	63
14	26	42.1	21.9	264	54.2	11.8	54	20	5 07	33	5 56	15 01	55	1 09	65
15	41	42.2	21.0	279	17.7	06.2	56	30	4 54	23	47	24 51		0 44	68
16	56	42.3	20.1	293	41.2	+24 00.5	57	35	45	16	42	38 49		30	69
17	71	42.3	-9 19.1	308	04.7	+23 54.5	60	40	4 35	5 08	5 37	15 54	46	0 13	71
18	86	42.4	-9 18.2	322	28.2	+23 48.4	61	45	4 22	4 59	5 30	16 13	42	***	***
19	101	42.5	17.3	336	51.7	42.1	63	50	4 06	48	22	36 38		***	***
20	116	42.6	16.4	351	15.3	35.7	64	52	3 58	42	18	16 47	36	***	***
21	131	42.7	15.4	5	38.9	29.1	66	54	49	36	14	17 00	33	***	***
22	146	42.8	14.5	20	02.5	22.3	68	56	38	29	10	14 30		***	***
23	161	42.9	13.6	34	26.1	15.4	69	58	26	22	5 04	31 26		23 50	98
24	176	43.0	-9 12.7	48	49.7	+23 08.3	71	60 S	3 12	4 13	4 59	17 51	21	23 30	104

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 42 ^m 7		Mag: -3.9 PMG: 12 ^h 55 ^m		Mag: -0.7 PMG: 22 ^h 00 ^m		Mag: -2.0 PMG: 12 ^h 26 ^m		Mag: +0.6 PMG: 2 ^h 00 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	°	°	°	°	°				
0	153	46.0	166	26.1	-6 59.1	28	50.5	+23 48.6	173	08.0	-9 11.1	329	49.2	+1 02.1
1	168	48.5	181	25.6	57.9	43	53.5	48.6	188	09.9	10.9	344	51.8	02.2
2	183	50.9	196	25.2	56.6	58	56.5	48.7	203	11.8	10.7	359	54.4	02.2
3	198	53.4	211	24.8	55.4	73	59.5	48.7	218	13.7	10.4	14	57.0	02.3
4	213	55.9	226	24.4	54.2	89	02.5	48.7	233	15.6	10.2	29	59.6	02.4
5	228	58.3	241	23.9	-6 52.9	104	05.4	+23 48.8	248	17.5	-9 10.0	45	02.3	+1 02.4
6	244	00.8	256	23.5	-6 51.7	119	08.4	+23 48.8	263	19.4	-9 09.8	60	04.9	+1 02.5
7	259	03.3	271	23.1	50.5	134	11.4	48.8	278	21.3	09.5	75	07.5	02.6
8	274	05.7	286	22.7	49.2	149	14.4	48.9	293	23.2	09.3	90	10.1	02.7
9	289	08.2	301	22.2	48.0	164	17.3	48.9	308	25.1	09.1	105	12.7	02.7
10	304	10.7	316	21.8	46.8	179	20.3	48.9	323	27.0	08.9	120	15.3	02.8
11	319	13.1	331	21.4	-6 45.5	194	23.3	+23 49.0	338	28.9	-9 08.6	135	17.9	+1 02.9
12	334	15.6	346	21.0	-6 44.3	209	26.3	+23 49.0	353	30.8	-9 08.4	150	20.5	+1 02.9
13	349	18.1	1	20.5	43.1	224	29.2	49.0	8	32.7	08.2	165	23.1	03.0
14	4	20.5	16	20.1	41.8	239	32.2	49.0	23	34.6	08.0	180	25.7	03.1
15	19	23.0	31	19.7	40.6	254	35.2	49.1	38	36.5	07.7	195	28.4	03.2
16	34	25.4	46	19.3	39.4	269	38.1	49.1	53	38.4	07.5	210	31.0	03.2
17	49	27.9	61	18.8	-6 38.1	284	41.1	+23 49.1	68	40.3	-9 07.3	225	33.6	+1 03.3
18	64	30.4	76	18.4	-6 36.9	299	44.1	+23 49.1	83	42.2	-9 07.1	240	36.2	+1 03.4
19	79	32.8	91	18.0	35.7	314	47.0	49.2	98	44.1	06.8	255	38.8	03.4
20	94	35.3	106	17.6	34.4	329	50.0	49.2	113	46.0	06.6	270	41.4	03.5
21	109	37.8	121	17.2	33.2	344	52.9	49.2	128	47.9	06.4	285	44.0	03.6
22	124	40.2	136	16.7	31.9	359	55.9	49.3	143	49.8	06.2	300	46.6	03.7
23	139	42.7	151	16.3	30.7	14	58.9	49.3	158	51.7	05.9	315	49.2	03.7
24	154	45.2	166	15.9	-6 29.5	30	01.8	+23 49.3	173	53.6	-9 05.7	330	51.9	+1 03.8
Dif	—		-4 +12		+30 0		+19 +2		+26 +1					

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2		Edad: 10 ^d 9 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'6 R°: 58 ^m											
	PMG: 12 ^h 13 ^m 1		SD: 16'4 PMG: 21 ^h 36 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	43.0	-9	12.7	48	49.7	+23 08.3	60 N	17 17	17 59	18 47	12 25 107	5 59 16	
1	191	43.1		11.7	63	13.4	+23 01.0	58	21	18 01	47	42 101	42 21	
2	206	43.2		10.8	77	37.1	+22 53.5	56	25	03	46	12 56 96	27 26	
3	221	43.3		09.9	92	00.9	45.9	54	29	05	46	13 08 93	15 28	
4	236	43.4		08.9	106	24.6	38.2	52	32	06	45	18 90	5 04 31	
5	251	43.5	-9	08.0	120	48.4	+22 30.2	50	17 35	18 08	18 45	13 28 87	4 54 34	
6	266	43.6	-9	07.1	135	12.2	+22 22.1	45	17 42	18 11	18 45	13 48 82	4 33 39	
7	281	43.7		06.2	149	36.1	13.9	40	47	14	46	14 04 77	16 42	
8	296	43.8		05.2	164	00.0	+22 05.5	35	52	17	47	17 75	4 01 46	
9	311	43.9		04.3	178	23.9	+21 56.9	30	17 56	20	48	29 71	3 49 48	
10	326	44.0		03.4	192	47.9	48.1	20	18 03	26	51	14 49 66	27 53	
11	341	44.1	-9	02.4	207	11.9	+21 39.2	10 N	18 10	18 31	18 56	15 06 63	3 09 56	
12	356	44.2	-9	01.5	221	36.0	+21 30.2	0	18 16	18 37	19 02	15 22 59	2 51 59	
13	11	44.3	-9	00.6	236	00.1	21.0	10 S	23	44	09	39 54	33 63	
14	26	44.4	-8	59.6	250	24.2	11.6	20	30	18 52	18	15 56 50	2 14 67	
15	41	44.5		58.7	264	48.4	+21 02.1	30	38	19 02	31	16 15 46	1 52 71	
16	56	44.6		57.8	279	12.7	+20 52.5	35	42	08	39	27 42	39 73	
17	71	44.7	-8	56.9	293	36.9	+20 42.7	40	18 48	19 16	19 49	16 40 39	1 24 76	
18	86	44.8	-8	55.9	308	01.3	+20 32.7	45	18 54	19 24	20 01	16 55 35	1 06 80	
19	101	44.9		55.0	322	25.6	22.6	50	19 01	35	17	17 14 30	0 43 85	
20	116	45.0		54.1	336	50.1	12.3	52	05	40	24	23 27	32 88	
21	131	45.1		53.1	351	14.5	+20 01.9	54	09	46	33	33 24	20 91	
22	146	45.2		52.2	5	39.1	+19 51.4	56	13	19 53	43	44 21	0 06 94	
23	161	45.3		51.3	20	03.6	40.7	58	18	20 00	20 54	17 57 17	** ** *	
24	176	45.4	-8	50.3	34	28.3	+19 29.9	60 S	19 23	20 08	21 08	18 12 12	** ** *	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 38 ^m 7		Mag: -3.9 PMG: 12 ^h 55 ^m		Mag: -0.7 PMG: 21 ^h 56 ^m		Mag: -2.0 PMG: 12 ^h 23 ^m		Mag: +0.6 PMG: 1 ^h 56 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	154	45.2	166	15.9	-6	29.5	30	01.8	+23	49.3	173	53.6	-9	05.7	330	51.9	+1	03.8
1	169	47.6	181	15.5		28.2	45	04.8		49.3	188	55.5		05.5	345	54.5		03.9
2	184	50.1	196	15.1		27.0	60	07.7		49.3	203	57.4		05.3	0	57.1		03.9
3	199	52.6	211	14.6		25.8	75	10.7		49.4	218	59.3		05.0	15	59.7		04.0
4	214	55.0	226	14.2		24.5	90	13.6		49.4	234	01.2		04.8	31	02.3		04.1
5	229	57.5	241	13.8	-6	23.3	105	16.6	+23	49.4	249	03.0	-9	04.6	46	04.9	+1	04.2
6	244	59.9	256	13.4	-6	22.0	120	19.5	+23	49.4	264	04.9	-9	04.3	61	07.5	+1	04.2
7	260	02.4	271	13.0		20.8	135	22.4		49.5	279	06.8		04.1	76	10.1		04.3
8	275	04.9	286	12.6		19.6	150	25.4		49.5	294	08.7		03.9	91	12.7		04.4
9	290	07.3	301	12.1		18.3	165	28.3		49.5	309	10.6		03.7	106	15.4		04.4
10	305	09.8	316	11.7		17.1	180	31.3		49.5	324	12.5		03.4	121	18.0		04.5
11	320	12.3	331	11.3	-6	15.8	195	34.2	+23	49.5	339	14.4	-9	03.2	136	20.6	+1	04.6
12	335	14.7	346	10.9	-6	14.6	210	37.1	+23	49.6	354	16.3	-9	03.0	151	23.2	+1	04.7
13	350	17.2	1	10.5		13.4	225	40.1		49.6	9	18.2		02.8	166	25.8		04.7
14	5	19.7	16	10.1		12.1	240	43.0		49.6	24	20.1		02.5	181	28.4		04.8
15	20	22.1	31	09.6		10.9	255	45.9		49.6	39	22.0		02.3	196	31.0		04.9
16	35	24.6	46	09.2		09.6	270	48.9		49.6	54	23.9		02.1	211	33.6		04.9
17	50	27.1	61	08.8	-6	08.4	285	51.8	+23	49.6	69	25.8	-9	01.9	226	36.3	+1	05.0
18	65	29.5	76	08.4	-6	07.1	300	54.7	+23	49.7	84	27.7	-9	01.6	241	38.9	+1	05.1
19	80	32.0	91	08.0		05.9	315	57.7		49.7	99	29.6		01.4	256	41.5		05.2
20	95	34.4	106	07.6		04.7	331	00.6		49.7	114	31.5		01.2	271	44.1		05.2
21	110	36.9	121	07.2		03.4	346	03.5		49.7	129	33.4		01.0	286	46.7		05.3
22	125	39.4	136	06.7		02.2	1	06.4		49.7	144	35.3		00.7	301	49.3		05.4
23	140	41.8	151	06.3	-6	00.9	16	09.4		49.7	159	37.2		00.5	316	51.9		05.4
24	155	44.3	166	05.9	-5	59.7	31	12.3	+23	49.8	174	39.1	-9	00.3	331	54.6	+1	05.5
Dif	—		-4		+12		+29		0		+19		+2		+26		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 9			Edad: 11 ^d 9 PHE { SD: 16'5 PMG: 22 ^h 34 ^m											
				R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	m	h	m	m
0	176	45.4	-8 50.3	34	28.3	+19 29.9		60 N	5 37	6 25	7 08	14 12	107	6 15	10
1	191	45.5		48	53.0	57	18.9 ¹¹⁰	58	38	24	7 03	23	102	6 03	14
2	206	45.6		63	17.7	57	+19 07.8 ¹¹¹	56	39	22	6 59	32	98	5 53	18
3	221	45.7		77	42.5	58	+18 56.6 ¹¹²	54	39	20	56	41	94	43	22
4	236	45.8		92	07.3	58	45.2 ¹¹⁴	52	40	19	53	48	92	35	24
5	251	45.9	-8 45.7	106	32.2	59	+18 33.7 ¹¹⁵	50	5 40	6 17	6 50	14 55	89	5 28	26
6	266	46.0	-8 44.7	120	57.2	60	+18 22.0 ¹¹⁷	45	5 40	6 14	6 43	15 10	83	5 12	32
7	281	46.1		135	22.2	60	+18 10.3 ¹¹⁷	40	39	11	38	21	79	4 58	37
8	296	46.2		149	47.3	61	+17 58.4 ¹¹⁹	35	39	08	33	32	74	47	40
9	311	46.4		164	12.4	61	46.3 ¹²¹	30	37	05	29	40	72	37	43
10	326	46.5		178	37.6	62	34.2 ¹²¹	20	34	6 00	22	15 55	66	20	48
11	341	46.6	-8 40.1	193	02.9	63	+17 21.9 ¹²³	10 N	5 30	5 55	6 16	16 09	60	4 05	53
12	356	46.7	-8 39.1	207	28.2	63	+17 09.5 ¹²⁴	0	5 24	5 49	6 10	16 21	56	3 50	58
13	11	46.8		221	53.5	63	+16 57.0 ¹²⁵	10 S	17	42	6 03	33	51	36	62
14	26	46.9		236	18.9	64	44.3 ¹²⁷	20	5 08	34	5 56	16 46	47	21	66
15	41	47.0		250	44.4	65	31.6 ¹²⁷	30	4 55	24	49	17 01	41	3 03	71
16	56	47.1		265	10.0	66	18.7 ¹²⁹	35	47	18	44	09	38	2 52	75
17	71	47.2	-8 34.4	279	35.6	66	+16 05.7 ¹³⁰	40	4 38	5 11	5 39	17 19	34	2 40	79
18	86	47.3	-8 33.5	294	01.2	66	+15 52.6 ¹³¹	45	4 26	5 02	5 33	17 30	30	2 26	83
19	101	47.4		308	27.0	68	39.4 ¹³²	50	10	4 51	25	44	24	08	89
20	116	47.5		322	52.7	67	26.1 ¹³³	52	4 02	46	22	50	22	2 00	92
21	131	47.6		337	18.6	69	+15 12.7 ¹³⁴	54	3 54	41	18	17 57	19	1 51	94
22	146	47.7		351	44.5	69	+14 59.1 ¹³⁶	56	44	34	14	18 05	16	40	99
23	161	47.8		6	10.4	69	45.5 ¹³⁶	58	33	27	09	14	12	28	103
24	176	48.0	-8 27.9	20	36.5	71	+14 31.7 ¹³⁸	60 S	3 19	4 19	5 04	18 24	8	1 14	108

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 34 ^m 8		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: -0.7 PMG: 21 ^h 51 ^m		Mag: -2.0 PMG: 12 ^h 20 ^m		Mag: +0.6 PMG: 1 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	155	44.3	166 05.9	-5 59.7	31 12.3	+23 49.8	174 39.1	-9 00.3	331 54.6	+1 05.5
1	170	46.8	181 05.5	58.4	46 15.2	49.8	189 41.0	-9 00.1	346 57.2	05.6
2	185	49.2	196 05.1	57.2	61 18.1	49.8	204 42.9	-8 59.8	1 59.8	05.7
3	200	51.7	211 04.7	56.0	76 21.0	49.8	219 44.8	59.6	17 02.4	05.7
4	215	54.2	226 04.3	54.7	91 23.9	49.8	234 46.7	59.4	32 05.0	05.8
5	230	56.6	241 03.9	-5 53.5	106 26.8	+23 49.8	249 48.6	-8 59.2	47 07.6	+1 05.9
6	245	59.1	256 03.4	-5 52.2	121 29.8	+23 49.8	264 50.5	-8 58.9	62 10.2	+1 06.0
7	261	01.5	271 03.0	51.0	136 32.7	49.9	279 52.4	58.7	77 12.9	06.0
8	276	04.0	286 02.6	49.7	151 35.6	49.9	294 54.3	58.5	92 15.5	06.1
9	291	06.5	301 02.2	48.5	166 38.5	49.9	309 56.2	58.3	107 18.1	06.2
10	306	08.9	316 01.8	47.2	181 41.4	49.9	324 58.1	58.0	122 20.7	06.2
11	321	11.4	331 01.4	-5 46.0	196 44.3	+23 49.9	340 00.0	-8 57.8	137 23.3	+1 06.3
12	336	13.9	346 01.0	-5 44.7	211 47.2	+23 49.9	355 01.9	-8 57.6	152 25.9	+1 06.4
13	351	16.3	1 00.6	43.5	226 50.1	49.9	10 03.7	57.4	167 28.5	06.5
14	6	18.8	16 00.2	42.2	241 53.0	49.9	25 05.6	57.1	182 31.2	06.5
15	21	21.3	30 59.8	41.0	256 55.9	49.9	40 07.5	56.9	197 33.8	06.6
16	36	23.7	45 59.4	39.7	271 58.8	49.9	55 09.4	56.7	212 36.4	06.7
17	51	26.2	60 58.9	-5 38.5	287 01.7	+23 49.9	70 11.3	-8 56.5	227 39.0	+1 06.8
18	66	28.7	75 58.5	-5 37.2	302 04.6	+23 50.0	85 13.2	-8 56.2	242 41.6	+1 06.8
19	81	31.1	90 58.1	36.0	317 07.5	50.0	100 15.1	56.0	257 44.2	06.9
20	96	33.6	105 57.7	34.7	332 10.4	50.0	115 17.0	55.8	272 46.8	07.0
21	111	36.0	120 57.3	33.5	347 13.2	50.0	130 18.9	55.6	287 49.5	07.1
22	126	38.5	135 56.9	32.2	2 16.1	50.0	145 20.8	55.3	302 52.1	07.1
23	141	41.0	150 56.5	31.0	17 19.0	50.0	160 22.7	55.1	317 54.7	07.2
24	156	43.4	165 56.1	-5 29.7	32 21.9	+23 50.0	175 24.6	-8 54.9	332 57.3	+1 07.3
Dif	—		-4	+12	+29	0	+19	+2	+26	+1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 7		Edad: 12 ^d 9 PHE { 4 ^h : 61 ^h 2 12 ^h : 61 ^h 3 20 ^h : 61 ^h 3 R°: 53 ^m SD: 16 ^h 7 PMG: 23 ^h 30 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	48.0	-8 27.9	20	36.5	+14 31.7	60 N	17 22	18 04	18 52	15 59	104	6 25	7
1	191	48.1	26.9	35	02.5	70 17.9 ¹³⁸	58	26	06	51	16 05	100	17	11
2	206	48.2	26.0	49	28.7	72 +14 04.0 ¹³⁹	56	30	07	50	10 97		11	14
3	221	48.3	25.1	63	54.9	72 +13 49.9 ¹⁴¹	54	33	08	49	15 94		6 05	17
4	236	48.4	24.1	78	21.1	72 35.8 ¹⁴¹	52	36	10	49	20 90		5 59	20
5	251	48.5	-8 23.2	92	47.4	73 +13 21.6 ¹⁴²	50	17 38	18 11	18 48	16 24	88	5 54	23
6	266	48.6	-8 22.2	107	13.8	74 +13 07.3 ¹⁴³	45	17 44	18 14	18 48	16 33	82	5 44	27
7	281	48.7	21.3	121	40.2	74 +12 52.9 ¹⁴⁴	40	49	17	48	40 77		35	32
8	296	48.8	20.4	136	06.7	75 38.4 ¹⁴⁵	35	54	19	49	46 74		27	36
9	311	48.9	19.4	150	33.3	76 23.9 ¹⁴⁵	30	17 58	22	49	16 52	70	20	39
10	326	49.1	18.5	164	59.9	76 +12 09.2 ¹⁴⁷	20	18 04	26	52	17 01	64	5 08	45
11	341	49.2	-8 17.5	179	26.5	76 +11 54.5 ¹⁴⁷	10 N	18 10	18 31	18 56	17 09	59	4 58	50
12	356	49.3	-8 16.6	193	53.3	78 +11 39.7 ¹⁴⁸	0	18 16	18 37	19 01	17 17	54	4 48	54
13	11	49.4	15.7	208	20.0	77 24.8 ¹⁴⁹	10 S	22	43	08	24 49		38	59
14	26	49.5	14.7	222	46.9	79 +11 09.8 ¹⁵⁰	20	28	18 51	17	33 43		27	65
15	41	49.6	13.8	237	13.7	78 +10 54.8 ¹⁵⁰	30	36	19 00	29	42 38		14	71
16	56	49.7	12.8	251	40.7	80 39.7 ¹⁵¹	35	40	06	36	47 35		4 07	74
17	71	49.8	-8 11.9	266	07.7	80 +10 24.6 ¹⁵¹	40	18 45	19 13	19 46	17 53	31	3 59	78
18	86	50.0	-8 11.0	280	34.7	80 +10 09.3 ¹⁵³	45	18 50	19 21	19 57	18 00	26	3 49	83
19	101	50.1	10.0	295	01.8	81 +9 54.0 ¹⁵³	50	18 57	31	20 12	08 21		37	89
20	116	50.2	09.1	309	29.0	82 38.7 ¹⁵³	52	19 01	36	19	12 19		32	91
21	131	50.3	08.1	323	56.2	82 23.2 ¹⁵⁵	54	04	41	27	16 16		25	95
22	146	50.4	07.2	338	23.4	82 +9 07.8 ¹⁵⁴	56	08	47	37	21 13		19	97
23	161	50.5	06.2	352	50.7	83 +8 52.2 ¹⁵⁶	58	12	19 54	20 47	26 10		11	101
24	176	50.6	-8 05.3	7	18.1	84 +8 36.6 ¹⁵⁶	60 S	19 17	20 02	21 00	18 32	6	3 02	106
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 30 ^m 9		Mag: -3.9 PMG: 12 ^h 57 ^m		Mag: -0.7 PMG: 21 ^h 46 ^m		Mag: -2.0 PMG: 12 ^h 17 ^m		Mag: +0.6 PMG: 1 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	156	43.4	165 56.1	-5 29.7	32 21.9	+23 50.0	175 24.6	-8 54.9	332 57.3	+1 07.3				
1	171	45.9	180 55.7	28.5	47 24.8	50.0	190 26.5	54.7	347 59.9	07.3				
2	186	48.4	195 55.3	27.2	62 27.7	50.0	205 28.4	54.4	3 02.5	07.4				
3	201	50.8	210 54.9	26.0	77 30.6	50.0	220 30.3	54.2	18 05.2	07.5				
4	216	53.3	225 54.5	24.7	92 33.4	50.0	235 32.2	54.0	33 07.8	07.6				
5	231	55.8	240 54.1	-5 23.5	107 36.3	+23 50.0	250 34.1	-8 53.8	48 10.4	+1 07.6				
6	246	58.2	255 53.7	-5 22.2	122 39.2	+23 50.0	265 36.0	-8 53.5	63 13.0	+1 07.7				
7	262	00.7	270 53.3	21.0	137 42.1	50.0	280 37.9	53.3	78 15.6	07.8				
8	277	03.2	285 52.8	19.7	152 44.9	50.0	295 39.8	53.1	93 18.2	07.9				
9	292	05.6	300 52.4	18.5	167 47.8	50.0	310 41.7	52.8	108 20.9	07.9				
10	307	08.1	315 52.0	17.2	182 50.7	50.0	325 43.6	52.6	123 23.5	08.0				
11	322	10.5	330 51.6	-5 16.0	197 53.5	+23 50.0	340 45.5	-8 52.4	138 26.1	+1 08.1				
12	337	13.0	345 51.2	-5 14.7	212 56.4	+23 50.0	355 47.4	-8 52.2	153 28.7	+1 08.2				
13	352	15.5	0 50.8	13.5	227 59.3	50.0	10 49.3	51.9	168 31.3	08.2				
14	7	17.9	15 50.4	12.2	243 02.1	50.0	25 51.2	51.7	183 33.9	08.3				
15	22	20.4	30 50.0	11.0	258 05.0	50.0	40 53.1	51.5	198 36.6	08.4				
16	37	22.9	45 49.6	09.7	273 07.9	50.0	55 55.0	51.3	213 39.2	08.4				
17	52	25.3	60 49.2	-5 08.4	288 10.7	+23 50.0	70 56.9	-8 51.0	228 41.8	+1 08.5				
18	67	27.8	75 48.8	-5 07.2	303 13.6	+23 50.0	85 58.8	-8 50.8	243 44.4	+1 08.6				
19	82	30.3	90 48.4	05.9	318 16.4	50.0	101 00.7	50.6	258 47.0	08.7				
20	97	32.7	105 48.0	04.7	333 19.3	50.0	116 02.6	50.4	273 49.6	08.7				
21	112	35.2	120 47.6	03.4	348 22.2	50.0	131 04.5	50.1	288 52.3	08.8				
22	127	37.6	135 47.2	02.2	3 25.0	50.0	146 06.4	49.9	303 54.9	08.9				
23	142	40.1	150 46.8	-5 00.9	18 27.9	50.0	161 08.3	49.7	318 57.5	09.0				
24	157	42.6	165 46.4	-4 59.7	33 30.7	+23 50.0	176 10.1	-8 49.5	334 00.1	+1 09.0				
Dif	—		-4	+13	+29	0	+19	+2	+26	+1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 12 ^m 5			Edad: 13 ^d 9 PHE { 4 ^h : 61 ^h /3 12 ^h : 61 ^h /2 20 ^h : 61 ^h /1 PMG: **h **m R°: **m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	176	50.6	-8 05.3	7	18.1	+8 36.6	60 N	5 32	6 20	7 02	17 43	103	6 32	5
1	191	50.7	04.4	21	45.5	84 21.0 ¹⁵⁶	58	33	18	6 58	45 99		28	9
2	206	50.9	03.4	36	12.9	84 +8 05.3 ¹⁵⁷	56	34	17	54	47 95		25	12
3	221	51.0	02.5	50	40.4	85 +7 49.6 ¹⁵⁷	54	35	16	51	49 92		22	15
4	236	51.1	01.5	65	07.9	85 33.8 ¹⁵⁸	52	35	14	48	50 89		19	18
5	251	51.2	-8 00.6	79	35.5	86 +7 17.9 ¹⁵⁹	50	5 36	6 13	6 46	17 52	86	6 17	20
6	266	51.3	-7 59.6	94	03.2	87 +7 02.1 ¹⁵⁸	45	5 37	6 11	6 40	17 55	81	6 11	26
7	281	51.4	58.7	108	30.8	86 +6 46.2 ¹⁵⁹	40	37	08	35	17 57	76	07	30
8	296	51.6	57.7	122	58.6	88 30.2 ¹⁶⁰	35	36	06	31	18 00	72	6 03	33
9	311	51.7	56.8	137	26.3	87 +6 14.2 ¹⁶⁰	30	35	6 03	27	02 68		5 59	37
10	326	51.8	55.9	151	54.1	88 +5 58.2 ¹⁶⁰	20	33	5 59	21	05 62		53	43
11	341	51.9	-7 54.9	166	22.0	89 +5 42.1 ¹⁶¹	10 N	5 29	5 54	6 15	18 08	57	5 48	48
12	356	52.0	-7 54.0	180	49.9	89 +5 26.1 ¹⁶⁰	0	5 24	5 48	6 09	18 11	52	5 42	53
13	11	52.1	53.0	195	17.8	89 +5 09.9 ¹⁶²	10 S	18	42	6 03	13 48		37	58
14	26	52.3	52.1	209	45.8	90 +4 53.8 ¹⁶¹	20	5 09	35	5 57	16 42		32	63
15	41	52.4	51.1	224	13.8	90 37.6 ¹⁶²	30	4 57	26	50	20 36		25	69
16	56	52.5	50.2	238	41.8	90 21.4 ¹⁶²	35	49	20	46	22 32		21	73
17	71	52.6	-7 49.2	253	09.9	91 +4 05.2 ¹⁶²	40	4 40	5 13	5 41	18 24	29	5 17	77
18	86	52.7	-7 48.3	267	38.0	91 +3 49.0 ¹⁶²	45	4 29	5 05	5 35	18 26	25	5 12	81
19	101	52.9	47.3	282	06.1	91 32.8 ¹⁶²	50	14	4 55	29	29 20		06	87
20	116	53.0	46.4	296	34.3	92 16.5 ¹⁶³	52	4 07	50	26	31 17		03	90
21	131	53.1	45.4	311	02.5	92 +3 00.3 ¹⁶²	54	3 59	45	22	32 15		5 00	93
22	146	53.2	44.5	325	30.8	93 +2 44.0 ¹⁶³	56	49	39	18	34 12		4 56	96
23	161	53.3	43.5	339	59.1	93 27.7 ¹⁶³	58	39	32	14	36 8		52	100
24	176	53.4	-7 42.6	354	27.4	93 +2 11.4 ¹⁶³	60 S	3 26	4 24	5 09	18 38	5	4 48	104
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 27 ^m 0		Mag: -3.9 PMG: 12 ^h 57 ^m			Mag: -0.6 PMG: 21 ^h 42 ^m			Mag: -2.0 PMG: 12 ^h 14 ^m			Mag: +0.6 PMG: 1 ^h 44 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	157	42.6	165	46.4	-4 59.7	33	30.7	+23 50.0	176	10.1	-8 49.5	334	00.1	+1 09.0
1	172	45.0	180	46.0	58.4	48	33.6	50.0	191	12.0	49.2	349	02.7	09.1
2	187	47.5	195	45.6	57.1	63	36.4	50.0	206	13.9	49.0	4	05.4	09.2
3	202	50.0	210	45.2	55.9	78	39.2	50.0	221	15.8	48.8	19	08.0	09.3
4	217	52.4	225	44.8	54.6	93	42.1	50.0	236	17.7	48.6	34	10.6	09.3
5	232	54.9	240	44.4	-4 53.4	108	44.9	+23 50.0	251	19.6	-8 48.3	49	13.2	+1 09.4
6	247	57.4	255	44.0	-4 52.1	123	47.8	+23 50.0	266	21.5	-8 48.1	64	15.8	+1 09.5
7	262	59.8	270	43.6	50.9	138	50.6	50.0	281	23.4	47.9	79	18.5	09.6
8	278	02.3	285	43.2	49.6	153	53.5	50.0	296	25.3	47.7	94	21.1	09.6
9	293	04.8	300	42.8	48.3	168	56.3	50.0	311	27.2	47.4	109	23.7	09.7
10	308	07.2	315	42.4	47.1	183	59.1	50.0	326	29.1	47.2	124	26.3	09.8
11	323	09.7	330	42.0	-4 45.8	199	02.0	+23 50.0	341	31.0	-8 47.0	139	28.9	+1 09.9
12	338	12.1	345	41.6	-4 44.6	214	04.8	+23 49.9	356	32.9	-8 46.8	154	31.5	+1 09.9
13	353	14.6	0	41.2	43.3	229	07.6	49.9	11	34.8	46.5	169	34.2	10.0
14	8	17.1	15	40.8	42.0	244	10.5	49.9	26	36.7	46.3	184	36.8	10.1
15	23	19.5	30	40.4	40.8	259	13.3	49.9	41	38.6	46.1	199	39.4	10.2
16	38	22.0	45	40.0	39.5	274	16.1	49.9	56	40.5	45.9	214	42.0	10.2
17	53	24.5	60	39.6	-4 38.3	289	18.9	+23 49.9	71	42.4	-8 45.6	229	44.6	+1 10.3
18	68	26.9	75	39.2	-4 37.0	304	21.8	+23 49.9	86	44.3	-8 45.4	244	47.3	+1 10.4
19	83	29.4	90	38.8	35.7	319	24.6	49.9	101	46.2	45.2	259	49.9	10.5
20	98	31.9	105	38.4	34.5	334	27.4	49.9	116	48.1	44.9	274	52.5	10.5
21	113	34.3	120	38.1	33.2	349	30.2	49.9	131	50.0	44.7	289	55.1	10.6
22	128	36.8	135	37.7	32.0	4	33.0	49.9	146	51.9	44.5	304	57.7	10.7
23	143	39.2	150	37.3	30.7	19	35.9	49.8	161	53.8	44.3	320	00.4	10.7
24	158	41.7	165	36.9	-4 29.4	34	38.7	+23 49.8	176	55.7	-8 44.0	335	03.0	+1 10.8
Dif	—		-4		+13	+28		0	+19		+2	+26		+1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 14 ^d 9 PHE	4 ^h : 61 ^o 0 12 ^h : 60 ^o 9 20 ^h : 60 ^o 7											
	PMG: 12 ^h 12 ^m 3				SD: 16 ^h 6											PMG: 0 ^h 23 ^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		h m m	m	
0	176	53.4	-7 42.6	354	27.4	+2 11.4		60 N	17 27	18 09	18 57	19 26 100		6 37	6	
1	191	53.6	41.7	8	55.7	+1 55.1	163	58	31	10	56	24 97		37	9	
2	206	53.7	40.7	23	24.1	38.8	163	56	34	11	54	22 93		37	12	
3	221	53.8	39.8	37	52.5	22.5	163	54	37	12	53	21 90		37	15	
4	236	53.9	38.8	52	20.9	+1 06.2	163	52	39	13	52	19 88		37	17	
5	251	54.0	-7 37.9	66	49.3	+0 49.9	163	50	17 42	18 14	18 52	19 18 85		6 37	20	
6	266	54.2	-7 36.9	81	17.8	+0 33.6	163	45	17 47	18 17	18 51	19 16 79		6 37	25	
7	281	54.3	36.0	95	46.3	17.3	163	40	52	19	50	13 75		37	29	
8	296	54.4	35.0	110	14.8	+0 01.1	162	35	55	21	50	12 71		36	33	
9	311	54.5	34.1	124	43.3	-0 15.2	163	30	17 59	23	51	10 68		36	36	
10	326	54.7	33.1	139	11.9	31.5	163	20	18 05	27	53	07 62		36	42	
11	341	54.8	-7 32.2	153	40.5	-0 47.7	162	10 N	18 10	18 32	18 56	19 05 56		6 36	47	
12	356	54.9	-7 31.2	168	09.1	-1 03.9	162	0	18 16	18 36	19 01	19 03 52		6 35	52	
13	11	55.0	30.3	182	37.7	20.1	162	10 S	21	42	07	19 01 47		35	57	
14	26	55.1	29.3	197	06.3	36.3	162	20	27	49	15	18 58 42		35	62	
15	41	55.3	28.4	211	35.0	-1 52.5	162	30	33	18 58	26	56 36		34	68	
16	56	55.4	27.4	226	03.6	-2 08.6	161	35	37	19 03	33	54 33		34	72	
17	71	55.5	-7 26.5	240	32.3	-2 24.7	161	40	18 42	19 09	19 42	18 53 29		6 34	75	
18	86	55.6	-7 25.5	255	01.0	-2 40.8	161	45	18 47	19 17	19 53	18 51 25		6 33	80	
19	101	55.8	24.6	269	29.7	-2 56.8	160	50	53	27	20 07	49 20		33	86	
20	116	55.9	23.6	283	58.4	-3 12.9	161	52	56	31	14	48 18		33	88	
21	131	56.0	22.7	298	27.2	28.9	160	54	18 59	36	22	47 15		33	90	
22	146	56.1	21.7	312	55.9	-3 44.8	159	56	19 03	42	30	46 12		32	94	
23	161	56.3	20.7	327	24.7	-4 00.7	159	58	07	48	41	44 9		32	98	
24	176	56.4	-7 19.8	341	53.4	-4 16.6	159	60 S	19 11	19 56	20 53	18 43 5		6 32	101	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 23 ^m 0		Mag: -3.9 PMG: 12 ^h 58 ^m			Mag: -0.6 PMG: 21 ^h 37 ^m			Mag: -2.0 PMG: 12 ^h 11 ^m			Mag: +0.6 PMG: 1 ^h 40 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	158	41.7	165	36.9	-4 29.4	34	38.7	+23 49.8	176	55.7	-8 44.0	335	03.0	+1 10.8		
1	173	44.2	180	36.5	28.2	49	41.5	49.8	191	57.6	43.8	350	05.6	10.9		
2	188	46.6	195	36.1	26.9	64	44.3	49.8	206	59.5	43.6	5	08.2	11.0		
3	203	49.1	210	35.7	25.7	79	47.1	49.8	222	01.4	43.4	20	10.8	11.0		
4	218	51.6	225	35.3	24.4	94	49.9	49.8	237	03.3	43.1	35	13.5	11.1		
5	233	54.0	240	34.9	-4 23.1	109	52.7	+23 49.8	252	05.2	-8 42.9	50	16.1	+1 11.2		
6	248	56.5	255	34.5	-4 21.9	124	55.5	+23 49.7	267	07.1	-8 42.7	65	18.7	+1 11.3		
7	263	59.0	270	34.1	20.6	139	58.3	49.7	282	09.0	42.5	80	21.3	11.3		
8	279	01.4	285	33.7	19.3	155	01.1	49.7	297	10.9	42.2	95	23.9	11.4		
9	294	03.9	300	33.3	18.1	170	03.9	49.7	312	12.8	42.0	110	26.6	11.5		
10	309	06.4	315	32.9	16.8	185	06.8	49.7	327	14.7	41.8	125	29.2	11.6		
11	324	08.8	330	32.5	-4 15.5	200	09.6	+23 49.7	342	16.6	-8 41.6	140	31.8	+1 11.6		
12	339	11.3	345	32.1	-4 14.3	215	12.3	+23 49.7	357	18.5	-8 41.3	155	34.4	+1 11.7		
13	354	13.7	0	31.7	13.0	230	15.1	49.6	12	20.4	41.1	170	37.1	11.8		
14	9	16.2	15	31.4	11.8	245	17.9	49.6	27	22.3	40.9	185	39.7	11.9		
15	24	18.7	30	31.0	10.5	260	20.7	49.6	42	24.2	40.6	200	42.3	11.9		
16	39	21.1	45	30.6	09.2	275	23.5	49.6	57	26.1	40.4	215	44.9	12.0		
17	54	23.6	60	30.2	-4 08.0	290	26.3	+23 49.6	72	28.0	-8 40.2	230	47.5	+1 12.1		
18	69	26.1	75	29.8	-4 06.7	305	29.1	+23 49.6	87	29.9	-8 40.0	245	50.2	+1 12.2		
19	84	28.5	90	29.4	05.4	320	31.9	49.5	102	31.8	39.7	260	52.8	12.2		
20	99	31.0	105	29.0	04.2	335	34.7	49.5	117	33.7	39.5	275	55.4	12.3		
21	114	33.5	120	28.6	02.9	350	37.5	49.5	132	35.5	39.3	290	58.0	12.4		
22	129	35.9	135	28.2	01.6	5	40.3	49.5	147	37.4	39.1	306	00.7	12.5		
23	144	38.4	150	27.8	-4 00.4	20	43.0	49.5	162	39.3	38.8	321	03.3	12.6		
24	159	40.9	165	27.4	-3 59.1	35	45.8	+23 49.4	177	41.2	-8 38.6	336	05.9	+1 12.6		
Dif	—		-4		+13	+28		0	+19		+2	+26		+1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 15 ^d 9	PHE {	SD: 16 ^h 5	SD: 1 ^h 15 ^m	R°: 52 ^m										
	PMG: 12 ^h 12 ^m 1									Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	176	56.4	-7 19.8	341	53.4	-4 16.6		60 N	5 26	6 14	6 56	21 06 100	6 43 6					
1	191	56.5	18.8	356	22.2	32.5	159	58	28	13	53	21 01 95	46 10					
2	206	56.6	17.9	10	51.0	-4 48.3	158	56	29	12	49	20 55 92	49 13					
3	221	56.8	16.9	25	19.7	-5 04.0	157	54	30	11	47	51 88	52 16					
4	236	56.9	16.0	39	48.5	19.7	157	52	31	10	44	47 85	54 19					
5	251	57.0	-7 15.0	54	17.3	-5 35.4	157	50	5 32	6 09	6 42	20 43 83	6 57 20					
6	266	57.1	-7 14.1	68	46.1	-5 51.0	156	45	5 33	6 07	6 37	20 35 78	7 02 25					
7	281	57.3	13.1	83	14.9	-6 06.6	156	40	34	05	32	28 74	06 30					
8	296	57.4	12.2	97	43.7	22.1	155	35	34	03	28	23 69	09 34					
9	311	57.5	11.2	112	12.5	37.6	155	30	33	6 01	25	18 66	12 37					
10	326	57.7	10.3	126	41.3	-6 53.0	154	20	31	5 57	19	09 61	18 42					
11	341	57.8	-7 09.3	141	10.1	-7 08.3	153	10 N	5 28	5 53	6 14	20 01 57	7 23 47					
12	356	57.9	-7 08.3	155	38.9	-7 23.6	153	0	5 24	5 48	6 09	19 55 52	7 27 52					
13	11	58.0	07.4	170	07.7	38.9	153	10 S	18	42	6 04	48 47	32 56					
14	26	58.2	06.4	184	36.5	-7 54.1	152	20	5 10	36	5 58	40 43	37 61					
15	41	58.3	05.5	199	05.3	-8 09.2	151	30	4 59	27	51	32 38	42 67					
16	56	58.4	04.5	213	34.1	24.2	150	35	51	22	48	27 35	46 70					
17	71	58.5	-7 03.6	228	02.8	-8 39.2	150	40	4 43	5 16	5 43	19 22 31	7 49 74					
18	86	58.7	-7 02.6	242	31.6	-8 54.1	149	45	4 32	5 08	5 38	19 16 27	7 53 79					
19	101	58.8	01.7	257	00.4	-9 09.0	149	50	18	4 59	32	09 22	7 59 84					
20	116	58.9	-7 00.7	271	29.1	23.8	148	52	11	54	29	06 19	8 01 87					
21	131	59.1	-6 59.7	285	57.9	38.5	147	54	4 04	49	26	19 02 17	03 90					
22	146	59.2	58.8	300	26.6	-9 53.1	146	56	3 55	44	23	18 58 14	06 93					
23	161	59.3	57.8	314	55.4	-10 07.7	146	58	45	37	19	53 11	10 96					
24	176	59.5	-6 56.9	329	24.1	-10 22.2	145	60 S	3 33	4 30	5 14	18 48 8	8 13 100					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 19 ^m 1		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: -0.6 PMG: 21 ^h 33 ^m		Mag: -2.0 PMG: 12 ^h 08 ^m		Mag: +0.6 PMG: 1 ^h 35 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	159	40.9	165	27.4	-3 59.1	35	45.8	+23 49.4	177	41.2	-8 38.6	336	05.9	+1 12.6
1	174	43.3	180	27.1	57.8	50	48.6	49.4	192	43.1	38.4	351	08.5	12.7
2	189	45.8	195	26.7	56.6	65	51.4	49.4	207	45.0	38.2	6	11.1	12.8
3	204	48.2	210	26.3	55.3	80	54.1	49.4	222	46.9	37.9	21	13.8	12.9
4	219	50.7	225	25.9	54.0	95	56.9	49.3	237	48.8	37.7	36	16.4	12.9
5	234	53.2	240	25.5	-3 52.8	110	59.7	+23 49.3	252	50.7	-8 37.5	51	19.0	+1 13.0
6	249	55.6	255	25.1	-3 51.5	126	02.5	+23 49.3	267	52.6	-8 37.2	66	21.6	+1 13.1
7	264	58.1	270	24.7	50.2	141	05.2	49.3	282	54.5	37.0	81	24.3	13.2
8	280	00.6	285	24.3	49.0	156	08.0	49.3	297	56.4	36.8	96	26.9	13.2
9	295	03.0	300	23.9	47.7	171	10.8	49.2	312	58.3	36.6	111	29.5	13.3
10	310	05.5	315	23.6	46.4	186	13.5	49.2	328	00.2	36.3	126	32.1	13.4
11	325	08.0	330	23.2	-3 45.2	201	16.3	+23 49.2	343	02.1	-8 36.1	141	34.7	+1 13.5
12	340	10.4	345	22.8	-3 43.9	216	19.1	+23 49.2	358	04.0	-8 35.9	156	37.4	+1 13.5
13	355	12.9	0	22.4	42.6	231	21.8	49.1	13	05.9	35.7	171	40.0	13.6
14	10	15.3	15	22.0	41.4	246	24.6	49.1	28	07.8	35.4	186	42.6	13.7
15	25	17.8	30	21.6	40.1	261	27.4	49.1	43	09.7	35.2	201	45.2	13.8
16	40	20.3	45	21.2	38.8	276	30.1	49.1	58	11.6	35.0	216	47.9	13.8
17	55	22.7	60	20.8	-3 37.5	291	32.9	+23 49.0	73	13.5	-8 34.8	231	50.5	+1 13.9
18	70	25.2	75	20.5	-3 36.3	306	35.6	+23 49.0	88	15.4	-8 34.5	246	53.1	+1 14.0
19	85	27.7	90	20.1	35.0	321	38.4	49.0	103	17.3	34.3	261	55.7	14.1
20	100	30.1	105	19.7	33.7	336	41.1	49.0	118	19.2	34.1	276	58.4	14.1
21	115	32.6	120	19.3	32.5	351	43.9	48.9	133	21.1	33.8	292	01.0	14.2
22	130	35.1	135	18.9	31.2	6	46.6	48.9	148	23.0	33.6	307	03.6	14.3
23	145	37.5	150	18.5	29.9	21	49.4	48.9	163	24.9	33.4	322	06.2	14.4
24	160	40.0	165	18.1	-3 28.7	36	52.1	+23 48.8	178	26.8	-8 33.2	337	08.9	+1 14.4
Dif	—		-4	+13		+28	0		+19		+2	+26		+1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 16 ^d 9		PHE {	4 ^h : 59 ^m 7 12 ^h : 59 ^m 4 20 ^h : 59 ^m 1									
	PMG: 12 ^h 11 ^m 9		SD: 16 ^h 3			PMG: 2 ^h 07 ^m			R°: 52 ^m						
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	176	59.5	-6 56.9	329	24.1	-10 22.2	60 N	17 32	18 14	19 02	22 46 98	6 49 8			
1	191	59.6	55.9	343	52.8	97 36.6	58	35	15	19 00	36 93	6 56 12			
2	206	59.7	55.0	358	21.5	97 -10 50.9	56	38	15	18 58	27 89	7 02 16			
3	221	59.8	54.0	12	50.2	97 -11 05.2	54	41	16	57	19 86	08 18			
4	237	00.0	53.1	27	18.9	97 19.3	52	43	17	56	12 83	13 21			
5	252	00.1	-6 52.1	41	47.6	97 -11 33.4	50	17 45	18 18	18 55	22 06 80	7 17 24			
6	267	00.2	-6 51.1	56	16.2	96 -11 47.4	45	17 50	18 19	18 53	21 53 75	7 27 29			
7	282	00.4	50.2	70	44.9	97 -12 01.4	40	54	21	52	42 71	36 32			
8	297	00.5	49.2	85	13.5	96 15.2	35	17 57	23	52	32 68	43 36			
9	312	00.6	48.3	99	42.1	96 29.0	30	18 00	24	52	24 65	7 49 39			
10	327	00.8	47.3	114	10.7	96 42.6	20	06	28	53	21 10 61	8 00 44			
11	342	00.9	-6 46.3	128	39.3	96 -12 56.2	10 N	18 11	18 32	18 56	20 58 56	8 10 48			
12	357	01.0	-6 45.4	143	07.9	96 -13 09.7	0	18 15	18 36	19 00	20 47 52	8 19 53			
13	12	01.2	44.4	157	36.4	95 23.0	10 S	20	41	06	35 49	28 57			
14	27	01.3	43.5	172	05.0	96 36.3	20	25	47	13	23 45	38 61			
15	42	01.4	42.5	186	33.5	95 -13 49.5	30	31	18 55	24	10 40	49 66			
16	57	01.6	41.5	201	02.0	95 -14 02.6	35	35	19 00	31	20 02 38	8 56 69			
17	72	01.7	-6 40.6	215	30.5	95 -14 15.6	40	18 39	19 06	19 39	19 53 35	9 03 73			
18	87	01.8	-6 39.6	229	59.0	95 -14 28.5	45	18 43	19 13	19 49	19 43 31	9 12 77			
19	102	02.0	38.7	244	27.4	94 41.3	50	49	22	20 02	31 26	23 82			
20	117	02.1	37.7	258	55.8	94 -14 54.1	52	52	26	09	25 24	28 84			
21	132	02.2	36.7	273	24.2	94 -15 06.7	54	55	31	16	19 21	33 87			
22	147	02.4	35.8	287	52.6	94 19.2	56	18 58	36	24	12 18	39 91			
23	162	02.5	34.8	302	21.0	94 31.6	58	19 01	42	34	19 04 15	46 94			
24	177	02.6	-6 33.9	316	49.4	94 -15 43.8	60 S	19 05	19 49	20 45	18 56 10	9 53 99			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 15 ^m 2		Mag: -3.9 PMG: 12 ^h 59 ^m			Mag: -0.6 PMG: 21 ^h 29 ^m			Mag: -2.0 PMG: 12 ^h 05 ^m			Mag: +0.6 PMG: 1 ^h 31 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	160	40.0	165 18.1	-3 28.7	36 52.1	+23 48.8	178 26.8	-8 33.2	337 08.9	+1 14.4					
1	175	42.5	180 17.8	27.4	51 54.9	48.8	193 28.7	32.9	352 11.5	14.5					
2	190	44.9	195 17.4	26.1	66 57.6	48.8	208 30.6	32.7	7 14.1	14.6					
3	205	47.4	210 17.0	24.8	82 00.4	48.8	223 32.5	32.5	22 16.7	14.7					
4	220	49.8	225 16.6	23.6	97 03.1	48.7	238 34.4	32.3	37 19.4	14.7					
5	235	52.3	240 16.2	-3 22.3	112 05.8	+23 48.7	253 36.3	-8 32.0	52 22.0	+1 14.8					
6	250	54.8	255 15.8	-3 21.0	127 08.6	+23 48.7	268 38.2	-8 31.8	67 24.6	+1 14.9					
7	265	57.2	270 15.4	19.8	142 11.3	48.6	283 40.1	31.6	82 27.2	15.0					
8	280	59.7	285 15.1	18.5	157 14.0	48.6	298 42.0	31.4	97 29.9	15.1					
9	296	02.2	300 14.7	17.2	172 16.8	48.6	313 43.9	31.1	112 32.5	15.1					
10	311	04.6	315 14.3	15.9	187 19.5	48.5	328 45.8	30.9	127 35.1	15.2					
11	326	07.1	330 13.9	-3 14.7	202 22.2	+23 48.5	343 47.7	-8 30.7	142 37.7	+1 15.3					
12	341	09.6	345 13.5	-3 13.4	217 25.0	+23 48.5	358 49.6	-8 30.4	157 40.4	+1 15.4					
13	356	12.0	0 13.1	12.1	232 27.7	48.4	13 51.5	30.2	172 43.0	15.4					
14	11	14.5	15 12.8	10.8	247 30.4	48.4	28 53.4	30.0	187 45.6	15.5					
15	26	16.9	30 12.4	09.6	262 33.1	48.4	43 55.3	29.8	202 48.2	15.6					
16	41	19.4	45 12.0	08.3	277 35.9	48.3	58 57.2	29.5	217 50.9	15.7					
17	56	21.9	60 11.6	-3 07.0	292 38.6	+23 48.3	73 59.1	-8 29.3	232 53.5	+1 15.7					
18	71	24.3	75 11.2	-3 05.8	307 41.3	+23 48.3	89 01.0	-8 29.1	247 56.1	+1 15.8					
19	86	26.8	90 10.8	04.5	322 44.0	48.2	104 02.9	28.9	262 58.7	15.9					
20	101	29.3	105 10.5	03.2	337 46.7	48.2	119 04.8	28.6	278 01.4	16.0					
21	116	31.7	120 10.1	01.9	352 49.5	48.2	134 06.7	28.4	293 04.0	16.0					
22	131	34.2	135 09.7	-3 00.7	7 52.2	48.1	149 08.6	28.2	308 06.6	16.1					
23	146	36.7	150 09.3	-2 59.4	22 54.9	48.1	164 10.5	28.0	323 09.2	16.2					
24	161	39.1	165 08.9	-2 58.1	37 57.6	+23 48.0	179 12.4	-8 27.7	338 11.9	+1 16.3					
Dif	—		-4	+13	+27	0	+19	+2	+26	+					

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 11 ^m 7			Edad: 17 ^d 9 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 4 20 ^h : 58 ^m 1 SD: 16:0 PMG: 2 ^h 59 ^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	h m m	
0	177	02.6	-6 33.9	316	49.4	-15 43.8		60 N	5 21	6 09	6 50	** ** *		6 57 12	
1	192	02.8		331	17.7	-15 56.0	122	58	23	08	47	** ** *		7 08 17	
2	207	02.9		345	46.0	-16 08.1	121	56	24	07	44	23 56	83	18 20	
3	222	03.0		0	14.3		120	54	26	07	42	45 80		26 24	
4	237	03.2		30.0	14 42.6		118	52	27	06	40	35 77		34 26	
5	252	03.3	-6 29.1	29	10.8	-16 43.7	118	50	5 28	6 05	6 38	23 26	75	7 41 29	
6	267	03.4	-6 28.1	43	39.0	-16 55.3	116	45	5 30	6 04	6 33	23 08	71	7 56 33	
7	282	03.6		58	07.3	-17 06.9	116	40	31	02	29	22 53	68	8 08 37	
8	297	03.7		72	35.4		114	35	31	6 01	26	40 66		19 40	
9	312	03.9		87	03.6		113	30	31	5 59	23	29 63		28 42	
10	327	04.0		101	31.8		112	20	30	56	18	22 11	59	44 47	
11	342	04.1	-6 23.3	115	59.9	-17 51.8	110	10 N	5 27	5 52	6 13	21 54	57	8 58 50	
12	357	04.3	-6 22.3	130	28.0	-18 02.8	110	0	5 23	5 48	6 08	21 39	54	9 12 53	
13	12	04.4		144	56.1		108	10 S	18	43	6 04	24 51		25 56	
14	27	04.5		159	24.1		107	20	11	37	5 59	21 08	48	39 60	
15	42	04.7		173	52.2		106	30	5 00	29	53	20 50	44	9 55 65	
16	57	04.8		188	20.2		105	35	4 53	24	49	40 42		10 05 67	
17	72	05.0	-6 17.5	202	48.2	-18 55.8	104	40	4 45	5 18	5 46	20 28	39	10 16 70	
18	87	05.1	-6 16.5	217	16.2	-19 06.0	102	45	4 35	5 11	5 41	20 14	36	10 29 73	
19	102	05.2		231	44.2		101	50	22	5 02	35	19 57	31	45 78	
20	117	05.4		246	12.1		100	52	16	4 58	33	49 29		10 52 80	
21	132	05.5		260	40.0		99	54	08	53	30	40 27		11 00 83	
22	147	05.6		275	07.9		97	56	4 00	48	27	30 24		10 86	
23	162	05.8		289	35.8	-19 55.3	96	58	3 51	42	23	19 20		20 90	
24	177	05.9	-6 10.8	304	03.7	-20 04.8	95	60 S	3 40	4 36	5 20	19 06	15	11 32 96	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 11 ^m 2		Mag: -3.9 PMG: 13 ^h 00 ^m			Mag: -0.5 PMG: 21 ^h 24 ^m			Mag: -2.0 PMG: 12 ^h 02 ^m			Mag: +0.6 PMG: 1 ^h 27 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	161	39.1	165	08.9	-2 58.1	37	57.6	+23 48.0	179	12.4	-8 27.7	338	11.9	+1 16.3
1	176	41.6	180	08.6		53	00.3	48.0	194	14.3	27.5	353	14.5	16.4
2	191	44.1	195	08.2		68	03.0	48.0	209	16.2	27.3	8	17.1	16.4
3	206	46.5	210	07.8		83	05.7	47.9	224	18.1	27.0	23	19.7	16.5
4	221	49.0	225	07.4		98	08.4	47.9	239	19.9	26.8	38	22.4	16.6
5	236	51.4	240	07.0	-2 51.7	113	11.1	+23 47.9	254	21.8	-8 26.6	53	25.0	+1 16.7
6	251	53.9	255	06.6	-2 50.5	128	13.8	+23 47.8	269	23.7	-8 26.4	68	27.6	+1 16.7
7	266	56.4	270	06.3		143	16.5	47.8	284	25.6	26.1	83	30.2	16.8
8	281	58.8	285	05.9		158	19.2	47.7	299	27.5	25.9	98	32.9	16.9
9	297	01.3	300	05.5		173	21.9	47.7	314	29.4	25.7	113	35.5	17.0
10	312	03.8	315	05.1		188	24.6	47.7	329	31.3	25.5	128	38.1	17.0
11	327	06.2	330	04.7	-2 44.1	203	27.3	+23 47.6	344	33.2	-8 25.2	143	40.8	+1 17.1
12	342	08.7	345	04.4	-2 42.8	218	30.0	+23 47.6	359	35.1	-8 25.0	158	43.4	+1 17.2
13	357	11.2	0 04.0		41.5	233	32.7	47.5	14	37.0	24.8	173	46.0	17.3
14	12	13.6	15 03.6		40.2	248	35.4	47.5	29	38.9	24.6	188	48.6	17.3
15	27	16.1	30 03.2		39.0	263	38.1	47.5	44	40.8	24.3	203	51.3	17.4
16	42	18.5	45 02.9		37.7	278	40.8	47.4	59	42.7	24.1	218	53.9	17.5
17	57	21.0	60 02.5	-2 36.4		293	43.5	+23 47.4	74	44.6	-8 23.9	233	56.5	+1 17.6
18	72	23.5	75 02.1	-2 35.1		308	46.2	+23 47.3	89	46.5	-8 23.6	248	59.1	+1 17.7
19	87	25.9	90 01.7		33.9	323	48.9	47.3	104	48.4	23.4	264	01.8	17.7
20	102	28.4	105 01.3		32.6	338	51.5	47.2	119	50.3	23.2	279	04.4	17.8
21	117	30.9	120 01.0		31.3	353	54.2	47.2	134	52.2	23.0	294	07.0	17.9
22	132	33.3	135 00.6		30.0	8	56.9	47.2	149	54.1	22.7	309	09.7	18.0
23	147	35.8	150 00.2		28.8	23	59.6	47.1	164	56.0	22.5	324	12.3	18.0
24	162	38.3	164 59.8	-2 27.5		39	02.3	+23 47.1	179	57.9	-8 22.3	339	14.9	+1 18.1
Dif	—		-4 +13			+27 0			+19 +2			+26 +1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 18 ^d 9 PHE	SD: 15 ^h 8				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 5				PMG: 3 ^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	h m m	
0	177	05.9	-6 10.8	304	03.7	-20 04.8	88	60 N	17 37	18 19	19 07	0 24 92	7 09 20	25 25	
1	192	06.1	09.8	318	31.5	14.2	94	58	40	19	05	0 09 87	25 25	38 29	
2	207	06.2	08.8	332	59.3	23.4	92	56	42	19	03	** ** *	38 29	7 50 31	
3	222	06.3	07.9	347	27.2	32.6	89	54	45	20	19 01	** ** *	7 50 31	8 00 34	
4	237	06.5	06.9	1	54.9	41.5	89	52	47	20	18 59	** ** *	8 00 34	8 10 35	
5	252	06.6	-6 05.9	16	22.7	-20 50.4	89	50	17 48	18 21	18 58	** ** *	8 10 35	8 29 39	
6	267	06.8	-6 05.0	30	50.5	-20 59.1	87	45	17 53	18 22	18 56	** ** *	8 29 39	45 42	
7	282	06.9	04.0	45	18.2	-21 07.7	86	40	56	23	54	** ** *	45 42	8 59 44	
8	297	07.0	03.0	59	45.9	16.2	85	35	17 59	24	54	23 46 60	8 59 44	9 10 46	
9	312	07.2	02.1	74	13.7	24.5	83	30	18 02	26	53	32 60	9 10 46	31 49	
10	327	07.3	01.1	88	41.3	32.7	82	20	06	28	54	23 10 57	31 49	9 48 52	
11	342	07.5	-6 00.1	103	09.0	-21 40.8	81	10 N	18 11	18 32	18 56	22 51 55	9 48 52	10 05 54	
12	357	07.6	-5 59.2	117	36.7	-21 48.7	79	0	18 15	18 36	19 00	22 33 54	10 05 54	21 57	
13	12	07.8	58.2	132	04.3	-21 56.5	78	10 S	19	40	05	22 15 52	21 57	10 39 59	
14	27	07.9	57.2	146	32.0	-22 04.2	77	20	24	46	12	21 56 50	10 39 59	11 00 61	
15	42	08.0	56.3	160	59.6	11.7	75	30	29	53	21	34 48	11 00 61	12 63	
16	57	08.2	55.3	175	27.2	19.1	74	35	32	18 58	28	22 46	12 63	11 26 65	
17	72	08.3	-5 54.3	189	54.8	-22 26.4	73	40	18 36	19 03	19 36	21 07 45	11 26 65	11 42 68	
18	87	08.5	-5 53.4	204	22.4	-22 33.5	71	45	18 40	19 10	19 45	20 50 42	11 42 68	12 03 71	
19	102	08.6	52.4	218	50.0	40.5	70	50	45	18	19 58	28 40	12 03 71	12 74	
20	117	08.7	51.4	233	17.6	47.4	69	52	47	22	20 04	18 38	12 74	23 76	
21	132	08.9	50.5	247	45.1	-22 54.1	67	54	50	26	11	20 07 36	23 76	36 78	
22	147	09.0	49.5	262	12.7	-23 00.7	66	56	53	31	18	19 54 33	36 78	12 50 82	
23	162	09.2	48.5	276	40.2	07.2	65	58	56	36	27	39 30	12 50 82	13 08 86	
24	177	09.3	-5 47.6	291	07.8	-23 13.5	63	60 S	18 59	19 43	20 38	19 21 26	13 08 86		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 07 ^m 3		Mag: -3.9 PMG: 13 ^h 00 ^m			Mag: -0.5 PMG: 21 ^h 20 ^m			Mag: -2.0 PMG: 11 ^h 59 ^m			Mag: +0.6 PMG: 1 ^h 23 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'		
0	162	38.3	164 59.8	-2 27.5	39 02.3	+23 47.1	179 57.9	-8 22.3	339 14.9	+1 18.1	18.2	18.3	18.4		
1	177	40.7	179 59.4	26.2	54 04.9	47.0	194 59.8	22.1	354 17.5	18.2	18.3	18.4	18.5		
2	192	43.2	194 59.1	24.9	69 07.6	47.0	210 01.7	21.8	9 20.2	18.3	18.4	18.5	18.6		
3	207	45.7	209 58.7	23.6	84 10.3	46.9	225 03.6	21.6	24 22.8	18.4	18.5	18.6	18.7		
4	222	48.1	224 58.3	22.4	99 13.0	46.9	240 05.5	21.4	39 25.4	18.4	18.5	18.6	18.7		
5	237	50.6	239 57.9	-2 21.1	114 15.6	+23 46.8	255 07.4	-8 21.1	54 28.1	+1 18.5	18.6	18.7	18.8		
6	252	53.0	254 57.6	-2 19.8	129 18.3	+23 46.8	270 09.3	-8 20.9	69 30.7	+1 18.6	18.7	18.8	18.9		
7	267	55.5	269 57.2	18.5	144 21.0	46.7	285 11.2	20.7	84 33.3	18.7	18.8	18.9	19.0		
8	282	58.0	284 56.8	17.2	159 23.6	46.7	300 13.1	20.5	99 35.9	18.7	18.8	18.9	19.0		
9	298	00.4	299 56.4	16.0	174 26.3	46.7	315 15.0	20.2	114 38.6	18.8	18.9	19.0	19.1		
10	313	02.9	314 56.1	14.7	189 29.0	46.6	330 16.9	20.0	129 41.2	18.9	19.0	19.1	19.2		
11	328	05.4	329 55.7	-2 13.4	204 31.6	+23 46.6	345 18.8	-8 19.8	144 43.8	+1 19.0	19.1	19.2	19.3		
12	343	07.8	344 55.3	-2 12.1	219 34.3	+23 46.5	0 20.7	-8 19.6	159 46.5	+1 19.0	19.1	19.2	19.3		
13	358	10.3	359 54.9	10.9	234 36.9	46.5	15 22.6	19.3	174 49.1	19.1	19.2	19.3	19.4		
14	13	12.8	14 54.5	09.6	249 39.6	46.4	30 24.5	19.1	189 51.7	19.2	19.3	19.4	19.5		
15	28	15.2	29 54.2	08.3	264 42.3	46.4	45 26.4	18.9	204 54.3	19.3	19.4	19.5	19.6		
16	43	17.7	44 53.8	07.0	279 44.9	46.3	60 28.3	18.7	219 57.0	19.4	19.5	19.6	19.7		
17	58	20.2	59 53.4	-2 05.7	294 47.6	+23 46.3	75 30.2	-8 18.4	234 59.6	+1 19.4	19.5	19.6	19.7		
18	73	22.6	74 53.0	-2 04.5	309 50.2	+23 46.2	90 32.1	-8 18.2	250 02.2	+1 19.5	19.6	19.7	19.8		
19	88	25.1	89 52.7	03.2	324 52.9	46.2	105 34.0	18.0	265 04.9	19.6	19.7	19.8	19.9		
20	103	27.5	104 52.3	01.9	339 55.5	46.1	120 35.9	17.7	280 07.5	19.7	19.8	19.9	20.0		
21	118	30.0	119 51.9	-2 00.6	354 58.2	46.1	135 37.8	17.5	295 10.1	19.7	19.8	19.9	20.0		
22	133	32.5	134 51.5	-1 59.3	10 00.8	46.0	150 39.7	17.3	310 12.7	19.8	19.9	20.0	20.1		
23	148	34.9	149 51.2	58.1	25 03.4	46.0	165 41.6	17.1	325 15.4	19.9	20.0	20.1	20.2		
24	163	37.4	164 50.8	-1 56.8	40 06.1	+23 45.9	180 43.5	-8 16.8	340 18.0	+1 20.0	20.1	20.2	20.3		
Dif	—		-4	+13		+27	0		+19	+2		+26		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 19 ^d 9 PHE { 4 ^h : 56 ^m /9 12 ^h : 56 ^m /6 20 ^h : 56 ^m /3										
	PMG: 12 ^h 11 ^m 3			SD: 15 ^h 5 PMG: 4 ^h 46 ^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	177	09.3	-5 47.6	291	07.8	-23 13.5	60 N	5 15	6 03	6 44	1 56	79	7 29	33
1	192	09.5	46.6	305	35.3 85	19.7 62	58	17	02	42	36	74	7 50	37
2	207	09.6	45.6	320	02.8 85	25.7 60	56	19	02	39	19	72	8 07	39
3	222	09.8	44.7	334	30.4 86	31.6 59	54	21	02	37	1 05	69	21	42
4	237	09.9	43.7	348	57.9 85	37.4 58	52	22	01	35	0 52	69	34	43
5	252	10.0	-5 42.7	3 25.4 85	-23 43.0 56	50	5 24	6 01	6 33	0 41	67	8 45	44	
6	267	10.2	-5 41.8	17 52.9 85	-23 48.5 55	45	5 26	6 00	6 29	0 19	64	9 08	46	
7	282	10.3	40.8	32 20.4 85	53.8 53	40	28	5 59	26	0 01	62	27	48	
8	297	10.5	39.8	46 48.0 86	-23 59.0 52	35	29	58	23	** ** *	**	43	49	
9	312	10.6	38.8	61 15.5 85	-24 04.1 51	30	29	57	21	** ** *	**	9 56	50	
10	327	10.8	37.9	75 43.0 85	09.0 49	20	28	54	16	** ** *	**	10 20	51	
11	342	10.9	-5 36.9	90 10.5 85	-24 13.8 48	10 N	5 26	5 51	6 12	23 46	54	10 40	52	
12	357	11.1	-5 35.9	104 38.0 85	-24 18.5 47	0	5 23	5 47	6 08	23 27	53	10 59	53	
13	12	11.2	35.0	119 05.6 86	23.0 45	10 S	18	43	6 04	23 07	53	11 18	54	
14	27	11.3	34.0	133 33.1 85	27.4 44	20	11	37	5 59	22 46	52	11 38	56	
15	42	11.5	33.0	148 00.6 85	31.6 42	30	5 02	30	54	22	52	12 01	58	
16	57	11.6	32.1	162 28.2 86	35.7 41	35	4 55	26	51	22 08	51	15	58	
17	72	11.8	-5 31.1	176 55.7 85	-24 39.6 39	40	4 48	5 20	5 48	21 52	50	12 31	59	
18	87	11.9	-5 30.1	191 23.3 86	-24 43.5 39	45	4 38	5 14	5 44	21 32	50	12 50	60	
19	102	12.1	29.1	205 50.8 85	47.1 36	50	26	06	39	21 08	48	13 14	62	
20	117	12.2	28.2	220 18.4 86	50.7 36	52	20	5 02	36	20 56	48	26	62	
21	132	12.4	27.2	234 46.0 86	54.1 34	54	13	4 58	34	43	47	39	63	
22	147	12.5	26.2	249 13.6 86	-24 57.3 32	56	4 05	53	31	27	46	13 54	65	
23	162	12.7	25.3	263 41.2 86	-25 00.5 32	58	3 57	47	28	20 09	45	14 12	66	
24	177	12.8	-5 24.3	278 08.8 86	-25 03.4 29	60 S	3 46	4 41	5 25	19 47	42	14 34	69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 03 ^m 4		Mag: -3.9 PMG: 13 ^h 01 ^m		Mag: -0.5 PMG: 21 ^h 16 ^m		Mag: -2.0 PMG: 11 ^h 56 ^m		Mag: +0.6 PMG: 1 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	163	37.4	164	50.8	-1 56.8	40 06.1 +23 45.9	180 43.5	-8 16.8	340 18.0	+1 20.0
1	178	39.9	179	50.4	55.5	55 08.7 45.8	195 45.4	16.6	355 20.6	20.1
2	193	42.3	194	50.0	54.2	70 11.4 45.8	210 47.3	16.4	10 23.3	20.1
3	208	44.8	209	49.7	52.9	85 14.0 45.7	225 49.2	16.2	25 25.9	20.2
4	223	47.3	224	49.3	51.6	100 16.7 45.7	240 51.1	15.9	40 28.5	20.3
5	238	49.7	239	48.9	-1 50.4	115 19.3 +23 45.6	255 53.0	-8 15.7	55 31.2	+1 20.4
6	253	52.2	254	48.5	-1 49.1	130 21.9 +23 45.6	270 54.9	-8 15.5	70 33.8	+1 20.4
7	268	54.7	269	48.2	47.8	145 24.6 45.5	285 56.8	15.2	85 36.4	20.5
8	283	57.1	284	47.8	46.5	160 27.2 45.5	300 58.7	15.0	100 39.0	20.6
9	298	59.6	299	47.4	45.2	175 29.8 45.4	316 00.6	14.8	115 41.7	20.7
10	314	02.0	314	47.1	44.0	190 32.5 45.4	331 02.5	14.6	130 44.3	20.8
11	329	04.5	329	46.7	-1 42.7	205 35.1 +23 45.3	346 04.4	-8 14.3	145 46.9	+1 20.8
12	344	07.0	344	46.3	-1 41.4	220 37.7 +23 45.2	1 06.3	-8 14.1	160 49.6	+1 20.9
13	359	09.4	359	45.9	40.1	235 40.3 45.2	16 08.2	13.9	175 52.2	21.0
14	14	11.9	14 45.6	38.8	250 43.0 45.1	31 10.1	13.7	190 54.8	21.1	
15	29	14.4	29 45.2	37.6	265 45.6 45.1	46 12.0	13.4	205 57.5	21.1	
16	44	16.8	44 44.8	36.3	280 48.2 45.0	61 13.9	13.2	221 00.1	21.2	
17	59	19.3	59 44.4	-1 35.0	295 50.8 +23 45.0	76 15.8	-8 13.0	236 02.7	+1 21.3	
18	74	21.8	74 44.1	-1 33.7	310 53.4 +23 44.9	91 17.7	-8 12.7	251 05.4	+1 21.4	
19	89	24.2	89 43.7	32.4	325 56.1 44.8	106 19.6	12.5	266 08.0	21.5	
20	104	26.7	104 43.3	31.1	340 58.7 44.8	121 21.5	12.3	281 10.6	21.5	
21	119	29.1	119 43.0	29.9	356 01.3 44.7	136 23.4	12.1	296 13.2	21.6	
22	134	31.6	134 42.6	28.6	11 03.9 44.7	151 25.3	11.8	311 15.9	21.7	
23	149	34.1	149 42.2	27.3	26 06.5 44.6	166 27.2	11.6	326 18.5	21.8	
24	164	36.5	164 41.8	-1 26.0	41 09.1 +23 44.5	181 29.1	-8 11.4	341 21.1	+1 21.8	
Dif	—		-4	+13	+26	-1	+19	+2	+26	+

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 20 ^d 9 PHE { 4 ^h : 56/0 12 ^h : 55/8 20 ^h : 55/5					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 0			SD: 15/3 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	h m m	h m m	
0	177	12.8	-5 24.3	278	08.8	-25 03.4	29	60 N	17 42	18 24	19 12	3 15 57	8 02 52		
1	192	13.0		292	36.5	06.3	29	58	44	24	09	2 50 57	27 52		
2	207	13.1	22.3	307	04.1	09.0	27	56	46	24	07	31 57	8 46 53		
3	222	13.3	21.4	321	31.8	11.5	25	54	48	24	05	14 57	9 03 53		
4	237	13.4	20.4	335	59.5	14.0	25	52	50	24	03	2 01 56	17 53		
5	252	13.6	-5 19.4	350	27.2	-25 16.3	23	50	17 52	18 24	19 01	1 48 56	9 29 53		
6	267	13.7	-5 18.5	4	54.9	-25 18.4	21	45	17 55	18 25	18 59	1 23 56	9 54 53		
7	282	13.9	17.5	19	22.7	20.4	20	40	17 58	25	57	1 03 55	10 15 53		
8	297	14.0	16.5	33	50.5	22.3	19	35	18 01	26	55	0 46 55	32 53		
9	312	14.2	15.5	48	18.3	24.0	17	30	03	27	55	32 54	10 46 53		
10	327	14.3	14.6	62	46.1	25.6	16	20	07	29	55	0 07 55	11 11 53		
11	342	14.5	-5 13.6	77	13.9	-25 27.1	15	10 N	18 11	18 32	18 56	** ** *	11 32 53		
12	357	14.6	-5 12.6	91	41.8	-25 28.4	13	0	18 14	18 35	18 59	** ** *	11 52 53		
13	12	14.8	11.6	106	09.7	29.6	12	10 S	18	39	19 04	** ** *	12 12 53		
14	27	14.9	10.7	120	37.6	30.6	10	20	22	44	10	23 38 54	34 52		
15	42	15.1	09.7	135	05.5	31.6	10	30	27	51	19	23 14 54	12 59 52		
16	57	15.2	08.7	149	33.5	32.3	7	35	29	18 55	25	22 59 55	13 13 52		
17	72	15.4	-5 07.8	164	01.5	-25 33.0	7	40	18 33	19 00	19 32	22 42 55	13 30 52		
18	87	15.5	-5 06.8	178	29.6	-25 33.5	5	45	18 36	19 06	19 41	22 22 56	13 50 51		
19	102	15.7	05.8	192	57.6	33.9	4	50	41	13	53	21 56 57	14 16 50		
20	117	15.8	04.8	207	25.7	34.1	2	52	43	17	59	44 57	28 50		
21	132	16.0	03.9	221	53.9	34.2	1	54	45	21	20 05	30 58	42 50		
22	147	16.1	02.9	236	22.0	34.2	0	56	47	26	12	21 13 59	14 59 49		
23	162	16.3	01.9	250	50.2	34.0	2	58	50	31	21	20 54 60	15 18 49		
24	177	16.4	-5 00.9	265	18.5	-25 33.7	3	60 S	18 53	19 36	20 30	20 29 61	15 43 47		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 12 ^h 59 ^m 4		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: -0.4 PMG: 21 ^h 12 ^m		Mag: -2.0 PMG: 11 ^h 53 ^m		Mag: +0.6 PMG: 1 ^h 14 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	164	36.5	164 41.8	-1 26.0	41 09.1	+23 44.5	181 29.1	-8 11.4	341 21.1	+1 21.8					
1	179	39.0	179 41.5	24.7	56 11.7	44.5	196 31.0	11.2	356 23.8	21.9					
2	194	41.5	194 41.1	23.4	71 14.3	44.4	211 32.9	10.9	11 26.4	22.0					
3	209	43.9	209 40.7	22.2	86 16.9	44.4	226 34.8	10.7	26 29.0	22.1					
4	224	46.4	224 40.3	20.9	101 19.5	44.3	241 36.7	10.5	41 31.7	22.2					
5	239	48.9	239 40.0	-1 19.6	116 22.1	+23 44.2	256 38.6	-8 10.2	56 34.3	+1 22.2					
6	254	51.3	254 39.6	-1 18.3	131 24.7	+23 44.2	271 40.5	-8 10.0	71 36.9	+1 22.3					
7	269	53.8	269 39.2	17.0	146 27.3	44.1	286 42.4	09.8	86 39.6	22.4					
8	284	56.3	284 38.9	15.7	161 29.9	44.1	301 44.3	09.6	101 42.2	22.5					
9	299	58.7	299 38.5	14.5	176 32.5	44.0	316 46.2	09.3	116 44.8	22.6					
10	315	01.2	314 38.1	13.2	191 35.1	43.9	331 48.1	09.1	131 47.5	22.6					
11	330	03.6	329 37.7	-1 11.9	206 37.7	+23 43.9	346 50.0	-8 08.9	146 50.1	+1 22.7					
12	345	06.1	344 37.4	-1 10.6	221 40.3	+23 43.8	1 51.9	-8 08.7	161 52.7	+1 22.8					
13	0	08.6	359 37.0	09.3	236 42.9	43.7	16 53.8	08.4	176 55.4	22.9					
14	15	11.0	14 36.6	08.0	251 45.5	43.7	31 55.7	08.2	191 58.0	22.9					
15	30	13.5	29 36.3	06.8	266 48.1	43.6	46 57.6	08.0	207 00.6	23.0					
16	45	16.0	44 35.9	05.5	281 50.7	43.5	61 59.5	07.7	222 03.3	23.1					
17	60	18.4	59 35.5	-1 04.2	296 53.3	+23 43.5	77 01.4	-8 07.5	237 05.9	+1 23.2					
18	75	20.9	74 35.2	-1 02.9	311 55.8	+23 43.4	92 03.3	-8 07.3	252 08.5	+1 23.3					
19	90	23.4	89 34.8	01.6	326 58.4	43.4	107 05.2	07.1	267 11.1	23.3					
20	105	25.8	104 34.4	-1 00.3	342 01.0	43.3	122 07.1	06.8	282 13.8	23.4					
21	120	28.3	119 34.0	-0 59.1	357 03.6	43.2	137 09.0	06.6	297 16.4	23.5					
22	135	30.8	134 33.7	57.8	12 06.2	43.2	152 10.9	06.4	312 19.0	23.6					
23	150	33.2	149 33.3	56.5	27 08.7	43.1	167 12.8	06.2	327 21.7	23.6					
24	165	35.7	164 32.9	-0 55.2	42 11.3	+23 43.0	182 14.7	-8 05.9	342 24.3	+1 23.7					
Dif	—		-4	+13	+26	-1	+19	+2	+26	+1					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 21 ^d 9	PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 1 20 ^h : 54 ^h 9									
	PMG: 12 ^h 10 ^m 8					SD: 15 ^h 1		PMG: 6 ^h 33 ^m			R ^o : 51 ^m			
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	177	16.4	-5 00.9	265	18.5	-25 33.7	60 N	5 09	5 57	6 38	4 12	37	8 54	70
1	192	16.6	-5 00.0	279	46.8	33.3	58	12	57	36	3 47	40	9 19	67
2	207	16.7	-4 59.0	294	15.1	32.8	56	14	57	34	28	41	39	64
3	222	16.9	58.0	308	43.4	32.1	54	16	57	32	3 11	43	9 55	63
4	237	17.0	57.0	323	11.8	31.3	52	18	57	31	2 57	43	10 10	61
5	252	17.2	-4 56.1	337	40.2	-25 30.3	50	5 20	5 57	6 29	2 44	45	10 22	61
6	267	17.3	-4 55.1	352	08.7	-25 29.2	45	5 23	5 57	6 26	2 19	46	10 47	59
7	282	17.5	54.1	6 37.2	28.0	12	40	25	56	23	1 58	48	11 08	57
8	297	17.6	53.1	21 05.8	26.7	13	35	26	55	21	41	48	25	56
9	312	17.8	52.2	35 34.4	25.2	15	30	27	54	18	26	49	11 39	55
10	327	17.9	51.2	50 03.0	23.6	16	20	27	52	14	1 02	50	12 04	53
11	342	18.1	-4 50.2	64 31.7	-25 21.9	17	10 N	5 25	5 50	6 11	0 40	51	12 25	52
12	357	18.2	-4 49.2	79 00.5	-25 20.1	18	0	5 23	5 47	6 07	0 20	52	12 45	51
13	12 18.4	48.3	93 29.3	98	18.1	20	10 S	18	43	04	0 00	52	13 05	49
14	27 18.5	47.3	107 58.1	98	16.0	21	20	12	38	6 00	** ** *	**	26	48
15	42 18.7	46.3	122 27.0	99	13.8	22	30	5 03	31	5 56	** ** *	**	13 51	46
16	57 18.9	45.3	136 55.9	99	11.4	24	35	4 57	27	53	23 54	56	14 05	45
17	72 19.0	-4 44.4	151 24.9	100	-25 09.0	24	40	4 50	5 23	5 50	23 37	59	14 22	43
18	87 19.2	-4 43.4	165 53.9	100	-25 06.4	26	45	4 41	5 17	5 46	23 18	60	14 41	42
19	102 19.3	42.4	180 23.0	101	03.7	27	50	30	09	42	22 53	63	15 06	40
20	117 19.5	41.4	194 52.1	101	-25 00.8	29	52	24	06	40	41	65	18	38
21	132 19.6	40.4	209 21.3	102	-24 57.9	29	54	18	5 02	38	28	66	32	37
22	147 19.8	39.5	223 50.5	102	54.8	31	56	10	4 57	35	22 12	69	15 48	34
23	162 19.9	38.5	238 19.8	103	51.6	32	58	4 02	52	33	21 54	71	16 07	32
24	177 20.1	-4 37.5	252 49.1	103	-24 48.3	33	60 S	3 53	4 47	5 30	21 30	76	16 30	28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 12 ^h 55 ^m 5		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: -0.4 PMG: 21 ^h 08 ^m		Mag: -2.0 PMG: 11 ^h 50 ^m		Mag: +0.6 PMG: 1 ^h 10 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'			
0	165	35.7	164 32.9	-0 55.2	42 11.3	+23 43.0	182	14.7	-8 05.9	342	24.3	+1 23.7		
1	180	38.1	179 32.6	53.9	57 13.9	43.0	197	16.6	05.7	357	26.9	23.8		
2	195	40.6	194 32.2	52.6	72 16.5	42.9	212	18.5	05.5	12	29.6	23.9		
3	210	43.1	209 31.8	51.3	87 19.0	42.8	227	20.4	05.2	27	32.2	24.0		
4	225	45.5	224 31.5	50.1	102 21.6	42.7	242	22.3	05.0	42	34.8	24.0		
5	240	48.0	239 31.1	-0 48.8	117 24.2	+23 42.7	257	24.2	-8 04.8	57	37.5	+1 24.1		
6	255	50.5	254 30.7	-0 47.5	132 26.7	+23 42.6	272	26.1	-8 04.6	72	40.1	+1 24.2		
7	270	52.9	269 30.3	46.2	147 29.3	42.5	287	28.0	04.3	87	42.7	24.3		
8	285	55.4	284 30.0	44.9	162 31.9	42.5	302	29.9	04.1	102	45.4	24.4		
9	300	57.9	299 29.6	43.6	177 34.4	42.4	317	31.8	03.9	117	48.0	24.4		
10	316	00.3	314 29.2	42.3	192 37.0	42.3	332	33.7	03.7	132	50.6	24.5		
11	331	02.8	329 28.9	-0 41.1	207 39.6	+23 42.3	347	35.6	-8 03.4	147	53.3	+1 24.6		
12	346	05.3	344 28.5	-0 39.8	222 42.1	+23 42.2	2	37.5	-8 03.2	162	55.9	+1 24.7		
13	1 07.7	359 28.1	38.5	237 44.7	42.1	17 39.4	17	39.4	03.0	177	58.5	24.8		
14	16 10.2	14 27.8	37.2	252 47.2	42.0	32 41.3	32	41.3	02.7	193	01.2	24.8		
15	31 12.6	29 27.4	35.9	267 49.8	42.0	47 43.2	47	43.2	02.5	208	03.8	24.9		
16	46 15.1	44 27.0	34.6	282 52.3	41.9	62 45.1	62	45.1	02.3	223	06.4	25.0		
17	61 17.6	59 26.7	-0 33.4	297 54.9	+23 41.8	77 47.0	77	47.0	-8 02.1	238	09.1	+1 25.1		
18	76 20.0	74 26.3	-0 32.1	312 57.4	+23 41.8	92 48.9	92	48.9	-8 01.8	253	11.7	+1 25.1		
19	91 22.5	89 25.9	30.8	328 00.0	41.7	107 50.8	107	50.8	01.6	268	14.3	25.2		
20	106 25.0	104 25.6	29.5	343 02.5	41.6	122 52.7	122	52.7	01.4	283	17.0	25.3		
21	121 27.4	119 25.2	28.2	358 05.1	41.5	137 54.6	137	54.6	01.2	298	19.6	25.4		
22	136 29.9	134 24.8	26.9	13 07.6	41.5	152 56.5	152	56.5	00.9	313	22.3	25.5		
23	151 32.4	149 24.5	25.6	28 10.2	41.4	167 58.4	167	58.4	00.7	328	24.9	25.5		
24	166 34.8	164 24.1	-0 24.4	43 12.7	+23 41.3	183 00.3	183	00.3	-8 00.5	343	27.5	+1 25.6		
Dif	—		-4	+13	+26		-1	+19		+2	+26		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 22 ^d 9 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5											
	PMG: 12 ^h 10 ^m 5			SD: 14 ^h 9 PMG: 7 ^h 24 ^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	177	20.1	-4 37.5	252	49.1	-24 48.3	35	60 N	17 47	18 29	19 17	4 49	21	10 04	80
1	192	20.3	36.5	267	18.5 ¹⁰⁴	44.8	35	58	49	28	14	27	25	26	75
2	207	20.4	35.6	281	48.0 ¹⁰⁵	41.3	35	56	51	28	11	4 09	28	43	72
3	222	20.6	34.6	296	17.5 ¹⁰⁵	37.6	37	54	52	28	09	3 54	31	10 58	69
4	237	20.7	33.6	310	47.0 ¹⁰⁵	33.8	38	52	54	27	07	40	33	11 11	67
5	252	20.9	-4 32.6	325	16.6 ¹⁰⁶	-24 29.9	39	50	17 55	18 27	19 05	3 29	34	11 23	65
6	267	21.0	-4 31.7	339	46.3 ¹⁰⁷	-24 25.9	40	45	17 58	18 27	19 01	3 05	37	11 46	62
7	282	21.2	30.7	354	16.0 ¹⁰⁷	21.7	42	40	18 00	27	18 59	2 46	39	12 05	59
8	297	21.3	29.7	8	45.8 ¹⁰⁸	17.5	42	35	02	28	57	29	42	21	57
9	312	21.5	28.7	23	15.7 ¹⁰⁹	13.1	44	30	04	28	56	2 15	44	34	56
10	327	21.7	27.7	37	45.6 ¹⁰⁹	08.7	44	20	08	30	55	1 52	45	12 57	53
11	342	21.8	-4 26.8	52	15.5 ¹⁰⁹	-24 04.1	46	10 N	18 11	18 32	18 56	1 31	47	13 17	51
12	357	22.0	-4 25.8	66	45.5 ¹¹⁰	-23 59.4	47	0	18 14	18 35	18 59	1 12	49	13 36	48
13	12	22.1	24.8	81	15.6 ¹¹¹	54.6	48	10 S	17	38	19 02	0 52	51	13 54	46
14	27	22.3	23.8	95	45.7 ¹¹¹	49.6	50	20	20	42	08	32	53	14 14	43
15	42	22.4	22.9	110	15.9 ¹¹²	44.6	50	30	24	48	17	0 08	55	37	40
16	57	22.6	21.9	124	46.2 ¹¹³	39.5	51	35	27	52	22	** ** *	**	14 50	39
17	72	22.8	-4 20.9	139	16.5 ¹¹³	-23 34.2	53	40	18 29	18 57	19 29	** ** *	**	15 05	37
18	87	22.9	-4 19.9	153	46.9 ¹¹⁴	-23 28.9	53	45	18 33	19 02	19 37	** ** *	**	15 23	34
19	102	23.1	18.9	168	17.3 ¹¹⁴	23.4	55	50	36	09	48	23	56	67	46
20	117	23.2	18.0	182	47.8 ¹¹⁵	17.8	56	52	38	12	19 54	46	68	15 56	29
21	132	23.4	17.0	197	18.3 ¹¹⁵	12.2	56	54	40	16	20 00	34	71	16 09	26
22	147	23.5	16.0	211	49.0 ¹¹⁷	06.4	58	56	42	20	06	21	73	22	25
23	162	23.7	15.0	226	19.6 ¹¹⁶	-23 00.5	59	58	45	25	14	23	05	76	39
24	177	23.9	-4 14.0	240	50.4 ¹¹⁸	-22 54.5	60	60 S	18 47	19 30	20 23	22	46	81	16
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 51 ^m 6		Mag: -3.9 PMG: 13 ^h 03 ^m			Mag: -0.4 PMG: 21 ^h 04 ^m			Mag: -2.0 PMG: 11 ^h 46 ^m			Mag: +0.6 PMG: 1 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	166	34.8	164	24.1	-0 24.4	43 12.7	+23 41.3	183 00.3	-8 00.5	343 27.5	+1 25.6				
1	181	37.3	179	23.7	23.1	58 15.3	41.2	198 02.2	-8 00.2	358 30.2	25.7				
2	196	39.7	194	23.3	21.8	73 17.8	41.2	213 04.1	-8 00.0	13 32.8	25.8				
3	211	42.2	209	23.0	20.5	88 20.3	41.1	228 06.0	-7 59.8	28 35.4	25.9				
4	226	44.7	224	22.6	19.2	103 22.9	41.0	243 07.9	59.6	43 38.1	25.9				
5	241	47.1	239	22.2	-0 17.9	118 25.4	+23 40.9	258 09.8	-7 59.3	58 40.7	+1 26.0				
6	256	49.6	254	21.9	-0 16.6	133 27.9	+23 40.9	273 11.7	-7 59.1	73 43.3	+1 26.1				
7	271	52.1	269	21.5	15.3	148 30.5	40.8	288 13.6	58.9	88 46.0	26.2				
8	286	54.5	284	21.1	14.1	163 33.0	40.7	303 15.5	58.7	103 48.6	26.3				
9	301	57.0	299	20.8	12.8	178 35.5	40.6	318 17.4	58.4	118 51.2	26.3				
10	316	59.5	314	20.4	11.5	193 38.1	40.6	333 19.3	58.2	133 53.9	26.4				
11	332	01.9	329	20.0	-0 10.2	208 40.6	+23 40.5	348 21.2	-7 58.0	148 56.5	+1 26.5				
12	347	04.4	344	19.7	-0 08.9	223 43.1	+23 40.4	3 23.1	-7 57.7	163 59.1	+1 26.6				
13	2	06.9	359	19.3	07.6	238 45.7	40.3	18 25.0	57.5	179 01.8	26.6				
14	17	09.3	14	18.9	06.3	253 48.2	40.2	33 26.9	57.3	194 04.4	26.7				
15	32	11.8	29	18.6	05.1	268 50.7	40.2	48 28.8	57.1	209 07.0	26.8				
16	47	14.2	44	18.2	03.8	283 53.2	40.1	63 30.7	56.8	224 09.7	26.9				
17	62	16.7	59	17.8	-0 02.5	298 55.7	+23 40.0	78 32.6	-7 56.6	239 12.3	+1 27.0				
18	77	19.2	74	17.5	-0 01.2	313 58.3	+23 39.9	93 34.5	-7 56.4	254 14.9	+1 27.0				
19	92	21.6	89	17.1	+0 00.1	329 00.8	39.9	108 36.4	56.2	269 17.6	27.1				
20	107	24.1	104	16.7	01.4	344 03.3	39.8	123 38.3	55.9	284 20.2	27.2				
21	122	26.6	119	16.4	02.7	359 05.8	39.7	138 40.2	55.7	299 22.9	27.3				
22	137	29.0	134	16.0	03.9	14 08.3	39.6	153 42.1	55.5	314 25.5	27.4				
23	152	31.5	149	15.6	05.2	29 10.8	39.5	168 44.0	55.2	329 28.1	27.4				
24	167	34.0	164	15.3	+0 06.5	44 13.3	+23 39.4	183 45.9	-7 55.0	344 30.8	+1 27.5				
Dif	—		-4		+13	+25		-1	+19		+2	+26		+1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1			Edad: 23 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2														
	PMG: 12 ^h 10 ^m 3			SD: 14'8														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	177	23.9	-4	14.0		240	50.4	-22	54.5	5	03	5	51	6	32	5	10	
1	192	24.0		13.1		255	21.2 ¹¹⁸		48.5	60	06	52	31	4	52	17	41	
2	207	24.2		12.1		269	52.0 ¹¹⁸		42.3	62	09	52	29	37	21	11	55	
3	222	24.3		11.1		284	22.9 ¹¹⁹		36.0	63	11	52	27	25	22	12	07	
4	237	24.5		10.1		298	53.9 ¹²⁰		29.6	64	13	53	26	13	26	18	69	
5	252	24.7	-4	09.1		313	25.0 ¹²¹	-22	23.1	65	5	53	6	25	4	03	27	
6	267	24.8	-4	08.2		327	56.1 ¹²¹	-22	16.5	66	5	53	6	22	3	42	31	
7	282	25.0		07.2		342	27.2 ¹²¹		09.9	66	22	53	20	25	34	13	04	
8	297	25.1		06.2		356	58.5 ¹²³	-22	03.1	68	23	53	18	3	11	36	18	
9	312	25.3		05.2		11	29.8 ¹²³	-21	56.2	69	30	24	52	16	2	59	38	
10	327	25.5		04.2		26	01.1 ¹²³		49.2	70	25	51	13	37	41	13	50	
11	342	25.6	-4	03.3		40	32.5 ¹²⁴	-21	42.2	70	10	5	49	6	10	2	18	
12	357	25.8	-4	02.3		55	04.0 ¹²⁵	-21	35.0	72	0	5	46	6	07	2	01	
13	12	25.9		01.3		69	35.5 ¹²⁵		27.8	72	10	18	43	04	1	43	50	
14	27	26.1	-4	00.3		84	07.1 ¹²⁶		20.4	74	20	13	39	6	01	25	52	
15	42	26.3	-3	59.3		98	38.8 ¹²⁷		13.0	75	30	5	33	5	57	1	03	
16	57	26.4		58.4		113	10.5 ¹²⁷	-21	05.5	75	35	4	29	55	0	50	58	
17	72	26.6	-3	57.4		127	42.3 ¹²⁸	-20	57.9	76	40	4	25	5	52	0	36	
18	87	26.7	-3	56.4		142	14.1 ¹²⁸	-20	50.2	77	45	4	19	5	49	0	18	
19	102	26.9		55.4		156	46.0 ¹²⁹		42.4	78	50	33	13	45	**	**	**	
20	117	27.1		54.4		171	18.0 ¹³⁰		34.5	79	52	28	09	44	**	**	**	
21	132	27.2		53.5		185	50.0 ¹³⁰		26.6	79	54	22	06	42	**	**	**	
22	147	27.4		52.5		200	22.1 ¹³¹		18.5	81	56	15	5	40	**	**	**	
23	162	27.6		51.5		214	54.2 ¹³¹		10.4	81	58	4	57	37	**	**	**	
24	177	27.7	-3	50.5		229	26.4 ¹³²	-20	02.2	82	60	3	59	4	52	**	**	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 47 ^m 6		Mag: -3.9 PMG: 13 ^h 03 ^m			Mag: -0.4 PMG: 21 ^h 00 ^m			Mag: -2.0 PMG: 11 ^h 43 ^m			Mag: +0.6 PMG: 1 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°	'			
0	167	34.0	164	15.3	+0	06.5		44	13.3	+23	39.4	183	45.9	-7	55.0			
1	182	36.4	179	14.9		07.8		59	15.8		39.4	198	47.8		54.8			
2	197	38.9	194	14.5		09.1		74	18.3		39.3	213	49.7		54.6			
3	212	41.4	209	14.2		10.4		89	20.8		39.2	228	51.6		54.3			
4	227	43.8	224	13.8		11.7		104	23.4		39.1	243	53.5		54.1			
5	242	46.3	239	13.4	+0	13.0		119	25.9	+23	39.0	258	55.5	-7	53.9			
6	257	48.7	254	13.1	+0	14.2		134	28.4	+23	39.0	273	57.4	-7	53.7			
7	272	51.2	269	12.7		15.5		149	30.9		38.9	288	59.3		53.4			
8	287	53.7	284	12.3		16.8		164	33.4		38.8	304	01.2		53.2			
9	302	56.1	299	12.0		18.1		179	35.9		38.7	319	03.1		53.0			
10	317	58.6	314	11.6		19.4		194	38.3		38.6	334	05.0		52.7			
11	333	01.1	329	11.2	+0	20.7		209	40.8	+23	38.5	349	06.9	-7	52.5			
12	348	03.5	344	10.9	+0	22.0		224	43.3	+23	38.5	4	08.8	-7	52.3			
13	3	06.0	359	10.5		23.2		239	45.8		38.4	19	10.7		52.1			
14	18	08.5	14	10.1		24.5		254	48.3		38.3	34	12.6		51.8			
15	33	10.9	29	09.8		25.8		269	50.8		38.2	49	14.5		51.6			
16	48	13.4	44	09.4		27.1		284	53.3		38.1	64	16.4		51.4			
17	63	15.9	59	09.0	+0	28.4		299	55.8	+23	38.0	79	18.3	-7	51.2			
18	78	18.3	74	08.7	+0	29.7		314	58.3	+23	37.9	94	20.2	-7	50.9			
19	93	20.8	89	08.3		31.0		330	00.7		37.9	109	22.1		50.7			
20	108	23.2	104	07.9		32.3		345	03.2		37.8	124	24.0		50.5			
21	123	25.7	119	07.6		33.5		0	05.7		37.7	139	25.9		50.2			
22	138	28.2	134	07.2		34.8		15	08.2		37.6	154	27.8		50.0			
23	153	30.6	149	06.9		36.1		30	10.7		37.5	169	29.7		49.8			
24	168	33.1	164	06.5	+0	37.4		45	13.1	+23	37.4	184	31.6	-7	49.6			
Dif	—		-4		+13			+25		-1		+19		+2		+26		+1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 24 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0											
	PMG: 12 ^h 10 ^m 0		SD: 14 ^h 7 PMG: 8 ^h 59 ^m R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	27.7	-3 50.5	229	26.4	-20 02.2	60 N	17 52	18 33	19 22	5 22 8	12 46 82		
1	192	27.9		243	58.7 ¹³³	-19 53.9 ⁸³	58	53	33	18	5 09 12	12 59 78		
2	207	28.0		258	31.0 ¹³³	45.5 ⁸⁴	56	55	32	15	4 58 14	13 10 74		
3	222	28.2		273	03.4 ¹³⁴	37.0 ⁸⁵	54	56	31	12	47 18	19 72		
4	237	28.4		287	35.8 ¹³⁴	28.5 ⁸⁵	52	57	31	10	39 19	27 70		
5	252	28.5	-3 45.6	302	08.3 ¹³⁵	-19 19.8 ⁸⁷	50	17 58	18 30	19 08	4 30 22	13 35 68		
6	267	28.7	-3 44.6	316	40.9 ¹³⁶	-19 11.1 ⁸⁷	45	18 00	18 30	19 04	4 13 26	13 51 63		
7	282	28.9		331	13.5 ¹³⁶	-19 02.4 ⁸⁷	40	02	29	19 01	3 59 29	14 04 60		
8	297	29.0		345	46.1 ¹³⁶	-18 53.5 ⁸⁹	35	04	29	18 59	47 32	15 57		
9	312	29.2		0	18.9 ¹³⁸	44.5 ⁹⁰	30	06	30	57	37 34	25 55		
10	327	29.3		14	51.6 ¹³⁷	35.5 ⁹⁰	20	08	30	56	18 38	42 50		
11	342	29.5	-3 39.7	29	24.5 ¹³⁹	-18 26.4 ⁹¹	10 N	18 11	18 32	18 56	3 03 41	14 56 47		
12	357	29.7	-3 38.7	43	57.4 ¹³⁹	-18 17.3 ⁹¹	0	18 13	18 34	18 58	2 48 44	15 09 44		
13	12	29.8		58	30.3 ¹³⁹	-18 08.0 ⁹³	10 S	16	37	19 01	33 47	23 40		
14	27	30.0		73	03.3 ¹⁴⁰	-17 58.7 ⁹³	20	19	41	06	2 17 51	37 36		
15	42	30.2		87	36.4 ¹⁴¹	49.3 ⁹⁴	30	22	46	14	1 58 55	15 53 33		
16	57	30.3		102	09.5 ¹⁴¹	39.8 ⁹⁵	35	24	49	19	48 57	16 02 30		
17	72	30.5	-3 33.8	116	42.6 ¹⁴¹	-17 30.3 ⁹⁵	40	18 26	18 53	19 25	1 35 60	16 13 27		
18	87	30.7	-3 32.8	131	15.8 ¹⁴²	-17 20.7 ⁹⁶	45	18 29	18 58	19 33	1 21 63	16 26 23		
19	102	30.8		145	49.1 ¹⁴³	11.0 ⁹⁷	50	32	19 05	44	1 03 67	41 19		
20	117	31.0		160	22.4 ¹⁴³	-17 01.3 ⁹⁷	52	34	08	49	0 54 70	48 17		
21	132	31.2		174	55.8 ¹⁴⁴	-16 51.5 ⁹⁸	54	35	11	19 54	45 71	16 55 16		
22	147	31.3		189	29.2 ¹⁴⁴	41.6 ⁹⁹	56	37	15	20 00	34 74	17 04 13		
23	162	31.5		204	02.7 ¹⁴⁵	31.6 ¹⁰⁰	58	39	19	08	21 78	14 10		
24	177	31.6	-3 26.9	218	36.2 ¹⁴⁵	-16 21.6 ¹⁰⁰	60 S	18 41	19 24	20 16	0 07 82	17 25 7		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 12 ^h 43 ^m 7		Mag: -3.9 PMG: 13 ^h 04 ^m		Mag: -0.3 PMG: 20 ^h 56 ^m		Mag: -2.0 PMG: 11 ^h 40 ^m			Mag: +0.6 PMG: 0 ^h 58 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	168	33.1	164	06.5	+0 37.4	45 13.1	+23 37.4	184 31.6	-7 49.6	345 34.0	+1 29.4			
1	183	35.6	179	06.1	38.7	60 15.6	37.3	199 33.5	49.3	0 36.7	29.5			
2	198	38.0	194	05.8	40.0	75 18.1	37.2	214 35.4	49.1	15 39.3	29.6			
3	213	40.5	209	05.4	41.3	90 20.6	37.1	229 37.3	48.9	30 41.9	29.7			
4	228	43.0	224	05.0	42.5	105 23.0	37.1	244 39.2	48.7	45 44.6	29.7			
5	243	45.4	239	04.7	+0 43.8	120 25.5	+23 37.0	259 41.1	-7 48.4	60 47.2	+1 29.8			
6	258	47.9	254	04.3	+0 45.1	135 28.0	+23 36.9	274 43.0	-7 48.2	75 49.9	+1 29.9			
7	273	50.3	269	03.9	46.4	150 30.4	36.8	289 44.9	48.0	90 52.5	30.0			
8	288	52.8	284	03.6	47.7	165 32.9	36.7	304 46.8	47.7	105 55.1	30.1			
9	303	55.3	299	03.2	49.0	180 35.4	36.6	319 48.7	47.5	120 57.8	30.1			
10	318	57.7	314	02.8	50.3	195 37.8	36.5	334 50.6	47.3	136 00.4	30.2			
11	334	00.2	329	02.5	+0 51.6	210 40.3	+23 36.4	349 52.5	-7 47.1	151 03.0	+1 30.3			
12	349	02.7	344	02.1	+0 52.8	225 42.8	+23 36.3	4 54.4	-7 46.8	166 05.7	+1 30.4			
13	4	05.1	359	01.7	54.1	240 45.2	36.2	19 56.3	46.6	181 08.3	30.5			
14	19	07.6	14	01.4	55.4	255 47.7	36.1	34 58.2	46.4	196 11.0	30.5			
15	34	10.1	29	01.0	56.7	270 50.1	36.1	50 00.1	46.2	211 13.6	30.6			
16	49	12.5	44	00.6	58.0	285 52.6	36.0	65 02.0	45.9	226 16.2	30.7			
17	64	15.0	59	00.3	+0 59.3	300 55.0	+23 35.9	80 03.9	-7 45.7	241 18.9	+1 30.8			
18	79	17.5	73	59.9	+1 00.6	315 57.5	+23 35.8	95 05.8	-7 45.5	256 21.5	+1 30.9			
19	94	19.9	88	59.5	01.8	330 59.9	35.7	110 07.7	45.2	271 24.1	30.9			
20	109	22.4	103	59.2	03.1	346 02.4	35.6	125 09.6	45.0	286 26.8	31.0			
21	124	24.8	118	58.8	04.4	1 04.8	35.5	140 11.5	44.8	301 29.4	31.1			
22	139	27.3	133	58.4	05.7	16 07.3	35.4	155 13.4	44.6	316 32.1	31.2			
23	154	29.8	148	58.1	07.0	31 09.7	35.3	170 15.3	44.3	331 34.7	31.3			
24	169	32.2	163	57.7	+1 08.3	46 12.2	+23 35.2	185 17.3	-7 44.1	346 37.3	+1 31.3			
Dif	—		-4	+13		+25	-1	+19	+2	+26	+1			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'1			Edad: 25 ^d 9	PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0															
	PMG: 12 ^h 09 ^m 8																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	°	'	°	'	h	m	h	m	m	m	m						
0	177	31.6	-3 26.9	218	36.2	-16 21.6		60 N	4 56	5 45	6 26	5 30	6 14	08 80						
1	192	31.8		233	09.8 ¹⁴⁶		11.5 ¹⁰¹	58	5 00		46 25	21 9		17 77						
2	207	32.0		247	43.4 ¹⁴⁶	-16 01.4 ¹⁰¹		56	04	47	24	12 12		24 74						
3	222	32.1		262	17.0 ¹⁴⁶	-15 51.2 ¹⁰²		54	06	47	23	5 05 14		31 77						
4	237	32.3		276	50.8 ¹⁴⁸		40.9 ¹⁰³	52	09	48	22	4 58 16		37 69						
5	252	32.5	-3 22.0	291	24.5 ¹⁴⁷	-15 30.6 ¹⁰³		50	5 11	5 48	6 21	4 52 18	14 43	67						
6	267	32.6	-3 21.0	305	58.3 ¹⁴⁸	-15 20.2 ¹⁰⁴		45	5 15	5 49	6 18	4 39 22	14 54	63						
7	282	32.8		320	32.2 ¹⁴⁹	-15 09.7 ¹⁰⁵		40	18	50	17	28 26	15 04	59						
8	297	33.0		335	06.1 ¹⁴⁹	-14 59.2 ¹⁰⁵		35	21	50	15	19 28		12 57						
9	312	33.1		349	40.0 ¹⁴⁹		48.6 ¹⁰⁶	30	22	50	14	4 11 31		20 53						
10	327	33.3		4	14.0 ¹⁵⁰		38.0 ¹⁰⁶	20	24	49	11	3 56 36		32 49						
11	342	33.5	-3 16.1	18	48.0 ¹⁵⁰	-14 27.3 ¹⁰⁷		10 N	5 23	5 48	6 09	3 44 39	15 43	45						
12	357	33.6	-3 15.1	33	22.1 ¹⁵¹	-14 16.5 ¹⁰⁸		0	5 22	5 46	6 06	3 32 43	15 53	42						
13	12	33.8		47	56.2 ¹⁵¹	-14 05.7 ¹⁰⁸		10 S	19	43	04	20 46	16 03	38						
14	27	34.0		62	30.4 ¹⁵²	-13 54.9 ¹⁰⁸		20	14	39	6 01	3 08 49		13 35						
15	42	34.1		77	04.6 ¹⁵²		43.9 ¹¹⁰	30	06	34	5 58	2 53 54		26 29						
16	57	34.3		91	38.8 ¹⁵²		33.0 ¹⁰⁹	35	5 01	31	56	45 56		32 28						
17	72	34.5	-3 10.2	106	13.1 ¹⁵³	-13 21.9 ¹¹¹		40	4 55	5 27	5 54	2 35 60	16 40	25						
18	87	34.6	-3 09.2	120	47.4 ¹⁵³	-13 10.8 ¹¹¹		45	4 47	5 22	5 52	2 24 63	16 49	22						
19	102	34.8		135	21.8 ¹⁵⁴	-12 59.7 ¹¹¹		50	37	16	49	10 67	17 00	17						
20	117	35.0		149	56.1 ¹⁵³		48.5 ¹¹²	52	32	13	47	2 04 69		05 15						
21	132	35.1		164	30.6 ¹⁵⁵		37.3 ¹¹²	54	27	10	46	1 56 72		11 13						
22	147	35.3		179	05.0 ¹⁵⁴		26.0 ¹¹³	56	20	06	44	48 75		17 11						
23	162	35.5		193	39.5 ¹⁵⁵		14.7 ¹¹³	58	13	5 02	42	39 78		24 8						
24	177	35.6	-3 03.3	208	14.1 ¹⁵⁶	-12 03.3 ¹¹⁴		60 S	4 05	4 57	5 40	1 29 81	17 32	5						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 12 ^h 39 ^m 8		Mag: -3.9 PMG: 13 ^h 04 ^m			Mag: -0.3 PMG: 20 ^h 52 ^m			Mag: -2.0 PMG: 11 ^h 37 ^m			Mag: +0.6 PMG: 0 ^h 53 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°	'					
0	169	32.2	163	57.7	+1	08.3		46	12.2	+23	35.2	185	17.3	-7	44.1	346	37.3	+1	31.3	
1	184	34.7	178	57.4		09.6		61	14.6		35.1	200	19.2		43.9	1	40.0		31.4	
2	199	37.2	193	57.0		10.9		76	17.1		35.0	215	21.1		43.7	16	42.6		31.5	
3	214	39.6	208	56.6		12.1		91	19.5		34.9	230	23.0		43.4	31	45.2		31.6	
4	229	42.1	223	56.3		13.4		106	21.9		34.8	245	24.9		43.2	46	47.9		31.7	
5	244	44.6	238	55.9	+1	14.7		121	24.4	+23	34.7	260	26.8	-7	43.0	61	50.5	+1	31.7	
6	259	47.0	253	55.5	+1	16.0		136	26.8	+23	34.6	275	28.7	-7	42.7	76	53.2	+1	31.8	
7	274	49.5	268	55.2		17.3		151	29.3		34.5	290	30.6		42.5	91	55.8		31.9	
8	289	51.9	283	54.8		18.6		166	31.7		34.4	305	32.5		42.3	106	58.4		32.0	
9	304	54.4	298	54.4		19.9		181	34.1		34.3	320	34.4		42.1	122	01.1		32.1	
10	319	56.9	313	54.1		21.1		196	36.5		34.2	335	36.3		41.8	137	03.7		32.1	
11	334	59.3	328	53.7	+1	22.4		211	39.0	+23	34.2	350	38.2	-7	41.6	152	06.4	+1	32.2	
12	350	01.8	343	53.3	+1	23.7		226	41.4	+23	34.1	5	40.1	-7	41.4	167	09.0	+1	32.3	
13	5	04.3	358	53.0		25.0		241	43.8		34.0	20	42.0		41.2	182	11.6		32.4	
14	20	06.7	13	52.6		26.3		256	46.3		33.9	35	43.9		40.9	197	14.3		32.5	
15	35	09.2	28	52.2		27.6		271	48.7		33.8	50	45.8		40.7	212	16.9		32.5	
16	50	11.7	43	51.9		28.9		286	51.1		33.7	65	47.7		40.5	227	19.5		32.6	
17	65	14.1	58	51.5	+1	30.1		301	53.5	+23	33.6	80	49.6	-7	40.2	242	22.2	+1	32.7	
18	80	16.6	73	51.1	+1	31.4		316	55.9	+23	33.5	95	51.5	-7	40.0	257	24.8	+1	32.8	
19	95	19.1	88	50.8		32.7		331	58.4		33.4	110	53.4		39.8	272	27.5		32.9	
20	110	21.5	103	50.4		34.0		347	00.8		33.3	125	55.3		39.6	287	30.1		32.9	
21	125	24.0	118	50.1		35.3		2	03.2		33.2	140	57.2		39.3	302	32.7		33.0	
22	140	26.4	133	49.7		36.6		17	05.6		33.1	155	59.1		39.1	317	35.4		33.1	
23	155	28.9	148	49.3		37.9		32	08.0		33.0	171	01.0		38.9	332	38.0		33.2	
24	170	31.4	163	49.0	+1	39.1		47	10.4	+23	32.9	186	02.9	-7	38.7	347	40.7	+1	33.3	
Dif	—		-4		+13			+24		-1		+19		+2			+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 26 ^d 9 PHE { 4 ^h : 54:0 12 ^h : 54:1 20 ^h : 54:1					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 09 ^m 5			SD: 14:7 PMG: 10 ^h 25 ^m R°: 41 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	35.6	-3 03.3	208	14.1	-12 03.3		60 N	17 57	18 38	19 27	5 36	4	15 28	80
1	192	35.8		222	48.6 ¹⁵⁵	-11 51.8 ¹¹⁵		58	58	37	23	30	7	34	76
2	207	36.0		237	23.2 ¹⁵⁶		40.4 ¹¹⁴	56	17 59	36	20	24	10	38	74
3	222	36.2	-3 00.3	251	57.9 ¹⁵⁷		28.8 ¹¹⁶	54	18 00	35	16	19	12	43	71
4	237	36.3	-2 59.4	266	32.6 ¹⁵⁷		17.3 ¹¹⁵	52	01	34	14	14	15	46	69
5	252	36.5	-2 58.4	281	07.3 ¹⁵⁷	-11 05.6 ¹¹⁷		50	18 01	18 34	19 11	5 10	16	15 50	67
6	267	36.7	-2 57.4	295	42.0 ¹⁵⁷	-10 54.0 ¹¹⁶		45	18 03	18 32	19 06	5 01	20	15 57	63
7	282	36.8		310	16.7 ¹⁵⁷		42.3 ¹¹⁷	40	05	32	03	4 54	23	16 03	59
8	297	37.0		324	51.5 ¹⁵⁸		30.5 ¹¹⁸	35	06	31	19 00	47	27	09	56
9	312	37.2		339	26.4 ¹⁵⁹		18.7 ¹¹⁸	30	07	31	18 59	42	29	13	53
10	327	37.3		354	01.2 ¹⁵⁸	-10 06.9 ¹¹⁸		20	09	31	57	32	33	21	49
11	342	37.5	-2 52.5	8	36.1 ¹⁵⁹	-9 55.0 ¹¹⁹		10 N	18 11	18 32	18 56	4 23	37	16 28	45
12	357	37.7	-2 51.5	23	11.0 ¹⁵⁹	-9 43.1 ¹¹⁹		0	18 13	18 33	18 57	4 15	41	16 35	40
13	12	37.8		50.5	37 45.9 ¹⁵⁹		31.1 ¹²⁰	10 S	15	36	19 00	4 06	45	41	37
14	27	38.0		49.5	52 20.9 ¹⁶⁰		19.1 ¹²⁰	20	17	39	05	3 57	49	48	33
15	42	38.2		48.5	66 55.8 ¹⁵⁹	-9 07.1 ¹²⁰		30	20	44	12	47	54	16 55	29
16	57	38.4		47.5	81 30.8 ¹⁶⁰	-8 55.0 ¹²¹		35	21	47	16	41	57	17 00	26
17	72	38.5	-2 46.5	96	05.8 ¹⁶⁰	-8 42.9 ¹²¹		40	18 23	18 50	19 22	3 35	59	17 05	23
18	87	38.7	-2 45.6	110	40.9 ¹⁶¹	-8 30.8 ¹²¹		45	18 25	18 55	19 29	3 27	63	17 11	19
19	102	38.9		44.6	125 15.9 ¹⁶⁰		18.6 ¹²²	50	28	19 00	39	17	67	17	16
20	117	39.0		43.6	139 51.0 ¹⁶¹	-8 06.4 ¹²²		52	29	03	43	13	69	20	14
21	132	39.2		42.6	154 26.1 ¹⁶¹	-7 54.2 ¹²²		54	30	06	49	08	72	24	11
22	147	39.4		41.6	169 01.3 ¹⁶²		41.9 ¹²³	56	32	09	19 55	3 03	74	28	9
23	162	39.5		40.6	183 36.4 ¹⁶¹		29.6 ¹²³	58	33	13	20 01	2 57	76	32	7
24	177	39.7	-2 39.6	198	11.5 ¹⁶¹	-7 17.2 ¹²⁴		60 S	18 35	19 17	20 09	2 50	80	17 37	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 35 ^m 8		Mag: -3.9 PMG: 13 ^h 05 ^m			Mag: -0.3 PMG: 20 ^h 48 ^m			Mag: -2.0 PMG: 11 ^h 34 ^m			Mag: +0.5 PMG: 0 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	170	31.4	163 49.0	+1 39.1	47 10.4	+23 32.9		186 02.9	-7 38.7	347 40.7	+1 33.3				
1	185	33.8	178 48.6		40.4	62 12.9	32.8	201 04.8		38.4	2 43.3	33.3			
2	200	36.3	193 48.2		41.7	77 15.3	32.7	216 06.7		38.2	17 45.9	33.4			
3	215	38.8	208 47.9		43.0	92 17.7	32.5	231 08.6		38.0	32 48.6	33.5			
4	230	41.2	223 47.5		44.3	107 20.1	32.4	246 10.5		37.7	47 51.2	33.6			
5	245	43.7	238 47.1	+1 45.6	122 22.5	+23 32.3		261 12.5	-7 37.5	62 53.9	+1 33.7				
6	260	46.2	253 46.8	+1 46.9	137 24.9	+23 32.2		276 14.4	-7 37.3	77 56.5	+1 33.7				
7	275	48.6	268 46.4		48.1	152 27.3	32.1	291 16.3		37.1	92 59.1	33.8			
8	290	51.1	283 46.0		49.4	167 29.7	32.0	306 18.2		36.8	108 01.8	33.9			
9	305	53.6	298 45.7		50.7	182 32.1	31.9	321 20.1		36.6	123 04.4	34.0			
10	320	56.0	313 45.3		52.0	197 34.5	31.8	336 22.0		36.4	138 07.1	34.1			
11	335	58.5	328 44.9	+1 53.3	212 36.9	+23 31.7		351 23.9	-7 36.2	153 09.7	+1 34.1				
12	351	00.9	343 44.6	+1 54.6	227 39.3	+23 31.6		6 25.8	-7 35.9	168 12.3	+1 34.2				
13	6	03.4	358 44.2		55.8	242 41.7	31.5	21 27.7		35.7	183 15.0	34.3			
14	21	05.9	13 43.8		57.1	257 44.1	31.4	36 29.6		35.5	198 17.6	34.4			
15	36	08.3	28 43.5		58.4	272 46.5	31.3	51 31.5		35.2	213 20.3	34.5			
16	51	10.8	43 43.1	+1 59.7	287 48.9	31.2		66 33.4		35.0	228 22.9	34.5			
17	66	13.3	58 42.7	+2 01.0	302 51.2	+23 31.1		81 35.3	-7 34.8	243 25.5	+1 34.6				
18	81	15.7	73 42.4	+2 02.3	317 53.6	+23 31.0		96 37.2	-7 34.6	258 28.2	+1 34.7				
19	96	18.2	88 42.0		03.6	332 56.0	30.9	111 39.1		34.3	273 30.8	34.8			
20	111	20.7	103 41.7		04.8	347 58.4	30.8	126 41.0		34.1	288 33.4	34.9			
21	126	23.1	118 41.3		06.1	3 00.8	30.7	141 42.9		33.9	303 36.1	34.9			
22	141	25.6	133 40.9		07.4	18 03.2	30.6	156 44.8		33.7	318 38.7	35.0			
23	156	28.0	148 40.6		08.7	33 05.6	30.4	171 46.7		33.4	333 41.4	35.1			
24	171	30.5	163 40.2	+2 10.0	48 07.9	+23 30.3		186 48.6	-7 33.2	348 44.0	+1 35.2				
Dif	—		-4	+13		+24	-1		+19	+2		+26	+1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 09 ^m 2			Edad: 27 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 40 ^m SD: 14'7 PMG: 11 ^h 06 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	177	39.7	-2 39.6	198	11.5	-7 17.2	60 N	4 50	5 39	6 20	5 40	4	16 48	80
1	192	39.9		212	46.7 ¹⁶²	-7 04.9 ¹²³	58	54	40	19	37	6	50	77
2	207	40.1		227	21.9 ¹⁶²	-6 52.5 ¹²⁴	56	4 58	42	18	34	9	52	74
3	222	40.2		241	57.1 ¹⁶²	40.0 ¹²⁵	54	5 01	43	18	31	11	54	71
4	237	40.4		256	32.3 ¹⁶²	27.6 ¹²⁴	52	04	43	17	29	13	55	70
5	252	40.6	-2 34.7	271	07.6 ¹⁶³	-6 15.1 ¹²⁵	50	5 07	5 44	6 16	5 26	15	16 57	67
6	267	40.7	-2 33.7	285	42.8 ¹⁶²	-6 02.6 ¹²⁵	45	5 12	5 46	6 15	5 21	20	17 00	63
7	282	40.9		300	18.0 ¹⁶²	-5 50.0 ¹²⁶	40	15	47	14	17	23	02	60
8	297	41.1		314	53.3 ¹⁶³	37.4 ¹²⁶	35	18	47	12	14	25	05	56
9	312	41.3		329	28.6 ¹⁶³	24.9 ¹²⁵	30	20	47	11	11	28	06	54
10	327	41.4		344	03.9 ¹⁶³	-5 12.2 ¹²⁷	20	22	47	09	05	33	10	48
11	342	41.6	-2 28.8	358	39.2 ¹⁶³	-4 59.6 ¹²⁶	10 N	5 22	5 47	6 08	5 00	37	17 13	44
12	357	41.8	-2 27.8	13	14.5 ¹⁶³	-4 46.9 ¹²⁷	0	5 21	5 45	6 06	4 56	40	17 15	41
13	12	41.9		27	49.8 ¹⁶³	34.2 ¹²⁷	10 S	19	43	04	51	45	18	37
14	27	42.1		42	25.1 ¹⁶³	21.5 ¹²⁷	20	14	40	02	46	49	21	33
15	42	42.3		57	00.4 ¹⁶³	-4 08.8 ¹²⁷	30	08	36	6 00	41	53	24	28
16	57	42.5		71	35.7 ¹⁶³	-3 56.1 ¹²⁷	35	5 03	33	5 58	38	56	26	25
17	72	42.6	-2 22.9	86	11.0 ¹⁶³	-3 43.3 ¹²⁸	40	4 57	5 29	5 56	4 34	59	17 28	22
18	87	42.8	-2 21.9	100	46.3 ¹⁶³	-3 30.5 ¹²⁸	45	4 50	5 25	5 54	4 30	62	17 30	19
19	102	43.0		115	21.7 ¹⁶⁴	17.7 ¹²⁸	50	41	19	52	24	68	33	15
20	117	43.2		129	57.0 ¹⁶³	-3 04.9 ¹²⁸	52	36	17	51	22	69	34	13
21	132	43.3		144	32.3 ¹⁶³	-2 52.0 ¹²⁹	54	31	14	49	20	71	35	12
22	147	43.5		159	07.6 ¹⁶³	39.2 ¹²⁸	56	25	10	48	17	73	37	9
23	162	43.7		173	43.0 ¹⁶⁴	26.3 ¹²⁹	58	18	07	47	13	77	39	6
24	177	43.9	-2 16.0	188	18.3 ¹⁶³	-2 13.4 ¹²⁹	60 S	4 11	5 03	5 45	4 10	79	17 41	3
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 31 ^m 9		Mag: -3.9 PMG: 13 ^h 06 ^m			Mag: -0.3 PMG: 20 ^h 44 ^m			Mag: -2.0 PMG: 11 ^h 31 ^m			Mag: +0.5 PMG: 0 ^h 45 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	171	30.5	163	40.2	+2 10.0	48	07.9	+23 30.3	186	48.6	-7 33.2	348	44.0	+1 35.2
1	186	33.0	178	39.8		63	10.3	30.2	201	50.5	33.0	3	46.6	35.3
2	201	35.4	193	39.5		78	12.7	30.1	216	52.4	32.8	18	49.3	35.3
3	216	37.9	208	39.1		93	15.1	30.0	231	54.3	32.5	33	51.9	35.4
4	231	40.4	223	38.7		108	17.4	29.9	246	56.3	32.3	48	54.6	35.5
5	246	42.8	238	38.4	+2 16.4	123	19.8	+23 29.8	261	58.2	-7 32.1	63	57.2	+1 35.6
6	261	45.3	253	38.0	+2 17.7	138	22.2	+23 29.7	277	00.1	-7 31.8	78	59.9	+1 35.7
7	276	47.8	268	37.6		153	24.6	29.6	292	02.0	31.6	94	02.5	35.7
8	291	50.2	283	37.3		168	26.9	29.5	307	03.9	31.4	109	05.1	35.8
9	306	52.7	298	36.9		183	29.3	29.4	322	05.8	31.2	124	07.8	35.9
10	321	55.2	313	36.5		198	31.7	29.2	337	07.7	30.9	139	10.4	36.0
11	336	57.6	328	36.2	+2 24.1	213	34.0	+23 29.1	352	09.6	-7 30.7	154	13.1	+1 36.1
12	352	00.1	343	35.8	+2 25.4	228	36.4	+23 29.0	7	11.5	-7 30.5	169	15.7	+1 36.1
13	7	02.5	358	35.4		243	38.8	28.9	22	13.4	30.3	184	18.3	36.2
14	22	05.0	13	35.1		258	41.1	28.8	37	15.3	30.0	199	21.0	36.3
15	37	07.5	28	34.7		273	43.5	28.7	52	17.2	29.8	214	23.6	36.4
16	52	09.9	43	34.3		288	45.9	28.6	67	19.1	29.6	229	26.3	36.5
17	67	12.4	58	34.0	+2 31.8	303	48.2	+23 28.5	82	21.0	-7 29.3	244	28.9	+1 36.5
18	82	14.9	73	33.6	+2 33.1	318	50.6	+23 28.4	97	22.9	-7 29.1	259	31.5	+1 36.6
19	97	17.3	88	33.2		333	52.9	28.2	112	24.8	28.9	274	34.2	36.7
20	112	19.8	103	32.9		348	55.3	28.1	127	26.7	28.7	289	36.8	36.8
21	127	22.3	118	32.5		3	57.6	28.0	142	28.6	28.4	304	39.5	36.9
22	142	24.7	133	32.1		19	00.0	27.9	157	30.5	28.2	319	42.1	36.9
23	157	27.2	148	31.8		34	02.3	27.8	172	32.4	28.0	334	44.7	37.0
24	172	29.6	163	31.4	+2 40.8	49	04.7	+23 27.7	187	34.4	-7 27.8	349	47.4	+1 37.1
Dif	—		-4		+13	+24		-1	+19		+2	+26		+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'1			Edad: 28 ^d 9 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6														
	PMG: 12 ^h 08 ^m 9			SD: 14'8 PMG: 11 ^h 46 ^m R°: 41 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	177	43.9	-2	16.0	188	18.3	-2	13.4	60 N	18 02	18 43	19 33	5 44	4	18 08	81		
1	192	44.0		15.0	202	53.6 ¹⁶³	-2	00.5 ¹²⁹	58	03	42	28	43	7	07	78		
2	207	44.2		14.0	217	28.9 ¹⁶³	-1	47.6 ¹²⁹	56	03	40	24	43	9	06	75		
3	222	44.4		13.0	232	04.2 ¹⁶³		34.7 ¹²⁹	54	04	39	20	42	12	05	77		
4	237	44.5		12.0	246	39.5 ¹⁶³		21.8 ¹²⁹	52	04	38	17	42	13	05	70		
5	252	44.7	-2	11.0	261	14.8 ¹⁶³	-1	08.8 ¹³⁰	50	18 05	18 37	19 15	5 41	16	18 04	68		
6	267	44.9	-2	10.0	275	50.1 ¹⁶³	-0	55.9 ¹²⁹	45	18 06	18 35	19 09	5 41	19	18 03	64		
7	282	45.1		09.0	290	25.4 ¹⁶³		42.9 ¹³⁰	40	07	34	05	40	23	02	60		
8	297	45.2		08.1	305	00.6 ¹⁶²		30.0 ¹²⁹	35	07	33	02	39	26	01	57		
9	312	45.4		07.1	319	35.9 ¹⁶³		17.0 ¹³⁰	30	08	32	19 00	39	28	18 00	54		
10	327	45.6		06.1	334	11.1 ¹⁶²	-0	04.0 ¹³⁰	20	10	32	18 57	38	33	17 58	50		
11	342	45.8	-2	05.1	348	46.4 ¹⁶³	+0	09.0 ¹³⁰	10 N	18 11	18 32	18 56	5 37	37	17 57	46		
12	357	45.9	-2	04.1	3	21.6 ¹⁶²	+0	22.0 ¹³⁰	0	18 12	18 33	18 57	5 36	41	17 56	41		
13	12	46.1		03.1	17	56.8 ¹⁶²		35.0 ¹³⁰	10 S	14	35	18 59	36	45	55	37		
14	27	46.3		02.1	32	32.0 ¹⁶²	+0	48.0 ¹³⁰	20	15	37	19 03	35	49	54	33		
15	42	46.5		01.1	47	07.2 ¹⁶²	+1	01.0 ¹³⁰	30	17	41	09	34	54	52	29		
16	57	46.6	-2	00.2	61	42.3 ¹⁶¹		14.0 ¹³⁰	35	18	44	13	34	56	51	26		
17	72	46.8	-1	59.2	76	17.5 ¹⁶²	+1	27.0 ¹³⁰	40	18 20	18 47	19 19	5 33	60	17 50	23		
18	87	47.0	-1	58.2	90	52.6 ¹⁶¹	+1	40.0 ¹³⁰	45	18 21	18 51	19 25	5 32	64	17 49	20		
19	102	47.2		57.2	105	27.7 ¹⁶¹	+1	53.0 ¹³⁰	50	23	56	34	32	67	48	15		
20	117	47.3		56.2	120	02.8 ¹⁶¹	+2	06.0 ¹³⁰	52	24	18 58	39	31	70	47	14		
21	132	47.5		55.2	134	37.9 ¹⁶¹		19.0 ¹³⁰	54	25	19 01	43	31	72	47	11		
22	147	47.7		54.2	149	12.9 ¹⁶⁰		32.0 ¹³⁰	56	26	04	49	30	75	46	9		
23	162	47.9		53.2	163	47.9 ¹⁶⁰		45.0 ¹³⁰	58	28	07	19 55	30	77	45	7		
24	177	48.0	-1	52.2	178	22.9 ¹⁶⁰	+2	58.0 ¹³⁰	60 S	18 29	19 11	20 02	5 29	81	17 44	4		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 28 ^m 0		Mag: -3.9 PMG: 13 ^h 06 ^m			Mag: -0.2 PMG: 20 ^h 40 ^m			Mag: -2.0 PMG: 11 ^h 28 ^m			Mag: +0.5 PMG: 0 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	172	29.6	163	31.4	+2	40.8	49	04.7	+23	27.7	187	34.4	-7	27.8	349	47.4	+1	37.1
1	187	32.1	178	31.0		42.1	64	07.0		27.6	202	36.3		27.5	4	50.0		37.2
2	202	34.6	193	30.7		43.3	79	09.4		27.4	217	38.2		27.3	19	52.7		37.3
3	217	37.0	208	30.3		44.6	94	11.7		27.3	232	40.1		27.1	34	55.3		37.4
4	232	39.5	223	29.9		45.9	109	14.1		27.2	247	42.0		26.8	49	57.9		37.4
5	247	42.0	238	29.6	+2	47.2	124	16.4	+23	27.1	262	43.9	-7	26.6	65	00.6	+1	37.5
6	262	44.4	253	29.2	+2	48.5	139	18.8	+23	27.0	277	45.8	-7	26.4	80	03.2	+1	37.6
7	277	46.9	268	28.8		49.8	154	21.1		26.9	292	47.7		26.2	95	05.9		37.7
8	292	49.4	283	28.5		51.0	169	23.4		26.7	307	49.6		25.9	110	08.5		37.8
9	307	51.8	298	28.1		52.3	184	25.8		26.6	322	51.5		25.7	125	11.2		37.8
10	322	54.3	313	27.7		53.6	199	28.1		26.5	337	53.4		25.5	140	13.8		37.9
11	337	56.8	328	27.4	+2	54.9	214	30.4	+23	26.4	352	55.3	-7	25.3	155	16.4	+1	38.0
12	352	59.2	343	27.0	+2	56.2	229	32.8	+23	26.3	7	57.2	-7	25.0	170	19.1	+1	38.1
13	8	01.7	358	26.6		57.4	244	35.1		26.2	22	59.1		24.8	185	21.7		38.2
14	23	04.1	13	26.3	+2	58.7	259	37.4		26.0	38	01.0		24.6	200	24.4		38.2
15	38	06.6	28	25.9	+3	00.0	274	39.8		25.9	53	02.9		24.4	215	27.0		38.3
16	53	09.1	43	25.5	+3	01.3	289	42.1		25.8	68	04.8		24.1	230	29.6		38.4
17	68	11.5	58	25.2	+3	02.6	304	44.4	+23	25.7	83	06.8	-7	23.9	245	32.3	+1	38.5
18	83	14.0	73	24.8	+3	03.8	319	46.8	+23	25.6	98	08.7	-7	23.7	260	34.9	+1	38.6
19	98	16.5	88	24.4		05.1	334	49.1		25.5	113	10.6		23.4	275	37.6		38.6
20	113	18.9	103	24.1		06.4	349	51.4		25.3	128	12.5		23.2	290	40.2		38.7
21	128	21.4	118	23.7		07.7	4	53.7		25.2	143	14.4		23.0	305	42.8		38.8
22	143	23.9	133	23.3		09.0	19	56.0		25.1	158	16.3		22.8	320	45.5		38.9
23	158	26.3	148	23.0		10.2	34	58.4		25.0	173	18.2		22.5	335	48.1		39.0
24	173	28.8	163	22.6	+3	11.5	50	00.7	+23	24.9	188	20.1	-7	22.3	350	50.8	+1	39.0
Dif	—		-4		+13		+23		-1		+19		+2		+26		+	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 0 ^d 1	PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9										
	PMG: 12 ^h 08 ^m 7					SD: 14 ^h 9		PMG: 12 ^h 27 ^m			R ^o : 43 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	48.0	-1 52.2	178	22.9	+2 58.0		60 N	4 44	5 33	6 14	5 48	4	19 29	83
1	192	48.2		51.3	192 57.9 ¹⁶⁰	+3 10.9 ¹²⁹		58	49	35	14	50	7	25	80
2	207	48.4		50.3	207 32.8 ¹⁵⁹	23.9 ¹³⁰		56	53	36	13	52	10	21	77
3	222	48.6		49.3	222 07.8 ¹⁶⁰	36.9 ¹³⁰		54	56	38	13	54	12	18	74
4	237	48.7		48.3	236 42.7 ¹⁵⁹	+3 49.8 ¹²⁹		52	4 59	39	12	55	15	15	72
5	252	48.9	-1 47.3	251	17.5 ¹⁵⁸	+4 02.8 ¹³⁰		50	5 02	5 40	6 12	5 57	16	19 12	70
6	267	49.1	-1 46.3	265	52.4 ¹⁵⁹	+4 15.7 ¹²⁹		45	5 08	5 42	6 11	6 00	20	19 07	65
7	282	49.3		45.3	280 27.2 ¹⁵⁸	28.7 ¹³⁰		40	12	43	10	03	24	19 02	62
8	297	49.5		44.3	295 01.9 ¹⁵⁷	41.6 ¹²⁹		35	15	44	10	05	27	18 58	58
9	312	49.6		43.4	309 36.7 ¹⁵⁸	+4 54.5 ¹²⁹		30	17	45	09	07	30	54	56
10	327	49.8		42.4	324 11.4 ¹⁵⁷	+5 07.4 ¹²⁹		20	20	46	08	11	34	48	51
11	342	50.0	-1 41.4	338	46.1 ¹⁵⁷	+5 20.3 ¹²⁹		10 N	5 21	5 46	6 07	6 14	39	18 43	47
12	357	50.2	-1 40.4	353	20.7 ¹⁵⁶	+5 33.2 ¹²⁹		0	5 21	5 45	6 05	6 17	43	18 37	44
13	12	50.3		39.4	7 55.3 ¹⁵⁶	46.0 ¹²⁸		10 S	19	43	04	21	46	32	40
14	27	50.5		38.4	22 29.9 ¹⁵⁶	+5 58.8 ¹²⁸		20	15	41	03	24	50	27	35
15	42	50.7		37.4	37 04.5 ¹⁵⁶	+6 11.7 ¹²⁹		30	09	37	01	28	55	21	31
16	57	50.9		36.4	51 39.0 ¹⁵⁵	24.5 ¹²⁸		35	5 05	34	6 00	30	58	17	28
17	72	51.0	-1 35.4	66	13.4 ¹⁵⁴	+6 37.3 ¹²⁸		40	4 59	5 31	5 58	6 33	61	18 13	25
18	87	51.2	-1 34.5	80	47.9 ¹⁵⁵	+6 50.0 ¹²⁷		45	4 53	5 27	5 57	6 36	64	18 09	21
19	102	51.4		33.5	95 22.2 ¹⁵³	+7 02.8 ¹²⁸		50	44	23	55	39	69	03	18
20	117	51.6		32.5	109 56.6 ¹⁵⁴	15.5 ¹²⁷		52	40	20	54	41	71	18 01	15
21	132	51.8		31.5	124 30.9 ¹⁵³	28.2 ¹²⁷		54	35	18	53	43	73	17 58	13
22	147	51.9		30.5	139 05.2 ¹⁵³	40.8 ¹²⁶		56	30	15	52	45	76	55	11
23	162	52.1		29.5	153 39.4 ¹⁵²	+7 53.5 ¹²⁷		58	24	11	51	47	79	52	8
24	177	52.3	-1 28.5	168	13.5 ¹⁵¹	+8 06.1 ¹²⁶		60 S	4 16	5 08	5 50	6 50	82	17 48	5
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 24 ^m 0		Mag: -3.9 PMG: 13 ^h 07 ^m		Mag: -0.2 PMG: 20 ^h 37 ^m		Mag: -2.0 PMG: 11 ^h 25 ^m		Mag: +0.5 PMG: 0 ^h 37 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	173	28.8	163	22.6	+3 11.5	50 00.7	+23 24.9	188 20.1	-7 22.3	350 50.8	+1 39.0				
1	188	31.2	178	22.2	12.8	65 03.0	24.7	203 22.0	22.1	5 53.4	39.1				
2	203	33.7	193	21.9	14.1	80 05.3	24.6	218 23.9	21.9	20 56.1	39.2				
3	218	36.2	208	21.5	15.4	95 07.6	24.5	233 25.8	21.6	35 58.7	39.3				
4	233	38.6	223	21.1	16.6	110 09.9	24.4	248 27.7	21.4	51 01.3	39.4				
5	248	41.1	238	20.8	+3 17.9	125 12.3	+23 24.2	263 29.6	-7 21.2	66 04.0	+1 39.4				
6	263	43.6	253	20.4	+3 19.2	140 14.6	+23 24.1	278 31.5	-7 21.0	81 06.6	+1 39.5				
7	278	46.0	268	20.0	20.5	155 16.9	24.0	293 33.4	20.7	96 09.3	39.6				
8	293	48.5	283	19.7	21.8	170 19.2	23.9	308 35.3	20.5	111 11.9	39.7				
9	308	51.0	298	19.3	23.0	185 21.5	23.8	323 37.3	20.3	126 14.6	39.8				
10	323	53.4	313	18.9	24.3	200 23.8	23.6	338 39.2	20.0	141 17.2	39.8				
11	338	55.9	328	18.6	+3 25.6	215 26.1	+23 23.5	353 41.1	-7 19.8	156 19.8	+1 39.9				
12	353	58.4	343	18.2	+3 26.9	230 28.4	+23 23.4	8 43.0	-7 19.6	171 22.5	+1 40.0				
13	9	00.8	358	17.8	28.2	245 30.7	23.3	23 44.9	19.4	186 25.1	40.1				
14	24	03.3	13	17.5	29.4	260 33.0	23.1	38 46.8	19.1	201 27.8	40.2				
15	39	05.7	28	17.1	30.7	275 35.3	23.0	53 48.7	18.9	216 30.4	40.2				
16	54	08.2	43	16.7	32.0	290 37.6	22.9	68 50.6	18.7	231 33.0	40.3				
17	69	10.7	58	16.3	+3 33.3	305 39.9	+23 22.8	83 52.5	-7 18.5	246 35.7	+1 40.4				
18	84	13.1	73	16.0	+3 34.5	320 42.2	+23 22.6	98 54.4	-7 18.2	261 38.3	+1 40.5				
19	99	15.6	88	15.6	35.8	335 44.5	22.5	113 56.3	18.0	276 41.0	40.6				
20	114	18.1	103	15.2	37.1	350 46.8	22.4	128 58.2	17.8	291 43.6	40.6				
21	129	20.5	118	14.9	38.4	5 49.1	22.3	144 00.1	17.5	306 46.3	40.7				
22	144	23.0	133	14.5	39.7	20 51.4	22.1	159 02.0	17.3	321 48.9	40.8				
23	159	25.5	148	14.1	40.9	35 53.7	22.0	174 04.0	17.1	336 51.5	40.9				
24	174	27.9	163	13.8	+3 42.2	50 56.0	+23 21.9	189 05.9	-7 16.9	351 54.2	+1 41.0				
Dif	—		-4 +13		+23 -1		+19 +2		+26 +1						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 1 ^d 1	PHE { 4 ^h : 55 ¹ / 12 ^h : 55 ² / 20 ^h : 55 ³	SD: 15 ^h 0			PMG: 13 ^h 10 ^m	R°: 45 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec									Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	177	52.3	-1 28.5	168	13.5	+8 06.1		60 N	18 07	18 48	19 38	5 52 6		20 52 87			
1	192	52.5		182	47.7 ¹⁵²		18.7 ¹²⁶	58	07	46	33	5 57 9		45 82			
2	207	52.6		197	21.8 ¹⁵¹		31.3 ¹²⁶	56	07	44	28	6 02 12		38 80			
3	222	52.8		211	55.8 ¹⁵⁰		43.8 ¹²⁵	54	07	43	24	06 14		32 77			
4	237	53.0		226	29.8 ¹⁵⁰	+8 56.4		52	08	41	21	10 16		27 74			
5	252	53.2	-1 23.6	241	03.7 ¹⁴⁹	+9 08.8 ¹²⁴		50	18 08	18 40	19 18	6 13 19		20 22 72			
6	267	53.4	-1 22.6	255	37.6 ¹⁴⁹	+9 21.3 ¹²⁵		45	18 08	18 38	19 12	6 20 23		20 12 67			
7	282	53.5		270	11.5 ¹⁴⁹	33.7 ¹²⁴		40	09	36	07	27 26		20 04 63			
8	297	53.7		284	45.2 ¹⁴⁷	46.1 ¹²⁴		35	09	34	04	32 30		19 56 61			
9	312	53.9		299	19.0 ¹⁴⁸	+9 58.5 ¹²⁴		30	09	33	19 01	37 32		50 58			
10	327	54.1		313	52.7 ¹⁴⁷	+10 10.8 ¹²³		20	10	32	18 58	45 37		39 53			
11	342	54.3	-1 17.6	328	26.3 ¹⁴⁶	+10 23.1 ¹²³		10 N	18 11	18 32	18 56	6 53 40		19 30 49			
12	357	54.4	-1 16.7	342	59.9 ¹⁴⁶	+10 35.3 ¹²²		0	18 12	18 32	18 56	7 00 44		19 21 45			
13	12	54.6		357	33.4 ¹⁴⁵	47.5 ¹²²		10 S	13	33	18 58	07 48		12 42			
14	27	54.8		12	06.9 ¹⁴⁵	+10 59.7 ¹²²		20	14	36	19 01	14 52		19 02 38			
15	42	55.0		26	40.3 ¹⁴⁴	+11 11.9 ¹²²		30	15	39	07	23 57		18 52 33			
16	57	55.2		41	13.6 ¹⁴³	23.9 ¹²⁰		35	16	41	10	28 60		45 32			
17	72	55.3	-1 11.7	55	46.9 ¹⁴³	+11 36.0 ¹²¹		40	18 17	18 44	19 15	7 34 62		18 38 29			
18	87	55.5	-1 10.7	70	20.2 ¹⁴³	+11 48.0 ¹²⁰		45	18 18	18 47	19 22	7 40 67		18 30 25			
19	102	55.7		84	53.3 ¹⁴¹	+12 00.0 ¹²⁰		50	19	51	30	48 72		21 20			
20	117	55.9		99	26.4 ¹⁴¹	+12 11.9 ¹¹⁹		52	20	53	34	52 73		16 18			
21	132	56.0		113	59.5 ¹⁴¹	23.8 ¹¹⁹		54	20	56	38	7 56 76		11 16			
22	147	56.2		128	32.5 ¹⁴⁰	35.6 ¹¹⁸		56	21	18 58	43	8 01 78		06 13			
23	162	56.4		143	05.4 ¹³⁹	47.4 ¹¹⁸		58	22	19 01	49	06 82		18 00 10			
24	177	56.6	-1 04.8	157	38.3 ¹³⁹	+12 59.1 ¹¹⁷		60 S	18 23	19 05	19 55	8 12 85		17 53 7			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 20 ^m 1		Mag: -3.9 PMG: 13 ^h 07 ^m			Mag: -0.2 PMG: 20 ^h 33 ^m			Mag: -2.0 PMG: 11 ^h 22 ^m			Mag: +0.5 PMG: 0 ^h 32 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'		
0	174	27.9	163	13.8	+3 42.2	50	56.0	+23 21.9	189	05.9	-7 16.9	351	54.2	+1 41.0			
1	189	30.4	178	13.4	43.5	65	58.2	21.8	204	07.8	16.6	6	56.8	41.1			
2	204	32.9	193	13.0	44.8	81	00.5	21.6	219	09.7	16.4	21	59.5	41.1			
3	219	35.3	208	12.7	46.0	96	02.8	21.5	234	11.6	16.2	37	02.1	41.2			
4	234	37.8	223	12.3	47.3	111	05.1	21.4	249	13.5	16.0	52	04.8	41.3			
5	249	40.2	238	11.9	+3 48.6	126	07.4	+23 21.3	264	15.4	-7 15.7	67	07.4	+1 41.4			
6	264	42.7	253	11.6	+3 49.9	141	09.7	+23 21.1	279	17.3	-7 15.5	82	10.0	+1 41.5			
7	279	45.2	268	11.2	51.1	156	11.9	21.0	294	19.2	15.3	97	12.7	41.5			
8	294	47.6	283	10.8	52.4	171	14.2	20.9	309	21.1	15.1	112	15.3	41.6			
9	309	50.1	298	10.4	53.7	186	16.5	20.7	324	23.0	14.8	127	18.0	41.7			
10	324	52.6	313	10.1	55.0	201	18.8	20.6	339	24.9	14.6	142	20.6	41.8			
11	339	55.0	328	09.7	+3 56.2	216	21.1	+23 20.5	354	26.8	-7 14.4	157	23.3	+1 41.9			
12	354	57.5	343	09.3	+3 57.5	231	23.3	+23 20.3	9	28.8	-7 14.2	172	25.9	+1 41.9			
13	10	00.0	358	09.0	+3 58.8	246	25.6	20.2	24	30.7	13.9	187	28.5	42.0			
14	25	02.4	13	08.6	+4 00.1	261	27.9	20.1	39	32.6	13.7	202	31.2	42.1			
15	40	04.9	28	08.2	01.3	276	30.1	20.0	54	34.5	13.5	217	33.8	42.2			
16	55	07.3	43	07.8	02.6	291	32.4	19.8	69	36.4	13.2	232	36.5	42.3			
17	70	09.8	58	07.5	+4 03.9	306	34.7	+23 19.7	84	38.3	-7 13.0	247	39.1	+1 42.3			
18	85	12.3	73	07.1	+4 05.2	321	36.9	+23 19.6	99	40.2	-7 12.8	262	41.7	+1 42.4			
19	100	14.7	88	06.7	06.4	336	39.2	19.4	114	42.1	12.6	277	44.4	42.5			
20	115	17.2	103	06.4	07.7	351	41.5	19.3	129	44.0	12.3	292	47.0	42.6			
21	130	19.7	118	06.0	09.0	6	43.7	19.2	144	45.9	12.1	307	49.7	42.7			
22	145	22.1	133	05.6	10.3	21	46.0	19.0	159	47.8	11.9	322	52.3	42.7			
23	160	24.6	148	05.3	11.5	36	48.3	18.9	174	49.7	11.7	337	55.0	42.8			
24	175	27.1	163	04.9	+4 12.8	51	50.5	+23 18.8	189	51.7	-7 11.4	352	57.6	+1 42.9			
Dif	—		-4		+13	+23		-1	+19		+2	+26		+1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 2 ^d 1	PHE {	R ^o : 48 ^m										
	PMG: 12 ^h 08 ^m 1					SD: 15 ^h 1		PMG: 13 ^h 55 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m		h	m	m
0	177	56.6	-1 04.8	157	38.3	+12 59.1		60 N	4 37	5 27	6 08	5 58	8	22	19	88
1	192	56.8		172	11.1 ¹³⁸	+13 10.8 ¹¹⁷		58	43	29	08	6 06	13	22	07	85
2	207	56.9		186	43.8 ¹³⁷	22.5 ¹¹⁷		56	47	31	08	14	15	21	58	80
3	222	57.1		201	16.5 ¹³⁷	34.1 ¹¹⁶		54	51	33	08	20	18		49	77
4	237	57.3	-1 00.8	215	49.1 ¹³⁶	45.6 ¹¹⁵		52	55	34	08	26	21		41	75
5	252	57.5	-0 59.8	230	21.6 ¹³⁵	+13 57.1 ¹¹⁵		50	4 58	5 35	6 08	6 32	22	21	34	73
6	267	57.7	-0 58.9	244	54.1 ¹³⁵	+14 08.5 ¹¹⁴		45	5 04	5 38	6 07	6 43	27	21	19	69
7	282	57.9		259	26.5 ¹³⁴	19.9 ¹¹⁴		40	09	40	07	6 53	31	21	07	65
8	297	58.0		273	58.8 ¹³³	31.2 ¹¹³		35	12	42	07	7 02	33	20	57	62
9	312	58.2		288	31.1 ¹³³	42.4 ¹¹²		30	15	43	07		09	36	48	60
10	327	58.4		303	03.3 ¹³²	+14 53.6 ¹¹²		20	19	44	06		22	40	32	56
11	342	58.6	-0 53.9	317	35.4 ¹³¹	+15 04.8 ¹¹²		10 N	5 20	5 44	6 05	7 33	44	20	19	52
12	357	58.8	-0 52.9	332	07.5 ¹³¹	+15 15.8 ¹¹⁰		0	5 20	5 44	6 05	7 44	47	20	06	49
13	12	58.9		346	39.4 ¹²⁹	26.8 ¹¹⁰		10 S	19	43	04	7 55	51	19	54	45
14	27	59.1		1	11.3 ¹²⁹	37.8 ¹¹⁰		20	16	41	03	8 06	55	40	43	
15	42	59.3		15	43.2 ¹²⁹	48.7 ¹⁰⁹		30	10	38	02		20	59	25	38
16	57	59.5		30	14.9 ¹²⁷	+15 59.5 ¹⁰⁸		35	06	36	01		28	61	17	35
17	72	59.7	-0 48.0	44	46.6 ¹²⁷	+16 10.3 ¹⁰⁸		40	5 02	5 33	6 01	8 36	65	19	07	32
18	87	59.8	-0 47.0	59	18.2 ¹²⁶	+16 20.9 ¹⁰⁶		45	4 56	5 30	6 00	8 47	68	18	55	29
19	103	00.0		73	49.7 ¹²⁵	31.6 ¹⁰⁷		50	48	26	5 58	9 00	72	41	25	
20	118	00.2		88	21.2 ¹²⁵	42.1 ¹⁰⁵		52	44	24	58		05	75	34	23
21	133	00.4		102	52.6 ¹²⁴	+16 52.6 ¹⁰⁵		54	39	22	57		12	78	27	21
22	148	00.6		117	23.9 ¹²³	+17 03.0 ¹⁰⁴		56	34	19	56		19	81	19	18
23	163	00.8		131	55.1 ¹²²	13.3 ¹⁰³		58	29	16	56		28	84	10	14
24	178	00.9	-0 41.1	146	26.2 ¹²¹	+17 23.6 ¹⁰³		60 S	4 22	5 13	5 55	9 37	89	18	00	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 16 ^m 2		Mag: -3.9 PMG: 13 ^h 08 ^m		Mag: -0.2 PMG: 20 ^h 30 ^m		Mag: -2.0 PMG: 11 ^h 19 ^m		Mag: +0.5 PMG: 0 ^h 28 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	175	27.1	163	04.9	+4 12.8	51 50.5	+23 18.8	189 51.7	-7 11.4	352 57.6	+1 42.9
1	190	29.5	178	04.5	14.1	66 52.8	18.6	204 53.6	11.2	8 00.2	43.0
2	205	32.0	193	04.1	15.4	81 55.0	18.5	219 55.5	11.0	23 02.9	43.1
3	220	34.5	208	03.8	16.6	96 57.3	18.4	234 57.4	10.8	38 05.5	43.1
4	235	36.9	223	03.4	17.9	111 59.5	18.2	249 59.3	10.5	53 08.2	43.2
5	250	39.4	238	03.0	+4 19.2	127 01.8	+23 18.1	265 01.2	-7 10.3	68 10.8	+1 43.3
6	265	41.8	253	02.7	+4 20.5	142 04.0	+23 18.0	280 03.1	-7 10.1	83 13.5	+1 43.4
7	280	44.3	268	02.3	21.7	157 06.3	17.8	295 05.0	09.8	98 16.1	43.5
8	295	46.8	283	01.9	23.0	172 08.5	17.7	310 06.9	09.6	113 18.7	43.5
9	310	49.2	298	01.5	24.3	187 10.8	17.6	325 08.8	09.4	128 21.4	43.6
10	325	51.7	313	01.2	25.5	202 13.0	17.4	340 10.7	09.2	143 24.0	43.7
11	340	54.2	328	00.8	+4 26.8	217 15.3	+23 17.3	355 12.6	-7 08.9	158 26.7	+1 43.8
12	355	56.6	343	00.4	+4 28.1	232 17.5	+23 17.2	10 14.6	-7 08.7	173 29.3	+1 43.9
13	10	59.1	358	00.0	29.4	247 19.8	17.0	25 16.5	08.5	188 32.0	43.9
14	26	01.6	12	59.7	30.6	262 22.0	16.9	40 18.4	08.3	203 34.6	44.0
15	41	04.0	27	59.3	31.9	277 24.3	16.8	55 20.3	08.0	218 37.3	44.1
16	56	06.5	42	58.9	33.2	292 26.5	16.6	70 22.2	07.8	233 39.9	44.2
17	71	08.9	57	58.6	+4 34.4	307 28.7	+23 16.5	85 24.1	-7 07.6	248 42.5	+1 44.3
18	86	11.4	72	58.2	+4 35.7	322 31.0	+23 16.3	100 26.0	-7 07.4	263 45.2	+1 44.4
19	101	13.9	87	57.8	37.0	337 33.2	16.2	115 27.9	07.1	278 47.8	44.4
20	116	16.3	102	57.4	38.3	352 35.4	16.1	130 29.8	06.9	293 50.5	44.5
21	131	18.8	117	57.1	39.5	7 37.7	15.9	145 31.7	06.7	308 53.1	44.6
22	146	21.3	132	56.7	40.8	22 39.9	15.8	160 33.6	06.5	323 55.8	44.7
23	161	23.7	147	56.3	42.1	37 42.1	15.7	175 35.6	06.2	338 58.4	44.8
24	176	26.2	162	55.9	+4 43.3	52 44.4	+23 15.5	190 37.5	-7 06.0	354 01.0	+1 44.8
Dif	—		-4	+13		+22	-1	+19	+2	+26	+

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: 3 ^d 1 PHE { 4 ^h : 56 ^o 0 12 ^h : 56 ^o 1 20 ^h : 56 ^o 3 PMG: 14 ^h 43 ^m R ^o : 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R ^o	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	00.9	-0	41.1	146	26.2	+17 23.6	60 N	18 12	18 53	19 43	6 06	14	23 47 87
1	193	01.1		40.1	160	57.3 ¹²¹	33.8 ¹⁰²	58	12	51	38	19	18	32 82
2	208	01.3		39.1	175	28.3 ¹²⁰	43.9 ¹⁰¹	56	11	49	33	29	22	18 79
3	223	01.5		38.1	189	59.2 ¹¹⁹	+17 53.9 ¹⁰⁰	54	11	47	28	38	25	23 06 74
4	238	01.7		37.1	204	30.0 ¹¹⁸	+18 03.9 ¹⁰⁰	52	11	45	25	47	26	22 56 74
5	253	01.8	-0	36.1	219	00.7 ¹¹⁷	+18 13.7 ⁹⁸	50	18 11	18 43	19 21	6 54	29	22 47 72
6	268	02.0	-0	35.1	233	31.4 ¹¹⁷	+18 23.5 ⁹⁸	45	18 11	18 40	19 15	7 10	33	22 28 68
7	283	02.2		34.1	248	02.0 ¹¹⁶	33.2 ⁹⁷	40	11	38	09	24	36	22 12 65
8	298	02.4		33.1	262	32.5 ¹¹⁵	42.9 ⁹⁷	35	11	36	05	35	39	21 59 63
9	313	02.6		32.2	277	02.9 ¹¹⁴	+18 52.4 ⁹⁵	30	11	35	19 02	7 45	41	48 60
10	328	02.8		31.2	291	33.2 ¹¹³	+19 01.9 ⁹⁵	20	11	33	18 58	8 02	45	28 58
11	343	02.9	-0	30.2	306	03.5 ¹¹³	+19 11.2 ⁹³	10 N	18 11	18 32	18 56	8 17	48	21 11 55
12	358	03.1	-0	29.2	320	33.6 ¹¹¹	+19 20.5 ⁹³	0	18 11	18 32	18 56	8 31	51	20 55 53
13	13	03.3		28.2	335	03.7 ¹¹¹	29.7 ⁹²	10 S	11	32	57	8 46	53	39 50
14	28	03.5		27.2	349	33.7 ¹¹⁰	38.8 ⁹¹	20	12	34	18 59	9 01	57	23 47
15	43	03.7		26.2	4	03.6 ¹⁰⁹	47.8 ⁹⁰	30	12	36	19 04	19	60	20 03 44
16	58	03.9		25.2	18	33.5 ¹⁰⁹	+19 56.7 ⁸⁹	35	13	38	08	29	63	19 52 42
17	73	04.0	-0	24.3	33	03.2 ¹⁰⁷	+20 05.5 ⁸⁸	40	18 13	18 40	19 12	9 41	65	19 39 40
18	88	04.2	-0	23.3	47	32.9 ¹⁰⁷	+20 14.3 ⁸⁸	45	18 14	18 43	19 18	9 55	69	19 24 37
19	103	04.4		22.3	62	02.5 ¹⁰⁶	22.9 ⁸⁶	50	15	47	25	10 12	73	19 06 33
20	118	04.6		21.3	76	32.0 ¹⁰⁵	31.4 ⁸⁵	52	15	49	29	20	75	18 57 31
21	133	04.8		20.3	91	01.4 ¹⁰⁴	39.9 ⁸⁵	54	15	51	33	30	77	48 28
22	148	05.0		19.3	105	30.7 ¹⁰³	48.2 ⁸³	56	16	53	37	40	80	37 25
23	163	05.1		18.3	120	00.0 ¹⁰³	+20 56.4 ⁸²	58	16	56	43	10 52	84	24 22
24	178	05.3	-0	17.3	134	29.1 ¹⁰¹	+21 04.6 ⁸²	60 S	18 17	18 59	19 49	11 06	89	18 10 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 12 ^m 2		Mag: -3.9 PMG: 13 ^h 09 ^m		Mag: -0.1 PMG: 20 ^h 26 ^m		Mag: -2.0 PMG: 11 ^h 16 ^m		Mag: +0.5 PMG: 0 ^h 24 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	176	26.2	162	55.9	+4 43.3	52 44.4	+23 15.5	190 37.5	-7 06.0	354 01.0	+1 44.8
1	191	28.7	177	55.6	44.6	67 46.6	15.4	205 39.4	05.8	9 03.7	44.9
2	206	31.1	192	55.2	45.9	82 48.8	15.2	220 41.3	05.5	24 06.3	45.0
3	221	33.6	207	54.8	47.1	97 51.0	15.1	235 43.2	05.3	39 09.0	45.1
4	236	36.1	222	54.4	48.4	112 53.3	15.0	250 45.1	05.1	54 11.6	45.2
5	251	38.5	237	54.1	+4 49.7	127 55.5	+23 14.8	265 47.0	-7 04.9	69 14.3	+1 45.2
6	266	41.0	252	53.7	+4 50.9	142 57.7	+23 14.7	280 48.9	-7 04.6	84 16.9	+1 45.3
7	281	43.4	267	53.3	52.2	157 59.9	14.5	295 50.8	04.4	99 19.5	45.4
8	296	45.9	282	53.0	53.5	173 02.2	14.4	310 52.7	04.2	114 22.2	45.5
9	311	48.4	297	52.6	54.8	188 04.4	14.3	325 54.7	04.0	129 24.8	45.6
10	326	50.8	312	52.2	56.0	203 06.6	14.1	340 56.6	03.7	144 27.5	45.6
11	341	53.3	327	51.8	+4 57.3	218 08.8	+23 14.0	355 58.5	-7 03.5	159 30.1	+1 45.7
12	356	55.8	342	51.5	+4 58.6	233 11.0	+23 13.8	11 00.4	-7 03.3	174 32.8	+1 45.8
13	11	58.2	357	51.1	+4 59.8	248 13.2	13.7	26 02.3	03.1	189 35.4	45.9
14	27	00.7	12	50.7	+5 01.1	263 15.5	13.6	41 04.2	02.8	204 38.0	46.0
15	42	03.2	27	50.3	02.4	278 17.7	13.4	56 06.1	02.6	219 40.7	46.0
16	57	05.6	42	50.0	03.6	293 19.9	13.3	71 08.0	02.4	234 43.3	46.1
17	72	08.1	57	49.6	+5 04.9	308 22.1	+23 13.1	86 09.9	-7 02.2	249 46.0	+1 46.2
18	87	10.6	72	49.2	+5 06.2	323 24.3	+23 13.0	101 11.8	-7 01.9	264 48.6	+1 46.3
19	102	13.0	87	48.8	07.4	338 26.5	12.8	116 13.8	01.7	279 51.3	46.4
20	117	15.5	102	48.4	08.7	353 28.7	12.7	131 15.7	01.5	294 53.9	46.4
21	132	17.9	117	48.1	10.0	8 30.9	12.6	146 17.6	01.3	309 56.6	46.5
22	147	20.4	132	47.7	11.2	23 33.1	12.4	161 19.5	01.0	324 59.2	46.6
23	162	22.9	147	47.3	12.5	38 35.3	12.3	176 21.4	00.8	340 01.8	46.7
24	177	25.3	162	46.9	+5 13.7	53 37.5	+23 12.1	191 23.3	-7 00.6	355 04.5	+1 46.8
Dif	—		-4	+13		+22	-1	+19	+2	+26	+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 07 ^m 5			Edad: 4 ^d 1	PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'9 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	178	05.3	-0	17.3	134	29.1	+21	04.6	80	60 N	4	31	5	21	6	02	
1	193	05.5		16.3	148	58.2	101	12.6	80	58	37	23	02		6	20	
2	208	05.7		15.4	163	27.2	100	20.5	79	56	42	26	03		6	51	
3	223	05.9		14.4	177	56.1	99	28.4	79	54	46	28	03		7	03	
4	238	06.1		13.4	192	24.9	98	36.1	77	52	50	30	03		13	37	
5	253	06.2	-0	12.4	206	53.6	97	+21	43.7	50	4	53	5	31	6	03	
6	268	06.4	-0	11.4	221	22.3	97	+21	51.2	45	5	00	5	34	6	04	
7	283	06.6		10.4	235	50.9	96	+21	58.6	40	05	37	04		7	43	
8	298	06.8		09.4	250	19.4	95	+22	05.8	35	09	39	04		8	00	
9	313	07.0		08.4	264	47.8	94		13.0	30	13	40	04		14	45	
10	328	07.2		07.4	279	16.1	93		20.1	20	17	42	04		26	47	
11	343	07.3	-0	06.5	293	44.3	92	+22	27.0	10 N	5	19	5	43	6	04	
12	358	07.5	-0	05.5	308	12.5	92	+22	33.8	0	5	20	5	44	6	04	
13	13	07.7		04.5	322	40.5	90		40.5	10 S	19	43	04		9	22	
14	28	07.9		03.5	337	08.5	90		47.1	20	16	42	04		39	57	
15	43	08.1		02.5	351	36.4	89		53.6	30	12	39	03		57	29	
16	58	08.3		01.5	6	04.3	89	+22	59.9	35	08	38	03		25	52	
17	73	08.4	-0	00.5	20	32.0	87	+23	06.2	40	5	04	5	36	6	03	
18	88	08.6	+0	00.5	34	59.7	87	+23	12.3	45	4	58	5	33	6	02	
19	103	08.8		01.4	49	27.3	86		18.2	50	51	29	01		10	46	
20	118	09.0		02.4	63	54.8	85		24.1	52	47	27	01		01	05	
21	133	09.2		03.4	78	22.2	84		29.8	54	43	25	01		70	19	
22	148	09.4		04.4	92	49.6	84		35.4	56	39	23	00		35	42	
23	163	09.6		05.4	107	16.8	82		40.9	58	34	21	00		28	40	
24	178	09.7	+0	06.4	121	44.0	82	+23	46.3	60 S	4	28	5	18	6	00	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 08 ^m 3		Mag: -3.9 PMG: 13 ^h 09 ^m			Mag: -0.1 PMG: 20 ^h 23 ^m			Mag: -2.0 PMG: 11 ^h 13 ^m			Mag: +0.5 PMG: 0 ^h 20 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	177	25.3	162	46.9	+5	53	37.5	+23	12.1	191	23.3	-7	00.6	355	04.5	+1	46.8
1	192	27.8	177	46.6		68	39.7		12.0	206	25.2		00.3	10	07.1		46.8
2	207	30.3	192	46.2		83	41.9		11.8	221	27.1	-7	00.1	25	09.8		46.9
3	222	32.7	207	45.8		98	44.1		11.7	236	29.0	-6	59.9	40	12.4		47.0
4	237	35.2	222	45.4		113	46.3		11.6	251	31.0		59.7	55	15.1		47.1
5	252	37.7	237	45.1	+5	128	48.5	+23	11.4	266	32.9	-6	59.4	70	17.7	+1	47.2
6	267	40.1	252	44.7	+5	143	50.7	+23	11.3	281	34.8	-6	59.2	85	20.3	+1	47.2
7	282	42.6	267	44.3		158	52.9		11.1	296	36.7		59.0	100	23.0		47.3
8	297	45.0	282	43.9		173	55.1		11.0	311	38.6		58.8	115	25.6		47.4
9	312	47.5	297	43.5		188	57.3		10.8	326	40.5		58.5	130	28.3		47.5
10	327	50.0	312	43.2		203	59.5		10.7	341	42.4		58.3	145	30.9		47.6
11	342	52.4	327	42.8	+5	219	01.7	+23	10.5	356	44.3	-6	58.1	160	33.6	+1	47.6
12	357	54.9	342	42.4	+5	234	03.8	+23	10.4	11	46.2	-6	57.9	175	36.2	+1	47.7
13	12	57.4	357	42.0		249	06.0		10.2	26	48.2		57.6	190	38.9		47.8
14	27	59.8	12	41.7		264	08.2		10.1	41	50.1		57.4	205	41.5		47.9
15	43	02.3	27	41.3		279	10.4		09.9	56	52.0		57.2	220	44.1		48.0
16	58	04.8	42	40.9		294	12.6		09.8	71	53.9		57.0	235	46.8		48.0
17	73	07.2	57	40.5	+5	309	14.8	+23	09.6	86	55.8	-6	56.7	250	49.4	+1	48.1
18	88	09.7	72	40.1	+5	324	16.9	+23	09.5	101	57.7	-6	56.5	265	52.1	+1	48.2
19	103	12.2	87	39.8		339	19.1		09.3	116	59.6		56.3	280	54.7		48.3
20	118	14.6	102	39.4		354	21.3		09.2	132	01.5		56.1	295	57.4		48.4
21	133	17.1	117	39.0		9	23.5		09.1	147	03.4		55.8	311	00.0		48.4
22	148	19.5	132	38.6		24	25.6		08.9	162	05.4		55.6	326	02.6		48.5
23	163	22.0	147	38.2		39	27.8		08.8	177	07.3		55.4	341	05.3		48.6
24	178	24.5	162	37.9	+5	54	30.0	+23	08.6	192	09.2	-6	55.2	356	07.9	+1	48.7
Dif	—		-4		+13	+22		-1		+19		+2		+26		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 2			Edad: 5 ^d 1 SD: 15 ^h 5 PMG: 16 ^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	178	09.7	+0 06.4	121	44.0	+23 46.3	52	60 N	18 17	18 58	19 49	6 44 41	1 14 76	
1	193	09.9		136	11.2	51.5	82	58	16	55	43	7 05 44	0 54 73	
2	208	10.1	08.4	150	38.2	56.6	80	56	16	53	37	22 46	37 70	
3	223	10.3	09.4	165	05.2	01.5	80	54	15	50	32	37 47	22 67	
4	238	10.5	10.3	179	32.1	06.3	79	52	15	48	28	7 50 48	0 10 67	
5	253	10.7	+0 11.3	193	58.9	11.0	78	50	18 14	18 47	19 25	8 01 50	** ** *	** ** *
6	268	10.9	+0 12.3	208	25.7	15.6	78	45	18 13	18 43	19 17	8 24 52	** ** *	** ** *
7	283	11.0	13.3	222	52.3	20.0	76	40	13	40	12	43 53	** ** *	** ** *
8	298	11.2	14.3	237	18.9	24.3	76	35	12	38	07	8 59 54	** ** *	** ** *
9	313	11.4	15.3	251	45.5	28.4	76	30	12	36	19 04	9 13 54	23 49 58	
10	328	11.6	16.3	266	12.0	32.4	75	20	11	33	18 59	37 55	24 58	
11	343	11.8	+0 17.3	280	38.4	36.3	74	10 N	18 11	18 32	18 56	9 57 56	23 03 58	
12	358	12.0	+0 18.2	295	04.7	40.0	73	0	18 10	18 31	18 55	10 16 57	22 43 58	
13	13	12.2	19.2	309	31.0	43.6	73	10 S	10	31	56	36 57	24 58	
14	28	12.3	20.2	323	57.2	47.1	72	20	10	32	18 58	10 56 59	22 02 58	
15	43	12.5	21.2	338	23.3	50.4	71	30	10	34	19 02	11 20 60	21 38 57	
16	58	12.7	22.2	352	49.4	53.5	71	35	10	35	05	34 61	23 58	
17	73	12.9	+0 23.2	7	15.4	56.5	70	40	18 10	18 37	19 09	11 51 61	21 07 57	
18	88	13.1	+0 24.2	21	41.4	59.4	70	45	18 10	18 39	19 14	12 10 62	20 47 57	
19	103	13.3	25.2	36	07.3	02.1	69	50	10	43	20	35 63	22 56	
20	118	13.5	26.1	50	33.2	04.7	69	52	10	44	24	12 47 63	20 10 56	
21	133	13.6	27.1	64	59.0	07.1	68	54	11	46	27	13 01 63	19 56 55	
22	148	13.8	28.1	79	24.7	09.4	67	56	11	48	32	16 65	40 55	
23	163	14.0	29.1	93	50.4	11.5	67	58	11	50	37	35 66	19 21 54	
24	178	14.2	+0 30.1	108	16.0	13.5	66	60 S	18 11	18 52	19 42	13 58 67	18 57 53	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 04 ^m 4		Mag: -3.9 PMG: 13 ^h 10 ^m		Mag: -0.1 PMG: 20 ^h 19 ^m		Mag: -2.0 PMG: 11 ^h 10 ^m		Mag: +0.5 PMG: 0 ^h 15 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	178	24.5	162	37.9	+5 44.1	54 30.0	+23 08.6	192 09.2	-6 55.2	356 07.9	+1 48.7
1	193	26.9	177	37.5	45.3	69 32.2	08.5	207 11.1	54.9	11 10.6	48.8
2	208	29.4	192	37.1	46.6	84 34.3	08.3	222 13.0	54.7	26 13.2	48.8
3	223	31.9	207	36.7	47.8	99 36.5	08.2	237 14.9	54.5	41 15.9	48.9
4	238	34.3	222	36.3	49.1	114 38.7	08.0	252 16.8	54.2	56 18.5	49.0
5	253	36.8	237	36.0	+5 50.4	129 40.8	+23 07.8	267 18.7	-6 54.0	71 21.2	+1 49.1
6	268	39.3	252	35.6	+5 51.6	144 43.0	+23 07.7	282 20.6	-6 53.8	86 23.8	+1 49.2
7	283	41.7	267	35.2	52.9	159 45.2	07.5	297 22.6	53.6	101 26.4	49.2
8	298	44.2	282	34.8	54.1	174 47.3	07.4	312 24.5	53.3	116 29.1	49.3
9	313	46.7	297	34.4	55.4	189 49.5	07.2	327 26.4	53.1	131 31.7	49.4
10	328	49.1	312	34.1	56.6	204 51.7	07.1	342 28.3	52.9	146 34.4	49.5
11	343	51.6	327	33.7	+5 57.9	219 53.8	+23 06.9	357 30.2	-6 52.7	161 37.0	+1 49.6
12	358	54.0	342	33.3	+5 59.2	234 56.0	+23 06.8	12 32.1	-6 52.4	176 39.7	+1 49.6
13	13	56.5	357	32.9	+6 00.4	249 58.1	06.6	27 34.0	52.2	191 42.3	49.7
14	28	59.0	12	32.5	01.7	265 00.3	06.5	42 35.9	52.0	206 45.0	49.8
15	44	01.4	27	32.2	02.9	280 02.5	06.3	57 37.9	51.8	221 47.6	49.9
16	59	03.9	42	31.8	04.2	295 04.6	06.2	72 39.8	51.5	236 50.2	50.0
17	74	06.4	57	31.4	+6 05.4	310 06.8	+23 06.0	87 41.7	-6 51.3	251 52.9	+1 50.0
18	89	08.8	72	31.0	+6 06.7	325 08.9	+23 05.9	102 43.6	-6 51.1	266 55.5	+1 50.1
19	104	11.3	87	30.6	08.0	340 11.1	05.7	117 45.5	50.9	281 58.2	50.2
20	119	13.8	102	30.2	09.2	355 13.2	05.6	132 47.4	50.6	297 00.8	50.3
21	134	16.2	117	29.9	10.5	10 15.4	05.4	147 49.3	50.4	312 03.5	50.4
22	149	18.7	132	29.5	11.7	25 17.5	05.2	162 51.2	50.2	327 06.1	50.4
23	164	21.1	147	29.1	13.0	40 19.7	05.1	177 53.2	50.0	342 08.7	50.5
24	179	23.6	162	28.7	+6 14.2	55 21.8	+23 04.9	192 55.1	-6 49.7	357 11.4	+1 50.6
Dif	—		-4	+13		+22	-2	+19	+2	+26	+1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 6 ^d 1	PHE { 4 ^h : 57 ^h 7 12 ^h : 57 ^h 9 20 ^h : 58 ^h 1			Salida de Luna	Puesta de Luna						
	PMG: 12 ^h 06 ^m 9					PMG: 17 ^h 27 ^m					R ^o : 59 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	14.2	+0 30.1	108	16.0	+25 13.5	18	60 N	4 24	5 15	5 56	7 25	66	2 30	56
1	193	14.4		122	41.6	15.3	66	58	31	18	57	7 49	65	2 07	56
2	208	14.6		137	07.1	17.0	65	56	36	20	57	8 08	65	1 47	57
3	223	14.8		151	32.6	18.5	65	54	41	23	58	24	64	31	55
4	238	14.9		165	58.0	19.9	64	52	45	25	58	38	64	17	58
5	253	15.1	+0 35.0	180	23.4	+25 21.1	12	50	4 49	5 27	5 59	8 51	63	1 05	58
6	268	15.3	+0 36.0	194	48.7	+25 22.1	10	45	4 56	5 31	6 00	9 16	62	0 40	58
7	283	15.5		209	14.0	23.0	9	40	5 02	34	01	36	62	20	58
8	298	15.7		223	39.3	23.8	8	35	06	36	01	9 53	61	0 03	58
9	313	15.9		238	04.5	24.4	6	30	10	38	02	10 07	61	** ** *	**
10	328	16.1		252	29.7	24.8	4	20	15	41	03	32	60	** ** *	**
11	343	16.3	+0 40.9	266	54.8	+25 25.1	3	10 N	5 18	5 42	6 03	10 53	60	** ** *	**
12	358	16.4	+0 41.9	281	19.9	+25 25.2	1	0	5 19	5 43	6 04	11 13	59	23 41	59
13	13	16.6		295	45.0	25.2	0	10 S	19	43	04	33	58	22	60
14	28	16.8		310	10.0	25.0	2	20	17	42	04	11 55	57	23 00	62
15	43	17.0		324	35.0	24.6	4	30	13	41	05	12 20	56	22 35	64
16	58	17.2		339	00.0	24.1	5	35	10	39	05	35	55	21	64
17	73	17.4	+0 46.9	353	25.0	+25 23.5	6	40	5 06	5 38	6 05	12 52	54	22 04	65
18	88	17.6	+0 47.9	7	49.9	+25 22.6	9	45	5 01	5 35	6 05	13 12	54	21 44	67
19	103	17.7		22	14.8	21.7	9	50	4 54	32	05	38	52	18	69
20	118	17.9		36	39.7	20.5	12	52	51	31	05	13 50	51	21 06	70
21	133	18.1		51	04.5	19.2	13	54	48	29	05	14 04	50	20 51	72
22	148	18.3		65	29.3	17.7	15	56	43	27	05	21	49	35	73
23	163	18.5		79	54.2	16.1	16	58	39	25	05	14 41	46	20 15	75
24	178	18.7	+0 53.8	94	19.0	+25 14.3	18	60 S	4 33	5 23	6 04	15 05	44	19 50	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 00 ^m 5		Mag: -3.9 PMG: 13 ^h 10 ^m		Mag: -0.1 PMG: 20 ^h 16 ^m		Mag: -2.0 PMG: 11 ^h 07 ^m		Mag: +0.5 PMG: 0 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	179	23.6	162	28.7	+6 14.2	55 21.8	+23 04.9	192 55.1	-6 49.7	357 11.4	+1 50.6				
1	194	26.1	177 28.3	15.5	70 23.9	04.8	207 57.0	49.5	12 14.0	50.7					
2	209	28.5	192 27.9	16.7	85 26.1	04.6	222 58.9	49.3	27 16.7	50.8					
3	224	31.0	207 27.6	18.0	100 28.2	04.5	238 00.8	49.1	42 19.3	50.8					
4	239	33.5	222 27.2	19.2	115 30.4	04.3	253 02.7	48.8	57 22.0	50.9					
5	254	35.9	237 26.8	+6 20.5	130 32.5	+23 04.2	268 04.6	-6 48.6	72 24.6	+1 51.0					
6	269	38.4	252 26.4	+6 21.8	145 34.7	+23 04.0	283 06.6	-6 48.4	87 27.3	+1 51.1					
7	284	40.9	267 26.0	23.0	160 36.8	03.8	298 08.5	48.2	102 29.9	51.2					
8	299	43.3	282 25.6	24.3	175 38.9	03.7	313 10.4	47.9	117 32.5	51.2					
9	314	45.8	297 25.2	25.5	190 41.1	03.5	328 12.3	47.7	132 35.2	51.3					
10	329	48.3	312 24.9	26.8	205 43.2	03.4	343 14.2	47.5	147 37.8	51.4					
11	344	50.7	327 24.5	+6 28.0	220 45.3	+23 03.2	358 16.1	-6 47.3	162 40.5	+1 51.5					
12	359	53.2	342 24.1	+6 29.3	235 47.5	+23 03.1	13 18.0	-6 47.0	177 43.1	+1 51.6					
13	14	55.6	357 23.7	30.5	250 49.6	02.9	28 20.0	46.8	192 45.8	51.6					
14	29	58.1	12 23.3	31.8	265 51.7	02.7	43 21.9	46.6	207 48.4	51.7					
15	45	00.6	27 22.9	33.0	280 53.9	02.6	58 23.8	46.4	222 51.1	51.8					
16	60	03.0	42 22.5	34.3	295 56.0	02.4	73 25.7	46.1	237 53.7	51.9					
17	75	05.5	57 22.2	+6 35.5	310 58.1	+23 02.3	88 27.6	-6 45.9	252 56.3	+1 52.0					
18	90	08.0	72 21.8	+6 36.8	326 00.2	+23 02.1	103 29.5	-6 45.7	267 59.0	+1 52.0					
19	105	10.4	87 21.4	38.0	341 02.4	01.9	118 31.4	45.5	283 01.6	52.1					
20	120	12.9	102 21.0	39.3	356 04.5	01.8	133 33.3	45.2	298 04.3	52.2					
21	135	15.4	117 20.6	40.5	11 06.6	01.6	148 35.3	45.0	313 06.9	52.3					
22	150	17.8	132 20.2	41.8	26 08.7	01.5	163 37.2	44.8	328 09.6	52.4					
23	165	20.3	147 19.8	43.0	41 10.8	01.3	178 39.1	44.6	343 12.2	52.4					
24	180	22.8	162 19.5	+6 44.3	56 13.0	+23 01.1	193 41.0	-6 44.3	358 14.8	+1 52.5					
Dif	—		-4	+13		+21	-2		+19	+2		+26		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 06 ^m 6			Edad: 7 ^d 1 PHE { SD: 15'9 PMG: 18 ^h 26 ^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	18.7	+0 53.8	94	19.0	+25 14.3	19	60 N	18 22	19 03	19 54	8 31 88	3 26 34	
1	193	18.9	54.8	108	43.7	57 12.4	19	58	20	19 00	48	8 54 84	3 03 38	
2	208	19.1	55.7	123	08.5	58 10.3	21	56	20	18 57	42	9 13 80	2 44 41	
3	223	19.2	56.7	137	33.3	58 08.0	23	54	19	54	37	28 78	28 43	
4	238	19.4	57.7	151	58.0	57 05.5	25	52	18	52	32	42 76	15 45	
5	253	19.6	+0 58.7	166	22.7	57 +25 03.0	25	50	18 17	18 50	19 28	9 54 74	2 03 46	
6	268	19.8	+0 59.7	180	47.5	58 +25 00.2	28	45	18 16	18 45	19 20	10 18 71	1 38 49	
7	283	20.0	+1 00.7	195	12.2	57 +24 57.3	29	40	15	42	14	38 69	18 51	
8	298	20.2	01.7	209	36.9	57 54.2	31	35	14	39	09	10 54 67	1 01 53	
9	313	20.4	02.6	224	01.6	57 51.0	32	30	13	37	19 05	11 08 65	0 47 54	
10	328	20.6	03.6	238	26.3	57 47.6	34	20	12	34	18 59	32 63	22 56	
11	343	20.7	+1 04.6	252	51.0	57 +24 44.0	36	10 N	18 11	18 32	18 56	11 53 60	0 01 57	
12	358	20.9	+1 05.6	267	15.7	57 +24 40.3	37	0	18 10	18 31	18 55	12 12 59	** ** *	
13	13	21.1	06.6	281	40.4	57 36.4	39	10 S	09	30	54	31 57	** ** *	
14	28	21.3	07.6	296	05.2	58 32.3	41	20	08	30	56	12 52 54	** ** *	
15	43	21.5	08.6	310	29.9	57 28.1	42	30	08	31	18 59	13 16 51	23 39 67	
16	58	21.7	09.5	324	54.6	57 23.8	43	35	07	32	19 02	30 49	25 69	
17	73	21.9	+1 10.5	339	19.4	58 +24 19.2	46	40	18 07	18 34	19 05	13 46 47	23 09 72	
18	88	22.1	+1 11.5	353	44.1	57 +24 14.5	47	45	18 06	18 36	19 10	14 06 44	22 51 74	
19	103	22.3	12.5	8	08.9	58 09.7	48	50	06	38	16	30 41	27 79	
20	118	22.4	13.5	22	33.7	58 +24 04.7	50	52	06	39	19	41 39	16 81	
21	133	22.6	14.5	36	58.5	58 +23 59.5	52	54	06	41	22	14 54 37	22 03 83	
22	148	22.8	15.5	51	23.3	58 54.2	53	56	05	42	26	15 10 34	21 48 86	
23	163	23.0	16.4	65	48.1	58 48.7	55	58	05	44	31	27 31	30 91	
24	178	23.2	+1 17.4	80	12.9	58 +23 43.1	56	60 S	18 05	18 46	19 36	15 49 26	21 09 96	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 56 ^m 5		Mag: -3.9 PMG: 13 ^h 11 ^m			Mag: 0.0 PMG: 20 ^h 12 ^m			Mag: -2.0 PMG: 11 ^h 04 ^m			Mag: +0.5 PMG: 0 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	180	22.8	162	19.5	+6 44.3	56	13.0	+23 01.1	193	41.0	-6 44.3	358	14.8	+1 52.5
1	195	25.2	177	19.1	45.5	71	15.1	01.0	208	42.9	44.1	13	17.5	52.6
2	210	27.7	192	18.7	46.8	86	17.2	00.8	223	44.8	43.9	28	20.1	52.7
3	225	30.1	207	18.3	48.0	101	19.3	00.7	238	46.7	43.7	43	22.8	52.8
4	240	32.6	222	17.9	49.3	116	21.4	00.5	253	48.7	43.4	58	25.4	52.8
5	255	35.1	237	17.5	+6 50.5	131	23.5	+23 00.3	268	50.6	-6 43.2	73	28.1	+1 52.9
6	270	37.5	252	17.1	+6 51.8	146	25.6	+23 00.2	283	52.5	-6 43.0	88	30.7	+1 53.0
7	285	40.0	267	16.7	53.0	161	27.8	+23 00.0	298	54.4	42.8	103	33.4	53.1
8	300	42.5	282	16.3	54.3	176	29.9	+22 59.8	313	56.3	42.5	118	36.0	53.2
9	315	44.9	297	16.0	55.5	191	32.0	59.7	328	58.2	42.3	133	38.6	53.2
10	330	47.4	312	15.6	56.7	206	34.1	59.5	344	00.2	42.1	148	41.3	53.3
11	345	49.9	327	15.2	+6 58.0	221	36.2	+22 59.4	359	02.1	-6 41.9	163	43.9	+1 53.4
12	0	52.3	342	14.8	+6 59.2	236	38.3	+22 59.2	14	04.0	-6 41.6	178	46.6	+1 53.5
13	15	54.8	357	14.4	+7 00.5	251	40.4	59.0	29	05.9	41.4	193	49.2	53.6
14	30	57.3	12	14.0	01.7	266	42.5	58.9	44	07.8	41.2	208	51.9	53.6
15	45	59.7	27	13.6	03.0	281	44.6	58.7	59	09.7	41.0	223	54.5	53.7
16	61	02.2	42	13.2	04.2	296	46.7	58.5	74	11.6	40.7	238	57.2	53.8
17	76	04.6	57	12.8	+7 05.5	311	48.8	+22 58.4	89	13.6	-6 40.5	253	59.8	+1 53.9
18	91	07.1	72	12.4	+7 06.7	326	50.9	+22 58.2	104	15.5	-6 40.3	269	02.4	+1 53.9
19	106	09.6	87	12.1	07.9	341	53.0	58.0	119	17.4	40.1	284	05.1	54.0
20	121	12.0	102	11.7	09.2	356	55.1	57.9	134	19.3	39.8	299	07.7	54.1
21	136	14.5	117	11.3	10.4	11	57.2	57.7	149	21.2	39.6	314	10.4	54.2
22	151	17.0	132	10.9	11.7	26	59.3	57.5	164	23.1	39.4	329	13.0	54.3
23	166	19.4	147	10.5	12.9	42	01.4	57.4	179	25.0	39.2	344	15.7	54.3
24	181	21.9	162	10.1	+7 14.2	57	03.5	+22 57.2	194	27.0	-6 38.9	359	18.3	+1 54.4
Dif	—		-4		+12	+21		-2	+19		+2	+26		+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 06 ^m 3			Edad: 8 ^d 1 PHE { 4 ^h : 59'0 12 ^h : 59'2 20 ^h : 59'4 R°: 57 ^m	hG ☾ Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
	hG ☉	Dec														
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	23.2	+1 17.4	80	12.9	+23 43.1	58	60 N	4 18	5 08	5 50	9 59	100	4 00	19	
1	193	23.4		94	37.8		59	58		12	51	10 18	94	3 41	25	
2	208	23.6		109	02.7		59	56	30	15	52	33	90		25	29
3	223	23.8		123	27.6		59	54	35	18	53	46	87		11	32
4	238	23.9		137	52.5		59	52	40	20	54	10 58	84	3 00	34	
5	253	24.1	+1 22.3	152	17.5	+23 12.6	64	50	4 44	5 22	5 55	11 08	82	2 49	36	
6	268	24.3	+1 23.3	166	42.4	+23 06.0	66	45	4 52	5 27	5 56	11 29	77	2 27	40	
7	283	24.5		181	07.4	+22 59.3	67	40	4 59	30	57	11 47	73	2 09	44	
8	298	24.7		195	32.5		61	35	5 04	33	58	12 01	71	1 54	46	
9	313	24.9		209	57.5		60	30	08	35	5 59	13	69	41	48	
10	328	25.1		224	22.6		61	20	13	39	6 01	35	64	1 18	52	
11	343	25.3	+1 28.3	238	47.8	+22 30.9	73	10 N	5 17	5 41	6 02	12 53	61	0 58	56	
12	358	25.5	+1 29.2	253	12.9	+22 23.4	75	0	5 18	5 42	6 03	13 11	57	0 40	58	
13	13	25.6		267	38.1		62	10 S	19	43	04	28	53		22	60
14	28	25.8		282	03.3		62	20	17	43	05	13	46	50	0 02	63
15	43	26.0		296	28.6	+22 00.1	79	30	14	42	06	14	07	46	***	***
16	58	26.2		310	53.9	+21 52.0	81	35	12	41	06	19	44		***	***
17	73	26.4	+1 34.2	325	19.2	+21 43.8	82	40	5 08	5 40	6 07	14	33	41	***	***
18	88	26.6	+1 35.1	339	44.6	+21 35.4	84	45	5 04	5 38	6 07	14	50	37	***	***
19	103	26.8		354	10.0		85	50	4 58	36	08	15	11	32	23	46
20	118	27.0		8	35.5		86	52	55	34	08	20	30		37	86
21	133	27.2		23	01.0		88	54	52	33	08	31	27		26	90
22	148	27.3		37	26.5	+21 00.5	90	56	48	32	09	44	23		14	93
23	163	27.5		51	52.1	+20 51.5	90	58	43	30	09	15	58	20	23	01
24	178	27.7	+1 41.0	66	17.7	+20 42.2	93	60 S	4 38	5 28	6 09	16	15	14	22	45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 52 ^m 6		Mag: -3.9 PMG: 13 ^h 12 ^m		Mag: 0.0 PMG: 20 ^h 09 ^m		Mag: -2.0 PMG: 11 ^h 01 ^m		Mag: +0.5 PMG: 0 ^h 03 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	181	21.9	162	10.1	+7 14.2	57 03.5	+22 57.2	194 27.0	-6 38.9	359 18.3	+1 54.4
1	196	24.4	177	09.7	15.4	72 05.6	57.1	209 28.9	38.7	14 20.9	54.5
2	211	26.8	192	09.3	16.6	87 07.7	56.9	224 30.8	38.5	29 23.6	54.6
3	226	29.3	207	08.9	17.9	102 09.7	56.7	239 32.7	38.3	44 26.2	54.7
4	241	31.7	222	08.5	19.1	117 11.8	56.6	254 34.6	38.0	59 28.9	54.7
5	256	34.2	237	08.1	+7 20.4	132 13.9	+22 56.4	269 36.5	-6 37.8	74 31.5	+1 54.8
6	271	36.7	252	07.7	+7 21.6	147 16.0	+22 56.2	284 38.5	-6 37.6	89 34.2	+1 54.9
7	286	39.1	267	07.3	22.8	162 18.1	56.0	299 40.4	37.4	104 36.8	55.0
8	301	41.6	282	07.0	24.1	177 20.2	55.9	314 42.3	37.1	119 39.5	55.1
9	316	44.1	297	06.6	25.3	192 22.3	55.7	329 44.2	36.9	134 42.1	55.1
10	331	46.5	312	06.2	26.6	207 24.3	55.5	344 46.1	36.7	149 44.7	55.2
11	346	49.0	327	05.8	+7 27.8	222 26.4	+22 55.4	359 48.0	-6 36.5	164 47.4	+1 55.3
12	1	51.5	342	05.4	+7 29.0	237 28.5	+22 55.2	14 50.0	-6 36.2	179 50.0	+1 55.4
13	16	53.9	357	05.0	30.3	252 30.6	55.0	29 51.9	36.0	194 52.7	55.5
14	31	56.4	12	04.6	31.5	267 32.7	54.9	44 53.8	35.8	209 55.3	55.5
15	46	58.9	27	04.2	32.8	282 34.7	54.7	59 55.7	35.6	224 58.0	55.6
16	62	01.3	42	03.8	34.0	297 36.8	54.5	74 57.6	35.3	240 00.6	55.7
17	77	03.8	57	03.4	+7 35.2	312 38.9	+22 54.4	89 59.5	-6 35.1	255 03.3	+1 55.8
18	92	06.2	72	03.0	+7 36.5	327 41.0	+22 54.2	105 01.5	-6 34.9	270 05.9	+1 55.9
19	107	08.7	87	02.6	37.7	342 43.0	54.0	120 03.4	34.7	285 08.5	55.9
20	122	11.2	102	02.2	38.9	357 45.1	53.9	135 05.3	34.4	300 11.2	56.0
21	137	13.6	117	01.8	40.2	12 47.2	53.7	150 07.2	34.2	315 13.8	56.1
22	152	16.1	132	01.4	41.4	27 49.2	53.5	165 09.1	34.0	330 16.5	56.2
23	167	18.6	147	01.0	42.7	42 51.3	53.3	180 11.0	33.8	345 19.1	56.2
24	182	21.0	162	00.6	+7 43.9	57 53.4	+22 53.2	195 13.0	-6 33.5	0 21.8	+1 56.3
Dif	—		-4 +12		+21 -2		+19 +2		-8974 +1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 06 ^m 0			Edad: 9 ^d 1 PHE { SD: 16'2 PMG: 20 ^h 21 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	27.7	+1 41.0	66	17.7	+20 42.2	93	60 N	18 26	19 08	20 00	11 39	103	4 19	13
1	193	27.9		80	43.4	67	32.9	58	25	05	19 53	11 52	98	4 06	16
2	208	28.1		95	09.1	67	23.4	56	24	19 01	46	12 03	94	3 54	20
3	223	28.3		109	34.8	67	13.8	54	23	18 58	41	13 91		43	22
4	238	28.5		124	00.6	68	+20 04.0	52	22	55	36	22 87		34	26
5	253	28.7	+1 46.0	138	26.4	68	+19 54.1	50	18 21	18 53	19 32	12 30	85	3 25	29
6	268	28.9	+1 46.9	152	52.3	69	+19 44.1	45	18 19	18 48	19 23	12 46	80	3 07	34
7	283	29.0		167	18.3	70	33.9	40	17	44	16	13 00	75	2 53	37
8	298	29.2		181	44.2	69	23.6	35	16	41	11	12 71		40	41
9	313	29.4		196	10.3	71	13.2	30	14	38	06	22 68		29	44
10	328	29.6		210	36.3	70	+19 02.7	20	12	34	19 00	39 63		2 10	48
11	343	29.8	+1 51.8	225	02.4	71	+18 52.0	10 N	18 11	18 32	18 56	13 54	59	1 54	52
12	358	30.0	+1 52.8	239	28.6	72	+18 41.2	0	18 09	18 30	18 54	14 08	55	1 38	56
13	13	30.2		253	54.8	72	30.3	10 S	08	29	53	21 51		22	60
14	28	30.4		53.8	268 21.1	73	19.2	20	07	29	54	36 47		1 05	64
15	43	30.6		55.8	282 47.4	73	+18 08.0	30	05	29	57	14 53	41	0 46	68
16	58	30.7		56.8	297 13.8	74	+17 56.8	35	04	30	18 59	15 03	38	34	72
17	73	30.9	+1 57.7	311	40.2	74	+17 45.3	40	18 04	18 31	19 02	15 14	35	0 21	75
18	88	31.1	+1 58.7	326	06.6	74	+17 33.8	45	18 03	18 32	19 06	15 27	31	0 05	79
19	103	31.3	+1 59.7	340	33.1	75	22.2	50	02	34	11	43 25		** ** *	**
20	118	31.5	+2 00.7	354	59.7	76	+17 10.4	52	01	35	14	50 23		** ** *	**
21	133	31.7		9	26.3	76	+16 58.5	54	01	36	17	15 58	21	** ** *	**
22	148	31.9		23	52.9	76	46.5	56	00	37	21	16 07	18	** ** *	**
23	163	32.1		38	19.7	78	34.4	58	18 00	39	25	18 13		** ** *	**
24	178	32.3	+2 04.6	52	46.4	77	+16 22.2	60 S	17 59	18 40	19 29	16 29	10	** ** *	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 48 ^m 7		Mag: -3.9 PMG: 13 ^h 12 ^m		Mag: 0.0 PMG: 20 ^h 06 ^m		Mag: -2.0 PMG: 10 ^h 58 ^m		Mag: +0.5 PMG: 23 ^h 54 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	182	21.0	162	00.6	+7 43.9	57 53.4	+22 53.2	195 13.0	-6 33.5	0 21.8	+1 56.3
1	197	23.5	177	00.2		72 55.4	53.0	210 14.9	33.3	15 24.4	56.4
2	212	26.0	191	59.8		87 57.5	52.8	225 16.8	33.1	30 27.0	56.5
3	227	28.4	206	59.4		102 59.6	52.7	240 18.7	32.9	45 29.7	56.6
4	242	30.9	221	59.0		118 01.6	52.5	255 20.6	32.6	60 32.3	56.6
5	257	33.4	236	58.6	+7 50.1	133 03.7	+22 52.3	270 22.5	-6 32.4	75 35.0	+1 56.7
6	272	35.8	251	58.2	+7 51.3	148 05.8	+22 52.1	285 24.5	-6 32.2	90 37.6	+1 56.8
7	287	38.3	266	57.8		52.5 163 07.8	52.0	300 26.4	32.0	105 40.3	56.9
8	302	40.7	281	57.4		53.8 178 09.9	51.8	315 28.3	31.7	120 42.9	57.0
9	317	43.2	296	57.1		55.0 193 11.9	51.6	330 30.2	31.5	135 45.6	57.0
10	332	45.7	311	56.7		56.2 208 14.0	51.4	345 32.1	31.3	150 48.2	57.1
11	347	48.1	326	56.3	+7 57.5	223 16.0	+22 51.3	0 34.0	-6 31.1	165 50.8	+1 57.2
12	2	50.6	341	55.9	+7 58.7	238 18.1	+22 51.1	15 36.0	-6 30.9	180 53.5	+1 57.3
13	17	53.1	356	55.5	+7 59.9	253 20.1	50.9	30 37.9	30.6	195 56.1	57.4
14	32	55.5	11	55.1	+8 01.1	268 22.2	50.7	45 39.8	30.4	210 58.8	57.4
15	47	58.0	26	54.7		02.4 283 24.2	50.6	60 41.7	30.2	226 01.4	57.5
16	63	00.5	41	54.3		03.6 298 26.3	50.4	75 43.6	30.0	241 04.1	57.6
17	78	02.9	56	53.9	+8 04.8	313 28.3	+22 50.2	90 45.6	-6 29.7	256 06.7	+1 57.7
18	93	05.4	71	53.5	+8 06.1	328 30.4	+22 50.0	105 47.5	-6 29.5	271 09.3	+1 57.7
19	108	07.9	86	53.1		07.3 343 32.4	49.9	120 49.4	29.3	286 12.0	57.8
20	123	10.3	101	52.6		08.5 358 34.5	49.7	135 51.3	29.1	301 14.6	57.9
21	138	12.8	116	52.2		09.8 13 36.5	49.5	150 53.2	28.8	316 17.3	58.0
22	153	15.2	131	51.8		11.0 28 38.6	49.3	165 55.1	28.6	331 19.9	58.1
23	168	17.7	146	51.4		12.2 43 40.6	49.2	180 57.1	28.4	346 22.6	58.1
24	183	20.2	161	51.0	+8 13.4	58 42.7	+22 49.0	195 59.0	-6 28.2	1 25.2	+1 58.2
Dif	—		-4 +12		+21 -2		+19 +2		+26 +1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 05 ^m 7			Edad: 10 ^d 1 PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'4 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	178	32.3	+2	04.6	52	46.4	+16	22.2	60 N	4	11	5	02	5	44	13	22 102	
1	193	32.5		05.6	67	13.2	78	+16 09.9 ¹²³	58	18	06	46			30	98	22 12	
2	208	32.6		06.6	81	40.1	79	+15 57.5 ¹²⁴	56	25	10	47			37	94	14 16	
3	223	32.8		07.6	96	07.0	79	44.9 ¹²⁶	54	30	13	48			44	91	07 18	
4	238	33.0		08.5	110	33.9	79	32.3 ¹²⁶	52	35	15	49			49	89	4 00 21	
5	253	33.2	+2	09.5	125	00.9	80	+15 19.5 ¹²⁸	50	4	39	5	18	5	50	13	55 85	
6	268	33.4	+2	10.5	139	28.0	81	+15 06.7 ¹²⁸	45	4	48	5	23	5	52	14	06 80	
7	283	33.6		11.5	153	55.1	81	+14 53.8 ¹²⁹	40	4	55	27	54		15	76	30 33	
8	298	33.8		12.5	168	22.2	81	40.7 ¹³¹	35	5	01	30	56		23	72	21 36	
9	313	34.0		13.4	182	49.4	82	27.6 ¹³¹	30	05	33	57			30	69	3 13 39	
10	328	34.2		14.4	197	16.6	82	14.3 ¹³³	20	11	37	5	59		42	63	2 58 45	
11	343	34.3	+2	15.4	211	43.9	83	+14 01.0 ¹³³	10 N	5	15	5	40	6	01	14	53 57	
12	358	34.5	+2	16.4	226	11.2	83	+13 47.6 ¹³⁴	0	5	18	5	42	6	02	15	03 53	
13	13	34.7		17.4	240	38.6	84	34.1 ¹³⁵	10 S	19	43	04	12	49	22	58		
14	28	34.9		18.3	255	06.0	84	20.5 ¹³⁶	20	18	43	05	23	43	2	09	63	
15	43	35.1		19.3	269	33.5	85	+13 06.8 ¹³⁷	30	15	43	07	34	38	1	54	69	
16	58	35.3		20.3	284	01.0	85	+12 53.0 ¹³⁸	35	13	43	08	41	35	46	71		
17	73	35.5	+2	21.3	298	28.6	86	+12 39.1 ¹³⁹	40	5	10	5	42	6	09	15	49 31	
18	88	35.7	+2	22.3	312	56.2	86	+12 25.2 ¹³⁹	45	5	06	5	41	6	10	15	58 27	
19	103	35.9		23.2	327	23.8	86	+12 11.2 ¹⁴⁰	50	5	01	39	11	16	08	22	10 85	
20	118	36.1		24.2	341	51.5	87	+11 57.1 ¹⁴¹	52	4	58	38	12	13	20	1	03 88	
21	133	36.2		25.2	356	19.2	87	42.9 ¹⁴²	54	55	37	12	19	17	0	56	91	
22	148	36.4		26.2	10	47.0	88	28.6 ¹⁴³	56	52	36	13	25	14	47	95		
23	163	36.6		27.2	25	14.8	88	+11 14.3 ¹⁴³	58	48	34	13	31	11	38	98		
24	178	36.8	+2	28.1	39	42.7	89	+10 59.9 ¹⁴⁴	60 S	4	44	5	33	6	14	16	39 7	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 44 ^m 7			Mag: -3.9 PMG: 13 ^h 13 ^m			Mag: 0.0 PMG: 20 ^h 02 ^m			Mag: -2.1 PMG: 10 ^h 55 ^m			Mag: +0.5 PMG: 23 ^h 50 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	183	20.2	161	51.0	+8	13.4	58	42.7	+22	49.0	195	59.0	-6	28.2	1	25.2		
1	198	22.6	176	50.6		14.7	73	44.7		48.8	211	00.9		27.9	16	27.9		
2	213	25.1	191	50.2		15.9	88	46.7		48.6	226	02.8		27.7	31	30.5		
3	228	27.6	206	49.8		17.1	103	48.8		48.5	241	04.7		27.5	46	33.1		
4	243	30.0	221	49.4		18.3	118	50.8		48.3	256	06.7		27.3	61	35.8		
5	258	32.5	236	49.0	+8	19.6	133	52.9	+22	48.1	271	08.6	-6	27.0	76	38.4		
6	273	35.0	251	48.6	+8	20.8	148	54.9	+22	47.9	286	10.5	-6	26.8	91	41.1		
7	288	37.4	266	48.2		22.0	163	56.9		47.7	301	12.4		26.6	106	43.7		
8	303	39.9	281	47.8		23.2	178	59.0		47.6	316	14.3		26.4	121	46.4		
9	318	42.3	296	47.4		24.5	194	01.0		47.4	331	16.2		26.1	136	49.0		
10	333	44.8	311	47.0		25.7	209	03.0		47.2	346	18.2		25.9	151	51.6		
11	348	47.3	326	46.6	+8	26.9	224	05.1	+22	47.0	1	20.1	-6	25.7	166	54.3		
12	3	49.7	341	46.2	+8	28.1	239	07.1	+22	46.9	16	22.0	-6	25.5	181	56.9		
13	18	52.2	356	45.8		29.4	254	09.1		46.7	31	23.9		25.3	196	59.6		
14	33	54.7	11	45.4		30.6	269	11.1		46.5	46	25.8		25.0	212	02.2		
15	48	57.1	26	45.0		31.8	284	13.2		46.3	61	27.8		24.8	227	04.9		
16	63	59.6	41	44.6		33.0	299	15.2		46.1	76	29.7		24.6	242	07.5		
17	79	02.1	56	44.2	+8	34.3	314	17.2	+22	46.0	91	31.6	-6	24.4	257	10.1		
18	94	04.5	71	43.8	+8	35.5	329	19.2	+22	45.8	106	33.5	-6	24.1	272	12.8		
19	109	07.0	86	43.4		36.7	344	21.3		45.6	121	35.4		23.9	287	15.4		
20	124	09.5	101	43.0		37.9	359	23.3		45.4	136	37.4		23.7	302	18.1		
21	139	11.9	116	42.5		39.1	14	25.3		45.2	151	39.3		23.5	317	20.7		
22	154	14.4	131	42.1		40.4	29	27.3		45.1	166	41.2		23.2	332	23.4		
23	169	16.8	146	41.7		41.6	44	29.3		44.9	181	43.1		23.0	347	26.0		
24	184	19.3	161	41.3	+8	42.8	59	31.4	+22	44.7	196	45.0	-6	22.8	2	28.6		
Dif	—			-4			+12			+20			+19			+2		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m .4			Edad: 11 ^d 1 PHE { 4 ^h : 60'5 12 ^h : 60'5 20 ^h : 60'6 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	36.8	+2 28.1	39	42.7	+10 59.9	60 N	18 31	19 14	20 06	15 04 100	4 40 6					
1	193	37.0		54	10.6 ⁸⁹	45.4 ¹⁴⁵	58	29	09	19 58	08 97	34 10					
2	208	37.2	30.1	68	38.5 ⁸⁹	30.9 ¹⁴⁵	56	28	05	51	11 94	30 13					
3	223	37.4	31.1	83	06.5 ⁹⁰	16.3 ¹⁴⁶	54	26	19 02	45	15 90	25 16					
4	238	37.6	32.1	97	34.5 ⁹⁰	+10 01.6 ¹⁴⁷	52	25	18 59	40	18 87	21 19					
5	253	37.8	+2 33.0	112	02.5 ⁹⁰	+9 46.8 ¹⁴⁸	50	18 24	18 56	19 35	15 20 85	4 18 20					
6	268	37.9	+2 34.0	126	30.6 ⁹¹	+9 32.0 ¹⁴⁸	45	18 21	18 51	19 26	15 26 80	4 10 26					
7	283	38.1	35.0	140	58.7 ⁹¹	17.1 ¹⁴⁹	40	19	46	18	31 75	4 03 30					
8	298	38.3	36.0	155	26.9 ⁹²	+9 02.2 ¹⁴⁹	35	17	43	12	35 71	3 57 34					
9	313	38.5	37.0	169	55.1 ⁹²	+8 47.2 ¹⁵⁰	30	16	40	08	39 67	52 37					
10	328	38.7	37.9	184	23.3 ⁹²	32.2 ¹⁵⁰	20	13	35	19 01	45 62	43 43					
11	343	38.9	+2 38.9	198	51.6 ⁹³	+8 17.1 ¹⁵¹	10 N	18 11	18 32	18 56	15 50 57	3 35 48					
12	358	39.1	+2 39.9	213	19.9 ⁹³	+8 01.9 ¹⁵²	0	18 09	18 29	18 53	15 56 52	3 28 52					
13	13	39.3	40.9	227	48.2 ⁹³	+7 46.7 ¹⁵²	10 S	07	28	52	16 01 47	20 57					
14	28	39.5	41.8	242	16.6 ⁹⁴	31.4 ¹⁵³	20	05	27	52	06 42	12 62					
15	43	39.7	42.8	256	44.9 ⁹³	16.1 ¹⁵³	30	03	27	54	12 37	3 03 68					
16	58	39.8	43.8	271	13.4 ⁹⁵	+7 00.8 ¹⁵³	35	02	27	56	16 33	2 57 72					
17	73	40.0	+2 44.8	285	41.8 ⁹⁴	+6 45.4 ¹⁵⁴	40	18 00	18 27	18 59	16 20 29	2 51 76					
18	88	40.2	+2 45.8	300	10.3 ⁹⁵	+6 29.9 ¹⁵⁵	45	17 59	18 28	19 02	16 25 25	2 44 80					
19	103	40.4	46.7	314	38.8 ⁹⁵	+6 14.5 ¹⁵⁴	50	57	29	07	30 20	35 86					
20	118	40.6	47.7	329	07.3 ⁹⁵	+5 59.0 ¹⁵⁵	52	57	30	09	33 18	31 88					
21	133	40.8	48.7	343	35.8 ⁹⁵	43.4 ¹⁵⁶	54	56	31	12	36 15	27 90					
22	148	41.0	49.7	358	04.4 ⁹⁶	27.8 ¹⁵⁶	56	55	32	15	39 12	22 94					
23	163	41.2	50.6	12	33.0 ⁹⁶	+5 12.2 ¹⁵⁶	58	54	33	19	42 9	16 98					
24	178	41.4	+2 51.6	27	01.6 ⁹⁶	+4 56.5 ¹⁵⁷	60 S	17 53	18 34	19 23	16 46 6	2 10 101					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 40 ^m .8		Mag: -3.9 PMG: 13 ^h 14 ^m		Mag: +0.1 PMG: 19 ^h 59 ^m		Mag: -2.1 PMG: 10 ^h 52 ^m		Mag: +0.6 PMG: 23 ^h 46 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	184	19.3	161	41.3	+8 42.8	59 31.4	+22 44.7	196 45.0	-6 22.8	2 28.6	
1	199	21.8	176	40.9	44.0	74 33.4	44.5	211 47.0	22.6	17 31.3	
2	214	24.2	191	40.5	45.2	89 35.4	44.3	226 48.9	22.3	32 33.9	
3	229	26.7	206	40.1	46.5	104 37.4	44.1	241 50.8	22.1	47 36.6	
4	244	29.2	221	39.7	47.7	119 39.4	44.0	256 52.7	21.9	62 39.2	
5	259	31.6	236	39.3	+8 48.9	134 41.4	+22 43.8	271 54.6	-6 21.7	77 41.9	
6	274	34.1	251	38.9	+8 50.1	149 43.4	+22 43.6	286 56.6	-6 21.5	92 44.5	
7	289	36.6	266	38.5	51.3	164 45.4	43.4	301 58.5	21.2	107 47.1	
8	304	39.0	281	38.1	52.5	179 47.5	43.2	317 00.4	21.0	122 49.8	
9	319	41.5	296	37.6	53.8	194 49.5	43.0	332 02.3	20.8	137 52.4	
10	334	44.0	311	37.2	55.0	209 51.5	42.9	347 04.2	20.6	152 55.1	
11	349	46.4	326	36.8	+8 56.2	224 53.5	+22 42.7	2 06.2	-6 20.3	167 57.7	
12	4	48.9	341	36.4	+8 57.4	239 55.5	+22 42.5	17 08.1	-6 20.1	183 00.4	
13	19	51.3	356	36.0	58.6	254 57.5	42.3	32 10.0	19.9	198 03.0	
14	34	53.8	11	35.6	+8 59.8	269 59.5	42.1	47 11.9	19.7	213 05.7	
15	49	56.3	26	35.2	+9 01.1	285 01.5	41.9	62 13.8	19.4	228 08.3	
16	64	58.7	41	34.8	02.3	300 03.5	41.8	77 15.8	19.2	243 10.9	
17	80	01.2	56	34.4	+9 03.5	315 05.5	+22 41.6	92 17.7	-6 19.0	258 13.6	
18	95	03.7	71	33.9	+9 04.7	330 07.5	+22 41.4	107 19.6	-6 18.8	273 16.2	
19	110	06.1	86	33.5	05.9	345 09.5	41.2	122 21.5	18.5	288 18.9	
20	125	08.6	101	33.1	07.1	0 11.5	41.0	137 23.5	18.3	303 21.5	
21	140	11.1	116	32.7	08.3	15 13.5	40.8	152 25.4	18.1	318 24.2	
22	155	13.5	131	32.3	09.5	30 15.5	40.6	167 27.3	17.9	333 26.8	
23	170	16.0	146	31.9	10.8	45 17.5	40.5	182 29.2	17.7	348 29.4	
24	185	18.4	161	31.5	+9 12.0	60 19.5	+22 40.3	197 31.1	-6 17.4	3 32.1	
Dif	—		-4	+12		+20	-2	+19	+2	+26	+1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 1			Edad: 12 ^d 1 PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'5 Rº: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	41.4	+2 51.6	27	01.6	+4 56.5	157	60 N	4 04	4 56	5 38	16 44	101	4 46	6	
1	193	41.6	52.6	41	30.3	40.8	157	58	12	5 00	40	45	96	44	9	
2	208	41.7	53.6	55	58.9	25.1	157	56	19	04	42	45	93	43	12	
3	223	41.9	54.5	70	27.6	+4 09.4	157	54	25	08	43	45	90	41	15	
4	238	42.1	55.5	84	56.3	+3 53.6	158	52	30	11	45	45	87	40	17	
5	253	42.3	+2 56.5	99	25.1	+3 37.8	158	50	4 35	5 13	5 46	16 45	85	4 38	20	
6	268	42.5	+2 57.5	113	53.8	+3 22.0	158	45	4 44	5 19	5 49	16 46	79	4 36	24	
7	283	42.7	58.5	128	22.6	+3 06.2	158	40	52	24	51	46	75	33	29	
8	298	42.9	+2 59.4	142	51.3	+2 50.3	159	35	4 58	27	53	46	71	31	33	
9	313	43.1	+3 00.4	157	20.1	34.5	158	30	5 03	31	54	46	68	29	36	
10	328	43.3	01.4	171	48.9	18.6	159	20	10	35	5 57	47	61	26	42	
11	343	43.4	+3 02.4	186	17.7	+2 02.7	159	10 N	5 14	5 39	6 00	16 47	57	4 23	47	
12	358	43.6	+3 03.3	200	46.6	+1 46.8	159	0	5 17	5 41	6 02	16 48	51	4 20	52	
13	13	43.8	04.3	215	15.4	30.9	159	10 S	18	43	04	48	47	17	57	
14	28	44.0	05.3	229	44.3	+1 15.0	159	20	18	44	06	48	42	14	62	
15	43	44.2	06.3	244	13.1	+0 59.0	160	30	17	44	08	49	36	11	68	
16	58	44.4	07.2	258	42.0	43.1	159	35	15	44	09	49	33	09	71	
17	73	44.6	+3 08.2	273	10.9	+0 27.2	159	40	5 12	5 44	6 11	16 49	30	4 07	75	
18	88	44.8	+3 09.2	287	39.7	+0 11.3	159	45	5 09	5 43	6 12	16 50	25	4 04	79	
19	103	45.0	10.2	302	08.6	-0 04.7	160	50	04	42	14	50	20	4 01	85	
20	118	45.2	11.1	316	37.5	20.6	159	52	5 02	41	15	51	17	3 59	88	
21	133	45.3	12.1	331	06.4	36.5	159	54	4 59	41	16	51	15	57	91	
22	148	45.5	13.1	345	35.3	-0 52.4	159	56	56	40	17	51	12	56	93	
23	163	45.7	14.1	0	04.2	-1 08.3	159	58	53	39	18	51	10	54	96	
24	178	45.9	+3 15.0	14	33.1	-1 24.2	159	60 S	4 49	5 38	6 19	16 52	6	3 51	101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 11 ^h 36 ^m 9		Mag: -3.9 PMG: 13 ^h 14 ^m		Mag: +0.1 PMG: 19 ^h 56 ^m		Mag: -2.1 PMG: 10 ^h 49 ^m		Mag: +0.6 PMG: 23 ^h 42 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	185	18.4	161	31.5	+9 12.0	60	19.5	+22 40.3	197	31.1	-6 17.4	3	32.1	+2 02.0	
1	200	20.9	176	31.0	13.2	75	21.5	40.1	212	33.1	17.2	18	34.7	02.1	
2	215	23.4	191	30.6	14.4	90	23.5	39.9	227	35.0	17.0	33	37.4	02.1	
3	230	25.8	206	30.2	15.6	105	25.4	39.7	242	36.9	16.8	48	40.0	02.2	
4	245	28.3	221	29.8	16.8	120	27.4	39.5	257	38.8	16.5	63	42.6	02.3	
5	260	30.8	236	29.4	+9 18.0	135	29.4	+22 39.3	272	40.7	-6 16.3	78	45.3	+2 02.4	
6	275	33.2	251	29.0	+9 19.2	150	31.4	+22 39.1	287	42.7	-6 16.1	93	47.9	+2 02.4	
7	290	35.7	266	28.6	20.4	165	33.4	39.0	302	44.6	15.9	108	50.6	02.5	
8	305	38.2	281	28.1	21.6	180	35.4	38.8	317	46.5	15.7	123	53.2	02.6	
9	320	40.6	296	27.7	22.8	195	37.4	38.6	332	48.4	15.4	138	55.9	02.7	
10	335	43.1	311	27.3	24.1	210	39.4	38.4	347	50.4	15.2	153	58.5	02.8	
11	350	45.6	326	26.9	+9 25.3	225	41.3	+22 38.2	2	52.3	-6 15.0	169	01.1	+2 02.8	
12	5	48.0	341	26.5	+9 26.5	240	43.3	+22 38.0	17	54.2	-6 14.8	184	03.8	+2 02.9	
13	20	50.5	356	26.1	27.7	255	45.3	37.8	32	56.1	14.5	199	06.4	03.0	
14	35	52.9	11	25.6	28.9	270	47.3	37.6	47	58.0	14.3	214	09.1	03.1	
15	50	55.4	26	25.2	30.1	285	49.3	37.4	63	00.0	14.1	229	11.7	03.1	
16	65	57.9	41	24.8	31.3	300	51.2	37.3	78	01.9	13.9	244	14.4	03.2	
17	81	00.3	56	24.4	+9 32.5	315	53.2	+22 37.1	93	03.8	-6 13.6	259	17.0	+2 03.3	
18	96	02.8	71	24.0	+9 33.7	330	55.2	+22 36.9	108	05.7	-6 13.4	274	19.6	+2 03.4	
19	111	05.3	86	23.6	34.9	345	57.2	36.7	123	07.7	13.2	289	22.3	03.5	
20	126	07.7	101	23.1	36.1	0	59.1	36.5	138	09.6	13.0	304	24.9	03.5	
21	141	10.2	116	22.7	37.3	16	01.1	36.3	153	11.5	12.8	319	27.6	03.6	
22	156	12.7	131	22.3	38.5	31	03.1	36.1	168	13.4	12.5	334	30.2	03.7	
23	171	15.1	146	21.9	39.7	46	05.1	35.9	183	15.3	12.3	349	32.9	03.8	
24	186	17.6	161	21.5	+9 40.9	61	07.0	+22 35.7	198	17.3	-6 12.1	4	35.5	+2 03.8	
Dif	—		-4	+12		+20	-2		+19	+2		+26	+1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 8			Edad: 13 ^d 1 PHE { 4 ^h : 60'5 12 ^h : 60'4 20 ^h : 60'2 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	45.9	+3 15.0	14	33.1	-1 24.2	60 N	18 36	19 19	20 11	18 25 100	4 52	6	
1	193	46.1		29	02.0	99 40.1 ¹⁵⁹	58	34	14	20 03	21 97	53	10	
2	208	46.3		43	30.9	99 -1 56.0 ¹⁵⁹	56	32	10	19 56	18 93	55	12	
3	223	46.5		57	59.8	99 -2 11.8 ¹⁵⁸	54	30	06	49	15 90	56	15	
4	238	46.7		72	28.7	99 27.7 ¹⁵⁹	52	28	03	44	12 87	57	18	
5	253	46.9	+3 19.9	86	57.6	99 -2 43.5 ¹⁵⁸	50	18 27	19 00	19 39	18 10 84	4 58	20	
6	268	47.0	+3 20.9	101	26.5	99 -2 59.3 ¹⁵⁸	45	18 24	18 53	19 28	18 05 79	5 00	26	
7	283	47.2		115	55.4	99 -3 15.0 ¹⁵⁷	40	21	48	20	18 01 74	02	30	
8	298	47.4		130	24.3	99 30.8 ¹⁵⁸	35	19	44	14	17 57 71	04	33	
9	313	47.6		144	53.2	99 -3 46.5 ¹⁵⁷	30	17	41	09	54 67	05	37	
10	328	47.8		159	22.1	99 -4 02.2 ¹⁵⁷	20	13	36	19 01	48 62	08	42	
11	343	48.0	+3 25.7	173	50.9	98 -4 17.8 ¹⁵⁶	10 N	18 11	18 32	18 56	17 44 56	5 10	47	
12	358	48.2	+3 26.7	188	19.8	99 -4 33.5 ¹⁵⁷	0	18 08	18 29	18 53	17 39 52	5 12	52	
13	13	48.4		202	48.6	98 -4 49.1 ¹⁵⁶	10 S	06	27	51	35 47	14	56	
14	28	48.6		217	17.5	99 -5 04.6 ¹⁵⁵	20	03	25	51	30 43	16	62	
15	43	48.8		231	46.3	98 20.1 ¹⁵⁵	30	18 00	24	52	25 37	19	67	
16	58	48.9		246	15.1	98 35.6 ¹⁵⁵	35	17 59	24	53	22 34	20	71	
17	73	49.1	+3 31.6	260	43.9	98 -5 51.1 ¹⁵⁵	40	17 57	18 24	18 55	17 19 30	5 22	74	
18	88	49.3	+3 32.6	275	12.7	98 -6 06.5 ¹⁵⁴	45	17 55	18 24	18 58	17 15 26	5 23	79	
19	103	49.5		289	41.5	98 21.8 ¹⁵³	50	53	25	19 03	10 21	26	84	
20	118	49.7		304	10.2	97 37.1 ¹⁵³	52	52	26	05	08 19	27	87	
21	133	49.9		318	39.0	98 -6 52.4 ¹⁵³	54	51	26	07	06 16	28	90	
22	148	50.1		333	07.7	97 -7 07.6 ¹⁵²	56	50	27	10	03 14	29	93	
23	163	50.3		347	36.4	97 22.8 ¹⁵²	58	48	27	13	17 01 10	30	97	
24	178	50.5	+3 38.4	2	05.1	97 -7 37.9 ¹⁵¹	60 S	17 47	18 28	19 17	16 58 6	5 32	100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 32 ^m 9		Mag: -3.9 PMG: 13 ^h 15 ^m		Mag: +0.1 PMG: 19 ^h 53 ^m		Mag: -2.1 PMG: 10 ^h 45 ^m		Mag: +0.6 PMG: 23 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	186	17.6	161 21.5	+9 40.9	61 07.0	+22 35.7	198 17.3	-6 12.1	4 35.5	+2 03.8
1	201	20.0	176 21.0	42.1	76 09.0	35.5	213 19.2	11.9	19 38.1	03.9
2	216	22.5	191 20.6	43.3	91 11.0	35.3	228 21.1	11.6	34 40.8	04.0
3	231	25.0	206 20.2	44.5	106 12.9	35.1	243 23.0	11.4	49 43.4	04.1
4	246	27.4	221 19.8	45.7	121 14.9	35.0	258 25.0	11.2	64 46.1	04.1
5	261	29.9	236 19.3	+9 46.9	136 16.9	+22 34.8	273 26.9	-6 11.0	79 48.7	+2 04.2
6	276	32.4	251 18.9	+9 48.1	151 18.8	+22 34.6	288 28.8	-6 10.8	94 51.3	+2 04.3
7	291	34.8	266 18.5	49.3	166 20.8	34.4	303 30.7	10.5	109 54.0	04.4
8	306	37.3	281 18.1	50.5	181 22.8	34.2	318 32.7	10.3	124 56.6	04.5
9	321	39.8	296 17.7	51.7	196 24.7	34.0	333 34.6	10.1	139 59.3	04.5
10	336	42.2	311 17.2	52.9	211 26.7	33.8	348 36.5	09.9	155 01.9	04.6
11	351	44.7	326 16.8	+9 54.1	226 28.6	+22 33.6	3 38.4	-6 09.6	170 04.6	+2 04.7
12	6	47.2	341 16.4	+9 55.3	241 30.6	+22 33.4	18 40.3	-6 09.4	185 07.2	+2 04.8
13	21	49.6	356 16.0	56.5	256 32.6	33.2	33 42.3	09.2	200 09.8	04.8
14	36	52.1	11 15.5	57.7	271 34.5	33.0	48 44.2	09.0	215 12.5	04.9
15	51	54.5	26 15.1	+9 58.9	286 36.5	32.8	63 46.1	08.7	230 15.1	05.0
16	66	57.0	41 14.7	+10 00.1	301 38.4	32.6	78 48.0	08.5	245 17.8	05.1
17	81	59.5	56 14.3	+10 01.3	316 40.4	+22 32.4	93 50.0	-6 08.3	260 20.4	+2 05.1
18	97	01.9	71 13.8	+10 02.5	331 42.3	+22 32.2	108 51.9	-6 08.1	275 23.1	+2 05.2
19	112	04.4	86 13.4	03.7	346 44.3	32.0	123 53.8	07.9	290 25.7	05.3
20	127	06.9	101 13.0	04.9	1 46.2	31.8	138 55.7	07.6	305 28.3	05.4
21	142	09.3	116 12.6	06.1	16 48.2	31.7	153 57.7	07.4	320 31.0	05.5
22	157	11.8	131 12.1	07.3	31 50.1	31.5	168 59.6	07.2	335 33.6	05.5
23	172	14.3	146 11.7	08.4	46 52.1	31.3	184 01.5	07.0	350 36.3	05.6
24	187	16.7	161 11.3	+10 09.6	61 54.0	+22 31.1	199 03.4	-6 06.7	5 38.9	+2 05.7
Dif	—		-4	+12	+20 -2		+19 +2		+26 +1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 04 ^m 5			Edad: 14 ^d 1	PHE { 4 ^h : 60 ^l 1 12 ^h : 59 ^l 9 20 ^h : 59 ^l 7 R°: **m	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾												
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	50.5	+3 38.4	2	05.1	-7 37.9		60 N	3 57	4 49	5 32	20 05	101	4 58	8	
1	193	50.6		16	33.8	-7 53.0 ¹⁵¹		58	4 05	54	34	19 58	95	5 03	11	
2	208	50.8		31	02.4	-8 08.0 ¹⁵⁰		56	13	4 59	36	51 92		07	15	
3	223	51.0		45	31.1	22.9 ¹⁴⁹		54	19	5 02	38	45 88		11	18	
4	238	51.2		59	59.7	37.8 ¹⁴⁹		52	25	06	40	39 86		15	20	
5	253	51.4	+3 43.2	74	28.3	-8 52.6 ¹⁴⁸		50	4 30	5 09	5 42	19 34	83	5 18	23	
6	268	51.6	+3 44.2	88	56.8	-9 07.4 ¹⁴⁸		45	4 40	5 15	5 45	19 24	78	5 26	27	
7	283	51.8		103	25.4	22.1 ¹⁴⁷		40	48	20	48	15 74		32	32	
8	298	52.0		117	53.9	36.7 ¹⁴⁶		35	4 55	25	50	08 70		37	35	
9	313	52.2		132	22.4	-9 51.3 ¹⁴⁶		30	5 00	28	52	19 01	67	42	38	
10	328	52.3		146	50.9	-10 05.8 ¹⁴⁵		20	08	33	56	18 50	62	50	44	
11	343	52.5	+3 49.1	161	19.3	-10 20.3 ¹⁴⁵		10 N	5 13	5 37	5 59	18 40	58	5 57	48	
12	358	52.7	+3 50.0	175	47.8	-10 34.6 ¹⁴³		0	5 16	5 41	6 01	18 31	54	6 04	52	
13	13	52.9		190	16.2	-10 48.9 ¹⁴³		10 S	18	43	04	22 49		10	58	
14	28	53.1		204	44.5	-11 03.1 ¹⁴²		20	19	44	06	13 45		18	61	
15	43	53.3		219	12.9	17.3 ¹⁴²		30	18	45	09	18 02	40	26	67	
16	58	53.5		233	41.2	31.3 ¹⁴⁰		35	16	46	11	17 56	37	31	70	
17	73	53.7	+3 54.9	248	09.5	-11 45.3 ¹⁴⁰		40	5 14	5 46	6 13	17 49	33	6 36	74	
18	88	53.8	+3 55.9	262	37.8	-11 59.2 ¹³⁹		45	5 11	5 46	6 15	17 41	29	6 42	79	
19	103	54.0		277	06.0	-12 13.0 ¹³⁸		50	07	45	17	31 25		50	84	
20	118	54.2		291	34.2	26.8 ¹³⁸		52	05	45	18	27 22		54	86	
21	133	54.4		306	02.4	40.4 ¹³⁶		54	03	44	20	22 20		6 58	89	
22	148	54.6	+3 59.7	320	30.6	-12 54.0 ¹³⁶		56	5 00	44	21	17 16		7 02	92	
23	163	54.8	+4 00.7	334	58.7	-13 07.5 ¹³⁵		58	4 57	43	22	11 13		07	96	
24	178	55.0	+4 01.7	349	26.8	-13 20.8 ¹³³		60 S	4 54	5 42	6 24	17 04	9	7 12	101	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 29 ^m 0		Mag: -3.9 PMG: 13 ^h 16 ^m			Mag: +0.1 PMG: 19 ^h 50 ^m			Mag: -2.1 PMG: 10 ^h 42 ^m			Mag: +0.6 PMG: 23 ^h 33 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	187	16.7	161	11.3	+10 09.6	61	54.0	+22 31.1	199	03.4	-6 06.7	5	38.9	+2 05.7
1	202	19.2	176	10.9	10.8	76	56.0	30.9	214	05.4	06.5	20	41.5	05.8
2	217	21.6	191	10.4	12.0	91	57.9	30.7	229	07.3	06.3	35	44.2	05.8
3	232	24.1	206	10.0	13.2	106	59.9	30.5	244	09.2	06.1	50	46.8	05.9
4	247	26.6	221	09.6	14.4	122	01.8	30.3	259	11.1	05.9	65	49.5	06.0
5	262	29.0	236	09.1	+10 15.6	137	03.8	+22 30.1	274	13.1	-6 05.6	80	52.1	+2 06.1
6	277	31.5	251	08.7	+10 16.8	152	05.7	+22 29.9	289	15.0	-6 05.4	95	54.8	+2 06.1
7	292	34.0	266	08.3	18.0	167	07.6	29.7	304	16.9	05.2	110	57.4	06.2
8	307	36.4	281	07.9	19.2	182	09.6	29.5	319	18.8	05.0	126	00.0	06.3
9	322	38.9	296	07.4	20.4	197	11.5	29.3	334	20.8	04.8	141	02.7	06.4
10	337	41.4	311	07.0	21.5	212	13.5	29.1	349	22.7	04.5	156	05.3	06.5
11	352	43.8	326	06.6	+10 22.7	227	15.4	+22 28.9	4	24.6	-6 04.3	171	08.0	+2 06.5
12	7	46.3	341	06.1	+10 23.9	242	17.3	+22 28.7	19	26.5	-6 04.1	186	10.6	+2 06.6
13	22	48.8	356	05.7	25.1	257	19.3	28.5	34	28.5	03.9	201	13.2	06.7
14	37	51.2	11	05.3	26.3	272	21.2	28.3	49	30.4	03.6	216	15.9	06.8
15	52	53.7	26	04.8	27.5	287	23.1	28.1	64	32.3	03.4	231	18.5	06.8
16	67	56.1	41	04.4	28.7	302	25.1	27.9	79	34.2	03.2	246	21.2	06.9
17	82	58.6	56	04.0	+10 29.8	317	27.0	+22 27.7	94	36.2	-6 03.0	261	23.8	+2 07.0
18	98	01.1	71	03.6	+10 31.0	332	28.9	+22 27.5	109	38.1	-6 02.8	276	26.4	+2 07.1
19	113	03.5	86	03.1	32.2	347	30.9	27.3	124	40.0	02.5	291	29.1	07.1
20	128	06.0	101	02.7	33.4	2	32.8	27.1	139	41.9	02.3	306	31.7	07.2
21	143	08.5	116	02.3	34.6	17	34.7	26.9	154	43.9	02.1	321	34.4	07.3
22	158	10.9	131	01.8	35.8	32	36.6	26.7	169	45.8	01.9	336	37.0	07.4
23	173	13.4	146	01.4	36.9	47	38.6	26.5	184	47.7	01.6	351	39.6	07.4
24	188	15.9	161	01.0	+10 38.1	62	40.5	+22 26.3	199	49.6	-6 01.4	6	42.3	+2 07.5
Dif	—		-4	+12		+19		-2	+19		+2	+26		+1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°0 PMG: 12 ^h 04 ^m 2			Edad: 15 ^d 1 PHE { 4 ^h : 59/5 12 ^h : 59/2 20 ^h : 59/0 PMG: 0 ^h 44 ^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	55.0	+4	01.7	349	26.8	-13 20.8	60 N	18 41	19 24	20 17	21 46 97	5 06 10					
1	193	55.2		02.6	3	54.9 91	34.1 ¹³³	58	38	19	08	33 92	14 15					
2	208	55.4		03.6	18	22.9 90	-13 47.4 ¹³³	56	36	14	20 00	23 88	22 19					
3	223	55.5		04.6	32	50.9 90	-14 00.5 ¹³¹	54	34	10	19 53	13 85	29 22					
4	238	55.7		05.6	47	18.9 90	13.5 ¹³⁰	52	32	06	47	21 05 82	35 25					
5	253	55.9	+4	06.5	61	46.8 89	-14 26.4 ¹²⁹	50	18 30	19 03	19 42	20 57 80	5 41 27					
6	268	56.1	+4	07.5	76	14.7 89	-14 39.2 ¹²⁸	45	18 26	18 56	19 31	20 42 75	5 53 32					
7	283	56.3		08.5	90	42.6 89	-14 52.0 ¹²⁸	40	23	50	23	29 71	6 04 35					
8	298	56.5		09.4	105	10.5 89	-15 04.6 ¹²⁶	35	20	46	16	18 68	12 39					
9	313	56.7		10.4	119	38.3 88	17.1 ¹²⁵	30	18	42	10	20 08 66	20 42					
10	328	56.9		11.4	134	06.1 88	29.5 ¹²⁴	20	14	36	19 02	19 52 61	34 46					
11	343	57.0	+4	12.3	148	33.8 87	-15 41.8 ¹²³	10 N	18 11	18 32	18 56	19 38 58	6 45 51					
12	358	57.2	+4	13.3	163	01.5 87	-15 54.1 ¹²³	0	18 07	18 28	18 52	19 25 54	6 56 54					
13	13	57.4		14.3	177	29.2 87	-16 06.2 ¹²¹	10 S	04	25	50	19 11 52	7 08 57					
14	28	57.6		15.2	191	56.9 87	18.2 ¹²⁰	20	18 01	23	49	18 58 47	19 62					
15	43	57.8		16.2	206	24.5 86	30.0 ¹¹⁸	30	17 58	22	50	42 43	33 67					
16	58	58.0		17.2	220	52.1 86	41.8 ¹¹⁸	35	56	21	51	33 41	41 70					
17	73	58.2	+4	18.1	235	19.7 86	-16 53.5 ¹¹⁷	40	17 54	18 21	18 52	18 22 38	7 50 73					
18	88	58.4	+4	19.1	249	47.2 85	-17 05.0 ¹¹⁵	45	17 52	18 21	18 55	18 10 35	8 01 77					
19	103	58.5		20.1	264	14.7 85	16.5 ¹¹⁵	50	49	21	18 58	17 56 29	14 82					
20	118	58.7		21.0	278	42.2 85	27.8 ¹¹³	52	47	21	19 00	49 27	20 84					
21	133	58.9		22.0	293	09.6 84	39.0 ¹¹²	54	46	21	02	42 24	27 87					
22	148	59.1		23.0	307	37.0 84	-17 50.1 ¹¹¹	56	44	21	04	33 22	34 91					
23	163	59.3		23.9	322	04.4 84	-18 01.1 ¹¹⁰	58	43	22	07	24 18	43 94					
24	178	59.5	+4	24.9	336	31.7 83	-18 12.0 ¹⁰⁹	60 S	17 41	18 22	19 10	17 13 14	8 53 98					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 25 ^m 1		Mag: -3.9 PMG: 13 ^h 16 ^m			Mag: +0.2 PMG: 19 ^h 47 ^m			Mag: -2.1 PMG: 10 ^h 39 ^m			Mag: +0.6 PMG: 23 ^h 29 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	188	15.9	161	01.0	+10	38.1	62	40.5	+22	26.3	199	49.6	-6	01.4	6	42.3	+2	07.5
1	203	18.3	176	00.5		39.3	77	42.4		26.1	214	51.6		01.2	21	44.9		07.6
2	218	20.8	191	00.1		40.5	92	44.3		25.9	229	53.5		01.0	36	47.6		07.7
3	233	23.2	205	59.6		41.7	107	46.3		25.7	244	55.4		00.8	51	50.2		07.8
4	248	25.7	220	59.2		42.9	122	48.2		25.5	259	57.3		00.5	66	52.9		07.8
5	263	28.2	235	58.8	+10	44.0	137	50.1	+22	25.3	274	59.3	-6	00.3	81	55.5	+2	07.9
6	278	30.6	250	58.3	+10	45.2	152	52.0	+22	25.1	290	01.2	-6	00.1	96	58.1	+2	08.0
7	293	33.1	265	57.9		46.4	167	53.9		24.9	305	03.1	-5	59.9	112	00.8		08.1
8	308	35.6	280	57.5		47.6	182	55.9		24.7	320	05.0		59.7	127	03.4		08.1
9	323	38.0	295	57.0		48.7	197	57.8		24.5	335	07.0		59.4	142	06.1		08.2
10	338	40.5	310	56.6		49.9	212	59.7		24.3	350	08.9		59.2	157	08.7		08.3
11	353	43.0	325	56.2	+10	51.1	228	01.6	+22	24.1	5	10.8	-5	59.0	172	11.3	+2	08.4
12	8	45.4	340	55.7	+10	52.3	243	03.5	+22	23.9	20	12.8	-5	58.8	187	14.0	+2	08.4
13	23	47.9	355	55.3		53.5	258	05.4		23.6	35	14.7		58.5	202	16.6		08.5
14	38	50.4	10	54.8		54.6	273	07.4		23.4	50	16.6		58.3	217	19.3		08.6
15	53	52.8	25	54.4		55.8	288	09.3		23.2	65	18.5		58.1	232	21.9		08.7
16	68	55.3	40	54.0		57.0	303	11.2		23.0	80	20.5		57.9	247	24.5		08.7
17	83	57.7	55	53.5	+10	58.2	318	13.1	+22	22.8	95	22.4	-5	57.7	262	27.2	+2	08.8
18	99	00.2	70	53.1	+10	59.3	333	15.0	+22	22.6	110	24.3	-5	57.4	277	29.8	+2	08.9
19	114	02.7	85	52.6	+11	00.5	348	16.9		22.4	125	26.2		57.2	292	32.5		09.0
20	129	05.1	100	52.2		01.7	3	18.8		22.2	140	28.2		57.0	307	35.1		09.0
21	144	07.6	115	51.8		02.9	18	20.7		22.0	155	30.1		56.8	322	37.7		09.1
22	159	10.1	130	51.3		04.0	33	22.6		21.8	170	32.0		56.6	337	40.4		09.2
23	174	12.5	145	50.9		05.2	48	24.5		21.6	185	34.0		56.3	352	43.0		09.3
24	189	15.0	160	50.4	+11	06.4	63	26.4	+22	21.4	200	35.9	-5	56.1	7	45.7	+2	09.3
Dif	—		-4	+12		+19	-2		+19	+2		+26		+1				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 03 ^m 9				Edad: 16 ^d 1 PHE SD: 16'0 PMG: 1 ^h 37 ^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	178	59.5	+4	24.9	336	31.7	-18	12.0	60 N	3	50	4	43	5	26	23	23	87	
1	193	59.7		25.9	350	59.1	84	22.7	58	3	59		48	29	23	05	83		
2	208	59.9		26.8	5	26.3	82	33.3	56	4	07		53	31	22	51	79		
3	224	00.0		27.8	19	53.6	83	43.8	54	14	4	57	33	33	38	77	5	51	
4	239	00.2		28.8	34	20.8	82	-18	52	20	5	01	35	35	27	74	6	00	
5	254	00.4	+4	29.7	48	48.0	82	-19	04.4	50	4	25	5	04	5	37	22	17	
6	269	00.6	+4	30.7	63	15.2	82	-19	14.5	45	4	36	5	11	5	41	21	57	
7	284	00.8		31.6	77	42.3	81	24.5	40	45	17	44		44	40	67		39	
8	299	01.0		32.6	92	09.5	82	34.4	35	52	22	47		47	26	65	6	51	
9	314	01.2		33.6	106	36.6	81	44.2	30	4	57	26	50	50	21	14	63	7	02
10	329	01.3		34.5	121	03.6	80	-19	53.8	20	5	06	32	54	20	53	60	20	49
11	344	01.5	+4	35.5	135	30.7	81	-20	03.2	10 N	5	12	5	36	5	57	20	36	57
12	359	01.7	+4	36.5	149	57.7	80	-20	12.6	0	5	16	5	40	6	01	20	19	55
13	14	01.9		37.4	164	24.7	80	21.8	92	10 S	18	43	04	07	20	03	53	8	05
14	29	02.1		38.4	178	51.6	79	30.9	91	20	19	45	07	19	45	51	21	61	
15	44	02.3		39.4	193	18.6	80	39.9	90	30	19	47	11	25	48	40	64		
16	59	02.5		40.3	207	45.5	79	48.7	88	35	18	47	13	14	45	8	51	66	
17	74	02.7	+4	41.3	222	12.4	79	-20	57.4	40	5	16	5	48	6	15	19	00	44
18	89	02.8	+4	42.3	236	39.2	78	-21	05.9	45	5	14	5	48	6	17	18	45	40
19	104	03.0		43.2	251	06.1	79	14.4	85	50	11	48	20	25	37	36	76	72	
20	119	03.2		44.2	265	32.9	78	22.7	83	52	09	48	22	16	36	44	79		
21	134	03.4		45.1	279	59.7	78	30.8	81	54	07	48	23	18	06	33	9	54	81
22	149	03.6		46.1	294	26.5	78	38.8	80	56	05	48	25	17	55	30	10	05	84
23	164	03.8		47.1	308	53.3	78	46.7	79	58	5	02	48	27	42	27	17	88	
24	179	04.0	+4	48.0	323	20.1	78	-21	54.4	60 S	4	59	5	47	6	29	17	27	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 21 ^m 1	Mag: -3.9 PMG: 13 ^h 17 ^m	Mag: -3.9 PMG: 13 ^h 17 ^m	Mag: +0.2 PMG: 19 ^h 44 ^m	Mag: +0.2 PMG: 19 ^h 44 ^m	Mag: -2.1 PMG: 10 ^h 36 ^m	Mag: -2.1 PMG: 10 ^h 36 ^m	Mag: +0.6 PMG: 23 ^h 25 ^m	Mag: +0.6 PMG: 23 ^h 25 ^m	
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	189	15.0	160	50.4	+11	06.4	63	26.4	+22	21.4
1	204	17.5	175	50.0		07.5	78	28.3		21.2
2	219	19.9	190	49.6		08.7	93	30.2		21.0
3	234	22.4	205	49.1		09.9	108	32.1		20.8
4	249	24.9	220	48.7		11.1	123	34.0		20.6
5	264	27.3	235	48.2	+11	12.2	138	35.9	+22	20.4
6	279	29.8	250	47.8	+11	13.4	153	37.8	+22	20.1
7	294	32.2	265	47.3		14.6	168	39.7		19.9
8	309	34.7	280	46.9		15.7	183	41.6		19.7
9	324	37.2	295	46.4		16.9	198	43.5		19.5
10	339	39.6	310	46.0		18.1	213	45.4		19.3
11	354	42.1	325	45.6	+11	19.2	228	47.3	+22	19.1
12	9	44.6	340	45.1	+11	20.4	243	49.2	+22	18.9
13	24	47.0	355	44.7		21.6	258	51.1		18.7
14	39	49.5	10	44.2		22.7	273	53.0		18.5
15	54	52.0	25	43.8		23.9	288	54.9		18.3
16	69	54.4	40	43.3		25.1	303	56.8		18.1
17	84	56.9	55	42.9	+11	26.2	318	58.7	+22	17.9
18	99	59.3	70	42.4	+11	27.4	334	00.6	+22	17.6
19	115	01.8	85	42.0		28.5	349	02.4		17.4
20	130	04.3	100	41.5		29.7	4	04.3		17.2
21	145	06.7	115	41.1		30.9	19	06.2		17.0
22	160	09.2	130	40.6		32.0	34	08.1		16.8
23	175	11.7	145	40.2		33.2	49	10.0		16.6
24	190	14.1	160	39.7	+11	34.4	64	11.9	+22	16.4
Dif	—		-4		+12		+19		-2	
							+19		+2	
									+26	
									+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 03 ^m 6			Edad: 17 ^d 1 PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'3 PMG: 2 ^h 32 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	04.0	+4 48.0	323	20.1	-21 54.4	76	60 N	18 46	19 29	20 23	** ** *	5 33	28	
1	194	04.1		337	46.8	-22 02.0	76	58	43	23	14	** ** *	5 51	32	
2	209	04.3		352	13.5	09.5	75	56	40	18	20 05	** ** *	6 06	36	
3	224	04.5		6	40.2	16.8	73	54	37	14	19 58	23 55	64	19 38	
4	239	04.7		21	06.9	24.0	72	52	35	10	51	41	64	31 39	
5	254	04.9	+4 52.8	35	33.6	-22 31.0	70	50	18 33	19 06	19 46	23 30	62	6 41 41	
6	269	05.1	+4 53.8	50	00.3	-22 37.9	69	45	18 29	18 59	19 34	23 06	61	7 02 45	
7	284	05.3		64	27.0	44.6	67	40	25	52	25	22 47	60	20 46	
8	299	05.4		78	53.6	51.3	67	35	22	47	18	31	59	34 48	
9	314	05.6		93	20.3	-22 57.7	64	30	19	43	12	22 17	58	7 47 50	
10	329	05.8		107	46.9	-23 04.0	63	20	15	37	19 03	21 53	58	8 09 52	
11	344	06.0	+4 58.6	122	13.5	-23 10.2	62	10 N	18 11	18 32	18 56	21 33	56	8 28 54	
12	359	06.2	+4 59.6	136	40.1	-23 16.3	61	0	18 07	18 28	18 52	21 14	56	8 46 55	
13	14	06.4	+5 00.5	151	06.8	22.1	58	10 S	03	24	49	20 56	54	9 03 57	
14	29	06.5		165	33.4	27.9	58	20	18 00	22	47	36	53	22 59	
15	44	06.7		180	00.0	33.5	56	30	17 56	20	47	20 13	51	44 61	
16	59	06.9		194	26.6	39.0	55	35	53	19	48	19 59	51	9 57 63	
17	74	07.1	+5 04.4	208	53.2	-23 44.3	53	40	17 51	18 18	18 49	19 44	49	10 12 64	
18	89	07.3	+5 05.3	223	19.8	-23 49.4	51	45	17 48	18 17	18 51	19 25	48	10 30 66	
19	104	07.5		237	46.4	54.5	51	50	44	17	54	19 02	46	10 52 68	
20	119	07.7		252	13.0	-23 59.3	48	52	43	16	55	18 52	44	11 03 69	
21	134	07.8		266	39.7	-24 04.1	48	54	41	16	57	39	44	15 71	
22	149	08.0		281	06.3	08.6	45	56	39	16	18 59	25	42	29 73	
23	164	08.2		295	32.9	13.1	45	58	37	16	19 02	18 09	39	11 45 75	
24	179	08.4	+5 11.1	309	59.6	-24 17.4	43	60 S	17 35	18 16	19 04	17 49	36	12 04 80	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 11 ^h 17 ^m 2		Mag: -3.9 PMG: 13 ^h 18 ^m		Mag: +0.2 PMG: 19 ^h 41 ^m		Mag: -2.1 PMG: 10 ^h 33 ^m		Mag: +0.6 PMG: 23 ^h 21 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	190	14.1	160	39.7	+11 34.4	64	11.9	+22 16.4	201	22.2	-5 50.8	8 49.0	+2 11.2
1	205	16.6	175	39.3	35.5	79	13.7	16.2	216	24.1	50.6	23 51.6	11.2
2	220	19.1	190	38.8	36.7	94	15.6	16.0	231	26.0	50.4	38 54.3	11.3
3	235	21.5	205	38.4	37.8	109	17.5	15.7	246	28.0	50.2	53 56.9	11.4
4	250	24.0	220	37.9	39.0	124	19.4	15.5	261	29.9	49.9	68 59.6	11.5
5	265	26.5	235	37.5	+11 40.1	139	21.3	+22 15.3	276	31.8	-5 49.7	84 02.2	+2 11.5
6	280	28.9	250	37.0	+11 41.3	154	23.1	+22 15.1	291	33.7	-5 49.5	99 04.8	+2 11.6
7	295	31.4	265	36.6	42.5	169	25.0	14.9	306	35.7	49.3	114 07.5	11.7
8	310	33.8	280	36.1	43.6	184	26.9	14.7	321	37.6	49.0	129 10.1	11.8
9	325	36.3	295	35.7	44.8	199	28.8	14.5	336	39.5	48.8	144 12.8	11.8
10	340	38.8	310	35.2	45.9	214	30.6	14.3	351	41.5	48.6	159 15.4	11.9
11	355	41.2	325	34.8	+11 47.1	229	32.5	+22 14.0	6	43.4	-5 48.4	174 18.0	+2 12.0
12	10	43.7	340	34.3	+11 48.2	244	34.4	+22 13.8	21	45.3	-5 48.2	189 20.7	+2 12.1
13	25	46.2	355	33.9	49.4	259	36.3	13.6	36	47.3	47.9	204 23.3	12.1
14	40	48.6	10	33.4	50.5	274	38.1	13.4	51	49.2	47.7	219 26.0	12.2
15	55	51.1	25	33.0	51.7	289	40.0	13.2	66	51.1	47.5	234 28.6	12.3
16	70	53.6	40	32.5	52.9	304	41.9	13.0	81	53.0	47.3	249 31.2	12.4
17	85	56.0	55	32.0	+11 54.0	319	43.7	+22 12.8	96	55.0	-5 47.1	264 33.9	+2 12.4
18	100	58.5	70	31.6	+11 55.2	334	45.6	+22 12.5	111	56.9	-5 46.8	279 36.5	+2 12.5
19	116	01.0	85	31.1	56.3	349	47.5	12.3	126	58.8	46.6	294 39.1	12.6
20	131	03.4	100	30.7	57.5	4	49.3	12.1	142	00.8	46.4	309 41.8	12.6
21	146	05.9	115	30.2	58.6	19	51.2	11.9	157	02.7	46.2	324 44.4	12.7
22	161	08.3	130	29.8	+11 59.8	34	53.1	11.7	172	04.6	46.0	339 47.1	12.8
23	176	10.8	145	29.3	+12 00.9	49	54.9	11.5	187	06.6	45.7	354 49.7	12.9
24	191	13.3	160	28.8	+12 02.1	64	56.8	+22 11.2	202	08.5	-5 45.5	9 52.3	+2 12.9
Dif	—		-5	+12		+19	-2		+19	+2		+26	+1

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 3			Edad: 18 ^d 1 PHE { 4 ^h : 57 ^h 0 12 ^h : 56 ^h 7 20 ^h : 56 ^h 4 PMG: 3 ^h 28 ^m R°: 55 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	179	08.4	+5	11.1	309	59.6	76	-24	17.4	41	60 N	3 43	4 37	5 20	0 50	69	6 01	45	
1	194	08.6			324	26.2	76		21.5	41	58	3 52	43	23	28	67	23	48	
2	209	08.8			338	52.9	77		25.5	40	56	4 01	48	26	0 10	65	42	48	
3	224	08.9			353	19.5	76		29.4	39	54	08	52	28	**	**	**	6 57	49
4	239	09.1			7	46.2	77		33.1	37	52	15	4 56	31	**	**	**	7 10	51
5	254	09.3	+5	15.9	22	12.9	77	-24	36.7	36	50	4 20	5 00	5 33	**	**	**	7 22	51
6	269	09.5	+5	16.8	36	39.6	77	-24	40.1	34	45	4 32	5 08	5 37	**	**	**	7 47	51
7	284	09.7			51	06.3	77		43.3	32	40	41	14	41	23	47	51	8 06	52
8	299	09.9			65	33.1	78		46.5	32	35	49	19	44	30	52		22	53
9	314	10.1			79	59.8	77		49.5	30	30	4 55	23	47	23	15	53	8 37	53
10	329	10.2			94	26.6	78		52.3	28	20	5 04	30	52	22	51	53	9 01	53
11	344	10.4	+5	21.6	108	53.4	78	-24	55.0	27	10 N	5 11	5 35	5 56	22	29	54	9 22	54
12	359	10.6	+5	22.6	123	20.2	78	-24	57.5	25	0	5 15	5 39	6 00	22	10	53	9 41	55
13	14	10.8			137	47.0	78	-24	59.9	24	10 S	18	43	04	21	50	54	10 00	55
14	29	11.0			152	13.9	79	-25	02.2	23	20	20	45	08	29	54		21	56
15	44	11.2			166	40.8	79		04.3	21	30	20	48	12	21	04	55	10 45	56
16	59	11.3			181	07.7	79		06.3	20	35	19	49	14	20	50	54	11 00	56
17	74	11.5	+5	27.4	195	34.7	80	-25	08.1	18	40	5 18	5 50	6 17	20	33	55	11 16	56
18	89	11.7	+5	28.3	210	01.6	79	-25	09.8	17	45	5 17	5 51	6 20	20	13	55	11 36	56
19	104	11.9			224	28.6	80		11.3	15	50	14	51	23	19	48	55	12 00	57
20	119	12.1			238	55.7	81		12.7	14	52	12	51	25	36	55		12	57
21	134	12.3			253	22.7	80		13.9	12	54	11	52	27	23	55		26	57
22	149	12.4			267	49.8	81		15.1	12	56	09	52	29	19	07	55	12 42	57
23	164	12.6			282	17.0	82		16.0	9	58	06	52	31	18	48	55	13 00	58
24	179	12.8	+5	34.0	296	44.1	81	-25	16.8	8	60 S	5 04	5 52	6 34	18	25	55	13 24	57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 13 ^m 3		Mag: -3.9 PMG: 13 ^h 18 ^m		Mag: +0.2 PMG: 19 ^h 38 ^m		Mag: -2.1 PMG: 10 ^h 30 ^m		Mag: +0.6 PMG: 23 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	191	13.3	160	28.8	+12	02.1	64	56.8	+22	11.2	202	08.5	-5	45.5	9	52.3	+2	12.9
1	206	15.7	175	28.4		03.2	79	58.7		11.0	217	10.4		45.3	24	55.0		13.0
2	221	18.2	190	27.9		04.4	95	00.5		10.8	232	12.3		45.1	39	57.6		13.1
3	236	20.7	205	27.5		05.5	110	02.4		10.6	247	14.3		44.9	55	00.2		13.2
4	251	23.1	220	27.0		06.6	125	04.2		10.4	262	16.2		44.6	70	02.9		13.2
5	266	25.6	235	26.6	+12	07.8	140	06.1	+22	10.2	277	18.1	-5	44.4	85	05.5	+2	13.3
6	281	28.1	250	26.1	+12	08.9	155	08.0	+22	10.0	292	20.1	-5	44.2	100	08.2	+2	13.4
7	296	30.5	265	25.6		10.1	170	09.8		09.7	307	22.0		44.0	115	10.8		13.5
8	311	33.0	280	25.2		11.2	185	11.7		09.5	322	23.9		43.8	130	13.4		13.5
9	326	35.5	295	24.7		12.4	200	13.5		09.3	337	25.9		43.5	145	16.1		13.6
10	341	37.9	310	24.2		13.5	215	15.4		09.1	352	27.8		43.3	160	18.7		13.7
11	356	40.4	325	23.8	+12	14.7	230	17.2	+22	08.9	7	29.7	-5	43.1	175	21.4	+2	13.8
12	11	42.8	340	23.3	+12	15.8	245	19.1	+22	08.6	22	31.7	-5	42.9	190	24.0	+2	13.8
13	26	45.3	355	22.9		16.9	260	20.9		08.4	37	33.6		42.7	205	26.6		13.9
14	41	47.8	10	22.4		18.1	275	22.8		08.2	52	35.5		42.4	220	29.3		14.0
15	56	50.2	25	21.9		19.2	290	24.6		08.0	67	37.5		42.2	235	31.9		14.1
16	71	52.7	40	21.5		20.4	305	26.5		07.8	82	39.4		42.0	250	34.5		14.1
17	86	55.2	55	21.0	+12	21.5	320	28.3	+22	07.5	97	41.3	-5	41.8	265	37.2	+2	14.2
18	101	57.6	70	20.5	+12	22.7	335	30.2	+22	07.3	112	43.3	-5	41.6	280	39.8	+2	14.3
19	117	00.1	85	20.1		23.8	350	32.0		07.1	127	45.2		41.3	295	42.5		14.4
20	132	02.6	100	19.6		24.9	5	33.9		06.9	142	47.1		41.1	310	45.1		14.4
21	147	05.0	115	19.1		26.1	20	35.7		06.7	157	49.1		40.9	325	47.7		14.5
22	162	07.5	130	18.7		27.2	35	37.6		06.4	172	51.0		40.7	340	50.4		14.6
23	177	09.9	145	18.2		28.3	50	39.4		06.2	187	52.9		40.5	355	53.0		14.6
24	192	12.4	160	17.8	+12	29.5	65	41.2	+22	06.0	202	54.9	-5	40.3	10	55.6	+2	14.7
Dif	—		-5		+11		+19		-2		+19		+2		+26		+1	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 03 ^m 0		Edad: 19 ^d 1 PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 20 ^h : 55 ^m 7 PMG: 4 ^h 23 ^m R°: 53 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	12.8	+5 34.0	296	44.1	-25 16.8	7	60 N	18 51	19 34	20 29	1 59 46	6 46 65	
1	194	13.0		311	11.3	17.5	82	58	47	28	19	35 47	7 11 62	
2	209	13.2	36.0	325	38.6	18.1	6	56	44	23	10	1 15 49	30 61	
3	224	13.3	36.9	340	05.8	18.5	4	54	41	18	20 02	0 59 49	7 46 61	
4	239	13.5	37.9	354	33.2	18.7	2	52	39	13	19 55	45 49	8 01 59	
5	254	13.7	+5 38.8	9	00.5	-25 18.9	2	50	18 36	19 09	19 49	0 32 51	8 13 59	
6	269	13.9	+5 39.8	23	27.9	-25 18.9	0	45	18 31	19 01	19 37	0 07 51	8 38 58	
7	284	14.1	40.7	37	55.4	18.7	2	40	27	18 55	27	** ** *	8 58 57	
8	299	14.3	41.7	52	22.9	18.4	3	35	24	49	19	** ** *	9 15 56	
9	314	14.4	42.6	66	50.4	18.0	4	30	20	45	13	** ** *	30 55	
10	329	14.6	43.6	81	18.0	17.4	6	20	15	37	19 03	23 44 48	9 54 55	
11	344	14.8	+5 44.5	95	45.6	-25 16.7	7	10 N	18 10	18 32	18 56	23 23 49	10 16 53	
12	359	15.0	+5 45.5	110	13.3	-25 15.9	8	0	18 06	18 27	18 51	23 03 51	10 36 52	
13	14	15.2	46.4	124	41.0	14.9	10	10 S	18 02	23	48	22 44 52	10 55 52	
14	29	15.3	47.4	139	08.8	13.8	11	20	17 58	20	46	22 23 54	11 17 50	
15	44	15.5	48.3	153	36.6	12.6	12	30	53	17	45	21 59 55	41 50	
16	59	15.7	49.3	168	04.5	11.2	14	35	51	16	45	44 57	11 56 48	
17	74	15.9	+5 50.2	182	32.4	-25 09.7	15	40	17 48	18 15	18 46	21 28 58	12 12 48	
18	89	16.1	+5 51.2	197	00.4	-25 08.1	16	45	17 44	18 13	18 47	21 08 60	12 32 47	
19	104	16.3	52.2	211	28.4	06.3	18	50	40	12	50	20 43 62	12 57 45	
20	119	16.4	53.1	225	56.5	04.4	19	52	38	12	51	31 63	13 09 44	
21	134	16.6	54.1	240	24.7	02.4	20	54	36	12	52	18 64	23 42	
22	149	16.8	55.0	254	52.9	-25 00.3	21	56	34	11	54	20 02 66	39 41	
23	164	17.0	56.0	269	21.1	-24 58.0	23	58	32	11	56	19 43 68	13 58 39	
24	179	17.2	+5 56.9	283	49.4	-24 55.6	24	60 S	17 29	18 10	18 58	19 20 71	14 21 36	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 09 ^m 3		Mag: -3.9 PMG: 13 ^h 19 ^m		Mag: +0.2 PMG: 19 ^h 35 ^m		Mag: -2.1 PMG: 10 ^h 27 ^m		Mag: +0.6 PMG: 23 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	192	12.4	160 17.8	+12 29.5	65 41.2	+22 06.0	202 54.9	-5 40.3	10 55.6	+2 14.7
1	207	14.9	175 17.3	30.6	80 43.1	05.8	217 56.8	40.0	25 58.3	14.8
2	222	17.3	190 16.8	31.8	95 44.9	05.6	232 58.7	39.8	41 00.9	14.9
3	237	19.8	205 16.3	32.9	110 46.8	05.3	248 00.7	39.6	56 03.5	14.9
4	252	22.3	220 15.9	34.0	125 48.6	05.1	263 02.6	39.4	71 06.2	15.0
5	267	24.7	235 15.4	+12 35.2	140 50.4	+22 04.9	278 04.5	-5 39.2	86 08.8	+2 15.1
6	282	27.2	250 14.9	+12 36.3	155 52.3	+22 04.7	293 06.5	-5 38.9	101 11.5	+2 15.2
7	297	29.7	265 14.5	37.4	170 54.1	04.5	308 08.4	38.7	116 14.1	15.2
8	312	32.1	280 14.0	38.6	185 56.0	04.2	323 10.3	38.5	131 16.7	15.3
9	327	34.6	295 13.5	39.7	200 57.8	04.0	338 12.2	38.3	146 19.4	15.4
10	342	37.1	310 13.1	40.8	215 59.6	03.8	353 14.2	38.1	161 22.0	15.5
11	357	39.5	325 12.6	+12 42.0	231 01.5	+22 03.6	8 16.1	-5 37.8	176 24.6	+2 15.5
12	12	42.0	340 12.1	+12 43.1	246 03.3	+22 03.3	23 18.1	-5 37.6	191 27.3	+2 15.6
13	27	44.4	355 11.7	44.2	261 05.1	03.1	38 20.0	37.4	206 29.9	15.7
14	42	46.9	10 11.2	45.3	276 07.0	02.9	53 21.9	37.2	221 32.5	15.7
15	57	49.4	25 10.7	46.5	291 08.8	02.7	68 23.9	37.0	236 35.2	15.8
16	72	51.8	40 10.2	47.6	306 10.6	02.4	83 25.8	36.7	251 37.8	15.9
17	87	54.3	55 09.8	+12 48.7	321 12.4	+22 02.2	98 27.7	-5 36.5	266 40.5	+2 16.0
18	102	56.8	70 09.3	+12 49.9	336 14.3	+22 02.0	113 29.7	-5 36.3	281 43.1	+2 16.0
19	117	59.2	85 08.8	51.0	351 16.1	01.8	128 31.6	36.1	296 45.7	16.1
20	133	01.7	100 08.3	52.1	6 17.9	01.6	143 33.5	35.9	311 48.4	16.2
21	148	04.2	115 07.9	53.2	21 19.7	01.3	158 35.5	35.7	326 51.0	16.3
22	163	06.6	130 07.4	54.4	36 21.6	01.1	173 37.4	35.4	341 53.6	16.3
23	178	09.1	145 06.9	55.5	51 23.4	00.9	188 39.3	35.2	356 56.3	16.4
24	193	11.6	160 06.4	+12 56.6	66 25.2	+22 00.7	203 41.3	-5 35.0	11 58.9	+2 16.5
Dif	—		-5	+11	+18	-2	+19	+2	+26	+

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 02 ^m 4			Edad: 21 ^d 1 PHE { 4 ^h : 54'9 12 ^h : 54'7 20 ^h : 54'6 PMG: 6 ^h 06 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	179	21.5	+6 19.7	271	28.0	-23 21.4	53	60 N	18 56	19 40	20 36	3 12 16	9 08 82	
1	194	21.6		285	58.0 ¹¹⁰	16.1	53	58	52	33	25	2 53 20	26 78	
2	209	21.8		300	28.0 ¹¹⁰	10.6	55	56	48	27	15	37 24	42 74	
3	224	22.0		314	58.1 ¹¹¹	-23 05.0	56	54	45	22	20 07	24 26	9 55 71	
4	239	22.2		329	28.2 ¹¹¹	-22 59.4	56	52	42	17	19 59	12 28	10 06 69	
5	254	22.4	+6 24.4	343	58.5 ¹¹³	-22 53.6	58	50	18 39	19 13	19 53	2 02 30	10 16 67	
6	269	22.5	+6 25.3	358	28.7 ¹¹²	-22 47.7	59	45	18 34	19 04	19 40	1 40 33	10 38 63	
7	284	22.7		12	59.1 ¹¹⁴	41.7	60	40	29	18 57	29	22 36	10 55 60	
8	299	22.9		27	29.5 ¹¹⁴	35.7	60	35	25	51	21	1 07 39	11 09 58	
9	314	23.1		42	00.1 ¹¹⁶	29.5	62	30	22	46	14	0 54 40	21 56	
10	329	23.3		56	30.6 ¹¹⁵	23.2	63	20	16	38	19 04	32 43	11 43 52	
11	344	23.4	+6 30.1	71	01.3 ¹¹⁷	-22 16.8	64	10 N	18 10	18 32	18 56	0 12 46	12 01 50	
12	359	23.6	+6 31.0	85	32.0 ¹¹⁷	-22 10.3	65	0	18 06	18 27	18 51	*** ** *	12 18 47	
13	14	23.8		100	02.8 ¹¹⁸	-22 03.7	66	10 S	18 01	22	47	*** ** *	35 44	
14	29	24.0		114	33.6 ¹¹⁸	-21 57.1	66	20	17 56	18	44	*** ** *	12 53 41	
15	44	24.1		129	04.6 ¹²⁰	50.3	68	30	51	15	43	23 51 55	13 14 38	
16	59	24.3		143	35.6 ¹²⁰	43.4	69	35	48	13	42	39 58	26 36	
17	74	24.5	+6 35.7	158	06.6 ¹²⁰	-21 36.4	70	40	17 44	18 12	18 43	23 26 60	13 40 33	
18	89	24.7	+6 36.7	172	37.8 ¹²²	-21 29.4	70	45	17 41	18 10	18 44	23 10 64	13 56 31	
19	104	24.8		187	09.0 ¹²²	22.2	72	50	36	08	46	22 51 68	14 16 27	
20	119	25.0		201	40.2 ¹²²	15.0	72	52	34	08	46	42 69	26 25	
21	134	25.2		216	11.6 ¹²⁴	07.7	73	54	31	07	48	32 72	36 23	
22	149	25.4		230	43.0 ¹²⁴	-21 00.2	75	56	29	06	49	20 75	14 48 21	
23	164	25.6		245	14.5 ¹²⁵	-20 52.7	75	58	26	05	51	22 07 78	15 02 17	
24	179	25.7	+6 42.3	259	46.0 ¹²⁵	-20 45.1	76	60 S	17 23	18 05	18 53	21 51 82	15 19 13	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 01 ^m 5		Mag: -3.9 PMG: 13 ^h 21 ^m			Mag: +0.3 PMG: 19 ^h 29 ^m			Mag: -2.1 PMG: 10 ^h 21 ^m			Mag: +0.6 PMG: 23 ^h 04 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	194	10.7	159	54.9	+13 23.4	67	08.7	+21 55.2	204	27.7	-5 29.8	13	02.2	+2 18.2
1	209	13.2	174	54.4	24.5	82	10.5	55.0	219	29.6	29.5	28	04.8	18.3
2	224	15.6	189	54.0	25.6	97	12.3	54.7	234	31.6	29.3	43	07.4	18.4
3	239	18.1	204	53.5	26.8	112	14.1	54.5	249	33.5	29.1	58	10.1	18.4
4	254	20.5	219	53.0	27.9	127	15.9	54.3	264	35.5	28.9	73	12.7	18.5
5	269	23.0	234	52.5	+13 29.0	142	17.7	+21 54.0	279	37.4	-5 28.7	88	15.3	+2 18.6
6	284	25.5	249	52.0	+13 30.1	157	19.5	+21 53.8	294	39.3	-5 28.4	103	18.0	+2 18.6
7	299	27.9	264	51.5	31.2	172	21.3	53.6	309	41.3	28.2	118	20.6	18.7
8	314	30.4	279	51.0	32.3	187	23.1	53.3	324	43.2	28.0	133	23.2	18.8
9	329	32.9	294	50.5	33.4	202	24.9	53.1	339	45.1	27.8	148	25.9	18.9
10	344	35.3	309	50.1	34.5	217	26.7	52.9	354	47.1	27.6	163	28.5	18.9
11	359	37.8	324	49.6	+13 35.6	232	28.5	+21 52.6	9	49.0	-5 27.4	178	31.1	+2 19.0
12	14	40.3	339	49.1	+13 36.7	247	30.3	+21 52.4	24	51.0	-5 27.1	193	33.8	+2 19.1
13	29	42.7	354	48.6	37.8	262	32.1	52.2	39	52.9	26.9	208	36.4	19.1
14	44	45.2	9	48.1	38.9	277	33.9	51.9	54	54.8	26.7	223	39.0	19.2
15	59	47.7	24	47.6	40.0	292	35.7	51.7	69	56.8	26.5	238	41.7	19.3
16	74	50.1	39	47.1	41.1	307	37.5	51.5	84	58.7	26.3	253	44.3	19.4
17	89	52.6	54	46.6	+13 42.2	322	39.3	+21 51.2	100	00.6	-5 26.0	268	46.9	+2 19.4
18	104	55.0	69	46.1	+13 43.3	337	41.0	+21 51.0	115	02.6	-5 25.8	283	49.6	+2 19.5
19	119	57.5	84	45.6	44.4	352	42.8	50.8	130	04.5	25.6	298	52.2	19.6
20	135	00.0	99	45.2	45.5	7	44.6	50.5	145	06.5	25.4	313	54.8	19.6
21	150	02.4	114	44.7	46.6	22	46.4	50.3	160	08.4	25.2	328	57.5	19.7
22	165	04.9	129	44.2	47.7	37	48.2	50.1	175	10.3	25.0	344	00.1	19.8
23	180	07.4	144	43.7	48.8	52	50.0	49.8	190	12.3	24.7	359	02.7	19.9
24	195	09.8	159	43.2	+13 49.9	67	51.8	+21 49.6	205	14.2	-5 24.5	14	05.4	+2 19.9
Dif	—		-5 +11			+18 -2			+19 +2			+26 +1		

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG: 12 ^h 02 ^m 1			Edad: 22 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 PMG: 6 ^h 54 ^m R°: 45 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m					
0	179	25.7	+6	42.3	259	46.0	-20	45.1	60 N	3	28	4	24	5	08	3	28				
1	194	25.9		43.3	274	17.6 ¹²⁶		37.4 ⁷⁷	58	39	31	12		13	14	44	78				
2	209	26.1		44.2	288	49.3 ¹²⁷		29.6 ⁷⁸	56	49	37	15		3	01	17	10				
3	224	26.3		45.2	303	21.1 ¹²⁸		21.8 ⁷⁸	54	3	57	42	19	2	50	20	11				
4	239	26.4		46.1	317	52.9 ¹²⁸		13.8 ⁸⁰	52	4	04	47	22		40	22	15				
5	254	26.6	+6	47.0	332	24.8 ¹²⁹	-20	05.8 ⁸⁰	50	4	11	4	51	5	24	2	32				
6	269	26.8	+6	48.0	346	56.7 ¹²⁹	-19	57.7 ⁸¹	45	4	24	5	00	5	30	2	13				
7	284	27.0		48.9	1	28.7 ¹³⁰		49.5 ⁸²	40		35	07	35	1	58	31	11				
8	299	27.1		49.9	16	00.8 ¹³¹		41.2 ⁸³	35		43	13	39		46	33	12				
9	314	27.3		50.8	30	33.0 ¹³²		32.8 ⁸⁴	30	4	50	18	43		34	36	17				
10	329	27.5		51.7	45	05.2 ¹³²		24.4 ⁸⁴	20	5	00	26	49	1	15	40	35				
11	344	27.7	+6	52.7	59	37.5 ¹³³	-19	15.8 ⁸⁶	10 N	5	08	5	33	5	54	0	58				
12	359	27.8	+6	53.6	74	09.8 ¹³³	-19	07.2 ⁸⁶	0	5	14	5	38	5	59	0	43				
13	14	28.0		54.6	88	42.2 ¹³⁴	-18	58.6 ⁸⁶	10 S		18	43	6	04		27	48				
14	29	28.2		55.5	103	14.7 ¹³⁵		49.8 ⁸⁸	20		21	46	09		0	10	52				
15	44	28.4		56.4	117	47.2 ¹³⁵		41.0 ⁸⁸	30		22	50	14		**	**	**				
16	59	28.5		57.4	132	19.8 ¹³⁶		32.1 ⁸⁹	35		23	52	17		**	**	**				
17	74	28.7	+6	58.3	146	52.5 ¹³⁷	-18	23.1 ⁹⁰	40	5	22	5	54	6	21	**	**				
18	89	28.9	+6	59.3	161	25.2 ¹³⁷	-18	14.0 ⁹¹	45	5	21	5	55	6	25	**	**				
19	104	29.1	+7	00.2	175	58.0 ¹³⁸	-18	04.9 ⁹¹	50		20	57	30		23	59	67				
20	119	29.2		01.1	190	30.8 ¹³⁸	-17	55.7 ⁹²	52		19	58	32		51	70	51				
21	134	29.4		02.1	205	03.7 ¹³⁹		46.4 ⁹³	54		18	5	59	34		44	71				
22	149	29.6		03.0	219	36.7 ¹⁴⁰		37.0 ⁹⁴	56		17	6	00	37		35	74				
23	164	29.8		03.9	234	09.7 ¹⁴⁰		27.6 ⁹⁴	58		15	00	40		25	77	19				
24	179	29.9	+7	04.9	248	42.7 ¹⁴⁰	-17	18.1 ⁹⁵	60 S	5	13	6	01	6	43	23	13				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 10 ^h 57 ^m 5			Mag: -3.9 PMG: 13 ^h 22 ^m			Mag: +0.3 PMG: 19 ^h 26 ^m			Mag: -2.1 PMG: 10 ^h 18 ^m			Mag: +0.6 PMG: 23 ^h 00 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'					
0	195	09.8		159	43.2	+13	49.9	67	51.8	+21	49.6	205	14.2	-5	24.5	14	05.4				
1	210	12.3		174	42.7		51.0	82	53.5		49.4	220	16.1		24.3	29	08.0				
2	225	14.8		189	42.2		52.1	97	55.3		49.1	235	18.1		24.1	44	10.6				
3	240	17.2		204	41.7		53.2	112	57.1		48.9	250	20.0		23.9	59	13.3				
4	255	19.7		219	41.2		54.3	127	58.9		48.7	265	22.0		23.7	74	15.9				
5	270	22.2		234	40.7	+13	55.4	143	00.7	+21	48.4	280	23.9	-5	23.4	89	18.5				
6	285	24.6		249	40.2	+13	56.5	158	02.5	+21	48.2	295	25.8	-5	23.2	104	21.2				
7	300	27.1		264	39.7		57.6	173	04.2		47.9	310	27.8		23.0	119	23.8				
8	315	29.5		279	39.2		58.7	188	06.0		47.7	325	29.7		22.8	134	26.4				
9	330	32.0		294	38.7	+13	59.8	203	07.8		47.5	340	31.7		22.6	149	29.1				
10	345	34.5		309	38.2	+14	00.9	218	09.6		47.2	355	33.6		22.4	164	31.7				
11	0	36.9		324	37.7	+14	01.9	233	11.3	+21	47.0	10	35.5	-5	22.1	179	34.3				
12	15	39.4		339	37.2	+14	03.0	248	13.1	+21	46.8	25	37.5	-5	21.9	194	37.0				
13	30	41.9		354	36.7		04.1	263	14.9		46.5	40	39.4		21.7	209	39.6				
14	45	44.3		9	36.2		05.2	278	16.7		46.3	55	41.3		21.5	224	42.2				
15	60	46.8		24	35.7		06.3	293	18.4		46.1	70	43.3		21.3	239	44.9				
16	75	49.3		39	35.2		07.4	308	20.2		45.8	85	45.2		21.1	254	47.5				
17	90	51.7		54	34.7	+14	08.5	323	22.0	+21	45.6	100	47.2	-5	20.8	269	50.1				
18	105	54.2		69	34.2	+14	09.6	338	23.8	+21	45.3	115	49.1	-5	20.6	284	52.8				
19	120	56.6		84	33.7		10.7	353	25.5		45.1	130	51.0		20.4	299	55.4				
20	135	59.1		99	33.2		11.7	8	27.3		44.9	145	53.0		20.2	314	58.0				
21	151	01.6		114	32.7		12.8	23	29.1		44.6	160	54.9		20.0	330	00.7				
22	166	04.0		129	32.2		13.9	38	30.8		44.4	175	56.9		19.7	345	03.3				
23	181	06.5		144	31.7		15.0	53	32.6		44.1	190	58.8		19.5	0	05.9				
24	196	09.0		159	31.2	+14	16.1	68	34.4	+21	43.9	206	00.7	-5	19.3	15	08.5				
Dif	—			-5			+11	+18			-2			+19			+2	+26			+1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 9		Edad: 23 ^d 1 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1 SD: 14'8 PMG: 7 ^h 39 ^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	h m	m	h m	m
0	179	29.9	+7 04.9	248	42.7	-17 18.1	60 N	19 01	19 45	20 42	3 38	7	11 52	80	
1	194	30.1	05.8	263	15.9 ¹⁴²	-17 08.6 ⁹⁵	58	18 56	38	30	27	10	12 02	77	
2	209	30.3	06.8	277	49.1 ¹⁴²	-16 58.9 ⁹⁷	56	52	31	20	18	13	10 74		
3	224	30.5	07.7	292	22.3 ¹⁴²	49.2 ⁹⁷	54	49	26	11	10	15	18 7		
4	239	30.6	08.6	306	55.6 ¹⁴³	39.5 ⁹⁷	52	45	21	20 04	3 02	18	25 69		
5	254	30.8	+7 09.6	321	29.0 ¹⁴⁴	-16 29.6 ⁹⁹	50	18 43	19 16	19 57	2 56	19	12 31	67	
6	269	31.0	+7 10.5	336	02.4 ¹⁴⁴	-16 19.7 ⁹⁹	45	18 36	19 06	19 43	2 41	24	12 44	63	
7	284	31.1	11.4	350	35.8 ¹⁴⁴	-16 09.8 ⁹⁹	40	31	18 59	32	29	27	12 55	59	
8	299	31.3	12.4	5	09.3 ¹⁴⁵	-15 59.8 ¹⁰⁰	35	27	52	23	19	30	13 04	57	
9	314	31.5	13.3	19	42.9 ¹⁴⁶	49.7 ¹⁰¹	30	23	47	16	2 10	32	12 54		
10	329	31.7	14.2	34	16.5 ¹⁴⁶	39.5 ¹⁰²	20	16	38	19 04	1 55	36	26 50		
11	344	31.8	+7 15.2	48	50.2 ¹⁴⁷	-15 29.3 ¹⁰²	10 N	18 10	18 32	18 56	1 41	40	13 38	46	
12	359	32.0	+7 16.1	63	23.9 ¹⁴⁷	-15 19.1 ¹⁰²	0	18 05	18 26	18 50	1 28	43	13 49	42	
13	14	32.2	17.0	77	57.7 ¹⁴⁸	-15 08.7 ¹⁰⁴	10 S	18 00	21	46	15	47	14 00	39	
14	29	32.4	18.0	92	31.5 ¹⁴⁸	-14 58.3 ¹⁰⁴	20	17 55	17	42	1 02	50	12 35		
15	44	32.5	18.9	107	05.4 ¹⁴⁹	47.9 ¹⁰⁴	30	49	13	40	0 46	54	26 30		
16	59	32.7	19.8	121	39.3 ¹⁴⁹	37.4 ¹⁰⁵	35	45	11	40	37	56	33 29		
17	74	32.9	+7 20.8	136	13.2 ¹⁴⁹	-14 26.8 ¹⁰⁶	40	17 41	18 08	18 40	0 26	60	14 42	26	
18	89	33.0	+7 21.7	150	47.2 ¹⁵⁰	-14 16.2 ¹⁰⁶	45	17 37	18 06	18 40	0 14	63	14 52	22	
19	104	33.2	22.6	165	21.3 ¹⁵¹	-14 05.5 ¹⁰⁷	50	32	04	41	** ** *	**	15 04	19	
20	119	33.4	23.6	179	55.4 ¹⁵¹	-13 54.8 ¹⁰⁷	52	29	03	42	** ** *	**	10 16		
21	134	33.6	24.5	194	29.5 ¹⁵¹	44.0 ¹⁰⁸	54	27	02	43	** ** *	**	16 15		
22	149	33.7	25.4	209	03.7 ¹⁵²	33.2 ¹⁰⁸	56	24	01	44	** ** *	**	23 12		
23	164	33.9	26.4	223	37.9 ¹⁵²	22.3 ¹⁰⁹	58	21	18 00	45	** ** *	**	31 9		
24	179	34.1	+7 27.3	238	12.2 ¹⁵³	-13 11.3 ¹¹⁰	60 S	17 17	17 59	18 47	** ** *	**	15 40	6	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 53 ^m 6		Mag: -3.9 PMG: 13 ^h 22 ^m			Mag: +0.3 PMG: 19 ^h 23 ^m			Mag: -2.1 PMG: 10 ^h 15 ^m			Mag: +0.6 PMG: 22 ^h 55 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	196	09.0	159	31.2	+14 16.1	68	34.4	+21 43.9	206	00.7	-5 19.3	15	08.5	+2 21.6	
1	211	11.4	174	30.7	17.2	83	36.1	43.7	221	02.7	19.1	30	11.2	21.7	
2	226	13.9	189	30.2	18.2	98	37.9	43.4	236	04.6	18.9	45	13.8	21.8	
3	241	16.4	204	29.7	19.3	113	39.7	43.2	251	06.6	18.7	60	16.4	21.8	
4	256	18.8	219	29.2	20.4	128	41.4	42.9	266	08.5	18.4	75	19.1	21.9	
5	271	21.3	234	28.7	+14 21.5	143	43.2	+21 42.7	281	10.4	-5 18.2	90	21.7	+2 22.0	
6	286	23.8	249	28.2	+14 22.6	158	45.0	+21 42.5	296	12.4	-5 18.0	105	24.3	+2 22.1	
7	301	26.2	264	27.7	23.6	173	46.7	42.2	311	14.3	17.8	120	27.0	22.1	
8	316	28.7	279	27.2	24.7	188	48.5	42.0	326	16.3	17.6	135	29.6	22.2	
9	331	31.1	294	26.6	25.8	203	50.2	41.7	341	18.2	17.4	150	32.2	22.3	
10	346	33.6	309	26.1	26.9	218	52.0	41.5	356	20.2	17.2	165	34.9	22.3	
11	1	36.1	324	25.6	+14 27.9	233	53.7	+21 41.3	11	22.1	-5 16.9	180	37.5	+2 22.4	
12	16	38.5	339	25.1	+14 29.0	248	55.5	+21 41.0	26	24.0	-5 16.7	195	40.1	+2 22.5	
13	31	41.0	354	24.6	30.1	263	57.3	40.8	41	26.0	16.5	210	42.8	22.5	
14	46	43.5	9	24.1	31.2	278	59.0	40.5	56	27.9	16.3	225	45.4	22.6	
15	61	45.9	24	23.6	32.2	294	00.8	40.3	71	29.9	16.1	240	48.0	22.7	
16	76	48.4	39	23.1	33.3	309	02.5	40.0	86	31.8	15.9	255	50.6	22.8	
17	91	50.9	54	22.6	+14 34.4	324	04.3	+21 39.8	101	33.7	-5 15.6	270	53.3	+2 22.8	
18	106	53.3	69	22.1	+14 35.5	339	06.0	+21 39.6	116	35.7	-5 15.4	285	55.9	+2 22.9	
19	121	55.8	84	21.6	36.5	354	07.8	39.3	131	37.6	15.2	300	58.5	23.0	
20	136	58.3	99	21.0	37.6	9	09.5	39.1	146	39.6	15.0	316	01.2	23.0	
21	152	00.7	114	20.5	38.7	24	11.3	38.8	161	41.5	14.8	331	03.8	23.1	
22	167	03.2	129	20.0	39.7	39	13.0	38.6	176	43.5	14.6	346	06.4	23.2	
23	182	05.6	144	19.5	40.8	54	14.8	38.3	191	45.4	14.3	1	09.1	23.2	
24	197	08.1	159	19.0	+14 41.9	69	16.5	+21 38.1	206	47.3	-5 14.1	16	11.7	+2 23.3	
Dif	—		-5	+11		+18	-2		+19	+2		+26	+1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 6			Edad: 24 ^d 1 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2 PMG: 8 ^h 21 ^m R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	34.1	+7 27.3	238	12.2	-13 11.3		60 N	3 20	4 17	5 02	3 45	5	13 12	80
1	194	34.2	28.2	252	46.5 ¹⁵³	-13 00.3 ¹¹⁰		58	32	25	06	37	8	19	76
2	209	34.4	29.2	267	20.9 ¹⁵⁴	-12 49.3 ¹¹⁰		56	43	31	10	31	11	24	74
3	224	34.6	30.1	281	55.3 ¹⁵⁴	38.2 ¹¹¹		54	51	37	14	25	13	29	71
4	239	34.8	31.0	296	29.7 ¹⁵⁴	27.1 ¹¹¹		52	3 59	42	17	20	15	34	69
5	254	34.9	+7 32.0	311	04.1 ¹⁵⁴	-12 15.9 ¹¹²		50	4 06	4 47	5 20	3 15	17	13 38	67
6	269	35.1	+7 32.9	325	38.6 ¹⁵⁵	-12 04.6 ¹¹³		45	4 20	4 56	5 26	3 05	21	13 47	62
7	284	35.3	33.8	340	13.2 ¹⁵⁶	-11 53.3 ¹¹³		40	31	5 04	32	2 56	24	13 54	59
8	299	35.4	34.8	354	47.7 ¹⁵⁵	42.0 ¹¹³		35	40	11	36	49	27	14 01	55
9	314	35.6	35.7	9	22.4 ¹⁵⁷	30.6 ¹¹⁴		30	47	16	40	42	30	06	53
10	329	35.8	36.6	23	57.0 ¹⁵⁶	19.2 ¹¹⁴		20	4 59	25	47	31	34	16	48
11	344	35.9	+7 37.5	38	31.7 ¹⁵⁷	-11 07.7 ¹¹⁵		10 N	5 07	5 32	5 53	2 21	38	14 24	44
12	359	36.1	+7 38.5	53	06.4 ¹⁵⁷	-10 56.2 ¹¹⁵		0	5 13	5 37	5 58	2 11	42	14 31	41
13	14	36.3	39.4	67	41.1 ¹⁵⁷	44.6 ¹¹⁶		10 S	18	42	6 04	2 02	45	39	37
14	29	36.5	40.3	82	15.9 ¹⁵⁸	33.0 ¹¹⁶		20	21	47	09	1 52	49	47	34
15	44	36.6	41.3	96	50.7 ¹⁵⁸	21.4 ¹¹⁶		30	24	51	15	40	54	14 56	29
16	59	36.8	42.2	111	25.5 ¹⁵⁸	-10 09.7 ¹¹⁷		35	24	53	19	33	56	15 02	26
17	74	37.0	+7 43.1	126	00.3 ¹⁵⁸	-9 58.0 ¹¹⁷		40	5 24	5 56	6 23	1 26	59	15 08	23
18	89	37.1	+7 44.0	140	35.2 ¹⁵⁹	-9 46.2 ¹¹⁸		45	5 24	5 58	6 27	1 17	62	15 14	21
19	104	37.3	45.0	155	10.1 ¹⁵⁹	34.4 ¹¹⁸		50	23	6 00	33	06	67	23	16
20	119	37.5	45.9	169	45.0 ¹⁵⁹	22.5 ¹¹⁹		52	22	01	35	1 01	69	26	15
21	134	37.6	46.8	184	20.0 ¹⁶⁰	-9 10.7 ¹¹⁸		54	21	02	38	0 55	71	31	12
22	149	37.8	47.8	198	55.0 ¹⁶⁰	-8 58.7 ¹²⁰		56	20	03	41	49	74	35	10
23	164	38.0	48.7	213	30.0 ¹⁶⁰	46.8 ¹¹⁹		58	19	05	44	42	76	40	8
24	179	38.1	+7 49.6	228	05.0 ¹⁶⁰	-8 34.8 ¹²⁰		60 S	5 18	6 06	6 48	0 34	80	15 46	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 49 ^m 7		Mag: -3.9 PMG: 13 ^h 23 ^m		Mag: +0.3 PMG: 19 ^h 21 ^m		Mag: -2.1 PMG: 10 ^h 12 ^m		Mag: +0.6 PMG: 22 ^h 51 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	197	08.1	159	19.0	+14 41.9	69 16.5	+21 38.1	206 47.3	-5 14.1	16 11.7	+2 23.3
1	212	10.6	174	18.5	43.0	84 18.3	37.8	221 49.3	13.9	31 14.3	23.4
2	227	13.0	189	18.0	44.0	99 20.0	37.6	236 51.2	13.7	46 17.0	23.5
3	242	15.5	204	17.4	45.1	114 21.8	37.4	251 53.2	13.5	61 19.6	23.5
4	257	18.0	219	16.9	46.2	129 23.5	37.1	266 55.1	13.3	76 22.2	23.6
5	272	20.4	234	16.4	+14 47.2	144 25.3	+21 36.9	281 57.0	-5 13.0	91 24.8	+2 23.7
6	287	22.9	249	15.9	+14 48.3	159 27.0	+21 36.6	296 59.0	-5 12.8	106 27.5	+2 23.7
7	302	25.4	264	15.4	49.3	174 28.8	36.4	312 00.9	12.6	121 30.1	23.8
8	317	27.8	279	14.9	50.4	189 30.5	36.1	327 02.9	12.4	136 32.7	23.9
9	332	30.3	294	14.3	51.5	204 32.2	35.9	342 04.8	12.2	151 35.4	23.9
10	347	32.7	309	13.8	52.5	219 34.0	35.6	357 06.8	12.0	166 38.0	24.0
11	2 35.2	324 13.3	+14 53.6	234 35.7	+21 35.4	234 35.7	+21 35.4	12 08.7	-5 11.8	181 40.6	+2 24.1
12	17 37.7	339 12.8	+14 54.7	249 37.5	+21 35.1	249 37.5	+21 35.1	27 10.6	-5 11.5	196 43.2	+2 24.1
13	32 40.1	354 12.3	55.7	264 39.2	34.9	264 39.2	34.9	42 12.6	11.3	211 45.9	24.2
14	47 42.6	9 11.8	56.8	279 40.9	34.6	279 40.9	34.6	57 14.5	11.1	226 48.5	24.3
15	62 45.1	24 11.2	57.8	294 42.7	34.4	294 42.7	34.4	72 16.5	10.9	241 51.1	24.3
16	77 47.5	39 10.7	58.9	309 44.4	34.2	309 44.4	34.2	87 18.4	10.7	256 53.8	24.4
17	92 50.0	54 10.2	+14 59.9	324 46.2	+21 33.9	324 46.2	+21 33.9	102 20.4	-5 10.5	271 56.4	+2 24.5
18	107 52.5	69 09.7	+15 01.0	339 47.9	+21 33.7	339 47.9	+21 33.7	117 22.3	-5 10.2	286 59.0	+2 24.6
19	122 54.9	84 09.1	02.1	354 49.6	33.4	354 49.6	33.4	132 24.3	10.0	302 01.7	24.6
20	137 57.4	99 08.6	03.1	9 51.4	33.2	9 51.4	33.2	147 26.2	09.8	317 04.3	24.7
21	152 59.9	114 08.1	04.2	24 53.1	32.9	24 53.1	32.9	162 28.1	09.6	332 06.9	24.8
22	168 02.3	129 07.6	05.2	39 54.8	32.7	39 54.8	32.7	177 30.1	09.4	347 09.5	24.8
23	183 04.8	144 07.1	06.3	54 56.6	32.4	54 56.6	32.4	192 32.0	09.2	2 12.2	24.9
24	198 07.2	159 06.5	+15 07.3	69 58.3	+21 32.2	69 58.3	+21 32.2	207 34.0	-5 09.0	17 14.8	+2 25.0
Dif	—		-5	+11		+17	-2	+19	+2	+26	+1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 25 ^d 1 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4											
	PMG: 12 ^h 01 ^m 3		SD: 14'8 PMG: 9 ^h 03 ^m R°: 40 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	38.1	+7 49.6		228	05.0	-8 34.8	60 N	19 05	19 50	20 49	3 50	4	14 32 79
1	194	38.3		50.5	242	40.0 ¹⁶⁰	22.8 ¹²⁰	58	19 01	43	36	45	7	35 76
2	209	38.5		51.5	257	15.1 ¹⁶¹	-8 10.7 ¹²¹	56	18 56	36	25	42	9	38 73
3	224	38.6		52.4	271	50.2 ¹⁶¹	-7 58.6 ¹²¹	54	52	30	16	38	12	40 72
4	239	38.8		53.3	286	25.3 ¹⁶¹	46.5 ¹²¹	52	49	24	08	35	14	43 69
5	254	39.0	+7 54.2		301	00.4 ¹⁶¹	-7 34.3 ¹²²	50	18 46	19 19	20 00	3 32	16	14 45 67
6	269	39.2	+7 55.2		315	35.5 ¹⁶¹	-7 22.1 ¹²²	45	18 39	19 09	19 46	3 26	19	14 49 63
7	284	39.3		56.1	330	10.7 ¹⁶²	-7 09.9 ¹²²	40	33	19 01	34	20	24	53 59
8	299	39.5		57.0	344	45.8 ¹⁶¹	-6 57.6 ¹²³	35	28	18 54	25	16	26	56 56
9	314	39.7		57.9	359	21.0 ¹⁶²	45.3 ¹²³	30	24	48	17	12	28	14 59 54
10	329	39.8		58.9	13	56.2 ¹⁶²	33.0 ¹²³	20	17	39	19 05	3 05	33	15 04 49
11	344	40.0	+7 59.8		28	31.4 ¹⁶²	-6 20.6 ¹²⁴	10 N	18 10	18 32	18 56	2 59	37	15 08 45
12	359	40.2	+8 00.7		43	06.6 ¹⁶²	-6 08.3 ¹²³	0	18 05	18 25	18 50	2 53	41	15 12 41
13	14	40.3		01.6	57	41.9 ¹⁶³	-5 55.9 ¹²⁴	10 S	17 59	20	45	47	45	16 37
14	29	40.5		02.6	72	17.1 ¹⁶²	43.4 ¹²⁵	20	53	15	41	41	48	21 33
15	44	40.7		03.5	86	52.3 ¹⁶²	31.0 ¹²⁴	30	46	10	38	34	53	25 29
16	59	40.8		04.4	101	27.6 ¹⁶³	18.5 ¹²⁵	35	43	08	37	29	56	28 26
17	74	41.0	+8 05.3		116	02.8 ¹⁶²	-5 06.0 ¹²⁵	40	17 38	18 05	18 37	2 25	59	15 31 23
18	89	41.2	+8 06.2		130	38.1 ¹⁶³	-4 53.5 ¹²⁵	45	17 33	18 03	18 37	2 19	63	15 35 19
19	104	41.3		07.2	145	13.4 ¹⁶³	40.9 ¹²⁶	50	28	18 00	37	13	66	39 15
20	119	41.5		08.1	159	48.6 ¹⁶²	28.3 ¹²⁶	52	25	17 59	38	10	68	41 13
21	134	41.7		09.0	174	23.9 ¹⁶³	15.7 ¹²⁶	54	22	58	38	06	71	43 11
22	149	41.8		09.9	188	59.2 ¹⁶³	-4 03.1 ¹²⁶	56	19	56	39	2 03	73	45 9
23	164	42.0		10.9	203	34.5 ¹⁶³	-3 50.5 ¹²⁶	58	15	55	40	1 58	77	48 6
24	179	42.1	+8 11.8		218	09.8 ¹⁶³	-3 37.8 ¹²⁷	60 S	17 11	17 53	18 41	1 54	79	15 50 4
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 10 ^h 45 ^m 7		Mag: -3.9 PMG: 13 ^h 24 ^m			Mag: +0.4 PMG: 19 ^h 18 ^m			Mag: -2.1 PMG: 10 ^h 08 ^m		Mag: +0.7 PMG: 22 ^h 47 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	198	07.2	159	06.5	+15 07.3		69 58.3	+21 32.2	207 34.0	-5 09.0		17 14.8	+2 25.0	
1	213	09.7	174	06.0		08.4	85 00.0	31.9	222 35.9	08.7		32 17.4	25.0	
2	228	12.2	189	05.5		09.4	100 01.7	31.7	237 37.9	08.5		47 20.1	25.1	
3	243	14.6	204	05.0		10.5	115 03.5	31.4	252 39.8	08.3		62 22.7	25.2	
4	258	17.1	219	04.4		11.5	130 05.2	31.2	267 41.8	08.1		77 25.3	25.2	
5	273	19.6	234	03.9	+15 12.6		145 06.9	+21 30.9	282 43.7	-5 07.9		92 27.9	+2 25.3	
6	288	22.0	249	03.4	+15 13.6		160 08.7	+21 30.7	297 45.6	-5 07.7		107 30.6	+2 25.4	
7	303	24.5	264	02.9		14.7	175 10.4	30.4	312 47.6	07.4		122 33.2	25.4	
8	318	27.0	279	02.3		15.7	190 12.1	30.2	327 49.5	07.2		137 35.8	25.5	
9	333	29.4	294	01.8		16.8	205 13.8	29.9	342 51.5	07.0		152 38.5	25.6	
10	348	31.9	309	01.3		17.8	220 15.6	29.7	357 53.4	06.8		167 41.1	25.7	
11	3	34.4	324	00.7	+15 18.9		235 17.3	+21 29.4	12 55.4	-5 06.6		182 43.7	+2 25.7	
12	18	36.8	339	00.2	+15 19.9		250 19.0	+21 29.2	27 57.3	-5 06.4		197 46.3	+2 25.8	
13	33	39.3	353	59.7		21.0	265 20.7	28.9	42 59.3	06.2		212 49.0	25.9	
14	48	41.7	8	59.2		22.0	280 22.4	28.7	58 01.2	05.9		227 51.6	25.9	
15	63	44.2	23	58.6		23.1	295 24.2	28.4	73 03.1	05.7		242 54.2	26.0	
16	78	46.7	38	58.1		24.1	310 25.9	28.2	88 05.1	05.5		257 56.8	26.1	
17	93	49.1	53	57.6	+15 25.1		325 27.6	+21 27.9	103 07.0	-5 05.3		272 59.5	+2 26.1	
18	108	51.6	68	57.0	+15 26.2		340 29.3	+21 27.6	118 09.0	-5 05.1		288 02.1	+2 26.2	
19	123	54.1	83	56.5		27.2	355 31.0	27.4	133 10.9	04.9		303 04.7	26.3	
20	138	56.5	98	56.0		28.3	10 32.8	27.1	148 12.9	04.7		318 07.4	26.3	
21	153	59.0	113	55.4		29.3	25 34.5	26.9	163 14.8	04.4		333 10.0	26.4	
22	169	01.5	128	54.9		30.3	40 36.2	26.6	178 16.8	04.2		348 12.6	26.5	
23	184	03.9	143	54.4		31.4	55 37.9	26.4	193 18.7	04.0		3 15.2	26.5	
24	199	06.4	158	53.8	+15 32.4		70 39.6	+21 26.1	208 20.7	-5 03.8		18 17.9	+2 26.6	
Dif	—		-5		+10		+17	-3	+19		+2	+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: 26 ^d 1 PHE { SD: 14'8 PMG: 9 ^h 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	
0	179	42.1	+8 11.8	218	09.8	-3 37.8	60 N	3 13	4 11	4 56		3 54	4	15 51 80	
1	194	42.3		232	45.0 ¹⁶²	25.1 ¹²⁷	58	25	19	5 01		52	7	51 78	
2	209	42.5		247	20.3 ¹⁶³	-3 12.4 ¹²⁷	56	36	26	05		51	9	51 75	
3	224	42.6		261	55.6 ¹⁶³	-2 59.7 ¹²⁷	54	46	32	09		50	11	52 72	
4	239	42.8		276	30.9 ¹⁶³	47.0 ¹²⁷	52	3 54	37	13		49	13	52 70	
5	254	43.0	+8 16.4	291	06.1 ¹⁶²	-2 34.2 ¹²⁸	50	4 01	4 42	5 16		3 48	15	15 52 68	
6	269	43.1	+8 17.3	305	41.4 ¹⁶³	-2 21.4 ¹²⁸	45	4 16	4 53	5 23		3 45	20	15 52 64	
7	284	43.3		320	16.6 ¹⁶²	-2 08.7 ¹²⁷	40	28	5 01	29		44	22	52 60	
8	299	43.5		334	51.9 ¹⁶³	-1 55.9 ¹²⁸	35	37	08	34		42	26	52 57	
9	314	43.6		349	27.1 ¹⁶²	43.0 ¹²⁹	30	45	14	38		40	29	53 54	
10	329	43.8		4	02.4 ¹⁶³	30.2 ¹²⁸	20	4 57	23	45		38	33	53 49	
11	344	44.0	+8 21.9	18	37.6 ¹⁶²	-1 17.4 ¹²⁸	10 N	5 06	5 31	5 52		3 36	37	15 53 45	
12	359	44.1	+8 22.8	33	12.8 ¹⁶²	-1 04.5 ¹²⁹	0	5 13	5 37	5 58		3 34	41	15 53 42	
13	14	44.3		47	48.0 ¹⁶²	-0 51.7 ¹²⁸	10 S	18	42	6 04		32	44	53 38	
14	29	44.4		62	23.2 ¹⁶²	38.8 ¹²⁹	20	22	48	10		29	49	54 33	
15	44	44.6		76	58.4 ¹⁶²	25.9 ¹²⁹	30	25	52	17		27	53	54 28	
16	59	44.8		91	33.5 ¹⁶¹	13.0 ¹²⁹	35	26	55	20		25	57	54 26	
17	74	44.9	+8 27.4	106	08.7 ¹⁶²	-0 00.2 ¹²⁸	40	5 26	5 58	6 25		3 24	59	15 54 23	
18	89	45.1	+8 28.3	120	43.8 ¹⁶¹	+0 12.8 ¹³⁰	45	5 26	6 00	6 30		3 22	63	15 54 20	
19	104	45.3		135	18.9 ¹⁶¹	25.7 ¹²⁹	50	26	03	36		19	68	54 16	
20	119	45.4		149	54.0 ¹⁶¹	38.6 ¹²⁹	52	25	05	39		18	70	54 14	
21	134	45.6		164	29.1 ¹⁶¹	+0 51.5 ¹²⁹	54	25	06	42		17	72	54 12	
22	149	45.8		179	04.2 ¹⁶¹	+1 04.4 ¹²⁹	56	24	07	45		16	74	54 10	
23	164	45.9		193	39.2 ¹⁶⁰	17.3 ¹²⁹	58	23	09	49		15	76	54 7	
24	179	46.1	+8 33.8	208	14.2 ¹⁶⁰	+1 30.3 ¹³⁰	60 S	5 22	6 11	6 53		3 13	80	15 54 5	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 41 ^m 8			Mag: -3.9 PMG: 13 ^h 25 ^m			Mag: +0.4 PMG: 19 ^h 15 ^m			Mag: -2.1 PMG: 10 ^h 05 ^m			Mag: +0.7 PMG: 22 ^h 43 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	199	06.4		158	53.8	+15 32.4	70	39.6	+21 26.1	208	20.7	-5 03.8	18	17.9	+2 26.6
1	214	08.8		173	53.3	33.4	85	41.3	25.9	223	22.6	03.6	33	20.5	26.7
2	229	11.3		188	52.8	34.5	100	43.0	25.6	238	24.6	03.4	48	23.1	26.7
3	244	13.8		203	52.2	35.5	115	44.8	25.4	253	26.5	03.2	63	25.7	26.8
4	259	16.2		218	51.7	36.6	130	46.5	25.1	268	28.4	02.9	78	28.4	26.9
5	274	18.7		233	51.2	+15 37.6	145	48.2	+21 24.9	283	30.4	-5 02.7	93	31.0	+2 26.9
6	289	21.2		248	50.6	+15 38.6	160	49.9	+21 24.6	298	32.3	-5 02.5	108	33.6	+2 27.0
7	304	23.6		263	50.1	39.7	175	51.6	24.3	313	34.3	02.3	123	36.2	27.1
8	319	26.1		278	49.5	40.7	190	53.3	24.1	328	36.2	02.1	138	38.9	27.1
9	334	28.6		293	49.0	41.7	205	55.0	23.8	343	38.2	01.9	153	41.5	27.2
10	349	31.0		308	48.5	42.7	220	56.7	23.6	358	40.1	01.7	168	44.1	27.3
11	4	33.5		323	47.9	+15 43.8	235	58.4	+21 23.3	13	42.1	-5 01.4	183	46.8	+2 27.3
12	19	36.0		338	47.4	+15 44.8	251	00.1	+21 23.1	28	44.0	-5 01.2	198	49.4	+2 27.4
13	34	38.4		353	46.8	45.8	266	01.8	22.8	43	46.0	01.0	213	52.0	27.5
14	49	40.9		8	46.3	46.9	281	03.5	22.6	58	47.9	00.8	228	54.6	27.5
15	64	43.3		23	45.8	47.9	296	05.2	22.3	73	49.9	00.6	243	57.3	27.6
16	79	45.8		38	45.2	48.9	311	06.9	22.0	88	51.8	00.4	258	59.9	27.7
17	94	48.3		53	44.7	+15 49.9	326	08.7	+21 21.8	103	53.8	-5 00.2	274	02.5	+2 27.7
18	109	50.7		68	44.1	+15 51.0	341	10.4	+21 21.5	118	55.7	-4 59.9	289	05.1	+2 27.8
19	124	53.2		83	43.6	52.0	356	12.1	21.3	133	57.7	59.7	304	07.8	27.9
20	139	55.7		98	43.1	53.0	11	13.8	21.0	148	59.6	59.5	319	10.4	27.9
21	154	58.1		113	42.5	54.0	26	15.5	20.8	164	01.6	59.3	334	13.0	28.0
22	170	00.6		128	42.0	55.1	41	17.2	20.5	179	03.5	59.1	349	15.6	28.1
23	185	03.1		143	41.4	56.1	56	18.8	20.2	194	05.4	58.9	4	18.3	28.1
24	200	05.5		158	40.9	+15 57.1	71	20.5	+21 20.0	209	07.4	-4 58.7	19	20.9	+2 28.2
Dif	—			-5 +10			+17 -3			+19 +2			+26 +1		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 00 ^m 8		Edad: 27 ^d 1 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'0 R°: 43 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	46.1	+8 33.8	208	14.2	+1 30.3	60 N	19 10	19 56	20 56	3 58 5	17 11	83		
1	194	46.2		222	49.2 ¹⁶⁰	43.2 ¹²⁹	58	05	47	42	3 59 8	09 79			
2	209	46.4		237	24.2 ¹⁶⁰	+1 56.1 ¹²⁹	56	19 00	40	30	4 00 10	06 77			
3	224	46.6		251	59.1 ¹⁵⁹	+2 09.1 ¹³⁰	54	18 56	34	21	01 13	04 74			
4	239	46.7		266	34.0 ¹⁵⁹	22.0 ¹²⁹	52	52	28	12	02 15	02 71			
5	254	46.9	+8 38.4	281	08.9 ¹⁵⁹	+2 34.9 ¹²⁹	50	18 49	19 23	20 04	4 03 16	17 00	69		
6	269	47.0	+8 39.3	295	43.8 ¹⁵⁹	+2 47.9 ¹³⁰	45	18 41	19 12	19 49	4 05 20	16 56	65		
7	284	47.2		310	18.6 ¹⁵⁸	+3 00.8 ¹²⁹	40	35	19 03	36	06 24	52 62			
8	299	47.4		324	53.4 ¹⁵⁸	13.7 ¹²⁹	35	30	18 56	27	08 27	49 59			
9	314	47.5		339	28.2 ¹⁵⁸	26.6 ¹²⁹	30	25	50	19	09 29	47 55			
10	329	47.7		354	02.9 ¹⁵⁷	39.5 ¹²⁹	20	17	40	19 06	11 34	42 51			
11	344	47.9	+8 43.9	8	37.7 ¹⁵⁸	+3 52.5 ¹³⁰	10 N	18 10	18 32	18 57	4 13 38	16 38	47		
12	359	48.0	+8 44.8	23	12.3 ¹⁵⁶	+4 05.4 ¹²⁹	0	18 04	18 25	18 49	4 15 42	16 35	42		
13	14	48.2		37	47.0 ¹⁵⁷	18.2 ¹²⁸	10 S	17 58	19	44	16 46	31 39			
14	29	48.3		52	21.6 ¹⁵⁶	31.1 ¹²⁹	20	51	14	39	18 50	27 35			
15	44	48.5		66	56.2 ¹⁵⁶	44.0 ¹²⁹	30	44	08	36	20 55	22 31			
16	59	48.7		81	30.7 ¹⁵⁵	+4 56.9 ¹²⁹	35	40	05	35	22 57	20 28			
17	74	48.8	+8 49.3	96	05.2 ¹⁵⁵	+5 09.7 ¹²⁸	40	17 35	18 02	18 34	4 23 61	16 17	25		
18	89	49.0	+8 50.2	110	39.7 ¹⁵⁵	+5 22.6 ¹²⁹	45	17 30	17 59	18 33	4 25 64	16 14	21		
19	104	49.1		125	14.1 ¹⁵⁴	35.4 ¹²⁸	50	23	56	33	27 69	10 17			
20	119	49.3		139	48.5 ¹⁵⁴	+5 48.2 ¹²⁸	52	20	55	34	28 71	08 15			
21	134	49.5		154	22.9 ¹⁵⁴	+6 01.0 ¹²⁸	54	17	53	34	29 73	06 13			
22	149	49.6		168	57.2 ¹⁵³	13.8 ¹²⁸	56	14	51	34	30 76	04 10			
23	164	49.8		183	31.4 ¹⁵²	26.6 ¹²⁸	58	10	49	35	31 79	16 01	8		
24	179	49.9	+8 55.7	198	05.6 ¹⁵²	+6 39.3 ¹²⁷	60 S	17 05	17 48	18 36	4 33 81	15 59	5		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 37 ^m 9		Mag: -3.9 PMG: 13 ^h 26 ^m		Mag: +0.4 PMG: 19 ^h 12 ^m		Mag: -2.1 PMG: 10 ^h 02 ^m		Mag: +0.7 PMG: 22 ^h 39 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	200	05.5	158	40.9	+15 57.1	71 20.5	+21 20.0	209 07.4	-4 58.7	19 20.9	+2 28.2				
1	215	08.0	173	40.3	58.1	86 22.2	19.7	224 09.3	58.5	34 23.5	28.3				
2	230	10.4	188	39.8	+15 59.1	101 23.9	19.5	239 11.3	58.2	49 26.1	28.3				
3	245	12.9	203	39.2	+16 00.2	116 25.6	19.2	254 13.2	58.0	64 28.8	28.4				
4	260	15.4	218	38.7	01.2	131 27.3	18.9	269 15.2	57.8	79 31.4	28.5				
5	275	17.8	233	38.2	+16 02.2	146 29.0	+21 18.7	284 17.1	-4 57.6	94 34.0	+2 28.5				
6	290	20.3	248	37.6	+16 03.2	161 30.7	+21 18.4	299 19.1	-4 57.4	109 36.6	+2 28.6				
7	305	22.8	263	37.1	04.2	176 32.4	18.2	314 21.0	57.2	124 39.3	28.7				
8	320	25.2	278	36.5	05.2	191 34.1	17.9	329 23.0	57.0	139 41.9	28.7				
9	335	27.7	293	36.0	06.3	206 35.8	17.6	344 24.9	56.7	154 44.5	28.8				
10	350	30.2	308	35.4	07.3	221 37.5	17.4	359 26.9	56.5	169 47.1	28.9				
11	5	32.6	323	34.9	+16 08.3	236 39.2	+21 17.1	14 28.8	-4 56.3	184 49.8	+2 28.9				
12	20	35.1	338	34.3	+16 09.3	251 40.9	+21 16.9	29 30.8	-4 56.1	199 52.4	+2 29.0				
13	35	37.6	353	33.8	10.3	266 42.6	16.6	44 32.7	55.9	214 55.0	29.1				
14	50	40.0	8	33.2	11.3	281 44.2	16.3	59 34.7	55.7	229 57.6	29.1				
15	65	42.5	23	32.7	12.3	296 45.9	16.1	74 36.6	55.5	245 00.3	29.2				
16	80	44.9	38	32.1	13.3	311 47.6	15.8	89 38.6	55.3	260 02.9	29.3				
17	95	47.4	53	31.6	+16 14.4	326 49.3	+21 15.6	104 40.5	-4 55.0	275 05.5	+2 29.3				
18	110	49.9	68	31.0	+16 15.4	341 51.0	+21 15.3	119 42.5	-4 54.8	290 08.1	+2 29.4				
19	125	52.3	83	30.4	16.4	356 52.7	15.0	134 44.4	54.6	305 10.7	29.5				
20	140	54.8	98	29.9	17.4	11 54.4	14.8	149 46.4	54.4	320 13.4	29.5				
21	155	57.3	113	29.3	18.4	26 56.0	14.5	164 48.3	54.2	335 16.0	29.6				
22	170	59.7	128	28.8	19.4	41 57.7	14.2	179 50.3	54.0	350 18.6	29.7				
23	186	02.2	143	28.2	20.4	56 59.4	14.0	194 52.2	53.8	5 21.2	29.7				
24	201	04.7	158	27.7	+16 21.4	72 01.1	+21 13.7	209 54.2	-4 53.5	20 23.9	+2 29.8				
Dif	—		-6	+10		+17	-3	+19	+2		+26	+1			

UT	SOL			● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 0 PMG: 12 ^h 00 ^m 5			Edad: 28 ^d 1 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /3 20 ^h : 55 ^m /5 PMG: 11 ^h 07 ^m R ^o : 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	179	49.9	+8	55.7	198	05.6	+6	39.3	60 N	3 05	4 04	4 50	4 03	5	18 34 87			
1	194	50.1		56.6	212	39.8 ¹⁵²	+6	52.0 ¹²⁷	58	18	13	4 55	07	9	28 83			
2	209	50.2		57.5	227	13.9 ¹⁵¹	+7	04.8 ¹²⁸	56	30	20	5 00	10	12	23 79			
3	224	50.4		58.4	241	48.0 ¹⁵¹		17.4 ¹²⁶	54	40	27	04	14	14	18 76			
4	239	50.6	+8	59.3	256	22.1 ¹⁵¹		30.1 ¹²⁷	52	49	33	08	17	16	13 75			
5	254	50.7	+9	00.2	270	56.0 ¹⁴⁹	+7	42.8 ¹²⁷	50	3 56	4 38	5 12	4 19	18	18 09 72			
6	269	50.9	+9	01.1	285	30.0 ¹⁵⁰	+7	55.4 ¹²⁶	45	4 12	4 49	5 19	4 25	23	18 01 67			
7	284	51.0		02.1	300	03.9 ¹⁴⁹	+8	08.0 ¹²⁶	40	24	4 58	26	30	26	17 54 63			
8	299	51.2		03.0	314	37.7 ¹⁴⁸		20.6 ¹²⁶	35	34	5 05	31	35	29	48 60			
9	314	51.4		03.9	329	11.5 ¹⁴⁸		33.1 ¹²⁵	30	42	11	36	38	32	42 58			
10	329	51.5		04.8	343	45.2 ¹⁴⁷		45.7 ¹²⁶	20	4 55	21	44	45	36	33 53			
11	344	51.7	+9	05.7	358	18.9 ¹⁴⁷	+8	58.2 ¹²⁵	10 N	5 05	5 29	5 51	4 51	40	17 25 49			
12	359	51.8	+9	06.6	12	52.5 ¹⁴⁶	+9	10.6 ¹²⁴	0	5 12	5 36	5 57	4 57	44	17 17 46			
13	14	52.0		07.5	27	26.1 ¹⁴⁶		23.1 ¹²⁵	10 S	18	42	6 04	5 02	48	10 42			
14	29	52.1		08.4	41	59.6 ¹⁴⁵		35.5 ¹²⁴	20	22	48	10	08	52	17 02 38			
15	44	52.3		09.3	56	33.1 ¹⁴⁵	+9	47.9 ¹²⁴	30	26	54	18	15	57	16 53 33			
16	59	52.5		10.2	71	06.5 ¹⁴⁴	+10	00.2 ¹²³	35	27	56	22	19	60	48 30			
17	74	52.6	+9	11.1	85	39.8 ¹⁴³	+10	12.5 ¹²³	40	5 28	5 59	6 27	5 24	63	16 42 27			
18	89	52.8	+9	12.0	100	13.1 ¹⁴³	+10	24.8 ¹²³	45	5 29	6 03	6 32	5 29	67	16 35 24			
19	104	52.9		12.9	114	46.3 ¹⁴²		37.0 ¹²²	50	29	06	39	36	71	27 19			
20	119	53.1		13.8	129	19.5 ¹⁴²	+10	49.3 ¹²³	52	29	08	42	39	73	23 17			
21	134	53.2		14.7	143	52.6 ¹⁴¹	+11	01.4 ¹²¹	54	28	09	45	42	76	19 15			
22	149	53.4		15.6	158	25.6 ¹⁴⁰		13.6 ¹²²	56	28	11	49	46	78	14 13			
23	164	53.5		16.5	172	58.6 ¹⁴⁰		25.6 ¹²⁰	58	28	13	53	50	81	09 10			
24	179	53.7	+9	17.4	187	31.5 ¹³⁹	+11	37.7 ¹²¹	60 S	5 27	6 15	6 58	5 54	85	16 04 6			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 34 ^m 0		Mag: -3.9 PMG: 13 ^h 27 ^m			Mag: +0.4 PMG: 19 ^h 10 ^m			Mag: -2.1 PMG: 9 ^h 59 ^m			Mag: +0.7 PMG: 22 ^h 34 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	201	04.7	158	27.7	+16	21.4	72	01.1	+21	13.7	209	54.2	-4	53.5	20	23.9	+2	29.8
1	216	07.1	173	27.1		22.4	87	02.8		13.5	224	56.1		53.3	35	26.5		29.9
2	231	09.6	188	26.6		23.4	102	04.4		13.2	239	58.1		53.1	50	29.1		29.9
3	246	12.0	203	26.0		24.4	117	06.1		12.9	255	00.0		52.9	65	31.7		30.0
4	261	14.5	218	25.4		25.4	132	07.8		12.7	270	02.0		52.7	80	34.4		30.1
5	276	17.0	233	24.9	+16	26.4	147	09.5	+21	12.4	285	03.9	-4	52.5	95	37.0	+2	30.1
6	291	19.4	248	24.3	+16	27.4	162	11.2	+21	12.1	300	05.9	-4	52.3	110	39.6	+2	30.2
7	306	21.9	263	23.8		28.4	177	12.8		11.9	315	07.8		52.1	125	42.2		30.3
8	321	24.4	278	23.2		29.4	192	14.5		11.6	330	09.8		51.8	140	44.8		30.3
9	336	26.8	293	22.7		30.4	207	16.2		11.3	345	11.7		51.6	155	47.5		30.4
10	351	29.3	308	22.1		31.4	222	17.9		11.1	0	13.7		51.4	170	50.1		30.4
11	6	31.8	323	21.5	+16	32.4	237	19.5	+21	10.8	15	15.7	-4	51.2	185	52.7	+2	30.5
12	21	34.2	338	21.0	+16	33.4	252	21.2	+21	10.5	30	17.6	-4	51.0	200	55.3	+2	30.6
13	36	36.7	353	20.4		34.4	267	22.9		10.3	45	19.6		50.8	215	58.0		30.6
14	51	39.2	8	19.9		35.4	282	24.6		10.0	60	21.5		50.6	231	00.6		30.7
15	66	41.6	23	19.3		36.4	297	26.2		09.7	75	23.5		50.4	246	03.2		30.8
16	81	44.1	38	18.7		37.4	312	27.9		09.5	90	25.4		50.2	261	05.8		30.8
17	96	46.5	53	18.2	+16	38.4	327	29.6	+21	09.2	105	27.4	-4	49.9	276	08.4	+2	30.9
18	111	49.0	68	17.6	+16	39.3	342	31.2	+21	08.9	120	29.3	-4	49.7	291	11.1	+2	31.0
19	126	51.5	83	17.0		40.3	357	32.9		08.7	135	31.3		49.5	306	13.7		31.0
20	141	53.9	98	16.5		41.3	12	34.6		08.4	150	33.2		49.3	321	16.3		31.1
21	156	56.4	113	15.9		42.3	27	36.2		08.1	165	35.2		49.1	336	18.9		31.2
22	171	58.9	128	15.3		43.3	42	37.9		07.9	180	37.1		48.9	351	21.6		31.2
23	187	01.3	143	14.8		44.3	57	39.6		07.6	195	39.1		48.7	6	24.2		31.3
24	202	03.8	158	14.2	+16	45.3	72	41.2	+21	07.3	210	41.0	-4	48.5	21	26.8	+2	31.4
Dif	—		-6		+10		+17		-3		+20		+2		+26		+1	

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: 29 ^d 1 PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/0 PMG: 11 ^h 52 ^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	179	53.7	+9 17.4	187	31.5	+11 37.7	60 N	19 15	20 01	21 03	4 08	9	20 01 89	
1	194	53.9		202	04.4 ¹³⁹	+11 49.7 ¹²⁰	58	10	19 52	20 48	16	11	19 51 84	
2	209	54.0		216	37.2 ¹³⁸	+12 01.7 ¹²⁰	56	04	45	36	22	15	42 81	
3	224	54.2		231	09.9 ¹³⁷	13.6 ¹¹⁹	54	19 00	38	25	28	17	34 79	
4	239	54.3		245	42.5 ¹³⁶	25.5 ¹¹⁹	52	18 56	32	16	33	19	28 75	
5	254	54.5	+9 22.0	260	15.1 ¹³⁶	+12 37.3 ¹¹⁸	50	18 52	19 26	20 08	4 37	22	19 21 74	
6	269	54.6	+9 22.9	274	47.6 ¹³⁵	+12 49.1 ¹¹⁸	45	18 44	19 15	19 52	4 48	26	19 08 69	
7	284	54.8		289	20.1 ¹³⁵	+13 00.8 ¹¹⁷	40	37	19 05	39	4 56	30	18 57 66	
8	299	54.9		303	52.4 ¹³³	12.5 ¹¹⁷	35	32	18 58	28	5 04	32	48 63	
9	314	55.1		318	24.7 ¹³³	24.1 ¹¹⁶	30	26	51	20	10	35	40 60	
10	329	55.2		332	57.0 ¹³³	35.7 ¹¹⁶	20	18	40	19 07	21	40	26 56	
11	344	55.4	+9 27.4	347	29.1 ¹³¹	+13 47.2 ¹¹⁵	10 N	18 10	18 32	18 57	5 31	44	18 14 52	
12	359	55.6	+9 28.3	2	01.2 ¹³¹	+13 58.7 ¹¹⁵	0	18 04	18 25	18 49	5 41	47	18 03 48	
13	14	55.7		16	33.2 ¹³⁰	+14 10.1 ¹¹⁴	10 S	17 57	18	43	5 50	51	17 52 45	
14	29	55.9		31	05.2 ¹³⁰	21.5 ¹¹⁴	20	50	12	38	6 00	55	40 41	
15	44	56.0		45	37.1 ¹²⁹	32.8 ¹¹³	30	42	06	34	12	59	26 37	
16	59	56.2		60	08.9 ¹²⁸	44.1 ¹¹³	35	37	03	32	19	61	18 35	
17	74	56.3	+9 32.7	74	40.6 ¹²⁷	+14 55.2 ¹¹¹	40	17 32	18 00	18 31	6 27	64	17 09 32	
18	89	56.5	+9 33.6	89	12.2 ¹²⁶	+15 06.4 ¹¹²	45	17 26	17 56	18 30	6 36	68	16 59 28	
19	104	56.6		103	43.8 ¹²⁶	17.4 ¹¹⁰	50	19	52	29	47	73	46 24	
20	119	56.8		118	15.3 ¹²⁵	28.4 ¹¹⁰	52	16	50	29	52	75	40 22	
21	134	56.9		132	46.7 ¹²⁴	39.4 ¹¹⁰	54	13	48	29	6 58	77	34 20	
22	149	57.1		147	18.0 ¹²³	+15 50.3 ¹⁰⁹	56	09	46	29	7 04	81	27 17	
23	164	57.2		161	49.3 ¹²³	+16 01.1 ¹⁰⁸	58	04	44	30	11	84	19 14	
24	179	57.4	+9 39.0	176	20.4 ¹²¹	+16 11.8 ¹⁰⁷	60 S	17 00	17 42	18 30	7 19	88	16 10 10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 30 ^m 0		Mag: -3.9 PMG: 13 ^h 28 ^m			Mag: +0.4 PMG: 19 ^h 07 ^m			Mag: -2.1 PMG: 9 ^h 56 ^m			Mag: +0.7 PMG: 22 ^h 30 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	202	03.8	158	14.2	+16 45.3	72	41.2	+21 07.3	210	41.0	-4 48.5	21	26.8	+2 31.4
1	217	06.3	173	13.6	46.3	87	42.9	07.1	225	43.0	48.2	36	29.4	31.4
2	232	08.7	188	13.1	47.2	102	44.6	06.8	240	44.9	48.0	51	32.0	31.5
3	247	11.2	203	12.5	48.2	117	46.2	06.5	255	46.9	47.8	66	34.7	31.5
4	262	13.6	218	11.9	49.2	132	47.9	06.3	270	48.8	47.6	81	37.3	31.6
5	277	16.1	233	11.4	+16 50.2	147	49.6	+21 06.0	285	50.8	-4 47.4	96	39.9	+2 31.7
6	292	18.6	248	10.8	+16 51.2	162	51.2	+21 05.7	300	52.8	-4 47.2	111	42.5	+2 31.7
7	307	21.0	263	10.2	52.2	177	52.9	05.5	315	54.7	47.0	126	45.1	31.8
8	322	23.5	278	09.7	53.1	192	54.5	05.2	330	56.7	46.8	141	47.8	31.9
9	337	26.0	293	09.1	54.1	207	56.2	04.9	345	58.6	46.6	156	50.4	31.9
10	352	28.4	308	08.5	55.1	222	57.9	04.6	1	00.6	46.3	171	53.0	32.0
11	7	30.9	323	08.0	+16 56.1	237	59.5	+21 04.4	16	02.5	-4 46.1	186	55.6	+2 32.1
12	22	33.4	338	07.4	+16 57.1	253	01.2	+21 04.1	31	04.5	-4 45.9	201	58.2	+2 32.1
13	37	35.8	353	06.8	58.0	268	02.8	03.8	46	06.4	45.7	217	00.9	32.2
14	52	38.3	8	06.2	+16 59.0	283	04.5	03.6	61	08.4	45.5	232	03.5	32.2
15	67	40.8	23	05.7	+17 00.0	298	06.1	03.3	76	10.3	45.3	247	06.1	32.3
16	82	43.2	38	05.1	+17 01.0	313	07.8	03.0	91	12.3	45.1	262	08.7	32.4
17	97	45.7	53	04.5	+17 01.9	328	09.4	+21 02.8	106	14.2	-4 44.9	277	11.3	+2 32.4
18	112	48.1	68	03.9	+17 02.9	343	11.1	+21 02.5	121	16.2	-4 44.7	292	14.0	+2 32.5
19	127	50.6	83	03.4	03.9	358	12.8	02.2	136	18.2	44.4	307	16.6	32.6
20	142	53.1	98	02.8	04.9	13	14.4	01.9	151	20.1	44.2	322	19.2	32.6
21	157	55.5	113	02.2	05.8	28	16.1	01.7	166	22.1	44.0	337	21.8	32.7
22	172	58.0	128	01.6	06.8	43	17.7	01.4	181	24.0	43.8	352	24.4	32.8
23	188	00.5	143	01.1	07.8	58	19.4	01.1	196	26.0	43.6	7	27.1	32.8
24	203	02.9	158	00.5	+17 08.7	73	21.0	+21 00.8	211	27.9	-4 43.4	22	29.7	+2 32.9
Dif	—		-6		+10	+17		-3	+20		+2	+26		+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 12 ^h 00 ^m 1			Edad: 0 ^d 5 SD: 15'3 PMG: 12 ^h 39 ^m	PHE { 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'5 R ^c : 52 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	57.4	+9	39.0	176	20.4	+16 11.8	60 N	2 57	3 58	4 44	4 17	12	21 30 88
1	194	57.5		39.9	190	51.5 ¹²¹	22.5 ¹⁰⁷	58	3 11	4 07	50	27	17	15 84
2	209	57.7		40.8	205	22.6 ¹²¹	33.1 ¹⁰⁶	56	24	15	4 55	37	20	21 03 81
3	224	57.8		41.7	219	53.5 ¹¹⁹	43.6 ¹⁰⁵	54	34	22	5 00	45	23	20 53 77
4	239	58.0		42.6	234	24.3 ¹¹⁸	+16 54.1 ¹⁰⁵	52	43	28	04	52	26	43 75
5	254	58.1	+9	43.5	248	55.1 ¹¹⁸	+17 04.4 ¹⁰³	50	3 52	4 33	5 08	4 59	28	20 35 73
6	269	58.3	+9	44.4	263	25.8 ¹¹⁷	+17 14.7 ¹⁰³	45	4 08	4 45	5 16	5 14	31	20 17 69
7	284	58.4		45.3	277	56.4 ¹¹⁶	25.0 ¹⁰³	40	21	4 55	23	26	35	20 03 66
8	299	58.6		46.2	292	26.9 ¹¹⁵	35.1 ¹⁰¹	35	31	5 02	28	36	38	19 51 63
9	314	58.8		47.1	306	57.4 ¹¹⁵	45.2 ¹⁰¹	30	40	09	33	5 45	40	40 61
10	329	58.9		48.0	321	27.7 ¹¹³	+17 55.2 ¹⁰⁰	20	4 53	20	42	6 01	44	22 58
11	344	59.1	+9	48.9	335	58.0 ¹¹³	+18 05.1 ⁹⁹	10 N	5 04	5 28	5 50	6 15	47	19 06 55
12	359	59.2	+9	49.8	350	28.2 ¹¹²	+18 14.9 ⁹⁸	0	5 11	5 36	5 57	6 28	50	18 51 53
13	14	59.4		50.7	4	58.3 ¹¹¹	24.7 ⁹⁸	10 S	18	42	6 04	41	53	37 49
14	29	59.5		51.5	19	28.3 ¹¹⁰	34.3 ⁹⁶	20	23	49	11	6 55	57	21 46
15	44	59.7		52.4	33	58.3 ¹¹⁰	43.9 ⁹⁶	30	27	55	19	7 11	61	18 03 43
16	59	59.8		53.3	48	28.1 ¹⁰⁸	+18 53.4 ⁹⁵	35	29	5 58	24	20	64	17 53 40
17	75	00.0	+9	54.2	62	57.9 ¹⁰⁸	+19 02.8 ⁹⁴	40	5 30	6 01	6 29	7 31	66	17 41 38
18	90	00.1	+9	55.1	77	27.6 ¹⁰⁷	+19 12.1 ⁹³	45	5 31	6 05	6 35	7 44	70	17 27 35
19	105	00.2		56.0	91	57.2 ¹⁰⁶	21.3 ⁹²	50	32	09	42	8 00	74	10 31
20	120	00.4		56.9	106	26.7 ¹⁰⁵	30.5 ⁹²	52	32	11	45	07	76	17 02 29
21	135	00.5		57.8	120	56.2 ¹⁰⁵	39.5 ⁹⁰	54	32	13	49	15	79	16 54 26
22	150	00.7		58.7	135	25.5 ¹⁰³	48.4 ⁸⁹	56	32	15	53	25	81	44 23
23	165	00.8	+9	59.6	149	54.8 ¹⁰³	+19 57.3 ⁸⁹	58	32	17	6 57	35	86	33 20
24	180	01.0	+10	00.5	164	23.9 ¹⁰¹	+20 06.0 ⁸⁷	60 S	5 31	6 20	7 02	8 47	90	16 20 15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 26 ^m 1		Mag: -3.9 PMG: 13 ^h 28 ^m		Mag: +0.5 PMG: 19 ^h 05 ^m		Mag: -2.1 PMG: 9 ^h 53 ^m		Mag: +0.7 PMG: 22 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	203	02.9	158	00.5	+17	08.7	73	21.0	+21	00.8
1	218	05.4	172	59.9		09.7	88	22.7		00.6
2	233	07.9	187	59.3		10.7	103	24.3	+21	00.3
3	248	10.3	202	58.7		11.6	118	26.0	+21	00.0
4	263	12.8	217	58.2		12.6	133	27.6	+20	59.8
5	278	15.3	232	57.6	+17	13.6	148	29.3	+20	59.5
6	293	17.7	247	57.0	+17	14.5	163	30.9	+20	59.2
7	308	20.2	262	56.4		15.5	178	32.5		58.9
8	323	22.6	277	55.9		16.5	193	34.2		58.7
9	338	25.1	292	55.3		17.4	208	35.8		58.4
10	353	27.6	307	54.7		18.4	223	37.5		58.1
11	8	30.0	322	54.1	+17	19.3	238	39.1	+20	57.8
12	23	32.5	337	53.5	+17	20.3	253	40.8	+20	57.6
13	38	35.0	352	52.9		21.3	268	42.4		57.3
14	53	37.4	7	52.4		22.2	283	44.0		57.0
15	68	39.9	22	51.8		23.2	298	45.7		56.7
16	83	42.4	37	51.2		24.1	313	47.3		56.5
17	98	44.8	52	50.6	+17	25.1	328	49.0	+20	56.2
18	113	47.3	67	50.0	+17	26.0	343	50.6	+20	55.9
19	128	49.7	82	49.4		27.0	358	52.2		55.6
20	143	52.2	97	48.8		28.0	13	53.9		55.4
21	158	54.7	112	48.3		28.9	28	55.5		55.1
22	173	57.1	127	47.7		29.9	43	57.2		54.8
23	188	59.6	142	47.1		30.8	58	58.8		54.5
24	204	02.1	157	46.5	+17	31.8	74	00.4	+20	54.2
Dif	—		-6		+10		+16		-3	
							+20		+2	
									+26	
									+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 59 ^m 8			Edad: 1 ^d 5 PHE { 4 ^h : 56°6 12 ^h : 56°8 20 ^h : 57°0 SD: 15°4 PMG: 13 ^h 31 ^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	180	01.0	+10 00.5	164	23.9	+20 06.0	60 N	19 20	20 07	21 10	4 29 21	22 58 81		
1	195	01.1	01.3	178	53.0 ¹⁰¹	14.7 ⁸⁷	58	14	19 57	20 54	44 25	39 77		
2	210	01.3	02.2	193	22.0 ¹⁰⁰	23.2 ⁸⁵	56	09	49	41	4 57 28	24 74		
3	225	01.4	03.1	207	51.0 ¹⁰⁰	31.6 ⁸⁴	54	19 04	42	30	5 08 31	22 10 72		
4	240	01.6	04.0	222	19.8 ⁹⁸	40.0 ⁸⁴	52	18 59	35	20	18 33	21 58 71		
5	255	01.7	+10 04.9	236	48.5 ⁹⁷	+20 48.2 ⁸²	50	18 55	19 30	20 12	5 27 35	21 48 69		
6	270	01.9	+10 05.8	251	17.2 ⁹⁷	+20 56.4 ⁸²	45	18 46	19 17	19 55	5 45 39	21 26 67		
7	285	02.0	06.7	265	45.8 ⁹⁶	+21 04.4 ⁸⁰	40	39	19 07	41	6 01 42	21 09 64		
8	300	02.2	07.6	280	14.3 ⁹⁵	12.3 ⁷⁹	35	33	18 59	30	14 44	20 54 63		
9	315	02.3	08.4	294	42.7 ⁹⁴	20.1 ⁷⁸	30	28	52	21	25 46	41 62		
10	330	02.5	09.3	309	11.0 ⁹³	27.8 ⁷⁷	20	19	41	19 07	6 45 49	20 59		
11	345	02.6	+10 10.2	323	39.3 ⁹³	+21 35.4 ⁷⁶	10 N	18 11	18 32	18 57	7 02 52	20 01 57		
12	0	02.8	+10 11.1	338	07.5 ⁹²	+21 42.9 ⁷⁵	0	18 03	18 24	18 49	7 18 54	19 44 55		
13	15	02.9	12.0	352	35.5 ⁹⁰	50.2 ⁷³	10 S	17 56	17	42	34 57	26 54		
14	30	03.1	12.9	7	03.5 ⁹⁰	+21 57.5 ⁷³	20	48	11	36	7 52 59	19 07 52		
15	45	03.2	13.8	21	31.5 ⁹⁰	+22 04.6 ⁷¹	30	40	04	32	8 12 62	18 46 49		
16	60	03.3	14.6	35	59.3 ⁸⁸	11.7 ⁷¹	35	35	18 00	30	24 63	33 48		
17	75	03.5	+10 15.5	50	27.1 ⁸⁸	+22 18.6 ⁶⁹	40	17 29	17 57	18 28	8 37 66	18 19 46		
18	90	03.6	+10 16.4	64	54.7 ⁸⁶	+22 25.3 ⁶⁷	45	17 23	17 53	18 27	8 54 68	18 02 44		
19	105	03.8	17.3	79	22.3 ⁸⁶	32.0 ⁶⁷	50	15	48	26	9 14 72	17 41 41		
20	120	03.9	18.2	93	49.9 ⁸⁶	38.5 ⁶⁵	52	12	46	25	23 74	31 39		
21	135	04.1	19.1	108	17.3 ⁸⁴	44.9 ⁶⁴	54	08	44	25	34 76	20 37		
22	150	04.2	19.9	122	44.7 ⁸⁴	51.2 ⁶³	56	17 04	42	25	9 46 79	17 07 35		
23	165	04.4	20.8	137	11.9 ⁸²	+22 57.4 ⁶²	58	16 59	39	25	10 01 81	16 53 31		
24	180	04.5	+10 21.7	151	39.2 ⁸³	+23 03.5 ⁶¹	60 S	16 54	17 37	18 25	10 17 87	16 35 27		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 22 ^m 2		Mag: -3.9 PMG: 13 ^h 29 ^m		Mag: +0.5 PMG: 19 ^h 02 ^m		Mag: -2.1 PMG: 9 ^h 50 ^m		Mag: +0.7 PMG: 22 ^h 22 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	204	02.1	157	46.5	+17 31.8	74 00.4	+20 54.2	212 14.9	-4 38.3	23 32.5				
1	219	04.5	172	45.9	32.7	89 02.1	54.0	227 16.8	38.1	38 35.1				
2	234	07.0	187	45.3	33.7	104 03.7	53.7	242 18.8	37.9	53 37.7				
3	249	09.5	202	44.7	34.6	119 05.3	53.4	257 20.8	37.7	68 40.4				
4	264	11.9	217	44.1	35.6	134 07.0	53.1	272 22.7	37.5	83 43.0				
5	279	14.4	232	43.5	+17 36.5	149 08.6	+20 52.9	287 24.7	-4 37.3	98 45.6				
6	294	16.9	247	43.0	+17 37.4	164 10.2	+20 52.6	302 26.6	-4 37.1	113 48.2				
7	309	19.3	262	42.4	38.4	179 11.9	52.3	317 28.6	36.9	128 50.8				
8	324	21.8	277	41.8	39.3	194 13.5	52.0	332 30.5	36.7	143 53.4				
9	339	24.2	292	41.2	40.3	209 15.1	51.7	347 32.5	36.4	158 56.1				
10	354	26.7	307	40.6	41.2	224 16.7	51.5	2 34.5	36.2	173 58.7				
11	9	29.2	322	40.0	+17 42.2	239 18.4	+20 51.2	17 36.4	-4 36.0	189 01.3				
12	24	31.6	337	39.4	+17 43.1	254 20.0	+20 50.9	32 38.4	-4 35.8	204 03.9				
13	39	34.1	352	38.8	44.0	269 21.6	50.6	47 40.3	35.6	219 06.5				
14	54	36.6	7	38.2	45.0	284 23.3	50.3	62 42.3	35.4	234 09.1				
15	69	39.0	22	37.6	45.9	299 24.9	50.1	77 44.3	35.2	249 11.8				
16	84	41.5	37	37.0	46.9	314 26.5	49.8	92 46.2	35.0	264 14.4				
17	99	44.0	52	36.4	+17 47.8	329 28.1	+20 49.5	107 48.2	-4 34.8	279 17.0				
18	114	46.4	67	35.8	+17 48.7	344 29.8	+20 49.2	122 50.1	-4 34.6	294 19.6				
19	129	48.9	82	35.2	49.7	359 31.4	48.9	137 52.1	34.4	309 22.2				
20	144	51.4	97	34.6	50.6	14 33.0	48.7	152 54.1	34.1	324 24.8				
21	159	53.8	112	34.0	51.5	29 34.6	48.4	167 56.0	33.9	339 27.4				
22	174	56.3	127	33.4	52.5	44 36.2	48.1	182 58.0	33.7	354 30.1				
23	189	58.7	142	32.8	53.4	59 37.9	47.8	197 59.9	33.5	9 32.7				
24	205	01.2	157	32.2	+17 54.3	74 39.5	+20 47.5	213 01.9	-4 33.3	24 35.3				
Dif	—		-6		+9	+16		-3		+20		+2		

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: 2 ^d 5 PHE { 4 ^h : 57/1 12 ^h : 57/3 20 ^h : 57/5 PMG: 14 ^h 25 ^m R°: 58 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	04.5	+10	21.7	151	39.2	+23	03.5	60 N	2	48	3	51	4	38	4	50	
1	195	04.6		22.6	166	06.3	81	09.4	58	3	04	4	01	44	5	09	40	
2	210	04.8		23.5	180	33.4	81	15.2	56	17	09	50	25	43	38	61	62	
3	225	04.9		24.4	195	00.3	79	20.8	54	29	17	55	39	44	22	6		
4	240	05.1		25.2	209	27.3	80	26.3	55	38	23	4	59	5	51	46	61	
5	255	05.2	+10	26.1	223	54.1	78	+23	50	3	47	4	29	5	04	6	02	
6	270	05.4	+10	27.0	238	20.9	78	+23	45	4	04	4	42	5	12	6	24	
7	285	05.5		27.9	252	47.6	77	42.1	51	18	4	51	20	43	50	22	13	
8	300	05.7		28.8	267	14.2	76	47.1	50	35	29	5	00	26	6	58	51	
9	315	05.8		29.6	281	40.8	76	52.0	49	30	38	07	31	7	11	53	43	
10	330	05.9		30.5	296	07.3	75	+23	20	4	52	18	41	34	54	21	19	
11	345	06.1	+10	31.4	310	33.7	74	+24	10 N	5	02	5	27	5	49	7	54	
12	0	06.2	+10	32.3	325	00.1	74	+24	0	5	11	5	35	5	56	8	12	
13	15	06.4		33.2	339	26.4	73	10.1	44	18	42	6	04	31	58	20	20	
14	30	06.5		34.0	353	52.6	72	14.2	41	20	23	49	11	8	51	59	57	
15	45	06.7		34.9	8	18.8	72	18.3	41	30	28	5	56	20	9	14	60	
16	60	06.8		35.8	22	44.9	71	22.1	38	35	30	6	00	25	27	62	56	
17	75	06.9	+10	36.7	37	11.0	71	+24	40	5	32	6	03	6	31	9	43	
18	90	07.1	+10	37.5	51	37.0	70	+24	45	5	33	6	07	6	37	10	02	
19	105	07.2		38.4	66	02.9	69	32.9	34	50	35	12	45	26	65	22	52	
20	120	07.4		39.3	80	28.8	69	36.3	31	52	35	14	49	37	66	18	10	
21	135	07.5		40.2	94	54.6	68	39.4	30	54	35	16	53	10	50	67	51	
22	150	07.6		41.1	109	20.4	68	42.4	30	56	36	19	6	57	11	05	50	
23	165	07.8		41.9	123	46.1	67	45.3	29	58	36	21	7	02	22	71	48	
24	180	07.9	+10	42.8	138	11.8	67	+24	60 S	5	36	6	24	7	07	11	44	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 18 ^m 2		Mag: -3.9 PMG: 13 ^h 30 ^m				Mag: +0.5 PMG: 18 ^h 59 ^m				Mag: -2.1 PMG: 9 ^h 47 ^m				Mag: +0.7 PMG: 22 ^h 18 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	205	01.2	157	32.2	+17	54.3	74	39.5	+20	47.5	213	01.9	-4	33.3	24	35.3	+2	35.9
1	220	03.7	172	31.6		55.3	89	41.1		47.2	228	03.9		33.1	39	37.9		35.9
2	235	06.1	187	31.0		56.2	104	42.7		47.0	243	05.8		32.9	54	40.5		36.0
3	250	08.6	202	30.4		57.1	119	44.3		46.7	258	07.8		32.7	69	43.1		36.0
4	265	11.1	217	29.8		58.1	134	46.0		46.4	273	09.7		32.5	84	45.7		36.1
5	280	13.5	232	29.2	+17	59.0	149	47.6	+20	46.1	288	11.7	-4	32.3	99	48.4	+2	36.2
6	295	16.0	247	28.6	+17	59.9	164	49.2	+20	45.8	303	13.7	-4	32.1	114	51.0	+2	36.2
7	310	18.5	262	28.0	+18	00.8	179	50.8		45.5	318	15.6		31.8	129	53.6		36.3
8	325	20.9	277	27.4		01.8	194	52.4		45.3	333	17.6		31.6	144	56.2		36.3
9	340	23.4	292	26.8		02.7	209	54.0		45.0	348	19.5		31.4	159	58.8		36.4
10	355	25.8	307	26.2		03.6	224	55.7		44.7	3	21.5		31.2	175	01.4		36.5
11	10	28.3	322	25.6	+18	04.5	239	57.3	+20	44.4	18	23.5	-4	31.0	190	04.0	+2	36.5
12	25	30.8	337	25.0	+18	05.5	254	58.9	+20	44.1	33	25.4	-4	30.8	205	06.7	+2	36.6
13	40	33.2	352	24.4		06.4	270	00.5		43.8	48	27.4		30.6	220	09.3		36.7
14	55	35.7	7	23.8		07.3	285	02.1		43.6	63	29.3		30.4	235	11.9		36.7
15	70	38.2	22	23.2		08.2	300	03.7		43.3	78	31.3		30.2	250	14.5		36.8
16	85	40.6	37	22.6		09.1	315	05.3		43.0	93	33.3		30.0	265	17.1		36.8
17	100	43.1	52	22.0	+18	10.1	330	06.9	+20	42.7	108	35.2	-4	29.8	280	19.7	+2	36.9
18	115	45.6	67	21.4	+18	11.0	345	08.6	+20	42.4	123	37.2	-4	29.6	295	22.3	+2	37.0
19	130	48.0	82	20.8		11.9	0	10.2		42.1	138	39.2		29.3	310	25.0		37.0
20	145	50.5	97	20.2		12.8	15	11.8		41.8	153	41.1		29.1	325	27.6		37.1
21	160	53.0	112	19.6		13.7	30	13.4		41.6	168	43.1		28.9	340	30.2		37.1
22	175	55.4	127	18.9		14.6	45	15.0		41.3	183	45.0		28.7	355	32.8		37.2
23	190	57.9	142	18.3		15.5	60	16.6		41.0	198	47.0		28.5	10	35.4		37.3
24	206	00.3	157	17.7	+18	16.5	75	18.2	+20	40.7	213	49.0	-4	28.3	25	38.0	+2	37.3
Dif	—		-6		+9		+16		-3		+20		+2		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 4			Edad: 3 ^d 5 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 8 20 ^h : 57 ^m 9 R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	07.9	+10 42.8	138	11.8	+24 48.0	26	60 N	19 25	20 13	21 17	5 26 59	0 19 62		
1	195	08.1	43.7	152	37.4	50.6	26	58	19	20 03	21 01	5 49 59	** ** *		
2	210	08.2	44.6	167	03.0	53.0	24	56	13	19 54	20 47	6 08 59	** ** *		
3	225	08.3	45.4	181	28.5	55.3	23	54	07	46	35	23 59	** ** *		
4	240	08.5	46.3	195	54.0	57.4	21	52	19 03	39	25	37 59	** ** *		
5	255	08.6	+10 47.2	210	19.5	+24 59.4	20	50	18 58	19 33	20 16	6 49 59	23 58 49		
6	270	08.8	+10 48.0	224	44.9	+25 01.2	18	45	18 49	19 20	19 58	7 13 59	23 33 51		
7	285	08.9	48.9	239	10.3	02.9	17	40	41	10	44	33 59	23 13 53		
8	300	09.0	49.8	253	35.6	04.4	15	35	35	19 01	32	7 49 60	22 56 54		
9	315	09.2	50.7	268	00.9	05.8	14	30	29	18 54	23	8 04 59	42 55		
10	330	09.3	51.5	282	26.1	07.0	12	20	19	42	19 08	28 59	22 18 56		
11	345	09.5	+10 52.4	296	51.4	+25 08.0	10	10 N	18 11	18 32	18 57	8 49 59	21 56 58		
12	0	09.6	+10 53.3	311	16.6	+25 08.9	9	0	18 03	18 24	18 48	9 09 58	21 37 58		
13	15	09.7	54.1	325	41.7	09.7	8	10 S	17 55	16	41	29 58	21 17 59		
14	30	09.9	55.0	340	06.9	10.3	6	20	47	09	35	9 50 57	20 56 60		
15	45	10.0	55.9	354	32.0	10.7	4	30	38	18 02	30	10 14 58	31 62		
16	60	10.2	56.8	8	57.0	11.0	3	35	32	17 58	27	29 57	17 62		
17	75	10.3	+10 57.6	23	22.1	+25 11.1	1	40	17 26	17 54	18 25	10 46 56	20 00 63		
18	90	10.4	+10 58.5	37	47.1	+25 11.1	0	45	17 20	17 49	18 24	11 06 56	19 40 64		
19	105	10.6	+10 59.4	52	12.1	10.9	2	50	11	44	22	31 55	14 66		
20	120	10.7	+11 00.2	66	37.1	10.5	4	52	08	42	21	43 55	19 02 66		
21	135	10.8	01.1	81	02.1	10.0	5	54	17 03	40	21	11 57 54	18 48 67		
22	150	11.0	02.0	95	27.1	09.3	7	56	16 59	37	20	12 13 54	32 68		
23	165	11.1	02.8	109	52.0	08.5	8	58	54	34	20	33 52	18 12 70		
24	180	11.2	+11 03.7	124	17.0	+25 07.5	10	60 S	16 48	17 31	18 19	12 57 50	17 48 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 14 ^m 3		Mag: -3.9 PMG: 13 ^h 31 ^m		Mag: +0.5 PMG: 18 ^h 57 ^m		Mag: -2.1 PMG: 9 ^h 43 ^m		Mag: +0.7 PMG: 22 ^h 14 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	206	00.3	157 17.7	+18 16.5	75 18.2	+20 40.7	213 49.0	-4 28.3	25 38.0	+2 37.3
1	221	02.8	172 17.1	17.4	90 19.8	40.4	228 50.9	28.1	40 40.6	37.4
2	236	05.3	187 16.5	18.3	105 21.4	40.1	243 52.9	27.9	55 43.2	37.4
3	251	07.7	202 15.9	19.2	120 23.0	39.8	258 54.9	27.7	70 45.9	37.5
4	266	10.2	217 15.3	20.1	135 24.6	39.6	273 56.8	27.5	85 48.5	37.5
5	281	12.7	232 14.7	+18 21.0	150 26.2	+20 39.3	288 58.8	-4 27.3	100 51.1	+2 37.6
6	296	15.1	247 14.1	+18 21.9	165 27.8	+20 39.0	304 00.7	-4 27.1	115 53.7	+2 37.7
7	311	17.6	262 13.4	22.8	180 29.4	38.7	319 02.7	26.8	130 56.3	37.7
8	326	20.1	277 12.8	23.7	195 31.0	38.4	334 04.7	26.6	145 58.9	37.8
9	341	22.5	292 12.2	24.6	210 32.6	38.1	349 06.6	26.4	161 01.5	37.8
10	356	25.0	307 11.6	25.5	225 34.2	37.8	4 08.6	26.2	176 04.1	37.9
11	11	27.5	322 11.0	+18 26.4	240 35.8	+20 37.5	19 10.6	-4 26.0	191 06.7	+2 38.0
12	26	29.9	337 10.4	+18 27.3	255 37.4	+20 37.2	34 12.5	-4 25.8	206 09.4	+2 38.0
13	41	32.4	352 09.7	28.2	270 39.0	37.0	49 14.5	25.6	221 12.0	38.1
14	56	34.8	7 09.1	29.1	285 40.6	36.7	64 16.5	25.4	236 14.6	38.1
15	71	37.3	22 08.5	30.0	300 42.2	36.4	79 18.4	25.2	251 17.2	38.2
16	86	39.8	37 07.9	30.9	315 43.8	36.1	94 20.4	25.0	266 19.8	38.3
17	101	42.2	52 07.3	+18 31.8	330 45.4	+20 35.8	109 22.3	-4 24.8	281 22.4	+2 38.3
18	116	44.7	67 06.7	+18 32.7	345 47.0	+20 35.5	124 24.3	-4 24.6	296 25.0	+2 38.4
19	131	47.2	82 06.0	33.6	0 48.6	35.2	139 26.3	24.4	311 27.6	38.4
20	146	49.6	97 05.4	34.5	15 50.2	34.9	154 28.2	24.2	326 30.2	38.5
21	161	52.1	112 04.8	35.4	30 51.8	34.6	169 30.2	23.9	341 32.9	38.6
22	176	54.6	127 04.2	36.3	45 53.4	34.3	184 32.2	23.7	356 35.5	38.6
23	191	57.0	142 03.6	37.2	60 55.0	34.1	199 34.1	23.5	11 38.1	38.7
24	206	59.5	157 02.9	+18 38.1	75 56.6	+20 33.8	214 36.1	-4 23.3	26 40.7	+2 38.7
Dif	—		-6 +9		+16 -3		+20 +2		+26 +1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 59 ^m 1				Edad: 4 ^d 5 PHE { SD: 15°8 PMG: 16 ^h 21 ^m R°: 58 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora			R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	11.2	+11	03.7	124	17.0	+25	07.5	11	60 N	2 40	3 45	4 32	6 25	82	1 21	40			
1	195	11.4		04.6	138	41.9	59	06.4	13	58	2 57	3 55	39	6 48	78	0 58	43			
2	210	11.5		05.4	153	06.8	59	05.1	13	56	3 11	4 04	45	7 07	75	39	45			
3	225	11.7		06.3	167	31.7	59	03.6	15	54	23	12	50	22	74	23	47			
4	240	11.8		07.2	181	56.6	59	02.0	16	52	33	19	55	36	72	0 10	48			
5	255	11.9	+11	08.0	196	21.5	59	+25	00.2	18	50	3 42	4 25	4 59	7 48	71	** ** *			
6	270	12.1	+11	08.9	210	46.4	59	+24	58.3	19	45	4 00	4 38	5 09	8 12	69	** ** *			
7	285	12.2		09.8	225	11.3	59	56.2	21	40	14	48	17	32	66	** ** *	**			
8	300	12.3		10.6	239	36.2	59	53.9	23	35	26	4 57	23	8 49	64	23 50	48			
9	315	12.5		11.5	254	01.1	59	51.5	24	30	35	5 04	29	9 03	63	37	49			
10	330	12.6		12.4	268	26.0	59	48.9	26	20	4 50	17	39	27	61	23 14	52			
11	345	12.7	+11	13.2	282	50.9	59	+24	46.2	27	10 N	5 01	5 26	5 48	9 48	59	22 54	55		
12	0	12.9	+11	14.1	297	15.8	59	+24	43.3	29	0	5 10	5 35	5 56	10 07	58	22 35	57		
13	15	13.0		15.0	311	40.7	59	40.3	30	10 S	18	42	6 04	27	56	22 16	60			
14	30	13.1		15.8	326	05.7	60	37.1	32	20	24	50	12	10 47	55	21 56	62			
15	45	13.3		16.7	340	30.6	59	33.7	34	30	29	5 57	21	11 12	52	33	65			
16	60	13.4		17.5	354	55.6	60	30.2	35	35	31	6 01	27	26	50	19	67			
17	75	13.5	+11	18.4	9	20.5	59	+24	26.5	37	40	5 34	6 05	6 33	11 42	49	21 03	69		
18	90	13.7	+11	19.3	23	45.5	60	+24	22.7	38	45	5 36	6 10	6 40	12 02	46	20 44	71		
19	105	13.8		20.1	38	10.5	60	18.7	40	50	37	15	48	26	44	20	75			
20	120	13.9		21.0	52	35.6	61	14.6	41	52	38	17	52	38	42	20 08	77			
21	135	14.1		21.9	67	00.6	60	10.3	43	54	39	20	6 56	12 51	40	19 55	79			
22	150	14.2		22.7	81	25.7	61	05.8	45	56	39	23	7 01	13 07	38	40	81			
23	165	14.3		23.6	95	50.8	61	+24	01.2	46	58	40	25	25	35	19 22	85			
24	180	14.5	+11	24.4	110	15.9	61	+23	56.4	48	60 S	5 40	6 29	7 12	13 47	31	18 59	90		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 10 ^m 4				Mag: -3.9 PMG: 13 ^h 32 ^m				Mag: +0.5 PMG: 18 ^h 54 ^m				Mag: -2.1 PMG: 9 ^h 40 ^m				Mag: +0.7 PMG: 22 ^h 09 ^m			
	hG ♈		Dec		hG ♉		Dec		hG ♊		Dec		hG ♋		Dec		hG ♌		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	206	59.5	157	02.9	+18	38.1	75	56.6	+20	33.8	214	36.1	-4	23.3	26	40.7	+2	38.7		
1	222	02.0	172	02.3		39.0	90	58.2		33.5	229	38.1		23.1	41	43.3		38.8		
2	237	04.4	187	01.7		39.9	105	59.8		33.2	244	40.0		22.9	56	45.9		38.8		
3	252	06.9	202	01.1		40.8	121	01.3		32.9	259	42.0		22.7	71	48.5		38.9		
4	267	09.3	217	00.4		41.7	136	02.9		32.6	274	44.0		22.5	86	51.1		39.0		
5	282	11.8	231	59.8	+18	42.6	151	04.5	+20	32.3	289	45.9	-4	22.3	101	53.7	+2	39.0		
6	297	14.3	246	59.2	+18	43.4	166	06.1	+20	32.0	304	47.9	-4	22.1	116	56.3	+2	39.1		
7	312	16.7	261	58.6		44.3	181	07.7		31.7	319	49.9		21.9	131	59.0		39.1		
8	327	19.2	276	58.0		45.2	196	09.3		31.4	334	51.8		21.7	147	01.6		39.2		
9	342	21.7	291	57.3		46.1	211	10.9		31.1	349	53.8		21.5	162	04.2		39.3		
10	357	24.1	306	56.7		47.0	226	12.5		30.8	4	55.8		21.3	177	06.8		39.3		
11	12	26.6	321	56.1	+18	47.9	241	14.1	+20	30.5	19	57.7	-4	21.1	192	09.4	+2	39.4		
12	27	29.1	336	55.4	+18	48.7	256	15.6	+20	30.3	34	59.7	-4	20.8	207	12.0	+2	39.4		
13	42	31.5	351	54.8		49.6	271	17.2		30.0	50	01.7		20.6	222	14.6		39.5		
14	57	34.0	6	54.2		50.5	286	18.8		29.7	65	03.6		20.4	237	17.2		39.5		
15	72	36.5	21	53.6		51.4	301	20.4		29.4	80	05.6		20.2	252	19.8		39.6		
16	87	38.9	36	52.9		52.3	316	22.0		29.1	95	07.6		20.0	267	22.4		39.7		
17	102	41.4	51	52.3	+18	53.1	331	23.6	+20	28.8	110	09.5	-4	19.8	282	25.0	+2	39.7		
18	117	43.8	66	51.7	+18	54.0	346	25.1	+20	28.5	125	11.5	-4	19.6	297	27.6	+2	39.8		
19	132	46.3	81	51.0		54.9	1	26.7		28.2	140	13.5		19.4	312	30.3		39.8		
20	147	48.8	96	50.4		55.8	16	28.3		27.9	155	15.4		19.2	327	32.9		39.9		
21	162	51.2	111	49.8		56.6	31	29.9		27.6	170	17.4		19.0	342	35.5		39.9		
22	177	53.7	126	49.2		57.5	46	31.5		27.3	185	19.4		18.8	357	38.1		40.0		
23	192	56.2	141	48.5		58.4	61	33.0		27.0	200	21.3		18.6	12	40.7		40.1		
24	207	58.6	156	47.9	+18	59.3	76	34.6	+20	26.7	215	23.3	-4	18.4	27	43.3	+2	40.1		
Dif	—				-6				+16				+20				+26			
					+9				-3				+2				+1			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 5 ^d 5	PHE {	4 ^h : 58 ^h /5 12 ^h : 58 ^h /6 20 ^h : 58 ^h /8 R°: 56 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 58 ^m 9															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	14.5	+11	24.4	110	15.9	+23	56.4	60 N	19 30	20 18	21 25	7 47	94	2 01	23
1	195	14.6		25.3	124	41.1		51.5	58	23	20 08	21 07	8 06	90	1 41	28
2	210	14.7		26.2	139	06.2		46.5	56	17	19 58	20 52	22	86	24	32
3	225	14.9		27.0	153	31.4		41.3	54	11	50	40	36	83	1 10	35
4	240	15.0		27.9	167	56.7		35.9	52	06	43	29	48	80	0 58	37
5	255	15.1	+11	28.7	182	21.9	+23	30.4	50	19 01	19 36	20 20	8 59	78	0 47	39
6	270	15.3	+11	29.6	196	47.2	+23	24.7	45	18 52	19 23	20 01	9 21	74	0 24	43
7	285	15.4		30.4	211	12.5		18.9	40	43	12	19 46	38	71	0 06	45
8	300	15.5		31.3	225	37.9		12.9	35	36	19 03	34	9 53	69	**	**
9	315	15.7		32.2	240	03.3		06.8	30	30	18 55	24	10 06	66	**	**
10	330	15.8		33.0	254	28.8	+23	00.5	20	20	42	19 09	28	63	**	**
11	345	15.9	+11	33.9	268	54.2	+22	54.1	10 N	18 11	18 32	18 57	10 47	60	23 49	52
12	0	16.1	+11	34.7	283	19.7	+22	47.6	0	18 02	18 23	18 48	11 05	57	23 32	56
13	15	16.2		35.6	297	45.3		40.9	10 S	17 54	15	40	23	53	23 16	59
14	30	16.3		36.4	312	10.9		34.0	20	45	08	34	11 42	50	22 58	62
15	45	16.4		37.3	326	36.5		27.0	30	35	18 00	28	12 04	46	38	66
16	60	16.6		38.1	341	02.2		19.9	35	30	17 56	25	16	45	26	69
17	75	16.7	+11	39.0	355	27.9	+22	12.6	40	17 24	17 51	18 23	12 31	42	22 12	72
18	90	16.8	+11	39.9	9	53.7	+22	05.2	45	17 16	17 46	18 20	12 48	39	21 55	76
19	105	17.0		40.7	24	19.5	+21	57.7	50	07	41	18	13 10	34	35	80
20	120	17.1		41.6	38	45.4		50.0	52	17 03	38	17	20	32	25	83
21	135	17.2		42.4	53	11.3		42.1	54	16 59	35	17	31	30	14	86
22	150	17.3		43.3	67	37.3		34.2	56	54	32	16	13 45	26	21 01	89
23	165	17.5		44.1	82	03.3		26.0	58	49	29	15	14 00	22	20 47	93
24	180	17.6	+11	45.0	96	29.3	+21	17.8	60 S	16 42	17 26	18 14	14 18	17	20 29	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 06 ^m 4		Mag: -3.9 PMG: 13 ^h 33 ^m		Mag: +0.6 PMG: 18 ^h 52 ^m		Mag: -2.1 PMG: 9 ^h 37 ^m		Mag: +0.7 PMG: 22 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	207	58.6	156	47.9	+18	59.3	215	23.3	-4	18.4
1	223	01.1	171	47.3	+19	00.1	230	25.3		18.2
2	238	03.6	186	46.6		01.0	245	27.2		18.0
3	253	06.0	201	46.0		01.9	260	29.2		17.8
4	268	08.5	216	45.4		02.7	275	31.2		17.5
5	283	10.9	231	44.7	+19	03.6	290	33.1	-4	17.3
6	298	13.4	246	44.1	+19	04.5	305	35.1	-4	17.1
7	313	15.9	261	43.4		05.3	320	37.1		16.9
8	328	18.3	276	42.8		06.2	335	39.0		16.7
9	343	20.8	291	42.2		07.1	350	41.0		16.5
10	358	23.3	306	41.5		07.9	5	43.0		16.3
11	13	25.7	321	40.9	+19	08.8	20	44.9	-4	16.1
12	28	28.2	336	40.3	+19	09.7	35	46.9	-4	15.9
13	43	30.7	351	39.6		10.5	50	48.9		15.7
14	58	33.1	6	39.0		11.4	65	50.8		15.5
15	73	35.6	21	38.3		12.2	80	52.8		15.3
16	88	38.1	36	37.7		13.1	95	54.8		15.1
17	103	40.5	51	37.1	+19	14.0	110	56.8	-4	14.9
18	118	43.0	66	36.4	+19	14.8	125	58.7	-4	14.7
19	133	45.4	81	35.8		15.7	141	00.7		14.5
20	148	47.9	96	35.1		16.5	156	02.7		14.3
21	163	50.4	111	34.5		17.4	171	04.6		14.1
22	178	52.8	126	33.9		18.2	186	06.6		13.9
23	193	55.3	141	33.2		19.1	201	08.6		13.6
24	208	57.8	156	32.6	+19	19.9	216	10.5	-4	13.4
Dif	—		-6		+9		+20		+2	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 6 ^d 5	PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1									
	PMG: 11 ^h 58 ^m 7					SD: 16'0								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	180	17.6	+11 45.0	96	29.3	+21 17.8	84	60 N	2 31	3 38	4 26	9 21	99	2 24 14
1	195	17.7	45.8	110	55.4	09.4	84	58	2 50	49	34	36	94	2 09 19
2	210	17.9	46.7	125	21.6	+21 00.9	85	56	3 04	3 59	40	48	90	1 56 22
3	225	18.0	47.5	139	47.8	+20 52.3	86	54	17	4 07	46	9 59	87	45 25
4	240	18.1	48.4	154	14.1	43.5	88	52	28	14	51	10 08	84	35 28
5	255	18.2	+11 49.2	168	40.4	+20 34.6	89	50	3 37	4 21	4 56	10 17	82	1 26 30
6	270	18.4	+11 50.1	183	06.7	+20 25.6	90	45	3 56	4 34	5 06	10 35	76	1 07 34
7	285	18.5	50.9	197	33.2	16.4	92	40	4 11	45	14	10 49	73	0 51 38
8	300	18.6	51.8	211	59.6	+20 07.1	93	35	23	4 54	21	11 02	69	38 41
9	315	18.7	52.6	226	26.1	+19 57.7	94	30	33	5 02	27	12 07	67	26 44
10	330	18.9	53.5	240	52.7	48.1	96	20	4 48	15	38	31	62	0 06 48
11	345	19.0	+11 54.3	255	19.4	+19 38.5	96	10 N	5 00	5 25	5 47	11 47	58	** ** **
12	0	19.1	+11 55.2	269	46.0	+19 28.7	98	0	5 10	5 34	5 55	12 02	54	** ** **
13	15	19.3	56.0	284	12.8	18.8	99	10 S	18	42	6 04	16	51	** ** **
14	30	19.4	56.9	298	39.6	+19 08.7	101	20	24	50	13	32	47	** ** **
15	45	19.5	57.7	313	06.4	+18 58.6	101	30	30	5 58	23	12 50	42	23 44 67
16	60	19.6	58.6	327	33.3	48.3	103	35	33	6 03	28	13 01	39	35 69
17	75	19.8	+11 59.4	342	00.3	+18 37.9	104	40	5 35	6 07	6 35	13 13	35	23 24 73
18	90	19.9	+12 00.2	356	27.3	+18 27.4	105	45	5 38	6 12	6 42	13 27	32	23 11 77
19	105	20.0	01.1	10 54.4	81	16.8	106	50	40	18	51	44	27	22 55 83
20	120	20.1	01.9	25 21.5	81	+18 06.1	107	52	41	21	6 55	13 52	25	48 85
21	135	20.3	02.8	39 48.7	82	+17 55.2	109	54	42	23	7 00	14 01	22	40 87
22	150	20.4	03.6	54 16.0	83	44.3	109	56	43	26	05	11 19		30 91
23	165	20.5	04.5	68 43.3	83	33.2	111	58	44	30	10	22 15		20 94
24	180	20.6	+12 05.3	83 10.6	83	+17 22.0	112	60 S	5 45	6 33	7 17	14 35	11	22 07 100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 02 ^m 5		Mag: -3.9 PMG: 13 ^h 34 ^m		Mag: +0.6 PMG: 18 ^h 49 ^m		Mag: -2.1 PMG: 9 ^h 34 ^m		Mag: +0.7 PMG: 22 ^h 01 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	208	57.8	156	32.6	+19 19.9	77	12.4	+20 19.6	216	10.5	-4 13.4	28	45.8	+2 41.5
1	224	00.2	171	31.9	20.8	92	13.9	19.3	231	12.5	13.2	43	48.5	41.5
2	239	02.7	186	31.3	21.6	107	15.5	19.0	246	14.5	13.0	58	51.1	41.6
3	254	05.2	201	30.6	22.5	122	17.1	18.6	261	16.5	12.8	73	53.7	41.6
4	269	07.6	216	30.0	23.3	137	18.6	18.3	276	18.4	12.6	88	56.3	41.7
5	284	10.1	231	29.4	+19 24.2	152	20.2	+20 18.0	291	20.4	-4 12.4	103	58.9	+2 41.7
6	299	12.6	246	28.7	+19 25.0	167	21.7	+20 17.7	306	22.4	-4 12.2	119	01.5	+2 41.8
7	314	15.0	261	28.1	25.9	182	23.3	17.4	321	24.3	12.0	134	04.1	41.9
8	329	17.5	276	27.4	26.7	197	24.9	17.1	336	26.3	11.8	149	06.7	41.9
9	344	19.9	291	26.8	27.6	212	26.4	16.8	351	28.3	11.6	164	09.3	42.0
10	359	22.4	306	26.1	28.4	227	28.0	16.5	6 30.2	11.4		179	11.9	42.0
11	14	24.9	321	25.5	+19 29.2	242	29.5	+20 16.2	21 32.2	-4 11.2		194	14.5	+2 42.1
12	29	27.3	336	24.8	+19 30.1	257	31.1	+20 15.9	36 34.2	-4 11.0		209	17.1	+2 42.1
13	44	29.8	351	24.2	30.9	272	32.7	15.6	51 36.2	10.8		224	19.7	42.2
14	59	32.3	6 23.5	31.8	287	34.2	15.3	66 38.1	10.6			239	22.3	42.2
15	74	34.7	21 22.9	32.6	302	35.8	15.0	81 40.1	10.4			254	24.9	42.3
16	89	37.2	36 22.2	33.4	317	37.3	14.7	96 42.1	10.2			269	27.5	42.4
17	104	39.7	51 21.6	+19 34.3	332	38.9	+20 14.4	111 44.1	-4 10.0			284	30.1	+2 42.4
18	119	42.1	66 20.9	+19 35.1	347	40.5	+20 14.1	126 46.0	-4 09.8			299	32.7	+2 42.5
19	134	44.6	81 20.3	35.9	2 42.0	13.8		141 48.0	09.6			314	35.3	42.5
20	149	47.1	96 19.6	36.8	17 43.6	13.5		156 50.0	09.4			329	37.9	42.6
21	164	49.5	111 19.0	37.6	32 45.1	13.2		171 51.9	09.2			344	40.5	42.6
22	179	52.0	126 18.3	38.4	47 46.7	12.9		186 53.9	08.9			359	43.1	42.7
23	194	54.4	141 17.7	39.3	62 48.2	12.6		201 55.9	08.7			14 45.7	42.7	
24	209	56.9	156 17.0	+19 40.1	77 49.8	+20 12.3		216 57.9	-4 08.5			29 48.3	+2 42.8	
Dif	—		-6	+8	+16	-3		+20	+2			+26	+1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 5		Edad: 7 ^d 5 PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 4 20 ^h : 59 ^m 4 R°: 52 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	20.6	+12 05.3	83	10.6	+17 22.0	60 N	19 35	20 24	21 33	11 00 99	2 38 10		
1	195	20.7	06.2	97	38.0	+17 10.8 ¹¹²	58	28	13	21 14	10 94	28 13		
2	210	20.9	07.0	112	05.5	+16 59.4 ¹¹⁴	56	21	20 03	20 58	18 91	18 17		
3	225	21.0	07.8	126	33.0	85 47.9 ¹¹⁵	54	15	19 54	45	26 87	10 20		
4	240	21.1	08.7	141	00.6	86 36.3 ¹¹⁶	52	09	47	34	32 85	2 03 22		
5	255	21.2	+12 09.5	155	28.2	86 +16 24.6 ¹¹⁷	50	19 05	19 40	20 24	11 39 82	1 56 24		
6	270	21.4	+12 10.4	169	55.9	87 +16 12.8 ¹¹⁸	45	18 54	19 25	20 04	11 51 78	1 41 30		
7	285	21.5	11.2	184	23.6	87 +16 00.9 ¹¹⁹	40	45	14	19 48	12 02 73	29 34		
8	300	21.6	12.1	198	51.4	88 +15 48.9 ¹²⁰	35	38	19 04	36	11 69	19 37		
9	315	21.7	12.9	213	19.3	89 36.8 ¹²¹	30	31	18 56	26	19 66	1 10 40		
10	330	21.9	13.7	227	47.1	88 24.6 ¹²²	20	20	43	19 10	33 61	0 54 45		
11	345	22.0	+12 14.6	242	15.1	90 +15 12.4 ¹²²	10 N	18 11	18 32	18 58	12 45 56	0 41 49		
12	0	22.1	+12 15.4	256	43.1	90 +15 00.0 ¹²⁴	0	18 02	18 23	18 48	12 56 52	0 28 53		
13	15	22.2	16.2	271	11.2	91 +14 47.5 ¹²⁵	10 S	17 53	15	39	13 07 47	15 57		
14	30	22.3	17.1	285	39.3	91 35.0 ¹²⁵	20	44	18 06	32	19 43	0 00 62		
15	45	22.5	17.9	300	07.4	91 22.3 ¹²⁷	30	33	17 58	26	32 38	** ** *		
16	60	22.6	18.8	314	35.6	92 +14 09.6 ¹²⁷	35	27	53	23	40 35	** ** *		
17	75	22.7	+12 19.6	329	03.9	93 +13 56.8 ¹²⁸	40	17 21	17 48	18 20	13 48 32	** ** *		
18	90	22.8	+12 20.4	343	32.2	93 +13 43.9 ¹²⁹	45	17 13	17 43	18 17	13 59 27	** ** *		
19	105	22.9	21.3	358	00.5	93 30.9 ¹³⁰	50	17 04	37	15	14 11 22	** ** *		
20	120	23.1	22.1	12	29.0	95 17.8 ¹³¹	52	16 59	34	14	17 20	** ** *		
21	135	23.2	22.9	26	57.4	94 +13 04.7 ¹³¹	54	55	31	12	23 17	** ** *		
22	150	23.3	23.8	41	25.9	95 +12 51.5 ¹³²	56	49	28	11	30 14	** ** *		
23	165	23.4	24.6	55	54.5	96 38.1 ¹³⁴	58	43	24	10	37 12	23 54 95		
24	180	23.5	+12 25.5	70	23.0	95 +12 24.8 ¹³³	60 S	16 37	17 21	18 09	14 46 8	23 47 98		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 58 ^m 6		Mag: -3.9 PMG: 13 ^h 35 ^m		Mag: +0.6 PMG: 18 ^h 47 ^m		Mag: -2.1 PMG: 9 ^h 31 ^m		Mag: +0.7 PMG: 21 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	209	56.9	156	17.0	+19 40.1	77 49.8	+20 12.3	216 57.9	-4 08.5	29 48.3	+2 42.8			
1	224	59.4	171	16.3	40.9	92 51.3	12.0	231 59.8	08.3	44 50.9	42.8			
2	240	01.8	186	15.7	41.8	107 52.9	11.7	247 01.8	08.1	59 53.5	42.9			
3	255	04.3	201	15.0	42.6	122 54.4	11.4	262 03.8	07.9	74 56.1	43.0			
4	270	06.8	216	14.4	43.4	137 56.0	11.1	277 05.8	07.7	89 58.7	43.0			
5	285	09.2	231	13.7	+19 44.2	152 57.5	+20 10.8	292 07.7	-4 07.5	105 01.3	+2 43.1			
6	300	11.7	246	13.1	+19 45.1	167 59.1	+20 10.4	307 09.7	-4 07.3	120 03.9	+2 43.1			
7	315	14.2	261	12.4	45.9	183 00.6	10.1	322 11.7	07.1	135 06.5	43.2			
8	330	16.6	276	11.7	46.7	198 02.2	09.8	337 13.6	06.9	150 09.2	43.2			
9	345	19.1	291	11.1	47.5	213 03.7	09.5	352 15.6	06.7	165 11.8	43.3			
10	0	21.5	306	10.4	48.3	228 05.3	09.2	7 17.6	06.5	180 14.4	43.3			
11	15	24.0	321	09.8	+19 49.2	243 06.8	+20 08.9	22 19.6	-4 06.3	195 17.0	+2 43.4			
12	30	26.5	336	09.1	+19 50.0	258 08.4	+20 08.6	37 21.5	-4 06.1	210 19.6	+2 43.4			
13	45	28.9	351	08.4	50.8	273 09.9	08.3	52 23.5	05.9	225 22.2	43.5			
14	60	31.4	6 07.8	51.6	288 11.5	08.0	67 25.5	05.7	240 24.8	43.6				
15	75	33.9	21 07.1	52.4	303 13.0	07.7	82 27.5	05.5	255 27.4	43.6				
16	90	36.3	36 06.5	53.3	318 14.6	07.4	97 29.4	05.3	270 30.0	43.7				
17	105	38.8	51 05.8	+19 54.1	333 16.1	+20 07.1	112 31.4	-4 05.1	285 32.6	+2 43.7				
18	120	41.3	66 05.1	+19 54.9	348 17.7	+20 06.8	127 33.4	-4 04.9	300 35.2	+2 43.8				
19	135	43.7	81 04.5	55.7	3 19.2	06.4	142 35.4	04.7	315 37.8	43.8				
20	150	46.2	96 03.8	56.5	18 20.7	06.1	157 37.3	04.5	330 40.4	43.9				
21	165	48.7	111 03.2	57.3	33 22.3	05.8	172 39.3	04.3	345 43.0	43.9				
22	180	51.1	126 02.5	58.1	48 23.8	05.5	187 41.3	04.1	0 45.6	44.0				
23	195	53.6	141 01.8	58.9	63 25.4	05.2	202 43.3	03.9	15 48.2	44.0				
24	210	56.0	156 01.2	+19 59.7	78 26.9	+20 04.9	217 45.2	-4 03.7	30 50.8	+2 44.1				
Dif	—		-7 +8		+15 -3		+20 +2		+26 +1					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/9 PMG: 11 ^h 58 ^m 3				Edad: 8 ^d 5 PHE { SD: 16/2 PMG: 20 ^h 00 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	23.5	+12	25.5	70	23.0	+12	24.8	60 N	2	23	3	32	4	21	12	39
1	195	23.7		26.3	84	51.7	97	+12 11.3 ¹³⁵	58		42		43	28		44	94
2	210	23.8		27.1	99	20.4	97	+11 57.8 ¹³⁵	56	2	58	3	53	35		49	90
3	225	23.9		28.0	113	49.1	97	44.2 ¹³⁶	54	3	11	4	02	41		53	88
4	240	24.0		28.8	128	17.9	98	30.5 ¹³⁷	52		23		10	47		12	57
5	255	24.1	+12	29.6	142	46.7	98	+11 16.8 ¹³⁷	50	3	32	4	16	4	52	13	01
6	270	24.3	+12	30.5	157	15.5	98	+11 03.0 ¹³⁸	45	3	52	4	31	5	02	13	09
7	285	24.4		31.3	171	44.4	99	+10 49.1 ¹³⁹	40	4	08		42	11		15	73
8	300	24.5		32.1	186	13.4	100	35.2 ¹³⁹	35		20	4	52	18		20	69
9	315	24.6		33.0	200	42.3	99	21.2 ¹⁴⁰	30		31	5	00	25		25	66
10	330	24.7		33.8	215	11.4	101	+10 07.1 ¹⁴¹	20		47		14	36		34	60
11	345	24.8	+12	34.6	229	40.4	100	+9 53.0 ¹⁴¹	10 N	4	59	5	24	5	46	13	41
12	0	25.0	+12	35.4	244	09.5	101	+9 38.8 ¹⁴²	0	5	09	5	34	5	55	13	48
13	15	25.1		36.3	258	38.6	101	24.5 ¹⁴³	10 S		18		42	6	04	13	54
14	30	25.2		37.1	273	07.8	102	+9 10.2 ¹⁴³	20		25		51	13		14	02
15	45	25.3		37.9	287	37.0	102	+8 55.9 ¹⁴³	30		31	5	59	24		10	36
16	60	25.4		38.8	302	06.2	102	41.5 ¹⁴⁴	35		34	6	04	30		15	32
17	75	25.5	+12	39.6	316	35.5	103	+8 27.0 ¹⁴⁵	40	5	37	6	09	6	37	14	20
18	90	25.7	+12	40.4	331	04.8	103	+8 12.5 ¹⁴⁵	45	5	40	6	15	6	45	14	26
19	105	25.8		41.3	345	34.1	103	+7 58.0 ¹⁴⁵	50		43		21	54		33	20
20	120	25.9		42.1	0	03.5	104	43.3 ¹⁴⁷	52		44		24	6	59	37	18
21	135	26.0		42.9	14	32.9	104	28.7 ¹⁴⁶	54		45		27	7	03	40	16
22	150	26.1		43.7	29	02.3	104	+7 14.0 ¹⁴⁷	56		46		30	09		44	13
23	165	26.2		44.6	43	31.7	104	+6 59.3 ¹⁴⁷	58		48		34	15		49	10
24	180	26.4	+12	45.4	58	01.2	105	+6 44.5 ¹⁴⁸	60 S	5	49	6	38	7	22	14	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 54 ^m 6		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: +0.6 PMG: 18 ^h 44 ^m		Mag: -2.1 PMG: 9 ^h 28 ^m		Mag: +0.8 PMG: 21 ^h 53 ^m	
	hG ♈	hG ♀	hG ♂	hG ♎	hG ♊	hG ♋	hG ♏	hG ♑	hG ♒	hG ♐
h	°	'	°	'	°	'	°	'	°	'
0	210	56.0	156	01.2	78	26.9	217	45.2	30	50.8
1	225	58.5	171	00.5	93	28.5	232	47.2	45	53.4
2	241	01.0	185	59.8	108	30.0	247	49.2	60	56.0
3	256	03.4	200	59.2	123	31.5	262	51.2	75	58.6
4	271	05.9	215	58.5	138	33.1	277	53.1	91	01.2
5	286	08.4	230	57.8	153	34.6	292	55.1	106	03.8
6	301	10.8	245	57.2	168	36.2	307	57.1	121	06.4
7	316	13.3	260	56.5	183	37.7	322	59.1	136	09.0
8	331	15.8	275	55.8	198	39.2	338	01.0	151	11.6
9	346	18.2	290	55.2	213	40.8	353	03.0	166	14.2
10	1	20.7	305	54.5	228	42.3	8	05.0	181	16.8
11	16	23.2	320	53.8	243	43.8	23	07.0	196	19.3
12	31	25.6	335	53.1	258	45.4	38	09.0	211	21.9
13	46	28.1	350	52.5	273	46.9	53	10.9	226	24.5
14	61	30.5	5	51.8	288	48.4	68	12.9	241	27.1
15	76	33.0	20	51.1	303	50.0	83	14.9	256	29.7
16	91	35.5	35	50.5	318	51.5	98	16.9	271	32.3
17	106	37.9	50	49.8	333	53.0	113	18.8	286	34.9
18	121	40.4	65	49.1	348	54.6	128	20.8	301	37.5
19	136	42.9	80	48.4	3	56.1	143	22.8	316	40.1
20	151	45.3	95	47.8	18	57.6	158	24.8	331	42.7
21	166	47.8	110	47.1	33	59.2	173	26.8	346	45.3
22	181	50.3	125	46.4	49	00.7	188	28.7	1	47.9
23	196	52.7	140	45.7	64	02.2	203	30.7	16	50.5
24	211	55.2	155	45.1	79	03.8	218	32.7	31	53.1
Dif	—	—	-7	+8	+15	-3	+20	+2	+26	+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 9 ^d 5	PHE { 4 ^h : 59 ^m /7 12 ^h : 59 ^m /7 20 ^h : 59 ^m /7									
	PMG: 11 ^h 58 ^m 2					SD: 16 ^h 3			PMG: 20 ^h 50 ^m		R°: 50 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	26.4	+12 45.4	58	01.2	+6 44.5	105	60 N	19 40	20 30	21 42	14 16 97	2 55 6	
1	195	26.5	46.2	72	30.7	29.7	148	58	32	18	21	18 93	51 10	
2	210	26.6	47.0	87	00.2	+6 14.8	149	56	25	20 07	21 04	19 90	49 12	
3	225	26.7	47.9	101	29.7	+5 59.9	149	54	19	19 58	20 50	21 87	46 15	
4	240	26.8	48.7	115	59.3	45.0	149	52	13	50	38	22 84	44 17	
5	255	26.9	+12 49.5	130	28.9	+5 30.0	150	50	19 08	19 43	20 28	14 23 82	2 42 19	
6	270	27.0	+12 50.3	144	58.5	+5 15.0	150	45	18 57	19 28	20 07	14 25 77	2 37 24	
7	285	27.2	51.2	159	28.1	+5 00.0	150	40	47	16	19 51	28 72	33 28	
8	300	27.3	52.0	173	57.8	+4 44.9	151	35	40	19 06	38	29 69	29 32	
9	315	27.4	52.8	188	27.4	29.8	151	30	33	18 58	27	31 65	26 36	
10	330	27.5	53.6	202	57.1	+4 14.7	151	20	21	44	19 11	34 59	21 41	
11	345	27.6	+12 54.5	217	26.8	+3 59.6	151	10 N	18 11	18 33	18 58	14 36 55	2 16 46	
12	0	27.7	+12 55.3	231	56.5	+3 44.4	152	0	18 02	18 23	18 47	14 38 50	2 12 50	
13	15	27.8	56.1	246	26.3	29.2	152	10 S	17 52	14	39	40 46	07 55	
14	30	27.9	56.9	260	56.0	+3 14.0	152	20	42	18 05	31	43 40	2 02 60	
15	45	28.1	57.7	275	25.8	+2 58.8	152	30	31	17 56	24	46 35	1 57 65	
16	60	28.2	58.6	289	55.5	43.5	153	35	25	51	21	47 32	53 69	
17	75	28.3	+12 59.4	304	25.3	+2 28.3	152	40	17 18	17 46	18 18	14 49 28	1 50 72	
18	90	28.4	+13 00.2	318	55.1	+2 13.0	153	45	17 10	17 40	18 14	14 51 24	1 45 77	
19	105	28.5	01.0	333	24.9	+1 57.7	153	50	17 00	33	11	53 20	40 82	
20	120	28.6	01.8	347	54.7	42.4	153	52	16 55	30	10	55 17	37 85	
21	135	28.7	02.7	2	24.5	27.1	153	54	50	27	08	56 14	35 87	
22	150	28.8	03.5	16	54.3	+1 11.8	153	56	45	24	07	57 12	32 90	
23	165	28.9	04.3	31	24.1	+0 56.4	154	58	38	20	06	14 59 9	28 94	
24	180	29.0	+13 05.1	45	53.9	+0 41.1	153	60 S	16 31	17 15	18 04	15 00 6	1 25 97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 50 ^m 7		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: +0.6 PMG: 18 ^h 42 ^m		Mag: -2.1 PMG: 9 ^h 25 ^m		Mag: +0.8 PMG: 21 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	211	55.2	155 45.1	+20 18.9	79 03.8	+19 57.4	218 32.7	-3 58.8	31 53.1	+2 45.3
1	226	57.6	170 44.4	19.6	94 05.3	57.1	233 34.7	58.6	46 55.7	45.4
2	242	00.1	185 43.7	20.4	109 06.8	56.8	248 36.6	58.4	61 58.3	45.5
3	257	02.6	200 43.0	21.2	124 08.3	56.5	263 38.6	58.2	77 00.9	45.5
4	272	05.0	215 42.4	22.0	139 09.9	56.2	278 40.6	58.0	92 03.5	45.6
5	287	07.5	230 41.7	+20 22.8	154 11.4	+19 55.8	293 42.6	-3 57.8	107 06.1	+2 45.6
6	302	10.0	245 41.0	+20 23.5	169 12.9	+19 55.5	308 44.6	-3 57.6	122 08.7	+2 45.7
7	317	12.4	260 40.3	24.3	184 14.4	55.2	323 46.5	57.4	137 11.3	45.7
8	332	14.9	275 39.6	25.1	199 16.0	54.9	338 48.5	57.2	152 13.9	45.8
9	347	17.4	290 39.0	25.9	214 17.5	54.6	353 50.5	57.0	167 16.5	45.8
10	2	19.8	305 38.3	26.7	229 19.0	54.3	8 52.5	56.8	182 19.1	45.9
11	17	22.3	320 37.6	+20 27.4	244 20.5	+19 53.9	23 54.5	-3 56.6	197 21.7	+2 45.9
12	32	24.8	335 36.9	+20 28.2	259 22.1	+19 53.6	38 56.4	-3 56.4	212 24.3	+2 46.0
13	47	27.2	350 36.2	29.0	274 23.6	53.3	53 58.4	56.2	227 26.9	46.0
14	62	29.7	5 35.6	29.8	289 25.1	53.0	69 00.4	56.0	242 29.5	46.1
15	77	32.1	20 34.9	30.5	304 26.6	52.7	84 02.4	55.8	257 32.1	46.1
16	92	34.6	35 34.2	31.3	319 28.2	52.4	99 04.4	55.6	272 34.7	46.2
17	107	37.1	50 33.5	+20 32.1	334 29.7	+19 52.0	114 06.3	-3 55.4	287 37.3	+2 46.2
18	122	39.5	65 32.8	+20 32.8	349 31.2	+19 51.7	129 08.3	-3 55.2	302 39.8	+2 46.3
19	137	42.0	80 32.1	33.6	4 32.7	51.4	144 10.3	55.0	317 42.4	46.3
20	152	44.5	95 31.5	34.4	19 34.2	51.1	159 12.3	54.8	332 45.0	46.4
21	167	46.9	110 30.8	35.1	34 35.8	50.8	174 14.3	54.6	347 47.6	46.4
22	182	49.4	125 30.1	35.9	49 37.3	50.5	189 16.2	54.4	2 50.2	46.5
23	197	51.9	140 29.4	36.7	64 38.8	50.1	204 18.2	54.2	17 52.8	46.5
24	212	54.3	155 28.7	+20 37.4	79 40.3	+19 49.8	219 20.2	-3 54.0	32 55.4	+2 46.6
Dif	—		-7	+8	+15	-3	+20	+2	+26	+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 0			Edad: 10 ^d 5 SD: 16 ^h 3 PMG: 21 ^h 40 ^m	PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 7 20 ^h : 59 ^m 7 R°: 51 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	29.0	+13 05.1	45	53.9	+0 41.1	60 N	2 13	3 25	4 15	15 53	98	3 01	6	
1	195	29.2	05.9	60	23.7 ¹⁰⁸	25.8 ¹⁵³	58	35	37	23	51	94	01	9	
2	210	29.3	06.7	74	53.5 ¹⁰⁸	+0 10.4 ¹⁵⁴	56	2 51	48	30	49	91	01	12	
3	225	29.4	07.6	89	23.3 ¹⁰⁸	-0 04.9 ¹⁵³	54	3 05	3 57	37	48	87	01	15	
4	240	29.5	08.4	103	53.2 ¹⁰⁹	20.3 ¹⁵⁴	52	17	4 05	43	46	85	01	17	
5	255	29.6	+13 09.2	118	23.0 ¹⁰⁸	-0 35.6 ¹⁵³	50	3 28	4 12	4 48	15 45	82	3 01	20	
6	270	29.7	+13 10.0	132	52.8 ¹⁰⁸	-0 50.9 ¹⁵³	45	3 49	4 27	4 59	15 42	77	3 01	25	
7	285	29.8	10.8	147	22.6 ¹⁰⁸	-1 06.3 ¹⁵⁴	40	4 05	39	5 08	40	72	01	29	
8	300	29.9	11.6	161	52.4 ¹⁰⁸	21.6 ¹⁵³	35	18	49	16	38	69	01	33	
9	315	30.0	12.5	176	22.2 ¹⁰⁸	36.9 ¹⁵³	30	28	4 58	23	36	66	02	35	
10	330	30.1	13.3	190	52.0 ¹⁰⁸	-1 52.2 ¹⁵³	20	45	5 12	35	33	60	02	40	
11	345	30.2	+13 14.1	205	21.8 ¹⁰⁸	-2 07.5 ¹⁵³	10 N	4 58	5 23	5 45	15 31	55	3 02	45	
12	0	30.4	+13 14.9	219	51.5 ¹⁰⁷	-2 22.8 ¹⁵³	0	5 09	5 33	5 55	15 28	51	3 02	50	
13	15	30.5	15.7	234	21.3 ¹⁰⁸	38.1 ¹⁵³	10 S	18	42	6 04	26	46	02	55	
14	30	30.6	16.5	248	51.0 ¹⁰⁷	-2 53.3 ¹⁵²	20	25	5 51	14	23	42	02	60	
15	45	30.7	17.3	263	20.8 ¹⁰⁸	-3 08.6 ¹⁵³	30	32	6 01	25	21	35	02	65	
16	60	30.8	18.1	277	50.5 ¹⁰⁷	23.8 ¹⁵²	35	36	06	32	19	33	02	69	
17	75	30.9	+13 19.0	292	20.2 ¹⁰⁷	-3 39.0 ¹⁵²	40	5 39	6 11	6 39	15 17	29	3 02	72	
18	90	31.0	+13 19.8	306	49.9 ¹⁰⁷	-3 54.1 ¹⁵¹	45	5 42	6 17	6 47	15 15	25	3 02	77	
19	105	31.1	20.6	321	19.6 ¹⁰⁷	-4 09.3 ¹⁵²	50	46	24	6 57	13	20	02	82	
20	120	31.2	21.4	335	49.3 ¹⁰⁷	24.4 ¹⁵¹	52	47	27	7 02	12	18	02	84	
21	135	31.3	22.2	350	18.9 ¹⁰⁶	39.5 ¹⁵¹	54	49	30	07	10	16	02	87	
22	150	31.4	23.0	4	48.6 ¹⁰⁷	-4 54.6 ¹⁵¹	56	50	34	13	09	13	02	90	
23	165	31.5	23.8	19	18.2 ¹⁰⁶	-5 09.6 ¹⁵⁰	58	51	38	19	08	9	02	93	
24	180	31.6	+13 24.6	33	47.8 ¹⁰⁶	-5 24.6 ¹⁵⁰	60 S	5 53	6 42	7 26	15 06	6	3 02	97	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 46 ^m 8			Mag: -3.9 PMG: 13 ^h 39 ^m			Mag: +0.6 PMG: 18 ^h 39 ^m			Mag: -2.1 PMG: 9 ^h 21 ^m			Mag: +0.8 PMG: 21 ^h 45 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	212	54.3	155 28.7	+20 37.4	79 40.3	+19 49.8	219 20.2	-3 54.0	32 55.4	+2 46.6					
1	227	56.8	170 28.0	38.2	94 41.8	49.5	234 22.2	53.8	47 58.0	46.6					
2	242	59.3	185 27.3	38.9	109 43.4	49.2	249 24.2	53.6	63 00.6	46.7					
3	258	01.7	200 26.6	39.7	124 44.9	48.9	264 26.1	53.4	78 03.2	46.7					
4	273	04.2	215 26.0	40.5	139 46.4	48.5	279 28.1	53.2	93 05.8	46.8					
5	288	06.6	230 25.3	+20 41.2	154 47.9	+19 48.2	294 30.1	-3 53.0	108 08.4	+2 46.8					
6	303	09.1	245 24.6	+20 42.0	169 49.4	+19 47.9	309 32.1	-3 52.8	123 11.0	+2 46.9					
7	318	11.6	260 23.9	42.7	184 50.9	47.6	324 34.1	52.6	138 13.6	46.9					
8	333	14.0	275 23.2	43.5	199 52.4	47.3	339 36.1	52.4	153 16.2	47.0					
9	348	16.5	290 22.5	44.2	214 54.0	46.9	354 38.0	52.2	168 18.8	47.0					
10	3	19.0	305 21.8	45.0	229 55.5	46.6	9 40.0	52.0	183 21.4	47.1					
11	18	21.4	320 21.1	+20 45.8	244 57.0	+19 46.3	24 42.0	-3 51.8	198 23.9	+2 47.1					
12	33	23.9	335 20.4	+20 46.5	259 58.5	+19 46.0	39 44.0	-3 51.6	213 26.5	+2 47.2					
13	48	26.4	350 19.7	47.3	275 00.0	45.7	54 46.0	51.4	228 29.1	47.2					
14	63	28.8	5 19.1	48.0	290 01.5	45.3	69 47.9	51.2	243 31.7	47.3					
15	78	31.3	20 18.4	48.8	305 03.0	45.0	84 49.9	51.0	258 34.3	47.3					
16	93	33.7	35 17.7	49.5	320 04.5	44.7	99 51.9	50.8	273 36.9	47.4					
17	108	36.2	50 17.0	+20 50.2	335 06.1	+19 44.4	114 53.9	-3 50.6	288 39.5	+2 47.4					
18	123	38.7	65 16.3	+20 51.0	350 07.6	+19 44.1	129 55.9	-3 50.4	303 42.1	+2 47.5					
19	138	41.1	80 15.6	51.7	5 09.1	43.7	144 57.9	50.2	318 44.7	47.5					
20	153	43.6	95 14.9	52.5	20 10.6	43.4	159 59.8	50.0	333 47.3	47.6					
21	168	46.1	110 14.2	53.2	35 12.1	43.1	175 01.8	49.8	348 49.9	47.6					
22	183	48.5	125 13.5	54.0	50 13.6	42.8	190 03.8	49.6	3 52.5	47.7					
23	198	51.0	140 12.8	54.7	65 15.1	42.4	205 05.8	49.4	18 55.1	47.7					
24	213	53.5	155 12.1	+20 55.4	80 16.6	+19 42.1	220 07.8	-3 49.2	33 57.6	+2 47.8					
Dif	—		-7	+8	+15	-3	+20	+2	+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: 11 ^d 5 PHE { 4 ^h : 59'6 12 ^h : 59'5 20 ^h : 59'4 Rº: 52 ^m SD: 16'2 PMG: 22 ^h 31 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	31.6	+13	24.6	33	47.8	-5	24.6	60 N	19 45	20 36	21 51	17 31 98		3 07 7			
1	195	31.7		25.4	48	17.3 ¹⁰⁵		39.6 ¹⁵⁰	58	36	23	28	25 94		10 11			
2	210	31.8		26.2	62	46.9 ¹⁰⁶	-5	54.5 ¹⁴⁹	56	29	12	21 10	20 90		13 14			
3	225	31.9		27.0	77	16.4 ¹⁰⁵	-6	09.4 ¹⁴⁹	54	22	20 03	20 55	15 88		16 16			
4	240	32.0		27.8	91	45.9 ¹⁰⁵		24.3 ¹⁴⁹	52	16	19 54	43	11 85		18 19			
5	255	32.2	+13	28.7	106	15.4 ¹⁰⁵	-6	39.1 ¹⁴⁸	50	19 11	19 47	20 32	17 07 82		3 21 21			
6	270	32.3	+13	29.5	120	44.8 ¹⁰⁴	-6	53.9 ¹⁴⁸	45	18 59	19 31	20 10	16 59 77		3 26 26			
7	285	32.4		30.3	135	14.3 ¹⁰⁵	-7	08.7 ¹⁴⁸	40	49	18	19 53	52 73		30 30			
8	300	32.5		31.1	149	43.7 ¹⁰⁴		23.4 ¹⁴⁷	35	41	19 08	40	47 69		34 33			
9	315	32.6		31.9	164	13.1 ¹⁰⁴		38.0 ¹⁴⁶	30	34	18 59	29	42 66		37 37			
10	330	32.7		32.7	178	42.4 ¹⁰³	-7	52.7 ¹⁴⁷	20	22	45	19 11	33 61		42 42			
11	345	32.8	+13	33.5	193	11.7 ¹⁰³	-8	07.2 ¹⁴⁵	10 N	18 11	18 33	18 58	16 26 56		3 47 47			
12	0	32.9	+13	34.3	207	41.0 ¹⁰³	-8	21.7 ¹⁴⁵	0	18 01	18 22	18 47	16 19 52		3 52 51			
13	15	33.0		35.1	222	10.3 ¹⁰³		36.2 ¹⁴⁵	10 S	17 51	13	38	12 48		3 57 55			
14	30	33.1		35.9	236	39.5 ¹⁰²	-8	50.6 ¹⁴⁴	20	41	18 04	30	16 05 43		4 02 60			
15	45	33.2		36.7	251	08.7 ¹⁰²	-9	05.0 ¹⁴⁴	30	30	17 54	22	15 56 38		07 66			
16	60	33.3		37.5	265	37.8 ¹⁰¹		19.3 ¹⁴³	35	23	49	19	52 35		11 69			
17	75	33.4	+13	38.3	280	07.0 ¹⁰²	-9	33.5 ¹⁴²	40	17 15	17 43	18 15	15 46 32		4 14 73			
18	90	33.5	+13	39.1	294	36.1 ¹⁰¹	-9	47.7 ¹⁴²	45	17 07	17 37	18 11	15 40 28		4 19 77			
19	105	33.6		39.9	309	05.1 ¹⁰⁰	-10	01.8 ¹⁴¹	50	16 56	30	08	33 23		24 82			
20	120	33.7		40.7	323	34.2 ¹⁰¹		15.9 ¹⁴¹	52	51	27	06	30 20		26 85			
21	135	33.8		41.5	338	03.1 ⁹⁹		29.9 ¹⁴⁰	54	46	23	05	26 18		29 88			
22	150	33.9		42.3	352	32.1 ¹⁰⁰		43.8 ¹³⁹	56	40	19	03	22 15		32 91			
23	165	34.0		43.1	7	01.0 ⁹⁹	-10	57.7 ¹³⁹	58	33	15	18 01	17 12		35 94			
24	180	34.1	+13	43.9	21	29.9 ⁹⁹	-11	11.5 ¹³⁸	60 S	16 26	17 10	17 59	15 12 9		4 39 98			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 42 ^m 8		Mag: -3.9 PMG: 13 ^h 40 ^m				Mag: +0.7 PMG: 18 ^h 37 ^m				Mag: -2.1 PMG: 9 ^h 18 ^m				Mag: +0.8 PMG: 21 ^h 40 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♎	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	213	53.5	155	12.1	+20	55.4	80	16.6	+19	42.1	220	07.8	-3	49.2	33	57.6	+2	47.8
1	228	55.9	170	11.4		56.2	95	18.1		41.8	235	09.8		49.0	49	00.2		47.8
2	243	58.4	185	10.7		56.9	110	19.6		41.5	250	11.7		48.8	64	02.8		47.9
3	259	00.9	200	10.0		57.7	125	21.1		41.1	265	13.7		48.6	79	05.4		47.9
4	274	03.3	215	09.3		58.4	140	22.6		40.8	280	15.7		48.4	94	08.0		48.0
5	289	05.8	230	08.6	+20	59.1	155	24.1	+19	40.5	295	17.7	-3	48.2	109	10.6	+2	48.0
6	304	08.2	245	07.9	+20	59.9	170	25.6	+19	40.2	310	19.7	-3	48.0	124	13.2	+2	48.1
7	319	10.7	260	07.2	+21	00.6	185	27.1		39.8	325	21.7		47.8	139	15.8		48.1
8	334	13.2	275	06.5		01.3	200	28.6		39.5	340	23.7		47.6	154	18.4		48.2
9	349	15.6	290	05.8		02.1	215	30.2		39.2	355	25.6		47.4	169	21.0		48.2
10	4	18.1	305	05.1		02.8	230	31.7		38.9	10	27.6		47.2	184	23.5		48.3
11	19	20.6	320	04.4	+21	03.5	245	33.2	+19	38.5	25	29.6	-3	47.0	199	26.1	+2	48.3
12	34	23.0	335	03.7	+21	04.2	260	34.7	+19	38.2	40	31.6	-3	46.8	214	28.7	+2	48.4
13	49	25.5	350	03.0		05.0	275	36.2		37.9	55	33.6		46.6	229	31.3		48.4
14	64	28.0	5	02.3		05.7	290	37.7		37.6	70	35.6		46.4	244	33.9		48.5
15	79	30.4	20	01.6		06.4	305	39.2		37.2	85	37.6		46.2	259	36.5		48.5
16	94	32.9	35	00.9		07.1	320	40.7		36.9	100	39.5		46.0	274	39.1		48.5
17	109	35.3	50	00.2	+21	07.9	335	42.2	+19	36.6	115	41.5	-3	45.8	289	41.7	+2	48.6
18	124	37.8	64	59.5	+21	08.6	350	43.7	+19	36.3	130	43.5	-3	45.6	304	44.3	+2	48.6
19	139	40.3	79	58.8		09.3	5	45.2		35.9	145	45.5		45.4	319	46.9		48.7
20	154	42.7	94	58.1		10.0	20	46.7		35.6	160	47.5		45.2	334	49.4		48.7
21	169	45.2	109	57.4		10.8	35	48.2		35.3	175	49.5		45.0	349	52.0		48.8
22	184	47.7	124	56.7		11.5	50	49.6		35.0	190	51.5		44.8	4	54.6		48.8
23	199	50.1	139	56.0		12.2	65	51.1		34.6	205	53.4		44.6	19	57.2		48.9
24	214	52.6	154	55.2	+21	12.9	80	52.6	+19	34.3	220	55.4	-3	44.4	34	59.8	+2	48.9
Dif	—		-7		+7		+15		-3		+20		+2		+26		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/9 PMG: 11 ^h 57 ^m 6			Edad: 12 ^d 5 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 59/0 PMG: 23 ^h 23 ^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	34.1	+13	43.9	21	29.9	98	−11	11.5	60 N	2 04	3 19	4 09	19 09	98	3 14	9	
1	195	34.2		44.7	35	58.7	98		25.2 ¹³⁷	58	27	31	18	18 59	93	21	13	
2	210	34.3		45.5	50	27.5	98		38.9 ¹³⁷	56	2 45	43	26	50	90	27	16	
3	225	34.4		46.3	64	56.3	98	−11	52.4 ¹³⁵	54	3 00	3 52	32	43	86	32	20	
4	240	34.5		47.1	79	25.0	97	−12	06.0 ¹³⁶	52	12	4 01	39	36	83	37	23	
5	255	34.6	+13	47.9	93	53.7	97	−12	19.4 ¹³⁴	50	3 23	4 08	4 44	18 29	81	3 42	24	
6	270	34.7	+13	48.7	108	22.4	97	−12	32.8 ¹³⁴	45	3 45	4 24	4 56	18 16	76	3 52	29	
7	285	34.8		49.5	122	51.0	96		46.0 ¹³²	40	4 02	37	5 06	18 05	72	4 00	33	
8	300	34.9		50.3	137	19.5	95	−12	59.2 ¹³²	35	15	47	14	17 56	69	07	37	
9	315	35.0		51.1	151	48.1	96	−13	12.4 ¹³²	30	26	4 56	21	48	66	14	39	
10	330	35.1		51.9	166	16.5	94		25.4 ¹³⁰	20	44	5 11	33	34	61	24	45	
11	345	35.2	+13	52.7	180	45.0	95	−13	38.4 ¹³⁰	10 N	4 57	5 23	5 44	17 22	57	4 34	49	
12	0	35.3	+13	53.5	195	13.4	94	−13	51.2 ¹²⁸	0	5 08	5 33	5 54	17 11	53	4 43	53	
13	15	35.4		54.3	209	41.7	93	−14	04.0 ¹²⁸	10 S	18	43	6 04	17 00	50	4 52	57	
14	30	35.5		55.0	224	10.0	93		16.7 ¹²⁷	20	26	5 52	15	16 48	46	5 02	61	
15	45	35.6		55.8	238	38.3	93		29.3 ¹²⁶	30	34	6 02	26	34	42	13	66	
16	60	35.7		56.6	253	06.5	92		41.9 ¹²⁶	35	37	07	33	27	38	20	69	
17	75	35.8	+13	57.4	267	34.7	92	−14	54.3 ¹²⁴	40	5 41	6 13	6 41	16 18	36	5 27	73	
18	90	35.9	+13	58.2	282	02.8	91	−15	06.6 ¹²³	45	5 45	6 19	6 50	16 08	32	5 36	77	
19	105	35.9		59.0	296	30.9	91		18.8 ¹²²	50	48	27	7 00	15 56	27	46	82	
20	120	36.0	+13	59.8	310	59.0	91		31.0 ¹²²	52	50	30	05	50	25	51	84	
21	135	36.1	+14	00.6	325	27.0	90		43.0 ¹²⁰	54	52	33	11	44	22	5 57	87	
22	150	36.2		01.4	339	55.0	90	−15	55.0 ¹²⁰	56	53	37	17	37	19	6 03	90	
23	165	36.3		02.2	354	22.9	89	−16	06.8 ¹¹⁸	58	55	42	23	29	16	09	94	
24	180	36.4	+14	03.0	8	50.7	88	−16	18.6 ¹¹⁸	60 S	5 57	6 46	7 31	15 21	11	6 17	98	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 9 ^h 38 ^m 9		Mag: −3.9 PMG: 13 ^h 41 ^m			Mag: +0.7 PMG: 18 ^h 35 ^m			Mag: −2.1 PMG: 9 ^h 15 ^m			Mag: +0.8 PMG: 21 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	214	52.6	154	55.2	+21	12.9	80	52.6	+19	34.3	220	55.4	−3	44.4	34	59.8	+2	48.9
1	229	55.1	169	54.5		13.6	95	54.1		34.0	235	57.4		44.3	50	02.4		49.0
2	244	57.5	184	53.8		14.3	110	55.6		33.6	250	59.4		44.1	65	05.0		49.0
3	260	00.0	199	53.1		15.0	125	57.1		33.3	266	01.4		43.9	80	07.6		49.1
4	275	02.5	214	52.4		15.8	140	58.6		33.0	281	03.4		43.7	95	10.2		49.1
5	290	04.9	229	51.7	+21	16.5	156	00.1	+19	32.7	296	05.4	−3	43.5	110	12.7	+2	49.2
6	305	07.4	244	51.0	+21	17.2	171	01.6	+19	32.3	311	07.4	−3	43.3	125	15.3	+2	49.2
7	320	09.8	259	50.3		17.9	186	03.1		32.0	326	09.3		43.1	140	17.9		49.3
8	335	12.3	274	49.6		18.6	201	04.6		31.7	341	11.3		42.9	155	20.5		49.3
9	350	14.8	289	48.9		19.3	216	06.1		31.3	356	13.3		42.7	170	23.1		49.4
10	5	17.2	304	48.1		20.0	231	07.6		31.0	11	15.3		42.5	185	25.7		49.4
11	20	19.7	319	47.4	+21	20.7	246	09.1	+19	30.7	26	17.3	−3	42.3	200	28.3	+2	49.5
12	35	22.2	334	46.7	+21	21.4	261	10.6	+19	30.4	41	19.3	−3	42.1	215	30.9	+2	49.5
13	50	24.6	349	46.0		22.1	276	12.1		30.0	56	21.3		41.9	230	33.4		49.5
14	65	27.1	4	45.3		22.8	291	13.5		29.7	71	23.3		41.7	245	36.0		49.6
15	80	29.6	19	44.6		23.5	306	15.0		29.4	86	25.2		41.5	260	38.6		49.6
16	95	32.0	34	43.9		24.2	321	16.5		29.0	101	27.2		41.3	275	41.2		49.7
17	110	34.5	49	43.2	+21	24.9	336	18.0	+19	28.7	116	29.2	−3	41.1	290	43.8	+2	49.7
18	125	36.9	64	42.4	+21	25.6	351	19.5	+19	28.4	131	31.2	−3	40.9	305	46.4	+2	49.8
19	140	39.4	79	41.7		26.3	6	21.0		28.0	146	33.2		40.7	320	49.0		49.8
20	155	41.9	94	41.0		27.0	21	22.5		27.7	161	35.2		40.5	335	51.5		49.9
21	170	44.3	109	40.3		27.7	36	24.0		27.4	176	37.2		40.3	350	54.1		49.9
22	185	46.8	124	39.6		28.4	51	25.4		27.0	191	39.2		40.1	5	56.7		50.0
23	200	49.3	139	38.9		29.1	66	26.9		26.7	206	41.2		39.9	20	59.3		50.0
24	215	51.7	154	38.1	+21	29.8	81	28.4	+19	26.4	221	43.1	−3	39.7	36	01.9	+2	50.1
Dif	—		−7 +7			+15 −3			+20 +2			+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: 13 ^d 5 PHE { 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'4 R°: ***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	36.4	+14	03.0	8	50.7	-16 18.6	60 N	19 50	20 42	22 00	20 47 93	3 23 14	
1	195	36.5		03.8	23	18.6 ⁸⁹	30.2 ¹¹⁶	58	41	28	21 35	32 88	34 18	
2	210	36.6		04.5	37	46.4 ⁸⁸	41.7 ¹¹⁵	56	33	17	16	20 84	43 23	
3	225	36.7		05.3	52	14.1 ⁸⁷	-16 53.2 ¹¹⁵	54	26	20 07	21 01	20 09 81	3 52 25	
4	240	36.8		06.1	66	41.8 ⁸⁷	-17 04.5 ¹¹³	52	20	19 58	20 47	19 59 79	4 00 27	
5	255	36.9	+14	06.9	81	09.4 ⁸⁶	-17 15.7 ¹¹²	50	19 14	19 50	20 36	19 50 77	4 06 30	
6	270	37.0	+14	07.7	95	37.1 ⁸⁷	-17 26.8 ¹¹¹	45	19 02	19 34	20 13	19 32 73	4 21 35	
7	285	37.1		08.5	110	04.6 ⁸⁵	37.8 ¹¹⁰	40	18 51	21	19 56	17 70	33 39	
8	300	37.2		09.3	124	32.1 ⁸⁵	48.7 ¹⁰⁹	35	43	10	42	19 05 67	44 41	
9	315	37.3		10.1	138	59.6 ⁸⁵	-17 59.5 ¹⁰⁸	30	35	19 01	31	18 54 65	4 53 44	
10	330	37.4		10.8	153	27.1 ⁸⁵	-18 10.1 ¹⁰⁶	20	22	18 45	19 12	35 62	5 09 48	
11	345	37.5	+14	11.6	167	54.5 ⁸⁴	-18 20.7 ¹⁰⁶	10 N	18 11	18 33	18 58	18 19 59	5 23 51	
12	0	37.5	+14	12.4	182	21.8 ⁸³	-18 31.1 ¹⁰⁴	0	18 01	18 22	18 47	18 04 56	5 36 55	
13	15	37.6		13.2	196	49.1 ⁸³	41.4 ¹⁰³	10 S	17 51	12	37	17 50 52	5 49 58	
14	30	37.7		14.0	211	16.4 ⁸³	-18 51.6 ¹⁰²	20	40	18 03	29	34 49	6 03 62	
15	45	37.8		14.8	225	43.6 ⁸²	-19 01.7 ¹⁰¹	30	28	17 52	21	16 46	19 66	
16	60	37.9		15.5	240	10.8 ⁸²	11.6 ⁹⁹	35	21	47	17	17 05 44	29 68	
17	75	38.0	+14	16.3	254	38.0 ⁸²	-19 21.5 ⁹⁹	40	17 13	17 41	18 13	16 54 41	6 40 71	
18	90	38.1	+14	17.1	269	05.1 ⁸¹	-19 31.2 ⁹⁷	45	17 04	17 34	18 09	16 40 38	6 53 74	
19	105	38.2		17.9	283	32.1 ⁸⁰	40.8 ⁹⁶	50	16 52	26	04	23 33	7 08 79	
20	120	38.3		18.7	297	59.2 ⁸¹	50.2 ⁹⁴	52	47	23	03	15 31	15 82	
21	135	38.4		19.5	312	26.2 ⁸⁰	-19 59.6 ⁹⁴	54	42	19	18 01	16 06 29	24 84	
22	150	38.5		20.2	326	53.1 ⁷⁹	-20 08.8 ⁹²	56	35	15	17 59	15 56 26	33 87	
23	165	38.5		21.0	341	20.0 ⁷⁹	17.8 ⁹⁰	58	28	10	57	45 23	43 91	
24	180	38.6	+14	21.8	355	46.9 ⁷⁹	-20 26.8 ⁹⁰	60 S	16 21	17 05	17 55	15 32 18	7 55 96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 35 ^m 0		Mag: -3.9 PMG: 13 ^h 42 ^m		Mag: +0.7 PMG: 18 ^h 32 ^m		Mag: -2.2 PMG: 9 ^h 12 ^m		Mag: +0.8 PMG: 21 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	215	51.7	154	38.1	+21	29.8	81	28.4	+19	26.4
1	230	54.2	169	37.4		30.5	96	29.9		26.1
2	245	56.7	184	36.7		31.2	111	31.4		25.7
3	260	59.1	199	36.0		31.9	126	32.9		25.4
4	276	01.6	214	35.3		32.5	141	34.4		25.1
5	291	04.1	229	34.5	+21	33.2	156	35.8	+19	24.7
6	306	06.5	244	33.8	+21	33.9	171	37.3	+19	24.4
7	321	09.0	259	33.1		34.6	186	38.8		24.1
8	336	11.4	274	32.4		35.3	201	40.3		23.7
9	351	13.9	289	31.7		36.0	216	41.8		23.4
10	6	16.4	304	30.9		36.7	231	43.3		23.1
11	21	18.8	319	30.2	+21	37.3	246	44.7	+19	22.7
12	36	21.3	334	29.5	+21	38.0	261	46.2	+19	22.4
13	51	23.8	349	28.8		38.7	276	47.7		22.0
14	66	26.2	4	28.1		39.4	291	49.2		21.7
15	81	28.7	19	27.3		40.0	306	50.7		21.4
16	96	31.2	34	26.6		40.7	321	52.1		21.0
17	111	33.6	49	25.9	+21	41.4	336	53.6	+19	20.7
18	126	36.1	64	25.2	+21	42.1	351	55.1	+19	20.4
19	141	38.6	79	24.4		42.7	6	56.6		20.0
20	156	41.0	94	23.7		43.4	21	58.0		19.7
21	171	43.5	109	23.0		44.1	36	59.5		19.4
22	186	45.9	124	22.3		44.8	52	01.0		19.0
23	201	48.4	139	21.5		45.4	67	02.5		18.7
24	216	50.9	154	20.8	+21	46.1	82	03.9	+19	18.4
Dif	—		-7		+7		+15		-3	
							+20		+2	
									+26	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 57 ^m 4				Edad: 14 ^d 5 PHE { 4 ^h : 58/2 12 ^h : 58/0 20 ^h : 57/7 PMG: 0 ^h 18 ^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	38.6	+14	21.8	355	46.9	-20	26.8	88	58	60 N	1 54	3 12	4 04	22 20	79	3 37	23		
1	195	38.7		22.6	10	13.8	79	35.6	88	58	58	2 19	26	13	22 00	76	3 52	28		
2	210	38.8		23.3	24	40.6	78	44.3	87	56	56	3 38	37	21	21 44	73	4 06	31		
3	225	38.9		24.1	39	07.4	78	-20	52.9	86	54	2 54	47	28	30 71		17	34		
4	240	39.0		24.9	53	34.1	77	-21	01.3	84	52	3 07	3 56	35	18 69		27	36		
5	255	39.1	+14	25.7	68	00.8	77	-21	09.6	83	50	3 18	4 04	4 40	21 07	68	4 36	38		
6	270	39.2	+14	26.5	82	27.5	77	-21	17.8	82	45	3 41	4 21	4 53	20 45	65	4 56	41		
7	285	39.3		27.2	96	54.2	77		25.8	80	40	3 58	34	5 03	27 64		5 12	44		
8	300	39.3		28.0	111	20.8	76		33.7	79	35	4 12	45	12	20 12	62	25	46		
9	315	39.4		28.8	125	47.4	76		41.4	77	30	24	4 54	19	19 59	61	37	48		
10	330	39.5		29.6	140	14.0	76		49.1	77	20	42	5 09	32	37 59		5 57	51		
11	345	39.6	+14	30.3	154	40.5	75	-21	56.5	74	10 N	4 56	5 22	5 43	19 18	57	6 14	54		
12	0	39.7	+14	31.1	169	07.0	75	-22	03.9	74	0	5 08	5 33	5 54	19 00	56	6 31	56		
13	15	39.8		31.9	183	33.5	75		11.1	72	10 S	18	43	6 04	18 42	54	6 47	58		
14	30	39.9		32.7	198	00.0	75		18.2	71	20	26	5 53	15	23 53		7 05	60		
15	45	40.0		33.4	212	26.4	74		25.1	69	30	35	6 03	28	18 02	50	25	64		
16	60	40.0		34.2	226	52.8	74		31.9	68	35	39	09	35	17 49	49	37	65		
17	75	40.1	+14	35.0	241	19.2	74	-22	38.5	66	40	5 43	6 15	6 43	17 35	47	7 51	67		
18	90	40.2	+14	35.8	255	45.6	74	-22	45.0	65	45	5 47	6 21	6 52	17 18	45	8 07	70		
19	105	40.3		36.5	270	12.0	74		51.4	64	50	51	29	7 03	16 56	43	27	73		
20	120	40.4		37.3	284	38.3	73	-22	57.6	62	52	53	33	09	46 41		37	75		
21	135	40.5		38.1	299	04.6	73	-23	03.7	61	54	55	37	14	35 39		8 48	76		
22	150	40.5		38.8	313	30.9	73		09.6	59	56	57	41	21	22 37		9 00	79		
23	165	40.6		39.6	327	57.2	73		15.4	58	58	5 59	46	28	16 08	34	14	83		
24	180	40.7	+14	40.4	342	23.5	73	-23	21.0	56	60 S	6 01	6 51	7 36	15 50	30	9 31	87		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 9 ^h 31 ^m 0		Mag: -3.9 PMG: 13 ^h 43 ^m			Mag: +0.7 PMG: 18 ^h 30 ^m			Mag: -2.2 PMG: 9 ^h 09 ^m			Mag: +0.8 PMG: 21 ^h 28 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	°	°	'	°	°	'	°	°	°		
0	216	50.9	154	20.8	+21	46.1	82	03.9	+19	18.4	222	30.9	-3	35.0	37	
1	231	53.3	169	20.1		46.8	97	05.4		18.0	237	32.9		34.8	52	
2	246	55.8	184	19.3		47.4	112	06.9		17.7	252	34.9		34.6	67	
3	261	58.3	199	18.6		48.1	127	08.4		17.3	267	36.9		34.4	82	
4	277	00.7	214	17.9		48.8	142	09.8		17.0	282	38.9		34.2	97	
5	292	03.2	229	17.2	+21	49.4	157	11.3	+19	16.7	297	40.9	-3	34.0	112	
6	307	05.7	244	16.4	+21	50.1	172	12.8	+19	16.3	312	42.9	-3	33.8	127	
7	322	08.1	259	15.7		50.7	187	14.3		16.0	327	44.9		33.6	142	
8	337	10.6	274	15.0		51.4	202	15.7		15.7	342	46.9		33.5	157	
9	352	13.0	289	14.2		52.1	217	17.2		15.3	357	48.9		33.3	172	
10	7	15.5	304	13.5		52.7	232	18.7		15.0	12	50.9		33.1	187	
11	22	18.0	319	12.8	+21	53.4	247	20.1	+19	14.6	27	52.9	-3	32.9	202	
12	37	20.4	334	12.0	+21	54.0	262	21.6	+19	14.3	42	54.9	-3	32.7	217	
13	52	22.9	349	11.3		54.7	277	23.1		14.0	57	56.9		32.5	232	
14	67	25.4	4	10.6		55.3	292	24.6		13.6	72	58.8		32.3	247	
15	82	27.8	19	09.8		56.0	307	26.0		13.3	88	00.8		32.1	262	
16	97	30.3	34	09.1		56.6	322	27.5		12.9	103	02.8		31.9	277	
17	112	32.8	49	08.4	+21	57.3	337	29.0	+19	12.6	118	04.8	-3	31.7	292	
18	127	35.2	64	07.6	+21	57.9	352	30.4	+19	12.3	133	06.8	-3	31.5	307	
19	142	37.7	79	06.9		58.6	7	31.9		11.9	148	08.8		31.3	322	
20	157	40.2	94	06.2		59.2	22	33.4		11.6	163	10.8		31.1	337	
21	172	42.6	109	05.4	+21	59.9	37	34.8		11.2	178	12.8		30.9	352	
22	187	45.1	124	04.7	+22	00.5	52	36.3		10.9	193	14.8		30.7	8	
23	202	47.5	139	04.0		01.2	67	37.8		10.6	208	16.8		30.5	23	
24	217	50.0	154	03.2	+22	01.8	82	39.2	+19	10.2	223	18.8	-3	30.3	38	
Dif	—		-7		+7		+15		-3		+20		+2		+26	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 15 ^d 5 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/0					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 57 ^m 2			PMG: 1 ^h 13 ^m R°: 56 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	40.7	+14 40.4	342	23.5	-23 21.0	55	60 N	19 55	20 48	22 10	23 39 57	4 00 37		
1	195	40.8		356	49.8	73 26.5	55	58	45	34	21 43	23 16 56	20 41		
2	210	40.9	41.9	11	16.1	73 31.9	54	56	37	21	22	22 57 56	37 43		
3	225	41.0	42.7	25	42.3	72 37.1	52	54	30	11	21 06	41 57	4 51 45		
4	240	41.1	43.5	40	08.6	73 42.1	50	52	23	20 02	20 52	27 57	5 03 47		
5	255	41.1	+14 44.2	54	34.8	72 -23 47.0	49	50	19 17	19 53	20 40	22 15 57	5 14 48		
6	270	41.2	+14 45.0	69	01.1	73 -23 51.8	48	45	19 04	19 36	20 16	21 50 57	5 37 50		
7	285	41.3	45.8	83	27.3	72 -23 56.4	46	40	18 53	23	19 58	31 56	5 56 50		
8	300	41.4	46.5	97	53.5	72 -24 00.9	45	35	35	44	11	44	14 57	6 11 52	
9	315	41.5	47.3	112	19.8	73 05.2	43	30	30	37	19 02	32	21 00 56	25 52	
10	330	41.5	48.1	126	46.0	72 09.4	42	20	23	18 46	19 13	20 36 56	6 48 54		
11	345	41.6	+14 48.8	141	12.2	72 -24 13.4	40	10 N	18 11	18 33	18 59	20 15 56	7 08 55		
12	0	41.7	+14 49.6	155	38.5	73 -24 17.3	39	0	18 01	18 22	18 47	19 56 55	7 27 56		
13	15	41.8	50.4	170	04.7	72 21.1	38	10 S	17 50	12	37	36 56	7 45 57		
14	30	41.9	51.1	184	31.0	73 24.6	35	20	39	18 01	28	19 16 55	8 05 58		
15	45	42.0	51.9	198	57.2	72 28.1	35	30	26	17 51	19	18 52 54	29 59		
16	60	42.0	52.6	213	23.5	73 31.4	33	35	19	45	15	38 54	42 60		
17	75	42.1	+14 53.4	227	49.8	73 -24 34.5	31	40	17 10	17 38	18 10	18 22 53	8 58 60		
18	90	42.2	+14 54.2	242	16.0	72 -24 37.5	30	45	17 01	17 31	18 06	18 03 53	9 17 61		
19	105	42.3	54.9	256	42.3	73 40.4	29	50	16 49	23	18 01	17 39 52	40 63		
20	120	42.4	55.7	271	08.7	74 43.1	27	52	44	19	17 59	27 52	9 52 63		
21	135	42.4	56.5	285	35.0	73 45.6	25	54	38	15	57	17 14 51	10 04 65		
22	150	42.5	57.2	300	01.3	73 48.0	24	56	31	11	55	16 59 50	19 66		
23	165	42.6	58.0	314	27.7	74 50.3	23	58	24	06	53	42 49	37 66		
24	180	42.7	+14 58.7	328	54.1	74 -24 52.4	21	60 S	16 15	17 01	17 50	16 20 47	10 58 69		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 27 ^m 1			Mag: -3.9 PMG: 13 ^h 44 ^m			Mag: +0.7 PMG: 18 ^h 28 ^m			Mag: -2.2 PMG: 9 ^h 06 ^m			Mag: +0.8 PMG: 21 ^h 24 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	
0	217	50.0	154 03.2	+22 01.8	82 39.2	+19 10.2	223 18.8	-3 30.3	38 05.8	+2 52.2					
1	232	52.5	169 02.5	02.4	97 40.7	09.9	238 20.8	30.1	53 08.4	52.2					
2	247	54.9	184 01.7	03.1	112 42.2	09.5	253 22.8	30.0	68 11.0	52.3					
3	262	57.4	199 01.0	03.7	127 43.6	09.2	268 24.8	29.8	83 13.6	52.3					
4	277	59.9	214 00.3	04.4	142 45.1	08.9	283 26.8	29.6	98 16.2	52.4					
5	293	02.3	228 59.5	+22 05.0	157 46.6	+19 08.5	298 28.8	-3 29.4	113 18.7	+2 52.4					
6	308	04.8	243 58.8	+22 05.6	172 48.0	+19 08.2	313 30.8	-3 29.2	128 21.3	+2 52.5					
7	323	07.3	258 58.1	06.3	187 49.5	07.8	328 32.8	29.0	143 23.9	52.5					
8	338	09.7	273 57.3	06.9	202 50.9	07.5	343 34.8	28.8	158 26.5	52.5					
9	353	12.2	288 56.6	07.5	217 52.4	07.1	358 36.8	28.6	173 29.1	52.6					
10	8	14.7	303 55.8	08.2	232 53.9	06.8	13 38.8	28.4	188 31.6	52.6					
11	23	17.1	318 55.1	+22 08.8	247 55.3	+19 06.5	28 40.8	-3 28.2	203 34.2	+2 52.7					
12	38	19.6	333 54.3	+22 09.4	262 56.8	+19 06.1	43 42.8	-3 28.0	218 36.8	+2 52.7					
13	53	22.0	348 53.6	10.1	277 58.3	05.8	58 44.8	27.8	233 39.4	52.8					
14	68	24.5	3 52.9	10.7	292 59.7	05.4	73 46.7	27.6	248 41.9	52.8					
15	83	27.0	18 52.1	11.3	308 01.2	05.1	88 48.7	27.4	263 44.5	52.8					
16	98	29.4	33 51.4	11.9	323 02.6	04.7	103 50.7	27.2	278 47.1	52.9					
17	113	31.9	48 50.6	+22 12.6	338 04.1	+19 04.4	118 52.7	-3 27.0	293 49.7	+2 52.9					
18	128	34.4	63 49.9	+22 13.2	353 05.5	+19 04.1	133 54.7	-3 26.9	308 52.3	+2 53.0					
19	143	36.8	78 49.1	13.8	8 07.0	03.7	148 56.7	26.7	323 54.8	53.0					
20	158	39.3	93 48.4	14.4	23 08.5	03.4	163 58.7	26.5	338 57.4	53.1					
21	173	41.8	108 47.7	15.1	38 09.9	03.0	179 00.7	26.3	354 00.0	53.1					
22	188	44.2	123 46.9	15.7	53 11.4	02.7	194 02.7	26.1	9 02.6	53.1					
23	203	46.7	138 46.2	16.3	68 12.8	02.3	209 04.7	25.9	24 05.1	53.2					
24	218	49.2	153 45.4	+22 16.9	83 14.3	+19 02.0	224 06.7	-3 25.7	39 07.7	+2 53.2					
Dif	—	-7	+6	+15	-3	+20	+2	+26							

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15'9 PMG: 11 ^h 57 ^m 1				Edad: 16 ^d 5 PHE { 4 ^h : 56'8 12 ^h : 56'5 20 ^h : 56'3 PMG: 2 ^h 09 ^m R°: 55 ^m																			
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico		Civil		Hora		R°		Hora	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m
0	180	42.7	+14	58.7	328	54.1	−24	52.4	19	58	60 N	1	43	3	05	3	58	**	**	**	4	37	58	
1	195	42.7	+14	59.5	343	20.5	74	54.3	19	58	58	2	11	20	4	08	**	**	**	5	01	57		
2	210	42.8	+15	00.3	357	46.9	74	56.2	19	56	56	31	32	17			23	53	41	20	57			
3	225	42.9		01.0	12	13.4	75	57.8	16	54	54	2	48	43	24		38	42	36	5				
4	240	43.0		01.8	26	39.9	75	−24	59.3	15	52	3	02	3	52	31		24	43	5	50	56		
5	255	43.1	+15	02.5	41	06.4	75	−25	00.7	14	50	3	14	4	00	4	37	23	12	44	6	02	56	
6	270	43.1	+15	03.3	55	32.9	75	−25	02.0	13	45	3	37	4	17	4	50	22	47	46	6	27	56	
7	285	43.2		04.0	69	59.5	76		03.0	10	40	3	55	31	5	00		27	48	6	46	57		
8	300	43.3		04.8	84	26.1	76		04.0	10	35	4	10	42	09		22	11	48	7	03	56		
9	315	43.4		05.6	98	52.7	76		04.8	8	30	22	4	52	17		21	56	50	17	56			
10	330	43.4		06.3	113	19.4	77		05.4	6	20	41	5	08	31		32	51	7	42	55			
11	345	43.5	+15	07.1	127	46.1	77	−25	05.9	5	10 N	4	55	5	21	5	43	21	11	52	8	03	55	
12	0	43.6	+15	07.8	142	12.8	77	−25	06.3	4	0	5	07	5	32	5	54	20	51	53	8	23	54	
13	15	43.7		08.6	156	39.6	78		06.5	2	10 S	18	43	6	04		32	54	8	42	54			
14	30	43.7		09.3	171	06.4	78		06.6	1	20	27	5	53	16		20	11	55	9	03	54		
15	45	43.8		10.1	185	33.2	78		06.5	2	30	36	6	04	29		19	46	57	28	53			
16	60	43.9		10.8	200	00.1	79		06.3	1	35	40	10	36			32	57	42	53				
17	75	44.0	+15	11.6	214	27.1	80	−25	06.0	3	40	5	44	6	17	6	45	19	15	58	9	58	53	
18	90	44.0	+15	12.3	228	54.1	80	−25	05.5	5	45	5	49	6	24	6	55	18	56	59	10	18	52	
19	105	44.1		13.1	243	21.1	80		04.9	6	50	54	32	7	06		31	60	43	51				
20	120	44.2		13.8	257	48.2	81		04.1	8	52	56	36	12			19	61	10	55	50			
21	135	44.3		14.6	272	15.3	81		03.2	9	54	5	58	40	18		18	05	62	11	09	49		
22	150	44.3		15.3	286	42.5	82		02.1	11	56	6	00	45	25		17	49	63	25	48			
23	165	44.4		16.1	301	09.7	82	−25	01.0	11	58	03	49	32			31	64	11	43	48			
24	180	44.5	+15	16.8	315	37.0	83	−24	59.6	14	60 S	6	05	6	55	7	41	17	07	67	12	07	45	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 23 ^m 2		Mag: −3.9 PMG: 13 ^h 46 ^m		Mag: +0.7 PMG: 18 ^h 25 ^m		Mag: −2.2 PMG: 9 ^h 02 ^m		Mag: +0.8 PMG: 21 ^h 20 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	218	49.2	153	45.4	+22	16.9	83	14.3	+19	02.0	224	06.7	−3	25.7	39	07.7	+2	53.2
1	233	51.6	168	44.7		17.5	98	15.7		01.6	239	08.7		25.5	54	10.3		53.3
2	248	54.1	183	43.9		18.2	113	17.2		01.3	254	10.7		25.3	69	12.9		53.3
3	263	56.5	198	43.2		18.8	128	18.7		00.9	269	12.7		25.1	84	15.4		53.3
4	278	59.0	213	42.4		19.4	143	20.1		00.6	284	14.7		24.9	99	18.0		53.4
5	294	01.5	228	41.7	+22	20.0	158	21.6	+19	00.3	299	16.7	−3	24.7	114	20.6	+2	53.4
6	309	03.9	243	40.9	+22	20.6	173	23.0	+18	59.9	314	18.7	−3	24.5	129	23.2	+2	53.5
7	324	06.4	258	40.2		21.2	188	24.5		59.6	329	20.7		24.4	144	25.8		53.5
8	339	08.9	273	39.4		21.8	203	25.9		59.2	344	22.7		24.2	159	28.3		53.5
9	354	11.3	288	38.7		22.4	218	27.4		58.9	359	24.7		24.0	174	30.9		53.6
10	9	13.8	303	37.9		23.0	233	28.8		58.5	14	26.7		23.8	189	33.5		53.6
11	24	16.3	318	37.2	+22	23.6	248	30.3	+18	58.2	29	28.7	−3	23.6	204	36.1	+2	53.7
12	39	18.7	333	36.4	+22	24.2	263	31.7	+18	57.8	44	30.7	−3	23.4	219	38.6	+2	53.7
13	54	21.2	348	35.7		24.8	278	33.2		57.5	59	32.7		23.2	234	41.2		53.8
14	69	23.7	3	34.9		25.5	293	34.6		57.1	74	34.7		23.0	249	43.8		53.8
15	84	26.1	18	34.2		26.1	308	36.1		56.8	89	36.7		22.8	264	46.4		53.8
16	99	28.6	33	33.4		26.7	323	37.5		56.4	104	38.7		22.6	279	48.9		53.9
17	114	31.0	48	32.7	+22	27.3	338	39.0	+18	56.1	119	40.7	−3	22.4	294	51.5	+2	53.9
18	129	33.5	63	31.9	+22	27.9	353	40.4	+18	55.7	134	42.7	−3	22.2	309	54.1	+2	54.0
19	144	36.0	78	31.2		28.4	8	41.9		55.4	149	44.7		22.0	324	56.6		54.0
20	159	38.4	93	30.4		29.0	23	43.3		55.0	164	46.7		21.9	339	59.2		54.0
21	174	40.9	108	29.7		29.6	38	44.8		54.7	179	48.7		21.7	355	01.8		54.1
22	189	43.4	123	28.9		30.2	53	46.2		54.3	194	50.7		21.5	10	04.4		54.1
23	204	45.8	138	28.1		30.8	68	47.7		54.0	209	52.7		21.3	25	06.9		54.2
24	219	48.3	153	27.4	+22	31.4	83	49.1	+18	53.6	224	54.7	−3	21.1	40	09.5	+2	54.2
Dif	—		−8		+6		+15		−3		+20		+2		+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 0				Edad: 17 ^d 5 PHE { 4 ^h : 56/1 12 ^h : 55/8 20 ^h : 55/6 PMG: 3 ^h 04 ^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	180	44.5	+15	16.8	315	37.0	-24	59.6	60 N	20 00	20 54	22 21	0 36 35	5 35 74				
1	195	44.6		17.6	330	04.3 83		58.2 14	58	19 50	39	21 51	0 12 39	5 58 71				
2	210	44.6		18.3	344	31.7 84		56.6 16	56	41	26	29	** ** *	6 17 68				
3	225	44.7		19.1	358	59.1 84		54.9 17	54	33	15	21 11	** ** *	33 66				
4	240	44.8		19.8	13	26.6 85		53.0 19	52	26	20 05	20 57	** ** *	46 65				
5	255	44.8	+15	20.6	27	54.2 86	-24	51.0 20	50	19 20	19 57	20 44	23 56 35	6 58 64				
6	270	44.9	+15	21.3	42	21.8 86	-24	48.9 21	45	19 07	19 39	20 20	23 33 38	7 23 61				
7	285	45.0		22.1	56	49.4 86		46.6 23	40	18 55	25	20 01	23 15 40	43 59				
8	300	45.1		22.8	71	17.2 88		44.2 24	35	46	13	19 46	22 59 42	7 59 58				
9	315	45.1		23.6	85	44.9 87		41.7 25	30	38	19 03	34	46 43	8 13 57				
10	330	45.2		24.3	100	12.8 89		39.0 27	20	24	18 47	19 14	23 46	37 55				
11	345	45.3	+15	25.1	114	40.7 89	-24	36.2 28	10 N	18 12	18 34	18 59	22 03 48	8 58 53				
12	0	45.3	+15	25.8	129	08.7 90	-24	33.3 30	0	18 00	18 22	18 47	21 44 51	9 17 52				
13	15	45.4		26.5	143	36.7 90		30.3 32	10 S	17 49	11	36	26 52	36 51				
14	30	45.5		27.3	158	04.8 91		27.1 32	20	37	18 00	27	21 06 54	9 57 49				
15	45	45.5		28.0	172	33.0 92		23.8 33	30	24	17 49	17	20 43 57	10 21 46				
16	60	45.6		28.8	187	01.2 92		20.4 34	35	16	43	13	29 59	35 45				
17	75	45.7	+15	29.5	201	29.5 93	-24	16.9 35	40	17 08	17 36	18 08	20 13 61	10 51 44				
18	90	45.7	+15	30.3	215	57.9 94	-24	13.2 37	45	16 58	17 28	18 03	19 55 62	11 10 42				
19	105	45.8		31.0	230	26.3 94		09.4 38	50	45	20	17 58	31 66	34 39				
20	120	45.9		31.7	244	54.8 95		05.5 39	52	40	16	56	20 67	45 38				
21	135	46.0		32.5	259	23.4 96	-24	01.5 40	54	34	12	54	19 07 69	11 58 36				
22	150	46.0		33.2	273	52.0 96	-23	57.3 42	56	27	07	51	18 52 72	12 13 34				
23	165	46.1		34.0	288	20.7 97		53.1 42	58	19	17 02	49	35 74	31 31				
24	180	46.2	+15	34.7	302	49.5 98	-23	48.7 44	60 S	16 10	16 56	17 46	18 14 78	12 52 28				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 19 ^m 2		Mag: -3.9 PMG: 13 ^h 47 ^m				Mag: +0.7 PMG: 18 ^h 23 ^m				Mag: -2.2 PMG: 8 ^h 59 ^m				Mag: +0.8 PMG: 21 ^h 16 ^m			
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		hG ♅ Dec		hG ♆ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	219	48.3	153	27.4	+22	31.4	83	49.1	+18	53.6	224	54.7	-3	21.1	40	09.5	+2	54.2
1	234	50.8	168	26.6		32.0	98	50.6		53.3	239	56.7		20.9	55	12.1		54.2
2	249	53.2	183	25.9		32.6	113	52.0		52.9	254	58.7		20.7	70	14.7		54.3
3	264	55.7	198	25.1		33.2	128	53.5		52.6	270	00.7		20.5	85	17.2		54.3
4	279	58.1	213	24.4		33.8	143	54.9		52.2	285	02.7		20.3	100	19.8		54.4
5	295	00.6	228	23.6	+22	34.4	158	56.3	+18	51.9	300	04.7	-3	20.1	115	22.4	+2	54.4
6	310	03.1	243	22.8	+22	34.9	173	57.8	+18	51.5	315	06.8	-3	19.9	130	25.0	+2	54.4
7	325	05.5	258	22.1		35.5	188	59.2		51.2	330	08.8		19.8	145	27.5		54.5
8	340	08.0	273	21.3		36.1	204	00.7		50.8	345	10.8		19.6	160	30.1		54.5
9	355	10.5	288	20.6		36.7	219	02.1		50.5	0	12.8		19.4	175	32.7		54.6
10	10	12.9	303	19.8		37.3	234	03.6		50.1	15	14.8		19.2	190	35.2		54.6
11	25	15.4	318	19.1	+22	37.9	249	05.0	+18	49.8	30	16.8	-3	19.0	205	37.8	+2	54.6
12	40	17.9	333	18.3	+22	38.4	264	06.4	+18	49.4	45	18.8	-3	18.8	220	40.4	+2	54.7
13	55	20.3	348	17.5		39.0	279	07.9		49.1	60	20.8		18.6	235	43.0		54.7
14	70	22.8	3	16.8		39.6	294	09.3		48.7	75	22.8		18.4	250	45.5		54.8
15	85	25.3	18	16.0		40.2	309	10.8		48.4	90	24.8		18.2	265	48.1		54.8
16	100	27.7	33	15.2		40.7	324	12.2		48.0	105	26.8		18.0	280	50.7		54.8
17	115	30.2	48	14.5	+22	41.3	339	13.6	+18	47.7	120	28.8	-3	17.8	295	53.2	+2	54.9
18	130	32.6	63	13.7	+22	41.9	354	15.1	+18	47.3	135	30.8	-3	17.7	310	55.8	+2	54.9
19	145	35.1	78	13.0		42.5	9	16.5		46.9	150	32.8		17.5	325	58.4		55.0
20	160	37.6	93	12.2		43.0	24	18.0		46.6	165	34.8		17.3	341	01.0		55.0
21	175	40.0	108	11.4		43.6	39	19.4		46.2	180	36.8		17.1	356	03.5		55.0
22	190	42.5	123	10.7		44.2	54	20.8		45.9	195	38.8		16.9	11	06.1		55.1
23	205	45.0	138	09.9		44.7	69	22.3		45.5	210	40.8		16.7	26	08.7		55.1
24	220	47.4	153	09.1	+22	45.3	84	23.7	+18	45.2	225	42.8	-3	16.5	41	11.2	+2	55.1
Dif	—		-8 +6				+14 -4				+20 +2				+26 0			

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 9				Edad: 18 ^d 5 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 2 20 ^h : 55 ^m 0 PMG: 3 ^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	h	m	m				
0	180	46.2	+15	34.7	302	49.5	-23	48.7	45	58	60 N	1	32	2	59	3	53	1	11	20	6	49	81		
1	195	46.2		35.4	317	18.4	99		44.2	47	58	2	02	3	14	4	03	0	51	25	7	09	77		
2	210	46.3		36.2	331	47.3	99		39.5	47	56		24		27	12		34	28		25	74			
3	225	46.4		36.9	346	16.3	100		34.8	47	54		42		38	20		20	30		39	71			
4	240	46.4		37.6	0	45.4	101		30.0	48	52	2	57		48	27		0	07	33	7	51	69		
5	255	46.5	+15	38.4	15	14.5	101	-23	25.0	50	50	3	09		3	56	4	33	**	**	**		8	02	67
6	270	46.5	+15	39.1	29	43.8	103	-23	19.9	51	45	3	34		4	14	4	47	**	**	**		8	24	64
7	285	46.6		39.9	44	13.1	103		14.7	52	40	3	53		28	4	58	23	55	33		42	61		
8	300	46.7		40.6	58	42.4	103		09.4	53	35	4	08		40	5	07		41	36		8	57	59	
9	315	46.7		41.3	73	11.9	105	-23	04.0	54	30		20	4	50	16		29	38		9	10	57		
10	330	46.8		42.1	87	41.4	105	-22	58.5	55	20		39	5	07	30		23	09	42		32	54		
11	345	46.9	+15	42.8	102	11.0	106	-22	52.9	56	10 N	4	55		5	20	5	42	22	51	45		9	51	52
12	0	46.9	+15	43.5	116	40.7	107	-22	47.1	58	0	5	07		5	32	5	53	22	35	47		10	09	49
13	15	47.0		44.3	131	10.4	107		41.3	58	10 S		18		43	6	05		18	50		27	46		
14	30	47.1		45.0	145	40.2	108		35.3	60	20		28	5	54	17		22	00	53		10	46	43	
15	45	47.1		45.7	160	10.1	109		29.3	60	30		37	6	05	30		21	40	56		11	07	41	
16	60	47.2		46.5	174	40.1	110		23.1	62	35		41		12	38		28	58		20	39			
17	75	47.3	+15	47.2	189	10.2	111	-22	16.9	62	40	5	46	6	18	6	47	21	14	61		11	35	36	
18	90	47.3	+15	47.9	203	40.3	111	-22	10.5	64	45	5	51	6	26	6	57	20	57	64		11	52	34	
19	105	47.4		48.6	218	10.5	112	-22	04.0	65	50		56		35	7	09		37	68		12	13	30	
20	120	47.4		49.4	232	40.8	113	-21	57.5	65	52	5	59		39	15			27	70		23	28		
21	135	47.5		50.1	247	11.2	114		50.8	67	54	6	01		43	21			16	72		34	27		
22	150	47.6		50.8	261	41.6	114		44.0	68	56		04		48	28		20	04	74		12	47	24	
23	165	47.6		51.6	276	12.1	115		37.2	68	58		06		53	36		19	49	78		13	02	21	
24	180	47.7	+15	52.3	290	42.7	116	-21	30.2	70	60 S	6	09		6	59	7	45	19	32	82		13	20	16
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO								
	PMG: 9 ^h 15 ^m 3				Mag: -3.9 PMG: 13 ^h 48 ^m				Mag: +0.8 PMG: 18 ^h 21 ^m				Mag: -2.2 PMG: 8 ^h 56 ^m				Mag: +0.8 PMG: 21 ^h 12 ^m								
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	220	47.4	153	09.1	+22	45.3	84	23.7	+18	45.2	225	42.8	-3	16.5	41	11.2	+2	55.1							
1	235	49.9	168	08.4		45.9	99	25.2		44.8	240	44.8		16.3	56	13.8		55.2							
2	250	52.4	183	07.6		46.4	114	26.6		44.5	255	46.8		16.1	71	16.4		55.2							
3	265	54.8	198	06.8		47.0	129	28.0		44.1	270	48.8		15.9	86	18.9		55.3							
4	280	57.3	213	06.1		47.6	144	29.5		43.8	285	50.8		15.8	101	21.5		55.3							
5	295	59.8	228	05.3	+22	48.1	159	30.9	+18	43.4	300	52.8	-3	15.6	116	24.1	+2	55.3							
6	311	02.2	243	04.5	+22	48.7	174	32.3	+18	43.0	315	54.9	-3	15.4	131	26.7	+2	55.4							
7	326	04.7	258	03.8		49.2	189	33.8		42.7	330	56.9		15.2	146	29.2		55.4							
8	341	07.1	273	03.0		49.8	204	35.2		42.3	345	58.9		15.0	161	31.8		55.5							
9	356	09.6	288	02.2		50.3	219	36.6		42.0	1	00.9		14.8	176	34.4		55.5							
10	11	12.1	303	01.5		50.9	234	38.1		41.6	16	02.9		14.6	191	36.9		55.5							
11	26	14.5	318	00.7	+22	51.5	249	39.5	+18	41.3	31	04.9	-3	14.4	206	39.5	+2	55.6							
12	41	17.0	332	59.9	+22	52.0	264	40.9	+18	40.9	46	06.9	-3	14.2	221	42.1	+2	55.6							
13	56	19.5	347	59.2		52.6	279	42.4		40.6	61	08.9		14.0	236	44.6		55.6							
14	71	21.9	2	58.4		53.1	294	43.8		40.2	76	10.9		13.9	251	47.2		55.7							
15	86	24.4	17	57.6		53.7	309	45.2		39.8	91	12.9		13.7	266	49.8		55.7							
16	101	26.9	32	56.9		54.2	324	46.7		39.5	106	14.9		13.5	281	52.3		55.8							
17	116	29.3	47	56.1	+22	54.8	339	48.1	+18	39.1	121	16.9	-3	13.3	296	54.9	+2	55.8							
18	131	31.8	62	55.3	+22	55.3	354	49.5	+18	38.8	136	18.9	-3	13.1	311	57.5	+2	55.8							
19	146	34.3	77	54.5		55.8	9	51.0		38.4	151	20.9		12.9	327	00.0		55.9							
20	161	36.7	92	53.8		56.4	24	52.4		38.1	166	22.9		12.7	342	02.6		55.9							
21	176	39.2	107	53.0		56.9	39	53.8		37.7	181	25.0		12.5	357	05.2		55.9							
22	191	41.6	122	52.2		57.5	54	55.3		37.3	196	27.0		12.3	12	07.7		56.0							
23	206	44.1	137	51.5		58.0	69	56.7		37.0	211	29.0		12.2	27	10.3		56.0							
24	221	46.6	152	50.7	+22	58.6	84	58.1	+18	36.6	226	31.0	-3	12.0	42	12.9	+2	56.1							
Dif	—				-8				+14				+20				+26				0				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 19 ^d 5 PHE { 4 ^h : 54/9 12 ^h : 54/7 20 ^h : 54/6										
	PMG: 11 ^h 56 ^m 8			SD: 15°0 PMG: 4 ^h 46 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	47.7	+15 52.3	290	42.7	-21 30.2	70	60 N	20 05	21 00	22 33	1 31 13	8 10 83	
1	195	47.7	53.0	305	13.4 ¹¹⁷	23.2	71	58	19 54	20 44	21 59	16 16	26 78	
2	210	47.8	53.7	319	44.1 ¹¹⁷	16.1	71	56	45	31	35	1 02 20	39 75	
3	225	47.9	54.5	334	14.9 ¹¹⁸	08.8	73	54	37	19	17	0 50 23	8 50 73	
4	240	47.9	55.2	348	45.8 ¹¹⁹	-21 01.5	73	52	30	09	21 01	40 24	9 00 70	
5	255	48.0	+15 55.9	3	16.8 ¹²⁰	-20 54.1	74	50	19 23	20 00	20 48	0 31 26	9 09 68	
6	270	48.0	+15 56.7	17	47.8 ¹²⁰	-20 46.6	75	45	19 09	19 42	20 23	0 11 30	9 28 64	
7	285	48.1	57.4	32	19.0 ¹²²	39.0	76	40	18 57	27	20 03	** ** *	43 61	
8	300	48.2	58.1	46	50.2 ¹²²	31.3	77	35	48	15	19 48	** ** *	9 56 58	
9	315	48.2	58.8	61	21.4 ¹²²	23.5	78	30	39	19 05	35	** ** *	10 07 56	
10	330	48.3	+15 59.5	75	52.8 ¹²⁴	15.6	79	20	25	18 48	15	23 51 37	26 52	
11	345	48.3	+16 00.3	90	24.2 ¹²⁴	-20 07.7	79	10 N	18 12	18 34	19 00	23 36 41	10 43 48	
12	0	48.4	+16 01.0	104	55.7 ¹²⁵	-19 59.7	80	0	18 00	18 22	18 47	23 22 44	10 58 46	
13	15	48.5	01.7	119	27.3 ¹²⁶	51.5	82	10 S	17 49	18 10	36	23 08 48	11 13 43	
14	30	48.5	02.4	133	58.9 ¹²⁶	43.3	82	20	36	17 59	26	22 53 51	29 40	
15	45	48.6	03.2	148	30.6 ¹²⁷	35.1	82	30	22	47	16	36 55	48 36	
16	60	48.6	03.9	163	02.4 ¹²⁸	26.7	84	35	14	41	11	26 57	11 59 33	
17	75	48.7	+16 04.6	177	34.3 ¹²⁹	-19 18.2	85	40	17 05	17 34	18 06	22 15 60	12 11 31	
18	90	48.7	+16 05.3	192	06.2 ¹²⁹	-19 09.7	85	45	16 55	17 26	18 01	22 01 64	12 26 27	
19	105	48.8	06.0	206	38.2 ¹³⁰	-19 01.1	86	50	42	17	17 55	21 45 67	43 24	
20	120	48.9	06.8	221	10.3 ¹³¹	-18 52.4	87	52	36	12	53	37 69	12 51 22	
21	135	48.9	07.5	235	42.4 ¹³¹	43.7	87	54	30	08	50	28 72	13 01 19	
22	150	49.0	08.2	250	14.6 ¹³²	34.8	89	56	22	17 03	47	18 75	11 17	
23	165	49.0	08.9	264	46.9 ¹³³	25.9	89	58	14	16 57	45	21 07 78	23 14	
24	180	49.1	+16 09.6	279	19.3 ¹³⁴	-18 16.9	90	60 S	16 05	16 51	17 41	20 54 82	13 36 11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 11 ^m 4		Mag: -3.9 PMG: 13 ^h 49 ^m			Mag: +0.8 PMG: 18 ^h 18 ^m			Mag: -2.2 PMG: 8 ^h 53 ^m			Mag: +0.8 PMG: 21 ^h 08 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	221	46.6	152 50.7	+22 58.6	84 58.1	+18 36.6	226 31.0	-3 12.0	42 12.9	226 31.0	-3 12.0	42 12.9	+2 56.1	
1	236	49.0	167 49.9	59.1	99 59.5	36.3	241 33.0	11.8	57 15.4	241 33.0	11.8	57 15.4	56.1	
2	251	51.5	182 49.1	+22 59.6	115 01.0	35.9	256 35.0	11.6	72 18.0	256 35.0	11.6	72 18.0	56.1	
3	266	54.0	197 48.4	+23 00.2	130 02.4	35.5	271 37.0	11.4	87 20.6	271 37.0	11.4	87 20.6	56.2	
4	281	56.4	212 47.6	00.7	145 03.8	35.2	286 39.0	11.2	102 23.1	286 39.0	11.2	102 23.1	56.2	
5	296	58.9	227 46.8	+23 01.2	160 05.2	+18 34.8	301 41.0	-3 11.0	117 25.7	301 41.0	-3 11.0	117 25.7	+2 56.2	
6	312	01.4	242 46.0	+23 01.8	175 06.7	+18 34.5	316 43.0	-3 10.8	132 28.3	316 43.0	-3 10.8	132 28.3	+2 56.3	
7	327	03.8	257 45.3	02.3	190 08.1	34.1	331 45.0	10.7	147 30.8	331 45.0	10.7	147 30.8	56.3	
8	342	06.3	272 44.5	02.8	205 09.5	33.7	346 47.0	10.5	162 33.4	346 47.0	10.5	162 33.4	56.3	
9	357	08.8	287 43.7	03.4	220 10.9	33.4	1 49.1	10.3	177 36.0	1 49.1	10.3	177 36.0	56.4	
10	12	11.2	302 42.9	03.9	235 12.4	33.0	16 51.1	10.1	192 38.5	16 51.1	10.1	192 38.5	56.4	
11	27	13.7	317 42.2	+23 04.4	250 13.8	+18 32.7	31 53.1	-3 09.9	207 41.1	31 53.1	-3 09.9	207 41.1	+2 56.5	
12	42	16.1	332 41.4	+23 04.9	265 15.2	+18 32.3	46 55.1	-3 09.7	222 43.7	46 55.1	-3 09.7	222 43.7	+2 56.5	
13	57	18.6	347 40.6	05.5	280 16.6	31.9	61 57.1	09.5	237 46.2	61 57.1	09.5	237 46.2	56.5	
14	72	21.1	2 39.8	06.0	295 18.1	31.6	76 59.1	09.3	252 48.8	76 59.1	09.3	252 48.8	56.6	
15	87	23.5	17 39.1	06.5	310 19.5	31.2	92 01.1	09.1	267 51.4	92 01.1	09.1	267 51.4	56.6	
16	102	26.0	32 38.3	07.0	325 20.9	30.8	107 03.1	09.0	282 53.9	107 03.1	09.0	282 53.9	56.6	
17	117	28.5	47 37.5	+23 07.6	340 22.3	+18 30.5	122 05.1	-3 08.8	297 56.5	122 05.1	-3 08.8	297 56.5	+2 56.7	
18	132	30.9	62 36.7	+23 08.1	355 23.8	+18 30.1	137 07.1	-3 08.6	312 59.1	137 07.1	-3 08.6	312 59.1	+2 56.7	
19	147	33.4	77 35.9	08.6	10 25.2	29.8	152 09.2	08.4	328 01.6	147 33.4	08.4	328 01.6	56.7	
20	162	35.9	92 35.2	09.1	25 26.6	29.4	167 11.2	08.2	343 04.2	162 35.9	08.2	343 04.2	56.8	
21	177	38.3	107 34.4	09.6	40 28.0	29.0	182 13.2	08.0	358 06.7	177 38.3	08.0	358 06.7	56.8	
22	192	40.8	122 33.6	10.1	55 29.4	28.7	197 15.2	07.8	13 09.3	192 40.8	07.8	13 09.3	56.9	
23	207	43.2	137 32.8	10.7	70 30.9	28.3	212 17.2	07.6	28 11.9	207 43.2	07.6	28 11.9	56.9	
24	222	45.7	152 32.0	+23 11.2	85 32.3	+18 27.9	227 19.2	-3 07.5	43 14.4	222 45.7	-3 07.5	43 14.4	+2 56.9	
Dif	—		-8	+5	+14	-4	+20	+2	+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: 20 ^d 5 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	49.1	+16 09.6	279	19.3	-18 16.9	60 N	1 20	2 52	3 48	1 44	8	9 33	81	
1	195	49.1	10.3	293	51.7 ¹³⁴	-18 07.9 ⁹⁰	58	1 54	3 08	3 58	32	12	44	78	
2	210	49.2	11.1	308	24.2 ¹³⁵	-17 58.8 ⁹¹	56	2 17	22	4 08	22	14	9 54	75	
3	225	49.2	11.8	322	56.7 ¹³⁵	49.6 ⁹²	54	36	33	16	13	17	10 03	71	
4	240	49.3	12.5	337	29.3 ¹³⁶	40.3 ⁹³	52	2 51	44	23	1 04	20	10 70		
5	255	49.3	+16 13.2	352	02.0 ¹³⁷	-17 30.9 ⁹⁴	50	3 04	3 53	4 30	0 57	21	10 17	68	
6	270	49.4	+16 13.9	6	34.8 ¹³⁸	-17 21.5 ⁹⁴	45	3 30	4 11	4 44	0 41	26	10 32	63	
7	285	49.5	14.6	21	07.6 ¹³⁸	12.0 ⁹⁵	40	3 50	26	4 56	28	29	44	59	
8	300	49.5	15.3	35	40.5 ¹³⁹	-17 02.5 ⁹⁵	35	4 05	38	5 05	17	31	10 54	57	
9	315	49.6	16.1	50	13.4 ¹³⁹	-16 52.9 ⁹⁶	30	18	4 48	14	0 07	34	11 03	54	
10	330	49.6	16.8	64	46.4 ¹⁴⁰	43.2 ⁹⁷	20	38	5 05	29	** ** *	**	18	50	
11	345	49.7	+16 17.5	79	19.5 ¹⁴¹	-16 33.4 ⁹⁸	10 N	4 54	5 19	5 41	** ** *	**	11 31	47	
12	0	49.7	+16 18.2	93	52.6 ¹⁴¹	-16 23.6 ⁹⁸	0	5 07	5 32	5 53	** ** *	**	11 44	43	
13	15	49.8	18.9	108	25.8 ¹⁴²	13.8 ⁹⁸	10 S	18	43	6 05	23	56	45	40	
14	30	49.8	19.6	122	59.1 ¹⁴³	-16 03.8 ¹⁰⁰	20	28	5 54	17	44	50	12 09	36	
15	45	49.9	20.3	137	32.4 ¹⁴³	-15 53.8 ¹⁰⁰	30	38	6 06	31	31	54	24	32	
16	60	49.9	21.0	152	05.8 ¹⁴⁴	43.8 ¹⁰⁰	35	43	13	39	23	57	32	30	
17	75	50.0	+16 21.7	166	39.2 ¹⁴⁴	-15 33.6 ¹⁰²	40	5 48	6 20	6 49	23	15	59	27	
18	90	50.0	+16 22.5	181	12.7 ¹⁴⁵	-15 23.4 ¹⁰²	45	5 53	6 28	6 59	23	05	62	24	
19	105	50.1	23.2	195	46.2 ¹⁴⁵	13.2 ¹⁰²	50	5 59	38	7 12	22	52	67	13	
20	120	50.1	23.9	210	19.8 ¹⁴⁶	-15 02.9 ¹⁰³	52	6 02	42	18	46	69	13	18	
21	135	50.2	24.6	224	53.5 ¹⁴⁷	-14 52.5 ¹⁰⁴	54	04	47	25	40	71	20	16	
22	150	50.2	25.3	239	27.2 ¹⁴⁷	42.1 ¹⁰⁴	56	07	52	32	33	74	28	13	
23	165	50.3	26.0	254	01.0 ¹⁴⁸	31.7 ¹⁰⁴	58	10	6 57	41	25	77	37	10	
24	180	50.3	+16 26.7	268	34.8 ¹⁴⁸	-14 21.1 ¹⁰⁶	60 S	6 13	7 03	7 50	22	16	80	13	47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 9 ^h 07 ^m 5		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: +0.8 PMG: 18 ^h 16 ^m		Mag: -2.2 PMG: 8 ^h 50 ^m		Mag: +0.8 PMG: 21 ^h 03 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	°	°	'	°	'	°	'			
0	222	45.7	152	32.0	+23 11.2	85 32.3	+18 27.9	227	19.2	-3 07.5	43 14.4	+2 56.9	
1	237	48.2	167	31.3	11.7	100 33.7	27.6	242	21.2	07.3	58 17.0	57.0	
2	252	50.6	182	30.5	12.2	115 35.1	27.2	257	23.2	07.1	73 19.6	57.0	
3	267	53.1	197	29.7	12.7	130 36.5	26.9	272	25.2	06.9	88 22.1	57.0	
4	282	55.6	212	28.9	13.2	145 38.0	26.5	287	27.3	06.7	103 24.7	57.1	
5	297	58.0	227	28.1	+23 13.7	160 39.4	+18 26.1	302	29.3	-3 06.5	118 27.3	+2 57.1	
6	313	00.5	242	27.3	+23 14.2	175 40.8	+18 25.8	317	31.3	-3 06.3	133 29.8	+2 57.1	
7	328	03.0	257	26.6	14.7	190 42.2	25.4	332	33.3	06.2	148 32.4	57.2	
8	343	05.4	272	25.8	15.2	205 43.6	25.0	347	35.3	06.0	163 34.9	57.2	
9	358	07.9	287	25.0	15.7	220 45.0	24.7	2	37.3	05.8	178 37.5	57.2	
10	13	10.4	302	24.2	16.2	235 46.5	24.3	17	39.3	05.6	193 40.1	57.3	
11	28	12.8	317	23.4	+23 16.7	250 47.9	+18 23.9	32	41.3	-3 05.4	208 42.6	+2 57.3	
12	43	15.3	332	22.6	+23 17.2	265 49.3	+18 23.6	47	43.4	-3 05.2	223 45.2	+2 57.3	
13	58	17.7	347	21.9	17.7	280 50.7	23.2	62	45.4	05.0	238 47.8	57.4	
14	73	20.2	2	21.1	18.2	295 52.1	22.8	77	47.4	04.8	253 50.3	57.4	
15	88	22.7	17	20.3	18.7	310 53.5	22.5	92	49.4	04.7	268 52.9	57.4	
16	103	25.1	32	19.5	19.2	325 55.0	22.1	107	51.4	04.5	283 55.4	57.5	
17	118	27.6	47	18.7	+23 19.7	340 56.4	+18 21.7	122	53.4	-3 04.3	298 58.0	+2 57.5	
18	133	30.1	62	17.9	+23 20.2	355 57.8	+18 21.4	137	55.4	-3 04.1	314 00.6	+2 57.6	
19	148	32.5	77	17.1	20.7	10 59.2	21.0	152	57.5	03.9	329 03.1	57.6	
20	163	35.0	92	16.3	21.2	26 00.6	20.6	167	59.5	03.7	344 05.7	57.6	
21	178	37.5	107	15.6	21.7	41 02.0	20.3	183	01.5	03.5	359 08.2	57.7	
22	193	39.9	122	14.8	22.2	56 03.4	19.9	198	03.5	03.4	14 10.8	57.7	
23	208	42.4	137	14.0	22.6	71 04.8	19.5	213	05.5	03.2	29 13.4	57.7	
24	223	44.9	152	13.2	+23 23.1	86 06.3	+18 19.2	228	07.5	-3 03.0	44 15.9	+2 57.8	
Dif	—		-8		+5	+14	-4	+20		+2	+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 6			Edad: 21 ^d 5 PHE { SD: 14'8 PMG: 6 ^h 17 ^m 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 R°: 41 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	50.3	+16	26.7	268	34.8	-14	21.1	60 N	20 10	21 07	22 47	1 52 6	10 54 80				
1	195	50.4		27.4	283	08.6 ¹⁴⁸	-14	10.5 ¹⁰⁶	58	19 59	20 50	22 08	44 9	11 02 76				
2	210	50.4		28.1	297	42.6 ¹⁵⁰	-13	59.9 ¹⁰⁶	56	49	36	21 42	36 12	09 73				
3	225	50.5		28.8	312	16.5 ¹⁴⁹		49.2 ¹⁰⁷	54	41	24	22	30 14	14 71				
4	240	50.5		29.5	326	50.6 ¹⁵¹		38.5 ¹⁰⁷	52	33	13	21 06	24 16	20 68				
5	255	50.6	+16	30.2	341	24.6 ¹⁵⁰	-13	27.7 ¹⁰⁸	50	19 26	20 04	20 53	1 18 18	11 25 66				
6	270	50.6	+16	30.9	355	58.7 ¹⁵¹	-13	16.8 ¹⁰⁹	45	19 11	19 45	20 26	1 07 22	11 35 62				
7	285	50.7		31.6	10	32.9 ¹⁵²	-13	05.9 ¹⁰⁹	40	18 59	29	20 06	0 57 25	43 59				
8	300	50.7		32.3	25	07.1 ¹⁵²	-12	55.0 ¹⁰⁹	35	49	17	19 50	48 29	51 56				
9	315	50.8		33.0	39	41.4 ¹⁵³		44.0 ¹¹⁰	30	40	19 06	37	41 31	11 57 54				
10	330	50.8		33.7	54	15.7 ¹⁵³		33.0 ¹¹⁰	20	25	18 49	16	28 35	12 08 49				
11	345	50.8	+16	34.4	68	50.0 ¹⁵³	-12	21.9 ¹¹¹	10 N	18 12	18 34	19 00	0 17 39	12 18 45				
12	0	50.9	+16	35.1	83	24.4 ¹⁵⁴	-12	10.7 ¹¹²	0	18 00	18 22	18 47	0 06 42	12 27 41				
13	15	50.9		35.8	97	58.8 ¹⁵⁴	-11	59.6 ¹¹¹	10 S	17 48	18 10	35	** ** *	36 37				
14	30	51.0		36.5	112	33.3 ¹⁵⁵		48.3 ¹¹³	20	35	17 58	25	** ** *	45 34				
15	45	51.0		37.2	127	07.8 ¹⁵⁵		37.1 ¹¹²	30	21	46	14	** ** *	12 56 29				
16	60	51.1		37.9	141	42.4 ¹⁵⁶		25.7 ¹¹⁴	35	13	39	09	** ** *	13 02 27				
17	75	51.1	+16	38.6	156	17.0 ¹⁵⁶	-11	14.4 ¹¹³	40	17 03	17 32	18 04	** ** *	13 09 24				
18	90	51.2	+16	39.3	170	51.6 ¹⁵⁶	-11	03.0 ¹¹⁴	45	16 52	17 23	17 58	** ** *	13 17 21				
19	105	51.2		40.0	185	26.3 ¹⁵⁷	-10	51.5 ¹¹⁵	50	39	14	52	23 59 67	26 17				
20	120	51.3		40.7	200	01.0 ¹⁵⁷		40.1 ¹¹⁴	52	33	09	50	55 69	31 15				
21	135	51.3		41.4	214	35.7 ¹⁵⁷		28.5 ¹¹⁶	54	26	17 04	47	51 71	36 13				
22	150	51.3		42.1	229	10.5 ¹⁵⁸		17.0 ¹¹⁵	56	18	16 59	44	47 73	41 11				
23	165	51.4		42.8	243	45.3 ¹⁵⁸	-10	05.4 ¹¹⁶	58	10	53	41	42 75	47 8				
24	180	51.4	+16	43.5	258	20.1 ¹⁵⁸	-9	53.7 ¹¹⁷	60 S	16 00	16 47	17 37	23 36 79	13 54 5				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 03 ^m 5		Mag: -3.9 PMG: 13 ^h 52 ^m			Mag: +0.8 PMG: 18 ^h 14 ^m			Mag: -2.2 PMG: 8 ^h 46 ^m			Mag: +0.8 PMG: 20 ^h 59 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	223	44.9	152	13.2	+23	23.1	86	06.3	+18	19.2	228	07.5	-3	03.0	44	15.9	+2	57.8
1	238	47.3	167	12.4		23.6	101	07.7		18.8	243	09.5		02.8	59	18.5		57.8
2	253	49.8	182	11.6		24.1	116	09.1		18.4	258	11.6		02.6	74	21.0		57.8
3	268	52.2	197	10.8		24.6	131	10.5		18.1	273	13.6		02.4	89	23.6		57.9
4	283	54.7	212	10.0		25.1	146	11.9		17.7	288	15.6		02.2	104	26.2		57.9
5	298	57.2	227	09.2	+23	25.5	161	13.3	+18	17.3	303	17.6	-3	02.1	119	28.7	+2	57.9
6	313	59.6	242	08.5	+23	26.0	176	14.7	+18	17.0	318	19.6	-3	01.9	134	31.3	+2	58.0
7	329	02.1	257	07.7		26.5	191	16.1		16.6	333	21.6		01.7	149	33.8		58.0
8	344	04.6	272	06.9		27.0	206	17.5		16.2	348	23.7		01.5	164	36.4		58.0
9	359	07.0	287	06.1		27.5	221	18.9		15.9	3	25.7		01.3	179	39.0		58.1
10	14	09.5	302	05.3		27.9	236	20.4		15.5	18	27.7		01.1	194	41.5		58.1
11	29	12.0	317	04.5	+23	28.4	251	21.8	+18	15.1	33	29.7	-3	00.9	209	44.1	+2	58.1
12	44	14.4	332	03.7	+23	28.9	266	23.2	+18	14.7	48	31.7	-3	00.8	224	46.6	+2	58.2
13	59	16.9	347	02.9		29.3	281	24.6		14.4	63	33.7		00.6	239	49.2		58.2
14	74	19.3	2	02.1		29.8	296	26.0		14.0	78	35.7		00.4	254	51.7		58.2
15	89	21.8	17	01.3		30.3	311	27.4		13.6	93	37.8	-3	00.2	269	54.3		58.3
16	104	24.3	32	00.5		30.8	326	28.8		13.3	108	39.8	-3	00.0	284	56.9		58.3
17	119	26.7	46	59.7	+23	31.2	341	30.2	+18	12.9	123	41.8	-2	59.8	299	59.4	+2	58.3
18	134	29.2	61	58.9	+23	31.7	356	31.6	+18	12.5	138	43.8	-2	59.7	315	02.0	+2	58.4
19	149	31.7	76	58.2		32.1	11	33.0		12.2	153	45.8		59.5	330	04.5		58.4
20	164	34.1	91	57.4		32.6	26	34.4		11.8	168	47.9		59.3	345	07.1		58.4
21	179	36.6	106	56.6		33.1	41	35.8		11.4	183	49.9		59.1	0	09.7		58.5
22	194	39.1	121	55.8		33.5	56	37.2		11.0	198	51.9		58.9	15	12.2		58.5
23	209	41.5	136	55.0		34.0	71	38.6		10.7	213	53.9		58.7	30	14.8		58.5
24	224	44.0	151	54.2	+23	34.5	86	40.0	+18	10.3	228	55.9	-2	58.5	45	17.3	+2	58.6
Dif	—		-8		+5		+14		-4		+20		+2		+26			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 5				Edad: 22 ^d 5 PHE { SD: 14 ^h 8 PMG: 6 ^h 58 ^m											
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	51.4	+16	43.5	258	20.1	-9	53.7	60 N	1 06	2 46	3 42	1 58 5	12 14 78		
1	195	51.5		44.2	272	55.0 ¹⁵⁹		42.0 ¹¹⁷	58	1 44	3 03	3 54	53 7	18 76		
2	210	51.5		44.9	287	29.9 ¹⁵⁹		30.3 ¹¹⁷	56	2 10	17	4 03	48 10	22 73		
3	225	51.6		45.6	302	04.8 ¹⁵⁹		18.6 ¹¹⁷	54	30	29	12	44 12	25 7		
4	240	51.6		46.3	316	39.7 ¹⁵⁹	-9	06.8 ¹¹⁸	52	2 46	40	20	40 14	28 69		
5	255	51.6	+16	47.0	331	14.7 ¹⁶⁰	-8	54.9 ¹¹⁹	50	3 00	3 49	4 27	1 36 17	12 31 67		
6	270	51.7	+16	47.6	345	49.7 ¹⁶⁰	-8	43.1 ¹¹⁸	45	3 27	4 08	4 41	1 29 20	12 37 62		
7	285	51.7		48.3	0	24.8 ¹⁶¹		31.2 ¹¹⁹	40	3 47	23	4 53	22 24	42 59		
8	300	51.8		49.0	14	59.8 ¹⁶⁰		19.3 ¹¹⁹	35	4 03	36	5 03	17 26	47 55		
9	315	51.8		49.7	29	34.9 ¹⁶¹	-8	07.3 ¹²⁰	30	16	4 47	12	12 29	51 52		
10	330	51.8		50.4	44	10.0 ¹⁶¹	-7	55.3 ¹²⁰	20	37	5 04	28	1 03 33	12 57 48		
11	345	51.9	+16	51.1	58	45.1 ¹⁶¹	-7	43.3 ¹²⁰	10 N	4 53	5 19	5 41	0 56 37	13 03 44		
12	0	51.9	+16	51.8	73	20.3 ¹⁶²	-7	31.2 ¹²¹	0	5 06	5 31	5 53	0 48 41	13 08 41		
13	15	52.0		52.5	87	55.4 ¹⁶¹		19.1 ¹²¹	10 S	18	43	6 05	41 45	13 37		
14	30	52.0		53.2	102	30.6 ¹⁶²	-7	07.0 ¹²¹	20	29	5 55	18	34 48	19 33		
15	45	52.0		53.8	117	05.8 ¹⁶²	-6	54.9 ¹²¹	30	39	6 08	33	25 53	25 29		
16	60	52.1		54.5	131	41.1 ¹⁶³		42.7 ¹²²	35	44	14	41	20 55	29 26		
17	75	52.1	+16	55.2	146	16.3 ¹⁶²	-6	30.5 ¹²²	40	5 50	6 22	6 51	0 14 59	13 33 23		
18	90	52.2	+16	55.9	160	51.5 ¹⁶²	-6	18.2 ¹²³	45	5 55	6 30	7 02	0 07 62	13 38 19		
19	105	52.2		56.6	175	26.8 ¹⁶³	-6	06.0 ¹²²	50	6 02	40	15	** ** *	43 16		
20	120	52.2		57.3	190	02.1 ¹⁶³	-5	53.7 ¹²³	52	04	45	21	** ** *	46 14		
21	135	52.3		58.0	204	37.4 ¹⁶³		41.4 ¹²³	54	07	50	28	** ** *	49 12		
22	150	52.3		58.6	219	12.7 ¹⁶³		29.1 ¹²³	56	10	6 55	36	** ** *	52 10		
23	165	52.3	+16	59.3	233	48.0 ¹⁶³		16.7 ¹²⁴	58	13	7 01	45	** ** *	55 8		
24	180	52.4	+17	00.0	248	23.3 ¹⁶³	-5	04.3 ¹²⁴	60 S	6 17	7 08	7 55	** ** *	13 59 5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 59 ^m 6		Mag: -3.9 PMG: 13 ^h 53 ^m		Mag: +0.8 PMG: 18 ^h 12 ^m		Mag: -2.2 PMG: 8 ^h 43 ^m		Mag: +0.9 PMG: 20 ^h 55 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	224	44.0	151	54.2	+23	34.5	228	55.9	-2	58.5
1	239	46.5	166	53.4		34.9	243	57.9		58.4
2	254	48.9	181	52.6		35.4	259	00.0		58.2
3	269	51.4	196	51.8		35.8	274	02.0		58.0
4	284	53.8	211	51.0		36.3	289	04.0		57.8
5	299	56.3	226	50.2	+23	36.7	304	06.0	-2	57.6
6	314	58.8	241	49.4	+23	37.2	319	08.0	-2	57.4
7	330	01.2	256	48.6		37.6	334	10.1		57.3
8	345	03.7	271	47.8		38.1	349	12.1		57.1
9	0	06.2	286	47.0		38.5	4	14.1		56.9
10	15	08.6	301	46.2		39.0	19	16.1		56.7
11	30	11.1	316	45.4	+23	39.4	34	18.1	-2	56.5
12	45	13.6	331	44.6	+23	39.9	49	20.2	-2	56.3
13	60	16.0	346	43.8		40.3	64	22.2		56.2
14	75	18.5	1	43.0		40.7	79	24.2		56.0
15	90	21.0	16	42.2		41.2	94	26.2		55.8
16	105	23.4	31	41.4		41.6	109	28.2		55.6
17	120	25.9	46	40.6	+23	42.1	124	30.3	-2	55.4
18	135	28.3	61	39.8	+23	42.5	139	32.3	-2	55.2
19	150	30.8	76	39.0		42.9	154	34.3		55.1
20	165	33.3	91	38.2		43.4	169	36.3		54.9
21	180	35.7	106	37.4		43.8	184	38.3		54.7
22	195	38.2	121	36.6		44.2	199	40.4		54.5
23	210	40.7	136	35.8		44.7	214	42.4		54.3
24	225	43.1	151	35.0	+23	45.1	229	44.4	-2	54.1
Dif	—		-8		+4		+14		+20	
									+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: 23 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 SD: 14'8 PMG: 7 ^h 39 ^m R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	52.4	+17 00.0	248	23.3	-5 04.3	60 N	20 15	21 13	23 04	2 03	4	13 32	80
1	195	52.4	+17 00.7	262	58.7 ¹⁶⁴	-4 51.9 ¹²⁴	58	20 03	20 55	22 17	2 00	7	34	76
2	210	52.5	01.4	277	34.0 ¹⁶³	39.5 ¹²⁴	56	19 53	40	21 49	1 58	10	35	73
3	225	52.5	02.1	292	09.3 ¹⁶³	27.0 ¹²⁵	54	44	28	28	56	12	36	77
4	240	52.5	02.7	306	44.7 ¹⁶⁴	14.6 ¹²⁴	52	36	17	21 11	54	14	37	69
5	255	52.6	+17 03.4	321	20.0 ¹⁶³	-4 02.1 ¹²⁵	50	19 29	20 07	20 57	1 53	15	13 38	67
6	270	52.6	+17 04.1	335	55.4 ¹⁶⁴	-3 49.6 ¹²⁵	45	19 14	19 47	20 29	1 49	19	13 39	63
7	285	52.6	04.8	350	30.8 ¹⁶⁴	37.0 ¹²⁶	40	19 01	32	20 08	46	23	41	59
8	300	52.7	05.5	5	06.1 ¹⁶³	24.5 ¹²⁵	35	18 51	19	19 52	43	26	42	56
9	315	52.7	06.1	19	41.5 ¹⁶⁴	-3 11.9 ¹²⁶	30	42	19 08	38	41	28	43	54
10	330	52.7	06.8	34	16.8 ¹⁶³	-2 59.3 ¹²⁶	20	26	18 49	17	36	33	45	49
11	345	52.8	+17 07.5	48	52.2 ¹⁶⁴	-2 46.7 ¹²⁶	10 N	18 13	18 35	19 00	1 33	37	13 47	45
12	0	52.8	+17 08.2	63	27.5 ¹⁶³	-2 34.1 ¹²⁶	0	18 00	18 22	18 47	1 29	41	13 49	41
13	15	52.8	08.8	78	02.9 ¹⁶⁴	21.5 ¹²⁶	10 S	17 47	18 09	35	26	44	50	37
14	30	52.9	09.5	92	38.2 ¹⁶³	-2 08.9 ¹²⁶	20	34	17 57	24	22	49	52	33
15	45	52.9	10.2	107	13.6 ¹⁶⁴	-1 56.2 ¹²⁷	30	19	44	13	18	53	54	28
16	60	52.9	10.9	121	48.9 ¹⁶³	43.5 ¹²⁷	35	11	37	08	15	56	55	26
17	75	53.0	+17 11.5	136	24.2 ¹⁶³	-1 30.8 ¹²⁷	40	17 01	17 30	18 02	1 13	59	13 56	23
18	90	53.0	+17 12.2	150	59.6 ¹⁶⁴	-1 18.1 ¹²⁷	45	16 50	17 21	17 56	1 09	63	13 57	20
19	105	53.0	12.9	165	34.9 ¹⁶³	-1 05.4 ¹²⁷	50	36	11	50	06	66	13 59	16
20	120	53.1	13.6	180	10.2 ¹⁶³	-0 52.7 ¹²⁷	52	29	06	47	04	68	14 00	14
21	135	53.1	14.2	194	45.5 ¹⁶³	40.0 ¹²⁷	54	22	17 01	44	02	71	01	11
22	150	53.1	14.9	209	20.7 ¹⁶²	27.2 ¹²⁸	56	14	16 55	40	1 00	73	02	9
23	165	53.2	15.6	223	56.0 ¹⁶³	14.5 ¹²⁷	58	16 05	49	37	0 57	76	03	7
24	180	53.2	+17 16.2	238	31.2 ¹⁶²	-0 01.7 ¹²⁸	60 S	15 55	16 43	17 33	0 55	78	14 04	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 55 ^m 7		Mag: -3.9 PMG: 13 ^h 54 ^m		Mag: +0.8 PMG: 18 ^h 09 ^m		Mag: -2.2 PMG: 8 ^h 40 ^m		Mag: +0.9 PMG: 20 ^h 51 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	225	43.1	151	35.0	+23 45.1	87 13.6	+18 01.3	229 44.4	-2 54.1	46 18.6	+2 59.3
1	240	45.6	166	34.2	45.5	102 15.0	00.9	244 46.4	54.0	61 21.2	59.3
2	255	48.1	181	33.4	46.0	117 16.4	00.5	259 48.4	53.8	76 23.8	59.4
3	270	50.5	196	32.6	46.4	132 17.8	+18 00.2	274 50.5	53.6	91 26.3	59.4
4	285	53.0	211	31.8	46.8	147 19.2	+17 59.8	289 52.5	53.4	106 28.9	59.4
5	300	55.4	226	31.0	+23 47.2	162 20.6	+17 59.4	304 54.5	-2 53.2	121 31.4	+2 59.5
6	315	57.9	241	30.2	+23 47.7	177 22.0	+17 59.0	319 56.5	-2 53.1	136 34.0	+2 59.5
7	331	00.4	256	29.4	48.1	192 23.4	58.7	334 58.6	52.9	151 36.5	59.5
8	346	02.8	271	28.6	48.5	207 24.8	58.3	350 00.6	52.7	166 39.1	59.6
9	1	05.3	286	27.8	48.9	222 26.1	57.9	5 02.6	52.5	181 41.6	59.6
10	16	07.8	301	26.9	49.3	237 27.5	57.5	20 04.6	52.3	196 44.2	59.6
11	31	10.2	316	26.1	+23 49.8	252 28.9	+17 57.1	35 06.6	-2 52.1	211 46.7	+2 59.6
12	46	12.7	331	25.3	+23 50.2	267 30.3	+17 56.8	50 08.7	-2 52.0	226 49.3	+2 59.7
13	61	15.2	346	24.5	50.6	282 31.7	56.4	65 10.7	51.8	241 51.8	59.7
14	76	17.6	1	23.7	51.0	297 33.1	56.0	80 12.7	51.6	256 54.4	59.7
15	91	20.1	16	22.9	51.4	312 34.5	55.6	95 14.7	51.4	271 56.9	59.8
16	106	22.6	31	22.1	51.8	327 35.9	55.3	110 16.8	51.2	286 59.5	59.8
17	121	25.0	46	21.3	+23 52.2	342 37.3	+17 54.9	125 18.8	-2 51.1	302 02.0	+2 59.8
18	136	27.5	61	20.5	+23 52.7	357 38.7	+17 54.5	140 20.8	-2 50.9	317 04.6	+2 59.8
19	151	29.9	76	19.7	53.1	12 40.0	54.1	155 22.8	50.7	332 07.1	59.9
20	166	32.4	91	18.9	53.5	27 41.4	53.7	170 24.9	50.5	347 09.7	59.9
21	181	34.9	106	18.1	53.9	42 42.8	53.3	185 26.9	50.3	2 12.2	+2 59.9
22	196	37.3	121	17.3	54.3	57 44.2	53.0	200 28.9	50.1	17 14.8	+3 00.0
23	211	39.8	136	16.5	54.7	72 45.6	52.6	215 30.9	50.0	32 17.3	00.0
24	226	42.3	151	15.6	+23 55.1	87 47.0	+17 52.2	230 33.0	-2 49.8	47 19.9	+3 00.0

Dif	—	-8	+4	+14	-4	+20	+2	+26	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 24 ^d 5 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9 R°: 41 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m			
0	180	53.2	+17	16.2	238	31.2	-0	01.7	60 N	0 49	2 39	3 37	2 07	5	14 52	81					
1	195	53.2		16.9	253	06.5 ¹⁶³	+0	11.0 ¹²⁷	58	1 35	2 57	49	07	8	50	78					
2	210	53.3		17.6	267	41.7 ¹⁶²		23.8 ¹²⁸	56	2 03	3 12	3 59	08	9	48	76					
3	225	53.3		18.3	282	16.9 ¹⁶²		36.6 ¹²⁸	54	24	25	4 08	08	12	47	73					
4	240	53.3		18.9	296	52.0 ¹⁶¹	+0	49.4 ¹²⁸	52	41	36	16	08	14	46	70					
5	255	53.3	+17	19.6	311	27.2 ¹⁶²	+1	02.1 ¹²⁷	50	2 55	3 45	4 23	2 08	16	14 45	68					
6	270	53.4	+17	20.3	326	02.3 ¹⁶¹	+1	14.9 ¹²⁸	45	3 23	4 05	4 39	2 08	20	14 42	65					
7	285	53.4		20.9	340	37.4 ¹⁶¹		27.7 ¹²⁸	40	3 44	21	4 51	09	23	40	61					
8	300	53.4		21.6	355	12.5 ¹⁶¹		40.5 ¹²⁸	35	4 01	34	5 02	09	26	38	58					
9	315	53.5		22.3	9	47.6 ¹⁶¹	+1	53.3 ¹²⁸	30	14	4 45	11	09	29	37	55					
10	330	53.5		22.9	24	22.6 ¹⁶⁰	+2	06.1 ¹²⁸	20	36	5 03	27	09	34	34	50					
11	345	53.5	+17	23.6	38	57.6 ¹⁶⁰	+2	18.9 ¹²⁸	10 N	4 52	5 18	5 40	2 10	37	14 32	46					
12	0	53.5	+17	24.3	53	32.6 ¹⁶⁰	+2	31.7 ¹²⁸	0	5 06	5 31	5 53	2 10	41	14 30	42					
13	15	53.6		24.9	68	07.6 ¹⁶⁰		44.5 ¹²⁸	10 S	18	44	6 06	10	45	27	39					
14	30	53.6		25.6	82	42.5 ¹⁵⁹	+2	57.3 ¹²⁸	20	29	5 56	19	11	49	25	34					
15	45	53.6		26.2	97	17.4 ¹⁵⁹	+3	10.1 ¹²⁸	30	40	6 09	34	11	54	22	30					
16	60	53.7		26.9	111	52.3 ¹⁵⁹		22.9 ¹²⁸	35	46	16	43	11	57	21	27					
17	75	53.7	+17	27.6	126	27.1 ¹⁵⁸	+3	35.7 ¹²⁸	40	5 51	6 24	6 53	2 12	59	14 19	24					
18	90	53.7	+17	28.2	141	01.9 ¹⁵⁸	+3	48.5 ¹²⁸	45	5 57	6 33	7 04	2 12	63	14 17	21					
19	105	53.7		28.9	155	36.7 ¹⁵⁸	+4	01.2 ¹²⁷	50	6 04	43	18	12	68	15	16					
20	120	53.8		29.6	170	11.4 ¹⁵⁷		14.0 ¹²⁸	52	07	48	25	12	70	14	14					
21	135	53.8		30.2	184	46.1 ¹⁵⁷		26.8 ¹²⁸	54	10	53	32	13	72	12	13					
22	150	53.8		30.9	199	20.7 ¹⁵⁶		39.5 ¹²⁷	56	13	6 58	40	13	74	11	10					
23	165	53.8		31.5	213	55.4 ¹⁵⁷	+4	52.3 ¹²⁸	58	17	7 05	49	13	77	10	7					
24	180	53.9	+17	32.2	228	29.9 ¹⁵⁵	+5	05.0 ¹²⁷	60 S	6 21	7 12	7 59	2 13	81	14 08	5					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 8 ^h 51 ^m 7			Mag: -3.9 PMG: 13 ^h 56 ^m			Mag: +0.9 PMG: 18 ^h 07 ^m			Mag: -2.2 PMG: 8 ^h 37 ^m			Mag: +0.9 PMG: 20 ^h 47 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	226	42.3	151	15.6	+23	55.1	87	47.0	+17	52.2	230	33.0	-2	49.8	47	19.9	+3	00.0			
1	241	44.7	166	14.8		55.5	102	48.4		51.8	245	35.0		49.6	62	22.4	+3	00.1			
2	256	47.2	181	14.0		55.9	117	49.8		51.4	260	37.0		49.4	77	25.0		00.1			
3	271	49.7	196	13.2		56.3	132	51.1		51.1	275	39.0		49.2	92	27.5		00.1			
4	286	52.1	211	12.4		56.7	147	52.5		50.7	290	41.1		49.1	107	30.1		00.1			
5	301	54.6	226	11.6	+23	57.1	162	53.9	+17	50.3	305	43.1	-2	48.9	122	32.6	+3	00.2			
6	316	57.0	241	10.8	+23	57.5	177	55.3	+17	49.9	320	45.1	-2	48.7	137	35.2	+3	00.2			
7	331	59.5	256	10.0		57.9	192	56.7		49.5	335	47.1		48.5	152	37.7		00.2			
8	347	02.0	271	09.2		58.3	207	58.1		49.2	350	49.2		48.3	167	40.3		00.3			
9	2	04.4	286	08.3		58.7	222	59.5		48.8	5	51.2		48.2	182	42.8		00.3			
10	17	06.9	301	07.5		59.1	238	00.8		48.4	20	53.2		48.0	197	45.4		00.3			
11	32	09.4	316	06.7	+23	59.4	253	02.2	+17	48.0	35	55.2	-2	47.8	212	47.9	+3	00.3			
12	47	11.8	331	05.9	+23	59.8	268	03.6	+17	47.6	50	57.3	-2	47.6	227	50.5	+3	00.4			
13	62	14.3	346	05.1	+24	00.2	283	05.0		47.2	65	59.3		47.4	242	53.0		00.4			
14	77	16.8	1	04.3		00.6	298	06.4		46.9	81	01.3		47.3	257	55.6		00.4			
15	92	19.2	16	03.5		01.0	313	07.8		46.5	96	03.4		47.1	272	58.1		00.5			
16	107	21.7	31	02.7		01.4	328	09.1		46.1	111	05.4		46.9	288	00.7		00.5			
17	122	24.2	46	01.9	+24	01.8	343	10.5	+17	45.7	126	07.4	-2	46.7	303	03.2	+3	00.5			
18	137	26.6	61	01.0	+24	02.1	358	11.9	+17	45.3	141	09.4	-2	46.5	318	05.8	+3	00.5			
19	152	29.1	76	00.2		02.5	13	13.3		44.9	156	11.5		46.4	333	08.3		00.6			
20	167	31.5	90	59.4		02.9	28	14.7		44.5	171	13.5		46.2	348	10.8		00.6			
21	182	34.0	105	58.6		03.3	43	16.0		44.2	186	15.5		46.0	3	13.4		00.6			
22	197	36.5	120	57.8		03.7	58	17.4		43.8	201	17.5		45.8	18	15.9		00.6			
23	212	38.9	135	57.0		04.0	73	18.8		43.4	216	19.6		45.6	33	18.5		00.7			
24	227	41.4	150	56.2	+24	04.4	88	20.2	+17	43.0	231	21.6	-2	45.5	48	21.0	+3	00.7			
Dif	—			-8			+14			-4			+20			+2			+25		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8		Edad: 25 ^d 5	PHE { 4 ^h : 55°1 12 ^h : 55°3 20 ^h : 55°4	SD: 15°0				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 4				PMG: 9 ^h 01 ^m				R°: 44 ^m					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	53.9	+17	32.2	228	29.9	+5 05.0	60 N	20 20	21 19	23 28	2 12 5	16 13 85	
1	195	53.9		32.8	243	04.5 ¹⁵⁶	17.7 ¹²⁷	58	20 07	21 01	22 27	15 8	08 81	
2	210	53.9		33.5	257	39.0 ¹⁵⁵	30.4 ¹²⁷	56	19 57	20 45	21 56	17 11	04 78	
3	225	53.9		34.2	272	13.4 ¹⁵⁴	43.2 ¹²⁸	54		48	32 34	20 13	16 00 76	
4	240	54.0		34.8	286	47.8 ¹⁵⁴	+5 55.8 ¹²⁶	52		39	20 16	22 15	15 56 74	
5	255	54.0	+17	35.5	301	22.2 ¹⁵⁴	+6 08.5 ¹²⁷	50	19 32	20 11	21 01	2 24 17	15 53 71	
6	270	54.0	+17	36.1	315	56.5 ¹⁵³	+6 21.2 ¹²⁷	45	19 16	19 50	20 32	2 28 22	15 47 66	
7	285	54.0		36.8	330	30.8 ¹⁵³	33.8 ¹²⁶	40	19 03	34	20 11	32 25	41 63	
8	300	54.0		37.4	345	05.0 ¹⁵²	46.5 ¹²⁷	35	18 53	20	19 54	35 28	36 60	
9	315	54.1		38.1	359	39.2 ¹⁵²	+6 59.1 ¹²⁶	30		43	19 09	40	38 31	32 57
10	330	54.1		38.7	14	13.4 ¹⁵²	+7 11.7 ¹²⁶	20		27	18 50	18	43 35	24 53
11	345	54.1	+17	39.4	28	47.4 ¹⁵⁰	+7 24.3 ¹²⁶	10 N	18 13	18 35	19 01	2 47 40	15 18 48	
12	0	54.1	+17	40.1	43	21.5 ¹⁵¹	+7 36.8 ¹²⁵	0	18 00	18 22	18 47	2 51 43	15 12 44	
13	15	54.2		40.7	57	55.4 ¹⁴⁹	+7 49.4 ¹²⁶	10 S	17 47	18 09	34	2 55 47	15 06 40	
14	30	54.2		41.4	72	29.4 ¹⁵⁰	+8 01.9 ¹²⁵	20		33	17 56	23	3 00 51	14 59 37
15	45	54.2		42.0	87	03.2 ¹⁴⁸	14.4 ¹²⁵	30		18	43 12	05 56	52 32	
16	60	54.2		42.7	101	37.0 ¹⁴⁸	26.8 ¹²⁴	35	17 09	36	06 00	08 59	48 29	
17	75	54.2	+17	43.3	116	10.8 ¹⁴⁸	+8 39.3 ¹²⁵	40	16 59	17 28	18 00	3 11 62	14 43 26	
18	90	54.3	+17	44.0	130	44.5 ¹⁴⁷	+8 51.7 ¹²⁴	45	16 47	17 19	17 54	3 15 66	14 38 22	
19	105	54.3		44.6	145	18.1 ¹⁴⁶	+9 04.1 ¹²⁴	50		33	08 47	20 70	31 19	
20	120	54.3		45.3	159	51.7 ¹⁴⁶	16.5 ¹²⁴	52		26	17 03	44	22 72	28 17
21	135	54.3		45.9	174	25.3 ¹⁴⁶	28.8 ¹²³	54		19	16 58	41	25 74	25 14
22	150	54.3		46.5	188	58.7 ¹⁴⁴	41.1 ¹²³	56		10	52 37	27 77	21 12	
23	165	54.4		47.2	203	32.1 ¹⁴⁴	+9 53.4 ¹²³	58	16 01	46	34	30 80	17 9	
24	180	54.4	+17	47.8	218	05.5 ¹⁴⁴	+10 05.7 ¹²³	60 S	15 50	16 38	17 29	3 34 83	14 13 6	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 47 ^m 8		Mag: -3.9 PMG: 13 ^h 57 ^m		Mag: +0.9 PMG: 18 ^h 05 ^m		Mag: -2.2 PMG: 8 ^h 33 ^m		Mag: +0.9 PMG: 20 ^h 43 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	227	41.4	150	56.2	+24 04.4	88 20.2	+17 43.0	231 21.6	-2 45.5	48 21.0				
1	242	43.9	165	55.3	04.8	103 21.6	42.6	246 23.6	45.3	63 23.6				
2	257	46.3	180	54.5	05.2	118 22.9	42.2	261 25.7	45.1	78 26.1				
3	272	48.8	195	53.7	05.5	133 24.3	41.8	276 27.7	44.9	93 28.7				
4	287	51.3	210	52.9	05.9	148 25.7	41.5	291 29.7	44.7	108 31.2				
5	302	53.7	225	52.1	+24 06.3	163 27.1	+17 41.1	306 31.8	-2 44.6	123 33.8				
6	317	56.2	240	51.3	+24 06.6	178 28.5	+17 40.7	321 33.8	-2 44.4	138 36.3				
7	332	58.7	255	50.4	07.0	193 29.8	40.3	336 35.8	44.2	153 38.9				
8	348	01.1	270	49.6	07.4	208 31.2	39.9	351 37.8	44.0	168 41.4				
9	3	03.6	285	48.8	07.7	223 32.6	39.5	6 39.9	43.8	183 43.9				
10	18	06.0	300	48.0	08.1	238 34.0	39.1	21 41.9	43.7	198 46.5				
11	33	08.5	315	47.2	+24 08.4	253 35.3	+17 38.7	36 43.9	-2 43.5	213 49.0				
12	48	11.0	330	46.4	+24 08.8	268 36.7	+17 38.4	51 46.0	-2 43.3	228 51.6				
13	63	13.4	345	45.5	09.2	283 38.1	38.0	66 48.0	43.1	243 54.1				
14	78	15.9	0	44.7	09.5	298 39.5	37.6	81 50.0	42.9	258 56.7				
15	93	18.4	15	43.9	09.9	313 40.8	37.2	96 52.1	42.8	273 59.2				
16	108	20.8	30	43.1	10.2	328 42.2	36.8	111 54.1	42.6	289 01.8				
17	123	23.3	45	42.3	+24 10.6	343 43.6	+17 36.4	126 56.1	-2 42.4	304 04.3				
18	138	25.8	60	41.4	+24 10.9	358 45.0	+17 36.0	141 58.1	-2 42.2	319 06.8				
19	153	28.2	75	40.6	11.3	13 46.3	35.6	157 00.2	42.1	334 09.4				
20	168	30.7	90	39.8	11.6	28 47.7	35.3	172 02.2	41.9	349 11.9				
21	183	33.1	105	39.0	12.0	43 49.1	34.9	187 04.2	41.7	4 14.5				
22	198	35.6	120	38.2	12.3	58 50.5	34.5	202 06.3	41.5	19 17.0				
23	213	38.1	135	37.3	12.7	73 51.8	34.1	217 08.3	41.3	34 19.6				
24	228	40.5	150	36.5	+24 13.0	88 53.2	+17 33.7	232 10.3	-2 41.2	49 22.1				
Dif	—		-8		+4		+14		+20		+25		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 26 ^d 5 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0 PMG: 9 ^h 45 ^m R°: 47 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.4	+17	47.8	218	05.5	+10	05.7	60 N	0 24	2 33	3 32	2 17	8	17 38	88	
1	195	54.4		48.5	232	38.7 ¹⁴²		17.9 ¹²²	58	1 25	2 52	45	23	11	29	85	
2	210	54.4		49.1	247	11.9 ¹⁴²		30.1 ¹²²	56	1 56	3 07	3 55	28	14	22	81	
3	225	54.4		49.8	261	45.1 ¹⁴²		42.2 ¹²¹	54	2 18	20	4 04	33	16	16	78	
4	240	54.4		50.4	276	18.2 ¹⁴¹	+10	54.4 ¹²²	52	36	32	13	37	19	10	75	
5	255	54.5	+17	51.1	290	51.2 ¹⁴⁰	+11	06.4 ¹²⁰	50	2 51	3 42	4 20	2 41	21	17 04	74	
6	270	54.5	+17	51.7	305	24.1 ¹³⁹	+11	18.5 ¹²¹	45	3 20	4 02	4 36	2 50	25	16 53	69	
7	285	54.5		52.4	319	57.0 ¹³⁹		30.5 ¹²⁰	40	41	19	4 49	2 57	28	44	65	
8	300	54.5		53.0	334	29.8 ¹³⁸		42.5 ¹²⁰	35	3 58	32	5 00	3 03	31	36	62	
9	315	54.5		53.6	349	02.5 ¹³⁷	+11	54.4 ¹¹⁹	30	4 12	4 43	09	09	34	29	59	
10	330	54.5		54.3	3	35.2 ¹³⁷	+12	06.3 ¹¹⁹	20	35	5 02	26	18	39	17	55	
11	345	54.6	+17	54.9	18	07.8 ¹³⁶	+12	18.1 ¹¹⁸	10 N	4 52	5 18	5 40	3 27	42	16 06	51	
12	0	54.6	+17	55.6	32	40.3 ¹³⁵	+12	29.9 ¹¹⁸	0	5 06	5 31	5 53	3 34	46	15 56	48	
13	15	54.6		56.2	47	12.7 ¹³⁴		41.7 ¹¹⁸	10 S	18	44	6 06	42	50	46	44	
14	30	54.6		56.8	61	45.1 ¹³⁴	+12	53.4 ¹¹⁷	20	30	5 56	20	3 51	54	36	40	
15	45	54.6		57.5	76	17.4 ¹³³	+13	05.1 ¹¹⁷	30	41	6 10	35	4 01	58	24	36	
16	60	54.6		58.1	90	49.6 ¹³²		16.7 ¹¹⁶	35	47	17	44	07	61	17	33	
17	75	54.7	+17	58.7	105	21.7 ¹³¹	+13	28.3 ¹¹⁶	40	5 53	6 26	6 54	4 13	64	15 09	31	
18	90	54.7	+17	59.4	119	53.8 ¹³¹	+13	39.8 ¹¹⁵	45	5 59	6 35	7 06	4 21	68	15 00	27	
19	105	54.7	+18	00.0	134	25.8 ¹³⁰	+13	51.3 ¹¹⁵	50	6 07	46	21	30	72	14 50	22	
20	120	54.7	+18	00.7	148	57.6 ¹²⁸	+14	02.7 ¹¹⁴	52	10	51	28	34	75	45	20	
21	135	54.7		01.3	163	29.5 ¹²⁹		14.0 ¹¹³	54	13	6 56	35	39	77	39	18	
22	150	54.7		01.9	178	01.2 ¹²⁷		25.4 ¹¹⁴	56	16	7 02	44	44	80	33	15	
23	165	54.7		02.6	192	32.9 ¹²⁷		36.6 ¹¹²	58	20	08	7 53	50	83	26	13	
24	180	54.7	+18	03.2	207	04.4 ¹²⁵	+14	47.8 ¹¹²	60 S	6 24	7 16	8 04	4 57	87	14 19	8	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 43 ^m 9		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: +0.9 PMG: 18 ^h 03 ^m		Mag: -2.2 PMG: 8 ^h 30 ^m		Mag: +0.9 PMG: 20 ^h 39 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	228	40.5	150	36.5	+24	13.0	88	53.2	+17	33.7	232	10.3	-2	41.2	49	22.1	+3	01.3
1	243	43.0	165	35.7		13.4	103	54.6		33.3	247	12.4		41.0	64	24.6		01.4
2	258	45.5	180	34.9		13.7	118	55.9		32.9	262	14.4		40.8	79	27.2		01.4
3	273	47.9	195	34.1		14.1	133	57.3		32.5	277	16.4		40.6	94	29.7		01.4
4	288	50.4	210	33.2		14.4	148	58.7		32.1	292	18.5		40.5	109	32.3		01.4
5	303	52.9	225	32.4	+24	14.8	164	00.1	+17	31.7	307	20.5	-2	40.3	124	34.8	+3	01.5
6	318	55.3	240	31.6	+24	15.1	179	01.4	+17	31.3	322	22.5	-2	40.1	139	37.4	+3	01.5
7	333	57.8	255	30.8		15.4	194	02.8		31.0	337	24.6		39.9	154	39.9		01.5
8	349	00.3	270	30.0		15.8	209	04.2		30.6	352	26.6		39.7	169	42.4		01.5
9	4	02.7	285	29.1		16.1	224	05.5		30.2	7	28.6		39.6	184	45.0		01.6
10	19	05.2	300	28.3		16.4	239	06.9		29.8	22	30.7		39.4	199	47.5		01.6
11	34	07.6	315	27.5	+24	16.8	254	08.3	+17	29.4	37	32.7	-2	39.2	214	50.1	+3	01.6
12	49	10.1	330	26.7	+24	17.1	269	09.6	+17	29.0	52	34.7	-2	39.0	229	52.6	+3	01.6
13	64	12.6	345	25.9		17.4	284	11.0		28.6	67	36.8		38.9	244	55.1		01.7
14	79	15.0	0	25.0		17.8	299	12.4		28.2	82	38.8		38.7	259	57.7		01.7
15	94	17.5	15	24.2		18.1	314	13.7		27.8	97	40.8		38.5	275	00.2		01.7
16	109	20.0	30	23.4		18.4	329	15.1		27.4	112	42.9		38.3	290	02.8		01.7
17	124	22.4	45	22.6	+24	18.7	344	16.5	+17	27.0	127	44.9	-2	38.2	305	05.3	+3	01.8
18	139	24.9	60	21.7	+24	19.1	359	17.8	+17	26.6	142	46.9	-2	38.0	320	07.9	+3	01.8
19	154	27.4	75	20.9		19.4	14	19.2		26.2	157	49.0		37.8	335	10.4		01.8
20	169	29.8	90	20.1		19.7	29	20.6		25.9	172	51.0		37.6	350	12.9		01.8
21	184	32.3	105	19.3		20.0	44	21.9		25.5	187	53.0		37.4	5	15.5		01.9
22	199	34.7	120	18.4		20.4	59	23.3		25.1	202	55.1		37.3	20	18.0		01.9
23	214	37.2	135	17.6		20.7	74	24.7		24.7	217	57.1		37.1	35	20.5		01.9
24	229	39.7	150	16.8	+24	21.0	89	26.0	+17	24.3	232	59.2	-2	36.9	50	23.1	+3	01.9
Dif	—		-8		+3		+14		-4		+20		+2		+25		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 11 ^h 56 ^m 3			Edad: 27 ^d 5 PHE { SD: 15°3 PMG: 10 ^h 32 ^m 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/6 R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	54.7	+18	03.2	207	04.4	+14	47.8	60 N	20 24	21 26	** **	2 25	11	19 06	90
1	195	54.8		03.8	221	35.9 ¹²⁵	+14	58.9 ¹¹¹	58	12	21 06	22 38	34	15	18 54	85
2	210	54.8		04.5	236	07.3 ¹²⁴	+15	10.0 ¹¹¹	56	20 01	20 50	22 04	42	18	43	82
3	225	54.8		05.1	250	38.6 ¹²³		21.0 ¹¹⁰	54	19 51	36	21 40	49	21	34	77
4	240	54.8		05.7	265	09.9 ¹²³		32.0 ¹¹⁰	52	43	24	21	2 56	23	25	77
5	255	54.8	+18	06.4	279	41.0 ¹²¹	+15	42.9 ¹⁰⁹	50	19 35	20 14	21 05	3 02	25	18 18	74
6	270	54.8	+18	07.0	294	12.1 ¹²¹	+15	53.7 ¹⁰⁸	45	19 19	19 53	20 35	3 15	29	18 02	70
7	285	54.8		07.6	308	43.1 ¹²⁰	+16	04.5 ¹⁰⁸	40	19 05	36	20 13	25	33	17 49	67
8	300	54.8		08.2	323	14.0 ¹¹⁹		15.2 ¹⁰⁷	35	18 54	22	19 56	34	36	38	64
9	315	54.8		08.9	337	44.8 ¹¹⁸		25.8 ¹⁰⁶	30	44	19 10	42	43	38	28	62
10	330	54.9		09.5	352	15.5 ¹¹⁷		36.4 ¹⁰⁶	20	28	18 51	19	3 57	42	17 12	57
11	345	54.9	+18	10.1	6	46.1 ¹¹⁶	+16	46.9 ¹⁰⁵	10 N	18 13	18 35	19 01	4 09	46	16 57	55
12	0	54.9	+18	10.8	21	16.6 ¹¹⁵	+16	57.3 ¹⁰⁴	0	18 00	18 22	18 47	4 20	50	16 44	51
13	15	54.9		11.4	35	47.1 ¹¹⁵	+17	07.6 ¹⁰³	10 S	17 47	18 09	34	32	53	30	49
14	30	54.9		12.0	50	17.4 ¹¹³		17.9 ¹⁰³	20	33	17 56	22	45	56	16	45
15	45	54.9		12.6	64	47.7 ¹¹³		28.1 ¹⁰²	30	17	42	11	4 59	61	16 00	41
16	60	54.9		13.3	79	17.8 ¹¹¹		38.2 ¹⁰¹	35	17 07	34	18 05	5 08	63	15 50	39
17	75	54.9	+18	13.9	93	47.9 ¹¹¹	+17	48.2 ¹⁰⁰	40	16 57	17 26	17 58	5 17	67	15 40	36
18	90	54.9	+18	14.5	108	17.9 ¹¹⁰	+17	58.2 ¹⁰⁰	45	16 45	17 16	17 52	5 29	70	15 27	33
19	105	54.9		15.1	122	47.8 ¹⁰⁹	+18	08.1 ⁹⁹	50	30	05	44	42	75	12	29
20	120	54.9		15.8	137	17.6 ¹⁰⁸		17.9 ⁹⁸	52	23	17 00	41	49	77	15 05	26
21	135	54.9		16.4	151	47.3 ¹⁰⁷		27.6 ⁹⁷	54	15	16 55	38	5 56	79	14 57	24
22	150	55.0		17.0	166	16.9 ¹⁰⁶		37.2 ⁹⁶	56	16 07	49	34	6 04	83	48	22
23	165	55.0		17.6	180	46.5 ¹⁰⁶		46.7 ⁹⁵	58	15 57	42	30	13	86	39	17
24	180	55.0	+18	18.2	195	15.9 ¹⁰⁴	+18	56.2 ⁹⁵	60 S	15 46	16 34	17 26	6 24	90	14 27	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 39 ^m 9		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +0.9 PMG: 18 ^h 01 ^m		Mag: -2.2 PMG: 8 ^h 27 ^m		Mag: +0.9 PMG: 20 ^h 35 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	229	39.7	150	16.8	+24	21.0	89	26.0	+17	24.3	232	59.2	-2	36.9	50	23.1	+3	01.9
1	244	42.1	165	16.0		21.3	104	27.4		23.9	248	01.2		36.7	65	25.6		02.0
2	259	44.6	180	15.1		21.6	119	28.8		23.5	263	03.2		36.6	80	28.2		02.0
3	274	47.1	195	14.3		21.9	134	30.1		23.1	278	05.3		36.4	95	30.7		02.0
4	289	49.5	210	13.5		22.2	149	31.5		22.7	293	07.3		36.2	110	33.2		02.0
5	304	52.0	225	12.7	+24	22.6	164	32.9	+17	22.3	308	09.3	-2	36.0	125	35.8	+3	02.1
6	319	54.5	240	11.8	+24	22.9	179	34.2	+17	21.9	323	11.4	-2	35.9	140	38.3	+3	02.1
7	334	56.9	255	11.0		23.2	194	35.6		21.5	338	13.4		35.7	155	40.9		02.1
8	349	59.4	270	10.2		23.5	209	36.9		21.1	353	15.4		35.5	170	43.4		02.1
9	5	01.9	285	09.4		23.8	224	38.3		20.7	8	17.5		35.3	185	45.9		02.2
10	20	04.3	300	08.5		24.1	239	39.7		20.3	23	19.5		35.2	200	48.5		02.2
11	35	06.8	315	07.7	+24	24.4	254	41.0	+17	19.9	38	21.6	-2	35.0	215	51.0	+3	02.2
12	50	09.2	330	06.9	+24	24.7	269	42.4	+17	19.5	53	23.6	-2	34.8	230	53.5	+3	02.2
13	65	11.7	345	06.1		25.0	284	43.8		19.1	68	25.6		34.6	245	56.1		02.2
14	80	14.2	0	05.2		25.3	299	45.1		18.7	83	27.7		34.5	260	58.6		02.3
15	95	16.6	15	04.4		25.6	314	46.5		18.3	98	29.7		34.3	276	01.2		02.3
16	110	19.1	30	03.6		25.9	329	47.8		17.9	113	31.8		34.1	291	03.7		02.3
17	125	21.6	45	02.7	+24	26.2	344	49.2	+17	17.5	128	33.8	-2	33.9	306	06.2	+3	02.3
18	140	24.0	60	01.9	+24	26.5	359	50.6	+17	17.1	143	35.8	-2	33.8	321	08.8	+3	02.4
19	155	26.5	75	01.1		26.8	14	51.9		16.7	158	37.9		33.6	336	11.3		02.4
20	170	29.0	90	00.3		27.1	29	53.3		16.3	173	39.9		33.4	351	13.8		02.4
21	185	31.4	104	59.4		27.4	44	54.6		16.0	188	41.9		33.2	6	16.4		02.4
22	200	33.9	119	58.6		27.7	59	56.0		15.6	203	44.0		33.1	21	18.9		02.5
23	215	36.4	134	57.8		28.0	74	57.3		15.2	218	46.0		32.9	36	21.4		02.5
24	230	38.8	149	56.9	+24	28.2	89	58.7	+17	14.8	233	48.1	-2	32.7	51	24.0	+3	02.5
Dif	—	—	-8	+3		+14	-4	-4		+20	+2	+2		+25		0		

UT	SOL				● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 28 ^d 5 PHE { 4 ^h : 56 ^m 8 12 ^h : 57 ^m 0 20 ^h : 57 ^m 2 PMG: 11 ^h 23 ^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
0	180	55.0	+18	18.2	195	15.9	+18	56.2	94	58	60 N	**	**	2	26	3	27	2	36	18	86
1	195	55.0		18.9	209	45.2	+19	05.6	92	58	58	1	14	2	46	40		2	49	22	82
2	210	55.0		19.5	224	14.5		14.8	92	56	56	1	48	3	02	3	51	3	00	26	78
3	225	55.0		20.1	238	43.6		24.0	92	54	54	2	13	16		4	01	10	29		75
4	240	55.0		20.7	253	12.7		33.1	91	52	52	31		28	10			19	31		74
5	255	55.0	+18	21.3	267	41.6	+19	42.1	90	50	50	2	47	3	38	4	17	3	27	33	72
6	270	55.0	+18	22.0	282	10.5	+19	51.0	89	45	45	3	17	4	00	4	34	3	44	37	69
7	285	55.0		22.6	296	39.3	+19	59.8	88	40	40	39		16	47			3	58	40	66
8	300	55.0		23.2	311	07.9	+20	08.5	87	35	35	3	56	30	4	58		4	10	43	64
9	315	55.0		23.8	325	36.5		17.1	86	30	30	4	11	4	42	5	08	21	44		63
10	330	55.0		24.4	340	05.0		25.6	85	20	20	33		5	01	25		39	48		60
11	345	55.0	+18	25.0	354	33.4	+20	34.0	84	10 N	10 N	4	51	5	17	5	39	4	55	51	57
12	0	55.0	+18	25.7	9	01.7	+20	42.3	83	0	0	5	06	5	31	5	53	5	10	54	56
13	15	55.0		26.3	23	29.9		50.5	82	10 S	10 S	19		44	6	06		25	56		53
14	30	55.0		26.9	37	58.0	+20	58.5	80	20	20	31		5	57	20		5	41	60	51
15	45	55.0		27.5	52	26.0	+21	06.5	80	30	30	42		6	11	36		6	00	63	48
16	60	55.0		28.1	66	54.0		14.4	79	35	35	48		19	46			11	65		46
17	75	55.0	+18	28.7	81	21.8	+21	22.1	77	40	40	5	55	6	27	6	56	6	24	67	44
18	90	55.0	+18	29.3	95	49.6	+21	29.8	77	45	45	6	01	6	37	7	09	6	39	70	41
19	105	55.0		29.9	110	17.2		37.3	75	50	50	09		48	24			6	57	74	37
20	120	55.0		30.6	124	44.8		44.7	74	52	52	12		53	31			7	06	76	36
21	135	55.0		31.2	139	12.2		52.0	73	54	54	16		6	59	39		15	79		34
22	150	55.0		31.8	153	39.6	+21	59.2	72	56	56	19		7	05	47		27	81		30
23	165	55.0		32.4	168	06.9	+22	06.3	71	58	58	23		12	7	57		39	85		28
24	180	55.0	+18	33.0	182	34.1	+22	13.2	69	60 S	60 S	6	28	7	20	8	08	7	54	90	22

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO											
	PMG 8 ^h 36 ^m 0		Mag: -3.9 PMG: 14 ^h 01 ^m			Mag: +0.9 PMG: 17 ^h 58 ^m			Mag: -2.2 PMG: 8 ^h 24 ^m			Mag: +0.9 PMG: 20 ^h 31 ^m											
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'									
0	230	38.8	149	56.9	+24	89	58.7	+17	14.8		233	48.1	-2	32.7									
1	245	41.3	164	56.1		105	00.1		14.4		248	50.1		32.5									
2	260	43.7	179	55.3		120	01.4		14.0		263	52.1		32.4									
3	275	46.2	194	54.5		135	02.8		13.6		278	54.2		32.2									
4	290	48.7	209	53.6		150	04.1		13.2		293	56.2		32.0									
5	305	51.1	224	52.8	+24	165	05.5	+17	12.8		308	58.3	-2	31.8									
6	320	53.6	239	52.0	+24	180	06.8	+17	12.4		324	00.3	-2	31.7									
7	335	56.1	254	51.1		195	08.2		12.0		339	02.3		31.5									
8	350	58.5	269	50.3		210	09.6		11.6		354	04.4		31.3									
9	6	01.0	284	49.5		225	10.9		11.2		9	06.4		31.1									
10	21	03.5	299	48.6		240	12.3		10.8		24	08.5		31.0									
11	36	05.9	314	47.8	+24	255	13.6	+17	10.4		39	10.5	-2	30.8									
12	51	08.4	329	47.0	+24	270	15.0	+17	10.0		54	12.6	-2	30.6									
13	66	10.8	344	46.2		285	16.3		09.6		69	14.6		30.4									
14	81	13.3	359	45.3		300	17.7		09.2		84	16.6		30.3									
15	96	15.8	14	44.5		315	19.0		08.7		99	18.7		30.1									
16	111	18.2	29	43.7		330	20.4		08.3		114	20.7		29.9									
17	126	20.7	44	42.8	+24	345	21.7	+17	07.9		129	22.8	-2	29.7									
18	141	23.2	59	42.0	+24	0	23.1	+17	07.5		144	24.8	-2	29.6									
19	156	25.6	74	41.2		15	24.4		07.1		159	26.8		29.4									
20	171	28.1	89	40.3		30	25.8		06.7		174	28.9		29.2									
21	186	30.6	104	39.5		45	27.2		06.3		189	30.9		29.1									
22	201	33.0	119	38.7		60	28.5		05.9		204	33.0		28.9									
23	216	35.5	134	37.8		75	29.9		05.5		219	35.0		28.7									
24	231	38.0	149	37.0	+24	90	31.2	+17	05.1		234	37.1	-2	28.5									
Dif	—		-8			+3			+14			+20			+2			+25			0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 15°8 PMG: 11 ^h 56 ^m 3			Edad: 29 ^d 5 PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 6 20 ^h : 57 ^m 8 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	m	m	m			
0	180	55.0	+18	33.0	182	34.1	+22	13.2	60 N	20 29	21 32	** **	2 54	31	22 02	70			
1	195	55.0		33.6	197	01.2		20.0	58	16	21 11	22 50	3 11	35	21 41	68			
2	210	55.0		34.2	211	28.3		26.7	56	20 05	20 54	22 11	26	38	23	68			
3	225	55.0		34.8	225	55.2		33.3	54	19 55	40	21 45	39	40	21	08			
4	240	55.0		35.4	240	22.1		39.7	52	46	28	26	3 50	42	20	56			
5	255	55.0	+18	36.0	254	48.8	+22	46.0	50	19 38	20 17	21 09	4 00	44	20	44			
6	270	55.0	+18	36.6	269	15.5	+22	52.2	45	19 21	19 55	20 39	4 21	47	20	21			
7	285	55.0		37.2	283	42.1	+22	58.3	40	19 07	38	20 16	38	49	20	02			
8	300	55.0		37.8	298	08.6	+23	04.2	35	18 56	24	19 58	4 53	50	19	46			
9	315	55.0		38.4	312	35.1		10.0	30	46	19 12	43	5 05	52	33	61			
10	330	55.0		39.0	327	01.4		15.7	20	28	18 52	20	27	54	19	09			
11	345	55.0	+18	39.6	341	27.7	+23	21.2	10 N	18 14	18 36	19 02	5 46	55	18	49			
12	0	55.0	+18	40.2	355	53.9	+23	26.7	0	18 00	18 22	18 47	6 04	57	18	31			
13	15	55.0		40.8	10	20.0		31.9	10 S	17 46	18 08	34	21	59	18	12			
14	30	55.0		41.4	24	46.0		37.0	20	32	17 55	22	6 41	60	17	52			
15	45	55.0		42.0	39	12.0		42.0	30	15	41	10	7 03	62	29	55			
16	60	55.0		42.6	53	37.9		46.9	35	17 06	33	18 03	16	63	15	54			
17	75	55.0	+18	43.2	68	03.7	+23	51.6	40	16 55	17 24	17 57	7 31	65	17	00			
18	90	55.0	+18	43.8	82	29.4	+23	56.2	45	16 42	17 14	17 50	7 49	67	16	41			
19	105	55.0		44.4	96	55.1	+24	00.6	50	27	17 03	42	8 11	69	18	50			
20	120	55.0		45.0	111	20.7		04.9	52	20	16 57	39	22	70	16	07			
21	135	55.0		45.6	125	46.2		09.0	54	12	52	35	34	72	15	55			
22	150	55.0		46.2	140	11.7		13.0	56	16 03	45	31	8 48	74	40	46			
23	165	55.0		46.8	154	37.1		16.8	58	15 53	38	27	9 04	77	24	43			
24	180	55.0	+18	47.4	169	02.4	+24	20.5	60 S	15 41	16 30	17 22	9 24	80	15	03			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG: 8 ^h 32 ^m 1		Mag: -3.9 PMG: 14 ^h 02 ^m			Mag: +0.9 PMG: 17 ^h 56 ^m			Mag: -2.2 PMG: 8 ^h 20 ^m				Mag: +0.9 PMG: 20 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	231	38.0	149	37.0	+24	34.8	90	31.2	+17	05.1	234	37.1	-2	28.5	52	24.8			
1	246	40.4	164	36.2		35.1	105	32.6		04.7	249	39.1		28.4	67	27.3			
2	261	42.9	179	35.3		35.3	120	33.9		04.3	264	41.2		28.2	82	29.9			
3	276	45.3	194	34.5		35.6	135	35.3		03.9	279	43.2		28.0	97	32.4			
4	291	47.8	209	33.7		35.8	150	36.6		03.5	294	45.2		27.8	112	34.9			
5	306	50.3	224	32.8	+24	36.1	165	38.0	+17	03.1	309	47.3	-2	27.7	127	37.5			
6	321	52.7	239	32.0	+24	36.3	180	39.3	+17	02.7	324	49.3	-2	27.5	142	40.0			
7	336	55.2	254	31.2		36.6	195	40.7		02.3	339	51.4		27.3	157	42.5			
8	351	57.7	269	30.3		36.8	210	42.0		01.9	354	53.4		27.2	172	45.0			
9	7	00.1	284	29.5		37.1	225	43.3		01.5	9	55.5		27.0	187	47.6			
10	22	02.6	299	28.7		37.3	240	44.7		01.1	24	57.5		26.8	202	50.1			
11	37	05.1	314	27.8	+24	37.6	255	46.0	+17	00.7	39	59.6	-2	26.6	217	52.6			
12	52	07.5	329	27.0	+24	37.8	270	47.4	+17	00.3	55	01.6	-2	26.5	232	55.2			
13	67	10.0	344	26.2		38.1	285	48.7	+16	59.9	70	03.6		26.3	247	57.7			
14	82	12.5	359	25.3		38.3	300	50.1		59.5	85	05.7		26.1	263	00.2			
15	97	14.9	14	24.5		38.5	315	51.4		59.1	100	07.7		25.9	278	02.8			
16	112	17.4	29	23.7		38.8	330	52.8		58.6	115	09.8		25.8	293	05.3			
17	127	19.8	44	22.8	+24	39.0	345	54.1	+16	58.2	130	11.8	-2	25.6	308	07.8			
18	142	22.3	59	22.0	+24	39.3	0	55.5	+16	57.8	145	13.9	-2	25.4	323	10.3			
19	157	24.8	74	21.2		39.5	15	56.8		57.4	160	15.9		25.3	338	12.9			
20	172	27.2	89	20.3		39.7	30	58.2		57.0	175	18.0		25.1	353	15.4			
21	187	29.7	104	19.5		40.0	45	59.5		56.6	190	20.0		24.9	8	17.9			
22	202	32.2	119	18.7		40.2	61	00.9		56.2	205	22.1		24.7	23	20.5			
23	217	34.6	134	17.8		40.4	76	02.2		55.8	220	24.1		24.6	38	23.0			
24	232	37.1	149	17.0	+24	40.7	91	03.5	+16	55.4	235	26.2	-2	24.4	53	25.5			
Dif	—		-8			+2	+13			-4		+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: 11 ^h 56 ^m 3			Edad: 1 ^d 0 PHE { SD: 15 ^h 8 PMG: 13 ^h 15 ^m R ^o : 59 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	55.0	+18 47.4	169	02.4	+24 20.5	36	60 N	** **	2 20	3 23	3 25	52	23 12	48		
1	195	55.0		183	27.7	24.1	36	58	1 02	41	36	3 46	54	22 49	50		
2	210	55.0		197	52.9	27.5	34	56	1 41	2 58	48	4 04	55	31	51		
3	225	55.0		212	18.1	30.7	32	54	2 07	3 12	3 58	19	55	15	52		
4	240	55.0		226	43.2	33.8	31	52	27	24	4 06	32	56	22 01	54		
5	255	55.0	+18 50.4	241	08.2	+24 36.8	30	50	2 43	3 35	4 14	4 44	56	21 49	54		
6	270	54.9	+18 51.0	255	33.2	+24 39.6	28	45	3 14	3 57	4 31	5 08	57	21 25	55		
7	285	54.9		269	58.1	42.2	26	40	37	4 14	45	27	57	21 05	56		
8	300	54.9		284	23.0	44.7	25	35	3 54	29	4 57	43	58	20 48	57		
9	315	54.9		298	47.8	47.0	23	30	4 09	4 41	5 07	5 57	58	34	58		
10	330	54.9		313	12.6	49.2	22	20	32	5 00	24	6 21	58	20 10	58		
11	345	54.9	+18 53.9	327	37.4	+24 51.2	20	10 N	4 51	5 17	5 39	6 41	59	19 49	59		
12	0	54.9	+18 54.5	342	02.0	+24 53.1	19	0	5 06	5 31	5 53	7 01	59	19 29	59		
13	15	54.9		356	26.7	54.8	17	10 S	19	44	6 07	20	60	19 09	60		
14	30	54.9		10	51.3	56.3	15	20	31	5 58	21	7 41	60	18 48	61		
15	45	54.9		25	15.9	57.7	14	30	43	6 12	38	8 05	60	24	61		
16	60	54.9		39	40.4	+24 59.0	13	35	50	20	47	19	60	18 09	62		
17	75	54.9	+18 57.4	54	04.9	+25 00.0	10	40	5 56	6 29	6 58	8 36	60	17 53	62		
18	90	54.8	+18 58.0	68	29.4	+25 00.9	9	45	6 03	6 39	7 11	8 56	60	17 33	62		
19	105	54.8		82	53.8	01.7	8	50	11	51	26	9 20	60	17 08	63		
20	120	54.8		97	18.2	02.3	6	52	15	6 56	34	32	60	16 56	63		
21	135	54.8	+18 59.8	111	42.6	02.7	4	54	18	7 02	42	9 46	60	42	63		
22	150	54.8	+19 00.4	126	06.9	02.9	2	56	22	08	7 51	10 02	60	26	64		
23	165	54.8		140	31.2	03.0	1	58	27	15	8 01	21	59	16 07	64		
24	180	54.8	+19 01.5	154	55.5	+25 03.0	0	60 S	6 31	7 23	8 13	10 44	60	15 43	65		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 8 ^h 28 ^m 1		Mag: -3.9 PMG: 14 ^h 04 ^m			Mag: +0.9 PMG: 17 ^h 54 ^m			Mag: -2.2 PMG: 8 ^h 17 ^m			Mag: +0.9 PMG: 20 ^h 23 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	232	37.1	149	17.0	+24 40.7	91	03.5	+16 55.4	235	26.2	-2 24.4	53	25.5	+3 03.5			
1	247	39.6	164	16.2	40.9	106	04.9	55.0	250	28.2	24.2	68	28.0	03.5			
2	262	42.0	179	15.3	41.1	121	06.2	54.6	265	30.3	24.1	83	30.6	03.5			
3	277	44.5	194	14.5	41.3	136	07.6	54.2	280	32.3	23.9	98	33.1	03.5			
4	292	47.0	209	13.7	41.6	151	08.9	53.8	295	34.3	23.7	113	35.6	03.6			
5	307	49.4	224	12.8	+24 41.8	166	10.3	+16 53.4	310	36.4	-2 23.6	128	38.2	+3 03.6			
6	322	51.9	239	12.0	+24 42.0	181	11.6	+16 52.9	325	38.4	-2 23.4	143	40.7	+3 03.6			
7	337	54.3	254	11.1	42.2	196	12.9	52.5	340	40.5	23.2	158	43.2	03.6			
8	352	56.8	269	10.3	42.5	211	14.3	52.1	355	42.5	23.0	173	45.7	03.6			
9	7	59.3	284	09.5	42.7	226	15.6	51.7	10	44.6	22.9	188	48.3	03.7			
10	23	01.7	299	08.6	42.9	241	17.0	51.3	25	46.6	22.7	203	50.8	03.7			
11	38	04.2	314	07.8	+24 43.1	256	18.3	+16 50.9	40	48.7	-2 22.5	218	53.3	+3 03.7			
12	53	06.7	329	07.0	+24 43.3	271	19.6	+16 50.5	55	50.7	-2 22.4	233	55.8	+3 03.7			
13	68	09.1	344	06.1	43.5	286	21.0	50.1	70	52.8	22.2	248	58.4	03.7			
14	83	11.6	359	05.3	43.8	301	22.3	49.7	85	54.8	22.0	264	00.9	03.7			
15	98	14.1	14	04.5	44.0	316	23.7	49.3	100	56.9	21.8	279	03.4	03.8			
16	113	16.5	29	03.6	44.2	331	25.0	48.8	115	58.9	21.7	294	05.9	03.8			
17	128	19.0	44	02.8	+24 44.4	346	26.3	+16 48.4	131	01.0	-2 21.5	309	08.5	+3 03.8			
18	143	21.5	59	01.9	+24 44.6	1	27.7	+16 48.0	146	03.0	-2 21.3	324	11.0	+3 03.8			
19	158	23.9	74	01.1	44.8	16	29.0	47.6	161	05.1	21.2	339	13.5	03.8			
20	173	26.4	89	00.3	45.0	31	30.4	47.2	176	07.1	21.0	354	16.0	03.9			
21	188	28.8	103	59.4	45.2	46	31.7	46.8	191	09.2	20.8	9	18.6	03.9			
22	203	31.3	118	58.6	45.4	61	33.0	46.4	206	11.2	20.7	24	21.1	03.9			
23	218	33.8	133	57.8	45.6	76	34.4	46.0	221	13.3	20.5	39	23.6	03.9			
24	233	36.2	148	56.9	+24 45.8	91	35.7	+16 45.6	236	15.3	-2 20.3	54	26.1	+3 03.9			
Dif	—		-8		+2	+13		-4	+20		+2	+25		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15/8			Edad: 2 ^d 0	PHE {	4 ^h : 58/5 12 ^h : 58/6 20 ^h : 58/7 R°: 59 ^m									
	PMG: 11 ^h 56 ^m 4								SD: 15/9			PMG: 14 ^h 14 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	54.8	+19 01.5	154	55.5	+25 03.0	3	60 N	20 34	21 39	** **	4 17 77		** ** *	
1	195	54.8	02.1	169	19.8	02.7	4	58	20 20	21 17	23 04	40 74		23 39 33	
2	210	54.8	02.7	183	44.1	02.3	5	56	20 08	20 59	22 19	4 59 72		22 36	
3	225	54.7	03.3	198	08.3	01.8	6	54	19 58	44	21 51	5 14 71		23 07 39	
4	240	54.7	03.9	212	32.5	01.1	7	52	49	31	30	28 70		22 55 40	
5	255	54.7	+19 04.4	226	56.8	+25 00.2	8	50	19 41	20 20	21 14	5 40 69		22 43 43	
6	270	54.7	+19 05.0	241	21.0	+24 59.1	9	45	19 23	19 58	20 42	6 05 67		22 20 46	
7	285	54.7	05.6	255	45.2	57.9	10	40	19 09	40	18	24 66		22 01 48	
8	300	54.7	06.2	270	09.4	56.6	11	35	18 57	25	20 00	41 64		21 45 51	
9	315	54.7	06.7	284	33.5	55.0	12	30	47	19 13	19 45	6 55 64		32 51	
10	330	54.7	07.3	298	57.7	53.3	13	20	29	18 53	21	7 19 62		21 08 55	
11	345	54.6	+19 07.9	313	21.9	+24 51.5	14	10 N	18 14	18 36	19 03	7 40 61		20 48 56	
12	0	54.6	+19 08.5	327	46.1	+24 49.4	15	0	18 00	18 22	18 47	8 00 59		20 28 59	
13	15	54.6	09.0	342	10.3	47.2	16	10 S	17 46	18 08	34	20 58		20 09 61	
14	30	54.6	09.6	356	34.5	44.9	17	20	31	17 54	21	8 41 56		19 49 63	
15	45	54.6	10.2	10	58.7	42.4	18	30	14	40	09	9 05 55		25 65	
16	60	54.6	10.8	25	22.9	39.7	19	35	17 04	31	18 02	19 54		19 11 67	
17	75	54.6	+19 11.3	39	47.1	+24 36.8	20	40	16 53	17 22	17 55	9 36 52		18 55 68	
18	90	54.5	+19 11.9	54	11.4	+24 33.8	21	45	16 40	17 12	17 48	9 56 50		18 35 71	
19	105	54.5	12.5	68	35.6	30.6	22	50	24	17 00	40	10 20 48		18 11 73	
20	120	54.5	13.0	82	59.9	27.3	23	52	17	16 55	36	32 47		17 59 75	
21	135	54.5	13.6	97	24.2	23.8	24	54	16 09	49	32	10 46 45		45 77	
22	150	54.5	14.2	111	48.5	20.2	25	56	15 59	42	28	11 02 43		30 79	
23	165	54.5	14.8	126	12.8	16.3	26	58	49	35	24	20 41		17 11 82	
24	180	54.4	+19 15.3	140	37.1	+24 12.4	27	60 S	15 37	16 27	17 19	11 44 36		16 48 87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 24 ^m 2		Mag: -3.9 PMG: 14 ^h 05 ^m		Mag: +0.9 PMG: 17 ^h 52 ^m		Mag: -2.2 PMG: 8 ^h 14 ^m		Mag: +0.9 PMG: 20 ^h 19 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	233	36.2	148 56.9	+24 45.8	91 35.7	+16 45.6	236 15.3	-2 20.3	54 26.1	+3 03.9
1	248	38.7	163 56.1	46.0	106 37.1	45.1	251 17.4	20.1	69 28.7	03.9
2	263	41.2	178 55.2	46.2	121 38.4	44.7	266 19.4	20.0	84 31.2	04.0
3	278	43.6	193 54.4	46.4	136 39.7	44.3	281 21.5	19.8	99 33.7	04.0
4	293	46.1	208 53.6	46.6	151 41.1	43.9	296 23.5	19.6	114 36.2	04.0
5	308	48.6	223 52.7	+24 46.8	166 42.4	+16 43.5	311 25.6	-2 19.5	129 38.8	+3 04.0
6	323	51.0	238 51.9	+24 47.0	181 43.7	+16 43.1	326 27.7	-2 19.3	144 41.3	+3 04.0
7	338	53.5	253 51.1	47.2	196 45.1	42.7	341 29.7	19.1	159 43.8	04.0
8	353	55.9	268 50.2	47.4	211 46.4	42.2	356 31.8	19.0	174 46.3	04.1
9	8	58.4	283 49.4	47.6	226 47.7	41.8	11 33.8	18.8	189 48.9	04.1
10	24	00.9	298 48.5	47.8	241 49.1	41.4	26 35.9	18.6	204 51.4	04.1
11	39	03.3	313 47.7	+24 47.9	256 50.4	+16 41.0	41 37.9	-2 18.5	219 53.9	+3 04.1
12	54	05.8	328 46.9	+24 48.1	271 51.7	+16 40.6	56 40.0	-2 18.3	234 56.4	+3 04.1
13	69	08.3	343 46.0	48.3	286 53.1	40.2	71 42.0	18.1	249 58.9	04.1
14	84	10.7	358 45.2	48.5	301 54.4	39.8	86 44.1	18.0	265 01.5	04.2
15	99	13.2	13 44.4	48.7	316 55.7	39.4	101 46.1	17.8	280 04.0	04.2
16	114	15.7	28 43.5	48.9	331 57.1	38.9	116 48.2	17.6	295 06.5	04.2
17	129	18.1	43 42.7	+24 49.0	346 58.4	+16 38.5	131 50.2	-2 17.4	310 09.0	+3 04.2
18	144	20.6	58 41.8	+24 49.2	1 59.7	+16 38.1	146 52.3	-2 17.3	325 11.6	+3 04.2
19	159	23.1	73 41.0	49.4	17 01.1	37.7	161 54.3	17.1	340 14.1	04.2
20	174	25.5	88 40.2	49.6	32 02.4	37.3	176 56.4	16.9	355 16.6	04.3
21	189	28.0	103 39.3	49.8	47 03.7	36.9	191 58.5	16.8	10 19.1	04.3
22	204	30.4	118 38.5	49.9	62 05.1	36.4	207 00.5	16.6	25 21.6	04.3
23	219	32.9	133 37.6	50.1	77 06.4	36.0	222 02.6	16.4	40 24.2	04.3
24	234	35.4	148 36.8	+24 50.3	92 07.7	+16 35.6	237 04.6	-2 16.3	55 26.7	+3 04.3
Dif	—	—	-8	+2	+13	-4	+21	+2	+25	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 3 ^d 0 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 9 20 ^h : 59 ^m 0 PMG: 15 ^h 13 ^m R ^o : 58 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	54.4	+19	15.3	140	37.1	+24	12.4	60 N	**	**	2	13	3	18	5	34		
1	195	54.4		15.9	155	01.5	54	08.2	42	58	0	48		35	32	5	54		
2	210	54.4		16.5	169	25.9	54	+24	03.9	43	56	1	33	2	53	44	6	11	
3	225	54.4		17.0	183	50.4	55	+23	59.5	44	54	2	01	3	08	3	54	25	82
4	240	54.4		17.6	198	14.8	54		54.9	46	52		22		21	4	03	38	79
5	255	54.4	+19	18.2	212	39.3	55	+23	50.1	48	50	2	39	3	32	4	12	6	49
6	270	54.3	+19	18.7	227	03.8	55	+23	45.2	49	45	3	11	3	55	4	29	7	12
7	285	54.3		19.3	241	28.4	56		40.1	51	40		34	4	12		43	30	71
8	300	54.3		19.8	255	53.0	56		34.8	53	35	3	53		27	4	55	45	69
9	315	54.3		20.4	270	17.6	56		29.5	53	30	4	08	4	39	5	06	7	59
10	330	54.3		21.0	284	42.3	57		23.9	56	20		32	5	00		23	8	21
11	345	54.2	+19	21.5	299	07.0	57	+23	18.2	57	10 N	4	50	5	16	5	39	8	41
12	0	54.2	+19	22.1	313	31.8	58	+23	12.3	59	0	5	05	5	31	5	53	8	59
13	15	54.2		22.7	327	56.6	58		06.3	60	10 S		19		45	6	07	9	18
14	30	54.2		23.2	342	21.4	58	+23	00.2	61	20	32	5	59		22	9	37	
15	45	54.2		23.8	356	46.3	59	+22	53.9	63	30	44	6	13		39	10	00	
16	60	54.1		24.3	11	11.3	60		47.4	65	35	51		22	6	49		13	
17	75	54.1	+19	24.9	25	36.3	60	+22	40.8	66	40	5	58	6	31	7	00	10	28
18	90	54.1	+19	25.4	40	01.3	60	+22	34.1	67	45	6	05	6	41	7	13	10	46
19	105	54.1		26.0	54	26.4	61		27.2	69	50	14		53		29	11	08	
20	120	54.1		26.6	68	51.5	61		20.1	71	52	17	6	59		37		19	
21	135	54.0		27.1	83	16.7	62		12.9	72	54	21	7	05		45		31	
22	150	54.0		27.7	97	42.0	63	+22	05.6	73	56	25		11	7	54	11	45	
23	165	54.0		28.2	112	07.3	63	+21	58.1	75	58	30		19	8	05	12	01	
24	180	54.0	+19	28.8	126	32.7	64	+21	50.5	76	60 S	6	35	7	27	8	17	12	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 20 ^m 3		Mag: -3.9 PMG: 14 ^h 06 ^m		Mag: +1.0 PMG: 17 ^h 50 ^m		Mag: -2.2 PMG: 8 ^h 11 ^m		Mag: +0.9 PMG: 20 ^h 15 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	234	35.4	148	36.8	+24	92	07.7	+16	237	04.6
1	249	37.8	163	36.0		107	09.1		252	06.7
2	264	40.3	178	35.1		122	10.4		267	08.7
3	279	42.8	193	34.3		137	11.7		282	10.8
4	294	45.2	208	33.5		152	13.1		297	12.8
5	309	47.7	223	32.6	+24	167	14.4	+16	312	14.9
6	324	50.2	238	31.8	+24	182	15.7	+16	327	17.0
7	339	52.6	253	30.9		197	17.0		342	19.0
8	354	55.1	268	30.1		212	18.4		357	21.1
9	9	57.6	283	29.3		227	19.7		12	23.1
10	25	00.0	298	28.4		242	21.0		27	25.2
11	40	02.5	313	27.6	+24	257	22.4	+16	42	27.2
12	55	04.9	328	26.7	+24	272	23.7	+16	57	29.3
13	70	07.4	343	25.9		287	25.0		72	31.4
14	85	09.9	358	25.1		302	26.3		87	33.4
15	100	12.3	13	24.2		317	27.7		102	35.5
16	115	14.8	28	23.4		332	29.0		117	37.5
17	130	17.3	43	22.5	+24	347	30.3	+16	132	39.6
18	145	19.7	58	21.7	+24	2	31.6	+16	147	41.6
19	160	22.2	73	20.9		17	33.0		162	43.7
20	175	24.7	88	20.0		32	34.3		177	45.8
21	190	27.1	103	19.2		47	35.6		192	47.8
22	205	29.6	118	18.3		62	37.0		207	49.9
23	220	32.1	133	17.5		77	38.3		222	51.9
24	235	34.5	148	16.7	+24	92	39.6	+16	237	54.0
Dif	—		-8		+2		+13		+21	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 4 ^d 0	PHE { 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/2										
	PMG: 11 ^h 56 ^m 4					SD: 16 ^h 1			PMG: 16 ^h 11 ^m		R°: 54 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	54.0	+19 28.8	126	32.7	+21 50.5	77	60 N	20 39	21 46	** **	7 07 98		0 28 17	
1	195	53.9	29.3	140	58.1	42.8	79	58	24	22	23 23	22 94		0 12 21	
2	210	53.9	29.9	155	23.6	34.9	77	56	12	21 03	22 27	35 90		** ** *	**
3	225	53.9	30.4	169	49.1	26.8	81	54	20 01	20 48	21 57	47 87		** ** *	**
4	240	53.9	31.0	184	14.7	18.7	81	52	19 52	35	35	7 57 84		** ** *	**
5	255	53.8	+19 31.5	198	40.4	+21 10.4	83	50	19 43	20 24	21 18	8 06 82		23 59 26	
6	270	53.8	+19 32.1	213	06.1	+21 01.9	85	45	19 26	20 00	20 45	8 25 77		23 43 31	
7	285	53.8	32.6	227	31.9	+20 53.4	87	40	19 11	19 42	21	41 73		30 35	
8	300	53.8	33.2	241	57.7	44.7	85	35	18 59	27	20 02	8 54 70		19 38	
9	315	53.7	33.7	256	23.6	35.8	89	30	48	19 15	19 46	9 05 67		23 09 41	
10	330	53.7	34.3	270	49.6	26.9	89	20	30	18 54	22	25 62		22 53 45	
11	345	53.7	+19 34.8	285	15.7	+20 17.8	91	10 N	18 14	18 37	19 03	9 42 58		22 38 50	
12	0	53.7	+19 35.4	299	41.8	+20 08.6	92	0	18 00	18 22	18 47	9 57 55		22 24 53	
13	15	53.6	35.9	314	07.9	+19 59.2	94	10 S	17 46	18 08	34	10 13 51		22 10 57	
14	30	53.6	36.5	328	34.2	49.7	95	20	30	17 54	21	30 47		21 55 61	
15	45	53.6	37.0	343	00.5	40.1	96	30	13	39	08	10 49 43		37 67	
16	60	53.6	37.6	357	26.8	30.4	97	35	17 03	30	18 01	11 00 40		27 70	
17	75	53.5	+19 38.1	11	53.3	+19 20.6	98	40	16 52	17 21	17 54	11 12 38		21 15 73	
18	90	53.5	+19 38.7	26	19.8	+19 10.6	100	45	16 38	17 10	17 46	11 27 34		21 01 77	
19	105	53.5	39.2	40	46.3	+19 00.6	100	50	22	16 58	38	46 29		20 44 83	
20	120	53.5	39.7	55	13.0	+18 50.4	102	52	14	52	34	11 54 27		36 85	
21	135	53.4	40.3	69	39.7	40.1	103	54	16 06	46	30	12 04 24		27 88	
22	150	53.4	40.8	84	06.5	29.6	105	56	15 56	39	26	15 21		17 91	
23	165	53.4	41.4	98	33.3	19.1	105	58	45	32	21	27 17		20 06 94	
24	180	53.3	+19 41.9	113	00.2	+18 08.5	106	60 S	15 33	16 23	17 16	12 41 13		19 52 99	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 16 ^m 3		Mag: -3.9 PMG: 14 ^h 08 ^m			Mag: +1.0 PMG: 17 ^h 48 ^m			Mag: -2.3 PMG: 8 ^h 07 ^m			Mag: +0.9 PMG: 20 ^h 11 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	235	34.5	148	16.7	+24 54.0	92	39.6	+16 25.6	237	54.0	-2 12.3	56	27.1	+3 04.7	
1	250	37.0	163	15.8	54.2	107	40.9	25.1	252	56.1	12.1	71	29.7	04.7	
2	265	39.4	178	15.0	54.3	122	42.3	24.7	267	58.1	11.9	86	32.2	04.7	
3	280	41.9	193	14.1	54.4	137	43.6	24.3	283	00.2	11.8	101	34.7	04.7	
4	295	44.4	208	13.3	54.6	152	44.9	23.9	298	02.2	11.6	116	37.2	04.7	
5	310	46.8	223	12.5	+24 54.7	167	46.2	+16 23.5	313	04.3	-2 11.4	131	39.7	+3 04.7	
6	325	49.3	238	11.6	+24 54.8	182	47.5	+16 23.0	328	06.4	-2 11.3	146	42.2	+3 04.7	
7	340	51.8	253	10.8	55.0	197	48.9	22.6	343	08.4	11.1	161	44.8	04.8	
8	355	54.2	268	09.9	55.1	212	50.2	22.2	358	10.5	10.9	176	47.3	04.8	
9	10	56.7	283	09.1	55.2	227	51.5	21.8	13	12.5	10.8	191	49.8	04.8	
10	25	59.2	298	08.3	55.4	242	52.8	21.3	28	14.6	10.6	206	52.3	04.8	
11	41	01.6	313	07.4	+24 55.5	257	54.2	+16 20.9	43	16.7	-2 10.5	221	54.8	+3 04.8	
12	56	04.1	328	06.6	+24 55.6	272	55.5	+16 20.5	58	18.7	-2 10.3	236	57.3	+3 04.8	
13	71	06.6	343	05.7	55.7	287	56.8	20.1	73	20.8	10.1	251	59.8	04.8	
14	86	09.0	358	04.9	55.9	302	58.1	19.7	88	22.8	10.0	267	02.4	04.9	
15	101	11.5	13	04.1	56.0	317	59.4	19.2	103	24.9	09.8	282	04.9	04.9	
16	116	13.9	28	03.2	56.1	333	00.8	18.8	118	27.0	09.6	297	07.4	04.9	
17	131	16.4	43	02.4	+24 56.2	348	02.1	+16 18.4	133	29.0	-2 09.5	312	09.9	+3 04.9	
18	146	18.9	58	01.5	+24 56.4	3	03.4	+16 18.0	148	31.1	-2 09.3	327	12.4	+3 04.9	
19	161	21.3	73	00.7	56.5	18	04.7	17.5	163	33.2	09.1	342	14.9	04.9	
20	176	23.8	87	59.9	56.6	33	06.0	17.1	178	35.2	09.0	357	17.4	04.9	
21	191	26.3	102	59.0	56.7	48	07.4	16.7	193	37.3	08.8	12	20.0	04.9	
22	206	28.7	117	58.2	56.8	63	08.7	16.3	208	39.3	08.6	27	22.5	05.0	
23	221	31.2	132	57.4	56.9	78	10.0	15.8	223	41.4	08.5	42	25.0	05.0	
24	236	33.7	147	56.5	+24 57.0	93	11.3	+16 15.4	238	43.5	-2 08.3	57	27.5	+3 05.0	
Dif	—		-8		+1	+13		-4	+21		+2	+25		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 5 ^d 0 SD: 16 ^h 1 PMG: 17 ^h 05 ^m	PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /3 20 ^h : 59 ^m /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	h	m					
0	180	53.3	+19	41.9	113	00.2	+18	08.5	60 N	**	**	2	07	3	14	8	45	98	0	45	11		
1	195	53.3		42.4	127	27.2	80	+17	57.7	58	0	29	30	28	8	56	94		33	15			
2	210	53.3		43.0	141	54.3	81		46.9	56	1	25	2	49	40	9	05	91		23	18		
3	225	53.3		43.5	156	21.4	81		35.9	54	1	55	3	04	3	51		14	87	14	24		
4	240	53.2		44.1	170	48.6	82		24.8	52	2	17	17	4	01	21	84		0	06	24		
5	255	53.2	+19	44.6	185	15.8	82	+17	13.6	50	2	35	3	29	4	09	9	28	82	**	**	**	
6	270	53.2	+19	45.1	199	43.1	83	+17	02.3	45	3	08	3	52	4	27	9	42	77	**	**	**	
7	285	53.1		45.7	214	10.5	84	+16	51.0	40	32	4	11	41	9	54	72		**	**	**		
8	300	53.1		46.2	228	38.0	85		39.5	35	3	51	25	4	54	10	04	69		23	57	34	
9	315	53.1		46.7	243	05.5	85		27.9	30	4	06	38	5	04	12	66		50	37			
10	330	53.1		47.3	257	33.1	86		16.2	20	31	4	59	23	27	61		38	42				
11	345	53.0	+19	47.8	272	00.8	87	+16	04.4	10 N	4	50	5	16	5	38	10	40	57		23	28	46
12	0	53.0	+19	48.3	286	28.5	87	+15	52.6	0	5	05	5	31	5	53	10	52	53		23	17	52
13	15	53.0		48.9	300	56.3	88		40.6	10 S	19	45	6	07	11	04	49		23	07	56		
14	30	52.9		49.4	315	24.1	88		28.5	20	32	5	59	23	17	44		22	56	61			
15	45	52.9		49.9	329	52.1	90		16.4	30	45	6	15	40	32	39		44	65				
16	60	52.9		50.5	344	20.0	89	+15	04.2	35	52	23	6	50	40	36		37	68				
17	75	52.8	+19	51.0	358	48.1	91	+14	51.8	40	5	59	6	32	7	02	11	50	32		22	28	72
18	90	52.8	+19	51.5	13	16.2	91	+14	39.4	45	6	07	6	43	7	15	12	01	29		22	18	77
19	105	52.8		52.1	27	44.4	92		26.9	50	16	6	56	32	15	23		07	81				
20	120	52.7		52.6	42	12.6	92		14.4	52	20	7	01	40	21	21		22	01	84			
21	135	52.7		53.1	56	41.0	94	+14	01.7	54	24	08	48		28	19		21	55	87			
22	150	52.7		53.6	71	09.3	93	+13	49.0	56	28	15	7	58	36	15		48	90				
23	165	52.6		54.2	85	37.8	95		36.2	58	33	22	8	09	44	13		40	94				
24	180	52.6	+19	54.7	100	06.2	94	+13	23.3	60 S	6	38	7	31	8	22	12	54	9		21	31	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG: 8 ^h 12 ^m 4		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: +1.0 PMG: 17 ^h 46 ^m		Mag: -2.3 PMG: 8 ^h 04 ^m		Mag: +0.9 PMG: 20 ^h 07 ^m											
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'										
0	236	33.7	147	56.5	+24	57.0	93	11.3	+16	15.4	238	43.5	-2	08.3	57	27.5	+3	05.0		
1	251	36.1	162	55.7		57.2	108	12.6		15.0	253	45.5		08.2	72	30.0		05.0		
2	266	38.6	177	54.8		57.3	123	14.0		14.6	268	47.6		08.0	87	32.5		05.0		
3	281	41.1	192	54.0		57.4	138	15.3		14.1	283	49.7		07.8	102	35.0		05.0		
4	296	43.5	207	53.2		57.5	153	16.6		13.7	298	51.7		07.7	117	37.5		05.0		
5	311	46.0	222	52.3	+24	57.6	168	17.9	+16	13.3	313	53.8	-2	07.5	132	40.1	+3	05.0		
6	326	48.4	237	51.5	+24	57.7	183	19.2	+16	12.9	328	55.9	-2	07.3	147	42.6	+3	05.0		
7	341	50.9	252	50.6		57.8	198	20.6		12.4	343	57.9		07.2	162	45.1		05.1		
8	356	53.4	267	49.8		57.9	213	21.9		12.0	359	00.0		07.0	177	47.6		05.1		
9	11	55.8	282	49.0		58.0	228	23.2		11.6	14	02.1		06.8	192	50.1		05.1		
10	26	58.3	297	48.1		58.1	243	24.5		11.2	29	04.1		06.7	207	52.6		05.1		
11	42	00.8	312	47.3	+24	58.2	258	25.8	+16	10.7	44	06.2	-2	06.5	222	55.1	+3	05.1		
12	57	03.2	327	46.4	+24	58.3	273	27.1	+16	10.3	59	08.2	-2	06.4	237	57.6	+3	05.1		
13	72	05.7	342	45.6		58.4	288	28.5		09.9	74	10.3		06.2	253	00.2		05.1		
14	87	08.2	357	44.8		58.5	303	29.8		09.4	89	12.4		06.0	268	02.7		05.1		
15	102	10.6	12	43.9		58.6	318	31.1		09.0	104	14.4		05.9	283	05.2		05.1		
16	117	13.1	27	43.1		58.7	333	32.4		08.6	119	16.5		05.7	298	07.7		05.2		
17	132	15.5	42	42.2	+24	58.8	348	33.7	+16	08.2	134	18.6	-2	05.5	313	10.2	+3	05.2		
18	147	18.0	57	41.4	+24	58.8	3	35.0	+16	07.7	149	20.6	-2	05.4	328	12.7	+3	05.2		
19	162	20.5	72	40.6		58.9	18	36.3		07.3	164	22.7		05.2	343	15.2		05.2		
20	177	22.9	87	39.7		59.0	33	37.7		06.9	179	24.8		05.1	358	17.7		05.2		
21	192	25.4	102	38.9		59.1	48	39.0		06.5	194	26.8		04.9	13	20.2		05.2		
22	207	27.9	117	38.0		59.2	63	40.3		06.0	209	28.9		04.7	28	22.7		05.2		
23	222	30.3	132	37.2		59.3	78	41.6		05.6	224	31.0		04.6	43	25.3		05.2		
24	237	32.8	147	36.4	+24	59.4	93	42.9	+16	05.2	239	33.0	-2	04.4	58	27.8	+3	05.2		
Dif	—		-8		+1		+13		-4		+21		+2		+25					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 6 ^d 0	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 R°: 49 ^m										
	PMG: 11 ^h 56 ^m 5					SD: 16 ^h 1			SD: 17 ^h 57 ^m	Civil	Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	52.6	+19 54.7	100	06.2	+13 23.3		60 N	20 43	21 52	** **	10 23 96	0 56 8		
1	195	52.6	55.2	114	34.8	+13 10.3	130	58	28	27	** **	30 92	48 12		
2	210	52.5	55.8	129	03.4	+12 57.3	130	56	16	21 08	22 36	36 88	41 15		
3	225	52.5	56.3	143	32.1	97	44.1	54	20 04	20 52	22 03	41 86	35 1		
4	240	52.5	56.8	158	00.8	97	31.0	52	19 55	38	21 40	45 84	30 19		
5	255	52.4	+19 57.3	172	29.6	+12 17.7	133	50	19 46	20 27	21 22	10 50 81	0 25 22		
6	270	52.4	+19 57.8	186	58.5	+12 04.4	133	45	19 28	20 03	20 48	10 59 75	0 14 27		
7	285	52.4	58.4	201	27.4	+11 51.0	134	40	13	19 44	23	11 06 72	0 05 31		
8	300	52.3	58.9	215	56.3	99	37.5	35	19 00	29	20 04	13 68	** ** *		
9	315	52.3	59.4	230	25.3	100	24.0	30	18 49	19 16	19 48	18 65	** ** *		
10	330	52.3	+19 59.9	244	54.4	+11 10.4	136	20	31	18 55	23	28 59	** ** *		
11	345	52.2	+20 00.5	259	23.5	+10 56.8	136	10 N	18 15	18 37	19 04	11 37 54	** ** *		
12	0	52.2	+20 01.0	273	52.7	+10 43.1	137	0	18 00	18 22	18 48	11 45 50	** ** *		
13	15	52.1	01.5	288	21.9	102	29.3	10 S	17 45	18 08	33	11 53 45	** ** *		
14	30	52.1	02.0	302	51.2	103	15.5	20	30	17 53	20	12 01 41	23 57 58		
15	45	52.1	02.5	317	20.5	103	+10 01.6	30	12	38	07	11 35	49 65		
16	60	52.0	03.0	331	49.9	104	+9 47.7	35	17 02	29	18 00	16 33	45 68		
17	75	52.0	+20 03.6	346	19.3	+9 33.7	140	40	16 50	17 19	17 53	12 22 30	23 40 71		
18	90	52.0	+20 04.1	0	48.7	+9 19.7	140	45	16 36	17 09	17 45	12 30 25	23 35 75		
19	105	51.9	04.6	15	18.3	+9 05.6	141	50	19	16 56	36	38 21	28 81		
20	120	51.9	05.1	29	47.8	+8 51.5	141	52	12	50	32	42 18	25 83		
21	135	51.8	05.6	44	17.4	106	37.3	54	16 03	44	28	47 15	22 85		
22	150	51.8	06.1	58	47.1	107	23.0	56	15 53	36	23	51 13	18 88		
23	165	51.8	06.6	73	16.7	+8 08.8	142	58	42	29	18	12 57 10	14 91		
24	180	51.7	+20 07.2	87	46.5	+7 54.5	143	60 S	15 29	16 20	17 13	13 03 6	23 09 95		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 08 ^m 5		Mag: -3.9 PMG: 14 ^h 10 ^m		Mag: +1.0 PMG: 17 ^h 44 ^m		Mag: -2.3 PMG: 8 ^h 01 ^m		Mag: +0.9 PMG: 20 ^h 03 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	237	32.8	147	36.4	+24 59.4	93 42.9	+16 05.2	239 33.0	-2 04.4	58 27.8	+3 05.2
1	252	35.3	162	35.5	59.4	108 44.2	04.7	254 35.1	04.2	73 30.3	05.3
2	267	37.7	177	34.7	59.5	123 45.5	04.3	269 37.2	04.1	88 32.8	05.3
3	282	40.2	192	33.8	59.6	138 46.8	03.9	284 39.3	03.9	103 35.3	05.3
4	297	42.7	207	33.0	59.7	153 48.2	03.4	299 41.3	03.8	118 37.8	05.3
5	312	45.1	222	32.2	+24 59.8	168 49.5	+16 03.0	314 43.4	-2 03.6	133 40.3	+3 05.3
6	327	47.6	237	31.3	+24 59.8	183 50.8	+16 02.6	329 45.5	-2 03.4	148 42.8	+3 05.3
7	342	50.0	252	30.5	+24 59.9	198 52.1	02.2	344 47.5	03.3	163 45.3	05.3
8	357	52.5	267	29.7	+25 00.0	213 53.4	01.7	359 49.6	03.1	178 47.8	05.3
9	12	55.0	282	28.8	+25 00.0	228 54.7	01.3	14 51.7	02.9	193 50.3	05.3
10	27	57.4	297	28.0	+25 00.1	243 56.0	00.9	29 53.7	02.8	208 52.9	05.3
11	42	59.9	312	27.1	+25 00.2	258 57.3	+16 00.4	44 55.8	-2 02.6	223 55.4	+3 05.4
12	58	02.4	327	26.3	+25 00.3	273 58.7	+16 00.0	59 57.9	-2 02.5	238 57.9	+3 05.4
13	73	04.8	342	25.5	00.3	289 00.0	+15 59.6	74 59.9	02.3	254 00.4	05.4
14	88	07.3	357	24.6	00.4	304 01.3	59.1	90 02.0	02.1	269 02.9	05.4
15	103	09.8	12	23.8	00.4	319 02.6	58.7	105 04.1	02.0	284 05.4	05.4
16	118	12.2	27	22.9	00.5	334 03.9	58.3	120 06.2	01.8	299 07.9	05.4
17	133	14.7	42	22.1	+25 00.6	349 05.2	+15 57.8	135 08.2	-2 01.7	314 10.4	+3 05.4
18	148	17.2	57	21.3	+25 00.6	4 06.5	+15 57.4	150 10.3	-2 01.5	329 12.9	+3 05.4
19	163	19.6	72	20.4	00.7	19 07.8	57.0	165 12.4	01.3	344 15.4	05.4
20	178	22.1	87	19.6	00.7	34 09.1	56.5	180 14.4	01.2	359 17.9	05.4
21	193	24.5	102	18.8	00.8	49 10.4	56.1	195 16.5	01.0	14 20.4	05.4
22	208	27.0	117	17.9	00.9	64 11.7	55.7	210 18.6	00.9	29 22.9	05.5
23	223	29.5	132	17.1	00.9	79 13.1	55.2	225 20.7	00.7	44 25.4	05.5
24	238	31.9	147	16.2	+25 01.0	94 14.4	+15 54.8	240 22.7	-2 00.5	59 27.9	+3 05.5
Dif	—		-8	+1		+13	-4	+21	+2		+25

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: 7 ^d 0 PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 3 20 ^h : 59 ^m 2 PMG: 18 ^h 46 ^m R ^o : 49 ^m														
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	51.7	+20	07.2	87	46.5	+7 54.5	60 N	** **	2 00	3 09	11 59	95	1 04	6			
1	195	51.7		07.7	102	16.2 ¹⁰⁷	40.1 ¹⁴⁴	58	** **	25	24	12 02	91	1 00	9			
2	210	51.6		08.2	116	46.0 ¹⁰⁸	25.7 ¹⁴⁴	56	1 17	2 45	37	04 88		0 56	12			
3	225	51.6		08.7	131	15.9 ¹⁰⁹	+7 11.3 ¹⁴⁴	54	1 49	3 01	48	07 85		52	16			
4	240	51.6		09.2	145	45.8 ¹⁰⁹	+6 56.8 ¹⁴⁵	52	2 13	14	3 58	09 82		49	18			
5	255	51.5	+20	09.7	160	15.7 ¹⁰⁹	+6 42.3 ¹⁴⁵	50	2 31	3 26	4 07	12 11	80	0 47	19			
6	270	51.5	+20	10.2	174	45.6 ¹⁰⁹	+6 27.8 ¹⁴⁵	45	3 05	3 50	4 25	12 14	75	0 41	24			
7	285	51.4		10.7	189	15.6 ¹¹⁰	+6 13.2 ¹⁴⁶	40	30	4 09	40	18 70		36	28			
8	300	51.4		11.2	203	45.7 ¹¹¹	+5 58.6 ¹⁴⁶	35	3 49	24	4 52	21 67		31	32			
9	315	51.4		11.7	218	15.7 ¹¹⁰	44.0 ¹⁴⁶	30	4 05	37	5 03	23 64		27	35			
10	330	51.3		12.2	232	45.8 ¹¹¹	29.3 ¹⁴⁷	20	30	4 58	22	27 59		20	41			
11	345	51.3	+20	12.7	247	15.9 ¹¹¹	+5 14.6 ¹⁴⁷	10 N	4 49	5 16	5 38	12 31	54	0 14	45			
12	0	51.2	+20	13.3	261	46.1 ¹¹²	+4 59.9 ¹⁴⁷	0	5 05	5 31	5 53	12 35	49	0 09	49			
13	15	51.2		13.8	276	16.2 ¹¹¹	45.1 ¹⁴⁸	10 S	20	5 45	6 08	38 45		0 03	54			
14	30	51.2		14.3	290	46.4 ¹¹²	30.4 ¹⁴⁷	20	33	6 00	23	42 40		** ** *	**			
15	45	51.1		14.8	305	16.6 ¹¹²	15.6 ¹⁴⁸	30	47	16	41	46 35		** ** *	**			
16	60	51.1		15.3	319	46.9 ¹¹³	+4 00.8 ¹⁴⁸	35	5 54	24	6 52	49 31		** ** *	**			
17	75	51.0	+20	15.8	334	17.2 ¹¹³	+3 46.0 ¹⁴⁸	40	6 01	6 34	7 04	12 52	27	** ** *	**			
18	90	51.0	+20	16.3	348	47.5 ¹¹³	+3 31.1 ¹⁴⁹	45	6 09	6 45	7 17	12 55	24	** ** *	**			
19	105	50.9		16.8	3	17.8 ¹¹³	16.3 ¹⁴⁸	50	18	6 58	34	12 59	19	** ** *	**			
20	120	50.9		17.3	17	48.1 ¹¹³	+3 01.4 ¹⁴⁹	52	22	7 04	42	13 00	17	** ** *	**			
21	135	50.9		17.8	32	18.5 ¹¹⁴	+2 46.5 ¹⁴⁹	54	26	10	7 51	02 15		** ** *	**			
22	150	50.8		18.3	46	48.8 ¹¹³	31.6 ¹⁴⁹	56	31	17	8 01	04 12		** ** *	**			
23	165	50.8		18.8	61	19.2 ¹¹⁴	16.7 ¹⁴⁹	58	36	25	13	07 9		** ** *	**			
24	180	50.7	+20	19.3	75	49.6 ¹¹⁴	+2 01.8 ¹⁴⁹	60 S	6 41	7 34	8 26	13 09	6	** ** *	**			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 04 ^m 5		Mag: -3.9 PMG: 14 ^h 12 ^m			Mag: +1.0 PMG: 17 ^h 42 ^m			Mag: -2.3 PMG: 7 ^h 57 ^m			Mag: +0.9 PMG: 19 ^h 59 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	238	31.9	147	16.2	+25	01.0	94	14.4	+15	54.8	240	22.7	-2	00.5	59	27.9	+3	05.5
1	253	34.4	162	15.4		01.0	109	15.7		54.4	255	24.8		00.4	74	30.4		05.5
2	268	36.9	177	14.6		01.1	124	17.0		53.9	270	26.9		00.2	89	33.0		05.5
3	283	39.3	192	13.7		01.1	139	18.3		53.5	285	28.9	-2	00.1	104	35.5		05.5
4	298	41.8	207	12.9		01.2	154	19.6		53.1	300	31.0	-1	59.9	119	38.0		05.5
5	313	44.3	222	12.1	+25	01.2	169	20.9	+15	52.6	315	33.1	-1	59.7	134	40.5	+3	05.5
6	328	46.7	237	11.2	+25	01.3	184	22.2	+15	52.2	330	35.2	-1	59.6	149	43.0	+3	05.5
7	343	49.2	252	10.4		01.3	199	23.5		51.8	345	37.2		59.4	164	45.5		05.5
8	358	51.6	267	09.5		01.3	214	24.8		51.3	0	39.3		59.3	179	48.0		05.5
9	13	54.1	282	08.7		01.4	229	26.1		50.9	15	41.4		59.1	194	50.5		05.5
10	28	56.6	297	07.9		01.4	244	27.4		50.5	30	43.5		58.9	209	53.0		05.6
11	43	59.0	312	07.0	+25	01.5	259	28.7	+15	50.0	45	45.5	-1	58.8	224	55.5	+3	05.6
12	59	01.5	327	06.2	+25	01.5	274	30.0	+15	49.6	60	47.6	-1	58.6	239	58.0	+3	05.6
13	74	04.0	342	05.4		01.5	289	31.3		49.2	75	49.7		58.5	255	00.5		05.6
14	89	06.4	357	04.5		01.6	304	32.6		48.7	90	51.7		58.3	270	03.0		05.6
15	104	08.9	12	03.7		01.6	319	33.9		48.3	105	53.8		58.1	285	05.5		05.6
16	119	11.4	27	02.8		01.6	334	35.2		47.9	120	55.9		58.0	300	08.0		05.6
17	134	13.8	42	02.0	+25	01.7	349	36.6	+15	47.4	135	58.0	-1	57.8	315	10.5	+3	05.6
18	149	16.3	57	01.2	+25	01.7	4	37.9	+15	47.0	151	00.0	-1	57.7	330	13.0	+3	05.6
19	164	18.8	72	00.3		01.7	19	39.2		46.5	166	02.1		57.5	345	15.5		05.6
20	179	21.2	86	59.5		01.8	34	40.5		46.1	181	04.2		57.4	0	18.0		05.6
21	194	23.7	101	58.7		01.8	49	41.8		45.7	196	06.3		57.2	15	20.5		05.6
22	209	26.1	116	57.8		01.8	64	43.1		45.2	211	08.3		57.0	30	23.0		05.6
23	224	28.6	131	57.0		01.8	79	44.4		44.8	226	10.4		56.9	45	25.5		05.7
24	239	31.1	146	56.2	+25	01.9	94	45.7	+15	44.4	241	12.5	-1	56.7	60	28.0	+3	05.7
Dif	—		-8			0	+13		-4		+21		+2		+25			

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 7			Edad: 8 ^d 0 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 1 20 ^h : 59 ^m 1 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	180	50.7	+20	19.3	75	49.6	+2	01.8	60 N	20 48	21 59	** **	13 34 94	1 10 6	
1	195	50.7		19.8	90	20.1 ¹¹⁵	+1	46.8 ¹⁵⁰	58	32	33	** **	33 91	09 9	
2	210	50.6		20.3	104	50.5 ¹¹⁴		31.9 ¹⁴⁹	56	19	21 12	22 45	32 88	08 12	
3	225	50.6		20.8	119	20.9 ¹¹⁴		17.0 ¹⁴⁹	54	20 08	20 56	22 09	32 84	08 14	
4	240	50.5		21.2	133	51.4 ¹¹⁵	+1	02.0 ¹⁵⁰	52	19 58	42	21 45	31 82	07 17	
5	255	50.5	+20	21.7	148	21.9 ¹¹⁵	+0	47.1 ¹⁴⁹	50	19 49	20 30	21 26	13 31 79	1 06 19	
6	270	50.5	+20	22.2	162	52.3 ¹¹⁴	+0	32.1 ¹⁵⁰	45	19 30	20 05	20 50	13 29 75	1 05 24	
7	285	50.4		22.7	177	22.8 ¹¹⁵		17.2 ¹⁴⁹	40	15	19 46	25	28 71	04 28	
8	300	50.4		23.2	191	53.3 ¹¹⁵	+0	02.2 ¹⁵⁰	35	19 02	30	20 05	28 66	03 31	
9	315	50.3		23.7	206	23.8 ¹¹⁵	-0	12.7 ¹⁴⁹	30	18 51	19 17	19 49	27 64	02 34	
10	330	50.3		24.2	220	54.3 ¹¹⁵		27.7 ¹⁵⁰	20	32	18 56	24	26 58	1 01 39	
11	345	50.2	+20	24.7	235	24.8 ¹¹⁵	-0	42.6 ¹⁴⁹	10 N	18 15	18 38	19 04	13 25 53	0 59 45	
12	0	50.2	+20	25.2	249	55.3 ¹¹⁵	-0	57.6 ¹⁵⁰	0	18 00	18 22	18 48	13 24 49	0 58 49	
13	15	50.1		25.7	264	25.9 ¹¹⁶	-1	12.5 ¹⁴⁹	10 S	17 45	18 08	33	23 44	57 53	
14	30	50.1		26.2	278	56.4 ¹¹⁵		27.4 ¹⁴⁹	20	29	17 53	20	22 40	55 58	
15	45	50.0		26.7	293	26.9 ¹¹⁵		42.3 ¹⁴⁹	30	11	37	18 06	21 34	54 63	
16	60	50.0		27.1	307	57.4 ¹¹⁵	-1	57.2 ¹⁴⁹	35	17 01	28	17 59	20 32	53 67	
17	75	49.9	+20	27.6	322	27.9 ¹¹⁵	-2	12.1 ¹⁴⁹	40	16 49	17 18	17 51	13 19 28	0 51 71	
18	90	49.9	+20	28.1	336	58.4 ¹¹⁵	-2	26.9 ¹⁴⁸	45	16 34	17 07	17 43	13 19 24	0 50 75	
19	105	49.8		28.6	351	28.9 ¹¹⁵		41.8 ¹⁴⁹	50	17	16 54	34	18 19	49 80	
20	120	49.8		29.1	5	59.4 ¹¹⁵	-2	56.6 ¹⁴⁸	52	09	48	30	17 17	48 82	
21	135	49.7		29.6	20	29.9 ¹¹⁵	-3	11.4 ¹⁴⁸	54	16 00	41	25	17 15	47 85	
22	150	49.7		30.1	35	00.4 ¹¹⁵		26.2 ¹⁴⁸	56	15 50	34	21	16 13	46 88	
23	165	49.6		30.5	49	30.8 ¹¹⁴		41.0 ¹⁴⁸	58	38	26	16	16 9	45 91	
24	180	49.6	+20	31.0	64	01.3 ¹¹⁵	-3	55.7 ¹⁴⁷	60 S	15 25	16 17	17 10	13 15 6	0 44 95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 00 ^m 6		Mag: -3.9 PMG: 14 ^h 13 ^m		Mag: +1.0 PMG: 17 ^h 39 ^m		Mag: -2.3 PMG: 7 ^h 54 ^m		Mag: +1.0 PMG: 19 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	239	31.1	146	56.2	+25	01.9	94	45.7	+15	44.4
1	254	33.5	161	55.3		01.9	109	47.0		43.9
2	269	36.0	176	54.5		01.9	124	48.3		43.5
3	284	38.5	191	53.7		01.9	139	49.6		43.1
4	299	40.9	206	52.8		01.9	154	50.9		42.6
5	314	43.4	221	52.0	+25	02.0	169	52.2	+15	42.2
6	329	45.9	236	51.1	+25	02.0	184	53.5	+15	41.7
7	344	48.3	251	50.3		02.0	199	54.8		41.3
8	359	50.8	266	49.5		02.0	214	56.1		40.9
9	14	53.3	281	48.6		02.0	229	57.4		40.4
10	29	55.7	296	47.8		02.0	244	58.7		40.0
11	44	58.2	311	47.0	+25	02.0	260	00.0	+15	39.5
12	60	00.6	326	46.1	+25	02.0	275	01.3	+15	39.1
13	75	03.1	341	45.3		02.0	290	02.6		38.7
14	90	05.6	356	44.5		02.0	305	03.9		38.2
15	105	08.0	11	43.6		02.1	320	05.2		37.8
16	120	10.5	26	42.8		02.1	335	06.5		37.3
17	135	13.0	41	42.0	+25	02.1	350	07.8	+15	36.9
18	150	15.4	56	41.1	+25	02.1	5	09.1	+15	36.5
19	165	17.9	71	40.3		02.1	20	10.4		36.0
20	180	20.4	86	39.5		02.1	35	11.7		35.6
21	195	22.8	101	38.6		02.1	50	13.0		35.1
22	210	25.3	116	37.8		02.0	65	14.3		34.7
23	225	27.7	131	37.0		02.0	80	15.6		34.3
24	240	30.2	146	36.1	+25	02.0	95	16.9	+15	33.8
Dif	—		-8		0		+13		-4	
								+21		+2
										+25

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8				Edad: 9 ^d 0	PHE	SD: 16 ^h 1	PMG: 20 ^h 24 ^m		R°: 51 ^m											
	PMG: 11 ^h 56 ^m 7																				
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	m	h	m	m	h	m	m
0	180	49.6	+20	31.0	64	01.3	-3	55.7	60 N	** **	1	54	3	05		15	08	96	1	16	6
1	195	49.5		31.5	78	31.7 ¹¹⁴	-4	10.4 ¹⁴⁷	58	** **	2	20		21			04	91		18	10
2	210	49.5		32.0	93	02.2 ¹¹⁵		25.1 ¹⁴⁷	56	1	08	41	34		15	00	88		20	13	
3	225	49.4		32.5	107	32.6 ¹¹⁴		39.8 ¹⁴⁷	54	1	44	2	57	45	14	56	86		22	15	
4	240	49.4		32.9	122	03.0 ¹¹⁴	-4	54.5 ¹⁴⁷	52	2	08	3	11	3	55		53	83		24	18
5	255	49.3	+20	33.4	136	33.4 ¹¹⁴	-5	09.1 ¹⁴⁶	50	2	27	3	23	4	04	14	50	80	1	25	20
6	270	49.3	+20	33.9	151	03.8 ¹¹⁴	-5	23.6 ¹⁴⁵	45	3	03	3	48	4	23	14	44	75	1	29	25
7	285	49.2		34.4	165	34.1 ¹¹³		38.2 ¹⁴⁶	40	28	4	07	38			39	71		32	28	
8	300	49.2		34.9	180	04.5 ¹¹⁴	-5	52.7 ¹⁴⁵	35	3	48	23	4	51	34	68		34	32		
9	315	49.1		35.3	194	34.8 ¹¹³	-6	07.2 ¹⁴⁵	30	4	04	36	5	02	31	64		36	36		
10	330	49.1		35.8	209	05.1 ¹¹³		21.6 ¹⁴⁴	20	29	4	58	21		24	59		40	41		
11	345	49.0	+20	36.3	223	35.4 ¹¹³	-6	36.0 ¹⁴⁴	10 N	4	49	5	15	5	38	14	18	54	1	44	45
12	0	49.0	+20	36.8	238	05.6 ¹¹²	-6	50.4 ¹⁴⁴	0	5	05	5	31	5	53	14	13	50	1	47	49
13	15	48.9		37.2	252	35.9 ¹¹³	-7	04.7 ¹⁴³	10 S	20	5	46	6	08		07	46		50	54	
14	30	48.9		37.7	267	06.1 ¹¹²		19.0 ¹⁴³	20	34	6	01	24		14	02	41		53	59	
15	45	48.8		38.2	281	36.3 ¹¹²		33.3 ¹⁴³	30	48	17		43		13	55	36	1	57	64	
16	60	48.8		38.7	296	06.4 ¹¹¹	-7	47.5 ¹⁴²	35	5	55	26	6	53		52	33	2	00	67	
17	75	48.7	+20	39.1	310	36.6 ¹¹²	-8	01.6 ¹⁴¹	40	6	02	6	36	7	05	13	47	30	2	02	71
18	90	48.7	+20	39.6	325	06.7 ¹¹¹	-8	15.7 ¹⁴¹	45	6	11	6	47	7	20	13	43	25	2	05	75
19	105	48.6		40.1	339	36.8 ¹¹¹		29.8 ¹⁴¹	50	20	7	00	37			37	21		09	79	
20	120	48.6		40.5	354	06.8 ¹¹⁰		43.8 ¹⁴⁰	52	24		06	45			34	19		10	82	
21	135	48.5		41.0	8	36.8 ¹¹⁰	-8	57.8 ¹⁴⁰	54	29	13		7	54		32	16		12	85	
22	150	48.4		41.5	23	06.8 ¹¹⁰	-9	11.7 ¹³⁹	56	33	20		8	04	29	13		14	88		
23	165	48.4		42.0	37	36.8 ¹¹⁰		25.5 ¹³⁸	58	39	29		16		25	11		16	91		
24	180	48.3	+20	42.4	52	06.7 ¹⁰⁹	-9	39.4 ¹³⁹	60 S	6	44	7	38	8	30	13	21	8	2	19	94

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 7 ^h 56 ^m 7		Mag: -3.9 PMG: 14 ^h 14 ^m			Mag: +1.0 PMG: 17 ^h 37 ^m			Mag: -2.3 PMG: 7 ^h 51 ^m			Mag: +1.0 PMG: 19 ^h 51 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	240	30.2	146	36.1	+25	02.0	95	16.9	+15	33.8	242	02.4	-1	52.9	61	28.0	+3	05.8		
1	255	32.7	161	35.3		02.0	110	18.2		33.4	257	04.5		52.8	76	30.5		05.8		
2	270	35.1	176	34.5		02.0	125	19.5		32.9	272	06.5		52.6	91	33.0		05.8		
3	285	37.6	191	33.6		02.0	140	20.8		32.5	287	08.6		52.5	106	35.5		05.8		
4	300	40.1	206	32.8		02.0	155	22.0		32.0	302	10.7		52.3	121	38.0		05.8		
5	315	42.5	221	32.0	+25	02.0	170	23.3	+15	31.6	317	12.8	-1	52.2	136	40.5	+3	05.8		
6	330	45.0	236	31.1	+25	02.0	185	24.6	+15	31.2	332	14.9	-1	52.0	151	43.0	+3	05.8		
7	345	47.5	251	30.3		02.0	200	25.9		30.7	347	16.9		51.9	166	45.5		05.8		
8	0	49.9	266	29.5		01.9	215	27.2		30.3	2	19.0		51.7	181	48.0		05.8		
9	15	52.4	281	28.6		01.9	230	28.5		29.8	17	21.1		51.5	196	50.5		05.9		
10	30	54.9	296	27.8		01.9	245	29.8		29.4	32	23.2		51.4	211	53.0		05.9		
11	45	57.3	311	27.0	+25	01.9	260	31.1	+15	28.9	47	25.3	-1	51.2	226	55.5	+3	05.9		
12	60	59.8	326	26.2	+25	01.9	275	32.4	+15	28.5	62	27.4	-1	51.1	241	58.0	+3	05.9		
13	76	02.2	341	25.3		01.8	290	33.7		28.1	77	29.4		50.9	257	00.5		05.9		
14	91	04.7	356	24.5		01.8	305	35.0		27.6	92	31.5		50.8	272	03.0		05.9		
15	106	07.2	11	23.7		01.8	320	36.3		27.2	107	33.6		50.6	287	05.5		05.9		
16	121	09.6	26	22.8		01.8	335	37.6		26.7	122	35.7		50.5	302	08.0		05.9		
17	136	12.1	41	22.0	+25	01.7	350	38.9	+15	26.3	137	37.8	-1	50.3	317	10.5	+3	05.9		
18	151	14.6	56	21.2	+25	01.7	5	40.2	+15	25.8	152	39.9	-1	50.1	332	13.0	+3	05.9		
19	166	17.0	71	20.3		01.7	20	41.5		25.4	167	41.9		50.0	347	15.4		05.9		
20	181	19.5	86	19.5		01.6	35	42.8		24.9	182	44.0		49.8	2	17.9		05.9		
21	196	22.0	101	18.7		01.6	50	44.1		24.5	197	46.1		49.7	17	20.4		05.9		
22	211	24.4	116	17.8		01.6	65	45.3		24.1	212	48.2		49.5	32	22.9		05.9		
23	226	26.9	131	17.0		01.5	80	46.6		23.6	227	50.3		49.4	47	25.4		05.9		
24	241	29.3	146	16.2	+25	01.5	95	47.9	+15	23.2	242	52.4	-1	49.2	62	27.9	+3	05.9		
Dif	—		-8			0	+13			-4	+21			+2	+25			0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8			Edad: 10 ^d 0	PHE {	4 ^h : 58'7 12 ^h : 58'6 20 ^h : 58'5								
	PMG: 11 ^h 56 ^m 8													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	48.3	+20 42.4	52	06.7	-9 39.4		60 N	20 52	22 06	** **	16 44 96	1 22 8	
1	195	48.3		66	36.6 ¹⁰⁹	-9 53.1 ¹³⁷		58	36	21 38	** **	35 92	28 12	
2	210	48.2	43.4	81	06.5 ¹⁰⁹	-10 06.8 ¹³⁷		56	22	21 17	22 55	28 88	33 15	
3	225	48.2	43.8	95	36.3 ¹⁰⁸	20.4 ¹³⁶		54	11	20 59	22 15	22 84	37 18	
4	240	48.1	44.3	110	06.1 ¹⁰⁸	34.0 ¹³⁶		52	20 00	45	21 50	16 82	42 20	
5	255	48.1	+20 44.8	124	35.8 ¹⁰⁷	-10 47.5 ¹³⁵		50	19 51	20 33	21 30	16 10 80	1 45 23	
6	270	48.0	+20 45.2	139	05.5 ¹⁰⁷	-11 00.9 ¹³⁴		45	19 32	20 07	20 53	15 59 75	1 54 27	
7	285	47.9	45.7	153	35.2 ¹⁰⁷	14.3 ¹³⁴		40	16	19 48	27	50 70	2 00 32	
8	300	47.9	46.1	168	04.9 ¹⁰⁷	27.6 ¹³³		35	19 03	32	20 07	42 67	06 35	
9	315	47.8	46.6	182	34.5 ¹⁰⁶	40.9 ¹³³		30	18 52	19 19	19 51	35 64	12 37	
10	330	47.8	47.1	197	04.0 ¹⁰⁵	-11 54.1 ¹³²		20	33	18 57	25	23 59	21 42	
11	345	47.7	+20 47.5	211	33.6 ¹⁰⁶	-12 07.2 ¹³¹		10 N	18 16	18 39	19 05	15 12 56	2 29 46	
12	0	47.7	+20 48.0	226	03.0 ¹⁰⁴	-12 20.2 ¹³⁰		0	18 00	18 23	18 48	15 03 51	2 36 51	
13	15	47.6	48.5	240	32.5 ¹⁰⁵	33.2 ¹³⁰		10 S	17 45	18 07	33	14 53 48	44 55	
14	30	47.5	48.9	255	01.9 ¹⁰⁴	46.1 ¹²⁹		20	29	17 52	19	43 44	2 52 59	
15	45	47.5	49.4	269	31.2 ¹⁰³	-12 58.9 ¹²⁸		30	10	36	18 05	31 39	3 01 64	
16	60	47.4	49.8	284	00.6 ¹⁰⁴	-13 11.7 ¹²⁸		35	17 00	27	17 58	25 36	07 67	
17	75	47.4	+20 50.3	298	29.8 ¹⁰²	-13 24.3 ¹²⁶		40	16 47	17 17	17 50	14 17 33	3 13 70	
18	90	47.3	+20 50.7	312	59.1 ¹⁰³	-13 36.9 ¹²⁶		45	16 33	17 05	17 42	14 08 30	3 20 75	
19	105	47.3	51.2	327	28.2 ¹⁰¹	-13 49.4 ¹²⁵		50	15	16 52	32	13 58 25	28 80	
20	120	47.2	51.7	341	57.4 ¹⁰²	-14 01.9 ¹²⁵		52	16 07	46	28	53 23	32 83	
21	135	47.1	52.1	356	26.5 ¹⁰¹	14.2 ¹²³		54	15 58	39	23	48 20	37 85	
22	150	47.1	52.6	10	55.5 ¹⁰⁰	26.5 ¹²³		56	47	31	18	42 17	42 88	
23	165	47.0	53.0	25	24.5 ¹⁰⁰	38.7 ¹²²		58	35	23	13	36 14	47 92	
24	180	47.0	+20 53.5	39	53.5 ¹⁰⁰	-14 50.8 ¹²¹		60 S	15 21	16 14	17 07	13 29 9	3 53 96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 52 ^m 7		Mag: -3.9 PMG: 14 ^h 16 ^m		Mag: +1.0 PMG: 17 ^h 35 ^m		Mag: -2.3 PMG: 7 ^h 47 ^m		Mag: +1.0 PMG: 19 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	29.3	146 16.2	+25 01.5	95 47.9	+15 23.2	242 52.4	-1 49.2	62 27.9	+3 05.9
1	256	31.8	161 15.4	01.5	110 49.2	22.7	257 54.4	49.1	77 30.4	05.9
2	271	34.3	176 14.5	01.4	125 50.5	22.3	272 56.5	48.9	92 32.9	05.9
3	286	36.7	191 13.7	01.4	140 51.8	21.8	287 58.6	48.8	107 35.4	05.9
4	301	39.2	206 12.9	01.3	155 53.1	21.4	303 00.7	48.6	122 37.9	05.9
5	316	41.7	221 12.0	+25 01.3	170 54.4	+15 20.9	318 02.8	-1 48.4	137 40.4	+3 05.9
6	331	44.1	236 11.2	+25 01.3	185 55.7	+15 20.5	333 04.9	-1 48.3	152 42.9	+3 05.9
7	346	46.6	251 10.4	01.2	200 57.0	20.0	348 07.0	48.1	167 45.4	05.9
8	1	49.1	266 09.6	01.2	215 58.3	19.6	3	09.0	182 47.9	05.9
9	16	51.5	281 08.7	01.1	230 59.5	19.1	18 11.1	47.8	197 50.4	05.9
10	31	54.0	296 07.9	01.1	246 00.8	18.7	33 13.2	47.7	212 52.9	05.9
11	46	56.5	311 07.1	+25 01.0	261 02.1	+15 18.3	48 15.3	-1 47.5	227 55.3	+3 05.9
12	61	58.9	326 06.2	+25 01.0	276 03.4	+15 17.8	63 17.4	-1 47.4	242 57.8	+3 05.9
13	77	01.4	341 05.4	00.9	291 04.7	17.4	78 19.5	47.2	258 00.3	05.9
14	92	03.8	356 04.6	00.9	306 06.0	16.9	93 21.6	47.1	273 02.8	06.0
15	107	06.3	11 03.8	00.8	321 07.3	16.5	108 23.7	46.9	288 05.3	06.0
16	122	08.8	26 02.9	00.7	336 08.6	16.0	123 25.7	46.8	303 07.8	06.0
17	137	11.2	41 02.1	+25 00.7	351 09.9	+15 15.6	138 27.8	-1 46.6	318 10.3	+3 06.0
18	152	13.7	56 01.3	+25 00.6	6 11.2	+15 15.1	153 29.9	-1 46.5	333 12.8	+3 06.0
19	167	16.2	71 00.5	00.6	21 12.4	14.7	168 32.0	46.3	348 15.3	06.0
20	182	18.6	85 59.6	00.5	36 13.7	14.2	183 34.1	46.1	3 17.8	06.0
21	197	21.1	100 58.8	00.4	51 15.0	13.8	198 36.2	46.0	18 20.3	06.0
22	212	23.6	115 58.0	00.4	66 16.3	13.3	213 38.3	45.8	33 22.7	06.0
23	227	26.0	130 57.1	00.3	81 17.6	12.9	228 40.4	45.7	48 25.2	06.0
24	242	28.5	145 56.3	+25 00.3	96 18.9	+15 12.4	243 42.5	-1 45.5	63 27.7	+3 06.0
Dif	—		-8	-1	+13	-4	+21	+2	+25	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 0 PHE { 4 ^h : 58 ^m .4 12 ^h : 58 ^m .2 20 ^h : 58 ^m .1						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 9			SD: 15 ^h 9 PMG: 22 ^h 07 ^m R°: 54 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	47.0	+20	53.5		39 53.5	-14 50.8	60 N	** **	1 48	3 01	18 20	94	1 30	12	
1	195	46.9		53.9		54 22.4	-15 02.8	58	** **	2 16	17	18 07	89	40	16	
2	210	46.8		54.4		68 51.3	14.7	56	0 58	37	31	17 56	85	48	19	
3	225	46.8		54.8		83 20.1	26.6	54	1 38	2 54	43	46 82		1 55	20	
4	240	46.7		55.3		97 48.9	38.3	52	2 04	3 08	3 53	38 79		2 02	25	
5	255	46.7	+20	55.7		112 17.6	-15 50.0	50	2 24	3 21	4 02	17 30	77	2 08	27	
6	270	46.6	+20	56.2		126 46.2	-16 01.5	45	3 00	3 46	4 21	17 14	72	2 21	32	
7	285	46.5		56.6		141 14.9	13.0	40	26	4 06	37	17 00	70	32	35	
8	300	46.5		57.1		155 43.5	24.3	35	3 46	21	4 50	16 49	67	41	38	
9	315	46.4		57.5		170 12.0	35.6	30	4 03	35	5 02	39 64		2 49	41	
10	330	46.3		58.0		184 40.5	46.8	20	29	4 57	21	22 61		3 03	46	
11	345	46.3	+20	58.4		199 08.9	-16 57.9	10 N	4 49	5 15	5 38	16 08	57	3 15	50	
12	0	46.2	+20	58.9		213 37.3	-17 08.8	0	5 05	5 31	5 53	15 54	54	3 27	53	
13	15	46.2		59.3		228 05.6	19.7	10 S	20	5 46	6 09	41 51		39	56	
14	30	46.1	+20	59.8		242 33.9	30.5	20	34	6 02	25	27 47		3 51	60	
15	45	46.0	+21	00.2		257 02.1	41.1	30	49	18	44	10 44		4 05	65	
16	60	46.0		00.6		271 30.3	-17 51.7	35	5 56	27	6 55	15 01	41	14	67	
17	75	45.9	+21	01.1		285 58.5	-18 02.2	40	6 04	6 37	7 07	14 50	38	4 23	71	
18	90	45.8	+21	01.5		300 26.6	-18 12.5	45	6 12	6 49	7 21	14 38	35	4 35	74	
19	105	45.8		02.0		314 54.6	22.8	50	22	7 02	39	23 30		48	79	
20	120	45.7		02.4		329 22.6	32.9	52	26	09	48	16 28		4 55	81	
21	135	45.7		02.8		343 50.6	42.9	54	31	16	7 57	14 08	26	5 02	83	
22	150	45.6		03.3		358 18.5	-18 52.8	56	36	23	8 08	13 59	23	10	86	
23	165	45.5		03.7		12 46.3	-19 02.6	58	41	32	20	50 19		19	90	
24	180	45.5	+21	04.2		27 14.1	-19 12.3	60 S	6 47	7 41	8 34	13 38	15	5 29	95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 48 ^m 8		Mag: -3.9 PMG: 14 ^h 17 ^m		Mag: +1.0 PMG: 17 ^h 33 ^m		Mag: -2.3 PMG: 7 ^h 44 ^m		Mag: +1.0 PMG: 19 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	242	28.5	145	56.3	+25	00.3	96	18.9	+15	12.4
1	257	31.0	160	55.5		00.2	111	20.2		12.0
2	272	33.4	175	54.7	+25	00.1	126	21.4		11.5
3	287	35.9	190	53.8	+25	00.0	141	22.7		11.1
4	302	38.3	205	53.0	+25	00.0	156	24.0		10.6
5	317	40.8	220	52.2	+24	59.9	171	25.3	+15	10.2
6	332	43.3	235	51.4	+24	59.8	186	26.6	+15	09.7
7	347	45.7	250	50.5		59.8	201	27.9		09.3
8	2	48.2	265	49.7		59.7	216	29.2		08.8
9	17	50.7	280	48.9		59.6	231	30.5		08.4
10	32	53.1	295	48.1		59.5	246	31.7		07.9
11	47	55.6	310	47.3	+24	59.4	261	33.0	+15	07.5
12	62	58.1	325	46.4	+24	59.4	276	34.3	+15	07.0
13	78	00.5	340	45.6		59.3	291	35.6		06.6
14	93	03.0	355	44.8		59.2	306	36.9		06.1
15	108	05.4	10	44.0		59.1	321	38.2		05.7
16	123	07.9	25	43.1		59.0	336	39.4		05.2
17	138	10.4	40	42.3	+24	58.9	351	40.7	+15	04.7
18	153	12.8	55	41.5	+24	58.9	6	42.0	+15	04.3
19	168	15.3	70	40.7		58.8	21	43.3		03.8
20	183	17.8	85	39.9		58.7	36	44.6		03.4
21	198	20.2	100	39.0		58.6	51	45.9		02.9
22	213	22.7	115	38.2		58.5	66	47.1		02.5
23	228	25.2	130	37.4		58.4	81	48.4		02.0
24	243	27.6	145	36.6	+24	58.3	96	49.7	+15	01.6
Dif	—		-8		-1		+13		-5	
								+21		+2
									+25	
										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: 12 ^d 0 PHE { 4 ^h : 57'9 12 ^h : 57'8 20 ^h : 57'6 R°: 56 ^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	45.5	+21	04.2	27	14.1	-19	12.3	60 N	20 56	22 12	** **	19 54	84	1 42	19		
1	195	45.4		04.6	41	41.9	88	21.9	58	39	21 43	** **	36	80	1 56	23		
2	210	45.3		05.0	56	09.6	87	31.3	56	26	21	23 06	21	77	2 07	27		
3	225	45.3		05.5	70	37.3	87	40.6	54	14	21 03	22 21	19 08	75	18	29		
4	240	45.2		05.9	85	04.9	86	49.9	52	20 03	20 48	21 54	18 57	73	27	32		
5	255	45.1	+21	06.3	99	32.5	86	-19 59.0	50	19 54	20 35	21 33	18 47	71	2 35	34		
6	270	45.1	+21	06.8	114	00.0	85	-20 07.9	49	19 34	20 10	20 56	18 26	69	2 53	38		
7	285	45.0		07.2	128	27.5	85	16.8	40	18	19 50	29	18 10	65	3 07	41		
8	300	44.9		07.6	142	55.0	85	25.5	35	19 05	34	20 09	17 56	64	19	44		
9	315	44.9		08.1	157	22.4	84	34.1	30	18 53	19 20	19 52	43	63	30	46		
10	330	44.8		08.5	171	49.8	84	42.6	20	33	18 57	26	23	59	3 49	49		
11	345	44.7	+21	08.9	186	17.1	83	-20 51.0	10 N	18 16	18 39	19 06	17 05	57	4 05	52		
12	0	44.7	+21	09.4	200	44.4	83	-20 59.2	0	18 01	18 23	18 49	16 48	55	4 20	54		
13	15	44.6		09.8	215	11.6	82	-21 07.3	10 S	17 45	18 07	33	32	53	35	57		
14	30	44.5		10.2	229	38.8	82	15.3	20	28	17 52	19	16 14	51	4 51	60		
15	45	44.5		10.7	244	06.0	82	23.2	30	17 10	35	18 05	15 54	48	5 10	64		
16	60	44.4		11.1	258	33.1	81	30.9	35	16 59	26	17 57	42	46	21	66		
17	75	44.3	+21	11.5	273	00.2	81	-21 38.5	40	16 46	17 16	17 49	15 28	45	5 34	68		
18	90	44.3	+21	11.9	287	27.2	80	-21 46.0	45	16 31	17 04	17 40	15 13	41	5 49	70		
19	105	44.2		12.4	301	54.2	80	-21 53.3	50	13	16 50	31	14 53	38	6 07	75		
20	120	44.1		12.8	316	21.2	80	-22 00.5	52	16 05	44	26	44	37	16	76		
21	135	44.0		13.2	330	48.2	80	07.6	54	15 55	37	22	34	34	25	79		
22	150	44.0		13.6	345	15.1	79	14.5	56	44	29	16	22	32	36	82		
23	165	43.9		14.1	359	41.9	78	21.3	58	32	21	11	14 09	28	6 49	85		
24	180	43.8	+21	14.5	14	08.8	79	-22 28.0	60 S	15 18	16 11	17 05	13 53	25	7 04	90		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 44 ^m 9		Mag: -3.9 PMG: 14 ^h 18 ^m				Mag: +1.1 PMG: 17 ^h 31 ^m				Mag: -2.3 PMG: 7 ^h 41 ^m				Mag: +1.0 PMG: 19 ^h 39 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	243	27.6	145	36.6	+24	58.3	96	49.7	+15	01.6	244	32.7	-1	41.9	64	27.4	+3	06.0
1	258	30.1	160	35.7		58.2	111	51.0		01.1	259	34.7		41.8	79	29.9		06.0
2	273	32.6	175	34.9		58.1	126	52.3		00.7	274	36.8		41.6	94	32.4		06.0
3	288	35.0	190	34.1		58.0	141	53.6	+15	00.2	289	38.9		41.5	109	34.9		06.0
4	303	37.5	205	33.3		57.9	156	54.8	+14	59.8	304	41.0		41.3	124	37.4		06.0
5	318	39.9	220	32.5	+24	57.8	171	56.1	+14	59.3	319	43.1	-1	41.2	139	39.9	+3	06.0
6	333	42.4	235	31.6	+24	57.7	186	57.4	+14	58.9	334	45.2	-1	41.0	154	42.4	+3	06.0
7	348	44.9	250	30.8		57.6	201	58.7		58.4	349	47.3		40.9	169	44.8		06.0
8	3	47.3	265	30.0		57.5	217	00.0		57.9	4	49.4		40.7	184	47.3		06.0
9	18	49.8	280	29.2		57.4	232	01.2		57.5	19	51.5		40.6	199	49.8		06.0
10	33	52.3	295	28.4		57.3	247	02.5		57.0	34	53.6		40.4	214	52.3		06.0
11	48	54.7	310	27.6	+24	57.2	262	03.8	+14	56.6	49	55.7	-1	40.3	229	54.8	+3	06.0
12	63	57.2	325	26.7	+24	57.0	277	05.1	+14	56.1	64	57.8	-1	40.1	244	57.3	+3	06.0
13	78	59.7	340	25.9		56.9	292	06.4		55.7	79	59.9		40.0	259	59.8		06.0
14	94	02.1	355	25.1		56.8	307	07.6		55.2	95	02.0		39.8	275	02.2		06.0
15	109	04.6	10	24.3		56.7	322	08.9		54.8	110	04.1		39.7	290	04.7		06.0
16	124	07.1	25	23.5		56.6	337	10.2		54.3	125	06.2		39.5	305	07.2		06.0
17	139	09.5	40	22.6	+24	56.5	352	11.5	+14	53.8	140	08.3	-1	39.4	320	09.7	+3	06.0
18	154	12.0	55	21.8	+24	56.4	7	12.8	+14	53.4	155	10.4	-1	39.2	335	12.2	+3	06.0
19	169	14.4	70	21.0		56.2	22	14.0		52.9	170	12.5		39.1	350	14.7		06.0
20	184	16.9	85	20.2		56.1	37	15.3		52.5	185	14.6		38.9	5	17.1		06.0
21	199	19.4	100	19.4		56.0	52	16.6		52.0	200	16.7		38.8	20	19.6		06.0
22	214	21.8	115	18.6		55.9	67	17.9		51.6	215	18.8		38.6	35	22.1		06.0
23	229	24.3	130	17.7		55.8	82	19.1		51.1	230	20.9		38.5	50	24.6		06.0
24	244	26.8	145	16.9	+24	55.6	97	20.4	+14	50.6	245	23.0	-1	38.3	65	27.1	+3	06.0
Dif	—		-8		-1		+13		-5		+21		+1		+25			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8				Edad: 13 ^d 0 PHE { 4 ^h : 57/4 12 ^h : 57/2 20 ^h : 57/0													
	PMG: 11 ^h 57 ^m 1				SD: 15 ^h 7													
	hG ☉ Dec				hG ☾ Dif Dec Dif					Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	43.8	+21	14.5	14	08.8	-22	28.0	60 N	**	**	1 42	2 58	21 18	66	2 01	30	
1	195	43.8		14.9	28	35.6	78	34.5	65	**	**	2 11	3 14	20 56	65	19	35	
2	210	43.7		15.3	43	02.4	78	40.9	64	56	0 48	33	28	38	64	34	38	
3	225	43.6		15.8	57	29.2	78	47.2	63	54	1 32	2 51	40	23	63	47	40	
4	240	43.6		16.2	71	55.9	77	53.3	61	52	2 00	3 06	3 51	20 10	62	2 59	41	
5	255	43.5	+21	16.6	86	22.6	77	-22	59.3	60	50	2 20	3 18	4 00	19 58	62	3 09	43
6	270	43.4	+21	17.0	100	49.3	77	-23	05.2	59	45	2 58	3 44	4 20	19 35	60	3 31	45
7	285	43.3		17.4	115	15.9	76	10.9	57	40	3 24	4 04	36	15	60	3 48	48	
8	300	43.3		17.8	129	42.6	77	16.4	55	35	3 45	20	4 49	19 00	58	4 03	49	
9	315	43.2		18.3	144	09.2	76	21.9	55	30	4 02	34	5 01	18 46	58	16	50	
10	330	43.1		18.7	158	35.8	76	27.2	53	20	28	4 57	21	22	58	38	52	
11	345	43.1	+21	19.1	173	02.3	75	-23	32.3	51	10 N	4 48	5 15	5 38	18 02	57	4 57	54
12	0	43.0	+21	19.5	187	28.9	76	-23	37.3	50	0	5 06	5 31	5 54	17 43	56	5 14	56
13	15	42.9		19.9	201	55.4	75	42.2	49	49	10 S	21	5 47	6 09	25	54	32	57
14	30	42.8		20.3	216	22.0	76	46.9	47	20	35	6 02	26	17	05	53	5	51
15	45	42.8		20.8	230	48.5	75	51.5	46	30	50	19	45	16	42	52	6	14
16	60	42.7		21.2	245	15.0	75	-23	55.9	44	35	5 57	28	6	56	28	52	27
17	75	42.6	+21	21.6	259	41.5	75	-24	00.2	43	40	6 05	6 39	7 09	16	13	51	6
18	90	42.5	+21	22.0	274	07.9	74	-24	04.3	41	45	6 14	6 51	7 23	15	54	50	6
19	105	42.5		22.4	288	34.4	75	08.3	40	50	50	24	7 05	42	31	48	7	22
20	120	42.4		22.8	303	00.9	75	12.2	39	52	52	28	11	7	50	21	47	32
21	135	42.3		23.2	317	27.3	74	15.9	37	54	54	33	18	8	00	15	08	46
22	150	42.3		23.6	331	53.8	75	19.5	36	56	56	38	26	11	14	54	44	7
23	165	42.2		24.0	346	20.2	74	22.9	34	58	58	44	34	23	37	43	8	14
24	180	42.1	+21	24.4	0	46.7	75	-24	26.2	33	60 S	6 50	7 44	8 38	14	18	39	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 41 ^m 0		Mag: -3.9 PMG: 14 ^h 20 ^m		Mag: +1.1 PMG: 17 ^h 29 ^m		Mag: -2.3 PMG: 7 ^h 37 ^m		Mag: +1.0 PMG: 19 ^h 35 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	244	26.8	145	16.9	+24	55.6	97	20.4	+14	50.6
1	259	29.2	160	16.1		55.5	112	21.7		50.2
2	274	31.7	175	15.3		55.4	127	23.0		49.7
3	289	34.2	190	14.5		55.2	142	24.3		49.3
4	304	36.6	205	13.7		55.1	157	25.5		48.8
5	319	39.1	220	12.9	+24	55.0	172	26.8	+14	48.3
6	334	41.6	235	12.0	+24	54.9	187	28.1	+14	47.9
7	349	44.0	250	11.2		54.7	202	29.4		47.4
8	4	46.5	265	10.4		54.6	217	30.6		47.0
9	19	48.9	280	09.6		54.4	232	31.9		46.5
10	34	51.4	295	08.8		54.3	247	33.2		46.1
11	49	53.9	310	08.0	+24	54.2	262	34.5	+14	45.6
12	64	56.3	325	07.2	+24	54.0	277	35.7	+14	45.1
13	79	58.8	340	06.4		53.9	292	37.0		44.7
14	95	01.3	355	05.5		53.7	307	38.3		44.2
15	110	03.7	10	04.7		53.6	322	39.6		43.8
16	125	06.2	25	03.9		53.5	337	40.8		43.3
17	140	08.7	40	03.1	+24	53.3	352	42.1	+14	42.8
18	155	11.1	55	02.3	+24	53.2	7	43.4	+14	42.4
19	170	13.6	70	01.5		53.0	22	44.7		41.9
20	185	16.0	85	00.7		52.9	37	45.9		41.4
21	200	18.5	99	59.9		52.7	52	47.2		41.0
22	215	21.0	114	59.1		52.6	67	48.5		40.5
23	230	23.4	129	58.2		52.4	82	49.8		40.1
24	245	25.9	144	57.4	+24	52.3	97	51.0	+14	39.6
Dif	—		-8 -1		+13 -5		+21 -5		+1 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 3				Edad: 14 ^d 0 PHE { SD: 15/5 PMG: *** **m R°: ***m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	180	42.1	+21	24.4	0	46.7	-24	26.2	60 N	21 00	22 19	** **	22 24 44		2 31 50		
1	195	42.0		24.9	15	13.1	74	29.3	58	20 43	21 48	** **	22 01 46		2 54 50		
2	210	42.0		25.3	29	39.5	74	32.3	56	29	25	23 18	21 42 47		3 12 51		
3	225	41.9		25.7	44	06.0	75	35.2	54	16	21 06	22 27	26 48		27 52		
4	240	41.8		26.1	58	32.4	74	37.9	52	20 05	20 51	21 59	12 49		40 53		
5	255	41.7	+21	26.5	72	58.9	75	-24 40.4	50	19 56	20 38	21 37	21 00 50		3 52 53		
6	270	41.7	+21	26.9	87	25.4	75	-24 42.8	45	19 36	20 12	20 59	20 35 51		4 16 54		
7	285	41.6		27.3	101	51.8	74	45.1	40	20	19 51	31	20 15 52		36 54		
8	300	41.5		27.7	116	18.3	75	47.2	35	19 06	35	20 11	19 58 53		4 52 54		
9	315	41.4		28.1	130	44.8	75	49.2	30	18 54	19 21	19 54	44 53		5 06 55		
10	330	41.3		28.5	145	11.3	75	51.0	20	34	18 58	27	19 20 53		30 55		
11	345	41.3	+21	28.9	159	37.9	76	-24 52.7	10 N	18 17	18 40	19 06	18 59 54		5 51 55		
12	0	41.2	+21	29.3	174	04.4	75	-24 54.2	0	18 01	18 23	18 49	18 39 55		6 10 55		
13	15	41.1		29.7	188	30.9	75	55.6	10 S	17 45	18 07	34	18 19 55		29 56		
14	30	41.0		30.1	202	57.5	76	56.9	20	28	17 52	19	17 58 56		6 50 56		
15	45	41.0		30.5	217	24.1	76	58.0	30	17 09	35	18 04	34 56		7 14 56		
16	60	40.9		30.9	231	50.7	76	58.9	35	16 58	25	17 57	20 56		28 56		
17	75	40.8	+21	31.3	246	17.4	77	-24 59.8	40	16 45	17 15	17 48	17 04 56		7 45 55		
18	90	40.7	+21	31.7	260	44.0	76	-25 00.4	45	16 30	17 03	17 39	16 44 57		8 04 56		
19	105	40.6		32.1	275	10.7	77	01.0	50	11	16 49	29	19 58		29 55		
20	120	40.6		32.5	289	37.4	77	01.3	52	16 03	42	25	16 08 57		40 56		
21	135	40.5		32.9	304	04.2	78	01.6	54	15 53	35	20	15 54 58		8 54 55		
22	150	40.4		33.3	318	31.0	78	01.7	56	42	27	15	38 59		9 09 56		
23	165	40.3		33.6	332	57.8	78	01.6	58	29	18	09	15 20 58		28 55		
24	180	40.3	+21	34.0	347	24.6	78	-25 01.4	60 S	15 15	16 08	17 03	14 57 59		9 50 56		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 7 ^h 37 ^m 0			Mag: -3.9 PMG: 14 ^h 21 ^m			Mag: +1.1 PMG: 17 ^h 27 ^m			Mag: -2.3 PMG: 7 ^h 34 ^m			Mag: +1.0 PMG: 19 ^h 31 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	245	25.9	144	57.4	+24	52.3	97	51.0	+14	39.6	246	13.4	-1	34.8	66	26.6	
1	260	28.4	159	56.6		52.1	112	52.3		39.1	261	15.5		34.6	81	29.1	
2	275	30.8	174	55.8		51.9	127	53.6		38.7	276	17.6		34.5	96	31.6	
3	290	33.3	189	55.0		51.8	142	54.9		38.2	291	19.7		34.3	111	34.0	
4	305	35.8	204	54.2		51.6	157	56.1		37.8	306	21.8		34.2	126	36.5	
5	320	38.2	219	53.4	+24	51.5	172	57.4	+14	37.3	321	23.9	-1	34.1	141	39.0	
6	335	40.7	234	52.6	+24	51.3	187	58.7	+14	36.8	336	26.0	-1	33.9	156	41.5	
7	350	43.2	249	51.8		51.1	202	59.9		36.4	351	28.1		33.8	171	43.9	
8	5	45.6	264	51.0		51.0	218	01.2		35.9	6	30.2		33.6	186	46.4	
9	20	48.1	279	50.2		50.8	233	02.5		35.4	21	32.3		33.5	201	48.9	
10	35	50.5	294	49.4		50.6	248	03.8		35.0	36	34.4		33.3	216	51.4	
11	50	53.0	309	48.5	+24	50.5	263	05.0	+14	34.5	51	36.5	-1	33.2	231	53.8	
12	65	55.5	324	47.7	+24	50.3	278	06.3	+14	34.0	66	38.6	-1	33.0	246	56.3	
13	80	57.9	339	46.9		50.1	293	07.6		33.6	81	40.7		32.9	261	58.8	
14	96	00.4	354	46.1		50.0	308	08.8		33.1	96	42.8		32.7	277	01.3	
15	111	02.9	9	45.3		49.8	323	10.1		32.7	111	44.9		32.6	292	03.8	
16	126	05.3	24	44.5		49.6	338	11.4		32.2	126	47.0		32.5	307	06.2	
17	141	07.8	39	43.7	+24	49.4	353	12.7	+14	31.7	141	49.1	-1	32.3	322	08.7	
18	156	10.3	54	42.9	+24	49.3	8	13.9	+14	31.3	156	51.3	-1	32.2	337	11.2	
19	171	12.7	69	42.1		49.1	23	15.2		30.8	171	53.4		32.0	352	13.7	
20	186	15.2	84	41.3		48.9	38	16.5		30.3	186	55.5		31.9	7	16.1	
21	201	17.7	99	40.5		48.7	53	17.7		29.9	201	57.6		31.7	22	18.6	
22	216	20.1	114	39.7		48.6	68	19.0		29.4	216	59.7		31.6	37	21.1	
23	231	22.6	129	38.9		48.4	83	20.3		28.9	232	01.8		31.4	52	23.6	
24	246	25.0	144	38.1	+24	48.2	98	21.5	+14	28.5	247	03.9	-1	31.3	67	26.0	
Dif	—		-8		-2		+13		-5		+21		+1		+25		
															0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 15 ^d 0 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 1 20 ^h : 55 ^m 9												
	PMG: 11 ^h 57 ^m 4			SD: 15 ^h 4 PMG: 0 ^h 52 ^m R ^o : 54 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	180	40.3	+21 34.0	347	24.6	-25	01.4	3	60 N	** **	1 35	2 54	23 08 26	3 21 68		
1	195	40.2	34.4	1	51.5		01.1	4	58	** **	2 07	3 11	22 47 30	3 44 66		
2	210	40.1	34.8	16	18.4	-25	00.7	5	56	0 36	30	26	29 33	4 03 65		
3	225	40.0	35.2	30	45.3	-25	00.0	6	54	1 27	2 48	38	14 35	19 63		
4	240	39.9	35.6	45	12.3	-24	59.3	7	52	1 56	3 03	49	22 01 37	33 62		
5	255	39.9	+21 36.0	59	39.4	-24	58.4	8	50	2 17	3 16	3 58	21 50 38	4 45 61		
6	270	39.8	+21 36.4	74	06.4	-24	57.4	9	45	2 56	3 43	4 19	21 26 41	5 10 60		
7	285	39.7	36.8	88	33.5		56.2	10	40	3 23	4 03	35	21 07 43	30 59		
8	300	39.6	37.2	103	00.7		54.9	11	35	3 44	19	4 48	20 51 45	5 46 58		
9	315	39.5	37.5	117	27.9		53.5	12	30	4 01	33	5 00	37 46	6 01 57		
10	330	39.4	37.9	131	55.1		51.9	13	20	28	4 56	20	20 13 49	25 56		
11	345	39.4	+21 38.3	146	22.4	-24	50.2	14	10 N	4 48	5 15	5 38	19 53 50	6 46 54		
12	0	39.3	+21 38.7	160	49.8	-24	48.3	15	0	5 06	5 32	5 54	19 34 52	7 05 54		
13	15	39.2	39.1	175	17.2		46.4	16	10 S	21	5 47	6 10	19 14 54	25 52		
14	30	39.1	39.5	189	44.6		44.2	17	20	36	6 03	27	18 54 55	7 46 51		
15	45	39.0	39.8	204	12.1		42.0	18	30	51	20	46	30 58	8 10 50		
16	60	39.0	40.2	218	39.7		39.6	19	35	5 58	30	6 57	16 59	24 49		
17	75	38.9	+21 40.6	233	07.3	-24	37.1	20	40	6 07	6 40	7 10	18 00 60	8 40 48		
18	90	38.8	+21 41.0	247	34.9	-24	34.4	21	45	6 16	6 52	7 25	17 41 62	9 00 46		
19	105	38.7	41.4	262	02.6		31.7	22	50	26	7 07	44	17 64	24 44		
20	120	38.6	41.7	276	30.4		28.7	23	52	30	13	7 53	17 05 66	36 43		
21	135	38.5	42.1	290	58.2		25.7	24	54	35	20	8 02	16 52 67	9 49 42		
22	150	38.5	42.5	305	26.1		22.5	25	56	41	28	13	37 69	10 05 40		
23	165	38.4	42.9	319	54.1		19.2	26	58	46	37	26	16 18 72	23 38		
24	180	38.3	+21 43.3	334	22.1	-24	15.8	27	60 S	6 53	7 47	8 41	15 56 75	10 46 34		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 7 ^h 33 ^m 1		Mag: -3.9 PMG: 14 ^h 22 ^m		Mag: +1.1 PMG: 17 ^h 25 ^m		Mag: -2.3 PMG: 7 ^h 31 ^m		Mag: +1.0 PMG: 19 ^h 27 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'
0	246	25.0	144	38.1	+24 48.2	98	21.5	+14 28.5	247	03.9	-1 31.3
1	261	27.5	159	37.3	48.0	113	22.8	28.0	262	06.0	31.2
2	276	30.0	174	36.5	47.8	128	24.1	27.5	277	08.1	31.0
3	291	32.4	189	35.7	47.6	143	25.3	27.1	292	10.2	30.9
4	306	34.9	204	34.9	47.4	158	26.6	26.6	307	12.3	30.7
5	321	37.4	219	34.1	+24 47.2	173	27.9	+14 26.1	322	14.4	-1 30.6
6	336	39.8	234	33.3	+24 47.1	188	29.1	+14 25.7	337	16.5	-1 30.4
7	351	42.3	249	32.5	46.9	203	30.4	25.2	352	18.6	30.3
8	6	44.8	264	31.7	46.7	218	31.7	24.7	7	20.8	30.1
9	21	47.2	279	30.9	46.5	233	32.9	24.3	22	22.9	30.0
10	36	49.7	294	30.1	46.3	248	34.2	23.8	37	25.0	29.9
11	51	52.2	309	29.3	+24 46.1	263	35.5	+14 23.3	52	27.1	-1 29.7
12	66	54.6	324	28.5	+24 45.9	278	36.7	+14 22.9	67	29.2	-1 29.6
13	81	57.1	339	27.7	45.7	293	38.0	22.4	82	31.3	29.4
14	96	59.5	354	26.9	45.5	308	39.3	21.9	97	33.4	29.3
15	112	02.0	9	26.1	45.3	323	40.5	21.5	112	35.5	29.1
16	127	04.5	24	25.3	45.1	338	41.8	21.0	127	37.6	29.0
17	142	06.9	39	24.5	+24 44.9	353	43.1	+14 20.5	142	39.7	-1 28.9
18	157	09.4	54	23.7	+24 44.7	8	44.3	+14 20.1	157	41.9	-1 28.7
19	172	11.9	69	22.9	44.5	23	45.6	19.6	172	44.0	28.6
20	187	14.3	84	22.1	44.3	38	46.9	19.1	187	46.1	28.4
21	202	16.8	99	21.3	44.0	53	48.1	18.7	202	48.2	28.3
22	217	19.3	114	20.5	43.8	68	49.4	18.2	217	50.3	28.2
23	232	21.7	129	19.7	43.6	83	50.7	17.7	232	52.4	28.0
24	247	24.2	144	18.9	+24 43.4	98	51.9	+14 17.2	247	54.5	-1 27.9
Dif	—		-8 -2		+13 -5		+21 +1		+25 0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 16 ^d 0 PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /5 20 ^h : 55 ^m /3					Civil			Hora		Hora	
	PMG: 11 ^h 57 ^m 5			PMG: 1 ^h 46 ^m R°: 52 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	m
0	180	38.3	+21 43.3	334	22.1	-24 15.8	35	60 N	21 04	22 25	** **	23 34	16	4 29	80
1	195	38.2	43.6	348	50.2	12.3	35	58	20 46	21 52	** **	17 20		4 50	76
2	210	38.1	44.0	3	18.3	91	37	56	32	29	23 36	23 02	23	5 08	72
3	225	38.0	44.4	17	46.5	92	38	54	19	21 10	22 33	22 49	26	22	77
4	240	37.9	44.8	32	14.8	93	39	52	20 08	20 54	22 03	38 28		35	68
5	255	37.9	+21 45.1	46	43.1	93	41	50	19 58	20 41	21 41	22 28	30	5 46	67
6	270	37.8	+21 45.5	61	11.5	94	41	45	19 38	20 14	21 01	22 07	33	6 10	63
7	285	37.7	45.9	75	40.0	95	43	40	21	19 53	20 33	21 50	36	29	61
8	300	37.6	46.2	90	08.5	95	44	35	19 07	36	20 12	36 38		44	59
9	315	37.5	46.6	104	37.1	96	46	30	18 55	19 22	19 55	23 41		6 58	57
10	330	37.4	47.0	119	05.8	97	46	20	35	18 59	28	21 02	43	7 21	55
11	345	37.4	+21 47.4	133	34.5	97	48	10 N	18 17	18 40	19 07	20 43	46	7 40	53
12	0	37.3	+21 47.7	148	03.3	98	49	0	18 01	18 23	18 49	20 26	48	7 59	51
13	15	37.2	48.1	162	32.2	99	49	10 S	17 45	18 08	34	20 08	51	8 17	49
14	30	37.1	48.5	177	01.2	100	52	20	28	17 52	19	19 49	54	8 37	46
15	45	37.0	48.8	191	30.2	100	52	30	17 08	34	18 04	28 57		9 00	43
16	60	36.9	49.2	205	59.3	101	53	35	16 57	25	17 56	15 59		13	42
17	75	36.8	+21 49.6	220	28.5	102	55	40	16 44	17 14	17 48	19 00	62	9 28	40
18	90	36.7	+21 49.9	234	57.7	102	55	45	16 29	17 02	17 38	18 43	64	9 46	37
19	105	36.7	50.3	249	27.1	104	57	50	10	16 47	28	21 68		10 08	34
20	120	36.6	50.7	263	56.5	104	58	52	16 01	41	23	18 11	69	19	32
21	135	36.5	51.0	278	25.9	104	59	54	15 51	33	18	17 59	72	31	30
22	150	36.4	51.4	292	55.5	106	60	56	40	25	13	46 74		10 45	28
23	165	36.3	51.7	307	25.1	106	61	58	27	16	07	30 77		11 01	25
24	180	36.2	+21 52.1	321	54.8	107	62	60 S	15 12	16 06	17 01	17 11	82	11 20	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 7 ^h 29 ^m 2		Mag: -3.9 PMG: 14 ^h 24 ^m		Mag: +1.1 PMG: 17 ^h 23 ^m		Mag: -2.3 PMG: 7 ^h 27 ^m		Mag: +1.0 PMG: 19 ^h 23 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	247	24.2	144	18.9	+24 43.4	98 51.9	+14 17.2	247 54.5	-1 27.9	68 25.4	+3 05.7
1	262	26.7	159	18.1	43.2	113 53.2	16.8	262 56.6	27.7	83 27.8	05.7
2	277	29.1	174	17.3	43.0	128 54.5	16.3	277 58.8	27.6	98 30.3	05.6
3	292	31.6	189	16.5	42.8	143 55.7	15.8	293 00.9	27.4	113 32.8	05.6
4	307	34.0	204	15.7	42.6	158 57.0	15.4	308 03.0	27.3	128 35.3	05.6
5	322	36.5	219	14.9	+24 42.3	173 58.3	+14 14.9	323 05.1	-1 27.2	143 37.7	+3 05.6
6	337	39.0	234	14.1	+24 42.1	188 59.5	+14 14.4	338 07.2	-1 27.0	158 40.2	+3 05.6
7	352	41.4	249	13.3	41.9	204 00.8	14.0	353 09.3	26.9	173 42.7	05.6
8	7	43.9	264	12.5	41.7	219 02.0	13.5	8 11.4	26.7	188 45.1	05.6
9	22	46.4	279	11.8	41.4	234 03.3	13.0	23 13.5	26.6	203 47.6	05.6
10	37	48.8	294	11.0	41.2	249 04.6	12.5	38 15.7	26.4	218 50.1	05.6
11	52	51.3	309	10.2	+24 41.0	264 05.8	+14 12.1	53 17.8	-1 26.3	233 52.5	+3 05.6
12	67	53.8	324	09.4	+24 40.8	279 07.1	+14 11.6	68 19.9	-1 26.2	248 55.0	+3 05.6
13	82	56.2	339	08.6	40.5	294 08.4	11.1	83 22.0	26.0	263 57.5	05.6
14	97	58.7	354	07.8	40.3	309 09.6	10.7	98 24.1	25.9	278 59.9	05.6
15	113	01.2	9	07.0	40.1	324 10.9	10.2	113 26.2	25.7	294 02.4	05.5
16	128	03.6	24	06.2	39.8	339 12.1	09.7	128 28.3	25.6	309 04.9	05.5
17	143	06.1	39	05.4	+24 39.6	354 13.4	+14 09.2	143 30.5	-1 25.5	324 07.4	+3 05.5
18	158	08.5	54	04.6	+24 39.4	9 14.7	+14 08.8	158 32.6	-1 25.3	339 09.8	+3 05.5
19	173	11.0	69	03.8	39.1	24 15.9	08.3	173 34.7	25.2	354 12.3	05.5
20	188	13.5	84	03.1	38.9	39 17.2	07.8	188 36.8	25.0	9 14.8	05.5
21	203	15.9	99	02.3	38.7	54 18.4	07.3	203 38.9	24.9	24 17.2	05.5
22	218	18.4	114	01.5	38.4	69 19.7	06.9	218 41.0	24.8	39 19.7	05.5
23	233	20.9	129	00.7	38.2	84 21.0	06.4	233 43.2	24.6	54 22.2	05.5
24	248	23.3	143	59.9	+24 38.0	99 22.2	+14 05.9	248 45.3	-1 24.5	69 24.6	+3 05.5
Dif	—		-8		-2	+13	-5	+21	+1	+25	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7				Edad: 17 ^d 0 PHE { SD: 15 ^h 0 PMG: 2 ^h 38 ^m R°: 48 ^m																	
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°		Hora		R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	h	m	m
0	180	36.2	+21	52.1	321	54.8	−22	17.8	60 N	** **	1 29	2 51	23 50	10	5 49	83						
1	195	36.1		52.5	336	24.6 ¹⁰⁸		11.5	58	** **	2 02	3 09	37 13		6 06	79						
2	210	36.0		52.8	350	54.4 ¹⁰⁸	−22	05.1	56	0 19	26	23	25 17		20	76						
3	225	35.9		53.2	5	24.3 ¹⁰⁹	−21	58.6	54	1 21	2 45	36	15 19		33	73						
4	240	35.9		53.5	19	54.3 ¹¹⁰		51.9	52	1 52	3 01	47	23 06	21	43	71						
5	255	35.8	+21	53.9	34	24.4 ¹¹¹	−21	45.2	50	2 14	3 14	3 57	22 58	23	6 53	69						
6	270	35.7	+21	54.2	48	54.6 ¹¹²	−21	38.4	45	2 54	3 41	4 17	22 40	28	7 13	65						
7	285	35.6		54.6	63	24.8 ¹¹²		31.5	40	3 22	4 02	34	26 31		30	61						
8	300	35.5		55.0	77	55.1 ¹¹³		24.5	35	3 43	19	4 48	14 33		43	59						
9	315	35.4		55.3	92	25.5 ¹¹⁴		17.4	30	4 00	33	5 00	22 04	35	7 55	57						
10	330	35.3		55.7	106	56.0 ¹¹⁵		10.1	20	27	4 56	20	21 45	40	8 16	53						
11	345	35.2	+21	56.0	121	26.5 ¹¹⁵	−21	02.8	10 N	4 48	5 15	5 38	21 29	43	8 33	50						
12	0	35.1	+21	56.4	135	57.1 ¹¹⁶	−20	55.4	0	5 06	5 32	5 54	21 14	46	8 50	47						
13	15	35.0		56.7	150	27.8 ¹¹⁷		48.0	10 S	22	5 48	6 10	20 59	49	9 06	44						
14	30	35.0		57.1	164	58.6 ¹¹⁸		40.4	20	36	6 04	27	43 53		23	42						
15	45	34.9		57.4	179	29.5 ¹¹⁹		32.7	30	52	21	47	25 56		43	38						
16	60	34.8		57.8	194	00.4 ¹¹⁹		24.9	35	5 59	31	6 58	14 58		9 55	35						
17	75	34.7	+21	58.1	208	31.4 ¹²⁰	−20	17.1	40	6 08	6 42	7 12	20 02	61	10 08	33						
18	90	34.6	+21	58.5	223	02.5 ¹²¹	−20	09.2	45	6 17	6 54	7 27	19 47	64	10 23	31						
19	105	34.5		58.8	237	33.6 ¹²¹	−20	01.1	50	28	7 08	46	29 68		42	27						
20	120	34.4		59.2	252	04.9 ¹²³	−19	53.0	52	32	15	7 55	20 71		10 51	25						
21	135	34.3		59.5	266	36.2 ¹²³		44.8	54	37	23	8 05	11 72		11 01	23						
22	150	34.2	+21	59.9	281	07.5 ¹²³		36.5	56	43	31	16	19 00	75	13	19						
23	165	34.1	+22	00.2	295	39.0 ¹²⁵		28.2	58	49	40	29	18 47	79	26	16						
24	180	34.0	+22	00.6	310	10.5 ¹²⁵	−19	19.7	60 S	6 55	7 50	8 45	18 33	83	11 41	12						

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 7 ^h 25 ^m 2		Mag: −3.9 PMG: 14 ^h 25 ^m		Mag: +1.1 PMG: 17 ^h 21 ^m		Mag: −2.3 PMG: 7 ^h 24 ^m		Mag: +1.0 PMG: 19 ^h 19 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	248	23.3	143	59.9	+24	99	22.2	+14	248	45.3	−1	24.5	69	24.6	+3	05.5
1	263	25.8	158	59.1		114	23.5		263	47.4		24.3	84	27.1		05.5
2	278	28.3	173	58.3		129	24.7		278	49.5		24.2	99	29.6		05.5
3	293	30.7	188	57.5		144	26.0		293	51.6		24.1	114	32.0		05.4
4	308	33.2	203	56.8		159	27.3		308	53.7		23.9	129	34.5		05.4
5	323	35.6	218	56.0	+24	174	28.5	+14	323	55.9	−1	23.8	144	37.0	+3	05.4
6	338	38.1	233	55.2	+24	189	29.8	+14	338	58.0	−1	23.6	159	39.4	+3	05.4
7	353	40.6	248	54.4		204	31.0		354	00.1		23.5	174	41.9		05.4
8	8	43.0	263	53.6		219	32.3		9	02.2		23.4	189	44.4		05.4
9	23	45.5	278	52.8		234	33.6		24	04.3		23.2	204	46.8		05.4
10	38	48.0	293	52.0		249	34.8		39	06.5		23.1	219	49.3		05.4
11	53	50.4	308	51.3	+24	264	36.1	+14	54	08.6	−1	22.9	234	51.8	+3	05.4
12	68	52.9	323	50.5	+24	279	37.3	+14	69	10.7	−1	22.8	249	54.2	+3	05.4
13	83	55.4	338	49.7		294	38.6	+13	84	12.8		22.7	264	56.7		05.4
14	98	57.8	353	48.9		309	39.9		99	14.9		22.5	279	59.1		05.3
15	114	00.3	8	48.1		324	41.1		114	17.1		22.4	295	01.6		05.3
16	129	02.8	23	47.3		339	42.4		129	19.2		22.3	310	04.1		05.3
17	144	05.2	38	46.6	+24	354	43.6	+13	144	21.3	−1	22.1	325	06.5	+3	05.3
18	159	07.7	53	45.8	+24	9	44.9	+13	159	23.4	−1	22.0	340	09.0	+3	05.3
19	174	10.1	68	45.0		24	46.1		174	25.5		21.8	355	11.5		05.3
20	189	12.6	83	44.2		39	47.4		189	27.7		21.7	10	13.9		05.3
21	204	15.1	98	43.4		54	48.7		204	29.8		21.6	25	16.4		05.3
22	219	17.5	113	42.7		69	49.9		219	31.9		21.4	40	18.9		05.3
23	234	20.0	128	41.9		84	51.2		234	34.0		21.3	55	21.3		05.3
24	249	22.5	143	41.1	+24	99	52.4	+13	249	36.1	−1	21.2	70	23.8	+3	05.2
Dif	—		−8		−3	+13		−5	+21		+1		+25			0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 18 ^d 0 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5	SD: 14 ^h 9				Civil		Náutico		Hora R°		
	PMG: 11 ^h 57 ^m 8				PMG: 3 ^h 26 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	34.0	+22 00.6	310	10.5	-19 19.7	85	60 N	21 07	22 32	** ** *	** ** *	7 12	83	
1	195	33.9	00.9	324	42.1 ¹²⁶	11.2	85	58	20 49	21 57	** ** *	23 50	10	25	78
2	210	33.8	01.2	339	13.8 ¹²⁷	-19 02.6	86	56	34	32	** ** *	42 12	36	75	
3	225	33.8	01.6	353	45.6 ¹²⁸	-18 53.9	87	54	21	21 13	22 39	34 15	46	72	
4	240	33.7	01.9	8	17.4 ¹²⁸	45.2	87	52	10	20 57	22 07	27 18	7 54	70	
5	255	33.6	+22 02.3	22	49.3 ¹²⁹	-18 36.3	89	50	20 00	20 43	21 44	23 21	19	8 02	68
6	270	33.5	+22 02.6	37	21.3 ¹³⁰	-18 27.4	89	45	19 39	20 16	21 03	23 08	23	8 18	64
7	285	33.4	03.0	51	53.3 ¹³⁰	18.4	90	40	23	19 55	20 35	22 57	26	31	61
8	300	33.3	03.3	66	25.5 ¹³²	09.3	91	35	19 09	38	20 14	47 30	42	58	
9	315	33.2	03.6	80	57.7 ¹³²	-18 00.2	91	30	18 56	23	19 56	39 32	8 52	55	
10	330	33.1	04.0	95	29.9 ¹³²	-17 51.0	92	20	36	19 00	29	25 36	9 09	51	
11	345	33.0	+22 04.3	110	02.3 ¹³⁴	-17 41.7	93	10 N	18 18	18 41	19 08	22 12	40	9 23	48
12	0	32.9	+22 04.6	124	34.7 ¹³⁴	-17 32.4	93	0	18 01	18 24	18 50	22 00	43	9 37	44
13	15	32.8	05.0	139	07.1 ¹³⁴	22.9	95	10 S	17 45	18 08	34	21 48	47	9 50	41
14	30	32.7	05.3	153	39.7 ¹³⁶	13.4	95	20	28	17 51	19	36 50	10 05	37	
15	45	32.6	05.7	168	12.3 ¹³⁶	-17 03.9	95	30	17 08	34	18 03	21 54	21	34	
16	60	32.5	06.0	182	45.0 ¹³⁷	-16 54.2	97	35	16 56	24	17 55	12 57	30	32	
17	75	32.4	+22 06.3	197	17.7 ¹³⁷	-16 44.5	97	40	16 43	17 13	17 47	21 03	60	10 41	29
18	90	32.3	+22 06.7	211	50.5 ¹³⁸	-16 34.8	97	45	16 28	17 01	17 37	20 51	64	10 54	25
19	105	32.2	07.0	226	23.4 ¹³⁹	25.0	98	50	16 08	16 46	27	37 68	11 09	21	
20	120	32.1	07.3	240	56.4 ¹⁴⁰	15.1	99	52	15 59	39	22	31 69	16	19	
21	135	32.0	07.6	255	29.4 ¹⁴⁰	-16 05.1 ¹⁰⁰	100	54	49	32	17	23 72	24	17	
22	150	31.9	08.0	270	02.5 ¹⁴¹	-15 55.1 ¹⁰⁰	100	56	38	23	11	15 75	32	15	
23	165	31.8	08.3	284	35.6 ¹⁴¹	45.0 ¹⁰¹	101	58	25	14	17 05	20 06	78	42	12
24	180	31.7	+22 08.6	299	08.8 ¹⁴²	-15 34.9 ¹⁰¹	101	60 S	15 09	16 04	16 59	19 56	81	11 53	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 21 ^m 3		Mag: -3.9 PMG: 14 ^h 26 ^m		Mag: +1.1 PMG: 17 ^h 19 ^m		Mag: -2.3 PMG: 7 ^h 21 ^m		Mag: +1.0 PMG: 19 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	249	22.5	143 41.1	+24 31.8	99 52.4	+13 54.5	249 36.1	-1 21.2	70 23.8	+3 05.2
1	264	24.9	158 40.3	31.5	114 53.7	54.0	264 38.3	21.0	85 26.2	05.2
2	279	27.4	173 39.5	31.3	129 54.9	53.6	279 40.4	20.9	100 28.7	05.2
3	294	29.9	188 38.8	31.0	144 56.2	53.1	294 42.5	20.7	115 31.2	05.2
4	309	32.3	203 38.0	30.7	159 57.4	52.6	309 44.6	20.6	130 33.6	05.2
5	324	34.8	218 37.2	+24 30.4	174 58.7	+13 52.1	324 46.8	-1 20.5	145 36.1	+3 05.2
6	339	37.3	233 36.4	+24 30.2	190 00.0	+13 51.6	339 48.9	-1 20.3	160 38.6	+3 05.2
7	354	39.7	248 35.7	29.9	205 01.2	51.2	354 51.0	20.2	175 41.0	05.2
8	9	42.2	263 34.9	29.6	220 02.5	50.7	9 53.1	20.1	190 43.5	05.2
9	24	44.6	278 34.1	29.3	235 03.7	50.2	24 55.2	19.9	205 45.9	05.1
10	39	47.1	293 33.3	29.0	250 05.0	49.7	39 57.4	19.8	220 48.4	05.1
11	54	49.6	308 32.5	+24 28.7	265 06.2	+13 49.3	54 59.5	-1 19.6	235 50.9	+3 05.1
12	69	52.0	323 31.8	+24 28.5	280 07.5	+13 48.8	70 01.6	-1 19.5	250 53.3	+3 05.1
13	84	54.5	338 31.0	28.2	295 08.7	48.3	85 03.7	19.4	265 55.8	05.1
14	99	57.0	353 30.2	27.9	310 10.0	47.8	100 05.9	19.2	280 58.2	05.1
15	114	59.4	8 29.5	27.6	325 11.2	47.3	115 08.0	19.1	296 00.7	05.1
16	130	01.9	23 28.7	27.3	340 12.5	46.9	130 10.1	19.0	311 03.2	05.1
17	145	04.4	38 27.9	+24 27.0	355 13.7	+13 46.4	145 12.2	-1 18.8	326 05.6	+3 05.1
18	160	06.8	53 27.1	+24 26.7	10 15.0	+13 45.9	160 14.4	-1 18.7	341 08.1	+3 05.0
19	175	09.3	68 26.4	26.4	25 16.3	45.4	175 16.5	18.6	356 10.5	05.0
20	190	11.8	83 25.6	26.1	40 17.5	44.9	190 18.6	18.4	11 13.0	05.0
21	205	14.2	98 24.8	25.9	55 18.8	44.5	205 20.7	18.3	26 15.5	05.0
22	220	16.7	113 24.0	25.6	70 20.0	44.0	220 22.9	18.1	41 17.9	05.0
23	235	19.1	128 23.3	25.3	85 21.3	43.5	235 25.0	18.0	56 20.4	05.0
24	250	21.6	143 22.5	+24 25.0	100 22.5	+13 43.0	250 27.1	-1 17.9	71 22.8	+3 05.0
Dif	—		-8	-3	+13	-5	+21	+1	+25	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 0				Edad: 19 ^d 0 PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3 PMG: 4 ^h 11 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	31.7	+22	08.6	299	08.8	-15	34.9	60 N	** **	1 24	2 48	0 00	7	8 35	80		
1	195	31.6		09.0	313	42.1 ¹⁴³		24.7 ¹⁰²	58	** **	1 59	3 06	** **	**	43	77		
2	210	31.6		09.3	328	15.4 ¹⁴³		14.4 ¹⁰³	56	** **	2 23	21	23 54	11	51	74		
3	225	31.5		09.6	342	48.8 ¹⁴⁴	-15	04.1 ¹⁰³	54	1 16	43	34	49 13		8 58	72		
4	240	31.4		09.9	357	22.2 ¹⁴⁴	-14	53.8 ¹⁰³	52	1 49	2 59	45	45 15		9 04	69		
5	255	31.3	+22	10.3	11	55.7 ¹⁴⁵	-14	43.3 ¹⁰⁵	50	2 12	3 12	3 55	23 40	17	9 10	67		
6	270	31.2	+22	10.6	26	29.3 ¹⁴⁶	-14	32.9 ¹⁰⁴	45	2 52	3 40	4 16	23 31	21	9 22	63		
7	285	31.1		10.9	41	02.9 ¹⁴⁶		22.3 ¹⁰⁶	40	3 20	4 01	33	23 25		32	59		
8	300	31.0		11.2	55	36.6 ¹⁴⁷		11.7 ¹⁰⁶	35	42	18	47	17 27		40	56		
9	315	30.9		11.6	70	10.4 ¹⁴⁸	-14	01.1 ¹⁰⁶	30	3 59	32	4 59	11 29		9 47	54		
10	330	30.8		11.9	84	44.2 ¹⁴⁸	-13	50.4 ¹⁰⁷	20	4 27	4 56	5 20	23 01	34	10 00	50		
11	345	30.7	+22	12.2	99	18.0 ¹⁴⁸	-13	39.7 ¹⁰⁷	10 N	4 48	5 15	5 38	22 52	37	10 11	46		
12	0	30.6	+22	12.5	113	51.9 ¹⁴⁹	-13	28.9 ¹⁰⁸	0	5 06	5 32	5 54	22 43	42	10 21	42		
13	15	30.5		12.9	128	25.9 ¹⁵⁰		18.0 ¹⁰⁹	10 S	22	5 48	6 11	35 45		31	39		
14	30	30.4		13.2	142	59.9 ¹⁵⁰	-13	07.1 ¹⁰⁹	20	37	6 04	28	26 49	42	35			
15	45	30.3		13.5	157	34.0 ¹⁵¹	-12	56.2 ¹⁰⁹	30	5 52	22	6 48	15 54		10 55	30		
16	60	30.2		13.8	172	08.1 ¹⁵¹		45.2 ¹¹⁰	35	6 01	32	7 00	09 56		11 02	28		
17	75	30.1	+22	14.1	186	42.2 ¹⁵¹	-12	34.1 ¹¹¹	40	6 09	6 43	7 13	22 03	58	11 10	25		
18	90	30.0	+22	14.4	201	16.4 ¹⁵²	-12	23.1 ¹¹⁰	45	6 19	6 55	7 29	21 55	62	11 19	22		
19	105	29.9		14.8	215	50.7 ¹⁵³		11.9 ¹¹²	50	29	7 10	48	45 66		30	18		
20	120	29.8		15.1	230	25.0 ¹⁵³	-12	00.8 ¹¹¹	52	34	17	7 57	40 69		35	16		
21	135	29.7		15.4	244	59.4 ¹⁵⁴	-11	49.5 ¹¹³	54	39	25	8 07	35 71		41	14		
22	150	29.6		15.7	259	33.8 ¹⁵⁴		38.3 ¹¹²	56	45	33	19	30 73		47	12		
23	165	29.5		16.0	274	08.2 ¹⁵⁴		27.0 ¹¹³	58	51	42	32	24 76		11 54	9		
24	180	29.4	+22	16.3	288	42.7 ¹⁵⁵	-11	15.6 ¹¹⁴	60 S	6 58	7 53	8 48	21 17	79	12 02	6		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 17 ^m 4		Mag: -3.9 PMG: 14 ^h 27 ^m				Mag: +1.1 PMG: 17 ^h 17 ^m				Mag: -2.3 PMG: 7 ^h 17 ^m				Mag: +1.0 PMG: 19 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	21.6	143	22.5	+24	25.0	100	22.5	+13	43.0	250	27.1	-1	17.9	71	22.8	+3	05.0
1	265	24.1	158	21.7		24.7	115	23.8		42.5	265	29.2		17.7	86	25.3		05.0
2	280	26.5	173	21.0		24.4	130	25.0		42.0	280	31.4		17.6	101	27.8		05.0
3	295	29.0	188	20.2		24.1	145	26.3		41.6	295	33.5		17.5	116	30.2		04.9
4	310	31.5	203	19.4		23.8	160	27.5		41.1	310	35.6		17.3	131	32.7		04.9
5	325	33.9	218	18.7	+24	23.4	175	28.8	+13	40.6	325	37.8	-1	17.2	146	35.1	+3	04.9
6	340	36.4	233	17.9	+24	23.1	190	30.0	+13	40.1	340	39.9	-1	17.1	161	37.6	+3	04.9
7	355	38.9	248	17.1		22.8	205	31.3		39.6	355	42.0		16.9	176	40.1		04.9
8	10	41.3	263	16.4		22.5	220	32.5		39.2	10	44.1		16.8	191	42.5		04.9
9	25	43.8	278	15.6		22.2	235	33.8		38.7	25	46.3		16.7	206	45.0		04.9
10	40	46.2	293	14.8		21.9	250	35.0		38.2	40	48.4		16.5	221	47.4		04.9
11	55	48.7	308	14.1	+24	21.6	265	36.3	+13	37.7	55	50.5	-1	16.4	236	49.9	+3	04.8
12	70	51.2	323	13.3	+24	21.3	280	37.5	+13	37.2	70	52.7	-1	16.3	251	52.3	+3	04.8
13	85	53.6	338	12.5		21.0	295	38.8		36.7	85	54.8		16.1	266	54.8		04.8
14	100	56.1	353	11.8		20.7	310	40.0		36.3	100	56.9		16.0	281	57.3		04.8
15	115	58.6	8	11.0		20.3	325	41.3		35.8	115	59.0		15.9	296	59.7		04.8
16	131	01.0	23	10.2		20.0	340	42.5		35.3	131	01.2		15.7	312	02.2		04.8
17	146	03.5	38	09.5	+24	19.7	355	43.8	+13	34.8	146	03.3	-1	15.6	327	04.6	+3	04.8
18	161	06.0	53	08.7	+24	19.4	10	45.0	+13	34.3	161	05.4	-1	15.5	342	07.1	+3	04.7
19	176	08.4	68	07.9		19.1	25	46.3		33.8	176	07.6		15.3	357	09.5		04.7
20	191	10.9	83	07.2		18.7	40	47.5		33.3	191	09.7		15.2	12	12.0		04.7
21	206	13.4	98	06.4		18.4	55	48.8		32.9	206	11.8		15.0	27	14.5		04.7
22	221	15.8	113	05.7		18.1	70	50.0		32.4	221	14.0		14.9	42	16.9		04.7
23	236	18.3	128	04.9		17.8	85	51.3		31.9	236	16.1		14.8	57	19.4		04.7
24	251	20.7	143	04.1	+24	17.4	100	52.5	+13	31.4	251	18.2	-1	14.6	72	21.8	+3	04.7
Dif	—		-8		-3		+12		-5		+21		+1		+25			
															0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8			Edad: 20 ^d 0 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2										
	PMG: 11 ^h 58 ^m 1			SD: 14'8 PMG: 4 ^h 53 ^m R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	29.4	+22 16.3	288	42.7	-11 15.6	113	60 N	21 11	22 38	** **	0 07 5	9 55 78	
1	195	29.3	16.6	303	17.3 ¹⁵⁶	-11 04.3	113	58	20 52	22 01	** **	0 00 8	10 00 76	
2	210	29.2	17.0	317	51.8 ¹⁵⁵	-10 52.8	115	56	37	21 36	** **	** ** *	05 73	
3	225	29.1	17.3	332	26.5 ¹⁵⁷	41.4	114	54	24	21 16	22 45	** ** *	10 70	
4	240	29.0	17.6	347	01.1 ¹⁵⁶	29.9	115	52	12	20 59	22 11	** ** *	13 69	
5	255	28.9	+22 17.9	1	35.8 ¹⁵⁷	-10 18.3	116	50	20 02	20 45	21 47	23 57 16	10 17 66	
6	270	28.7	+22 18.2	16	10.6 ¹⁵⁸	-10 06.7	116	45	19 41	20 18	21 06	23 52 20	10 25 62	
7	285	28.6	18.5	30	45.3 ¹⁵⁷	-9 55.1	116	40	24	19 56	20 37	48 23	31 59	
8	300	28.5	18.8	45	20.2 ¹⁵⁹	43.5	116	35	19 10	39	20 15	44 26	36 56	
9	315	28.4	19.1	59	55.0 ¹⁵⁸	31.8	117	30	18 57	25	19 57	40 29	41 53	
10	330	28.3	19.4	74	29.9 ¹⁵⁹	20.1	117	20	37	19 01	30	35 32	50 48	
11	345	28.2	+22 19.7	89	04.8 ¹⁵⁹	-9 08.3	118	10 N	18 18	18 41	19 08	23 29 37	10 57 44	
12	0	28.1	+22 20.0	103	39.8 ¹⁶⁰	-8 56.5	118	0	18 02	18 24	18 50	23 25 40	11 03 41	
13	15	28.0	20.3	118	14.8 ¹⁶⁰	44.7	118	10 S	17 45	18 08	34	20 44	10 37	
14	30	27.9	20.6	132	49.8 ¹⁶⁰	32.8	119	20	28	17 51	19	15 48	17 33	
15	45	27.8	20.9	147	24.8 ¹⁶⁰	21.0	118	30	17 07	34	18 03	09 52	25 29	
16	60	27.7	21.2	161	59.9 ¹⁶¹	-8 09.0	120	35	16 56	24	17 55	05 56	30 26	
17	75	27.6	+22 21.5	176	35.0 ¹⁶¹	-7 57.1	119	40	16 42	17 13	17 46	23 01 59	11 35 23	
18	90	27.5	+22 21.8	191	10.1 ¹⁶¹	-7 45.1	120	45	16 27	17 00	17 37	22 57 62	11 41 20	
19	105	27.4	22.1	205	45.3 ¹⁶²	33.1	120	50	16 07	16 45	26	51 66	48 16	
20	120	27.3	22.4	220	20.5 ¹⁶²	21.1	120	52	15 58	38	21	49 68	51 14	
21	135	27.2	22.7	234	55.7 ¹⁶²	-7 09.0	121	54	48	30	16	46 70	55 12	
22	150	27.1	23.0	249	30.9 ¹⁶²	-6 56.9	121	56	36	22	10	43 73	11 59 10	
23	165	27.0	23.3	264	06.2 ¹⁶³	44.8	121	58	22	12	17 04	40 75	12 03 8	
24	180	26.9	+22 23.6	278	41.5 ¹⁶³	-6 32.7	121	60 S	15 07	16 02	16 57	22 36 78	12 08 5	
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO		
	PMG: 7 ^h 13 ^m 4			Mag: -3.9 PMG: 14 ^h 28 ^m			Mag: +1.1 PMG: 17 ^h 15 ^m			Mag: -2.3 PMG: 7 ^h 14 ^m		Mag: +1.0 PMG: 19 ^h 07 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'
0	251	20.7	143 04.1	+24 17.4	100 52.5	+13 31.4	251 18.2	-1 14.6	72 21.8	+3 04.7				
1	266	23.2	158 03.4	17.1	115 53.8	30.9	266 20.4	14.5	87 24.3	04.7				
2	281	25.7	173 02.6	16.8	130 55.0	30.4	281 22.5	14.4	102 26.7	04.6				
3	296	28.1	188 01.8	16.5	145 56.3	30.0	296 24.6	14.3	117 29.2	04.6				
4	311	30.6	203 01.1	16.1	160 57.5	29.5	311 26.7	14.1	132 31.6	04.6				
5	326	33.1	218 00.3	+24 15.8	175 58.8	+13 29.0	326 28.9	-1 14.0	147 34.1	+3 04.6				
6	341	35.5	232 59.6	+24 15.5	191 00.0	+13 28.5	341 31.0	-1 13.9	162 36.5	+3 04.6				
7	356	38.0	247 58.8	15.1	206 01.2	28.0	356 33.1	13.7	177 39.0	04.6				
8	11	40.5	262 58.1	14.8	221 02.5	27.5	11 35.3	13.6	192 41.5	04.6				
9	26	42.9	277 57.3	14.4	236 03.7	27.0	26 37.4	13.5	207 43.9	04.5				
10	41	45.4	292 56.5	14.1	251 05.0	26.5	41 39.5	13.3	222 46.4	04.5				
11	56	47.9	307 55.8	+24 13.8	266 06.2	+13 26.1	56 41.7	-1 13.2	237 48.8	+3 04.5				
12	71	50.3	322 55.0	+24 13.4	281 07.5	+13 25.6	71 43.8	-1 13.1	252 51.3	+3 04.5				
13	86	52.8	337 54.3	13.1	296 08.7	25.1	86 45.9	12.9	267 53.7	04.5				
14	101	55.2	352 53.5	12.7	311 10.0	24.6	101 48.1	12.8	282 56.2	04.5				
15	116	57.7	7 52.8	12.4	326 11.2	24.1	116 50.2	12.7	297 58.6	04.5				
16	132	00.2	22 52.0	12.1	341 12.5	23.6	131 52.4	12.5	313 01.1	04.4				
17	147	02.6	37 51.3	+24 11.7	356 13.7	+13 23.1	146 54.5	-1 12.4	328 03.5	+3 04.4				
18	162	05.1	52 50.5	+24 11.4	11 15.0	+13 22.6	161 56.6	-1 12.3	343 06.0	+3 04.4				
19	177	07.6	67 49.8	11.0	26 16.2	22.2	176 58.8	12.1	358 08.4	04.4				
20	192	10.0	82 49.0	10.7	41 17.4	21.7	192 00.9	12.0	13 10.9	04.4				
21	207	12.5	97 48.2	10.3	56 18.7	21.2	207 03.0	11.9	28 13.3	04.4				
22	222	15.0	112 47.5	10.0	71 19.9	20.7	222 05.2	11.7	43 15.8	04.3				
23	237	17.4	127 46.7	09.6	86 21.2	20.2	237 07.3	11.6	58 18.2	04.3				
24	252	19.9	142 46.0	+24 09.3	101 22.4	+13 19.7	252 09.4	-1 11.5	73 20.7	+3 04.3				
Dif	—		-8	-3	+12	-5	+21	+1	+25	0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 3			Edad: 21 ^d 0 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 3 20 ^h : 54 ^m 3 PMG: 5 ^h 34 ^m R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	26.9	+22	278	41.5	-6 32.7	60 N	** **	1 18	2 45	0 12	4	11 13	79
1	195	26.8		293	16.8 ¹⁶³	20.5 ¹²²	58	** **	1 55	3 04	08	7	16	75
2	210	26.7		307	52.1 ¹⁶³	-6 08.3 ¹²²	56	** **	2 20	19	05	10	18	73
3	225	26.6		322	27.4 ¹⁶³	-5 56.1 ¹²²	54	1 11	40	32	02	12	20	70
4	240	26.5		337	02.8 ¹⁶⁴	43.9 ¹²²	52	1 45	2 57	44	0 00	13	22	68
5	255	26.3	+22	351	38.2 ¹⁶⁴	-5 31.6 ¹²³	50	2 09	3 11	3 54	** **	**	11 23	66
6	270	26.2	+22	6	13.5 ¹⁶³	-5 19.4 ¹²²	45	2 51	3 39	4 15	** **	**	11 27	62
7	285	26.1		20	49.0 ¹⁶⁵	-5 07.1 ¹²³	40	3 19	4 00	32	** **	**	30	58
8	300	26.0		35	24.4 ¹⁶⁴	-4 54.7 ¹²⁴	35	41	17	46	** **	**	32	55
9	315	25.9		49	59.8 ¹⁶⁴	42.4 ¹²³	30	3 59	32	4 59	** **	**	34	53
10	330	25.8		64	35.2 ¹⁶⁴	30.0 ¹²⁴	20	4 27	4 55	5 20	** **	**	38	48
11	345	25.7	+22	79	10.7 ¹⁶⁵	-4 17.7 ¹²³	10 N	4 48	5 15	5 38	** **	**	11 41	44
12	0	25.6	+22	93	46.2 ¹⁶⁵	-4 05.3 ¹²⁴	0	5 06	5 32	5 55	** **	**	11 44	40
13	15	25.5		108	21.6 ¹⁶⁴	-3 52.8 ¹²⁵	10 S	22	5 49	6 11	** **	**	47	37
14	30	25.4		122	57.1 ¹⁶⁵	40.4 ¹²⁴	20	38	6 05	29	** **	**	50	33
15	45	25.3		137	32.6 ¹⁶⁵	28.0 ¹²⁴	30	5 53	23	6 49	** **	**	54	28
16	60	25.2		152	08.1 ¹⁶⁵	15.5 ¹²⁵	35	6 02	33	7 01	** **	**	56	25
17	75	25.1	+22	166	43.6 ¹⁶⁵	-3 03.0 ¹²⁵	40	6 10	6 44	7 14	** **	**	11 58	23
18	90	25.0	+22	181	19.1 ¹⁶⁵	-2 50.5 ¹²⁵	45	6 20	6 57	7 30	23 59	62	12 01	19
19	105	24.8		195	54.6 ¹⁶⁵	38.0 ¹²⁵	50	31	7 12	50	57	67	04	15
20	120	24.7		210	30.1 ¹⁶⁵	25.5 ¹²⁵	52	36	19	7 59	57	68	05	14
21	135	24.6		225	05.6 ¹⁶⁵	13.0 ¹²⁵	54	41	27	8 09	56	71	07	12
22	150	24.5		239	41.1 ¹⁶⁵	-2 00.4 ¹²⁶	56	47	35	21	56	73	09	9
23	165	24.4		254	16.6 ¹⁶⁵	-1 47.9 ¹²⁵	58	6 53	45	35	55	75	11	7
24	180	24.3	+22	268	52.1 ¹⁶⁵	-1 35.3 ¹²⁶	60 S	7 00	7 55	8 51	23 54	79	12 13	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 09 ^m 5		Mag: -3.9 PMG: 14 ^h 30 ^m			Mag: +1.1 PMG: 17 ^h 13 ^m			Mag: -2.4 PMG: 7 ^h 10 ^m			Mag: +1.0 PMG: 19 ^h 04 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	252	19.9	142	46.0	+24 09.3	101	22.4	+13 19.7	252	09.4	-1 11.5	73	20.7	+3 04.3
1	267	22.3	157	45.2	08.9	116	23.7	19.2	267	11.6	11.3	88	23.1	04.3
2	282	24.8	172	44.5	08.5	131	24.9	18.7	282	13.7	11.2	103	25.6	04.3
3	297	27.3	187	43.7	08.2	146	26.2	18.3	297	15.9	11.1	118	28.0	04.3
4	312	29.7	202	43.0	07.8	161	27.4	17.8	312	18.0	11.0	133	30.5	04.3
5	327	32.2	217	42.2	+24 07.5	176	28.6	+13 17.3	327	20.1	-1 10.8	148	32.9	+3 04.2
6	342	34.7	232	41.5	+24 07.1	191	29.9	+13 16.8	342	22.3	-1 10.7	163	35.4	+3 04.2
7	357	37.1	247	40.7	06.7	206	31.1	16.3	357	24.4	10.6	178	37.8	04.2
8	12	39.6	262	40.0	06.4	221	32.4	15.8	12	26.5	10.4	193	40.3	04.2
9	27	42.1	277	39.3	06.0	236	33.6	15.3	27	28.7	10.3	208	42.7	04.2
10	42	44.5	292	38.5	05.6	251	34.9	14.8	42	30.8	10.2	223	45.2	04.2
11	57	47.0	307	37.8	+24 05.3	266	36.1	+13 14.3	57	33.0	-1 10.0	238	47.6	+3 04.1
12	72	49.5	322	37.0	+24 04.9	281	37.3	+13 13.8	72	35.1	-1 09.9	253	50.1	+3 04.1
13	87	51.9	337	36.3	04.5	296	38.6	13.3	87	37.2	09.8	268	52.5	04.1
14	102	54.4	352	35.5	04.2	311	39.8	12.9	102	39.4	09.7	283	55.0	04.1
15	117	56.8	7	34.8	03.8	326	41.1	12.4	117	41.5	09.5	298	57.4	04.1
16	132	59.3	22	34.0	03.4	341	42.3	11.9	132	43.7	09.4	313	59.9	04.1
17	148	01.8	37	33.3	+24 03.0	356	43.5	+13 11.4	147	45.8	-1 09.3	329	02.3	+3 04.0
18	163	04.2	52	32.6	+24 02.7	11	44.8	+13 10.9	162	47.9	-1 09.1	344	04.8	+3 04.0
19	178	06.7	67	31.8	02.3	26	46.0	10.4	177	50.1	09.0	359	07.2	04.0
20	193	09.2	82	31.1	01.9	41	47.3	09.9	192	52.2	08.9	14	09.7	04.0
21	208	11.6	97	30.3	01.5	56	48.5	09.4	207	54.4	08.8	29	12.1	04.0
22	223	14.1	112	29.6	01.2	71	49.8	08.9	222	56.5	08.6	44	14.6	04.0
23	238	16.6	127	28.8	00.8	86	51.0	08.4	237	58.6	08.5	59	17.0	03.9
24	253	19.0	142	28.1	+24 00.4	101	52.2	+13 07.9	253	00.8	-1 08.4	74	19.5	+3 03.9
Dif	—		-7 -4		+12 -5		+21 +1				+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 58 ^m 5			Edad: 22 ^d 0	PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	180	24.3	+22	30.5	268	52.1	-1 35.3	60 N	21 14	22 44	** **	0 16	5	12 32	79
1	195	24.2		30.8	283	27.6 ¹⁶⁵	22.7 ¹²⁶	58	20 55	22 05	** **	15	8	31	76
2	210	24.1		31.1	298	03.1 ¹⁶⁵	-1 10.1 ¹²⁶	56	39	21 39	** **	15	9	31	73
3	225	24.0		31.4	312	38.5 ¹⁶⁴	-0 57.6 ¹²⁵	54	26	18	22 51	14	12	30	77
4	240	23.9		31.7	327	14.0 ¹⁶⁵	44.9 ¹²⁷	52	14	21 02	22 15	13	14	30	69
5	255	23.8	+22	31.9	341	49.5 ¹⁶⁵	-0 32.3 ¹²⁶	50	20 04	20 48	21 50	0 13	15	12 29	67
6	270	23.6	+22	32.2	356	25.0 ¹⁶⁵	-0 19.7 ¹²⁶	45	19 43	20 19	21 08	0 12	19	12 29	62
7	285	23.5		32.5	11	00.4 ¹⁶⁴	-0 07.1 ¹²⁶	40	25	19 58	20 39	11	22	28	59
8	300	23.4		32.8	25	35.8 ¹⁶⁴	+0 05.5 ¹²⁶	35	19 11	40	20 17	10	25	27	57
9	315	23.3		33.0	40	11.3 ¹⁶⁵	18.2 ¹²⁷	30	18 58	26	19 59	09	28	27	53
10	330	23.2		33.3	54	46.7 ¹⁶⁴	30.8 ¹²⁶	20	37	19 02	31	07	33	26	49
11	345	23.1	+22	33.6	69	22.1 ¹⁶⁴	+0 43.5 ¹²⁷	10 N	18 19	18 42	19 09	0 06	37	12 25	45
12	0	23.0	+22	33.9	83	57.5 ¹⁶⁴	+0 56.1 ¹²⁶	0	18 02	18 25	18 51	0 05	41	12 24	41
13	15	22.9		34.1	98	32.8 ¹⁶³	+1 08.8 ¹²⁷	10 S	17 45	18 08	34	04	44	24	37
14	30	22.8		34.4	113	08.2 ¹⁶⁴	21.4 ¹²⁶	20	28	17 51	19	03	48	23	33
15	45	22.6		34.7	127	43.5 ¹⁶³	34.1 ¹²⁷	30	17 07	33	18 03	01	53	22	29
16	60	22.5		34.9	142	18.8 ¹⁶³	46.7 ¹²⁶	35	16 55	23	17 55	01	55	21	27
17	75	22.4	+22	35.2	156	54.1 ¹⁶³	+1 59.4 ¹²⁷	40	16 42	17 12	17 46	0 00	58	12 21	23
18	90	22.3	+22	35.5	171	29.4 ¹⁶³	+2 12.0 ¹²⁶	45	16 26	16 59	17 36	** ** *	**	12 20	20
19	105	22.2		35.7	186	04.6 ¹⁶²	24.7 ¹²⁷	50	16 06	44	25	** ** *	**	19	16
20	120	22.1		36.0	200	39.8 ¹⁶²	37.3 ¹²⁶	52	15 57	37	20	** ** *	**	19	14
21	135	22.0		36.3	215	15.0 ¹⁶²	+2 50.0 ¹²⁷	54	46	29	15	** ** *	**	19	11
22	150	21.9		36.5	229	50.2 ¹⁶²	+3 02.6 ¹²⁶	56	34	21	09	** ** *	**	18	10
23	165	21.8		36.8	244	25.3 ¹⁶¹	15.3 ¹²⁷	58	21	11	17 03	** ** *	**	18	7
24	180	21.6	+22	37.1	259	00.5 ¹⁶²	+3 27.9 ¹²⁶	60 S	15 04	16 00	16 56	** ** *	**	12 17	4
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 7 ^h 05 ^m 6		Mag: -4.0 PMG: 14 ^h 31 ^m		Mag: +1.2 PMG: 17 ^h 11 ^m		Mag: -2.4 PMG: 7 ^h 07 ^m		Mag: +1.0 PMG: 19 ^h 00 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	253	19.0	142	28.1	+24 00.4	101	52.2	+13 07.9	253	00.8	-1 08.4	74	19.5	+3 03.9	
1	268	21.5	157	27.4	+24 00.0	116	53.5	07.4	268	02.9	08.2	89	21.9	03.9	
2	283	24.0	172	26.6	+23 59.6	131	54.7	06.9	283	05.1	08.1	104	24.4	03.9	
3	298	26.4	187	25.9	59.2	146	56.0	06.5	298	07.2	08.0	119	26.8	03.9	
4	313	28.9	202	25.1	58.9	161	57.2	06.0	313	09.3	07.9	134	29.3	03.9	
5	328	31.3	217	24.4	+23 58.5	176	58.4	+13 05.5	328	11.5	-1 07.7	149	31.7	+3 03.8	
6	343	33.8	232	23.7	+23 58.1	191	59.7	+13 05.0	343	13.6	-1 07.6	164	34.2	+3 03.8	
7	358	36.3	247	22.9	57.7	207	00.9	04.5	358	15.8	07.5	179	36.6	03.8	
8	13	38.7	262	22.2	57.3	222	02.1	04.0	13	17.9	07.3	194	39.0	03.8	
9	28	41.2	277	21.5	56.9	237	03.4	03.5	28	20.1	07.2	209	41.5	03.8	
10	43	43.7	292	20.7	56.5	252	04.6	03.0	43	22.2	07.1	224	43.9	03.8	
11	58	46.1	307	20.0	+23 56.1	267	05.9	+13 02.5	58	24.4	-1 07.0	239	46.4	+3 03.7	
12	73	48.6	322	19.3	+23 55.7	282	07.1	+13 02.0	73	26.5	-1 06.8	254	48.8	+3 03.7	
13	88	51.1	337	18.5	55.3	297	08.3	01.5	88	28.6	06.7	269	51.3	03.7	
14	103	53.5	352	17.8	54.9	312	09.6	01.0	103	30.8	06.6	284	53.7	03.7	
15	118	56.0	7	17.1	54.5	327	10.8	+13 00.5	118	32.9	06.4	299	56.2	03.7	
16	133	58.4	22	16.3	54.1	342	12.1	+13 00.0	133	35.1	06.3	314	58.6	03.6	
17	149	00.9	37	15.6	+23 53.7	357	13.3	+12 59.5	148	37.2	-1 06.2	330	01.1	+3 03.6	
18	164	03.4	52	14.9	+23 53.3	12	14.5	+12 59.0	163	39.4	-1 06.1	345	03.5	+3 03.6	
19	179	05.8	67	14.1	52.9	27	15.8	58.5	178	41.5	05.9	0	05.9	03.6	
20	194	08.3	82	13.4	52.5	42	17.0	58.0	193	43.7	05.8	15	08.4	03.6	
21	209	10.8	97	12.7	52.1	57	18.2	57.6	208	45.8	05.7	30	10.8	03.5	
22	224	13.2	112	11.9	51.7	72	19.5	57.1	223	48.0	05.6	45	13.3	03.5	
23	239	15.7	127	11.2	51.3	87	20.7	56.6	238	50.1	05.4	60	15.7	03.5	
24	254	18.2	142	10.5	+23 50.9	102	22.0	+12 56.1	253	52.2	-1 05.3	75	18.2	+3 03.5	
Dif	—		-7		-4		+12		+21		+1		+24		0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 6				Edad: 23 ^d 0 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1 PMG: 6 ^h 56 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	21.6	+22	37.1	259	00.5	+3	27.9	60 N	** **	1 13	2 43	0 21	5	13	51	82	
1	195	21.5		37.3	273	35.5 ¹⁶⁰		40.5 ¹²⁶	58	** **	1 52	3 02	23	7		47	79	
2	210	21.4		37.6	288	10.6 ¹⁶¹	+3	53.2 ¹²⁷	56	** **	2 18	18	24	11		44	76	
3	225	21.3		37.9	302	45.6 ¹⁶⁰	+4	05.8 ¹²⁶	54	1 06	38	31	26	12		41	74	
4	240	21.2		38.1	317	20.6 ¹⁶⁰		18.4 ¹²⁶	52	1 42	2 55	43	27	15		39	71	
5	255	21.1	+22	38.4	331	55.6 ¹⁶⁰	+4	31.0 ¹²⁶	50	2 07	3 09	3 53	0 28	17	13	36	70	
6	270	21.0	+22	38.6	346	30.5 ¹⁵⁹	+4	43.6 ¹²⁶	45	2 49	3 38	4 14	0 31	21	13	31	65	
7	285	20.8		38.9	1	05.4 ¹⁵⁹	+4	56.2 ¹²⁶	40	3 18	3 59	32	33	24		27	61	
8	300	20.7		39.1	15	40.2 ¹⁵⁸	+5	08.7 ¹²⁵	35	40	4 17	46	35	27		24	58	
9	315	20.6		39.4	30	15.0 ¹⁵⁸		21.3 ¹²⁶	30	3 58	31	4 59	37	30		20	56	
10	330	20.5		39.7	44	49.8 ¹⁵⁸		33.9 ¹²⁶	20	4 26	4 55	5 20	40	34		15	51	
11	345	20.4	+22	39.9	59	24.5 ¹⁵⁷	+5	46.4 ¹²⁵	10 N	4 48	5 15	5 38	0 43	38	13	10	47	
12	0	20.3	+22	40.2	73	59.2 ¹⁵⁷	+5	58.9 ¹²⁵	0	5 07	5 33	5 55	0 46	41	13	05	43	
13	15	20.2		40.4	88	33.9 ¹⁵⁷	+6	11.4 ¹²⁵	10 S	23	5 49	6 12	48	46	13	01	39	
14	30	20.0		40.7	103	08.5 ¹⁵⁶		23.9 ¹²⁵	20	38	6 06	30	51	50	12	56	35	
15	45	19.9		40.9	117	43.0 ¹⁵⁵		36.4 ¹²⁵	30	5 54	24	6 50	54	55		51	30	
16	60	19.8		41.2	132	17.6 ¹⁵⁶	+6	48.9 ¹²⁵	35	6 03	34	7 02	56	57		48	28	
17	75	19.7	+22	41.4	146	52.0 ¹⁵⁴	+7	01.3 ¹²⁴	40	6 11	6 45	7 16	0 58	61	12	44	25	
18	90	19.6	+22	41.7	161	26.4 ¹⁵⁴	+7	13.8 ¹²⁵	45	6 21	6 58	7 32	1 01	64	12	40	22	
19	105	19.5		41.9	176	00.8 ¹⁵⁴		26.2 ¹²⁴	50	32	7 14	7 51	04	68		35	17	
20	120	19.4		42.2	190	35.1 ¹⁵³		38.6 ¹²⁴	52	37	21	8 01	05	71		33	15	
21	135	19.2		42.4	205	09.4 ¹⁵³	+7	51.0 ¹²⁴	54	43	28	11	07	72		30	14	
22	150	19.1		42.7	219	43.6 ¹⁵²	+8	03.3 ¹²³	56	48	37	23	09	74		28	11	
23	165	19.0		42.9	234	17.8 ¹⁵²		15.6 ¹²³	58	6 55	47	37	10	78		25	8	
24	180	18.9	+22	43.2	248	51.9 ¹⁵¹	+8	27.9 ¹²³	60 S	7 02	7 58	8 54	1 13	80	12	21	6	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 01 ^m 6		Mag: -4.0 PMG: 14 ^h 32 ^m				Mag: +1.2 PMG: 17 ^h 09 ^m				Mag: -2.4 PMG: 7 ^h 04 ^m				Mag: +1.0 PMG: 18 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	254	18.2	142	10.5	+23	50.9	102	22.0	+12	56.1	253	52.2	-1	05.3	75	18.2	+3	03.5
1	269	20.6	157	09.7		50.5	117	23.2		55.6	268	54.4		05.2	90	20.6		03.5
2	284	23.1	172	09.0		50.1	132	24.4		55.1	283	56.5		05.1	105	23.1		03.5
3	299	25.6	187	08.3		49.6	147	25.7		54.6	298	58.7		04.9	120	25.5		03.4
4	314	28.0	202	07.6		49.2	162	26.9		54.1	314	00.8		04.8	135	27.9		03.4
5	329	30.5	217	06.8	+23	48.8	177	28.1	+12	53.6	329	03.0	-1	04.7	150	30.4	+3	03.4
6	344	32.9	232	06.1	+23	48.4	192	29.4	+12	53.1	344	05.1	-1	04.6	165	32.8	+3	03.4
7	359	35.4	247	05.4		48.0	207	30.6		52.6	359	07.3		04.4	180	35.3		03.4
8	14	37.9	262	04.7		47.6	222	31.8		52.1	14	09.4		04.3	195	37.7		03.3
9	29	40.3	277	03.9		47.1	237	33.1		51.6	29	11.6		04.2	210	40.2		03.3
10	44	42.8	292	03.2		46.7	252	34.3		51.1	44	13.7		04.0	225	42.6		03.3
11	59	45.3	307	02.5	+23	46.3	267	35.5	+12	50.6	59	15.9	-1	03.9	240	45.0	+3	03.3
12	74	47.7	322	01.8	+23	45.9	282	36.8	+12	50.1	74	18.0	-1	03.8	255	47.5	+3	03.3
13	89	50.2	337	01.0		45.4	297	38.0		49.6	89	20.2		03.7	270	49.9		03.2
14	104	52.7	352	00.3		45.0	312	39.2		49.1	104	22.3		03.5	285	52.4		03.2
15	119	55.1	6	59.6		44.6	327	40.5		48.6	119	24.5		03.4	300	54.8		03.2
16	134	57.6	21	58.9		44.2	342	41.7		48.1	134	26.6		03.3	315	57.2		03.2
17	150	00.1	36	58.2	+23	43.7	357	42.9	+12	47.6	149	28.8	-1	03.2	330	59.7	+3	03.2
18	165	02.5	51	57.4	+23	43.3	12	44.2	+12	47.1	164	30.9	-1	03.0	346	02.1	+3	03.1
19	180	05.0	66	56.7		42.9	27	45.4		46.6	179	33.1		02.9	1	04.6		03.1
20	195	07.4	81	56.0		42.4	42	46.6		46.1	194	35.2		02.8	16	07.0		03.1
21	210	09.9	96	55.3		42.0	57	47.9		45.6	209	37.4		02.7	31	09.4		03.1
22	225	12.4	111	54.6		41.6	72	49.1		45.1	224	39.5		02.6	46	11.9		03.1
23	240	14.8	126	53.8		41.1	87	50.3		44.6	239	41.7		02.4	61	14.3		03.0
24	255	17.3	141	53.1	+23	40.7	102	51.6	+12	44.1	254	43.8	-1	02.3	76	16.8	+3	03.0
Dif	—		-7		-4		+12		-5		+21		+1		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 24 ^d 0	PHE {	4 ^h : 55 ^h 3 12 ^h : 55 ^h 4 20 ^h : 55 ^h 7			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 58 ^m 8								Civil		Náutico		Hora R°		Hora R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	18.9	+22 43.2	248	51.9	+8 27.9		60 N	21 17	22 50	** **	0 26 6	15 13 86		
1	195	18.8	43.4	263	26.0 ¹⁵¹	40.2 ¹²³		58	20 57	22 09	** **	30 10	06 83		
2	210	18.7	43.7	278	00.0 ¹⁵⁰	+8 52.5 ¹²³		56	42	21 42	** **	35 12	15 00 79		
3	225	18.5	43.9	292	33.9 ¹⁴⁹	+9 04.7 ¹²²		54	28	21	22 56	38 15	14 55 76		
4	240	18.4	44.2	307	07.8 ¹⁴⁹	16.9 ¹²²		52	16	21 04	22 18	42 17	50 74		
5	255	18.3	+22 44.4	321	41.6 ¹⁴⁸	+9 29.1 ¹²²		50	20 06	20 49	21 53	0 45 19	14 46 71		
6	270	18.2	+22 44.7	336	15.4 ¹⁴⁸	+9 41.3 ¹²²		45	19 44	20 21	21 10	0 52 23	14 36 67		
7	285	18.1	44.9	350	49.1 ¹⁴⁷	+9 53.4 ¹²¹		40	27	19 59	20 40	0 57 27	28 64		
8	300	18.0	45.1	5	22.7 ¹⁴⁶	+10 05.5 ¹²¹		35	19 12	41	18	1 02 30	22 60		
9	315	17.8	45.4	19	56.3 ¹⁴⁶	17.6 ¹²¹		30	18 59	27	20 00	07 32	16 57		
10	330	17.7	45.6	34	29.8 ¹⁴⁵	29.6 ¹²⁰		20	38	19 02	19 31	14 37	14 06 53		
11	345	17.6	+22 45.9	49	03.3 ¹⁴⁵	+10 41.6 ¹²⁰		10 N	18 20	18 43	19 09	1 21 41	13 57 49		
12	0	17.5	+22 46.1	63	36.7 ¹⁴⁴	+10 53.6 ¹²⁰		0	18 02	18 25	18 51	1 27 45	13 48 46		
13	15	17.4	46.3	78	10.0 ¹⁴³	+11 05.5 ¹¹⁹		10 S	17 46	18 08	35	34 48	40 42		
14	30	17.3	46.6	92	43.2 ¹⁴²	17.4 ¹¹⁹		20	28	17 51	19	41 52	31 39		
15	45	17.1	46.8	107	16.4 ¹⁴²	29.3 ¹¹⁹		30	17 07	33	18 03	49 56	21 34		
16	60	17.0	47.0	121	49.5 ¹⁴¹	41.1 ¹¹⁸		35	16 55	23	17 55	53 60	16 31		
17	75	16.9	+22 47.3	136	22.5 ¹⁴⁰	+11 52.9 ¹¹⁸		40	16 41	17 12	17 46	1 59 62	13 09 28		
18	90	16.8	+22 47.5	150	55.5 ¹⁴⁰	+12 04.7 ¹¹⁸		45	16 25	16 59	17 36	2 05 66	13 02 24		
19	105	16.7	47.7	165	28.4 ¹³⁹	16.4 ¹¹⁷		50	16 05	43	24	12 71	12 52 21		
20	120	16.5	48.0	180	01.2 ¹³⁸	28.0 ¹¹⁶		52	15 56	36	19	16 72	48 19		
21	135	16.4	48.2	194	33.9 ¹³⁷	39.7 ¹¹⁷		54	45	28	14	19 75	44 16		
22	150	16.3	48.4	209	06.6 ¹³⁷	+12 51.3 ¹¹⁶		56	33	20	08	23 78	39 13		
23	165	16.2	48.7	223	39.2 ¹³⁶	+13 02.8 ¹¹⁵		58	19	16 10	17 02	28 81	33 11		
24	180	16.1	+22 48.9	238	11.7 ¹³⁵	+13 14.3 ¹¹⁵		60 S	15 02	15 59	16 55	2 33 85	12 27 7		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 57 ^m 7		Mag: -4.0 PMG: 14 ^h 33 ^m		Mag: +1.2 PMG: 17 ^h 07 ^m		Mag: -2.4 PMG: 7 ^h 00 ^m		Mag: +1.0 PMG: 18 ^h 52 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	255	17.3	141	53.1	+23 40.7		254	43.8	-1 02.3	76 16.8	+3 03.0				
1	270	19.8	156	52.4	40.3	117 52.8	43.6	269 46.0	02.2	91 19.2	03.0				
2	285	22.2	171	51.7	39.8	132 54.0	43.1	284 48.1	02.1	106 21.6	03.0				
3	300	24.7	186	51.0	39.4	147 55.3	42.6	299 50.3	01.9	121 24.1	03.0				
4	315	27.2	201	50.3	38.9	162 56.5	42.1	314 52.4	01.8	136 26.5	02.9				
5	330	29.6	216	49.5	+23 38.5	177 57.7	+12 41.6	329 54.6	-1 01.7	151 29.0	+3 02.9				
6	345	32.1	231	48.8	+23 38.1	192 59.0	+12 41.1	344 56.7	-1 01.6	166 31.4	+3 02.9				
7	0	34.5	246	48.1	37.6	208 00.2	40.6	359 58.9	01.4	181 33.8	02.9				
8	15	37.0	261	47.4	37.2	223 01.4	40.1	15 01.1	01.3	196 36.3	02.9				
9	30	39.5	276	46.7	36.7	238 02.7	39.6	30 03.2	01.2	211 38.7	02.8				
10	45	41.9	291	46.0	36.3	253 03.9	39.1	45 05.4	01.1	226 41.1	02.8				
11	60	44.4	306	45.3	+23 35.8	268 05.1	+12 38.6	60 07.5	-1 00.9	241 43.6	+3 02.8				
12	75	46.9	321	44.5	+23 35.4	283 06.4	+12 38.1	75 09.7	-1 00.8	256 46.0	+3 02.8				
13	90	49.3	336	43.8	34.9	298 07.6	37.6	90 11.8	00.7	271 48.5	02.7				
14	105	51.8	351	43.1	34.5	313 08.8	37.1	105 14.0	00.6	286 50.9	02.7				
15	120	54.3	6	42.4	34.0	328 10.1	36.6	120 16.1	00.5	301 53.3	02.7				
16	135	56.7	21	41.7	33.6	343 11.3	36.1	135 18.3	00.3	316 55.8	02.7				
17	150	59.2	36	41.0	+23 33.1	358 12.5	+12 35.6	150 20.4	-1 00.2	331 58.2	+3 02.7				
18	166	01.7	51	40.3	+23 32.7	13 13.7	+12 35.1	165 22.6	-1 00.1	347 00.6	+3 02.6				
19	181	04.1	66	39.6	32.2	28 15.0	34.6	180 24.8	-1 00.0	2 03.1	02.6				
20	196	06.6	81	38.9	31.7	43 16.2	34.1	195 26.9	-0 59.8	17 05.5	02.6				
21	211	09.0	96	38.2	31.3	58 17.4	33.6	210 29.1	59.7	32 08.0	02.6				
22	226	11.5	111	37.5	30.8	73 18.7	33.1	225 31.2	59.6	47 10.4	02.6				
23	241	14.0	126	36.8	30.3	88 19.9	32.5	240 33.4	59.5	62 12.8	02.5				
24	256	16.4	141	36.1	+23 29.9	103 21.1	+12 32.0	255 35.5	-0 59.4	77 15.3	+3 02.5				
Dif	—		-7	-5		+12	-5	+22	+1		+24	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: 25 ^d 0 PHE { 4 ^h : 55 ^h 9 12 ^h : 56 ^h 1 20 ^h : 56 ^h 3 PMG: 8 ^h 23 ^m R°: 48 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	16.1	+22	48.9	238	11.7	+13	14.3	60 N	** **	1 07	2 41	0 32	9	16 39	90	
1	195	16.0		49.1	252	44.1 ¹³⁴		25.7 ¹¹⁴	58	** **	1 49	3 00	40 13	29 85			
2	210	15.8		49.4	267	16.5 ¹³⁴		37.1 ¹¹⁴	56	** **	2 16	16	47 16	19 82			
3	225	15.7		49.6	281	48.7 ¹³²		48.5 ¹¹⁴	54	1 02	37	30	53 19	11 79			
4	240	15.6		49.8	296	20.9 ¹³²	+13	59.8 ¹¹³	52	1 40	2 54	42	0 59	20	16 04	76	
5	255	15.5	+22	50.0	310	53.0 ¹³¹	+14	11.1 ¹¹³	50	2 05	3 08	3 52	1 04	23	15 57	74	
6	270	15.4	+22	50.3	325	25.0 ¹³⁰	+14	22.3 ¹¹²	45	2 48	3 37	4 14	1 15	27	15 43	70	
7	285	15.2		50.5	339	57.0 ¹³⁰		33.4 ¹¹¹	40	3 17	3 59	31	24 31	32 66			
8	300	15.1		50.7	354	28.8 ¹²⁸		44.5 ¹¹¹	35	40	4 16	46	32 33	22 63			
9	315	15.0		50.9	9	00.6 ¹²⁸	+14	55.5 ¹¹⁰	30	3 58	31	4 58	39 36	15 13	61		
10	330	14.9		51.2	23	32.3 ¹²⁷	+15	06.5 ¹¹⁰	20	4 26	4 55	5 20	1 51	40	14 59	56	
11	345	14.8	+22	51.4	38	03.8 ¹²⁵	+15	17.5 ¹¹⁰	10 N	4 48	5 15	5 38	2 02	44	14 46	53	
12	0	14.6	+22	51.6	52	35.3 ¹²⁵	+15	28.3 ¹⁰⁸	0	5 07	5 33	5 55	2 12	47	14 34	50	
13	15	14.5		51.8	67	06.8 ¹²⁵		39.1 ¹⁰⁸	10 S	23	5 50	6 12	22 51	22 46			
14	30	14.4		52.1	81	38.1 ¹²³	+15	49.9 ¹⁰⁸	20	39	6 06	30	33 55	14 10	42		
15	45	14.3		52.3	96	09.3 ¹²²	+16	00.6 ¹⁰⁷	30	5 55	25	6 51	45 60	13 55	39		
16	60	14.1		52.5	110	40.4 ¹²¹		11.2 ¹⁰⁶	35	6 03	35	7 03	2 53	62	47 36		
17	75	14.0	+22	52.7	125	11.5 ¹²¹	+16	21.7 ¹⁰⁵	40	6 12	6 46	7 17	3 01	65	13 37	34	
18	90	13.9	+22	52.9	139	42.4 ¹¹⁹	+16	32.2 ¹⁰⁵	45	6 22	6 59	7 33	3 11	68	13 26	30	
19	105	13.8		53.2	154	13.3 ¹¹⁹		42.7 ¹⁰⁵	50	34	7 15	7 53	23 73	13 25			
20	120	13.7		53.4	168	44.1 ¹¹⁸	+16	53.0 ¹⁰³	52	39	22	8 03	28 76	07 23			
21	135	13.5		53.6	183	14.7 ¹¹⁶	+17	03.3 ¹⁰³	54	44	30	13	34 78	13 00	21		
22	150	13.4		53.8	197	45.3 ¹¹⁶		13.5 ¹⁰²	56	50	39	25	41 81	12 52	19		
23	165	13.3		54.0	212	15.8 ¹¹⁵		23.7 ¹⁰²	58	6 57	7 49	40	49 84	44 15			
24	180	13.2	+22	54.2	226	46.2 ¹¹⁴	+17	33.7 ¹⁰⁰	60 S	7 04	8 00	8 56	3 58	88	12 34	11	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 53 ^m 8			Mag: -4.0 PMG: 14 ^h 34 ^m			Mag: +1.2 PMG: 17 ^h 05 ^m			Mag: -2.4 PMG: 6 ^h 57 ^m			Mag: +1.0 PMG: 18 ^h 48 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♊		Dec	hG ♉		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	256	16.4	141	36.1	+23	29.9	103	21.1	+12	32.0	255	35.5	-0	59.4	77	15.3	
1	271	18.9	156	35.3		29.4	118	22.3		31.5	270	37.7		59.2	92	17.7	
2	286	21.4	171	34.6		29.0	133	23.6		31.0	285	39.9		59.1	107	20.1	
3	301	23.8	186	33.9		28.5	148	24.8		30.5	300	42.0		59.0	122	22.6	
4	316	26.3	201	33.2		28.0	163	26.0		30.0	315	44.2		58.9	137	25.0	
5	331	28.8	216	32.5	+23	27.6	178	27.3	+12	29.5	330	46.3	-0	58.8	152	27.4	
6	346	31.2	231	31.8	+23	27.1	193	28.5	+12	29.0	345	48.5	-0	58.6	167	29.9	
7	1	33.7	246	31.1		26.6	208	29.7		28.5	0	50.7		58.5	182	32.3	
8	16	36.2	261	30.4		26.1	223	30.9		28.0	15	52.8		58.4	197	34.7	
9	31	38.6	276	29.7		25.7	238	32.2		27.5	30	55.0		58.3	212	37.2	
10	46	41.1	291	29.0		25.2	253	33.4		27.0	45	57.1		58.1	227	39.6	
11	61	43.5	306	28.3	+23	24.7	268	34.6	+12	26.5	60	59.3	-0	58.0	242	42.0	
12	76	46.0	321	27.6	+23	24.2	283	35.9	+12	26.0	76	01.5	-0	57.9	257	44.5	
13	91	48.5	336	26.9		23.8	298	37.1		25.5	91	03.6		57.8	272	46.9	
14	106	50.9	351	26.2		23.3	313	38.3		25.0	106	05.8		57.7	287	49.3	
15	121	53.4	6	25.5		22.8	328	39.5		24.5	121	07.9		57.5	302	51.8	
16	136	55.9	21	24.8		22.3	343	40.8		24.0	136	10.1		57.4	317	54.2	
17	151	58.3	36	24.1	+23	21.8	358	42.0	+12	23.4	151	12.3	-0	57.3	332	56.6	
18	167	00.8	51	23.4	+23	21.4	13	43.2	+12	22.9	166	14.4	-0	57.2	347	59.1	
19	182	03.3	66	22.7		20.9	28	44.4		22.4	181	16.6		57.1	3	01.5	
20	197	05.7	81	22.0		20.4	43	45.7		21.9	196	18.7		56.9	18	03.9	
21	212	08.2	96	21.4		19.9	58	46.9		21.4	211	20.9		56.8	33	06.4	
22	227	10.6	111	20.7		19.4	73	48.1		20.9	226	23.1		56.7	48	08.8	
23	242	13.1	126	20.0		18.9	88	49.3		20.4	241	25.2		56.6	63	11.2	
24	257	15.6	141	19.3	+23	18.4	103	50.6	+12	19.9	256	27.4	-0	56.5	78	13.7	
Dif	—		-7		-5		+12		-5		+22		+1		+24		

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: 26 ^d 0 PHE { 4 ^h : 56/6 12 ^h : 56/8 20 ^h : 57/1 SD: 15°4 PMG: 9 ^h 11 ^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	180	13.2	+22 54.2	226	46.2	+17 33.7	100	60 N	21 19	22 56	** **	0 41 15	18 09 88	
1	195	13.1	54.4	241	16.5 ¹¹³	43.7	100	58	21 00	22 12	** **	0 53 19	17 54 84	
2	210	12.9	54.7	255	46.6 ¹¹¹	+17 53.6	99	56	20 44	21 44	** **	1 03 22	41 81	
3	225	12.8	54.9	270	16.7 ¹¹¹	+18 03.5	99	54	30	23	23 01	12 24	30 78	
4	240	12.7	55.1	284	46.7 ¹¹⁰	13.3	98	52	18	21 06	22 21	19 28	20 76	
5	255	12.6	+22 55.3	299	16.6 ¹⁰⁹	+18 22.9	96	50	20 07	20 51	21 55	1 27 29	17 11 74	
6	270	12.4	+22 55.5	313	46.4 ¹⁰⁸	+18 32.5	96	45	19 45	20 22	21 11	1 42 33	16 53 70	
7	285	12.3	55.7	328	16.1 ¹⁰⁷	42.1	96	40	28	20 00	20 42	1 55 36	38 67	
8	300	12.2	55.9	342	45.7 ¹⁰⁶	+18 51.5	94	35	13	19 43	19	2 05 40	25 65	
9	315	12.1	56.1	357	15.2 ¹⁰⁵	+19 00.8	93	30	19 00	28	20 01	15 42	16 14 63	
10	330	11.9	56.3	11	44.6 ¹⁰⁴	10.1	93	20	18 39	19 03	19 32	31 46	15 55 60	
11	345	11.8	+22 56.5	26	13.8 ¹⁰²	+19 19.3	92	10 N	18 20	18 43	19 10	2 46 49	15 39 56	
12	0	11.7	+22 56.7	40	43.0 ¹⁰²	+19 28.4	91	0	18 03	18 25	18 51	2 59 52	15 24 53	
13	15	11.6	56.9	55	12.1 ¹⁰¹	37.4	90	10 S	17 46	18 09	35	3 13 55	15 08 52	
14	30	11.5	57.1	69	41.1 ¹⁰⁰	46.3	89	20	28	17 52	19	28 58	14 52 49	
15	45	11.3	57.3	84	10.0 ⁹⁹	+19 55.1	88	30	17 07	33	18 03	45 62	34 45	
16	60	11.2	57.5	98	38.7 ⁹⁷	+20 03.8	87	35	16 55	23	17 54	3 55 64	23 43	
17	75	11.1	+22 57.8	113	07.4 ⁹⁷	+20 12.4	86	40	16 41	17 11	17 45	4 06 67	14 11 40	
18	90	11.0	+22 58.0	127	36.0 ⁹⁶	+20 20.9	85	45	16 25	16 58	17 35	4 19 71	13 56 37	
19	105	10.8	58.2	142	04.5 ⁹⁵	29.3	84	50	16 04	43	24	36 74	38 34	
20	120	10.7	58.4	156	32.8 ⁹³	37.7	84	52	15 55	35	19	44 76	30 32	
21	135	10.6	58.6	171	01.1 ⁹³	45.9	82	54	44	27	13	4 52 80	21 29	
22	150	10.5	58.7	185	29.2 ⁹¹	+20 54.0	81	56	32	19	07	5 02 82	13 11 26	
23	165	10.3	58.9	199	57.3 ⁹¹	+21 02.0	80	58	18	16 09	17 01	13 86	12 59 22	
24	180	10.2	+22 59.1	214	25.3 ⁹⁰	+21 09.9	79	60 S	15 01	15 57	16 54	5 26 91	12 45 18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 6 ^h 49 ^m 8		Mag: -4.0 PMG: 14 ^h 35 ^m		Mag: +1.2 PMG: 17 ^h 03 ^m		Mag: -2.4 PMG: 6 ^h 53 ^m		Mag: +1.0 PMG: 18 ^h 44 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	257	15.6	141	19.3	+23 18.4	103 50.6	+12 19.9	256 27.4	-0 56.5	78 13.7	+3 02.0	
1	272	18.0	156	18.6	17.9	118 51.8	19.4	271 29.6	56.4	93 16.1	01.9	
2	287	20.5	171	17.9	17.4	133 53.0	18.9	286 31.7	56.2	108 18.5	01.9	
3	302	23.0	186	17.2	17.0	148 54.2	18.4	301 33.9	56.1	123 21.0	01.9	
4	317	25.4	201	16.5	16.5	163 55.5	17.9	316 36.0	56.0	138 23.4	01.9	
5	332	27.9	216	15.8	+23 16.0	178 56.7	+12 17.4	331 38.2	-0 55.9	153 25.8	+3 01.8	
6	347	30.4	231	15.1	+23 15.5	193 57.9	+12 16.8	346 40.4	-0 55.8	168 28.3	+3 01.8	
7	2	32.8	246	14.4	15.0	208 59.1	16.3	1	42.5	183 30.7	01.8	
8	17	35.3	261	13.8	14.5	224 00.4	15.8	16	44.7	198 33.1	01.8	
9	32	37.8	276	13.1	14.0	239 01.6	15.3	31	46.9	213 35.6	01.7	
10	47	40.2	291	12.4	13.5	254 02.8	14.8	46	49.0	228 38.0	01.7	
11	62	42.7	306	11.7	+23 13.0	269 04.0	+12 14.3	61	51.2	243 40.4	+3 01.7	
12	77	45.1	321	11.0	+23 12.5	284 05.3	+12 13.8	76	53.4	258 42.8	+3 01.7	
13	92	47.6	336	10.3	12.0	299 06.5	13.3	91	55.5	273 45.3	01.6	
14	107	50.1	351	09.6	11.5	314 07.7	12.8	106	57.7	288 47.7	01.6	
15	122	52.5	6	08.9	11.0	329 08.9	12.3	121	59.9	303 50.1	01.6	
16	137	55.0	21	08.3	10.4	344 10.2	11.8	137	02.0	318 52.6	01.6	
17	152	57.5	36	07.6	+23 09.9	359 11.4	+12 11.2	152	04.2	333 55.0	+3 01.5	
18	167	59.9	51	06.9	+23 09.4	14 12.6	+12 10.7	167	06.4	348 57.4	+3 01.5	
19	183	02.4	66	06.2	08.9	29 13.8	10.2	182	08.5	3	59.8	01.5
20	198	04.9	81	05.5	08.4	44 15.1	09.7	197	10.7	19	02.3	01.5
21	213	07.3	96	04.8	07.9	59 16.3	09.2	212	12.9	34	04.7	01.4
22	228	09.8	111	04.2	07.4	74 17.5	08.7	227	15.0	49	07.1	01.4
23	243	12.3	126	03.5	06.9	89 18.7	08.2	242	17.2	64	09.6	01.4
24	258	14.7	141	02.8	+23 06.3	104 19.9	+12 07.7	257	19.4	79	12.0	+3 01.4
Dif	—	—	-7	-5		+12	-5	+22	+1		+24	

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: 27 ^d 0 PHE { 4 ^h : 57'4 12 ^h : 57'6 20 ^h : 57'9 PMG: 10 ^h 04 ^m R°: 57 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	10.2	+22	59.1	214	25.3	+21	09.9	60 N	** **	1 03	2 39	0 56	25	19 37	79				
1	195	10.1		59.3	228	53.1		17.7	58	** **	1 46	2 59	1 12	29	18 76					
2	210	10.0		59.5	243	20.9		25.4	56	** **	2 14	3 15	25	32	19 02	73				
3	225	09.8		59.7	257	48.5		33.0	54	0 57	35	29	36	35	18 48	72				
4	240	09.7	+22	59.9	272	16.1		40.4	52	1 37	2 53	41	47	37	36	70				
5	255	09.6	+23	00.1	286	43.5	+21	47.8	50	2 03	3 07	3 51	1 56	39	18 25	69				
6	270	09.5	+23	00.3	301	10.8		55.0	45	2 47	3 36	4 13	2 15	43	18 03	67				
7	285	09.3		00.5	315	38.1	+22	02.1	40	3 17	3 58	31	31	45	17 45	65				
8	300	09.2		00.7	330	05.2		09.1	35	40	4 16	46	45	47	30	64				
9	315	09.1		00.9	344	32.3		16.0	30	3 58	31	4 58	2 57	48	17 17	63				
10	330	09.0		01.1	358	59.2		22.8	20	4 26	4 55	5 20	3 17	51	16 55	61				
11	345	08.8	+23	01.3	13	26.1	+22	29.4	10 N	4 49	5 16	5 39	3 35	53	16 35	60				
12	0	08.7	+23	01.5	27	52.8	+22	35.9	0	5 07	5 33	5 56	3 51	56	16 17	58				
13	15	08.6		01.6	42	19.5		42.3	10 S	24	5 50	6 13	4 08	58	16 00	56				
14	30	08.5		01.8	56	46.0		48.6	20	40	6 07	31	26	60	15 41	54				
15	45	08.3		02.0	71	12.5	+22	54.7	30	5 56	26	6 52	47	63	19	52				
16	60	08.2		02.2	85	38.8	+23	00.7	35	6 04	36	7 04	4 59	65	15 06	51				
17	75	08.1	+23	02.4	100	05.1	+23	06.6	40	6 13	6 47	7 18	5 13	67	14 51	49				
18	90	07.9	+23	02.6	114	31.3	+23	12.4	45	6 24	7 01	7 34	5 30	69	14 33	48				
19	105	07.8		02.7	128	57.4		18.0	50	35	16	7 55	5 50	73	12	45				
20	120	07.7		02.9	143	23.3		23.5	52	40	24	8 04	6 00	74	14 02	43				
21	135	07.6		03.1	157	49.2		28.8	54	46	32	15	12	76	13 50	41				
22	150	07.4		03.3	172	15.0		34.0	56	52	40	27	24	79	37	39				
23	165	07.3		03.5	186	40.8		39.1	58	6 58	7 50	42	39	82	21	37				
24	180	07.2	+23	03.7	201	06.4	+23	44.0	60 S	7 05	8 02	8 58	6 57	86	13 03	32				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 45 ^m 9				Mag: -4.0 PMG: 14 ^h 36 ^m				Mag: +1.2 PMG: 17 ^h 01 ^m				Mag: -2.4 PMG: 6 ^h 50 ^m				Mag: +1.0 PMG: 18 ^h 40 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	258	14.7			141	02.8	+23	06.3	104	19.9	+12	07.7	257	19.4	-0	53.6	79	12.0	+3	01.4
1	273	17.2			156	02.1		05.8	119	21.2		07.2	272	21.5		53.5	94	14.4		01.3
2	288	19.6			171	01.4		05.3	134	22.4		06.6	287	23.7		53.4	109	16.8		01.3
3	303	22.1			186	00.8		04.8	149	23.6		06.1	302	25.9		53.3	124	19.3		01.3
4	318	24.6			201	00.1		04.3	164	24.8		05.6	317	28.0		53.2	139	21.7		01.3
5	333	27.0			215	59.4	+23	03.8	179	26.0	+12	05.1	332	30.2	-0	53.1	154	24.1	+3	01.2
6	348	29.5			230	58.7	+23	03.2	194	27.3	+12	04.6	347	32.4	-0	52.9	169	26.6	+3	01.2
7	3	32.0			245	58.1		02.7	209	28.5		04.1	2	34.5		52.8	184	29.0		01.2
8	18	34.4			260	57.4		02.2	224	29.7		03.6	17	36.7		52.7	199	31.4		01.2
9	33	36.9			275	56.7		01.7	239	30.9		03.1	32	38.9		52.6	214	33.8		01.1
10	48	39.4			290	56.0		01.1	254	32.1		02.5	47	41.1		52.5	229	36.3		01.1
11	63	41.8			305	55.4	+23	00.6	269	33.4	+12	02.0	62	43.2	-0	52.4	244	38.7	+3	01.1
12	78	44.3			320	54.7	+23	00.1	284	34.6	+12	01.5	77	45.4	-0	52.2	259	41.1	+3	01.0
13	93	46.7			335	54.0	+22	59.5	299	35.8		01.0	92	47.6		52.1	274	43.5		01.0
14	108	49.2			350	53.3		59.0	314	37.0	+12	00.5	107	49.7		52.0	289	46.0		01.0
15	123	51.7			5	52.7		58.5	329	38.2	+12	00.0	122	51.9		51.9	304	48.4		01.0
16	138	54.1			20	52.0		57.9	344	39.5	+11	59.5	137	54.1		51.8	319	50.8		00.9
17	153	56.6			35	51.3	+22	57.4	359	40.7	+11	58.9	152	56.3	-0	51.7	334	53.2	+3	00.9
18	168	59.1			50	50.7	+22	56.9	14	41.9	+11	58.4	167	58.4	-0	51.6	349	55.7	+3	00.9
19	184	01.5			65	50.0		56.3	29	43.1		57.9	183	00.6		51.4	4	58.1		00.9
20	199	04.0			80	49.3		55.8	44	44.3		57.4	198	02.8		51.3	20	00.5		00.8
21	214	06.5			95	48.7		55.3	59	45.6		56.9	213	04.9		51.2	35	02.9		00.8
22	229	08.9			110	48.0		54.7	74	46.8		56.4	228	07.1		51.1	50	05.4		00.8
23	244	11.4			125	47.3		54.2	89	48.0		55.9	243	09.3		51.0	65	07.8		00.7
24	259	13.9			140	46.7	+22	53.6	104	49.2	+11	55.3	258	11.5	-0	50.9	80	10.2	+3	00.7
Dif	—				-7 -5				+12 -5				+22 +1				+24 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 28 ^d 0	PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'6										
	PMG: 11 ^h 59 ^m 6					SD: 15°8			PMG: 11 ^h 01 ^m			R°: 60 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	07.2	+23 03.7	201	06.4	+23 44.0	48	60 N	21 22	23 01	** **	1 21 43		20 56 59	
1	195	07.1	03.8	215	31.9	48.8	48	58	21 02	22 15	** **	41 46		34 59	
2	210	06.9	04.0	229	57.4	53.5	47	56	20 45	21 47	** **	1 57 48		15 59	
3	225	06.8	04.2	244	22.8	58.0	64	54	31	25	23 06	2 11 50		20 00 59	
4	240	06.7	04.4	258	48.1	02.3	43	52	19	21 08	22 24	24 51		19 46 60	
5	255	06.6	+23 04.5	273	13.3	06.5	42	50	20 09	20 53	21 57	2 35 51		19 34 60	
6	270	06.4	+23 04.7	287	38.4	10.6	41	45	19 46	20 24	21 13	2 58 53		19 10 60	
7	285	06.3	04.9	302	03.4	14.5	39	40	29	20 01	20 43	3 16 55		18 50 61	
8	300	06.2	05.1	316	28.4	18.3	38	35	14	19 44	20	32 55		34 60	
9	315	06.0	05.2	330	53.3	21.9	36	30	19 01	28	20 02	3 45 57		18 20 60	
10	330	05.9	05.4	345	18.1	25.4	35	20	18 39	19 04	19 33	4 08 58		17 56 60	
11	345	05.8	+23 05.6	359	42.9	28.7	33	10 N	18 21	18 44	19 11	4 28 59		17 35 60	
12	0	05.7	+23 05.8	14	07.6	31.9	32	0	18 03	18 26	18 52	4 47 60		17 15 61	
13	15	05.5	05.9	28	32.2	34.9	30	10 S	17 46	18 09	35	5 06 60		16 56 60	
14	30	05.4	06.1	42	56.7	37.8	29	20	28	17 52	19	26 62		35 60	
15	45	05.3	06.3	57	21.2	40.5	27	30	17 07	33	18 03	5 50 62		16 11 60	
16	60	05.1	06.4	71	45.6	43.0	25	35	16 55	23	17 54	6 04 62		15 57 59	
17	75	05.0	+23 06.6	86	09.9	45.4	24	40	16 41	17 11	17 45	6 20 63		15 40 60	
18	90	04.9	+23 06.8	100	34.2	47.6	22	45	16 24	16 58	17 35	6 39 64		15 21 59	
19	105	04.8	06.9	114	58.4	49.7	21	50	16 04	42	24	7 03 65		14 57 58	
20	120	04.6	07.1	129	22.6	51.6	19	52	15 54	35	18	14 66		45 58	
21	135	04.5	07.3	143	46.7	53.3	17	54	43	27	13	28 66		31 58	
22	150	04.4	07.4	158	10.7	54.9	16	56	31	18	07	7 43 67		14 16 57	
23	165	04.2	07.6	172	34.7	56.4	15	58	17	16 08	17 00	8 01 68		13 58 56	
24	180	04.1	+23 07.8	186	58.7	57.6	12	60 S	15 00	15 57	16 53	8 23 70		13 35 55	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 42 ^m 0		Mag: -4.0 PMG: 14 ^h 38 ^m			Mag: +1.2 PMG: 16 ^h 59 ^m			Mag: -2.4 PMG: 6 ^h 46 ^m			Mag: +1.1 PMG: 18 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	259	13.9	140 46.7	+22 53.6	104 49.2	+11 55.3	258 11.5	-0 50.9	80 10.2	+3 00.7					
1	274	16.3	155 46.0	53.1	119 50.4	54.8	273 13.6	50.8	95 12.6	00.7					
2	289	18.8	170 45.3	52.6	134 51.7	54.3	288 15.8	50.6	110 15.1	00.7					
3	304	21.2	185 44.7	52.0	149 52.9	53.8	303 18.0	50.5	125 17.5	00.6					
4	319	23.7	200 44.0	51.5	164 54.1	53.3	318 20.2	50.4	140 19.9	00.6					
5	334	26.2	215 43.3	+22 50.9	179 55.3	+11 52.8	333 22.3	-0 50.3	155 22.3	+3 00.6					
6	349	28.6	230 42.7	+22 50.4	194 56.5	+11 52.2	348 24.5	-0 50.2	170 24.8	+3 00.6					
7	4	31.1	245 42.0	49.8	209 57.7	51.7	3	26.7	185 27.2	00.5					
8	19	33.6	260 41.3	49.3	224 59.0	51.2	18	28.9	200 29.6	00.5					
9	34	36.0	275 40.7	48.7	240 00.2	50.7	33	31.0	215 32.0	00.5					
10	49	38.5	290 40.0	48.2	255 01.4	50.2	48	33.2	230 34.4	00.4					
11	64	41.0	305 39.4	+22 47.6	270 02.6	+11 49.7	63	35.4	245 36.9	+3 00.4					
12	79	43.4	320 38.7	+22 47.1	285 03.8	+11 49.1	78	37.6	260 39.3	+3 00.4					
13	94	45.9	335 38.0	46.5	300 05.0	48.6	93	39.7	275 41.7	00.4					
14	109	48.4	350 37.4	45.9	315 06.3	48.1	108	41.9	290 44.1	00.3					
15	124	50.8	5 36.7	45.4	330 07.5	47.6	123	44.1	305 46.6	00.3					
16	139	53.3	20 36.1	44.8	345 08.7	47.1	138	46.3	320 49.0	00.3					
17	154	55.7	35 35.4	+22 44.3	0 09.9	+11 46.6	153	48.5	335 51.4	+3 00.2					
18	169	58.2	50 34.7	+22 43.7	15 11.1	+11 46.0	168	50.6	350 53.8	+3 00.2					
19	185	00.7	65 34.1	43.1	30 12.3	45.5	183	52.8	5 56.2	00.2					
20	200	03.1	80 33.4	42.6	45 13.6	45.0	198	55.0	20 58.7	00.2					
21	215	05.6	95 32.8	42.0	60 14.8	44.5	213	57.2	36 01.1	00.1					
22	230	08.1	110 32.1	41.5	75 16.0	44.0	228	59.3	51 03.5	00.1					
23	245	10.5	125 31.5	40.9	90 17.2	43.5	244	01.5	66 05.9	+3 00.1					
24	260	13.0	140 30.8	+22 40.3	105 18.4	+11 42.9	259	03.7	81 08.3	+3 00.0					
Dif	—		-7	-6	+12	-5	+22	+1	+24		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: 29 ^d 0 SD: 16 ^h 0 PMG: 12 ^h 01 ^m	PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 0 20 ^h : 59 ^m 2 Rº: 61 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	04.1	+23	07.8	186	58.7	+24	57.6	11	58	2	38	2	04	69	21
1	195	04.0		07.9	201	22.6	49	58.7	9	58	2	58	27	67	33	39
2	210	03.9		08.1	215	46.5	49	+24	59.6	8	56	2	45	67	21	14
3	225	03.7		08.2	230	10.3	48	+25	00.4	9	54	3	01	66	20	59
4	240	03.6		08.4	244	34.0	47	01.0	6	52	1	35	2	52	40	15
5	255	03.5	+23	08.6	258	57.8	48	+25	01.4	4	50	2	02	3	06	3
6	270	03.3	+23	08.7	273	21.5	47	+25	01.7	3	45	2	46	3	36	4
7	285	03.2		08.9	287	45.1	46	01.8	1	40	3	16	3	58	31	4
8	300	03.1		09.0	302	08.7	46	01.7	1	35	3	39	4	16	45	27
9	315	02.9		09.2	316	32.3	46	01.5	2	30	3	58	31	4	58	4
10	330	02.8		09.4	330	55.9	46	01.0	5	20	4	26	4	56	5	20
11	345	02.7	+23	09.5	345	19.4	45	+25	00.5	8	10 N	4	49	5	16	5
12	0	02.6	+23	09.7	359	43.0	46	+24	59.7	5	0	5	07	5	34	5
13	15	02.4		09.8	14	06.4	44	58.8	9	10 S	24	5	51	6	13	6
14	30	02.3		10.0	28	29.9	45	57.7	11	20	40	6	08	32	28	59
15	45	02.2		10.1	42	53.4	45	56.4	13	30	5	57	26	6	53	6
16	60	02.0		10.3	57	16.8	44	55.0	14	35	6	05	37	7	05	7
17	75	01.9	+23	10.4	71	40.2	44	+24	53.4	16	40	6	14	6	48	7
18	90	01.8	+23	10.6	86	03.6	44	+24	51.6	18	45	6	25	7	02	7
19	105	01.6		10.7	100	27.0	44	49.7	19	50	36	18	7	56	8	08
20	120	01.5		10.9	114	50.4	44	47.6	21	52	41	25	8	06	20	54
21	135	01.4		11.0	129	13.8	44	45.3	23	54	47	33	16	34	52	29
22	150	01.2		11.2	143	37.2	44	42.8	25	56	53	42	29	8	50	51
23	165	01.1		11.3	158	00.5	43	40.2	26	58	6	59	7	52	8	43
24	180	01.0	+23	11.5	172	23.9	44	+24	37.4	28	60 S	7	07	8	03	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 38 ^m 0		Mag: -4.0 PMG: 14 ^h 39 ^m		Mag: +1.2 PMG: 16 ^h 57 ^m		Mag: -2.4 PMG: 6 ^h 43 ^m		Mag: +1.1 PMG: 18 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	260	13.0	140	30.8	+22	40.3	105	18.4	+11	42.9
1	275	15.5	155	30.2		39.8	120	19.6		42.4
2	290	17.9	170	29.5		39.2	135	20.8		41.9
3	305	20.4	185	28.9		38.6	150	22.1		41.4
4	320	22.9	200	28.2		38.0	165	23.3		40.9
5	335	25.3	215	27.6	+22	37.5	180	24.5	+11	40.3
6	350	27.8	230	26.9	+22	36.9	195	25.7	+11	39.8
7	5	30.2	245	26.3		36.3	210	26.9		39.3
8	20	32.7	260	25.6		35.8	225	28.1		38.8
9	35	35.2	275	25.0		35.2	240	29.3		38.3
10	50	37.6	290	24.3		34.6	255	30.6		37.7
11	65	40.1	305	23.7	+22	34.0	270	31.8	+11	37.2
12	80	42.6	320	23.0	+22	33.4	285	33.0	+11	36.7
13	95	45.0	335	22.4		32.9	300	34.2		36.2
14	110	47.5	350	21.7		32.3	315	35.4		35.7
15	125	50.0	5	21.1		31.7	330	36.6		35.1
16	140	52.4	20	20.5		31.1	345	37.8		34.6
17	155	54.9	35	19.8	+22	30.5	0	39.0	+11	34.1
18	170	57.4	50	19.2	+22	29.9	15	40.3	+11	33.6
19	185	59.8	65	18.5		29.4	30	41.5		33.0
20	201	02.3	80	17.9		28.8	45	42.7		32.5
21	216	04.7	95	17.2		28.2	60	43.9		32.0
22	231	07.2	110	16.6		27.6	75	45.1		31.5
23	246	09.7	125	16.0		27.0	90	46.3		31.0
24	261	12.1	140	15.3	+22	26.4	105	47.5	+11	30.4
Dif	—		-6	-6		+12	-5	+22		+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15:7 PMG: 12 ^h 00 ^m 0			Edad: 30 ^d 0 PHE { 4 ^h : 59/3 12 ^h : 59/5 20 ^h : 59/6 R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	01.0	+23	11.5	172	23.9	+24	37.4	60 N	21 24	23 05	** **	3 13	90	22 30	21		
1	195	00.9		11.6	186	47.3	44	34.4	58	21 03	22 18	** **	34	87	22 12	26		
2	210	00.7		11.7	201	10.7	44	31.3	56	20 47	21 49	** **	3 52	83	21 57	30		
3	225	00.6		11.9	215	34.1	44	28.0	54	33	27	23 10	4 07	81	44	33		
4	240	00.5		12.0	229	57.5	44	24.5	52	21	21 09	22 26	20	79	33	35		
5	255	00.3	+23	12.2	244	20.9	44	+24 20.9	50	20 10	20 54	21 59	4 32	77	21 22	37		
6	270	00.2	+23	12.3	258	44.4	45	+24 17.0	45	19 48	20 25	21 14	4 56	73	21 01	41		
7	285	00.1		12.5	273	07.8	44	13.1	40	30	20 02	20 44	5 15	71	20 43	45		
8	299	59.9		12.6	287	31.3	45	08.9	35	15	19 44	21	31	69	29	47		
9	314	59.8		12.7	301	54.8	45	04.6	30	19 02	29	20 03	5 45	67	20 16	49		
10	329	59.7		12.9	316	18.3	45	+24 00.1	20	18 40	19 05	19 34	6 08	65	19 54	53		
11	344	59.5	+23	13.0	330	41.8	45	+23 55.4	10 N	18 21	18 44	19 11	6 29	62	19 35	56		
12	359	59.4	+23	13.2	345	05.4	46	+23 50.6	0	18 04	18 26	18 52	6 48	60	19 17	59		
13	14	59.3		13.3	359	29.0	46	45.6	10 S	17 46	18 09	36	7 07	58	18 58	62		
14	29	59.1		13.4	13	52.6	46	40.5	20	28	17 52	19	27	55	39	65		
15	44	59.0		13.6	28	16.3	47	35.2	30	17 07	33	18 03	7 50	53	17	68		
16	59	58.9		13.7	42	39.9	46	29.7	35	16 55	23	17 55	8 04	51	18 03	71		
17	74	58.7	+23	13.8	57	03.7	48	+23 24.0	40	16 41	17 11	17 45	8 20	49	17 48	73		
18	89	58.6	+23	14.0	71	27.4	47	+23 18.2	45	16 24	16 58	17 35	8 39	46	17 30	76		
19	104	58.5		14.1	85	51.2	48	12.3	50	16 04	42	23	9 02	43	17 07	80		
20	119	58.3		14.2	100	15.1	49	+23 06.2	52	15 54	35	18	14	40	16 56	82		
21	134	58.2		14.4	114	38.9	48	+22 59.9	54	43	26	13	26	38	43	85		
22	149	58.1		14.5	129	02.9	50	53.4	56	30	17	06	41	35	29	88		
23	164	57.9		14.6	143	26.8	49	46.8	58	15 16	16 07	17 00	9 58	32	16 12	92		
24	179	57.8	+23	14.7	157	50.9	51	+22 40.1	60 S	14 59	15 56	16 52	10 19	27	15 51	98		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 34 ^m 1		Mag: -4.0 PMG: 14 ^h 40 ^m		Mag: +1.2 PMG: 16 ^h 55 ^m		Mag: -2.4 PMG: 6 ^h 39 ^m		Mag: +1.1 PMG: 18 ^h 29 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	261	12.1	140	15.3	+22	26.4	105	47.5	+11	30.4	259	56.1	-0	45.5	82	06.4	+2	59.3
1	276	14.6	155	14.7		25.8	120	48.7		29.9	274	58.3		45.4	97	08.8		59.3
2	291	17.1	170	14.1		25.2	135	50.0		29.4	290	00.4		45.3	112	11.2		59.3
3	306	19.5	185	13.4		24.6	150	51.2		28.9	305	02.6		45.2	127	13.6		59.2
4	321	22.0	200	12.8		24.0	165	52.4		28.3	320	04.8		45.1	142	16.0		59.2
5	336	24.5	215	12.1	+22	23.4	180	53.6	+11	27.8	335	07.0	-0	45.0	157	18.5	+2	59.2
6	351	26.9	230	11.5	+22	22.8	195	54.8	+11	27.3	350	09.2	-0	44.9	172	20.9	+2	59.1
7	6	29.4	245	10.9		22.2	210	56.0		26.8	5	11.4		44.7	187	23.3		59.1
8	21	31.9	260	10.2		21.6	225	57.2		26.3	20	13.6		44.6	202	25.7		59.1
9	36	34.3	275	09.6		21.0	240	58.4		25.7	35	15.8		44.5	217	28.1		59.1
10	51	36.8	290	09.0		20.4	255	59.6		25.2	50	17.9		44.4	232	30.5		59.0
11	66	39.2	305	08.3	+22	19.8	271	00.9	+11	24.7	65	20.1	-0	44.3	247	33.0	+2	59.0
12	81	41.7	320	07.7	+22	19.2	286	02.1	+11	24.2	80	22.3	-0	44.2	262	35.4	+2	59.0
13	96	44.2	335	07.1		18.6	301	03.3		23.6	95	24.5		44.1	277	37.8		58.9
14	111	46.6	350	06.5		18.0	316	04.5		23.1	110	26.7		44.0	292	40.2		58.9
15	126	49.1	5	05.8		17.4	331	05.7		22.6	125	28.9		43.9	307	42.6		58.9
16	141	51.6	20	05.2		16.8	346	06.9		22.1	140	31.1		43.8	322	45.0		58.8
17	156	54.0	35	04.6	+22	16.2	1	08.1	+11	21.5	155	33.3	-0	43.7	337	47.4	+2	58.8
18	171	56.5	50	03.9	+22	15.6	16	09.3	+11	21.0	170	35.4	-0	43.6	352	49.8	+2	58.8
19	186	59.0	65	03.3		15.0	31	10.5		20.5	185	37.6		43.5	7	52.3		58.7
20	202	01.4	80	02.7		14.4	46	11.7		20.0	200	39.8		43.3	22	54.7		58.7
21	217	03.9	95	02.1		13.7	61	12.9		19.4	215	42.0		43.2	37	57.1		58.7
22	232	06.4	110	01.4		13.1	76	14.2		18.9	230	44.2		43.1	52	59.5		58.6
23	247	08.8	125	00.8		12.5	91	15.4		18.4	245	46.4		43.0	68	01.9		58.6
24	262	11.3	140	00.2	+22	11.9	106	16.6	+11	17.9	260	48.6	-0	42.9	83	04.3	+2	58.6
Dif	—		-6		-6		+12		-5		+22		+1		+24			

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 3			Edad: 1 ^d 5 SD: 16 ^h 3 PMG: 14 ^h 02 ^m	PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 8 20 ^h : 59 ^m 9 R°: 57 ^m			Hora	R°		Hora	R°				
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	57.8	+23 14.7	157	50.9	+22 40.1	69	60 N	** **	0 55	2 37	4 43 100	22 51 13			
1	194	57.7	14.9	172	14.9	33.2	69	58	** **	1 42	2 57	5 01 95	38 17			
2	209	57.6	15.0	186	39.0	26.1	71	56	** **	2 11	3 13	15 91	27 20			
3	224	57.4	15.1	201	03.2	18.9	72	54	0 50	33	27	28 88	17 23			
4	239	57.3	15.3	215	27.4	11.5	74	52	1 34	2 51	40	39 85	22 08 26			
5	254	57.2	+23 15.4	229	51.7	+22 04.0	75	50	2 01	3 06	3 50	5 49 83	21 59 29			
6	269	57.0	+23 15.5	244	16.0	+21 56.3	77	45	2 46	3 35	4 13	6 09 79	21 42 34			
7	284	56.9	15.6	258	40.4	48.5	78	40	3 16	3 58	31	26 75	28 38			
8	299	56.8	15.8	273	04.9	40.5	80	35	39	4 16	45	40 72	16 41			
9	314	56.6	15.9	287	29.4	32.4	81	30	3 58	31	4 58	6 52 69	21 05 44			
10	329	56.5	16.0	301	54.0	24.1	83	20	4 27	4 56	5 20	7 13 65	20 47 48			
11	344	56.4	+23 16.1	316	18.6	+21 15.7	84	10 N	4 49	5 16	5 39	7 31 61	20 31 52			
12	359	56.2	+23 16.2	330	43.3	+21 07.2	85	0	5 08	5 34	5 57	7 48 58	20 16 56			
13	14	56.1	16.4	345	08.0	+20 58.5	87	10 S	25	5 51	6 14	8 05 54	20 00 60			
14	29	56.0	16.5	359	32.9	49.7	88	20	41	6 08	32	22 51	19 44 64			
15	44	55.8	16.6	13	57.8	40.7	90	30	5 57	27	6 53	43 46	25 69			
16	59	55.7	16.7	28	22.7	31.6	91	35	6 06	38	7 06	8 55 44	14 72			
17	74	55.6	+23 16.8	42	47.7	+20 22.4	92	40	6 15	6 49	7 20	9 09 40	19 01 75			
18	89	55.4	+23 16.9	57	12.8	+20 13.0	94	45	6 25	7 03	7 36	9 25 37	18 46 79			
19	104	55.3	17.1	71	38.0	+20 03.5	95	50	37	19	7 57	45 32	27 84			
20	119	55.2	17.2	86	03.2	+19 53.8	97	52	42	26	8 07	9 54 30	18 87			
21	134	55.0	17.3	100	28.5	44.1	97	54	48	34	18	10 04 28	18 08 90			
22	149	54.9	17.4	114	53.9	34.1	100	56	6 54	43	30	16 25	17 57 93			
23	164	54.7	17.5	129	19.3	24.1	100	58	7 01	7 53	8 45	30 20	44 97			
24	179	54.6	+23 17.6	143	44.9	+19 14.0	101	60 S	7 08	8 05	9 02	10 46 16	17 29 102			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 6 ^h 30 ^m 2			Mag: -4.0 PMG: 14 ^h 41 ^m			Mag: +1.2 PMG: 16 ^h 54 ^m			Mag: -2.4 PMG: 6 ^h 36 ^m			Mag: +1.1 PMG: 18 ^h 25 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	°
0	262	11.3	140 00.2	+22 11.9	106 16.6	+11 17.9	260 48.6	-0 42.9	83 04.3	+2 58.6						
1	277	13.7	154 59.6	11.3	121 17.8	17.3	275 50.8	42.8	98 06.7	58.5						
2	292	16.2	169 58.9	10.7	136 19.0	16.8	290 53.0	42.7	113 09.2	58.5						
3	307	18.7	184 58.3	10.0	151 20.2	16.3	305 55.2	42.6	128 11.6	58.5						
4	322	21.1	199 57.7	09.4	166 21.4	15.8	320 57.4	42.5	143 14.0	58.4						
5	337	23.6	214 57.1	+22 08.8	181 22.6	+11 15.2	335 59.5	-0 42.4	158 16.4	+2 58.4						
6	352	26.1	229 56.4	+22 08.2	196 23.8	+11 14.7	351 01.7	-0 42.3	173 18.8	+2 58.4						
7	7	28.5	244 55.8	07.6	211 25.0	14.2	6 03.9	42.2	188 21.2	58.3						
8	22	31.0	259 55.2	06.9	226 26.2	13.6	21 06.1	42.1	203 23.6	58.3						
9	37	33.5	274 54.6	06.3	241 27.4	13.1	36 08.3	42.0	218 26.0	58.3						
10	52	35.9	289 54.0	05.7	256 28.6	12.6	51 10.5	41.9	233 28.4	58.2						
11	67	38.4	304 53.4	+22 05.1	271 29.9	+11 12.1	66 12.7	-0 41.8	248 30.9	+2 58.2						
12	82	40.9	319 52.7	+22 04.4	286 31.1	+11 11.5	81 14.9	-0 41.7	263 33.3	+2 58.2						
13	97	43.3	334 52.1	03.8	301 32.3	11.0	96 17.1	41.5	278 35.7	58.1						
14	112	45.8	349 51.5	03.2	316 33.5	10.5	111 19.3	41.4	293 38.1	58.1						
15	127	48.2	4 50.9	02.5	331 34.7	10.0	126 21.5	41.3	308 40.5	58.1						
16	142	50.7	19 50.3	01.9	346 35.9	09.4	141 23.7	41.2	323 42.9	58.0						
17	157	53.2	34 49.7	+22 01.3	1 37.1	+11 08.9	156 25.9	-0 41.1	338 45.3	+2 58.0						
18	172	55.6	49 49.1	+22 00.6	16 38.3	+11 08.4	171 28.1	-0 41.0	353 47.7	+2 58.0						
19	187	58.1	64 48.4	+22 00.0	31 39.5	07.8	186 30.3	40.9	8 50.1	57.9						
20	203	00.6	79 47.8	+21 59.4	46 40.7	07.3	201 32.4	40.8	23 52.5	57.9						
21	218	03.0	94 47.2	58.7	61 41.9	06.8	216 34.6	40.7	38 55.0	57.9						
22	233	05.5	109 46.6	58.1	76 43.1	06.3	231 36.8	40.6	53 57.4	57.8						
23	248	08.0	124 46.0	57.4	91 44.3	05.7	246 39.0	40.5	68 59.8	57.8						
24	263	10.4	139 45.4	+21 56.8	106 45.5	+11 05.2	261 41.2	-0 40.4	84 02.2	+2 57.8						
Dif	—		-6	-6	+12	-5	+22	+1	+24	0						

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 5				Edad: 2 ^d 5 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 9 20 ^h : 59 ^m 9 PMG: 14 ^h 59 ^m 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	179	54.6	+23	17.6	143	44.9	+19	14.0	60 N	21 25	23 09	** **	6 23 101	23 04	9	
1	194	54.5		17.7	158	10.5	+19	03.7 ¹⁰³	58	21 05	22 20	** **	36 96	22 55	13	
2	209	54.3		17.8	172	36.1	+18	53.3 ¹⁰⁴	56	20 48	21 50	** **	46 93	47 16		
3	224	54.2		18.0	187	01.9		42.8 ¹⁰⁵	54	34	28	23 13	6 56 89	40 19		
4	239	54.1		18.1	201	27.7		32.1 ¹⁰⁷	52	22 10	22 10	22 28	7 04 87	34 21		
5	254	53.9	+23	18.2	215	53.6	+18	21.4 ¹⁰⁷	50	20 11	20 55	22 01	7 12 84	22 28	24	
6	269	53.8	+23	18.3	230	19.5	+18	10.5 ¹⁰⁹	45	19 48	20 26	21 15	7 28 78	22 16	28	
7	284	53.7		18.4	244	45.5	+17	59.5 ¹¹⁰	40	30	20 03	20 45	41 74	22 06	32	
8	299	53.5		18.5	259	11.7		48.4 ¹¹¹	35	15	19 45	22	7 52 71	21 57	36	
9	314	53.4		18.6	273	37.8		37.2 ¹¹²	30	19 03	30	20 03	8 01 68	49 39		
10	329	53.3		18.7	288	04.1		25.8 ¹¹⁴	20	18 41	19 05	19 34	18 63	35 44		
11	344	53.1	+23	18.8	302	30.4	+17	14.4 ¹¹⁴	10 N	18 22	18 45	19 12	8 32 59	21 23	49	
12	359	53.0	+23	18.9	316	56.9	+17	02.9 ¹¹⁵	0	18 04	18 27	18 53	8 46 54	21 12	53	
13	14	52.9		19.0	331	23.4	+16	51.2 ¹¹⁷	10 S	17 47	18 10	36	8 59 50	21 00	58	
14	29	52.7		19.1	345	49.9		39.5 ¹¹⁷	20	28	17 52	20	9 13 46	20 48	62	
15	44	52.6		19.2	0	16.6		27.6 ¹¹⁹	30	17 07	34	18 03	29 41	34 67		
16	59	52.5		19.3	14	43.3		15.6 ¹²⁰	35	16 55	23	17 55	39 38	26 70		
17	74	52.3	+23	19.4	29	10.1	+16	03.6 ¹²⁰	40	16 41	17 11	17 45	9 49 35	20 16	74	
18	89	52.2	+23	19.5	43	36.9	+15	51.4 ¹²²	45	16 24	16 58	17 35	10 02 31	20 05	79	
19	104	52.1		19.6	58	03.9		39.2 ¹²²	50	16 03	42	23	17 26	19 51	84	
20	119	51.9		19.7	72	30.9		26.8 ¹²⁴	52	15 54	34	18	24 23	45 86		
21	134	51.8		19.8	86	58.0		14.4 ¹²⁴	54	42	26	12	32 21	38 89		
22	149	51.7		19.9	101	25.2	+15	01.9 ¹²⁵	56	30	17	06	41 17	30 92		
23	164	51.5		20.0	115	52.4	+14	49.3 ¹²⁶	58	15 15	16 07	17 00	10 50 15	21 96		
24	179	51.4	+23	20.1	130	19.7	+14	36.6 ¹²⁷	60 S	14 58	15 55	16 52	11 02 10	19 11	100	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 6 ^h 26 ^m 2		Mag: -4.0 PMG: 14 ^h 42 ^m		Mag: +1.2 PMG: 16 ^h 52 ^m		Mag: -2.4 PMG: 6 ^h 32 ^m		Mag: +1.1 PMG: 18 ^h 21 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	263	10.4	139	45.4	+21	56.8	106	45.5	+11	05.2	261	41.2	-0	40.4	84	02.2
1	278	12.9	154	44.8		56.2	121	46.7		04.7	276	43.4		40.3	99	04.6
2	293	15.3	169	44.2		55.5	136	47.9		04.1	291	45.6		40.2	114	07.0
3	308	17.8	184	43.6		54.9	151	49.1		03.6	306	47.8		40.1	129	09.4
4	323	20.3	199	43.0		54.2	166	50.3		03.1	321	50.0		40.0	144	11.8
5	338	22.7	214	42.3	+21	53.6	181	51.5	+11	02.5	336	52.2	-0	39.9	159	14.2
6	353	25.2	229	41.7	+21	52.9	196	52.8	+11	02.0	351	54.4	-0	39.8	174	16.6
7	8	27.7	244	41.1		52.3	211	54.0		01.5	6	56.6		39.7	189	19.0
8	23	30.1	259	40.5		51.7	226	55.2		01.0	21	58.8		39.6	204	21.4
9	38	32.6	274	39.9		51.0	241	56.4	+11	00.4	37	01.0		39.5	219	23.9
10	53	35.1	289	39.3		50.4	256	57.6	+10	59.9	52	03.2		39.4	234	26.3
11	68	37.5	304	38.7	+21	49.7	271	58.8	+10	59.4	67	05.4	-0	39.3	249	28.7
12	83	40.0	319	38.1	+21	49.0	287	00.0	+10	58.8	82	07.6	-0	39.2	264	31.1
13	98	42.5	334	37.5		48.4	302	01.2		58.3	97	09.8		39.1	279	33.5
14	113	44.9	349	36.9		47.7	317	02.4		57.8	112	12.0		39.0	294	35.9
15	128	47.4	4	36.3		47.1	332	03.6		57.2	127	14.2		38.8	309	38.3
16	143	49.8	19	35.7		46.4	347	04.8		56.7	142	16.4		38.7	324	40.7
17	158	52.3	34	35.1	+21	45.8	2	06.0	+10	56.2	157	18.6	-0	38.6	339	43.1
18	173	54.8	49	34.5	+21	45.1	17	07.2	+10	55.6	172	20.8	-0	38.5	354	45.5
19	188	57.2	64	33.9		44.5	32	08.4		55.1	187	23.0		38.4	9	47.9
20	203	59.7	79	33.3		43.8	47	09.6		54.6	202	25.2		38.3	24	50.3
21	219	02.2	94	32.7		43.1	62	10.8		54.0	217	27.4		38.2	39	52.7
22	234	04.6	109	32.1		42.5	77	12.0		53.5	232	29.6		38.1	54	55.1
23	249	07.1	124	31.5		41.8	92	13.2		53.0	247	31.8		38.0	69	57.5
24	264	09.6	139	31.0	+21	41.1	107	14.4	+10	52.4	262	34.0	-0	37.9	84	59.9
Dif	—		-6		-7		+12		-5		+22		+1		+24	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7				Edad: 3 ^d 5	PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 9 20 ^h : 59 ^m 8	SD: 16 ^h 3	PMG: 15 ^h 53 ^m		R ^o : 51 ^m									
	hG ☉	Dec	hG ☾	Dif							Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	51.4	+23	20.1	130	19.7	+14	36.6	60 N	** **	0 52	2 36	8 04	99	23 13	7			
1	194	51.3		20.2	144	47.1		23.8 ¹²⁸	58	** **	1 41	2 56		12 95		08 10			
2	209	51.1		20.3	159	14.6	+14	10.9 ¹²⁹	56	** **	2 11	3 13		19 91	23 03	16			
3	224	51.0		20.4	173	42.1	+13	58.0 ¹²⁹	54		0 48	33	27	25 88	22 59	16			
4	239	50.8		20.5	188	09.7		44.9 ¹³¹	52		1 33	2 51	39	31 85		55 19			
5	254	50.7	+23	20.6	202	37.4	+13	31.8 ¹³¹	50		2 00	3 06	3 50	8 36	83	22 52	20		
6	269	50.6	+23	20.6	217	05.2	+13	18.6 ¹³²	45		2 46	3 35	4 13	8 46	78	22 44	26		
7	284	50.4		20.7	231	33.0	+13	05.4 ¹³²	40		3 16	3 58	31	8 55	74		38 30		
8	299	50.3		20.8	246	00.9	+12	52.0 ¹³⁴	35		39	4 16	46	9 03	69		33 33		
9	314	50.2		20.9	260	28.8		38.6 ¹³⁴	30		3 58	31	4 59	09 67		28 36			
10	329	50.0		21.0	274	56.9		25.1 ¹³⁵	20		4 27	4 56	5 21	21 61		19 42			
11	344	49.9	+23	21.1	289	25.0	+12	11.6 ¹³⁵	10 N		4 49	5 16	5 39	9 31	56	22 12	46		
12	359	49.8	+23	21.2	303	53.1	+11	58.0 ¹³⁶	0		5 08	5 34	5 57	9 40	52	22 05	51		
13	14	49.6		21.3	318	21.4		44.3 ¹³⁷	10 S		25	5 52	6 14	49 48		21 58	55		
14	29	49.5		21.3	332	49.7		30.6 ¹³⁷	20		41	6 09	33	9 59	43		50 60		
15	44	49.4		21.4	347	18.0		16.7 ¹³⁹	30		5 58	28	6 54	10 10	38		41 66		
16	59	49.2		21.5	1	46.5	+11	02.9 ¹³⁸	35		6 07	38	7 06	17 34		36 69			
17	74	49.1	+23	21.6	16	15.0	+10	48.9 ¹⁴⁰	40		6 16	6 50	7 21	10 24	31	21 30	73		
18	89	49.0	+23	21.7	30	43.5	+10	35.0 ¹³⁹	45		6 26	7 03	7 37	10 33	26	21 24	76		
19	104	48.8		21.8	45	12.1		20.9 ¹⁴¹	50		38	19	7 58	43 21		15 82			
20	119	48.7		21.8	59	40.8	+10	06.8 ¹⁴¹	52		43	27	8 08	47 20		11 85			
21	134	48.5		21.9	74	09.6	+9	52.7 ¹⁴¹	54		49	35	19	53 16		07 87			
22	149	48.4		22.0	88	38.4		38.5 ¹⁴²	56		6 55	44	31	10 58	14	21 02	91		
23	164	48.3		22.1	103	07.2		24.2 ¹⁴³	58		7 02	7 54	8 46	11 05	10	20 57	94		
24	179	48.1	+23	22.2	117	36.2 ¹⁰⁰	+9	09.9 ¹⁴³	60 S		7 09	8 06	9 04	11 12	7	20 51	98		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 22 ^m 3	Mag: -4.0 PMG: 14 ^h 43 ^m	Mag: +1.3 PMG: 16 ^h 50 ^m	Mag: -2.4 PMG: 6 ^h 29 ^m	Mag: +1.1 PMG: 18 ^h 17 ^m													
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	264	09.6	139	31.0	+21	41.1	107	14.4	+10	52.4	262	34.0	-0	37.9	84	59.9	+2	56.9
1	279	12.0	154	30.4		40.5	122	15.6		51.9	277	36.2		37.8	100	02.3		56.9
2	294	14.5	169	29.8		39.8	137	16.8		51.4	292	38.4		37.7	115	04.8		56.9
3	309	17.0	184	29.2		39.1	152	18.0		50.9	307	40.6		37.6	130	07.2		56.8
4	324	19.4	199	28.6		38.5	167	19.2		50.3	322	42.8		37.5	145	09.6		56.8
5	339	21.9	214	28.0	+21	37.8	182	20.4	+10	49.8	337	45.0	-0	37.4	160	12.0	+2	56.8
6	354	24.3	229	27.4	+21	37.1	197	21.6	+10	49.3	352	47.2	-0	37.3	175	14.4	+2	56.7
7	9	26.8	244	26.8		36.5	212	22.8		48.7	7	49.4		37.2	190	16.8		56.7
8	24	29.3	259	26.2		35.8	227	24.0		48.2	22	51.6		37.1	205	19.2		56.7
9	39	31.7	274	25.6		35.1	242	25.2		47.6	37	53.9		37.0	220	21.6		56.6
10	54	34.2	289	25.0		34.5	257	26.4		47.1	52	56.1		36.9	235	24.0		56.6
11	69	36.7	304	24.5	+21	33.8	272	27.6	+10	46.6	67	58.3	-0	36.8	250	26.4	+2	56.5
12	84	39.1	319	23.9	+21	33.1	287	28.8	+10	46.0	83	00.5	-0	36.7	265	28.8	+2	56.5
13	99	41.6	334	23.3		32.4	302	30.0		45.5	98	02.7		36.6	280	31.2		56.5
14	114	44.1	349	22.7		31.8	317	31.2		45.0	113	04.9		36.5	295	33.6		56.4
15	129	46.5	4	22.1		31.1	332	32.4		44.4	128	07.1		36.4	310	36.0		56.4
16	144	49.0	19	21.5		30.4	347	33.6		43.9	143	09.3		36.3	325	38.4		56.4
17	159	51.5	34	20.9	+21	29.7	2	34.8	+10	43.4	158	11.5	-0	36.2	340	40.8	+2	56.3
18	174	53.9	49	20.4	+21	29.0	17	36.0	+10	42.8	173	13.7	-0	36.1	355	43.2	+2	56.3
19	189	56.4	64	19.8		28.3	32	37.2		42.3	188	15.9		36.0	10	45.6		56.3
20	204	58.8	79	19.2		27.7	47	38.4		41.8	203	18.1		35.9	25	48.0		56.2
21	220	01.3	94	18.6		27.0	62	39.6		41.2	218	20.3		35.8	40	50.4		56.2
22	235	03.8	109	18.0		26.3	77	40.8		40.7	233	22.5		35.7	55	52.8		56.1
23	250	06.2	124	17.5		25.6	92	42.0		40.2	248	24.7		35.6	70	55.2		56.1
24	265	08.7	139	16.9	+21	24.9	107	43.2	+10	39.6	263	26.9	-0	35.5	85	57.6	+2	56.1
Dif	—		-6 -7		+12 -5		+22 -1		+24 0									

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15:7 PMG: 12 ^h 00 ^m 9			Edad: 4 ^d 5 PHE { 4 ^h : 59:7 12 ^h : 59:6 20 ^h : 59:5 R°: 49 ^m SD: 16:3 PMG: 16 ^h 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m	h m m			
0	179	48.1	+23	22.2	117	36.2	+9 09.9	60 N	21 26	23 12	** **	9 43 96	23 20 6			
1	194	48.0		22.2	132	05.1	+8 55.6 ¹⁴³	58	21 06	22 22	** **	47 92	18 9			
2	209	47.9		22.3	146	34.2 ¹⁰¹	41.2 ¹⁴⁴	56	20 49	21 52	** **	50 89	16 12			
3	224	47.7		22.4	161	03.3 ¹⁰¹	26.8 ¹⁴⁴	54	35	29	23 16	53 86	15 15			
4	239	47.6		22.5	175	32.4 ¹⁰¹	+8 12.3 ¹⁴⁵	52	23	21 11	22 30	56 84	14 17			
5	254	47.5	+23	22.5	190	01.6 ¹⁰²	+7 57.8 ¹⁴⁵	50	20 12	20 56	22 02	9 59 81	23 12 20			
6	269	47.3	+23	22.6	204	30.8 ¹⁰²	+7 43.2 ¹⁴⁶	45	19 49	20 27	21 16	10 04 76	23 10 24			
7	284	47.2		22.7	219	00.1 ¹⁰³	28.6 ¹⁴⁶	40	31	20 04	20 46	09 71	08 27			
8	299	47.1		22.7	233	29.5 ¹⁰⁴	+7 14.0 ¹⁴⁶	35	16	19 46	23	12 68	06 31			
9	314	46.9		22.8	247	58.9 ¹⁰⁴	+6 59.4 ¹⁴⁶	30	19 03	31	20 04	16 65	04 34			
10	329	46.8		22.9	262	28.4 ¹⁰⁵	44.7 ¹⁴⁷	20	18 41	19 06	19 35	22 59	23 01 40			
11	344	46.6	+23	23.0	276	57.9 ¹⁰⁵	+6 30.0 ¹⁴⁷	10 N	18 22	18 45	19 12	10 27 54	22 58 45			
12	359	46.5	+23	23.0	291	27.4 ¹⁰⁵	+6 15.2 ¹⁴⁸	0	18 05	18 27	18 53	10 32 49	22 56 49			
13	14	46.4		23.1	305	57.0 ¹⁰⁶	+6 00.4 ¹⁴⁸	10 S	17 47	18 10	36	37 45	53 54			
14	29	46.2		23.2	320	26.6 ¹⁰⁶	+5 45.6 ¹⁴⁸	20	29	17 53	20	42 40	50 59			
15	44	46.1		23.2	334	56.3 ¹⁰⁷	30.8 ¹⁴⁸	30	17 07	34	18 04	48 35	47 64			
16	59	46.0		23.3	349	26.0 ¹⁰⁷	16.0 ¹⁴⁸	35	16 55	23	17 55	51 32	45 67			
17	74	45.8	+23	23.4	3	55.8 ¹⁰⁸	+5 01.1 ¹⁴⁹	40	16 41	17 11	17 46	10 55 28	22 43 71			
18	89	45.7	+23	23.4	18	25.6 ¹⁰⁸	+4 46.2 ¹⁴⁹	45	16 24	16 58	17 35	10 59 25	22 40 76			
19	104	45.6		23.5	32	55.4 ¹⁰⁸	31.3 ¹⁴⁹	50	16 03	42	23	11 04 20	37 81			
20	119	45.4		23.5	47	25.3 ¹⁰⁹	16.4 ¹⁴⁹	52	15 53	34	18	07 17	36 83			
21	134	45.3		23.6	61	55.2 ¹⁰⁹	+4 01.4 ¹⁵⁰	54	42	26	12	09 15	34 86			
22	149	45.2		23.7	76	25.2 ¹¹⁰	+3 46.5 ¹⁴⁹	56	30	17	06	12 13	33 88			
23	164	45.0		23.7	90	55.2 ¹¹⁰	31.5 ¹⁵⁰	58	15 15	16 07	17 00	15 10	31 91			
24	179	44.9	+23	23.8	105	25.2 ¹¹⁰	+3 16.5 ¹⁵⁰	60 S	14 58	15 55	16 52	11 19 6	22 29 95			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag: -4.0			Mag: +1.3			Mag: -2.4			Mag: +1.1				
	6 ^h 18 ^m 4		PMG: 14 ^h 43 ^m			PMG: 16 ^h 48 ^m			PMG: 6 ^h 25 ^m			PMG: 18 ^h 13 ^m				
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	265	08.7	139	16.9	+21	24.9	107	43.2	+10	39.6	263	26.9	-0	35.5	85	57.6
1	280	11.2	154	16.3		24.2	122	44.4		39.1	278	29.2		35.4	101	00.0
2	295	13.6	169	15.7		23.5	137	45.6		38.6	293	31.4		35.3	116	02.4
3	310	16.1	184	15.2		22.9	152	46.8		38.0	308	33.6		35.2	131	04.8
4	325	18.6	199	14.6		22.2	167	48.0		37.5	323	35.8		35.1	146	07.2
5	340	21.0	214	14.0	+21	21.5	182	49.2	+10	36.9	338	38.0	-0	35.0	161	09.6
6	355	23.5	229	13.4	+21	20.8	197	50.4	+10	36.4	353	40.2	-0	34.9	176	12.0
7	10	25.9	244	12.9		20.1	212	51.6		35.9	8	42.4		34.8	191	14.4
8	25	28.4	259	12.3		19.4	227	52.8		35.3	23	44.6		34.7	206	16.8
9	40	30.9	274	11.7		18.7	242	54.0		34.8	38	46.8		34.6	221	19.2
10	55	33.3	289	11.1		18.0	257	55.2		34.3	53	49.0		34.6	236	21.6
11	70	35.8	304	10.6	+21	17.3	272	56.4	+10	33.7	68	51.3	-0	34.5	251	24.0
12	85	38.3	319	10.0	+21	16.6	287	57.6	+10	33.2	83	53.5	-0	34.4	266	26.4
13	100	40.7	334	09.4		15.9	302	58.8		32.6	98	55.7		34.3	281	28.8
14	115	43.2	349	08.9		15.2	318	00.0		32.1	113	57.9		34.2	296	31.2
15	130	45.7	4	08.3		14.5	333	01.2		31.6	129	00.1		34.1	311	33.6
16	145	48.1	19	07.7		13.8	348	02.4		31.0	144	02.3		34.0	326	36.0
17	160	50.6	34	07.1	+21	13.1	3	03.6	+10	30.5	159	04.5	-0	33.9	341	38.4
18	175	53.1	49	06.6	+21	12.4	18	04.8	+10	29.9	174	06.7	-0	33.8	356	40.8
19	190	55.5	64	06.0		11.7	33	06.0		29.4	189	08.9		33.7	11	43.2
20	205	58.0	79	05.5		11.0	48	07.2		28.9	204	11.2		33.6	26	45.6
21	221	00.4	94	04.9		10.3	63	08.4		28.3	219	13.4		33.5	41	48.0
22	236	02.9	109	04.3		09.6	78	09.6		27.8	234	15.6		33.4	56	50.4
23	251	05.4	124	03.8		08.9	93	10.7		27.3	249	17.8		33.3	71	52.8
24	266	07.8	139	03.2	+21	08.2	108	11.9	+10	26.7	264	20.0	-0	33.2	86	55.2
Dif	—		-6		-7		+12		-5		+22		+1		+24	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 5 ^d 5	PHE {	4 ^h : 59 ^m 4 12 ^h : 59 ^m 3 20 ^h : 59 ^m 2 Rº: 49 ^m										
	PMG: 12 ^h 01 ^m 1															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	44.9	+23	23.8	105	25.2	+3 16.5	60 N	** **	0 50	2 36	11 19	94	23 26	6	
1	194	44.7		23.9	119	55.2 ¹¹⁰	+3 01.5 ¹⁵⁰	58	** **	1 40	2 56	19 91		27 10		
2	209	44.6		23.9	134	25.3 ¹¹¹	+2 46.5 ¹⁵⁰	56	** **	2 10	3 13	19 88		28 13		
3	224	44.5		24.0	148	55.4 ¹¹¹	31.5 ¹⁵⁰	54	0 46	33	27	19 85		30 14		
4	239	44.3		24.0	163	25.6 ¹¹²	16.5 ¹⁵⁰	52	1 32	2 50	39	20 82		31 17		
5	254	44.2	+23	24.1	177	55.8 ¹¹²	+2 01.5 ¹⁵⁰	50	2 00	3 06	3 50	11 20	79	23 32	19	
6	269	44.1	+23	24.1	192	26.0 ¹¹²	+1 46.5 ¹⁵⁰	45	2 46	3 35	4 13	11 20	75	23 34	24	
7	284	43.9		24.2	206	56.2 ¹¹²	31.4 ¹⁵¹	40	3 16	3 58	31	20 71		35 29		
8	299	43.8		24.3	221	26.4 ¹¹²	16.4 ¹⁵⁰	35	39	4 16	46	20 67		37 32		
9	314	43.7		24.3	235	56.7 ¹¹³	+1 01.4 ¹⁵⁰	30	3 58	31	4 59	21 63		38 35		
10	329	43.5		24.4	250	27.0 ¹¹³	+0 46.4 ¹⁵⁰	20	4 27	4 56	5 21	21 58		41 40		
11	344	43.4	+23	24.4	264	57.3 ¹¹³	+0 31.4 ¹⁵⁰	10 N	4 50	5 17	5 40	11 21	54	23 43	44	
12	359	43.2	+23	24.5	279	27.7 ¹¹⁴	+0 16.4 ¹⁵⁰	0	5 09	5 35	5 57	11 21	49	23 45	49	
13	14	43.1		24.5	293	58.0 ¹¹³	+0 01.4 ¹⁵⁰	10 S	26	5 52	6 15	22 44		47 53		
14	29	43.0		24.6	308	28.4 ¹¹⁴	-0 13.6 ¹⁵⁰	20	42	6 09	33	22 40		49 58		
15	44	42.8		24.6	322	58.8 ¹¹⁴	28.6 ¹⁵⁰	30	5 58	28	6 55	23 34		51 63		
16	59	42.7		24.7	337	29.2 ¹¹⁴	43.6 ¹⁵⁰	35	6 07	39	7 07	23 31		52 67		
17	74	42.6	+23	24.7	351	59.6 ¹¹⁴	-0 58.5 ¹⁴⁹	40	6 17	6 51	7 21	11 23	28	23 54	70	
18	89	42.4	+23	24.8	6	30.1 ¹¹⁵	-1 13.5 ¹⁵⁰	45	6 27	7 04	7 38	11 24	23	23 56	74	
19	104	42.3		24.8	21	00.5 ¹¹⁴	28.4 ¹⁴⁹	50	39	20	7 59	24 19		58 79		
20	119	42.2		24.8	35	31.0 ¹¹⁵	43.3 ¹⁴⁹	52	44	28	8 09	24 17		23 59	81	
21	134	42.0		24.9	50	01.4 ¹¹⁴	-1 58.2 ¹⁴⁹	54	50	36	20	24 15		** ** *	**	
22	149	41.9		24.9	64	31.9 ¹¹⁵	-2 13.1 ¹⁴⁹	56	6 56	45	32	25 12		** ** *	**	
23	164	41.7		25.0	79	02.4 ¹¹⁵	28.0 ¹⁴⁹	58	7 03	7 55	8 47	25 9		** ** *	**	
24	179	41.6	+23	25.0	93	32.9 ¹¹⁵	-2 42.8 ¹⁴⁸	60 S	7 10	8 07	9 05	11 25	6	** ** *	**	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG			Mag: -4.0			Mag: +1.3			Mag: -2.4			Mag: +1.1					
	6 ^h 14 ^m 5			PMG: 14 ^h 44 ^m			PMG: 16 ^h 46 ^m			PMG: 6 ^h 22 ^m			PMG: 18 ^h 09 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	266	07.8		139	03.2	+21	108	11.9	+10	26.7	264	20.0	-0	86	55.2			
1	281	10.3		154	02.6		123	13.1		26.2	279	22.2		101	57.6			
2	296	12.8		169	02.1		138	14.3		25.6	294	24.4		117	00.0			
3	311	15.2		184	01.5		153	15.5		25.1	309	26.7		132	02.4			
4	326	17.7		199	01.0		168	16.7		24.6	324	28.9		147	04.8			
5	341	20.2		214	00.4	+21	183	17.9	+10	24.0	339	31.1	-0	162	07.2			
6	356	22.6		228	59.8	+21	198	19.1	+10	23.5	354	33.3	-0	177	09.6			
7	11	25.1		243	59.3		213	20.3		22.9	9	35.5		192	12.0			
8	26	27.6		258	58.7		228	21.5		22.4	24	37.7		207	14.4			
9	41	30.0		273	58.2		243	22.7		21.9	39	40.0		222	16.8			
10	56	32.5		288	57.6		258	23.9		21.3	54	42.2		237	19.2			
11	71	34.9		303	57.0	+21	273	25.1	+10	20.8	69	44.4	-0	252	21.6			
12	86	37.4		318	56.5	+20	288	26.3	+10	20.2	84	46.6	-0	267	23.9			
13	101	39.9		333	55.9		303	27.5		19.7	99	48.8		282	26.3			
14	116	42.3		348	55.4		318	28.7		19.2	114	51.0		297	28.7			
15	131	44.8		3	54.8		333	29.9		18.6	129	53.3		312	31.1			
16	146	47.3		18	54.3		348	31.1		18.1	144	55.5		327	33.5			
17	161	49.7		33	53.7	+20	3	32.3	+10	17.5	159	57.7	-0	342	35.9			
18	176	52.2		48	53.2	+20	18	33.4	+10	17.0	174	59.9	-0	357	38.3			
19	191	54.7		63	52.6		33	34.6		16.4	190	02.1		12	40.7			
20	206	57.1		78	52.1		48	35.8		15.9	205	04.4		27	43.1			
21	221	59.6		93	51.5		63	37.0		15.4	220	06.6		42	45.5			
22	237	02.0		108	51.0		78	38.2		14.8	235	08.8		57	47.9			
23	252	04.5		123	50.4		93	39.4		14.3	250	11.0		72	50.3			
24	267	07.0		138	49.9	+20	108	40.6	+10	13.7	265	13.2	-0	87	52.7			
Dif	—			-6			+12			-5			+22			+1		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 6 ^d 5	PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 9 20 ^h : 58 ^m 7	SD: 16 ^h 1				R°: 49 ^m							
	PMG: 12 ^h 01 ^m 3						PMG: 18 ^h 22 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m		
0	179	41.6	+23	25.0	93	32.9	-2	42.8	60 N	21 27	23 14	** **	12 53	94	23 32	7		
1	194	41.5		25.1	108	03.4 ¹¹⁵	-2	57.6 ¹⁴⁸	58	21 07	22 23	** **	50 90		37 10			
2	209	41.3		25.1	122	33.9 ¹¹⁵	-3	12.4 ¹⁴⁸	56	20 50	21 53	** **	47 87		41 14			
3	224	41.2		25.1	137	04.4 ¹¹⁵		27.2 ¹⁴⁸	54	36	30	23 18	44 84		44 17			
4	239	41.1		25.2	151	34.9 ¹¹⁵		41.9 ¹⁴⁷	52	23	21 12	22 31	42 81		48 19			
5	254	40.9	+23	25.2	166	05.4 ¹¹⁵	-3	56.6 ¹⁴⁷	50	20 12	20 57	22 03	12 39	80	23 51	21		
6	269	40.8	+23	25.3	180	35.9 ¹¹⁵	-4	11.3 ¹⁴⁷	45	19 50	20 27	21 17	12 35	74	23 58	26		
7	284	40.7		25.3	195	06.4 ¹¹⁵		25.9 ¹⁴⁶	40	32	20 05	20 46	31 70		** **	**		
8	299	40.5		25.3	209	36.9 ¹¹⁵		40.6 ¹⁴⁷	35	17	19 46	23	27 67		** **	**		
9	314	40.4		25.4	224	07.5 ¹¹⁶	-4	55.1 ¹⁴⁵	30	19 04	31	20 05	24 64		** **	**		
10	329	40.3		25.4	238	38.0 ¹¹⁵	-5	09.7 ¹⁴⁶	20	18 42	19 06	19 35	19 58		** **	**		
11	344	40.1	+23	25.5	253	08.5 ¹¹⁵	-5	24.2 ¹⁴⁵	10 N	18 23	18 46	19 13	12 15	53	** **	**		
12	359	40.0	+23	25.5	267	38.9 ¹¹⁴	-5	38.7 ¹⁴⁵	0	18 05	18 28	18 54	12 10	49	** **	**		
13	14	39.8		25.5	282	09.4 ¹¹⁵	-5	53.1 ¹⁴⁴	10 S	17 48	18 10	37	06 45		** **	**		
14	29	39.7		25.6	296	39.9 ¹¹⁵	-6	07.5 ¹⁴⁴	20	29	17 53	21	12 02	40	** **	**		
15	44	39.6		25.6	311	10.4 ¹¹⁵		21.9 ¹⁴⁴	30	17 08	34	18 04	11 57	35	** **	**		
16	59	39.4		25.6	325	40.8 ¹¹⁴		36.2 ¹⁴³	35	16 55	24	17 55	54 32		** **	**		
17	74	39.3	+23	25.6	340	11.3 ¹¹⁵	-6	50.5 ¹⁴³	40	16 41	17 12	17 46	11 51	29	** **	**		
18	89	39.2	+23	25.7	354	41.7 ¹¹⁴	-7	04.7 ¹⁴²	45	16 24	16 58	17 35	11 47	25	** **	**		
19	104	39.0		25.7	9	12.1 ¹¹⁴		18.9 ¹⁴²	50	16 04	42	24	43 20		** **	**		
20	119	38.9		25.7	23	42.5 ¹¹⁴		33.1 ¹⁴²	52	15 54	35	18	41 18		** **	**		
21	134	38.8		25.8	38	12.9 ¹¹⁴	-7	47.1 ¹⁴⁰	54	43	26	13	39 16		0 00	84		
22	149	38.6		25.8	52	43.3 ¹¹⁴	-8	01.2 ¹⁴¹	56	30	17	06	37 13		01 87			
23	164	38.5		25.8	67	13.7 ¹¹⁴		15.2 ¹⁴⁰	58	15 15	16 07	17 00	34 10		02 91			
24	179	38.3	+23	25.8	81	44.0 ¹¹³	-8	29.1 ¹³⁹	60 S	14 58	15 55	16 52	11 31	7	0 04	94		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 10 ^m 5		Mag: -4.0 PMG: 14 ^h 45 ^m				Mag: +1.3 PMG: 16 ^h 44 ^m				Mag: -2.4 PMG: 6 ^h 18 ^m				Mag: +1.1 PMG: 18 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	267	07.0	138	49.9	+20	50.8	108	40.6	+10	13.7	265	13.2	-0	30.9	87	52.7	+2	54.2
1	282	09.4	153	49.3		50.1	123	41.8		13.2	280	15.5		30.8	102	55.1		54.2
2	297	11.9	168	48.8		49.4	138	43.0		12.6	295	17.7		30.7	117	57.5		54.1
3	312	14.4	183	48.3		48.6	153	44.2		12.1	310	19.9		30.6	132	59.9		54.1
4	327	16.8	198	47.7		47.9	168	45.4		11.6	325	22.1		30.6	148	02.3		54.0
5	342	19.3	213	47.2	+20	47.2	183	46.6	+10	11.0	340	24.3	-0	30.5	163	04.6	+2	54.0
6	357	21.8	228	46.6	+20	46.4	198	47.8	+10	10.5	355	26.6	-0	30.4	178	07.0	+2	54.0
7	12	24.2	243	46.1		45.7	213	49.0		09.9	10	28.8		30.3	193	09.4		53.9
8	27	26.7	258	45.5		45.0	228	50.1		09.4	25	31.0		30.2	208	11.8		53.9
9	42	29.2	273	45.0		44.2	243	51.3		08.8	40	33.2		30.1	223	14.2		53.8
10	57	31.6	288	44.5		43.5	258	52.5		08.3	55	35.4		30.0	238	16.6		53.8
11	72	34.1	303	43.9	+20	42.7	273	53.7	+10	07.8	70	37.7	-0	29.9	253	19.0	+2	53.8
12	87	36.5	318	43.4	+20	42.0	288	54.9	+10	07.2	85	39.9	-0	29.8	268	21.4	+2	53.7
13	102	39.0	333	42.8		41.2	303	56.1		06.7	100	42.1		29.7	283	23.8		53.7
14	117	41.5	348	42.3		40.5	318	57.3		06.1	115	44.3		29.6	298	26.2		53.6
15	132	43.9	3	41.8		39.8	333	58.5		05.6	130	46.6		29.5	313	28.6		53.6
16	147	46.4	18	41.2		39.0	348	59.7		05.0	145	48.8		29.4	328	31.0		53.6
17	162	48.9	33	40.7	+20	38.3	4	00.9	+10	04.5	160	51.0	-0	29.4	343	33.3	+2	53.5
18	177	51.3	48	40.2	+20	37.5	19	02.1	+10	03.9	175	53.2	-0	29.3	358	35.7	+2	53.5
19	192	53.8	63	39.6		36.8	34	03.2		03.4	190	55.5		29.2	13	38.1		53.4
20	207	56.3	78	39.1		36.0	49	04.4		02.8	205	57.7		29.1	28	40.5		53.4
21	222	58.7	93	38.6		35.3	64	05.6		02.3	220	59.9		29.0	43	42.9		53.3
22	238	01.2	108	38.0		34.5	79	06.8		01.8	236	02.1		28.9	58	45.3		53.3
23	253	03.7	123	37.5		33.8	94	08.0		01.2	251	04.4		28.8	73	47.7		53.3
24	268	06.1	138	37.0	+20	33.0	109	09.2	+10	00.7	266	06.6	-0	28.7	88	50.1	+2	53.2
Dif	—		-5		-7		+12		-5		+22		+1		+24			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 7 ^d 5	PHE	$\left\{ \begin{array}{l} 4^h: 58'6 \\ 12^h: 58'4 \\ 20^h: 58'3 \end{array} \right.$		R°: 51 ^m			Hora R°		Hora R°			
	PMG: 12 ^h 01 ^m 6															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	m	h m m	m		
0	179	38.3	+23	25.8	81	44.0	-8	29.1	60 N	** **	0 49	2 36	14 27	95	23 39	11
1	194	38.2		25.9	96	14.3 ¹¹³		43.0 ¹³⁹	58	** **	1 40	2 56	20 90		47	15
2	209	38.1		25.9	110	44.6 ¹¹³		56.9 ¹³⁹	56	** **	2 10	3 13	14 87		23 55	17
3	224	37.9		25.9	125	14.9 ¹¹³		10.6 ¹³⁷	54	0 45	33	27	08 84		** **	**
4	239	37.8		25.9	139	45.2 ¹¹³		24.4 ¹³⁸	52	1 32	2 51	40	14 03	81	** **	**
5	254	37.7	+23	26.0	154	15.4 ¹¹²		38.0 ¹³⁶	50	2 00	3 06	3 50	13 59	78	** **	**
6	269	37.5	+23	26.0	168	45.6 ¹¹²		51.6 ¹³⁶	45	2 46	3 36	4 13	13 49	73	** **	**
7	284	37.4		26.0	183	15.8 ¹¹²		05.2 ¹³⁶	40	3 16	3 58	31	41 69		0 04	30
8	299	37.3		26.0	197	46.0 ¹¹²		18.7 ¹³⁵	35	40	4 16	46	34 66		09	33
9	314	37.1		26.0	212	16.1 ¹¹¹		32.1 ¹³⁴	30	3 58	32	4 59	28 63		13	36
10	329	37.0		26.1	226	46.2 ¹¹¹		45.5 ¹³⁴	20	4 27	4 57	5 21	17 59		21	41
11	344	36.8	+23	26.1	241	16.3 ¹¹¹		58.8 ¹³³	10 N	4 50	5 17	5 40	13 08	54	0 27	46
12	359	36.7	+23	26.1	255	46.4 ¹¹¹		12.0 ¹³²	0	5 09	5 35	5 58	12 59	51	0 34	49
13	14	36.6		26.1	270	16.4 ¹¹⁰		25.2 ¹³²	10 S	26	5 52	6 15	51 46		40	54
14	29	36.4		26.1	284	46.4 ¹¹⁰		38.3 ¹³¹	20	42	6 10	34	42 42		47	58
15	44	36.3		26.1	299	16.4 ¹¹⁰		51.3 ¹³⁰	30	5 59	29	6 55	32 38		54	64
16	59	36.2		26.2	313	46.3 ¹⁰⁹		04.3 ¹³⁰	35	6 08	39	7 08	26 35		0 59	66
17	74	36.0	+23	26.2	328	16.2 ¹⁰⁹		17.2 ¹²⁹	40	6 17	6 51	7 22	12 20	31	1 04	70
18	89	35.9	+23	26.2	342	46.1 ¹⁰⁹		30.0 ¹²⁸	45	6 27	7 05	7 39	12 12	28	1 10	74
19	104	35.8		26.2	357	15.9 ¹⁰⁸		42.7 ¹²⁷	50	39	21	7 59	12 03	23	17	79
20	119	35.6		26.2	11	45.7 ¹⁰⁸		55.4 ¹²⁷	52	45	28	8 09	11 59	21	20	82
21	134	35.5		26.2	26	15.5 ¹⁰⁸		08.0 ¹²⁶	54	50	37	20	55 18		24	84
22	149	35.4		26.2	40	45.3 ¹⁰⁸		20.5 ¹²⁵	56	6 56	46	33	50 15		28	87
23	164	35.2		26.2	55	15.0 ¹⁰⁷		32.9 ¹²⁴	58	7 03	7 56	8 48	44 12		33	90
24	179	35.1	+23	26.2	69	44.6 ¹⁰⁶		45.3 ¹²⁴	60 S	7 11	8 08	9 05	11 38	9	1 38	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 06 ^m 6		Mag: -4.0 PMG: 14 ^h 46 ^m		Mag: +1.3 PMG: 16 ^h 42 ^m		Mag: -2.5 PMG: 6 ^h 15 ^m		Mag: +1.1 PMG: 18 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	268	06.1	138	37.0	+20	33.0	109	09.2	+10	00.7	266	06.6	-0	28.7	88	50.1	+2	53.2
1	283	08.6	153	36.4		32.2	124	10.4	+10	00.1	281	08.8		28.6	103	52.5		53.2
2	298	11.0	168	35.9		31.5	139	11.6	+9	59.6	296	11.0		28.5	118	54.9		53.1
3	313	13.5	183	35.4		30.7	154	12.8		59.0	311	13.3		28.4	133	57.2		53.1
4	328	16.0	198	34.9		30.0	169	14.0		58.5	326	15.5		28.4	148	59.6		53.1
5	343	18.4	213	34.3	+20	29.2	184	15.1	+9	57.9	341	17.7	-0	28.3	164	02.0	+2	53.0
6	358	20.9	228	33.8	+20	28.5	199	16.3	+9	57.4	356	20.0	-0	28.2	179	04.4	+2	53.0
7	13	23.4	243	33.3		27.7	214	17.5		56.8	11	22.2		28.1	194	06.8		52.9
8	28	25.8	258	32.7		26.9	229	18.7		56.3	26	24.4		28.0	209	09.2		52.9
9	43	28.3	273	32.2		26.2	244	19.9		55.7	41	26.6		27.9	224	11.6		52.8
10	58	30.8	288	31.7		25.4	259	21.1		55.2	56	28.9		27.8	239	14.0		52.8
11	73	33.2	303	31.2	+20	24.7	274	22.3	+9	54.7	71	31.1	-0	27.7	254	16.4	+2	52.8
12	88	35.7	318	30.7	+20	23.9	289	23.5	+9	54.1	86	33.3	-0	27.6	269	18.7	+2	52.7
13	103	38.1	333	30.1		23.1	304	24.7		53.6	101	35.6		27.6	284	21.1		52.7
14	118	40.6	348	29.6		22.4	319	25.8		53.0	116	37.8		27.5	299	23.5		52.6
15	133	43.1	3	29.1		21.6	334	27.0		52.5	131	40.0		27.4	314	25.9		52.6
16	148	45.5	18	28.6		20.8	349	28.2		51.9	146	42.2		27.3	329	28.3		52.5
17	163	48.0	33	28.1	+20	20.1	4	29.4	+9	51.4	161	44.5	-0	27.2	344	30.7	+2	52.5
18	178	50.5	48	27.5	+20	19.3	19	30.6	+9	50.8	176	46.7	-0	27.1	359	33.1	+2	52.5
19	193	52.9	63	27.0		18.5	34	31.8		50.3	191	48.9		27.0	14	35.5		52.4
20	208	55.4	78	26.5		17.7	49	33.0		49.7	206	51.2		26.9	29	37.8		52.4
21	223	57.9	93	26.0		17.0	64	34.2		49.2	221	53.4		26.8	44	40.2		52.3
22	239	00.3	108	25.5		16.2	79	35.3		48.6	236	55.6		26.8	59	42.6		52.3
23	254	02.8	123	25.0		15.4	94	36.5		48.1	251	57.9		26.7	74	45.0		52.2
24	269	05.3	138	24.4	+20	14.7	109	37.7	+9	47.5	267	00.1	-0	26.6	89	47.4	+2	52.2
Dif	—		-5		-8		+12		-5		+22		+1		+24			0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 8 ^d 5	PHE { 4 ^h : 58 ^m 1 12 ^h : 58 ^m 0 20 ^h : 57 ^m 8 R°: 53 ^m													
	PMG: 12 ^h 01 ^m 8					SD: 15 ^h 8 PMG: 20 ^h 02 ^m												
	hG ☉		Dec	hG ☾ Dif		Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	°	h m	h m	h m	h m m		h m m	m			
0	179	35.1	+23	26.2	69	44.6	-13 45.3	60 N	21 28	23 15	** **	16 02 93		23 50 15				
1	194	34.9		26.3	84	14.3 ¹⁰⁷	-13 57.6 ¹²³	58	21 07	22 23	** **	15 50 89		** ** *				
2	209	34.8		26.3	98	43.9 ¹⁰⁶	-14 09.8 ¹²²	56	20 50	21 53	** **	41 84		** ** *				
3	224	34.7		26.3	113	13.4 ¹⁰⁵		54	36	31	23 19	32 81		0 01 21				
4	239	34.5		26.3	127	42.9 ¹⁰⁵		52	24	21 13	22 31	24 79		07 23				
5	254	34.4	+23	26.3	142	12.4 ¹⁰⁵	-14 45.9 ¹²⁰	50	20 13	20 58	22 03	15 17 77		0 12 26				
6	269	34.3	+23	26.3	156	41.9 ¹⁰⁵	-14 57.7 ¹¹⁸	45	19 50	20 28	21 18	15 02 73		0 24 30				
7	284	34.1		26.3	171	11.3 ¹⁰⁴	-15 09.5 ¹¹⁸	40	32	20 05	20 47	14 50 69		34 33				
8	299	34.0		26.3	185	40.6 ¹⁰³		35	17	19 47	24	40 66		42 36				
9	314	33.9		26.3	200	10.0 ¹⁰⁴		30	19 04	32	20 05	31 63		0 49 39				
10	329	33.7		26.3	214	39.2 ¹⁰²		20	18 42	19 07	19 36	16 59		1 02 43				
11	344	33.6	+23	26.3	229	08.5 ¹⁰³	-15 55.7 ¹¹⁴	10 N	18 23	18 46	19 13	14 02 56		1 13 47				
12	359	33.5	+23	26.3	243	37.7 ¹⁰²	-16 07.0 ¹¹³	0	18 05	18 28	18 54	13 50 52		1 23 51				
13	14	33.3		26.3	258	06.8 ¹⁰¹		10 S	17 48	18 11	37	37 49		34 55				
14	29	33.2		26.3	272	35.9 ¹⁰¹		20	29	17 53	21	24 46		45 59				
15	44	33.0		26.3	287	05.0 ¹⁰¹		30	17 08	35	18 04	10 41		1 58 63				
16	59	32.9		26.3	301	34.0 ¹⁰⁰	-16 51.4 ¹¹⁰	35	16 56	24	17 56	13 01 39		2 05 66				
17	74	32.8	+23	26.3	316	03.0 ¹⁰⁰	-17 02.2 ¹⁰⁸	40	16 42	17 12	17 46	12 51 36		2 14 69				
18	89	32.6	+23	26.3	330	32.0 ¹⁰⁰	-17 13.0 ¹⁰⁸	45	16 25	16 59	17 36	12 40 32		2 24 73				
19	104	32.5		26.3	345	00.9 ⁹⁹		50	16 04	42	24	26 28		36 78				
20	119	32.4		26.3	359	29.7 ⁹⁸		52	15 54	35	19	20 26		42 80				
21	134	32.2		26.3	13	58.6 ⁹⁹		54	43	27	13	13 23		48 83				
22	149	32.1		26.3	28	27.3 ⁹⁷	-17 54.9 ¹⁰³	56	30	18	07	12 05 20		2 55 86				
23	164	32.0		26.2	42	56.1 ⁹⁸	-18 05.2 ¹⁰³	58	15 15	16 07	17 00	11 56 17		3 03 89				
24	179	31.8	+23	26.2	57	24.7 ⁹⁶	-18 15.3 ¹⁰¹	60 S	14 58	15 56	16 53	11 47 12		3 12 94				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 02 ^m 7		Mag: -4.0 PMG: 14 ^h 47 ^m			Mag: +1.3 PMG: 16 ^h 40 ^m			Mag: -2.5 PMG: 6 ^h 11 ^m			Mag: +1.1 PMG: 17 ^h 58 ^m						
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec						
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	269	05.3	138	24.4	+20	14.7	109	37.7	+9	47.5	267	00.1	-0	26.6				
1	284	07.7	153	23.9		13.9	124	38.9		47.0	282	02.3		26.5				
2	299	10.2	168	23.4		13.1	139	40.1		46.4	297	04.6		26.4				
3	314	12.6	183	22.9		12.3	154	41.3		45.9	312	06.8		26.3				
4	329	15.1	198	22.4		11.5	169	42.5		45.3	327	09.0		26.2				
5	344	17.6	213	21.9	+20	10.8	184	43.7	+9	44.8	342	11.3	-0	26.1				
6	359	20.0	228	21.4	+20	10.0	199	44.8	+9	44.2	357	13.5	-0	26.1				
7	14	22.5	243	20.9		09.2	214	46.0		43.7	12	15.7		26.0				
8	29	25.0	258	20.4		08.4	229	47.2		43.1	27	18.0		25.9				
9	44	27.4	273	19.8		07.6	244	48.4		42.6	42	20.2		25.8				
10	59	29.9	288	19.3		06.9	259	49.6		42.0	57	22.4		25.7				
11	74	32.4	303	18.8	+20	06.1	274	50.8	+9	41.5	72	24.7	-0	25.6				
12	89	34.8	318	18.3	+20	05.3	289	52.0	+9	40.9	87	26.9	-0	25.5				
13	104	37.3	333	17.8		04.5	304	53.1		40.4	102	29.1		25.4				
14	119	39.8	348	17.3		03.7	319	54.3		39.8	117	31.4		25.4				
15	134	42.2	3	16.8		02.9	334	55.5		39.3	132	33.6		25.3				
16	149	44.7	18	16.3		02.1	349	56.7		38.7	147	35.8		25.2				
17	164	47.1	33	15.8	+20	01.3	4	57.9	+9	38.2	162	38.1	-0	25.1				
18	179	49.6	48	15.3	+20	00.6	19	59.1	+9	37.6	177	40.3	-0	25.0				
19	194	52.1	63	14.8	+19	59.8	35	00.3		37.1	192	42.6		24.9				
20	209	54.5	78	14.3		59.0	50	01.4		36.5	207	44.8		24.8				
21	224	57.0	93	13.8		58.2	65	02.6		36.0	222	47.0		24.8				
22	239	59.5	108	13.3		57.4	80	03.8		35.4	237	49.3		24.7				
23	255	01.9	123	12.8		56.6	95	05.0		34.9	252	51.5		24.6				
24	270	04.4	138	12.3	+19	55.8	110	06.2	+9	34.3	267	53.7	-0	24.5				
Dif	—		-5			-8	+12		-6		+22		+1		+24		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 0				Edad: 9 ^d 5 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 5 20 ^h : 57 ^m 3 Rº: 54 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	31.8	+23	26.2	57	24.7	−18	15.3	60 N	** **	0 49	2 36	17 35	87	** **	** **	**			
1	194	31.7		26.2	71	53.4		25.4	58	** **	1 41	2 56	19 82		0 02	20				
2	209	31.6		26.2	86	22.0		35.3	56	** **	2 11	3 13	17 05	79	12	24				
3	224	31.4		26.2	100	50.5		45.1	54	0 45	33	28	16 53	77	22	26				
4	239	31.3		26.2	115	19.1		−18 54.8	52	1 32	2 51	40	43 74		30	29				
5	254	31.2	+23	26.2	129	47.5		−19 04.4	50	2 00	3 06	3 51	16 34	72	0 38	30				
6	269	31.0	+23	26.2	144	15.9		−19 13.9	45	2 46	3 36	4 13	16 15	68	0 54	35				
7	284	30.9		26.2	158	44.3		23.3	40	3 17	3 59	31	15 59	66	1 07	38				
8	299	30.7		26.1	173	12.7		32.5	35	40	4 17	4 47	46 63		18	41				
9	314	30.6		26.1	187	41.0		41.7	30	3 59	32	5 00	34 62		28	43				
10	329	30.5		26.1	202	09.2		50.7	20	4 28	4 57	22	15 15	58	1 45	47				
11	344	30.3	+23	26.1	216	37.4		−19 59.7	10 N	4 51	5 18	5 41	14 58	56	2 00	50				
12	359	30.2	+23	26.1	231	05.6		−20 08.5	0	5 10	5 36	5 58	14 42	54	2 14	54				
13	14	30.1		26.1	245	33.7		17.2	10 S	27	5 53	6 16	26 52		29	56				
14	29	29.9		26.0	260	01.8		25.7	20	43	6 10	34	14 10	48	2 44	59				
15	44	29.8		26.0	274	29.9		34.2	30	5 59	29	6 56	13 51	45	3 01	63				
16	59	29.7		26.0	288	57.9		42.5	35	6 08	40	7 08	40 43		11	65				
17	74	29.5	+23	26.0	303	25.8		−20 50.7	40	6 18	6 52	7 22	13 27	41	3 23	68				
18	89	29.4	+23	26.0	317	53.7		−20 58.8	45	6 28	7 05	7 39	13 12	39	3 37	71				
19	104	29.3		25.9	332	21.6		−21 06.8	50	40	21	8 00	12 54	35	3 54	75				
20	119	29.1		25.9	346	49.5		14.7	52	45	29	10	46 32		4 02	77				
21	134	29.0		25.9	1	17.3		22.4	54	51	37	21	36 31		11	79				
22	149	28.9		25.9	15	45.1		30.0	56	6 57	46	34	25 28		21	82				
23	164	28.7		25.8	30	12.8		37.5	58	7 04	7 56	8 48	12 13	25	32	86				
24	179	28.6	+23	25.8	44	40.5		−21 44.8	60 S	7 11	8 08	9 06	11 59	20	4 46	90				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 58 ^m 7				Mag: −4.0 PMG: 14 ^h 48 ^m				Mag: +1.3 PMG: 16 ^h 38 ^m				Mag: −2.5 PMG: 6 ^h 08 ^m				Mag: +1.1 PMG: 17 ^h 54 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	270	04.4	138	12.3	+19	55.8	110	06.2	+9	34.3	267	53.7	−0	24.5	90	44.6	+2	51.1		
1	285	06.9	153	11.8		55.0	125	07.4		33.8	282	56.0		24.4	105	47.0		51.1		
2	300	09.3	168	11.3		54.2	140	08.5		33.2	297	58.2		24.3	120	49.4		51.0		
3	315	11.8	183	10.8		53.4	155	09.7		32.7	313	00.5		24.2	135	51.8		51.0		
4	330	14.2	198	10.3		52.6	170	10.9		32.1	328	02.7		24.2	150	54.1		51.0		
5	345	16.7	213	09.8	+19	51.8	185	12.1	+9	31.5	343	04.9	−0	24.1	165	56.5	+2	50.9		
6	0	19.2	228	09.3	+19	51.0	200	13.3	+9	31.0	358	07.2	−0	24.0	180	58.9	+2	50.9		
7	15	21.6	243	08.8		50.2	215	14.5		30.4	13	09.4		23.9	196	01.3		50.8		
8	30	24.1	258	08.4		49.4	230	15.6		29.9	28	11.7		23.8	211	03.7		50.8		
9	45	26.6	273	07.9		48.6	245	16.8		29.3	43	13.9		23.7	226	06.0		50.7		
10	60	29.0	288	07.4		47.8	260	18.0		28.8	58	16.1		23.7	241	08.4		50.7		
11	75	31.5	303	06.9	+19	47.0	275	19.2	+9	28.2	73	18.4	−0	23.6	256	10.8	+2	50.6		
12	90	34.0	318	06.4	+19	46.2	290	20.4	+9	27.7	88	20.6	−0	23.5	271	13.2	+2	50.6		
13	105	36.4	333	05.9		45.4	305	21.6		27.1	103	22.9		23.4	286	15.6		50.5		
14	120	38.9	348	05.4		44.6	320	22.7		26.6	118	25.1		23.3	301	18.0		50.5		
15	135	41.4	3	04.9		43.8	335	23.9		26.0	133	27.4		23.2	316	20.3		50.4		
16	150	43.8	18	04.4		42.9	350	25.1		25.5	148	29.6		23.2	331	22.7		50.4		
17	165	46.3	33	04.0	+19	42.1	5	26.3	+9	24.9	163	31.8	−0	23.1	346	25.1	+2	50.4		
18	180	48.7	48	03.5	+19	41.3	20	27.5	+9	24.3	178	34.1	−0	23.0	1	27.5	+2	50.3		
19	195	51.2	63	03.0		40.5	35	28.7		23.8	193	36.3		22.9	16	29.9		50.3		
20	210	53.7	78	02.5		39.7	50	29.8		23.2	208	38.6		22.8	31	32.2		50.2		
21	225	56.1	93	02.0		38.9	65	31.0		22.7	223	40.8		22.7	46	34.6		50.2		
22	240	58.6	108	01.5		38.1	80	32.2		22.1	238	43.1		22.7	61	37.0		50.1		
23	256	01.1	123	01.1		37.3	95	33.4		21.6	253	45.3		22.6	76	39.4		50.1		
24	271	03.5	138	00.6	+19	36.4	110	34.6	+9	21.0	268	47.5	−0	22.5	91	41.7	+2	50.0		
Dif	—		−5		−8		+12		−6		+22		+1		+24					

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 2				Edad: 10 ^d 5 PHE { SD: 15 ^h 6 PMG: 21 ^h 49 ^m																
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	R°
0	179	28.6	+23	25.8	44	40.5			−21	44.8	73	21 28	23 14	***	19 02	73	0 05	25			
1	194	28.5		25.8	59	08.1	86			52.1	71	21 08	22 23	***	18 41	70	22	29			
2	209	28.3		25.8	73	35.8	87		−21	59.2	71	20 51	21 53	***	24	68	36	33			
3	224	28.2		25.7	88	03.4	86		−22	06.2	70	36	31	23 18	18 10	66	48	35			
4	239	28.1		25.7	102	30.9	85			13.0	68	24	21 13	22 31	17 57	65	0 59	37			
5	254	27.9	+23	25.7	116	58.4	85		−22	19.7	67	20 13	20 58	22 03	17 46	64	1 08	39			
6	269	27.8	+23	25.6	131	25.9	85		−22	26.3	66	19 51	20 28	21 18	17 23	63	1 29	42			
7	284	27.6		25.6	145	53.4	85			32.8	65	33	20 06	20 47	17 05	61	45	45			
8	299	27.5		25.6	160	20.8	84			39.1	63	18	19 47	24	16 49	60	1 59	47			
9	314	27.4		25.6	174	48.2	84			45.3	62	19 05	32	20 05	36	59	2 11	48			
10	329	27.2		25.5	189	15.6	84			51.4	61	18 42	19 07	19 36	16 13	58	32	51			
11	344	27.1	+23	25.5	203	42.9	83		−22	57.3	59	18 23	18 47	19 14	15 54	56	2 50	53			
12	359	27.0	+23	25.4	218	10.2	83		−23	03.1	58	18 06	18 28	18 55	15 36	54	3 08	54			
13	14	26.8		25.4	232	37.5	83			08.8	57	17 48	18 11	38	15 18	53	25	56			
14	29	26.7		25.4	247	04.8	83			14.3	55	30	17 54	21	14 58	52	3 43	58			
15	44	26.6		25.3	261	32.0	82			19.7	54	17 09	35	18 05	36	50	4 04	61			
16	59	26.4		25.3	275	59.2	82			25.0	53	16 56	24	17 56	23	49	16	63			
17	74	26.3	+23	25.3	290	26.4	82		−23	30.1	51	16 42	17 13	17 47	14 08	48	4 31	64			
18	89	26.2	+23	25.2	304	53.6	82		−23	35.1	50	16 25	16 59	17 36	13 51	46	4 48	66			
19	104	26.0		25.2	319	20.7	81			40.0	49	16 04	43	25	29	43	5 09	68			
20	119	25.9		25.1	333	47.8	81			44.7	47	15 55	36	19	18	43	19	70			
21	134	25.8		25.1	348	14.9	81			49.3	46	43	27	14	13 07	40	30	72			
22	149	25.6		25.1	2	42.0	81			53.7	44	31	18	07	12 53	39	43	74			
23	164	25.5		25.0	17	09.1	81		−23	58.0	43	15 16	16 08	17 01	38	36	5 58	77			
24	179	25.4	+23	25.0	31	36.2	81		−24	02.2	42	14 58	15 56	16 53	12 19	33	6 16	81			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 5 ^h 54 ^m 8		Mag: −4.0 PMG: 14 ^h 48 ^m				Mag: +1.3 PMG: 16 ^h 36 ^m				Mag: −2.5 PMG: 6 ^h 04 ^m				Mag: +1.1 PMG: 17 ^h 50 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	271	03.5	138	00.6	+19	36.4	110	34.6	+9	21.0	268	47.5	−0	22.5	91	41.7	+2	50.0			
1	286	06.0	153	00.1		35.6	125	35.7		20.5	283	49.8		22.4	106	44.1		50.0			
2	301	08.5	167	59.6		34.8	140	36.9		19.9	298	52.0		22.3	121	46.5		49.9			
3	316	10.9	182	59.1		34.0	155	38.1		19.4	313	54.3		22.2	136	48.9		49.9			
4	331	13.4	197	58.7		33.2	170	39.3		18.8	328	56.5		22.2	151	51.3		49.8			
5	346	15.9	212	58.2	+19	32.3	185	40.5	+9	18.2	343	58.8	−0	22.1	166	53.6	+2	49.8			
6	1	18.3	227	57.7	+19	31.5	200	41.7	+9	17.7	359	01.0	−0	22.0	181	56.0	+2	49.8			
7	16	20.8	242	57.2		30.7	215	42.8		17.1	14	03.3		21.9	196	58.4		49.7			
8	31	23.2	257	56.8		29.9	230	44.0		16.6	29	05.5		21.8	212	00.8		49.7			
9	46	25.7	272	56.3		29.1	245	45.2		16.0	44	07.8		21.8	227	03.2		49.6			
10	61	28.2	287	55.8		28.2	260	46.4		15.5	59	10.0		21.7	242	05.5		49.6			
11	76	30.6	302	55.3	+19	27.4	275	47.6	+9	14.9	74	12.3	−0	21.6	257	07.9	+2	49.5			
12	91	33.1	317	54.9	+19	26.6	290	48.7	+9	14.3	89	14.5	−0	21.5	272	10.3	+2	49.5			
13	106	35.6	332	54.4		25.8	305	49.9		13.8	104	16.8		21.4	287	12.7		49.4			
14	121	38.0	347	53.9		24.9	320	51.1		13.2	119	19.0		21.3	302	15.0		49.4			
15	136	40.5	2	53.4		24.1	335	52.3		12.7	134	21.2		21.3	317	17.4		49.3			
16	151	43.0	17	53.0		23.3	350	53.5		12.1	149	23.5		21.2	332	19.8		49.3			
17	166	45.4	32	52.5	+19	22.4	5	54.6	+9	11.6	164	25.7	−0	21.1	347	22.2	+2	49.2			
18	181	47.9	47	52.0	+19	21.6	20	55.8	+9	11.0	179	28.0	−0	21.0	2	24.5	+2	49.2			
19	196	50.4	62	51.6		20.8	35	57.0		10.4	194	30.2		20.9	17	26.9		49.1			
20	211	52.8	77	51.1		19.9	50	58.2		09.9	209	32.5		20.9	32	29.3		49.1			
21	226	55.3	92	50.6		19.1	65	59.4		09.3	224	34.7		20.8	47	31.7		49.0			
22	241	57.7	107	50.2		18.3	81	00.5		08.8	239	37.0		20.7	62	34.0		49.0			
23	257	00.2	122	49.7		17.4	96	01.7		08.2	254	39.2		20.6	77	36.4		48.9			
24	272	02.7	137	49.2	+19	16.6	111	02.9	+9	07.7	269	41.5	−0	20.5	92	38.8	+2	48.9			
Dif	—		−5		−8		+12		−6		+22		+1		+24		0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 11 ^d 5 PHE	SD: 15 ^h 4			R ^o : 54 ^m			Hora		R ^o	Hora		R ^o
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	25.4	+23	25.0	31	36.2	-24	02.2	60 N	0 51	2 37	20	15	51	0 30	42
1	194	25.2		24.9	46	03.2	80	06.2	58	1 41	2 57	19	51	52	0 51	44
2	209	25.1		24.9	60	30.2	80	10.1	56	2 11	3 14		32	53	1 09	45
3	224	25.0		24.8	74	57.3	81	13.9	54	0 46	34		16	53		23 4
4	239	24.8		24.8	89	24.3	80	17.5	52	1 33	2 52	41	19	02	54	36 48
5	254	24.7	+23	24.8	103	51.3	80	-24	50	2 01	3 07	3 51	18	50	54	1 47 49
6	269	24.6	+23	24.7	118	18.3	80	-24	45	2 47	3 37	4 14	18	26	53	2 11 50
7	284	24.4		24.7	132	45.3	80	27.5	40	3 17	3 59	32	18	06	54	30 51
8	299	24.3		24.6	147	12.2	79	30.5	35	41	4 17	4 47	17	49	54	46 51
9	314	24.2		24.6	161	39.2	80	33.4	30	3 59	33	5 00	35	54		2 59 53
10	329	24.0		24.5	176	06.2	80	36.2	20	4 28	4 58	22	17	11	54	3 23 53
11	344	23.9	+23	24.5	190	33.2	80	-24	10 N	4 51	5 18	5 41	16	50	54	3 43 54
12	359	23.8	+23	24.4	205	00.1	79	-24	0	5 10	5 36	5 59	16	30	55	4 02 55
13	14	23.6		24.4	219	27.1	80	43.7	10 S	27	5 53	6 16	16	11	54	21 55
14	29	23.5		24.3	233	54.1	80	45.9	20	5 43	6 11	35	15	50	55	4 41 56
15	44	23.4		24.3	248	21.1	80	48.0	19	30	6 00	30	6 56		26 54	5 05 57
16	59	23.2		24.2	262	48.1	80	49.9	35	08	40	7 08	15	12	54	19 57
17	74	23.1	+23	24.1	277	15.1	80	-24	40	6 18	6 52	7 23	14	56	54	5 35 57
18	89	23.0	+23	24.1	291	42.1	80	-24	45	6 28	7 05	7 39	14	37	53	5 54 58
19	104	22.8		24.0	306	09.1	80	54.8	50	40	22	8 00		12 54		6 17 60
20	119	22.7		24.0	320	36.1	80	56.2	52	45	29	10	14	01	53	29 60
21	134	22.6		23.9	335	03.1	80	57.4	12	54	51	37	21	13	47	53
22	149	22.4		23.9	349	30.2	81	58.5	56	6 57	46	34		32 53		6 57 61
23	164	22.3		23.8	3	57.2	80	-24	58	7 04	7 57	8 48	13	14	52	7 15 61
24	179	22.2	+23	23.7	18	24.3	81	-25	60 S	7 11	8 08	9 06	12	52	51	7 37 62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 50 ^m 9		Mag: -4.0 PMG: 14 ^h 49 ^m		Mag: +1.3 PMG: 16 ^h 35 ^m		Mag: -2.5 PMG: 6 ^h 00 ^m		Mag: +1.1 PMG: 17 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	272	02.7	137	49.2	+19	16.6	111	02.9	+9	07.7
1	287	05.1	152	48.8		15.8	126	04.1		07.1
2	302	07.6	167	48.3		14.9	141	05.3		06.5
3	317	10.1	182	47.9		14.1	156	06.4		06.0
4	332	12.5	197	47.4		13.3	171	07.6		05.4
5	347	15.0	212	46.9	+19	12.4	186	08.8	+9	04.9
6	2	17.5	227	46.5	+19	11.6	201	10.0	+9	04.3
7	17	19.9	242	46.0		10.7	216	11.1		03.7
8	32	22.4	257	45.6		09.9	231	12.3		03.2
9	47	24.8	272	45.1		09.0	246	13.5		02.6
10	62	27.3	287	44.6		08.2	261	14.7		02.1
11	77	29.8	302	44.2	+19	07.4	276	15.9	+9	01.5
12	92	32.2	317	43.7	+19	06.5	291	17.0	+9	00.9
13	107	34.7	332	43.3		05.7	306	18.2	+9	00.4
14	122	37.2	347	42.8		04.8	321	19.4	+8	59.8
15	137	39.6	2	42.4		04.0	336	20.6		59.3
16	152	42.1	17	41.9		03.1	351	21.7		58.7
17	167	44.6	32	41.5	+19	02.3	6	22.9	+8	58.1
18	182	47.0	47	41.0	+19	01.4	21	24.1	+8	57.6
19	197	49.5	62	40.6	+19	00.6	36	25.3		57.0
20	212	52.0	77	40.1	+18	59.7	51	26.5		56.5
21	227	54.4	92	39.7		58.9	66	27.6		55.9
22	242	56.9	107	39.2		58.0	81	28.8		55.3
23	257	59.3	122	38.8		57.2	96	30.0		54.8
24	273	01.8	137	38.3	+18	56.3	111	31.2	+8	54.2
Dif	—		-5	-8			+12	-6		
									+23	+1
										+24

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 5 PHE { 4 ^h : 56 ^m 1 12 ^h : 56 ^m 0 20 ^h : 55 ^m 8 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	22.2	+23	23.7	18	24.3	-25 00.3	60 N	21 28	23 13	** **	21 06 32	1 12 61	
1	194	22.0		23.7	32	51.4 81	00.9	58	21 07	22 23	** **	20 43 35	35 60	
2	209	21.9		23.6	47	18.5 81	01.5	56	20 51	21 53	** **	25 37	1 54 59	
3	224	21.8		23.6	61	45.6 81	01.8	54	36	31	23 17	20 09 40	2 10 59	
4	239	21.6		23.5	76	12.8 82	02.1	52	24	21 13	22 31	19 56 41	24 58	
5	254	21.5	+23	23.4	90	39.9 81	-25 02.2	50	20 13	20 58	22 03	19 44 42	2 36 58	
6	269	21.4	+23	23.4	105	07.1 82	-25 02.2	45	19 51	20 28	21 18	19 19 45	3 01 57	
7	284	21.3		23.3	119	34.4 83	02.0	40	33	20 06	20 47	19 00 46	21 56	
8	299	21.1		23.2	134	01.6 82	01.7	35	18	19 48	24	18 43 48	37 56	
9	314	21.0		23.2	148	28.9 83	01.2	30	19 05	32	20 06	29 49	3 52 55	
10	329	20.9		23.1	162	56.2 83	-25 00.6	20	18 43	19 07	19 37	18 05 50	4 16 55	
11	344	20.7	+23	23.0	177	23.5 83	-24 59.9	10 N	18 24	18 47	19 14	17 44 52	4 37 54	
12	359	20.6	+23	23.0	191	50.9 84	-24 59.1	0	18 06	18 29	18 55	17 25 53	4 57 54	
13	14	20.5		22.9	206	18.3 84	58.1	10 S	17 49	18 12	38	17 05 54	5 16 53	
14	29	20.3		22.8	220	45.7 84	56.9	20	30	17 54	22	16 45 55	5 37 53	
15	44	20.2		22.7	235	13.2 85	55.7	30	17 09	36	18 05	20 57	6 02 51	
16	59	20.1		22.7	249	40.7 85	54.3	35	16 57	25	17 57	16 06 58	16 51	
17	74	19.9	+23	22.6	264	08.3 86	-24 52.7	40	16 43	17 13	17 47	15 50 59	6 32 50	
18	89	19.8	+23	22.5	278	35.9 86	-24 51.0	45	16 26	17 00	17 37	15 30 60	6 52 49	
19	104	19.7		22.5	293	03.5 86	49.2	50	16 05	16 44	25	15 06 61	7 17 48	
20	119	19.5		22.4	307	31.2 87	47.3	52	15 55	36	20	14 54 62	29 47	
21	134	19.4		22.3	321	58.9 87	45.2	54	44	28	14	40 64	42 46	
22	149	19.3		22.2	336	26.6 87	43.0	56	32	19	08	25 65	7 58 45	
23	164	19.1		22.2	350	54.4 88	40.7	58	15 17	16 09	17 01	14 06 67	8 16 44	
24	179	19.0	+23	22.1	5	22.3 89	-24 38.2	60 S	14 59	15 57	16 54	13 43 70	8 39 42	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 46 ^m 9		Mag: -4.0 PMG: 14 ^h 50 ^m			Mag: +1.3 PMG: 16 ^h 33 ^m			Mag: -2.5 PMG: 5 ^h 57 ^m			Mag: +1.1 PMG: 17 ^h 43 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	273	01.8	137	38.3	+18	56.3	111	31.2	+8	54.2	270	35.6	-0	18.7
1	288	04.3	152	37.9		55.4	126	32.3		53.7	285	37.9		18.6
2	303	06.7	167	37.4		54.6	141	33.5		53.1	300	40.1		18.5
3	318	09.2	182	37.0		53.7	156	34.7		52.5	315	42.4		18.4
4	333	11.7	197	36.5		52.9	171	35.9		52.0	330	44.6		18.4
5	348	14.1	212	36.1	+18	52.0	186	37.0	+8	51.4	345	46.9	-0	18.3
6	3	16.6	227	35.7	+18	51.2	201	38.2	+8	50.9	0	49.1	-0	18.2
7	18	19.1	242	35.2		50.3	216	39.4		50.3	15	51.4		18.1
8	33	21.5	257	34.8		49.4	231	40.6		49.7	30	53.7		18.1
9	48	24.0	272	34.3		48.6	246	41.7		49.2	45	55.9		18.0
10	63	26.5	287	33.9		47.7	261	42.9		48.6	60	58.2		17.9
11	78	28.9	302	33.4	+18	46.8	276	44.1	+8	48.0	76	00.4	-0	17.8
12	93	31.4	317	33.0	+18	46.0	291	45.3	+8	47.5	91	02.7	-0	17.8
13	108	33.8	332	32.6		45.1	306	46.4		46.9	106	05.0		17.7
14	123	36.3	347	32.1		44.2	321	47.6		46.4	121	07.2		17.6
15	138	38.8	2	31.7		43.4	336	48.8		45.8	136	09.5		17.5
16	153	41.2	17	31.3		42.5	351	50.0		45.2	151	11.8		17.5
17	168	43.7	32	30.8	+18	41.6	6	51.1	+8	44.7	166	14.0	-0	17.4
18	183	46.2	47	30.4	+18	40.8	21	52.3	+8	44.1	181	16.3	-0	17.3
19	198	48.6	62	30.0		39.9	36	53.5		43.5	196	18.5		17.2
20	213	51.1	77	29.5		39.0	51	54.7		43.0	211	20.8		17.2
21	228	53.6	92	29.1		38.2	66	55.8		42.4	226	23.1		17.1
22	243	56.0	107	28.7		37.3	81	57.0		41.8	241	25.3		17.0
23	258	58.5	122	28.2		36.4	96	58.2		41.3	256	27.6		16.9
24	274	01.0	137	27.8	+18	35.5	111	59.4	+8	40.7	271	29.9	-0	16.9
Dif	—		-4 -9		+12 -6		+23 -6		+23 +1		+24 -1		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 02 ^m 8			Edad: 13 ^d 5 PHE { SD: 15/2 PMG: *** **m 4 ^h : 55/6 12 ^h : 55/5 20 ^h : 55/3 R°: ***											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	19.0	+23	22.1	5	22.3	-24	38.2	26	60 N	0 53	2 38	21	38	18
1	194	18.9		22.0	19	50.2	89	35.6	26	58	*** **	1 43	2 58	18	24
2	209	18.8		21.9	34	18.1	89	32.9	27	56	*** **	2 12	3 15	21	02
3	224	18.6		21.8	48	46.1	90	30.1	28	54	0 49	35	29	20	49
4	239	18.5		21.8	63	14.1	90	27.1	30	52	1 35	2 53	41	37	31
5	254	18.4	+23	21.7	77	42.2	91	-24	24.0	31	50	2 02	3 08	3 52	20
6	269	18.2	+23	21.6	92	10.4	92	-24	20.7	33	45	2 48	3 37	4 15	20
7	284	18.1		21.5	106	38.6	92	17.4	33	40	3 18	4 00	33	19	46
8	299	18.0		21.4	121	06.8	92	13.9	35	35	3 41	18	4 48	31	41
9	314	17.8		21.4	135	35.1	93	10.3	36	30	4 00	33	5 01	19	18
10	329	17.7		21.3	150	03.5	94	06.5	38	20	29	4 58	23	18	55
11	344	17.6	+23	21.2	164	31.9	94	-24	02.7	38	10 N	4 51	5 19	5 42	18
12	359	17.4	+23	21.1	179	00.4	95	-23	58.7	40	0	5 10	5 37	5 59	18
13	14	17.3		21.0	193	28.9	95	54.6	41	10 S	27	5 54	6 17	17	59
14	29	17.2		20.9	207	57.5	96	50.3	43	20	5 44	6 11	35	40	54
15	44	17.1		20.8	222	26.2	97	46.0	43	30	6 00	30	6 56	17	58
16	59	16.9		20.7	236	54.9	97	41.5	45	35	09	40	7 09	17	04
17	74	16.8	+23	20.7	251	23.7	98	-23	36.9	46	40	6 18	6 52	7 23	16
18	89	16.7	+23	20.6	265	52.5	98	-23	32.2	47	45	6 28	7 06	7 39	16
19	104	16.5		20.5	280	21.4	99	27.4	48	50	40	22	8 00	16	07
20	119	16.4		20.4	294	50.4	100	22.5	49	52	45	29	10	15	56
21	134	16.3		20.3	309	19.4	100	17.4	51	54	51	37	21	44	70
22	149	16.1		20.2	323	48.5	101	12.3	51	56	6 57	46	34	30	72
23	164	16.0		20.1	338	17.7	102	07.0	53	58	7 04	7 57	8 48	15	13
24	179	15.9	+23	20.0	352	46.9	102	-23	01.6	54	60 S	7 11	8 08	9 06	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 43 ^m 0		Mag: -4.0 PMG: 14 ^h 51 ^m		Mag: +1.3 PMG: 16 ^h 31 ^m		Mag: -2.5 PMG: 5 ^h 53 ^m		Mag: +1.1 PMG: 17 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	274	01.0	137	27.8	+18	35.5	111	59.4	+8	40.7
1	289	03.4	152	27.4		34.7	127	00.5		40.1
2	304	05.9	167	26.9		33.8	142	01.7		39.6
3	319	08.3	182	26.5		32.9	157	02.9		39.0
4	334	10.8	197	26.1		32.0	172	04.0		38.5
5	349	13.3	212	25.7	+18	31.2	187	05.2	+8	37.9
6	4	15.7	227	25.2	+18	30.3	202	06.4	+8	37.3
7	19	18.2	242	24.8		29.4	217	07.6		36.8
8	34	20.7	257	24.4		28.5	232	08.7		36.2
9	49	23.1	272	24.0		27.6	247	09.9		35.6
10	64	25.6	287	23.5		26.8	262	11.1		35.1
11	79	28.1	302	23.1	+18	25.9	277	12.3	+8	34.5
12	94	30.5	317	22.7	+18	25.0	292	13.4	+8	33.9
13	109	33.0	332	22.3		24.1	307	14.6		33.4
14	124	35.5	347	21.8		23.2	322	15.8		32.8
15	139	37.9	2	21.4		22.3	337	16.9		32.2
16	154	40.4	17	21.0		21.4	352	18.1		31.7
17	169	42.8	32	20.6	+18	20.6	7	19.3	+8	31.1
18	184	45.3	47	20.2	+18	19.7	22	20.5	+8	30.5
19	199	47.8	62	19.8		18.8	37	21.6		30.0
20	214	50.2	77	19.3		17.9	52	22.8		29.4
21	229	52.7	92	18.9		17.0	67	24.0		28.8
22	244	55.2	107	18.5		16.1	82	25.1		28.3
23	259	57.6	122	18.1		15.2	97	26.3		27.7
24	275	00.1	137	17.7	+18	14.3	112	27.5	+8	27.1
Dif	—		-4			-9	+12			-6
								+23		+1
									+24	
										-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 0			Edad: 14 ^d 5 PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 1 20 ^h : 54 ^m 9 SD: 15 ^h 1 PMG: 0 ^h 30 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m	h m	m		
0	179	15.9	+23	20.0	352	46.9	-23	01.6	60 N	21 27	23 10	** **	21 56	12	3 29	83		
1	194	15.8		19.9	7	16.2 ¹⁰³	-22	56.1	58	21 07	22 22	** **	42	15	3 48	78		
2	209	15.6		19.8	21	45.6 ¹⁰⁴		50.5	56	20 50	21 52	** **	29	19	4 03	75		
3	224	15.5		19.7	36	15.0 ¹⁰⁴		44.7	58	36	30	23 15	18	21	17	77		
4	239	15.4		19.6	50	44.5 ¹⁰⁵		38.9	58	24	21 13	22 30	21 08	23	28	70		
5	254	15.2	+23	19.5	65	14.1 ¹⁰⁶	-22	33.0	59	20 13	20 58	22 03	20 59	25	4 39	68		
6	269	15.1	+23	19.4	79	43.8 ¹⁰⁷	-22	26.9	61	19 51	20 28	21 18	20 40	30	5 00	65		
7	284	15.0		19.3	94	13.5 ¹⁰⁷		20.8	61	33	20 06	20 47	25	32	18	61		
8	299	14.9		19.2	108	43.3 ¹⁰⁸		14.5	63	18	19 48	24	12	35	32	59		
9	314	14.7		19.1	123	13.1 ¹⁰⁸		08.1	64	19 05	32	20 06	20 00	38	5 45	57		
10	329	14.6		19.0	137	43.0 ¹⁰⁹	-22	01.7	64	18 43	19 08	19 37	19 41	41	6 06	54		
11	344	14.5	+23	18.9	152	13.0 ¹¹⁰	-21	55.1	66	18 24	18 47	19 14	19 24	44	6 25	51		
12	359	14.3	+23	18.8	166	43.1 ¹¹¹	-21	48.4	67	18 07	18 29	18 55	19 08	47	6 42	49		
13	14	14.2		18.7	181	13.2 ¹¹¹		41.7	67	17 49	18 12	39	18 52	50	6 59	46		
14	29	14.1		18.6	195	43.5 ¹¹³		34.8	69	31	17 55	22	34	53	7 18	43		
15	44	14.0		18.5	210	13.7 ¹¹²		27.8	70	17 10	36	18 06	15	56	39	40		
16	59	13.8		18.4	224	44.1 ¹¹⁴		20.7	71	16 57	26	17 57	18 03	59	7 51	38		
17	74	13.7	+23	18.3	239	14.5 ¹¹⁴	-21	13.6	71	16 43	17 14	17 48	17 50	61	8 05	36		
18	89	13.6	+23	18.2	253	45.0 ¹¹⁵	-21	06.3	73	16 27	17 00	17 38	17 34	64	8 22	32		
19	104	13.4		18.1	268	15.6 ¹¹⁶	-20	58.9	74	16 06	16 44	26	14	69	42	29		
20	119	13.3		18.0	282	46.2 ¹¹⁶		51.5	74	15 56	37	21	17 05	70	8 52	27		
21	134	13.2		17.9	297	17.0 ¹¹⁸		43.9	76	45	29	15	16 54	73	9 02	25		
22	149	13.1		17.8	311	47.7 ¹¹⁷		36.3	76	33	20	09	42	76	15	22		
23	164	12.9		17.6	326	18.6 ¹¹⁹		28.6	77	18	16 10	17 02	29	79	29	19		
24	179	12.8	+23	17.5	340	49.5 ¹¹⁹	-20	20.8	78	15 01	15 58	16 55	16 13	83	9 46	15		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 39 ^m 1			Mag: -4.0 PMG: 14 ^h 51 ^m			Mag: +1.3 PMG: 16 ^h 29 ^m			Mag: -2.5 PMG: 5 ^h 50 ^m			Mag: +1.1 PMG: 17 ^h 35 ^m					
	hG ♈			hG ♀			hG ♂			hG ♊			hG ♎			hG ♏		
h	°	'		°	'		°	'		°	'		°	'		°	'	
0	275	00.1		137	17.7	+18	14.3		112	27.5	+8	27.1	272	24.3	-0	15.1	95	29.4
1	290	02.6		152	17.3		13.4		127	28.7		26.6	287	26.5		15.0	110	31.8
2	305	05.0		167	16.9		12.5		142	29.8		26.0	302	28.8		15.0	125	34.1
3	320	07.5		182	16.4		11.6		157	31.0		25.4	317	31.1		14.9	140	36.5
4	335	10.0		197	16.0		10.7		172	32.2		24.9	332	33.3		14.8	155	38.9
5	350	12.4		212	15.6	+18	09.9		187	33.3	+8	24.3	347	35.6	-0	14.8	170	41.2
6	5	14.9		227	15.2	+18	09.0		202	34.5	+8	23.7	2	37.9	-0	14.7	185	43.6
7	20	17.3		242	14.8		08.1		217	35.7		23.2	17	40.2		14.6	200	46.0
8	35	19.8		257	14.4		07.2		232	36.9		22.6	32	42.4		14.6	215	48.3
9	50	22.3		272	14.0		06.3		247	38.0		22.0	47	44.7		14.5	230	50.7
10	65	24.7		287	13.6		05.4		262	39.2		21.5	62	47.0		14.4	245	53.1
11	80	27.2		302	13.2	+18	04.5		277	40.4	+8	20.9	77	49.3	-0	14.3	260	55.4
12	95	29.7		317	12.8	+18	03.6		292	41.5	+8	20.3	92	51.5	-0	14.3	275	57.8
13	110	32.1		332	12.4		02.7		307	42.7		19.8	107	53.8		14.2	291	00.1
14	125	34.6		347	12.0		01.8		322	43.9		19.2	122	56.1		14.1	306	02.5
15	140	37.1		2	11.6	+18	00.8		337	45.0		18.6	137	58.3		14.1	321	04.9
16	155	39.5		17	11.2	+17	59.9		352	46.2		18.0	153	00.6		14.0	336	07.2
17	170	42.0		32	10.8	+17	59.0		7	47.4	+8	17.5	168	02.9	-0	13.9	351	09.6
18	185	44.4		47	10.4	+17	58.1		22	48.6	+8	16.9	183	05.2	-0	13.9	6	12.0
19	200	46.9		62	10.0		57.2		37	49.7		16.3	198	07.4		13.8	21	14.3
20	215	49.4		77	09.6		56.3		52	50.9		15.8	213	09.7		13.7	36	16.7
21	230	51.8		92	09.2		55.4		67	52.1		15.2	228	12.0		13.7	51	19.0
22	245	54.3		107	08.8		54.5		82	53.2		14.6	243	14.3		13.6	66	21.4
23	260	56.8		122	08.4		53.6		97	54.4		14.1	258	16.5		13.5	81	23.8
24	275	59.2		137	08.0	+17	52.7		112	55.6	+8	13.5	273	18.8	-0	13.4	96	26.1
Dif	—			-4			-9		+12			-6	+23			+1	+24	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 15 ^d 5 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6											
	PMG: 12 ^h 03 ^m 2			SD: 14 ^h 9 PMG: 1 ^h 19 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	12.8	+23 17.5	340	49.5	-20 20.8	79	60 N	** **	0 56	2 39	22 08 8		4 52 83	
1	194	12.7	17.4	355	20.6 ¹²¹	12.9	80	58	** **	1 45	2 59	21 57 11		5 06 79	
2	209	12.5	17.3	9	51.6 ¹²⁰	-20 04.9	81	56	** **	2 14	3 16	48 14		18 76	
3	224	12.4	17.2	24	22.8 ¹²²	-19 56.8	82	54	0 52	36	30	39 17		29 73	
4	239	12.3	17.1	38	54.0 ¹²²	48.6	83	52	1 36	2 54	42	31 19		38 71	
5	254	12.2	+23 17.0	53	25.3 ¹²³	-19 40.3		50	2 04	3 09	3 53	21 24 21		5 47 69	
6	269	12.0	+23 16.9	67	56.7 ¹²⁴	-19 32.0	83	45	2 49	3 38	4 16	21 10 24		6 05 64	
7	284	11.9	16.7	82	28.1 ¹²⁴	23.6	84	40	3 19	4 01	33	20 57 28		19 61	
8	299	11.8	16.6	96	59.7 ¹²⁶	15.1	85	35	3 42	19	4 48	47 31		31 59	
9	314	11.7	16.5	111	31.3 ¹²⁶	-19 06.5	86	30	4 01	34	5 01	38 33		6 42 56	
10	329	11.5	16.4	126	02.9 ¹²⁶	-18 57.8	87	20	29	4 59	23	22 37		7 00 52	
11	344	11.4	+23 16.3	140	34.6 ¹²⁷	-18 49.1	87	10 N	4 52	5 19	5 42	20 08 41		7 16 49	
12	359	11.3	+23 16.1	155	06.5 ¹²⁹	-18 40.2	89	0	5 11	5 37	6 00	19 55 44		7 31 45	
13	14	11.1	16.0	169	38.3 ¹²⁸	31.3	89	10 S	28	5 54	17	42 47		7 45 43	
14	29	11.0	15.9	184	10.3 ¹³⁰	22.4	89	20	5 44	6 11	35	27 52		8 01 39	
15	44	10.9	15.8	198	42.3 ¹³⁰	13.3	91	30	6 00	30	6 56	11 56		19 35	
16	59	10.8	15.7	213	14.4 ¹³¹	-18 04.2	91	35	09	41	7 09	19 02 58		29 33	
17	74	10.6	+23 15.5	227	46.5 ¹³¹	-17 55.0	92	40	6 18	6 52	7 23	18 51 61		8 41 30	
18	89	10.5	+23 15.4	242	18.8 ¹³³	-17 45.7	93	45	6 28	7 06	7 39	18 38 64		8 54 27	
19	104	10.4	15.3	256	51.1 ¹³³	36.3	94	50	40	22	8 00	23 68		9 11 23	
20	119	10.3	15.2	271	23.4 ¹³³	26.9	94	52	45	29	10	15 71		19 21	
21	134	10.1	15.0	285	55.8 ¹³⁴	17.4	95	54	51	37	21	18 07 73		27 19	
22	149	10.0	14.9	300	28.3 ¹³⁵	-17 07.9	95	56	6 57	46	33	17 58 75		37 17	
23	164	09.9	14.8	315	00.9 ¹³⁶	-16 58.2	97	58	7 04	7 56	8 48	48 78		9 48 14	
24	179	09.8	+23 14.6	329	33.5 ¹³⁶	-16 48.5	97	60 S	7 11	8 08	9 05	17 36 82		10 01 10	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 5 ^h 35 ^m 1		Mag: -4.0 PMG: 14 ^h 52 ^m		Mag: +1.3 PMG: 16 ^h 27 ^m		Mag: -2.5 PMG: 5 ^h 46 ^m		Mag: +1.1 PMG: 17 ^h 32 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	275	59.2	137	08.0	+17 52.7	112	55.6	+8 13.5	273	18.8	-0 13.4
1	291	01.7	152	07.6	51.8	127	56.7	12.9	288	21.1	13.4
2	306	04.2	167	07.2	50.9	142	57.9	12.4	303	23.4	13.3
3	321	06.6	182	06.8	49.9	157	59.1	11.8	318	25.7	13.2
4	336	09.1	197	06.4	49.0	173	00.2	11.2	333	27.9	13.2
5	351	11.6	212	06.0	+17 48.1	188	01.4	+8 10.6	348	30.2	-0 13.1
6	6	14.0	227	05.6	+17 47.2	203	02.6	+8 10.1	3	32.5	-0 13.0
7	21	16.5	242	05.2	46.3	218	03.7	09.5	18	34.8	13.0
8	36	18.9	257	04.8	45.4	233	04.9	08.9	33	37.0	12.9
9	51	21.4	272	04.4	44.5	248	06.1	08.4	48	39.3	12.8
10	66	23.9	287	04.0	43.5	263	07.2	07.8	63	41.6	12.8
11	81	26.3	302	03.7	+17 42.6	278	08.4	+8 07.2	78	43.9	-0 12.7
12	96	28.8	317	03.3	+17 41.7	293	09.6	+8 06.6	93	46.2	-0 12.6
13	111	31.3	332	02.9	40.8	308	10.7	06.1	108	48.4	12.6
14	126	33.7	347	02.5	39.9	323	11.9	05.5	123	50.7	12.5
15	141	36.2	2	02.1	38.9	338	13.1	04.9	138	53.0	12.4
16	156	38.7	17	01.7	38.0	353	14.2	04.4	153	55.3	12.4
17	171	41.1	32	01.3	+17 37.1	8	15.4	+8 03.8	168	57.6	-0 12.3
18	186	43.6	47	00.9	+17 36.2	23	16.6	+8 03.2	183	59.8	-0 12.2
19	201	46.1	62	00.6	35.2	38	17.7	02.6	199	02.1	12.2
20	216	48.5	77	00.2	34.3	53	18.9	02.1	214	04.4	12.1
21	231	51.0	91	59.8	33.4	68	20.1	01.5	229	06.7	12.0
22	246	53.4	106	59.4	32.5	83	21.2	00.9	244	09.0	12.0
23	261	55.9	121	59.0	31.5	98	22.4	+8 00.3	259	11.3	11.9
24	276	58.4	136	58.7	+17 30.6	113	23.6	+7 59.8	274	13.5	-0 11.8
Dif	—		-4 -9		+12 -6		+23 +1		+24 -1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 16 ^d 5 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3												
	PMG: 12 ^h 03 ^m 5			SD: 14 ^h 8 PMG: 2 ^h 06 ^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	179	09.8	+23	14.6	329	33.5	-16 48.5	60 N	21 26	23 07	** **	22 16	6	6 15	81	
1	194	09.6		14.5	344	06.2 ¹³⁷	38.8 ⁹⁷	58	21 06	22 20	** **	08	9	25	78	
2	209	09.5		14.4	358	39.0 ¹³⁸	29.0 ⁹⁸	56	20 50	21 52	** **	22 02	11	34	75	
3	224	09.4		14.3	13	11.8 ¹³⁸	19.1 ⁹⁹	54	36	30	23 12	21 56	13	42	72	
4	239	09.3		14.1	27	44.7 ¹³⁹	-16 09.1 ¹⁰⁰	52	24	21 12	22 29	50	16	49	70	
5	254	09.1	+23	14.0	42	17.7 ¹⁴⁰	-15 59.1 ¹⁰⁰	50	20 13	20 57	22 02	21 45	18	6 56	67	
6	269	09.0	+23	13.9	56	50.7 ¹⁴⁰	-15 49.0 ¹⁰¹	45	19 51	20 28	21 17	21 34	22	7 09	64	
7	284	08.9		13.7	71	23.8 ¹⁴¹	38.9 ¹⁰¹	40	33	20 06	20 47	25	25	20	60	
8	299	08.8		13.6	85	57.0 ¹⁴²	28.7 ¹⁰²	35	18	19 48	24	18	28	30	57	
9	314	08.6		13.5	100	30.2 ¹⁴²	18.4 ¹⁰³	30	19 05	33	20 06	21 11	30	38	55	
10	329	08.5		13.3	115	03.5 ¹⁴³	-15 08.1 ¹⁰³	20	18 43	19 08	19 37	20 59	35	7 52	51	
11	344	08.4	+23	13.2	129	36.8 ¹⁴³	-14 57.7 ¹⁰⁴	10 N	18 25	18 48	19 15	20 49	38	8 05	46	
12	359	08.3	+23	13.1	144	10.2 ¹⁴⁴	-14 47.3 ¹⁰⁴	0	18 07	18 30	18 56	20 39	42	8 16	43	
13	14	08.1		12.9	158	43.6 ¹⁴⁴	36.8 ¹⁰⁵	10 S	17 50	18 13	39	29	46	28	39	
14	29	08.0		12.8	173	17.2 ¹⁴⁶	26.2 ¹⁰⁶	20	31	17 55	23	19	49	40	36	
15	44	07.9		12.6	187	50.7 ¹⁴⁵	15.6 ¹⁰⁶	30	17 10	37	18 07	07	53	8 54	31	
16	59	07.8		12.5	202	24.4 ¹⁴⁷	-14 05.0 ¹⁰⁶	35	16 58	26	17 58	20 00	56	9 02	29	
17	74	07.6	+23	12.4	216	58.1 ¹⁴⁷	-13 54.3 ¹⁰⁷	40	16 44	17 15	17 49	19 52	59	9 11	26	
18	89	07.5	+23	12.2	231	31.8 ¹⁴⁷	-13 43.5 ¹⁰⁸	45	16 28	17 01	17 39	19 42	63	9 21	23	
19	104	07.4		12.1	246	05.6 ¹⁴⁸	32.7 ¹⁰⁸	50	16 07	16 45	27	31	67	34	19	
20	119	07.3		11.9	260	39.5 ¹⁴⁹	21.8 ¹⁰⁹	52	15 57	38	22	26	69	40	17	
21	134	07.1		11.8	275	13.4 ¹⁴⁹	-13 10.9 ¹⁰⁹	54	46	30	16	20	71	46	15	
22	149	07.0		11.6	289	47.3 ¹⁴⁹	-13 00.0 ¹⁰⁹	56	34	21	10	13	74	9 54	12	
23	164	06.9		11.5	304	21.4 ¹⁵¹	-12 49.0 ¹¹⁰	58	19	16 11	17 03	19 06	77	10 02	10	
24	179	06.8	+23	11.4	318	55.4 ¹⁵⁰	-12 37.9 ¹¹¹	60 S	15 02	15 59	16 56	18 58	80	10 11	7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 5 ^h 31 ^m 2		Mag: -4.1 PMG: 14 ^h 52 ^m			Mag: +1.3 PMG: 16 ^h 25 ^m			Mag: -2.5 PMG: 5 ^h 42 ^m			Mag: +1.1 PMG: 17 ^h 28 ^m				
	hG ♈		hG ♎	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	'	°	'	'	°	'	'			
0	276	58.4	136	58.7	+17	30.6	113 23.6	+7 59.8	274 13.5	-0 11.8	97 22.7	+2 42.7				
1	292	00.8	151	58.3		29.7	128 24.7	59.2	289 15.8	11.8	112 25.1	42.6				
2	307	03.3	166	57.9		28.8	143 25.9	58.6	304 18.1	11.7	127 27.5	42.6				
3	322	05.8	181	57.5		27.8	158 27.1	58.1	319 20.4	11.7	142 29.8	42.5				
4	337	08.2	196	57.1		26.9	173 28.2	57.5	334 22.7	11.6	157 32.2	42.4				
5	352	10.7	211	56.8	+17	26.0	188 29.4	+7 56.9	349 25.0	-0 11.5	172 34.5	+2 42.4				
6	7	13.2	226	56.4	+17	25.0	203 30.6	+7 56.3	4 27.2	-0 11.5	187 36.9	+2 42.3				
7	22	15.6	241	56.0		24.1	218 31.7	55.8	19 29.5	11.4	202 39.2	42.3				
8	37	18.1	256	55.6		23.2	233 32.9	55.2	34 31.8	11.3	217 41.6	42.2				
9	52	20.6	271	55.3		22.2	248 34.1	54.6	49 34.1	11.3	232 44.0	42.2				
10	67	23.0	286	54.9		21.3	263 35.2	54.0	64 36.4	11.2	247 46.3	42.1				
11	82	25.5	301	54.5	+17	20.4	278 36.4	+7 53.5	79 38.7	-0 11.1	262 48.7	+2 42.1				
12	97	27.9	316	54.2	+17	19.4	293 37.6	+7 52.9	94 41.0	-0 11.1	277 51.0	+2 42.0				
13	112	30.4	331	53.8		18.5	308 38.7	52.3	109 43.3	11.0	292 53.4	41.9				
14	127	32.9	346	53.4		17.5	323 39.9	51.7	124 45.5	10.9	307 55.7	41.9				
15	142	35.3	1	53.0		16.6	338 41.1	51.2	139 47.8	10.9	322 58.1	41.8				
16	157	37.8	16	52.7		15.7	353 42.2	50.6	154 50.1	10.8	338 00.4	41.8				
17	172	40.3	31	52.3	+17	14.7	8 43.4	+7 50.0	169 52.4	-0 10.8	353 02.8	+2 41.7				
18	187	42.7	46	51.9	+17	13.8	23 44.5	+7 49.4	184 54.7	-0 10.7	8 05.2	+2 41.7				
19	202	45.2	61	51.6		12.8	38 45.7	48.9	199 57.0	10.6	23 07.5	41.6				
20	217	47.7	76	51.2		11.9	53 46.9	48.3	214 59.3	10.6	38 09.9	41.5				
21	232	50.1	91	50.8		11.0	68 48.0	47.7	230 01.6	10.5	53 12.2	41.5				
22	247	52.6	106	50.5		10.0	83 49.2	47.1	245 03.8	10.4	68 14.6	41.4				
23	262	55.0	121	50.1		09.1	98 50.4	46.6	260 06.1	10.4	83 16.9	41.4				
24	277	57.5	136	49.8	+17	08.1	113 51.5	+7 46.0	275 08.4	-0 10.3	98 19.3	+2 41.3				
Dif	—		-4		-9		+12		-6		+23		+1		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 03 ^m 6			Edad: 17 ^d 5 PHE { SD: 14'8 PMG: 2 ^h 49 ^m											
				R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	06.8	+23	318	55.4	-12	37.9	60 N	** *	1 00	2 41	22 22	4	7 36	79
1	194	06.6		333	29.5 ¹⁵¹		26.8 ¹¹¹	58	** *	1 47	3 01	17	8	43	76
2	209	06.5		348	03.7 ¹⁵²		15.7 ¹¹¹	56	** *	2 16	17	13	10	49	73
3	224	06.4		2	37.9 ¹⁵²	-12	04.5 ¹¹²	54	0 56	37	31	09	12	54	7
4	239	06.3		17	12.2 ¹⁵³	-11	53.3 ¹¹²	52	1 38	2 55	44	06	14	7 59	69
5	254	06.1	+23	31	46.5 ¹⁵³	-11	42.0 ¹¹³	50	2 05	3 10	3 54	22 03	16	8 03	67
6	269	06.0	+23	46	20.9 ¹⁵⁴	-11	30.7 ¹¹³	45	2 50	3 39	4 16	21 56	20	8 13	62
7	284	05.9		60	55.3 ¹⁵⁴		19.4 ¹¹³	40	3 20	4 02	34	50	24	20	59
8	299	05.8		75	29.8 ¹⁵⁵	-11	08.0 ¹¹⁴	35	3 43	20	4 49	46	26	27	56
9	314	05.7		90	04.3 ¹⁵⁵	-10	56.5 ¹¹⁵	30	4 01	35	5 02	41	29	33	53
10	329	05.5		104	38.8 ¹⁵⁵		45.1 ¹¹⁴	20	30	4 59	24	34	33	43	48
11	344	05.4	+23	119	13.4 ¹⁵⁶	-10	33.5 ¹¹⁶	10 N	4 53	5 20	5 43	21 27	37	8 51	45
12	359	05.3	+23	133	48.1 ¹⁵⁷	-10	22.0 ¹¹⁵	0	5 11	5 37	6 00	21 21	40	8 59	41
13	14	05.2		148	22.7 ¹⁵⁶	-10	10.4 ¹¹⁶	10 S	28	5 54	17	15	44	9 07	38
14	29	05.0		162	57.5 ¹⁵⁸	-9	58.8 ¹¹⁶	20	5 44	6 12	36	08	48	16	34
15	44	04.9		177	32.2 ¹⁵⁷		47.1 ¹¹⁷	30	6 00	30	6 57	21 00	53	25	30
16	59	04.8		192	07.0 ¹⁵⁸		35.4 ¹¹⁷	35	09	41	7 09	20 56	55	31	27
17	74	04.7	+23	206	41.9 ¹⁵⁹	-9	23.7 ¹¹⁷	40	6 18	6 52	7 23	20 51	58	9 37	24
18	89	04.6	+23	221	16.7 ¹⁵⁸	-9	12.0 ¹¹⁷	45	6 28	7 06	7 39	20 45	62	9 44	21
19	104	04.4		235	51.7 ¹⁶⁰	-9	00.2 ¹¹⁸	50	40	21	8 00	38	66	53	17
20	119	04.3		250	26.6 ¹⁵⁹	-8	48.4 ¹¹⁸	52	45	29	10	35	68	9 57	15
21	134	04.2		265	01.6 ¹⁶⁰		36.5 ¹¹⁹	54	51	37	20	31	70	10 01	13
22	149	04.1		279	36.6 ¹⁶⁰		24.6 ¹¹⁹	56	6 57	46	33	27	73	06	11
23	164	03.9		294	11.7 ¹⁶¹		12.7 ¹¹⁹	58	7 03	7 56	8 47	23	75	12	8
24	179	03.8	+23	308	46.8 ¹⁶¹	-8	00.8 ¹¹⁹	60 S	7 11	8 07	9 04	20 18	78	10 18	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 5 ^h 27 ^m 3		Mag: -4.1 PMG: 14 ^h 53 ^m		Mag: +1.3 PMG: 16 ^h 23 ^m		Mag: -2.5 PMG: 5 ^h 39 ^m		Mag: +1.1 PMG: 17 ^h 24 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	277	57.5	136	49.8	+17	08.1	113	51.5	+7	46.0	275	08.4	-0	10.3	98	19.3	+2	41.3	
1	293	00.0	151	49.4		07.2	128	52.7		45.4	290	10.7		10.3	113	21.6		41.3	
2	308	02.4	166	49.0		06.2	143	53.8		44.8	305	13.0		10.2	128	24.0		41.2	
3	323	04.9	181	48.7		05.3	158	55.0		44.3	320	15.3		10.1	143	26.3		41.1	
4	338	07.4	196	48.3		04.3	173	56.2		43.7	335	17.6		10.1	158	28.7		41.1	
5	353	09.8	211	48.0	+17	03.4	188	57.3	+7	43.1	350	19.9	-0	10.0	173	31.0	+2	41.0	
6	8	12.3	226	47.6	+17	02.4	203	58.5	+7	42.5	5	22.2	-0	09.9	188	33.4	+2	41.0	
7	23	14.8	241	47.2		01.5	218	59.7		42.0	20	24.5		09.9	203	35.8		40.9	
8	38	17.2	256	46.9	+17	00.5	234	00.8		41.4	35	26.8		09.8	218	38.1		40.9	
9	53	19.7	271	46.5	+16	59.6	249	02.0		40.8	50	29.0		09.8	233	40.5		40.8	
10	68	22.2	286	46.2		58.6	264	03.1		40.2	65	31.3		09.7	248	42.8		40.7	
11	83	24.6	301	45.8	+16	57.7	279	04.3	+7	39.7	80	33.6	-0	09.6	263	45.2	+2	40.7	
12	98	27.1	316	45.5	+16	56.7	294	05.5	+7	39.1	95	35.9	-0	09.6	278	47.5	+2	40.6	
13	113	29.5	331	45.1		55.8	309	06.6		38.5	110	38.2		09.5	293	49.9		40.6	
14	128	32.0	346	44.8		54.8	324	07.8		37.9	125	40.5		09.5	308	52.2		40.5	
15	143	34.5	1	44.4		53.9	339	09.0		37.3	140	42.8		09.4	323	54.6		40.5	
16	158	36.9	16	44.0		52.9	354	10.1		36.8	155	45.1		09.3	338	56.9		40.4	
17	173	39.4	31	43.7	+16	52.0	9	11.3	+7	36.2	170	47.4	-0	09.3	353	59.3	+2	40.3	
18	188	41.9	46	43.3	+16	51.0	24	12.4	+7	35.6	185	49.7	-0	09.2	9	01.6	+2	40.3	
19	203	44.3	61	43.0		50.0	39	13.6		35.0	200	52.0		09.2	24	04.0		40.2	
20	218	46.8	76	42.6		49.1	54	14.8		34.5	215	54.3		09.1	39	06.3		40.2	
21	233	49.3	91	42.3		48.1	69	15.9		33.9	230	56.6		09.0	54	08.7		40.1	
22	248	51.7	106	42.0		47.2	84	17.1		33.3	245	58.9		09.0	69	11.0		40.0	
23	263	54.2	121	41.6		46.2	99	18.2		32.7	261	01.2		08.9	84	13.4		40.0	
24	278	56.7	136	41.3	+16	45.2	114	19.4	+7	32.1	276	03.5	-0	08.9	99	15.7	+2	39.9	
Dif	—		-4		-10		+12		-6		+23		+1		+24		-1		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7		Edad: 18 ^d 5		PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1									
	PMG: 12 ^h 03 ^m 8		SD: 14 ^h 7	PMG: 3 ^h 31 ^m		R°: 40 ^m								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	m
0	179	03.8	+23 07.7		308 46.8	-8 00.8	60 N	21 25	23 03	** **	22 26 5		8 55 78	
1	194	03.7			323 21.9 ¹⁶¹	-7 48.8 ¹²⁰	58	21 05	22 18	** **	25 6		8 59 75	
2	209	03.6			337 57.0 ¹⁶¹	36.8 ¹²⁰	56	20 49	21 50	** **	23 9		9 02 72	
3	224	03.5			352 32.2 ¹⁶²	24.8 ¹²⁰	54	35	29	23 08	21 12		05 70	
4	239	03.3			7 07.4 ¹⁶²	12.8 ¹²⁰	52	23	21 11	22 27	20 13		08 67	
5	254	03.2	+23 06.8		21 42.6 ¹⁶²	-7 00.7 ¹²¹	50	20 13	20 57	22 01	22 19 15		9 10 66	
6	269	03.1	+23 06.7		36 17.9 ¹⁶³	-6 48.6 ¹²¹	45	19 50	20 28	21 17	22 16 19		9 15 61	
7	284	03.0			50 53.2 ¹⁶³	36.5 ¹²¹	40	33	20 05	20 47	14 22		19 58	
8	299	02.9			65 28.5 ¹⁶³	24.3 ¹²²	35	18	19 48	24	12 25		23 55	
9	314	02.7			80 03.8 ¹⁶³	-6 12.2 ¹²¹	30	19 05	33	20 06	10 28		26 52	
10	329	02.6			94 39.2 ¹⁶⁴	-6 00.0 ¹²²	20	18 43	19 08	19 37	07 32		31 48	
11	344	02.5	+23 05.8		109 14.6 ¹⁶⁴	-5 47.8 ¹²²	10 N	18 25	18 48	19 15	22 04 36		9 36 44	
12	359	02.4	+23 05.7		123 50.0 ¹⁶⁴	-5 35.5 ¹²³	0	18 08	18 30	18 56	22 01 41		9 40 41	
13	14	02.3			138 25.4 ¹⁶⁴	23.3 ¹²²	10 S	17 50	18 13	39	21 59 44		45 36	
14	29	02.1			153 00.8 ¹⁶⁴	-5 11.0 ¹²³	20	32	17 56	23	56 48		50 32	
15	44	02.0			167 36.3 ¹⁶⁵	-4 58.7 ¹²³	30	17 11	38	18 07	53 52		55 28	
16	59	01.9			182 11.8 ¹⁶⁵	46.4 ¹²³	35	16 59	27	17 59	51 55		9 58 25	
17	74	01.8	+23 04.8		196 47.3 ¹⁶⁵	-4 34.1 ¹²³	40	16 45	17 16	17 50	21 49 58		10 01 23	
18	89	01.7	+23 04.6		211 22.8 ¹⁶⁵	-4 21.8 ¹²³	45	16 29	17 02	17 39	21 47 61		10 05 19	
19	104	01.5			225 58.3 ¹⁶⁵	-4 09.4 ¹²⁴	50	16 08	16 47	28	44 66		10 15	
20	119	01.4			240 33.9 ¹⁶⁶	-3 57.0 ¹²⁴	52	15 59	39	23	43 67		12 13	
21	134	01.3			255 09.4 ¹⁶⁵	44.7 ¹²³	54	48	31	17	41 70		14 12	
22	149	01.2			269 45.0 ¹⁶⁶	32.3 ¹²⁴	56	35	22	11	40 72		17 9	
23	164	01.1			284 20.6 ¹⁶⁶	19.8 ¹²⁵	58	21	12	17 05	38 75		20 7	
24	179	00.9	+23 03.6		298 56.2 ¹⁶⁶	-3 07.4 ¹²⁴	60 S	15 04	16 01	16 57	21 36 78		10 23 4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 23 ^m 3		Mag: -4.1 PMG: 14 ^h 54 ^m		Mag: +1.4 PMG: 16 ^h 21 ^m		Mag: -2.5 PMG: 5 ^h 35 ^m		Mag: +1.1 PMG: 17 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	278	56.7	136	41.3	114	19.4	276	03.5	99	15.7
1	293	59.1	151	40.9	129	20.6	291	05.8	114	18.1
2	309	01.6	166	40.6	144	21.7	306	08.1	129	20.4
3	324	04.0	181	40.2	159	22.9	321	10.4	144	22.8
4	339	06.5	196	39.9	174	24.0	336	12.6	159	25.1
5	354	09.0	211	39.5	189	25.2	351	14.9	174	27.5
6	9	11.4	226	39.2	204	26.4	6	17.2	189	29.8
7	24	13.9	241	38.9	219	27.5	21	19.5	204	32.2
8	39	16.4	256	38.5	234	28.7	36	21.8	219	34.5
9	54	18.8	271	38.2	249	29.8	51	24.1	234	36.9
10	69	21.3	286	37.8	264	31.0	66	26.4	249	39.2
11	84	23.8	301	37.5	279	32.2	81	28.7	264	41.6
12	99	26.2	316	37.2	294	33.3	96	31.0	279	43.9
13	114	28.7	331	36.8	309	34.5	111	33.3	294	46.3
14	129	31.1	346	36.5	324	35.6	126	35.6	309	48.6
15	144	33.6	1	36.1	339	36.8	141	37.9	324	51.0
16	159	36.1	16	35.8	354	38.0	156	40.2	339	53.3
17	174	38.5	31	35.5	9	39.1	171	42.5	354	55.7
18	189	41.0	46	35.1	24	40.3	186	44.8	9	58.0
19	204	43.5	61	34.8	39	41.4	201	47.1	25	00.4
20	219	45.9	76	34.5	54	42.6	216	49.4	40	02.7
21	234	48.4	91	34.1	69	43.8	231	51.7	55	05.1
22	249	50.9	106	33.8	84	44.9	246	54.1	70	07.4
23	264	53.3	121	33.5	99	46.1	261	56.4	85	09.8
24	279	55.8	136	33.2	114	47.2	276	58.7	100	12.1
Dif	—		-3	-10	+12	-6	+23	+1	+23	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 19 ^d 5	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3	SD: 14 ^h 8		R°: 40 ^m	R°		Hora		R°			
	PMG: 12 ^h 04 ^m 0															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	00.9	+23	03.6	298	56.2	-3	07.4	60 N	** **	1 05	2 43	22 31	4	10 13	78
1	194	00.8		03.4	313	31.8 ¹⁶⁶	-2	55.0 ¹²⁴	58	** **	1 50	3 03		31	8	14 75
2	209	00.7		03.2	328	07.4 ¹⁶⁶		42.5 ¹²⁵	56	** **	2 18	19		32	10	14 73
3	224	00.6		03.0	342	43.0 ¹⁶⁶		30.1 ¹²⁴	54	1 00	39	33		33	12	15 70
4	239	00.5		02.8	357	18.6 ¹⁶⁶		17.6 ¹²⁵	52	1 41	2 57	45		33	14	15 68
5	254	00.4	+23	02.6	11	54.2 ¹⁶⁶	-2	05.1 ¹²⁵	50	2 07	3 11	3 56	22 34	16	10 16	66
6	269	00.2	+23	02.5	26	29.8 ¹⁶⁶	-1	52.6 ¹²⁵	45	2 51	3 40	4 18	22 35	20	10 16	62
7	284	00.1		02.3	41	05.5 ¹⁶⁷		40.1 ¹²⁵	40	3 21	4 03	35		36	23	17 58
8	299	00.0		02.1	55	41.1 ¹⁶⁶		27.6 ¹²⁵	35	3 44	20	4 50		37	26	18 55
9	313	59.9		01.9	70	16.7 ¹⁶⁶		15.1 ¹²⁵	30	4 02	4 35	5 03		38	28	18 53
10	328	59.8		01.7	84	52.4 ¹⁶⁷	-1	02.6 ¹²⁵	20	31	5 00	24		39	33	19 48
11	343	59.6	+23	01.5	99	28.0 ¹⁶⁶	-0	50.1 ¹²⁵	10 N	4 53	5 20	5 43	22 40	37	10 20	44
12	358	59.5	+23	01.4	114	03.6 ¹⁶⁶	-0	37.5 ¹²⁶	0	5 12	5 38	6 00	22 42	40	10 21	40
13	13	59.4		01.2	128	39.3 ¹⁶⁷		25.0 ¹²⁵	10 S	28	5 55	18		43	44	21 37
14	28	59.3		01.0	143	14.9 ¹⁶⁶	-0	12.5 ¹²⁵	20	5 44	6 12	36		44	48	22 33
15	43	59.2		00.8	157	50.5 ¹⁶⁶	+0	00.1 ¹²⁶	30	6 00	30	6 57		45	54	23 28
16	58	59.1		00.6	172	26.1 ¹⁶⁶		12.6 ¹²⁵	35	09	41	7 09		46	56	23 26
17	73	58.9	+23	00.4	187	01.7 ¹⁶⁶	+0	25.2 ¹²⁶	40	6 18	6 52	7 23	22 47	59	10 24	23
18	88	58.8	+23	00.2	201	37.3 ¹⁶⁶	+0	37.7 ¹²⁵	45	6 28	7 05	7 39	22 48	63	10 24	20
19	103	58.7	+23	00.0	216	12.9 ¹⁶⁶	+0	50.3 ¹²⁶	50	40	21	7 59		50	66	25 16
20	118	58.6	+22	59.8	230	48.5 ¹⁶⁶	+1	02.8 ¹²⁵	52	45	28	8 09		50	69	25 14
21	133	58.5		59.6	245	24.0 ¹⁶⁵		15.4 ¹²⁶	54	50	36	20		51	71	26 11
22	148	58.4		59.4	259	59.6 ¹⁶⁶		27.9 ¹²⁵	56	6 56	45	32		52	73	26 10
23	163	58.2		59.2	274	35.1 ¹⁶⁵		40.5 ¹²⁶	58	7 03	7 55	8 46		53	76	27 7
24	178	58.1	+22	59.0	289	10.7 ¹⁶⁶	+1	53.0 ¹²⁵	60 S	7 10	8 06	9 03	22 54	78	10 27	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: -4.1		Mag: +1.4		Mag: -2.5		Mag: +1.1						
	5 ^h 19 ^m 4		PMG: 14 ^h 54 ^m		PMG: 16 ^h 20 ^m		PMG: 5 ^h 31 ^m		PMG: 17 ^h 16 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	279	55.8	136	33.2	+16	114	47.2	+7	276	58.7	-0	100	12.1	+2	38.5
1	294	58.3	151	32.8		129	48.4		292	01.0	07.4	115	14.5		38.4
2	310	00.7	166	32.5		144	49.5		307	03.3	07.4	130	16.8		38.4
3	325	03.2	181	32.2		159	50.7		322	05.6	07.3	145	19.1		38.3
4	340	05.6	196	31.8		174	51.9		337	07.9	07.2	160	21.5		38.3
5	355	08.1	211	31.5	+16	189	53.0	+7	352	10.2	-0	175	23.8	+2	38.2
6	10	10.6	226	31.2	+16	204	54.2	+7	7	12.5	-0	190	26.2	+2	38.1
7	25	13.0	241	30.9		219	55.3		22	14.8	07.1	205	28.5		38.1
8	40	15.5	256	30.5		234	56.5		37	17.1	07.0	220	30.9		38.0
9	55	18.0	271	30.2		249	57.6		52	19.4	07.0	235	33.2		38.0
10	70	20.4	286	29.9		264	58.8		67	21.7	06.9	250	35.6		37.9
11	85	22.9	301	29.6	+16	280	00.0	+7	82	24.0	-0	265	37.9	+2	37.8
12	100	25.4	316	29.3	+16	295	01.1	+7	97	26.3	-0	280	40.3	+2	37.8
13	115	27.8	331	28.9		310	02.3		112	28.6	06.7	295	42.6		37.7
14	130	30.3	346	28.6		325	03.4		127	30.9	06.7	310	45.0		37.7
15	145	32.8	1	28.3		340	04.6		142	33.2	06.6	325	47.3		37.6
16	160	35.2	16	28.0		355	05.7		157	35.5	06.6	340	49.6		37.5
17	175	37.7	31	27.7	+16	10	06.9	+7	172	37.9	-0	355	52.0	+2	37.5
18	190	40.1	46	27.3	+16	25	08.1	+7	187	40.2	-0	10	54.3	+2	37.4
19	205	42.6	61	27.0		40	09.2		202	42.5	06.4	25	56.7		37.4
20	220	45.1	76	26.7		55	10.4		217	44.8	06.4	40	59.0		37.3
21	235	47.5	91	26.4		70	11.5		232	47.1	06.3	56	01.4		37.2
22	250	50.0	106	26.1	+16	85	12.7		247	49.4	06.3	71	03.7		37.2
23	265	52.5	121	25.8	+15	99	13.8		262	51.7	06.2	86	06.1		37.1
24	280	54.9	136	25.5	+15	58	15.0	+7	277	54.0	-0	101	08.4	+2	37.1
Dif	—		-3	-10		+12	-6		+23		+1	+23			-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7			Edad: 20 ^d 5 PHE { 4 ^h : 54:4 12 ^h : 54:5 20 ^h : 54:6										
	PMG: 12 ^h 04 ^m 2			SD: 14:8 PMG: 4 ^h 51 ^m Rº: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif					
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	58.1	+22 59.0	289	10.7	+1 53.0	60 N	21 23	22 58	** **	22 35 6	11 31 80		
1	193	58.0	58.9	303	46.2 ¹⁶⁵	+2 05.6 ¹²⁶	58	21 04	22 16	** **	39 8	29 77		
2	208	57.9	58.7	318	21.7 ¹⁶⁵	18.1 ¹²⁵	56	20 48	21 48	** **	42 11	27 74		
3	223	57.8	58.5	332	57.1 ¹⁶⁴	30.6 ¹²⁵	54	34	27	23 04	45 13	25 77		
4	238	57.7	58.3	347	32.6 ¹⁶⁵	43.2 ¹²⁶	52	22	21 10	22 25	47 16	23 69		
5	253	57.6	+22 58.1	2	08.0 ¹⁶⁴	+2 55.7 ¹²⁵	50	20 12	20 56	21 59	22 50 17	11 22 67		
6	268	57.4	+22 57.9	16	43.4 ¹⁶⁴	+3 08.2 ¹²⁵	45	19 50	20 27	21 16	22 55 21	11 18 63		
7	283	57.3	57.7	31	18.8 ¹⁶⁴	20.7 ¹²⁵	40	32	20 05	20 46	22 59 25	15 60		
8	298	57.2	57.5	45	54.2 ¹⁶⁴	33.2 ¹²⁵	35	18	19 47	24	23 03 28	13 56		
9	313	57.1	57.3	60	29.6 ¹⁶⁴	45.7 ¹²⁵	30	19 05	32	20 06	06 31	11 54		
10	328	57.0	57.0	75	04.9 ¹⁶³	+3 58.2 ¹²⁵	20	18 44	19 08	19 37	12 35	07 49		
11	343	56.9	+22 56.8	89	40.2 ¹⁶³	+4 10.7 ¹²⁵	10 N	18 25	18 48	19 15	23 17 39	11 04 45		
12	358	56.7	+22 56.6	104	15.5 ¹⁶³	+4 23.2 ¹²⁵	0	18 08	18 30	18 56	23 22 43	11 01 41		
13	13	56.6	56.4	118	50.7 ¹⁶²	35.6 ¹²⁴	10 S	17 51	18 14	40	27 46	10 58 38		
14	28	56.5	56.2	133	25.9 ¹⁶²	+4 48.1 ¹²⁵	20	33	17 57	24	32 51	55 33		
15	43	56.4	56.0	148	01.1 ¹⁶²	+5 00.5 ¹²⁴	30	12	38	08	39 54	51 29		
16	58	56.3	55.8	162	36.3 ¹⁶²	12.9 ¹²⁴	35	17 00	28	18 00	42 57	49 27		
17	73	56.2	+22 55.6	177	11.4 ¹⁶¹	+5 25.3 ¹²⁴	40	16 46	17 17	17 50	23 46 60	10 47 23		
18	88	56.1	+22 55.4	191	46.5 ¹⁶¹	+5 37.7 ¹²⁴	45	16 30	17 03	17 40	23 51 64	10 44 20		
19	103	55.9	55.2	206	21.5 ¹⁶⁰	+5 50.1 ¹²⁴	50	10	16 48	29	56 69	41 16		
20	118	55.8	55.0	220	56.5 ¹⁶⁰	+6 02.5 ¹²⁴	52	16 00	41	24	23 59 70	39 15		
21	133	55.7	54.8	235	31.5 ¹⁶⁰	14.8 ¹²³	54	15 49	33	19	** ** *	37 13		
22	148	55.6	54.6	250	06.5 ¹⁶⁰	27.2 ¹²⁴	56	37	24	13	** ** *	36 10		
23	163	55.5	54.3	264	41.4 ¹⁵⁹	39.5 ¹²³	58	23	14	17 06	** ** *	34 7		
24	178	55.4	+22 54.1	279	16.2 ¹⁵⁸	+6 51.8 ¹²³	60 S	15 06	16 03	16 59	** ** *	10 31 5		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 15 ^m 5		Mag: -4.1 PMG: 14 ^h 55 ^m		Mag: +1.4 PMG: 16 ^h 18 ^m		Mag: -2.5 PMG: 5 ^h 28 ^m		Mag: +1.1 PMG: 17 ^h 13 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	280	54.9	136	25.5	+15 58.3	115 15.0	+7 04.3	277 54.0	-0 06.1	101 08.4	+2 37.1			
1	295	57.4	151	25.1	57.3	130 16.1	03.7	292 56.3	06.1	116 10.7	37.0			
2	310	59.9	166	24.8	56.3	145 17.3	03.1	307 58.6	06.0	131 13.1	36.9			
3	326	02.3	181	24.5	55.3	160 18.5	02.5	323 01.0	06.0	146 15.4	36.9			
4	341	04.8	196	24.2	54.3	175 19.6	01.9	338 03.3	05.9	161 17.8	36.8			
5	356	07.2	211	23.9	+15 53.3	190 20.8	+7 01.3	353 05.6	-0 05.9	176 20.1	+2 36.7			
6	11	09.7	226	23.6	+15 52.4	205 21.9	+7 00.7	8 07.9	-0 05.8	191 22.5	+2 36.7			
7	26	12.2	241	23.3	51.4	220 23.1	+7 00.2	23 10.2	05.8	206 24.8	36.6			
8	41	14.6	256	23.0	50.4	235 24.2	+6 59.6	38 12.5	05.7	221 27.1	36.6			
9	56	17.1	271	22.7	49.4	250 25.4	59.0	53 14.8	05.7	236 29.5	36.5			
10	71	19.6	286	22.4	48.4	265 26.5	58.4	68 17.1	05.6	251 31.8	36.4			
11	86	22.0	301	22.1	+15 47.4	280 27.7	+6 57.8	83 19.4	-0 05.6	266 34.2	+2 36.4			
12	101	24.5	316	21.8	+15 46.4	295 28.8	+6 57.2	98 21.8	-0 05.5	281 36.5	+2 36.3			
13	116	27.0	331	21.5	45.4	310 30.0	56.7	113 24.1	05.5	296 38.8	36.3			
14	131	29.4	346	21.2	44.4	325 31.2	56.1	128 26.4	05.4	311 41.2	36.2			
15	146	31.9	1	20.8	43.4	340 32.3	55.5	143 28.7	05.4	326 43.5	36.1			
16	161	34.4	16	20.5	42.4	355 33.5	54.9	158 31.0	05.3	341 45.9	36.1			
17	176	36.8	31	20.2	+15 41.3	10 34.6	+6 54.3	173 33.3	-0 05.3	356 48.2	+2 36.0			
18	191	39.3	46	19.9	+15 40.3	25 35.8	+6 53.7	188 35.6	-0 05.2	11 50.6	+2 35.9			
19	206	41.7	61	19.6	39.3	40 36.9	53.1	203 38.0	05.2	26 52.9	35.9			
20	221	44.2	76	19.3	38.3	55 38.1	52.6	218 40.3	05.1	41 55.2	35.8			
21	236	46.7	91	19.0	37.3	70 39.2	52.0	233 42.6	05.1	56 57.6	35.8			
22	251	49.1	106	18.8	36.3	85 40.4	51.4	248 44.9	05.0	71 59.9	35.7			
23	266	51.6	121	18.5	35.3	100 41.5	50.8	263 47.2	05.0	87 02.3	35.6			
24	281	54.1	136	18.2	+15 34.3	115 42.7	+6 50.2	278 49.5	-0 04.9	102 04.6	+2 35.6			
Dif	—		-3 -10		+12 -6		+23 +1		+23 -1					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 4				Edad: 21 ^d 5 PHE { SD: 14 ^h 9 PMG: 5 ^h 32 ^m R°: 43 ^m 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 1													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	55.4	+22	54.1	279	16.2	+6	51.8	60 N	** **	1 11	2 45	22 41	8	12 51	83		
1	193	55.3		53.9	293	51.1 ¹⁵⁹	+7	04.1 ¹²³	58	** **	1 53	3 05	47 11		46 79			
2	208	55.2		53.7	308	25.9 ¹⁵⁸		16.3 ¹²²	56	** **	2 20	21	53 14		41 76			
3	223	55.0		53.5	323	00.6 ¹⁵⁷		28.6 ¹²³	54	1 05	41	35	22 58	17	36 74			
4	238	54.9		53.3	337	35.3 ¹⁵⁷		40.8 ¹²²	52	1 44	2 59	46	23 03	18	32 72			
5	253	54.8	+22	53.1	352	10.0 ¹⁵⁷	+7	53.0 ¹²²	50	2 10	3 13	3 57	23 07	21	12 29	69		
6	268	54.7	+22	52.8	6	44.6 ¹⁵⁶	+8	05.2 ¹²²	45	2 53	3 42	4 19	23 16	25	12 21	65		
7	283	54.6		52.6	21	19.1 ¹⁵⁵		17.3 ¹²¹	40	3 23	4 04	36	24 28		15 61			
8	298	54.5		52.4	35	53.6 ¹⁵⁵		29.4 ¹²¹	35	3 45	21	4 51	31 31		09 59			
9	313	54.4		52.2	50	28.1 ¹⁵⁵		41.5 ¹²¹	30	4 03	4 36	5 04	37 33		12 05	55		
10	328	54.3		52.0	65	02.5 ¹⁵⁴	+8	53.6 ¹²¹	20	32	5 01	25	47 38		11 56	52		
11	343	54.1	+22	51.8	79	36.9 ¹⁵⁴	+9	05.7 ¹²¹	10 N	4 54	5 21	5 44	23 56	42	11 49	47		
12	358	54.0	+22	51.5	94	11.2 ¹⁵³	+9	17.7 ¹²⁰	0	5 12	5 38	6 01	** ** *		11 42	44		
13	13	53.9		51.3	108	45.4 ¹⁵²		29.7 ¹²⁰	10 S	29	5 55	18	** ** *		36 40			
14	28	53.8		51.1	123	19.6 ¹⁵²		41.7 ¹²⁰	20	5 44	6 12	36	** ** *		28 37			
15	43	53.7		50.9	137	53.8 ¹⁵²	+9	53.6 ¹¹⁹	30	6 00	30	6 56	** ** *		20 32			
16	58	53.6		50.6	152	27.9 ¹⁵¹	+10	05.5 ¹¹⁹	35	09	40	7 08	** ** *		16 29			
17	73	53.5	+22	50.4	167	01.9 ¹⁵⁰	+10	17.4 ¹¹⁹	40	6 18	6 52	7 22	** ** *		11 10	26		
18	88	53.4	+22	50.2	181	35.9 ¹⁵⁰	+10	29.2 ¹¹⁸	45	6 28	7 05	7 39	** ** *		11 04	23		
19	103	53.3		50.0	196	09.8 ¹⁴⁹		41.0 ¹¹⁸	50	39	21	7 59	** ** *		10 57	18		
20	118	53.1		49.7	210	43.7 ¹⁴⁹	+10	52.8 ¹¹⁸	52	44	28	8 08	** ** *		54 16			
21	133	53.0		49.5	225	17.4 ¹⁴⁷	+11	04.6 ¹¹⁸	54	50	36	19	0 02	72	50 14			
22	148	52.9		49.3	239	51.2 ¹⁴⁸		16.3 ¹¹⁷	56	6 56	44	31	05 75		46 12			
23	163	52.8		49.1	254	24.8 ¹⁴⁶		27.9 ¹¹⁶	58	7 02	7 54	8 45	09 78		41 10			
24	178	52.7	+22	48.8	268	58.4 ¹⁴⁶	+11	39.6 ¹¹⁷	60 S	7 09	8 05	9 02	0 12	82	10 36	6		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 11 ^m 5		Mag: -4.1 PMG: 14 ^h 55 ^m		Mag: +1.4 PMG: 16 ^h 16 ^m		Mag: -2.6 PMG: 5 ^h 24 ^m		Mag: +1.1 PMG: 17 ^h 09 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	281	54.1	136	18.2	+15	34.3	115	42.7	+6	50.2
1	296	56.5	151	17.9		33.3	130	43.8		49.6
2	311	59.0	166	17.6		32.3	145	45.0		49.0
3	327	01.5	181	17.3		31.3	160	46.1		48.5
4	342	03.9	196	17.0		30.3	175	47.3		47.9
5	357	06.4	211	16.7	+15	29.3	190	48.4	+6	47.3
6	12	08.9	226	16.4	+15	28.2	205	49.6	+6	46.7
7	27	11.3	241	16.1		27.2	220	50.7		46.1
8	42	13.8	256	15.8		26.2	235	51.9		45.5
9	57	16.2	271	15.5		25.2	250	53.1		44.9
10	72	18.7	286	15.2		24.2	265	54.2		44.3
11	87	21.2	301	14.9	+15	23.2	280	55.4	+6	43.8
12	102	23.6	316	14.7	+15	22.2	295	56.5	+6	43.2
13	117	26.1	331	14.4		21.1	310	57.7		42.6
14	132	28.6	346	14.1		20.1	325	58.8		42.0
15	147	31.0	1	13.8		19.1	341	00.0		41.4
16	162	33.5	16	13.5		18.1	356	01.1		40.8
17	177	36.0	31	13.2	+15	17.1	11	02.3	+6	40.2
18	192	38.4	46	12.9	+15	16.1	26	03.4	+6	39.6
19	207	40.9	61	12.7		15.0	41	04.6		39.0
20	222	43.3	76	12.4		14.0	56	05.7		38.5
21	237	45.8	91	12.1		13.0	71	06.9		37.9
22	252	48.3	106	11.8		12.0	86	08.0		37.3
23	267	50.7	121	11.5		11.0	101	09.2		36.7
24	282	53.2	136	11.2	+15	09.9	116	10.3	+6	36.1
Dif	—		-3 -10		+12 -10		+12 -6		+23 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 22 ^d 5	PHE { 4 ^h : 55 ^h /3 12 ^h : 55 ^h /5 20 ^h : 55 ^h /7										
	PMG: 12 ^h 04 ^m 6	PMG: 6 ^h 15 ^m	R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	52.7	+22 48.8	268	58.4	+11 39.6		60 N	21 21	22 53	** **	22 49 11		14 14 86	
1	193	52.6		283	32.0 ¹⁴⁶	+11 51.2 ¹¹⁶		58	21 02	22 13	** **	22 58 16		14 05 82	
2	208	52.5		298	05.4 ¹⁴⁴	+12 02.7 ¹¹⁵		56	20 47	21 46	** **	23 07 18		13 57 79	
3	223	52.4		312	38.8 ¹⁴⁴		14.3 ¹¹⁶	54		33	26	23 00	15 21	50 76	
4	238	52.3		327	12.2 ¹⁴⁴		25.7 ¹¹⁴	52	21	21 09	22 22		21 24	44 74	
5	253	52.2	+22 47.7	341	45.4 ¹⁴²	+12 37.2 ¹¹⁵		50	20 11	20 55	21 57	23 28 25		13 38 72	
6	268	52.1	+22 47.4	356	18.6 ¹⁴²	+12 48.6 ¹¹⁴		45	19 49	20 26	21 15	23 41 30		13 26 67	
7	283	51.9		10	51.8 ¹⁴²	+12 59.9 ¹¹³		40	32	20 05	20 46	23 52 33		16 64	
8	298	51.8		25	24.8 ¹⁴⁰	+13 11.2 ¹¹³		35	18	19 47	23	** ** *		08 60	
9	313	51.7		39	57.8 ¹⁴⁰		22.5 ¹¹³	30	19 05	32	20 05	** ** *		13 00 59	
10	328	51.6		54	30.7 ¹³⁹		33.7 ¹¹²	20	18 44	19 08	19 37	** ** *		12 48 53	
11	343	51.5	+22 46.3	69	03.5 ¹³⁸	+13 44.9 ¹¹²		10 N	18 25	18 48	19 15	** ** *		12 36 51	
12	358	51.4	+22 46.0	83	36.2 ¹³⁷	+13 56.0 ¹¹¹		0	18 08	18 31	18 57	0 05 45		12 26 47	
13	13	51.3		98	08.9 ¹³⁷	+14 07.1 ¹¹¹		10 S	17 51	18 14	40	13 49		16 43	
14	28	51.2		112	41.5 ¹³⁶		18.1 ¹¹⁰	20	33	17 57	25	23 52		12 05 39	
15	43	51.1		127	14.0 ¹³⁵		29.1 ¹¹⁰	30	13	39	09	33 57		11 52 36	
16	58	51.0		141	46.4 ¹³⁴		40.0 ¹⁰⁹	35	17 01	29	18 00	39 60		45 33	
17	73	50.9	+22 44.8	156	18.8 ¹³⁴	+14 50.9 ¹⁰⁹		40	16 47	17 18	17 51	0 46 63		11 36 31	
18	88	50.8	+22 44.6	170	51.1 ¹³³	+15 01.7 ¹⁰⁸		45	16 31	17 05	17 42	0 55 66		11 27 27	
19	103	50.6		185	23.2 ¹³¹		12.4 ¹⁰⁷	50	11	16 49	30	1 05 70		15 23	
20	118	50.5		199	55.3 ¹³¹		23.1 ¹⁰⁷	52	16 02	42	25	09 73		10 21	
21	133	50.4		214	27.3 ¹³⁰		33.8 ¹⁰⁷	54	15 51	34	20	14 76		11 04 18	
22	148	50.3		228	59.3 ¹³⁰		44.4 ¹⁰⁶	56	39	26	14	20 78		10 58 15	
23	163	50.2		243	31.1 ¹²⁸	+15 54.9 ¹⁰⁵		58	25	16	08	27 81		51 12	
24	178	50.1	+22 43.1	258	02.9 ¹²⁸	+16 05.3 ¹⁰⁴		60 S	15 09	16 05	17 01	1 34 85		10 42 9	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 07 ^m 6		Mag: -4.1 PMG: 14 ^h 56 ^m			Mag: +1.4 PMG: 16 ^h 14 ^m			Mag: -2.6 PMG: 5 ^h 20 ^m			Mag: +1.1 PMG: 17 ^h 05 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	282	53.2	136	11.2	+15 09.9	116	10.3	+6 36.1	279	45.2	-0 03.7	103	00.7	+2 34.0	
1	297	55.7	151	11.0	08.9	131	11.5	35.5	294	47.6	03.7	118	03.1	34.0	
2	312	58.1	166	10.7	07.9	146	12.6	34.9	309	49.9	03.6	133	05.4	33.9	
3	328	00.6	181	10.4	06.9	161	13.8	34.3	324	52.2	03.6	148	07.7	33.9	
4	343	03.1	196	10.1	05.8	176	14.9	33.7	339	54.5	03.5	163	10.1	33.8	
5	358	05.5	211	09.9	+15 04.8	191	16.1	+6 33.2	354	56.9	-0 03.5	178	12.4	+2 33.7	
6	13	08.0	226	09.6	+15 03.8	206	17.2	+6 32.6	9	59.2	-0 03.5	193	14.7	+2 33.7	
7	28	10.5	241	09.3	02.8	221	18.4	32.0	25	01.5	03.4	208	17.1	33.6	
8	43	12.9	256	09.0	01.7	236	19.5	31.4	40	03.8	03.4	223	19.4	33.5	
9	58	15.4	271	08.8	+15 00.7	251	20.7	30.8	55	06.2	03.3	238	21.8	33.5	
10	73	17.8	286	08.5	+14 59.7	266	21.8	30.2	70	08.5	03.3	253	24.1	33.4	
11	88	20.3	301	08.2	+14 58.7	281	23.0	+6 29.6	85	10.8	-0 03.2	268	26.4	+2 33.3	
12	103	22.8	316	07.9	+14 57.6	296	24.1	+6 29.0	100	13.1	-0 03.2	283	28.8	+2 33.3	
13	118	25.2	331	07.7	56.6	311	25.3	28.4	115	15.5	03.1	298	31.1	33.2	
14	133	27.7	346	07.4	55.6	326	26.4	27.8	130	17.8	03.1	313	33.4	33.1	
15	148	30.2	1 07.1	54.5	54.5	341	27.6	27.3	145	20.1	03.0	328	35.8	33.1	
16	163	32.6	16 06.9	53.5	53.5	356	28.7	26.7	160	22.5	03.0	343	38.1	33.0	
17	178	35.1	31 06.6	+14 52.5	11 29.8	+6 26.1			175	24.8	-0 02.9	358	40.4	+2 32.9	
18	193	37.6	46 06.3	+14 51.4	26 31.0	+6 25.5			190	27.1	-0 02.9	13 42.8		+2 32.9	
19	208	40.0	61 06.1	50.4	41 32.1	24.9			205	29.4	02.9	28 45.1		32.8	
20	223	42.5	76 05.8	49.4	56 33.3	24.3			220	31.8	02.8	43 47.4		32.8	
21	238	45.0	91 05.5	48.3	71 34.4	23.7			235	34.1	02.8	58 49.8		32.7	
22	253	47.4	106 05.3	47.3	86 35.6	23.1			250	36.4	02.7	73 52.1		32.6	
23	268	49.9	121 05.0	46.3	101 36.7	22.5			265	38.8	02.7	88 54.4		32.6	
24	283	52.3	136 04.7	+14 45.2	116 37.9	+6 21.9			280	41.1	-0 02.6	103 56.8		+2 32.5	
Dif	—		-3	-10	+11	-6			+23	0		+23		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 23 ^d 5	PHE { 4 ^h : 55 ^h 9 12 ^h : 56 ^h 2 20 ^h : 56 ^h 4	SD: 15 ^h 2		PMG: 7 ^h 01 ^m	R°: 50 ^m		Hora	R°	Hora	R°		
	hG ☉	Dec	Dif													
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	50.1	+22	43.1	258	02.9	+16 05.3	60 N	** **	1 16	2 48	23 00	19	15 40	89	
1	193	50.0		42.9	272	34.5 ¹²⁶	15.7 ¹⁰⁴	58	** **	1 56	3 07	14 23		27 84		
2	208	49.9		42.6	287	06.1 ¹²⁶	26.1 ¹⁰⁴	56	** **	2 23	23	25 27		16 80		
3	223	49.8		42.4	301	37.6 ¹²⁵	36.4 ¹⁰³	54	1 10	2 44	36	36 29		15 06	78	
4	238	49.7		42.1	316	09.0 ¹²⁴	46.6 ¹⁰²	52	1 47	3 01	48	45 32		14 58	75	
5	253	49.6	+22	41.9	330	40.3 ¹²³	+16 56.7 ¹⁰¹	50	2 12	3 15	3 59	23 53	34	14 50	73	
6	268	49.5	+22	41.6	345	11.5 ¹²²	+17 06.8 ¹⁰¹	45	2 55	3 43	4 20	** ** *		14 33	69	
7	283	49.4		41.4	359	42.6 ¹²¹	16.8 ¹⁰⁰	40	3 24	4 05	37	** ** *		20 65		
8	298	49.3		41.1	14	13.7 ¹²¹	26.8 ¹⁰⁰	35	3 46	23	4 52	0 02	36	14 08	63	
9	313	49.2		40.9	28	44.6 ¹¹⁹	36.6 ⁹⁸	30	4 04	4 37	5 04	10 38		13 59	60	
10	328	49.1		40.6	43	15.4 ¹¹⁸	46.4 ⁹⁸	20	32	5 01	26	25 42		41 57		
11	343	49.0	+22	40.4	57	46.2 ¹¹⁸	+17 56.2 ⁹⁸	10 N	4 54	5 21	5 44	0 38	45	13 27	53	
12	358	48.8	+22	40.1	72	16.8 ¹¹⁶	+18 05.8 ⁹⁶	0	5 13	5 39	6 01	0 50	49	13 13	51	
13	13	48.7		39.9	86	47.4 ¹¹⁶	15.4 ⁹⁶	10 S	29	5 55	18	1 02	52	12 59	48	
14	28	48.6		39.6	101	17.8 ¹¹⁴	24.9 ⁹⁵	20	5 45	6 12	36	15 56		44 45		
15	43	48.5		39.4	115	48.2 ¹¹⁴	34.3 ⁹⁴	30	6 00	30	6 56	30 60		28 41		
16	58	48.4		39.1	130	18.5 ¹¹³	43.6 ⁹³	35	09	40	7 08	39 62		18 39		
17	73	48.3	+22	38.8	144	48.6 ¹¹¹	+18 52.9 ⁹³	40	6 18	6 52	7 22	1 49	65	12 07	36	
18	88	48.2	+22	38.6	159	18.7 ¹¹¹	+19 02.1 ⁹²	45	6 28	7 04	7 38	2 01	68	11 54	33	
19	103	48.1		38.3	173	48.6 ¹⁰⁹	11.2 ⁹¹	50	39	20	7 58	15 73		38 29		
20	118	48.0		38.1	188	18.5 ¹⁰⁹	20.2 ⁹⁰	52	44	27	8 07	22 75		31 26		
21	133	47.9		37.8	202	48.2 ¹⁰⁷	29.1 ⁸⁹	54	49	35	18	30 77		22 25		
22	148	47.8		37.5	217	17.9 ¹⁰⁷	38.0 ⁸⁹	56	6 55	43	30	38 81		13 22		
23	163	47.7		37.3	231	47.4 ¹⁰⁵	46.7 ⁸⁷	58	7 01	7 53	8 44	48 84		11 03	18	
24	178	47.6	+22	37.0	246	16.9 ¹⁰⁵	+19 55.4 ⁸⁷	60 S	7 08	8 04	9 00	2 59	88	10 51	14	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 5 ^h 03 ^m 7			Mag: -4.1 PMG: 14 ^h 56 ^m			Mag: +1.4 PMG: 16 ^h 12 ^m			Mag: -2.6 PMG: 5 ^h 16 ^m			Mag: +1.1 PMG: 17 ^h 02 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	283	52.3		136	04.7	+14 45.2	116	37.9	+6 21.9	280	41.1	-0 02.6	103	56.8	+2 32.5	
1	298	54.8		151	04.5	44.2	131	39.0	21.3	295	43.4	02.6	118	59.1		32.4
2	313	57.3		166	04.2	43.1	146	40.2	20.8	310	45.8	02.5	134	01.4		32.4
3	328	59.7		181	03.9	42.1	161	41.3	20.2	325	48.1	02.5	149	03.8		32.3
4	344	02.2		196	03.7	41.1	176	42.5	19.6	340	50.4	02.5	164	06.1		32.2
5	359	04.7		211	03.4	+14 40.0	191	43.6	+6 19.0	355	52.7	-0 02.4	179	08.4	+2	32.2
6	14	07.1		226	03.2	+14 39.0	206	44.8	+6 18.4	10	55.1	-0 02.4	194	10.8	+2	32.1
7	29	09.6		241	02.9	38.0	221	45.9	17.8	25	57.4	02.3	209	13.1		32.0
8	44	12.1		256	02.6	36.9	236	47.1	17.2	40	59.7	02.3	224	15.4		32.0
9	59	14.5		271	02.4	35.9	251	48.2	16.6	56	02.1	02.2	239	17.8		31.9
10	74	17.0		286	02.1	34.8	266	49.3	16.0	71	04.4	02.2	254	20.1		31.8
11	89	19.4		301	01.9	+14 33.8	281	50.5	+6 15.4	86	06.7	-0 02.2	269	22.4	+2	31.8
12	104	21.9		316	01.6	+14 32.7	296	51.6	+6 14.8	101	09.1	-0 02.1	284	24.8	+2	31.7
13	119	24.4		331	01.4	31.7	311	52.8	14.2	116	11.4	02.1	299	27.1		31.6
14	134	26.8		346	01.1	30.7	326	53.9	13.6	131	13.8	02.0	314	29.4		31.6
15	149	29.3		1	00.9	29.6	341	55.1	13.0	146	16.1	02.0	329	31.8		31.5
16	164	31.8		16	00.6	28.6	356	56.2	12.5	161	18.4	01.9	344	34.1		31.4
17	179	34.2		31	00.3	+14 27.5	11	57.4	+6 11.9	176	20.8	-0 01.9	359	36.4	+2	31.4
18	194	36.7		46	00.1	+14 26.5	26	58.5	+6 11.3	191	23.1	-0 01.9	14	38.8	+2	31.3
19	209	39.2		60	59.8	25.4	41	59.7	10.7	206	25.4	01.8	29	41.1		31.2
20	224	41.6		75	59.6	24.4	57	00.8	10.1	221	27.8	01.8	44	43.4		31.2
21	239	44.1		90	59.3	23.3	72	01.9	09.5	236	30.1	01.7	59	45.7		31.1
22	254	46.6		105	59.1	22.3	87	03.1	08.9	251	32.4	01.7	74	48.1		31.0
23	269	49.0		120	58.8	21.2	102	04.2	08.3	266	34.8	01.7	89	50.4		31.0
24	284	51.5		135	58.6	+14 20.2	117	05.4	+6 07.7	281	37.1	-0 01.6	104	52.7	+2	30.9
Dif	—			-3 -10			+11 -6			+23 0			+23 -1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 24 ^d 5 PHE { 4 ^h : 56 ^h 7 12 ^h : 57 ^h 0 20 ^h : 57 ^h 3											
	PMG: 12 ^h 04 ^m 9			SD: 15 ^h 4 PMG: 7 ^h 51 ^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	h m	
0	178	47.6	+22 37.0	246	16.9	+19 55.4		60 N	21 19	22 48	** ** *	23 19	33	17 09	84
1	193	47.5		260	46.2 ¹⁰³	+20 03.9	⁸⁵	58	21 01	22 10	** ** *	37 37		16 51	80
2	208	47.4		275	15.5 ¹⁰³		⁸⁵	56	20 45	21 44	** ** *	23 52	40	36 77	
3	223	47.3		289	44.6 ¹⁰¹		⁸⁴	54		32	24 22 55	** ** *	**	24 77	
4	238	47.2		304	13.7 ¹⁰¹		⁸³	52	20	21 07	22 20	** ** *	**	13 72	
5	253	47.1	+22 35.7	318	42.6 ⁹⁹	+20 37.3	⁸²	50	20 10	20 53	21 55	** ** *	**	16 03	71
6	268	47.0	+22 35.4	333	11.4 ⁹⁸	+20 45.4	⁸¹	45	19 49	20 25	21 14	0 11	37	15 42	68
7	283	46.9	35.2	347	40.2 ⁹⁸	+20 53.4	⁸⁰	40	31	20 04	20 45	25 41		25 66	
8	298	46.8	34.9	2	08.8 ⁹⁶	+21 01.3	⁷⁹	35	17	19 46	23	38 42		15 11	64
9	313	46.7	34.6	16	37.3 ⁹⁵	09.1	⁷⁸	30	19 05	32	20 05	0 48	45	14 59	63
10	328	46.6	34.4	31	05.7 ⁹⁴	16.8	⁷⁷	20	18 44	19 08	19 37	1 07	48	38 60	
11	343	46.5	+22 34.1	45	34.0 ⁹³	+21 24.4	⁷⁶	10 N	18 25	18 48	19 15	1 23	51	14 20	58
12	358	46.4	+22 33.8	60	02.2 ⁹²	+21 31.8	⁷⁴	0	18 09	18 31	18 57	1 39	53	14 04	55
13	13	46.3	33.5	74	30.3 ⁹¹	39.2	⁷⁴	10 S	17 52	18 15	41	1 54	56	13 47	53
14	28	46.2	33.3	88	58.3 ⁹⁰	46.5	⁷³	20	34	17 58	25	2 11	58	29 51	
15	43	46.1	33.0	103	26.2 ⁸⁹	+21 53.6	⁷¹	30	14	40	10	30 62		13 09	48
16	58	46.0	32.7	117	54.0 ⁸⁸	+22 00.7	⁷¹	35	17 02	30	18 01	41 64		12 57	46
17	73	45.9	+22 32.5	132	21.7 ⁸⁷	+22 07.6	⁶⁹	40	16 48	17 19	17 52	2 54	66	12 43	44
18	88	45.8	+22 32.2	146	49.2 ⁸⁵	+22 14.5	⁶⁹	45	16 32	17 06	17 43	3 09	69	12 27	42
19	103	45.7	31.9	161	16.7 ⁸⁵	21.2	⁶⁷	50	13	16 51	32	28 73		12 07	38
20	118	45.6	31.6	175	44.1 ⁸⁴	27.8	⁶⁶	52	16 03	44	27	37 75		11 57	37
21	133	45.5	31.4	190	11.4 ⁸³	34.2	⁶⁴	54	15 53	36	22	47 77		47 34	
22	148	45.4	31.1	204	38.5 ⁸¹	40.6	⁶⁴	56	41	27	16	3 59	79	35 32	
23	163	45.3	30.8	219	05.6 ⁸¹	46.8	⁶²	58	27	18	10	4 12	83	21 29	
24	178	45.2	+22 30.5	233	32.5 ⁷⁹	+22 52.9	⁶¹	60 S	15 11	16 07	17 03	4 27	88	11 05	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 4 ^h 59 ^m 7		Mag: -4.1 PMG: 14 ^h 56 ^m		Mag: +1.4 PMG: 16 ^h 10 ^m		Mag: -2.6 PMG: 5 ^h 13 ^m		Mag: +1.1 PMG: 16 ^h 58 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	284	51.5	135	58.6	+14 20.2	117 05.4	+6 07.7	281	37.1	-0 01.6	104 52.7	+2 30.9	
1	299	53.9	150	58.4	19.1	132 06.5	07.1	296	39.5	01.6	119 55.1	30.8	
2	314	56.4	165	58.1	18.1	147 07.7	06.5	311	41.8	01.5	134 57.4	30.8	
3	329	58.9	180	57.9	17.0	162 08.8	05.9	326	44.1	01.5	149 59.7	30.7	
4	345	01.3	195	57.6	16.0	177 10.0	05.3	341	46.5	01.4	165 02.1	30.6	
5	0	03.8	210	57.4	+14 14.9	192 11.1	+6 04.7	356	48.8	-0 01.4	180 04.4	+2 30.6	
6	15	06.3	225	57.1	+14 13.9	207 12.2	+6 04.1	11	51.1	-0 01.4	195 06.7	+2 30.5	
7	30	08.7	240	56.9	12.8	222 13.4	03.5	26	53.5	01.3	210 09.0	30.4	
8	45	11.2	255	56.6	11.8	237 14.5	02.9	41	55.8	01.3	225 11.4	30.4	
9	60	13.7	270	56.4	10.7	252 15.7	02.4	56	58.2	01.2	240 13.7	30.3	
10	75	16.1	285	56.2	09.6	267 16.8	01.8	72	00.5	01.2	255 16.0	30.2	
11	90	18.6	300	55.9	+14 08.6	282 18.0	+6 01.2	87	02.9	-0 01.2	270 18.4	+2 30.2	
12	105	21.1	315	55.7	+14 07.5	297 19.1	+6 00.6	102	05.2	-0 01.1	285 20.7	+2 30.1	
13	120	23.5	330	55.4	06.5	312 20.3	+6 00.0	117	07.5	01.1	300 23.0	30.0	
14	135	26.0	345	55.2	05.4	327 21.4	+5 59.4	132	09.9	01.0	315 25.4	30.0	
15	150	28.4	0	55.0	04.4	342 22.5	58.8	147	12.2	01.0	330 27.7	29.9	
16	165	30.9	15	54.7	03.3	357 23.7	58.2	162	14.6	01.0	345 30.0	29.8	
17	180	33.4	30	54.5	+14 02.2	12 24.8	+5 57.6	177	16.9	-0 00.9	0 32.3	+2 29.8	
18	195	35.8	45	54.3	+14 01.2	27 26.0	+5 57.0	192	19.2	-0 00.9	15 34.7	+2 29.7	
19	210	38.3	60	54.0	+14 00.1	42 27.1	56.4	207	21.6	00.9	30 37.0	29.6	
20	225	40.8	75	53.8	+13 59.1	57 28.3	55.8	222	23.9	00.8	45 39.3	29.6	
21	240	43.2	90	53.6	58.0	72 29.4	55.2	237	26.3	00.8	60 41.6	29.5	
22	255	45.7	105	53.3	56.9	87 30.5	54.6	252	28.6	00.7	75 44.0	29.4	
23	270	48.2	120	53.1	55.9	102 31.7	54.0	267	31.0	00.7	90 46.3	29.3	
24	285	50.6	135	52.9	+13 54.8	117 32.8	+5 53.4	282	33.3	-0 00.7	105 48.6	+2 29.3	
Dif	—		-2	-11	+11	-6	-6	+23		0	+23	-1	-1

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 1				Edad: 25 ^d 5 PHE { 4 ^h : 57 ^h /6 12 ^h : 57 ^h /9 20 ^h : 58 ^h /2 PMG: 8 ^h 45 ^m R°: 59 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	45.2	+22	30.5	233	32.5	+22	52.9	60 N	** **	1 22	2 51	23 52	56	18 33	68				
1	193	45.1		30.2	247	59.4	79	+22 58.9	58	** **	2 00	3 10	** **	**	18 11	67				
2	208	45.0		30.0	262	26.2	78	+23 04.8	59	** **	26	25	** **	**	17 53	67				
3	223	44.9		29.7	276	52.8	76	10.5	57	1 15	2 46	38	0 05	42	38	66				
4	238	44.8		29.4	291	19.4	76	16.1	56	1 51	3 03	3 50	17	43	25	65				
5	253	44.7	+22	29.1	305	45.8	74	+23 21.6	55	2 15	3 17	4 00	0 27	45	17 14	65				
6	268	44.6	+22	28.8	320	12.2	74	+23 26.9	53	2 57	3 45	4 22	0 48	48	16 50	64				
7	283	44.5		28.6	334	38.5	73	32.2	53	3 25	4 06	39	1 06	49	31	63				
8	298	44.4		28.3	349	04.6	71	37.2	50	3 48	24	4 53	20	51	15	63				
9	313	44.3		28.0	3	30.7	71	42.2	50	4 05	4 38	5 05	33	52	16 02	61				
10	328	44.2		27.7	17	56.7	70	47.0	48	33	5 02	26	1 55	54	15 38	61				
11	343	44.1	+22	27.4	32	22.6	69	+23 51.7	47	4 55	5 22	5 45	2 14	56	15 18	60				
12	358	44.0	+22	27.1	46	48.3	67	+23 56.2	45	5 13	5 39	6 01	2 32	57	14 59	59				
13	13	43.9		26.8	61	14.0	67	+24 00.6	44	29	5 55	18	2 50	59	40	58				
14	28	43.8		26.6	75	39.6	66	04.9	43	5 45	6 12	36	3 09	61	14 20	57				
15	43	43.7		26.3	90	05.2	66	09.0	41	6 00	30	6 56	32	62	13 57	56				
16	58	43.6		26.0	104	30.6	64	13.0	40	35	08	40	3 45	63	43	55				
17	73	43.5	+22	25.7	118	55.9	63	+24 16.8	38	40	6 17	6 51	7 21	4 00	65	13 27	55			
18	88	43.4	+22	25.4	133	21.2	63	+24 20.5	37	45	6 27	7 04	7 37	4 18	67	13 09	53			
19	103	43.3		25.1	147	46.3	61	24.0	35	50	38	19	7 57	41	69	12 45	52			
20	118	43.2		24.8	162	11.4	61	27.4	34	52	43	26	8 06	4 52	70	34	50			
21	133	43.1		24.5	176	36.4	60	30.7	33	54	48	34	16	5 04	72	21	50			
22	148	43.0		24.2	191	01.3	59	33.8	31	56	6 54	42	28	18	74	12 07	48			
23	163	42.9		23.9	205	26.1	58	36.7	29	58	7 00	7 52	42	35	76	11 50	45			
24	178	42.8	+22	23.6	219	50.9	58	+24 39.5	28	60 S	7 07	8 02	8 58	5 55	79	11 29	43			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 55 ^m 8				Mag: -4.1 PMG: 14 ^h 57 ^m				Mag: +1.4 PMG: 16 ^h 09 ^m				Mag: -2.6 PMG: 5 ^h 09 ^m				Mag: +1.1 PMG: 16 ^h 54 ^m			
h	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	285	50.6	135	52.9	+13	54.8	117	32.8	+5	53.4	282	33.3	-0	00.7	105	48.6	+2	29.3		
1	300	53.1	150	52.6		53.8	132	34.0		52.8	297	35.7		00.6	120	51.0		29.2		
2	315	55.6	165	52.4		52.7	147	35.1		52.2	312	38.0		00.6	135	53.3		29.1		
3	330	58.0	180	52.2		51.6	162	36.2		51.6	327	40.3		00.5	150	55.6		29.1		
4	346	00.5	195	51.9		50.6	177	37.4		51.0	342	42.7		00.5	165	57.9		29.0		
5	1	02.9	210	51.7	+13	49.5	192	38.5	+5	50.4	357	45.0	-0	00.5	181	00.3	+2	28.9		
6	16	05.4	225	51.5	+13	48.4	207	39.7	+5	49.8	12	47.4	-0	00.4	196	02.6	+2	28.9		
7	31	07.9	240	51.3		47.4	222	40.8		49.2	27	49.7		00.4	211	04.9		28.8		
8	46	10.3	255	51.0		46.3	237	42.0		48.6	42	52.1		00.4	226	07.2		28.7		
9	61	12.8	270	50.8		45.2	252	43.1		48.0	57	54.4		00.3	241	09.6		28.7		
10	76	15.3	285	50.6		44.2	267	44.2		47.4	72	56.8		00.3	256	11.9		28.6		
11	91	17.7	300	50.4	+13	43.1	282	45.4	+5	46.8	87	59.1	-0	00.2	271	14.2	+2	28.5		
12	106	20.2	315	50.1	+13	42.0	297	46.5	+5	46.2	103	01.5	-0	00.2	286	16.5	+2	28.5		
13	121	22.7	330	49.9		40.9	312	47.7		45.7	118	03.8		00.2	301	18.9		28.4		
14	136	25.1	345	49.7		39.9	327	48.8		45.1	133	06.2		00.1	316	21.2		28.3		
15	151	27.6	0	49.5		38.8	342	49.9		44.5	148	08.5		00.1	331	23.5		28.3		
16	166	30.0	15	49.2		37.7	357	51.1		43.9	163	10.9	-0	00.1	346	25.8		28.2		
17	181	32.5	30	49.0	+13	36.7	12	52.2	+5	43.3	178	13.2	+0	00.0	1	28.2	+2	28.1		
18	196	35.0	45	48.8	+13	35.6	27	53.4	+5	42.7	193	15.6	+0	00.0	16	30.5	+2	28.0		
19	211	37.4	60	48.6		34.5	42	54.5		42.1	208	17.9	+0	00.0	31	32.8		28.0		
20	226	39.9	75	48.4		33.4	57	55.6		41.5	223	20.3	+0	00.1	46	35.1		27.9		
21	241	42.4	90	48.1		32.4	72	56.8		40.9	238	22.6		00.1	61	37.5		27.8		
22	256	44.8	105	47.9		31.3	87	57.9		40.3	253	25.0		00.1	76	39.8		27.8		
23	271	47.3	120	47.7		30.2	102	59.1		39.7	268	27.3		00.2	91	42.1		27.7		
24	286	49.8	135	47.5	+13	29.1	118	00.2	+5	39.1	283	29.7	+0	00.2	106	44.4	+2	27.6		
Dif	—		-2		-11		+11		-6		+23		0		+23		-			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 05 ^m 2			Edad: 26 ^d 5 PHE { 4 ^h : 58'5 12 ^h : 58'8 20 ^h : 59'1 SD: 15:9 PMG: 9 ^h 44 ^m R°: 61 ^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	42.8	+22 23.6	219	50.9	+24 39.5	26	60 N	21 17	22 43	** ** *	** ** *	** ** *	19 41 47
1	193	42.8	23.3	234	15.6	42.1	26	58	20 58	22 07	** ** *	0 14 57	18 49	
2	208	42.7	23.0	248	40.2	44.6	25	56	43	21 42	** ** *	32 57	19 00 51	
3	223	42.6	22.7	263	04.7	46.9	23	54	30	22	22 50	0 47 58	18 44 52	
4	238	42.5	22.5	277	29.2	49.1	22	52	19	21 06	22 16	1 00 58	30 54	
5	253	42.4	+22 22.2	291	53.5	+24 51.1	20	50	20 09	20 52	21 53	1 12 58	18 19 54	
6	268	42.3	+22 21.9	306	17.8	+24 52.9	18	45	19 48	20 24	21 12	1 36 59	17 54 56	
7	283	42.2	21.6	320	42.1	54.6	17	40	31	20 03	20 44	1 55 60	34 57	
8	298	42.1	21.3	335	06.3	56.2	16	35	17	19 46	22	2 11 60	18 57	
9	313	42.0	21.0	349	30.4	57.5	13	30	19 04	31	20 04	25 60	17 03 59	
10	328	41.9	20.7	3	54.4	58.7	12	20	18 43	19 08	19 37	2 49 61	16 39 59	
11	343	41.8	+22 20.3	18	18.4	+24 59.8	11	10 N	18 26	18 48	19 15	3 10 60	16 18 60	
12	358	41.7	+22 20.0	32	42.3	+25 00.7	9	0	18 09	18 31	18 57	3 29 61	15 58 61	
13	13	41.6	19.7	47	06.2	01.4	7	10 S	17 52	18 15	41	3 49 61	38 62	
14	28	41.5	19.4	61	30.0	01.9	5	20	35	17 59	26	4 10 60	15 17 63	
15	43	41.4	19.1	75	53.8	02.3	4	30	15	41	10	34 61	14 53 63	
16	58	41.3	18.8	90	17.5	02.5	2	35	17 03	31	18 02	4 48 61	38 64	
17	73	41.3	+22 18.5	104	41.2	+25 02.6	1	40	16 50	17 20	17 54	5 05 60	14 22 64	
18	88	41.2	+22 18.2	119	04.8	+25 02.5	1	45	16 34	17 07	17 44	5 25 60	14 02 65	
19	103	41.1	17.9	133	28.3	02.2	3	50	15	16 52	33	5 50 60	13 37 66	
20	118	41.0	17.6	147	51.9	01.7	5	52	16 05	45	28	6 02 60	24 67	
21	133	40.9	17.3	162	15.4	01.1	6	54	15 55	38	23	16 59	13 11 66	
22	148	40.8	17.0	176	38.8	+25 00.3	8	56	43	29	18	32 59	12 55 67	
23	163	40.7	16.7	191	02.2	+24 59.3	10	58	30	20	11	6 51 58	35 69	
24	178	40.6	+22 16.4	205	25.6	+24 58.2	11	60 S	15 14	16 09	17 05	7 14 58	12 12 69	

UT	ARIES	VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 51 ^m 9	Mag: -4.1 PMG: 14 ^h 57 ^m		Mag: +1.4 PMG: 16 ^h 07 ^m		Mag: -2.6 PMG: 5 ^h 05 ^m		Mag: +1.1 PMG: 16 ^h 50 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	°	°	°	°	°	°	°	°
0	286	49.8	135 47.5	+13 29.1	118 00.2	+5 39.1	283 29.7	+0 00.2	106 44.4
1	301	52.2	150 47.3	28.1	133 01.3	38.5	298 32.0	00.3	121 46.8
2	316	54.7	165 47.1	27.0	148 02.5	37.9	313 34.4	00.3	136 49.1
3	331	57.2	180 46.8	25.9	163 03.6	37.3	328 36.7	00.3	151 51.4
4	346	59.6	195 46.6	24.8	178 04.7	36.7	343 39.1	00.4	166 53.7
5	2	02.1	210 46.4	+13 23.8	193 05.9	+5 36.1	358 41.4	+0 00.4	181 56.1
6	17	04.5	225 46.2	+13 22.7	208 07.0	+5 35.5	13 43.8	+0 00.4	196 58.4
7	32	07.0	240 46.0	21.6	223 08.2	34.9	28 46.1	00.5	212 00.7
8	47	09.5	255 45.8	20.5	238 09.3	34.3	43 48.5	00.5	227 03.0
9	62	11.9	270 45.6	19.4	253 10.4	33.7	58 50.9	00.5	242 05.3
10	77	14.4	285 45.4	18.4	268 11.6	33.1	73 53.2	00.6	257 07.7
11	92	16.9	300 45.2	+13 17.3	283 12.7	+5 32.5	88 55.6	+0 00.6	272 10.0
12	107	19.3	315 45.0	+13 16.2	298 13.9	+5 31.9	103 57.9	+0 00.6	287 12.3
13	122	21.8	330 44.7	15.1	313 15.0	31.3	119 00.3	00.7	302 14.6
14	137	24.3	345 44.5	14.0	328 16.1	30.7	134 02.6	00.7	317 17.0
15	152	26.7	0 44.3	12.9	343 17.3	30.1	149 05.0	00.7	332 19.3
16	167	29.2	15 44.1	11.9	358 18.4	29.5	164 07.3	00.8	347 21.6
17	182	31.7	30 43.9	+13 10.8	13 19.5	+5 28.9	179 09.7	+0 00.8	2 23.9
18	197	34.1	45 43.7	+13 09.7	28 20.7	+5 28.3	194 12.1	+0 00.8	17 26.2
19	212	36.6	60 43.5	08.6	43 21.8	27.7	209 14.4	00.9	32 28.6
20	227	39.0	75 43.3	07.5	58 23.0	27.1	224 16.8	00.9	47 30.9
21	242	41.5	90 43.1	06.4	73 24.1	26.5	239 19.1	00.9	62 33.2
22	257	44.0	105 42.9	05.3	88 25.2	25.9	254 21.5	01.0	77 35.5
23	272	46.4	120 42.7	04.3	103 26.4	25.3	269 23.9	01.0	92 37.8
24	287	48.9	135 42.5	+13 03.2	118 27.5	+5 24.7	284 26.2	+0 01.0	107 40.2
Dif	—	—	-2	-11	+11	-6	+24	0	+23

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 4				Edad: 27 ^d 5 PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 6 20 ^h : 59 ^m 8 PMG: 10 ^h 45 ^m R°: 61 ^m													
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	40.6	+22	16.4	205	25.6	+24	58.2	60 N	*** **	1 28	2 54	0 48	82	20 28	27		
1	193	40.5		16.1	219	48.9		56.9	58	*** **	2 04	3 13	1 11	79	20 07	32		
2	208	40.4		15.7	234	12.2		55.4	56	*** **	29	28	29	77	19 51	35		
3	223	40.3		15.4	248	35.5		53.7	54	1 21	2 49	41	45	75	36	39		
4	238	40.3		15.1	262	58.7		51.9	52	1 54	3 05	3 52	1 58	74	24	41		
5	253	40.2	+22	14.8	277	22.0	+24	49.9	50	2 18	3 19	4 02	2 10	73	19 13	42		
6	268	40.1	+22	14.5	291	45.2	+24	47.7	45	2 59	3 47	4 23	2 35	71	18 50	46		
7	283	40.0		14.2	306	08.4		45.4	40	3 27	4 08	40	2 55	69	31	49		
8	298	39.9		13.9	320	31.5		42.9	35	3 49	25	4 54	3 11	68	15	52		
9	313	39.8		13.5	334	54.7		40.2	30	4 06	4 39	5 06	25	67	18 02	53		
10	328	39.7		13.2	349	17.8		37.3	20	34	5 03	27	3 50	64	17 38	57		
11	343	39.6	+22	12.9	3	41.0	+24	34.3	10 N	4 55	5 22	5 45	4 10	63	17 18	59		
12	358	39.5	+22	12.6	18	04.1	+24	31.1	0	5 13	5 39	6 02	4 30	61	16 59	61		
13	13	39.5		12.3	32	27.2		27.7	10 S	29	5 56	18	4 50	59	40	64		
14	28	39.4		11.9	46	50.3		24.1	20	5 45	6 12	36	5 10	59	16 20	66		
15	43	39.3		11.6	61	13.4		20.4	30	6 00	30	6 56	35	56	15 56	69		
16	58	39.2		11.3	75	36.5		16.5	35	08	39	7 07	5 49	55	42	71		
17	73	39.1	+22	11.0	89	59.6	+24	12.4	40	6 17	6 50	7 21	6 05	54	15 26	72		
18	88	39.0	+22	10.7	104	22.7	+24	08.1	45	6 26	7 03	7 36	6 25	51	15 07	75		
19	103	38.9		10.3	118	45.8	+24	03.7	50	37	18	7 56	6 50	48	14 43	78		
20	118	38.8		10.0	133	08.9	+23	59.1	52	42	25	8 05	7 02	46	31	80		
21	133	38.8		09.7	147	32.1		54.3	54	47	32	15	15	45	17	83		
22	148	38.7		09.4	161	55.2		49.4	56	53	41	27	31	42	14 02	85		
23	163	38.6		09.0	176	18.4		44.3	58	6 59	7 50	40	7 49	40	13 44	88		
24	178	38.5	+22	08.7	190	41.6	+23	39.0	60 S	7 05	8 01	8 56	8 12	35	13 21	93		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 4 ^h 48 ^m 0			Mag: -4.1 PMG: 14 ^h 57 ^m			Mag: +1.4 PMG: 16 ^h 05 ^m			Mag: -2.6 PMG: 5 ^h 01 ^m			Mag: +1.1 PMG: 16 ^h 47 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	287	48.9	135	42.5	+13	03.2	118	27.5	+5	24.7	284	26.2	+0	01.0	107	40.2	+2	25.9
1	302	51.4	150	42.3		02.1	133	28.6		24.1	299	28.6		01.0	122	42.5		25.9
2	317	53.8	165	42.1	+13	01.0	148	29.8		23.5	314	30.9		01.1	137	44.8		25.8
3	332	56.3	180	41.9	+12	59.9	163	30.9		22.9	329	33.3		01.1	152	47.1		25.7
4	347	58.8	195	41.7		58.8	178	32.0		22.3	344	35.7		01.1	167	49.4		25.7
5	3	01.2	210	41.5	+12	57.7	193	33.2	+5	21.7	359	38.0	+0	01.2	182	51.8	+2	25.6
6	18	03.7	225	41.3	+12	56.6	208	34.3	+5	21.0	14	40.4	+0	01.2	197	54.1	+2	25.5
7	33	06.2	240	41.1		55.5	223	35.5		20.4	29	42.7		01.2	212	56.4		25.4
8	48	08.6	255	40.9		54.5	238	36.6		19.8	44	45.1		01.3	227	58.7		25.4
9	63	11.1	270	40.7		53.4	253	37.7		19.2	59	47.5		01.3	243	01.0		25.3
10	78	13.5	285	40.5		52.3	268	38.9		18.6	74	49.8		01.3	258	03.4		25.2
11	93	16.0	300	40.3	+12	51.2	283	40.0	+5	18.0	89	52.2	+0	01.4	273	05.7	+2	25.2
12	108	18.5	315	40.2	+12	50.1	298	41.1	+5	17.4	104	54.5	+0	01.4	288	08.0	+2	25.1
13	123	20.9	330	40.0		49.0	313	42.3		16.8	119	56.9		01.4	303	10.3		25.0
14	138	23.4	345	39.8		47.9	328	43.4		16.2	134	59.3		01.4	318	12.6		24.9
15	153	25.9	0	39.6		46.8	343	44.5		15.6	150	01.6		01.5	333	15.0		24.9
16	168	28.3	15	39.4		45.7	358	45.7		15.0	165	04.0		01.5	348	17.3		24.8
17	183	30.8	30	39.2	+12	44.6	13	46.8	+5	14.4	180	06.4	+0	01.5	3	19.6	+2	24.7
18	198	33.3	45	39.0	+12	43.5	28	47.9	+5	13.8	195	08.7	+0	01.6	18	21.9	+2	24.7
19	213	35.7	60	38.8		42.4	43	49.1		13.2	210	11.1		01.6	33	24.2		24.6
20	228	38.2	75	38.6		41.3	58	50.2		12.6	225	13.5		01.6	48	26.6		24.5
21	243	40.7	90	38.5		40.2	73	51.3		12.0	240	15.8		01.7	63	28.9		24.4
22	258	43.1	105	38.3		39.1	88	52.5		11.4	255	18.2		01.7	78	31.2		24.4
23	273	45.6	120	38.1		38.0	103	53.6		10.8	270	20.6		01.7	93	33.5		24.3
24	288	48.0	135	37.9	+12	36.9	118	54.7	+5	10.2	285	22.9	+0	01.7	108	35.8	+2	24.2
Dif	—		-2	-11		+11	-6			+24	0		+23		-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 05 ^m 5			Edad: 28 ^d 5 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'4 R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m				
0	178	38.5	+22	08.7	190	41.6	+23	39.0	60 N	21 14	22 37	** **	2 10 99	20 55 16				
1	193	38.4		08.4	205	04.8		33.5	58	20 56	22 03	** **	30 94	39 21				
2	208	38.3		08.0	219	28.0		27.9	56	41	21 39	** **	2 46 90	26 25				
3	223	38.2		07.7	233	51.2		22.1	58	28	19	22 45	3 00 87	15 28				
4	238	38.1		07.4	248	14.5		16.2	59	17	21 04	22 13	12 85	20 05 30				
5	253	38.1	+22	07.1	262	37.8	+23	10.1	50	20 07	20 50	21 50	3 23 82	19 55 33				
6	268	38.0	+22	06.7	277	01.1	+23	03.8	45	19 47	20 23	21 10	3 46 78	19 36 38				
7	283	37.9		06.4	291	24.4	+22	57.3	40	30	20 02	20 42	4 04 75	20 42				
8	298	37.8		06.1	305	47.8		50.7	35	16	19 45	21	19 72	19 07 44				
9	313	37.7		05.7	320	11.2		43.9	30	19 04	31	20 04	32 70	18 55 47				
10	328	37.6		05.4	334	34.6		37.0	20	18 43	19 08	19 36	4 54 67	35 52				
11	343	37.6	+22	05.1	348	58.1	+22	29.8	10 N	18 26	18 48	19 15	5 13 64	18 17 56				
12	358	37.5	+22	04.7	3	21.6	+22	22.6	0	18 09	18 31	18 57	5 31 61	18 00 59				
13	13	37.4		04.4	17	45.2		15.1	10 S	17 53	18 15	42	5 49 58	17 44 62				
14	28	37.3		04.1	32	08.8	+22	07.6	20	35	17 59	26	6 09 54	26 66				
15	43	37.2		03.7	46	32.4	+21	59.8	30	16	42	11	31 50	17 05 71				
16	58	37.1		03.4	60	56.1		51.9	35	17 04	32	18 03	44 48	16 53 73				
17	73	37.0	+22	03.1	75	19.9	+21	43.8	40	16 51	17 21	17 55	6 59 45	16 38 77				
18	88	37.0	+22	02.7	89	43.6	+21	35.6	45	16 35	17 09	17 45	7 16 42	16 22 80				
19	103	36.9		02.4	104	07.5		27.2	50	16	16 54	35	38 37	16 01 85				
20	118	36.8		02.0	118	31.4		18.7	52	16 07	47	30	7 48 36	15 51 87				
21	133	36.7		01.7	132	55.3		10.0	54	15 57	40	25	8 00 33	40 90				
22	148	36.6		01.4	147	19.3	+21	01.2	56	46	31	20	13 30	27 94				
23	163	36.6		01.0	161	43.3	+20	52.2	58	33	22	14	29 25	15 12 98				
24	178	36.5	+22	00.7	176	07.4	+20	43.1	60 S	15 17	16 12	17 07	8 47 21	14 54 103				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 44 ^m 0		Mag: -4.1 PMG: 14 ^h 58 ^m		Mag: +1.4 PMG: 16 ^h 03 ^m		Mag: -2.6 PMG: 4 ^h 58 ^m		Mag: +1.1 PMG: 16 ^h 43 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	288	48.0	135	37.9	+12	36.9	118	54.7	+5	10.2	285	22.9	+0	01.7	108	35.8	+2	24.2
1	303	50.5	150	37.7		35.8	133	55.9		09.6	300	25.3		01.8	123	38.1		24.1
2	318	53.0	165	37.5		34.7	148	57.0		09.0	315	27.7		01.8	138	40.5		24.1
3	333	55.4	180	37.3		33.6	163	58.1		08.4	330	30.0		01.8	153	42.8		24.0
4	348	57.9	195	37.2		32.5	178	59.3		07.8	345	32.4		01.9	168	45.1		23.9
5	4	00.4	210	37.0	+12	31.4	194	00.4	+5	07.2	0	34.8	+0	01.9	183	47.4	+2	23.9
6	19	02.8	225	36.8	+12	30.3	209	01.5	+5	06.6	15	37.1	+0	01.9	198	49.7	+2	23.8
7	34	05.3	240	36.6		29.2	224	02.7		06.0	30	39.5		01.9	213	52.0		23.7
8	49	07.8	255	36.4		28.1	239	03.8		05.4	45	41.9		02.0	228	54.4		23.6
9	64	10.2	270	36.3		27.0	254	04.9		04.8	60	44.2		02.0	243	56.7		23.6
10	79	12.7	285	36.1		25.9	269	06.1		04.2	75	46.6		02.0	258	59.0		23.5
11	94	15.2	300	35.9	+12	24.8	284	07.2	+5	03.5	90	49.0	+0	02.0	274	01.3	+2	23.4
12	109	17.6	315	35.7	+12	23.7	299	08.3	+5	02.9	105	51.3	+0	02.1	289	03.6	+2	23.4
13	124	20.1	330	35.6		22.6	314	09.5		02.3	120	53.7		02.1	304	05.9		23.3
14	139	22.5	345	35.4		21.5	329	10.6		01.7	135	56.1		02.1	319	08.2		23.2
15	154	25.0	0	35.2		20.4	344	11.7		01.1	150	58.5		02.2	334	10.6		23.1
16	169	27.5	15	35.0		19.3	359	12.9	+5	00.5	166	00.8		02.2	349	12.9		23.1
17	184	29.9	30	34.9	+12	18.2	14	14.0	+4	59.9	181	03.2	+0	02.2	4	15.2	+2	23.0
18	199	32.4	45	34.7	+12	17.1	29	15.1	+4	59.3	196	05.6	+0	02.2	19	17.5	+2	22.9
19	214	34.9	60	34.5		15.9	44	16.3		58.7	211	07.9		02.3	34	19.8		22.8
20	229	37.3	75	34.3		14.8	59	17.4		58.1	226	10.3		02.3	49	22.1		22.8
21	244	39.8	90	34.2		13.7	74	18.5		57.5	241	12.7		02.3	64	24.5		22.7
22	259	42.3	105	34.0		12.6	89	19.7		56.9	256	15.1		02.3	79	26.8		22.6
23	274	44.7	120	33.8		11.5	104	20.8		56.3	271	17.4		02.4	94	29.1		22.5
24	289	47.2	135	33.7	+12	10.4	119	21.9	+4	55.7	286	19.8	+0	02.4	109	31.4	+2	22.5
Dif	—		-2		-11		+11		-6		+24		0		+23		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 05 ^m 6			Edad: 0 ^d 2 PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'7 PMG: 12 ^h 46 ^m R ^o : 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m			
0	178	36.5	+22	00.7	176	07.4	+20	43.1	93	60 N	1 35	2 58	3 49	104	21 11 11			
1	193	36.4	+22	00.3	190	31.6	52	33.8	93	58	2 09	3 15	4 04	99	21 00 15			
2	208	36.3	+22	00.0	204	55.8	52	24.4	94	56	33	30	16	96	20 51 18			
3	223	36.2	+21	59.6	219	20.0	52	14.9	95	54	1 27	2 52	27	92	43 21			
4	238	36.1		59.3	233	44.4	54	+20	05.1	98	1 58	3 08	3 54	37 89	35 24			
5	253	36.1	+21	58.9	248	08.8	54	+19	55.3	98	2 21	3 21	4 04	4 45	87 20 28 27			
6	268	36.0	+21	58.6	262	33.2	54	+19	45.3	100	3 01	3 48	4 25	5 04	81 20 14 31			
7	283	35.9		58.3	276	57.7	55	35.2	101	40	29	4 09	41	19	77 20 02 35			
8	298	35.8		57.9	291	22.3	56	24.9	103	35	3 50	26	4 55	31	74 19 51 40			
9	313	35.7		57.6	305	47.0	57	14.6	103	30	4 08	4 40	5 07	5 42	71 42 42			
10	328	35.7		57.2	320	11.7	57	+19	04.0	106	35	5 04	28	6 01	65 27 47			
11	343	35.6	+21	56.9	334	36.4	57	+18	53.4	106	4 56	5 23	5 46	6 17	61 19 13 51			
12	358	35.5	+21	56.5	349	01.3	59	+18	42.6	108	5 14	5 40	6 02	6 32	57 18 59 57			
13	13	35.4		56.2	3	26.2	59	31.7	109	10 S	30	5 56	18	6 47	53 46 61			
14	28	35.3		55.8	17	51.2	60	20.6	111	20	5 45	6 12	36	7 03	49 32 65			
15	43	35.3		55.5	32	16.2	60	+18	09.5	111	6 00	29	6 55	21	45 16 70			
16	58	35.2		55.1	46	41.3	61	+17	58.2	113	08	39	7 07	32	41 18 06 73			
17	73	35.1	+21	54.7	61	06.5	62	+17	46.8	114	6 16	6 50	7 20	7 44	38 17 55 77			
18	88	35.0	+21	54.4	75	31.8	63	+17	35.2	116	6 25	7 02	7 35	7 58	34 17 42 81			
19	103	35.0		54.0	89	57.1	63	23.6	116	50	36	17	7 54	8 15	30 26 87			
20	118	34.9		53.7	104	22.5	64	+17	11.8	118	41	23	8 03	24	26 18 90			
21	133	34.8		53.3	118	48.0	65	+16	59.9	119	46	31	13	33	24 10 93			
22	148	34.7		53.0	133	13.5	65	47.9	120	56	51	39	25	43	21 17 01 96			
23	163	34.6		52.6	147	39.1	66	35.8	121	58	6 57	48	38	8 54	17 16 50 100			
24	178	34.6	+21	52.3	162	04.8	67	+16	23.6	122	7 04	7 59	8 53	9 08	12 16 37 105			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 4 ^h 40 ^m 1			Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: +1.4 PMG: 16 ^h 01 ^m			Mag: -2.6 PMG: 4 ^h 54 ^m			Mag: +1.1 PMG: 16 ^h 39 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	289	47.2	135	33.7	+12	10.4	119	21.9	+4	55.7	286	19.8	+0	02.4	109	31.4	+2	22.5
1	304	49.7	150	33.5		09.3	134	23.0		55.1	301	22.2		02.4	124	33.7		22.4
2	319	52.1	165	33.3		08.2	149	24.2		54.5	316	24.6		02.4	139	36.0		22.3
3	334	54.6	180	33.1		07.1	164	25.3		53.9	331	26.9		02.5	154	38.3		22.3
4	349	57.0	195	33.0		06.0	179	26.4		53.3	346	29.3		02.5	169	40.7		22.2
5	4	59.5	210	32.8	+12	04.8	194	27.6	+4	52.6	1	31.7	+0	02.5	184	43.0	+2	22.1
6	20	02.0	225	32.7	+12	03.7	209	28.7	+4	52.0	16	34.1	+0	02.5	199	45.3	+2	22.0
7	35	04.4	240	32.5		02.6	224	29.8		51.4	31	36.4		02.6	214	47.6		22.0
8	50	06.9	255	32.3		01.5	239	31.0		50.8	46	38.8		02.6	229	49.9		21.9
9	65	09.4	270	32.2	+12	00.4	254	32.1		50.2	61	41.2		02.6	244	52.2		21.8
10	80	11.8	285	32.0	+11	59.3	269	33.2		49.6	76	43.6		02.6	259	54.5		21.7
11	95	14.3	300	31.8	+11	58.2	284	34.3	+4	49.0	91	45.9	+0	02.7	274	56.8	+2	21.7
12	110	16.8	315	31.7	+11	57.0	299	35.5	+4	48.4	106	48.3	+0	02.7	289	59.2	+2	21.6
13	125	19.2	330	31.5		55.9	314	36.6		47.8	121	50.7		02.7	305	01.5		21.5
14	140	21.7	345	31.4		54.8	329	37.7		47.2	136	53.1		02.7	320	03.8		21.4
15	155	24.1	0	31.2		53.7	344	38.9		46.6	151	55.5		02.8	335	06.1		21.4
16	170	26.6	15	31.0		52.6	359	40.0		46.0	166	57.8		02.8	350	08.4		21.3
17	185	29.1	30	30.9	+11	51.5	14	41.1	+4	45.4	182	00.2	+0	02.8	5	10.7	+2	21.2
18	200	31.5	45	30.7	+11	50.3	29	42.2	+4	44.8	197	02.6	+0	02.8	20	13.0	+2	21.1
19	215	34.0	60	30.6		49.2	44	43.4		44.1	212	05.0		02.8	35	15.3		21.1
20	230	36.5	75	30.4		48.1	59	44.5		43.5	227	07.3		02.9	50	17.7		21.0
21	245	38.9	90	30.2		47.0	74	45.6		42.9	242	09.7		02.9	65	20.0		20.9
22	260	41.4	105	30.1		45.9	89	46.8		42.3	257	12.1		02.9	80	22.3		20.8
23	275	43.9	120	29.9		44.7	104	47.9		41.7	272	14.5		02.9	95	24.6		20.8
24	290	46.3	135	29.8	+11	43.6	119	49.0	+4	41.1	287	16.9	+0	03.0	110	26.9	+2	20.7
Dif	—		-2		-11		+11		-6		+24		0		+23		-1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7				Edad: 1 ^d 2	PHE	4 ^h : 60 ^h /7				Final del crepúsculo			Salida de Luna			Puesta de Luna		
	PMG: 12 ^h 05 ^m 8						12 ^h : 60 ^h /7				Civil			Náutico			Hora R°		
	PMG: 13 ^h 43 ^m						20 ^h : 60 ^h /7				Hora R°			Hora R°					
	hG ☉		Dec		hG ☾		Dif		Dec		Dif								
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	34.6	+21	52.3	162	04.8	+16	23.6	60 N	21 11	22 31	** **	5 33	104	21 22	7			
1	193	34.5		51.9	176	30.6	+16	11.3	58	20 53	21 59	** **	43	99	15	11			
2	208	34.4		51.5	190	56.4	+15	58.8	56	39	35	23 35	52	95	09	15			
3	223	34.3		51.2	205	22.3		46.3	54	26	17	22 39	5 59	92	21 04	17			
4	238	34.3		50.8	219	48.3		33.7	52	15	21 01	22 09	6 06	89	20 59	20			
5	253	34.2	+21	50.5	234	14.3	+15	20.9	50	20 06	20 48	21 48	6 12	86	20 55	22			
6	268	34.1	+21	50.1	248	40.4	+15	08.1	45	19 45	20 21	21 08	6 25	81	20 45	28			
7	283	34.0		49.7	263	06.6	+14	55.1	40	29	20 01	20 41	36	76	37	32			
8	298	34.0		49.4	277	32.9		42.1	35	15	19 44	20	45	72	31	35			
9	313	33.9		49.0	291	59.2		29.0	30	19 03	30	20 03	6 53	69	24	39			
10	328	33.8		48.6	306	25.6		15.8	20	18 43	19 07	19 36	7 06	64	14	44			
11	343	33.7	+21	48.3	320	52.1	+14	02.5	10 N	18 26	18 48	19 15	7 18	59	20 04	49			
12	358	33.7	+21	47.9	335	18.6	+13	49.1	0	18 09	18 32	18 58	7 29	55	19 56	53			
13	13	33.6		47.5	349	45.2		35.6	10 S	17 53	16	42	40	51	47	57			
14	28	33.5		47.2	4	11.9		22.0	20	36	18 00	27	7 52	46	37	63			
15	43	33.4		46.8	18	38.7	+13	08.4	30	17	17 43	12	8 06	40	26	68			
16	58	33.4		46.4	33	05.5	+12	54.6	35	17 05	33	18 04	13	37	19	72			
17	73	33.3	+21	46.1	47	32.4	+12	40.8	40	16 52	17 22	17 56	8 22	33	19 12	76			
18	88	33.2	+21	45.7	61	59.4	+12	27.0	45	16 37	17 10	17 47	8 32	29	19 03	81			
19	103	33.1		45.3	76	26.4	+12	13.0	50	18	16 56	36	45	24	18 53	86			
20	118	33.1		45.0	90	53.5	+11	59.0	52	10	49	32	50	22	48	88			
21	133	33.0		44.6	105	20.7		44.9	54	16 00	42	27	8 57	18	43	91			
22	148	32.9		44.2	119	47.9		30.7	56	15 48	34	22	9 04	15	37	94			
23	163	32.9		43.8	134	15.2		16.5	58	35	25	16	11	13	30	98			
24	178	32.8	+21	43.5	148	42.6	+11	02.2	60 S	15 20	16 14	17 09	9 20	9	18 22	102			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 36 ^m 2		Mag: -4.1 PMG: 14 ^h 58 ^m		Mag: +1.4 PMG: 16 ^h 00 ^m		Mag: -2.6 PMG: 4 ^h 50 ^m		Mag: +1.1 PMG: 16 ^h 36 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	290	46.3	135	29.8	+11	43.6	119	49.0	+4	41.1
1	305	48.8	150	29.6		42.5	134	50.1		40.5
2	320	51.3	165	29.5		41.4	149	51.3		39.9
3	335	53.7	180	29.3		40.2	164	52.4		39.3
4	350	56.2	195	29.2		39.1	179	53.5		38.7
5	5	58.6	210	29.0	+11	38.0	194	54.7	+4	38.1
6	21	01.1	225	28.9	+11	36.9	209	55.8	+4	37.5
7	36	03.6	240	28.7		35.8	224	56.9		36.8
8	51	06.0	255	28.6		34.6	239	58.0		36.2
9	66	08.5	270	28.4		33.5	254	59.2		35.6
10	81	11.0	285	28.3		32.4	270	00.3		35.0
11	96	13.4	300	28.1	+11	31.3	285	01.4	+4	34.4
12	111	15.9	315	28.0	+11	30.1	300	02.5	+4	33.8
13	126	18.4	330	27.8		29.0	315	03.7		33.2
14	141	20.8	345	27.7		27.9	330	04.8		32.6
15	156	23.3	0	27.5		26.7	345	05.9		32.0
16	171	25.8	15	27.4		25.6	0	07.1		31.4
17	186	28.2	30	27.3	+11	24.5	15	08.2	+4	30.7
18	201	30.7	45	27.1	+11	23.4	30	09.3	+4	30.1
19	216	33.1	60	27.0		22.2	45	10.4		29.5
20	231	35.6	75	26.8		21.1	60	11.6		28.9
21	246	38.1	90	26.7		20.0	75	12.7		28.3
22	261	40.5	105	26.6		18.8	90	13.8		27.7
23	276	43.0	120	26.4		17.7	105	14.9		27.1
24	291	45.5	135	26.3	+11	16.6	120	16.1	+4	26.5
Dif	—		-1		-11		+11		-6	
									+24	
									0	
									+23	
									-1	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 2 ^d 2	PHE {	4 ^h : 60 ^m 7 12 ^h : 60 ^m 6 20 ^h : 60 ^m 5				R°: 52 ^m			Hora	R°	Hora	R°	
	PMG: 12 ^h 05 ^m 9					SD: 16 ^h 5				PMG: 14 ^h 36 ^m							
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil						
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	178	32.8	+21	43.5	148	42.6	+11	02.2	60 N	**	**	1	41	3	01	7	17
1	193	32.7		43.1	163	10.1	+10	47.8	58	**	**	2	13		19	22	96
2	208	32.6		42.7	177	37.6		33.4	56	0	37	37		33	27	93	24
3	223	32.6		42.3	192	05.1		18.9	54	1	33	2	55	46	31	90	21
4	238	32.5		42.0	206	32.8	+10	04.3	52	2	03	3	11	3	57	35	87
5	253	32.4	+21	41.6	221	00.5	+9	49.7	50	2	24	3	24	4	06	7	38
6	268	32.4	+21	41.2	235	28.2	+9	35.1	45	3	03	3	50	4	26	7	46
7	283	32.3		40.8	249	56.0		20.4	40	31	4	11	43		52	75	09
8	298	32.2		40.4	264	23.9	+9	05.6	35	3	52	28	4	57	7	57	06
9	313	32.1		40.1	278	51.9	+8	50.8	30	4	09	4	42	5	08	8	02
10	328	32.1		39.7	293	19.9		35.9	20	36	5	04	29		10	62	20
11	343	32.0	+21	39.3	307	47.9	+8	21.0	10 N	4	57	5	23	5	46	8	17
12	358	31.9	+21	38.9	322	16.0	+8	06.1	0	5	14	5	40	6	02	8	24
13	13	31.9		38.5	336	44.2	+7	51.1	10 S	30	5	56	18		31	47	44
14	28	31.8		38.2	351	12.4		36.1	20	44	6	12	35		38	42	40
15	43	31.7		37.8	5	40.7		21.0	30	5	59	29	6	55	46	36	34
16	58	31.7		37.4	20	09.1	+7	05.9	35	6	07	38	7	06	50	34	31
17	73	31.6	+21	37.0	34	37.5	+6	50.8	40	6	15	6	49	7	19	8	55
18	88	31.5	+21	36.6	49	05.9	+6	35.6	45	6	24	7	01	7	34	9	01
19	103	31.5		36.2	63	34.4		20.4	50	35	15	7	53		09	20	19
20	118	31.4		35.9	78	03.0	+6	05.2	52	39	22	8	01		12	18	16
21	133	31.3		35.5	92	31.6	+5	50.0	54	44	29	11			15	16	14
22	148	31.3		35.1	107	00.2		34.7	56	49	37	22			19	14	11
23	163	31.2		34.7	121	28.9		19.4	58	6	55	46	35		24	10	08
24	178	31.1	+21	34.3	135	57.7	+5	04.1	60 S	7	02	7	56	8	50	9	29

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 4 ^h 32 ^m 2		Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: +1.4 PMG: 15 ^h 58 ^m			Mag: -2.6 PMG: 4 ^h 46 ^m			Mag: +1.1 PMG: 16 ^h 32 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	291	45.5	135	26.3	+11	16.6	120	16.1	+4	26.5	288	14.1	+0	03.5						
1	306	47.9	150	26.1		15.4	135	17.2		25.9	303	16.5		03.5						
2	321	50.4	165	26.0		14.3	150	18.3		25.3	318	18.9		03.5						
3	336	52.9	180	25.9		13.2	165	19.4		24.6	333	21.3		03.5						
4	351	55.3	195	25.7		12.1	180	20.6		24.0	348	23.7		03.5						
5	6	57.8	210	25.6	+11	10.9	195	21.7	+4	23.4	3	26.1	+0	03.6						
6	22	00.3	225	25.5	+11	09.8	210	22.8	+4	22.8	18	28.4	+0	03.6						
7	37	02.7	240	25.3		08.7	225	23.9		22.2	33	30.8		03.6						
8	52	05.2	255	25.2		07.5	240	25.1		21.6	48	33.2		03.6						
9	67	07.6	270	25.1		06.4	255	26.2		21.0	63	35.6		03.6						
10	82	10.1	285	24.9		05.2	270	27.3		20.4	78	38.0		03.6						
11	97	12.6	300	24.8	+11	04.1	285	28.4	+4	19.8	93	40.4	+0	03.7						
12	112	15.0	315	24.7	+11	03.0	300	29.6	+4	19.1	108	42.8	+0	03.7						
13	127	17.5	330	24.5		01.8	315	30.7		18.5	123	45.2		03.7						
14	142	20.0	345	24.4	+11	00.7	330	31.8		17.9	138	47.6		03.7						
15	157	22.4	0	24.3	+10	59.6	345	32.9		17.3	153	50.0		03.7						
16	172	24.9	15	24.1		58.4	0	34.1		16.7	168	52.4		03.7						
17	187	27.4	30	24.0	+10	57.3	15	35.2	+4	16.1	183	54.8	+0	03.8						
18	202	29.8	45	23.9	+10	56.2	30	36.3	+4	15.5	198	57.2	+0	03.8						
19	217	32.3	60	23.8		55.0	45	37.4		14.9	213	59.5		03.8						
20	232	34.7	75	23.6		53.9	60	38.5		14.3	229	01.9		03.8						
21	247	37.2	90	23.5		52.7	75	39.7		13.6	244	04.3		03.8						
22	262	39.7	105	23.4		51.6	90	40.8		13.0	259	06.7		03.8						
23	277	42.1	120	23.3		50.5	105	41.9		12.4	274	09.1		03.9						
24	292	44.6	135	23.1	+10	49.3	120	43.0	+4	11.8	289	11.5	+0	03.9						
Dif	—		-1			-11	+11			-6			+24			0	+23			-1

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 0			Edad: 3 ^d 2 PHE { 4 ^h : 60'4 12 ^h : 60'2 20 ^h : 60'1 Rº: 50 ^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	31.1	+21	34.3	135	57.7	+5	04.1	60 N	21 07	22 25	** **	8 57 97	21 36 6
1	193	31.1		33.9	150	26.5 ⁹⁸	+4	48.7 ¹⁵⁴	58	20 51	21 55	** **	8 58 94	36 10
2	208	31.0		33.5	164	55.3 ⁹⁸		33.4 ¹⁵³	56	36	32	23 21	9 00 90	37 12
3	223	30.9		33.1	179	24.2 ⁹⁹		18.0 ¹⁵⁴	54	24	21 14	22 34	01 87	37 15
4	238	30.9		32.7	193	53.1 ⁹⁹	+4	02.6 ¹⁵⁴	52	13	20 59	22 06	02 85	37 18
5	253	30.8	+21	32.3	208	22.1 ¹⁰⁰	+3	47.2 ¹⁵⁴	50	20 04	20 46	21 44	9 03 82	21 37 20
6	268	30.7	+21	32.0	222	51.1 ¹⁰⁰	+3	31.8 ¹⁵⁴	45	19 44	20 20	21 06	9 05 77	21 38 24
7	283	30.7		31.6	237	20.1 ¹⁰⁰		16.4 ¹⁵⁴	40	28	20 00	20 40	07 73	38 29
8	298	30.6		31.2	251	49.2 ¹⁰¹	+3	00.9 ¹⁵⁵	35	14	19 43	19	08 69	38 33
9	313	30.5		30.8	266	18.3 ¹⁰¹	+2	45.5 ¹⁵⁴	30	19 03	30	20 02	10 65	39 35
10	328	30.5		30.4	280	47.5 ¹⁰²		30.0 ¹⁵⁵	20	18 43	19 07	19 36	12 60	39 41
11	343	30.4	+21	30.0	295	16.7 ¹⁰²	+2	14.6 ¹⁵⁴	10 N	18 26	18 48	19 15	9 14 55	21 40 45
12	358	30.3	+21	29.6	309	45.9 ¹⁰²	+1	59.1 ¹⁵⁵	0	18 10	18 32	18 58	9 16 50	21 40 50
13	13	30.3		29.2	324	15.2 ¹⁰³		43.7 ¹⁵⁴	10 S	17 54	16	42	18 46	40 55
14	28	30.2		28.8	338	44.5 ¹⁰³		28.2 ¹⁵⁵	20	37	18 01	28	20 41	41 59
15	43	30.2		28.4	353	13.8 ¹⁰³	+1	12.8 ¹⁵⁴	30	18	17 44	13	22 36	41 65
16	58	30.1		28.0	7	43.2 ¹⁰⁴	+0	57.3 ¹⁵⁵	35	17 07	34	18 05	24 32	41 69
17	73	30.0	+21	27.6	22	12.6 ¹⁰⁴	+0	41.9 ¹⁵⁴	40	16 54	17 24	17 57	9 25 29	21 42 72
18	88	30.0	+21	27.2	36	42.0 ¹⁰⁴	+0	26.5 ¹⁵⁴	45	16 39	17 12	17 48	9 27 25	21 42 76
19	103	29.9		26.8	51	11.4 ¹⁰⁴	+0	11.1 ¹⁵⁴	50	20	16 58	38	29 20	42 82
20	118	29.8		26.4	65	40.9 ¹⁰⁵	-0	04.3 ¹⁵⁴	52	12	51	34	30 18	42 84
21	133	29.8		26.0	80	10.4 ¹⁰⁵		19.7 ¹⁵⁴	54	16 02	44	29	31 15	42 87
22	148	29.7		25.6	94	39.9 ¹⁰⁵		35.1 ¹⁵⁴	56	15 51	36	24	33 12	43 89
23	163	29.7		25.2	109	09.5 ¹⁰⁶	-0	50.5 ¹⁵⁴	58	39	27	18	34 9	43 93
24	178	29.6	+21	24.8	123	39.1 ¹⁰⁶	-1	05.8 ¹⁵³	60 S	15 24	16 17	17 12	9 35 7	21 43 97
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 28 ^m 3		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.4 PMG: 15 ^h 56 ^m		Mag: -2.6 PMG: 4 ^h 42 ^m		Mag: +1.1 PMG: 16 ^h 28 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	292	44.6	135	23.1	+10	49.3	120	43.0	+0	03.9				
1	307	47.1	150	23.0		48.2	135	44.2		03.9				
2	322	49.5	165	22.9		47.0	150	45.3		03.9				
3	337	52.0	180	22.8		45.9	165	46.4		03.9				
4	352	54.5	195	22.6		44.7	180	47.5		03.9				
5	7	56.9	210	22.5	+10	43.6	195	48.7	+4	04.0				
6	22	59.4	225	22.4	+10	42.5	210	49.8	+4	04.0				
7	38	01.9	240	22.3		41.3	225	50.9		04.0				
8	53	04.3	255	22.2		40.2	240	52.0		04.0				
9	68	06.8	270	22.0		39.0	255	53.1		04.0				
10	83	09.2	285	21.9		37.9	270	54.3		04.0				
11	98	11.7	300	21.8	+10	36.7	285	55.4	+4	04.0				
12	113	14.2	315	21.7	+10	35.6	300	56.5	+4	04.1				
13	128	16.6	330	21.6		34.4	315	57.6		04.1				
14	143	19.1	345	21.5		33.3	330	58.7		04.1				
15	158	21.6	0	21.3		32.2	345	59.9		04.1				
16	173	24.0	15	21.2		31.0	1	01.0		04.1				
17	188	26.5	30	21.1	+10	29.9	16	02.1	+4	04.1				
18	203	29.0	45	21.0	+10	28.7	31	03.2	+4	04.1				
19	218	31.4	60	20.9		27.6	46	04.3	+4	04.2				
20	233	33.9	75	20.8		26.4	61	05.5	+3	04.2				
21	248	36.4	90	20.7		25.3	76	06.6		04.2				
22	263	38.8	105	20.6		24.1	91	07.7		04.2				
23	278	41.3	120	20.5		23.0	106	08.8		04.2				
24	293	43.7	135	20.3	+10	21.8	121	09.9	+3	04.2				
Dif	—		-1		-11		+11		-6					

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 1				Edad: 4 ^d 2 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 7 20 ^h : 59 ^m 5 R°: 50 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	29.6	+21	24.8	123	39.1	-1	05.8	60 N	** **	1 48	3 05	10 34	96	21 42	7		
1	193	29.5		24.4	138	08.7 ¹⁰⁶		21.2 ¹⁵⁴	58	** **	2 18	22	32 92		46	10		
2	208	29.5		24.0	152	38.3 ¹⁰⁶		36.5 ¹⁵³	56	0 51	40	36	30 89		49	14		
3	223	29.4		23.6	167	07.9 ¹⁰⁶	-1	51.8 ¹⁵³	54	1 39	2 58	48	28 86		52	16		
4	238	29.4		23.2	181	37.6 ¹⁰⁷	-2	07.0 ¹⁵²	52	2 07	3 14	3 59	27 83		55	18		
5	253	29.3	+21	22.7	196	07.2 ¹⁰⁶	-2	22.3 ¹⁵³	50	2 28	3 26	4 08	10 25	81	21 57	21		
6	268	29.2	+21	22.3	210	36.9 ¹⁰⁷	-2	37.5 ¹⁵²	45	3 06	3 52	4 28	10 22	76	22 02	26		
7	283	29.2		21.9	225	06.6 ¹⁰⁷	-2	52.7 ¹⁵²	40	33	4 13	44	20 71		07	30		
8	298	29.1		21.5	239	36.3 ¹⁰⁷	-3	07.8 ¹⁵¹	35	3 53	29	4 58	17 68		11	33		
9	313	29.1		21.1	254	06.0 ¹⁰⁷		22.9 ¹⁵¹	30	4 10	4 43	5 10	15 65		14	36		
10	328	29.0		20.7	268	35.8 ¹⁰⁸		38.0 ¹⁵¹	20	37	5 05	29	12 59		20	41		
11	343	28.9	+21	20.3	283	05.5 ¹⁰⁷	-3	53.1 ¹⁵¹	10 N	4 57	5 24	5 47	10 09	55	22 25	46		
12	358	28.9	+21	19.9	297	35.3 ¹⁰⁸	-4	08.1 ¹⁵⁰	0	5 14	5 40	6 02	10 06	50	22 30	50		
13	13	28.8		19.5	312	05.0 ¹⁰⁷		23.1 ¹⁵⁰	10 S	30	5 56	18	04 45		35	55		
14	28	28.8		19.0	326	34.8 ¹⁰⁸		38.1 ¹⁵⁰	20	44	6 11	35	10 01	41	40	60		
15	43	28.7		18.6	341	04.6 ¹⁰⁸	-4	53.0 ¹⁴⁹	30	5 59	28	6 54	9 58	35	46	65		
16	58	28.7		18.2	355	34.4 ¹⁰⁸	-5	07.9 ¹⁴⁹	35	6 06	38	7 05	56 33		50	67		
17	73	28.6	+21	17.8	10	04.2 ¹⁰⁸	-5	22.7 ¹⁴⁸	40	6 15	6 48	7 18	9 54	29	22 54	71		
18	88	28.5	+21	17.4	24	34.0 ¹⁰⁸	-5	37.5 ¹⁴⁸	45	6 23	7 00	7 33	9 52	25	22 58	76		
19	103	28.5		17.0	39	03.8 ¹⁰⁸	-5	52.2 ¹⁴⁷	50	33	14	7 51	49 20		23	04 80		
20	118	28.4		16.6	53	33.6 ¹⁰⁸	-6	06.9 ¹⁴⁷	52	38	20	8 00	48 18		06	83		
21	133	28.4		16.1	68	03.4 ¹⁰⁸		21.6 ¹⁴⁷	54	43	27	09	46 16		09	86		
22	148	28.3		15.7	82	33.2 ¹⁰⁸		36.2 ¹⁴⁶	56	48	35	20	45 13		12	89		
23	163	28.3		15.3	97	03.0 ¹⁰⁸	-6	50.8 ¹⁴⁶	58	53	44	32	43 10		16	92		
24	178	28.2	+21	14.9	111	32.8 ¹⁰⁸	-7	05.3 ¹⁴⁵	60 S	6 59	7 54	8 47	9 42	6	23 20	95		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 24 ^m 4		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.4 PMG: 15 ^h 54 ^m		Mag: -2.6 PMG: 4 ^h 39 ^m		Mag: +1.1 PMG: 16 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	293	43.7	135	20.3	+10	21.8	121	09.9	+3	57.1	290	09.1	+0	04.2	113	13.0	+2	15.2
1	308	46.2	150	20.2		20.7	136	11.1		56.5	305	11.5		04.2	128	15.3		15.1
2	323	48.7	165	20.1		19.5	151	12.2		55.9	320	13.9		04.2	143	17.6		15.0
3	338	51.1	180	20.0		18.4	166	13.3		55.2	335	16.3		04.3	158	19.9		14.9
4	353	53.6	195	19.9		17.2	181	14.4		54.6	350	18.7		04.3	173	22.2		14.9
5	8	56.1	210	19.8	+10	16.1	196	15.5	+3	54.0	5	21.1	+0	04.3	188	24.5	+2	14.8
6	23	58.5	225	19.7	+10	14.9	211	16.7	+3	53.4	20	23.5	+0	04.3	203	26.8	+2	14.7
7	39	01.0	240	19.6		13.8	226	17.8		52.8	35	25.9		04.3	218	29.1		14.6
8	54	03.5	255	19.5		12.6	241	18.9		52.2	50	28.3		04.3	233	31.4		14.5
9	69	05.9	270	19.4		11.5	256	20.0		51.5	65	30.8		04.3	248	33.7		14.5
10	84	08.4	285	19.3		10.3	271	21.1		50.9	80	33.2		04.3	263	36.0		14.4
11	99	10.8	300	19.2	+10	09.2	286	22.3	+3	50.3	95	35.6	+0	04.3	278	38.3	+2	14.3
12	114	13.3	315	19.1	+10	08.0	301	23.4	+3	49.7	110	38.0	+0	04.4	293	40.6	+2	14.2
13	129	15.8	330	19.0		06.8	316	24.5		49.1	125	40.4		04.4	308	42.9		14.2
14	144	18.2	345	18.9		05.7	331	25.6		48.5	140	42.8		04.4	323	45.2		14.1
15	159	20.7	0	18.8		04.5	346	26.7		47.9	155	45.2		04.4	338	47.5		14.0
16	174	23.2	15	18.7		03.4	1	27.9		47.2	170	47.6		04.4	353	49.8		13.9
17	189	25.6	30	18.6	+10	02.2	16	29.0	+3	46.6	185	50.0	+0	04.4	8	52.1	+2	13.8
18	204	28.1	45	18.5	+10	01.1	31	30.1	+3	46.0	200	52.4	+0	04.4	23	54.4	+2	13.8
19	219	30.6	60	18.4	+9	59.9	46	31.2		45.4	215	54.8		04.4	38	56.7		13.7
20	234	33.0	75	18.3		58.8	61	32.3		44.8	230	57.2		04.4	53	59.0		13.6
21	249	35.5	90	18.2		57.6	76	33.4		44.2	245	59.6		04.4	69	01.3		13.5
22	264	38.0	105	18.1		56.4	91	34.6		43.5	261	02.1		04.5	84	03.6		13.4
23	279	40.4	120	18.0		55.3	106	35.7		42.9	276	04.5		04.5	99	05.9		13.4
24	294	42.9	135	17.9	+9	54.1	121	36.8	+3	42.3	291	06.9	+0	04.5	114	08.2	+2	13.3
Dif	—		-1 -12		+11 -6				+24 0				+23 -1					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:7			Edad: 5 ^d 2	PHE {	4 ^h : 59:2 12 ^h : 59:0 20 ^h : 58:8									
	PMG: 12 ^h 06 ^m 2								SD: 16:2		PMG: 17 ^h 08 ^m		R°: 51 ^m		
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	h	m	h	m	m	h	m
0	178	28.2	+21	14.9	111	32.8	-7	05.3	60 N	21 04	22 19	** **	12 10	96	21 49
1	193	28.1		14.5	126	02.6 ¹⁰⁸		19.7 ¹⁴⁴	58	20 47	21 50	** **	12 04	92	21 56
2	208	28.1		14.0	140	32.4 ¹⁰⁸		34.1 ¹⁴⁴	56	34	28	23 10	11 59	88	22 03
3	223	28.0		13.6	155	02.1 ¹⁰⁷	-7	48.5 ¹⁴⁴	54	22	21 11	22 28	54	85	08 20
4	238	28.0		13.2	169	31.9 ¹⁰⁸	-8	02.8 ¹⁴³	52	11	20 56	22 02	50	82	13 22
5	253	27.9	+21	12.8	184	01.7 ¹⁰⁸	-8	17.0 ¹⁴²	50	20 02	20 44	21 41	11 46	80	22 18
6	268	27.9	+21	12.4	198	31.5 ¹⁰⁸	-8	31.2 ¹⁴²	45	19 43	20 18	21 04	11 38	75	22 28
7	283	27.8		11.9	213	01.2 ¹⁰⁷		45.3 ¹⁴¹	40	27	19 58	20 38	31	71	37 32
8	298	27.8		11.5	227	31.0 ¹⁰⁸	-8	59.3 ¹⁴⁰	35	13	42	18	25	67	44 35
9	313	27.7		11.1	242	00.7 ¹⁰⁷	-9	13.3 ¹⁴⁰	30	19 02	29	20 01	20	64	22 50
10	328	27.7		10.7	256	30.4 ¹⁰⁷		27.3 ¹⁴⁰	20	18 42	19 06	19 35	11	59	23 01
11	343	27.6	+21	10.2	271	00.1 ¹⁰⁷	-9	41.1 ¹³⁸	10 N	18 25	18 48	19 15	11 04	54	23 11
12	358	27.6	+21	09.8	285	29.9 ¹⁰⁸	-9	54.9 ¹³⁸	0	18 10	18 32	18 58	10 56	51	23 20
13	13	27.5		09.4	299	59.5 ¹⁰⁶	-10	08.7 ¹³⁸	10 S	17 54	17	43	49	47	30 55
14	28	27.4		08.9	314	29.2 ¹⁰⁷		22.3 ¹³⁶	20	38	18 01	28	42	42	40 59
15	43	27.4		08.5	328	58.9 ¹⁰⁷		35.9 ¹³⁶	30	19	17 45	14	33	38	51 64
16	58	27.3		08.1	343	28.5 ¹⁰⁶	-10	49.5 ¹³⁶	35	17 08	35	18 07	29	34	23 57
17	73	27.3	+21	07.7	357	58.1 ¹⁰⁶	-11	02.9 ¹³⁴	40	16 55	17 25	17 59	10 23	31	** ** *
18	88	27.2	+21	07.2	12	27.8 ¹⁰⁷	-11	16.3 ¹³⁴	45	16 41	17 13	17 50	10 17	27	** ** *
19	103	27.2		06.8	26	57.4 ¹⁰⁶		29.6 ¹³³	50	23	17 00	40	09	23	** ** *
20	118	27.1		06.4	41	26.9 ¹⁰⁵		42.9 ¹³³	52	14	16 53	36	06	20	** ** *
21	133	27.1		05.9	55	56.5 ¹⁰⁶	-11	56.0 ¹³¹	54	16 05	46	31	10 02	18	** ** *
22	148	27.0		05.5	70	26.0 ¹⁰⁵	-12	09.1 ¹³¹	56	15 54	39	26	9	58	** ** *
23	163	27.0		05.1	84	55.5 ¹⁰⁵		22.1 ¹³⁰	58	42	30	21	53	12	** ** *
24	178	26.9	+21	04.6	99	25.0 ¹⁰⁵	-12	35.0 ¹²⁹	60 S	15 27	16 20	17 15	9	48	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 20 ^m 4		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.4 PMG: 15 ^h 52 ^m		Mag: -2.6 PMG: 4 ^h 35 ^m		Mag: +1.1 PMG: 16 ^h 21 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	294	42.9	135	17.9	+9	54.1	121	36.8	+3	42.3
1	309	45.3	150	17.8		53.0	136	37.9		41.7
2	324	47.8	165	17.7		51.8	151	39.0		40.1
3	339	50.3	180	17.6		50.6	166	40.1		40.5
4	354	52.7	195	17.5		49.5	181	41.3		39.8
5	9	55.2	210	17.5	+9	48.3	196	42.4	+3	39.2
6	24	57.7	225	17.4	+9	47.2	211	43.5	+3	38.6
7	40	00.1	240	17.3		46.0	226	44.6		38.0
8	55	02.6	255	17.2		44.8	241	45.7		37.4
9	70	05.1	270	17.1		43.7	256	46.8		36.8
10	85	07.5	285	17.0		42.5	271	48.0		36.1
11	100	10.0	300	16.9	+9	41.4	286	49.1	+3	35.5
12	115	12.4	315	16.8	+9	40.2	301	50.2	+3	34.9
13	130	14.9	330	16.7		39.0	316	51.3		34.3
14	145	17.4	345	16.7		37.9	331	52.4		33.7
15	160	19.8	0	16.6		36.7	346	53.5		33.1
16	175	22.3	15	16.5		35.5	1	54.7		32.4
17	190	24.8	30	16.4	+9	34.4	16	55.8	+3	31.8
18	205	27.2	45	16.3	+9	33.2	31	56.9	+3	31.2
19	220	29.7	60	16.2		32.0	46	58.0		30.6
20	235	32.2	75	16.2		30.9	61	59.1		30.0
21	250	34.6	90	16.1		29.7	77	00.2		29.3
22	265	37.1	105	16.0		28.5	92	01.3		28.7
23	280	39.6	120	15.9		27.4	107	02.5		28.1
24	295	42.0	135	15.8	+9	26.2	122	03.6	+3	27.5
Dif	—		-1		-12		+11		-6	
									+24	
									0	
									+23	
									-	
									-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 6 ^d 2	PHE { 4 ^h : 58 ^m 6 12 ^h : 58 ^m 3 20 ^h : 58 ^m 1									
	PMG: 12 ^h 06 ^m 2					SD: 16 ^h 0		PMG: 17 ^h 59 ^m			Rº: 52 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	178	26.9	+21 04.6	99	25.0	-12 35.0	60 N	** *	1 54	3 09	13 46	94	21 59	13
1	193	26.9	04.2	113	54.5 ¹⁰⁵	-12 47.9 ¹²⁹	58	** *	2 23	25	36 89		22 10	17
2	208	26.8	03.8	128	23.9 ¹⁰⁴	-13 00.6 ¹²⁷	56	1 03	2 44	39	27 86		19 21	
3	223	26.8	03.3	142	53.4 ¹⁰⁵	13.3 ¹²⁷	54	1 45	3 02	3 51	19 83		28 24	
4	238	26.7	02.9	157	22.8 ¹⁰⁴	25.9 ¹²⁶	52	2 11	17	4 01	12 80		35 27	
5	253	26.7	+21 02.5	171	52.1 ¹⁰³	-13 38.4 ¹²⁵	50	2 32	3 29	4 11	13 06	78	22 42	29
6	268	26.6	+21 02.0	186	21.5 ¹⁰⁴	-13 50.9 ¹²⁵	45	3 08	3 55	4 30	12 53	73	22 57	33
7	283	26.6	01.6	200	50.8 ¹⁰³	-14 03.2 ¹²³	40	35	4 14	46	42 69		23 09	37
8	298	26.5	01.1	215	20.1 ¹⁰³	15.5 ¹²³	35	3 55	30	4 59	32 67		19 40	
9	313	26.5	00.7	229	49.4 ¹⁰³	27.6 ¹²¹	30	4 12	4 44	5 11	24 64		29 42	
10	328	26.5	+21 00.3	244	18.6 ¹⁰²	39.7 ¹²¹	20	38	5 06	30	12 10	59	45 45	
11	343	26.4	+20 59.8	258	47.8 ¹⁰²	-14 51.7 ¹²⁰	10 N	4 58	5 24	5 47	11 58	56	23 58	50
12	358	26.4	+20 59.4	273	17.0 ¹⁰²	-15 03.6 ¹¹⁹	0	5 15	5 41	6 03	11 47	52	** ** *	**
13	13	26.3	58.9	287	46.2 ¹⁰²	15.4 ¹¹⁸	10 S	30	5 56	18	36 48		** ** *	**
14	28	26.3	58.5	302	15.3 ¹⁰¹	27.1 ¹¹⁷	20	44	6 11	35	24 44		** ** *	**
15	43	26.2	58.0	316	44.4 ¹⁰¹	38.7 ¹¹⁶	30	5 58	27	6 53	11 39		** ** *	**
16	58	26.2	57.6	331	13.5 ¹⁰¹	-15 50.2 ¹¹⁵	35	6 06	37	7 04	11 03	37	** ** *	**
17	73	26.1	+20 57.2	345	42.5 ¹⁰⁰	-16 01.6 ¹¹⁴	40	6 14	6 47	7 17	10 54	34	0 05	70
18	88	26.1	+20 56.7	0	11.6 ¹⁰¹	-16 13.0 ¹¹⁴	45	6 22	6 58	7 31	10 44	31	0 14	74
19	103	26.0	56.3	14	40.5 ⁹⁹	24.2 ¹¹²	50	32	7 12	49	32 26	24	79	
20	118	26.0	55.8	29	09.5 ¹⁰⁰	35.3 ¹¹¹	52	36	18	7 57	26 24		29 82	
21	133	25.9	55.4	43	38.4 ⁹⁹	46.3 ¹¹⁰	54	41	25	8 07	20 21		35 84	
22	148	25.9	54.9	58	07.3 ⁹⁹	-16 57.3 ¹¹⁰	56	46	33	17	13 18		41 87	
23	163	25.9	54.5	72	36.1 ⁹⁸	-17 08.1 ¹⁰⁸	58	51	41	30	10 05	15	48 90	
24	178	25.8	+20 54.0	87	05.0 ⁹⁹	-17 18.8 ¹⁰⁷	60 S	6 57	7 51	8 44	9 56	12	0 55	95

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 4 ^h 16 ^m 5		Mag: -4.2 PMG: 14 ^h 59 ^m			Mag: +1.4 PMG: 15 ^h 51 ^m			Mag: -2.7 PMG: 4 ^h 31 ^m			Mag: +1.1 PMG: 16 ^h 17 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°
0	295	42.0	135 15.8	+9 26.2	122 03.6	+3 27.5	292 04.8	+0 04.7	115 03.3	+2 11.4				
1	310	44.5	150 15.8	25.0	137 04.7	26.9	307 07.2	04.7	130 05.6	11.3				
2	325	46.9	165 15.7	23.9	152 05.8	26.3	322 09.7	04.7	145 07.9	11.2				
3	340	49.4	180 15.6	22.7	167 06.9	25.6	337 12.1	04.7	160 10.2	11.1				
4	355	51.9	195 15.5	21.5	182 08.0	25.0	352 14.5	04.7	175 12.5	11.0				
5	10	54.3	210 15.5	+9 20.4	197 09.1	+3 24.4	7 16.9	+0 04.7	190 14.8	+2 10.9				
6	25	56.8	225 15.4	+9 19.2	212 10.3	+3 23.8	22 19.3	+0 04.7	205 17.1	+2 10.9				
7	40	59.3	240 15.3	18.0	227 11.4	23.2	37 21.8	04.7	220 19.4	10.8				
8	56	01.7	255 15.2	16.9	242 12.5	22.5	52 24.2	04.7	235 21.7	10.7				
9	71	04.2	270 15.2	15.7	257 13.6	21.9	67 26.6	04.7	250 24.0	10.6				
10	86	06.7	285 15.1	14.5	272 14.7	21.3	82 29.0	04.7	265 26.3	10.5				
11	101	09.1	300 15.0	+9 13.4	287 15.8	+3 20.7	97 31.4	+0 04.7	280 28.6	+2 10.5				
12	116	11.6	315 14.9	+9 12.2	302 16.9	+3 20.1	112 33.9	+0 04.7	295 30.8	+2 10.4				
13	131	14.1	330 14.9	11.0	317 18.1	19.4	127 36.3	04.7	310 33.1	10.3				
14	146	16.5	345 14.8	09.8	332 19.2	18.8	142 38.7	04.7	325 35.4	10.2				
15	161	19.0	0 14.7	08.7	347 20.3	18.2	157 41.1	04.7	340 37.7	10.1				
16	176	21.4	15 14.7	07.5	2 21.4	17.6	172 43.6	04.7	355 40.0	10.1				
17	191	23.9	30 14.6	+9 06.3	17 22.5	+3 17.0	187 46.0	+0 04.8	10 42.3	+2 10.0				
18	206	26.4	45 14.5	+9 05.2	32 23.6	+3 16.4	202 48.4	+0 04.8	25 44.6	+2 09.9				
19	221	28.8	60 14.4	04.0	47 24.7	15.7	217 50.8	04.8	40 46.9	09.8				
20	236	31.3	75 14.4	02.8	62 25.8	15.1	232 53.3	04.8	55 49.2	09.7				
21	251	33.8	90 14.3	01.6	77 27.0	14.5	247 55.7	04.8	70 51.5	09.6				
22	266	36.2	105 14.2	+9 00.5	92 28.1	13.9	262 58.1	04.8	85 53.8	09.6				
23	281	38.7	120 14.2	+8 59.3	107 29.2	13.3	278 00.5	04.8	100 56.1	09.5				
24	296	41.2	135 14.1	+8 58.1	122 30.3	+3 12.6	293 03.0	+0 04.8	115 58.4	+2 09.4				
Dif	—		-1	-12	+11	-6	+24	0	+23	-1				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 7 ^d 2	PHE { 4 ^h : 57 ^m 9 12 ^h : 57 ^m 6 20 ^h : 57 ^m 4 R°: 54 ^m													
	PMG: 12 ^h 06 ^m 3					SD: 15 ^h 8 PMG: 18 ^h 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m				
0	178	25.8	+20	54.0	87	05.0	-17	18.8	60 N	21 00	22 12	** **	15 20	89				
1	193	25.8		53.6	101	33.8	98	29.4	58	20 44	21 45	** **	15 05	85				
2	208	25.7		53.1	116	02.5	97	39.9	56	31	25	23 00	14 53	80				
3	223	25.7		52.7	130	31.2	97	-17	50.3	54	19	21 08	22 23	42				
4	238	25.6		52.2	144	59.9	97	-18	00.6	52	09	20 53	21 57	32				
5	253	25.6	+20	51.8	159	28.6	97	-18	10.8	50	20 00	20 41	21 38	14				
6	268	25.6	+20	51.3	173	57.2	96	-18	20.9	45	19 41	20 16	21 02	14				
7	283	25.5		50.9	188	25.8	96	30.9	40	25	19 57	20 36	20 36	13				
8	298	25.5		50.4	202	54.4	96	40.7	35	12	41	16	16	39				
9	313	25.4		50.0	217	22.9	95	-18	50.5	30	19 01	28	20 00	28				
10	328	25.4		49.5	231	51.4	95	-19	00.1	20	18 42	19 06	19 34	13				
11	343	25.4	+20	49.1	246	19.9	95	-19	09.7	10 N	18 25	18 48	19 14	12				
12	358	25.3	+20	48.6	260	48.3	94	-19	19.1	0	18 10	18 32	18 58	12				
13	13	25.3		48.1	275	16.7	94	28.4	10 S	17	55	17	43	24				
14	28	25.2		47.7	289	45.1	94	37.5	20	38	18 02	29	29	12				
15	43	25.2		47.2	304	13.4	93	46.6	30	20	17 46	15	15	11				
16	58	25.1		46.8	318	41.7	93	-19	55.6	35	17 09	37	08	40				
17	73	25.1	+20	46.3	333	10.0	93	-20	04.4	40	16 57	17 27	18 00	11				
18	88	25.1	+20	45.8	347	38.2	92	-20	13.1	45	16 43	17 15	17 51	11				
19	103	25.0		45.4	2	06.4	92	21.7	50	25	17 02	42	42	10				
20	118	25.0		44.9	16	34.6	92	30.2	52	17	16 56	38	38	50				
21	133	25.0		44.5	31	02.7	91	38.6	54	16	07	49	33	41				
22	148	24.9		44.0	45	30.8	91	46.8	56	15	57	41	28	31				
23	163	24.9		43.5	59	58.9	91	-20	54.9	58	45	33	23	20				
24	178	24.8	+20	43.1	74	27.0	91	-21	02.9	60 S	15 31	16 24	17 17	10				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 12 ^m 6		Mag: -4.2 PMG: 14 ^h 59 ^m				Mag: +1.4 PMG: 15 ^h 49 ^m				Mag: -2.7 PMG: 4 ^h 27 ^m				Mag: +1.1 PMG: 16 ^h 14 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	296	41.2	135	14.1	+8	58.1	122	30.3	+3	12.6	293	03.0	+0	04.8	115	58.4	+2	09.4
1	311	43.6	150	14.1		56.9	137	31.4		12.0	308	05.4		04.8	131	00.7		09.3
2	326	46.1	165	14.0		55.8	152	32.5		11.4	323	07.8		04.8	146	03.0		09.2
3	341	48.5	180	13.9		54.6	167	33.6		10.8	338	10.2		04.8	161	05.2		09.2
4	356	51.0	195	13.9		53.4	182	34.7		10.1	353	12.7		04.8	176	07.5		09.1
5	11	53.5	210	13.8	+8	52.2	197	35.8	+3	09.5	8	15.1	+0	04.8	191	09.8	+2	09.0
6	26	55.9	225	13.7	+8	51.1	212	37.0	+3	08.9	23	17.5	+0	04.8	206	12.1	+2	08.9
7	41	58.4	240	13.7		49.9	227	38.1		08.3	38	19.9		04.8	221	14.4		08.8
8	57	00.9	255	13.6		48.7	242	39.2		07.7	53	22.4		04.8	236	16.7		08.7
9	72	03.3	270	13.6		47.5	257	40.3		07.0	68	24.8		04.8	251	19.0		08.7
10	87	05.8	285	13.5		46.4	272	41.4		06.4	83	27.2		04.8	266	21.3		08.6
11	102	08.3	300	13.4	+8	45.2	287	42.5	+3	05.8	98	29.7	+0	04.8	281	23.6	+2	08.5
12	117	10.7	315	13.4	+8	44.0	302	43.6	+3	05.2	113	32.1	+0	04.8	296	25.9	+2	08.4
13	132	13.2	330	13.3		42.8	317	44.7		04.6	128	34.5		04.8	311	28.2		08.3
14	147	15.7	345	13.3		41.7	332	45.8		03.9	143	36.9		04.8	326	30.5		08.2
15	162	18.1	0	13.2		40.5	347	47.0		03.3	158	39.4		04.8	341	32.8		08.2
16	177	20.6	15	13.2		39.3	2	48.1		02.7	173	41.8		04.8	356	35.0		08.1
17	192	23.0	30	13.1	+8	38.1	17	49.2	+3	02.1	188	44.2	+0	04.8	11	37.3	+2	08.0
18	207	25.5	45	13.0	+8	36.9	32	50.3	+3	01.5	203	46.7	+0	04.8	26	39.6	+2	07.9
19	222	28.0	60	13.0		35.8	47	51.4		00.8	218	49.1		04.8	41	41.9		07.8
20	237	30.4	75	12.9		34.6	62	52.5	+3	00.2	233	51.5		04.8	56	44.2		07.7
21	252	32.9	90	12.9		33.4	77	53.6	+2	59.6	248	54.0		04.8	71	46.5		07.7
22	267	35.4	105	12.8		32.2	92	54.7		59.0	263	56.4		04.8	86	48.8		07.6
23	282	37.8	120	12.8		31.0	107	55.8		58.3	278	58.8		04.8	101	51.1		07.5
24	297	40.3	135	12.7	+8	29.9	122	56.9	+2	57.7	294	01.3	+0	04.8	116	53.4	+2	07.4
Dif	—		-1		-12		+11		-6		+24		0		+23		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 06 ^m 4			Edad: 8 ^d 2 SD: 15'6 PMG: 19 ^h 45 ^m	PHE { 4 ^h : 57/2 12 ^h : 57/0 20 ^h : 56/8 R°: 54 ^m												
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	h	m
0	178	24.8	+20 43.1	74	27.0	-21 02.9	60 N	** **	2 01	3 13	16 49	77	22 34	35			
1	193	24.8		88	55.0	10.8	58	** **	28	29	30	73	22 53	39			
2	208	24.8		103	23.0	18.5	56	1 13	2 49	42	13	72	23 10	41			
3	223	24.7		117	51.0	26.1	54	1 51	3 05	3 54	16 00	69	24	42			
4	238	24.7		132	18.9	33.6	52	2 16	20	4 04	15 48	68	36	44			
5	253	24.7	+20 40.7	146	46.8	41.0	50	2 35	3 32	4 13	15 37	67	23 47	45			
6	268	24.6	+20 40.3	161	14.7	48.3	45	3 11	3 57	4 32	15 15	64	** **	**			
7	283	24.6		175	42.5	55.4	40	37	4 16	4 48	14 58	62	** **	**			
8	298	24.5		190	10.3	02.4	35	3 57	32	5 01	43	60	** **	**			
9	313	24.5		204	38.1	09.3	30	4 13	4 45	12	30	59	0 11	46			
10	328	24.5		219	05.9	16.0	20	39	5 07	31	14 08	57	30	49			
11	343	24.4	+20 37.9	233	33.7	22.6	10 N	4 58	5 25	5 47	13 49	56	0 48	51			
12	358	24.4	+20 37.5	248	01.4	29.1	0	5 15	5 41	6 03	13 32	54	1 04	54			
13	13	24.4		262	29.1	35.4	10 S	30	5 56	18	13 14	53	20	56			
14	28	24.3		36.5	276 56.8	41.7	63	44	6 11	34	12 56	50	38	58			
15	43	24.3		291	24.4	47.8	61	30	5 57	27	6 52	34	49	1 58	61		
16	58	24.3		305	52.1	53.7	59	35	6 05	36	7 03	22	47	2 10	62		
17	73	24.2	+20 35.1	320	19.7	59.5	40	6 12	6 46	7 15	12 08	45	2 23	65			
18	88	24.2	+20 34.6	334	47.3	05.2	45	6 21	6 57	7 30	11 51	43	2 39	67			
19	103	24.2		349	14.8	10.8	56	50	30	7 10	47	30	40	2 59	71		
20	118	24.1		3	42.4	16.2	54	52	34	16	7 55	20	39	3 09	72		
21	133	24.1		18	09.9	21.5	53	54	39	23	8 04	11	09	37	19	74	
22	148	24.1		32	37.4	26.7	52	56	44	31	15	10	56	35	31	77	
23	163	24.0		32.2	47 04.9	31.7	50	58	49	39	26	42	32	3 46	79		
24	178	24.0	+20 31.8	61	32.4	36.6	49	60 S	6 55	7 48	8 40	10 25	28	4 02	84		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 4 ^h 08 ^m 6		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.4 PMG: 15 ^h 47 ^m		Mag: -2.7 PMG: 4 ^h 23 ^m		Mag: +1.1 PMG: 16 ^h 10 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	297	40.3	135	12.7	+8 29.9	122 56.9	+2 57.7	294 01.3	+0 04.8	116 53.4	+2 07.4						
1	312	42.8	150	12.7	28.7	137 58.1	57.1	309 03.7	04.8	131 55.7	07.3						
2	327	45.2	165	12.6	27.5	152 59.2	56.5	324 06.1	04.8	146 57.9	07.2						
3	342	47.7	180	12.6	26.3	168 00.3	55.9	339 08.6	04.8	162 00.2	07.2						
4	357	50.2	195	12.5	25.1	183 01.4	55.2	354 11.0	04.8	177 02.5	07.1						
5	12	52.6	210	12.5	+8 23.9	198 02.5	+2 54.6	9 13.4	+0 04.8	192 04.8	+2 07.0						
6	27	55.1	225	12.4	+8 22.8	213 03.6	+2 54.0	24 15.9	+0 04.8	207 07.1	+2 06.9						
7	42	57.5	240	12.4	21.6	228 04.7	53.4	39 18.3	04.8	222 09.4	06.8						
8	58	00.0	255	12.4	20.4	243 05.8	52.7	54 20.7	04.8	237 11.7	06.7						
9	73	02.5	270	12.3	19.2	258 06.9	52.1	69 23.2	04.8	252 14.0	06.7						
10	88	04.9	285	12.3	18.0	273 08.0	51.5	84 25.6	04.8	267 16.3	06.6						
11	103	07.4	300	12.2	+8 16.8	288 09.1	+2 50.9	99 28.0	+0 04.8	282 18.6	+2 06.5						
12	118	09.9	315	12.2	+8 15.7	303 10.2	+2 50.3	114 30.5	+0 04.8	297 20.8	+2 06.4						
13	133	12.3	330	12.1	14.5	318 11.4	49.6	129 32.9	04.8	312 23.1	06.3						
14	148	14.8	345	12.1	13.3	333 12.5	49.0	144 35.3	04.8	327 25.4	06.2						
15	163	17.3	0	12.0	12.1	348 13.6	48.4	159 37.8	04.8	342 27.7	06.2						
16	178	19.7	15	12.0	10.9	3 14.7	47.8	174 40.2	04.8	357 30.0	06.1						
17	193	22.2	30	12.0	+8 09.7	18 15.8	+2 47.1	189 42.7	+0 04.8	12 32.3	+2 06.0						
18	208	24.7	45	11.9	+8 08.5	33 16.9	+2 46.5	204 45.1	+0 04.8	27 34.6	+2 05.9						
19	223	27.1	60	11.9	07.4	48 18.0	45.9	219 47.5	04.8	42 36.9	05.8						
20	238	29.6	75	11.9	06.2	63 19.1	45.3	234 50.0	04.8	57 39.1	05.7						
21	253	32.0	90	11.8	05.0	78 20.2	44.6	249 52.4	04.8	72 41.4	05.7						
22	268	34.5	105	11.8	03.8	93 21.3	44.0	264 54.9	04.8	87 43.7	05.6						
23	283	37.0	120	11.7	02.6	108 22.4	43.4	279 57.3	04.8	102 46.0	05.5						
24	298	39.4	135	11.7	+8 01.4	123 23.5	+2 42.8	294 59.7	+0 04.8	117 48.3	+2 05.4						
Dif	—		0		-12	+11		-6		+24		0	+23		-		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 4			Edad: 9 ^d 2 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 4 20 ^h : 56 ^m 2 R°: 53 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	178	24.0	+20	31.8	61	32.4	-23	36.6	60 N	20 56	22 06	** **	18 06	58	23 09	54	
1	193	24.0		31.3	75	59.9	85	41.4	58	41	21 41	** **	17 43	57	32	54	
2	208	23.9		30.8	90	27.4	85	46.0	56	28	21	22 51	25	57	23 51	54	
3	223	23.9		30.3	104	54.8	84	50.5	54	16	21 04	22 17	17 09	57	** *	** *	
4	238	23.9		29.9	119	22.3	85	54.9	52	20 07	20 50	21 53	16 56	56	** *	** *	
5	253	23.8	+20	29.4	133	49.7	84	-23 59.1	50	19 58	20 38	21 34	16 44	56	** *	** *	
6	268	23.8	+20	28.9	148	17.1	84	-24 03.2	45	19 39	20 14	20 59	16 19	56	0 10	47	
7	283	23.8		28.4	162	44.5	84	07.1	39	24	19 55	34	16 00	55	28	48	
8	298	23.8		27.9	177	11.9	84	10.9	38	11	40	20 15	15 43	56	43	50	
9	313	23.7		27.4	191	39.3	84	14.6	37	30	19 00	27 19 59	29 56	0 57	50		
10	328	23.7		27.0	206	06.7	84	18.2	36	20	18 41	19 05	34	15 05	55	1 19	52
11	343	23.7	+20	26.5	220	34.1	84	-24 21.6	34	10 N	18 25	18 48	19 14	14 45	54	1 39	53
12	358	23.6	+20	26.0	235	01.4	83	-24 24.8	32	0	18 10	18 32	18 58	14 26	54	1 58	54
13	13	23.6		25.5	249	28.8	84	28.0	32	10 S	17 55	17	43	14 07	53	2 16	55
14	28	23.6		25.0	263	56.2	84	30.9	29	20	39	18 03	30	13 46	53	36	56
15	43	23.6		24.5	278	23.6	84	33.8	29	30	21	17 47	16	23	52	2 59	57
16	58	23.5		24.0	292	50.9	83	36.5	27	35	17 11	38	09	13 09	52	3 12	59
17	73	23.5	+20	23.6	307	18.3	84	-24 39.1	26	40	16 59	17 28	18 01	12 53	51	3 28	59
18	88	23.5	+20	23.1	321	45.7	84	-24 41.5	24	45	16 45	17 17	17 53	12 34	50	3 46	61
19	103	23.4		22.6	336	13.1	84	43.8	23	50	27	17 04	44	12 10	50	4 10	61
20	118	23.4		22.1	350	40.5	84	46.0	22	52	19	16 58	40	11 59	49	21	62
21	133	23.4		21.6	5	07.9	84	48.0	20	54	10	51	36	46	48	33	64
22	148	23.4		21.1	19	35.3	84	49.9	19	56	16 00	44	31	31	48	4 48	64
23	163	23.3		20.6	34	02.7	84	51.7	18	58	15 49	36	26	11 14	46	5 05	66
24	178	23.3	+20	20.1	48	30.1	84	-24 53.3	16	60 S	15 35	16 27	17 20	10 53	44	5 26	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 04 ^m 7		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.4 PMG: 15 ^h 45 ^m		Mag: -2.7 PMG: 4 ^h 19 ^m		Mag: +1.1 PMG: 16 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	298	39.4	135	11.7	+8	01.4	123	23.5	+2	04.8
1	313	41.9	150	11.7	+8	00.2	138	24.6		05.3
2	328	44.4	165	11.6	+7	59.0	153	25.7		05.2
3	343	46.8	180	11.6		57.9	168	26.8		05.2
4	358	49.3	195	11.6		56.7	183	28.0		05.1
5	13	51.8	210	11.5	+7	55.5	198	29.1	+2	05.0
6	28	54.2	225	11.5	+7	54.3	213	30.2	+2	04.9
7	43	56.7	240	11.5		53.1	228	31.3		04.8
8	58	59.1	255	11.4		51.9	243	32.4		04.7
9	74	01.6	270	11.4		50.7	258	33.5		04.6
10	89	04.1	285	11.4		49.5	273	34.6		04.6
11	104	06.5	300	11.3	+7	48.3	288	35.7	+2	04.5
12	119	09.0	315	11.3	+7	47.1	303	36.8	+2	04.4
13	134	11.5	330	11.3		45.9	318	37.9		04.3
14	149	13.9	345	11.3		44.8	333	39.0		04.2
15	164	16.4	0	11.2		43.6	348	40.1		04.1
16	179	18.9	15	11.2		42.4	3	41.2		04.0
17	194	21.3	30	11.2	+7	41.2	18	42.3	+2	04.0
18	209	23.8	45	11.1	+7	40.0	33	43.4	+2	03.9
19	224	26.3	60	11.1		38.8	48	44.5		03.8
20	239	28.7	75	11.1		37.6	63	45.6		03.7
21	254	31.2	90	11.1		36.4	78	46.7		03.6
22	269	33.6	105	11.1		35.2	93	47.8		03.5
23	284	36.1	120	11.0		34.0	108	48.9		03.5
24	299	38.6	135	11.0	+7	32.8	123	50.0	+2	03.4
Dif	—		0		-12		+11		-6	

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: 10 ^d 2 PHE { 4 ^h : 56/0 12 ^h : 55/8 20 ^h : 55/7 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	178	23.3	+20	20.1	48	30.1	-24	53.3	15	60 N	**	**	2	07	3	18	19	04
1	193	23.3		19.6	62	57.5		54.8	15	58	**	**		33		33	18	40
2	208	23.3		19.1	77	25.0		56.1	13	56	1	22	2	53		46		22
3	223	23.2		18.6	91	52.4		57.3	12	54	1	57	3	09	3	57	18	06
4	238	23.2		18.2	106	19.9		58.4	11	52	2	20		23	4	07	17	52
5	253	23.2	+20	17.7	120	47.4		59.3	9	50	2	39	3	35	4	16	17	40
6	268	23.2	+20	17.2	135	14.9		00.1	8	45	3	14	3	59	4	34	17	15
7	283	23.1		16.7	149	42.4		00.8	7	40		39	4	18	4	49	16	55
8	298	23.1		16.2	164	09.9		01.3	5	35	3	59		33	5	02	39	49
9	313	23.1		15.7	178	37.5		01.7	4	30	4	14	4	46	13		25	49
10	328	23.1		15.2	193	05.1		01.9	2	20		39	5	08	32		16	00
11	343	23.0	+20	14.7	207	32.7		02.0	1	10 N	4	59	5	25	5	48	15	39
12	358	23.0	+20	14.2	222	00.3		02.0	0	0	5	15	5	41	6	03	15	20
13	13	23.0		13.7	236	28.0		01.9	1	10 S		30	5	55	18		15	00
14	28	23.0		13.2	250	55.6		01.6	3	20		43	6	10	34		14	39
15	43	22.9		12.7	265	23.3		01.2	4	30	5	57		26	6	52	15	55
16	58	22.9		12.2	279	51.1		00.6	6	35	6	04		35	7	02	14	01
17	73	22.9	+20	11.7	294	18.8		59.9	7	40	6	11	6	44	7	14	13	44
18	88	22.9	+20	11.2	308	46.6		59.1	8	45	6	19	6	55	7	28	13	24
19	103	22.9		10.7	323	14.4		58.1	10	50		28	7	08	45		13	00
20	118	22.8		10.2	337	42.3		57.0	11	52		32		14	7	53	12	48
21	133	22.8		09.7	352	10.2		55.8	12	54		37		21	8	02		34
22	148	22.8		09.2	6	38.1		54.4	14	56		41		28	12		19	60
23	163	22.8		08.6	21	06.1		52.9	15	58		46		36	23		12	00
24	178	22.8	+20	08.1	35	34.0		51.3	16	60 S	6	52	7	45	8	36	11	37

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 4 ^h 00 ^m 8		Mag: -4.2 PMG: 14 ^h 59 ^m			Mag: +1.4 PMG: 15 ^h 44 ^m			Mag: -2.7 PMG: 4 ^h 15 ^m			Mag: +1.1 PMG: 16 ^h 03 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	299	38.6	135	11.0	+7	32.8	123	50.0	+2	27.8	295	58.4	+0	04.6			
1	314	41.0	150	11.0		31.6	138	51.2		27.2	311	00.8		04.6			
2	329	43.5	165	11.0		30.4	153	52.3		26.5	326	03.3		04.6			
3	344	46.0	180	10.9		29.2	168	53.4		25.9	341	05.7		04.6			
4	359	48.4	195	10.9		28.0	183	54.5		25.3	356	08.2		04.6			
5	14	50.9	210	10.9	+7	26.9	198	55.6	+2	24.7	11	10.6	+0	04.6			
6	29	53.4	225	10.9	+7	25.7	213	56.7	+2	24.0	26	13.1	+0	04.6			
7	44	55.8	240	10.9		24.5	228	57.8		23.4	41	15.5		04.6			
8	59	58.3	255	10.8		23.3	243	58.9		22.8	56	18.0		04.6			
9	75	00.8	270	10.8		22.1	259	00.0		22.2	71	20.4		04.6			
10	90	03.2	285	10.8		20.9	274	01.1		21.5	86	22.9		04.6			
11	105	05.7	300	10.8	+7	19.7	289	02.2	+2	20.9	101	25.3	+0	04.6			
12	120	08.1	315	10.8	+7	18.5	304	03.3	+2	20.3	116	27.8	+0	04.6			
13	135	10.6	330	10.8		17.3	319	04.4		19.7	131	30.3		04.5			
14	150	13.1	345	10.8		16.1	334	05.5		19.0	146	32.7		04.5			
15	165	15.5	0	10.7		14.9	349	06.6		18.4	161	35.2		04.5			
16	180	18.0	15	10.7		13.7	4	07.7		17.8	176	37.6		04.5			
17	195	20.5	30	10.7	+7	12.5	19	08.8	+2	17.2	191	40.1	+0	04.5			
18	210	22.9	45	10.7	+7	11.3	34	09.9	+2	16.5	206	42.5	+0	04.5			
19	225	25.4	60	10.7		10.1	49	11.0		15.9	221	45.0		04.5			
20	240	27.9	75	10.7		08.9	64	12.1		15.3	236	47.4		04.5			
21	255	30.3	90	10.7		07.7	79	13.2		14.6	251	49.9		04.5			
22	270	32.8	105	10.7		06.5	94	14.3		14.0	266	52.3		04.5			
23	285	35.3	120	10.7		05.3	109	15.4		13.4	281	54.8		04.5			
24	300	37.7	135	10.6	+7	04.1	124	16.5	+2	12.8	296	57.2	+0	04.4			
Dif	—		0		-12	+11		-6		+25		0		+23		-	

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: 11 ^d 2 PHE { SD: 15:1 PMG: 22 ^h 25 ^m					Civil			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	22.8	+20 08.1	35	34.0	91	-24 51.3	60 N	20 52	22 00	** **	19 41 22	0 03 71		
1	193	22.7	07.6	50	02.1	91	49.6	58	37	21 36	** **	21 26	26 68		
2	208	22.7	07.1	64	30.1	90	47.7	56	24	16	22 42	19 04 29	0 45 66		
3	223	22.7	06.6	78	58.3	92	45.7	54	14	21 01	22 11	18 49 32	1 01 64		
4	238	22.7	06.1	93	26.4	91	43.5	52	20 04	20 47	21 48	37 33	14 63		
5	253	22.7	+20 05.6	107	54.6	92	-24 41.3	50	19 55	20 36	21 30	18 25 36	1 26 62		
6	268	22.6	+20 05.1	122	22.8	92	-24 38.9	45	19 37	20 12	20 57	18 02 39	1 51 60		
7	283	22.6	04.6	136	51.1	93	36.4	40	22	19 53	32	17 44 40	2 10 59		
8	298	22.6	04.1	151	19.4	93	33.7	35	19 10	38	20 13	28 43	27 57		
9	313	22.6	03.6	165	47.8	94	30.9	30	18 59	26	19 57	17 14 44	2 41 56		
10	328	22.6	03.0	180	16.2	94	28.0	20	41	19 05	33	16 51 47	3 05 55		
11	343	22.6	+20 02.5	194	44.7	95	-24 25.0	10 N	18 25	18 47	19 14	16 31 49	3 26 53		
12	358	22.5	+20 02.0	209	13.2	95	-24 21.9	0	18 10	18 32	18 58	16 12 51	3 45 52		
13	13	22.5	01.5	223	41.7	95	18.6	10 S	17 55	18	43	15 54 52	4 05 50		
14	28	22.5	01.0	238	10.4	97	15.2	20	40	18 03	30	33 55	25 49		
15	43	22.5	+20 00.5	252	39.0	96	11.7	30	22	17 48	17	15 10 57	4 49 47		
16	58	22.5	+20 00.0	267	07.7	97	08.0	35	12	39	10	14 57 58	5 03 46		
17	73	22.5	+19 59.4	281	36.5	98	-24 04.3	40	17 00	17 30	18 03	14 41 60	5 19 45		
18	88	22.4	+19 58.9	296	05.3	98	-24 00.4	45	16 47	17 19	17 55	14 22 62	5 38 43		
19	103	22.4	58.4	310	34.2	99	-23 56.4	50	30	06	46	13 58 65	6 02 41		
20	118	22.4	57.9	325	03.1	99	52.2	52	22	17 00	42	47 66	14 39		
21	133	22.4	57.4	339	32.1	100	48.0	54	13	16 54	38	34 68	27 37		
22	148	22.4	56.9	354	01.1	100	43.6	56	16 03	47	33	19 70	6 42 36		
23	163	22.4	56.3	8	30.2	101	39.2	58	15 52	39	29	13 01 73	7 00 33		
24	178	22.4	+19 55.8	22	59.4	102	-23 34.6	60 S	15 39	16 30	17 23	12 40 76	7 22 29		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 56 ^m 8		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 15 ^h 42 ^m		Mag: -2.7 PMG: 4 ^h 11 ^m		Mag: +1.1 PMG: 15 ^h 59 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	300	37.7	135 10.6	+7 04.1	124 16.5	+2 12.8	296 57.2	+0 04.4	119 38.0	
1	315	40.2	150 10.6	02.9	139 17.6	12.1	311 59.7	04.4	134 40.2	
2	330	42.6	165 10.6	01.7	154 18.7	11.5	327 02.2	04.4	149 42.5	
3	345	45.1	180 10.6	+7 00.5	169 19.8	10.9	342 04.6	04.4	164 44.8	
4	0	47.6	195 10.6	+6 59.3	184 20.9	10.3	357 07.1	04.4	179 47.1	
5	15	50.0	210 10.6	+6 58.1	199 22.0	+2 09.6	12 09.5	+0 04.4	194 49.4	
6	30	52.5	225 10.6	+6 56.9	214 23.1	+2 09.0	27 12.0	+0 04.4	209 51.6	
7	45	55.0	240 10.6	55.7	229 24.2	08.4	42 14.4	04.4	224 53.9	
8	60	57.4	255 10.6	54.5	244 25.3	07.7	57 16.9	04.4	239 56.2	
9	75	59.9	270 10.6	53.3	259 26.4	07.1	72 19.4	04.4	254 58.5	
10	91	02.4	285 10.6	52.1	274 27.5	06.5	87 21.8	04.3	270 00.8	
11	106	04.8	300 10.6	+6 50.9	289 28.6	+2 05.9	102 24.3	+0 04.3	285 03.0	
12	121	07.3	315 10.6	+6 49.7	304 29.7	+2 05.2	117 26.7	+0 04.3	300 05.3	
13	136	09.8	330 10.6	48.5	319 30.8	04.6	132 29.2	04.3	315 07.6	
14	151	12.2	345 10.6	47.3	334 31.9	04.0	147 31.6	04.3	330 09.9	
15	166	14.7	0 10.6	46.1	349 33.0	03.4	162 34.1	04.3	345 12.2	
16	181	17.1	15 10.6	44.9	4 34.1	02.7	177 36.6	04.3	0 14.4	
17	196	19.6	30 10.6	+6 43.7	19 35.2	+2 02.1	192 39.0	+0 04.3	15 16.7	
18	211	22.1	45 10.6	+6 42.5	34 36.3	+2 01.5	207 41.5	+0 04.2	30 19.0	
19	226	24.5	60 10.6	41.2	49 37.4	00.8	222 44.0	04.2	45 21.3	
20	241	27.0	75 10.6	40.0	64 38.5	+2 00.2	237 46.4	04.2	60 23.6	
21	256	29.5	90 10.6	38.8	79 39.6	+1 59.6	252 48.9	04.2	75 25.8	
22	271	31.9	105 10.6	37.6	94 40.7	59.0	267 51.3	04.2	90 28.1	
23	286	34.4	120 10.6	36.4	109 41.8	58.3	282 53.8	04.2	105 30.4	
24	301	36.9	135 10.6	+6 35.2	124 42.9	+1 57.7	297 56.3	+0 04.2	120 32.7	
Dif	—	0	-12	+11	-6	+25	0	+23	-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 5			Edad: 12 ^d 2 PHE { 4 ^h : 55'1 12 ^h : 54'9 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	178	22.4	+19 55.8	22	59.4	-23 34.6	47	60 N	** *	2 14	3 22	20 03	14	1 14	81	
1	193	22.4	55.3	37	28.6 ¹⁰²	29.9	47	58	** *	38	37	19 47	18	34	77	
2	208	22.3	54.8	51	57.8 ¹⁰²	25.1	48	56	1 31	2 57	3 49	33 21		1 51	73	
3	223	22.3	54.3	66	27.2 ¹⁰⁴	20.1	50	54	2 02	3 13	4 00	21 24		2 05	7	
4	238	22.3	53.7	80	56.6 ¹⁰⁴	15.1	50	52	25	26	10	10 26		17	69	
5	253	22.3	+19 53.2	95	26.0 ¹⁰⁴	-23 09.9	52	50	2 43	3 38	4 18	19 01	27	2 28	67	
6	268	22.3	+19 52.7	109	55.5 ¹⁰⁵	-23 04.6	53	45	3 17	4 01	4 36	18 41	31	2 51	63	
7	283	22.3	52.2	124	25.1 ¹⁰⁶	-22 59.3	53	40	3 41	20	4 51	24 35		3 09	61	
8	298	22.3	51.6	138	54.7 ¹⁰⁶	53.8	55	35	4 00	35	5 03	18 11	36	24	59	
9	313	22.3	51.1	153	24.4 ¹⁰⁷	48.2	56	30	16	4 48	14	17 58	39	3 37	57	
10	328	22.2	50.6	167	54.2 ¹⁰⁸	42.4	58	20	40	5 09	32	38 42		4 00	54	
11	343	22.2	+19 50.1	182	24.0 ¹⁰⁸	-22 36.6	58	10 N	4 59	5 26	5 48	17 20	45	4 19	52	
12	358	22.2	+19 49.5	196	53.9 ¹⁰⁹	-22 30.7	59	0	5 15	5 41	6 03	17 03	48	4 37	49	
13	13	22.2	49.0	211	23.8 ¹⁰⁹	24.7	60	10 S	30	5 55	18	16 46	50	4 55	47	
14	28	22.2	48.5	225	53.8 ¹¹⁰	18.5	62	20	43	6 10	33	28 53		5 14	45	
15	43	22.2	48.0	240	23.9 ¹¹¹	12.3	62	30	5 56	25	6 51	16 07	57	36	41	
16	58	22.2	47.4	254	54.0 ¹¹¹	-22 06.0	63	35	6 03	33	7 01	15 55	58	5 49	40	
17	73	22.2	+19 46.9	269	24.2 ¹¹²	-21 59.5	65	40	6 10	6 43	7 12	15 41	61	6 04	37	
18	88	22.2	+19 46.4	283	54.5 ¹¹³	-21 53.0	65	45	6 18	6 54	7 26	15 24	64	6 21	35	
19	103	22.2	45.8	298	24.9 ¹¹⁴	46.3	67	50	26	7 06	42	15 03	68	43	31	
20	118	22.1	45.3	312	55.3 ¹¹⁴	39.6	67	52	30	12	50	14 53	70	6 53	30	
21	133	22.1	44.8	327	25.7 ¹¹⁴	32.7	69	54	34	18	7 59	42 72		7 04	28	
22	148	22.1	44.2	341	56.3 ¹¹⁶	25.8	69	56	39	25	8 09	29 74		18	25	
23	163	22.1	43.7	356	26.9 ¹¹⁶	18.8	70	58	44	33	20	14 14	78	33	22	
24	178	22.1	+19 43.2	10	57.5 ¹¹⁶	-21 11.6	72	60 S	6 49	7 42	8 32	13 56	82	7 51	18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 3 ^h 52 ^m 9		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 15 ^h 40 ^m		Mag: -2.7 PMG: 4 ^h 08 ^m		Mag: +1.1 PMG: 15 ^h 55 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	301	36.9	135	10.6	+6 35.2	124	42.9	+1 57.7	297	56.3	+0 04.2	120	32.7	+1 59.2	
1	316	39.3	150	10.6	34.0	139	44.0	57.1	312	58.7	04.2	135	35.0	59.1	
2	331	41.8	165	10.6	32.8	154	45.1	56.4	328	01.2	04.1	150	37.2	59.0	
3	346	44.2	180	10.6	31.6	169	46.2	55.8	343	03.7	04.1	165	39.5	58.9	
4	1	46.7	195	10.6	30.4	184	47.3	55.2	358	06.1	04.1	180	41.8	58.9	
5	16	49.2	210	10.7	+6 29.2	199	48.4	+1 54.6	13	08.6	+0 04.1	195	44.1	+1 58.8	
6	31	51.6	225	10.7	+6 28.0	214	49.5	+1 53.9	28	11.0	+0 04.1	210	46.4	+1 58.7	
7	46	54.1	240	10.7	26.8	229	50.6	53.3	43	13.5	04.1	225	48.6	58.6	
8	61	56.6	255	10.7	25.6	244	51.7	52.7	58	16.0	04.1	240	50.9	58.5	
9	76	59.0	270	10.7	24.4	259	52.8	52.0	73	18.4	04.0	255	53.2	58.4	
10	92	01.5	285	10.7	23.2	274	53.9	51.4	88	20.9	04.0	270	55.5	58.3	
11	107	04.0	300	10.7	+6 22.0	289	55.0	+1 50.8	103	23.4	+0 04.0	285	57.7	+1 58.2	
12	122	06.4	315	10.7	+6 20.7	304	56.1	+1 50.2	118	25.8	+0 04.0	301	00.0	+1 58.2	
13	137	08.9	330	10.7	19.5	319	57.2	49.5	133	28.3	04.0	316	02.3	58.1	
14	152	11.4	345	10.7	18.3	334	58.3	48.9	148	30.8	04.0	331	04.6	58.0	
15	167	13.8	0	10.8	17.1	349	59.4	48.3	163	33.2	04.0	346	06.9	57.9	
16	182	16.3	15	10.8	15.9	5	00.4	47.6	178	35.7	03.9	1	09.1	57.8	
17	197	18.7	30	10.8	+6 14.7	20	01.5	+1 47.0	193	38.2	+0 03.9	16	11.4	+1 57.7	
18	212	21.2	45	10.8	+6 13.5	35	02.6	+1 46.4	208	40.6	+0 03.9	31	13.7	+1 57.6	
19	227	23.7	60	10.8	12.3	50	03.7	45.8	223	43.1	03.9	46	16.0	57.5	
20	242	26.1	75	10.8	11.1	65	04.8	45.1	238	45.6	03.9	61	18.2	57.4	
21	257	28.6	90	10.9	09.9	80	05.9	44.5	253	48.1	03.9	76	20.5	57.4	
22	272	31.1	105	10.9	08.7	95	07.0	43.9	268	50.5	03.9	91	22.8	57.3	
23	287	33.5	120	10.9	07.4	110	08.1	43.2	283	53.0	03.8	106	25.1	57.2	
24	302	36.0	135	10.9	+6 06.2	125	09.2	+1 42.6	298	55.5	+0 03.8	121	27.3	+1 57.1	
Dif	—		0	-12		+11	-6		+25		0		+23		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 13 ^d 2 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5											
	PMG: 12 ^h 06 ^m 5			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	178	22.1	+19 43.2	10	57.5	-21 11.6	72	60 N	20 47	21 53	** **	20 17 9	2 35 83		
1	193	22.1	42.6	25	28.3 ¹¹⁸	-21 04.4	72	58	33	30	23 24	20 05 12	2 51 78		
2	208	22.1	42.1	39	59.1 ¹¹⁸	-20 57.1	73	56	21	21 12	22 34	19 54 16	3 04 75		
3	223	22.1	41.6	54	30.0 ¹¹⁹	49.6	75	54	10	20 57	22 05	45 18	16 72		
4	238	22.1	41.0	69	00.9 ¹¹⁹	42.1	75	52	20 01	44	21 44	36 20	26 70		
5	253	22.1	+19 40.5	83	31.9 ¹²⁰	-20 34.5	76	50	19 53	20 33	21 26	19 28 23	3 35 68		
6	268	22.1	+19 40.0	98	03.0 ¹²¹	-20 26.8	77	45	19 35	20 10	20 54	19 12 26	3 54 65		
7	283	22.1	39.4	112	34.1 ¹²¹	19.1	77	40	21	19 52	30	18 59 29	4 10 61		
8	298	22.1	38.9	127	05.3 ¹²²	11.2	79	35	19 09	37	20 11	47 33	23 58		
9	313	22.1	38.3	141	36.6 ¹²³	-20 03.2	80	30	18 58	24	19 56	37 35	34 57		
10	328	22.1	37.8	156	08.0 ¹²⁴	-19 55.2	80	20	40	19 04	32	20 38	4 54 52		
11	343	22.0	+19 37.3	170	39.4 ¹²⁴	-19 47.1	81	10 N	18 24	18 47	19 13	18 05 42	5 11 49		
12	358	22.0	+19 36.7	185	10.9 ¹²⁵	-19 38.8	83	0	18 10	18 32	18 58	17 51 45	5 26 47		
13	13	22.0	36.2	199	42.4 ¹²⁵	30.5	83	10 S	17 56	18	44	36 49	42 43		
14	28	22.0	35.6	214	14.0 ¹²⁶	22.1	84	20	41	18 04	31	21 52	5 59 40		
15	43	22.0	35.1	228	45.7 ¹²⁷	13.7	84	30	23	17 49	18	17 04 55	6 17 37		
16	58	22.0	34.6	243	17.4 ¹²⁷	-19 05.1	86	35	13	40	11	16 53 58	29 34		
17	73	22.0	+19 34.0	257	49.3 ¹²⁹	-18 56.5	86	40	17 02	17 31	18 04	16 42 60	6 41 32		
18	88	22.0	+19 33.5	272	21.1 ¹²⁸	-18 47.8	87	45	16 49	17 21	17 57	16 28 64	6 56 29		
19	103	22.0	32.9	286	53.1 ¹³⁰	39.0	88	50	32	08	48	11 68	7 14 25		
20	118	22.0	32.4	301	25.1 ¹³⁰	30.1	89	52	25	17 03	44	16 03 70	23 22		
21	133	22.0	31.8	315	57.2 ¹³¹	21.2	89	54	16	16 57	40	15 54 72	32 21		
22	148	22.0	31.3	330	29.3 ¹³¹	12.2	90	56	16 07	50	36	43 76	43 18		
23	163	22.0	30.7	345	01.5 ¹³²	-18 03.1	91	58	15 56	42	31	32 78	7 55 15		
24	178	22.0	+19 30.2	359	33.8 ¹³³	-17 53.9	92	60 S	15 43	16 34	17 26	15 18 83	8 09 11		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 49 ^m 0		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 15 ^h 38 ^m		Mag: -2.7 PMG: 4 ^h 04 ^m		Mag: +1.1 PMG: 15 ^h 52 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	302	36.0	135 10.9	+6 06.2	125 09.2	+1 42.6	298 55.5	+0 03.8	121 27.3	+1 57.1					
1	317	38.5	150 10.9	05.0	140 10.3	42.0	313 57.9	03.8	136 29.6	57.0					
2	332	40.9	165 11.0	03.8	155 11.4	41.3	329 00.4	03.8	151 31.9	56.9					
3	347	43.4	180 11.0	02.6	170 12.5	40.7	344 02.9	03.8	166 34.2	56.8					
4	2	45.9	195 11.0	01.4	185 13.6	40.1	359 05.3	03.8	181 36.4	56.6					
5	17	48.3	210 11.0	+6 00.2	200 14.7	+1 39.5	14 07.8	+0 03.7	196 38.7	+1 56.7					
6	32	50.8	225 11.0	+5 59.0	215 15.8	+1 38.8	29 10.3	+0 03.7	211 41.0	+1 56.6					
7	47	53.2	240 11.1	57.8	230 16.9	38.2	44 12.8	03.7	226 43.3	56.5					
8	62	55.7	255 11.1	56.5	245 18.0	37.6	59 15.2	03.7	241 45.6	56.4					
9	77	58.2	270 11.1	55.3	260 19.1	36.9	74 17.7	03.7	256 47.8	56.3					
10	93	00.6	285 11.1	54.1	275 20.2	36.3	89 20.2	03.6	271 50.1	56.2					
11	108	03.1	300 11.2	+5 52.9	290 21.3	+1 35.7	104 22.7	+0 03.6	286 52.4	+1 56.1					
12	123	05.6	315 11.2	+5 51.7	305 22.3	+1 35.0	119 25.1	+0 03.6	301 54.7	+1 56.0					
13	138	08.0	330 11.2	50.5	320 23.4	34.4	134 27.6	03.6	316 56.9	55.9					
14	153	10.5	345 11.2	49.3	335 24.5	33.8	149 30.1	03.6	331 59.2	55.8					
15	168	13.0	0 11.3	48.1	350 25.6	33.2	164 32.6	03.6	347 01.5	55.8					
16	183	15.4	15 11.3	46.8	5 26.7	32.5	179 35.0	03.5	2 03.8	55.7					
17	198	17.9	30 11.3	+5 45.6	20 27.8	+1 31.9	194 37.5	+0 03.5	17 06.0	+1 55.6					
18	213	20.4	45 11.3	+5 44.4	35 28.9	+1 31.3	209 40.0	+0 03.5	32 08.3	+1 55.5					
19	228	22.8	60 11.4	43.2	50 30.0	30.6	224 42.5	03.5	47 10.6	55.4					
20	243	25.3	75 11.4	42.0	65 31.1	30.0	239 44.9	03.5	62 12.8	55.3					
21	258	27.7	90 11.4	40.8	80 32.2	29.4	254 47.4	03.4	77 15.1	55.2					
22	273	30.2	105 11.5	39.6	95 33.3	28.7	269 49.9	03.4	92 17.4	55.1					
23	288	32.7	120 11.5	38.4	110 34.4	28.1	284 52.4	03.4	107 19.7	55.0					
24	303	35.1	135 11.5	+5 37.1	125 35.5	+1 27.5	299 54.8	+0 03.4	122 21.9	+1 55.0					
Dif	—	0	-12	+11	-6	+25	0	+23	-1						

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 5				Edad: 14 ^d 2 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 0 ^h 02 ^m R°: 44 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	22.0	+19	30.2	359	33.8	-17	53.9	60 N	** **	2 20	3 26	20 26	7	3 58	82		
1	193	22.0		29.6	14	06.1 ¹³³		44.7 ⁹²	58	0 49	2 43	41	17 10		4 09	79		
2	208	22.0		29.1	28	38.5 ¹³⁴		35.3 ⁹⁴	56	1 39	3 01	3 53	10 12		19	76		
3	223	22.0		28.5	43	11.0 ¹³⁵		26.0 ⁹³	54	2 08	17	4 03	20 03	14	28	73		
4	238	22.0		28.0	57	43.5 ¹³⁵		16.5 ⁹⁵	52	30	30	12	19 56	17	36	70		
5	253	22.0	+19	27.4	72	16.1 ¹³⁶	-17	07.0 ⁹⁵	50	2 47	3 41	4 21	19 51	18	4 43	68		
6	268	22.0	+19	26.9	86	48.8 ¹³⁷	-16	57.4 ⁹⁶	45	3 20	4 04	4 38	19 38	23	4 59	63		
7	283	22.0		26.3	101	21.5 ¹³⁷		47.7 ⁹⁷	40	3 43	22	4 53	28 26		5 11	60		
8	298	22.0		25.8	115	54.3 ¹³⁸		38.0 ⁹⁷	35	4 02	37	5 05	20 28		21	58		
9	313	22.0		25.2	130	27.2 ¹³⁹		28.2 ⁹⁸	30	17	4 49	15	19 12	31	31	55		
10	328	22.0		24.7	145	00.1 ¹³⁹		18.3 ⁹⁹	20	4 41	5 09	33	18 58	36	5 46	51		
11	343	22.0	+19	24.1	159	33.0 ¹³⁹	-16	08.4 ⁹⁹	10 N	5 00	5 26	5 49	18 47	39	6 00	47		
12	358	22.0	+19	23.6	174	06.1 ¹⁴¹	-15	58.4 ¹⁰⁰	0	5 16	5 41	6 03	18 36	42	6 13	44		
13	13	22.0		23.0	188	39.1 ¹⁴⁰		48.4 ¹⁰⁰	10 S	29	5 55	17	25 46		25	41		
14	28	22.0		22.5	203	12.3 ¹⁴²		38.2 ¹⁰²	20	42	6 09	32	18 13	50	39	37		
15	43	22.0		21.9	217	45.5 ¹⁴²		28.1 ¹⁰¹	30	5 55	24	49	17 59	54	6 54	33		
16	58	22.0		21.4	232	18.8 ¹⁴³		17.8 ¹⁰³	35	6 02	32	6 59	51 57		7 03	30		
17	73	22.0	+19	20.8	246	52.1 ¹⁴³	-15	07.5 ¹⁰³	40	6 08	6 41	7 11	17 42	60	7 13	28		
18	88	22.0	+19	20.2	261	25.5 ¹⁴⁴	-14	57.2 ¹⁰³	45	6 16	6 52	7 24	17 32	63	7 25	24		
19	103	22.0		19.7	275	58.9 ¹⁴⁴		46.8 ¹⁰⁴	50	24	7 04	40	19 67		39	20		
20	118	22.0		19.1	290	32.4 ¹⁴⁵		36.3 ¹⁰⁵	52	28	10	48	13 69		45	19		
21	133	22.0		18.6	305	06.0 ¹⁴⁶		25.8 ¹⁰⁵	54	32	16	7 56	17 06	72	7 53	16		
22	148	22.0		18.0	319	39.6 ¹⁴⁶		15.2 ¹⁰⁶	56	36	22	8 05	16 59	74	8 01	14		
23	163	22.1		17.4	334	13.2 ¹⁴⁶	-14	04.6 ¹⁰⁶	58	41	30	16	50 78		10	11		
24	178	22.1	+19	16.9	348	46.9 ¹⁴⁷	-13	53.9 ¹⁰⁷	60 S	6 46	7 38	8 28	16 41	80	8 20	8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 45 ^m 0		Mag: -4.2 PMG: 14 ^h 59 ^m				Mag: +1.5 PMG: 15 ^h 36 ^m				Mag: -2.7 PMG: 4 ^h 00 ^m				Mag: +1.1 PMG: 15 ^h 48 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	303	35.1	135	11.5	+5	37.1	125	35.5	+1	27.5	299	54.8	+0	03.4	122	21.9	+1	55.0
1	318	37.6	150	11.6		35.9	140	36.6		26.8	314	57.3		03.4	137	24.2		54.9
2	333	40.1	165	11.6		34.7	155	37.6		26.2	329	59.8		03.3	152	26.5		54.8
3	348	42.5	180	11.6		33.5	170	38.7		25.6	345	02.3		03.3	167	28.8		54.7
4	3	45.0	195	11.7		32.3	185	39.8		24.9	0	04.8		03.3	182	31.0		54.6
5	18	47.5	210	11.7	+5	31.1	200	40.9	+1	24.3	15	07.2	+0	03.3	197	33.3	+1	54.5
6	33	49.9	225	11.7	+5	29.8	215	42.0	+1	23.7	30	09.7	+0	03.3	212	35.6	+1	54.4
7	48	52.4	240	11.8		28.6	230	43.1		23.1	45	12.2		03.2	227	37.9		54.3
8	63	54.9	255	11.8		27.4	245	44.2		22.4	60	14.7		03.2	242	40.1		54.2
9	78	57.3	270	11.8		26.2	260	45.3		21.8	75	17.2		03.2	257	42.4		54.1
10	93	59.8	285	11.9		25.0	275	46.4		21.2	90	19.6		03.2	272	44.7		54.1
11	109	02.2	300	11.9	+5	23.8	290	47.5	+1	20.5	105	22.1	+0	03.2	287	46.9	+1	54.0
12	124	04.7	315	12.0	+5	22.5	305	48.6	+1	19.9	120	24.6	+0	03.1	302	49.2	+1	53.9
13	139	07.2	330	12.0		21.3	320	49.7		19.3	135	27.1		03.1	317	51.5		53.8
14	154	09.6	345	12.0		20.1	335	50.7		18.6	150	29.6		03.1	332	53.8		53.7
15	169	12.1	0	12.1		18.9	350	51.8		18.0	165	32.1		03.1	347	56.0		53.6
16	184	14.6	15	12.1		17.7	5	52.9		17.4	180	34.5		03.1	2	58.3		53.5
17	199	17.0	30	12.2	+5	16.5	20	54.0	+1	16.7	195	37.0	+0	03.0	18	00.6	+1	53.4
18	214	19.5	45	12.2	+5	15.2	35	55.1	+1	16.1	210	39.5	+0	03.0	33	02.9	+1	53.3
19	229	22.0	60	12.3		14.0	50	56.2		15.5	225	42.0		03.0	48	05.1		53.2
20	244	24.4	75	12.3		12.8	65	57.3		14.8	240	44.5		03.0	63	07.4		53.2
21	259	26.9	90	12.3		11.6	80	58.4		14.2	255	47.0		03.0	78	09.7		53.1
22	274	29.3	105	12.4		10.4	95	59.5		13.6	270	49.4		02.9	93	11.9		53.0
23	289	31.8	120	12.4		09.2	111	00.6		12.9	285	51.9		02.9	108	14.2		52.9
24	304	34.3	135	12.5	+5	07.9	126	01.6	+1	12.3	300	54.4	+0	02.9	123	16.5	+1	52.8
Dif	—		0		-12		+11		-6		+25		0		+23		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 2 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1					Civil			Hora R°		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	22.1	+19 16.9	348	46.9	-13 53.9		60 N	20 43	21 47	** **	20 33 5	5 20 79		
1	193	22.1	16.3	3	20.7 ¹⁴⁸	43.2 ¹⁰⁷		58	29	25	23 08	27 8	28 76		
2	208	22.1	15.8	17	54.5 ¹⁴⁸	32.4 ¹⁰⁸		56	17	21 08	22 26	22 10	35 73		
3	223	22.1	15.2	32	28.4 ¹⁴⁹	21.5 ¹⁰⁹		54	20 07	20 53	21 59	17 13	41 71		
4	238	22.1	14.6	47	02.3 ¹⁴⁹	-13 10.6 ¹⁰⁹		52	19 58	41	39	13 15	46 69		
5	253	22.1	+19 14.1	61	36.3 ¹⁵⁰	-12 59.7 ¹⁰⁹		50	19 50	20 30	21 22	20 09 17	5 51 67		
6	268	22.1	+19 13.5	76	10.3 ¹⁵⁰	-12 48.7 ¹¹⁰		45	19 33	20 07	20 51	20 01 21	6 02 63		
7	283	22.1	12.9	90	44.4 ¹⁵¹	37.7 ¹¹⁰		40	19	19 50	28	19 54 24	11 59		
8	298	22.1	12.4	105	18.6 ¹⁵²	26.6 ¹¹¹		35	19 07	35	20 09	48 27	19 56		
9	313	22.1	11.8	119	52.7 ¹⁵¹	15.5 ¹¹¹		30	18 57	23	19 54	43 29	26 53		
10	328	22.1	11.2	134	27.0 ¹⁵³	-12 04.3 ¹¹²		20	39	19 03	31	34 33	37 49		
11	343	22.1	+19 10.7	149	01.2 ¹⁵²	-11 53.1 ¹¹²		10 N	18 24	18 46	19 13	19 26 37	6 47 46		
12	358	22.1	+19 10.1	163	35.6 ¹⁵⁴	-11 41.9 ¹¹²		0	18 10	18 32	18 57	19 18 41	6 57 41		
13	13	22.1	09.5	178	09.9 ¹⁵³	30.6 ¹¹³		10 S	17 56	18	44	11 44	7 06 38		
14	28	22.2	09.0	192	44.3 ¹⁵⁴	19.2 ¹¹⁴		20	41	18 05	31	19 03 48	16 34		
15	43	22.2	08.4	207	18.8 ¹⁵⁵	-11 07.8 ¹¹⁴		30	24	17 50	19	18 53 54	27 30		
16	58	22.2	07.8	221	53.3 ¹⁵⁵	-10 56.4 ¹¹⁴		35	15	42	12	48 56	33 28		
17	73	22.2	+19 07.3	236	27.8 ¹⁵⁵	-10 45.0 ¹¹⁴		40	17 04	17 33	18 06	18 42 59	7 41 24		
18	88	22.2	+19 06.7	251	02.4 ¹⁵⁶	-10 33.5 ¹¹⁵		45	16 51	17 23	17 58	18 35 62	7 49 21		
19	103	22.2	06.1	265	37.0 ¹⁵⁶	21.9 ¹¹⁶		50	35	11	50	26 67	7 59 18		
20	118	22.2	05.6	280	11.7 ¹⁵⁷	-10 10.3 ¹¹⁶		52	27	17 05	47	22 69	8 04 15		
21	133	22.2	05.0	294	46.4 ¹⁵⁷	-9 58.7 ¹¹⁶		54	19	16 59	43	18 70	09 13		
22	148	22.2	04.4	309	21.2 ¹⁵⁸	47.1 ¹¹⁶		56	10	53	39	13 73	15 11		
23	163	22.2	03.8	323	55.9 ¹⁵⁷	35.4 ¹¹⁷		58	16 00	46	34	08 75	21 9		
24	178	22.3	+19 03.3	338	30.8 ¹⁵⁹	-9 23.7 ¹¹⁷		60 S	15 47	16 37	17 30	18 01 79	8 28 6		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 41 ^m 1		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 15 ^h 35 ^m		Mag: -2.7 PMG: 3 ^h 56 ^m		Mag: +1.1 PMG: 15 ^h 45 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	304	34.3	135	12.5	+5 07.9	126 01.6	+1 12.3	300 54.4	+0 02.9	123 16.5	+1 52.8
1	319	36.7	150	12.5	06.7	141 02.7	11.7	315 56.9	02.9	138 18.8	52.7
2	334	39.2	165	12.6	05.5	156 03.8	11.0	330 59.4	02.8	153 21.0	52.6
3	349	41.7	180	12.6	04.3	171 04.9	10.4	346 01.9	02.8	168 23.3	52.5
4	4	44.1	195	12.7	03.1	186 06.0	09.8	1 04.4	02.8	183 25.6	52.4
5	19	46.6	210	12.7	+5 01.8	201 07.1	+1 09.1	16 06.8	+0 02.8	198 27.8	+1 52.3
6	34	49.1	225	12.8	+5 00.6	216 08.2	+1 08.5	31 09.3	+0 02.7	213 30.1	+1 52.2
7	49	51.5	240	12.8	+4 59.4	231 09.3	07.9	46 11.8	02.7	228 32.4	52.2
8	64	54.0	255	12.9	58.2	246 10.4	07.2	61 14.3	02.7	243 34.6	52.1
9	79	56.5	270	12.9	57.0	261 11.4	06.6	76 16.8	02.7	258 36.9	52.0
10	94	58.9	285	13.0	55.7	276 12.5	06.0	91 19.3	02.6	273 39.2	51.9
11	110	01.4	300	13.0	+4 54.5	291 13.6	+1 05.3	106 21.8	+0 02.6	288 41.5	+1 51.8
12	125	03.8	315	13.1	+4 53.3	306 14.7	+1 04.7	121 24.3	+0 02.6	303 43.7	+1 51.7
13	140	06.3	330	13.1	52.1	321 15.8	04.1	136 26.7	02.6	318 46.0	51.6
14	155	08.8	345	13.2	50.9	336 16.9	03.4	151 29.2	02.6	333 48.3	51.5
15	170	11.2	0	13.2	49.6	351 18.0	02.8	166 31.7	02.5	348 50.5	51.4
16	185	13.7	15	13.3	48.4	6 19.1	02.2	181 34.2	02.5	3 52.8	51.3
17	200	16.2	30	13.3	+4 47.2	21 20.2	+1 01.5	196 36.7	+0 02.5	18 55.1	+1 51.2
18	215	18.6	45	13.4	+4 46.0	36 21.2	+1 00.9	211 39.2	+0 02.5	33 57.3	+1 51.1
19	230	21.1	60	13.4	44.8	51 22.3	+1 00.3	226 41.7	02.4	48 59.6	51.1
20	245	23.6	75	13.5	43.5	66 23.4	+0 59.6	241 44.2	02.4	64 01.9	51.0
21	260	26.0	90	13.6	42.3	81 24.5	59.0	256 46.7	02.4	79 04.1	50.9
22	275	28.5	105	13.6	41.1	96 25.6	58.4	271 49.2	02.4	94 06.4	50.8
23	290	31.0	120	13.7	39.9	111 26.7	57.7	286 51.7	02.3	109 08.7	50.7
24	305	33.4	135	13.7	+4 38.6	126 27.8	+0 57.1	301 54.1	+0 02.3	124 11.0	+1 50.6
Dif	—		+1	-12		+11	-6	+25	0	+23	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5			Edad: 16 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 PMG: 1 ^h 28 ^m R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	178	22.3	+19 03.3	338	30.8	-9 23.7	60 N	** **	2 27	3 31	20 38	4	6 39	78
1	193	22.3	02.7	353	05.6 ¹⁵⁸	12.0 ¹¹⁷	58	1 05	2 48	45	35	7	44	75
2	208	22.3	02.1	7	40.5 ¹⁵⁹	-9 00.2 ¹¹⁸	56	1 47	3 06	3 56	32	10	48	73
3	223	22.3	01.5	22	15.5 ¹⁶⁰	-8 48.4 ¹¹⁸	54	2 14	21	4 06	30	11	52	70
4	238	22.3	01.0	36	50.4 ¹⁵⁹	36.5 ¹¹⁹	52	34	33	15	28	13	55	68
5	253	22.3	+19 00.4	51	25.4 ¹⁶⁰	-8 24.7 ¹¹⁸	50	2 51	3 44	4 23	20 26	15	6 58	66
6	268	22.3	+18 59.8	66	00.5 ¹⁶¹	-8 12.8 ¹¹⁹	45	3 23	4 06	4 41	20 22	19	7 05	62
7	283	22.3	59.2	80	35.5 ¹⁶⁰	-8 00.8 ¹²⁰	40	3 46	24	4 54	18	23	10	59
8	298	22.4	58.7	95	10.6 ¹⁶¹	-7 48.9 ¹¹⁹	35	4 04	38	5 06	15	25	15	55
9	313	22.4	58.1	109	45.8 ¹⁶²	36.9 ¹²⁰	30	19	4 50	16	12	28	19	53
10	328	22.4	57.5	124	20.9 ¹⁶¹	24.9 ¹²⁰	20	4 42	5 10	34	07	33	26	48
11	343	22.4	+18 56.9	138	56.1 ¹⁶²	-7 12.9 ¹²⁰	10 N	5 01	5 27	5 49	20 03	37	7 33	44
12	358	22.4	+18 56.3	153	31.3 ¹⁶²	-7 00.8 ¹²¹	0	5 16	5 41	6 03	19 59	41	7 38	41
13	13	22.4	55.8	168	06.6 ¹⁶³	-6 48.7 ¹²¹	10 S	29	5 55	17	55	44	44	37
14	28	22.4	55.2	182	41.9 ¹⁶³	36.6 ¹²¹	20	42	6 08	32	51	48	50	33
15	43	22.5	54.6	197	17.2 ¹⁶³	24.5 ¹²¹	30	5 54	23	48	47	52	7 57	28
16	58	22.5	54.0	211	52.5 ¹⁶³	12.3 ¹²²	35	6 00	31	6 58	44	55	8 01	26
17	73	22.5	+18 53.4	226	27.8 ¹⁶³	-6 00.1 ¹²²	40	6 07	6 40	7 09	19 41	58	8 05	23
18	88	22.5	+18 52.8	241	03.2 ¹⁶⁴	-5 48.0 ¹²¹	45	6 14	6 50	7 22	19 37	61	8 10	20
19	103	22.5	52.3	255	38.6 ¹⁶⁴	35.7 ¹²³	50	22	7 02	37	33	65	17	15
20	118	22.5	51.7	270	14.0 ¹⁶⁴	23.5 ¹²²	52	26	07	45	31	67	19	14
21	133	22.6	51.1	284	49.4 ¹⁶⁴	-5 11.3 ¹²²	54	29	13	7 53	28	70	22	12
22	148	22.6	50.5	299	24.9 ¹⁶⁵	-4 59.0 ¹²³	56	33	19	8 02	26	72	26	10
23	163	22.6	49.9	314	00.4 ¹⁶⁵	46.7 ¹²³	58	38	26	12	23	75	30	7
24	178	22.6	+18 49.3	328	35.9 ¹⁶⁵	-4 34.4 ¹²³	60 S	6 42	7 35	8 24	19 20	78	8 34	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 3 ^h 37 ^m 2		Mag: -4.3 PMG: 14 ^h 59 ^m			Mag: +1.5 PMG: 15 ^h 33 ^m			Mag: -2.7 PMG: 3 ^h 52 ^m			Mag: +1.1 PMG: 15 ^h 41 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°
0	305	33.4	135	13.7	+4 38.6	126	27.8	+0 57.1	301	54.1	+0 02.3	124	11.0	+1 50.6
1	320	35.9	150	13.8	37.4	141	28.8	56.5	316	56.6	02.3	139	13.2	50.5
2	335	38.3	165	13.8	36.2	156	29.9	55.8	331	59.1	02.2	154	15.5	50.4
3	350	40.8	180	13.9	35.0	171	31.0	55.2	347	01.6	02.2	169	17.8	50.3
4	5	43.3	195	14.0	33.8	186	32.1	54.6	2	04.1	02.2	184	20.0	50.2
5	20	45.7	210	14.0	+4 32.5	201	33.2	+0 53.9	17	06.6	+0 02.2	199	22.3	+1 50.1
6	35	48.2	225	14.1	+4 31.3	216	34.3	+0 53.3	32	09.1	+0 02.1	214	24.6	+1 50.0
7	50	50.7	240	14.2	30.1	231	35.4	52.7	47	11.6	02.1	229	26.8	50.0
8	65	53.1	255	14.2	28.9	246	36.4	52.0	62	14.1	02.1	244	29.1	49.9
9	80	55.6	270	14.3	27.6	261	37.5	51.4	77	16.6	02.1	259	31.4	49.8
10	95	58.1	285	14.3	26.4	276	38.6	50.8	92	19.1	02.0	274	33.6	49.7
11	111	00.5	300	14.4	+4 25.2	291	39.7	+0 50.1	107	21.6	+0 02.0	289	35.9	+1 49.6
12	126	03.0	315	14.5	+4 24.0	306	40.8	+0 49.5	122	24.1	+0 02.0	304	38.2	+1 49.5
13	141	05.4	330	14.5	22.7	321	41.9	48.9	137	26.6	01.9	319	40.4	49.4
14	156	07.9	345	14.6	21.5	336	43.0	48.2	152	29.1	01.9	334	42.7	49.3
15	171	10.4	0	14.7	20.3	351	44.0	47.6	167	31.6	01.9	349	45.0	49.2
16	186	12.8	15	14.7	19.1	6	45.1	47.0	182	34.1	01.9	4	47.2	49.1
17	201	15.3	30	14.8	+4 17.8	21	46.2	+0 46.3	197	36.6	+0 01.8	19	49.5	+1 49.0
18	216	17.8	45	14.9	+4 16.6	36	47.3	+0 45.7	212	39.1	+0 01.8	34	51.8	+1 48.9
19	231	20.2	60	14.9	15.4	51	48.4	45.1	227	41.6	01.8	49	54.0	48.8
20	246	22.7	75	15.0	14.2	66	49.5	44.4	242	44.1	01.8	64	56.3	48.8
21	261	25.2	90	15.1	12.9	81	50.6	43.8	257	46.6	01.7	79	58.6	48.7
22	276	27.6	105	15.2	11.7	96	51.6	43.1	272	49.1	01.7	95	00.8	48.6
23	291	30.1	120	15.2	10.5	111	52.7	42.5	287	51.6	01.7	110	03.1	48.5
24	306	32.6	135	15.3	+4 09.3	126	53.8	+0 41.9	302	54.1	+0 01.6	125	05.4	+1 48.4
Dif	—		+1	-12		+11	-6		+25		0	+23	-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5			Edad: 17 ^d 2 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 1 SD: 14 ^h 7 PMG: 2 ^h 09 ^m R°: 40 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	22.6	+18 49.3	328	35.9	-4 34.4	60 N	20 38	21 40	** **	20 42 4	7 57 78		
1	193	22.6	48.7	343	11.4 ¹⁶⁵	22.1 ¹²³	58	25	20	22 55	42 7	7 59 75		
2	208	22.6	48.2	357	46.9 ¹⁶⁵	-4 09.7 ¹²⁴	56	14	21 03	22 19	42 9	8 01 72		
3	223	22.7	47.6	12	22.5 ¹⁶⁶	-3 57.4 ¹²³	54	20 04	20 49	21 54	41 12	02 70		
4	238	22.7	47.0	26	58.0 ¹⁶⁵	45.0 ¹²⁴	52	19 55	37	34	41 14	03 68		
5	253	22.7	+18 46.4	41	33.6 ¹⁶⁶	-3 32.7 ¹²³	50	19 47	20 26	21 18	20 41 16	8 04 66		
6	268	22.7	+18 45.8	56	09.2 ¹⁶⁶	-3 20.3 ¹²⁴	45	19 31	20 05	20 48	20 41 19	8 07 61		
7	283	22.7	45.2	70	44.8 ¹⁶⁶	-3 07.9 ¹²⁴	40	17	19 48	25	41 22	09 58		
8	298	22.8	44.6	85	20.4 ¹⁶⁶	-2 55.5 ¹²⁴	35	19 06	33	20 07	40 26	10 55		
9	313	22.8	44.0	99	56.0 ¹⁶⁶	43.0 ¹²⁵	30	18 56	22	19 53	40 28	12 52		
10	328	22.8	43.4	114	31.6 ¹⁶⁶	30.6 ¹²⁴	20	38	19 02	30	40 33	14 48		
11	343	22.8	+18 42.8	129	07.3 ¹⁶⁷	-2 18.2 ¹²⁴	10 N	18 24	18 46	19 12	20 40 36	8 17 43		
12	358	22.8	+18 42.2	143	42.9 ¹⁶⁶	-2 05.7 ¹²⁵	0	18 10	18 32	18 57	20 40 40	8 19 40		
13	13	22.9	41.7	158	18.6 ¹⁶⁷	-1 53.3 ¹²⁴	10 S	17 56	19	44	39 44	21 36		
14	28	22.9	41.1	172	54.2 ¹⁶⁶	40.8 ¹²⁵	20	42	18 05	32	39 48	23 32		
15	43	22.9	40.5	187	29.9 ¹⁶⁷	28.4 ¹²⁴	30	26	17 51	20	39 52	25 28		
16	58	22.9	39.9	202	05.5 ¹⁶⁶	15.9 ¹²⁵	35	16	43	14	39 55	27 25		
17	73	22.9	+18 39.3	216	41.2 ¹⁶⁷	-1 03.4 ¹²⁵	40	17 05	17 34	18 07	20 39 58	8 28 23		
18	88	23.0	+18 38.7	231	16.9 ¹⁶⁷	-0 50.9 ¹²⁵	45	16 53	17 25	18 00	20 38 62	8 30 19		
19	103	23.0	38.1	245	52.6 ¹⁶⁷	38.4 ¹²⁵	50	37	13	17 53	38 66	32 16		
20	118	23.0	37.5	260	28.2 ¹⁶⁶	25.9 ¹²⁵	52	30	08	49	38 68	33 14		
21	133	23.0	36.9	275	03.9 ¹⁶⁷	13.5 ¹²⁴	54	22	17 02	46	38 70	34 12		
22	148	23.0	36.3	289	39.6 ¹⁶⁷	-0 01.0 ¹²⁵	56	13	16 56	42	38 72	36 9		
23	163	23.1	35.7	304	15.2 ¹⁶⁶	+0 11.5 ¹²⁵	58	16 03	49	38	38 75	37 7		
24	178	23.1	+18 35.1	318	50.9 ¹⁶⁷	+0 24.0 ¹²⁵	60 S	15 52	16 41	17 33	20 38 78	8 38 5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 33 ^m 2		Mag: -4.3 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 15 ^h 31 ^m		Mag: -2.7 PMG: 3 ^h 48 ^m		Mag: +1.1 PMG: 15 ^h 37 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	306	32.6	135 15.3	+4 09.3	126 53.8	+0 41.9	302 54.1	+0 01.6	125 05.4	+1 48.4
1	321	35.0	150 15.4	08.0	141 54.9	41.2	317 56.6	01.6	140 07.6	48.3
2	336	37.5	165 15.4	06.8	156 56.0	40.6	332 59.1	01.6	155 09.9	48.2
3	351	39.9	180 15.5	05.6	171 57.1	40.0	348 01.6	01.5	170 12.2	48.1
4	6	42.4	195 15.6	04.4	186 58.1	39.3	3 04.1	01.5	185 14.4	48.0
5	21	44.9	210 15.7	+4 03.1	201 59.2	+0 38.7	18 06.6	+0 01.5	200 16.7	+1 47.9
6	36	47.3	225 15.7	+4 01.9	217 00.3	+0 38.1	33 09.1	+0 01.5	215 19.0	+1 47.8
7	51	49.8	240 15.8	+4 00.7	232 01.4	37.4	48 11.6	01.4	230 21.2	47.7
8	66	52.3	255 15.9	+3 59.5	247 02.5	36.8	63 14.1	01.4	245 23.5	47.6
9	81	54.7	270 16.0	58.2	262 03.5	36.2	78 16.6	01.4	260 25.8	47.5
10	96	57.2	285 16.0	57.0	277 04.6	35.5	93 19.1	01.3	275 28.0	47.5
11	111	59.7	300 16.1	+3 55.8	292 05.7	+0 34.9	108 21.6	+0 01.3	290 30.3	+1 47.4
12	127	02.1	315 16.2	+3 54.6	307 06.8	+0 34.2	123 24.1	+0 01.3	305 32.5	+1 47.3
13	142	04.6	330 16.3	53.3	322 07.9	33.6	138 26.6	01.2	320 34.8	47.2
14	157	07.0	345 16.4	52.1	337 09.0	33.0	153 29.1	01.2	335 37.1	47.1
15	172	09.5	0 16.4	50.9	352 10.0	32.3	168 31.6	01.2	350 39.3	47.0
16	187	12.0	15 16.5	49.7	7 11.1	31.7	183 34.1	01.2	5 41.6	46.9
17	202	14.4	30 16.6	+3 48.4	22 12.2	+0 31.1	198 36.6	+0 01.1	20 43.9	+1 46.8
18	217	16.9	45 16.7	+3 47.2	37 13.3	+0 30.4	213 39.1	+0 01.1	35 46.1	+1 46.7
19	232	19.4	60 16.8	46.0	52 14.4	29.8	228 41.6	01.1	50 48.4	46.6
20	247	21.8	75 16.8	44.7	67 15.4	29.2	243 44.1	01.0	65 50.7	46.5
21	262	24.3	90 16.9	43.5	82 16.5	28.5	258 46.7	01.0	80 52.9	46.4
22	277	26.8	105 17.0	42.3	97 17.6	27.9	273 49.2	01.0	95 55.2	46.3
23	292	29.2	120 17.1	41.1	112 18.7	27.3	288 51.7	00.9	110 57.5	46.2
24	307	31.7	135 17.2	+3 39.8	127 19.8	+0 26.6	303 54.2	+0 00.9	125 59.7	+1 46.1
Dif	—	+1	-12	+11	-6	+25	0	+23	-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h /8 PMG: 12 ^h 06 ^m .4				Edad: 18 ^d .2 PHE { 4 ^h : 54 ^m .1 12 ^h : 54 ^m .2 20 ^h : 54 ^m .2 PMG: 2 ^h 49 ^m R°: 41 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	23.1	+18	35.1	318	50.9	+0	24.0	60 N	**	**	2	33	3	36	20	46
1	193	23.1		34.5	333	26.6 ¹⁶⁷		36.5 ¹²⁵	58	1	18	2	54	3	49	49	8
2	208	23.1		33.9	348	02.2 ¹⁶⁶	+0	49.0 ¹²⁵	56	1	55	3	10	4	00	51	10
3	223	23.2		33.3	2	37.9 ¹⁶⁷	+1	01.5 ¹²⁵	54	2	20		24	10		53	13
4	238	23.2		32.7	17	13.5 ¹⁶⁶		14.0 ¹²⁵	52		39		37	18		55	15
5	253	23.2	+18	32.1	31	49.2 ¹⁶⁷	+1	26.5 ¹²⁵	50	2	55	3	47	4	26	20	57
6	268	23.2	+18	31.5	46	24.8 ¹⁶⁶	+1	39.0 ¹²⁵	45	3	26	4	09	4	43	21	00
7	283	23.3		30.9	61	00.4 ¹⁶⁶	+1	51.4 ¹²⁴	40	3	48		26	4	56	03	24
8	298	23.3		30.3	75	36.0 ¹⁶⁶	+2	03.9 ¹²⁵	35	4	06		40	5	08	06	27
9	313	23.3		29.7	90	11.6 ¹⁶⁶		16.4 ¹²⁵	30		20		4	5	18	08	30
10	328	23.3		29.1	104	47.2 ¹⁶⁶		28.9 ¹²⁵	20	4	43		5	5	11	13	33
11	343	23.4	+18	28.5	119	22.8 ¹⁶⁶	+2	41.3 ¹²⁴	10 N	5	01	5	27	5	49	21	16
12	358	23.4	+18	27.8	133	58.3 ¹⁶⁵	+2	53.8 ¹²⁵	0	5	16	5	41	6	03	21	20
13	13	23.4		27.2	148	33.8 ¹⁶⁵	+3	06.2 ¹²⁴	10 S	29		5	54	16		23	45
14	28	23.5		26.6	163	09.4 ¹⁶⁶		18.6 ¹²⁴	20	41		6	08	31		27	49
15	43	23.5		26.0	177	44.9 ¹⁶⁵		31.0 ¹²⁴	30	53		22		47		31	54
16	58	23.5		25.4	192	20.4 ¹⁶⁵		43.5 ¹²⁵	35	5	59		29	6	56	34	56
17	73	23.5	+18	24.8	206	55.8 ¹⁶⁴	+3	55.9 ¹²⁴	40	6	05	6	38	7	07	21	37
18	88	23.6	+18	24.2	221	31.3 ¹⁶⁵	+4	08.2 ¹²³	45	6	12	6	48	7	19	21	40
19	103	23.6		23.6	236	06.7 ¹⁶⁴		20.6 ¹²⁴	50	20		6	59	35		44	67
20	118	23.6		23.0	250	42.1 ¹⁶⁴		33.0 ¹²⁴	52	23		7	04	42		46	69
21	133	23.7		22.4	265	17.5 ¹⁶⁴		45.3 ¹²³	54	27		10		49		48	71
22	148	23.7		21.8	279	52.8 ¹⁶³	+4	57.7 ¹²⁴	56	30		16		7	58	50	74
23	163	23.7		21.1	294	28.2 ¹⁶⁴	+5	10.0 ¹²³	58	35		23		8	08	53	76
24	178	23.7	+18	20.5	309	03.5 ¹⁶³	+5	22.3 ¹²³	60 S	6	39	7	31	8	20	21	56
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 29 ^m .3		Mag: -4.3 PMG: 14 ^h 59 ^m			Mag: +1.5 PMG: 15 ^h 30 ^m			Mag: -2.7 PMG: 3 ^h 44 ^m			Mag: +1.1 PMG: 15 ^h 34 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	307	31.7	135	17.2	+3	39.8	127	19.8	+0	26.6	303	54.2	+0	00.9	125	59.7	
1	322	34.2	150	17.3		38.6	142	20.9		26.0	318	56.7		00.9	141	02.0	
2	337	36.6	165	17.3		37.4	157	21.9		25.3	333	59.2		00.8	156	04.2	
3	352	39.1	180	17.4		36.2	172	23.0		24.7	349	01.7		00.8	171	06.5	
4	7	41.5	195	17.5		34.9	187	24.1		24.1	4	04.2		00.8	186	08.8	
5	22	44.0	210	17.6	+3	33.7	202	25.2	+0	23.4	19	06.7	+0	00.7	201	11.0	
6	37	46.5	225	17.7	+3	32.5	217	26.3	+0	22.8	34	09.2	+0	00.7	216	13.3	
7	52	48.9	240	17.8		31.2	232	27.3		22.2	49	11.7		00.7	231	15.6	
8	67	51.4	255	17.9		30.0	247	28.4		21.5	64	14.2		00.6	246	17.8	
9	82	53.9	270	18.0		28.8	262	29.5		20.9	79	16.8		00.6	261	20.1	
10	97	56.3	285	18.0		27.5	277	30.6		20.2	94	19.3		00.6	276	22.3	
11	112	58.8	300	18.1	+3	26.3	292	31.6	+0	19.6	109	21.8	+0	00.5	291	24.6	
12	128	01.3	315	18.2	+3	25.1	307	32.7	+0	19.0	124	24.3	+0	00.5	306	26.9	
13	143	03.7	330	18.3		23.9	322	33.8		18.3	139	26.8		00.5	321	29.1	
14	158	06.2	345	18.4		22.6	337	34.9		17.7	154	29.3		00.4	336	31.4	
15	173	08.7	0	18.5		21.4	352	36.0		17.1	169	31.8		00.4	351	33.7	
16	188	11.1	15	18.6		20.2	7	37.0		16.4	184	34.3		00.4	6	35.9	
17	203	13.6	30	18.7	+3	18.9	22	38.1	+0	15.8	199	36.9	+0	00.3	21	38.2	
18	218	16.0	45	18.8	+3	17.7	37	39.2	+0	15.2	214	39.4	+0	00.3	36	40.4	
19	233	18.5	60	18.9		16.5	52	40.3		14.5	229	41.9		00.3	51	42.7	
20	248	21.0	75	19.0		15.3	67	41.4		13.9	244	44.4		00.2	66	45.0	
21	263	23.4	90	19.1		14.0	82	42.4		13.2	259	46.9		00.2	81	47.2	
22	278	25.9	105	19.2		12.8	97	43.5		12.6	274	49.4		00.2	96	49.5	
23	293	28.4	120	19.3		11.6	112	44.6		12.0	289	51.9		00.1	111	51.7	
24	308	30.8	135	19.3	+3	10.3	127	45.7	+0	11.3	304	54.5	+0	00.1	126	54.0	
Dif	—		+1			-12			+11			+25			0		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8				Edad: 19 ^d 2 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5													
	PMG: 12 ^h 06 ^m 4				SD: 14 ^h 8													
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	178	23.7	+18	20.5	309	03.5	+5	22.3	60 N	20 33	21 34	** **	20 51	7	10 33	81		
1	193	23.8		19.9	323	38.7 ¹⁶²		34.6 ¹²³	58	21	21 14	22 44	20 57	9	29	77		
2	208	23.8		19.3	338	14.0 ¹⁶³		46.9 ¹²³	56	10	20 58	22 11	21 01	13	25	75		
3	223	23.8		18.7	352	49.2 ¹⁶²	+5	59.1 ¹²²	54	20 00	45	21 48	06	15	22	72		
4	238	23.9		18.1	7	24.4 ¹⁶²	+6	11.4 ¹²³	52	19 52	33	29	10	16	19	69		
5	253	23.9	+18	17.5	21	59.6 ¹⁶²	+6	23.6 ¹²²	50	19 44	20 23	21 14	21 13	19	10 16	68		
6	268	23.9	+18	16.8	36	34.7 ¹⁶¹	+6	35.8 ¹²²	45	19 28	20 02	20 45	21 21	23	10 10	63		
7	283	24.0		16.2	51	09.8 ¹⁶¹	+6	47.9 ¹²¹	40	15	19 45	23	27	26	05	60		
8	298	24.0		15.6	65	44.8 ¹⁶⁰	+7	00.1 ¹²²	35	19 04	32	20 05	33	29	10 01	57		
9	313	24.0		15.0	80	19.9 ¹⁶¹		12.2 ¹²¹	30	18 54	20	19 51	38	31	9	57		
10	328	24.1		14.4	94	54.9 ¹⁶⁰		24.4 ¹²²	20	38	19 01	29	46	36	50	50		
11	343	24.1	+18	13.8	109	29.8 ¹⁵⁹	+7	36.4 ¹²⁰	10 N	18 23	18 45	19 11	21 54	40	9	45		
12	358	24.1	+18	13.1	124	04.7 ¹⁵⁹	+7	48.5 ¹²¹	0	18 10	18 32	18 57	22 01	43	9	39		
13	13	24.2		12.5	138	39.6 ¹⁵⁹	+8	00.5 ¹²⁰	10 S	17 57	19	44	08	47	34	38		
14	28	24.2		11.9	153	14.5 ¹⁵⁹		12.6 ¹²¹	20	43	18 06	32	16	51	28	35		
15	43	24.2		11.3	167	49.2 ¹⁵⁷		24.6 ¹²⁰	30	27	17 52	21	25	55	22	30		
16	58	24.3		10.7	182	24.0 ¹⁵⁸		36.5 ¹¹⁹	35	18	44	15	30	58	18	28		
17	73	24.3	+18	10.0	196	58.7 ¹⁵⁷	+8	48.5 ¹²⁰	40	17 07	17 36	18 09	22 36	60	9	14		
18	88	24.3	+18	09.4	211	33.4 ¹⁵⁷	+9	00.4 ¹¹⁹	45	16 55	17 27	18 02	22 43	64	9	09		
19	103	24.4		08.8	226	08.0 ¹⁵⁶		12.2 ¹¹⁸	50	40	16	17 55	51	69	03	18		
20	118	24.4		08.2	240	42.6 ¹⁵⁶		24.1 ¹¹⁹	52	33	11	52	55	70	9	01		
21	133	24.4		07.6	255	17.1 ¹⁵⁵		35.9 ¹¹⁸	54	26	17 05	48	22	59	73	8		
22	148	24.5		06.9	269	51.6 ¹⁵⁵		47.7 ¹¹⁸	56	17	16 59	45	23	04	75	55		
23	163	24.5		06.3	284	26.1 ¹⁵⁵	+9	59.4 ¹¹⁷	58	16 07	52	41	09	79	51	9		
24	178	24.5	+18	05.7	299	00.4 ¹⁵³	+10	11.2 ¹¹⁸	60 S	15 56	16 45	17 36	23 15	82	8	47		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 25 ^m 4		Mag: -4.3 PMG: 14 ^h 59 ^m				Mag: +1.5 PMG: 15 ^h 28 ^m				Mag: -2.7 PMG: 3 ^h 40 ^m				Mag: +1.1 PMG: 15 ^h 30 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	30.8	135	19.3	+3	10.3	127	45.7	+0	11.3	304	54.5	+0	00.1	126	54.0	+1	43.9
1	323	33.3	150	19.4		09.1	142	46.7		10.7	319	57.0	+0	00.0	141	56.3		43.8
2	338	35.8	165	19.5		07.9	157	47.8		10.1	334	59.5		00.0	156	58.5		43.7
3	353	38.2	180	19.6		06.6	172	48.9		09.4	350	02.0	+0	00.0	172	00.8		43.6
4	8	40.7	195	19.7		05.4	187	50.0		08.8	5	04.5	-0	00.1	187	03.1		43.5
5	23	43.1	210	19.8	+3	04.2	202	51.1	+0	08.1	20	07.0	-0	00.1	202	05.3	+1	43.4
6	38	45.6	225	19.9	+3	03.0	217	52.1	+0	07.5	35	09.6	-0	00.1	217	07.6	+1	43.3
7	53	48.1	240	20.0		01.7	232	53.2		06.9	50	12.1		00.2	232	09.8		43.2
8	68	50.5	255	20.1	+3	00.5	247	54.3		06.2	65	14.6		00.2	247	12.1		43.1
9	83	53.0	270	20.2	+2	59.3	262	55.4		05.6	80	17.1		00.2	262	14.4		43.0
10	98	55.5	285	20.3		58.0	277	56.4		04.9	95	19.6		00.3	277	16.6		42.9
11	113	57.9	300	20.4	+2	56.8	292	57.5	+0	04.3	110	22.1	-0	00.3	292	18.9	+1	42.8
12	129	00.4	315	20.6	+2	55.6	307	58.6	+0	03.7	125	24.7	-0	00.4	307	21.1	+1	42.7
13	144	02.9	330	20.7		54.3	322	59.7		03.0	140	27.2		00.4	322	23.4		42.6
14	159	05.3	345	20.8		53.1	338	00.7		02.4	155	29.7		00.4	337	25.6		42.6
15	174	07.8	0	20.9		51.9	353	01.8		01.8	170	32.2		00.5	352	27.9		42.5
16	189	10.3	15	21.0		50.6	8	02.9		01.1	185	34.7		00.5	7	30.2		42.4
17	204	12.7	30	21.1	+2	49.4	23	04.0	+0	00.5	200	37.3	-0	00.5	22	32.4	+1	42.3
18	219	15.2	45	21.2	+2	48.2	38	05.0	-0	00.2	215	39.8	-0	00.6	37	34.7	+1	42.2
19	234	17.6	60	21.3		46.9	53	06.1		00.8	230	42.3		00.6	52	36.9		42.1
20	249	20.1	75	21.4		45.7	68	07.2		01.4	245	44.8		00.7	67	39.2		42.0
21	264	22.6	90	21.5		44.5	83	08.3		02.1	260	47.4		00.7	82	41.5		41.9
22	279	25.0	105	21.6		43.2	98	09.3		02.7	275	49.9		00.7	97	43.7		41.8
23	294	27.5	120	21.7		42.0	113	10.4		03.3	290	52.4		00.8	112	46.0		41.7
24	309	30.0	135	21.8	+2	40.8	128	11.5	-0	04.0	305	54.9	-0	00.8	127	48.2	+1	41.6
Dif	—		+1		-12		+11		-6		+25		0		+23		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 20 ^d 2 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0											
	PMG: 12 ^h 06 ^m 3			SD: 14 ^h 9 PMG: 4 ^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	178	24.5	+18 05.7	299	00.4	+10 11.2	60 N	** **	2 40	3 40	20 58	10	11 54	83	
1	193	24.6	05.1	313	34.8 ¹⁵⁴	22.9 ¹¹⁷	58	1 29	2 59	3 53	21 06	14	46	80	
2	208	24.6	04.4	328	09.1 ¹⁵³	34.5 ¹¹⁶	56	2 02	3 15	4 04	14 16		40	76	
3	223	24.6	03.8	342	43.3 ¹⁵²	46.1 ¹¹⁶	54	26	28	13	21 18		34	73	
4	238	24.7	03.2	357	17.5 ¹⁵²	+10 57.7 ¹¹⁶	52	44	40	21	26 21		28	72	
5	253	24.7	+18 02.5	11	51.6 ¹⁵¹	+11 09.3 ¹¹⁶	50	2 59	3 50	4 29	21 32	23	11 24	69	
6	268	24.8	+18 01.9	26	25.7 ¹⁵¹	+11 20.8 ¹¹⁵	45	3 29	4 11	4 45	21 44	27	11 13	65	
7	283	24.8	01.3	40	59.7 ¹⁵⁰	32.2 ¹¹⁴	40	3 50	28	4 58	21 53	31	11 05	61	
8	298	24.8	+18 00.7	55	33.7 ¹⁵⁰	43.7 ¹¹⁵	35	4 08	41	5 09	22 02	33	10 58	58	
9	313	24.9	+18 00.0	70	07.6 ¹⁴⁹	+11 55.1 ¹¹⁴	30	22	4 53	19	09 36		51	56	
10	328	24.9	+17 59.4	84	41.4 ¹⁴⁸	+12 06.4 ¹¹³	20	4 44	5 12	35	22 40		40	52	
11	343	24.9	+17 58.8	99	15.2 ¹⁴⁸	+12 17.7 ¹¹³	10 N	5 01	5 27	5 50	22 34	42	10 30	48	
12	358	25.0	+17 58.1	113	48.9 ¹⁴⁷	+12 29.0 ¹¹³	0	5 16	5 41	6 03	22 44	46	10 21	45	
13	13	25.0	57.5	128	22.6 ¹⁴⁷	40.2 ¹¹²	10 S	28	5 54	16	22 55	50	12	42	
14	28	25.1	56.9	142	56.2 ¹⁴⁶	+12 51.4 ¹¹²	20	40	6 07	30	23 07	53	10 03	37	
15	43	25.1	56.2	157	29.8 ¹⁴⁶	+13 02.5 ¹¹¹	30	52	20	46	20 57		9 52	33	
16	58	25.1	55.6	172	03.2 ¹⁴⁴	13.6 ¹¹¹	35	5 57	28	6 55	28 59		46	31	
17	73	25.2	+17 55.0	186	36.6 ¹⁴⁴	+13 24.7 ¹¹¹	40	6 04	6 36	7 05	23 36	63	9 39	28	
18	88	25.2	+17 54.3	201	10.0 ¹⁴⁴	+13 35.7 ¹¹⁰	45	6 10	6 45	7 17	23 47	66	9 31	24	
19	103	25.3	53.7	215	43.3 ¹⁴³	46.6 ¹⁰⁹	50	17	6 56	32	** ** *		21	20	
20	118	25.3	53.1	230	16.5 ¹⁴²	+13 57.5 ¹⁰⁹	52	20	7 01	39	** ** *		16	19	
21	133	25.3	52.4	244	49.6 ¹⁴¹	+14 08.4 ¹⁰⁹	54	24	07	46	** ** *		11	17	
22	148	25.4	51.8	259	22.7 ¹⁴¹	19.2 ¹⁰⁸	56	27	13	7 55	** ** *		06	14	
23	163	25.4	51.2	273	55.7 ¹⁴⁰	29.9 ¹⁰⁷	58	31	19	8 04	** ** *		9 00	11	
24	178	25.5	+17 50.5	288	28.6 ¹³⁹	+14 40.6 ¹⁰⁷	60 S	6 35	7 27	8 15	** ** *		8 53	7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 3 ^h 21 ^m 5		Mag: -4.3 PMG: 14 ^h 58 ^m		Mag: +1.5 PMG: 15 ^h 26 ^m		Mag: -2.7 PMG: 3 ^h 36 ^m		Mag: +1.1 PMG: 15 ^h 26 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	'	°	'	°	'	°	'	
0	309	30.0	135	21.8	+2 40.8	128 11.5	-0 04.0	305 54.9	-0 00.8	127 48.2	+1 41.6
1	324	32.4	150	21.9	39.6	143 12.6	04.6	320 57.4	00.8	142 50.5	41.5
2	339	34.9	165	22.0	38.3	158 13.6	05.3	336 00.0	00.9	157 52.8	41.4
3	354	37.4	180	22.2	37.1	173 14.7	05.9	351 02.5	00.9	172 55.0	41.3
4	9	39.8	195	22.3	35.9	188 15.8	06.5	6 05.0	01.0	187 57.3	41.2
5	24	42.3	210	22.4	+2 34.6	203 16.9	-0 07.2	21 07.5	-0 01.0	202 59.5	+1 41.1
6	39	44.7	225	22.5	+2 33.4	218 17.9	-0 07.8	36 10.1	-0 01.0	218 01.8	+1 41.0
7	54	47.2	240	22.6	32.2	233 19.0	08.5	51 12.6	01.1	233 04.0	40.9
8	69	49.7	255	22.7	30.9	248 20.1	09.1	66 15.1	01.1	248 06.3	40.8
9	84	52.1	270	22.8	29.7	263 21.1	09.7	81 17.6	01.2	263 08.6	40.7
10	99	54.6	285	22.9	28.5	278 22.2	10.4	96 20.2	01.2	278 10.8	40.6
11	114	57.1	300	23.1	+2 27.2	293 23.3	-0 11.0	111 22.7	-0 01.2	293 13.1	+1 40.5
12	129	59.5	315	23.2	+2 26.0	308 24.4	-0 11.7	126 25.2	-0 01.3	308 15.3	+1 40.4
13	145	02.0	330	23.3	24.8	323 25.4	12.3	141 27.7	01.3	323 17.6	40.3
14	160	04.5	345	23.4	23.5	338 26.5	12.9	156 30.3	01.4	338 19.8	40.3
15	175	06.9	0 23.5	22.3	22.3	353 27.6	13.6	171 32.8	01.4	353 22.1	40.2
16	190	09.4	15 23.6	21.1	8 28.7	8 28.7	14.2	186 35.3	01.4	8 24.4	40.1
17	205	11.9	30 23.8	+2 19.8	23 29.7	-0 14.9	14.9	201 37.9	-0 01.5	23 26.6	+1 40.0
18	220	14.3	45 23.9	+2 18.6	38 30.8	-0 15.5	15.5	216 40.4	-0 01.5	38 28.9	+1 39.9
19	235	16.8	60 24.0	17.4	53 31.9	16.1	16.1	231 42.9	01.6	53 31.1	39.8
20	250	19.2	75 24.1	16.1	68 32.9	16.8	16.8	246 45.4	01.6	68 33.4	39.7
21	265	21.7	90 24.2	14.9	83 34.0	17.4	17.4	261 48.0	01.6	83 35.6	39.6
22	280	24.2	105 24.4	13.7	98 35.1	18.0	18.0	276 50.5	01.7	98 37.9	39.5
23	295	26.6	120 24.5	12.4	113 36.2	18.7	18.7	291 53.0	01.7	113 40.2	39.4
24	310	29.1	135 24.6	+2 11.2	128 37.2	-0 19.3	19.3	306 55.6	-0 01.8	128 42.4	+1 39.3
Dif	—		+1	-12	+11	-6	-6	+25	0	+23	-1

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 : 55 ^m /2 12 ^h : 55 ^m /4 20 ^h : 55 ^m /6											
	PMG: 12 ^h 06 ^m 3			SD: 15 ^h 0 PMG: 4 ^h 55 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	25.5	+17 50.5	288	28.6	+14 40.6	60 N	20 28	21 27	23 27	21 08 14	13 17 86			
1	193	25.5	49.9	303	01.5 ¹³⁹	+14 51.2 ¹⁰⁶	58	16	21 09	22 34	20 18	13 06 81			
2	208	25.6	49.3	317	34.3 ¹³⁸	+15 01.8 ¹⁰⁶	56	20 06	20 54	22 04	30 22	12 56 78			
3	223	25.6	48.6	332	07.0 ¹³⁷	12.3 ¹⁰⁵	54	19 57	41	21 42	39 25	47 76			
4	238	25.6	48.0	346	39.6 ¹³⁶	22.8 ¹⁰⁵	52	49	29	24	47 27	40 73			
5	253	25.7	+17 47.3	1	12.2 ¹³⁶	+15 33.2 ¹⁰⁴	50	19 41	20 19	21 10	21 55 29	12 33 71			
6	268	25.7	+17 46.7	15	44.6 ¹³⁴	+15 43.6 ¹⁰⁴	45	19 26	19 59	20 41	22 11 32	12 18 67			
7	283	25.8	46.1	30	17.0 ¹³⁴	+15 53.9 ¹⁰³	40	13	43	20	24 36	12 06 64			
8	298	25.8	45.4	44	49.4 ¹³⁴	+16 04.1 ¹⁰²	35	19 02	30	20 03	35 38	11 56 61			
9	313	25.9	44.8	59	21.6 ¹³²	14.3 ¹⁰²	30	18 53	19	19 49	22 45 40	47 58			
10	328	25.9	44.1	73	53.8 ¹³²	24.4 ¹⁰¹	20	37	19 00	28	23 02 44	32 54			
11	343	26.0	+17 43.5	88	25.9 ¹³¹	+16 34.5 ¹⁰¹	10 N	18 23	18 45	19 11	23 16 48	11 18 52			
12	358	26.0	+17 42.8	102	57.9 ¹³⁰	+16 44.4 ⁹⁹	0	18 10	18 31	18 57	23 30 50	11 06 48			
13	13	26.0	42.2	117	29.8 ¹²⁹	+16 54.4 ¹⁰⁰	10 S	17 57	19	44	23 45 52	10 54 44			
14	28	26.1	41.6	132	01.7 ¹²⁹	+17 04.2 ⁹⁸	20	43	18 06	33	*** ** *	40 42			
15	43	26.1	40.9	146	33.4 ¹²⁷	14.0 ⁹⁸	30	28	17 53	22	*** ** *	25 38			
16	58	26.2	40.3	161	05.1 ¹²⁷	23.7 ⁹⁷	35	19	46	16	*** ** *	17 35			
17	73	26.2	+17 39.6	175	36.7 ¹²⁶	+17 33.4 ⁹⁷	40	17 09	17 38	18 10	*** ** *	10 07 32			
18	88	26.3	+17 39.0	190	08.2 ¹²⁵	+17 42.9 ⁹⁵	45	16 57	17 29	18 04	*** ** *	9 55 30			
19	103	26.3	38.3	204	39.7 ¹²⁵	+17 52.5 ⁹⁶	50	43	18	17 57	0 00 70	41 26			
20	118	26.4	37.7	219	11.0 ¹²³	+18 01.9 ⁹⁴	52	36	13	54	05 73	35 23			
21	133	26.4	37.0	233	42.2 ¹²²	11.2 ⁹³	54	29	08	51	12 75	28 21			
22	148	26.5	36.4	248	13.4 ¹²²	20.5 ⁹³	56	21	17 02	48	19 78	20 18			
23	163	26.5	35.7	262	44.5 ¹²¹	29.7 ⁹²	58	11	16 56	44	28 81	11 15			
24	178	26.6	+17 35.1	277	15.5 ¹²⁰	+18 38.9 ⁹²	60 S	16 01	16 49	17 40	0 37 85	9 00 12			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 17 ^m 5		Mag: -4.3 PMG: 14 ^h 58 ^m			Mag: +1.5 PMG: 15 ^h 24 ^m			Mag: -2.8 PMG: 3 ^h 32 ^m			Mag: +1.1 PMG: 15 ^h 23 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	°	'	°	'	°	'	°	'	°	'		
0	310	29.1	135 24.6	+2 11.2	128 37.2	-0 19.3	306 55.6	-0 01.8	128 42.4	+1 39.3					
1	325	31.6	150 24.7	10.0	143 38.3	20.0	321 58.1	01.8	143 44.7	39.2					
2	340	34.0	165 24.8	08.7	158 39.4	20.6	337 00.6	01.9	158 46.9	39.1					
3	355	36.5	180 25.0	07.5	173 40.4	21.2	352 03.2	01.9	173 49.2	39.0					
4	10	39.0	195 25.1	06.3	188 41.5	21.9	7 05.7	01.9	188 51.4	38.9					
5	25	41.4	210 25.2	+2 05.0	203 42.6	-0 22.5	22 08.2	-0 02.0	203 53.7	+1 38.8					
6	40	43.9	225 25.3	+2 03.8	218 43.7	-0 23.2	37 10.8	-0 02.0	218 55.9	+1 38.7					
7	55	46.4	240 25.5	02.6	233 44.7	23.8	52 13.3	02.1	233 58.2	38.6					
8	70	48.8	255 25.6	01.3	248 45.8	24.4	67 15.8	02.1	249 00.5	38.5					
9	85	51.3	270 25.7	+2 00.1	263 46.9	25.1	82 18.4	02.2	264 02.7	38.4					
10	100	53.7	285 25.8	+1 58.9	278 47.9	25.7	97 20.9	02.2	279 05.0	38.3					
11	115	56.2	300 26.0	+1 57.6	293 49.0	-0 26.4	112 23.4	-0 02.2	294 07.2	+1 38.2					
12	130	58.7	315 26.1	+1 56.4	308 50.1	-0 27.0	127 26.0	-0 02.3	309 09.5	+1 38.1					
13	146	01.1	330 26.2	55.2	323 51.1	27.6	142 28.5	02.3	324 11.7	38.0					
14	161	03.6	345 26.4	53.9	338 52.2	28.3	157 31.0	02.4	339 14.0	37.9					
15	176	06.1	0 26.5	52.7	353 53.3	28.9	172 33.6	02.4	354 16.2	37.8					
16	191	08.5	15 26.6	51.5	8 54.3	29.6	187 36.1	02.5	9 18.5	37.7					
17	206	11.0	30 26.7	+1 50.2	23 55.4	-0 30.2	202 38.6	-0 02.5	24 20.7	+1 37.6					
18	221	13.5	45 26.9	+1 49.0	38 56.5	-0 30.9	217 41.2	-0 02.6	39 23.0	+1 37.5					
19	236	15.9	60 27.0	47.8	53 57.6	31.5	232 43.7	02.6	54 25.3	37.4					
20	251	18.4	75 27.1	46.5	68 58.6	32.1	247 46.2	02.6	69 27.5	37.3					
21	266	20.8	90 27.3	45.3	83 59.7	32.8	262 48.8	02.7	84 29.8	37.3					
22	281	23.3	105 27.4	44.0	99 00.8	33.4	277 51.3	02.7	99 32.0	37.2					
23	296	25.8	120 27.5	42.8	114 01.8	34.1	292 53.8	02.8	114 34.3	37.1					
24	311	28.2	135 27.7	+1 41.6	129 02.9	-0 34.7	307 56.4	-0 02.8	129 36.5	+1 37.0					
Dif	—	+1 -12		+11 -6		+25 0		+23 -1							

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna													
	SD: 15°8 PMG: 12 ^h 06 ^m 2				Edad: 22 ^d 2 PHE { 4 ^h : 55°8 12 ^h : 56°1 20 ^h : 56°4 PMG: 5 ^h 42 ^m R°: 51 ^m																							
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m											
0	178	26.6	+17	35.1	277	15.5	+18	38.9	60 N	0 46	2 46	3 45	21 22	25	14 43	84												
1	193	26.6		34.4	291	46.4		47.9	58	1 40	3 04	3 57		38 29	27	80												
2	208	26.7		33.8	306	17.2	+18	56.9	90	2 09	20	4 07	21 52	32	14	77												
3	223	26.7		33.1	320	47.9	+19	05.8	54	31	32	16	22 04	34	14 03	74												
4	238	26.8		32.5	335	18.5		14.6	52	2 49	44	25		14 37	13 53	72												
5	253	26.8	+17	31.8	349	49.0	+19	23.3	50	3 03	3 53	4 32	22 24	38	13 44	70												
6	268	26.9	+17	31.2	4	19.5	+19	32.0	45	3 32	4 14	4 47	22 43	42	13 25	67												
7	283	26.9		30.5	18	49.8		40.6	40	3 53	30	5 00	23 00	43	13 10	64												
8	298	27.0		29.9	33	20.1		49.0	35	4 10	43	11		13 46	12 57	62												
9	313	27.0		29.2	47	50.2	+19	57.4	30	23	4 54	20		25 48	45	60												
10	328	27.1		28.6	62	20.3	+20	05.7	20	4 45	5 13	36	23 46	50	26	57												
11	343	27.1	+17	27.9	76	50.3	+20	13.9	10 N	5 02	5 28	5 50	** ** *	**	12 10	54												
12	358	27.2	+17	27.3	91	20.2	+20	22.1	0	5 16	5 41	6 03	** ** *	**	11 54	52												
13	13	27.2		26.6	105	49.9		30.1	10 S	28	5 53	15	** ** *	**	38	50												
14	28	27.3		25.9	120	19.6		38.0	20	39	6 06	29	0 00	56	22	47												
15	43	27.3		25.3	134	49.2		45.9	30	50	19	44	17	60	11 03	44												
16	58	27.4		24.6	149	18.7	+20	53.6	35	5 56	26	6 53	27	62	10 52	42												
17	73	27.4	+17	24.0	163	48.1	+21	01.3	40	6 02	6 34	7 03	0 39	64	10 39	40												
18	88	27.5	+17	23.3	178	17.4	+21	08.8	45	6 08	6 43	7 15	0 53	67	10 25	36												
19	103	27.5		22.7	192	46.6		16.3	50	15	54	29	1 10	71	10 07	32												
20	118	27.6		22.0	207	15.7		23.6	52	18	6 58	35	18	73	9 58	31												
21	133	27.6		21.3	221	44.8		30.9	54	21	7 04	43	27	75	49	28												
22	148	27.7		20.7	236	13.7		38.0	56	24	09	7 51	37	78	38	26												
23	163	27.7		20.0	250	42.5		45.1	58	28	16	8 00	1 49	82	26	22												
24	178	27.8	+17	19.4	265	11.2	+21	52.0	60 S	6 32	7 23	8 10	2 02	87	9 12	18												
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO											
	PMG 3 ^h 13 ^m 6				Mag: -4.3 PMG: 14 ^h 58 ^m				Mag: +1.5 PMG: 15 ^h 23 ^m				Mag: -2.8 PMG: 3 ^h 28 ^m				Mag: +1.1 PMG: 15 ^h 19 ^m											
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	311	28.2	135	27.7	+1	41.6	129	02.9	-0	34.7	307	56.4	-0	02.8	129	36.5	+1	37.0										
1	326	30.7	150	27.8		40.3	144	04.0		35.3	322	58.9		02.9	144	38.8		36.9										
2	341	33.2	165	27.9		39.1	159	05.0		36.0	338	01.5		02.9	159	41.0		36.8										
3	356	35.6	180	28.1		37.9	174	06.1		36.6	353	04.0		03.0	174	43.3		36.7										
4	11	38.1	195	28.2		36.6	189	07.2		37.3	8	06.5		03.0	189	45.5		36.6										
5	26	40.6	210	28.3	+1	35.4	204	08.2	-0	37.9	23	09.1	-0	03.0	204	47.8	+1	36.5										
6	41	43.0	225	28.5	+1	34.2	219	09.3	-0	38.5	38	11.6	-0	03.1	219	50.0	+1	36.4										
7	56	45.5	240	28.6		32.9	234	10.4		39.2	53	14.2		03.1	234	52.3		36.3										
8	71	48.0	255	28.8		31.7	249	11.4		39.8	68	16.7		03.2	249	54.6		36.2										
9	86	50.4	270	28.9		30.5	264	12.5		40.5	83	19.2		03.2	264	56.8		36.1										
10	101	52.9	285	29.0		29.2	279	13.6		41.1	98	21.8		03.3	279	59.1		36.0										
11	116	55.3	300	29.2	+1	28.0	294	14.6	-0	41.7	113	24.3	-0	03.3	295	01.3	+1	35.9										
12	131	57.8	315	29.3	+1	26.8	309	15.7	-0	42.4	128	26.9	-0	03.4	310	03.6	+1	35.8										
13	147	00.3	330	29.5		25.5	324	16.8		43.0	143	29.4		03.4	325	05.8		35.7										
14	162	02.7	345	29.6		24.3	339	17.8		43.7	158	31.9		03.5	340	08.1		35.6										
15	177	05.2	0	29.7		23.1	354	18.9		44.3	173	34.5		03.5	355	10.3		35.5										
16	192	07.7	15	29.9		21.8	9	20.0		45.0	188	37.0		03.6	10	12.6		35.4										
17	207	10.1	30	30.0	+1	20.6	24	21.0	-0	45.6	203	39.6	-0	03.6	25	14.8	+1	35.3										
18	222	12.6	45	30.2	+1	19.4	39	22.1	-0	46.2	218	42.1	-0	03.6	40	17.1	+1	35.2										
19	237	15.1	60	30.3		18.1	54	23.2		46.9	233	44.7		03.7	55	19.3		35.1										
20	252	17.5	75	30.5		16.9	69	24.2		47.5	248	47.2		03.7	70	21.6		35.0										
21	267	20.0	90	30.6		15.6	84	25.3		48.2	263	49.8		03.8	85	23.8		34.9										
22	282	22.5	105	30.7		14.4	99	26.3		48.8	278	52.3		03.8	100	26.1		34.8										
23	297	24.9	120	30.9		13.2	114	27.4		49.4	293	54.8		03.9	115	28.3		34.7										
24	312	27.4	135	31.0	+1	11.9	129	28.5	-0	50.1	308	57.4	-0	03.9	130	30.6	+1	34.6										
Dif	—				+1				+11				+25				0				+23				-1			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1			Edad: 23 ^d 2 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 9 20 ^h : 57 ^m 2 SD: 15 ^h 4 PMG: 6 ^h 33 ^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
0	178	27.8	+17	19.4	265	11.2	+21	52.0	60 N	20 23	21 21	23 07	21 47	43	16 07 75
1	193	27.8		18.7	279	39.9	+21	58.9	58	12	21 03	22 24	22 07	46	15 47 73
2	208	27.9		18.0	294	08.4	+22	05.6	56	20 02	20 49	21 57	24	47	31 70
3	223	28.0		17.4	308	36.8		12.2	54	19 53	36	36	38	49	17 69
4	238	28.0		16.7	323	05.2		18.7	52	45	25	19	22 51	50	15 05 67
5	253	28.1	+17	16.0	337	33.4	+22	25.1	50	19 38	20 16	21 05	23 02	50	14 54 66
6	268	28.1	+17	15.4	352	01.5	+22	31.4	45	19 23	19 56	20 38	23 25	52	14 32 64
7	283	28.2		14.7	6	29.6		37.6	40	11	41	17	43	54	14 14 62
8	298	28.2		14.1	20	57.5		43.7	35	19 00	28	20 01	23 59	54	13 59 61
9	313	28.3		13.4	35	25.4		49.6	30	18 51	19 17	19 48	** ** *	**	45 61
10	328	28.4		12.7	49	53.2	+22	55.4	20	36	18 59	26	** ** *	**	23 59
11	343	28.4	+17	12.1	64	20.8	+23	01.2	10 N	18 22	18 44	19 10	0 04	52	13 04 57
12	358	28.5	+17	11.4	78	48.4	+23	06.7	0	18 10	18 31	18 56	0 20	55	12 46 56
13	13	28.5		10.7	93	15.9		12.2	10 S	17 57	19	44	37	56	28 54
14	28	28.6		10.1	107	43.2		17.6	20	44	18 07	34	0 56	58	12 09 53
15	43	28.6		09.4	122	10.5		22.8	30	29	17 54	23	1 17	60	11 47 51
16	58	28.7		08.7	136	37.7		27.9	35	21	47	18	29	62	34 49
17	73	28.8	+17	08.0	151	04.8	+23	32.9	40	17 11	17 39	18 12	1 43	64	11 19 48
18	88	28.8	+17	07.4	165	31.8	+23	37.7	45	16 59	17 31	18 06	2 00	66	11 01 47
19	103	28.9		06.7	179	58.7		42.4	50	46	21	17 59	21	69	10 39 44
20	118	28.9		06.0	194	25.6		47.0	52	39	16	57	31	71	29 42
21	133	29.0		05.4	208	52.3		51.5	54	32	11	54	42	73	17 41
22	148	29.1		04.7	223	18.9	+23	55.8	56	24	17 05	51	2 55	75	10 04 39
23	163	29.1		04.0	237	45.5	+24	00.0	58	15	16 59	47	3 11	77	9 48 36
24	178	29.2	+17	03.3	252	12.0	+24	04.1	60 S	16 05	16 53	17 43	3 29	82	9 30 32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 09 ^m 7		Mag: -4.3 PMG: 14 ^h 58 ^m		Mag: +1.5 PMG: 15 ^h 21 ^m		Mag: -2.8 PMG: 3 ^h 24 ^m		Mag: +1.1 PMG: 15 ^h 16 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	312	27.4	135	31.0	+1	11.9	308	57.4	-0	03.9
1	327	29.8	150	31.2		10.7	323	59.9		04.0
2	342	32.3	165	31.3		09.5	339	02.5		04.0
3	357	34.8	180	31.5		08.2	354	05.0		04.1
4	12	37.2	195	31.6		07.0	9	07.6		04.1
5	27	39.7	210	31.8	+1	05.8	24	10.1	-0	04.2
6	42	42.2	225	31.9	+1	04.5	39	12.7	-0	04.2
7	57	44.6	240	32.1		03.3	54	15.2		04.3
8	72	47.1	255	32.2		02.1	69	17.8		04.3
9	87	49.6	270	32.4	+1	00.8	84	20.3		04.4
10	102	52.0	285	32.5	+0	59.6	99	22.9		04.4
11	117	54.5	300	32.7	+0	58.4	114	25.4	-0	04.5
12	132	56.9	315	32.8	+0	57.1	129	28.0	-0	04.5
13	147	59.4	330	33.0		55.9	144	30.5		04.6
14	163	01.9	345	33.1		54.6	159	33.1		04.6
15	178	04.3	0	33.3		53.4	174	35.6		04.7
16	193	06.8	15	33.4		52.2	189	38.2		04.7
17	208	09.3	30	33.6	+0	50.9	204	40.7	-0	04.8
18	223	11.7	45	33.7	+0	49.7	219	43.3	-0	04.8
19	238	14.2	60	33.9		48.5	234	45.8		04.9
20	253	16.7	75	34.1		47.2	249	48.4		04.9
21	268	19.1	90	34.2		46.0	264	50.9		05.0
22	283	21.6	105	34.4		44.8	279	53.5		05.0
23	298	24.1	120	34.5		43.5	294	56.0		05.1
24	313	26.5	135	34.7	+0	42.3	309	58.6	-0	05.1
Dif	—		+2		-12		+11		-6	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 9			Edad: 25 ^d 2 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 8 20 ^h : 59 ^m 1 SD: 15 ^h 9 PMG: 8 ^h 27 ^m R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m		
0	178	30.7	+16	47.1	238	23.1	+24	58.5	60 N	20 18	21 14	22 51	23 38	91	18 19	35	
1	193	30.8		46.4	252	47.6		58.9	58	20 07	20 58	22 14	** ** *		17 57	39	
2	208	30.8		45.7	267	12.2		59.1	56	19 57		44	21 49	** ** *		39 42	
3	223	30.9		45.0	281	36.7		59.2	54		49	32	30	** ** *		24 44	
4	238	31.0		44.3	296	01.1		59.1	52		41	21	14	** ** *		17 10 47	
5	253	31.0	+16	43.6	310	25.5		58.8	50	19 35	20 12	21 01	** ** *		16 59	48	
6	268	31.1	+16	42.9	324	49.8		58.4	45	19 20	19 53	20 34	0 17	64	16 35	50	
7	283	31.2		42.3	339	14.0		57.8	40	19 08		38	20 15	37 63	16 15	53	
8	298	31.2		41.6	353	38.3		57.0	35	18 58		26	19 59	0 53 63	15 59	54	
9	313	31.3		40.9	8	02.4		56.1	30		50	19 15	46	1 07 63	45	55	
10	328	31.4		40.2	22	26.6		55.0	20		34	18 58	25	32 61	21	57	
11	343	31.5	+16	39.5	36	50.7		53.8	10 N	18 21	18 43	19 09	1 53 60		15 00	59	
12	358	31.5	+16	38.8	51	14.7		52.3	0	18 09	18 31	18 56	2 12 60		14 41	60	
13	13	31.6		38.1	65	38.7		50.8	10 S	17 57		19	45	32 59		21 62	
14	28	31.7		37.4	80	02.7		49.0	20		45	18 08	34	2 53 59	14 00	64	
15	43	31.7		36.7	94	26.7		47.1	30		30	17 55	24	3 17 58	13 36	65	
16	58	31.8		36.0	108	50.6		45.0	35		22	49	19	32 57		22 66	
17	73	31.9	+16	35.3	123	14.4		42.8	40	17 13	17 41	18 14	3 48 56		13 05	68	
18	88	31.9	+16	34.7	137	38.3		40.3	45	17 02	17 33	18 08	4 08 55		12 45	70	
19	103	32.0		34.0	152	02.1		37.7	50	16 48		23	18 02	33 54		21 71	
20	118	32.1		33.3	166	25.9		35.0	52		42	19	17 59	45 53		12 08 73	
21	133	32.2		32.6	180	49.7		32.1	54		35	14	57	4 59 52		11 55 73	
22	148	32.2		31.9	195	13.4		29.0	56		28	09	54	5 15 50		39 75	
23	163	32.3		31.2	209	37.1		25.7	58		19	17 03	50	3 48		11 20 77	
24	178	32.4	+16	30.5	224	00.8		22.3	60 S	16 10	16 57	17 47	5 58 45		10 56	81	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 01 ^m 8		Mag: -4.3 PMG: 14 ^h 57 ^m			Mag: +1.5 PMG: 15 ^h 18 ^m			Mag: -2.8 PMG: 3 ^h 15 ^m			Mag: +1.1 PMG: 15 ^h 08 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	314	25.7	135	38.6	+0	12.6	130	19.4	-1	20.9	310	59.9	-0	06.4	132	18.5	
1	329	28.1	150	38.8		11.4	145	20.5		21.6	326	02.5		06.5	147	20.8	
2	344	30.6	165	39.0		10.2	160	21.5		22.2	341	05.0		06.5	162	23.0	
3	359	33.1	180	39.1		08.9	175	22.6		22.9	356	07.6		06.6	177	25.3	
4	14	35.5	195	39.3		07.7	190	23.6		23.5	11	10.2		06.6	192	27.5	
5	29	38.0	210	39.5	+0	06.5	205	24.7	-1	24.1	26	12.7	-0	06.7	207	29.8	
6	44	40.4	225	39.6	+0	05.2	220	25.7	-1	24.8	41	15.3	-0	06.7	222	32.0	
7	59	42.9	240	39.8		04.0	235	26.8		25.4	56	17.9		06.8	237	34.3	
8	74	45.4	255	40.0		02.8	250	27.9		26.1	71	20.4		06.8	252	36.5	
9	89	47.8	270	40.2		01.5	265	28.9		26.7	86	23.0		06.9	267	38.7	
10	104	50.3	285	40.3	+0	00.3	280	30.0		27.4	101	25.5		06.9	282	41.0	
11	119	52.8	300	40.5	-0	00.9	295	31.0	-1	28.0	116	28.1	-0	07.0	297	43.2	
12	134	55.2	315	40.7	-0	02.2	310	32.1	-1	28.7	131	30.7	-0	07.1	312	45.5	
13	149	57.7	330	40.9		03.4	325	33.1		29.3	146	33.2		07.1	327	47.7	
14	165	00.2	345	41.0		04.6	340	34.2		29.9	161	35.8		07.2	342	50.0	
15	180	02.6	0	41.2		05.9	355	35.3		30.6	176	38.4		07.2	357	52.2	
16	195	05.1	15	41.4		07.1	10	36.3		31.2	191	40.9		07.3	12	54.5	
17	210	07.6	30	41.6	-0	08.3	25	37.4	-1	31.9	206	43.5	-0	07.3	27	56.7	
18	225	10.0	45	41.8	-0	09.6	40	38.4	-1	32.5	221	46.1	-0	07.4	42	59.0	
19	240	12.5	60	41.9		10.8	55	39.5		33.2	236	48.6		07.5	58	01.2	
20	255	14.9	75	42.1		12.0	70	40.5		33.8	251	51.2		07.5	73	03.4	
21	270	17.4	90	42.3		13.3	85	41.6		34.4	266	53.8		07.6	88	05.7	
22	285	19.9	105	42.5		14.5	100	42.6		35.1	281	56.3		07.6	103	07.9	
23	300	22.3	120	42.7		15.8	115	43.7		35.7	296	58.9		07.7	118	10.2	
24	315	24.8	135	42.8	-0	17.0	130	44.7	-1	36.4	312	01.5	-0	07.7	133	12.4	
Dif	—		+2			-12			+11			-6			+26		

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: 26 ^d 2 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 7 20 ^h : 60 ^m 0 SD: 16 ^d 1 PMG: 9 ^h 27 ^m R°: 60 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	178	32.4	+16	30.5	224	00.8	+24	22.3	60 N	1 21	2 58	3 54	** ** *	18 54	21				
1	193	32.4		29.8	238	24.5		18.7	58	1 58	3 15	4 05	0 00	86	36	26			
2	208	32.5		29.1	252	48.2		14.9	56	2 23		15	18	83	21	30			
3	223	32.6		28.4	267	11.9		11.0	54		42	41	23	33	81	18	08		
4	238	32.7		27.7	281	35.5		06.9	52	2 58	3 51	31	46	79	17	57	35		
5	253	32.7	+16	27.0	295	59.2	+24	02.6	50	3 11	4 00	4 38	0 57	77	17	47	37		
6	268	32.8	+16	26.3	310	22.8	+23	58.2	45	3 38	4 19	4 52	1 21	74	17	25	42		
7	283	32.9		25.6	324	46.4		53.6	40	3 58		34	40	72	17	08	45		
8	298	33.0		24.9	339	10.1		48.8	35	4 13		46	1	56	69	16	53		
9	313	33.0		24.2	353	33.7		43.8	30		26	4 57	2	10	68	40	51		
10	328	33.1		23.5	7	57.3		38.7	20	4 47	5 14	37	33	65	16	18	54		
11	343	33.2	+16	22.8	22	20.9	+23	33.4	10 N	5 03	5 28	5 50	2 53	63	15	59	57		
12	358	33.3	+16	22.1	36	44.6	+23	28.0	0	5 16	5 41	6 02	3 12	61	15	41	60		
13	13	33.3		21.4	51	08.2		22.4	10 S		27	5 52	14	31	59	23	63		
14	28	33.4		20.7	65	31.9		16.6	20		37	6 04	27	3	52	55	15	04	66
15	43	33.5		20.0	79	55.5		10.6	30		47	16	41	4	15	53	14	41	70
16	58	33.6		19.3	94	19.2	+23	04.5	35		53	23	49	29	51	28	72		
17	73	33.6	+16	18.6	108	42.8	+22	58.2	40	5 58	6 30	6 58	4 44	49	14	13	74		
18	88	33.7	+16	17.9	123	06.5	+22	51.8	45	6 03	6 38	7 09	5 03	46	13	55	77		
19	103	33.8		17.2	137	30.2		45.2	50		09	48	22	27	42	32	82		
20	118	33.9		16.5	151	54.0		38.4	52		12	52	28	38	40	21	84		
21	133	34.0		15.8	166	17.7		31.5	54		14	6 57	35	5	51	38	13	08	87
22	148	34.0		15.1	180	41.5		24.4	56		17	7 02	43	6	05	36	12	54	90
23	163	34.1		14.4	195	05.3		17.1	58		20	08	7 51	22	32	37	94		
24	178	34.2	+16	13.7	209	29.1	+22	09.7	60 S	6 24	7 14	8 01	6 43	27	12	17	99		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 57 ^m 9		Mag: -4.3 PMG: 14 ^h 57 ^m		Mag: +1.5 PMG: 15 ^h 16 ^m		Mag: -2.8 PMG: 3 ^h 11 ^m		Mag: +1.1 PMG: 15 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	315	24.8	135	42.8	-0	17.0	130	44.7	-1	36.4
1	330	27.3	150	43.0		18.2	145	45.8		37.0
2	345	29.7	165	43.2		19.5	160	46.9		37.7
3	0	32.2	180	43.4		20.7	175	47.9		38.3
4	15	34.7	195	43.6		21.9	190	49.0		39.0
5	30	37.1	210	43.8	-0	23.2	205	50.0	-1	39.6
6	45	39.6	225	43.9	-0	24.4	220	51.1	-1	40.2
7	60	42.1	240	44.1		25.6	235	52.1		40.9
8	75	44.5	255	44.3		26.9	250	53.2		41.5
9	90	47.0	270	44.5		28.1	265	54.2		42.2
10	105	49.4	285	44.7		29.3	280	55.3		42.8
11	120	51.9	300	44.9	-0	30.6	295	56.3	-1	43.5
12	135	54.4	315	45.1	-0	31.8	310	57.4	-1	44.1
13	150	56.8	330	45.2		33.0	325	58.4		44.8
14	165	59.3	345	45.4		34.3	340	59.5		45.4
15	181	01.8	0	45.6		35.5	356	00.5		46.0
16	196	04.2	15	45.8		36.7	11	01.6		46.7
17	211	06.7	30	46.0	-0	38.0	26	02.6	-1	47.3
18	226	09.2	45	46.2	-0	39.2	41	03.7	-1	48.0
19	241	11.6	60	46.4		40.4	56	04.7		48.6
20	256	14.1	75	46.6		41.7	71	05.8		49.3
21	271	16.5	90	46.8		42.9	86	06.8		49.9
22	286	19.0	105	47.0		44.1	101	07.9		50.6
23	301	21.5	120	47.2		45.4	116	09.0		51.2
24	316	23.9	135	47.3	-0	46.6	131	10.0	-1	51.8
Dif	—		+2		-12		+11		-6	
							+26		-1	
									+22	
									-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 7			Edad: 27 ^d 2 PHE { 4 ^h : 60 ^s 2 12 ^h : 60 ^s 5 20 ^h : 60 ^s 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 m	h m m	h m m	
0	178	34.2	+16	13.7	209	29.1	+22	09.7	60 N	20 13	21 08	22 38	1 09 103	19 15 14	
1	193	34.3		13.0	223	52.9 48	+22	02.1 76	58	20 02	20 52	22 06	26 98	19 02 18	
2	208	34.3		12.2	238	16.8 49	+21	54.4 77	56	19 53	39	21 42	41 93	18 51 22	
3	223	34.4		11.5	252	40.6 48		46.5 79	54	45	27	24	1 54 90	41 25	
4	238	34.5		10.8	267	04.6 50		38.4 81	52	38	17	21 09	2 05 87	32 28	
5	253	34.6	+16	10.1	281	28.5 49	+21	30.2 82	50	19 31	20 08	20 56	2 14 85	18 24 30	
6	268	34.7	+16	09.4	295	52.5 50	+21	21.8 84	45	19 17	19 50	20 31	2 35 80	18 07 35	
7	283	34.7		08.7	310	16.5 50		13.3 85	40	19 06	36	20 12	2 52 76	17 53 39	
8	298	34.8		08.0	324	40.5 50	+21	04.6 87	35	18 56	24	19 56	3 05 74	41 42	
9	313	34.9		07.3	339	04.6 51	+20	55.8 88	30	48	19 13	44	18 70	31 45	
10	328	35.0		06.6	353	28.7 51		46.8 90	20	33	18 56	24	38 67	17 12 50	
11	343	35.1	+16	05.9	7	52.9 52	+20	37.7 91	10 N	18 21	18 43	19 08	3 56 63	16 56 55	
12	358	35.2	+16	05.1	22	17.1 52	+20	28.4 93	0	18 09	18 31	18 56	4 13 59	16 41 58	
13	13	35.2		04.4	36	41.3 52		19.0 94	10 S	17 58	19	45	30 55	26 62	
14	28	35.3		03.7	51	05.6 53	+20	09.4 96	20	45	18 08	35	4 47 52	16 10 66	
15	43	35.4		03.0	65	30.0 54	+19	59.7 97	30	32	17 56	25	5 08 47	15 51 71	
16	58	35.5		02.3	79	54.3 53		49.8 99	35	24	50	20	20 45	40 74	
17	73	35.6	+16	01.6	94	18.7 54	+19	39.8 100	40	17 15	17 43	18 15	5 33 42	15 27 78	
18	88	35.6	+16	00.9	108	43.2 55	+19	29.7 101	45	17 04	17 35	18 10	5 49 39	15 12 82	
19	103	35.7	+16	00.2	123	07.7 55		19.4 103	50	16 51	26	04	6 09 33	14 54 87	
20	118	35.8	+15	59.4	137	32.2 55	+19	08.9 105	52	45	22	18 02	18 31	45 89	
21	133	35.9		58.7	151	56.8 56	+18	58.4 105	54	39	17	17 59	29 28	35 93	
22	148	36.0		58.0	166	21.5 57		47.7 107	56	32	12	57	41 25	24 96	
23	163	36.1		57.3	180	46.2 57		36.8 109	58	23	07	54	6 54 21	14 11 100	
24	178	36.2	+15	56.6	195	10.9 57	+18	25.9 109	60 S	16 14	17 01	17 51	7 10 16	13 56 105	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 53 ^m 9		Mag: -4.3 PMG: 14 ^h 57 ^m		Mag: +1.5 PMG: 15 ^h 14 ^m		Mag: -2.8 PMG: 3 ^h 07 ^m		Mag: +1.1 PMG: 15 ^h 01 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	316	23.9	135	47.3	-0	46.6	131	10.0	-1	51.8								
1	331	26.4	150	47.5		47.8	146	11.1		52.5								
2	346	28.9	165	47.7		49.1	161	12.1		53.1								
3	1	31.3	180	47.9		50.3	176	13.2		53.8								
4	16	33.8	195	48.1		51.5	191	14.2		54.4								
5	31	36.3	210	48.3	-0	52.8	206	15.3	-1	55.1								
6	46	38.7	225	48.5	-0	54.0	221	16.3	-1	55.7								
7	61	41.2	240	48.7		55.2	236	17.4		56.4								
8	76	43.7	255	48.9		56.5	251	18.4		57.0								
9	91	46.1	270	49.1		57.7	266	19.4		57.7								
10	106	48.6	285	49.3	-0	58.9	281	20.5		58.3								
11	121	51.0	300	49.5	-1	00.2	296	21.5	-1	58.9								
12	136	53.5	315	49.7	-1	01.4	311	22.6	-1	59.6								
13	151	56.0	330	49.9		02.6	326	23.6	-2	00.2								
14	166	58.4	345	50.1		03.9	341	24.7		00.9								
15	182	00.9	0	50.3		05.1	356	25.7		01.5								
16	197	03.4	15	50.5		06.3	11	26.8		02.2								
17	212	05.8	30	50.7	-1	07.6	26	27.8	-2	02.8								
18	227	08.3	45	50.9	-1	08.8	41	28.9	-2	03.5								
19	242	10.8	60	51.1		10.0	56	29.9		04.1								
20	257	13.2	75	51.3		11.3	71	31.0		04.8								
21	272	15.7	90	51.5		12.5	86	32.0		05.4								
22	287	18.2	105	51.7		13.7	101	33.1		06.0								
23	302	20.6	120	51.9		14.9	116	34.1		06.7								
24	317	23.1	135	52.1	-1	16.2	131	35.2	-2	07.3								
Dif	—		+2		-12		+10		-6		+26		-1		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 5			Edad: 28 ^d 2 PHE { 4 ^h : 60 ^m 9 12 ^h : 61 ^m 0 20 ^h : 61 ^m 1 PMG: 11 ^h 26 ^m R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	178	36.2	+15 56.6	195	10.9	+18 25.9	60 N	1 34	3 04	3 59	2 52	105	19 29	9
1	193	36.2	55.9	209	35.7	58 14.7 ¹¹²	58	2 06	20	4 10	3 04	101	20 13	
2	208	36.3	55.1	224	00.6	59 +18 03.5 ¹¹²	56	29	33	19	14	97	13 16	
3	223	36.4	54.4	238	25.5	59 +17 52.1 ¹¹⁴	54	2 48	45	27	24	93	06 19	
4	238	36.5	53.7	252	50.5	60 40.6 ¹¹⁵	52	3 03	3 55	34	32	90	19 00	22
5	253	36.6	+15 53.0	267	15.5	60 +17 29.0 ¹¹⁶	50	3 15	4 03	4 40	3 39	88	18 54	25
6	268	36.7	+15 52.3	281	40.6	61 +17 17.3 ¹¹⁷	45	3 41	4 22	4 54	3 55	83	18 42	30
7	283	36.7	51.5	296	05.7	61 +17 05.4 ¹¹⁹	40	4 00	36	5 06	4 08	78	32 34	
8	298	36.8	50.8	310	30.8	61 +16 53.4 ¹²⁰	35	15	48	15	19	74	23 38	
9	313	36.9	50.1	324	56.1	63 41.3 ¹²¹	30	28	4 58	24	28	72	16 41	
10	328	37.0	49.4	339	21.4	63 29.1 ¹²²	20	4 48	5 15	38	45	66	18 02	47
11	343	37.1	+15 48.7	353	46.7	63 +16 16.7 ¹²⁴	10 N	5 03	5 29	5 51	4 59	61	17 51	51
12	358	37.2	+15 47.9	8	12.1	64 +16 04.3 ¹²⁴	0	5 16	5 41	6 02	5 12	57	17 39	56
13	13	37.3	47.2	22	37.6	65 +15 51.7 ¹²⁶	10 S	27	5 52	14	25	53	28 61	
14	28	37.4	46.5	37	03.1	65 39.0 ¹²⁷	20	36	6 03	26	39	48	16 65	
15	43	37.4	45.8	51	28.7	66 26.2 ¹²⁸	30	46	14	39	5 55	43	17 02	71
16	58	37.5	45.0	65	54.3	66 13.3 ¹²⁹	35	51	21	47	6 05	39	16 54	74
17	73	37.6	+15 44.3	80	20.0	67 +15 00.3 ¹³⁰	40	5 56	6 28	6 56	6 15	36	16 45	78
18	88	37.7	+15 43.6	94	45.7	67 +14 47.2 ¹³¹	45	6 01	6 36	7 06	6 28	32	16 34	83
19	103	37.8	42.9	109	11.5	68 34.0 ¹³²	50	06	45	19	42	27	21 88	
20	118	37.9	42.1	123	37.4	69 20.7 ¹³³	52	08	49	25	49	25	14 91	
21	133	38.0	41.4	138	03.3	69 +14 07.3 ¹³⁴	54	11	53	31	6 57	22	08 93	
22	148	38.1	40.7	152	29.3	70 +13 53.8 ¹³⁵	56	14	6 58	38	7 06	18	16 00	97
23	163	38.2	40.0	166	55.3	70 40.2 ¹³⁶	58	16	7 03	46	15 15	15	15 51	101
24	178	38.3	+15 39.2	181	21.4	71 +13 26.5 ¹³⁷	60 S	6 19	7 09	7 55	7 26	11	15 41	105

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 2 ^h 50 ^m 0		Mag: -4.4 PMG: 14 ^h 56 ^m		Mag: +1.5 PMG: 15 ^h 13 ^m		Mag: -2.8 PMG: 3 ^h 03 ^m		Mag: +1.1 PMG: 14 ^h 58 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	317	23.1	135	52.1	-1 16.2	131	35.2	-2 07.3	314	05.1	-0 10.6
1	332	25.5	150	52.3	17.4	146	36.2	08.0	329	07.6	10.7
2	347	28.0	165	52.6	18.6	161	37.3	08.6	344	10.2	10.8
3	2	30.5	180	52.8	19.9	176	38.3	09.3	359	12.8	10.8
4	17	32.9	195	53.0	21.1	191	39.4	09.9	14	15.4	10.9
5	32	35.4	210	53.2	-1 22.3	206	40.4	-2 10.6	29	18.0	-0 11.0
6	47	37.9	225	53.4	-1 23.6	221	41.4	-2 11.2	44	20.6	-0 11.0
7	62	40.3	240	53.6	24.8	236	42.5	11.9	59	23.1	11.1
8	77	42.8	255	53.8	26.0	251	43.5	12.5	74	25.7	11.2
9	92	45.3	270	54.0	27.3	266	44.6	13.1	89	28.3	11.2
10	107	47.7	285	54.2	28.5	281	45.6	13.8	104	30.9	11.3
11	122	50.2	300	54.4	-1 29.7	296	46.7	-2 14.4	119	33.5	-0 11.3
12	137	52.7	315	54.6	-1 31.0	311	47.7	-2 15.1	134	36.1	-0 11.4
13	152	55.1	330	54.9	32.2	326	48.8	15.7	149	38.7	11.5
14	167	57.6	345	55.1	33.4	341	49.8	16.4	164	41.2	11.5
15	183	00.0	0	55.3	34.6	356	50.9	17.0	179	43.8	11.6
16	198	02.5	15	55.5	35.9	11	51.9	17.7	194	46.4	11.7
17	213	05.0	30	55.7	-1 37.1	26	52.9	-2 18.3	209	49.0	-0 11.7
18	228	07.4	45	55.9	-1 38.3	41	54.0	-2 19.0	224	51.6	-0 11.8
19	243	09.9	60	56.1	39.6	56	55.0	19.6	239	54.2	11.9
20	258	12.4	75	56.4	40.8	71	56.1	20.2	254	56.8	11.9
21	273	14.8	90	56.6	42.0	86	57.1	20.9	269	59.3	12.0
22	288	17.3	105	56.8	43.3	101	58.2	21.5	285	01.9	12.1
23	303	19.8	120	57.0	44.5	116	59.2	22.2	300	04.5	12.1
24	318	22.2	135	57.2	-1 45.7	132	00.3	-2 22.8	315	07.1	-0 12.2
Dif	—		+2 -12		+10 -6		+26 -1		+22 -1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 4			Edad: 29 ^d 2 PHE { SD: 16 ^h 7 PMG: 12 ^h 22 ^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	h m m	h m m
0	178	38.3	+15	39.2	181	21.4	+13 26.5	60 N	20 07	21 01	22 26	4 37 104	19 38 8	
1	193	38.3		38.5	195	47.5	+13 12.7 ¹³⁸	58	19 57	20 46	21 57	45 100	33 11	
2	208	38.4		37.8	210	13.7	+12 58.8 ¹³⁹	56		49	33	35	51 97	
3	223	38.5		37.0	224	40.0		54		41	23	18	4 57 93	
4	238	38.6		36.3	239	06.3		52		34	13	21 04	5 02 91	
5	253	38.7	+15	35.6	253	32.7	+12 16.7 ¹⁴¹	50	19 28	20 05	20 52	5 07 88	19 19 22	
6	268	38.8	+15	34.8	267	59.1	+12 02.4 ¹⁴³	45	19 14	19 47	20 27	5 18 82	19 12 27	
7	283	38.9		34.1	282	25.6	+11 48.1 ¹⁴³	40	19 04		33	20 09	26 78	
8	298	39.0		33.4	296	52.1		35	18 54	21	19 54	33 74	19 01 35	
9	313	39.1		32.7	311	18.7		30		46	19 11	42	40 70	
10	328	39.2		31.9	325	45.4	+11 04.8 ¹⁴⁵	20		32	18 55	22	5 51 64	
11	343	39.3	+15	31.2	340	12.1	+10 50.2 ¹⁴⁶	10 N	18 20	18 42	19 07	6 00 59	18 42 49	
12	358	39.4	+15	30.5	354	38.8	+10 35.5 ¹⁴⁷	0	18 09	18 30	18 55	6 09 55	18 35 54	
13	13	39.5		29.7	9	05.7		10 S	17 58	19	45	18 50	29 58	
14	28	39.5		29.0	23	32.5	+10 06.0 ¹⁴⁸	20		46	18 09	35	27 45	
15	43	39.6		28.3	37	59.4	+9 51.1 ¹⁴⁹	30		33	17 57	26	38 40	
16	58	39.7		27.5	52	26.4		35		25	51	21	44 36	
17	73	39.8	+15	26.8	66	53.4	+9 21.2 ¹⁵⁰	40	17 16	17 45	18 17	6 51 33	18 03 77	
18	88	39.9	+15	26.1	81	20.5	+9 06.2 ¹⁵⁰	45	17 06	17 37	18 12	7 00 28	17 57 81	
19	103	40.0		25.3	95	47.6	+8 51.1 ¹⁵¹	50	16 54	28	07	09 23	49 87	
20	118	40.1		24.6	110	14.8		52		48	24	05	14 20	
21	133	40.2		23.8	124	42.0		54		42	20	02	19 17	
22	148	40.3		23.1	139	09.3	+8 05.5 ¹⁵²	56		35	16	18 00	24 15	
23	163	40.4		22.4	153	36.6	+7 50.2 ¹⁵³	58		28	10	17 57	30 12	
24	178	40.5	+15	21.6	168	04.0	+7 34.8 ¹⁵⁴	60 S	16 19	17 05	17 55	7 37 8	17 26 104	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 46 ^m 1		Mag: -4.4 PMG: 14 ^h 56 ^m		Mag: +1.5 PMG: 15 ^h 11 ^m		Mag: -2.8 PMG: 2 ^h 59 ^m		Mag: +1.1 PMG: 14 ^h 54 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	318	22.2	135	57.2	-1	45.7	132	00.3	-2	22.8				
1	333	24.7	150	57.4		46.9	147	01.3		23.5				
2	348	27.1	165	57.7		48.2	162	02.3		24.1				
3	3	29.6	180	57.9		49.4	177	03.4		24.8				
4	18	32.1	195	58.1		50.6	192	04.4		25.4				
5	33	34.5	210	58.3	-1	51.9	207	05.5	-2	26.1				
6	48	37.0	225	58.5	-1	53.1	222	06.5	-2	26.7				
7	63	39.5	240	58.8		54.3	237	07.6		27.4				
8	78	41.9	255	59.0		55.6	252	08.6		28.0				
9	93	44.4	270	59.2		56.8	267	09.6		28.6				
10	108	46.9	285	59.4		58.0	282	10.7		29.3				
11	123	49.3	300	59.6	-1	59.2	297	11.7	-2	29.9				
12	138	51.8	315	59.9	-2	00.5	312	12.8	-2	30.6				
13	153	54.3	331	00.1		01.7	327	13.8		31.2				
14	168	56.7	346	00.3		02.9	342	14.8		31.9				
15	183	59.2	1	00.5		04.2	357	15.9		32.5				
16	199	01.6	16	00.8		05.4	12	16.9		33.2				
17	214	04.1	31	01.0	-2	06.6	27	18.0	-2	33.8				
18	229	06.6	46	01.2	-2	07.8	42	19.0	-2	34.5				
19	244	09.0	61	01.4		09.1	57	20.0		35.1				
20	259	11.5	76	01.7		10.3	72	21.1		35.8				
21	274	14.0	91	01.9		11.5	87	22.1		36.4				
22	289	16.4	106	02.1		12.7	102	23.2		37.0				
23	304	18.9	121	02.3		14.0	117	24.2		37.7				
24	319	21.4	136	02.6	-2	15.2	132	25.2	-2	38.3				
Dif	—		+2		-12		+10		-6					
							+26		-1					
									+22					
									-1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 2			Edad: 0 ^d 9 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 2 20 ^h : 61 ^m 1 R°: 53 ^m	hG ☾ Dif	Dec		Dif			Hora	R°	Hora	R°	
	hG ☉	Dec													
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	40.5	+15	21.6	168	04.0	+7 34.8	60 N	1 45	3 10	4 04	6 21	102	19 46	6
1	193	40.6		20.9	182	31.4	84 19.4	58	2 14	25	14	25	98	44	10
2	208	40.7		20.2	196	58.8	84 +7 04.0	56	36	38	23	28	94	43	13
3	223	40.8		19.4	211	26.3	85 +6 48.5	54	2 53	49	30	30	92	42	16
4	238	40.9		18.7	225	53.9	86 33.0	52	3 07	3 58	37	33	88	41	19
5	253	41.0	+15	17.9	240	21.5	86 +6 17.4	50	3 20	4 07	4 43	6 35	86	19 41	20
6	268	41.1	+15	17.2	254	49.1	86 +6 01.8	45	3 44	4 24	4 57	6 40	80	19 39	25
7	283	41.2		16.4	269	16.8	87 +5 46.2	40	4 02	38	5 08	44	76	37	30
8	298	41.3		15.7	283	44.5	87 30.6	35	17	50	17	47	72	36	33
9	313	41.4		15.0	298	12.2	87 +5 14.9	30	29	4 59	25	50	69	35	37
10	328	41.5		14.2	312	40.0	88 +4 59.2	20	4 48	5 16	39	55	63	33	42
11	343	41.6	+15	13.5	327	07.9	89 +4 43.4	10 N	5 03	5 29	5 51	6 59	58	19 31	47
12	358	41.7	+15	12.7	341	35.7	88 +4 27.7	0	5 15	5 40	6 02	7 04	53	19 29	52
13	13	41.8		12.0	356	03.7	90 +4 11.9	10 S	26	5 51	13	08	48	27	57
14	28	41.9		11.2	10	31.6	89 +3 56.1	20	35	6 02	24	12	43	25	62
15	43	42.0		10.5	24	59.6	90 40.3	30	44	13	38	18	37	23	68
16	58	42.1		09.8	39	27.6	90 24.5	35	49	19	45	20	34	21	72
17	73	42.2	+15	09.0	53	55.7	91 +3 08.6	40	5 53	6 25	6 54	7 24	30	19 20	75
18	88	42.3	+15	08.3	68	23.7	90 +2 52.8	45	5 58	6 33	7 04	7 28	26	19 18	80
19	103	42.4		07.5	82	51.9	92 36.9	50	6 03	41	16	32	21	16	85
20	118	42.5		06.8	97	20.0	91 21.0	52	05	45	21	34	19	15	88
21	133	42.6		06.0	111	48.2	92 +2 05.2	54	07	49	27	36	17	14	90
22	148	42.7		05.3	126	16.4	92 +1 49.3	56	10	54	34	39	13	13	93
23	163	42.8		04.5	140	44.6	92 33.4	58	12	6 59	42	42	10	11	97
24	178	42.9	+15	03.8	155	12.9	93 +1 17.5	60 S	6 15	7 05	7 50	7 45	7	19 10	101
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 2 ^h 42 ^m 1		Mag: -4.4 PMG: 14 ^h 56 ^m			Mag: +1.5 PMG: 15 ^h 09 ^m			Mag: -2.8 PMG: 2 ^h 55 ^m			Mag: +1.1 PMG: 14 ^h 51 ^m			
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	319	21.4	136	02.6	-2 15.2	132	25.2	-2 38.3	316	09.3	-0 13.8	136	47.5	+1 17.5	
1	334	23.8	151	02.8		147	26.3	39.0	331	11.9	13.9	151	49.7	17.4	
2	349	26.3	166	03.0		162	27.3	39.6	346	14.5	14.0	166	51.9	17.3	
3	4	28.8	181	03.3		177	28.4	40.3	1	17.1	14.0	181	54.2	17.2	
4	19	31.2	196	03.5		192	29.4	40.9	16	19.7	14.1	196	56.4	17.1	
5	34	33.7	211	03.7	-2 21.3	207	30.4	-2 41.6	31	22.3	-0 14.2	211	58.6	+1 17.0	
6	49	36.1	226	04.0	-2 22.6	222	31.5	-2 42.2	46	24.9	-0 14.3	227	00.9	+1 16.9	
7	64	38.6	241	04.2		237	32.5	42.9	61	27.5	14.3	242	03.1	16.8	
8	79	41.1	256	04.4		252	33.6	43.5	76	30.1	14.4	257	05.3	16.7	
9	94	43.5	271	04.7		267	34.6	44.2	91	32.7	14.5	272	07.6	16.6	
10	109	46.0	286	04.9		282	35.6	44.8	106	35.3	14.5	287	09.8	16.5	
11	124	48.5	301	05.1	-2 28.7	297	36.7	-2 45.5	121	37.9	-0 14.6	302	12.0	+1 16.4	
12	139	50.9	316	05.4	-2 29.9	312	37.7	-2 46.1	136	40.5	-0 14.7	317	14.3	+1 16.3	
13	154	53.4	331	05.6		327	38.7	46.7	151	43.1	14.8	332	16.5	16.2	
14	169	55.9	346	05.8		342	39.8	47.4	166	45.7	14.8	347	18.7	16.1	
15	184	58.3	1	06.1		357	40.8	48.0	181	48.3	14.9	2	21.0	16.0	
16	200	00.8	16	06.3	34.8	12	41.9	48.7	196	50.9	15.0	17	23.2	15.9	
17	215	03.2	31	06.6	-2 36.1	27	42.9	-2 49.3	211	53.5	-0 15.0	32	25.4	+1 15.8	
18	230	05.7	46	06.8	-2 37.3	42	43.9	-2 50.0	226	56.1	-0 15.1	47	27.7	+1 15.7	
19	245	08.2	61	07.0		57	45.0	50.6	241	58.7	15.2	62	29.9	15.6	
20	260	10.6	76	07.3		72	46.0	51.3	257	01.3	15.3	77	32.2	15.4	
21	275	13.1	91	07.5		87	47.0	51.9	272	03.9	15.3	92	34.4	15.3	
22	290	15.6	106	07.7		102	48.1	52.6	287	06.5	15.4	107	36.6	15.2	
23	305	18.0	121	08.0		117	49.1	53.2	302	09.1	15.5	122	38.9	15.1	
24	320	20.5	136	08.2	-2 44.6	132	50.2	-2 53.9	317	11.7	-0 15.5	137	41.1	+1 15.0	
Dif	—		+2	-12		+10	-6		+26	-1		+22	-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 1			Edad: 1 ^d 9 PHE { 4 ^h : 61'0 12 ^h : 60'8 20 ^h : 60'6 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	42.9	+15 03.8	155	12.9	+1 17.5	60 N	20 02	20 54	22 15	8 03 100		19 52 7		
1	193	43.0	03.0	169	41.2	+1 01.7 ¹⁵⁸	58	19 52	40	21 49	03 96		54 11		
2	208	43.1	02.3	184	09.5	+0 45.8 ¹⁵⁹	56	44	28	29	02 93		56 14		
3	223	43.2	01.5	198	37.9	29.9 ¹⁵⁹	54	37	18	21 12	02 90		19 58 17		
4	238	43.3	+15 00.8	213	06.2	+0 14.1 ¹⁵⁸	52	30	09	20 59	01 87		20 00 19		
5	253	43.4	+15 00.0	227	34.6	-0 01.8 ¹⁵⁹	50	19 24	20 01	20 47	8 01 85		20 01 22		
6	268	43.5	+14 59.3	242	03.0	-0 17.6 ¹⁵⁸	45	19 11	19 44	20 24	8 00 79		20 04 27		
7	283	43.6	58.5	256	31.5	33.5 ¹⁵⁹	40	19 01	30	20 06	8 00 74		07 31		
8	298	43.7	57.8	270	59.9	-0 49.3 ¹⁵⁸	35	18 52	19	19 51	7 59 71		09 34		
9	313	43.8	57.0	285	28.4	-1 05.1 ¹⁵⁸	30	44	19 09	40	59 67		12 37		
10	328	43.9	56.3	299	56.9	20.9 ¹⁵⁸	20	31	18 54	21	58 62		15 43		
11	343	44.0	+14 55.5	314	25.4	-1 36.6 ¹⁵⁷	10 N	18 19	18 41	19 06	7 57 57		20 18 48		
12	358	44.1	+14 54.8	328	53.9	-1 52.4 ¹⁵⁸	0	18 08	18 30	18 55	7 57 52		20 21 52		
13	13	44.3	54.0	343	22.5	-2 08.1 ¹⁵⁷	10 S	17 58	19	45	56 47		24 57		
14	28	44.4	53.3	357	51.0	23.8 ¹⁵⁷	20	47	18 09	35	55 43		27 62		
15	43	44.5	52.5	12	19.6	39.4 ¹⁵⁶	30	34	17 59	27	55 37		31 67		
16	58	44.6	51.8	26	48.2	-2 55.1 ¹⁵⁷	35	27	53	23	54 34		33 70		
17	73	44.7	+14 51.0	41	16.8	-3 10.7 ¹⁵⁶	40	17 18	17 46	18 18	7 54 30		20 35 74		
18	88	44.8	+14 50.2	55	45.4	-3 26.2 ¹⁵⁵	45	17 09	17 39	18 14	7 54 25		20 38 79		
19	103	44.9	49.5	70	14.0	41.8 ¹⁵⁶	50	16 57	31	09	53 21		41 84		
20	118	45.0	48.7	84	42.7	-3 57.3 ¹⁵⁵	52	52	27	07	53 18		43 86		
21	133	45.1	48.0	99	11.3	-4 12.8 ¹⁵⁵	54	46	23	05	53 16		44 90		
22	148	45.2	47.2	113	40.0	28.2 ¹⁵⁴	56	39	19	03	52 14		46 92		
23	163	45.3	46.5	128	08.6	43.6 ¹⁵⁴	58	32	14	18 01	52 10		48 96		
24	178	45.4	+14 45.7	142	37.3	-4 58.9 ¹⁵³	60 S	16 23	17 09	17 58	7 52 6		20 51 99		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 2 ^h 38 ^m 2		Mag: -4.4 PMG: 14 ^h 55 ^m		Mag: +1.5 PMG: 15 ^h 08 ^m		Mag: -2.8 PMG: 2 ^h 51 ^m			Mag: +1.1 PMG: 14 ^h 47 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	°	°	°	'	°	°	'	°			
0	320	20.5	136 08.2	-2 44.6	132 50.2	-2 53.9	317	11.7	-0 15.5	137 41.1	+1 15.0				
1	335	23.0	151 08.5	45.8	147 51.2	54.5	332	14.4	15.6	152 43.3	14.9				
2	350	25.4	166 08.7	47.1	162 52.2	55.2	347	17.0	15.7	167 45.6	14.8				
3	5 27.9	181 09.0	48.3	177 53.3	55.8	2 19.6	17 22.2	15.8	16.2	182 47.8	14.7				
4	20 30.4	196 09.2	49.5	192 54.3	56.4	17 22.2	32 24.8	15.9	16.3	197 50.0	14.6				
5	35 32.8	211 09.4	-2 50.7	207 55.3	-2 57.1	47 27.4	62 30.0	-0 16.0	16.1	212 52.3	+1 14.5				
6	50 35.3	226 09.7	-2 52.0	222 56.4	-2 57.7	77 32.6	167 48.2	-0 16.3	16.2	227 54.5	+1 14.4				
7	65 37.7	241 09.9	53.2	237 57.4	58.4	92 35.2	273 06.5	17.1	16.3	242 56.7	14.3				
8	80 40.2	256 10.2	54.4	252 58.4	59.0	107 37.8	288 09.1	17.2	16.7	257 59.0	14.2				
9	95 42.7	271 10.4	55.6	267 59.5	-2 59.7	122 40.4	303 11.7	-0 17.3	17.3	273 01.2	14.1				
10	110 45.1	286 10.7	56.9	283 00.5	-3 00.3	137 43.0	318 14.3	-0 17.3	17.3	288 03.4	14.0				
11	125 47.6	301 10.9	-2 58.1	298 01.5	-3 01.0	152 45.6				303 05.7	+1 13.9				
12	140 50.1	316 11.2	-2 59.3	313 02.6	-3 01.6	167 48.2				318 07.9	+1 13.8				
13	155 52.5	331 11.4	-3 00.5	328 03.6	02.3	182 50.8				333 10.1	13.7				
14	170 55.0	346 11.7	01.8	343 04.6	02.9	197 53.4				348 12.3	13.6				
15	185 57.5	1 11.9	03.0	358 05.7	03.6	212 56.0				3 14.6	13.4				
16	200 59.9	16 12.2	04.2	13 06.7	04.2	227 58.7				18 16.8	13.3				
17	216 02.4	31 12.4	-3 05.4	28 07.7	-3 04.9	243 01.3				33 19.0	+1 13.2				
18	231 04.9	46 12.7	-3 06.6	43 08.8	-3 05.5	258 03.9				48 21.3	+1 13.1				
19	246 07.3	61 12.9	07.9	58 09.8	06.2	273 06.5				63 23.5	13.0				
20	261 09.8	76 13.2	09.1	73 10.8	06.8	288 09.1				78 25.7	12.9				
21	276 12.2	91 13.4	10.3	88 11.9	07.4	303 11.7				93 28.0	12.8				
22	291 14.7	106 13.7	11.5	103 12.9	08.1	318 14.3				108 30.2	12.7				
23	306 17.2	121 13.9	12.7	118 13.9	08.7					123 32.4	12.6				
24	321 19.6	136 14.2	-3 14.0	133 15.0	-3 09.4					138 34.7	+1 12.5				
Dif	—		+2	-12	+10	-6		+26	-1		+22	-1			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 9				Edad: 2 ^d 9 PHE { 4 ^h : 60 ^h 4 12 ^h : 60 ^h 2 20 ^h : 59 ^h 9 R°: 52 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	45.4	+14	45.7	142	37.3	-4	58.9	60 N	1	56	3	16	4	09	9	43	
1	193	45.5		44.9	157	06.0	97	-5	14.2	58	2	22	30	18	39	95	20	
2	208	45.6		44.2	171	34.6	96		29.5	56	42	42	27	35	91	10	16	
3	223	45.8		43.4	186	03.3	97		44.7	54	2	58	3	34	32	88	15	
4	238	45.9		42.7	200	32.0	97	-5	59.9	52	3	12	4	40	28	86	19	
5	253	46.0	+14	41.9	215	00.7	97	-6	15.0	50	3	24	4	10	9	26	23	
6	268	46.1	+14	41.1	229	29.3	96	-6	30.0	45	3	47	4	27	9	19	28	
7	283	46.2		40.4	243	58.0	97	-6	45.0	40	4	05	40	5	14	74	38	
8	298	46.3		39.6	258	26.7	97	-7	00.0	35	19	4	51	18	10	70	43	
9	313	46.4		38.9	272	55.4	97	-7	14.9	30	31	5	01	26	06	67	49	
10	328	46.5		38.1	287	24.1	97		29.7	20	4	49	16	39	9	00	44	
11	343	46.6	+14	37.3	301	52.7	96	-7	44.5	10 N	5	04	5	29	8	54	48	
12	358	46.8	+14	36.6	316	21.4	97	-7	59.3	0	5	15	5	40	8	49	53	
13	13	46.9		35.8	330	50.1	97	-8	13.9	10 S	25	5	50	12	43	48	21	
14	28	47.0		35.0	345	18.7	96		28.5	20	34	6	00	23	38	43	29	
15	43	47.1		34.3	359	47.4	97		43.1	30	43	11	36	32	37	38	66	
16	58	47.2		33.5	14	16.1	97	-8	57.5	35	47	17	43	28	35	43	70	
17	73	47.3	+14	32.8	28	44.7	96	-9	11.9	40	5	51	6	23	8	24	73	
18	88	47.4	+14	32.0	43	13.3	96	-9	26.3	45	5	55	6	30	8	19	27	
19	103	47.5		31.2	57	42.0	97		40.5	50	6	00	38	12	14	22	82	
20	118	47.7		30.5	72	10.6	96	-9	54.7	52	02	42	17	11	20	09	85	
21	133	47.8		29.7	86	39.2	96	-10	08.8	54	04	46	23	09	17	14	87	
22	148	47.9		28.9	101	07.8	96		22.9	56	06	50	30	06	14	18	91	
23	163	48.0		28.2	115	36.4	96		36.8	58	08	6	55	37	8	02	94	
24	178	48.1	+14	27.4	130	04.9	95	-10	50.7	60 S	6	10	7	00	7	58	98	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 34 ^m 3		Mag: -4.4 PMG: 14 ^h 55 ^m				Mag: +1.5 PMG: 15 ^h 06 ^m				Mag: -2.8 PMG: 2 ^h 47 ^m				Mag: +1.1 PMG: 14 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	321	19.6	136	14.2	-3	14.0	133	15.0	-3	09.4	318	14.3	-0	17.3	138	34.7	+1	12.5
1	336	22.1	151	14.4		15.2	148	16.0		10.0	333	16.9		17.4	153	36.9		12.4
2	351	24.6	166	14.7		16.4	163	17.0		10.7	348	19.5		17.5	168	39.1		12.3
3	6	27.0	181	14.9		17.6	178	18.1		11.3	3	22.1		17.5	183	41.4		12.2
4	21	29.5	196	15.2		18.9	193	19.1		12.0	18	24.8		17.6	198	43.6		12.1
5	36	32.0	211	15.5	-3	20.1	208	20.1	-3	12.6	33	27.4	-0	17.7	213	45.8	+1	12.0
6	51	34.4	226	15.7	-3	21.3	223	21.2	-3	13.3	48	30.0	-0	17.8	228	48.1	+1	11.9
7	66	36.9	241	16.0		22.5	238	22.2		13.9	63	32.6		17.8	243	50.3		11.8
8	81	39.3	256	16.2		23.7	253	23.2		14.6	78	35.2		17.9	258	52.5		11.6
9	96	41.8	271	16.5		25.0	268	24.3		15.2	93	37.8		18.0	273	54.7		11.5
10	111	44.3	286	16.7		26.2	283	25.3		15.9	108	40.4		18.1	288	57.0		11.4
11	126	46.7	301	17.0	-3	27.4	298	26.3	-3	16.5	123	43.0	-0	18.1	303	59.2	+1	11.3
12	141	49.2	316	17.3	-3	28.6	313	27.3	-3	17.2	138	45.7	-0	18.2	319	01.4	+1	11.2
13	156	51.7	331	17.5		29.8	328	28.4		17.8	153	48.3		18.3	334	03.7		11.1
14	171	54.1	346	17.8		31.0	343	29.4		18.4	168	50.9		18.4	349	05.9		11.0
15	186	56.6	1	18.0		32.3	358	30.4		19.1	183	53.5		18.5	4	08.1		10.9
16	201	59.1	16	18.3		33.5	13	31.5		19.7	198	56.1		18.5	19	10.4		10.8
17	217	01.5	31	18.6	-3	34.7	28	32.5	-3	20.4	213	58.7	-0	18.6	34	12.6	+1	10.7
18	232	04.0	46	18.8	-3	35.9	43	33.5	-3	21.0	229	01.4	-0	18.7	49	14.8	+1	10.6
19	247	06.5	61	19.1		37.1	58	34.6		21.7	244	04.0		18.8	64	17.1		10.5
20	262	08.9	76	19.4		38.4	73	35.6		22.3	259	06.6		18.8	79	19.3		10.4
21	277	11.4	91	19.6		39.6	88	36.6		23.0	274	09.2		18.9	94	21.5		10.3
22	292	13.8	106	19.9		40.8	103	37.6		23.6	289	11.8		19.0	109	23.7		10.2
23	307	16.3	121	20.1		42.0	118	38.7		24.3	304	14.4		19.1	124	26.0		10.1
24	322	18.8	136	20.4	-3	43.2	133	39.7	-3	24.9	319	17.1	-0	19.2	139	28.2	+1	09.9
Dif	—		+3		-12		+10		-6		+26		-1		+22		-1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 7				Edad: 3 ^d 9 PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 4 20 ^h : 59 ^m 1 R°: 53 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	48.1	+14	27.4	130	04.9	-10	50.7	60 N	19 56	20 48	22 05	11 22 98	20 08 13		
1	193	48.2		26.6	144	33.5	-11	04.6 ¹³⁹	58	47	34	21 41	14 93	18 16		
2	208	48.3		25.9	159	02.0		18.3 ¹³⁷	56	39	23	22	06 90	26 20		
3	223	48.5		25.1	173	30.6		31.9 ¹³⁶	54	32	13	21 06	11 00 86	33 22		
4	238	48.6		24.3	187	59.1		45.5 ¹³⁶	52	26	20 04	20 53	10 54 83	40 26		
5	253	48.7	+14	23.5	202	27.6	-11	59.0 ¹³⁵	50	19 21	19 57	20 42	10 49 80	20 46 28		
6	268	48.8	+14	22.8	216	56.1	-12	12.4 ¹³⁴	45	19 08	19 40	20 20	10 37 76	20 59 33		
7	283	48.9		22.0	231	24.5		25.7 ¹³³	40	18 58	27	20 03	28 72	21 10 36		
8	298	49.0		21.2	245	53.0		39.0 ¹³³	35	50	17	19 49	20 68	19 39		
9	313	49.1		20.5	260	21.4	-12	52.1 ¹³¹	30	42	19 07	37	13 65	27 42		
10	328	49.3		19.7	274	49.9	-13	05.1 ¹³⁰	20	29	18 52	19	10 01 61	42 46		
11	343	49.4	+14	18.9	289	18.3	-13	18.1 ¹³⁰	10 N	18 18	18 40	19 05	9 50 57	21 54 50		
12	358	49.5	+14	18.1	303	46.6	-13	31.0 ¹²⁹	0	18 08	18 29	18 54	9 41 52	22 06 53		
13	13	49.6		17.4	318	15.0		43.8 ¹²⁸	10 S	17 58	20	45	31 49	17 57		
14	28	49.7		16.6	332	43.4	-13	56.4 ¹²⁶	20	47	10	36	21 45	30 60		
15	43	49.9		15.8	347	11.7	-14	09.0 ¹²⁶	30	35	18 00	28	09 40	44 65		
16	58	50.0		15.1	1	40.0		21.5 ¹²⁵	35	28	17 54	24	9 03 37	22 53 67		
17	73	50.1	+14	14.3	16	08.3	-14	33.9 ¹²⁴	40	17 20	17 48	18 20	8 55 34	23 02 71		
18	88	50.2	+14	13.5	30	36.5	-14	46.2 ¹²³	45	17 11	17 41	18 16	8 46 31	23 14 74		
19	103	50.3		12.7	45	04.8	-13	58.4 ¹²²	50	17 00	34	12	36 25	27 79		
20	118	50.4		12.0	59	33.0	-15	10.5 ¹²¹	52	16 55	30	10	31 23	34 81		
21	133	50.6		11.2	74	01.2		22.5 ¹²⁰	54	49	27	08	26 21	41 84		
22	148	50.7		10.4	88	29.4		34.4 ¹¹⁹	56	43	22	06	20 18	49 87		
23	163	50.8		09.6	102	57.5		46.2 ¹¹⁸	58	36	18	04	14 14	23 58 91		
24	178	50.9	+14	08.8	117	25.7	-15	57.9 ¹¹⁷	60 S	16 28	17 13	18 02	8 06 11	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 30 ^m 3		Mag: -4.4 PMG: 14 ^h 54 ^m		Mag: +1.5 PMG: 15 ^h 04 ^m		Mag: -2.8 PMG: 2 ^h 42 ^m		Mag: +1.1 PMG: 14 ^h 40 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	322	18.8	136	20.4	133	39.7	319	17.1	139	28.2
1	337	21.2	151	20.7	148	40.7	334	19.7	154	30.4
2	352	23.7	166	20.9	163	41.8	349	22.3	169	32.7
3	7	26.2	181	21.2	178	42.8	4	24.9	184	34.9
4	22	28.6	196	21.5	193	43.8	19	27.5	199	37.1
5	37	31.1	211	21.8	208	44.8	34	30.1	214	39.3
6	52	33.6	226	22.0	223	45.9	49	32.8	229	41.6
7	67	36.0	241	22.3	238	46.9	64	35.4	244	43.8
8	82	38.5	256	22.6	253	47.9	79	38.0	259	46.0
9	97	40.9	271	22.8	268	48.9	94	40.6	274	48.3
10	112	43.4	286	23.1	283	50.0	109	43.2	289	50.5
11	127	45.9	301	23.4	298	51.0	124	45.9	304	52.7
12	142	48.3	316	23.6	313	52.0	139	48.5	319	55.0
13	157	50.8	331	23.9	328	53.1	154	51.1	334	57.2
14	172	53.3	346	24.2	343	54.1	169	53.7	349	59.4
15	187	55.7	1	24.5	358	55.1	184	56.3	5	01.6
16	202	58.2	16	24.7	13	56.1	199	59.0	20	03.9
17	218	00.7	31	25.0	28	57.2	215	01.6	35	06.1
18	233	03.1	46	25.3	43	58.2	230	04.2	50	08.3
19	248	05.6	61	25.6	58	59.2	245	06.8	65	10.6
20	263	08.1	76	25.8	74	00.2	260	09.5	80	12.8
21	278	10.5	91	26.1	89	01.3	275	12.1	95	15.0
22	293	13.0	106	26.4	104	02.3	290	14.7	110	17.2
23	308	15.4	121	26.7	119	03.3	305	17.3	125	19.5
24	323	17.9	136	27.0	134	04.3	320	19.9	140	21.7
Dif	—		+3		+10		+26		+22	
			-12		-6		-1		-1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 5				Edad: 4 ^d 9 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 5 20 ^h : 58 ^m 2 Rº: 54 ^m														
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	178	50.9	+14	08.8	117	25.7	-15	57.9	60 N	2 05	3 22	4 14	13 00	92	20 21	19			
1	193	51.0		08.1	131	53.8	91	-16 09.5	58	29	36	23	12 47	88	34	24			
2	208	51.2		07.3	146	21.9	91	20.9	56	2 48	47	31	36 84		46	27			
3	223	51.3		06.5	160	49.9	90	32.3	54	3 03	3 57	37	26 81		20 56	30			
4	238	51.4		05.7	175	18.0	91	43.6	52	16	4 06	44	17 79		21 06	32			
5	253	51.5	+14	05.0	189	46.0	90	-16 54.7	50	3 28	4 13	4 49	12 09	77	21 14	34			
6	268	51.7	+14	04.2	204	14.0	90	-17 05.7	45	3 50	4 29	5 01	11 53	72	21 32	38			
7	283	51.8		03.4	218	42.0	90	16.7	40	4 07	42	11	40 69		46	41			
8	298	51.9		02.6	233	09.9	89	27.5	35	21	4 53	20	28 67		21 58	44			
9	313	52.0		01.8	247	37.8	89	38.2	30	32	5 02	27	18 64		22 09	45			
10	328	52.1		01.1	262	05.7	89	48.8	20	4 50	17	40	11 02	60	28	48			
11	343	52.3	+14	00.3	276	33.6	89	-17 59.2	10 N	5 04	5 29	5 51	10 47	57	22 44	51			
12	358	52.4	+13	59.5	291	01.5	89	-18 09.6	0	5 15	5 40	6 01	10 33	54	22 59	54			
13	13	52.5		58.7	305	29.3	88	19.8	10 S	25	50	11	20 51		23 14	57			
14	28	52.6		57.9	319	57.1	88	29.9	20	33	5 59	22	10 06	47	30	60			
15	43	52.8		57.1	334	24.9	88	39.9	30	41	6 09	34	9 49	44	23 49	63			
16	58	52.9		56.4	348	52.7	88	49.8	35	45	15	41	40 41		***	***	***		
17	73	53.0	+13	55.6	3	20.4	87	-18 59.6	40	5 49	6 21	6 48	9 29	38	***	***	***		
18	88	53.1	+13	54.8	17	48.1	87	-19 09.2	45	5 53	6 27	6 58	9 17	35	***	***	***		
19	103	53.3		54.0	32	15.8	87	18.7	50	57	35	7 08	9 01	31	***	***	***		
20	118	53.4		53.2	46	43.5	87	28.1	52	5 58	38	13	8 54	29	***	***	***		
21	133	53.5		52.4	61	11.1	86	37.4	54	6 00	42	19	47 26		***	***	***		
22	148	53.6		51.7	75	38.7	86	46.6	56	02	46	25	38 23		***	***	***		
23	163	53.8		50.9	90	06.4	87	-19 55.6	58	04	50	32	28 20		***	***	***		
24	178	53.9	+13	50.1	104	33.9	85	-20 04.5	60 S	6 06	6 55	7 40	8 17	15	0 08	96			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 26 ^m 4		Mag: -4.4 PMG: 14 ^h 54 ^m		Mag: +1.5 PMG: 15 ^h 03 ^m		Mag: -2.8 PMG: 2 ^h 38 ^m		Mag: +1.1 PMG: 14 ^h 36 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	323	17.9	136	27.0	-4	12.4	134	04.3	-3	40.5
1	338	20.4	151	27.2		13.6	149	05.4		41.1
2	353	22.8	166	27.5		14.8	164	06.4		41.8
3	8	25.3	181	27.8		16.0	179	07.4		42.4
4	23	27.8	196	28.1		17.2	194	08.4		43.1
5	38	30.2	211	28.4	-4	18.5	209	09.5	-3	43.7
6	53	32.7	226	28.6	-4	19.7	224	10.5	-3	44.3
7	68	35.2	241	28.9		20.9	239	11.5		45.0
8	83	37.6	256	29.2		22.1	254	12.5		45.6
9	98	40.1	271	29.5		23.3	269	13.6		46.3
10	113	42.6	286	29.8		24.5	284	14.6		46.9
11	128	45.0	301	30.1	-4	25.7	299	15.6	-3	47.6
12	143	47.5	316	30.3	-4	26.9	314	16.6	-3	48.2
13	158	49.9	331	30.6		28.1	329	17.6		48.9
14	173	52.4	346	30.9		29.4	344	18.7		49.5
15	188	54.9	1	31.2		30.6	359	19.7		50.2
16	203	57.3	16	31.5		31.8	14	20.7		50.8
17	218	59.8	31	31.8	-4	33.0	29	21.7	-3	51.5
18	234	02.3	46	32.1	-4	34.2	44	22.8	-3	52.1
19	249	04.7	61	32.4		35.4	59	23.8		52.8
20	264	07.2	76	32.6		36.6	74	24.8		53.4
21	279	09.7	91	32.9		37.8	89	25.8		54.1
22	294	12.1	106	33.2		39.0	104	26.8		54.7
23	309	14.6	121	33.5		40.2	119	27.9		55.4
24	324	17.0	136	33.8	-4	41.4	134	28.9	-3	56.0
Dif	—		+3		-12		+10		-6	
							+26		-1	
									+22	
									-	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 5 ^d 9	PHE { 4 ^h : 57 ^m /9 12 ^h : 57 ^m /6 20 ^h : 57 ^m /4 R°: 55 ^m									
	PMG: 12 ^h 04 ^m 3					SD: 15 ^h 8								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	53.9	+13 50.1	104	33.9	-20 04.5	86	60 N	19 51	20 41	21 55	14 32 83	20 40 30	
1	193	54.0		119	01.5	13.3	88	58	42	29	33	15 78	20 58 34	
2	208	54.1		133	29.0	21.9	86	56	35	18	15	14 00 75	21 13 37	
3	223	54.3		147	56.6	30.5	86	54	28	08	21 01	13 47 73	26 40	
4	238	54.4		162	24.1	38.9	84	52	22	20 00	20 48	36 71	38 41	
5	253	54.5	+13 46.1	176	51.5	-20 47.1	82	50	19 17	19 52	20 38	13 26 70	21 48 42	
6	268	54.6	+13 45.4	191	19.0	-20 55.3	82	45	19 05	19 37	20 16	13 05 67	22 10 45	
7	283	54.8		205	46.4	-21 03.3	80	40	18 56	24	19 59	12 49 64	27 47	
8	298	54.9		220	13.9	11.2	79	35	47	14	46	35 62	42 48	
9	313	55.0		234	41.3	18.9	77	30	40	19 05	35	22 62	22 54 50	
10	328	55.2		249	08.6	26.6	77	20	28	18 51	18	12 02 58	23 16 52	
11	343	55.3	+13 41.4	263	36.0	-21 34.0	74	10 N	18 18	18 39	19 04	11 44 56	23 35 53	
12	358	55.4	+13 40.6	278	03.4	-21 41.4	74	0	18 08	18 29	18 54	11 27 55	23 53 55	
13	13	55.5	39.8	292	30.7	48.6	72	10 S	17 58	20	44	11 11 52	** ** **	**
14	28	55.7	39.0	306	58.0	-21 55.7	71	20	48	10	36	10 53 50	** ** **	**
15	43	55.8	38.2	321	25.3	-22 02.7	70	30	36	18 01	29	33 47	** ** **	**
16	58	55.9	37.4	335	52.6	09.5	68	35	29	17 56	25	21 46	0 00 65	
17	73	56.1	+13 36.7	350	19.9	-22 16.2	67	40	17 22	17 50	18 22	10 07 44	0 13 67	
18	88	56.2	+13 35.9	4	47.2	-22 22.8	66	45	17 13	17 44	18 18	9 52 41	0 28 70	
19	103	56.3	35.1	19	14.4	29.2	64	50	17 03	36	14	32 38	46 74	
20	118	56.4	34.3	33	41.7	35.5	63	52	16 58	33	13	23 36	0 55 76	
21	133	56.6	33.5	48	08.9	41.6	61	54	53	30	11	13 34	1 05 78	
22	148	56.7	32.7	62	36.1	47.7	61	56	47	26	10	9 01 32	16 80	
23	163	56.8	31.9	77	03.3	53.5	58	58	40	22	08	8 48 28	29 84	
24	178	57.0	+13 31.1	91	30.5	-22 59.3	58	60 S	16 33	17 17	18 06	8 32 25	1 44 88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 22 ^m 5		Mag: -4.4 PMG: 14 ^h 53 ^m		Mag: +1.5 PMG: 15 ^h 01 ^m		Mag: -2.8 PMG: 2 ^h 34 ^m		Mag: +1.1 PMG: 14 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	324	17.0	136 33.8	-4 41.4	134 28.9	-3 56.0	321 23.0	-0 23.0	141 15.1	+1 04.8
1	339	19.5	151 34.1	42.7	149 29.9	56.6	336 25.6	23.1	156 17.4	04.7
2	354	22.0	166 34.4	43.9	164 30.9	57.3	351 28.3	23.2	171 19.6	04.6
3	9	24.4	181 34.7	45.1	179 31.9	57.9	6 30.9	23.3	186 21.8	04.5
4	24	26.9	196 35.0	46.3	194 33.0	58.6	21 33.5	23.4	201 24.0	04.4
5	39	29.4	211 35.3	-4 47.5	209 34.0	-3 59.2	36 36.2	-0 23.5	216 26.3	+1 04.2
6	54	31.8	226 35.6	-4 48.7	224 35.0	-3 59.9	51 38.8	-0 23.5	231 28.5	+1 04.1
7	69	34.3	241 35.9	49.9	239 36.0	-4 00.5	66 41.4	23.6	246 30.7	04.0
8	84	36.8	256 36.2	51.1	254 37.0	01.2	81 44.1	23.7	261 32.9	03.9
9	99	39.2	271 36.5	52.3	269 38.1	01.8	96 46.7	23.8	276 35.2	03.8
10	114	41.7	286 36.7	53.5	284 39.1	02.5	111 49.3	23.9	291 37.4	03.7
11	129	44.2	301 37.0	-4 54.7	299 40.1	-4 03.1	126 52.0	-0 24.0	306 39.6	+1 03.6
12	144	46.6	316 37.3	-4 55.9	314 41.1	-4 03.8	141 54.6	-0 24.0	321 41.8	+1 03.5
13	159	49.1	331 37.6	57.1	329 42.1	04.4	156 57.2	24.1	336 44.1	03.4
14	174	51.5	346 37.9	58.3	344 43.2	05.1	171 59.9	24.2	351 46.3	03.3
15	189	54.0	1 38.2	-4 59.5	359 44.2	05.7	187 02.5	24.3	6 48.5	03.2
16	204	56.5	16 38.5	-5 00.8	14 45.2	06.4	202 05.1	24.4	21 50.7	03.1
17	219	58.9	31 38.8	-5 02.0	29 46.2	-4 07.0	217 07.8	-0 24.5	36 53.0	+1 02.9
18	235	01.4	46 39.1	-5 03.2	44 47.2	-4 07.7	232 10.4	-0 24.6	51 55.2	+1 02.8
19	250	03.9	61 39.4	04.4	59 48.2	08.3	247 13.0	24.6	66 57.4	02.7
20	265	06.3	76 39.7	05.6	74 49.3	09.0	262 15.7	24.7	81 59.6	02.6
21	280	08.8	91 40.1	06.8	89 50.3	09.6	277 18.3	24.8	97 01.9	02.5
22	295	11.3	106 40.4	08.0	104 51.3	10.2	292 21.0	24.9	112 04.1	02.4
23	310	13.7	121 40.7	09.2	119 52.3	10.9	307 23.6	25.0	127 06.3	02.3
24	325	16.2	136 41.0	-5 10.4	134 53.3	-4 11.5	322 26.2	-0 25.1	142 08.5	+1 02.2
Dif	—		+3	-12	+10	-6	+26	-1	+22	-1

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h /8 PMG: 12 ^h 04 ^m 1				Edad: 6 ^d 9 PHE { 4 ^h : 57/1 12 ^h : 56/8 20 ^h : 56/6 Rº: 54 ^m SD: 15 ^h /6 PMG: 18 ^h 35 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	57.0	+13	31.1	91	30.5	-22	59.3	60 N	2	14	3	28	4	19	15	55	65
1	193	57.1		30.3	105	57.7 82	-23	04.9 56	58		36		41		27		33	63
2	208	57.2		29.5	120	24.9 82		10.4 55	56	2	54	3	51		34		15	62
3	223	57.4		28.7	134	52.1 82		15.7 53	54	3	09	4	01		41		15	00
4	238	57.5		27.9	149	19.3 82		20.9 52	52		21		09		47		14	47
5	253	57.6	+13	27.1	163	46.5 82	-23	26.0 51	50	3	31	4	17	4	52	14	36	60
6	268	57.8	+13	26.3	178	13.6 81	-23	30.9 49	45	3	53	4	32	5	04	14	12	59
7	283	57.9		25.5	192	40.8 82		35.7 48	40	4	09		44		13		13	53
8	298	58.0		24.7	207	08.0 82		40.3 46	35		23	4	55		21		37	58
9	313	58.2		23.9	221	35.1 81		44.8 45	30		34	5	03		28		24	56
10	328	58.3		23.1	236	02.3 82		49.2 44	20	4	51		18		41		13	00
11	343	58.4	+13	22.3	250	29.5 82	-23	53.4 42	10 N	5	04	5	29	5	51	12	40	55
12	358	58.6	+13	21.5	264	56.6 81	-23	57.5 41	0	5	15	5	39	6	01	12	22	54
13	13	58.7		20.7	279	23.8 82	-24	01.5 40	10 S		24		49		10		12	03
14	28	58.8		19.9	293	51.0 82		05.3 38	20	32	5	58		20		11	43	
15	43	59.0		19.1	308	18.1 81		08.9 36	30	39	6	07		32		20	51	
16	58	59.1		18.3	322	45.3 82		12.5 36	35	43		12		38		11	07	
17	73	59.2	+13	17.5	337	12.5 82	-24	15.9 34	40	5	46	6	18	6	46	10	51	
18	88	59.4	+13	16.7	351	39.7 82	-24	19.1 32	45	5	50	6	24	6	54	10	33	
19	103	59.5		15.9	6	06.9 82		22.2 31	50	53		31		7	05	10	10	
20	118	59.7		15.1	20	34.1 82		25.2 30	52	55		34		09		9	59	
21	133	59.8		14.3	35	01.3 82		28.1 29	54	56		38		15		47	45	
22	148	59.9		13.5	49	28.6 83		30.8 27	56	58		41		20		33	43	
23	164	00.1		12.7	63	55.8 82		33.3 25	58	5	59	45		27		9	16	
24	179	00.2	+13	11.9	78	23.1 83	-24	35.7 24	60 S	6	01	6	50	7	34	8	57	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 18 ^m 5		Mag: -4.4 PMG: 14 ^h 53 ^m				Mag: +1.5 PMG: 14 ^h 59 ^m				Mag: -2.8 PMG: 2 ^h 30 ^m				Mag: +1.1 PMG: 14 ^h 29 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	325	16.2	136	41.0	-5	10.4	134	53.3	-4	11.5	322	26.2	-0	25.1	142	08.5	+1	02.2
1	340	18.7	151	41.3		11.6	149	54.4		12.2	337	28.9		25.2	157	10.8		02.1
2	355	21.1	166	41.6		12.8	164	55.4		12.8	352	31.5		25.2	172	13.0		02.0
3	10	23.6	181	41.9		14.0	179	56.4		13.5	7	34.1		25.3	187	15.2		01.9
4	25	26.0	196	42.2		15.2	194	57.4		14.1	22	36.8		25.4	202	17.4		01.8
5	40	28.5	211	42.5	-5	16.4	209	58.4	-4	14.8	37	39.4	-0	25.5	217	19.6	+1	01.6
6	55	31.0	226	42.8	-5	17.6	224	59.4	-4	15.4	52	42.1	-0	25.6	232	21.9	+1	01.5
7	70	33.4	241	43.1		18.8	240	00.5		16.1	67	44.7		25.7	247	24.1		01.4
8	85	35.9	256	43.4		20.0	255	01.5		16.7	82	47.3		25.8	262	26.3		01.3
9	100	38.4	271	43.7		21.2	270	02.5		17.4	97	50.0		25.9	277	28.5		01.2
10	115	40.8	286	44.0		22.4	285	03.5		18.0	112	52.6		25.9	292	30.8		01.1
11	130	43.3	301	44.4	-5	23.6	300	04.5	-4	18.7	127	55.3	-0	26.0	307	33.0	+1	01.0
12	145	45.8	316	44.7	-5	24.8	315	05.5	-4	19.3	142	57.9	-0	26.1	322	35.2	+1	00.9
13	160	48.2	331	45.0		26.0	330	06.5		20.0	158	00.5		26.2	337	37.4		00.8
14	175	50.7	346	45.3		27.2	345	07.6		20.6	173	03.2		26.3	352	39.7		00.7
15	190	53.1	1	45.6		28.4	0	08.6		21.3	188	05.8		26.4	7	41.9		00.6
16	205	55.6	16	45.9		29.6	15	09.6		21.9	203	08.5		26.5	22	44.1		00.4
17	220	58.1	31	46.2	-5	30.8	30	10.6	-4	22.6	218	11.1	-0	26.6	37	46.3	+1	00.3
18	236	00.5	46	46.5	-5	32.0	45	11.6	-4	23.2	233	13.7	-0	26.6	52	48.5	+1	00.2
19	251	03.0	61	46.9		33.2	60	12.6		23.8	248	16.4		26.7	67	50.8	+1	00.1
20	266	05.5	76	47.2		34.4	75	13.6		24.5	263	19.0		26.8	82	53.0	+1	00.0
21	281	07.9	91	47.5		35.6	90	14.7		25.1	278	21.7		26.9	97	55.2	+0	59.9
22	296	10.4	106	47.8		36.8	105	15.7		25.8	293	24.3		27.0	112	57.4		59.8
23	311	12.9	121	48.1		38.0	120	16.7		26.4	308	27.0		27.1	127	59.7		59.7
24	326	15.3	136	48.4	-5	39.2	135	17.7	-4	27.1	323	29.6	-0	27.2	143	01.9	+0	59.6
Dif	—		+3		-12		+10		-6		+26		-1		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 9			Edad: 7 ^d 9 PHE { 4 ^h : 56 ^s 3 12 ^h : 56 ^s 1 20 ^h : 55 ^s 9 PMG: 19 ^h 29 ^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	179	00.2	+13	11.9	78	23.1	-24	35.7	60 N	19 45	20 35	21 46	17 00 43	21 58 66
1	194	00.3		11.1	92	50.3		38.0	58	37	23	25	16 36 45	22 22 63
2	209	00.5		10.3	107	17.6		40.2	56	30	12	21 08	17 47	40 63
3	224	00.6		09.5	121	44.9		42.2	54	24	20 03	20 55	16 01 48	22 56 61
4	239	00.7		08.7	136	12.3		44.1	52	18	19 55	43	15 48 48	23 10 60
5	254	00.9	+13	07.9	150	39.6	-24	45.8	50	19 13	19 48	20 33	15 36 48	23 22 59
6	269	01.0	+13	07.1	165	07.0	-24	47.4	45	19 02	19 33	20 12	15 11 50	23 47 58
7	284	01.2		06.3	179	34.3		48.8	40	18 53	22	19 56	14 51 51	** ** *
8	299	01.3		05.5	194	01.7		50.1	35	45	12	43	35 51	** ** *
9	314	01.4		04.6	208	29.2		51.3	30	38	19 03	33	14 20 52	** ** *
10	329	01.6		03.8	222	56.6		52.4	20	27	18 49	16	13 56 52	0 08 53
11	344	01.7	+13	03.0	237	24.1	-24	53.3	10 N	18 17	18 38	19 03	13 35 53	0 28 54
12	359	01.9	+13	02.2	251	51.6	-24	54.0	0	18 07	18 28	18 53	13 16 53	0 48 54
13	14	02.0		01.4	266	19.1		54.7	10 S	17 58	19	44	12 56 54	1 07 54
14	29	02.1	+13	00.6	280	46.6		55.2	20	48	11	37	35 54	28 54
15	44	02.3	+12	59.8	295	14.2		55.5	30	37	18 02	30	12 11 55	1 51 55
16	59	02.4		59.0	309	41.8		55.8	35	31	17 57	27	11 57 55	2 05 55
17	74	02.6	+12	58.2	324	09.5	-24	55.8	40	17 24	17 52	18 23	11 41 55	2 22 54
18	89	02.7	+12	57.4	338	37.1	-24	55.8	45	17 16	17 46	18 20	11 21 56	2 41 54
19	104	02.8		56.6	353	04.8		55.6	50	06	39	17	10 57 56	3 05 55
20	119	03.0		55.7	7	32.6		55.3	52	17 01	36	16	45 56	17 54
21	134	03.1		54.9	22	00.4		54.9	54	16 56	33	14	32 56	30 55
22	149	03.3		54.1	36	28.2		54.3	56	50	29	13	10 16 57	3 46 54
23	164	03.4		53.3	50	56.0		53.6	58	44	26	12	9 58 57	4 04 54
24	179	03.6	+12	52.5	65	23.9	-24	52.7	60 S	16 37	17 21	18 10	9 35 58	4 26 54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 14 ^m 6		Mag: -4.4 PMG: 14 ^h 52 ^m		Mag: +1.5 PMG: 14 ^h 58 ^m		Mag: -2.8 PMG: 2 ^h 26 ^m		Mag: +1.1 PMG: 14 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	326	15.3	136	48.4	-5	39.2	135	17.7	323	29.6
1	341	17.8	151	48.8		40.4	150	18.7	338	32.2
2	356	20.3	166	49.1		41.6	165	19.7	353	34.9
3	11	22.7	181	49.4		42.8	180	20.7	8	37.5
4	26	25.2	196	49.7		44.0	195	21.8	23	40.2
5	41	27.6	211	50.0	-5	45.2	210	22.8	38	42.8
6	56	30.1	226	50.4	-5	46.4	225	23.8	53	45.5
7	71	32.6	241	50.7		47.6	240	24.8	68	48.1
8	86	35.0	256	51.0		48.8	255	25.8	83	50.8
9	101	37.5	271	51.3		50.0	270	26.8	98	53.4
10	116	40.0	286	51.7		51.2	285	27.8	113	56.1
11	131	42.4	301	52.0	-5	52.4	300	28.8	128	58.7
12	146	44.9	316	52.3	-5	53.5	315	29.8	144	01.3
13	161	47.4	331	52.6		54.7	330	30.9	159	04.0
14	176	49.8	346	53.0		55.9	345	31.9	174	06.6
15	191	52.3	1	53.3		57.1	0	32.9	189	09.3
16	206	54.8	16	53.6		58.3	15	33.9	204	11.9
17	221	57.2	31	53.9	-5	59.5	30	34.9	219	14.6
18	236	59.7	46	54.3	-6	00.7	45	35.9	234	17.2
19	252	02.1	61	54.6		01.9	60	36.9	249	19.9
20	267	04.6	76	54.9		03.1	75	37.9	264	22.5
21	282	07.1	91	55.3		04.3	90	38.9	279	25.2
22	297	09.5	106	55.6		05.5	105	40.0	294	27.8
23	312	12.0	121	55.9		06.7	120	41.0	309	30.5
24	327	14.5	136	56.2	-6	07.9	135	42.0	324	33.1
Dif	—		+3		-12		+10		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 8 ^d 9	PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 5 20 ^h : 55 ^m 3										
	PMG: 12 ^h 03 ^m 6					SD: 15 ^h 2		PMG: 20 ^h 21 ^m			Rº: 51 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	179	03.6	+12 52.5	65	23.9	-24 52.7	9	60 N	2 23	3 34	4 23	17 43	26	23 04	78
1	194	03.7	51.7	79	51.8	51.8	9	58	2 43	46	31	21 31	25	25 74	
2	209	03.8	50.9	94	19.8	50.7	11	56	3 00	3 56	38	17 04	33	43 70	
3	224	04.0	50.1	108	47.8	49.4	13	54	14	4 05	45	16 49	35	23 57	69
4	239	04.1	49.2	123	15.8	48.0	14	52	25	13	50	36 37		** ** *	**
5	254	04.3	+12 48.4	137	43.9	-24 46.6	14	50	3 35	4 20	4 55	16 24	39	** * *	**
6	269	04.4	+12 47.6	152	12.0	-24 44.9	17	45	3 56	4 35	5 06	16 01	41	** * *	**
7	284	04.6	46.8	166	40.2	43.2	17	40	4 12	46	15	15 42	43	0 06	57
8	299	04.7	46.0	181	08.4	41.3	19	35	24	4 56	23	26 44		23 56	
9	314	04.8	45.2	195	36.6	39.3	20	30	35	5 05	30	15 12	46	0 37	56
10	329	05.0	44.4	210	04.9	37.1	22	20	4 52	18	41	14 48	48	1 01	54
11	344	05.1	+12 43.5	224	33.3	-24 34.9	22	10 N	5 04	5 29	5 51	14 28	49	1 22	53
12	359	05.3	+12 42.7	239	01.7	-24 32.5	24	0	5 14	5 39	6 00	14 09	51	1 42	52
13	14	05.4	41.9	253	30.1	30.0	25	10 S	23	48	09	13 50	52	2 01	51
14	29	05.6	41.1	267	58.6	27.3	27	20	31	5 57	19	29 55		22 50	
15	44	05.7	40.3	282	27.2	24.6	27	30	37	6 05	30	13 06	56	2 46	48
16	59	05.9	39.4	296	55.7	21.7	29	35	40	10	36	12 52	57	3 00	48
17	74	06.0	+12 38.6	311	24.4	-24 18.7	30	40	5 44	6 15	6 43	12 36	58	3 16	47
18	89	06.2	+12 37.8	325	53.1	-24 15.5	32	45	5 47	6 21	6 51	12 17	60	3 35	46
19	104	06.3	37.0	340	21.8	12.3	32	50	50	28	7 01	11 53	62	4 00	43
20	119	06.4	36.2	354	50.6	08.9	34	52	51	30	05	41 64		11 43	
21	134	06.6	35.4	9	19.5	05.4	35	54	52	34	10	28 65		25 41	
22	149	06.7	34.5	23	48.4	-24 01.8	36	56	53	37	16	11 13	66	40 40	
23	164	06.9	33.7	38	17.4	-23 58.1	37	58	55	41	22	10 55	69	4 58	38
24	179	07.0	+12 32.9	52	46.4	-23 54.2	39	60 S	5 56	6 45	7 29	10 33	72	5 20	35

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 10 ^m 7		Mag: -4.5 PMG: 14 ^h 52 ^m		Mag: +1.5 PMG: 14 ^h 56 ^m		Mag: -2.9 PMG: 2 ^h 21 ^m		Mag: +1.1 PMG: 14 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	327	14.5	136	56.2	-6	07.9	135	42.0	-4	42.6	324	33.1	-0	29.3	143	55.2	+0	56.9
1	342	16.9	151	56.6	09.1	150	43.0	43.3	339	35.8	29.4	158	57.4	56.8				
2	357	19.4	166	56.9	10.2	165	44.0	43.9	354	38.4	29.5	173	59.6	56.7				
3	12	21.9	181	57.2	11.4	180	45.0	44.6	9	41.1	29.6	189	01.8	56.6				
4	27	24.3	196	57.6	12.6	195	46.0	45.2	24	43.7	29.7	204	04.1	56.5				
5	42	26.8	211	57.9	-6	13.8	210	47.0	-4	45.9	39	46.4	-0	29.8	219	06.3	+0	56.4
6	57	29.3	226	58.2	-6	15.0	225	48.0	-4	46.5	54	49.0	-0	29.9	234	08.5	+0	56.3
7	72	31.7	241	58.6	16.2	240	49.0	47.2	69	51.7	30.0	249	10.7	56.2				
8	87	34.2	256	58.9	17.4	255	50.0	47.8	84	54.3	30.1	264	12.9	56.1				
9	102	36.6	271	59.3	18.6	270	51.0	48.4	99	57.0	30.2	279	15.2	55.9				
10	117	39.1	286	59.6	19.8	285	52.1	49.1	114	59.6	30.3	294	17.4	55.8				
11	132	41.6	301	59.9	-6	21.0	300	53.1	-4	49.7	130	02.3	-0	30.3	309	19.6	+0	55.7
12	147	44.0	317	00.3	-6	22.1	315	54.1	-4	50.4	145	04.9	-0	30.4	324	21.8	+0	55.6
13	162	46.5	332	00.6	23.3	330	55.1	51.0	160	07.6	30.5	339	24.0	55.5				
14	177	49.0	347	00.9	24.5	345	56.1	51.7	175	10.3	30.6	354	26.3	55.4				
15	192	51.4	2	01.3	25.7	0	57.1	52.3	190	12.9	30.7	9	28.5	55.3				
16	207	53.9	17	01.6	26.9	15	58.1	53.0	205	15.6	30.8	24	30.7	55.2				
17	222	56.4	32	02.0	-6	28.1	30	59.1	-4	53.6	220	18.2	-0	30.9	39	32.9	+0	55.1
18	237	58.8	47	02.3	-6	29.3	46	00.1	-4	54.3	235	20.9	-0	31.0	54	35.1	+0	55.0
19	253	01.3	62	02.7	30.5	61	01.1	54.9	250	23.5	31.1	69	37.4	54.8				
20	268	03.8	77	03.0	31.6	76	02.1	55.6	265	26.2	31.2	84	39.6	54.7				
21	283	06.2	92	03.3	32.8	91	03.1	56.2	280	28.8	31.3	99	41.8	54.6				
22	298	08.7	107	03.7	34.0	106	04.1	56.9	295	31.5	31.4	114	44.0	54.5				
23	313	11.1	122	04.0	35.2	121	05.1	57.5	310	34.1	31.5	129	46.2	54.4				
24	328	13.6	137	04.4	-6	36.4	136	06.1	-4	58.2	325	36.8	-0	31.6	144	48.5	+0	54.3
Dif	—		+3 -12		+10 -6		+27 -1		+22 -1		+22 -1		-1 -1		+22 -1		-1 -1	

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15°8 PMG: 12 ^h 03 ^m 4			Edad: 9 ^d 9 PHE { 4 ^h : 55°1 12 ^h : 55°0 20 ^h : 54°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 m	h m m	h m m	h m m			
0	179	07.0	+12	32.9	52	46.4	-23	54.2	60 N	19 39	20 28	21 36	18 09	16	**	**	**		
1	194	07.2		32.1	67	15.5 ¹⁰¹		50.2	58	32	17	17	17 52	20	**	**	**		
2	209	07.3		31.2	81	44.6 ¹⁰¹		46.2	56	25	20 07	21 02	37	23	**	**	**		
3	224	07.5		30.4	96	13.8 ¹⁰²		41.9	54	19	19 58	20 49	24	26	**	**	**		
4	239	07.6		29.6	110	43.1 ¹⁰³		37.6	52	14	51	38	13	28	0	10	67		
5	254	07.8	+12	28.8	125	12.4 ¹⁰³	-23	33.2	50	19 09	19 44	20 28	17 03	30	0	21	65		
6	269	07.9	+12	28.0	139	41.8 ¹⁰⁴	-23	28.7	45	18 59	19 30	20 08	16 42	33	0	45	62		
7	284	08.1		27.1	154	11.2 ¹⁰⁴		24.0	40	50	19	19 53	25	36	1	03	60		
8	299	08.2		26.3	168	40.7 ¹⁰⁵		19.2	35	43	09	41	16	10	38	19	58		
9	314	08.4		25.5	183	10.2 ¹⁰⁵		14.3	30	36	19 01	31	15	58	40	33	56		
10	329	08.5		24.7	197	39.8 ¹⁰⁶		09.3	20	25	18 48	15	36	43	1	55	54		
11	344	08.7	+12	23.8	212	09.5 ¹⁰⁷	-23	04.2	10 N	18 16	18 37	19 02	15 17	46	2	15	52		
12	359	08.8	+12	23.0	226	39.2 ¹⁰⁷	-22	59.0	0	18 07	18 28	18 52	15 00	48	2	34	49		
13	14	09.0		22.2	241	09.0 ¹⁰⁸		53.7	10 S	17 58	19	44	14	42	51	2	52	48	
14	29	09.1		21.4	255	38.9 ¹⁰⁹		48.3	20	49	11	37	24	53	3	12	45		
15	44	09.3		20.5	270	08.8 ¹⁰⁹		42.7	30	38	18 03	31	14	02	56	34	43		
16	59	09.4		19.7	284	38.8 ¹¹⁰		37.1	35	32	17 58	28	13	49	58	3	48	41	
17	74	09.6	+12	18.9	299	08.9 ¹¹¹	-22	31.4	40	17 26	17 53	18 25	13	34	61	4	03	39	
18	89	09.7	+12	18.1	313	39.0 ¹¹¹	-22	25.5	45	17 18	17 48	18 22	13	17	63	4	21	37	
19	104	09.9		17.2	328	09.2 ¹¹²		19.6	50	09	42	20	12	55	67	4	34	34	
20	119	10.0		16.4	342	39.4 ¹¹²		13.5	52	17 04	39	19	45	68	4	54	32		
21	134	10.2		15.6	357	09.7 ¹¹³		07.3	54	16 59	36	18	33	70	5	06	30		
22	149	10.3		14.7	11	40.1 ¹¹⁴	-22	01.1	56	54	33	17	19	73	20	28			
23	164	10.5		13.9	26	10.5 ¹¹⁴	-21	54.7	58	48	29	15	12	04	76	36	25		
24	179	10.6	+12	13.1	40	41.0 ¹¹⁵	-21	48.3	60 S	16 42	17 26	18 14	11 45	80	5	55	21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 06 ^m 7		Mag: -4.5 PMG: 14 ^h 51 ^m		Mag: +1.5 PMG: 14 ^h 55 ^m		Mag: -2.9 PMG: 2 ^h 17 ^m		Mag: +1.1 PMG: 14 ^h 19 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	328	13.6	137	04.4	-6	36.4	136	06.1	-4	58.2	325	36.8	-0	31.6	144	48.5	+0	54.3
1	343	16.1	152	04.7		37.6	151	07.1		58.8	340	39.5		31.6	159	50.7		54.2
2	358	18.5	167	05.1		38.8	166	08.2	-4	59.4	355	42.1		31.7	174	52.9		54.1
3	13	21.0	182	05.4		39.9	181	09.2	-5	00.1	10	44.8		31.8	189	55.1		54.0
4	28	23.5	197	05.8		41.1	196	10.2		00.7	25	47.4		31.9	204	57.3		53.8
5	43	25.9	212	06.1	-6	42.3	211	11.2	-5	01.4	40	50.1	-0	32.0	219	59.5	+0	53.7
6	58	28.4	227	06.5	-6	43.5	226	12.2	-5	02.0	55	52.7	-0	32.1	235	01.8	+0	53.6
7	73	30.9	242	06.8		44.7	241	13.2		02.7	70	55.4		32.2	250	04.0		53.5
8	88	33.3	257	07.2		45.9	256	14.2		03.3	85	58.1		32.3	265	06.2		53.4
9	103	35.8	272	07.5		47.0	271	15.2		04.0	101	00.7		32.4	280	08.4		53.3
10	118	38.2	287	07.9		48.2	286	16.2		04.6	116	03.4		32.5	295	10.6		53.2
11	133	40.7	302	08.2	-6	49.4	301	17.2	-5	05.3	131	06.0	-0	32.6	310	12.9	+0	53.1
12	148	43.2	317	08.6	-6	50.6	316	18.2	-5	05.9	146	08.7	-0	32.7	325	15.1	+0	53.0
13	163	45.6	332	08.9		51.8	331	19.2		06.6	161	11.4		32.8	340	17.3		52.8
14	178	48.1	347	09.3		52.9	346	20.2		07.2	176	14.0		32.9	355	19.5		52.7
15	193	50.6	2	09.6		54.1	1	21.2		07.9	191	16.7		33.0	10	21.7		52.6
16	208	53.0	17	10.0		55.3	16	22.2		08.5	206	19.3		33.1	25	23.9		52.5
17	223	55.5	32	10.3	-6	56.5	31	23.2	-5	09.2	221	22.0	-0	33.2	40	26.2	+0	52.4
18	238	58.0	47	10.7	-6	57.7	46	24.2	-5	09.8	236	24.7	-0	33.3	55	28.4	+0	52.3
19	254	00.4	62	11.1	-6	58.8	61	25.2		10.4	251	27.3		33.4	70	30.6		52.2
20	269	02.9	77	11.4	-7	00.0	76	26.2		11.1	266	30.0		33.5	85	32.8		52.1
21	284	05.4	92	11.8	-7	01.2	91	27.2		11.7	281	32.6		33.5	100	35.0		52.0
22	299	07.8	107	12.1		02.4	106	28.2		12.4	296	35.3		33.6	115	37.2		51.8
23	314	10.3	122	12.5		03.6	121	29.2		13.0	311	38.0		33.7	130	39.5		51.7
24	329	12.7	137	12.9	-7	04.7	136	30.2	-5	13.7	326	40.6	-0	33.8	145	41.7	+0	51.6
Dif	—		+4		-12		+10		-6		+27		-1		+22		-	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 2			Edad: 10 ^d 9 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 Rº: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	10.6	+12	13.1	40	41.0	-21	48.3	60 N	2	31	3	39	4	28	18	25
1	194	10.8		12.3	55	11.6 ¹¹⁶		41.7 ⁶⁶	58	2	50	3	51		36	12	14
2	209	10.9		11.4	69	42.2 ¹¹⁶		35.0 ⁶⁷	56	3	05	4	00	42		18	00
3	224	11.1		10.6	84	12.9 ¹¹⁷		28.3 ⁶⁷	54		18		09	48		17	50
4	239	11.3		09.8	98	43.6 ¹¹⁷		21.4 ⁶⁹	52		30		16	53		41	22
5	254	11.4	+12	08.9	113	14.5 ¹¹⁹	-21	14.5 ⁶⁹	50	3	39	4	23	4	58	17	33
6	269	11.6	+12	08.1	127	45.4 ¹¹⁹	-21	07.5 ⁷⁰	45	3	59	4	37	5	09	17	15
7	284	11.7		07.3	142	16.3 ¹¹⁹	-21	00.3 ⁷²	40	4	14		49	17		17	01
8	299	11.9		06.4	156	47.3 ¹²⁰	-20	53.1 ⁷²	35		26	4	58	24		16	48
9	314	12.0		05.6	171	18.4 ¹²¹		45.8 ⁷³	30		36	5	06	31		38	35
10	329	12.2		04.8	185	49.6 ¹²²		38.4 ⁷⁴	20	4	52	19		42		19	40
11	344	12.3	+12	03.9	200	20.8 ¹²²	-20	30.9 ⁷⁵	10 N	5	04	5	30	5	51	16	03
12	359	12.5	+12	03.1	214	52.1 ¹²³	-20	23.3 ⁷⁶	0	5	14	5	39	6	00	15	48
13	14	12.6		02.3	229	23.4 ¹²³		15.6 ⁷⁷	10 S		22		47	08		33	49
14	29	12.8		01.4	243	54.8 ¹²⁴	-20	07.8 ⁷⁸	20		29	5	55	18		15	17
15	44	13.0	+12	00.6	258	26.3 ¹²⁵	-20	00.0 ⁷⁸	30		35	6	03	28		14	58
16	59	13.1	+11	59.8	272	57.9 ¹²⁶	-19	52.1 ⁷⁹	35		38		08	34		47	58
17	74	13.3	+11	58.9	287	29.5 ¹²⁶	-19	44.0 ⁸¹	40	5	41	6	13	6	40	14	35
18	89	13.4	+11	58.1	302	01.1 ¹²⁶	-19	35.9 ⁸¹	45	5	44	6	18	6	48	14	20
19	104	13.6		57.3	316	32.9 ¹²⁸		27.7 ⁸²	50		46	24	6	57		14	02
20	119	13.7		56.4	331	04.7 ¹²⁸		19.5 ⁸²	52		47	27	7	01		13	53
21	134	13.9		55.6	345	36.5 ¹²⁸		11.1 ⁸⁴	54		48	29		06		43	72
22	149	14.0		54.8	0	08.5 ¹³⁰	-19	02.7 ⁸⁴	56		49	32		11		32	75
23	164	14.2		53.9	14	40.5 ¹³⁰	-18	54.2 ⁸⁵	58		50	36		17		20	77
24	179	14.4	+11	53.1	29	12.5 ¹³⁰	-18	45.6 ⁸⁶	60 S	5	51	6	40	7	23	13	05

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 02 ^m 8		Mag: -4.5 PMG: 14 ^h 51 ^m		Mag: +1.5 PMG: 14 ^h 53 ^m		Mag: -2.9 PMG: 2 ^h 13 ^m		Mag: +1.1 PMG: 14 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	329	12.7	137	12.9	-7	04.7	136	30.2	-5	13.7
1	344	15.2	152	13.2		05.9	151	31.2		14.3
2	359	17.7	167	13.6		07.1	166	32.2		15.0
3	14	20.1	182	13.9		08.3	181	33.2		15.6
4	29	22.6	197	14.3		09.4	196	34.2		16.3
5	44	25.1	212	14.7	-7	10.6	211	35.2	-5	16.9
6	59	27.5	227	15.0	-7	11.8	226	36.2	-5	17.6
7	74	30.0	242	15.4		13.0	241	37.2		18.2
8	89	32.5	257	15.8		14.2	256	38.2		18.9
9	104	34.9	272	16.1		15.3	271	39.2		19.5
10	119	37.4	287	16.5		16.5	286	40.2		20.1
11	134	39.9	302	16.9	-7	17.7	301	41.2	-5	20.8
12	149	42.3	317	17.2	-7	18.9	316	42.2	-5	21.4
13	164	44.8	332	17.6		20.0	331	43.2		22.1
14	179	47.2	347	18.0		21.2	346	44.2		22.7
15	194	49.7	2	18.3		22.4	1	45.2		23.4
16	209	52.2	17	18.7		23.6	16	46.2		24.0
17	224	54.6	32	19.1	-7	24.7	31	47.2	-5	24.7
18	239	57.1	47	19.4	-7	25.9	46	48.2	-5	25.3
19	254	59.6	62	19.8		27.1	61	49.2		26.0
20	270	02.0	77	20.2		28.2	76	50.2		26.6
21	285	04.5	92	20.6		29.4	91	51.2		27.3
22	300	07.0	107	20.9		30.6	106	52.2		27.9
23	315	09.4	122	21.3		31.8	121	53.2		28.5
24	330	11.9	137	21.7	-7	32.9	136	54.2	-5	29.2
Dif	—		+4		-12		+10		-6	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 9 PHE { 4 ^h : 54 ^h /4 12 ^h : 54 ^h /3 20 ^h : 54 ^h /2										
	PMG: 12 ^h 02 ^m 9			PMG: 22 ^h 44 ^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	179	14.4	+11 53.1	29	12.5	-18 45.6	60 N	19 34	20 22	21 28	18 36 7	1 44 81		
1	194	14.5	52.3	43	44.7 ¹³²	36.9 ⁸⁷	58	26	11	21 10	26 11	1 57 78		
2	209	14.7	51.4	58	16.8 ¹³¹	28.1 ⁸⁸	56	20	20 02	20 55	17 14	2 08 75		
3	224	14.8	50.6	72	49.1 ¹³³	19.3 ⁸⁸	54	15	19 53	43	10 15	17 70		
4	239	15.0	49.7	87	21.4 ¹³³	10.4 ⁸⁹	52	10	46	32	18 03 17	26 70		
5	254	15.2	+11 48.9	101	53.8 ¹³⁴	-18 01.4 ⁹⁰	50	19 05	19 40	20 23	17 56 20	2 34 68		
6	269	15.3	+11 48.1	116	26.2 ¹³⁴	-17 52.4 ⁹⁰	45	18 55	19 26	20 04	17 43 24	2 50 64		
7	284	15.5	47.2	130	58.7 ¹³⁵	43.3 ⁹¹	40	47	16	19 50	32 27	3 04 60		
8	299	15.6	46.4	145	31.2 ¹³⁵	34.1 ⁹²	35	40	19 07	38	22 30	15 58		
9	314	15.8	45.5	160	03.9 ¹³⁷	24.8 ⁹³	30	34	18 59	28	17 13 33	25 55		
10	329	15.9	44.7	174	36.5 ¹³⁶	15.5 ⁹³	20	24	46	13	16 59 36	42 51		
11	344	16.1	+11 43.9	189	09.3 ¹³⁸	-17 06.1 ⁹⁴	10 N	18 15	18 36	19 01	16 46 40	3 57 47		
12	359	16.3	+11 43.0	203	42.1 ¹³⁸	-16 56.6 ⁹⁵	0	18 06	18 27	18 52	16 34 43	4 11 44		
13	14	16.4	42.2	218	14.9 ¹³⁸	47.1 ⁹⁵	10 S	17 58	19	44	22 46	24 41		
14	29	16.6	41.3	232	47.8 ¹³⁹	37.4 ⁹⁷	20	49	12	38	16 09 50	39 37		
15	44	16.7	40.5	247	20.8 ¹⁴⁰	27.8 ⁹⁶	30	39	04	32	15 54 54	4 55 34		
16	59	16.9	39.7	261	53.8 ¹⁴⁰	18.0 ⁹⁸	35	34	18 00	29	45 57	5 05 31		
17	74	17.1	+11 38.8	276	26.9 ¹⁴¹	-16 08.2 ⁹⁸	40	17 28	17 55	18 27	15 35 60	5 16 28		
18	89	17.2	+11 38.0	291	00.1 ¹⁴²	-15 58.3 ⁹⁹	45	17 20	17 50	18 25	15 23 64	5 28 26		
19	104	17.4	37.1	305	33.3 ¹⁴²	48.4 ⁹⁹	50	11	45	22	09 68	44 21		
20	119	17.6	36.3	320	06.5 ¹⁴²	38.4 ¹⁰⁰	52	07	42	22	15 03 69	51 20		
21	134	17.7	35.4	334	39.8 ¹⁴³	28.4 ¹⁰⁰	54	17 03	39	21	14 55 72	5 59 17		
22	149	17.9	34.6	349	13.2 ¹⁴⁴	18.2 ¹⁰²	56	16 58	37	20	47 74	6 08 15		
23	164	18.0	33.8	3	46.6 ¹⁴⁴	-15 08.1 ¹⁰¹	58	53	33	19	37 78	18 12		
24	179	18.2	+11 32.9	18	20.1 ¹⁴⁵	-14 57.8 ¹⁰³	60 S	16 46	17 30	18 18	14 27 80	6 29 9		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 58 ^m 9		Mag: -4.5 PMG: 14 ^h 50 ^m		Mag: +1.5 PMG: 14 ^h 51 ^m		Mag: -2.9 PMG: 2 ^h 09 ^m		Mag: +1.1 PMG: 14 ^h 12 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	330	11.9	137 21.7	-7 32.9	136 54.2	-5 29.2	327 44.6	-0 36.2	146 34.9	+0 48.9
1	345	14.4	152 22.0	34.1	151 55.2	29.8	342 47.3	36.3	161 37.1	48.8
2	0	16.8	167 22.4	35.3	166 56.2	30.5	357 49.9	36.4	176 39.3	48.7
3	15	19.3	182 22.8	36.4	181 57.2	31.1	12 52.6	36.5	191 41.5	48.6
4	30	21.7	197 23.2	37.6	196 58.2	31.8	27 55.3	36.6	206 43.7	48.5
5	45	24.2	212 23.6	-7 38.8	211 59.2	-5 32.4	42 58.0	-0 36.7	221 45.9	+0 48.4
6	60	26.7	227 23.9	-7 39.9	227 00.2	-5 33.1	58 00.6	-0 36.8	236 48.2	+0 48.3
7	75	29.1	242 24.3	41.1	242 01.2	33.7	73 03.3	36.9	251 50.4	48.2
8	90	31.6	257 24.7	42.3	257 02.2	34.4	88 06.0	37.0	266 52.6	48.1
9	105	34.1	272 25.1	43.5	272 03.2	35.0	103 08.6	37.1	281 54.8	47.9
10	120	36.5	287 25.5	44.6	287 04.2	35.7	118 11.3	37.2	296 57.0	47.8
11	135	39.0	302 25.8	-7 45.8	302 05.2	-5 36.3	133 14.0	-0 37.3	311 59.2	+0 47.7
12	150	41.5	317 26.2	-7 47.0	317 06.2	-5 36.9	148 16.6	-0 37.4	327 01.4	+0 47.6
13	165	43.9	332 26.6	48.1	332 07.2	37.6	163 19.3	37.5	342 03.7	47.5
14	180	46.4	347 27.0	49.3	347 08.1	38.2	178 22.0	37.6	357 05.9	47.4
15	195	48.8	2 27.4	50.5	2 09.1	38.9	193 24.7	37.7	12 08.1	47.3
16	210	51.3	17 27.7	51.6	17 10.1	39.5	208 27.3	37.8	27 10.3	47.2
17	225	53.8	32 28.1	-7 52.8	32 11.1	-5 40.2	223 30.0	-0 37.9	42 12.5	+0 47.0
18	240	56.2	47 28.5	-7 53.9	47 12.1	-5 40.8	238 32.7	-0 38.0	57 14.7	+0 46.9
19	255	58.7	62 28.9	55.1	62 13.1	41.5	253 35.4	38.1	72 16.9	46.8
20	271	01.2	77 29.3	56.3	77 14.1	42.1	268 38.0	38.2	87 19.2	46.7
21	286	03.6	92 29.7	57.4	92 15.1	42.8	283 40.7	38.3	102 21.4	46.6
22	301	06.1	107 30.1	58.6	107 16.1	43.4	298 43.4	38.4	117 23.6	46.5
23	316	08.6	122 30.5	-7 59.8	122 17.1	44.1	313 46.0	38.5	132 25.8	46.4
24	331	11.0	137 30.8	-8 00.9	137 18.1	-5 44.7	328 48.7	-0 38.6	147 28.0	+0 46.3
Dif	—		+4	-12	+10	-6	+27	-1	+22	-1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 7				Edad: 12 ^d 9 SD: 14'8 PMG: 23 ^h 27 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m		
0	179	18.2	+11	32.9	18	20.1	-14	57.8	60 N	2 39	3 45	4 33	18 43	6	3 05	80		
1	194	18.4		32.1	32	53.6 ¹⁴⁵		47.5 ¹⁰³	58	2 56	3 56	40	37	8	15	76		
2	209	18.5		31.2	47	27.2 ¹⁴⁶		37.2 ¹⁰³	56	3 11	4 05	46	31	11	23	73		
3	224	18.7		30.4	62	00.9 ¹⁴⁷		26.8 ¹⁰⁴	54	23	13	52	25	14	30	7		
4	239	18.9		29.5	76	34.5 ¹⁴⁶		16.3 ¹⁰⁵	52	34	20	4 57	20	16	36	69		
5	254	19.0	+11	28.7	91	08.3 ¹⁴⁸	-14	05.8 ¹⁰⁵	50	3 43	4 26	5 01	18 16	17	3 42	67		
6	269	19.2	+11	27.8	105	42.1 ¹⁴⁸	-13	55.2 ¹⁰⁶	45	4 02	4 40	5 11	18 07	21	3 54	63		
7	284	19.3		27.0	120	15.9 ¹⁴⁸		44.6 ¹⁰⁶	40	16	4 51	19	17 59	24	4 04	59		
8	299	19.5		26.1	134	49.8 ¹⁴⁹		33.9 ¹⁰⁷	35	28	5 00	26	52	27	13	56		
9	314	19.7		25.3	149	23.7 ¹⁴⁹		23.2 ¹⁰⁷	30	38	07	32	46	29	20	54		
10	329	19.8		24.4	163	57.7 ¹⁵⁰		12.4 ¹⁰⁸	20	4 53	20	42	35	34	33	50		
11	344	20.0	+11	23.6	178	31.8 ¹⁵¹	-13	01.6 ¹⁰⁸	10 N	5 05	5 30	5 51	17 26	38	4 44	46		
12	359	20.2	+11	22.8	193	05.8 ¹⁵⁰	-12	50.7 ¹⁰⁹	0	5 14	5 38	5 59	17 17	42	4 55	42		
13	14	20.3		21.9	207	40.0 ¹⁵²		39.8 ¹⁰⁹	10 S	21	46	6 07	17 08	45	5 05	39		
14	29	20.5		21.1	222	14.1 ¹⁵¹		28.8 ¹¹⁰	20	28	5 54	16	16 59	49	16	36		
15	44	20.7		20.2	236	48.4 ¹⁵³		17.8 ¹¹⁰	30	33	6 01	26	48	53	29	31		
16	59	20.8		19.4	251	22.6 ¹⁵²	-12	06.8 ¹¹⁰	35	36	05	31	42	56	36	29		
17	74	21.0	+11	18.5	265	56.9 ¹⁵³	-11	55.6 ¹¹²	40	5 38	6 10	6 37	16 35	59	5 44	26		
18	89	21.2	+11	17.7	280	31.3 ¹⁵⁴	-11	44.5 ¹¹¹	45	5 40	6 15	6 45	16 27	62	5 54	22		
19	104	21.3		16.8	295	05.7 ¹⁵⁴		33.3 ¹¹²	50	42	20	53	17	66	6 05	19		
20	119	21.5		16.0	309	40.1 ¹⁵⁴		22.1 ¹¹²	52	43	22	6 57	12	68	11	16		
21	134	21.7		15.1	324	14.6 ¹⁵⁵	-11	10.8 ¹¹³	54	44	25	7 01	07	70	16	15		
22	149	21.8		14.3	338	49.1 ¹⁵⁵	-10	59.4 ¹¹⁴	56	45	28	06	16 01	73	23	12		
23	164	22.0		13.4	353	23.7 ¹⁵⁶		48.1 ¹¹³	58	45	31	12	15 55	75	30	10		
24	179	22.2	+11	12.5	7	58.3 ¹⁵⁶	-10	36.7 ¹¹⁴	60 S	5 46	6 34	7 18	15 47	79	6 38	7		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 55 ^m 0		Mag: -4.5 PMG: 14 ^h 50 ^m		Mag: +1.5 PMG: 14 ^h 50 ^m		Mag: -2.9 PMG: 2 ^h 04 ^m		Mag: +1.1 PMG: 14 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	331	11.0	137	30.8	-8	00.9	137	18.1	-5	44.7	328	48.7	-0	38.6	147	28.0	+0	46.3
1	346	13.5	152	31.2		02.1	152	19.1		45.3	343	51.4		38.7	162	30.2		46.1
2	1	16.0	167	31.6		03.3	167	20.1		46.0	358	54.1		38.8	177	32.4		46.0
3	16	18.4	182	32.0		04.4	182	21.1		46.6	13	56.7		38.9	192	34.7		45.9
4	31	20.9	197	32.4		05.6	197	22.1		47.3	28	59.4		39.0	207	36.9		45.8
5	46	23.3	212	32.8	-8	06.7	212	23.1	-5	47.9	44	02.1	-0	39.1	222	39.1	+0	45.7
6	61	25.8	227	33.2	-8	07.9	227	24.0	-5	48.6	59	04.8	-0	39.2	237	41.3	+0	45.6
7	76	28.3	242	33.6		09.1	242	25.0		49.2	74	07.4		39.3	252	43.5		45.5
8	91	30.7	257	34.0		10.2	257	26.0		49.9	89	10.1		39.4	267	45.7		45.4
9	106	33.2	272	34.4		11.4	272	27.0		50.5	104	12.8		39.5	282	47.9		45.2
10	121	35.7	287	34.8		12.5	287	28.0		51.2	119	15.5		39.6	297	50.1		45.1
11	136	38.1	302	35.2	-8	13.7	302	29.0	-5	51.8	134	18.2	-0	39.7	312	52.4	+0	45.0
12	151	40.6	317	35.6	-8	14.9	317	30.0	-5	52.5	149	20.8	-0	39.8	327	54.6	+0	44.9
13	166	43.1	332	36.0		16.0	332	31.0		53.1	164	23.5		39.9	342	56.8		44.8
14	181	45.5	347	36.4		17.2	347	32.0		53.7	179	26.2		40.0	357	59.0		44.7
15	196	48.0	2	36.8		18.3	2	33.0		54.4	194	28.9		40.1	13	01.2		44.6
16	211	50.4	17	37.2		19.5	17	34.0		55.0	209	31.5		40.2	28	03.4		44.5
17	226	52.9	32	37.6	-8	20.7	32	34.9	-5	55.7	224	34.2	-0	40.3	43	05.6	+0	44.3
18	241	55.4	47	38.0	-8	21.8	47	35.9	-5	56.3	239	36.9	-0	40.4	58	07.8	+0	44.2
19	256	57.8	62	38.4		23.0	62	36.9		57.0	254	39.6		40.5	73	10.1		44.1
20	272	00.3	77	38.8		24.1	77	37.9		57.6	269	42.3		40.6	88	12.3		44.0
21	287	02.8	92	39.2		25.3	92	38.9		58.3	284	44.9		40.7	103	14.5		43.9
22	302	05.2	107	39.6		26.4	107	39.9		58.9	299	47.6		40.8	118	16.7		43.8
23	317	07.7	122	40.0		27.6	122	40.9	-5	59.6	314	50.3		40.9	133	18.9		43.7
24	332	10.2	137	40.4	-8	28.7	137	41.9	-6	00.2	329	53.0	-0	41.0	148	21.1	+0	43.6
Dif	—		+4		-12		+10		-6		+27		-1		+22		-1	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 4				Edad: 13 ^d 9 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ R°: ***m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	22.2	+11	12.5	7	58.3	-10	36.7	60 N	19 28	20 15	21 19	18 49 5	4 25 79				
1	194	22.3		11.7	22	32.9 ¹⁵⁶		25.2 ¹¹⁵	58	21	20 05	21 03	45 8	31 76				
2	209	22.5		10.8	37	07.6 ¹⁵⁷		13.8 ¹¹⁴	56	15	19 56	20 49	42 10	36 73				
3	224	22.7		10.0	51	42.3 ¹⁵⁷	-10	02.2 ¹¹⁶	54	10		48	37	39 12	41 70			
4	239	22.8		09.1	66	17.0 ¹⁵⁷		-9 50.7 ¹¹⁵	52	05		42	27	36 14	45 68			
5	254	23.0	+11	08.3	80	51.8 ¹⁵⁸		-9 39.1 ¹¹⁶	50	19 01	19 36	20 18	18 33 16	4 49 66				
6	269	23.2	+11	07.4	95	26.6 ¹⁵⁸		-9 27.5 ¹¹⁶	45	18 52	19 23	20 00	18 28 19	4 57 62				
7	284	23.3		06.6	110	01.5 ¹⁵⁹		15.8 ¹¹⁷	40	44		12	19 46	23 23	5 03 59			
8	299	23.5		05.7	124	36.4 ¹⁵⁹	-9	04.1 ¹¹⁷	35	38	19 04	35	19 26	09 56				
9	314	23.7		04.9	139	11.3 ¹⁵⁹	-8	52.4 ¹¹⁷	30	32	18 57	26	15 29	14 53				
10	329	23.8		04.0	153	46.3 ¹⁶⁰		40.6 ¹¹⁸	20	22		45	11	09 33	23 48			
11	344	24.0	+11	03.2	168	21.2 ¹⁵⁹	-8	28.9 ¹¹⁷	10 N	18 14	18 35	19 00	18 04 36	5 30 45				
12	359	24.2	+11	02.3	182	56.3 ¹⁶¹	-8	17.0 ¹¹⁹	0	18 06	18 27	18 51	17 59 40	5 37 41				
13	14	24.3		01.4	197	31.3 ¹⁶⁰	-8	05.2 ¹¹⁸	10 S	17 58		19	44	53 44	44 37			
14	29	24.5	+11	00.6	212	06.4 ¹⁶¹	-7	53.3 ¹¹⁹	20	50		12	38	48 48	5 52 33			
15	44	24.7	+10	59.7	226	41.5 ¹⁶¹		41.4 ¹¹⁹	30	41		05	33	41 53	6 00 29			
16	59	24.8		58.9	241	16.6 ¹⁶¹		29.5 ¹¹⁹	35	35	18 01	31	38 55	05 26				
17	74	25.0	+10	58.0	255	51.8 ¹⁶²	-7	17.5 ¹²⁰	40	17 29	17 57	18 29	17 34 58	6 10 24				
18	89	25.2	+10	57.2	270	26.9 ¹⁶¹	-7	05.5 ¹²⁰	45	17 23	17 52	18 27	17 29 61	6 16 21				
19	104	25.4		56.3	285	02.2 ¹⁶³	-6	53.5 ¹²⁰	50	14		47	25	23 66	24 16			
20	119	25.5		55.4	299	37.4 ¹⁶²		41.5 ¹²⁰	52	11		45	24	20 68	27 15			
21	134	25.7		54.6	314	12.6 ¹⁶²		29.4 ¹²¹	54	06		43	24	17 70	31 12			
22	149	25.9		53.7	328	47.9 ¹⁶³		17.3 ¹²¹	56	17 02		40	23	14 72	35 10			
23	164	26.0		52.9	343	23.2 ¹⁶³	-6	05.2 ¹²¹	58	16 57		37	23	10 75	40 8			
24	179	26.2	+10	52.0	357	58.5 ¹⁶³	-5	53.1 ¹²¹	60 S	16 51	17 34	18 23	17 06 78	6 45 5				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 51 ^m 0		Mag: -4.5 PMG: 14 ^h 49 ^m				Mag: +1.5 PMG: 14 ^h 48 ^m				Mag: -2.9 PMG: 2 ^h 00 ^m				Mag: +1.1 PMG: 14 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	332	10.2	137	40.4	-8	28.7	137	41.9	-6	00.2	329	53.0	-0	41.0	148	21.1	0	43.6
1	347	12.6	152	40.8		29.9	152	42.9		00.8	344	55.7		41.1	163	23.3		43.4
2	2	15.1	167	41.2		31.1	167	43.8		01.5	359	58.3		41.2	178	25.5		43.3
3	17	17.6	182	41.6		32.2	182	44.8		02.1	15	01.0		41.3	193	27.8		43.2
4	32	20.0	197	42.0		33.4	197	45.8		02.8	30	03.7		41.4	208	30.0		43.1
5	47	22.5	212	42.4	-8	34.5	212	46.8	-6	03.4	45	06.4	-0	41.5	223	32.2	+0	43.0
6	62	24.9	227	42.8	-8	35.7	227	47.8	-6	04.1	60	09.1	-0	41.7	238	34.4	+0	42.9
7	77	27.4	242	43.2		36.8	242	48.8		04.7	75	11.7		41.8	253	36.6		42.8
8	92	29.9	257	43.7		38.0	257	49.8		05.4	90	14.4		41.9	268	38.8		42.7
9	107	32.3	272	44.1		39.1	272	50.8		06.0	105	17.1		42.0	283	41.0		42.5
10	122	34.8	287	44.5		40.3	287	51.8		06.6	120	19.8		42.1	298	43.2		42.4
11	137	37.3	302	44.9	-8	41.4	302	52.7	-6	07.3	135	22.5	-0	42.2	313	45.5	+0	42.3
12	152	39.7	317	45.3	-8	42.6	317	53.7	-6	07.9	150	25.2	-0	42.3	328	47.7	+0	42.2
13	167	42.2	332	45.7		43.7	332	54.7		08.6	165	27.8		42.4	343	49.9		42.1
14	182	44.7	347	46.1		44.9	347	55.7		09.2	180	30.5		42.5	358	52.1		42.0
15	197	47.1	2	46.5		46.0	2	56.7		09.9	195	33.2		42.6	13	54.3		41.9
16	212	49.6	17	47.0		47.2	17	57.7		10.5	210	35.9		42.7	28	56.5		41.7
17	227	52.1	32	47.4	-8	48.3	32	58.7	-6	11.2	225	38.6	-0	42.8	43	58.7	+0	41.6
18	242	54.5	47	47.8	-8	49.5	47	59.6	-6	11.8	240	41.3	-0	42.9	59	00.9	+0	41.5
19	257	57.0	62	48.2		50.6	63	00.6		12.5	255	43.9		43.0	74	03.1		41.4
20	272	59.4	77	48.6		51.8	78	01.6		13.1	270	46.6		43.1	89	05.4		41.3
21	288	01.9	92	49.1		52.9	93	02.6		13.7	285	49.3		43.2	104	07.6		41.2
22	303	04.4	107	49.5		54.1	108	03.6		14.4	300	52.0		43.3	119	09.8		41.1
23	318	06.8	122	49.9		55.2	123	04.6		15.0	315	54.7		43.4	134	12.0		41.0
24	333	09.3	137	50.3	-8	56.4	138	05.6	-6	15.7	330	57.4	-0	43.5	149	14.2	+0	40.8
Dif	—		+4		-12		+10		-6		+27		-1		+22		-1	

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 1			Edad: 14 ^d 9 SD: 14 ^h 7 PMG: 0 ^h 08 ^m				PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 R ^o : 41 ^m			Hora		R ^o				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m
0	179	26.2	+10	52.0	357	58.5	-5 53.1	2	46	3	50	4	38	18	54	4	5
1	194	26.4		51.1	12	33.9 ¹⁶⁴	41.0 ¹²¹	3	03	4	01	44		53	7	47	74
2	209	26.6		50.3	27	09.3 ¹⁶⁴	28.8 ¹²²	16	09		50	52		9		49	72
3	224	26.7		49.4	41	44.6 ¹⁶³	16.6 ¹²²	28	17	4	55	51	11			51	70
4	239	26.9		48.6	56	20.0 ¹⁶⁴	-5 04.4 ¹²²	38	24	5	00	50	14			53	68
5	254	27.1	+10	47.7	70	55.5 ¹⁶⁵	-4 52.2 ¹²²	3	47	4	30	5	04	18	49	16	5
6	269	27.2	+10	46.8	85	30.9 ¹⁶⁴	-4 39.9 ¹²³	4	05	4	42	5	13	18	47	20	5
7	284	27.4		46.0	100	06.4 ¹⁶⁵	27.7 ¹²²	19	4	53	21	46	23			6	58
8	299	27.6		45.1	114	41.8 ¹⁶⁴	15.4 ¹²³	30	5	01	27	45	25			05	55
9	314	27.8		44.3	129	17.3 ¹⁶⁵	-4 03.1 ¹²³	39	08		33	44	28			07	52
10	329	27.9		43.4	143	52.8 ¹⁶⁵	-3 50.8 ¹²³	4	54	20	43	42	33			11	48
11	344	28.1	+10	42.5	158	28.3 ¹⁶⁵	-3 38.5 ¹²³	5	05	5	30	5	51	18	40	37	6
12	359	28.3	+10	41.7	173	03.8 ¹⁶⁵	-3 26.1 ¹²⁴	5	13	5	38	5	59	18	39	40	6
13	14	28.5		40.8	187	39.4 ¹⁶⁶	13.8 ¹²³	20	45	6	06	37	44			21	37
14	29	28.6		39.9	202	14.9 ¹⁶⁵	-3 01.4 ¹²⁴	26	52	14		36	48			25	33
15	44	28.8		39.1	216	50.5 ¹⁶⁶	-2 49.1 ¹²³	31	5	59	23	34	52			29	28
16	59	29.0		38.2	231	26.0 ¹⁶⁵	36.7 ¹²⁴	33	6	03	29	33	55			31	26
17	74	29.2	+10	37.4	246	01.6 ¹⁶⁶	-2 24.3 ¹²⁴	5	35	6	07	6	34	18	32	58	6
18	89	29.3	+10	36.5	260	37.2 ¹⁶⁶	-2 11.9 ¹²⁴	5	37	6	11	6	41	18	30	62	6
19	104	29.5		35.6	275	12.7 ¹⁶⁵	-1 59.5 ¹²⁴	39	16		49	29	66			40	16
20	119	29.7		34.8	289	48.3 ¹⁶⁶	47.1 ¹²⁴	39	18		53	28	68			42	14
21	134	29.9		33.9	304	23.9 ¹⁶⁶	34.7 ¹²⁴	40	21	6	57	27	70			43	12
22	149	30.0		33.0	318	59.5 ¹⁶⁶	22.3 ¹²⁴	40	23	7	01	26	72			45	10
23	164	30.2		32.2	333	35.1 ¹⁶⁶	-1 09.8 ¹²⁵	40	26		06	25	75			48	7
24	179	30.4	+10	31.3	348	10.7 ¹⁶⁶	-0 57.4 ¹²⁴	5	41	6	29	7	12	18	24	78	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 47 ^m 1		Mag: -4.5 PMG: 14 ^h 48 ^m		Mag: +1.5 PMG: 14 ^h 47 ^m		Mag: -2.9 PMG: 1 ^h 56 ^m		Mag: +1.0 PMG: 14 ^h 01 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	333	09.3	137	50.3	138	05.6	330	57.4	149	14.2
1	348	11.8	152	50.7	153	06.5	346	00.1	164	16.4
2	3	14.2	167	51.2	168	07.5	1	02.7	179	18.6
3	18	16.7	182	51.6	183	08.5	16	05.4	194	20.8
4	33	19.2	197	52.0	198	09.5	31	08.1	209	23.0
5	48	21.6	212	52.4	213	10.5	46	10.8	224	25.2
6	63	24.1	227	52.9	228	11.5	61	13.5	239	27.5
7	78	26.5	242	53.3	243	12.4	76	16.2	254	29.7
8	93	29.0	257	53.7	258	13.4	91	18.9	269	31.9
9	108	31.5	272	54.1	273	14.4	106	21.5	284	34.1
10	123	33.9	287	54.6	288	15.4	121	24.2	299	36.3
11	138	36.4	302	55.0	303	16.4	136	26.9	314	38.5
12	153	38.9	317	55.4	318	17.4	151	29.6	329	40.7
13	168	41.3	332	55.8	333	18.3	166	32.3	344	42.9
14	183	43.8	347	56.3	348	19.3	181	35.0	359	45.1
15	198	46.3	2	56.7	3	20.3	196	37.7	14	47.3
16	213	48.7	17	57.1	18	21.3	211	40.4	29	49.6
17	228	51.2	32	57.6	33	22.3	226	43.1	44	51.8
18	243	53.7	47	58.0	48	23.2	241	45.7	59	54.0
19	258	56.1	62	58.4	63	24.2	256	48.4	74	56.2
20	273	58.6	77	58.9	78	25.2	271	51.1	89	58.4
21	289	01.0	92	59.3	93	26.2	286	53.8	105	00.6
22	304	03.5	107	59.7	108	27.2	301	56.5	120	02.8
23	319	06.0	123	00.2	123	28.1	316	59.2	135	05.0
24	334	08.4	138	00.6	138	29.1	332	01.9	150	07.2
Dif	—		+4	-11	+10	-6	+27	-1	+22	-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 15 ^d 9	PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 1										
	PMG: 12 ^h 01 ^m 8					SD: 14 ^h 7			PMG: 0 ^h 49 ^m		R°: 40 ^m				
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	m	h m	m
0	179	30.4	+10	31.3	348	10.7	-0	57.4	60 N	19 22	20 08	21 11	18 58	5	7 01 78
1	194	30.6		30.4	2	46.3 ¹⁶⁶		45.0 ¹²⁴	58	16	19 59	20 55	19 00	8	01 75
2	209	30.7		29.6	17	21.9 ¹⁶⁶		32.5 ¹²⁵	56	10	51	42	01 10		01 72
3	224	30.9		28.7	31	57.5 ¹⁶⁶		20.1 ¹²⁴	54	05	43	31	02 13		01 70
4	239	31.1		27.8	46	33.1 ¹⁶⁶		-0 07.6 ¹²⁵	52	19 01	37	22	04 14		01 67
5	254	31.3	+10	27.0	61	08.7 ¹⁶⁶		+0 04.8 ¹²⁴	50	18 57	19 31	20 13	19 05	16	7 01 65
6	269	31.4	+10	26.1	75	44.3 ¹⁶⁶		+0 17.3 ¹²⁵	45	18 48	19 19	19 56	19 07	20	7 00 62
7	284	31.6		25.2	90	19.9 ¹⁶⁶		29.7 ¹²⁴	40	41	09	43	09 23		00 58
8	299	31.8		24.4	104	55.5 ¹⁶⁶		42.2 ¹²⁵	35	35	19 01	32	10 27		7 00 55
9	314	32.0		23.5	119	31.1 ¹⁶⁶		+0 54.6 ¹²⁴	30	30	18 54	23	12 29		6 59 53
10	329	32.1		22.6	134	06.7 ¹⁶⁶		+1 07.1 ¹²⁵	20	20	43	19 09	15 33		59 48
11	344	32.3	+10	21.7	148	42.2 ¹⁶⁵		+1 19.5 ¹²⁴	10 N	18 13	18 34	18 59	19 17	37	6 59 44
12	359	32.5	+10	20.9	163	17.8 ¹⁶⁶		+1 31.9 ¹²⁴	0	18 05	18 26	18 51	19 19	41	6 58 41
13	14	32.7		20.0	177	53.4 ¹⁶⁶		44.4 ¹²⁵	10 S	17 58	19	44	21 45		58 37
14	29	32.9		19.1	192	28.9 ¹⁶⁵		+1 56.8 ¹²⁴	20	50	13	38	24 48		58 32
15	44	33.0		18.3	207	04.4 ¹⁶⁵		+2 09.2 ¹²⁴	30	42	06	34	26 53		57 28
16	59	33.2		17.4	221	40.0 ¹⁶⁶		21.6 ¹²⁴	35	37	18 02	32	28 56		57 26
17	74	33.4	+10	16.5	236	15.5 ¹⁶⁵		+2 34.0 ¹²⁴	40	17 31	17 59	18 30	19 30	58	6 56 23
18	89	33.6	+10	15.7	250	51.0 ¹⁶⁵		+2 46.4 ¹²⁴	45	17 25	17 55	18 29	19 32	62	6 56 20
19	104	33.7		14.8	265	26.4 ¹⁶⁴		+2 58.8 ¹²⁴	50	17	50	28	35 66		56 15
20	119	33.9		13.9	280	01.9 ¹⁶⁵		+3 11.2 ¹²⁴	52	14	48	27	36 68		56 13
21	134	34.1		13.0	294	37.4 ¹⁶⁵		23.6 ¹²⁴	54	10	46	27	37 70		55 12
22	149	34.3		12.2	309	12.8 ¹⁶⁴		35.9 ¹²³	56	06	44	27	38 73		55 10
23	164	34.5		11.3	323	48.2 ¹⁶⁴		+3 48.3 ¹²⁴	58	17 01	41	27	40 75		55 7
24	179	34.6	+10	10.4	338	23.6 ¹⁶⁴		+4 00.6 ¹²³	60 S	16 56	17 39	18 27	19 42	78	6 55 4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 43 ^m 2		Mag: -4.5 PMG: 14 ^h 48 ^m			Mag: +1.5 PMG: 14 ^h 45 ^m			Mag: -2.9 PMG: 1 ^h 52 ^m			Mag: +1.0 PMG: 13 ^h 57 ^m			
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	334	08.4	138	00.6	-9	23.8	338	29.1	-6	31.1	332	01.9	-0	46.1	
1	349	10.9	153	01.1		24.9	353	30.1		31.8	347	04.6		46.2	
2	4	13.4	168	01.5		26.0	368	31.1		32.4	2	07.3		46.3	
3	19	15.8	183	01.9		27.2	383	32.1		33.1	17	10.0		46.4	
4	34	18.3	198	02.4		28.3	398	33.0		33.7	32	12.7		46.5	
5	49	20.8	213	02.8	-9	29.4	413	34.0	-6	34.4	47	15.3	-0	46.6	
6	64	23.2	228	03.3	-9	30.6	428	35.0	-6	35.0	62	18.0	-0	46.7	
7	79	25.7	243	03.7		31.7	443	36.0		35.6	77	20.7		46.9	
8	94	28.1	258	04.1		32.8	458	37.0		36.3	92	23.4		47.0	
9	109	30.6	273	04.6		34.0	473	37.9		36.9	107	26.1		47.1	
10	124	33.1	288	05.0		35.1	488	38.9		37.6	122	28.8		47.2	
11	139	35.5	303	05.5	-9	36.2	503	39.9	-6	38.2	137	31.5	-0	47.3	
12	154	38.0	318	05.9	-9	37.4	518	40.9	-6	38.9	152	34.2	-0	47.4	
13	169	40.5	333	06.4		38.5	533	41.9		39.5	167	36.9		47.5	
14	184	42.9	348	06.8		39.6	548	42.8		40.2	182	39.6		47.6	
15	199	45.4	3	07.3		40.8	3	43.8		40.8	197	42.3		47.7	
16	214	47.9	18	07.7		41.9	18	44.8		41.4	212	45.0		47.8	
17	229	50.3	33	08.2	-9	43.0	33	45.8	-6	42.1	227	47.7	-0	47.9	
18	244	52.8	48	08.6	-9	44.2	48	46.7	-6	42.7	242	50.4	-0	48.1	
19	259	55.3	63	09.1		45.3	63	47.7		43.4	257	53.1		48.2	
20	274	57.7	78	09.5		46.4	78	48.7		44.0	272	55.8		48.3	
21	290	00.2	93	10.0		47.6	93	49.7		44.7	287	58.5		48.4	
22	305	02.6	108	10.4		48.7	108	50.7		45.3	303	01.2		48.5	
23	320	05.1	123	10.9		49.8	123	51.6		45.9	318	03.8		48.6	
24	335	07.6	138	11.3	-9	50.9	138	52.6	-6	46.6	333	06.5	-0	48.7	
Dif	—		+4		-11		+10		-6		+27		-1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 01 ^m 5			Edad: 16 ^d 9 PHE { 4 ^h : 54/1 12 ^h : 54/2 20 ^h : 54/3 SD: 14/7 PMG: 1 ^h 29 ^m R°: 41 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	34.6	+10	10.4	338	23.6	+4 00.6	60 N	2 53	3 56	4 43	19 03	7	8 19	80	
1	194	34.8		09.5	352	59.0 ¹⁶⁴	13.0 ¹²⁴	58	3 09	4 05	49	08 9		16 76		
2	209	35.0		08.7	7	34.4 ¹⁶⁴	25.3 ¹²³	56	22	14	54	11 12		13 74		
3	224	35.2		07.8	22	09.7 ¹⁶³	37.6 ¹²³	54	33	21	4 59	15 14		11 7		
4	239	35.4		06.9	36	45.0 ¹⁶³	+4 49.9 ¹²³	52	42	27	5 03	18 16		08 69		
5	254	35.5	+10	06.0	51	20.3 ¹⁶³	+5 02.1 ¹²²	50	3 51	4 33	5 07	19 21	18	8 06	67	
6	269	35.7	+10	05.2	65	55.6 ¹⁶³	+5 14.4 ¹²³	45	4 08	4 45	5 16	19 27	22	8 02	62	
7	284	35.9		04.3	80	30.9 ¹⁶³	26.6 ¹²²	40	21	4 55	23	32 26		7 58	59	
8	299	36.1		03.4	95	06.1 ¹⁶²	38.8 ¹²²	35	32	5 03	29	37 28		55 56		
9	314	36.3		02.5	109	41.3 ¹⁶²	+5 51.0 ¹²²	30	40	10	34	41 30		52 53		
10	329	36.4		01.7	124	16.5 ¹⁶²	+6 03.2 ¹²²	20	4 54	21	43	48 35		47 49		
11	344	36.6	+10	00.8	138	51.6 ¹⁶¹	+6 15.4 ¹²²	10 N	5 05	5 30	5 51	19 54	39	7 43	45	
12	359	36.8	+9	59.9	153	26.7 ¹⁶¹	+6 27.5 ¹²¹	0	5 13	5 37	5 58	20 00	42	7 39	41	
13	14	37.0		59.0	168	01.8 ¹⁶¹	39.6 ¹²¹	10 S	19	44	6 05	06 46		35 37		
14	29	37.2		58.2	182	36.9 ¹⁶¹	+6 51.7 ¹²¹	20	25	51	13	12 50		30 34		
15	44	37.4		57.3	197	11.9 ¹⁶⁰	+7 03.8 ¹²¹	30	29	5 57	21	19 55		25 30		
16	59	37.5		56.4	211	46.9 ¹⁶⁰	15.8 ¹²⁰	35	31	6 00	26	24 56		23 27		
17	74	37.7	+9	55.5	226	21.9 ¹⁶⁰	+7 27.8 ¹²⁰	40	5 33	6 04	6 31	20 28	60	7 19	25	
18	89	37.9	+9	54.6	240	56.8 ¹⁵⁹	+7 39.8 ¹²⁰	45	5 34	6 08	6 38	20 34	63	7 16	21	
19	104	38.1		53.8	255	31.7 ¹⁵⁹	+7 51.8 ¹²⁰	50	35	12	45	41 67		11 17		
20	119	38.3		52.9	270	06.5 ¹⁵⁸	+8 03.7 ¹¹⁹	52	35	14	49	44 69		09 15		
21	134	38.4		52.0	284	41.4 ¹⁵⁹	15.7 ¹²⁰	54	35	16	52	47 72		07 13		
22	149	38.6		51.1	299	16.2 ¹⁵⁸	27.6 ¹¹⁹	56	35	19	6 56	51 74		05 11		
23	164	38.8		50.3	313	50.9 ¹⁵⁷	39.4 ¹¹⁸	58	36	21	7 01	20 55	78	7 02	8	
24	179	39.0	+9	49.4	328	25.6 ¹⁵⁷	+8 51.2 ¹¹⁸	60 S	5 35	6 24	7 06	21 00	81	6 59	6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 39 ^m 2		Mag: -4.5 PMG: 14 ^h 47 ^m		Mag: +1.5 PMG: 14 ^h 44 ^m		Mag: -2.9 PMG: 1 ^h 47 ^m		Mag: +1.0 PMG: 13 ^h 54 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	335	07.6	138	11.3	138	52.6	333	06.5	151	00.2
1	350	10.0	153	11.8	153	53.6	348	09.2	166	02.4
2	5	12.5	168	12.2	168	54.6	3	11.9	181	04.6
3	20	15.0	183	12.7	183	55.5	18	14.6	196	06.8
4	35	17.4	198	13.1	198	56.5	33	17.3	211	09.1
5	50	19.9	213	13.6	213	57.5	48	20.0	226	11.3
6	65	22.4	228	14.1	228	58.5	63	22.7	241	13.5
7	80	24.8	243	14.5	243	59.4	78	25.4	256	15.7
8	95	27.3	258	15.0	259	00.4	93	28.1	271	17.9
9	110	29.8	273	15.4	274	01.4	108	30.8	286	20.1
10	125	32.2	288	15.9	289	02.4	123	33.5	301	22.3
11	140	34.7	303	16.4	304	03.3	138	36.2	316	24.5
12	155	37.1	318	16.8	319	04.3	153	38.9	331	26.7
13	170	39.6	333	17.3	334	05.3	168	41.6	346	28.9
14	185	42.1	348	17.8	349	06.2	183	44.3	1	31.1
15	200	44.5	3	18.2	4	07.2	198	47.0	16	33.3
16	215	47.0	18	18.7	19	08.2	213	49.7	31	35.5
17	230	49.5	33	19.2	34	09.2	228	52.4	46	37.7
18	245	51.9	48	19.6	49	10.1	243	55.1	61	39.9
19	260	54.4	63	20.1	64	11.1	258	57.8	76	42.2
20	275	56.9	78	20.6	79	12.1	274	00.5	91	44.4
21	290	59.3	93	21.0	94	13.1	289	03.2	106	46.6
22	306	01.8	108	21.5	109	14.0	304	05.9	121	48.8
23	321	04.2	123	22.0	124	15.0	319	08.6	136	51.0
24	336	06.7	138	22.4	139	16.0	334	11.3	151	53.2
Dif	—		+5		+10		+27		+22	
			-11		-6		-1		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 17 ^d 9 PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6											
	PMG: 12 ^h 01 ^m 3			SD: 14'8 PMG: 2 ^h 10 ^m R°: 43 ^m					Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	R°	h m m	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	R°	h m m	R°
0	179	39.0	+9 49.4	328	25.6	+8 51.2		60 N	19 16	20 02	21 03	19 10 8		9 39 81	
1	194	39.2		48.5	343	00.3 ¹⁵⁷	+9 03.0 ¹¹⁸	58	10	19 53	20 48	17 12		32 78	
2	209	39.4		47.6	357	34.9 ¹⁵⁶	14.8 ¹¹⁸	56	05	45	36	23 15		27 75	
3	224	39.5		46.7	12	09.5 ¹⁵⁶	26.6 ¹¹⁸	54	19 01	38	26	29 17		22 72	
4	239	39.7		45.8	26	44.1 ¹⁵⁶	38.3 ¹¹⁷	52	18 57	32	17	34 19		17 70	
5	254	39.9	+9 45.0	41	18.6 ¹⁵⁵	+9 49.9 ¹¹⁶		50	18 53	19 27	20 09	19 39 21		9 13 68	
6	269	40.1	+9 44.1	55	53.0 ¹⁵⁴	+10 01.6 ¹¹⁷		45	18 45	19 15	19 52	19 49 25		9 04 64	
7	284	40.3		43.2	70	27.5 ¹⁵⁵	13.2 ¹¹⁶	40	38	19 06	40	19 58 28		8 57 60	
8	299	40.5		42.3	85	01.8 ¹⁵³	24.7 ¹¹⁵	35	32	18 58	29	20 05 31		51 57	
9	314	40.7		41.4	99	36.2 ¹⁵⁴	36.3 ¹¹⁶	30	27	52	21	11 34		45 55	
10	329	40.8		40.6	114	10.5 ¹⁵³	47.8 ¹¹⁵	20	19	41	19 08	23 38		36 51	
11	344	41.0	+9 39.7	128	44.7 ¹⁵²	+10 59.2 ¹¹⁴		10 N	18 11	18 33	18 58	20 33 41		8 28 47	
12	359	41.2	+9 38.8	143	18.9 ¹⁵²	+11 10.6 ¹¹⁴		0	18 05	18 26	18 50	20 42 45		8 20 43	
13	14	41.4		37.9	157	53.0 ¹⁵¹	22.0 ¹¹⁴	10 S	17 58	19	44	20 52 48		12 40	
14	29	41.6		37.0	172	27.1 ¹⁵¹	33.3 ¹¹³	20	51	13	39	21 02 52		8 04 36	
15	44	41.8		36.1	187	01.1 ¹⁵⁰	44.6 ¹¹³	30	43	07	35	14 55		7 55 32	
16	59	42.0		35.3	201	35.1 ¹⁵⁰	+11 55.9 ¹¹³	35	38	04	33	20 59		50 29	
17	74	42.1	+9 34.4	216	09.1 ¹⁵⁰	+12 07.1 ¹¹²		40	17 33	18 01	18 32	21 28 61		7 44 26	
18	89	42.3	+9 33.5	230	42.9 ¹⁴⁸	+12 18.3 ¹¹²		45	17 27	17 57	18 31	21 37 65		7 37 23	
19	104	42.5		32.6	245	16.8 ¹⁴⁹	29.4 ¹¹¹	50	20	53	30	48 69		28 20	
20	119	42.7		31.7	259	50.5 ¹⁴⁷	40.4 ¹¹⁰	52	17	51	30	53 71		24 18	
21	134	42.9		30.8	274	24.2 ¹⁴⁷	+12 51.5 ¹¹¹	54	13	49	30	21 59 73		20 15	
22	149	43.1		29.9	288	57.9 ¹⁴⁷	+13 02.5 ¹¹⁰	56	10	47	30	22 05 76		16 12	
23	164	43.3		29.1	303	31.5 ¹⁴⁶	13.4 ¹⁰⁹	58	05	45	31	13 79		10 11	
24	179	43.4	+9 28.2	318	05.1 ¹⁴⁶	+13 24.3 ¹⁰⁹		60 S	17 00	17 43	18 31	22 21 83		7 05 7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 35 ^m 3		Mag: -4.6 PMG: 14 ^h 46 ^m		Mag: +1.5 PMG: 14 ^h 42 ^m		Mag: -2.9 PMG: 1 ^h 43 ^m		Mag: +1.0 PMG: 13 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	336	06.7	138	22.4	-10	17.9	139	16.0	-7	02.0
1	351	09.2	153	22.9		19.0	154	16.9		02.7
2	6	11.6	168	23.4		20.1	169	17.9		03.3
3	21	14.1	183	23.9		21.2	184	18.9		03.9
4	36	16.6	198	24.3		22.4	199	19.9		04.6
5	51	19.0	213	24.8	-10	23.5	214	20.8	-7	05.2
6	66	21.5	228	25.3	-10	24.6	229	21.8	-7	05.9
7	81	24.0	243	25.8		25.7	244	22.8		06.5
8	96	26.4	258	26.2		26.8	259	23.7		07.2
9	111	28.9	273	26.7		27.9	274	24.7		07.8
10	126	31.4	288	27.2		29.0	289	25.7		08.4
11	141	33.8	303	27.7	-10	30.2	304	26.6	-7	09.1
12	156	36.3	318	28.2	-10	31.3	319	27.6	-7	09.7
13	171	38.7	333	28.6		32.4	334	28.6		10.4
14	186	41.2	348	29.1		33.5	349	29.5		11.0
15	201	43.7	3	29.6		34.6	4	30.5		11.6
16	216	46.1	18	30.1		35.7	19	31.5		12.3
17	231	48.6	33	30.6	-10	36.8	34	32.5	-7	12.9
18	246	51.1	48	31.1	-10	37.9	49	33.4	-7	13.6
19	261	53.5	63	31.5		39.1	64	34.4		14.2
20	276	56.0	78	32.0		40.2	79	35.4		14.9
21	291	58.5	93	32.5		41.3	94	36.3		15.5
22	307	00.9	108	33.0		42.4	109	37.3		16.1
23	322	03.4	123	33.5		43.5	124	38.3		16.8
24	337	05.8	138	34.0	-10	44.6	139	39.2	-7	17.4
Dif	—		+5	-11		+10	-6	+27		-1
									+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 18 ^d 9	PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0	Principio del crepúsculo		Salida de Luna			Puesta de Luna			
	PMG: 12 ^h 01 ^m 0					SD: 14 ^m 9		R°: 45 ^m			R°: 45 ^m		R°: 45 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	43.4	+9	28.2	318	05.1	+13	24.3	60 N	3 00	4 01	4 47	19 18	13
1	194	43.6		27.3	332	38.5 ¹⁴⁴		35.1 ¹⁰⁸	58	15	10	53	29 16	10 50 80
2	209	43.8		26.4	347	12.0 ¹⁴⁵		45.9 ¹⁰⁸	56	27	18	4 58	38 19	42 76
3	224	44.0		25.5	1	45.3 ¹⁴³	+13	56.6 ¹⁰⁷	54	37	25	5 02	46 22	34 74
4	239	44.2		24.6	16	18.6 ¹⁴³	+14	07.3 ¹⁰⁷	52	46	31	07	19 53 25	27 72
5	254	44.4	+9	23.7	30	51.9 ¹⁴³	+14	17.9 ¹⁰⁶	50	3 54	4 36	5 10	20 00 26	10 21 69
6	269	44.6	+9	22.8	45	25.1 ¹⁴²	+14	28.5 ¹⁰⁶	45	4 11	4 48	5 18	20 14 30	10 08 65
7	284	44.8		22.0	59	58.2 ¹⁴¹		39.0 ¹⁰⁵	40	23	4 57	25	26 33	9 57 62
8	299	44.9		21.1	74	31.2 ¹⁴⁰		49.5 ¹⁰⁵	35	33	5 04	30	36 36	48 59
9	314	45.1		20.2	89	04.2 ¹⁴⁰	+14	59.9 ¹⁰⁴	30	42	11	35	20 45 38	40 57
10	329	45.3		19.3	103	37.2 ¹⁴⁰	+15	10.2 ¹⁰³	20	4 55	21	44	21 01 41	27 52
11	344	45.5	+9	18.4	118	10.0 ¹³⁸	+15	20.5 ¹⁰³	10 N	5 05	5 30	5 51	21 14 45	9 15 49
12	359	45.7	+9	17.5	132	42.8 ¹³⁸	+15	30.8 ¹⁰³	0	5 12	5 37	5 58	21 27 48	9 03 46
13	14	45.9		16.6	147	15.5 ¹³⁷		40.9 ¹⁰¹	10 S	18	43	6 04	40 50	8 52 43
14	29	46.1		15.7	161	48.2 ¹³⁷	+15	51.0 ¹⁰¹	20	23	49	11	21 54 53	40 40
15	44	46.3		14.8	176	20.8 ¹³⁶	+16	01.1 ¹⁰¹	30	27	55	19	22 09 58	27 35
16	59	46.5		14.0	190	53.3 ¹³⁵		11.1 ¹⁰⁰	35	29	5 58	23	19 60	19 33
17	74	46.6	+9	13.1	205	25.8 ¹³⁵	+16	21.0 ⁹⁹	40	5 30	6 01	6 28	22 29 63	8 10 31
18	89	46.8	+9	12.2	219	58.2 ¹³⁴	+16	30.9 ⁹⁹	45	5 31	6 05	6 34	22 42 65	8 00 27
19	104	47.0		11.3	234	30.5 ¹³³		40.6 ⁹⁷	50	31	08	41	22 57 70	7 48 23
20	119	47.2		10.4	249	02.7 ¹³²	+16	50.4 ⁹⁸	52	31	10	44	23 04 72	42 21
21	134	47.4		09.5	263	34.9 ¹³²	+17	00.0 ⁹⁶	54	31	12	48	12 74	35 19
22	149	47.6		08.6	278	07.0 ¹³¹	+17	09.6 ⁹⁶	56	31	14	51	21 77	28 17
23	164	47.8		07.7	292	39.0 ¹³⁰		19.1 ⁹⁵	58	30	16	6 56	32 80	21 13
24	179	48.0	+9	06.8	307	10.9 ¹²⁹	+17	28.6 ⁹⁵	60 S	5 30	6 18	7 00	23 44 84	7 12 9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 31 ^m 4		Mag: -4.6 PMG: 14 ^h 45 ^m		Mag: +1.5 PMG: 14 ^h 40 ^m		Mag: -2.9 PMG: 1 ^h 39 ^m		Mag: +1.0 PMG: 13 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	337	05.8	138	34.0	-10	44.6	139	39.2	-7	17.4	335	16.2	-0	54.1	152	46.1	+0	29.9
1	352	08.3	153	34.5		45.7	154	40.2		18.1	350	18.9		54.2	167	48.3		29.7
2	7	10.8	168	35.0		46.8	169	41.2		18.7	5	21.6		54.3	182	50.5		29.6
3	22	13.2	183	35.5		47.9	184	42.1		19.3	20	24.4		54.4	197	52.7		29.5
4	37	15.7	198	36.0		49.0	199	43.1		20.0	35	27.1		54.5	212	54.9		29.4
5	52	18.2	213	36.4	-10	50.1	214	44.1	-7	20.6	50	29.8	-0	54.7	227	57.1	+0	29.3
6	67	20.6	228	36.9	-10	51.2	229	45.0	-7	21.3	65	32.5	-0	54.8	242	59.3	+0	29.2
7	82	23.1	243	37.4		52.3	244	46.0		21.9	80	35.2		54.9	258	01.5		29.0
8	97	25.6	258	37.9		53.4	259	47.0		22.6	95	37.9		55.0	273	03.8		28.9
9	112	28.0	273	38.4		54.5	274	47.9		23.2	110	40.6		55.1	288	06.0		28.8
10	127	30.5	288	38.9		55.6	289	48.9		23.8	125	43.3		55.2	303	08.2		28.7
11	142	33.0	303	39.4	-10	56.7	304	49.8	-7	24.5	140	46.0	-0	55.3	318	10.4	+0	28.6
12	157	35.4	318	39.9	-10	57.9	319	50.8	-7	25.1	155	48.7	-0	55.5	333	12.6	+0	28.5
13	172	37.9	333	40.4	-10	59.0	334	51.8		25.8	170	51.4		55.6	348	14.8		28.4
14	187	40.3	348	40.9	-11	00.1	349	52.7		26.4	185	54.1		55.7	3	17.0		28.2
15	202	42.8	3	41.4		01.2	4	53.7		27.0	200	56.9		55.8	18	19.2		28.1
16	217	45.3	18	41.9		02.3	19	54.7		27.7	215	59.6		55.9	33	21.4		28.0
17	232	47.7	33	42.4	-11	03.4	34	55.6	-7	28.3	231	02.3	-0	56.0	48	23.6	+0	27.9
18	247	50.2	48	42.9	-11	04.5	49	56.6	-7	29.0	246	05.0	-0	56.1	63	25.8	+0	27.8
19	262	52.7	63	43.4		05.6	64	57.6		29.6	261	07.7		56.3	78	28.0		27.7
20	277	55.1	78	43.9		06.7	79	58.5		30.2	276	10.4		56.4	93	30.2		27.5
21	292	57.6	93	44.5		07.8	94	59.5		30.9	291	13.1		56.5	108	32.4		27.4
22	308	00.1	108	45.0		08.9	110	00.4		31.5	306	15.8		56.6	123	34.6		27.3
23	323	02.5	123	45.5		09.9	125	01.4		32.2	321	18.5		56.7	138	36.8		27.2
24	338	05.0	138	46.0	-11	11.0	140	02.4	-7	32.8	336	21.3	-0	56.8	153	39.0	+0	27.1
Dif	—		+5	-11		+10	-6			+27	-1			+22	-1			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 00 ^m 6		Edad: 19 ^d 9 PHE { 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/6 PMG: 3 ^h 38 ^m R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	48.0	+9	06.8	307	10.9	+17 28.6	60 N	19 10	19 55	20 55	19 31 20	12 23 84	
1	194	48.2		05.9	321	42.8 ¹²⁹	38.0 ⁹⁴	58	05	47	41	45 24	12 10 79	
2	209	48.4		05.0	336	14.6 ¹²⁸	47.3 ⁹³	56	19 00	40	30	19 57 28	11 58 76	
3	224	48.5		04.1	350	46.3 ¹²⁷	+17 56.5 ⁹²	54	18 56	33	20	20 08 30	48 73	
4	239	48.7		03.2	5	18.0 ¹²⁷	+18 05.7 ⁹²	52	52	28	11	18 31	39 71	
5	254	48.9	+9	02.4	19	49.6 ¹²⁶	+18 14.7 ⁹⁰	50	18 49	19 22	20 04	20 26 34	11 30 70	
6	269	49.1	+9	01.5	34	21.1 ¹²⁵	+18 23.7 ⁹⁰	45	18 41	19 12	19 48	20 44 37	11 13 66	
7	284	49.3	+9	00.6	48	52.5 ¹²⁴	32.7 ⁹⁰	40	35	19 03	36	20 59 40	10 59 63	
8	299	49.5	+8	59.7	63	23.8 ¹²³	41.5 ⁸⁸	35	30	18 56	26	21 12 42	47 60	
9	314	49.7		58.8	77	55.1 ¹²³	50.3 ⁸⁸	30	25	49	18	23 44	37 58	
10	329	49.9		57.9	92	26.3 ¹²²	+18 59.0 ⁸⁷	20	17	40	19 06	42 47	19 55	
11	344	50.1	+8	57.0	106	57.4 ¹²¹	+19 07.6 ⁸⁶	10 N	18 10	18 32	18 56	21 59 49	10 04 52	
12	359	50.3	+8	56.1	121	28.4 ¹²⁰	+19 16.1 ⁸⁵	0	18 04	18 25	18 49	22 15 51	9 49 50	
13	14	50.5		55.2	135	59.3 ¹¹⁹	24.6 ⁸⁵	10 S	17 58	19	43	30 54	35 47	
14	29	50.7		54.3	150	30.2 ¹¹⁹	32.9 ⁸³	20	51	13	39	22 47 56	20 44	
15	44	50.8		53.4	165	01.0 ¹¹⁸	41.2 ⁸³	30	44	08	36	23 07 59	9 02 41	
16	59	51.0		52.5	179	31.7 ¹¹⁷	49.4 ⁸²	35	40	05	35	19 60	8 52 39	
17	74	51.2	+8	51.6	194	02.3 ¹¹⁶	+19 57.5 ⁸¹	40	17 35	18 02	18 34	23 32 62	8 41 36	
18	89	51.4	+8	50.7	208	32.8 ¹¹⁵	+20 05.5 ⁸⁰	45	17 30	17 59	18 33	23 47 66	8 27 33	
19	104	51.6		49.8	223	03.3 ¹¹⁵	13.4 ⁷⁹	50	23	56	33	*** ** *	11 29	
20	119	51.8		48.9	237	33.7 ¹¹⁴	21.3 ⁷⁹	52	20	54	33	*** ** *	8 03 27	
21	134	52.0		48.0	252	04.0 ¹¹³	29.0 ⁷⁷	54	17	53	34	*** ** *	7 54 26	
22	149	52.2		47.1	266	34.2 ¹¹²	36.7 ⁷⁷	56	13	51	34	*** ** *	45 22	
23	164	52.4		46.2	281	04.3 ¹¹¹	44.2 ⁷⁵	58	09	49	35	*** ** *	34 19	
24	179	52.6	+8	45.3	295	34.4 ¹¹¹	+20 51.7 ⁷⁵	60 S	17 05	17 47	18 35	*** ** *	7 21 16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 27 ^m 4		Mag: -4.6 PMG: 14 ^h 44 ^m			Mag: +1.5 PMG: 14 ^h 39 ^m			Mag: -2.9 PMG: 1 ^h 34 ^m			Mag: +1.0 PMG: 13 ^h 43 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	338	05.0	138	46.0	-11	11.0	140	02.4	-7	32.8	336	21.3	-0	56.8
1	353	07.4	153	46.5		12.1	155	03.3		33.4	351	24.0		57.0
2	8	09.9	168	47.0		13.2	170	04.3		34.1	6	26.7		57.1
3	23	12.4	183	47.5		14.3	185	05.3		34.7	21	29.4		57.2
4	38	14.8	198	48.0		15.4	200	06.2		35.4	36	32.1		57.3
5	53	17.3	213	48.5	-11	16.5	215	07.2	-7	36.0	51	34.8	-0	57.4
6	68	19.8	228	49.0	-11	17.6	230	08.1	-7	36.7	66	37.5	-0	57.5
7	83	22.2	243	49.6		18.7	245	09.1		37.3	81	40.2		57.6
8	98	24.7	258	50.1		19.8	260	10.1		37.9	96	43.0		57.8
9	113	27.2	273	50.6		20.9	275	11.0		38.6	111	45.7		57.9
10	128	29.6	288	51.1		22.0	290	12.0		39.2	126	48.4		58.0
11	143	32.1	303	51.6	-11	23.1	305	12.9	-7	39.9	141	51.1	-0	58.1
12	158	34.6	318	52.1	-11	24.2	320	13.9	-7	40.5	156	53.8	-0	58.2
13	173	37.0	333	52.7		25.3	335	14.9		41.1	171	56.5		58.3
14	188	39.5	348	53.2		26.4	350	15.8		41.8	186	59.2		58.5
15	203	41.9	3	53.7		27.4	5	16.8		42.4	202	02.0		58.6
16	218	44.4	18	54.2		28.5	20	17.7		43.1	217	04.7		58.7
17	233	46.9	33	54.7	-11	29.6	35	18.7	-7	43.7	232	07.4	-0	58.8
18	248	49.3	48	55.3	-11	30.7	50	19.7	-7	44.3	247	10.1	-0	58.9
19	263	51.8	63	55.8		31.8	65	20.6		45.0	262	12.8		59.0
20	278	54.3	78	56.3		32.9	80	21.6		45.6	277	15.5		59.2
21	293	56.7	93	56.8		34.0	95	22.5		46.2	292	18.2		59.3
22	308	59.2	108	57.4		35.1	110	23.5		46.9	307	21.0		59.4
23	324	01.7	123	57.9		36.1	125	24.4		47.5	322	23.7		59.5
24	339	04.1	138	58.4	-11	37.2	140	25.4	-7	48.2	337	26.4	-0	59.6
Dif	—		+5 -11		+10 -6		+27 -1		+22 -1		+22 -1		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 00 ^m 3			Edad: 20 ^d 9 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/3 SD: 15/2 PMG: 4 ^h 27 ^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	52.6	+8	45.3	295	34.4	+20 51.7	60 N	3 07	4 07	4 52	19 51	34	13 47	77
1	194	52.8		44.4	310	04.3	+20 59.1	58	21	15	4 57	20 09	37	29	74
2	209	53.0		43.5	324	34.2	+21 06.3	56	32	22	5 02	25	39	14	71
3	224	53.2		42.6	339	04.0	13.5	54	42	29	06	38	41	13	01
4	239	53.4		41.7	353	33.7	20.6	52	50	34	10	20 49	43	12	50
5	254	53.6	+8	40.8	8	03.4	+21 27.6	50	3 58	4 39	5 13	21 00	44	12	40
6	269	53.8	+8	39.9	22	32.9	+21 34.4	45	4 13	4 50	5 20	21 21	47	12	19
7	284	53.9		39.0	37	02.4	41.2	40	25	4 59	27	39	48	12	02
8	299	54.1		38.1	51	31.7	47.9	35	35	5 06	32	21 54	49	11	47
9	314	54.3		37.2	66	01.0	+21 54.5	30	43	12	36	22 07	50	35	59
10	329	54.5		36.3	80	30.3	+22 00.9	20	4 56	22	44	29	52	11	14
11	344	54.7	+8	35.4	94	59.4	+22 07.3	10 N	5 05	5 30	5 51	22 48	53	10	56
12	359	54.9	+8	34.5	109	28.4	+22 13.5	0	5 12	5 36	5 57	23 06	54	10	39
13	14	55.1		33.6	123	57.4	19.7	10 S	17	42	6 03	24	56	22	51
14	29	55.3		32.7	138	26.3	25.7	20	22	47	10	23 43	58	10	04
15	44	55.5		31.8	152	55.1	31.6	30	25	53	17	** ** *	**	9	43
16	59	55.7		30.9	167	23.8	37.4	35	26	55	21	** ** *	**	31	45
17	74	55.9	+8	30.0	181	52.4	+22 43.2	40	5 27	5 58	6 25	** ** *	**	9	17
18	89	56.1	+8	29.1	196	21.0	+22 48.7	45	5 27	6 01	6 31	** ** *	**	9	00
19	104	56.3		28.2	210	49.4	54.2	50	27	04	37	0 07	68	8	40
20	119	56.5		27.3	225	17.8	59.6	52	27	06	40	16	70	30	37
21	134	56.7		26.4	239	46.1	+23 04.8	54	26	07	43	26	73	20	34
22	149	56.9		25.5	254	14.4	09.9	56	26	09	46	38	75	8	07
23	164	57.1		24.6	268	42.5	15.0	58	25	11	50	0 52	78	7	53
24	179	57.3	+8	23.7	283	10.6	+23 19.8	60 S	5 24	6 12	6 55	1 08	82	7	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 23 ^m 5		Mag: -4.6 PMG: 14 ^h 44 ^m		Mag: +1.5 PMG: 14 ^h 37 ^m		Mag: -2.9 PMG: 1 ^h 30 ^m		Mag: +1.0 PMG: 13 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	339	04.1	138	58.4	-11	37.2	140	25.4	-7	48.2
1	354	06.6	153	58.9		38.3	155	26.4		48.8
2	9	09.1	168	59.5		39.4	170	27.3		49.4
3	24	11.5	184	00.0		40.5	185	28.3		50.1
4	39	14.0	199	00.5		41.6	200	29.2		50.7
5	54	16.4	214	01.1	-11	42.7	215	30.2	-7	51.4
6	69	18.9	229	01.6	-11	43.7	230	31.1	-7	52.0
7	84	21.4	244	02.1		44.8	245	32.1		52.6
8	99	23.8	259	02.7		45.9	260	33.1		53.3
9	114	26.3	274	03.2		47.0	275	34.0		53.9
10	129	28.8	289	03.7		48.1	290	35.0		54.6
11	144	31.2	304	04.3	-11	49.1	305	35.9	-7	55.2
12	159	33.7	319	04.8	-11	50.2	320	36.9	-7	55.8
13	174	36.2	334	05.4		51.3	335	37.8		56.5
14	189	38.6	349	05.9		52.4	350	38.8		57.1
15	204	41.1	4	06.4		53.5	5	39.7		57.8
16	219	43.5	19	07.0		54.5	20	40.7		58.4
17	234	46.0	34	07.5	-11	55.6	35	41.7	-7	59.0
18	249	48.5	49	08.1	-11	56.7	50	42.6	-7	59.7
19	264	50.9	64	08.6		57.8	65	43.6	-8	00.3
20	279	53.4	79	09.1		58.8	80	44.5		00.9
21	294	55.9	94	09.7	-11	59.9	95	45.5		01.6
22	309	58.3	109	10.2	-12	01.0	110	46.4		02.2
23	325	00.8	124	10.8		02.1	125	47.4		02.9
24	340	03.3	139	11.3	-12	03.1	140	48.3	-8	03.5
Dif	—		+5		-11		+10		-6	
								+27		-1
									+22	
										-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00 ^m 0			Edad: 21 ^d 9 PHE { 4 ^h : 56'5 12 ^h : 56'8 20 ^h : 57'1 SD: 15'4 PMG: 5 ^h 19 ^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	179	57.3	+8	23.7	283	10.6	+23	19.8	60 N	19 04	19 49	20 47	20 25 55	15 04 63
1	194	57.5		22.8	297	38.6	90	24.6	58	18 59	41	34	20 46 56	14 43 62
2	209	57.7		21.9	312	06.5	89	29.3	56	55	34	23	21 04 56	25 61
3	224	57.9		21.0	326	34.3	88	33.8	54	51	28	14	19 56	14 10 61
4	239	58.1		20.1	341	02.0	87	38.2	52	48	23	20 06	32 57	13 57 61
5	254	58.3	+8	19.2	355	29.7	87	+23 42.5	50	18 44	19 18	19 59	21 44 56	13 46 60
6	269	58.5	+8	18.2	9	57.3	86	+23 46.6	41	18 38	19 08	19 44	22 08 56	13 22 60
7	284	58.7		17.3	24	24.8	85	50.6	40	32	19 00	33	27 57	13 03 59
8	299	58.9		16.4	38	52.3	85	54.5	35	27	18 53	23	43 57	12 48 58
9	314	59.1		15.5	53	19.6	83	+23 58.3	30	23	47	16	22 57 57	34 58
10	329	59.2		14.6	67	46.9	83	+24 02.0	20	15	38	19 04	23 21 57	12 11 57
11	344	59.4	+8	13.7	82	14.1	82	+24 05.5	10 N	18 09	18 30	18 55	23 41 57	11 50 57
12	359	59.6	+8	12.8	96	41.3	82	+24 08.8	0	18 03	18 24	18 48	** ** *	11 32 56
13	14	59.8		11.9	111	08.3	80	12.1	10 S	17 58	19	43	** ** *	11 13 55
14	30	00.0		11.0	125	35.3	80	15.2	20	52	14	39	** ** *	10 53 54
15	45	00.2		10.1	140	02.3	80	18.2	30	45	09	37	0 06 59	30 53
16	60	00.4		09.2	154	29.1	78	21.0	35	41	07	36	19 60	16 53
17	75	00.6	+8	08.3	168	55.9	78	+24 23.8	40	17 37	18 04	18 35	0 34 61	10 00 52
18	90	00.8	+8	07.4	183	22.6	77	+24 26.3	45	17 32	18 01	18 35	0 53 62	9 42 51
19	105	01.0		06.4	197	49.3	77	28.8	50	26	17 59	36	1 15 64	18 50
20	120	01.2		05.5	212	15.8	75	31.1	52	23	57	36	26 65	9 07 49
21	135	01.4		04.6	226	42.4	76	33.2	54	20	56	37	39 66	8 54 49
22	150	01.6		03.7	241	08.8	74	35.3	56	17	55	38	1 53 67	40 47
23	165	01.8		02.8	255	35.2	74	37.1	58	14	53	39	2 10 69	23 45
24	180	02.0	+8	01.9	270	01.5	73	+24 38.9	60 S	17 10	17 52	18 40	2 30 72	8 02 43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 19 ^m 6		Mag: -4.6 PMG: 14 ^h 43 ^m		Mag: +1.5 PMG: 14 ^h 36 ^m		Mag: -2.9 PMG: 1 ^h 26 ^m		Mag: +1.0 PMG: 13 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	340	03.3	139	11.3	-12	03.1	140	48.3	-8	03.5
1	355	05.7	154	11.9		04.2	155	49.3		04.1
2	10	08.2	169	12.4		05.3	170	50.2		04.8
3	25	10.7	184	13.0		06.4	185	51.2		05.4
4	40	13.1	199	13.5		07.4	200	52.1		06.1
5	55	15.6	214	14.1	-12	08.5	215	53.1	-8	06.7
6	70	18.0	229	14.6	-12	09.6	230	54.0	-8	07.3
7	85	20.5	244	15.2		10.7	245	55.0		08.0
8	100	23.0	259	15.7		11.7	260	55.9		08.6
9	115	25.4	274	16.3		12.8	275	56.9		09.2
10	130	27.9	289	16.9		13.9	290	57.8		09.9
11	145	30.4	304	17.4	-12	14.9	305	58.8	-8	10.5
12	160	32.8	319	18.0	-12	16.0	320	59.7	-8	11.2
13	175	35.3	334	18.5		17.1	336	00.7		11.8
14	190	37.8	349	19.1		18.1	351	01.6		12.4
15	205	40.2	4	19.7		19.2	6	02.6		13.1
16	220	42.7	19	20.2		20.3	21	03.5		13.7
17	235	45.2	34	20.8	-12	21.3	36	04.5	-8	14.3
18	250	47.6	49	21.3	-12	22.4	51	05.4	-8	15.0
19	265	50.1	64	21.9		23.5	66	06.4		15.6
20	280	52.5	79	22.5		24.5	81	07.3		16.3
21	295	55.0	94	23.0		25.6	96	08.3		16.9
22	310	57.5	109	23.6		26.7	111	09.2		17.5
23	325	59.9	124	24.2		27.7	126	10.2		18.2
24	341	02.4	139	24.7	-12	28.8	141	11.1	-8	18.8
Dif	—	+6	—	-11	—	+10	—	-6	+27	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'9 PMG: 11 ^h 59 ^m 7			Edad: 22 ^d 9 PHE { 4 ^h : 57'4 12 ^h : 57'6 20 ^h : 57'9 SD: 15'6 PMG: 6 ^h 14 ^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	h	m	
0	180	02.0	+8	01.9	270	01.5	+24	38.9	16	60 N	3 14	4 12	4 57	21 20	78	16 07	43		
1	195	02.2		01.0	284	27.8	73	40.5	16	58	26	20	5 02	21 42	75	15 45	45		
2	210	02.4	+8	00.1	298	54.0	72	41.9	14	56	37	26	06	22 00	73	26	48		
3	225	02.6	+7	59.2	313	20.1	71	43.3	14	54	46	32	10	15	72	15	11	49	
4	240	02.8		58.3	327	46.2	71	44.4	11	52	3 54	38	13	29	70	14	58	50	
5	255	03.0	+7	57.3	342	12.2	70	+24 45.4	10	50	4 02	4 43	5 16	22 40	70	14	46	51	
6	270	03.2	+7	56.4	356	38.2	70	+24 46.3	9	45	4 16	4 53	5 23	23 04	68	14	22	52	
7	285	03.4		55.5	11	04.1	69	47.1	8	40	28	5 01	28	24	65	14	02	54	
8	300	03.6		54.6	25	30.0	69	47.6	5	35	37	07	33	40	64	13	46	54	
9	315	03.8		53.7	39	55.8	68	48.1	5	30	44	13	37	23	54	63	32	55	
10	330	04.0		52.8	54	21.6	68	48.4	3	20	4 56	22	45	** ** *	**	13 08	56		
11	345	04.2	+7	51.9	68	47.3	67	+24 48.5	1	10 N	5 05	5 29	5 51	** ** *	**	12 47	57		
12	0	04.4	+7	51.0	83	12.9	66	+24 48.5	0	0	5 11	5 36	5 56	0 00	58	12	28	58	
13	15	04.6		50.0	97	38.5	66	48.3	2	10 S	16	41	6 02	20	57	12	08	59	
14	30	04.8		49.1	112	04.1	66	48.0	3	20	20	46	08	0 41	57	11	47	60	
15	45	05.0		48.2	126	29.6	65	47.5	5	30	23	50	14	1 05	56	23	60		
16	60	05.2		47.3	140	55.1	65	46.9	6	35	23	53	18	19	56	11	09	61	
17	75	05.4	+7	46.4	155	20.5	64	+24 46.2	7	40	5 24	5 55	6 22	1 35	57	10	52	62	
18	90	05.6	+7	45.5	169	45.9	64	+24 45.2	10	45	5 24	5 58	6 27	1 55	56	10	33	62	
19	105	05.9		44.6	184	11.2	63	44.2	10	50	23	6 00	33	2 19	56	10	08	63	
20	120	06.1		43.7	198	36.6	64	42.9	13	52	22	01	35	31	56	9	56	64	
21	135	06.3		42.7	213	01.8	62	41.6	13	54	22	03	38	2 45	55	43	64		
22	150	06.5		41.8	227	27.1	63	40.0	16	56	21	04	41	3 00	55	27	64		
23	165	06.7		40.9	241	52.3	62	38.3	17	58	20	05	45	19	54	9	08	66	
24	180	06.9	+7	40.0	256	17.4	61	+24 36.5	18	60 S	5 19	6 07	6 49	3 42	53	8	45	67	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 1 ^h 15 ^m 6		Mag: -4.6 PMG: 14 ^h 42 ^m			Mag: +1.5 PMG: 14 ^h 34 ^m			Mag: -2.9 PMG: 1 ^h 21 ^m			Mag: +1.0 PMG: 13 ^h 33 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	341	02.4	139	24.7	-12	28.8	141	11.1	-8	18.8	339	37.0	-1	05.4	156	17.5	+0	18.7	
1	356	04.9	154	25.3		29.8	156	12.1		19.4	354	39.7		05.5	171	19.7		18.6	
2	11	07.3	169	25.9		30.9	171	13.0		20.1	9	42.5		05.6	186	21.9		18.5	
3	26	09.8	184	26.5		32.0	186	14.0		20.7	24	45.2		05.7	201	24.1		18.3	
4	41	12.3	199	27.0		33.0	201	14.9		21.4	39	47.9		05.8	216	26.3		18.2	
5	56	14.7	214	27.6	-12	34.1	216	15.9	-8	22.0	54	50.6	-1	06.0	231	28.5	+0	18.1	
6	71	17.2	229	28.2	-12	35.1	231	16.8	-8	22.6	69	53.4	-1	06.1	246	30.7	+0	18.0	
7	86	19.7	244	28.7		36.2	246	17.8		23.3	84	56.1		06.2	261	32.9		17.9	
8	101	22.1	259	29.3		37.3	261	18.7		23.9	99	58.8		06.3	276	35.1		17.7	
9	116	24.6	274	29.9		38.3	276	19.7		24.5	115	01.6		06.4	291	37.3		17.6	
10	131	27.0	289	30.5		39.4	291	20.6		25.2	130	04.3		06.6	306	39.5		17.5	
11	146	29.5	304	31.1	-12	40.4	306	21.5	-8	25.8	145	07.0	-1	06.7	321	41.7	+0	17.4	
12	161	32.0	319	31.6	-12	41.5	321	22.5	-8	26.5	160	09.7	-1	06.8	336	43.9	+0	17.3	
13	176	34.4	334	32.2		42.5	336	23.4		27.1	175	12.5		06.9	351	46.1		17.2	
14	191	36.9	349	32.8		43.6	351	24.4		27.7	190	15.2		07.1	6	48.3		17.0	
15	206	39.4	4	33.4		44.6	6	25.3		28.4	205	17.9		07.2	21	50.5		16.9	
16	221	41.8	19	34.0		45.7	21	26.3		29.0	220	20.6		07.3	36	52.7		16.8	
17	236	44.3	34	34.5	-12	46.8	36	27.2	-8	29.6	235	23.4	-1	07.4	51	54.9	+0	16.7	
18	251	46.8	49	35.1	-12	47.8	51	28.2	-8	30.3	250	26.1	-1	07.5	66	57.1	+0	16.6	
19	266	49.2	64	35.7		48.9	66	29.1		30.9	265	28.8		07.7	81	59.3		16.5	
20	281	51.7	79	36.3		49.9	81	30.0		31.5	280	31.6		07.8	97	01.5		16.3	
21	296	54.1	94	36.9		51.0	96	31.0		32.2	295	34.3		07.9	112	03.7		16.2	
22	311	56.6	109	37.5		52.0	111	31.9		32.8	310	37.0		08.0	127	05.9		16.1	
23	326	59.1	124	38.1		53.1	126	32.9		33.5	325	39.7		08.2	142	08.1		16.0	
24	342	01.5	139	38.7	-12	54.1	141	33.8	-8	34.1	340	42.5	-1	08.3	157	10.3	+0	15.9	
Dif	—		+6			-11	+9			-6	+27		-1	+22			-1		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9		Edad: 23 ^d 9	PHE { 4 ^h : 58/3 12 ^h : 58/6 20 ^h : 58/9	SD: 15°8				R°: 58 ^m						
	PMG: 11 ^h 59 ^m 4	PMG: 7 ^h 12 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	180	06.9	+7	40.0	256	17.4	+24 36.5	60 N	18 58	19 42	20 39	22 38 95	16 50 27		
1	195	07.1		39.1	270	42.6	62 34.5	58	54	35	27	22 57 90	30 32		
2	210	07.3		38.2	285	07.7	61 32.3	56	50	29	17	23 13 87	14 35		
3	225	07.5		37.2	299	32.8	61 30.0	54	46	23	08	27 84	16 00 37		
4	240	07.7		36.3	313	57.8	60 27.5	52	43	18	20 01	39 81	15 48 39		
5	255	07.9	+7	35.4	328	22.9	61 +24 24.9	50	18 40	19 13	19 54	23 50 79	15 37 41		
6	270	08.1	+7	34.5	342	47.9	60 +24 22.1	45	18 34	19 04	19 40	** ** *	15 14 45		
7	285	08.3		33.6	357	12.8	59 19.2	40	29	18 56	29	** ** *	14 56 47		
8	300	08.5		32.7	11	37.8	60 16.0	35	24	50	20	** ** *	40 50		
9	315	08.7		31.7	26	02.7	59 12.8	30	20	45	13	** ** *	27 51		
10	330	08.9		30.8	40	27.7	60 09.4	20	14	36	19 02	0 18 61	14 04 54		
11	345	09.1	+7	29.9	54	52.6	59 +24 05.8	10 N	18 08	18 29	18 54	0 38 60	13 44 57		
12	0	09.3	+7	29.0	69	17.4	58 +24 02.1	0	18 03	18 23	18 48	0 58 58	13 26 58		
13	15	09.5		28.1	83	42.3	59 +23 58.2	10 S	17 57	19	43	1 17 57	13 07 60		
14	30	09.7		27.2	98	07.2	59 54.1	20	52	14	40	1 38 55	12 47 63		
15	45	09.9		26.2	112	32.0	58 49.9	30	46	10	38	2 01 54	23 66		
16	60	10.1		25.3	126	56.9	59 45.5	35	43	08	37	15 53	12 10 67		
17	75	10.3	+7	24.4	141	21.7	58 +23 41.0	40	17 39	18 06	18 37	2 32 50	11 54 69		
18	90	10.5	+7	23.5	155	46.5	58 +23 36.3	45	17 34	18 04	18 38	2 51 49	11 35 71		
19	105	10.7		22.6	170	11.3	58 31.5	50	29	01	39	3 15 46	11 75		
20	120	10.9		21.6	184	36.1	58 26.5	52	27	18 00	40	27 44	11 00 76		
21	135	11.1		20.7	199	01.0	59 21.4	54	24	17 59	40	40 43	10 47 78		
22	150	11.3		19.8	213	25.8	58 16.0	56	21	58	41	3 55 41	31 81		
23	165	11.5		18.9	227	50.6	58 10.6	58	18	57	43	4 13 38	10 14 83		
24	180	11.8	+7	18.0	242	15.4	58 +23 05.0	60 S	17 14	17 56	18 44	4 35 34	9 52 88		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG		Mag: -4.6		Mag: +1.5		Mag: -2.9		Mag: +1.0										
	1 ^h 11 ^m 7	PMG: 14 ^h 41 ^m	PMG: 14 ^h 33 ^m	PMG: 1 ^h 17 ^m	PMG: 13 ^h 29 ^m														
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	342	01.5	139	38.7	-12	54.1	141	33.8	-8	34.1	340	42.5	-1	08.3	157	10.3	+0	15.9	
1	357	04.0	154	39.3		55.2	156	34.8		34.7	355	45.2		08.4	172	12.5		15.8	
2	12	06.5	169	39.8		56.2	171	35.7		35.4	10	47.9		08.5	187	14.7		15.6	
3	27	08.9	184	40.4		57.3	186	36.6		36.0	25	50.7		08.6	202	16.9		15.5	
4	42	11.4	199	41.0		58.3	201	37.6		36.6	40	53.4		08.8	217	19.1		15.4	
5	57	13.9	214	41.6	-12	59.4	216	38.5	-8	37.3	55	56.1	-1	08.9	232	21.3	+0	15.3	
6	72	16.3	229	42.2	-13	00.4	231	39.5	-8	37.9	70	58.9	-1	09.0	247	23.5	+0	15.2	
7	87	18.8	244	42.8		01.4	246	40.4		38.5	86	01.6		09.1	262	25.7		15.0	
8	102	21.3	259	43.4		02.5	261	41.4		39.2	101	04.3		09.3	277	27.9		14.9	
9	117	23.7	274	44.0		03.5	276	42.3		39.8	116	07.1		09.4	292	30.1		14.8	
10	132	26.2	289	44.6		04.6	291	43.2		40.4	131	09.8		09.5	307	32.3		14.7	
11	147	28.6	304	45.2	-13	05.6	306	44.2	-8	41.1	146	12.5	-1	09.6	322	34.5	+0	14.6	
12	162	31.1	319	45.8	-13	06.7	321	45.1	-8	41.7	161	15.2	-1	09.7	337	36.6	+0	14.5	
13	177	33.6	334	46.4		07.7	336	46.1		42.3	176	18.0		09.9	352	38.8		14.3	
14	192	36.0	349	47.0		08.7	351	47.0		43.0	191	20.7		10.0	7	41.0		14.2	
15	207	38.5	4	47.6		09.8	6	47.9		43.6	206	23.4		10.1	22	43.2		14.1	
16	222	41.0	19	48.2		10.8	21	48.9		44.3	221	26.2		10.2	37	45.4		14.0	
17	237	43.4	34	48.8	-13	11.9	36	49.8	-8	44.9	236	28.9	-1	10.4	52	47.6	+0	13.9	
18	252	45.9	49	49.5	-13	12.9	51	50.8	-8	45.5	251	31.6	-1	10.5	67	49.8	+0	13.8	
19	267	48.4	64	50.1		13.9	66	51.7		46.2	266	34.4		10.6	82	52.0		13.6	
20	282	50.8	79	50.7		15.0	81	52.6		46.8	281	37.1		10.7	97	54.2		13.5	
21	297	53.3	94	51.3		16.0	96	53.6		47.4	296	39.8		10.9	112	56.4		13.4	
22	312	55.8	109	51.9		17.1	111	54.5		48.1	311	42.6		11.0	127	58.6		13.3	
23	327	58.2	124	52.5		18.1	126	55.4		48.7	326	45.3		11.1	143	00.8		13.2	
24	343	00.7	139	53.1	-13	19.1	141	56.4	-8	49.3	341	48.0	-1	11.2	158	03.0	+0	13.0	
Dif	—		+6		-10		+9		-6		+27		-1		+22			-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 1			Edad: 24 ^d 9 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 5 20 ^h : 59 ^m 8 PMG: 8 ^h 10 ^m R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	11.8	+7	18.0	242	15.4	+23 05.0	60 N	3 20	4 17	5 02	** ** *	** ** *	17 17	17
1	195	12.0		17.0	256	40.2	+22 59.2	58	32	24	06	** ** *	** ** *	17 02	21
2	210	12.2		16.1	271	05.0	58 53.2	56	42	31	10	** ** *	** ** *	16 49	25
3	225	12.4		15.2	285	29.8	58 47.1	54	51	36	13	** ** *	** ** *	37	28
4	240	12.6		14.3	299	54.6	58 40.9	52	3 58	41	16	** ** *	** ** *	27	31
5	255	12.8	+7	13.3	314	19.5	+22 34.5	50	4 05	4 46	5 19	** ** *	** ** *	16 18	33
6	270	13.0	+7	12.4	328	44.3	+22 27.9	45	4 19	4 55	5 25	0 12 75		15 59	37
7	285	13.2		11.5	343	09.2	59 21.2	40	30	5 03	30	29 73		43	41
8	300	13.4		10.6	357	34.0	58 14.4	35	39	09	35	44 70		30	44
9	315	13.6		09.7	11	58.9	59 07.4	30	46	14	38	0 57 68		15 18	47
10	330	13.8		08.7	26	23.8	+22 00.2	20	4 57	23	45	1 19 64		14 58	51
11	345	14.0	+7	07.8	40	48.7	+21 52.9	10 N	5 05	5 29	5 51	1 38 61		14 41	54
12	0	14.2	+7	06.9	55	13.6	+21 45.4	0	5 11	5 35	5 56	1 56 58		14 24	58
13	15	14.4		06.0	69	38.6	60 37.8	10 S	15	40	6 01	2 14 55		14 07	62
14	30	14.6		05.0	84	03.5	59 30.0	20	18	44	06	33 52		13 50	64
15	45	14.8		04.1	98	28.5	60 22.1	30	20	48	12	2 55 49		29	69
16	60	15.0		03.2	112	53.5	60 14.0	35	21	50	15	3 08 46		17	71
17	75	15.3	+7	02.3	127	18.5	+21 05.8	40	5 21	5 52	6 19	3 22 44		13 03	74
18	90	15.5	+7	01.3	141	43.5	+20 57.4	45	5 20	5 54	6 23	3 40 40		12 46	78
19	105	15.7	+7	00.4	156	08.6	61 48.9	50	19	56	28	4 01 37		26	82
20	120	15.9	+6	59.5	170	33.7	61 40.2	52	18	57	31	11 35		16	85
21	135	16.1		58.6	184	58.8	61 31.4	54	17	58	33	23 32		12 05	87
22	150	16.3		57.6	199	23.9	61 22.5	56	16	5 59	36	36 29		11 52	91
23	165	16.5		56.7	213	49.1	62 13.4	58	15	6 00	39	4 51 25		37	95
24	180	16.7	+6	55.8	228	14.2	+20 04.2	60 S	5 13	6 01	6 43	5 09 21		11 20	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 07 ^m 8		Mag: -4.6 PMG: 14 ^h 40 ^m		Mag: +1.5 PMG: 14 ^h 31 ^m		Mag: -2.9 PMG: 1 ^h 13 ^m		Mag: +1.0 PMG: 13 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	343	00.7	139	53.1	-13	19.1	141	56.4	-8	49.3
1	358	03.1	154	53.7		20.2	156	57.3		50.0
2	13	05.6	169	54.3		21.2	171	58.3		50.6
3	28	08.1	184	55.0		22.2	186	59.2		51.2
4	43	10.5	199	55.6		23.3	202	00.1		51.9
5	58	13.0	214	56.2	-13	24.3	217	01.1	-8	52.5
6	73	15.5	229	56.8	-13	25.3	232	02.0	-8	53.1
7	88	17.9	244	57.4		26.4	247	02.9		53.8
8	103	20.4	259	58.1		27.4	262	03.9		54.4
9	118	22.9	274	58.7		28.4	277	04.8		55.0
10	133	25.3	289	59.3		29.5	292	05.8		55.7
11	148	27.8	304	59.9	-13	30.5	307	06.7	-8	56.3
12	163	30.3	320	00.6	-13	31.5	322	07.6	-8	56.9
13	178	32.7	335	01.2		32.6	337	08.6		57.6
14	193	35.2	350	01.8		33.6	352	09.5		58.2
15	208	37.6	5	02.4		34.6	7	10.4		58.8
16	223	40.1	20	03.1		35.6	22	11.4	-8	59.5
17	238	42.6	35	03.7	-13	36.7	37	12.3	-9	00.1
18	253	45.0	50	04.3	-13	37.7	52	13.2	-9	00.7
19	268	47.5	65	05.0		38.7	67	14.2		01.4
20	283	50.0	80	05.6		39.8	82	15.1		02.0
21	298	52.4	95	06.2		40.8	97	16.0		02.6
22	313	54.9	110	06.9		41.8	112	17.0		03.3
23	328	57.4	125	07.5		42.8	127	17.9		03.9
24	343	59.8	140	08.1	-13	43.8	142	18.8	-9	04.5
Dif	—		+6 -10		+9 -6		+27 -1		+22 -1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 25 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 60'3 20 ^h : 60'5											
	PMG: 11 ^h 58 ^m 7		SD: 16'3 PMG: 9 ^h 08 ^m R°: 57 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	m
0	180	16.7	+6 55.8	228	14.2	+20 04.2	60 N	18 52	19 36	20 32	0 13 102		17 34	11
1	195	16.9		242	39.5	+19 54.8	58	48	29	21	27 98		23 15	
2	210	17.1		257	04.7	45.3	56	44	23	11	40 93		14 18	
3	225	17.3		271	30.0	35.6	54	41	18	20 03	0 51 90		17 05	22
4	240	17.5		285	55.3	25.8	52	38	13	19 56	1 00 87		16 58	24
5	255	17.7	+6 51.2	300	20.6	+19 15.9	50	18 36	19 09	19 49	1 09 85		16 51	27
6	270	17.9	+6 50.2	314	46.0	+19 05.9	45	18 30	19 00	19 36	1 27 80		16 36	32
7	285	18.2		329	11.4	+18 55.6	40	25	18 53	26	42 75		24 36	
8	300	18.4		343	36.8	45.3	35	21	47	17	1 54 73		14 39	
9	315	18.6		358	02.3	34.8	30	18	42	11	2 05 70		16 05	42
10	330	18.8		12	27.8	24.2	20	12	34	19 00	23 65		15 49	47
11	345	19.0	+6 45.6	26	53.3	+18 13.5	10 N	18 07	18 28	18 53	2 39 61		15 35	52
12	0	19.2	+6 44.7	41	18.9	+18 02.7	0	18 02	18 23	18 47	2 54 58		15 22	56
13	15	19.4		55	44.5	+17 51.7	10 S	17 57	18	43	3 09 54		15 09	60
14	30	19.6		70	10.1	40.6	20	52	15	40	25 50		14 54	65
15	45	19.8		84	35.8	29.3	30	47	11	39	44 44		38 70	
16	60	20.0		99	01.5	18.0	35	44	09	39	3 54 42		28 73	
17	75	20.2	+6 40.0	113	27.3	+17 06.5	40	17 41	18 08	18 39	4 06 39		14 17	77
18	90	20.4	+6 39.1	127	53.1	+16 54.9	45	17 37	18 06	18 40	4 20 35		14 04	81
19	105	20.7		142	18.9	43.1	50	32	04	42	38 29		13 48	87
20	120	20.9		156	44.8	31.3	52	30	04	43	46 27		41 89	
21	135	21.1		171	10.7	19.3	54	27	03	44	4 55 24		32 92	
22	150	21.3		185	36.6	+16 07.2	56	25	02	45	5 05 21		23 95	
23	165	21.5		200	02.6	+15 55.0	58	22	01	47	16 18		12 99	
24	180	21.7	+6 33.5	214	28.6	+15 42.7	60 S	17 19	18 01	18 49	5 30 13		13 00	103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 03 ^m 8		Mag: -4.6 PMG: 14 ^h 39 ^m		Mag: +1.5 PMG: 14 ^h 30 ^m		Mag: -2.9 PMG: 1 ^h 08 ^m		Mag: +1.0 PMG: 13 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	343	59.8	140	08.1	142	18.8	342	53.7	158	55.7
1	359	02.3	155	08.8	157	19.8	357	56.4	173	57.9
2	14	04.8	170	09.4	172	20.7	12	59.2	189	00.1
3	29	07.2	185	10.0	187	21.6	28	01.9	204	02.3
4	44	09.7	200	10.7	202	22.6	43	04.7	219	04.5
5	59	12.1	215	11.3	217	23.5	58	07.4	234	06.7
6	74	14.6	230	12.0	232	24.4	73	10.1	249	08.9
7	89	17.1	245	12.6	247	25.4	88	12.9	264	11.1
8	104	19.5	260	13.3	262	26.3	103	15.6	279	13.3
9	119	22.0	275	13.9	277	27.2	118	18.4	294	15.5
10	134	24.5	290	14.6	292	28.1	133	21.1	309	17.7
11	149	26.9	305	15.2	307	29.1	148	23.8	324	19.9
12	164	29.4	320	15.8	322	30.0	163	26.6	339	22.1
13	179	31.9	335	16.5	337	30.9	178	29.3	354	24.3
14	194	34.3	350	17.2	352	31.9	193	32.1	9	26.5
15	209	36.8	5	17.8	7	32.8	208	34.8	24	28.7
16	224	39.2	20	18.5	22	33.7	223	37.5	39	30.9
17	239	41.7	35	19.1	37	34.7	238	40.3	54	33.0
18	254	44.2	50	19.8	52	35.6	253	43.0	69	35.2
19	269	46.6	65	20.4	67	36.5	268	45.8	84	37.4
20	284	49.1	80	21.1	82	37.4	283	48.5	99	39.6
21	299	51.6	95	21.7	97	38.4	298	51.2	114	41.8
22	314	54.0	110	22.4	112	39.3	313	54.0	129	44.0
23	329	56.5	125	23.1	127	40.2	328	56.7	144	46.2
24	344	59.0	140	23.7	142	41.2	343	59.5	159	48.4
Dif	—		+6	-10	+9	-6	+27	-1	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 58 ^m 4			Edad: 26 ^d 9 SD: 16'5 PMG: 10 ^h 05 ^m	PHE { 4 ^h : 60'7 12 ^h : 60'9 20 ^h : 61'1 R°: 55 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	21.7	+6	33.5	214	28.6	+15	42.7	60 N	3 26	4 22	5 06	1 55	104	17 45	9		
1	195	21.9		32.6	228	54.7 71		30.3 ¹²⁴	58	37	29	10	2 05	99	38	13		
2	210	22.1		31.7	243	20.8 71		17.8 ¹²⁵	56	47	35	14	13	96	32	16		
3	225	22.3		30.7	257	46.9 71	+15	05.1 ¹²⁷	54	3 55	40	17	21	92	27	18		
4	240	22.5		29.8	272	13.1 72	+14	52.4 ¹²⁷	52	4 02	45	20	27	90	22	21		
5	255	22.8	+6	28.9	286	39.3 72	+14	39.5 ¹²⁹	50	4 09	4 49	5 22	2 34	87	17 18	23		
6	270	23.0	+6	27.9	301	05.5 72	+14	26.5 ¹³⁰	45	4 22	4 58	5 28	2 47	81	17 08	29		
7	285	23.2		27.0	315	31.8 73		13.5 ¹³⁰	40	32	5 05	32	2 57	78	17 00	33		
8	300	23.4		26.1	329	58.2 74	+14	00.3 ¹³²	35	40	10	36	3 07	73	16 53	37		
9	315	23.6		25.1	344	24.5 73	+13	47.0 ¹³³	30	47	15	40	15	70	47	40		
10	330	23.8		24.2	358	50.9 74		33.7 ¹³³	20	4 57	23	45	28	65	36	45		
11	345	24.0	+6	23.3	13	17.4 75	+13	20.2 ¹³⁵	10 N	5 05	5 29	5 50	3 40	60	16 27	50		
12	0	24.2	+6	22.4	27	43.9 75	+13	06.7 ¹³⁵	0	5 10	5 34	5 55	3 52	55	16 18	55		
13	15	24.4		21.4	42	10.4 75	+12	53.0 ¹³⁷	10 S	14	39	6 00	4 03	51	16 09	59		
14	30	24.6		20.5	56	37.0 76		39.3 ¹³⁷	20	17	42	04	15	46	15 59	64		
15	45	24.9		19.6	71	03.6 76		25.4 ¹³⁹	30	18	46	10	28	41	48	70		
16	60	25.1		18.6	85	30.2 76	+12	11.5 ¹³⁹	35	18	47	13	36	38	41	74		
17	75	25.3	+6	17.7	99	56.9 77	+11	57.5 ¹⁴⁰	40	5 17	5 49	6 16	4 45	34	15 34	77		
18	90	25.5	+6	16.8	114	23.6 77	+11	43.4 ¹⁴¹	45	5 16	5 50	6 20	4 55	30	15 25	82		
19	105	25.7		15.8	128	50.4 78		29.3 ¹⁴¹	50	15	52	24	5 07	25	15	87		
20	120	25.9		14.9	143	17.1 77		15.0 ¹⁴³	52	14	53	26	13	22	10	90		
21	135	26.1		14.0	157	44.0 79	+11	00.7 ¹⁴³	54	12	53	29	19	20	15 04	93		
22	150	26.3		13.0	172	10.8 78	+10	46.3 ¹⁴⁴	56	11	54	31	26	17	14 58	96		
23	165	26.5		12.1	186	37.7 79		31.8 ¹⁴⁵	58	09	55	34	34	14	51	100		
24	180	26.8	+6	11.2	201	04.7 80	+10	17.2 ¹⁴⁶	60 S	5 07	5 55	6 37	5 43	10	14 43	104		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 0 ^h 59 ^m 9		Mag: -4.6 PMG: 14 ^h 38 ^m		Mag: +1.5 PMG: 14 ^h 28 ^m		Mag: -2.9 PMG: 1 ^h 04 ^m		Mag: +1.0 PMG: 13 ^h 19 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	344	59.0	140	23.7	-14	08.2	142	41.2	-9	19.7	343	59.5	-1	17.2	159	48.4	+0	07.4
1	0	01.4	155	24.4		09.2	157	42.1		20.3	359	02.2		17.4	174	50.6		07.2
2	15	03.9	170	25.0		10.2	172	43.0		21.0	14	04.9		17.5	189	52.8		07.1
3	30	06.4	185	25.7		11.2	187	43.9		21.6	29	07.7		17.6	204	55.0		07.0
4	45	08.8	200	26.4		12.3	202	44.9		22.2	44	10.4		17.8	219	57.2		06.9
5	60	11.3	215	27.0	-14	13.3	217	45.8	-9	22.9	59	13.2	-1	17.9	234	59.4	+0	06.8
6	75	13.7	230	27.7	-14	14.3	232	46.7	-9	23.5	74	15.9	-1	18.0	250	01.6	+0	06.7
7	90	16.2	245	28.4		15.3	247	47.6		24.1	89	18.7		18.1	265	03.8		06.5
8	105	18.7	260	29.1		16.3	262	48.6		24.8	104	21.4		18.3	280	06.0		06.4
9	120	21.1	275	29.7		17.3	277	49.5		25.4	119	24.1		18.4	295	08.2		06.3
10	135	23.6	290	30.4		18.3	292	50.4		26.0	134	26.9		18.5	310	10.4		06.2
11	150	26.1	305	31.1	-14	19.3	307	51.3	-9	26.7	149	29.6	-1	18.6	325	12.6	+0	06.1
12	165	28.5	320	31.7	-14	20.3	322	52.3	-9	27.3	164	32.4	-1	18.8	340	14.7	+0	05.9
13	180	31.0	335	32.4		21.3	337	53.2		27.9	179	35.1		18.9	355	16.9		05.8
14	195	33.5	350	33.1		22.3	352	54.1		28.5	194	37.9		19.0	10	19.1		05.7
15	210	35.9	5	33.8		23.3	7	55.0		29.2	209	40.6		19.1	25	21.3		05.6
16	225	38.4	20	34.4		24.3	22	56.0		29.8	224	43.3		19.3	40	23.5		05.5
17	240	40.9	35	35.1	-14	25.3	37	56.9	-9	30.4	239	46.1	-1	19.4	55	25.7	+0	05.4
18	255	43.3	50	35.8	-14	26.3	52	57.8	-9	31.1	254	48.8	-1	19.5	70	27.9	+0	05.2
19	270	45.8	65	36.5		27.3	67	58.7		31.7	269	51.6		19.7	85	30.1		05.1
20	285	48.2	80	37.2		28.3	82	59.7		32.3	284	54.3		19.8	100	32.3		05.0
21	300	50.7	95	37.9		29.3	98	00.6		33.0	299	57.1		19.9	115	34.5		04.9
22	315	53.2	110	38.5		30.3	113	01.5		33.6	314	59.8		20.0	130	36.7		04.8
23	330	55.6	125	39.2		31.3	128	02.4		34.2	330	02.6		20.2	145	38.9		04.6
24	345	58.1	140	39.9	-14	32.3	143	03.4	-9	34.9	345	05.3	-1	20.3	160	41.1	+0	04.5
Dif	—		+7		-10		+9		-6		+27		-1		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 58 ^m 0			Edad: 27 ^d 9 PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'4 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	26.8	+6 11.2	201	04.7	+10 17.2	60 N	18 46	19 29	20 24	3 39 103		17 54 7					
1	195	27.0		215	31.6	+10 02.6 ¹⁴⁶	58	42	23	14	44 99		51 10					
2	210	27.2	09.3	229	58.6	+9 47.9 ¹⁴⁷	56	39	18	20 05	49 96		48 14					
3	225	27.4	08.3	244	25.7	33.1 ¹⁴⁸	54	36	13	19 57	53 93		45 17					
4	240	27.6	07.4	258	52.7	18.3 ¹⁴⁸	52	34	08	50	3 57 90		43 19					
5	255	27.8	+6 06.5	273	19.8	+9 03.4 ¹⁴⁹	50	18 31	19 05	19 44	4 01 87		17 41 22					
6	270	28.0	+6 05.5	287	47.0	+8 48.4 ¹⁵⁰	45	18 26	18 56	19 32	4 08 82		17 37 26					
7	285	28.2	04.6	302	14.1	33.4 ¹⁵⁰	40	22	50	22	15 77		33 31					
8	300	28.5	03.7	316	41.3	18.3 ¹⁵¹	35	19	44	14	20 73		30 34					
9	315	28.7	02.7	331	08.5	+8 03.1 ¹⁵²	30	16	40	19 08	25 70		27 38					
10	330	28.9	01.8	345	35.8	+7 47.9 ¹⁵²	20	10	32	18 58	33 64		21 44					
11	345	29.1	+6 00.9	0	03.1	+7 32.7 ¹⁵²	10 N	18 06	18 27	18 51	4 40 59		17 17 49					
12	0	29.3	+5 59.9	14	30.4	+7 17.4 ¹⁵³	0	18 01	18 22	18 46	4 47 54		17 13 53					
13	15	29.5	59.0	28	57.7	+7 02.0 ¹⁵⁴	10 S	17 57	18	43	4 54 49		08 59					
14	30	29.7	58.0	43	25.1	+6 46.6 ¹⁵⁴	20	53	15	41	5 01 44		17 03 64					
15	45	29.9	57.1	57	52.5	31.1 ¹⁵⁵	30	48	12	40	09 38		16 58 70					
16	60	30.2	56.2	72	19.9	15.7 ¹⁵⁴	35	45	11	40	14 35		55 73					
17	75	30.4	+5 55.2	86	47.4	+6 00.1 ¹⁵⁶	40	17 42	18 10	18 41	5 19 31		16 51 77					
18	90	30.6	+5 54.3	101	14.9	+5 44.5 ¹⁵⁶	45	17 39	18 08	18 42	5 25 27		16 47 82					
19	105	30.8	53.4	115	42.4	28.9 ¹⁵⁶	50	35	07	45	32 22		42 87					
20	120	31.0	52.4	130	09.9	+5 13.3 ¹⁵⁶	52	33	07	46	35 20		40 89					
21	135	31.2	51.5	144	37.4	+4 57.6 ¹⁵⁷	54	31	06	47	39 17		37 92					
22	150	31.4	50.5	159	05.0	41.9 ¹⁵⁷	56	29	06	49	43 15		34 96					
23	165	31.6	49.6	173	32.6	26.1 ¹⁵⁸	58	26	05	51	48 11		31 99					
24	180	31.9	+5 48.7	188	00.2	+4 10.3 ¹⁵⁸	60 S	17 23	18 05	18 53	5 53 7		16 27 103					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 56 ^m 0		Mag: -4.7 PMG: 14 ^h 37 ^m			Mag: +1.5 PMG: 14 ^h 27 ^m			Mag: -2.9 PMG: 0 ^h 59 ^m			Mag: +1.0 PMG: 13 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	345	58.1	140	39.9	-14	32.3	143	03.4	-9	34.9	345	05.3	-1	20.3	160	41.1	+0	04.5
1	1	00.6	155	40.6		33.3	158	04.3		35.5	0	08.0		20.4	175	43.3		04.4
2	16	03.0	170	41.3		34.2	173	05.2		36.1	15	10.8		20.6	190	45.5		04.3
3	31	05.5	185	42.0		35.2	188	06.1		36.7	30	13.5		20.7	205	47.7		04.2
4	46	08.0	200	42.7		36.2	203	07.0		37.4	45	16.3		20.8	220	49.8		04.0
5	61	10.4	215	43.4	-14	37.2	218	08.0	-9	38.0	60	19.0	-1	20.9	235	52.0	+0	03.9
6	76	12.9	230	44.1	-14	38.2	233	08.9	-9	38.6	75	21.8	-1	21.1	250	54.2	+0	03.8
7	91	15.3	245	44.8		39.2	248	09.8		39.3	90	24.5		21.2	265	56.4		03.7
8	106	17.8	260	45.5		40.2	263	10.7		39.9	105	27.3		21.3	280	58.6		03.6
9	121	20.3	275	46.2		41.2	278	11.6		40.5	120	30.0		21.5	296	00.8		03.4
10	136	22.7	290	46.9		42.2	293	12.6		41.1	135	32.8		21.6	311	03.0		03.3
11	151	25.2	305	47.6	-14	43.2	308	13.5	-9	41.8	150	35.5	-1	21.7	326	05.2	+0	03.2
12	166	27.7	320	48.3	-14	44.1	323	14.4	-9	42.4	165	38.2	-1	21.8	341	07.4	+0	03.1
13	181	30.1	335	49.0		45.1	338	15.3		43.0	180	41.0		22.0	356	09.6		03.0
14	196	32.6	350	49.7		46.1	353	16.2		43.7	195	43.7		22.1	11	11.8		02.9
15	211	35.1	5	50.4		47.1	8	17.2		44.3	210	46.5		22.2	26	14.0		02.7
16	226	37.5	20	51.1		48.1	23	18.1		44.9	225	49.2		22.3	41	16.2		02.6
17	241	40.0	35	51.8	-14	49.1	38	19.0	-9	45.5	240	52.0	-1	22.5	56	18.4	+0	02.5
18	256	42.5	50	52.5	-14	50.1	53	19.9	-9	46.2	255	54.7	-1	22.6	71	20.5	+0	02.4
19	271	44.9	65	53.2		51.0	68	20.8		46.8	270	57.5		22.7	86	22.7		02.3
20	286	47.4	80	53.9		52.0	83	21.8		47.4	286	00.2		22.9	101	24.9		02.1
21	301	49.8	95	54.6		53.0	98	22.7		48.1	301	03.0		23.0	116	27.1		02.0
22	316	52.3	110	55.3		54.0	113	23.6		48.7	316	05.7		23.1	131	29.3		01.9
23	331	54.8	125	56.0		55.0	128	24.5		49.3	331	08.5		23.3	146	31.5		01.8
24	346	57.2	140	56.8	-14	55.9	143	25.4	-9	49.9	346	11.2	-1	23.4	161	33.7	+0	01.7
Dif	—		+7		-10		+9		-6		+27		-1		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 57 ^m 7			Edad: 28 ^d 9 PHE { 4 ^h : 61'4 12 ^h : 61'4 20 ^h : 61'3 PMG: 11 ^h 54 ^m R°: 53 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	180	31.9	+5 48.7	188	00.2	+4 10.3	60 N	3 32	4 27	5 11	5 22	102	18 01	8			
1	195	32.1		202	27.8	+3 54.5	58	43	34	14	23	99	01	11			
2	210	32.3		216	55.5	38.7	56	52	39	18	25	95	02	14			
3	225	32.5		231	23.1	86	54	3 59	44	20	26	92	02	17			
4	240	32.7		245	50.8	+3 07.0	52	4 06	48	23	27	89	02	20			
5	255	32.9	+5 44.0	260	18.5	+2 51.1	50	4 12	4 52	5 25	5 28	87	18 03	21			
6	270	33.1	+5 43.0	274	46.2	+2 35.2	45	4 24	5 00	5 30	5 30	81	18 03	27			
7	285	33.4		289	14.0	88	40	34	07	34	32	76	04	31			
8	300	33.6		303	41.7	+2 03.3	35	42	12	38	33	73	04	35			
9	315	33.8		318	09.5	+1 47.4	30	48	17	41	35	69	05	37			
10	330	34.0		332	37.3	88	20	4 58	24	46	37	63	05	44			
11	345	34.2	+5 38.3	347	05.0	+1 15.4	10 N	5 05	5 29	5 50	5 39	58	18 06	48			
12	0	34.4	+5 37.4	1	32.8	+0 59.5	0	5 10	5 34	5 54	5 41	53	18 06	54			
13	15	34.6		16	00.7	43.5	10 S	13	37	5 58	43	48	07	58			
14	30	34.9		30	28.5	27.5	20	15	41	6 03	45	43	07	63			
15	45	35.1		44	56.3	+0 11.6	30	16	43	07	47	38	08	69			
16	60	35.3		59	24.1	-0 04.4	35	15	44	10	49	34	08	72			
17	75	35.5	+5 32.7	73	52.0	-0 20.4	40	5 14	5 46	6 13	5 50	31	18 08	77			
18	90	35.7	+5 31.7	88	19.8	-0 36.3	45	5 13	5 47	6 16	5 52	27	18 09	81			
19	105	35.9		102	47.7	-0 52.3	50	10	48	20	54	22	09	86			
20	120	36.1		117	15.6	-1 08.2	52	09	48	22	55	19	09	89			
21	135	36.4		131	43.4	88	54	08	48	24	56	17	09	92			
22	150	36.6		146	11.3	89	56	06	49	26	58	13	10	94			
23	165	36.8		160	39.2	-1 56.0	58	04	49	28	5 59	11	10	98			
24	180	37.0	+5 26.1	175	07.1	-2 11.8	60 S	5 01	5 49	6 31	6 00	8	18 10	102			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 52 ^m 0		Mag: -4.7 PMG: 14 ^h 36 ^m			Mag: +1.5 PMG: 14 ^h 25 ^m			Mag: -2.9 PMG: 0 ^h 55 ^m			Mag: +1.0 PMG: 13 ^h 12 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	346	57.2	140	56.8	-14 55.9	143	25.4	-9 49.9	346	11.2	-1 23.4	161	33.7	+0 01.7			
1	1	59.7	155	57.5	56.9	158	26.3	50.6	1	14.0	23.5	176	35.9	01.5			
2	17	02.2	170	58.2	57.9	173	27.3	51.2	16	16.7	23.6	191	38.1	01.4			
3	32	04.6	185	58.9	58.9	188	28.2	51.8	31	19.5	23.8	206	40.3	01.3			
4	47	07.1	200	59.6	-14 59.8	203	29.1	52.5	46	22.2	23.9	221	42.5	01.2			
5	62	09.6	216	00.3	-15 00.8	218	30.0	-9 53.1	61	25.0	-1 24.0	236	44.7	+0 01.1			
6	77	12.0	231	01.1	-15 01.8	233	30.9	-9 53.7	76	27.7	-1 24.2	251	46.9	+0 00.9			
7	92	14.5	246	01.8	02.8	248	31.8	54.3	91	30.5	24.3	266	49.1	00.8			
8	107	16.9	261	02.5	03.8	263	32.8	55.0	106	33.2	24.4	281	51.2	00.7			
9	122	19.4	276	03.2	04.7	278	33.7	55.6	121	36.0	24.5	296	53.4	00.6			
10	137	21.9	291	04.0	05.7	293	34.6	56.2	136	38.7	24.7	311	55.6	00.5			
11	152	24.3	306	04.7	-15 06.7	308	35.5	-9 56.8	151	41.5	-1 24.8	326	57.8	+0 00.4			
12	167	26.8	321	05.4	-15 07.6	323	36.4	-9 57.5	166	44.2	-1 24.9	342	00.0	+0 00.2			
13	182	29.3	336	06.2	08.6	338	37.3	58.1	181	47.0	25.1	357	02.2	+0 00.1			
14	197	31.7	351	06.9	09.6	353	38.2	58.7	196	49.7	25.2	12	04.4	+0 00.0			
15	212	34.2	6	07.6	10.6	8	39.2	-9 59.4	211	52.5	25.3	27	06.6	-0 00.1			
16	227	36.7	21	08.3	11.5	23	40.1	-10 00.0	226	55.2	25.4	42	08.8	00.2			
17	242	39.1	36	09.1	-15 12.5	38	41.0	-10 00.6	241	58.0	-1 25.6	57	11.0	-0 00.4			
18	257	41.6	51	09.8	-15 13.5	53	41.9	-10 01.2	257	00.7	-1 25.7	72	13.2	-0 00.5			
19	272	44.1	66	10.6	14.4	68	42.8	01.9	272	03.5	25.8	87	15.4	00.6			
20	287	46.5	81	11.3	15.4	83	43.7	02.5	287	06.2	26.0	102	17.5	00.7			
21	302	49.0	96	12.0	16.4	98	44.6	03.1	302	09.0	26.1	117	19.7	00.8			
22	317	51.4	111	12.8	17.3	113	45.6	03.7	317	11.7	26.2	132	21.9	01.0			
23	332	53.9	126	13.5	18.3	128	46.5	04.4	332	14.5	26.4	147	24.1	01.1			
24	347	56.4	141	14.3	-15 19.2	143	47.4	-10 05.0	347	17.2	-1 26.5	162	26.3	-0 01.2			
Dif	—		+7 -10			+9 -6			+27 -1			+22 -1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 4			Edad: 29 ^d 9 PHE { 4 ^h : 61'2 12 ^h : 61'1 20 ^h : 60'9 R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	m
0	180	37.0	+5 26.1	175	07.1	-2 11.8	159	60 N	18 40	19 23	20 17	7 04 102		18 09	8
1	195	37.2		189	34.9		88	58	37	17	20 07	02 98		12 13	
2	210	37.4	24.2	204	02.8		89	56	34	12	19 59	7 00 94		16 15	
3	225	37.7	23.3	218	30.7		89	54	31	08	52	6 58 91		19 18	
4	240	37.9	22.3	232	58.6		89	52	29	04	45	56 89		22 21	
5	255	38.1	+5 21.4	247	26.4		88	50	18 27	19 00	19 40	6 55 86		18 24	24
6	270	38.3	+5 20.4	261	54.3		89	45	18 23	18 52	19 28	6 51 81		18 30	28
7	285	38.5	19.5	276	22.2		89	40	19	46	19	48 77		35 32	
8	300	38.7	18.5	290	50.1		89	35	16	41	11	46 72		39 36	
9	315	38.9	17.6	305	17.9		88	30	13	37	19 05	44 69		42 40	
10	330	39.2	16.7	319	45.8		89	20	08	30	18 56	40 64		49 44	
11	345	39.4	+5 15.7	334	13.6		88	10 N	18 04	18 25	18 50	6 37 58		18 54	50
12	0	39.6	+5 14.8	348	41.5		89	0	18 01	18 21	18 45	6 34 54		19 00	53
13	15	39.8	13.8	3	09.3		88	10 S	17 57	18	43	31 49		05 58	
14	30	40.0	12.9	17	37.1		88	20	53	15	41	28 44		10 64	
15	45	40.2	11.9	32	05.0		89	30	49	13	41	25 38		17 69	
16	60	40.5	11.0	46	32.8		88	35	47	12	42	23 35		20 72	
17	75	40.7	+5 10.0	61	00.6		88	40	17 44	18 11	18 43	6 21 32		19 25	75
18	90	40.9	+5 09.1	75	28.4		88	45	17 41	18 11	18 45	6 19 27		19 30	80
19	105	41.1	08.2	89	56.1		87	50	38	10	48	16 22		35 86	
20	120	41.3	07.2	104	23.9		88	52	36	10	49	14 20		38 88	
21	135	41.5	06.3	118	51.6		87	54	34	10	51	13 17		41 91	
22	150	41.8	05.3	133	19.4		88	56	33	10	53	11 15		44 94	
23	165	42.0	04.4	147	47.1		87	58	30	10	55	10 11		48 98	
24	180	42.2	+5 03.4	162	14.8		87	60 S	17 28	18 10	18 58	6 08 8		19 52	102
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 48 ^m 1			Mag: -4.7 PMG: 14 ^h 34 ^m			Mag: +1.5 PMG: 14 ^h 24 ^m			Mag: -2.9 PMG: 0 ^h 51 ^m			Mag: +1.0 PMG: 13 ^h 08 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	347	56.4	141 14.3	-15 19.2	143 47.4	-10 05.0	347 17.2	-1 26.5	162 26.3	-0 01.2					
1	2	58.8	156 15.0	20.2	158 48.3	05.6	2 20.0	26.6	177 28.5	01.3					
2	18	01.3	171 15.8	21.2	173 49.2	06.2	17 22.7	26.7	192 30.7	01.4					
3	33	03.8	186 16.5	22.1	188 50.1	06.9	32 25.5	26.9	207 32.9	01.6					
4	48	06.2	201 17.2	23.1	203 51.0	07.5	47 28.2	27.0	222 35.1	01.7					
5	63	08.7	216 18.0	-15 24.1	218 51.9	-10 08.1	62 31.0	-1 27.1	237 37.3	-0 01.8					
6	78	11.2	231 18.7	-15 25.0	233 52.8	-10 08.7	77 33.7	-1 27.3	252 39.5	-0 01.9					
7	93	13.6	246 19.5	26.0	248 53.8	09.4	92 36.5	27.4	267 41.7	02.0					
8	108	16.1	261 20.2	26.9	263 54.7	10.0	107 39.2	27.5	282 43.8	02.2					
9	123	18.6	276 21.0	27.9	278 55.6	10.6	122 42.0	27.7	297 46.0	02.3					
10	138	21.0	291 21.8	28.8	293 56.5	11.3	137 44.7	27.8	312 48.2	02.4					
11	153	23.5	306 22.5	-15 29.8	308 57.4	-10 11.9	152 47.5	-1 27.9	327 50.4	-0 02.5					
12	168	25.9	321 23.3	-15 30.8	323 58.3	-10 12.5	167 50.2	-1 28.0	342 52.6	-0 02.6					
13	183	28.4	336 24.0	31.7	338 59.2	13.1	182 53.0	28.2	357 54.8	02.8					
14	198	30.9	351 24.8	32.7	354 00.1	13.8	197 55.7	28.3	12 57.0	02.9					
15	213	33.3	6 25.6	33.6	9 01.0	14.4	212 58.5	28.4	27 59.2	03.0					
16	228	35.8	21 26.3	34.6	24 01.9	15.0	228 01.2	28.6	43 01.4	03.1					
17	243	38.3	36 27.1	-15 35.5	39 02.8	-10 15.6	243 04.0	-1 28.7	58 03.6	-0 03.2					
18	258	40.7	51 27.8	-15 36.5	54 03.8	-10 16.3	258 06.8	-1 28.8	73 05.8	-0 03.4					
19	273	43.2	66 28.6	37.4	69 04.7	16.9	273 09.5	29.0	88 07.9	03.5					
20	288	45.7	81 29.4	38.4	84 05.6	17.5	288 12.3	29.1	103 10.1	03.6					
21	303	48.1	96 30.2	39.3	99 06.5	18.1	303 15.0	29.2	118 12.3	03.7					
22	318	50.6	111 30.9	40.3	114 07.4	18.7	318 17.8	29.4	133 14.5	03.8					
23	333	53.0	126 31.7	41.2	129 08.3	19.4	333 20.5	29.5	148 16.7	03.9					
24	348	55.5	141 32.5	-15 42.2	144 09.2	-10 20.0	348 23.3	-1 29.6	163 18.9	-0 04.1					
Dif	—			+8	-10		+9	-6		+28	-1		+22	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 0			Edad: 1 ^d 6 SD: 16 ^h 6 PMG: 13 ^h 41 ^m	PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 5 20 ^h : 60 ^m 3 R°: 54 ^m											
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	42.2	+5	03.4	162	14.8	-8 22.6	60 N	3 38	4 32	5 16	8 46 102	18 17 12			
1	195	42.4		02.5	176	42.5 87	37.5 149	58	48	38	19	40 97	25 15			
2	210	42.6		01.5	191	10.2 87	-8 52.2 147	56	3 56	43	21	34 93	31 19			
3	225	42.8	+5	00.6	205	37.8 86	-9 06.9 147	54	4 04	48	24	29 90	37 22			
4	240	43.1	+4	59.6	220	05.5 87	21.5 146	52	10	52	26	25 87	43 24			
5	255	43.3	+4	58.7	234	33.1 86	-9 36.1 146	50	4 16	4 55	5 28	8 21 84	18 48 27			
6	270	43.5	+4	57.7	249	00.7 86	-9 50.6 145	45	4 27	5 03	5 32	8 12 79	18 58 32			
7	285	43.7		56.8	263	28.3 86	-10 05.0 144	40	36	09	36	8 05 75	19 07 36			
8	300	43.9		55.9	277	55.9 86	19.3 143	35	43	14	39	7 58 72	15 39			
9	315	44.1		54.9	292	23.4 85	33.6 143	30	49	18	42	53 68	22 42			
10	330	44.4		54.0	306	51.0 86	-10 47.8 142	20	4 58	24	46	44 63	33 47			
11	345	44.6	+4	53.0	321	18.5 85	-11 01.9 141	10 N	5 05	5 29	5 50	7 35 59	19 44 51			
12	0	44.8	+4	52.1	335	46.0 85	-11 15.9 140	0	5 09	5 33	5 54	7 28 54	19 53 55			
13	15	45.0		51.1	350	13.5 85	29.8 139	10 S	12	36	5 57	20 50	20 03 59			
14	30	45.2		50.2	4	40.9 84	43.7 139	20	13	39	6 01	12 46	14 63			
15	45	45.5		49.2	19	08.3 84	-11 57.4 137	30	13	41	05	7 03 41	26 67			
16	60	45.7		48.3	33	35.7 84	-12 11.1 137	35	12	42	07	6 58 38	32 71			
17	75	45.9	+4	47.3	48	03.1 84	-12 24.7 136	40	5 11	5 42	6 09	6 53 33	20 40 75			
18	90	46.1	+4	46.4	62	30.5 84	-12 38.2 135	45	5 09	5 43	6 12	6 46 30	20 50 78			
19	105	46.3		45.4	76	57.8 83	-12 51.6 134	50	06	43	16	38 25	21 01 83			
20	120	46.5		44.5	91	25.1 83	-13 04.9 133	52	05	44	17	34 23	06 86			
21	135	46.8		43.5	105	52.4 83	18.1 132	54	03	44	19	30 20	12 88			
22	150	47.0		42.6	120	19.7 83	31.3 132	56	5 01	44	21	26 17	18 92			
23	165	47.2		41.6	134	46.9 82	44.3 130	58	4 58	44	23	21 14	26 95			
24	180	47.4	+4	40.7	149	14.1 82	-13 57.2 129	60 S	4 55	5 44	6 25	6 16 10	21 34 100			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 0 ^h 44 ^m 2			Mag: -4.7 PMG: 14 ^h 33 ^m			Mag: +1.5 PMG: 14 ^h 23 ^m			Mag: -2.9 PMG: 0 ^h 46 ^m			Mag: +1.0 PMG: 13 ^h 05 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	°	'	°	'	°	'	
0	348	55.5	141	32.5	-15	42.2	144	09.2	-10	20.0	348	23.3	-1	29.6	163	18.9
1	3	58.0	156	33.2		43.1	159	10.1		20.6	3	26.0		29.7	178	21.1
2	19	00.4	171	34.0		44.1	174	11.0		21.2	18	28.8		29.9	193	23.3
3	34	02.9	186	34.8		45.0	189	11.9		21.9	33	31.5		30.0	208	25.5
4	49	05.4	201	35.6		46.0	204	12.8		22.5	48	34.3		30.1	223	27.7
5	64	07.8	216	36.4	-15	46.9	219	13.7	-10	23.1	63	37.0	-1	30.3	238	29.9
6	79	10.3	231	37.1	-15	47.8	234	14.6	-10	23.7	78	39.8	-1	30.4	253	32.0
7	94	12.8	246	37.9		48.8	249	15.5		24.4	93	42.6		30.5	268	34.2
8	109	15.2	261	38.7		49.7	264	16.4		25.0	108	45.3		30.7	283	36.4
9	124	17.7	276	39.5		50.7	279	17.3		25.6	123	48.1		30.8	298	38.6
10	139	20.2	291	40.3		51.6	294	18.2		26.2	138	50.8		30.9	313	40.8
11	154	22.6	306	41.1	-15	52.6	309	19.2	-10	26.9	153	53.6	-1	31.1	328	43.0
12	169	25.1	321	41.8	-15	53.5	324	20.1	-10	27.5	168	56.3	-1	31.2	343	45.2
13	184	27.5	336	42.6		54.4	339	21.0		28.1	183	59.1		31.3	358	47.4
14	199	30.0	351	43.4		55.4	354	21.9		28.7	199	01.8		31.5	13	49.6
15	214	32.5	6	44.2		56.3	9	22.8		29.4	214	04.6		31.6	28	51.8
16	229	34.9	21	45.0		57.2	24	23.7		30.0	229	07.4		31.7	43	53.9
17	244	37.4	36	45.8	-15	58.2	39	24.6	-10	30.6	244	10.1	-1	31.8	58	56.1
18	259	39.9	51	46.6	-15	59.1	54	25.5	-10	31.2	259	12.9	-1	32.0	73	58.3
19	274	42.3	66	47.4	-16	00.0	69	26.4		31.8	274	15.6		32.1	89	00.5
20	289	44.8	81	48.2	-16	01.0	84	27.3		32.5	289	18.4		32.2	104	02.7
21	304	47.3	96	49.0		01.9	99	28.2		33.1	304	21.1		32.4	119	04.9
22	319	49.7	111	49.8		02.8	114	29.1		33.7	319	23.9		32.5	134	07.1
23	334	52.2	126	50.6		03.8	129	30.0		34.3	334	26.7		32.6	149	09.3
24	349	54.6	141	51.4	-16	04.7	144	30.9	-10	35.0	349	29.4	-1	32.8	164	11.5
Dif	—			+8 -9			+9 -6			+28 -1			+22 -1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9			Edad: 2 ^d 6	PHE { 4 ^h : 60'0 12 ^h : 59'7 20 ^h : 59'4													
	PMG: 11 ^h 56 ^m 7					SD: 16'4			PMG: 14 ^h 35 ^m	R°: 56 ^m								
	hG ☉	Dec		hG ☾	Dif						Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	47.4	+4	40.7	149	14.1	-13 57.2	60 N	18 34	19 17	20 10	10 28 98	18 29 17					
1	195	47.6		39.7	163	41.3	82 -14 10.0	58	31	11	20 01	17 93	40 22					
2	210	47.9		38.8	178	08.5	82 22.8	56	29	07	19 53	10 07 90	50 25					
3	225	48.1		37.8	192	35.6	81 35.4	54	27	19 02	46	9 59 87	18 59 28					
4	240	48.3		36.9	207	02.8	82 -14 47.9	52	25	18 59	40	52 84	19 07 31					
5	255	48.5	+4	35.9	221	29.9	81 -15 00.3	50	18 23	18 55	19 35	9 45 82	19 15 32					
6	270	48.7	+4	35.0	235	56.9	80 -15 12.6	45	18 19	18 49	19 24	9 31 77	19 30 37					
7	285	48.9		34.0	250	24.0	81 24.8	40	16	43	15	20 72	43 40					
8	300	49.2		33.1	264	51.0	80 36.9	35	13	38	08	10 70	19 54 43					
9	315	49.4		32.1	279	18.0	80 -15 48.9	30	11	35	19 03	9 01 67	20 04 45					
10	330	49.6		31.2	293	45.0	80 -16 00.8	20	07	29	18 54	8 47 62	20 49					
11	345	49.8	+4	30.2	308	11.9	79 -16 12.5	10 N	18 03	18 24	18 49	8 34 59	20 35 52					
12	0	50.0	+4	29.3	322	38.8	79 -16 24.2	0	18 00	18 21	18 45	8 22 55	20 48 56					
13	15	50.3		28.3	337	05.7	79 35.7	10 S	17 57	18	42	8 10 52	21 02 59					
14	30	50.5		27.4	351	32.6	79 47.1	20	54	16	41	7 58 48	17 62					
15	45	50.7		26.4	5	59.4	78 -16 58.4	30	50	14	42	44 43	33 67					
16	60	50.9		25.5	20	26.2	78 -17 09.6	35	48	14	43	36 41	43 69					
17	75	51.1	+4	24.5	34	53.0	78 -17 20.6	40	17 46	18 13	18 45	7 26 38	21 55 71					
18	90	51.4	+4	23.6	49	19.8	78 -17 31.6	45	17 44	18 13	18 47	7 16 34	22 08 74					
19	105	51.6		22.6	63	46.6	78 42.4	50	41	13	50	7 03 29	24 79					
20	120	51.8		21.7	78	13.3	77 -17 53.1	52	39	13	52	6 57 27	32 81					
21	135	52.0		20.7	92	40.0	77 -18 03.7	54	38	13	54	50 25	40 84					
22	150	52.2		19.7	107	06.7	77 14.1	56	36	13	57	43 22	22 50 86					
23	165	52.5		18.8	121	33.3	76 24.4	58	35	14	18 59	35 18	23 01 90					
24	180	52.7	+4	17.8	136	00.0	77 -18 34.6	60 S	17 33	18 14	19 03	6 26 14	23 14 94					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 40 ^m 2		Mag: -4.7 PMG: 14 ^h 32 ^m			Mag: +1.5 PMG: 14 ^h 21 ^m			Mag: -2.9 PMG: 0 ^h 42 ^m			Mag: +1.0 PMG: 13 ^h 01 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	349	54.6	141	51.4	-16	04.7	144	30.9	-10	35.0	349	29.4	-1	32.8	164	11.5	-0	06.9
1	4	57.1	156	52.2		05.6	159	31.8		35.6	4	32.2		32.9	179	13.7		07.1
2	19	59.6	171	53.0		06.6	174	32.7		36.2	19	34.9		33.0	194	15.8		07.2
3	35	02.0	186	53.8		07.5	189	33.6		36.8	34	37.7		33.2	209	18.0		07.3
4	50	04.5	201	54.6		08.4	204	34.5		37.4	49	40.4		33.3	224	20.2		07.4
5	65	07.0	216	55.5	-16	09.4	219	35.4	-10	38.1	64	43.2	-1	33.4	239	22.4	-0	07.5
6	80	09.4	231	56.3	-16	10.3	234	36.3	-10	38.7	79	45.9	-1	33.6	254	24.6	-0	07.7
7	95	11.9	246	57.1		11.2	249	37.2		39.3	94	48.7		33.7	269	26.8		07.8
8	110	14.4	261	57.9		12.1	264	38.1		39.9	109	51.5		33.8	284	29.0		07.9
9	125	16.8	276	58.7		13.1	279	39.0		40.5	124	54.2		34.0	299	31.2		08.0
10	140	19.3	291	59.5		14.0	294	39.9		41.2	139	57.0		34.1	314	33.4		08.1
11	155	21.8	307	00.4	-16	14.9	309	40.8	-10	41.8	154	59.7	-1	34.2	329	35.5	-0	08.3
12	170	24.2	322	01.2	-16	15.8	324	41.7	-10	42.4	170	02.5	-1	34.3	344	37.7	-0	08.4
13	185	26.7	337	02.0		16.7	339	42.6		43.0	185	05.3		34.5	359	39.9		08.5
14	200	29.1	352	02.8		17.7	354	43.5		43.7	200	08.0		34.6	14	42.1		08.6
15	215	31.6	7	03.7		18.6	9	44.4		44.3	215	10.8		34.7	29	44.3		08.7
16	230	34.1	22	04.5		19.5	24	45.3		44.9	230	13.5		34.9	44	46.5		08.9
17	245	36.5	37	05.3	-16	20.4	39	46.2	-10	45.5	245	16.3	-1	35.0	59	48.7	-0	09.0
18	260	39.0	52	06.1	-16	21.3	54	47.1	-10	46.1	260	19.0	-1	35.1	74	50.9	-0	09.1
19	275	41.5	67	07.0		22.3	69	48.0		46.8	275	21.8		35.3	89	53.1		09.2
20	290	43.9	82	07.8		23.2	84	48.9		47.4	290	24.6		35.4	104	55.3		09.3
21	305	46.4	97	08.6		24.1	99	49.8		48.0	305	27.3		35.5	119	57.4		09.5
22	320	48.9	112	09.5		25.0	114	50.7		48.6	320	30.1		35.7	134	59.6		09.6
23	335	51.3	127	10.3		25.9	129	51.6		49.2	335	32.8		35.8	150	01.8		09.7
24	350	53.8	142	11.1	-16	26.8	144	52.4	-10	49.9	350	35.6	-1	35.9	165	04.0	-0	09.8
Dif	—		+8			-9	+9		-6		+28		-1		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 3			Edad: 3 ^d 6 SD: 16 ^h 1 PMG: 15 ^h 31 ^m	PHE { 4 ^h : 59 ^h 1 12 ^h : 58 ^h 8 20 ^h : 58 ^h 5 Rº: 56 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	52.7	+4	17.8	136	00.0	-18	34.6	60 N	3 44	4 38	5 20	12 06	89	18 46 27
1	195	52.9		16.9	150	26.6	76	44.7	58	3 53	43	23	11 50	85	19 02 31
2	210	53.1		15.9	164	53.2	76	-18	54.6	56	4 01	47	25	37 82	15 35
3	225	53.3		15.0	179	19.7	75	-19	04.4	54	08	51	27	26 79	27 37
4	240	53.6		14.0	193	46.3	76	14.1	52	14	55	29	16	76	38 39
5	255	53.8	+4	13.1	208	12.8	75	-19	23.7	50	4 19	4 58	5 31	11 07	75 19 47 41
6	270	54.0	+4	12.1	222	39.3	75	-19	33.1	45	4 30	5 05	5 35	10 48	71 20 07 44
7	285	54.2		11.2	237	05.8	75	42.4	40	38	11	38	32	69	23 46
8	300	54.4		10.2	251	32.3	75	-19	51.5	35	45	15	41	20 66	37 48
9	315	54.7		09.3	265	58.7	74	-20	00.6	30	51	19	43	10 08	65 20 49 49
10	330	54.9		08.3	280	25.2	75	09.4	20	4 59	25	47	9 49	61	21 09 52
11	345	55.1	+4	07.4	294	51.6	74	-20	18.2	10 N	5 04	5 29	5 50	9 33	58 21 27 54
12	0	55.3	+4	06.4	309	18.0	74	-20	26.8	0	5 08	5 32	5 53	9 17	56 21 44 56
13	15	55.5		05.4	323	44.4	74	35.3	10 S	11	35	56	9 02	54	22 01 58
14	30	55.8		04.5	338	10.8	74	43.6	20	11	37	5 59	8 46	50	19 60
15	45	56.0		03.5	352	37.1	73	51.8	30	11	38	6 02	27	48	40 62
16	60	56.2		02.6	7	03.5	74	-20	59.9	35	10	39	04	17	45 22 52 64
17	75	56.4	+4	01.6	21	29.8	73	-21	07.8	40	5 08	5 39	6 06	8 04	43 23 06 65
18	90	56.6	+4	00.7	35	56.1	73	-21	15.6	45	5 05	5 39	6 09	7 50	40 23 22 68
19	105	56.9	+3	59.7	50	22.4	73	23.3	50	02	39	11	32	37	43 71
20	120	57.1		58.8	64	48.7	73	30.8	75	52	5 00	39	13	24	34 23 53 72
21	135	57.3		57.8	79	15.0	73	38.2	74	54	4 58	39	14	15	32 ** ** *
22	150	57.5		56.8	93	41.3	73	45.4	72	56	55	38	15	7 05	29 ** ** *
23	165	57.7		55.9	108	07.5	72	52.5	71	58	52	38	17	6 53	26 ** ** *
24	180	58.0	+3	54.9	122	33.8	73	-21	59.4	60 S	4 49	5 38	6 19	6 40	21 ** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 0 ^h 36 ^m 3		Mag: -4.7 PMG: 14 ^h 30 ^m		Mag: +1.5 PMG: 14 ^h 20 ^m		Mag: -2.9 PMG: 0 ^h 38 ^m		Mag: +1.0 PMG: 12 ^h 58 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	350	53.8	142	11.1	-16	26.8	144	52.4	-10	49.9	350	35.6	-1	35.9	165	04.0	-0	09.8
1	5	56.2	157	12.0		27.7	159	53.3		50.5	5	38.4		36.1	180	06.2		09.9
2	20	58.7	172	12.8		28.7	174	54.2		51.1	20	41.1		36.2	195	08.4		10.1
3	36	01.2	187	13.7		29.6	189	55.1		51.7	35	43.9		36.3	210	10.6		10.2
4	51	03.6	202	14.5		30.5	204	56.0		52.3	50	46.6		36.5	225	12.8		10.3
5	66	06.1	217	15.4	-16	31.4	219	56.9	-10	53.0	65	49.4	-1	36.6	240	15.0	-0	10.4
6	81	08.6	232	16.2	-16	32.3	234	57.8	-10	53.6	80	52.2	-1	36.7	255	17.1	-0	10.5
7	96	11.0	247	17.0		33.2	249	58.7		54.2	95	54.9		36.9	270	19.3		10.7
8	111	13.5	262	17.9		34.1	264	59.6		54.8	110	57.7		37.0	285	21.5		10.8
9	126	16.0	277	18.7		35.0	280	00.5		55.4	126	00.4		37.1	300	23.7		10.9
10	141	18.4	292	19.6		35.9	295	01.4		56.1	141	03.2		37.3	315	25.9		11.0
11	156	20.9	307	20.5	-16	36.8	310	02.3	-10	56.7	156	06.0	-1	37.4	330	28.1	-0	11.1
12	171	23.4	322	21.3	-16	37.7	325	03.2	-10	57.3	171	08.7	-1	37.5	345	30.3	-0	11.3
13	186	25.8	337	22.2		38.6	340	04.1		57.9	186	11.5		37.7	0	32.5		11.4
14	201	28.3	352	23.0		39.5	355	05.0		58.5	201	14.2		37.8	15	34.6		11.5
15	216	30.7	7	23.9		40.4	10	05.9		59.1	216	17.0		37.9	30	36.8		11.6
16	231	33.2	22	24.7		41.3	25	06.7	-10	59.8	231	19.8		38.1	45	39.0		11.7
17	246	35.7	37	25.6	-16	42.2	40	07.6	-11	00.4	246	22.5	-1	38.2	60	41.2	-0	11.9
18	261	38.1	52	26.5	-16	43.1	55	08.5	-11	01.0	261	25.3	-1	38.3	75	43.4	-0	12.0
19	276	40.6	67	27.3		44.0	70	09.4		01.6	276	28.0		38.5	90	45.6		12.1
20	291	43.1	82	28.2		44.9	85	10.3		02.2	291	30.8		38.6	105	47.8		12.2
21	306	45.5	97	29.1		45.8	100	11.2		02.9	306	33.6		38.7	120	50.0		12.3
22	321	48.0	112	29.9		46.7	115	12.1		03.5	321	36.3		38.9	135	52.2		12.5
23	336	50.5	127	30.8		47.6	130	13.0		04.1	336	39.1		39.0	150	54.3		12.6
24	351	52.9	142	31.7	-16	48.5	145	13.9	-11	04.7	351	41.8	-1	39.1	165	56.5	-0	12.7
Dif	—		+9		-9		+9		-6		+28		-1		+22		-1	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9		Edad: 4 ^d 6	PHE	$\left\{ \begin{array}{l} 4^h: 58/2 \\ 12^h: 57/8 \\ 20^h: 57/5 \\ R^{\circ}: 55^m \end{array} \right.$				Civil		Náutico	Hora	R°	Hora	R°	
	PMG: 11 ^h 56 ^m 0	PMG: 16 ^h 27 ^m			hG ☉	Dec			hG ☾	Dif	Dec	Dif				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	58.0	+3	54.9	122	33.8	-21	59.4	60 N	18 28	19 10	20 03	13 35	74	19 13	42
1	195	58.2		54.0	137	00.1	73	-22	06.2	68	58	25	05	19 54	13 15	71
2	210	58.4		53.0	151	26.3	72	12.9	67	56	23	19 01	47	12 59	69	19 50
3	225	58.6		52.1	165	52.5	72	19.4	65	54	22	18 57	41	45	67	20 04
4	240	58.8		51.1	180	18.8	73	25.8	64	52	20	54	35	32	67	17
5	255	59.1	+3	50.2	194	45.0	72	-22	32.0	62	50	18 18	18 51	19 30	12 22	65
6	270	59.3	+3	49.2	209	11.3	73	-22	38.1	61	45	18 15	18 45	19 20	11 59	64
7	285	59.5		48.2	223	37.5	72	44.0	59	40	12	40	12	41	62	21 09
8	300	59.7		47.3	238	03.7	72	49.8	58	35	10	36	05	26	61	25
9	316	00.0		46.3	252	30.0	73	-22	55.5	57	30	08	32	19 00	11 13	60
10	331	00.2		45.4	266	56.2	72	-23	01.0	55	20	05	27	18 53	10 50	59
11	346	00.4	+3	44.4	281	22.4	72	-23	06.3	53	10 N	18 02	18 23	18 47	10 31	57
12	1	00.6	+3	43.5	295	48.7	73	-23	11.6	53	0	17 59	18 20	18 44	10 13	56
13	16	00.8		42.5	310	14.9	72	16.6	50	20 S	57	18	42	9 56	54	22 59
14	31	01.1		41.5	324	41.2	73	21.6	50	20	54	16	42	36	54	23 19
15	46	01.3		40.6	339	07.4	72	26.3	47	30	51	15	43	15	51	42
16	61	01.5		39.6	353	33.7	73	31.0	47	35	50	15	44	9 02	50	23 56
17	76	01.7	+3	38.7	8	00.0	73	-23	35.5	45	40	17 48	18 15	18 46	8 47	49
18	91	01.9	+3	37.7	22	26.3	73	-23	39.8	43	45	17 46	18 15	18 49	8 30	47
19	106	02.2		36.8	36	52.6	73	44.0	42	50	44	16	53	8 09	44	** * *
20	121	02.4		35.8	51	18.9	73	48.0	40	52	43	16	56	7 58	44	** * *
21	136	02.6		34.8	65	45.2	73	51.9	39	54	42	17	18 58	47	42	0 04
22	151	02.8		33.9	80	11.5	73	55.7	38	56	40	17	19 01	34	40	16
23	166	03.1		32.9	94	37.9	74	-23	59.3	36	58	39	18	04	19	38
24	181	03.3	+3	32.0	109	04.3	74	-24	02.8	35	60 S	17 37	18 19	19 07	7 01	34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.7		Mag: +1.5		Mag: -2.9		Mag: +1.0	
	0 ^h 32 ^m 4	PMG: 14 ^h 29 ^m	PMG: 14 ^h 18 ^m	PMG: 0 ^h 33 ^m	PMG: 12 ^h 54 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	351	52.9	142	31.7	-16	48.5	145	13.9	-11	04.7
1	6	55.4	157	32.6		49.4	160	14.8		05.3
2	21	57.9	172	33.4		50.3	175	15.7		05.9
3	37	00.3	187	34.3		51.2	190	16.5		06.6
4	52	02.8	202	35.2		52.1	205	17.4		07.2
5	67	05.2	217	36.1	-16	53.0	220	18.3	-11	07.8
6	82	07.7	232	37.0	-16	53.9	235	19.2	-11	08.4
7	97	10.2	247	37.8		54.8	250	20.1		09.0
8	112	12.6	262	38.7		55.7	265	21.0		09.7
9	127	15.1	277	39.6		56.6	280	21.9		10.3
10	142	17.6	292	40.5		57.4	295	22.8		10.9
11	157	20.0	307	41.4	-16	58.3	310	23.7	-11	11.5
12	172	22.5	322	42.3	-16	59.2	325	24.5	-11	12.1
13	187	25.0	337	43.2	-17	00.1	340	25.4		12.7
14	202	27.4	352	44.1		01.0	355	26.3		13.4
15	217	29.9	7	45.0		01.9	10	27.2		14.0
16	232	32.4	22	45.9		02.7	25	28.1		14.6
17	247	34.8	37	46.8	-17	03.6	40	29.0	-11	15.2
18	262	37.3	52	47.7	-17	04.5	55	29.9	-11	15.8
19	277	39.7	67	48.6		05.4	70	30.8		16.4
20	292	42.2	82	49.5		06.3	85	31.6		17.0
21	307	44.7	97	50.4		07.2	100	32.5		17.7
22	322	47.1	112	51.3		08.0	115	33.4		18.3
23	337	49.6	127	52.2		08.9	130	34.3		18.9
24	352	52.1	142	53.1	-17	09.8	145	35.2	-11	19.5
Dif	—		+9		-9		+9		-6	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna													
	SD: 15'9 PMG: 11 ^h 55 ^m 6			Edad: 5 ^d 6 SD: 15'6 PMG: 17 ^h 22 ^m	PHE { 4 ^h : 57'2 12 ^h : 56'9 20 ^h : 56'6 R°: 55 ^m	Dif		Dec			R°	Hora	R°													
	hG ☉	Dec							hG ☾					Dif	Dec	Dif	Náutico	Civil	Hora	R°						
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m											
0	181	03.3	+3	32.0	109	04.3	-24	02.8	33	60 N	3	50	4	42	5	25	14	49	51	19	55	61				
1	196	03.5		31.0	123	30.7	74	06.1	33	58	3	58		47		27		26	52		20	18	60			
2	211	03.7		30.0	137	57.1	74	09.3	32	56	4	06		51		29		14	08	52		36	59			
3	226	03.9		29.1	152	23.5	74	12.3	30	54		12		55		31		13	52	53		20	52	58		
4	241	04.2		28.1	166	49.9	74	15.2	29	52		17		4	58	33		39	53		21	05	58			
5	256	04.4	+3	27.2	181	16.4	75	-24	17.9	27	50	4	22	5	01	5	34	13	27	53		21	17	58		
6	271	04.6	+3	26.2	195	42.9	75	-24	20.5	26	45	4	33	5	08	5	37	13	03	53		21	42	57		
7	286	04.8		25.3	210	09.4	75	23.0	25	40		40		13		40		12	43	54		22	01	57		
8	301	05.0		24.3	224	36.0	76	25.3	23	35		47		17		42			27	54			17	56		
9	316	05.3		23.3	239	02.5	75	27.4	21	30		52		20		44		12	13	54			32	55		
10	331	05.5		22.4	253	29.1	76	29.4	20	20		4	59		25	47		11	49	54		22	56	54		
11	346	05.7	+3	21.4	267	55.8	77	-24	31.3	19	10 N	5	04		5	29	5	50	11	28	55		23	16	54	
12	1	05.9	+3	20.5	282	22.4	76	-24	33.0	17	0	5	08		5	32	5	52	11	09	55		23	36	53	
13	16	06.2		19.5	296	49.1	77		34.6	16	10 S		09		34	55		10	50	55		23	55	53		
14	31	06.4		18.5	311	15.8	77		36.1	15	20		10		35	5	57		30	54		**	**	**		
15	46	06.6		17.6	325	42.6	78		37.4	13	30		08		36	6	00		10	06	54		**	**	**	
16	61	06.8		16.6	340	09.4	78		38.5	11	35		07		36	01		9	52	54		**	**	**		
17	76	07.0	+3	15.7	354	36.2	78	-24	39.5	10	40		5	05	5	36	6	03	9	36	54		0	11	59	
18	91	07.3	+3	14.7	9	03.1	79	-24	40.4	9	45		5	02	5	36	6	05	9	17	54		0	30	59	
19	106	07.5		13.7	23	30.0	79		41.1	7	50		4	57	35	07		8	53	54		0	54	59		
20	121	07.7		12.8	37	56.9	79		41.7	6	52			55	34	08			42	53		1	05	60		
21	136	07.9		11.8	52	23.9	80		42.2	5	54			53	34	09			29	53			18	60		
22	151	08.2		10.9	66	50.9	80		42.5	3	56			50	33	10			8	14	53		32	61		
23	166	08.4		09.9	81	18.0	81		42.7	2	58			47	32	11			7	57	52		1	50	61	
24	181	08.6	+3	08.9	95	45.1	81	-24	42.7	0	60 S		4	43		5	32	6	13	7	35	52		2	11	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 28 ^m 5		Mag: -4.7 PMG: 14 ^h 28 ^m		Mag: +1.5 PMG: 14 ^h 17 ^m		Mag: -2.9 PMG: 0 ^h 29 ^m		Mag: +1.0 PMG: 12 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	352	52.1	142	53.1	145	35.2	352	48.1	166	49.0
1	7	54.5	157	54.0	160	36.1	7	50.9	181	51.2
2	22	57.0	172	54.9	175	36.9	22	53.7	196	53.4
3	37	59.5	187	55.8	190	37.8	37	56.4	211	55.6
4	53	01.9	202	56.8	205	38.7	52	59.2	226	57.8
5	68	04.4	217	57.7	220	39.6	68	01.9	242	00.0
6	83	06.8	232	58.6	235	40.5	83	04.7	257	02.2
7	98	09.3	247	59.5	250	41.4	98	07.5	272	04.3
8	113	11.8	263	00.4	265	42.2	113	10.2	287	06.5
9	128	14.2	278	01.4	280	43.1	128	13.0	302	08.7
10	143	16.7	293	02.3	295	44.0	143	15.8	317	10.9
11	158	19.2	308	03.2	310	44.9	158	18.5	332	13.1
12	173	21.6	323	04.1	325	45.8	173	21.3	347	15.3
13	188	24.1	338	05.1	340	46.7	188	24.1	2	17.5
14	203	26.6	353	06.0	355	47.5	203	26.8	17	19.7
15	218	29.0	8	06.9	10	48.4	218	29.6	32	21.8
16	233	31.5	23	07.9	25	49.3	233	32.4	47	24.0
17	248	34.0	38	08.8	40	50.2	248	35.1	62	26.2
18	263	36.4	53	09.7	55	51.1	263	37.9	77	28.4
19	278	38.9	68	10.7	70	51.9	278	40.6	92	30.6
20	293	41.3	83	11.6	85	52.8	293	43.4	107	32.8
21	308	43.8	98	12.6	100	53.7	308	46.2	122	35.0
22	323	46.3	113	13.5	115	54.6	323	48.9	137	37.1
23	338	48.7	128	14.5	130	55.5	338	51.7	152	39.3
24	353	51.2	143	15.4	145	56.3	353	54.5	167	41.5
Dif	—		+9	-9	+9	-6	+28	-1	+22	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 15°9 PMG: 11 ^h 55 ^m 2			Edad: 6 ^d 6	PHE { 4 ^h : 56°4 12 ^h : 56°1 20 ^h : 55°9 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	181	08.6	+3 08.9	95	45.1	-24 42.7	60 N	18 22	19 04	19 56	15 40 32		20 56 75							
1	196	08.8	08.0	110	12.2	81 42.6	58	20	18 59	48	18 36		21 18 71							
2	211	09.1	07.0	124	39.4	82 42.4	56	18	56	41	15 00 38		35 69							
3	226	09.3	06.0	139	06.6	82 42.0	54	17	52	35	14 45 40		21 50 67							
4	241	09.5	05.1	153	33.9	83 41.5	52	15	49	30	32 41		22 03 66							
5	256	09.7	+3 04.1	168	01.2	83 -24 40.8	50	18 14	18 46	19 25	14 20 42		22 15 64							
6	271	09.9	+3 03.2	182	28.6	84 -24 40.1	45	18 11	18 41	19 16	13 56 45		22 39 61							
7	286	10.2	02.2	196	56.1	85 39.1	40	09	36	08	37 46		22 58 59							
8	301	10.4	01.2	211	23.5	84 38.1	35	07	33	19 02	21 47		23 13 58							
9	316	10.6	+3 00.3	225	51.1	86 36.9	30	06	30	18 58	13 07 48		27 57							
10	331	10.8	+2 59.3	240	18.6	85 35.6	20	03	25	51	12 43 50		23 50 55							
11	346	11.1	+2 58.4	254	46.3	87 -24 34.1	10 N	18 01	18 22	18 46	12 23 51		** * *	**						
12	1	11.3	+2 57.4	269	14.0	87 -24 32.6	0	17 58	18 19	18 43	12 04 52		** * *	**						
13	16	11.5	56.4	283	41.7	87 30.9	10 S	57	18	42	11 45 53		** * *	**						
14	31	11.7	55.5	298	09.5	88 29.0	20	55	17	42	24 55		0 16 52							
15	46	11.9	54.5	312	37.3	88 27.0	30	52	16	44	11 00 56		39 52							
16	61	12.2	53.5	327	05.3	90 24.9	35	51	16	46	10 46 57		0 53 51							
17	76	12.4	+2 52.6	341	33.2	89 -24 22.7	40	17 50	18 17	18 48	10 30 58		1 10 50							
18	91	12.6	+2 51.6	356	01.2	90 -24 20.4	45	17 48	18 18	18 52	10 11 59		1 29 49							
19	106	12.8	50.7	10 29.3	91 17.9	25 50	50	47	19	57	9 47 61		1 53 48							
20	121	13.1	49.7	24 57.5	92 15.3	26 52	52	46	20	18 59	35 62		2 05 47							
21	136	13.3	48.7	39 25.7	92 12.5	28 54	54	45	20	19 02	22 63		18 46							
22	151	13.5	47.8	53 53.9	92 09.7	28 56	56	44	21	05	9 07 64		33 46							
23	166	13.7	46.8	68 22.3	94 06.7	30 58	58	43	22	08	8 49 66		2 51 44							
24	181	14.0	+2 45.8	82 50.6	93 -24 03.6	31 60 S	60 S	17 42	18 23	19 12	8 27 68		3 14 41							
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 0 ^h 24 ^m 5		Mag: -4.7 PMG: 14 ^h 26 ^m			Mag: +1.5 PMG: 14 ^h 15 ^m			Mag: -2.9 PMG: 0 ^h 24 ^m			Mag: +1.0 PMG: 12 ^h 47 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	353	51.2	143 15.4	-17 30.6		145 56.3	-11 34.2		353 54.5	-1 45.5		167 41.5	-0 18.5							
1	8	53.7	158 16.4	31.4		160 57.2	34.9		8 57.2	45.6		182 43.7	18.6							
2	23	56.1	173 17.3	32.3		175 58.1	35.5		24 00.0	45.8		197 45.9	18.7							
3	38	58.6	188 18.3	33.1		190 59.0	36.1		39 02.8	45.9		212 48.1	18.9							
4	54	01.1	203 19.2	34.0		205 59.9	36.7		54 05.5	46.1		227 50.3	19.0							
5	69	03.5	218 20.2	-17 34.9		221 00.7	-11 37.3		69 08.3	-1 46.2		242 52.5	-0 19.1							
6	84	06.0	233 21.1	-17 35.7		236 01.6	-11 37.9		84 11.1	-1 46.3		257 54.6	-0 19.2							
7	99	08.5	248 22.1	36.6		251 02.5	38.5		99 13.8	46.5		272 56.8	19.3							
8	114	10.9	263 23.1	37.4		266 03.4	39.1		114 16.6	46.6		287 59.0	19.5							
9	129	13.4	278 24.0	38.3		281 04.3	39.8		129 19.4	46.7		303 01.2	19.6							
10	144	15.8	293 25.0	39.1		296 05.1	40.4		144 22.1	46.9		318 03.4	19.7							
11	159	18.3	308 26.0	-17 40.0		311 06.0	-11 41.0		159 24.9	-1 47.0		333 05.6	-0 19.8							
12	174	20.8	323 26.9	-17 40.8		326 06.9	-11 41.6		174 27.6	-1 47.1		348 07.8	-0 19.9							
13	189	23.2	338 27.9	41.7		341 07.8	42.2		189 30.4	47.3		3 09.9	20.1							
14	204	25.7	353 28.9	42.5		356 08.6	42.8		204 33.2	47.4		18 12.1	20.2							
15	219	28.2	8 29.8	43.3		11 09.5	43.4		219 35.9	47.5		33 14.3	20.3							
16	234	30.6	23 30.8	44.2		26 10.4	44.0		234 38.7	47.7		48 16.5	20.4							
17	249	33.1	38 31.8	-17 45.0		41 11.3	-11 44.7		249 41.5	-1 47.8		63 18.7	-0 20.5							
18	264	35.6	53 32.8	-17 45.9		56 12.1	-11 45.3		264 44.2	-1 47.9		78 20.9	-0 20.7							
19	279	38.0	68 33.8	46.7		71 13.0	45.9		279 47.0	48.1		93 23.1	20.8							
20	294	40.5	83 34.7	47.6		86 13.9	46.5		294 49.8	48.2		108 25.2	20.9							
21	309	43.0	98 35.7	48.4		101 14.8	47.1		309 52.5	48.3		123 27.4	21.0							
22	324	45.4	113 36.7	49.2		116 15.6	47.7		324 55.3	48.5		138 29.6	21.1							
23	339	47.9	128 37.7	50.1		131 16.5	48.3		339 58.1	48.6		153 31.8	21.3							
24	354	50.3	143 38.7	-17 50.9		146 17.4	-11 48.9		355 00.8	-1 48.7		168 34.0	-0 21.4							
Dif	—		+10			-8			+28			-1			+22			-1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/9 PMG: 11 ^h 54 ^m 9			Edad: 7 ^d 6 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 R°: 49 ^m										
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	181	14.0	+2 45.8	82	50.6	-24 03.6	60 N	3 56	4 47	5 30	16 12	20	22 11	80
1	196	14.2		97	19.1 95	-24 00.4 32	58	4 03	52	32	15 54	23	29 76	
2	211	14.4		111	47.6 95	-23 57.0 34	56	10	56	33	38 27		44 73	
3	226	14.6		126	16.2 96	53.5 35	54	16	4 59	35	25 29		22 57 7	
4	241	14.8		140	44.8 96	50.0 35	52	21	5 02	36	13 31		23 09 68	
5	256	15.1	+2 41.0	155	13.5 97	-23 46.2 38	50	4 26	5 04	5 37	15 02	33	23 19	66
6	271	15.3	+2 40.1	169	42.3 98	-23 42.4 38	45	4 35	5 10	5 40	14 41	36	23 40	63
7	286	15.5		184	11.1 98	38.5 39	40	42	14	42	23 38		23 57	60
8	301	15.7		198	40.0 99	34.4 41	35	48	18	43	14 08	41	** ** *	
9	316	16.0		213	09.0 100	30.2 42	30	4 53	21	45	13 55	42	** ** *	
10	331	16.2		227	38.0 100	25.9 43	20	5 00	25	48	33 45		** ** *	
11	346	16.4	+2 35.2	242	07.1 101	-23 21.5 44	10 N	5 04	5 29	5 50	13 14	47	0 10	53
12	1	16.6	+2 34.3	256	36.3 102	-23 17.0 45	0	5 07	5 31	5 52	12 56	49	0 29	51
13	16	16.9		271	05.6 103	12.4 46	10 S	08	32	53	38 51		0 48	49
14	31	17.1		285	34.9 103	07.6 48	20	08	33	55	12 19	54	1 08	47
15	46	17.3		300	04.2 103	-23 02.8 48	30	06	33	57	11 56	57	31 45	
16	61	17.5		314	33.7 105	-22 57.8 50	35	04	33	5 58	43 58		1 44	44
17	76	17.7	+2 29.5	329	03.2 105	-22 52.8 50	40	5 01	5 33	6 00	11 28	60	2 00	42
18	91	18.0	+2 28.5	343	32.8 106	-22 47.6 52	45	4 58	5 32	6 01	11 10	63	2 18	40
19	106	18.2		358	02.4 106	42.3 53	50	53	30	03	10 48	65	41 37	
20	121	18.4		12	32.2 108	36.9 54	52	50	30	03	37 67		2 52	36
21	136	18.6		27	02.0 108	31.4 55	54	48	29	04	25 69		3 04	34
22	151	18.9		41	31.8 108	25.8 56	56	45	28	05	10 11	71	19 31	
23	166	19.1		56	01.8 110	20.1 57	58	41	27	06	9 55	74	35 29	
24	181	19.3	+2 22.7	70	31.8 110	-22 14.2 59	60 S	4 37	5 26	6 07	9 35	78	3 55	26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 0 ^h 20 ^m 6		Mag: -4.7 PMG: 14 ^h 24 ^m		Mag: +1.5 PMG: 14 ^h 14 ^m		Mag: -2.9 PMG: 0 ^h 20 ^m		Mag: +0.9 PMG: 12 ^h 44 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	354	50.3	143	38.7	-17 50.9	146	17.4	-11 48.9	355	00.8					
1	9	52.8	158	39.7	51.7	161	18.3	49.5	10	03.6					
2	24	55.3	173	40.7	52.6	176	19.1	50.1	25	06.4					
3	39	57.7	188	41.7	53.4	191	20.0	50.8	40	09.1					
4	55	00.2	203	42.7	54.2	206	20.9	51.4	55	11.9					
5	70	02.7	218	43.7	-17 55.1	221	21.7	-11 52.0	70	14.7					
6	85	05.1	233	44.7	-17 55.9	236	22.6	-11 52.6	85	17.4					
7	100	07.6	248	45.7	56.7	251	23.5	53.2	100	20.2					
8	115	10.1	263	46.7	57.6	266	24.4	53.8	115	23.0					
9	130	12.5	278	47.7	58.4	281	25.2	54.4	130	25.7					
10	145	15.0	293	48.7	-17 59.2	296	26.1	55.0	145	28.5					
11	160	17.4	308	49.7	-18 00.1	311	27.0	-11 55.6	160	31.3					
12	175	19.9	323	50.7	-18 00.9	326	27.9	-11 56.2	175	34.0					
13	190	22.4	338	51.7	01.7	341	28.7	56.9	190	36.8					
14	205	24.8	353	52.7	02.5	356	29.6	57.5	205	39.6					
15	220	27.3	8	53.7	03.4	11	30.5	58.1	220	42.3					
16	235	29.8	23	54.8	04.2	26	31.3	58.7	235	45.1					
17	250	32.2	38	55.8	-18 05.0	41	32.2	-11 59.3	250	47.9					
18	265	34.7	53	56.8	-18 05.8	56	33.1	-11 59.9	265	50.6					
19	280	37.2	68	57.8	06.7	71	33.9	-12 00.5	280	53.4					
20	295	39.6	83	58.8	07.5	86	34.8	01.1	295	56.2					
21	310	42.1	98	59.9	08.3	101	35.7	01.7	310	58.9					
22	325	44.6	114	00.9	09.1	116	36.5	02.3	326	01.7					
23	340	47.0	129	01.9	09.9	131	37.4	02.9	341	04.5					
24	355	49.5	144	03.0	-18 10.7	146	38.3	-12 03.5	356	07.2					
Dif	—		+10		-8	+9		-6	+28		-1		+22		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 54 ^m 5			Edad: 8 ^d 6 PHE { 4 ^h : 55°0 12 ^h : 54°9 20 ^h : 54°7 SD: 15°0 PMG: 19 ^h 57 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	181	19.3	+2	22.7	70	31.8	-22 14.2	60 N	18 16	18 58	19 49	16 32 12	23 31 82			
1	196	19.5		21.7	85	01.8 ¹¹⁰	08.3	59	58	14	54	41	17 16	45 78		
2	211	19.8		20.8	99	32.0 ¹¹²	-22 02.3	60	56	13	50	35	16 05 19	23 57 75		
3	226	20.0		19.8	114	02.2 ¹¹²	-21 56.2	61	54	12	47	30	15 54 21	** ** *	**	
4	241	20.2		18.8	128	32.5 ¹¹³	50.0	62	52	11	44	25	44 24	** ** *	**	
5	256	20.4	+2	17.9	143	02.9 ¹¹⁴	-21 43.7	63	50	18 10	18 42	19 20	15 35 26	** ** *	**	
6	271	20.7	+2	16.9	157	33.3 ¹¹⁴	-21 37.2	65	45	18 08	18 37	19 12	15 17 29	** ** *	**	
7	286	20.9		15.9	172	03.8 ¹¹⁵	30.7	65	40	06	33	19 05	15 01 33	** ** *	**	
8	301	21.1		15.0	186	34.4 ¹¹⁶	24.1	66	35	04	30	18 59	14 49 35	0 11 58		
9	316	21.3		14.0	201	05.0 ¹¹⁶	17.4	67	30	03	27	55	37 37	24 56		
10	331	21.5		13.0	215	35.7 ¹¹⁷	10.6	68	20	18 01	23	49	18 41	0 45 53		
11	346	21.8	+2	12.1	230	06.5 ¹¹⁸	-21 03.7	69	10 N	17 59	18 20	18 45	14 01 44	1 03 51		
12	1	22.0	+2	11.1	244	37.4 ¹¹⁹	-20 56.7	70	0	17 58	18 18	18 42	13 45 47	1 20 48		
13	16	22.2		10.1	259	08.3 ¹¹⁹	49.7	70	10 S	56	17	42	29 50	37 46		
14	31	22.4		09.2	273	39.3 ¹²⁰	42.5	72	20	55	17	43	13 13 52	1 55 43		
15	46	22.7		08.2	288	10.3 ¹²⁰	35.2	73	30	53	17	45	12 53 56	2 16 39		
16	61	22.9		07.2	302	41.5 ¹²²	27.9	73	35	53	18	47	41 58	28 38		
17	76	23.1	+2	06.3	317	12.7 ¹²²	-20 20.4	75	40	17 52	18 19	18 50	12 28 61	2 42 35		
18	91	23.3	+2	05.3	331	44.0 ¹²³	-20 12.9	75	45	17 51	18 20	18 54	12 13 63	2 58 33		
19	106	23.6		04.3	346	15.3 ¹²³	-20 05.3	76	50	50	22	19 00	11 53 68	3 18 29		
20	121	23.8		03.4	0	46.7 ¹²⁴	-19 57.6	77	52	49	23	02	44 69	28 27		
21	136	24.0		02.4	15	18.2 ¹²⁵	49.8	78	54	49	24	05	34 71	38 26		
22	151	24.2		01.4	29	49.8 ¹²⁶	42.0	78	56	48	25	09	22 74	3 50 23		
23	166	24.5	+2	00.5	44	21.4 ¹²⁶	34.0	80	58	47	26	13	11 09 77	4 04 20		
24	181	24.7	+1	59.5	58	53.1 ¹²⁷	-19 26.0	80	60 S	17 47	18 28	19 17	10 53 81	4 21 16		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 16 ^m 7		Mag: -4.7 PMG: 14 ^h 23 ^m			Mag: +1.5 PMG: 14 ^h 13 ^m			Mag: -2.9 PMG: 0 ^h 15 ^m			Mag: +0.9 PMG: 12 ^h 40 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	355	49.5	144	03.0	-18	10.7	146	38.3	-12	03.5	356	07.2	-1	51.9		
1	10	51.9	159	04.0		11.6	161	39.2		04.2	11	10.0		52.1		
2	25	54.4	174	05.0		12.4	176	40.0		04.8	26	12.8		52.2		
3	40	56.9	189	06.1		13.2	191	40.9		05.4	41	15.5		52.4		
4	55	59.3	204	07.1		14.0	206	41.8		06.0	56	18.3		52.5		
5	71	01.8	219	08.1	-18	14.8	221	42.6	-12	06.6	71	21.1	-1	52.6		
6	86	04.3	234	09.2	-18	15.6	236	43.5	-12	07.2	86	23.8	-1	52.8		
7	101	06.7	249	10.2		16.4	251	44.4		07.8	101	26.6		52.9		
8	116	09.2	264	11.3		17.2	266	45.2		08.4	116	29.4		53.0		
9	131	11.7	279	12.3		18.1	281	46.1		09.0	131	32.2		53.2		
10	146	14.1	294	13.4		18.9	296	47.0		09.6	146	34.9		53.3		
11	161	16.6	309	14.4	-18	19.7	311	47.8	-12	10.2	161	37.7	-1	53.4		
12	176	19.1	324	15.5	-18	20.5	326	48.7	-12	10.8	176	40.5	-1	53.6		
13	191	21.5	339	16.5		21.3	341	49.6		11.4	191	43.2		53.7		
14	206	24.0	354	17.6		22.1	356	50.4		12.0	206	46.0		53.8		
15	221	26.4	9	18.7		22.9	11	51.3		12.6	221	48.8		54.0		
16	236	28.9	24	19.7		23.7	26	52.1		13.3	236	51.5		54.1		
17	251	31.4	39	20.8	-18	24.5	41	53.0	-12	13.9	251	54.3	-1	54.2		
18	266	33.8	54	21.8	-18	25.3	56	53.9	-12	14.5	266	57.1	-1	54.4		
19	281	36.3	69	22.9		26.1	71	54.7		15.1	281	59.8		54.5		
20	296	38.8	84	24.0		26.9	86	55.6		15.7	297	02.6		54.6		
21	311	41.2	99	25.1		27.7	101	56.5		16.3	312	05.4		54.8		
22	326	43.7	114	26.1		28.5	116	57.3		16.9	327	08.1		54.9		
23	341	46.2	129	27.2		29.3	131	58.2		17.5	342	10.9		55.0		
24	356	48.6	144	28.3	-18	30.1	146	59.1	-12	18.1	357	13.7	-1	55.2		
Dif	—		+11			-8	+9		-6		+28		-1		+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 54 ^m 2			Edad: 9 ^d 6 SD: 14'9 PMG: 20 ^h 43 ^m				PHE { 4 ^h : 54'6 12 ^h : 54'4 20 ^h : 54'3 R°: 43 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	m
0	181	24.7	+1 59.5	58	53.1	-19 26.0	81	60 N	4 01	4 52	5 34	16 44	9	***	***	***
1	196	24.9		73	24.8	127	17.9	58	08	4 56	36	33	12	***	***	***
2	211	25.1		87	56.6	128	09.7	56	14	5 00	37	24	14	***	***	***
3	226	25.3		102	28.5	129	-19 01.4	54	20	03	38	15	17	0 08	72	
4	241	25.6		117	00.5	130	-18 53.1	52	25	05	39	08	19	17	70	
5	256	25.8	+1 54.7	131	32.5	130	-18 44.6	50	4 29	5 08	5 40	16 01	21	0 25	68	
6	271	26.0	+1 53.7	146	04.6	131	-18 36.1	45	4 38	5 13	5 42	15 46	25	0 43	63	
7	286	26.2		160	36.8	132	27.5	40	45	16	44	34	28	0 57	61	
8	301	26.5		175	09.0	132	18.9	35	50	20	45	24	30	1 09	58	
9	316	26.7		189	41.3	133	10.1	30	4 54	22	46	15 14	34	20	55	
10	331	26.9		204	13.6	133	-18 01.3	20	5 00	26	48	14 59	37	38	51	
11	346	27.1	+1 48.9	218	46.0	134	-17 52.4	10 N	5 04	5 29	5 50	14 45	40	1 54	48	
12	1	27.4	+1 47.9	233	18.5	135	-17 43.5	0	5 06	5 30	5 51	14 32	44	2 08	45	
13	16	27.6		247	51.0	135	34.5	10 S	07	31	52	19	47	23	42	
14	31	27.8		262	23.6	136	25.4	20	06	31	53	14 05	50	38	39	
15	46	28.0		276	56.3	137	16.2	30	03	31	55	13 49	54	2 55	36	
16	61	28.2		291	29.0	137	-17 07.0	35	5 01	30	56	39	57	3 06	32	
17	76	28.5	+1 43.1	306	01.8	138	-16 57.6	40	4 58	5 29	5 56	13 29	59	3 17	30	
18	91	28.7	+1 42.1	320	34.7	139	-16 48.3	45	4 54	5 28	5 57	13 16	63	3 31	27	
19	106	28.9		335	07.6	139	38.8	50	48	26	58	13 01	67	47	24	
20	121	29.1		349	40.5	139	29.3	52	46	25	59	12 53	69	3 55	21	
21	136	29.4		4	13.6	141	19.8	54	43	24	5 59	45	72	4 04	19	
22	151	29.6		18	46.7	141	10.1	56	39	23	6 00	36	74	13	17	
23	166	29.8		33	19.8	141	-16 00.4	58	35	21	00	26	77	24	14	
24	181	30.0	+1 36.3	47	53.0	142	-15 50.7	60 S	4 30	5 19	6 01	12 14	81	4 37	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 12 ^m 7		Mag: -4.8 PMG: 14 ^h 21 ^m			Mag: +1.5 PMG: 14 ^h 11 ^m			Mag: -2.9 PMG: 0 ^h 11 ^m			Mag: +0.9 PMG: 12 ^h 37 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	356	48.6	144	28.3	-18 30.1	146	59.1	-12 18.1	357	13.7	-1 55.2	170	18.9	-0 27.2		
1	11	51.1	159	29.4	30.9	161	59.9	18.7	12	16.4	55.3	185	21.1	27.3		
2	26	53.5	174	30.4	31.7	177	00.8	19.3	27	19.2	55.4	200	23.3	27.4		
3	41	56.0	189	31.5	32.5	192	01.6	19.9	42	22.0	55.6	215	25.4	27.5		
4	56	58.5	204	32.6	33.2	207	02.5	20.5	57	24.7	55.7	230	27.6	27.7		
5	72	00.9	219	33.7	-18 34.0	222	03.4	-12 21.1	72	27.5	-1 55.8	245	29.8	-0 27.8		
6	87	03.4	234	34.8	-18 34.8	237	04.2	-12 21.7	87	30.3	-1 56.0	260	32.0	-0 27.9		
7	102	05.9	249	35.9	35.6	252	05.1	22.3	102	33.1	56.1	275	34.2	28.0		
8	117	08.3	264	37.0	36.4	267	05.9	22.9	117	35.8	56.2	290	36.4	28.2		
9	132	10.8	279	38.1	37.2	282	06.8	23.5	132	38.6	56.4	305	38.5	28.3		
10	147	13.3	294	39.2	38.0	297	07.7	24.1	147	41.4	56.5	320	40.7	28.4		
11	162	15.7	309	40.3	-18 38.8	312	08.5	-12 24.7	162	44.1	-1 56.6	335	42.9	-0 28.5		
12	177	18.2	324	41.4	-18 39.5	327	09.4	-12 25.3	177	46.9	-1 56.8	350	45.1	-0 28.6		
13	192	20.7	339	42.5	40.3	342	10.2	26.0	192	49.7	56.9	5	47.3	28.8		
14	207	23.1	354	43.6	41.1	357	11.1	26.6	207	52.4	57.0	20	49.5	28.9		
15	222	25.6	9	44.7	41.9	12	12.0	27.2	222	55.2	57.2	35	51.7	29.0		
16	237	28.0	24	45.8	42.7	27	12.8	27.8	237	58.0	57.3	50	53.8	29.1		
17	252	30.5	39	46.9	-18 43.4	42	13.7	-12 28.4	253	00.7	-1 57.5	65	56.0	-0 29.2		
18	267	33.0	54	48.0	-18 44.2	57	14.5	-12 29.0	268	03.5	-1 57.6	80	58.2	-0 29.4		
19	282	35.4	69	49.1	45.0	72	15.4	29.6	283	06.3	57.7	96	00.4	29.5		
20	297	37.9	84	50.2	45.8	87	16.3	30.2	298	09.0	57.9	111	02.6	29.6		
21	312	40.4	99	51.3	46.6	102	17.1	30.8	313	11.8	58.0	126	04.8	29.7		
22	327	42.8	114	52.5	47.3	117	18.0	31.4	328	14.6	58.1	141	06.9	29.8		
23	342	45.3	129	53.6	48.1	132	18.8	32.0	343	17.4	58.3	156	09.1	30.0		
24	357	47.8	144	54.7	-18 48.9	147	19.7	-12 32.6	358	20.1	-1 58.4	171	11.3	-0 30.1		
Dif	—		+11	-8		+9	-6		+28	-1		+22	-1			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 53 ^m 8			Edad: 10 ^d 6 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1 R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	30.0	+1 36.3	47	53.0	-15 50.7	60 N	18 09	18 51	19 42	16 53 6	0 53 80		
1	196	30.3		62	26.3 ¹⁴³	40.9 ⁹⁸	58	08	48	35	45 10	1 03 76		
2	211	30.5		76	59.6 ¹⁴³	31.0 ⁹⁹	56	07	45	29	38 12	12 73		
3	226	30.7		91	32.9 ¹⁴³	21.0 ¹⁰⁰	54	07	42	24	32 15	20 71		
4	241	30.9		106	06.4 ¹⁴⁵	11.0 ¹⁰⁰	52	06	40	20	27 16	27 68		
5	256	31.2	+1 31.4	120	39.8 ¹⁴⁴	-15 01.0 ¹⁰⁰	50	18 05	18 37	19 16	16 22 18	1 33 67		
6	271	31.4	+1 30.5	135	13.4 ¹⁴⁶	-14 50.8 ¹⁰²	45	18 04	18 33	19 08	16 11 22	1 46 63		
7	286	31.6		149	47.0 ¹⁴⁶	40.7 ¹⁰¹	40	02	30	19 01	16 02 25	1 58 59		
8	301	31.8		164	20.6 ¹⁴⁶	30.4 ¹⁰³	35	01	27	18 56	15 54 29	2 07 56		
9	316	32.0		178	54.3 ¹⁴⁷	20.2 ¹⁰²	30	18 01	25	52	48 30	15 54		
10	331	32.3		193	28.0 ¹⁴⁷	-14 09.8 ¹⁰⁴	20	17 59	21	47	36 35	29 50		
11	346	32.5	+1 25.6	208	01.8 ¹⁴⁸	-13 59.4 ¹⁰⁴	10 N	17 58	18 19	18 43	15 25 39	2 42 46		
12	1	32.7	+1 24.7	222	35.7 ¹⁴⁹	-13 49.0 ¹⁰⁴	0	17 57	18 18	18 42	15 16 42	2 53 43		
13	16	32.9		237	09.6 ¹⁴⁹	38.5 ¹⁰⁵	10 S	56	17	42	15 06 45	3 05 39		
14	31	33.2		251	43.5 ¹⁴⁹	27.9 ¹⁰⁶	20	55	17	43	14 55 49	17 36		
15	46	33.4		266	17.5 ¹⁵⁰	17.3 ¹⁰⁶	30	55	18	46	43 54	31 31		
16	61	33.6		280	51.5 ¹⁵⁰	-13 06.7 ¹⁰⁶	35	54	19	49	36 56	38 30		
17	76	33.8	+1 19.8	295	25.6 ¹⁵¹	-12 56.0 ¹⁰⁷	40	17 54	18 21	18 52	14 28 59	3 47 27		
18	91	34.1	+1 18.8	309	59.8 ¹⁵²	-12 45.2 ¹⁰⁸	45	17 53	18 22	18 57	14 19 62	3 58 23		
19	106	34.3		324	33.9 ¹⁵¹	34.4 ¹⁰⁸	50	53	25	19 03	08 66	4 11 19		
20	121	34.5		339	08.1 ¹⁵²	23.6 ¹⁰⁸	52	52	26	06	14 02 69	16 18		
21	136	34.7		353	42.4 ¹⁵³	12.7 ¹⁰⁹	54	52	27	09	13 57 70	23 15		
22	151	34.9		8	16.7 ¹⁵³	-12 01.7 ¹¹⁰	56	52	29	13	50 73	30 13		
23	166	35.2		22	51.1 ¹⁵⁴	-11 50.7 ¹¹⁰	58	52	31	17	43 76	38 11		
24	181	35.4	+1 13.0	37	25.5 ¹⁵⁴	-11 39.7 ¹¹⁰	60 S	17 51	18 33	19 22	13 35 79	4 47 8		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 08 ^m 8		Mag: -4.8 PMG: 14 ^h 19 ^m		Mag: +1.5 PMG: 14 ^h 10 ^m		Mag: -2.9 PMG: 0 ^h 07 ^m		Mag: +0.9 PMG: 12 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	357	47.8	144	54.7	-18	48.9	147	19.7	-12	32.6
1	12	50.2	159	55.8		49.7	162	20.5		33.2
2	27	52.7	174	57.0		50.4	177	21.4		33.8
3	42	55.2	189	58.1		51.2	192	22.3		34.4
4	57	57.6	204	59.2		52.0	207	23.1		35.0
5	73	00.1	220	00.4	-18	52.7	222	24.0	-12	35.6
6	88	02.5	235	01.5	-18	53.5	237	24.8	-12	36.2
7	103	05.0	250	02.6		54.3	252	25.7		36.8
8	118	07.5	265	03.8		55.0	267	26.5		37.4
9	133	09.9	280	04.9		55.8	282	27.4		38.0
10	148	12.4	295	06.1		56.6	297	28.2		38.6
11	163	14.9	310	07.2	-18	57.3	312	29.1	-12	39.2
12	178	17.3	325	08.4	-18	58.1	327	29.9	-12	39.8
13	193	19.8	340	09.5		58.8	342	30.8		40.4
14	208	22.3	355	10.7	-18	59.6	357	31.7		41.0
15	223	24.7	10	11.8	-19	00.4	12	32.5		41.6
16	238	27.2	25	13.0		01.1	27	33.4		42.2
17	253	29.6	40	14.1	-19	01.9	42	34.2	-12	42.8
18	268	32.1	55	15.3	-19	02.6	57	35.1	-12	43.4
19	283	34.6	70	16.4		03.4	72	35.9		44.0
20	298	37.0	85	17.6		04.1	87	36.8		44.6
21	313	39.5	100	18.8		04.9	102	37.6		45.2
22	328	42.0	115	19.9		05.6	117	38.5		45.8
23	343	44.4	130	21.1		06.4	132	39.3		46.4
24	358	46.9	145	22.3	-19	07.1	147	40.2	-12	47.0
Dif	—		+11		-8		+9		-6	
								+28	-1	
									+22	-1

UT	SOL			O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/9 PMG: 11 ^h 53 ^m 5			Edad: 11 ^d 6 PHE { 4 ^h : 54/1 12 ^h : 54/0 20 ^h : 54/0 R°: 41 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	35.4	+1	13.0	37	25.5	-11	39.7	60 N	4	06	4	57	5	39	16	59
1	196	35.6		12.1	51	59.9 ¹⁵⁴		28.6 ¹¹¹	58	13	5	01		40	55	8	
2	211	35.8		11.1	66	34.4 ¹⁵⁵		17.5 ¹¹¹	56	19		04		41	50	11	
3	226	36.1		10.1	81	08.9 ¹⁵⁵	-11	06.4 ¹¹¹	54	24		06		42	47	12	
4	241	36.3		09.1	95	43.4 ¹⁵⁵	-10	55.2 ¹¹²	52	28		09		42	43	15	
5	256	36.5	+1	08.2	110	18.0 ¹⁵⁶	-10	43.9 ¹¹³	50	4	32	5	11	5	43	16	40
6	271	36.7	+1	07.2	124	52.6 ¹⁵⁶	-10	32.7 ¹¹²	45	4	40	5	15	5	44	16	33
7	286	37.0		06.2	139	27.3 ¹⁵⁷		21.3 ¹¹⁴	40	47		18		45	27	24	
8	301	37.2		05.3	154	02.0 ¹⁵⁷	-10	10.0 ¹¹³	35	51		21		46	23	26	
9	316	37.4		04.3	168	36.7 ¹⁵⁷	-9	58.6 ¹¹⁴	30	4	55	23		47	18	29	
10	331	37.6		03.3	183	11.5 ¹⁵⁸		47.2 ¹¹⁴	20	5	01	26		48	11	33	
11	346	37.8	+1	02.4	197	46.3 ¹⁵⁸	-9	35.7 ¹¹⁵	10 N	5	04	5	28	5	49	16	04
12	1	38.1	+1	01.4	212	21.1 ¹⁵⁸	-9	24.2 ¹¹⁵	0	5	06	5	30	5	50	15	58
13	16	38.3	+1	00.4	226	56.0 ¹⁵⁹		12.7 ¹¹⁵	10 S		06	30		51	51	45	
14	31	38.5	+0	59.4	241	30.9 ¹⁵⁹	-9	01.1 ¹¹⁶	20		04	30		52	44	49	
15	46	38.7		58.5	256	05.8 ¹⁵⁹	-8	49.5 ¹¹⁶	30	5	01	28		52	37	52	
16	61	39.0		57.5	270	40.8 ¹⁶⁰		37.9 ¹¹⁶	35	4	58	27		53	32	56	
17	76	39.2	+0	56.5	285	15.8 ¹⁶⁰	-8	26.2 ¹¹⁷	40	4	55	5	26	5	53	15	27
18	91	39.4	+0	55.6	299	50.8 ¹⁶⁰	-8	14.5 ¹¹⁷	45	4	50	5	24	5	53	15	21
19	106	39.6		54.6	314	25.8 ¹⁶⁰	-8	02.8 ¹¹⁷	50		44	22		54	14	66	
20	121	39.8		53.6	329	00.9 ¹⁶¹	-7	51.0 ¹¹⁸	52		41	20		54	11	68	
21	136	40.1		52.6	343	36.0 ¹⁶¹		39.2 ¹¹⁸	54		37	19		54	07	70	
22	151	40.3		51.7	358	11.1 ¹⁶¹		27.4 ¹¹⁸	56		34	17		54	15	03	
23	166	40.5		50.7	372	46.3 ¹⁶²		15.6 ¹¹⁸	58		29	15		54	14	59	
24	181	40.7	+0	49.7	27	21.5 ¹⁶²	-7	03.7 ¹¹⁹	60 S	4	24	5	13	5	55	14	54
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 04 ^m 9			Mag: -4.8 PMG: 14 ^h 17 ^m			Mag: +1.5 PMG: 14 ^h 09 ^m			Mag: -2.9 PMG: 0 ^h 02 ^m			Mag: +0.9 PMG: 12 ^h 30 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	358	46.9	145	22.3	-19	07.1	147	40.2	-12	47.0	359	26.6	-2	01.6	172	03.7	
1	13	49.4	160	23.5		07.9	162	41.0		47.6	14	29.4		01.7	187	05.9	
2	28	51.8	175	24.6		08.6	177	41.9		48.2	29	32.1		01.9	202	08.1	
3	43	54.3	190	25.8		09.4	192	42.7		48.8	44	34.9		02.0	217	10.3	
4	58	56.8	205	27.0		10.1	207	43.6		49.4	59	37.7		02.2	232	12.5	
5	73	59.2	220	28.2	-19	10.9	222	44.4	-12	50.0	74	40.4	-2	02.3	247	14.6	
6	89	01.7	235	29.4	-19	11.6	237	45.3	-12	50.6	89	43.2	-2	02.4	262	16.8	
7	104	04.1	250	30.6		12.4	252	46.1		51.2	104	46.0		02.6	277	19.0	
8	119	06.6	265	31.8		13.1	267	47.0		51.8	119	48.7		02.7	292	21.2	
9	134	09.1	280	32.9		13.8	282	47.8		52.4	134	51.5		02.8	307	23.4	
10	149	11.5	295	34.1		14.6	297	48.7		53.0	149	54.3		03.0	322	25.6	
11	164	14.0	310	35.3	-19	15.3	312	49.5	-12	53.6	164	57.1	-2	03.1	337	27.7	
12	179	16.5	325	36.5	-19	16.1	327	50.4	-12	54.2	179	59.8	-2	03.2	352	29.9	
13	194	18.9	340	37.7		16.8	342	51.2		54.8	195	02.6		03.4	7	32.1	
14	209	21.4	355	38.9		17.5	357	52.1		55.4	210	05.4		03.5	22	34.3	
15	224	23.9	10	40.1		18.3	12	52.9		56.0	225	08.1		03.6	37	36.5	
16	239	26.3	25	41.4		19.0	27	53.8		56.6	240	10.9		03.8	52	38.7	
17	254	28.8	40	42.6	-19	19.7	42	54.6	-12	57.2	255	13.7	-2	03.9	67	40.8	
18	269	31.3	55	43.8	-19	20.5	57	55.5	-12	57.8	270	16.4	-2	04.0	82	43.0	
19	284	33.7	70	45.0		21.2	72	56.3		58.4	285	19.2		04.2	97	45.2	
20	299	36.2	85	46.2		21.9	87	57.1		59.0	300	22.0		04.3	112	47.4	
21	314	38.6	100	47.4		22.7	102	58.0	-12	59.5	315	24.8		04.4	127	49.6	
22	329	41.1	115	48.6		23.4	117	58.8	-13	00.1	330	27.5		04.6	142	51.8	
23	344	43.6	130	49.9		24.1	132	59.7		00.7	345	30.3		04.7	157	53.9	
24	359	46.0	145	51.1	-19	24.8	148	00.5	-13	01.3	0	33.1	-2	04.8	172	56.1	
Dif	—			+12 -7			+8 -6			-8972 -1			+22 -1				

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 53 ^m 1		Edad: 12 ^d 6 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: 40 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	181	40.7	+0	49.7	27	21.5	-7 03.7	60 N	18 03	18 45	19 35	17 05	5	3 31	78			
1	196	41.0		48.8	41	56.6 ¹⁶¹	-6 51.8 ¹¹⁹	58	03	42	29	03	7	35	74			
2	211	41.2		47.8	56	31.9 ¹⁶³	39.9 ¹¹⁹	56	02	39	24	17 01	10	38	72			
3	226	41.4		46.8	71	07.1 ¹⁶²	27.9 ¹²⁰	54	02	37	19	16 59	12	41	70			
4	241	41.6		45.8	85	42.4 ¹⁶³	15.9 ¹²⁰	52	01	35	15	58	14	44	67			
5	256	41.8	+0	44.9	100	17.6 ¹⁶²	-6 04.0 ¹¹⁹	50	18 01	18 33	19 11	16 56	16	3 46	66			
6	271	42.1	+0	43.9	114	52.9 ¹⁶³	-5 51.9 ¹²¹	45	18 00	18 29	19 04	16 54	19	3 51	62			
7	286	42.3		42.9	129	28.2 ¹⁶³	39.9 ¹²⁰	40	17 59	26	18 58	51	23	55	58			
8	301	42.5		42.0	144	03.6 ¹⁶⁴	27.8 ¹²¹	35	59	24	53	49	26	3 59	55			
9	316	42.7		41.0	158	38.9 ¹⁶³	15.8 ¹²⁰	30	58	22	50	47	28	4 02	53			
10	331	43.0		40.0	173	14.3 ¹⁶⁴	-5 03.6 ¹²²	20	57	19	45	44	33	08	48			
11	346	43.2	+0	39.0	187	49.6 ¹⁶³	-4 51.5 ¹²¹	10 N	17 57	18 18	18 42	16 41	37	4 13	44			
12	1	43.4	+0	38.1	202	25.0 ¹⁶⁴	-4 39.4 ¹²¹	0	17 56	18 17	18 41	16 38	41	4 17	41			
13	16	43.6		37.1	217	00.4 ¹⁶⁴	27.2 ¹²²	10 S	56	17	41	36	44	22	37			
14	31	43.8		36.1	231	35.9 ¹⁶⁵	15.1 ¹²¹	20	56	18	43	33	48	27	32			
15	46	44.1		35.2	246	11.3 ¹⁶⁴	-4 02.9 ¹²²	30	56	20	47	29	53	32	28			
16	61	44.3		34.2	260	46.7 ¹⁶⁴	-3 50.7 ¹²²	35	56	21	50	28	55	35	26			
17	76	44.5	+0	33.2	275	22.2 ¹⁶⁵	-3 38.4 ¹²³	40	17 56	18 23	18 54	16 25	58	4 38	24			
18	91	44.7	+0	32.2	289	57.6 ¹⁶⁴	-3 26.2 ¹²²	45	17 56	18 25	18 59	16 23	61	4 42	20			
19	106	45.0		31.3	304	33.1 ¹⁶⁵	14.0 ¹²²	50	56	28	19 06	20	66	47	16			
20	121	45.2		30.3	319	08.6 ¹⁶⁵	-3 01.7 ¹²³	52	56	29	09	19	67	49	15			
21	136	45.4		29.3	333	44.0 ¹⁶⁴	-2 49.4 ¹²³	54	56	31	13	17	70	52	12			
22	151	45.6		28.4	348	19.5 ¹⁶⁵	37.1 ¹²³	56	56	33	17	15	72	54	11			
23	166	45.8		27.4	2	55.0 ¹⁶⁵	24.8 ¹²³	58	56	35	22	14	74	4 57	8			
24	181	46.1	+0	26.4	17	30.5 ¹⁶⁵	-2 12.5 ¹²³	60 S	17 56	18 38	19 27	16 11	78	5 01	5			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 00 ^m 9		Mag: -4.8 PMG: 14 ^h 15 ^m			Mag: +1.5 PMG: 14 ^h 07 ^m			Mag: -2.9 PMG: 23 ^h 53 ^m			Mag: +0.9 PMG: 12 ^h 26 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	359	46.0	145	51.1	-19	24.8	148	00.5	-13	01.3	0 33.1	-2	04.8	172	56.1	-0	35.9	
1	14	48.5	160	52.3		25.6	163	01.4		01.9	15 35.8		05.0	187	58.3		36.0	
2	29	51.0	175	53.5		26.3	178	02.2		02.5	30 38.6		05.1	203	00.5		36.1	
3	44	53.4	190	54.8		27.0	193	03.1		03.1	45 41.4		05.2	218	02.7		36.3	
4	59	55.9	205	56.0		27.7	208	03.9		03.7	60 44.1		05.4	233	04.9		36.4	
5	74	58.4	220	57.2	-19	28.5	223	04.7	-13	04.3	75 46.9	-2	05.5	248	07.0	-0	36.5	
6	90	00.8	235	58.5	-19	29.2	238	05.6	-13	04.9	90 49.7	-2	05.6	263	09.2	-0	36.6	
7	105	03.3	250	59.7		29.9	253	06.4		05.5	105 52.5		05.8	278	11.4		36.7	
8	120	05.7	266	01.0		30.6	268	07.3		06.1	120 55.2		05.9	293	13.6		36.9	
9	135	08.2	281	02.2		31.3	283	08.1		06.7	135 58.0		06.0	308	15.8		37.0	
10	150	10.7	296	03.5		32.0	298	09.0		07.3	151 00.8		06.2	323	18.0		37.1	
11	165	13.1	311	04.7	-19	32.8	313	09.8	-13	07.9	166 03.5	-2	06.3	338	20.1	-0	37.2	
12	180	15.6	326	06.0	-19	33.5	328	10.7	-13	08.5	181 06.3	-2	06.4	353	22.3	-0	37.4	
13	195	18.1	341	07.2		34.2	343	11.5		09.1	196 09.1		06.6	8	24.5		37.5	
14	210	20.5	356	08.5		34.9	358	12.3		09.7	211 11.8		06.7	23	26.7		37.6	
15	225	23.0	11	09.7		35.6	13	13.2		10.3	226 14.6		06.8	38	28.9		37.7	
16	240	25.5	26	11.0		36.3	28	14.0		10.9	241 17.4		07.0	53	31.0		37.8	
17	255	27.9	41	12.2	-19	37.0	43	14.9	-13	11.5	256 20.2	-2	07.1	68	33.2	-0	38.0	
18	270	30.4	56	13.5	-19	37.7	58	15.7	-13	12.0	271 22.9	-2	07.2	83	35.4	-0	38.1	
19	285	32.9	71	14.8		38.4	73	16.5		12.6	286 25.7		07.4	98	37.6		38.2	
20	300	35.3	86	16.1		39.1	88	17.4		13.2	301 28.5		07.5	113	39.8		38.3	
21	315	37.8	101	17.3		39.8	103	18.2		13.8	316 31.2		07.6	128	42.0		38.4	
22	330	40.2	116	18.6		40.5	118	19.1		14.4	331 34.0		07.8	143	44.1		38.6	
23	345	42.7	131	19.9		41.2	133	19.9		15.0	346 36.8		07.9	158	46.3		38.7	
24	0	45.2	146	21.2	-19	42.0	148	20.7	-13	15.6	1	39.6	-2	08.0	173	48.5	-0	38.8
Dif	—		+13		-7		+8		-6		+28		-1		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 52 ^m 8			Edad: 13 ^d 6 PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1 R°: 41 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m
0	181	46.1	+0 26.4	17	30.5	-2 12.5	60 N	4 12	5 02	5 44	17 10	5	4 49	77		
1	196	46.3	25.4	32	06.0 ¹⁶⁵	-2 00.2 ¹²³	58	18	05	44	10	8	49	75		
2	211	46.5	24.5	46	41.5 ¹⁶⁵	-1 47.9 ¹²³	56	23	08	45	11	10	50	72		
3	226	46.7	23.5	61	17.0 ¹⁶⁵	35.5 ¹²⁴	54	28	10	45	11	13	51	69		
4	241	47.0	22.5	75	52.5 ¹⁶⁵	23.2 ¹²³	52	32	12	46	12	14	51	68		
5	256	47.2	+0 21.6	90	28.0 ¹⁶⁵	-1 10.9 ¹²³	50	4 36	5 14	5 46	17 12	17	4 52	65		
6	271	47.4	+0 20.6	105	03.5 ¹⁶⁵	-0 58.5 ¹²⁴	45	4 43	5 17	5 47	17 13	20	4 53	61		
7	286	47.6	19.6	119	39.0 ¹⁶⁵	46.1 ¹²⁴	40	49	20	47	14	24	53	59		
8	301	47.8	18.6	134	14.5 ¹⁶⁵	33.8 ¹²³	35	53	23	48	15	26	54	55		
9	316	48.1	17.7	148	50.0 ¹⁶⁵	21.4 ¹²⁴	30	4 56	24	48	15	29	55	52		
10	331	48.3	16.7	163	25.5 ¹⁶⁵	-0 09.0 ¹²⁴	20	5 01	27	49	17	33	56	48		
11	346	48.5	+0 15.7	178	01.0 ¹⁶⁵	+0 03.3 ¹²³	10 N	5 04	5 28	5 49	17 18	37	4 57	44		
12	1	48.7	+0 14.7	192	36.5 ¹⁶⁵	+0 15.7 ¹²⁴	0	5 05	5 29	5 50	17 19	40	4 58	40		
13	16	48.9	13.8	207	12.0 ¹⁶⁵	28.1 ¹²⁴	10 S	04	29	50	20	44	59	36		
14	31	49.2	12.8	221	47.4 ¹⁶⁴	40.5 ¹²⁴	20	5 02	28	50	21	48	4 59	33		
15	46	49.4	11.8	236	22.9 ¹⁶⁵	+0 52.8 ¹²³	30	4 58	26	50	22	53	5 00	29		
16	61	49.6	10.9	250	58.3 ¹⁶⁴	+1 05.2 ¹²⁴	35	55	25	50	23	55	01	26		
17	76	49.8	+0 09.9	265	33.8 ¹⁶⁵	+1 17.6 ¹²⁴	40	4 51	5 23	5 50	17 23	59	5 02	23		
18	91	50.0	+0 08.9	280	09.2 ¹⁶⁴	+1 30.0 ¹²⁴	45	4 46	5 20	5 50	17 24	62	5 02	20		
19	106	50.3	07.9	294	44.6 ¹⁶⁴	42.3 ¹²³	50	39	17	49	26	66	03	16		
20	121	50.5	07.0	309	20.0 ¹⁶⁴	+1 54.7 ¹²⁴	52	36	16	49	26	68	04	14		
21	136	50.7	06.0	323	55.4 ¹⁶⁴	+2 07.1 ¹²⁴	54	32	14	49	27	70	04	12		
22	151	50.9	05.0	338	30.8 ¹⁶⁴	19.4 ¹²³	56	28	12	49	27	73	05	10		
23	166	51.1	04.1	353	06.2 ¹⁶⁴	31.8 ¹²⁴	58	23	10	49	28	75	05	8		
24	181	51.4	+0 03.1	7	41.5 ¹⁶³	+2 44.1 ¹²³	60 S	4 17	5 07	5 49	17 29	78	5 06	5		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 53 ^m 1		Mag: -4.8 PMG: 14 ^h 13 ^m			Mag: +1.5 PMG: 14 ^h 06 ^m			Mag: -2.9 PMG: 23 ^h 49 ^m			Mag: +0.9 PMG: 12 ^h 23 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	0	45.2	146 21.2	-19 42.0		148 20.7	-13 15.6		1 39.6	-2 08.0		173 48.5	-0 38.8			
1	15	47.6	161 22.4	42.7		163 21.6	16.2		16 42.3	08.2		188 50.7	38.9			
2	30	50.1	176 23.7	43.3		178 22.4	16.8		31 45.1	08.3		203 52.9	39.0			
3	45	52.6	191 25.0	44.0		193 23.3	17.4		46 47.9	08.4		218 55.1	39.2			
4	60	55.0	206 26.3	44.7		208 24.1	18.0		61 50.6	08.6		233 57.2	39.3			
5	75	57.5	221 27.6	-19 45.4		223 24.9	-13 18.6		76 53.4	-2 08.7		248 59.4	-0 39.4			
6	91	00.0	236 28.9	-19 46.1		238 25.8	-13 19.2		91 56.2	-2 08.8		264 01.6	-0 39.5			
7	106	02.4	251 30.2	46.8		253 26.6	19.8		106 58.9	09.0		279 03.8	39.7			
8	121	04.9	266 31.5	47.5		268 27.4	20.3		122 01.7	09.1		294 06.0	39.8			
9	136	07.3	281 32.8	48.2		283 28.3	20.9		137 04.5	09.2		309 08.2	39.9			
10	151	09.8	296 34.1	48.9		298 29.1	21.5		152 07.3	09.4		324 10.3	40.0			
11	166	12.3	311 35.4	-19 49.6		313 30.0	-13 22.1		167 10.0	-2 09.5		339 12.5	-0 40.1			
12	181	14.7	326 36.7	-19 50.3		328 30.8	-13 22.7		182 12.8	-2 09.6		354 14.7	-0 40.3			
13	196	17.2	341 38.0	51.0		343 31.6	23.3		197 15.6	09.8		9 16.9	40.4			
14	211	19.7	356 39.3	51.7		358 32.5	23.9		212 18.3	09.9		24 19.1	40.5			
15	226	22.1	11 40.6	52.3		13 33.3	24.5		227 21.1	10.0		39 21.2	40.6			
16	241	24.6	26 41.9	53.0		28 34.1	25.1		242 23.9	10.2		54 23.4	40.7			
17	256	27.1	41 43.2	-19 53.7		43 35.0	-13 25.7		257 26.6	-2 10.3		69 25.6	-0 40.9			
18	271	29.5	56 44.6	-19 54.4		58 35.8	-13 26.3		272 29.4	-2 10.4		84 27.8	-0 41.0			
19	286	32.0	71 45.9	55.1		73 36.6	26.8		287 32.2	10.6		99 30.0	41.1			
20	301	34.5	86 47.2	55.8		88 37.5	27.4		302 35.0	10.7		114 32.2	41.2			
21	316	36.9	101 48.5	56.4		103 38.3	28.0		317 37.7	10.8		129 34.3	41.3			
22	331	39.4	116 49.9	57.1		118 39.1	28.6		332 40.5	11.0		144 36.5	41.5			
23	346	41.8	131 51.2	57.8		133 40.0	29.2		347 43.3	11.1		159 38.7	41.6			
24	1	44.3	146 52.5	-19 58.5		148 40.8	-13 29.8		2 46.0	-2 11.2		174 40.9	-0 41.7			
Dif	—		+13		-7	+8		-6	+28		-1	+22		-1	—	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 4			Edad: 14 ^d 6 PHE { SD: 14'7 PMG: *** **m R°: ***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	51.4	+0 03.1	7	41.5	+2 44.1		60 N	17 57	18 39	19 29	17 15 6	6 06 79	
1	196	51.6	02.1	22	16.9 ¹⁶⁴	+2 56.4 ¹²³		58	57	36	23	18 9	04 76	
2	211	51.8	01.1	36	52.2 ¹⁶³	+3 08.8 ¹²⁴		56	57	34	18	21 12	02 73	
3	226	52.0	+0 00.2	51	27.5 ¹⁶³	21.1 ¹²³		54	57	32	14	24 14	6 00 71	
4	241	52.3	-0 00.8	66	02.8 ¹⁶³	33.4 ¹²³		52	57	30	10	26 16	5 59 68	
5	256	52.5	-0 01.8	80	38.0 ¹⁶²	+3 45.7 ¹²³		50	17 56	18 29	19 06	17 29 17	5 57 67	
6	271	52.7	-0 02.8	95	13.3 ¹⁶³	+3 58.0 ¹²³		45	17 56	18 25	19 00	17 33 22	5 54 63	
7	286	52.9	03.7	109	48.5 ¹⁶²	+4 10.2 ¹²²		40	56	23	18 54	38 25	52 59	
8	301	53.1	04.7	124	23.7 ¹⁶²	22.5 ¹²³		35	56	21	50	41 28	49 56	
9	316	53.4	05.7	138	58.9 ¹⁶²	34.7 ¹²²		30	56	19	47	44 31	47 54	
10	331	53.6	06.6	153	34.0 ¹⁶¹	47.0 ¹²³		20	56	17	43	50 34	44 49	
11	346	53.8	-0 07.6	168	09.2 ¹⁶²	+4 59.2 ¹²²		10 N	17 56	18 17	18 41	17 55 38	5 41 45	
12	1	54.0	-0 08.6	182	44.3 ¹⁶¹	+5 11.4 ¹²²		0	17 56	18 16	18 40	17 59 42	5 38 41	
13	16	54.2	09.6	197	19.3 ¹⁶⁰	23.6 ¹²²		10 S	56	17	41	18 04 46	35 38	
14	31	54.5	10.5	211	54.4 ¹⁶¹	35.7 ¹²¹		20	56	18	44	09 50	32 34	
15	46	54.7	11.5	226	29.4 ¹⁶⁰	+5 47.9 ¹²²		30	57	21	48	15 54	29 29	
16	61	54.9	12.5	241	04.4 ¹⁶⁰	+6 00.0 ¹²¹		35	57	22	52	18 57	27 27	
17	76	55.1	-0 13.5	255	39.4 ¹⁶⁰	+6 12.1 ¹²¹		40	17 57	18 25	18 56	18 22 60	5 25 24	
18	91	55.3	-0 14.4	270	14.3 ¹⁵⁹	+6 24.2 ¹²¹		45	17 58	18 27	19 02	18 26 63	5 22 21	
19	106	55.5	15.4	284	49.2 ¹⁵⁹	36.3 ¹²¹		50	59	31	09	32 67	19 17	
20	121	55.8	16.4	299	24.1 ¹⁵⁹	+6 48.4 ¹²¹		52	59	33	13	34 70	18 15	
21	136	56.0	17.4	313	59.0 ¹⁵⁹	+7 00.4 ¹²⁰		54	17 59	35	17	37 71	16 13	
22	151	56.2	18.3	328	33.8 ¹⁵⁸	12.4 ¹²⁰		56	18 00	37	21	40 74	15 10	
23	166	56.4	19.3	343	08.5 ¹⁵⁷	24.4 ¹²⁰		58	00	39	27	43 77	13 8	
24	181	56.6	-0 20.3	357	43.3 ¹⁵⁸	+7 36.3 ¹¹⁹		60 S	18 01	18 42	19 33	18 47 80	5 11 5	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 49 ^m 1		Mag: -4.8 PMG: 14 ^h 11 ^m			Mag: +1.5 PMG: 14 ^h 04 ^m			Mag: -2.9 PMG: 23 ^h 45 ^m			Mag: +0.9 PMG: 12 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	1	44.3	146	52.5	-19 58.5	148	40.8	-13 29.8	2	46.0	-2 11.2	174	40.9	-0 41.7
1	16	46.8	161	53.9	59.1	163	41.6	30.4	17	48.8	11.4	189	43.1	41.8
2	31	49.2	176	55.2	-19 59.8	178	42.5	31.0	32	51.6	11.5	204	45.3	42.0
3	46	51.7	191	56.6	-20 00.5	193	43.3	31.6	47	54.3	11.6	219	47.4	42.1
4	61	54.2	206	57.9	01.1	208	44.1	32.2	62	57.1	11.8	234	49.6	42.2
5	76	56.6	221	59.3	-20 01.8	223	45.0	-13 32.7	77	59.9	-2 11.9	249	51.8	-0 42.3
6	91	59.1	237	00.6	-20 02.5	238	45.8	-13 33.3	93	02.7	-2 12.0	264	54.0	-0 42.4
7	107	01.6	252	02.0	03.2	253	46.6	33.9	108	05.4	12.2	279	56.2	42.6
8	122	04.0	267	03.3	03.8	268	47.5	34.5	123	08.2	12.3	294	58.3	42.7
9	137	06.5	282	04.7	04.5	283	48.3	35.1	138	11.0	12.4	310	00.5	42.8
10	152	08.9	297	06.0	05.2	298	49.1	35.7	153	13.7	12.6	325	02.7	42.9
11	167	11.4	312	07.4	-20 05.8	313	50.0	-13 36.3	168	16.5	-2 12.7	340	04.9	-0 43.0
12	182	13.9	327	08.8	-20 06.5	328	50.8	-13 36.9	183	19.3	-2 12.8	355	07.1	-0 43.2
13	197	16.3	342	10.1	07.1	343	51.6	37.4	198	22.0	13.0	10	09.3	43.3
14	212	18.8	357	11.5	07.8	358	52.4	38.0	213	24.8	13.1	25	11.4	43.4
15	227	21.3	12	12.9	08.5	13	53.3	38.6	228	27.6	13.2	40	13.6	43.5
16	242	23.7	27	14.2	09.1	28	54.1	39.2	243	30.4	13.4	55	15.8	43.6
17	257	26.2	42	15.6	-20 09.8	43	54.9	-13 39.8	258	33.1	-2 13.5	70	18.0	-0 43.8
18	272	28.7	57	17.0	-20 10.4	58	55.8	-13 40.4	273	35.9	-2 13.6	85	20.2	-0 43.9
19	287	31.1	72	18.4	11.1	73	56.6	41.0	288	38.7	13.8	100	22.3	44.0
20	302	33.6	87	19.8	11.7	88	57.4	41.6	303	41.4	13.9	115	24.5	44.1
21	317	36.1	102	21.1	12.4	103	58.3	42.1	318	44.2	14.0	130	26.7	44.3
22	332	38.5	117	22.5	13.0	118	59.1	42.7	333	47.0	14.2	145	28.9	44.4
23	347	41.0	132	23.9	13.7	133	59.9	43.3	348	49.7	14.3	160	31.1	44.5
24	2	43.4	147	25.3	-20 14.3	149	00.7	-13 43.9	3	52.5	-2 14.4	175	33.3	-0 44.6
Dif	—		+14		-7	+8		-6	+28		-1	+22		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 15 ^d 6 PHE	4^h: 54^m/3 12^h: 54^m/4 20^h: 54^m/5					R°: 43 ^m			R°		R°	
	PMG: 11 ^h 52 ^m 1				SD: 14 ^h 8		PMG: 0 ^h 09 ^m			R°: 43 ^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	181	56.6	-0 20.3	357	43.3	+7 36.3		60 N	4 17	5 07	5 48	17 21	8	7 25	81	
1	196	56.9		12	18.0 ¹⁵⁷	+7 48.2 ¹¹⁹		58	23	09	49	27 11		20 77		
2	211	57.1		26	52.7 ¹⁵⁷	+8 00.1 ¹¹⁹		56	27	12	49	33 14		15 75		
3	226	57.3		41	27.3 ¹⁵⁶		12.0 ¹¹⁹	54	32	14	49	38 16		11 77		
4	241	57.5		56	01.9 ¹⁵⁶		23.9 ¹¹⁹	52	35	15	49	42 19		07 70		
5	256	57.7	-0 25.1	70	36.5 ¹⁵⁶	+8 35.7 ¹¹⁸		50	4 39	5 17	5 49	17 46	21	7 04	68	
6	271	58.0	-0 26.1	85	11.0 ¹⁵⁵	+8 47.5 ¹¹⁸		45	4 45	5 20	5 49	17 55	24	6 57	63	
7	286	58.2		99	45.5 ¹⁵⁵	+8 59.2 ¹¹⁷		40	51	22	49	18 03	27	51	60	
8	301	58.4		114	19.9 ¹⁵⁴	+9 10.9 ¹¹⁷		35	55	24	49	09 30		45 58		
9	316	58.6		128	54.3 ¹⁵⁴		22.6 ¹¹⁷	30	4 58	25	49	15 32		41 54		
10	331	58.8		143	28.6 ¹⁵³		34.3 ¹¹⁷	20	5 02	27	49	24 38		33 50		
11	346	59.1	-0 31.0	158	03.0 ¹⁵⁴	+9 45.9 ¹¹⁶		10 N	5 04	5 28	5 49	18 33	41	6 26	46	
12	1	59.3	-0 31.9	172	37.2 ¹⁵²	+9 57.5 ¹¹⁶		0	5 04	5 28	5 49	18 41	45	6 19	43	
13	16	59.5		187	11.5 ¹⁵³	+10 09.1 ¹¹⁶		10 S	03	27	48	50 47		13 39		
14	31	59.7		201	45.6 ¹⁵¹		20.6 ¹¹⁵	20	5 00	26	48	18 59	51	6 06	36	
15	46	59.9		216	19.8 ¹⁵²		32.1 ¹¹⁵	30	4 56	23	47	19 09	55	5 58	32	
16	62	00.1		230	53.9 ¹⁵¹		43.5 ¹¹⁴	35	52	22	47	15 58		54 29		
17	77	00.4	-0 36.8	245	27.9 ¹⁵⁰	+10 54.9 ¹¹⁴		40	4 48	5 19	5 46	19 22	60	5 49	26	
18	92	00.6	-0 37.8	260	01.9 ¹⁵⁰	+11 06.3 ¹¹⁴		45	4 42	5 16	5 46	19 29	65	5 43	23	
19	107	00.8		274	35.8 ¹⁴⁹		17.6 ¹¹³	50	35	13	45	39 69		36 19		
20	122	01.0		289	09.7 ¹⁴⁹		28.9 ¹¹³	52	31	11	45	44 70		33 17		
21	137	01.2		303	43.6 ¹⁴⁹		40.1 ¹¹²	54	27	09	44	48 73		29 15		
22	152	01.5		318	17.4 ¹⁴⁸	+11 51.3 ¹¹²		56	22	07	44	19 54	75	25 13		
23	167	01.7		332	51.1 ¹⁴⁷	+12 02.5 ¹¹²		58	17	04	43	20 00	79	21 10		
24	182	01.9	-0 43.6	347	24.8 ¹⁴⁷	+12 13.6 ¹¹¹		60 S	4 11	5 01	5 42	20 07	82	5 16	7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 45 ^m 2		Mag: -4.8 PMG: 14 ^h 09 ^m		Mag: +1.5 PMG: 14 ^h 03 ^m		Mag: -2.9 PMG: 23 ^h 40 ^m		Mag: +0.9 PMG: 12 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	2	43.4	147	25.3	-20	14.3	149	00.7	-13	43.9	3	52.5	-2	14.4	175	33.3	-0	44.6
1	17	45.9	162	26.7		15.0	164	01.6		44.5	18	55.3		14.6	190	35.4		44.7
2	32	48.4	177	28.1		15.6	179	02.4		45.1	33	58.0		14.7	205	37.6		44.9
3	47	50.8	192	29.5		16.3	194	03.2		45.7	49	00.8		14.8	220	39.8		45.0
4	62	53.3	207	30.9		16.9	209	04.0		46.2	64	03.6		15.0	235	42.0		45.1
5	77	55.8	222	32.3	-20	17.6	224	04.9	-13	46.8	79	06.4	-2	15.1	250	44.2	-0	45.2
6	92	58.2	237	33.7	-20	18.2	239	05.7	-13	47.4	94	09.1	-2	15.2	265	46.3	-0	45.3
7	108	00.7	252	35.1		18.9	254	06.5		48.0	109	11.9		15.4	280	48.5		45.5
8	123	03.2	267	36.6		19.5	269	07.3		48.6	124	14.7		15.5	295	50.7		45.6
9	138	05.6	282	38.0		20.1	284	08.2		49.2	139	17.4		15.6	310	52.9		45.7
10	153	08.1	297	39.4		20.8	299	09.0		49.8	154	20.2		15.8	325	55.1		45.8
11	168	10.5	312	40.8	-20	21.4	314	09.8	-13	50.3	169	23.0	-2	15.9	340	57.3	-0	46.0
12	183	13.0	327	42.2	-20	22.0	329	10.6	-13	50.9	184	25.7	-2	16.0	355	59.4	-0	46.1
13	198	15.5	342	43.7		22.7	344	11.5		51.5	199	28.5		16.2	11	01.6		46.2
14	213	17.9	357	45.1		23.3	359	12.3		52.1	214	31.3		16.3	26	03.8		46.3
15	228	20.4	12	46.5		23.9	14	13.1		52.7	229	34.1		16.4	41	06.0		46.4
16	243	22.9	27	48.0		24.6	29	13.9		53.3	244	36.8		16.6	56	08.2		46.6
17	258	25.3	42	49.4	-20	25.2	44	14.8	-13	53.9	259	39.6	-2	16.7	71	10.3	-0	46.7
18	273	27.8	57	50.8	-20	25.8	59	15.6	-13	54.4	274	42.4	-2	16.8	86	12.5	-0	46.8
19	288	30.3	72	52.3		26.5	74	16.4		55.0	289	45.1		17.0	101	14.7		46.9
20	303	32.7	87	53.7		27.1	89	17.2		55.6	304	47.9		17.1	116	16.9		47.0
21	318	35.2	102	55.2		27.7	104	18.1		56.2	319	50.7		17.2	131	19.1		47.2
22	333	37.7	117	56.6		28.3	119	18.9		56.8	334	53.4		17.4	146	21.3		47.3
23	348	40.1	132	58.1		28.9	134	19.7		57.4	349	56.2		17.5	161	23.4		47.4
24	3	42.6	147	59.5	-20	29.6	149	20.5	-13	57.9	4	59.0	-2	17.6	176	25.6	-0	47.5
Dif	—		+14		-6		+8		-6		+28		-1		+22		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 16 ^d 6 PHE	SD: 14 ^h 9				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 51 ^m 7				PMG: 0 ^h 52 ^m				R°: 45 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	01.9	-0 43.6	347	24.8	+12 13.6		60 N	17 51	18 33	19 22	17 29 12	8 46 82	
1	197	02.1	44.6	1	58.5 ¹⁴⁷	24.7 ¹¹¹		58	51	30	17	38 16	37 79	
2	212	02.3	45.6	16	32.0 ¹⁴⁵	35.7 ¹¹⁰		56	52	29	12	47 18	30 76	
3	227	02.5	46.5	31	05.6 ¹⁴⁶	46.7 ¹¹⁰		54	52	27	08	17 54 21	23 73	
4	242	02.8	47.5	45	39.1 ¹⁴⁵	+12 57.6 ¹⁰⁹		52	52	25	05	18 01 22	17 71	
5	257	03.0	-0 48.5	60	12.5 ¹⁴⁴	+13 08.4 ¹⁰⁸		50	17 52	18 24	19 02	18 07 24	8 12 69	
6	272	03.2	-0 49.5	74	45.8 ¹⁴³	+13 19.3 ¹⁰⁹		45	17 52	18 21	18 56	18 19 29	8 00 65	
7	287	03.4	50.4	89	19.2 ¹⁴⁴	30.0 ¹⁰⁷		40	53	20	51	30 32	7 51 61	
8	302	03.6	51.4	103	52.4 ¹⁴²	40.8 ¹⁰⁸		35	53	18	47	39 35	43 58	
9	317	03.8	52.4	118	25.6 ¹⁴²	+13 51.4 ¹⁰⁶		30	53	17	45	18 47 37	35 57	
10	332	04.1	53.4	132	58.7 ¹⁴¹	+14 02.0 ¹⁰⁶		20	54	16	41	19 02 40	23 52	
11	347	04.3	-0 54.3	147	31.8 ¹⁴¹	+14 12.6 ¹⁰⁶		10 N	17 54	18 15	18 40	19 14 44	7 12 49	
12	2	04.5	-0 55.3	162	04.8 ¹⁴⁰	+14 23.1 ¹⁰⁵		0	17 55	18 16	18 40	19 26 46	7 02 46	
13	17	04.7	56.3	176	37.8 ¹⁴⁰	33.6 ¹⁰⁵		10 S	56	17	41	37 50	6 52 42	
14	32	04.9	57.3	191	10.7 ¹³⁹	43.9 ¹⁰³		20	57	19	44	19 50 53	42 38	
15	47	05.1	58.2	205	43.5 ¹³⁸	+14 54.3 ¹⁰⁴		30	58	22	50	20 04 57	30 34	
16	62	05.4	-0 59.2	220	16.3 ¹³⁸	+15 04.6 ¹⁰³		35	59	24	53	13 59	23 32	
17	77	05.6	-1 00.2	234	49.0 ¹³⁷	+15 14.8 ¹⁰²		40	17 59	18 26	18 58	20 22 62	6 15 29	
18	92	05.8	-1 01.2	249	21.7 ¹³⁷	+15 24.9 ¹⁰¹		45	18 00	18 30	19 04	20 34 65	6 06 26	
19	107	06.0	02.1	263	54.3 ¹³⁶	35.0 ¹⁰¹		50	02	34	12	48 69	5 55 22	
20	122	06.2	03.1	278	26.8 ¹³⁵	45.0 ¹⁰⁰		52	02	36	16	20 54 71	50 20	
21	137	06.4	04.1	292	59.3 ¹³⁵	+15 55.0 ¹⁰⁰		54	03	38	21	21 01 74	44 18	
22	152	06.7	05.0	307	31.6 ¹³³	+16 04.9 ⁹⁹		56	04	41	26	09 77	38 15	
23	167	06.9	06.0	322	04.0 ¹³⁴	14.7 ⁹⁸		58	04	44	31	19 79	31 13	
24	182	07.1	-1 07.0	336	36.2 ¹³²	+16 24.5 ⁹⁸		60 S	18 05	18 47	19 38	21 29 84	5 23 9	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 41 ^m 3		Mag: -4.8 PMG: 14 ^h 07 ^m			Mag: +1.5 PMG: 14 ^h 02 ^m			Mag: -2.9 PMG: 23 ^h 36 ^m			Mag: +0.9 PMG: 12 ^h 13 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	3	42.6	147	59.5	-20 29.6	149	20.5	-13 57.9	4	59.0	-2 17.6	176	25.6	-0 47.5
1	18	45.0	163	01.0	30.2	164	21.3	58.5	20	01.7	17.8	191	27.8	47.6
2	33	47.5	178	02.5	30.8	179	22.2	59.1	35	04.5	17.9	206	30.0	47.8
3	48	50.0	193	03.9	31.4	194	23.0	-13 59.7	50	07.3	18.0	221	32.2	47.9
4	63	52.4	208	05.4	32.0	209	23.8	-14 00.3	65	10.0	18.2	236	34.3	48.0
5	78	54.9	223	06.9	-20 32.7	224	24.6	-14 00.8	80	12.8	-2 18.3	251	36.5	-0 48.1
6	93	57.4	238	08.3	-20 33.3	239	25.4	-14 01.4	95	15.6	-2 18.4	266	38.7	-0 48.3
7	108	59.8	253	09.8	33.9	254	26.3	02.0	110	18.4	18.5	281	40.9	48.4
8	124	02.3	268	11.3	34.5	269	27.1	02.6	125	21.1	18.7	296	43.1	48.5
9	139	04.8	283	12.8	35.1	284	27.9	03.2	140	23.9	18.8	311	45.3	48.6
10	154	07.2	298	14.2	35.7	299	28.7	03.8	155	26.7	18.9	326	47.4	48.7
11	169	09.7	313	15.7	-20 36.3	314	29.5	-14 04.3	170	29.4	-2 19.1	341	49.6	-0 48.9
12	184	12.2	328	17.2	-20 36.9	329	30.4	-14 04.9	185	32.2	-2 19.2	356	51.8	-0 49.0
13	199	14.6	343	18.7	37.5	344	31.2	05.5	200	35.0	19.3	11	54.0	49.1
14	214	17.1	358	20.2	38.1	359	32.0	06.1	215	37.7	19.5	26	56.2	49.2
15	229	19.5	13	21.7	38.7	14	32.8	06.7	230	40.5	19.6	41	58.3	49.3
16	244	22.0	28	23.2	39.4	29	33.6	07.2	245	43.3	19.7	57	00.5	49.5
17	259	24.5	43	24.7	-20 40.0	44	34.4	-14 07.8	260	46.0	-2 19.9	72	02.7	-0 49.6
18	274	26.9	58	26.2	-20 40.6	59	35.3	-14 08.4	275	48.8	-2 20.0	87	04.9	-0 49.7
19	289	29.4	73	27.7	41.2	74	36.1	09.0	290	51.6	20.1	102	07.1	49.8
20	304	31.9	88	29.2	41.7	89	36.9	09.6	305	54.3	20.3	117	09.2	49.9
21	319	34.3	103	30.7	42.3	104	37.7	10.1	320	57.1	20.4	132	11.4	50.1
22	334	36.8	118	32.2	42.9	119	38.5	10.7	335	59.9	20.5	147	13.6	50.2
23	349	39.3	133	33.7	43.5	134	39.3	11.3	351	02.7	20.7	162	15.8	50.3
24	4	41.7	148	35.3	-20 44.1	149	40.1	-14 11.9	6	05.4	-2 20.8	177	18.0	-0 50.4
Dif	—		+15 -6			+8 -6			+28 -1			+22 -1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 51 ^m 4			Edad: 17 ^d 6 PHE { 4 ^h : 55'0 12 ^h : 55'1 20 ^h : 55'3 SD: 15'0 PMG: 1 ^h 37 ^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	07.1	-1	07.0	336	36.2	+16	24.5	97	60 N	4	22	5	53	17	41
1	197	07.3		08.0	351	08.4	132	34.2	97	58	27	14	53	17	54	21
2	212	07.5		08.9	5	40.6	132	43.8	96	56	32	16	53	18	05	25
3	227	07.7		09.9	20	12.6	130	+16	53.4	96	36	17	52	15	27	36
4	242	08.0		10.9	34	44.6	130	+17	02.9	95	39	19	52	23	30	28
5	257	08.2	-1	11.9	49	16.6	130	+17	12.3	94	50	4	42	5	20	18
6	272	08.4	-1	12.8	63	48.4	128	+17	21.7	94	45	4	48	5	22	18
7	287	08.6		13.8	78	20.2	128	30.9	92	40	53	24	51	19	02	37
8	302	08.8		14.8	92	51.9	127	40.1	92	35	56	26	51	14	39	41
9	317	09.0		15.8	107	23.6	127	49.3	92	30	4	59	27	50	24	42
10	332	09.2		16.7	121	55.2	126	+17	58.3	90	20	5	02	28	50	42
11	347	09.5	-1	17.7	136	26.7	125	+18	07.3	90	10 N	5	04	5	28	19
12	2	09.7	-1	18.7	150	58.1	124	+18	16.2	89	0	5	03	5	27	20
13	17	09.9		19.6	165	29.5	124	25.0	88	10 S	5	02	26	47	27	52
14	32	10.1		20.6	180	00.8	123	33.8	88	20	4	59	24	46	20	43
15	47	10.3		21.6	194	32.0	122	42.4	86	30	53	21	45	21	01	58
16	62	10.5		22.6	209	03.2	122	51.0	86	35	49	19	44	12	60	6
17	77	10.7	-1	23.5	223	34.3	121	+18	59.5	85	40	4	44	5	16	21
18	92	11.0	-1	24.5	238	05.3	120	+19	07.9	84	45	4	38	5	13	21
19	107	11.2		25.5	252	36.2	119	16.2	83	50	30	08	40	21	57	68
20	122	11.4		26.5	267	07.1	119	24.4	82	52	26	06	40	22	05	71
21	137	11.6		27.4	281	37.9	118	32.6	82	54	22	04	39	15	72	6
22	152	11.8		28.4	296	08.6	117	40.7	81	56	17	5	01	38	26	75
23	167	12.0		29.4	310	39.3	117	48.6	79	58	11	4	58	37	38	78
24	182	12.2	-1	30.4	325	09.9	116	+19	56.5	79	60 S	4	04	4	55	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 37 ^m 3		Mag: -4.8 PMG: 14 ^h 04 ^m		Mag: +1.5 PMG: 14 ^h 01 ^m		Mag: -2.9 PMG: 23 ^h 31 ^m		Mag: +0.9 PMG: 12 ^h 09 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	4	41.7	148	35.3	-20	44.1	149	40.1	-14	11.9	177	18.0	-0	50.4		
1	19	44.2	163	36.8		44.7	164	41.0		12.5	192	20.2		50.6		
2	34	46.6	178	38.3		45.3	179	41.8		13.0	207	22.3		50.7		
3	49	49.1	193	39.8		45.9	194	42.6		13.6	222	24.5		50.8		
4	64	51.6	208	41.4		46.5	209	43.4		14.2	237	26.7		50.9		
5	79	54.0	223	42.9	-20	47.1	224	44.2	-14	14.8	252	28.9	-0	51.0		
6	94	56.5	238	44.4	-20	47.7	239	45.0	-14	15.4	267	31.1	-0	51.2		
7	109	59.0	253	46.0		48.2	254	45.8		15.9	282	33.2		51.3		
8	125	01.4	268	47.5		48.8	269	46.7		16.5	297	35.4		51.4		
9	140	03.9	283	49.1		49.4	284	47.5		17.1	312	37.6		51.5		
10	155	06.4	298	50.6		50.0	299	48.3		17.7	327	39.8		51.6		
11	170	08.8	313	52.2	-20	50.6	314	49.1	-14	18.2	342	42.0	-0	51.8		
12	185	11.3	328	53.7	-20	51.1	329	49.9	-14	18.8	357	44.1	-0	51.9		
13	200	13.8	343	55.3		51.7	344	50.7		19.4	12	46.3		52.0		
14	215	16.2	358	56.8		52.3	359	51.5		20.0	27	48.5		52.1		
15	230	18.7	13	58.4		52.9	14	52.3		20.6	42	50.7		52.2		
16	245	21.1	29	00.0		53.4	29	53.2		21.1	57	52.9		52.4		
17	260	23.6	44	01.5	-20	54.0	44	54.0	-14	21.7	72	55.0	-0	52.5		
18	275	26.1	59	03.1	-20	54.6	59	54.8	-14	22.3	87	57.2	-0	52.6		
19	290	28.5	74	04.7		55.2	74	55.6		22.9	102	59.4		52.7		
20	305	31.0	89	06.2		55.7	89	56.4		23.4	118	01.6		52.9		
21	320	33.5	104	07.8		56.3	104	57.2		24.0	133	03.8		53.0		
22	335	35.9	119	09.4		56.9	119	58.0		24.6	148	06.0		53.1		
23	350	38.4	134	11.0		57.4	134	58.8		25.2	163	08.1		53.2		
24	5	40.9	149	12.6	-20	58.0	149	59.6	-14	25.7	178	10.3	-0	53.3		
Dif	—		+16		-6		+8		-6		+28		-1		+22	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16°0 PMG: 11 ^h 51 ^m 0			Edad: 18 ^d 6 PHE { 4 ^h : 55/4 12 ^h : 55/6 20 ^h : 55/8 SD: 15°1 PMG: 2 ^h 24 ^m R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	182	12.2	-1 30.4	325	09.9	+19 56.5	78	60 N	17 45	18 26	19 16	17 59	29	11 31	79		
1	197	12.5	31.3	339	40.4 ¹¹⁵	+20 04.3	78	58	46	25	11	18 15	33	15	75		
2	212	12.7	32.3	354	10.8 ¹¹⁴	12.0	77	56	46	23	07	30	35	11 01	73		
3	227	12.9	33.3	8	41.2 ¹¹⁴	19.6	76	54	47	22	03	42	37	10 50	69		
4	242	13.1	34.2	23	11.5 ¹¹³	27.2	76	52	47	21	19 00	18 53	38	39	68		
5	257	13.3	-1 35.2	37	41.7 ¹¹²	+20 34.6	74	50	17 48	18 20	18 57	19 02	40	10 30	66		
6	272	13.5	-1 36.2	52	11.8 ¹¹¹	+20 41.9	73	45	17 48	18 18	18 52	19 23	42	10 10	64		
7	287	13.7	37.2	66	41.9 ¹¹¹	49.2	73	40	49	16	48	39	45	9 54	62		
8	302	13.9	38.1	81	11.9 ¹¹⁰	+20 56.3	71	35	50	15	45	19	53	47	41		
9	317	14.2	39.1	95	41.8 ¹⁰⁹	+21 03.3	70	30	51	14	42	20	06	47	29		
10	332	14.4	40.1	110	11.7 ¹⁰⁹	10.3	70	20	52	14	39	27	49	9 09	56		
11	347	14.6	-1 41.1	124	41.4 ¹⁰⁷	+21 17.1	68	10 N	17 53	18 14	18 38	20 45	51	8 52	53		
12	2	14.8	-1 42.0	139	11.2 ¹⁰⁸	+21 23.8	67	0	17 54	18 15	18 39	21 02	53	8 36	51		
13	17	15.0	43.0	153	40.8 ¹⁰⁶	30.5	67	10 S	56	17	41	19	55	20	49		
14	32	15.2	44.0	168	10.3 ¹⁰⁵	37.0	65	20	57	19	45	38	56	8 03	47		
15	47	15.4	44.9	182	39.8 ¹⁰⁵	43.4	64	30	17 59	23	51	21 59	58	7 43	44		
16	62	15.6	45.9	197	09.3 ¹⁰⁵	49.8	64	35	18 00	25	18 55	22 12	59	32	42		
17	77	15.9	-1 46.9	211	38.6 ¹⁰³	+21 56.0	62	40	18 01	18 28	19 00	22 27	60	7 19	40		
18	92	16.1	-1 47.9	226	07.9 ¹⁰³	+22 02.1	61	45	18 03	18 32	19 07	22 44	62	7 03	38		
19	107	16.3	48.8	240	37.1 ¹⁰²	08.1	60	50	05	37	16	23	05	65	6 44		
20	122	16.5	49.8	255	06.2 ¹⁰¹	14.0	59	52	06	39	20	16	65	35	34		
21	137	16.7	50.8	269	35.3 ¹⁰¹	19.8	58	54	07	42	25	27	67	25	32		
22	152	16.9	51.8	284	04.3 ¹⁰⁰	25.5	57	56	08	45	30	41	68	14	29		
23	167	17.1	52.7	298	33.2 ⁹⁹	31.0	55	58	09	48	36	23	56	71	6 01		
24	182	17.3	-1 53.7	313	02.0 ⁹⁸	+22 36.5	55	60 S	18 10	18 52	19 43	** ** *	**	5 46	22		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 33 ^m 4		Mag: -4.8 PMG: 14 ^h 02 ^m			Mag: +1.5 PMG: 13 ^h 59 ^m			Mag: -2.9 PMG: 23 ^h 27 ^m			Mag: +0.9 PMG: 12 ^h 06 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	5	40.9	149	12.6	-20 58.0	149	59.6	-14 25.7	7	11.8	-2 23.9	178	10.3	-0 53.3			
1	20	43.3	164	14.2	58.5	165	00.4	26.3	22	14.6	24.1	193	12.5	53.5			
2	35	45.8	179	15.7	59.1	180	01.3	26.9	37	17.4	24.2	208	14.7	53.6			
3	50	48.2	194	17.3	-20 59.7	195	02.1	27.5	52	20.1	24.3	223	16.9	53.7			
4	65	50.7	209	18.9	-21 00.2	210	02.9	28.0	67	22.9	24.5	238	19.0	53.8			
5	80	53.2	224	20.5	-21 00.8	225	03.7	-14 28.6	82	25.7	-2 24.6	253	21.2	-0 53.9			
6	95	55.6	239	22.1	-21 01.3	240	04.5	-14 29.2	97	28.4	-2 24.7	268	23.4	-0 54.1			
7	110	58.1	254	23.7	01.9	255	05.3	29.8	112	31.2	24.8	283	25.6	54.2			
8	126	00.6	269	25.4	02.4	270	06.1	30.3	127	34.0	25.0	298	27.8	54.3			
9	141	03.0	284	27.0	03.0	285	06.9	30.9	142	36.8	25.1	313	29.9	54.4			
10	156	05.5	299	28.6	03.5	300	07.7	31.5	157	39.5	25.2	328	32.1	54.5			
11	171	08.0	314	30.2	-21 04.1	315	08.5	-14 32.1	172	42.3	-2 25.4	343	34.3	-0 54.7			
12	186	10.4	329	31.8	-21 04.6	330	09.3	-14 32.6	187	45.1	-2 25.5	358	36.5	-0 54.8			
13	201	12.9	344	33.4	05.2	345	10.1	33.2	202	47.8	25.6	13	38.7	54.9			
14	216	15.4	359	35.1	05.7	0	10.9	33.8	217	50.6	25.8	28	40.8	55.0			
15	231	17.8	14	36.7	06.3	15	11.7	34.4	232	53.3	25.9	43	43.0	55.1			
16	246	20.3	29	38.3	06.8	30	12.5	34.9	247	56.1	26.0	58	45.2	55.3			
17	261	22.7	44	40.0	-21 07.4	45	13.3	-14 35.5	262	58.9	-2 26.1	73	47.4	-0 55.4			
18	276	25.2	59	41.6	-21 07.9	60	14.1	-14 36.1	278	01.6	-2 26.3	88	49.6	-0 55.5			
19	291	27.7	74	43.2	08.4	75	15.0	36.6	293	04.4	26.4	103	51.8	55.6			
20	306	30.1	89	44.9	09.0	90	15.8	37.2	308	07.2	26.5	118	53.9	55.8			
21	321	32.6	104	46.5	09.5	105	16.6	37.8	323	09.9	26.7	133	56.1	55.9			
22	336	35.1	119	48.2	10.0	120	17.4	38.4	338	12.7	26.8	148	58.3	56.0			
23	351	37.5	134	49.8	10.6	135	18.2	38.9	353	15.5	26.9	164	00.5	56.1			
24	6	40.0	149	51.5	-21 11.1	150	19.0	-14 39.5	8	18.2	-2 27.1	179	02.7	-0 56.2			
Dif	—		+16			-5			+28			-1			+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 7			Edad: 19 ^d 6 PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/4 PMG: 3 ^h 15 ^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	182	17.3	-1	53.7	313	02.0	+22	36.5	60 N	4	27	5	16	5	58	18 28 46	
1	197	17.6			327	30.8	98	41.8	58	32	18	57				12 50 67	
2	212	17.8			341	59.5	97	47.0	52	36	20	57				30 65	
3	227	18.0			356	28.2	97	52.1	51	39	21	56				12 14 63	
4	242	18.2			10	56.7	95	+22	57.1	50	42	22	56			11 59 63	
5	257	18.4	-1	58.6	25	25.2	95	+23	02.0	49	50	44	5	55	19 42 52	47 62	
6	272	18.6	-1	59.5	39	53.7	95	+23	06.8	48	45	5	25	5	54	27 57	
7	287	18.8	-2	00.5	54	22.1	94	11.4	46	40	55	26	53			11 14 60	
8	302	19.0			68	50.4	93	15.9	45	35	4	58	27	52	40 53	58 58	
9	317	19.2			83	18.6	92	20.3	44	30	5	00	28	52	40 58	27 57	
10	332	19.5			97	46.8	92	24.6	43	20	03	28	50	21 16 54	10 05 56		
11	347	19.7	-2	04.4	112	14.9	91	+23	28.8	42	10 N	5	03	5	28	21 36 55	9 45 55
12	2	19.9	-2	05.4	126	43.0	91	+23	32.8	40	0	5	03	5	27	21 55 55	9 27 54
13	17	20.1			141	11.0	90	36.7	39	10 S	5	01	25	46	22 14 55	9 09 53	
14	32	20.3			155	38.9	89	40.5	38	20	4	57	22	44	34 56	8 50 52	
15	47	20.5			170	06.7	88	44.2	37	30	50	18	42	22 57 57	27 51		
16	62	20.7			184	34.5	88	47.7	35	35	46	16	41	23 11 57	8 14 50		
17	77	20.9	-2	10.2	199	02.3	88	+23	51.1	34	40	4	41	5	13	23 27 57	7 59 49
18	92	21.1	-2	11.2	213	30.0	87	+23	54.4	33	45	4	34	5	09	23 46 57	7 41 48
19	107	21.3			227	57.6	86	+23	57.6	32	50	25	04	36	23 ** *	19 46	
20	122	21.6			242	25.2	86	+24	00.6	30	52	21	5	01	35	** ** *	7 09 44
21	137	21.8			256	52.7	85	03.5	29	54	16	4	59	34	** ** *	6 57 43	
22	152	22.0			271	20.1	84	06.3	28	56	11	56	33	** ** *	43 42		
23	167	22.2			285	47.5	84	08.9	26	58	4	04	52	32	** ** *	27 40	
24	182	22.4	-2	17.0	300	14.9	84	+24	11.4	25	60 S	3	57	4	48	0 15 74	6 08 37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 29 ^m 5		Mag: -4.8 PMG: 13 ^h 59 ^m		Mag: +1.5 PMG: 13 ^h 58 ^m		Mag: -2.9 PMG: 23 ^h 22 ^m		Mag: +0.9 PMG: 12 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	40.0	149	51.5	150	19.0	8	18.2	179	02.7
1	21	42.5	164	53.1	165	19.8	23	21.0	194	04.8
2	36	44.9	179	54.8	180	20.6	38	23.8	209	07.0
3	51	47.4	194	56.5	195	21.4	53	26.5	224	09.2
4	66	49.9	209	58.1	210	22.2	68	29.3	239	11.4
5	81	52.3	224	59.8	225	23.0	83	32.1	254	13.6
6	96	54.8	240	01.5	240	23.8	98	34.8	269	15.7
7	111	57.2	255	03.2	255	24.6	113	37.6	284	17.9
8	126	59.7	270	04.8	270	25.4	128	40.4	299	20.1
9	142	02.2	285	06.5	285	26.2	143	43.1	314	22.3
10	157	04.6	300	08.2	300	27.0	158	45.9	329	24.5
11	172	07.1	315	09.9	315	27.8	173	48.7	344	26.6
12	187	09.6	330	11.6	330	28.6	188	51.4	359	28.8
13	202	12.0	345	13.3	345	29.4	203	54.2	14	31.0
14	217	14.5	0	15.0	0	30.2	218	57.0	29	33.2
15	232	17.0	15	16.7	15	31.0	233	59.7	44	35.4
16	247	19.4	30	18.4	30	31.8	249	02.5	59	37.5
17	262	21.9	45	20.1	45	32.6	264	05.3	74	39.7
18	277	24.3	60	21.8	60	33.4	279	08.0	89	41.9
19	292	26.8	75	23.5	75	34.2	294	10.8	104	44.1
20	307	29.3	90	25.2	90	35.0	309	13.6	119	46.3
21	322	31.7	105	26.9	105	35.8	324	16.3	134	48.4
22	337	34.2	120	28.7	120	36.6	339	19.1	149	50.6
23	352	36.7	135	30.4	135	37.4	354	21.8	164	52.8
24	7	39.1	150	32.1	150	38.2	9	24.6	179	55.0
Dif	—		+17	-5	+8	-6	+28	-1	+22	-1

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0			Edad: 21 ^d 6	PHE { 4 ^h : 57'3 12 ^h : 57'5 20 ^h : 57'8	SD: 15'6												
	PMG: 11 ^h 50 ^m 0					PMG: 5 ^h 04 ^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	27.4	-2	40.4	286	57.5	+24	30.5	60 N	4	32	5	21	6	03	20	22	
1	197	27.6		41.3	301	23.8		29.5	58		36		22	02	42	82		
2	212	27.8		42.3	315	50.1		28.4	56		40		24	01	20	59		
3	227	28.0		43.3	330	16.4		27.1	54		43		24	6	00	21		
4	242	28.2		44.2	344	42.7		25.7	52		46		25	5	59	25		
5	257	28.4	-2	45.2	359	08.9	+24	24.2	50	4	48	5	26	5	58	21		
6	272	28.6	-2	46.2	13	35.1	+24	22.5	45	4	53	5	27	5	56	21		
7	287	28.8		47.2	28	01.3		20.6	40		57		28	55	22	17		
8	302	29.0		48.1	42	27.4		18.6	35	4	59		29	54	33	65		
9	317	29.2		49.1	56	53.6		16.5	30	5	01		29	53	22	46		
10	332	29.4		50.1	71	19.7		14.2	20		03		29	51	23	09		
11	347	29.6	-2	51.0	85	45.8	+24	11.8	10 N	5	03	5	28	5	49	23		
12	2	29.8	-2	52.0	100	11.9	+24	09.2	0	5	02	5	26	5	47	23		
13	17	30.0		53.0	114	38.0		06.5	10 S	4	59		24	45	**	**		
14	32	30.2		54.0	129	04.0		03.6	20		55		20	43	**	**		
15	47	30.4		54.9	143	30.1	+24	00.6	30		48		16	40	**	**		
16	62	30.6		55.9	157	56.2	+23	57.5	35		43		13	38	0	08		
17	77	30.9	-2	56.9	172	22.2	+23	54.2	40	4	37	5	09	5	36	0		
18	92	31.1	-2	57.8	186	48.2	+23	50.7	45	4	30	5	05	5	34	0		
19	107	31.3		58.8	201	14.3		47.1	50		21	4	59	32	1	07		
20	122	31.5	-2	59.8	215	40.3		43.4	52		16		57	31	19	47		
21	137	31.7	-3	00.7	230	06.3		39.5	54		11		54	29	32	46		
22	152	31.9		01.7	244	32.3		35.4	56	4	05		50	28	1	47		
23	167	32.1		02.7	258	58.3		31.2	58	3	58		46	26	2	05		
24	182	32.3	-3	03.7	273	24.3	+23	26.9	60 S	3	50	4	42	5	24	2		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 21 ^m 6			Mag: -4.8 PMG: 13 ^h 53 ^m			Mag: +1.5 PMG: 13 ^h 55 ^m			Mag: -2.9 PMG: 23 ^h 14 ^m			Mag: +0.9 PMG: 11 ^h 55 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°		
0	8	38.3	151	14.5	-21	35.1	150	57.2	-15	06.8	10	30.9	-2	33.2	180	47.3		
1	23	40.7	166	16.3		35.5	165	58.0		07.3	25	33.7		33.4	195	49.5		
2	38	43.2	181	18.1		36.0	180	58.8		07.9	40	36.5		33.5	210	51.7		
3	53	45.7	196	19.9		36.5	195	59.5		08.5	55	39.2		33.6	225	53.9		
4	68	48.1	211	21.7		36.9	211	00.3		09.0	70	42.0		33.7	240	56.0		
5	83	50.6	226	23.5	-21	37.4	226	01.1	-15	09.6	85	44.8	-2	33.9	255	58.2		
6	98	53.1	241	25.4	-21	37.8	241	01.9	-15	10.2	100	47.5	-2	34.0	271	00.4		
7	113	55.5	256	27.2		38.3	256	02.7		10.7	115	50.3		34.1	286	02.6		
8	128	58.0	271	29.0		38.7	271	03.5		11.3	130	53.0		34.3	301	04.8		
9	144	00.5	286	30.8		39.2	286	04.3		11.8	145	55.8		34.4	316	06.9		
10	159	02.9	301	32.7		39.6	301	05.1		12.4	160	58.6		34.5	331	09.1		
11	174	05.4	316	34.5	-21	40.1	316	05.9	-15	13.0	176	01.3	-2	34.6	346	11.3		
12	189	07.8	331	36.4	-21	40.5	331	06.6	-15	13.5	191	04.1	-2	34.8	1	13.5		
13	204	10.3	346	38.2		41.0	346	07.4		14.1	206	06.8		34.9	16	15.7		
14	219	12.8	1	40.0		41.4	1	08.2		14.7	221	09.6		35.0	31	17.8		
15	234	15.2	16	41.9		41.9	16	09.0		15.2	236	12.4		35.1	46	20.0		
16	249	17.7	31	43.7		42.3	31	09.8		15.8	251	15.1		35.3	61	22.2		
17	264	20.2	46	45.6	-21	42.8	46	10.6	-15	16.3	266	17.9	-2	35.4	76	24.4		
18	279	22.6	61	47.5	-21	43.2	61	11.4	-15	16.9	281	20.7	-2	35.5	91	26.6		
19	294	25.1	76	49.3		43.7	76	12.1		17.5	296	23.4		35.7	106	28.7		
20	309	27.6	91	51.2		44.1	91	12.9		18.0	311	26.2		35.8	121	30.9		
21	324	30.0	106	53.1		44.5	106	13.7		18.6	326	28.9		35.9	136	33.1		
22	339	32.5	121	54.9		45.0	121	14.5		19.1	341	31.7		36.0	151	35.3		
23	354	35.0	136	56.8		45.4	136	15.3		19.7	356	34.5		36.2	166	37.5		
24	9	37.4	151	58.7	-21	45.8	151	16.1	-15	20.3	11	37.2	-2	36.3	181	39.6		
Dif	—			+18			-4			+8			-6			+28		
																-1		
																+22		
																-1		

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 : 58'0 12 ^h : 58'3 20 ^h : 58'5						Civil		R°		R°		
	PMG: 11 ^h 49 ^m 7	PMG: 6 ^h 00 ^m	R°: 56 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	32.3	-3	03.7	273	24.3	+23 26.9	60 N	17 33	18 14	19 03	21 48 95	15 17 20		
1	197	32.5		04.6	287	50.3	22.4 45	58	34	13	18 59	22 04 91	15 01 24		
2	212	32.7		05.6	302	16.4	17.8 46	56	36	13	56	18 87	14 47 27		
3	227	32.9		06.6	316	42.4	13.0 48	54	37	12	53	29 85	34 31		
4	242	33.1		07.5	331	08.4	08.1 49	52	38	11	51	40 82	23 33		
5	257	33.3	-3	08.5	345	34.4	+23 03.1 50	50	17 39	18 11	18 48	22 49 80	14 14 34		
6	272	33.5	-3	09.5	0	00.5	+22 57.9 52	45	17 41	18 10	18 44	23 09 75	13 53 39		
7	287	33.7		10.4	14	26.5	52.5 54	40	43	10	41	25 71	37 42		
8	302	33.9		11.4	28	52.5	47.0 55	35	44	10	39	38 69	22 45		
9	317	34.1		12.4	43	18.6	41.4 56	30	46	10	37	23 50 66	13 10 47		
10	332	34.3		13.4	57	44.7	35.6 58	20	48	10	36	*** ** *	12 49 50		
11	347	34.5	-3	14.3	72	10.7	+22 29.7 59	10 N	17 51	18 12	18 36	*** ** *	12 31 53		
12	2	34.7	-3	15.3	86	36.8	+22 23.6 61	0	17 53	18 14	18 38	*** ** *	12 13 56		
13	17	34.9		16.3	101	02.9	17.4 62	10 S	55	16	41	0 05 54	11 56 59		
14	32	35.1		17.2	115	29.0	11.0 64	20	17 58	20	46	24 52	37 62		
15	47	35.3		18.2	129	55.2	+22 04.5 65	30	18 01	25	53	0 47 49	16 65		
16	62	35.5		19.2	144	21.3	+21 57.9 66	35	03	29	18 58	1 00 47	11 03 67		
17	77	35.7	-3	20.1	158	47.5	+21 51.1 68	40	18 05	18 32	19 05	1 15 45	10 49 69		
18	92	35.9	-3	21.1	173	13.6	+21 44.2 69	45	18 08	18 37	19 12	1 33 42	10 31 73		
19	107	36.1		22.1	187	39.8	37.2 70	50	11	43	22	1 55 39	10 09 77		
20	122	36.3		23.1	202	06.0	30.0 72	52	12	46	27	2 06 37	9 59 79		
21	137	36.5		24.0	216	32.3	22.6 74	54	14	50	33	18 35	47 81		
22	152	36.7		25.0	230	58.5	15.2 74	56	16	53	39	32 32	34 84		
23	167	36.9		26.0	245	24.8	+21 07.6 76	58	17	18 57	46	2 48 29	9 18 87		
24	182	37.1	-3	26.9	259	51.1	+20 59.8 78	60 S	18 20	19 02	19 55	3 07 25	8 59 92		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 17 ^m 7	Mag: -4.8	PMG: 13 ^h 50 ^m	Mag: +1.5	PMG: 13 ^h 54 ^m	Mag: -2.9	PMG: 23 ^h 09 ^m	Mag: +0.9	PMG: 11 ^h 52 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	9	37.4	151	58.7	-21	45.8	151	16.1	-15	20.3	11	37.2	-2	36.3	181	39.6	-1	04.9
1	24	39.9	167	00.6		46.3	166	16.8		20.8	26	40.0		36.4	196	41.8		05.1
2	39	42.3	182	02.5		46.7	181	17.6		21.4	41	42.7		36.5	211	44.0		05.2
3	54	44.8	197	04.3		47.1	196	18.4		21.9	56	45.5		36.7	226	46.2		05.3
4	69	47.3	212	06.2		47.5	211	19.2		22.5	71	48.3		36.8	241	48.4		05.4
5	84	49.7	227	08.1	-21	48.0	226	20.0	-15	23.1	86	51.0	-2	36.9	256	50.5	-1	05.5
6	99	52.2	242	10.0	-21	48.4	241	20.8	-15	23.6	101	53.8	-2	37.0	271	52.7	-1	05.7
7	114	54.7	257	11.9		48.8	256	21.5		24.2	116	56.5		37.2	286	54.9		05.8
8	129	57.1	272	13.8		49.2	271	22.3		24.7	131	59.3		37.3	301	57.1		05.9
9	144	59.6	287	15.7		49.6	286	23.1		25.3	147	02.1		37.4	316	59.3		06.0
10	160	02.1	302	17.7		50.1	301	23.9		25.9	162	04.8		37.5	332	01.5		06.1
11	175	04.5	317	19.6	-21	50.5	316	24.7	-15	26.4	177	07.6	-2	37.7	347	03.6	-1	06.3
12	190	07.0	332	21.5	-21	50.9	331	25.4	-15	27.0	192	10.3	-2	37.8	2	05.8	-1	06.4
13	205	09.4	347	23.4		51.3	346	26.2		27.5	207	13.1		37.9	17	08.0		06.5
14	220	11.9	2	25.3		51.7	1	27.0		28.1	222	15.9		38.1	32	10.2		06.6
15	235	14.4	17	27.3		52.1	16	27.8		28.6	237	18.6		38.2	47	12.4		06.7
16	250	16.8	32	29.2		52.5	31	28.6		29.2	252	21.4		38.3	62	14.5		06.9
17	265	19.3	47	31.1	-21	52.9	46	29.3	-15	29.8	267	24.1	-2	38.4	77	16.7	-1	07.0
18	280	21.8	62	33.1	-21	53.3	61	30.1	-15	30.3	282	26.9	-2	38.6	92	18.9	-1	07.1
19	295	24.2	77	35.0		53.7	76	30.9		30.9	297	29.7		38.7	107	21.1		07.2
20	310	26.7	92	36.9		54.1	91	31.7		31.4	312	32.4		38.8	122	23.3		07.3
21	325	29.2	107	38.9		54.5	106	32.4		32.0	327	35.2		38.9	137	25.4		07.5
22	340	31.6	122	40.8		54.9	121	33.2		32.5	342	37.9		39.1	152	27.6		07.6
23	355	34.1	137	42.8		55.3	136	34.0		33.1	357	40.7		39.2	167	29.8		07.7
24	10	36.6	152	44.8	-21	55.7	151	34.8	-15	33.7	12	43.5	-2	39.3	182	32.0	-1	07.8
Dif	—	+19	-4	+8	-6	+28	-1	+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: 23 ^d 6 PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'3 PMG: 6 ^h 56 ^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	182	37.1	-3 26.9	259	51.1	+20 59.8	60 N	4 37	5 26	6 07	23 23	99	15 37	14	
1	197	37.3		274	17.4	73 51.9	58	41	27	06	35 95		25 17		
2	212	37.5		288	43.7	73 43.9	56	44	27	05	45 91		14 21		
3	227	37.7		303	10.1	74 35.8	54	47	28	03	23 54	88	15 05	21	
4	242	37.9		317	36.5	74 27.5	52	49	29	02	** ** *	**	14 56	26	
5	257	38.1	-3 31.8	332	02.9	74 +20 19.1	50	4 51	5 29	6 01	** ** *	**	14 48	29	
6	272	38.3	-3 32.7	346	29.3	74 +20 10.5	45	4 56	5 30	5 59	** ** *	**	14 32	33	
7	287	38.5		0	55.8	75 +20 01.8	40	4 59	30	57	** ** *	**	19 36		
8	302	38.7		15	22.2	74 +19 53.0	35	5 01	30	55	** ** *	**	14 07	40	
9	317	38.9		29	48.7	75 44.1	30	02	30	54	** ** *	**	13 57	42	
10	332	39.1		44	15.3	76 35.0	20	03	29	51	0 10	62	39 47		
11	347	39.3	-3 37.6	58	41.8	75 +19 25.8	10 N	5 03	5 28	5 49	0 27	58	13 24	51	
12	2	39.5	-3 38.5	73	08.4	76 +19 16.5	0	5 01	5 25	5 46	0 43	55	13 09	55	
13	17	39.7		87	35.1	77 +19 07.0	10 S	4 58	23	44	0 59	52	12 55	58	
14	32	39.9		102	01.7	76 +18 57.4	20	53	19	41	1 16	49	39 63		
15	47	40.1		116	28.4	77 47.7	30	45	13	37	36 44		21 67		
16	62	40.3		130	55.1	77 37.9	35	40	10	35	1 47	42	12 10	70	
17	77	40.5	-3 43.4	145	21.8	77 +18 27.9	40	4 34	5 06	5 33	2 00	39	11 58	73	
18	92	40.7	-3 44.4	159	48.6	78 +18 17.9	45	4 26	5 01	5 31	2 15	36	11 44	77	
19	107	40.9		45.3	174 15.4	78 +18 07.7	50	16	4 55	27	34 32		26 82		
20	122	41.1		46.3	188 42.2	78 +17 57.3	52	11	52	26	43 29		18 84		
21	137	41.3		47.3	203 09.1	79 46.9	54	4 05	48	24	2 53	27	11 08	87	
22	152	41.5		48.2	217 36.0	79 36.3	56	3 59	45	22	3 04	24	10 58	89	
23	167	41.7		49.2	232 02.9	79 25.7	58	52	41	20	17 20		45 94		
24	182	41.9	-3 50.2	246	29.8	79 +17 14.9	60 S	3 43	4 36	5 18	3 32	16	10 31	98	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 23 ^h 13 ^m 7		Mag: -4.8 PMG: 13 ^h 47 ^m		Mag: +1.5 PMG: 13 ^h 53 ^m		Mag: -2.9 PMG: 23 ^h 05 ^m		Mag: +0.9 PMG: 11 ^h 48 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	10	36.6	152	44.8	-21 55.7	151 34.8	-15 33.7	12 43.5	-2 39.3	182 32.0	-1 07.8
1	25	39.0	167	46.7	56.1	166 35.6	34.2	27 46.2	39.4	197 34.2	07.9
2	40	41.5	182	48.7	56.5	181 36.3	34.8	42 49.0	39.6	212 36.3	08.1
3	55	43.9	197	50.7	56.9	196 37.1	35.3	57 51.7	39.7	227 38.5	08.2
4	70	46.4	212	52.6	57.3	211 37.9	35.9	72 54.5	39.8	242 40.7	08.3
5	85	48.9	227	54.6	-21 57.7	226 38.7	-15 36.4	87 57.3	-2 39.9	257 42.9	-1 08.4
6	100	51.3	242	56.6	-21 58.1	241 39.4	-15 37.0	103 00.0	-2 40.1	272 45.1	-1 08.5
7	115	53.8	257	58.6	58.5	256 40.2	37.5	118 02.8	40.2	287 47.2	08.7
8	130	56.3	273	00.5	58.8	271 41.0	38.1	133 05.5	40.3	302 49.4	08.8
9	145	58.7	288	02.5	59.2	286 41.8	38.6	148 08.3	40.4	317 51.6	08.9
10	161	01.2	303	04.5	-21 59.6	301 42.5	39.2	163 11.0	40.6	332 53.8	09.0
11	176	03.7	318	06.5	-22 00.0	316 43.3	-15 39.8	178 13.8	-2 40.7	347 56.0	-1 09.2
12	191	06.1	333	08.5	-22 00.4	331 44.1	-15 40.3	193 16.6	-2 40.8	2 58.1	-1 09.3
13	206	08.6	348	10.5	00.7	346 44.9	40.9	208 19.3	40.9	18 00.3	09.4
14	221	11.1	3	12.5	01.1	1 45.6	41.4	223 22.1	41.1	33 02.5	09.5
15	236	13.5	18	14.5	01.5	16 46.4	42.0	238 24.8	41.2	48 04.7	09.6
16	251	16.0	33	16.5	01.9	31 47.2	42.5	253 27.6	41.3	63 06.9	09.8
17	266	18.4	48	18.6	-22 02.2	46 47.9	-15 43.1	268 30.3	-2 41.4	78 09.0	-1 09.9
18	281	20.9	63	20.6	-22 02.6	61 48.7	-15 43.6	283 33.1	-2 41.6	93 11.2	-1 10.0
19	296	23.4	78	22.6	03.0	76 49.5	44.2	298 35.9	41.7	108 13.4	10.1
20	311	25.8	93	24.6	03.3	91 50.3	44.7	313 38.6	41.8	123 15.6	10.2
21	326	28.3	108	26.7	03.7	106 51.0	45.3	328 41.4	41.9	138 17.8	10.4
22	341	30.8	123	28.7	04.0	121 51.8	45.8	343 44.1	42.0	153 19.9	10.5
23	356	33.2	138	30.7	04.4	136 52.6	46.4	358 46.9	42.2	168 22.1	10.6
24	11	35.7	153	32.8	-22 04.8	151 53.3	-15 46.9	13 49.6	-2 42.3	183 24.3	-1 10.7
Dif	—		+20 -4		+8 -6		+28 -1		+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: 24 ^d 6 PHE { 4 ^h : 59'6 12 ^h : 59'8 20 ^h : 60'0 SD: 16'2 PMG: 7 ^h 51 ^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	182	41.9	-3 50.2	246	29.8	+17 14.9	80	60 N	17 27	18 08	18 57	** ** *	**	15 51	10	
1	197	42.1	51.1	260	56.8	+17 04.0	109	58	29	08	53	** ** *	**	42 14		
2	212	42.3	52.1	275	23.8	+16 52.9	111	56	30	07	51	** ** *	**	35 17		
3	227	42.5	53.1	289	50.8	41.8	111	54	32	07	48	** ** *	**	28 20		
4	242	42.7	54.0	304	17.9	30.6	112	52	33	07	46	0 02	85	22 22		
5	257	42.8	-3 55.0	318	45.0	+16 19.2	114	50	17 35	18 07	18 44	0 09	83	15 17	24	
6	272	43.0	-3 56.0	333	12.2	+16 07.7	115	45	17 37	18 06	18 40	0 24	78	15 05	29	
7	287	43.2	56.9	347	39.3	+15 56.2	115	40	39	06	38	36	74	14 55	33	
8	302	43.4	57.9	2	06.5	44.5	117	35	41	07	36	47	70	47	36	
9	317	43.6	58.9	16	33.7	32.7	118	30	43	07	35	0 56	67	39	40	
10	332	43.8	-3 59.8	31	01.0	20.8	119	20	47	09	34	1 12	62	26	45	
11	347	44.0	-4 00.8	45	28.3	+15 08.8	120	10 N	17 49	18 10	18 35	1 25	59	14 15	49	
12	2	44.2	-4 01.8	59	55.6	+14 56.7	121	0	17 52	18 13	18 37	1 38	54	14 04	54	
13	17	44.4	02.7	74	22.9	44.5	122	10 S	55	16	41	1 51	50	13 53	58	
14	32	44.6	03.7	88	50.3	32.2	123	20	17 59	21	46	2 05	46	42 62		
15	47	44.8	04.7	103	17.7	19.8	124	30	18 02	26	18 55	20	41	28 68		
16	62	45.0	05.6	117	45.2	+14 07.3	125	35	05	30	19 00	29	38	20 71		
17	77	45.2	-4 06.6	132	12.6	+13 54.7	126	40	18 07	18 35	19 07	2 39	35	13 11	75	
18	92	45.4	-4 07.5	146	40.1	+13 42.0	127	45	18 10	18 40	19 15	2 51	31	13 01	78	
19	107	45.6	08.5	161	07.7	29.2	128	50	14	47	26	3 06	26	12 48	84	
20	122	45.8	09.5	175	35.2	16.3	129	52	16	50	31	12	24	42 86		
21	137	46.0	10.4	190	02.8	+13 03.3	130	54	18	54	37	20	21	35 89		
22	152	46.2	11.4	204	30.4	+12 50.3	130	56	20	18 58	44	28	18	27 93		
23	167	46.3	12.4	218	58.0	37.1	132	58	22	19 02	19 52	37	15	19 96		
24	182	46.5	-4 13.3	233	25.7	+12 23.9	132	60 S	18 24	19 07	20 00	3 48	11	12 09	100	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 09 ^m 8		Mag: -4.8 PMG: 13 ^h 44 ^m			Mag: +1.5 PMG: 13 ^h 52 ^m			Mag: -2.9 PMG: 23 ^h 00 ^m			Mag: +0.9 PMG: 11 ^h 45 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	11	35.7	153	32.8	-22 04.8	151	53.3	-15 46.9	13	49.6	-2 42.3	183	24.3	-1 10.7		
1	26	38.2	168	34.8	05.1	166	54.1	47.5	28	52.4	42.4	198	26.5	10.8		
2	41	40.6	183	36.9	05.5	181	54.9	48.0	43	55.2	42.5	213	28.7	11.0		
3	56	43.1	198	38.9	05.8	196	55.6	48.6	58	57.9	42.7	228	30.8	11.1		
4	71	45.5	213	41.0	06.2	211	56.4	49.1	74	00.7	42.8	243	33.0	11.2		
5	86	48.0	228	43.0	-22 06.5	226	57.2	-15 49.7	89	03.4	-2 42.9	258	35.2	-1 11.3		
6	101	50.5	243	45.1	-22 06.9	241	58.0	-15 50.2	104	06.2	-2 43.0	273	37.4	-1 11.4		
7	116	52.9	258	47.1	07.2	256	58.7	50.8	119	08.9	43.2	288	39.6	11.6		
8	131	55.4	273	49.2	07.6	271	59.5	51.3	134	11.7	43.3	303	41.7	11.7		
9	146	57.9	288	51.3	07.9	287	00.3	51.9	149	14.4	43.4	318	43.9	11.8		
10	162	00.3	303	53.4	08.3	302	01.0	52.4	164	17.2	43.5	333	46.1	11.9		
11	177	02.8	318	55.4	-22 08.6	317	01.8	-15 53.0	179	20.0	-2 43.7	348	48.3	-1 12.0		
12	192	05.3	333	57.5	-22 08.9	332	02.6	-15 53.5	194	22.7	-2 43.8	3 50.5	-1 12.2			
13	207	07.7	348	59.6	09.3	347	03.3	54.1	209	25.5	43.9	18 52.6	12.3			
14	222	10.2	4 01.7	09.6	2 04.1	54.6			224	28.2	44.0	33 54.8	12.4			
15	237	12.7	19 03.8	09.9	17 04.9	55.2			239	31.0	44.1	48 57.0	12.5			
16	252	15.1	34 05.9	10.3	32 05.6	55.7			254	33.7	44.3	63 59.2	12.6			
17	267	17.6	49 08.0	-22 10.6	47 06.4	-15 56.3			269	36.5	-2 44.4	79 01.4	-1 12.8			
18	282	20.0	64 10.1	-22 10.9	62 07.2	-15 56.8			284	39.2	-2 44.5	94 03.5	-1 12.9			
19	297	22.5	79 12.2	11.3	77 07.9	57.4			299	42.0	44.6	109 05.7	13.0			
20	312	25.0	94 14.3	11.6	92 08.7	57.9			314	44.7	44.8	124 07.9	13.1			
21	327	27.4	109 16.4	11.9	107 09.5	58.5			329	47.5	44.9	139 10.1	13.2			
22	342	29.9	124 18.5	12.2	122 10.2	59.0			344	50.3	45.0	154 12.3	13.4			
23	357	32.4	139 20.6	12.5	137 11.0	-15 59.6			359	53.0	45.1	169 14.4	13.5			
24	12	34.8	154 22.8	-22 12.9	152 11.7	-16 00.1			14	55.8	-2 45.2	184 16.6	-1 13.6			
Dif	—		+21	-3	+8	-5	+28			-1			+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 7			Edad: 25 ^d 6 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'6 SD: 16'4 PMG: 8 ^h 45 ^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	182	46.5	-4	13.3	233	25.7	+12	23.9	60 N	4	42	5	31	6	12	1	02
1	197	46.7		14.3	247	53.4	87	+12	10.5 ¹³⁴	58	45	31		10		10	96
2	212	46.9		15.3	262	21.1	87	+11	57.1 ¹³⁴	56	48	31		09		16	93
3	227	47.1		16.2	276	48.9	88		43.6 ¹³⁵	54	51	32		07		22	89
4	242	47.3		17.2	291	16.6	87		30.1 ¹³⁵	52	53	32		06		27	87
5	257	47.5	-4	18.2	305	44.4	88	+11	16.4 ¹³⁷	50	4	55	5	32	6	04	1
6	272	47.7	-4	19.1	320	12.2	88	+11	02.7 ¹³⁷	45	4	58	5	32	6	01	1
7	287	47.9		20.1	334	40.1	89	+10	48.9 ¹³⁸	40	5	01		32	5	59	
8	302	48.1		21.1	349	07.9	88		35.0 ¹³⁹	35	02	32		57		1	57
9	317	48.3		22.0	3	35.8	89		21.0 ¹⁴⁰	30	03	31		55		2	03
10	332	48.5		23.0	18	03.7	89	+10	07.0 ¹⁴⁰	20	04	30		52		14	63
11	347	48.7	-4	24.0	32	31.7	90	+9	52.9 ¹⁴¹	10 N	5	03	5	27	5	48	2
12	2	48.8	-4	24.9	46	59.6	89	+9	38.7 ¹⁴²	0	5	01	5	25	5	45	2
13	17	49.0		25.9	61	27.6	90		24.5 ¹⁴²	10 S	4	57		21	42		41
14	32	49.2		26.8	75	55.6	90	+9	10.1 ¹⁴⁴	20	51	17		39		2	51
15	47	49.4		27.8	90	23.6	90	+8	55.8 ¹⁴³	30	43	11		35		3	01
16	62	49.6		28.8	104	51.6	90		41.3 ¹⁴⁵	35	37	07		33		07	36
17	77	49.8	-4	29.7	119	19.7	91	+8	26.8 ¹⁴⁵	40	4	31	5	03	5	30	3
18	92	50.0	-4	30.7	133	47.7	90	+8	12.3 ¹⁴⁵	45	4	22	4	57	5	27	3
19	107	50.2		31.7	148	15.8	91	+7	57.6 ¹⁴⁷	50	11	50		23		32	23
20	122	50.4		32.6	162	43.9	91		43.0 ¹⁴⁶	52	06	47		21		36	21
21	137	50.6		33.6	177	12.0	91		28.2 ¹⁴⁸	54	4	00	43	19		41	18
22	152	50.7		34.6	191	40.1	91	+7	13.4 ¹⁴⁸	56	3	53	39	17		46	16
23	167	50.9		35.5	206	08.3	92	+6	58.6 ¹⁴⁸	58	45	35		15		52	12
24	182	51.1	-4	36.5	220	36.4	91	+6	43.7 ¹⁴⁹	60 S	3	36	4	29	5	12	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 05 ^m 9		Mag: -4.8 PMG: 13 ^h 41 ^m		Mag: +1.5 PMG: 13 ^h 51 ^m		Mag: -2.9 PMG: 22 ^h 56 ^m		Mag: +0.9 PMG: 11 ^h 41 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	12	34.8	154	22.8	-22	12.9	152	11.7	-16	00.1
1	27	37.3	169	24.9		13.2	167	12.5		00.7
2	42	39.8	184	27.0		13.5	182	13.3		01.2
3	57	42.2	199	29.2		13.8	197	14.0		01.8
4	72	44.7	214	31.3		14.1	212	14.8		02.3
5	87	47.2	229	33.4	-22	14.4	227	15.6	-16	02.9
6	102	49.6	244	35.6	-22	14.7	242	16.3	-16	03.4
7	117	52.1	259	37.7		15.1	257	17.1		03.9
8	132	54.5	274	39.9		15.4	272	17.8		04.5
9	147	57.0	289	42.0		15.7	287	18.6		05.0
10	162	59.5	304	44.2		16.0	302	19.4		05.6
11	178	01.9	319	46.4	-22	16.3	317	20.1	-16	06.1
12	193	04.4	334	48.5	-22	16.6	332	20.9	-16	06.7
13	208	06.9	349	50.7		16.9	347	21.6		07.2
14	223	09.3	4	52.9		17.2	2	22.4		07.8
15	238	11.8	19	55.1		17.4	17	23.2		08.3
16	253	14.3	34	57.2		17.7	32	23.9		08.9
17	268	16.7	49	59.4	-22	18.0	47	24.7	-16	09.4
18	283	19.2	65	01.6	-22	18.3	62	25.4	-16	09.9
19	298	21.6	80	03.8		18.6	77	26.2		10.5
20	313	24.1	95	06.0		18.9	92	27.0		11.0
21	328	26.6	110	08.2		19.2	107	27.7		11.6
22	343	29.0	125	10.4		19.5	122	28.5		12.1
23	358	31.5	140	12.6		19.7	137	29.2		12.7
24	13	34.0	155	14.8	-22	20.0	152	30.0	-16	13.2
Dif	—		+22		-3		+8		-5	
							+28		-1	
									+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 4			Edad: 26 ^d 6 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 60'9 SD: 16'5 PMG: 9 ^h 38 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	182	51.1	-4	36.5	220	36.4	+6	43.7	60 N	17 21	18 02	18 51	2 42 101	16 09 7	
1	197	51.3		37.4	235	04.6		28.8	58	23	02	48	46 96	07 11	
2	212	51.5		38.4	249	32.8	+6	13.8	56	25	02	45	49 93	06 14	
3	227	51.7		39.4	264	01.0	+5	58.7	54	27	02	43	51 91	05 17	
4	242	51.9		40.3	278	29.2		43.7	52	29	02	41	54 88	04 19	
5	257	52.1	-4	41.3	292	57.4	+5	28.5	50	17 30	18 02	18 40	2 56 85	16 03 22	
6	272	52.3	-4	42.3	307	25.6	+5	13.4	45	17 33	18 03	18 37	3 01 80	16 01 27	
7	287	52.4		43.2	321	53.8	+4	58.2	40	36	03	35	05 75	16 00 30	
8	302	52.6		44.2	336	22.1		42.9	35	39	04	33	08 72	15 58 34	
9	317	52.8		45.1	350	50.3		27.7	30	41	05	33	11 69	57 37	
10	332	53.0		46.1	5	18.6	+4	12.4	20	45	07	32	17 62	54 44	
11	347	53.2	-4	47.1	19	46.8	+3	57.0	10 N	17 48	18 09	18 34	3 21 58	15 52 48	
12	2	53.4	-4	48.0	34	15.1	+3	41.6	0	17 52	18 12	18 37	3 26 52	15 50 53	
13	17	53.6		49.0	48	43.3		26.2	10 S	55	16	41	30 48	48 58	
14	32	53.7		50.0	63	11.6	+3	10.8	20	17 59	21	47	34 43	46 63	
15	47	53.9		50.9	77	39.8	+2	55.3	30	18 04	28	18 56	40 37	44 68	
16	62	54.1		51.9	92	08.1		39.9	35	06	32	19 02	43 34	42 72	
17	77	54.3	-4	52.8	106	36.4	+2	24.4	40	18 09	18 37	19 09	3 46 31	15 41 75	
18	92	54.5	-4	53.8	121	04.6	+2	08.9	45	18 13	18 43	19 18	3 50 26	15 39 80	
19	107	54.7		54.8	135	32.9	+1	53.3	50	17	50	30	55 21	36 86	
20	122	54.9		55.7	150	01.1		37.8	52	19	53	35	57 19	35 88	
21	137	55.1		56.7	164	29.4		22.2	54	21	18 57	41	3 59 17	34 91	
22	152	55.2		57.6	178	57.6	+1	06.6	56	24	19 02	49	4 02 14	33 93	
23	167	55.4		58.6	193	25.9	+0	51.0	58	26	07	19 57	4 04 11	31 97	
24	182	55.6	-4	59.6	207	54.1	+0	35.4	60 S	18 29	19 12	20 06	4 08 7	15 30 100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 02 ^m 0		Mag: -4.7 PMG: 13 ^h 37 ^m		Mag: +1.5 PMG: 13 ^h 49 ^m		Mag: -2.9 PMG: 22 ^h 52 ^m		Mag: +0.9 PMG: 11 ^h 38 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	13	34.0	155	14.8	-22	20.0	152	30.0	-16	13.2	16	01.8	-2	48.2	185	08.9	-1	16.5
1	28	36.4	170	17.0		20.3	167	30.7		13.7	31	04.6		48.3	200	11.1		16.6
2	43	38.9	185	19.3		20.6	182	31.5		14.3	46	07.3		48.4	215	13.3		16.7
3	58	41.4	200	21.5		20.8	197	32.3		14.8	61	10.1		48.5	230	15.5		16.8
4	73	43.8	215	23.7		21.1	212	33.0		15.4	76	12.8		48.7	245	17.7		17.0
5	88	46.3	230	25.9	-22	21.4	227	33.8	-16	15.9	91	15.6	-2	48.8	260	19.8	-1	17.1
6	103	48.8	245	28.2	-22	21.6	242	34.5	-16	16.4	106	18.3	-2	48.9	275	22.0	-1	17.2
7	118	51.2	260	30.4		21.9	257	35.3		17.0	121	21.1		49.0	290	24.2		17.3
8	133	53.7	275	32.6		22.2	272	36.0		17.5	136	23.8		49.1	305	26.4		17.4
9	148	56.1	290	34.9		22.4	287	36.8		18.1	151	26.6		49.3	320	28.6		17.6
10	163	58.6	305	37.1		22.7	302	37.5		18.6	166	29.3		49.4	335	30.8		17.7
11	179	01.1	320	39.4	-22	23.0	317	38.3	-16	19.2	181	32.1	-2	49.5	350	32.9	-1	17.8
12	194	03.5	335	41.6	-22	23.2	332	39.0	-16	19.7	196	34.8	-2	49.6	5	35.1	-1	17.9
13	209	06.0	350	43.9		23.5	347	39.8		20.2	211	37.6		49.7	20	37.3		18.0
14	224	08.5	5	46.2		23.7	2	40.6		20.8	226	40.3		49.9	35	39.5		18.2
15	239	10.9	20	48.4		24.0	17	41.3		21.3	241	43.1		50.0	50	41.7		18.3
16	254	13.4	35	50.7		24.2	32	42.1		21.9	256	45.8		50.1	65	43.8		18.4
17	269	15.9	50	53.0	-22	24.5	47	42.8	-16	22.4	271	48.6	-2	50.2	80	46.0	-1	18.5
18	284	18.3	65	55.2	-22	24.7	62	43.6	-16	22.9	286	51.3	-2	50.3	95	48.2	-1	18.6
19	299	20.8	80	57.5		25.0	77	44.3		23.5	301	54.1		50.5	110	50.4		18.8
20	314	23.2	95	59.8		25.2	92	45.1		24.0	316	56.8		50.6	125	52.6		18.9
21	329	25.7	111	02.1		25.4	107	45.8		24.5	331	59.6		50.7	140	54.7		19.0
22	344	28.2	126	04.4		25.7	122	46.6		25.1	347	02.3		50.8	155	56.9		19.1
23	359	30.6	141	06.7		25.9	137	47.3		25.6	2	05.1		50.9	170	59.1		19.2
24	14	33.1	156	09.0	-22	26.1	152	48.1	-16	26.2	17	07.8	-2	51.0	186	01.3	-1	19.4
Dif	—		+23	-3		+8	-5		+27	-1		+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 1			Edad: 27 ^d 6 PHE { 4 ^h : 61'0 12 ^h : 61'0 20 ^h : 61'0 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	182	55.6	-4	59.6	207	54.1	+0	35.4	4	47	5	35	6	17	4	23
1	197	55.8	-5	00.5	222	22.4	93	19.8	50	35	15		22	98	16	16
2	212	56.0		01.5	236	50.6	92	+0	52	35	13		22	94	18	12
3	227	56.2		02.4	251	18.8	92	-0	54	35	11		22	91	20	15
4	242	56.3		03.4	265	47.0	92	27.1	56	35	09		22	88	22	18
5	257	56.5	-5	04.4	280	15.2	92	-0	4	58	5	35	6	07	23	21
6	272	56.7	-5	05.3	294	43.4	92	-0	5	01	5	35	6	04	16	25
7	287	56.9		06.3	309	11.6	92	-1	03	34	6	01	4	21	86	22
8	302	57.1		07.2	323	39.7	91	29.5	04	33	5	58	4	21	80	16
9	317	57.3		08.2	338	07.9	92	-1	04	32	5	56	4	21	80	28
10	332	57.4		09.2	352	36.0	91	-2	04	30	5	52	4	21	80	27
11	347	57.6	-5	10.1	7	04.1	91	-2	5	03	5	27	4	21	80	30
12	2	57.8	-5	11.1	21	32.2	91	-2	5	00	5	24	4	21	80	32
13	17	58.0		12.0	36	00.3	91	-2	4	56	20	41	4	21	80	32
14	32	58.2		13.0	50	28.4	91	-3	49	15	37	17	4	21	80	32
15	47	58.4		14.0	64	56.4	90	18.5	40	09	33	5	58	20	72	32
16	62	58.5		14.9	79	24.5	91	34.0	34	5	04	30	20	72	32	36
17	77	58.7	-5	15.9	93	52.5	90	-3	4	27	4	59	19	68	34	39
18	92	58.9	-5	16.8	108	20.5	90	-4	4	18	4	53	19	68	34	39
19	107	59.1		17.8	122	48.5	90	20.4	06	46	19	16	22	19	68	34
20	122	59.3		18.7	137	16.4	89	35.8	4	01	42	17	16	22	19	68
21	137	59.5		19.7	151	44.3	89	-4	3	54	38	14	16	22	19	68
22	152	59.6		20.7	166	12.3	90	-5	47	34	12	16	14	22	19	68
23	167	59.8		21.6	180	40.1	88	21.8	39	29	09	15	12	22	19	68
24	183	00.0	-5	22.6	195	08.0	89	-5	3	29	4	23	5	06	17	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 58 ^m 0		Mag: -4.7 PMG: 13 ^h 33 ^m		Mag: +1.5 PMG: 13 ^h 48 ^m		Mag: -2.9 PMG: 22 ^h 47 ^m		Mag: +0.9 PMG: 11 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	14	33.1	156	09.0	152	48.1	17	07.8	186	01.3
1	29	35.6	171	11.3	167	48.8	32	10.5	201	03.5
2	44	38.0	186	13.6	182	49.6	47	13.3	216	05.6
3	59	40.5	201	15.9	197	50.3	62	16.0	231	07.8
4	74	43.0	216	18.2	212	51.1	77	18.8	246	10.0
5	89	45.4	231	20.5	227	51.8	92	21.5	261	12.2
6	104	47.9	246	22.8	242	52.6	107	24.3	276	14.4
7	119	50.4	261	25.2	257	53.3	122	27.0	291	16.5
8	134	52.8	276	27.5	272	54.1	137	29.8	306	18.7
9	149	55.3	291	29.8	287	54.8	152	32.5	321	20.9
10	164	57.7	306	32.2	302	55.6	167	35.3	336	23.1
11	180	00.2	321	34.5	317	56.3	182	38.0	351	25.3
12	195	02.7	336	36.9	332	57.1	197	40.8	6	27.4
13	210	05.1	351	39.2	347	57.8	212	43.5	21	29.6
14	225	07.6	6	41.6	2	58.5	227	46.3	36	31.8
15	240	10.1	21	43.9	17	59.3	242	49.0	51	34.0
16	255	12.5	36	46.3	33	00.0	257	51.7	66	36.2
17	270	15.0	51	48.6	48	00.8	272	54.5	81	38.3
18	285	17.5	66	51.0	63	01.5	287	57.2	96	40.5
19	300	19.9	81	53.4	78	02.3	303	00.0	111	42.7
20	315	22.4	96	55.7	93	03.0	318	02.7	126	44.9
21	330	24.9	111	58.1	108	03.8	333	05.5	141	47.1
22	345	27.3	127	00.5	123	04.5	348	08.2	156	49.2
23	0	29.8	142	02.9	138	05.2	3	11.0	171	51.4
24	15	32.2	157	05.3	153	06.0	18	13.7	186	53.6
Dif	—		+23	-2	+7	-5	+27	-1	+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: 28 ^d 6 PHE { 4 ^h : 60'9 12 ^h : 60'9 20 ^h : 60'8 R°: 55 ^m												
	hG ☉		Dec		hG ☾		Dif						Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	00.0	-5	22.6	195	08.0	-5	37.1	60 N	17 15	17 57	18 45	6 04 102	16 25 10			
1	198	00.2		23.5	209	35.8	88	-5 52.4	58	18	57	42	6 00 98	30 15			
2	213	00.4		24.5	224	03.6	88	-6 07.6	56	20	57	40	5 56 95	35 18			
3	228	00.5		25.5	238	31.4	88	22.7	54	22	57	38	53 91	40 20			
4	243	00.7		26.4	252	59.2	88	37.8	52	24	58	37	50 88	44 23			
5	258	00.9	-5	27.4	267	26.9	87	-6 52.9	50	17 26	17 58	18 35	5 47 86	16 47 26			
6	273	01.1	-5	28.3	281	54.6	87	-7 07.9	45	17 30	17 59	18 33	5 41 81	16 55 31			
7	288	01.3		29.3	296	22.3	87	22.9	40	33	18 00	31	36 76	17 02 34			
8	303	01.4		30.2	310	49.9	86	37.9	35	36	01	31	32 72	08 38			
9	318	01.6		31.2	325	17.5	86	-7 52.7	30	39	02	30	28 69	13 41			
10	333	01.8		32.2	339	45.1	86	-8 07.6	20	43	05	31	22 64	22 46			
11	348	02.0	-5	33.1	354	12.6	85	-8 22.3	10 N	17 47	18 08	18 33	5 16 59	17 29 51			
12	3	02.2	-5	34.1	8	40.2	86	-8 37.1	0	17 51	18 12	18 36	5 11 55	17 37 55			
13	18	02.3		35.0	23	07.6	84	-8 51.7	10 S	17 55	16	41	06 50	44 60			
14	33	02.5		36.0	37	35.1	85	-9 06.3	20	18 00	22	48	5 01 45	17 52 64			
15	48	02.7		36.9	52	02.5	84	20.8	30	05	29	18 57	4 55 40	18 01 69			
16	63	02.9		37.9	66	29.9	84	35.3	35	08	33	19 04	51 37	06 73			
17	78	03.0	-5	38.8	80	57.2	83	-9 49.7	40	18 11	18 39	19 11	4 48 33	18 12 76			
18	93	03.2	-5	39.8	95	24.6	84	-10 04.1	45	18 15	18 45	19 21	4 43 29	18 19 81			
19	108	03.4		40.8	109	51.8	82	18.3	50	20	53	33	38 24	28 85			
20	123	03.6		41.7	124	19.1	83	32.5	52	22	18 57	39	35 22	32 88			
21	138	03.8		42.7	138	46.3	82	-10 46.6	54	25	19 01	46	33 19	36 91			
22	153	03.9		43.6	153	13.5	82	-11 00.7	56	28	06	19 53	30 16	41 94			
23	168	04.1		44.6	167	40.6	81	14.7	58	31	12	20 02	27 13	46 98			
24	183	04.3	-5	45.5	182	07.7	81	-11 28.6	60 S	18 34	19 18	20 13	4 23 10	18 52 102			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 54 ^m 1		Mag: -4.7 PMG: 13 ^h 29 ^m			Mag: +1.5 PMG: 13 ^h 47 ^m			Mag: -2.9 PMG: 22 ^h 43 ^m			Mag: +0.9 PMG: 11 ^h 31 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	15	32.2	157	05.3	-22	31.2	153	06.0	-16	39.0	18	13.7	-2	53.9	186	53.6	
1	30	34.7	172	07.7		31.4	168	06.7		39.5	33	16.5		54.0	201	55.8	
2	45	37.2	187	10.1		31.6	183	07.5		40.1	48	19.2		54.1	216	58.0	
3	60	39.6	202	12.5		31.8	198	08.2		40.6	63	21.9		54.2	232	00.1	
4	75	42.1	217	14.9		32.0	213	09.0		41.1	78	24.7		54.4	247	02.3	
5	90	44.6	232	17.3	-22	32.2	228	09.7	-16	41.7	93	27.4	-2	54.5	262	04.5	
6	105	47.0	247	19.7	-22	32.4	243	10.4	-16	42.2	108	30.2	-2	54.6	277	06.7	
7	120	49.5	262	22.1		32.5	258	11.2		42.7	123	32.9		54.7	292	08.9	
8	135	52.0	277	24.5		32.7	273	11.9		43.3	138	35.7		54.8	307	11.0	
9	150	54.4	292	27.0		32.9	288	12.7		43.8	153	38.4		54.9	322	13.2	
10	165	56.9	307	29.4		33.1	303	13.4		44.3	168	41.1		55.1	337	15.4	
11	180	59.3	322	31.8	-22	33.2	318	14.2	-16	44.9	183	43.9	-2	55.2	352	17.6	
12	196	01.8	337	34.2	-22	33.4	333	14.9	-16	45.4	198	46.6	-2	55.3	7	19.8	
13	211	04.3	352	36.7		33.6	348	15.6		45.9	213	49.4		55.4	22	22.0	
14	226	06.7	7	39.1		33.7	3	16.4		46.5	228	52.1		55.5	37	24.1	
15	241	09.2	22	41.6		33.9	18	17.1		47.0	243	54.9		55.6	52	26.3	
16	256	11.7	37	44.0		34.0	33	17.9		47.5	258	57.6		55.8	67	28.5	
17	271	14.1	52	46.5	-22	34.2	48	18.6	-16	48.0	274	00.3	-2	55.9	82	30.7	
18	286	16.6	67	48.9	-22	34.4	63	19.3	-16	48.6	289	03.1	-2	56.0	97	32.9	
19	301	19.1	82	51.4		34.5	78	20.1		49.1	304	05.8		56.1	112	35.0	
20	316	21.5	97	53.9		34.7	93	20.8		49.6	319	08.6		56.2	127	37.2	
21	331	24.0	112	56.3		34.8	108	21.5		50.2	334	11.3		56.3	142	39.4	
22	346	26.5	127	58.8		35.0	123	22.3		50.7	349	14.1		56.4	157	41.6	
23	1	28.9	143	01.3		35.1	138	23.0		51.2	4	16.8		56.6	172	43.8	
24	16	31.4	158	03.8	-22	35.3	153	23.8	-16	51.7	19	19.5	-2	56.7	187	45.9	
Dif	—		+24			-2		+7		-5		+27		-1		+22	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 6			Edad: 0 ^d 2 PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'2 R°: 56 ^m SD: 16'5 PMG: 12 ^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	183	04.3	-5	45.5	182	07.7	-11 28.6	60 N	4 52	5 40	6 22	7 46	102	16 35	15	
1	198	04.5		46.5	196	34.8	81 42.4	58	54	40	19	38	97	45	19	
2	213	04.6		47.4	211	01.8	80 -11 56.1	56	56	39	17	31	93	16 53	23	
3	228	04.8		48.4	225	28.8	80 -12 09.8	54	58	39	14	24	90	17 00	26	
4	243	05.0		49.4	239	55.7	79 23.3	52	4 59	39	12	18	87	07	28	
5	258	05.2	-5	50.3	254	22.6	79 -12 36.8	50	5 01	5 38	6 10	7 13	85	17 13	30	
6	273	05.3	-5	51.3	268	49.5	79 -12 50.2	45	5 03	5 37	6 06	7 02	79	17 26	35	
7	288	05.5		52.2	283	16.3	78 -13 03.5	40	05	36	03	6 52	76	36	40	
8	303	05.7		53.2	297	43.1	78 16.7	35	05	35	6 00	44	72	46	42	
9	318	05.9		54.1	312	09.9	78 29.8	30	06	33	5 57	37	70	17 54	45	
10	333	06.0		55.1	326	36.6	77 42.9	20	05	31	53	26	64	18 08	49	
11	348	06.2	-5	56.0	341	03.3	77 -13 55.8	10 N	5 03	5 27	5 48	6 15	60	18 20	53	
12	3	06.4	-5	57.0	355	29.9	76 -14 08.6	0	4 59	5 24	5 44	6 06	55	18 32	57	
13	18	06.6		57.9	9	56.5	76 21.4	10 S	54	19	40	5 56	52	44	60	
14	33	06.7		58.9	24	23.1	76 34.0	20	47	13	36	46	48	18 56	64	
15	48	06.9	-5	59.8	38	49.6	75 46.5	30	38	06	30	35	42	19 10	69	
16	63	07.1	-6	00.8	53	16.1	75 -14 58.9	35	31	5 02	27	28	40	19	71	
17	78	07.3	-6	01.7	67	42.5	74 -15 11.3	40	4 24	4 56	5 24	5 21	36	19 28	75	
18	93	07.4	-6	02.7	82	08.9	74 -15 23.5	45	4 14	4 50	5 19	5 12	33	19 40	78	
19	108	07.6		03.6	96	35.3	74 35.6	50	4 02	41	14	5 02	28	19 53	83	
20	123	07.8		04.6	111	01.6	73 47.6	52	3 56	37	12	4 57	26	20 00	85	
21	138	07.9		05.6	125	27.9	73 -15 59.5	54	49	33	10	52	23	07	88	
22	153	08.1		06.5	139	54.2	73 -16 11.2	56	41	28	07	46	20	15	91	
23	168	08.3		07.5	154	20.4	72 22.9	58	32	23	04	40	16	24	94	
24	183	08.5	-6	08.4	168	46.6	72 -16 34.4	60 S	3 22	4 17	5 00	4 33	12	20 34	99	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 50 ^m 2		Mag: -4.7 PMG: 13 ^h 26 ^m		Mag: +1.5 PMG: 13 ^h 46 ^m		Mag: -2.9 PMG: 22 ^h 39 ^m		Mag: +0.9 PMG: 11 ^h 27 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	16	31.4	158	03.8	-22	35.3	153	23.8	-16	51.7
1	31	33.8	173	06.3		35.4	168	24.5		52.3
2	46	36.3	188	08.7		35.5	183	25.2		52.8
3	61	38.8	203	11.2		35.7	198	26.0		53.3
4	76	41.2	218	13.7		35.8	213	26.7		53.9
5	91	43.7	233	16.2	-22	36.0	228	27.4	-16	54.4
6	106	46.2	248	18.7	-22	36.1	243	28.2	-16	54.9
7	121	48.6	263	21.2		36.2	258	28.9		55.4
8	136	51.1	278	23.8		36.4	273	29.6		56.0
9	151	53.6	293	26.3		36.5	288	30.4		56.5
10	166	56.0	308	28.8		36.6	303	31.1		57.0
11	181	58.5	323	31.3	-22	36.7	318	31.8	-16	57.5
12	197	00.9	338	33.8	-22	36.9	333	32.6	-16	58.1
13	212	03.4	353	36.4		37.0	348	33.3		58.6
14	227	05.9	8	38.9		37.1	3	34.0		59.1
15	242	08.3	23	41.5		37.2	18	34.8	-16	59.6
16	257	10.8	38	44.0		37.3	33	35.5	-17	00.2
17	272	13.3	53	46.5	-22	37.4	48	36.2	-17	00.7
18	287	15.7	68	49.1	-22	37.5	63	37.0	-17	01.2
19	302	18.2	83	51.6		37.6	78	37.7		01.7
20	317	20.7	98	54.2		37.8	93	38.4		02.3
21	332	23.1	113	56.8		37.9	108	39.2		02.8
22	347	25.6	128	59.3		38.0	123	39.9		03.3
23	2	28.1	144	01.9		38.1	138	40.6		03.8
24	17	30.5	159	04.5	-22	38.2	153	41.4	-17	04.4
Dif	—		+25		-1		+7		-5	
							+27		-1	
									+22	
									-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 47 ^m 3			Edad: 1 ^d 2 PHE { 4 ^h : 60:0 12 ^h : 59:8 20 ^h : 59:5 R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	08.5	-6 08.4	168	46.6	-16 34.4	71	60 N	17 09	17 51	18 39	9 28 96	16 50 23	17 04 27	17 04 27
1	198	08.6	09.4	183	12.7	45.9	115	58	12	51	37	15 92	17 04 27	17 04 27	17 04 27
2	213	08.8	10.3	197	38.8	57.2	113	56	15	52	35	9 04 88	16 30	16 30	16 30
3	228	09.0	11.3	212	04.9	08.4	112	54	17	53	34	8 54 85	26 34	26 34	26 34
4	243	09.2	12.2	226	30.9	19.4	110	52	20	53	32	45 83	35 36	35 36	35 36
5	258	09.3	-6 13.2	240	56.9	30.4	110	50	17 22	17 54	18 31	8 38 80	17 43 38	17 43 38	17 43 38
6	273	09.5	-6 14.1	255	22.9	41.2	108	45	17 26	17 56	18 29	8 21 76	18 01 42	18 01 42	18 01 42
7	288	09.7	15.1	269	48.8	51.9	107	40	30	57	28	8 08 72	16 44	16 44	16 44
8	303	09.8	16.0	284	14.7	02.5	106	35	33	17 59	28	7 56 70	28 47	28 47	28 47
9	318	10.0	17.0	298	40.6	12.9	104	30	36	18 00	28	47 67	39 49	39 49	39 49
10	333	10.2	17.9	313	06.4	23.3	104	20	41	04	29	30 63	18 57 53	18 57 53	18 57 53
11	348	10.3	-6 18.9	327	32.2	33.5	102	10 N	17 46	18 07	18 32	7 15 60	19 13 56	19 13 56	19 13 56
12	3	10.5	-6 19.8	341	58.0	43.5	100	0	17 51	18 11	18 36	7 01 58	19 29 57	19 29 57	19 29 57
13	18	10.7	20.8	356	23.7	53.5	100	10 S	17 55	16	41	6 48 54	19 44 60	19 44 60	19 44 60
14	33	10.9	21.7	10	49.4	03.3	98	20	18 00	22	48	34 50	20 00 63	20 00 63	20 00 63
15	48	11.0	22.7	25	15.1	12.9	96	30	06	30	18 59	17 47	19 66	19 66	19 66
16	63	11.2	23.6	39	40.7	22.5	96	35	09	35	19 05	6 08 44	30 68	30 68	30 68
17	78	11.4	-6 24.6	54	06.3	31.9	94	40	18 13	18 41	19 14	5 57 42	20 43 70	20 43 70	20 43 70
18	93	11.5	-6 25.5	68	31.9	41.1	92	45	18 18	18 48	19 24	5 45 38	20 58 73	20 58 73	20 58 73
19	108	11.7	26.5	82	57.5	50.2	91	50	23	18 57	37	30 34	21 16 77	21 16 77	21 16 77
20	123	11.9	27.4	97	23.0	59.2	90	52	26	19 01	43	23 31	25 78	25 78	25 78
21	138	12.0	28.4	111	48.5	08.1	89	54	29	05	50	15 29	35 80	35 80	35 80
22	153	12.2	29.3	126	14.0	16.8	87	56	32	11	19 58	5 06 27	46 83	46 83	46 83
23	168	12.4	30.3	140	39.5	25.4	86	58	35	16	20 08	4 56 23	21 58 87	21 58 87	21 58 87
24	183	12.5	-6 31.2	155	04.9	33.8	84	60 S	18 39	19 23	20 19	4 45 19	22 13 91	22 13 91	22 13 91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 46 ^m 2		Mag: -4.7 PMG: 13 ^h 21 ^m		Mag: +1.5 PMG: 13 ^h 45 ^m		Mag: -2.9 PMG: 22 ^h 34 ^m		Mag: +0.9 PMG: 11 ^h 24 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	17	30.5	159	04.5	-22	38.2	153	41.4	-17	04.4
1	32	33.0	174	07.1		38.3	168	42.1		04.9
2	47	35.4	189	09.6		38.3	183	42.8		05.4
3	62	37.9	204	12.2		38.4	198	43.5		05.9
4	77	40.4	219	14.8		38.5	213	44.3		06.5
5	92	42.8	234	17.4	-22	38.6	228	45.0	-17	07.0
6	107	45.3	249	20.0	-22	38.7	243	45.7	-17	07.5
7	122	47.8	264	22.6		38.8	258	46.5		08.0
8	137	50.2	279	25.2		38.9	273	47.2		08.5
9	152	52.7	294	27.8		38.9	288	47.9		09.1
10	167	55.2	309	30.4		39.0	303	48.6		09.6
11	182	57.6	324	33.1	-22	39.1	318	49.4	-17	10.1
12	198	00.1	339	35.7	-22	39.2	333	50.1	-17	10.6
13	213	02.6	354	38.3		39.2	348	50.8		11.1
14	228	05.0	9	40.9		39.3	3	51.5		11.7
15	243	07.5	24	43.6		39.4	18	52.3		12.2
16	258	09.9	39	46.2		39.4	33	53.0		12.7
17	273	12.4	54	48.9	-22	39.5	48	53.7	-17	13.2
18	288	14.9	69	51.5	-22	39.6	63	54.4	-17	13.7
19	303	17.3	84	54.1		39.6	78	55.2		14.3
20	318	19.8	99	56.8		39.7	93	55.9		14.8
21	333	22.3	114	59.5		39.7	108	56.6		15.3
22	348	24.7	130	02.1		39.8	123	57.3		15.8
23	3	27.2	145	04.8		39.8	138	58.1		16.3
24	18	29.7	160	07.5	-22	39.9	153	58.8	-17	16.9
Dif	—		+26		-1		+7		-5	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 0			Edad: 2 ^d 2 PHE { 4 ^h : 59'2 12 ^h : 58'9 20 ^h : 58'6 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	12.5	-6	31.2	155	04.9	-20	33.8	60 N	4 57	5 45	6 27	11 04	84	17 13	37		
1	198	12.7		32.2	169	30.3	64	42.1	83	58	4 59	44	23	10 47	79	31	40	
2	213	12.9		33.1	183	55.7	64	50.2	81	56	5 00	43	21	32	77	17 46	43	
3	228	13.0		34.0	198	21.1	64	-20 58.2	80	54	02	43	18	19	75	18 00	44	
4	243	13.2		35.0	212	46.5	64	-21 06.1	79	52	03	42	16	10 08	73	11	46	
5	258	13.4	-6	35.9	227	11.8	63	-21 13.8	77	50	5 04	5 41	6 14	9 58	72	18 21	47	
6	273	13.5	-6	36.9	241	37.1	63	-21 21.4	76	45	5 06	5 40	6 09	9 37	69	18 43	49	
7	288	13.7		37.8	256	02.4	63	28.8	74	40	07	38	05	20	68	19 00	51	
8	303	13.9		38.8	270	27.7	63	36.0	72	35	07	36	6 02	9 06	66	15	52	
9	318	14.0		39.7	284	53.0	63	43.2	72	30	07	35	5 59	8 54	64	28	53	
10	333	14.2		40.7	299	18.3	63	50.2	70	20	05	31	53	33	62	19 50	55	
11	348	14.4	-6	41.6	313	43.6	63	-21 57.0	68	10 N	5 03	5 27	5 48	8 15	60	20 09	56	
12	3	14.5	-6	42.6	328	08.8	62	-22 03.7	67	0	4 59	5 23	5 44	7 59	58	20 26	58	
13	18	14.7		43.5	342	34.1	63	10.2	65	10 S	53	18	39	42	56	20 44	59	
14	33	14.9		44.5	356	59.3	62	16.6	64	20	46	12	34	24	54	21 03	60	
15	48	15.0		45.4	11	24.5	62	22.8	62	30	35	5 04	28	7 04	51	25	62	
16	63	15.2		46.4	25	49.8	63	28.9	61	35	28	4 59	24	6 52	50	38	63	
17	78	15.4	-6	47.3	40	15.0	62	-22 34.8	59	40	4 20	4 53	5 20	6 39	48	21 53	64	
18	93	15.5	-6	48.2	54	40.2	62	-22 40.6	58	45	4 10	4 46	5 16	6 23	46	22 11	65	
19	108	15.7		49.2	69	05.4	62	46.2	56	50	3 57	37	10	6 04	42	33	66	
20	123	15.8		50.1	83	30.7	63	51.7	55	52	50	33	08	5 54	41	43	68	
21	138	16.0		51.1	97	55.9	62	-22 57.0	53	54	43	28	05	44	39	22 55	69	
22	153	16.2		52.0	112	21.1	62	-23 02.2	52	56	35	23	5 01	33	36	23 09	70	
23	168	16.3		53.0	126	46.4	63	07.2	50	58	25	17	4 58	19	34	25	71	
24	183	16.5	-6	53.9	141	11.6	62	-23 12.0	48	60 S	3 14	4 10	4 54	5 04	29	23 44	74	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 22 ^h 42 ^m 3		Mag: -4.7 PMG: 13 ^h 17 ^m			Mag: +1.5 PMG: 13 ^h 43 ^m			Mag: -2.9 PMG: 22 ^h 30 ^m			Mag: +0.9 PMG: 11 ^h 20 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	18	29.7	160	07.5	-22	39.9	153	58.8	-17	16.9	21	30.9	-3	02.1	189	30.6	-1	30.8
1	33	32.1	175	10.1		39.9	168	59.5		17.4	36	33.7		02.2	204	32.8		30.9
2	48	34.6	190	12.8		40.0	184	00.2		17.9	51	36.4		02.4	219	35.0		31.0
3	63	37.0	205	15.5		40.0	199	01.0		18.4	66	39.1		02.5	234	37.2		31.1
4	78	39.5	220	18.2		40.0	214	01.7		18.9	81	41.9		02.6	249	39.3		31.3
5	93	42.0	235	20.9	-22	40.1	229	02.4	-17	19.4	96	44.6	-3	02.7	264	41.5	-1	31.4
6	108	44.4	250	23.6	-22	40.1	244	03.1	-17	20.0	111	47.3	-3	02.8	279	43.7	-1	31.5
7	123	46.9	265	26.2		40.2	259	03.8		20.5	126	50.1		02.9	294	45.9		31.6
8	138	49.4	280	28.9		40.2	274	04.6		21.0	141	52.8		03.0	309	48.1		31.7
9	153	51.8	295	31.7		40.2	289	05.3		21.5	156	55.5		03.1	324	50.3		31.9
10	168	54.3	310	34.4		40.2	304	06.0		22.0	171	58.2		03.2	339	52.4		32.0
11	183	56.8	325	37.1	-22	40.3	319	06.7	-17	22.5	187	01.0	-3	03.3	354	54.6	-1	32.1
12	198	59.2	340	39.8	-22	40.3	334	07.5	-17	23.1	202	03.7	-3	03.5	9	56.8	-1	32.2
13	214	01.7	355	42.5		40.3	349	08.2		23.6	217	06.4		03.6	24	59.0		32.3
14	229	04.2	10	45.2		40.3	4	08.9		24.1	232	09.2		03.7	40	01.2		32.4
15	244	06.6	25	48.0		40.3	19	09.6		24.6	247	11.9		03.8	55	03.3		32.6
16	259	09.1	40	50.7		40.4	34	10.3		25.1	262	14.6		03.9	70	05.5		32.7
17	274	11.5	55	53.4	-22	40.4	49	11.0	-17	25.6	277	17.4	-3	04.0	85	07.7	-1	32.8
18	289	14.0	70	56.2	-22	40.4	64	11.8	-17	26.2	292	20.1	-3	04.1	100	09.9	-1	32.9
19	304	16.5	85	58.9		40.4	79	12.5		26.7	307	22.8		04.2	115	12.1		33.0
20	319	18.9	101	01.7		40.4	94	13.2		27.2	322	25.6		04.3	130	14.2		33.2
21	334	21.4	116	04.4		40.4	109	13.9		27.7	337	28.3		04.5	145	16.4		33.3
22	349	23.9	131	07.2		40.4	124	14.6		28.2	352	31.0		04.6	160	18.6		33.4
23	4	26.3	146	09.9		40.4	139	15.4		28.7	7	33.7		04.7	175	20.8		33.5
24	19	28.8	161	12.7	-22	40.4	154	16.1	-17	29.2	22	36.5	-3	04.8	190	23.0	-1	33.6
Dif	—		+27			0	+7			-5	+27		-1	+22			-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 8			Edad: 3 ^d 2 PHE { 4 ^h : 58'3 12 ^h : 58'0 SD: 15'9 20 ^h : 57'7 PMG: 15 ^h 10 ^m R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	183	16.5	-6	53.9	141	11.6	-23	12.0	17 03	17 45	18 33	12 28	62	
1	198	16.7		54.9	155	36.9	63	16.8	07	46	31	12 06	62	
2	213	16.8		55.8	170	02.1	62	21.3	10	47	30	11 49	61	
3	228	17.0		56.7	184	27.4	63	25.7	13	48	29	34	61	
4	243	17.1		57.7	198	52.7	63	30.0	15	49	28	21	61	
5	258	17.3	-6	58.6	213	18.0	63	-23 34.1	17 18	17 50	18 27	11 10	60	
6	273	17.5	-6	59.6	227	43.3	63	-23 38.0	17 23	17 52	18 26	10 46	60	
7	288	17.6	-7	00.5	242	08.6	63	41.8	27	54	25	28	59	
8	303	17.8		01.5	256	33.9	63	45.4	31	56	25	10 12	59	
9	318	18.0		02.4	270	59.3	64	48.9	34	17 58	26	9 58	59	
10	333	18.1		03.3	285	24.7	64	52.3	40	18 02	28	35	58	
11	348	18.3	-7	04.3	299	50.1	64	-23 55.4	17 45	18 06	18 31	9 15	58	
12	3	18.4	-7	05.2	314	15.5	64	-23 58.5	17 50	18 11	18 35	8 57	56	
13	18	18.6		06.2	328	41.0	65	-24 01.3	17 55	16	41	38	56	
14	33	18.8		07.1	343	06.4	64	04.1	20	18 01	23	8 18	56	
15	48	18.9		08.1	357	31.9	65	06.6	07	32	19 00	7 55	55	
16	63	19.1		09.0	11	57.5	66	09.0	11	37	07	42	54	
17	78	19.2	-7	09.9	26	23.0	65	-24 11.3	18 15	18 43	19 16	7 27	53	
18	93	19.4	-7	10.9	40	48.6	66	-24 13.4	18 20	18 51	19 27	7 09	52	
19	108	19.6		11.8	55	14.3	67	15.4	27	19 00	41	6 46	52	
20	123	19.7		12.8	69	39.9	66	17.2	29	04	47	35	51	
21	138	19.9		13.7	84	05.6	67	18.9	33	09	19 55	23	50	
22	153	20.0		14.6	98	31.4	68	20.4	36	15	20 04	6 09	49	
23	168	20.2		15.6	112	57.1	67	21.7	40	21	14	5 53	47	
24	183	20.3	-7	16.5	127	23.0	69	-24 22.9	18 44	19 28	20 25	5 33	46	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 38 ^m 4		Mag: -4.6 PMG: 13 ^h 13 ^m		Mag: +1.5 PMG: 13 ^h 42 ^m		Mag: -2.9 PMG: 22 ^h 25 ^m		Mag: +0.9 PMG: 11 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	28.8	161	12.7	-22	40.4	154	16.1	-17	29.2
1	34	31.3	176	15.5		40.4	169	16.8		29.7
2	49	33.7	191	18.2		40.4	184	17.5		30.3
3	64	36.2	206	21.0		40.4	199	18.2		30.8
4	79	38.7	221	23.8		40.4	214	18.9		31.3
5	94	41.1	236	26.6	-22	40.3	229	19.6	-17	31.8
6	109	43.6	251	29.4	-22	40.3	244	20.4	-17	32.3
7	124	46.0	266	32.2		40.3	259	21.1		32.8
8	139	48.5	281	35.0		40.3	274	21.8		33.3
9	154	51.0	296	37.8		40.3	289	22.5		33.8
10	169	53.4	311	40.6		40.2	304	23.2		34.3
11	184	55.9	326	43.4	-22	40.2	319	23.9	-17	34.9
12	199	58.4	341	46.2	-22	40.2	334	24.6	-17	35.4
13	215	00.8	356	49.0		40.1	349	25.4		35.9
14	230	03.3	11	51.8		40.1	4	26.1		36.4
15	245	05.8	26	54.6		40.1	19	26.8		36.9
16	260	08.2	41	57.5		40.0	34	27.5		37.4
17	275	10.7	57	00.3	-22	40.0	49	28.2	-17	37.9
18	290	13.1	72	03.1	-22	39.9	64	28.9	-17	38.4
19	305	15.6	87	06.0		39.9	79	29.6		38.9
20	320	18.1	102	08.8		39.9	94	30.3		39.4
21	335	20.5	117	11.7		39.8	109	31.1		40.0
22	350	23.0	132	14.5		39.8	124	31.8		40.5
23	5	25.5	147	17.4		39.7	139	32.5		41.0
24	20	27.9	162	20.2	-22	39.6	154	33.2	-17	41.5
Dif	—		+28		0		+7		-5	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 46 ^m 5			Edad: 4 ^d 2 SD: 15'7 PMG: 16 ^h 07 ^m	PHE { 4 ^h : 57'4 12 ^h : 57'1 20 ^h : 56'8 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	183	20.3	-7	127	23.0	-24	22.9	60 N	5 01	5 50	6 32	13 30	40	18 45	71	
1	198	20.5		141	48.8		68	58	03	48	28	13 08	43	19 07	69	
2	213	20.7		156	14.7		69	56	04	47	25	12 50	45	25	67	
3	228	20.8		170	40.6		69	54	05	46	22	35	46	40	65	
4	243	21.0		185	06.6		70	52	06	45	19	22	47	19 53	64	
5	258	21.1	-7	199	32.7	-24	26.8	50	5 07	5 44	6 17	12 10	48	20 04	64	
6	273	21.3	-7	213	58.7	-24	27.1	45	5 08	5 42	6 12	11 46	49	20 28	62	
7	288	21.4		228	24.9		72	40	09	40	07	27	50	20 48	59	
8	303	21.6		242	51.0		71	35	08	38	03	11 11	51	21 03	59	
9	318	21.8		257	17.3		73	30	08	36	6 00	10 57	52	17	58	
10	333	21.9		271	43.6		73	20	06	32	5 54	33	53	21 41	56	
11	348	22.1	-7	286	09.9	-24	26.6	10 N	5 03	5 27	5 48	10 13	53	22 01	55	
12	3	22.2	-7	300	36.3	-24	26.1	0	4 58	5 22	5 43	9 53	55	22 20	53	
13	18	22.4		315	02.7		74	10 S	52	17	38	34	56	39	52	
14	33	22.5		329	29.2		75	20	44	10	32	9 14	56	22 59	50	
15	48	22.7		343	55.8		76	30	33	5 01	26	8 50	57	23 22	49	
16	63	22.8		358	22.4		76	35	26	4 56	22	36	58	36	47	
17	78	23.0	-7	12	49.1	-24	21.3	40	4 17	4 50	5 17	8 20	59	23 52	46	
18	93	23.1	-7	27	15.8	-24	19.9	45	4 06	4 42	5 12	8 01	59	*** **	***	
19	108	23.3		44	42.6		78	50	3 52	33	06	7 38	59	*** **	***	
20	123	23.5		56	09.5		79	52	45	28	03	26	60	*** **	***	
21	138	23.6		70	36.4		79	54	38	23	5 00	7 13	61	0 04	53	
22	153	23.8		85	03.4		80	56	29	17	4 56	6 58	62	19	53	
23	168	23.9		99	30.4		80	58	19	11	52	40	63	36	53	
24	183	24.1	-7	113	57.6	-24	08.8	60 S	3 07	4 04	4 48	6 19	63	0 58	51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 34 ^m 4		Mag: -4.6 PMG: 13 ^h 08 ^m		Mag: +1.5 PMG: 13 ^h 41 ^m		Mag: -2.9 PMG: 22 ^h 21 ^m		Mag: +0.9 PMG: 11 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	20	27.9	162	20.2	-22	39.6	154	33.2	-17	41.5
1	35	30.4	177	23.1		39.6	169	33.9		42.0
2	50	32.9	192	26.0		39.5	184	34.6		42.5
3	65	35.3	207	28.8		39.5	199	35.3		43.0
4	80	37.8	222	31.7		39.4	214	36.0		43.5
5	95	40.3	237	34.6	-22	39.3	229	36.7	-17	44.0
6	110	42.7	252	37.5	-22	39.3	244	37.4	-17	44.5
7	125	45.2	267	40.4		39.2	259	38.1		45.0
8	140	47.6	282	43.2		39.1	274	38.9		45.5
9	155	50.1	297	46.1		39.0	289	39.6		46.0
10	170	52.6	312	49.0		39.0	304	40.3		46.5
11	185	55.0	327	51.9	-22	38.9	319	41.0	-17	47.0
12	200	57.5	342	54.8	-22	38.8	334	41.7	-17	47.5
13	216	00.0	357	57.8		38.7	349	42.4		48.1
14	231	02.4	13	00.7		38.6	4	43.1		48.6
15	246	04.9	28	03.6		38.5	19	43.8		49.1
16	261	07.4	43	06.5		38.4	34	44.5		49.6
17	276	09.8	58	09.4	-22	38.3	49	45.2	-17	50.1
18	291	12.3	73	12.4	-22	38.2	64	45.9	-17	50.6
19	306	14.8	88	15.3		38.1	79	46.6		51.1
20	321	17.2	103	18.2		38.0	94	47.3		51.6
21	336	19.7	118	21.2		37.9	109	48.0		52.1
22	351	22.1	133	24.1		37.8	124	48.7		52.6
23	6	24.6	148	27.1		37.7	139	49.4		53.1
24	21	27.1	163	30.0	-22	37.6	154	50.1	-17	53.6
Dif	—		+29		+1		+7		-5	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/0 PMG: 11 ^h 46 ^m 3			Edad: 5 ^d 2 SD: 15/4 PMG: 17 ^h 01 ^m	PHE { 4 ^h : 56/5 12 ^h : 56/2 20 ^h : 56/0 R°: 50 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	24.1	-7	39.0	113	57.6	-24	08.8	60 N	16 57	17 39	18 27	14 10 25	19 56 80		
1	198	24.2		40.0	128	24.8		06.5	58	17 01	41	26	13 51 28	20 16 76		
2	213	24.4		40.9	142	52.0		04.0	56	05	42	25	35 31	32 73		
3	228	24.5		41.8	157	19.4	-24	01.5	54	08	43	24	21 33	45 7		
4	243	24.7		42.8	171	46.8	-23	58.7	52	11	45	24	13 09 35	20 57 69		
5	258	24.8	-7	43.7	186	14.2	-23	55.9	50	17 13	17 46	18 23	12 58 37	21 08 67		
6	273	25.0	-7	44.6	200	41.8	-23	52.9	45	17 19	17 49	18 22	12 35 40	21 30 63		
7	288	25.1		45.6	215	09.4		49.8	40	24	51	22	17 42	21 47 61		
8	303	25.3		46.5	229	37.1		46.6	35	28	53	23	12 02 44	22 02 59		
9	318	25.4		47.5	244	04.8		43.3	30	32	17 56	23	11 49 45	15 57		
10	333	25.6		48.4	258	32.7		39.8	20	38	18 00	26	26 48	37 54		
11	348	25.7	-7	49.3	273	00.6	-23	36.2	10 N	17 44	18 05	18 30	11 06 50	22 56 52		
12	3	25.9	-7	50.3	287	28.5	-23	32.5	0	17 50	18 10	18 35	10 48 52	23 13 50		
13	18	26.0		51.2	301	56.6		28.6	10 S	17 55	16	41	30 53	31 47		
14	33	26.2		52.1	316	24.7		24.7	20	18 01	24	18 50	10 10 55	23 49 46		
15	48	26.3		53.1	330	52.9		20.6	30	09	33	19 02	9 47 58	** ** *		
16	63	26.5		54.0	345	21.2		16.4	35	13	39	09	34 59	** ** *		
17	78	26.6	-7	54.9	359	49.6	-23	12.1	40	18 18	18 45	19 18	9 19 60	** ** *		
18	93	26.8	-7	55.9	14	18.0	-23	07.6	45	18 23	18 53	19 30	9 00 63	0 10 45		
19	108	26.9		56.8	28	46.6	-23	03.1	50	30	19 03	44	8 37 66	33 43		
20	123	27.1		57.7	43	15.2	-22	58.4	52	33	08	19 52	26 67	45 41		
21	138	27.2		58.6	57	43.8		53.6	54	36	14	20 00	14 68	0 57 40		
22	153	27.4	-7	59.6	72	12.6		48.7	56	40	19	09	8 00 70	1 12 37		
23	168	27.5	-8	00.5	86	41.4		43.7	58	44	26	20	7 43 73	29 35		
24	183	27.7	-8	01.4	101	10.4	-22	38.6	60 S	18 49	19 34	20 32	7 22 77	1 49 32		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 30 ^m 5		Mag: -4.6 PMG: 13 ^h 03 ^m			Mag: +1.5 PMG: 13 ^h 40 ^m			Mag: -2.9 PMG: 22 ^h 17 ^m			Mag: +0.9 PMG: 11 ^h 10 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	21	27.1	163	30.0	-22	37.6	154	50.1	-17	53.6	24	47.3	-3	09.9	192	07.7
1	36	29.5	178	33.0		37.5	169	50.8		54.1	39	50.0		10.0	207	09.9
2	51	32.0	193	35.9		37.4	184	51.5		54.6	54	52.7		10.1	222	12.1
3	66	34.5	208	38.9		37.3	199	52.2		55.1	69	55.4		10.2	237	14.3
4	81	36.9	223	41.9		37.1	214	52.9		55.6	84	58.1		10.3	252	16.4
5	96	39.4	238	44.9	-22	37.0	229	53.6	-17	56.1	100	00.9	-3	10.4	267	18.6
6	111	41.9	253	47.8	-22	36.9	244	54.3	-17	56.6	115	03.6	-3	10.5	282	20.8
7	126	44.3	268	50.8		36.8	259	55.1		57.1	130	06.3		10.7	297	23.0
8	141	46.8	283	53.8		36.6	274	55.8		57.6	145	09.0		10.8	312	25.2
9	156	49.3	298	56.8		36.5	289	56.5		58.1	160	11.7		10.9	327	27.4
10	171	51.7	313	59.8		36.4	304	57.2		58.6	175	14.5		11.0	342	29.5
11	186	54.2	329	02.8	-22	36.2	319	57.9	-17	59.1	190	17.2	-3	11.1	357	31.7
12	201	56.6	344	05.8	-22	36.1	334	58.6	-17	59.6	205	19.9	-3	11.2	12	33.9
13	216	59.1	359	08.8		36.0	349	59.3	-18	00.1	220	22.6		11.3	27	36.1
14	232	01.6	14	11.8		35.8	5	00.0		00.6	235	25.3		11.4	42	38.3
15	247	04.0	29	14.8		35.7	20	00.7		01.1	250	28.0		11.5	57	40.4
16	262	06.5	44	17.8		35.5	35	01.3		01.6	265	30.8		11.6	72	42.6
17	277	09.0	59	20.8	-22	35.4	50	02.0	-18	02.1	280	33.5	-3	11.7	87	44.8
18	292	11.4	74	23.9	-22	35.2	65	02.7	-18	02.6	295	36.2	-3	11.8	102	47.0
19	307	13.9	89	26.9		35.1	80	03.4		03.1	310	38.9		11.9	117	49.2
20	322	16.4	104	29.9		34.9	95	04.1		03.6	325	41.6		12.0	132	51.4
21	337	18.8	119	33.0		34.7	110	04.8		04.1	340	44.3		12.1	147	53.5
22	352	21.3	134	36.0		34.6	125	05.5		04.6	355	47.1		12.2	162	55.7
23	7	23.8	149	39.0		34.4	140	06.2		05.1	10	49.8		12.3	177	57.9
24	22	26.2	164	42.1	-22	34.2	155	06.9	-18	05.6	25	52.5	-3	12.4	193	00.1
Dif	—		+30		+1	+7		-5	+27		-1		+22		-	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:0 PMG: 11 ^h 46 ^m 0			Edad: 6 ^d 2	PHE { 4 ^h : 55:7 12 ^h : 55:5 20 ^h : 55:3 R°: 48 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	27.7	-8	01.4	101	10.4	-22	38.6	52	60 N	5 06	5 54	6 36	14 35 15	21 16 82	
1	198	27.8		02.4	115	39.4 ¹⁰⁰		33.4	52	58	07	53	32	19 19	32 77	
2	213	28.0		03.3	130	08.4 ¹⁰⁰		28.1	53	56	08	51	29	14 06 22	45 74	
3	228	28.1		04.2	144	37.6 ¹⁰²		22.6	55	54	09	50	26	13 54 25	21 56 72	
4	243	28.3		05.2	159	06.8 ¹⁰²		17.1	55	52	10	49	23	44 26	22 06 70	
5	258	28.4	-8	06.1	173	36.2 ¹⁰⁴	-22	11.4	57	50	5 10	5 47	6 20	13 35 28	22 15 67	
6	273	28.5	-8	07.0	188	05.6 ¹⁰⁴	-22	05.6	58	45	5 11	5 45	6 14	13 15 32	22 33 64	
7	288	28.7		08.0	202	35.0 ¹⁰⁴	-21	59.8	58	40	11	42	09	12 59 35	22 48 61	
8	303	28.8		08.9	217	04.6 ¹⁰⁶		53.8	60	35	10	39	05	46 37	23 01 59	
9	318	29.0		09.8	231	34.3 ¹⁰⁷		47.7	61	30	09	37	6 01	34 39	12 57	
10	333	29.1		10.7	246	04.0 ¹⁰⁷		41.5	62	20	07	32	5 54	12 14 42	31 53	
11	348	29.3	-8	11.7	260	33.8 ¹⁰⁸	-21	35.3	62	10 N	5 03	5 27	5 48	11 56 45	23 48 49	
12	3	29.4	-8	12.6	275	03.7 ¹⁰⁹	-21	28.9	64	0	4 58	5 22	5 43	11 40 48	*** ** *	
13	18	29.6		13.5	289	33.6 ¹⁰⁹		22.4	65	10 S	51	16	37	23 51	*** ** *	
14	33	29.7		14.5	304	03.7 ¹¹¹		15.8	66	20	42	5 08	31	11 05 54	*** ** *	
15	48	29.8		15.4	318	33.8 ¹¹¹		09.2	66	30	30	4 59	23	10 45 57	0 11 42	
16	63	30.0		16.3	333	04.0 ¹¹²	-21	02.4	68	35	23	53	19	33 59	23 41	
17	78	30.1	-8	17.2	347	34.3 ¹¹³	-20	55.6	68	40	4 13	4 46	5 14	10 19 61	0 38 38	
18	93	30.3	-8	18.2	2	04.7 ¹¹⁴	-20	48.6	70	45	4 02	4 38	5 09	10 03 64	0 55 36	
19	108	30.4		19.1	16	35.2 ¹¹⁵		41.6	70	50	3 47	28	5 02	9 43 67	1 16 32	
20	123	30.6		20.0	31	05.7 ¹¹⁵		34.4	72	52	40	23	4 59	33 69	26 30	
21	138	30.7		21.0	45	36.3 ¹¹⁶		27.2	72	54	32	18	55	22 72	37 29	
22	153	30.9		21.9	60	07.0 ¹¹⁷		19.9	73	56	23	12	51	9 10 74	1 49 27	
23	168	31.0		22.8	74	37.8 ¹¹⁸		12.5	74	58	3 12	4 05	47	8 56 77	2 04 24	
24	183	31.1	-8	23.7	89	08.6 ¹¹⁸	-20	05.0	75	60 S	2 59	3 57	4 42	8 39 80	2 21 20	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 26 ^m 6		Mag: -4.5 PMG: 12 ^h 59 ^m			Mag: +1.5 PMG: 13 ^h 39 ^m			Mag: -2.9 PMG: 22 ^h 12 ^m			Mag: +0.9 PMG: 11 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	22	26.2	164	42.1	-22	34.2	155	06.9	-18	05.6	25	52.5	-3	12.4	193	00.1	-1	42.1
1	37	28.7	179	45.1		34.1	170	07.6		06.1	40	55.2		12.5	208	02.3		42.2
2	52	31.1	194	48.2		33.9	185	08.3		06.6	55	57.9		12.6	223	04.5		42.3
3	67	33.6	209	51.2		33.7	200	09.0		07.1	71	00.6		12.7	238	06.6		42.5
4	82	36.1	224	54.3		33.6	215	09.7		07.6	86	03.3		12.8	253	08.8		42.6
5	97	38.5	239	57.4	-22	33.4	230	10.4	-18	08.0	101	06.1	-3	12.9	268	11.0	-1	42.7
6	112	41.0	255	00.4	-22	33.2	245	11.1	-18	08.5	116	08.8	-3	13.0	283	13.2	-1	42.8
7	127	43.5	270	03.5		33.0	260	11.8		09.0	131	11.5		13.1	298	15.4		42.9
8	142	45.9	285	06.6		32.8	275	12.5		09.5	146	14.2		13.2	313	17.6		43.0
9	157	48.4	300	09.7		32.6	290	13.2		10.0	161	16.9		13.3	328	19.7		43.2
10	172	50.9	315	12.8		32.4	305	13.9		10.5	176	19.6		13.4	343	21.9		43.3
11	187	53.3	330	15.9	-22	32.2	320	14.6	-18	11.0	191	22.3	-3	13.5	358	24.1	-1	43.4
12	202	55.8	345	18.9	-22	32.1	335	15.3	-18	11.5	206	25.1	-3	13.6	13	26.3	-1	43.5
13	217	58.2	0	22.0		31.9	350	16.0		12.0	221	27.8		13.7	28	28.5		43.6
14	233	00.7	15	25.1		31.7	5	16.6		12.5	236	30.5		13.8	43	30.7		43.7
15	248	03.2	30	28.2		31.5	20	17.3		13.0	251	33.2		13.9	58	32.8		43.9
16	263	05.6	45	31.4		31.2	35	18.0		13.5	266	35.9		14.0	73	35.0		44.0
17	278	08.1	60	34.5	-22	31.0	50	18.7	-18	14.0	281	38.6	-3	14.1	88	37.2	-1	44.1
18	293	10.6	75	37.6	-22	30.8	65	19.4	-18	14.5	296	41.3	-3	14.2	103	39.4	-1	44.2
19	308	13.0	90	40.7		30.6	80	20.1		15.0	311	44.0		14.3	118	41.6		44.3
20	323	15.5	105	43.8		30.4	95	20.8		15.4	326	46.8		14.4	133	43.8		44.4
21	338	18.0	120	47.0		30.2	110	21.5		15.9	341	49.5		14.5	148	45.9		44.6
22	353	20.4	135	50.1		30.0	125	22.2		16.4	356	52.2		14.6	163	48.1		44.7
23	8	22.9	150	53.2		29.7	140	22.9		16.9	11	54.9		14.7	178	50.3		44.8
24	23	25.4	165	56.4	-22	29.5	155	23.6	-18	17.4	26	57.6	-3	14.8	193	52.5	-1	44.9
Dif	—		+31		+2		+7		-5		+27		-1		+22		-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:0			Edad: 7 ^d 2	PHE {	4 ^h : 55:1 12 ^h : 54:9 20 ^h : 54:7 R°: 44 ^m			Civil			Náutico		Hora R°			
	PMG: 11 ^h 45 ^m 8																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	h m
0	183	31.1	-8 23.7	89	08.6	-20 05.0		60 N	16 52	17 34	18 22	14 50	11	22	38	81	
1	198	31.3	24.7	103	39.5 ¹¹⁹	-19 57.4	76	58	16 56	36	21	38	14	49	77		
2	213	31.4	25.6	118	10.6 ¹²¹	49.7	77	56	17 00	37	20	28	16	22	59	74	
3	228	31.6	26.5	132	41.6 ¹²⁰	42.0	78	54	03	39	20	19	19	23	08	71	
4	243	31.7	27.4	147	12.8 ¹²²	34.2	80	52	06	40	19	10	22	16	69		
5	258	31.8	-8 28.4	161	44.0 ¹²²	-19 26.2	80	50	17 09	17 42	18 19	14 03	23	23	22	68	
6	273	32.0	-8 29.3	176	15.4 ¹²⁴	-19 18.2	80	45	17 16	17 45	18 19	13 47	27	23	37	63	
7	288	32.1	30.2	190	46.8 ¹²⁴	10.2	82	40	21	48	19	34	30	23	49	60	
8	303	32.3	31.1	205	18.2 ¹²⁴	-19 02.0	82	35	25	51	20	23	32	**	*	*	
9	318	32.4	32.1	219	49.8 ¹²⁶	-18 53.8	82	30	29	54	21	13	13	35	**	*	*
10	333	32.5	33.0	234	21.4 ¹²⁶	45.4	84	20	37	17 59	25	12	56	39	**	*	*
11	348	32.7	-8 33.9	248	53.1 ¹²⁷	-18 37.0	84	10 N	17 43	18 04	18 29	12	41	42	**	*	*
12	3	32.8	-8 34.8	263	24.9 ¹²⁸	-18 28.6	84	0	17 49	18 10	18 34	12	28	45	0	03	47
13	18	33.0	35.8	277	56.7 ¹²⁸	20.0	86	10 S	17 55	17	41	12	14	48	18	44	
14	33	33.1	36.7	292	28.6 ¹²⁹	11.4	86	20	18 02	24	18 51	11	59	51	35	40	
15	48	33.2	37.6	307	00.6 ¹³⁰	-18 02.7	87	30	10	34	19 03	42	55	0	53	37	
16	63	33.4	38.5	321	32.7 ¹³¹	-17 53.9	88	35	14	40	11	32	57	1	04	35	
17	78	33.5	-8 39.5	336	04.8 ¹³¹	-17 45.1	88	40	18 20	18 48	19 21	11	20	60	1	16	33
18	93	33.6	-8 40.4	350	37.0 ¹³²	-17 36.2	89	45	18 26	18 56	19 33	11	07	63	1	31	29
19	108	33.8	41.3	5	09.3 ¹³³	27.2	90	50	33	19 07	48	10	50	68	48	26	
20	123	33.9	42.2	19	41.6 ¹³³	18.1	91	52	36	12	19 56	42	70	1	56	24	
21	138	34.1	43.1	34	14.1 ¹³⁵	-17 09.0	91	54	40	18	20 04	34	71	2	06	21	
22	153	34.2	44.1	48	46.5 ¹³⁴	-16 59.8	92	56	44	24	14	24	74	16	19		
23	168	34.3	45.0	63	19.1 ¹³⁶	50.6	92	58	49	31	26	10	13	77	28	16	
24	183	34.5	-8 45.9	77	51.7 ¹³⁶	-16 41.3	93	60 S	18 54	19 40	20 39	9	59	81	2	41	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 22 ^m 6		Mag: -4.5 PMG: 12 ^h 54 ^m		Mag: +1.5 PMG: 13 ^h 38 ^m		Mag: -2.9 PMG: 22 ^h 08 ^m		Mag: +0.9 PMG: 11 ^h 03 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	23	25.4	165	56.4	-22	29.5	155	23.6	-18	17.4	26	57.6	-3	14.8	193	52.5	-1	44.9
1	38	27.8	180	59.5	29.3	170	24.2	17.9	42	00.3	14.9	208	54.7	45.0				
2	53	30.3	196	02.6	29.1	185	24.9	18.4	57	03.0	15.0	223	56.9	45.1				
3	68	32.7	211	05.8	28.8	200	25.6	18.9	72	05.7	15.1	238	59.0	45.3				
4	83	35.2	226	08.9	28.6	215	26.3	19.4	87	08.4	15.2	254	01.2	45.4				
5	98	37.7	241	12.1	-22	28.4	230	27.0	-18	19.9	102	11.2	-3	15.3	269	03.4	-1	45.5
6	113	40.1	256	15.3	-22	28.1	245	27.7	-18	20.4	117	13.9	-3	15.4	284	05.6	-1	45.6
7	128	42.6	271	18.4	27.9	260	28.4	20.8	132	16.6	15.5	299	07.8	45.7				
8	143	45.1	286	21.6	27.6	275	29.1	21.3	147	19.3	15.6	314	10.0	45.8				
9	158	47.5	301	24.8	27.4	290	29.8	21.8	162	22.0	15.7	329	12.1	46.0				
10	173	50.0	316	27.9	27.1	305	30.4	22.3	177	24.7	15.8	344	14.3	46.1				
11	188	52.5	331	31.1	-22	26.9	320	31.1	-18	22.8	192	27.4	-3	15.9	359	16.5	-1	46.2
12	203	54.9	346	34.3	-22	26.6	335	31.8	-18	23.3	207	30.1	-3	16.0	14	18.7	-1	46.3
13	218	57.4	1	37.5	26.4	350	32.5	23.8	222	32.8	16.1	29	20.9	46.4				
14	233	59.9	16	40.7	26.1	5	33.2	24.3	237	35.5	16.2	44	23.1	46.5				
15	249	02.3	31	43.9	25.9	20	33.9	24.7	252	38.2	16.3	59	25.2	46.7				
16	264	04.8	46	47.1	25.6	35	34.6	25.2	267	40.9	16.4	74	27.4	46.8				
17	279	07.2	61	50.3	-22	25.3	50	35.2	-18	25.7	282	43.6	-3	16.5	89	29.6	-1	46.9
18	294	09.7	76	53.5	-22	25.1	65	35.9	-18	26.2	297	46.4	-3	16.6	104	31.8	-1	47.0
19	309	12.2	91	56.7	24.8	80	36.6	26.7	312	49.1	16.7	119	34.0	47.1				
20	324	14.6	106	59.9	24.5	95	37.3	27.2	327	51.8	16.8	134	36.2	47.2				
21	339	17.1	122	03.1	24.2	110	38.0	27.7	342	54.5	16.9	149	38.3	47.4				
22	354	19.6	137	06.3	24.0	125	38.7	28.1	357	57.2	17.0	164	40.5	47.5				
23	9	22.0	152	09.6	23.7	140	39.3	28.6	12	59.9	17.1	179	42.7	47.6				
24	24	24.5	167	12.8	-22	23.4	155	40.0	-18	29.1	28	02.6	-3	17.2	194	44.9	-1	47.7
Dif	—		+32	+3		+7	-5		+27	-1		+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: 8 ^d 2	PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 42 ^m												
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	183	34.5	-8	45.9	77	51.7	-16	41.3	60 N	5 11	5 59	6 41	15 01	7	23 59	78	
1	198	34.6		46.8	92	24.4 ¹³⁷		31.9 ⁹⁴	58	12	57	37	14 52	10	***	***	***
2	213	34.7		47.8	106	57.2 ¹³⁸		22.4 ⁹⁵	56	12	55	33	44 13		***	***	***
3	228	34.9		48.7	121	30.0 ¹³⁸		12.9 ⁹⁵	54	13	54	29	38 15		***	***	***
4	243	35.0		49.6	136	02.9 ¹³⁹	-16	03.3 ⁹⁶	52	13	52	26	32 17		***	***	***
5	258	35.1	-8	50.5	150	35.8 ¹³⁹	-15	53.7 ⁹⁶	50	5 13	5 50	6 23	14 26	19	***	***	***
6	273	35.3	-8	51.4	165	08.8 ¹⁴⁰	-15	44.0 ⁹⁷	45	5 13	5 47	6 17	14 14	23	***	***	***
7	288	35.4		52.4	179	41.9 ¹⁴¹		34.2 ⁹⁸	40	13	44	11	14 04	26	***	***	***
8	303	35.6		53.3	194	15.1 ¹⁴²		24.4 ⁹⁸	35	12	41	07	13 55	30	0 00	57	
9	318	35.7		54.2	208	48.3 ¹⁴²		14.5 ⁹⁹	30	10	38	6 02	48 31		09	54	
10	333	35.8		55.1	223	21.5 ¹⁴²	-15	04.6 ⁹⁹	20	07	33	5 55	35 36		24	50	
11	348	36.0	-8	56.0	237	54.8 ¹⁴³	-14	54.6 ¹⁰⁰	10 N	5 03	5 27	5 49	13 23	40	0 37	47	
12	3	36.1	-8	56.9	252	28.2 ¹⁴⁴	-14	44.5 ¹⁰¹	0	4 57	5 21	5 42	13 13	42	0 50	43	
13	18	36.2		57.9	267	01.7 ¹⁴⁵		34.4 ¹⁰¹	10 S	50	15	36	13 02	46	1 02	41	
14	33	36.4		58.8	281	35.2 ¹⁴⁵		24.3 ¹⁰¹	20	41	5 07	29	12 50	50	15	37	
15	48	36.5	-8	59.7	296	08.7 ¹⁴⁵		14.1 ¹⁰²	30	28	4 57	21	37 54		30	33	
16	63	36.6	-9	00.6	310	42.3 ¹⁴⁶	-14	03.8 ¹⁰³	35	20	51	16	29 57		39	30	
17	78	36.8	-9	01.5	325	16.0 ¹⁴⁷	-13	53.5 ¹⁰³	40	4 10	4 43	5 11	12 20	60	1 49	28	
18	93	36.9	-9	02.5	339	49.7 ¹⁴⁷	-13	43.1 ¹⁰⁴	45	3 58	4 35	5 05	12 10	63	2 00	25	
19	108	37.0		03.4	354	23.5 ¹⁴⁸		32.7 ¹⁰⁴	50	42	24	4 58	11 58	66	14	21	
20	123	37.1		04.3	8	57.3 ¹⁴⁸		22.2 ¹⁰⁵	52	35	19	54	52 68		20	19	
21	138	37.3		05.2	23	31.2 ¹⁴⁹		11.7 ¹⁰⁵	54	26	13	50	45 71		27	17	
22	153	37.4		06.1	38	05.1 ¹⁴⁹	-13	01.1 ¹⁰⁶	56	16	4 06	46	38 73		35	15	
23	168	37.5		07.0	52	39.1 ¹⁵⁰	-12	50.5 ¹⁰⁶	58	3 05	3 59	41	30 76		44	12	
24	183	37.7	-9	08.0	67	13.1 ¹⁵⁰	-12	39.8 ¹⁰⁷	60 S	2 51	3 51	4 36	11 20	80	2 54	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 18 ^m 7		Mag: -4.5 PMG: 12 ^h 48 ^m		Mag: +1.5 PMG: 13 ^h 37 ^m		Mag: -2.9 PMG: 22 ^h 04 ^m		Mag: +0.9 PMG: 10 ^h 59 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	24	24.5	167	12.8	-22	23.4	155	40.0	-18	29.1	28	02.6	-3	17.2	194	44.9	-1	47.7
1	39	27.0	182	16.0		23.1	170	40.7		29.6	43	05.3		17.3	209	47.1		47.8
2	54	29.4	197	19.3		22.8	185	41.4		30.1	58	08.0		17.4	224	49.3		47.9
3	69	31.9	212	22.5		22.5	200	42.1		30.6	73	10.7		17.5	239	51.4		48.1
4	84	34.3	227	25.7		22.2	215	42.8		31.1	88	13.4		17.6	254	53.6		48.2
5	99	36.8	242	29.0	-22	21.9	230	43.4	-18	31.5	103	16.1	-3	17.7	269	55.8	-1	48.3
6	114	39.3	257	32.2	-22	21.6	245	44.1	-18	32.0	118	18.8	-3	17.8	284	58.0	-1	48.4
7	129	41.7	272	35.5		21.3	260	44.8		32.5	133	21.5		17.9	300	00.2		48.5
8	144	44.2	287	38.7		21.0	275	45.5		33.0	148	24.2		18.0	315	02.4		48.6
9	159	46.7	302	42.0		20.7	290	46.2		33.5	163	26.9		18.1	330	04.5		48.7
10	174	49.1	317	45.3		20.4	305	46.8		34.0	178	29.6		18.2	345	06.7		48.9
11	189	51.6	332	48.5	-22	20.1	320	47.5	-18	34.4	193	32.3	-3	18.3	0	08.9	-1	49.0
12	204	54.1	347	51.8	-22	19.8	335	48.2	-18	34.9	208	35.0	-3	18.4	15	11.1	-1	49.1
13	219	56.5	2	55.1		19.5	350	48.9		35.4	223	37.7		18.5	30	13.3		49.2
14	234	59.0	17	58.4		19.2	5	49.6		35.9	238	40.4		18.6	45	15.5		49.3
15	250	01.5	33	01.6		18.9	20	50.2		36.4	253	43.1		18.7	60	17.7		49.4
16	265	03.9	48	04.9		18.5	35	50.9		36.8	268	45.9		18.8	75	19.8		49.6
17	280	06.4	63	08.2	-22	18.2	50	51.6	-18	37.3	283	48.6	-3	18.9	90	22.0	-1	49.7
18	295	08.8	78	11.5	-22	17.9	65	52.3	-18	37.8	298	51.3	-3	19.0	105	24.2	-1	49.8
19	310	11.3	93	14.8		17.6	80	52.9		38.3	313	54.0		19.0	120	26.4		49.9
20	325	13.8	108	18.1		17.2	95	53.6		38.8	328	56.7		19.1	135	28.6		50.0
21	340	16.2	123	21.4		16.9	110	54.3		39.2	343	59.4		19.2	150	30.8		50.1
22	355	18.7	138	24.7		16.6	125	55.0		39.7	359	02.1		19.3	165	32.9		50.3
23	10	21.2	153	28.0		16.2	140	55.7		40.2	14	04.8		19.4	180	35.1		50.4
24	25	23.6	168	31.3	-22	15.9	155	56.3	-18	40.7	29	07.5	-3	19.5	195	37.3	-1	50.5
Dif	—		+33	+3			+7	-5			+27	-1			+22	-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 45 ^m 4			Edad: 9 ^d 2 PHE { SD: 14'8 PMG: 20 ^h 05 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	183	37.7	-9	08.0	67	13.1	-12 39.8	60 N	16 46	17 28	18 16	15 08	6	**	**			
1	198	37.8		08.9	81	47.2 ¹⁵¹	29.1 ¹⁰⁷	58	51	30	16	15 02	9	0	06 76			
2	213	37.9		09.8	96	21.4 ¹⁵²	18.3 ¹⁰⁸	56	55	33	15	14 57	12		13 73			
3	228	38.1		10.7	110	55.5 ¹⁵¹	-12 07.5 ¹⁰⁸	54	16 59	34	15	53	13		19 71			
4	243	38.2		11.6	125	29.8 ¹⁵³	-11 56.7 ¹⁰⁸	52	17 02	36	15	49	15		25 68			
5	258	38.3	-9	12.5	140	04.0 ¹⁵²	-11 45.8 ¹⁰⁹	50	17 05	17 38	18 15	14 45	17	0	30 66			
6	273	38.4	-9	13.4	154	38.4 ¹⁵⁴	-11 34.9 ¹⁰⁹	45	17 12	17 42	18 16	14 37	21	0	40 62			
7	288	38.6		14.4	169	12.7 ¹⁵³	23.9 ¹¹⁰	40	18	45	17	30	25		49 59			
8	303	38.7		15.3	183	47.1 ¹⁵⁴	12.9 ¹¹⁰	35	23	48	18	25	27	0	57 55			
9	318	38.8		16.2	198	21.6 ¹⁵⁵	-11 01.8 ¹¹¹	30	27	51	19	19	30	1	03 53			
10	333	39.0		17.1	212	56.1 ¹⁵⁵	-10 50.7 ¹¹¹	20	35	17 57	23	11	33		14 49			
11	348	39.1	-9	18.0	227	30.6 ¹⁵⁵	-10 39.6 ¹¹¹	10 N	17 42	18 03	18 28	14 03	37	1	24 46			
12	3	39.2	-9	18.9	242	05.2 ¹⁵⁶	-10 28.4 ¹¹²	0	17 49	18 10	18 34	13 55	41	1	33 42			
13	18	39.3		19.8	256	39.8 ¹⁵⁶	17.2 ¹¹²	10 S	17 55	17	42	48	44		43 38			
14	33	39.5		20.8	271	14.4 ¹⁵⁶	-10 06.0 ¹¹²	20	18 03	25	18 51	40	48	1	52 35			
15	48	39.6		21.7	285	49.1 ¹⁵⁷	-9 54.7 ¹¹³	30	11	36	19 05	31	53	2	03 31			
16	63	39.7		22.6	300	23.8 ¹⁵⁷	43.3 ¹¹⁴	35	16	42	13	26	55		09 28			
17	78	39.8	-9	23.5	314	58.6 ¹⁵⁸	-9 32.0 ¹¹³	40	18 22	18 50	19 23	13 20	58	2	17 25			
18	93	40.0	-9	24.4	329	33.4 ¹⁵⁸	-9 20.6 ¹¹⁴	45	18 28	18 59	19 36	13 13	61	2	25 22			
19	108	40.1		25.3	344	08.2 ¹⁵⁸	-9 09.2 ¹¹⁴	50	36	19 10	19 52	04	66		35 18			
20	123	40.2		26.2	358	43.1 ¹⁵⁹	-8 57.7 ¹¹⁵	52	40	16	20 00	13 00	68		39 17			
21	138	40.3		27.1	13	18.0 ¹⁵⁹	46.2 ¹¹⁵	54	44	22	09	12	56 70		44 15			
22	153	40.5		28.0	27	52.9 ¹⁵⁹	34.7 ¹¹⁵	56	49	29	20	51	72		50 12			
23	168	40.6		29.0	42	27.9 ¹⁶⁰	23.1 ¹¹⁶	58	54	36	32	46	75	2	56 10			
24	183	40.7	-9	29.9	57	02.8 ¹⁵⁹	-8 11.6 ¹¹⁵	60 S	18 59	19 45	20 46	12 40	78	3	03 7			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 14 ^m 8		Mag: -4.4 PMG: 12 ^h 43 ^m			Mag: +1.5 PMG: 13 ^h 36 ^m			Mag: -2.9 PMG: 22 ^h 00 ^m			Mag: +0.9 PMG: 10 ^h 56 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	25	23.6	168	31.3	-22	15.9	155	56.3	-18	40.7	29	07.5	-3	19.5	195	37.3	-1	50.5
1	40	26.1	183	34.6		15.5	170	57.0		41.2	44	10.2		19.6	210	39.5		50.6
2	55	28.6	198	38.0		15.2	185	57.7		41.6	59	12.9		19.7	225	41.7		50.7
3	70	31.0	213	41.3		14.8	200	58.4		42.1	74	15.6		19.8	240	43.9		50.8
4	85	33.5	228	44.6		14.5	215	59.0		42.6	89	18.3		19.9	255	46.1		51.0
5	100	36.0	243	47.9	-22	14.1	230	59.7	-18	43.1	104	21.0	-3	20.0	270	48.2	-1	51.1
6	115	38.4	258	51.3	-22	13.8	246	00.4	-18	43.5	119	23.7	-3	20.1	285	50.4	-1	51.2
7	130	40.9	273	54.6		13.4	261	01.1		44.0	134	26.4		20.2	300	52.6		51.3
8	145	43.3	288	57.9		13.0	276	01.7		44.5	149	29.1		20.3	315	54.8		51.4
9	160	45.8	304	01.3		12.7	291	02.4		45.0	164	31.8		20.4	330	57.0		51.5
10	175	48.3	319	04.6		12.3	306	03.1		45.5	179	34.5		20.5	345	59.2		51.6
11	190	50.7	334	08.0	-22	11.9	321	03.8	-18	45.9	194	37.1	-3	20.6	1	01.3	-1	51.8
12	205	53.2	349	11.3	-22	11.6	336	04.4	-18	46.4	209	39.8	-3	20.7	16	03.5	-1	51.9
13	220	55.7	4	14.7		11.2	351	05.1		46.9	224	42.5		20.8	31	05.7		52.0
14	235	58.1	19	18.1		10.8	6	05.8		47.4	239	45.2		20.8	46	07.9		52.1
15	251	00.6	34	21.4		10.4	21	06.4		47.8	254	47.9		20.9	61	10.1		52.2
16	266	03.1	49	24.8		10.1	36	07.1		48.3	269	50.6		21.0	76	12.3		52.3
17	281	05.5	64	28.2	-22	09.7	51	07.8	-18	48.8	284	53.3	-3	21.1	91	14.5	-1	52.5
18	296	08.0	79	31.5	-22	09.3	66	08.5	-18	49.3	299	56.0	-3	21.2	106	16.6	-1	52.6
19	311	10.4	94	34.9		08.9	81	09.1		49.7	314	58.7		21.3	121	18.8		52.7
20	326	12.9	109	38.3		08.5	96	09.8		50.2	330	01.4		21.4	136	21.0		52.8
21	341	15.4	124	41.7		08.1	111	10.5		50.7	345	04.1		21.5	151	23.2		52.9
22	356	17.8	139	45.1		07.7	126	11.1		51.1	0	06.8		21.6	166	25.4		53.0
23	11	20.3	154	48.5		07.3	141	11.8		51.6	15	09.5		21.7	181	27.6		53.1
24	26	22.8	169	51.8	-22	06.9	156	12.5	-18	52.1	30	12.2	-3	21.8	196	29.7	-1	53.3
Dif	—		+34	+4		+7	-5		+27	-1		+22	-1				-1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 45 ^m 2			Edad: 10 ^d 2 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 Rº: 40 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	40.7	-9	29.9	57	02.8	-8	11.6	60 N	5	15	6	04	6	46	15	14
1	198	40.8		30.8	71	37.9 ¹⁶¹	-7	59.9 ¹¹⁷	58	16	6	01	41		11	8	
2	213	41.0		31.7	86	12.9 ¹⁶⁰		48.3 ¹¹⁶	56	16	5	59	37		09	10	
3	228	41.1		32.6	100	48.0 ¹⁶¹		36.6 ¹¹⁷	54	16		57	33		06	13	
4	243	41.2		33.5	115	23.1 ¹⁶¹		24.9 ¹¹⁷	52	16		55	30		04	15	
5	258	41.3	-9	34.4	129	58.2 ¹⁶¹	-7	13.2 ¹¹⁷	50	5	16	5	54	6	26	15	02
6	273	41.5	-9	35.3	144	33.3 ¹⁶¹	-7	01.4 ¹¹⁸	45	5	15	5	50	6	19	14	58
7	288	41.6		36.2	159	08.5 ¹⁶²	-6	49.7 ¹¹⁷	40	15		46	13		55	23	
8	303	41.7		37.1	173	43.7 ¹⁶²		37.9 ¹¹⁸	35	13		43	08		52	26	
9	318	41.8		38.1	188	18.9 ¹⁶²		26.0 ¹¹⁹	30	12		40	6	04	49	29	
10	333	42.0		39.0	202	54.1 ¹⁶²		14.2 ¹¹⁸	20	08		33	5	56	44	33	
11	348	42.1	-9	39.9	217	29.4 ¹⁶³	-6	02.3 ¹¹⁹	10 N	5	03	5	27	5	49	14	40
12	3	42.2	-9	40.8	232	04.7 ¹⁶³	-5	50.4 ¹¹⁹	0	4	57	5	21	5	42	14	36
13	18	42.3		41.7	246	40.0 ¹⁶³		38.5 ¹¹⁹	10 S	49		14	35		32	45	
14	33	42.4		42.6	261	15.3 ¹⁶³		26.5 ¹²⁰	20	39		5	05	28	28	48	
15	48	42.6		43.5	275	50.6 ¹⁶³		14.6 ¹¹⁹	30	26		4	54	19	24	52	
16	63	42.7		44.4	290	25.9 ¹⁶³	-5	02.6 ¹²⁰	35	17		48	14		21	55	
17	78	42.8	-9	45.3	305	01.3 ¹⁶⁴	-4	50.6 ¹²⁰	40	4	07	4	40	5	08	14	18
18	93	42.9	-9	46.2	319	36.7 ¹⁶⁴	-4	38.6 ¹²⁰	45	3	54	4	31	5	02	14	14
19	108	43.0		47.1	334	12.1 ¹⁶⁴		26.5 ¹²¹	50	38		19	4	53	10	65	
20	123	43.2		48.0	348	47.5 ¹⁶⁴		14.5 ¹²⁰	52	30		14	50		08	67	
21	138	43.3		48.9	3	22.9 ¹⁶⁴	-4	02.4 ¹²¹	54	21		08	46		06	69	
22	153	43.4		49.8	17	58.3 ¹⁶⁴	-3	50.3 ¹²¹	56	3	10	4	01	41	03	72	
23	168	43.5		50.7	32	33.7 ¹⁶⁴		38.2 ¹²¹	58	2	58	3	53	36	14	01	
24	183	43.6	-9	51.6	47	09.1 ¹⁶⁴	-3	26.1 ¹²¹	60 S	2	43	3	44	4	30	13	58
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 10 ^m 8		Mag: -4.4 PMG: 12 ^h 38 ^m			Mag: +1.5 PMG: 13 ^h 35 ^m			Mag: -2.9 PMG: 21 ^h 55 ^m			Mag: +0.9 PMG: 10 ^h 52 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	26	22.8	169	51.8	-22	06.9	156	12.5	-18	52.1	30	12.2	-3	21.8	196	29.7	
1	41	25.2	184	55.2		06.5	171	13.1		52.6	45	14.9		21.9	211	31.9	
2	56	27.7	199	58.6		06.1	186	13.8		53.0	60	17.6		22.0	226	34.1	
3	71	30.2	215	02.0		05.7	201	14.5		53.5	75	20.3		22.1	241	36.3	
4	86	32.6	230	05.5		05.3	216	15.2		54.0	90	23.0		22.1	256	38.5	
5	101	35.1	245	08.9	-22	04.9	231	15.8	-18	54.5	105	25.7	-3	22.2	271	40.7	
6	116	37.6	260	12.3	-22	04.4	246	16.5	-18	54.9	120	28.4	-3	22.3	286	42.9	
7	131	40.0	275	15.7		04.0	261	17.2		55.4	135	31.1		22.4	301	45.0	
8	146	42.5	290	19.1		03.6	276	17.8		55.9	150	33.8		22.5	316	47.2	
9	161	44.9	305	22.5		03.2	291	18.5		56.3	165	36.4		22.6	331	49.4	
10	176	47.4	320	26.0		02.8	306	19.2		56.8	180	39.1		22.7	346	51.6	
11	191	49.9	335	29.4	-22	02.3	321	19.8	-18	57.3	195	41.8	-3	22.8	1	53.8	
12	206	52.3	350	32.8	-22	01.9	336	20.5	-18	57.7	210	44.5	-3	22.9	16	56.0	
13	221	54.8	5	36.3		01.5	351	21.2		58.2	225	47.2		23.0	31	58.2	
14	236	57.3	20	39.7		01.0	6	21.8		58.7	240	49.9		23.1	47	00.3	
15	251	59.7	35	43.1		00.6	21	22.5		59.2	255	52.6		23.2	62	02.5	
16	267	02.2	50	46.6	-22	00.1	36	23.1	-18	59.6	270	55.3		23.2	77	04.7	
17	282	04.7	65	50.0	-21	59.7	51	23.8	-19	00.1	285	58.0	-3	23.3	92	06.9	
18	297	07.1	80	53.5	-21	59.2	66	24.5	-19	00.6	301	00.7	-3	23.4	107	09.1	
19	312	09.6	95	56.9		58.8	81	25.1		01.0	316	03.4		23.5	122	11.3	
20	327	12.0	111	00.4		58.3	96	25.8		01.5	331	06.0		23.6	137	13.5	
21	342	14.5	126	03.9		57.9	111	26.5		02.0	346	08.7		23.7	152	15.6	
22	357	17.0	141	07.3		57.4	126	27.1		02.4	1	11.4		23.8	167	17.8	
23	12	19.4	156	10.8		57.0	141	27.8		02.9	16	14.1		23.9	182	20.0	
24	27	21.9	171	14.3	-21	56.5	156	28.5	-19	03.4	31	16.8	-3	24.0	197	22.2	
Dif	—		+34		+4		+7		-5		+27		-1		+22		-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 11 ^d 2	PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 2	SD: 14 ^h 7			R°: 41 ^m							
	PMG: 11 ^h 45 ^m 0					PMG: 21 ^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	
0	183	43.6	-9 51.6	47	09.1	-3 26.1	165	60 N	16 40	17 23	18 11	15 19	6	2 35	77	
1	198	43.7	52.6	61	44.6	14.0	121	58	45	25	11	19 8		36	75	
2	213	43.9	53.5	76	20.0	-3 01.8	122	56	50	28	11	19 10		38	72	
3	228	44.0	54.4	90	55.5	-2 49.7	121	54	54	30	11	19 12		39	70	
4	243	44.1	55.3	105	30.9	37.5	122	52	16 58	32	11	19 14		40	68	
5	258	44.2	-9 56.2	120	06.4	-2 25.3	122	50	17 01	17 34	18 11	15 19	16	2 41	66	
6	273	44.3	-9 57.1	134	41.9	-2 13.1	122	45	17 09	17 38	18 13	15 18	20	2 44	61	
7	288	44.4	58.0	149	17.3	-2 00.9	122	40	15	42	14	18 23		46	58	
8	303	44.6	58.9	163	52.8	-1 48.7	122	35	20	46	15	18 26		47	56	
9	318	44.7	-9 59.8	178	28.3	36.5	122	30	25	49	17	18 28		49	52	
10	333	44.8	-10 00.7	193	03.8	24.3	122	20	34	17 56	22	17 33		52	48	
11	348	44.9	-10 01.6	207	39.2	-1 12.0	123	10 N	17 41	18 02	18 27	15 17	37	2 54	44	
12	3	45.0	-10 02.5	222	14.7	-0 59.8	122	0	17 48	18 09	18 34	15 17	40	2 56	40	
13	18	45.1	03.4	236	50.2	47.5	123	10 S	17 56	17	42	17 44		2 58	37	
14	33	45.3	04.3	251	25.6	35.3	122	20	18 03	26	18 52	16 49		3 00	33	
15	48	45.4	05.2	266	01.1	23.0	123	30	13	37	19 06	16 53		02	29	
16	63	45.5	06.1	280	36.5	-0 10.8	122	35	18	44	15	16 55		04	26	
17	78	45.6	-10 07.0	295	12.0	+0 01.5	123	40	18 24	18 52	19 26	15 16	58	3 05	24	
18	93	45.7	-10 07.9	309	47.4	+0 13.8	123	45	18 31	19 02	19 39	15 16	61	3 07	20	
19	108	45.8	08.8	324	22.8	26.1	123	50	40	14	19 56	15 66		09	16	
20	123	45.9	09.7	338	58.2	38.3	122	52	44	20	20 05	15 68		10	15	
21	138	46.0	10.6	353	33.7	+0 50.6	123	54	48	26	14	15 70		11	13	
22	153	46.2	11.5	8	09.1	+1 02.9	123	56	53	33	25	15 72		13	10	
23	168	46.3	12.4	22	44.4	15.2	123	58	18 58	42	38	15 75		14	8	
24	183	46.4	-10 13.3	37	19.8	+1 27.4	122	60 S	19 04	19 51	20 54	15 15	77	3 15	6	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 06 ^m 9		Mag: -4.3 PMG: 12 ^h 32 ^m			Mag: +1.5 PMG: 13 ^h 34 ^m			Mag: -2.9 PMG: 21 ^h 51 ^m			Mag: +0.9 PMG: 10 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	27	21.9	171	14.3	-21 56.5	156	28.5	-19 03.4	31	16.8	-3 24.0	197	22.2	-1 56.0
1	42	24.4	186	17.7	56.1	171	29.1	03.8	46	19.5	24.1	212	24.4	56.1
2	57	26.8	201	21.2	55.6	186	29.8	04.3	61	22.2	24.1	227	26.6	56.3
3	72	29.3	216	24.7	55.1	201	30.4	04.8	76	24.9	24.2	242	28.8	56.4
4	87	31.8	231	28.2	54.6	216	31.1	05.2	91	27.6	24.3	257	30.9	56.5
5	102	34.2	246	31.7	-21 54.2	231	31.8	-19 05.7	106	30.3	-3 24.4	272	33.1	-1 56.6
6	117	36.7	261	35.1	-21 53.7	246	32.4	-19 06.2	121	32.9	-3 24.5	287	35.3	-1 56.7
7	132	39.2	276	38.6	53.2	261	33.1	06.6	136	35.6	24.6	302	37.5	56.8
8	147	41.6	291	42.1	52.7	276	33.7	07.1	151	38.3	24.7	317	39.7	56.9
9	162	44.1	306	45.6	52.2	291	34.4	07.5	166	41.0	24.8	332	41.9	57.1
10	177	46.5	321	49.1	51.8	306	35.1	08.0	181	43.7	24.9	347	44.1	57.2
11	192	49.0	336	52.6	-21 51.3	321	35.7	-19 08.5	196	46.4	-3 24.9	2	46.2	-1 57.3
12	207	51.5	351	56.1	-21 50.8	336	36.4	-19 08.9	211	49.1	-3 25.0	17	48.4	-1 57.4
13	222	53.9	6 59.6	50.3	351 37.0	09.4	226 51.7	25.1	32	50.6	57.5			
14	237	56.4	22 03.2	49.8	6 37.7	09.9	241 54.4	25.2	47	52.8	57.6			
15	252	58.9	37 06.7	49.3	21 38.4	10.3	256 57.1	25.3	62	55.0	57.7			
16	268	01.3	52 10.2	48.8	36 39.0	10.8	271 59.8	25.4	77	57.2	57.9			
17	283	03.8	67 13.7	-21 48.3	51 39.7	-19 11.3	287 02.5	-3 25.5	92	59.4	-1 58.0			
18	298	06.3	82 17.2	-21 47.8	66 40.3	-19 11.7	302 05.2	-3 25.6	108	01.6	-1 58.1			
19	313	08.7	97 20.8	47.3	81 41.0	12.2	317 07.9	25.7	123	03.7	58.2			
20	328	11.2	112 24.3	46.8	96 41.7	12.6	332 10.5	25.7	138	05.9	58.3			
21	343	13.7	127 27.8	46.2	111 42.3	13.1	347 13.2	25.8	153	08.1	58.4			
22	358	16.1	142 31.4	45.7	126 43.0	13.6	2 15.9	25.9	168	10.3	58.5			
23	13	18.6	157 34.9	45.2	141 43.6	14.0	17 18.6	26.0	183	12.5	58.7			
24	28	21.0	172 38.4	-21 44.7	156 44.3	-19 14.5	32 21.3	-3 26.1	198	14.7	-1 58.8			
Dif	—		+35	+5	+7	-5	+27	-1	+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 8			Edad: 12 ^d 2 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 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	183	46.4	-10	13.3	37	19.8	+1	27.4	60 N	5	20	6	08	6	51	15	25
1	198	46.5		14.2	51	55.2 ¹⁶⁴		39.7 ¹²³	58		20	06		46	27	9	
2	213	46.6		15.1	66	30.5 ¹⁶³	+1	52.0 ¹²³	56		20	03		41	29	12	
3	228	46.7		16.0	81	05.8 ¹⁶³	+2	04.2 ¹²²	54		20	6	01		37	31	
4	243	46.8		16.9	95	41.1 ¹⁶³		16.5 ¹²³	52		19	5	59		33	33	
5	258	46.9	-10	17.8	110	16.4 ¹⁶³	+2	28.8 ¹²³	50	5	19	5	57	6	30	15	
6	273	47.0	-10	18.7	124	51.7 ¹⁶³	+2	41.0 ¹²²	45	5	18	5	52	6	22	15	
7	288	47.2		19.6	139	27.0 ¹⁶³	+2	53.3 ¹²³	40		17	48		16	41	25	
8	303	47.3		20.5	154	02.2 ¹⁶²	+3	05.5 ¹²²	35		15	44		10	44	28	
9	318	47.4		21.4	168	37.4 ¹⁶²		17.7 ¹²²	30		13	41	6	05	46	30	
10	333	47.5		22.2	183	12.6 ¹⁶²		30.0 ¹²³	20		08	34	5	56	50	35	
11	348	47.6	-10	23.1	197	47.8 ¹⁶²	+3	42.2 ¹²²	10 N	5	03	5	27	5	49	15	
12	3	47.7	-10	24.0	212	22.9 ¹⁶¹	+3	54.4 ¹²²	0	4	56	5	20	5	41	15	
13	18	47.8		24.9	226	58.1 ¹⁶²	+4	06.6 ¹²²	10 S		48	13		34	16		
14	33	47.9		25.8	241	33.2 ¹⁶¹		18.8 ¹²²	20		37	5	04	26	05		
15	48	48.0		26.7	256	08.2 ¹⁶⁰		30.9 ¹²¹	30		23	4	52	17	09		
16	63	48.1		27.6	270	43.3 ¹⁶¹		43.1 ¹²²	35		14	45		11	11		
17	78	48.2	-10	28.5	285	18.3 ¹⁶⁰	+4	55.3 ¹²²	40	4	04	4	37	5	05	16	
18	93	48.3	-10	29.4	299	53.3 ¹⁶⁰	+5	07.4 ¹²¹	45	3	50	4	27	4	58	16	
19	108	48.5		30.3	314	28.3 ¹⁶⁰		19.5 ¹²¹	50		33	15		49	21		
20	123	48.6		31.2	329	03.2 ¹⁵⁹		31.6 ¹²¹	52		24	09		45	23		
21	138	48.7		32.1	343	38.1 ¹⁵⁹		43.7 ¹²¹	54		15	4	03	41	25		
22	153	48.8		33.0	358	13.0 ¹⁵⁹	+5	55.8 ¹²¹	56	3	04	3	56	36	27		
23	168	48.9		33.9	12	47.8 ¹⁵⁸	+6	07.8 ¹²⁰	58	2	51	47	31		30		
24	183	49.0	-10	34.8	27	22.6 ¹⁵⁸	+6	19.8 ¹²⁰	60 S	2	35	3	38	4	24	16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 03 ^m 0		Mag: -4.3 PMG: 12 ^h 26 ^m		Mag: +1.5 PMG: 13 ^h 32 ^m		Mag: -2.9 PMG: 21 ^h 47 ^m		Mag: +0.9 PMG: 10 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	28	21.0	172	38.4	-21	44.7	156	44.3	-19	14.5	32	21.3	-3	26.1	198	14.7	-1	58.8
1	43	23.5	187	42.0		44.2	171	44.9		14.9	47	24.0		26.2	213	16.9		58.9
2	58	26.0	202	45.5		43.6	186	45.6		15.4	62	26.6		26.3	228	19.0		59.0
3	73	28.4	217	49.1		43.1	201	46.2		15.9	77	29.3		26.3	243	21.2		59.1
4	88	30.9	232	52.6		42.6	216	46.9		16.3	92	32.0		26.4	258	23.4		59.2
5	103	33.4	247	56.2	-21	42.0	231	47.6	-19	16.8	107	34.7	-3	26.5	273	25.6	-1	59.3
6	118	35.8	262	59.7	-21	41.5	246	48.2	-19	17.2	122	37.4	-3	26.6	288	27.8	-1	59.5
7	133	38.3	278	03.3		41.0	261	48.9		17.7	137	40.1		26.7	303	30.0		59.6
8	148	40.8	293	06.9		40.4	276	49.5		18.2	152	42.7		26.8	318	32.2		59.7
9	163	43.2	308	10.4		39.9	291	50.2		18.6	167	45.4		26.9	333	34.4		59.8
10	178	45.7	323	14.0		39.3	306	50.8		19.1	182	48.1		27.0	348	36.5	-1	59.9
11	193	48.1	338	17.6	-21	38.8	321	51.5	-19	19.5	197	50.8	-3	27.0	3	38.7	-2	00.0
12	208	50.6	353	21.1	-21	38.2	336	52.1	-19	20.0	212	53.5	-3	27.1	18	40.9	-2	00.1
13	223	53.1	8	24.7		37.7	351	52.8		20.4	227	56.1		27.2	33	43.1		00.3
14	238	55.5	23	28.3		37.1	6	53.4		20.9	242	58.8		27.3	48	45.3		00.4
15	253	58.0	38	31.9		36.6	21	54.1		21.4	258	01.5		27.4	63	47.5		00.5
16	269	00.5	53	35.5		36.0	36	54.7		21.8	273	04.2		27.5	78	49.7		00.6
17	284	02.9	68	39.0	-21	35.5	51	55.4	-19	22.3	288	06.9	-3	27.6	93	51.8	-2	00.7
18	299	05.4	83	42.6	-21	34.9	66	56.0	-19	22.7	303	09.5	-3	27.6	108	54.0	-2	00.8
19	314	07.9	98	46.2		34.3	81	56.7		23.2	318	12.2		27.7	123	56.2		00.9
20	329	10.3	113	49.8		33.8	96	57.3		23.6	333	14.9		27.8	138	58.4		01.1
21	344	12.8	128	53.4		33.2	111	58.0		24.1	348	17.6		27.9	154	00.6		01.2
22	359	15.3	143	57.0		32.6	126	58.6		24.5	3	20.3		28.0	169	02.8		01.3
23	14	17.7	159	00.6		32.0	141	59.3		25.0	18	22.9		28.1	184	05.0		01.4
24	29	20.2	174	04.2	-21	31.4	156	59.9	-19	25.4	33	25.6	-3	28.1	199	07.2	-2	01.5
Dif	—		+36		+6		+7		-5		+27		-1		+22		-	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 7				Edad: 13 ^d 2 PHE { SD: 14 ^h 8 PMG: 22 ^h 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora		Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	183	49.0	-10	34.8	27	22.6	+6	19.8	60 N	16 34	17 17	18 06	15 31 8	5 10 80				
1	198	49.1		35.7	41	57.4 ¹⁵⁸		31.9 ¹²¹	58	40	20	06	36 11	06 77				
2	213	49.2		36.5	56	32.1 ¹⁵⁷		43.9 ¹²⁰	56	45	23	06	41 13	5 02 75				
3	228	49.3		37.4	71	06.8 ¹⁵⁷	+6	55.8 ¹¹⁹	54	50	26	07	45 16	4 59 72				
4	243	49.4		38.3	85	41.5 ¹⁵⁷	+7	07.8 ¹²⁰	52	54	28	07	49 18	56 70				
5	258	49.5	-10	39.2	100	16.1 ¹⁵⁶	+7	19.7 ¹¹⁹	50	16 57	17 30	18 08	15 52 20	4 53 68				
6	273	49.6	-10	40.1	114	50.7 ¹⁵⁶	+7	31.6 ¹¹⁹	45	17 05	17 35	18 09	16 00 24	4 47 64				
7	288	49.7		41.0	129	25.3 ¹⁵⁶		43.5 ¹¹⁹	40	12	40	11	06 27	43 60				
8	303	49.8		41.9	143	59.8 ¹⁵⁵	+7	55.3 ¹¹⁸	35	18	44	13	12 29	38 57				
9	318	49.9		42.8	158	34.2 ¹⁵⁴	+8	07.2 ¹¹⁹	30	23	47	15	16 33	35 54				
10	333	50.0		43.7	173	08.7 ¹⁵⁵		19.0 ¹¹⁸	20	32	17 55	20	25 36	28 50				
11	348	50.1	-10	44.6	187	43.0 ¹⁵³	+8	30.8 ¹¹⁸	10 N	17 40	18 02	18 26	16 32 41	4 23 46				
12	3	50.2	-10	45.4	202	17.4 ¹⁵⁴	+8	42.5 ¹¹⁷	0	17 48	18 09	18 33	16 39 44	4 17 43				
13	18	50.3		46.3	216	51.7 ¹⁵³	+8	54.2 ¹¹⁷	10 S	17 56	17	42	46 48	12 39				
14	33	50.4		47.2	231	25.9 ¹⁵²	+9	05.9 ¹¹⁷	20	18 04	27	18 53	16 54 51	07 35				
15	48	50.5		48.1	246	00.2 ¹⁵³		17.6 ¹¹⁷	30	14	39	19 08	17 03 55	4 00 31				
16	63	50.6		49.0	260	34.3 ¹⁵¹		29.2 ¹¹⁶	35	20	46	17	08 58	3 57 28				
17	78	50.7	-10	49.9	275	08.4 ¹⁵¹	+9	40.8 ¹¹⁶	40	18 26	18 54	19 28	17 13 61	3 53 25				
18	93	50.8	-10	50.8	289	42.5 ¹⁵¹	+9	52.4 ¹¹⁶	45	18 34	19 05	19 42	17 20 64	3 48 22				
19	108	50.9		51.7	304	16.5 ¹⁵⁰	+10	03.9 ¹¹⁵	50	43	18	20 00	28 69	42 19				
20	123	51.0		52.5	318	50.5 ¹⁵⁰		15.4 ¹¹⁵	52	47	24	09	32 71	40 16				
21	138	51.1		53.4	333	24.4 ¹⁴⁹		26.8 ¹¹⁴	54	52	30	19	36 73	37 14				
22	153	51.2		54.3	347	58.3 ¹⁴⁹		38.3 ¹¹⁵	56	18 57	38	31	41 75	34 12				
23	168	51.3		55.2	2	32.1 ¹⁴⁸	+10	49.6 ¹¹³	58	19 03	47	20 45	46 78	30 10				
24	183	51.4	-10	56.1	17	05.9 ¹⁴⁸	+11	01.0 ¹¹⁴	60 S	19 10	19 57	21 01	17 52 81	3 26 7				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 59 ^m 0		Mag: -4.2 PMG: 12 ^h 21 ^m				Mag: +1.5 PMG: 13 ^h 31 ^m				Mag: -2.9 PMG: 21 ^h 42 ^m				Mag: +0.9 PMG: 10 ^h 42 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	29	20.2	174	04.2	-21	31.4	156	59.9	-19	25.4	33	25.6	-3	28.1	199	07.2	-2	01.5
1	44	22.6	189	07.8		30.9	172	00.6		25.9	48	28.3		28.2	214	09.3		01.6
2	59	25.1	204	11.4		30.3	187	01.2		26.4	63	31.0		28.3	229	11.5		01.7
3	74	27.6	219	15.1		29.7	202	01.9		26.8	78	33.6		28.4	244	13.7		01.9
4	89	30.0	234	18.7		29.1	217	02.5		27.3	93	36.3		28.5	259	15.9		02.0
5	104	32.5	249	22.3	-21	28.5	232	03.2	-19	27.7	108	39.0	-3	28.6	274	18.1	-2	02.1
6	119	35.0	264	25.9	-21	27.9	247	03.8	-19	28.2	123	41.7	-3	28.6	289	20.3	-2	02.2
7	134	37.4	279	29.5		27.3	262	04.5		28.6	138	44.4		28.7	304	22.5		02.3
8	149	39.9	294	33.1		26.7	277	05.1		29.1	153	47.0		28.8	319	24.7		02.4
9	164	42.4	309	36.8		26.1	292	05.8		29.5	168	49.7		28.9	334	26.8		02.5
10	179	44.8	324	40.4		25.5	307	06.4		30.0	183	52.4		29.0	349	29.0		02.7
11	194	47.3	339	44.0	-21	24.9	322	07.1	-19	30.4	198	55.1	-3	29.1	4	31.2	-2	02.8
12	209	49.7	354	47.7	-21	24.3	337	07.7	-19	30.9	213	57.7	-3	29.1	19	33.4	-2	02.9
13	224	52.2	9	51.3		23.7	352	08.3		31.3	229	00.4		29.2	34	35.6		03.0
14	239	54.7	24	54.9		23.1	7	09.0		31.8	244	03.1		29.3	49	37.8		03.1
15	254	57.1	39	58.6		22.5	22	09.6		32.2	259	05.8		29.4	64	40.0		03.2
16	269	59.6	55	02.2		21.8	37	10.3		32.7	274	08.4		29.5	79	42.2		03.3
17	285	02.1	70	05.9	-21	21.2	52	10.9	-19	33.1	289	11.1	-3	29.6	94	44.3	-2	03.4
18	300	04.5	85	09.5	-21	20.6	67	11.6	-19	33.6	304	13.8	-3	29.6	109	46.5	-2	03.6
19	315	07.0	100	13.2		20.0	82	12.2		34.0	319	16.4		29.7	124	48.7		03.7
20	330	09.5	115	16.8		19.3	97	12.9		34.5	334	19.1		29.8	139	50.9		03.8
21	345	11.9	130	20.5		18.7	112	13.5		34.9	349	21.8		29.9	154	53.1		03.9
22	0	14.4	145	24.1		18.1	127	14.1		35.4	4	24.5		30.0	169	55.3		04.0
23	15	16.9	160	27.8		17.5	142	14.8		35.8	19	27.1		30.1	184	57.5		04.1
24	30	19.3	175	31.5	-21	16.8	157	15.4	-19	36.3	34	29.8	-3	30.1	199	59.7	-2	04.2
Dif	—		+36		+6		+6		-5		+27		-1		+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 5			Edad: 14 ^d 2 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	51.4	-10	56.1	17	05.9	+11 01.0	60 N	5 25	6 13	6 56	15 39	11	6 30	83	
1	198	51.5		57.0	31	39.6 ¹⁴⁷	12.3 ¹¹³	58	24	10	51	47	15	23	79	
2	213	51.6		57.9	46	13.3 ¹⁴⁷	23.6 ¹¹³	56	24	07	45	15 54	18	17	76	
3	228	51.7		58.7	60	46.9 ¹⁴⁶	34.8 ¹¹²	54	23	04	41	16 01	20	11	73	
4	243	51.8	-10	59.6	75	20.4 ¹⁴⁵	46.0 ¹¹²	52	23	02	37	07	22	06	71	
5	258	51.9	-11	00.5	89	53.9 ¹⁴⁵	+11 57.1 ¹¹¹	50	5 22	6 00	6 33	16 12	24	6 01	69	
6	273	52.0	-11	01.4	104	27.4 ¹⁴⁵	+12 08.2 ¹¹¹	45	5 20	5 55	6 25	16 24	27	5 51	65	
7	288	52.1		02.3	119	00.8 ¹⁴⁴	19.2 ¹¹⁰	40	19	50	18	33	31	43	61	
8	303	52.2		03.2	133	34.1 ¹⁴³	30.2 ¹¹⁰	35	16	46	12	41	34	35	59	
9	318	52.3		04.0	148	07.4 ¹⁴³	41.2 ¹¹⁰	30	14	42	6 06	16 49	36	29	56	
10	333	52.4		04.9	162	40.6 ¹⁴²	+12 52.1 ¹⁰⁹	20	09	35	5 57	17 01	40	18	52	
11	348	52.5	-11	05.8	177	13.7 ¹⁴¹	+13 03.0 ¹⁰⁹	10 N	5 03	5 28	5 49	17 13	43	5 09	48	
12	3	52.6	-11	06.7	191	46.8 ¹⁴¹	+13 13.8 ¹⁰⁸	0	4 56	5 20	5 41	17 23	46	5 00	45	
13	18	52.7		07.6	206	19.9 ¹⁴¹	24.6 ¹⁰⁸	10 S	47	12	33	34	49	4 51	42	
14	33	52.8		08.4	220	52.8 ¹³⁹	35.3 ¹⁰⁷	20	36	5 02	25	45	53	42	38	
15	48	52.9		09.3	235	25.7 ¹³⁹	45.9 ¹⁰⁶	30	21	4 50	15	17 58	57	31	34	
16	63	53.0		10.2	249	58.6 ¹³⁹	+13 56.5 ¹⁰⁶	35	12	43	09	18 06	59	25	32	
17	78	53.0	-11	11.1	264	31.4 ¹³⁸	+14 07.1 ¹⁰⁶	40	4 00	4 34	5 02	18 14	62	4 18	29	
18	93	53.1	-11	12.0	279	04.1 ¹³⁷	+14 17.6 ¹⁰⁵	45	3 46	4 24	4 55	18 24	66	4 10	26	
19	108	53.2		12.9	293	36.8 ¹³⁷	28.0 ¹⁰⁴	50	28	11	45	37	70	4 01	21	
20	123	53.3		13.7	308	09.4 ¹³⁶	38.4 ¹⁰⁴	52	19	4 05	41	43	71	3 56	20	
21	138	53.4		14.6	322	41.9 ¹³⁵	48.7 ¹⁰³	54	3 09	3 58	36	49	74	51	18	
22	153	53.5		15.5	337	14.4 ¹³⁵	+14 59.0 ¹⁰³	56	2 57	50	31	18 56	77	46	15	
23	168	53.6		16.4	351	46.8 ¹³⁴	+15 09.2 ¹⁰²	58	44	41	25	19 04	80	40	12	
24	183	53.7	-11	17.2	6	19.1 ¹³³	+15 19.4 ¹⁰²	60 S	2 27	3 31	4 19	19 13	84	3 33	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 55 ^m 1		Mag: -4.2 PMG: 12 ^h 15 ^m		Mag: +1.5 PMG: 13 ^h 30 ^m		Mag: -2.9 PMG: 21 ^h 38 ^m		Mag: +0.9 PMG: 10 ^h 38 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	30	19.3	175	31.5	-21	16.8	157	15.4	-19	36.3	34	29.8	-3	30.1	199	59.7	-2	04.2
1	45	21.8	190	35.1		16.2	172	16.1		36.7	49	32.5		30.2	215	01.8		04.4
2	60	24.2	205	38.8		15.5	187	16.7		37.1	64	35.1		30.3	230	04.0		04.5
3	75	26.7	220	42.4		14.9	202	17.4		37.6	79	37.8		30.4	245	06.2		04.6
4	90	29.2	235	46.1		14.2	217	18.0		38.0	94	40.5		30.5	260	08.4		04.7
5	105	31.6	250	49.8	-21	13.6	232	18.6	-19	38.5	109	43.2	-3	30.5	275	10.6	-2	04.8
6	120	34.1	265	53.5	-21	12.9	247	19.3	-19	38.9	124	45.8	-3	30.6	290	12.8	-2	04.9
7	135	36.6	280	57.1		12.3	262	19.9		39.4	139	48.5		30.7	305	15.0		05.0
8	150	39.0	296	00.8		11.6	277	20.6		39.8	154	51.2		30.8	320	17.2		05.1
9	165	41.5	311	04.5		11.0	292	21.2		40.3	169	53.8		30.9	335	19.4		05.3
10	180	44.0	326	08.2		10.3	307	21.8		40.7	184	56.5		30.9	350	21.5		05.4
11	195	46.4	341	11.9	-21	09.7	322	22.5	-19	41.2	199	59.2	-3	31.0	5	23.7	-2	05.5
12	210	48.9	356	15.5	-21	09.0	337	23.1	-19	41.6	215	01.8	-3	31.1	20	25.9	-2	05.6
13	225	51.3	11	19.2		08.3	352	23.7		42.0	230	04.5		31.2	35	28.1		05.7
14	240	53.8	26	22.9		07.7	7	24.4		42.5	245	07.2		31.3	50	30.3		05.8
15	255	56.3	41	26.6		07.0	22	25.0		42.9	260	09.9		31.3	65	32.5		05.9
16	270	58.7	56	30.3		06.3	37	25.7		43.4	275	12.5		31.4	80	34.7		06.0
17	286	01.2	71	34.0	-21	05.6	52	26.3	-19	43.8	290	15.2	-3	31.5	95	36.9	-2	06.2
18	301	03.7	86	37.7	-21	04.9	67	26.9	-19	44.3	305	17.9	-3	31.6	110	39.1	-2	06.3
19	316	06.1	101	41.4		04.3	82	27.6		44.7	320	20.5		31.7	125	41.2		06.4
20	331	08.6	116	45.1		03.6	97	28.2		45.1	335	23.2		31.7	140	43.4		06.5
21	346	11.1	131	48.8		02.9	112	28.8		45.6	350	25.9		31.8	155	45.6		06.6
22	1	13.5	146	52.5		02.2	127	29.5		46.0	5	28.5		31.9	170	47.8		06.7
23	16	16.0	161	56.2		01.5	142	30.1		46.5	20	31.2		32.0	185	50.0		06.8
24	31	18.5	176	59.9	-21	00.8	157	30.8	-19	46.9	35	33.9	-3	32.1	200	52.2	-2	07.0
Dif	—		+37		+7		+6		-4		+27		-1		+22		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 4			Edad: 15 ^d 2 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 2 20 ^h : 55 ^m 4 R°: ***m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	183	53.7	-11	17.2	6	19.1	+15	19.4	60 N	16 29	17 12	18 00	15 50 16	7 53 84
1	198	53.8		18.1	20	51.4 ¹³³		29.4 ¹⁰⁰	58	35	16	01	16 02 20	42 80
2	213	53.9		19.0	35	23.6 ¹³²		39.5 ¹⁰¹	56	40	19	02	12 23	33 76
3	228	54.0		19.9	49	55.7 ¹³¹		49.4 ⁹⁹	54	45	21	03	21 25	24 74
4	243	54.1		20.8	64	27.8 ¹³¹	+15	59.3 ⁹⁹	52	49	24	03	29 27	17 71
5	258	54.1	-11	21.6	78	59.8 ¹³⁰	+16	09.1 ⁹⁸	50	16 53	17 27	18 04	16 36 29	7 10 70
6	273	54.2	-11	22.5	93	31.7 ¹²⁹	+16	18.9 ⁹⁸	45	17 02	17 32	18 06	16 51 34	6 56 65
7	288	54.3		23.4	108	03.6 ¹²⁹		28.6 ⁹⁷	40	09	37	09	17 04 36	44 63
8	303	54.4		24.3	122	35.3 ¹²⁷		38.2 ⁹⁶	35	16	41	11	15 39	34 60
9	318	54.5		25.1	137	07.1 ¹²⁸		47.8 ⁹⁶	30	21	46	14	25 40	25 58
10	333	54.6		26.0	151	38.7 ¹²⁶	+16	57.3 ⁹⁵	20	31	17 53	19	41 44	6 10 54
11	348	54.7	-11	26.9	166	10.3 ¹²⁶	+17	06.7 ⁹⁴	10 N	17 40	18 01	18 26	17 56 47	5 57 51
12	3	54.8	-11	27.8	180	41.8 ¹²⁵	+17	16.0 ⁹³	0	17 48	18 09	18 33	18 09 50	5 45 48
13	18	54.8		28.6	195	13.2 ¹²⁴		25.3 ⁹³	10 S	17 56	18	43	23 52	33 45
14	33	54.9		29.5	209	44.6 ¹²⁴		34.5 ⁹²	20	18 05	28	18 54	38 55	20 42
15	48	55.0		30.4	224	15.9 ¹²³		43.6 ⁹¹	30	15	40	19 10	18 55 58	5 05 38
16	63	55.1		31.3	238	47.1 ¹²²	+17	52.6 ⁹⁰	35	21	48	19	19 05 60	4 57 35
17	78	55.2	-11	32.1	253	18.3 ¹²²	+18	01.6 ⁹⁰	40	18 28	18 57	19 31	19 16 63	4 47 33
18	93	55.3	-11	33.0	267	49.4 ¹²¹	+18	10.5 ⁸⁹	45	18 36	19 08	19 46	19 30 66	4 36 30
19	108	55.4		33.9	282	20.4 ¹²⁰		19.3 ⁸⁸	50	46	21	20 05	47 69	22 26
20	123	55.5		34.8	296	51.3 ¹¹⁹		28.0 ⁸⁷	52	51	28	14	19 54 72	16 24
21	138	55.5		35.6	311	22.2 ¹¹⁹		36.6 ⁸⁶	54	18 56	35	24	20 03 74	09 22
22	153	55.6		36.5	325	52.9 ¹¹⁷		45.2 ⁸⁶	56	19 01	43	37	13 76	4 01 19
23	168	55.7		37.4	340	23.7 ¹¹⁸	+18	53.6 ⁸⁴	58	08	19 52	20 51	24 79	3 52 17
24	183	55.8	-11	38.2	354	54.3 ¹¹⁶	+19	02.0 ⁸⁴	60 S	19 15	20 03	21 09	20 37 83	3 42 13
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 51 ^m 2		Mag: -4.2 PMG: 12 ^h 09 ^m			Mag: +1.4 PMG: 13 ^h 29 ^m			Mag: -2.9 PMG: 21 ^h 34 ^m			Mag: +0.9 PMG: 10 ^h 35 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	31	18.5	176	59.9	-21	00.8	157	30.8	-19	46.9	35	33.9	-3	32.1
1	46	20.9	192	03.6	-21	00.1	172	31.4		47.3	50	36.5		32.1
2	61	23.4	207	07.4	-20	59.4	187	32.0		47.8	65	39.2		32.2
3	76	25.8	222	11.1		58.7	202	32.7		48.2	80	41.8		32.3
4	91	28.3	237	14.8		58.0	217	33.3		48.7	95	44.5		32.4
5	106	30.8	252	18.5	-20	57.3	232	33.9	-19	49.1	110	47.2	-3	32.4
6	121	33.2	267	22.2	-20	56.6	247	34.6	-19	49.5	125	49.8	-3	32.5
7	136	35.7	282	26.0		55.9	262	35.2		50.0	140	52.5		32.6
8	151	38.2	297	29.7		55.2	277	35.8		50.4	155	55.2		32.7
9	166	40.6	312	33.4		54.5	292	36.5		50.9	170	57.8		32.8
10	181	43.1	327	37.1		53.8	307	37.1		51.3	186	00.5		32.8
11	196	45.6	342	40.9	-20	53.1	322	37.7	-19	51.7	201	03.2	-3	32.9
12	211	48.0	357	44.6	-20	52.3	337	38.4	-19	52.2	216	05.8	-3	33.0
13	226	50.5	12	48.3		51.6	352	39.0		52.6	231	08.5		33.1
14	241	53.0	27	52.1		50.9	7	39.6		53.0	246	11.1		33.1
15	256	55.4	42	55.8		50.2	22	40.3		53.5	261	13.8		33.2
16	271	57.9	57	59.5		49.4	37	40.9		53.9	276	16.5		33.3
17	287	00.3	73	03.3	-20	48.7	52	41.5	-19	54.3	291	19.1	-3	33.4
18	302	02.8	88	07.0	-20	48.0	67	42.1	-19	54.8	306	21.8	-3	33.5
19	317	05.3	103	10.7		47.2	82	42.8		55.2	321	24.4		33.5
20	332	07.7	118	14.5		46.5	97	43.4		55.7	336	27.1		33.6
21	347	10.2	133	18.2		45.8	112	44.0		56.1	351	29.8		33.7
22	2	12.7	148	22.0		45.0	127	44.7		56.5	6	32.4		33.8
23	17	15.1	163	25.7		44.3	142	45.3		57.0	21	35.1		33.8
24	32	17.6	178	29.5	-20	43.5	157	45.9	-19	57.4	36	37.7	-3	33.9
Dif	—		+37 +7			+6 -4			+27 -1			+22 -1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 16 ^d 2 PHE { 4 ^h : 55 ^h 5 12 ^h : 55 ^h 7 20 ^h : 55 ^h 8													
	PMG: 11 ^h 44 ^m 2			SD: 15 ^h 1 PMG: 0 ^h 21 ^m R ^o : 50 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	183	55.8	-11 38.2	354	54.3	+19 02.0	83	58	60 N	5 29	6 18	7 01	16 06	26	9 17	80	
1	198	55.9	39.1	9	24.9 ¹¹⁶	10.3	83	58		28	14	6 55	22	29	9 02	77	
2	213	56.0	40.0	23	55.4 ¹¹⁵	18.5	82	56		28	11	50	35	32	8 49	74	
3	228	56.0	40.9	38	25.8 ¹¹⁴	26.6	81	54		27	08	45	46	35	38	72	
4	243	56.1	41.7	52	56.1 ¹¹³	34.7	81	52		26	05	40	16	56	37	28	
5	258	56.2	-11 42.6	67	26.4 ¹¹³	+19 42.6	79	50		5 25	6 03	6 36	17	05	38	8 20	
6	273	56.3	-11 43.5	81	56.6 ¹¹²	+19 50.5	79	45		5 23	5 57	6 27	17	25	40	8 01	
7	288	56.4	44.3	96	26.7 ¹¹¹	+19 58.2	77	40		21	52	20	40	43	7 47	62	
8	303	56.5	45.2	110	56.8 ¹¹¹	+20 05.9	77	35		18	48	13	17	54	44	34	
9	318	56.5	46.1	125	26.8 ¹¹⁰	13.5	76	30		15	43	6 08	18	05	46	23	
10	333	56.6	46.9	139	56.7 ¹⁰⁹	20.9	74	20		10	36	5 58	25	49	7 04	56	
11	348	56.7	-11 47.8	154	26.5 ¹⁰⁸	+20 28.3	74	10 N		5 03	5 28	5 49	18	43	50	6 48	
12	3	56.8	-11 48.7	168	56.3 ¹⁰⁸	+20 35.6	73	0		4 55	5 20	5 41	18	59	52	6 33	
13	18	56.9	49.5	183	26.0 ¹⁰⁷	42.8	72	10 S		46	11	32	19	15	55	18	
14	33	56.9	50.4	197	55.6 ¹⁰⁶	49.9	71	20		34	5 01	23	33	56	6 02	46	
15	48	57.0	51.3	212	25.1 ¹⁰⁵	+20 56.9	70	30		19	4 48	13	19	53	59	5 43	
16	63	57.1	52.1	226	54.6 ¹⁰⁵	+21 03.7	68	35		4 09	40	07	20	05	60	32	
17	78	57.2	-11 53.0	241	24.0 ¹⁰⁴	+21 10.5	68	40		3 57	4 31	5 00	20	19	62	5 20	
18	93	57.2	-11 53.9	255	53.4 ¹⁰⁴	+21 17.2	67	45		3 42	4 20	4 51	20	36	63	5 06	
19	108	57.3	54.7	270	22.6 ¹⁰²	23.8	66	50		23	07	42	20	56	66	4 48	
20	123	57.4	55.6	284	51.8 ¹⁰²	30.2	64	52		14	4 00	37	21	06	67	40	
21	138	57.5	56.5	299	20.9 ¹⁰¹	36.6	64	54		3 03	3 53	32	17	69	31	29	
22	153	57.6	57.3	313	50.0 ¹⁰¹	42.8	62	56		2 51	45	26	29	71	20	27	
23	168	57.6	58.2	328	19.0 ¹⁰⁰	49.0	62	58		36	36	20	21	43	74	4 09	
24	183	57.7	-11 59.1	342	47.9 ⁹⁹	+21 55.0	60	60 S		2 18	3 25	4 13	22	00	78	3 55	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 47 ^m 2		Mag: -4.2 PMG: 12 ^h 03 ^m		Mag: +1.4 PMG: 13 ^h 28 ^m		Mag: -2.8 PMG: 21 ^h 30 ^m		Mag: +0.9 PMG: 10 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	32	17.6	178	29.5	-20	43.5	157	45.9	-19	57.4	36	37.7	-3	33.9	201	44.7	-2	09.7
1	47	20.1	193	33.2		42.8	172	46.6		57.8	51	40.4		34.0	216	46.9		09.8
2	62	22.5	208	37.0		42.0	187	47.2		58.3	66	43.1		34.1	231	49.1		09.9
3	77	25.0	223	40.7		41.3	202	47.8		58.7	81	45.7		34.1	246	51.3		10.0
4	92	27.4	238	44.5		40.5	217	48.4		59.1	96	48.4		34.2	261	53.5		10.1
5	107	29.9	253	48.2	-20	39.8	232	49.1	-19	59.6	111	51.0	-3	34.3	276	55.7	-2	10.2
6	122	32.4	268	52.0	-20	39.0	247	49.7	-20	00.0	126	53.7	-3	34.4	291	57.9	-2	10.3
7	137	34.8	283	55.8		38.3	262	50.3	-20	00.4	141	56.4		34.4	307	00.1		10.4
8	152	37.3	298	59.5		37.5	277	50.9		00.8	156	59.0		34.5	322	02.3		10.5
9	167	39.8	314	03.3		36.7	292	51.6		01.3	172	01.7		34.6	337	04.4		10.7
10	182	42.2	329	07.0		36.0	307	52.2		01.7	187	04.3		34.7	352	06.6		10.8
11	197	44.7	344	10.8	-20	35.2	322	52.8	-20	02.1	202	07.0	-3	34.7	7	08.8	-2	10.9
12	212	47.2	359	14.6	-20	34.4	337	53.4	-20	02.6	217	09.6	-3	34.8	22	11.0	-2	11.0
13	227	49.6	14	18.3		33.7	352	54.1		03.0	232	12.3		34.9	37	13.2		11.1
14	242	52.1	29	22.1		32.9	7	54.7		03.4	247	15.0		35.0	52	15.4		11.2
15	257	54.6	44	25.9		32.1	22	55.3		03.9	262	17.6		35.0	67	17.6		11.3
16	272	57.0	59	29.7		31.3	37	55.9		04.3	277	20.3		35.1	82	19.8		11.4
17	287	59.5	74	33.4	-20	30.5	52	56.6	-20	04.7	292	22.9	-3	35.2	97	22.0	-2	11.6
18	303	01.9	89	37.2	-20	29.8	67	57.2	-20	05.1	307	25.6	-3	35.2	112	24.2	-2	11.7
19	318	04.4	104	41.0		29.0	82	57.8		05.6	322	28.2		35.3	127	26.3		11.8
20	333	06.9	119	44.7		28.2	97	58.4		06.0	337	30.9		35.4	142	28.5		11.9
21	348	09.3	134	48.5		27.4	112	59.1		06.4	352	33.5		35.5	157	30.7		12.0
22	3	11.8	149	52.3		26.6	127	59.7		06.9	7	36.2		35.5	172	32.9		12.1
23	18	14.3	164	56.1		25.8	143	00.3		07.3	22	38.8		35.6	187	35.1		12.2
24	33	16.7	179	59.9	-20	25.0	158	00.9	-20	07.7	37	41.5	-3	35.7	202	37.3	-2	12.3
Dif	—		+38		+8		+6		-4		+27		-1		+22		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 17 ^d 2 PHE { 4 ^h : 56/0 12 ^h : 56/1 20 ^h : 56/3					Civil			Náutico		Hora R°	
	PMG: 11 ^h 44 ^m 1			PMG: 1 ^h 11 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	57.7	-11 59.1	342	47.9	+21 55.0	59	60 N	16 23	17 07	17 55	16 32 42	10 37 71		
1	198	57.8	-11 59.9	357	16.7	+22 00.9	59	58	30	11	57	16 51 44	19 68		
2	213	57.9	-12 00.8	11	45.5	06.7	58	56	36	14	58	17 07 45	10 03 67		
3	228	57.9	01.6	26	14.2	12.4	57	54	41	17	59	21 46	9 50 65		
4	243	58.0	02.5	40	42.9	18.0	56	52	45	20	18 00	33 47	38 64		
5	258	58.1	-12 03.4	55	11.4	+22 23.5	55	50	16 50	17 23	18 01	17 43 48	9 28 63		
6	273	58.2	-12 04.2	69	39.9	+22 28.9	54	45	16 59	17 29	18 03	18 05 50	9 06 62		
7	288	58.2	05.1	84	08.4	34.1	52	40	17 07	34	06	23 51	8 49 60		
8	303	58.3	06.0	98	36.8	39.2	51	35	13	39	09	38 52	34 59		
9	318	58.4	06.8	113	05.1	44.2	50	30	19	44	12	18 51 52	22 58		
10	333	58.5	07.7	127	33.3	49.1	49	20	30	17 52	18	19 14 53	8 00 56		
11	348	58.5	-12 08.5	142	01.5	+22 53.9	48	10 N	17 39	18 00	18 25	19 33 54	7 41 55		
12	3	58.6	-12 09.4	156	29.7	+22 58.6	47	0	17 47	18 09	18 33	19 51 55	7 24 53		
13	18	58.7	10.3	170	57.7	+23 03.1	45	10 S	17 56	18	43	20 10 55	7 06 53		
14	33	58.8	11.1	185	25.7	07.5	44	20	18 06	29	18 55	29 56	6 48 51		
15	48	58.8	12.0	199	53.7	11.8	43	30	17	42	19 11	20 52 57	26 49		
16	63	58.9	12.8	214	21.6	16.0	42	35	23	50	21	21 05 58	6 14 48		
17	78	59.0	-12 13.7	228	49.4	+23 20.0	40	40	18 31	18 59	19 34	21 21 58	5 59 47		
18	93	59.0	-12 14.6	243	17.2	+23 23.9	39	45	18 39	19 11	19 49	21 39 59	5 42 45		
19	108	59.1	15.4	257	44.9	27.7	38	50	50	25	20 09	22 02 60	21 43		
20	123	59.2	16.3	272	12.6	31.4	37	52	18 54	32	19	13 61	11 42		
21	138	59.3	17.1	286	40.2	34.9	35	54	19 00	39	30	26 61	5 00 40		
22	153	59.3	18.0	301	07.7	38.3	34	56	06	48	43	40 62	4 47 38		
23	168	59.4	18.8	315	35.2	41.6	33	58	12	19 58	20 58	22 57 63	32 36		
24	183	59.5	-12 19.7	330	02.7	+23 44.7	31	60 S	19 20	20 09	21 18	23 18 64	4 15 32		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 43 ^m 3		Mag: -4.2 PMG: 11 ^h 57 ^m		Mag: +1.4 PMG: 13 ^h 27 ^m		Mag: -2.8 PMG: 21 ^h 25 ^m		Mag: +0.9 PMG: 10 ^h 28 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	33	16.7	179 59.9	-20 25.0	158 00.9	-20 07.7	37 41.5	-3 35.7	202 37.3	
1	48	19.2	195 03.6	24.2	173 01.5	08.1	52 44.1	35.8	217 39.5	
2	63	21.7	210 07.4	23.4	188 02.2	08.6	67 46.8	35.8	232 41.7	
3	78	24.1	225 11.2	22.6	203 02.8	09.0	82 49.5	35.9	247 43.9	
4	93	26.6	240 15.0	21.8	218 03.4	09.4	97 52.1	36.0	262 46.1	
5	108	29.1	255 18.8	-20 21.0	233 04.0	-20 09.8	112 54.8	-3 36.0	277 48.3	
6	123	31.5	270 22.6	-20 20.2	248 04.7	-20 10.3	127 57.4	-3 36.1	292 50.4	
7	138	34.0	285 26.4	19.4	263 05.3	10.7	143 00.1	36.2	307 52.6	
8	153	36.4	300 30.1	18.6	278 05.9	11.1	158 02.7	36.3	322 54.8	
9	168	38.9	315 33.9	17.8	293 06.5	11.5	173 05.4	36.3	337 57.0	
10	183	41.4	330 37.7	17.0	308 07.1	12.0	188 08.0	36.4	352 59.2	
11	198	43.8	345 41.5	-20 16.1	323 07.7	-20 12.4	203 10.7	-3 36.5	8 01.4	
12	213	46.3	0 45.3	-20 15.3	338 08.4	-20 12.8	218 13.3	-3 36.6	23 03.6	
13	228	48.8	15 49.1	14.5	353 09.0	13.2	233 16.0	36.6	38 05.8	
14	243	51.2	30 52.9	13.7	8 09.6	13.7	248 18.6	36.7	53 08.0	
15	258	53.7	45 56.7	12.8	23 10.2	14.1	263 21.3	36.8	68 10.2	
16	273	56.2	61 00.5	12.0	38 10.8	14.5	278 23.9	36.8	83 12.4	
17	288	58.6	76 04.3	-20 11.2	53 11.5	-20 14.9	293 26.6	-3 36.9	98 14.5	
18	304	01.1	91 08.1	-20 10.4	68 12.1	-20 15.3	308 29.2	-3 37.0	113 16.7	
19	319	03.5	106 11.9	09.5	83 12.7	15.8	323 31.9	37.0	128 18.9	
20	334	06.0	121 15.7	08.7	98 13.3	16.2	338 34.5	37.1	143 21.1	
21	349	08.5	136 19.5	07.9	113 13.9	16.6	353 37.1	37.2	158 23.3	
22	4	10.9	151 23.3	07.0	128 14.5	17.0	8 39.8	37.3	173 25.5	
23	19	13.4	166 27.1	06.2	143 15.2	17.4	23 42.4	37.3	188 27.7	
24	34	15.9	181 30.9	-20 05.3	158 15.8	-20 17.9	38 45.1	-3 37.4	203 29.9	
Dif	—		+38	+8	+6	-4	+26	-1	+22	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1			Edad: 18 ^d 2 PHE { 4 ^h : 56'5 12 ^h : 56'6 20 ^h : 56'8															
	PMG: 11 ^h 44 ^m 0			SD: 15'4 PMG: 2 ^h 04 ^m R ^o : 55 ^m															
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	h	m		
0	183	59.5	-12	19.7	330	02.7	+23	44.7	30	58 N	5	34	6	23	7	06	17	14	
1	198	59.5		20.6	344	30.1		47.7	84	58	33	19	7	00		35	61	27	
2	213	59.6		21.4	358	57.4		50.6	29	56	32	15	6	54	17	52	61	11	
3	228	59.7		22.3	13	24.7		53.4	28	54	30	12		49	18	07	60	10	
4	243	59.7		23.1	27	52.0		56.0	26	52	29	09		44		20	59	42	
5	258	59.8	-12	24.0	42	19.2	+23	58.5	25	50	5	28	6	06	6	39	18	31	
6	273	59.9	-12	24.8	56	46.4	+24	00.9	24	45	5	25	6	00	6	30	18	55	
7	288	59.9		25.7	71	13.5		03.1	22	40	23	5	54	22		19	14	58	
8	304	00.0		26.5	85	40.5		05.2	21	35	20		49	15		30	57	33	
9	319	00.1		27.4	100	07.6		07.1	19	30	17		45	6	09	19	43	58	
10	334	00.1		28.2	114	34.6		09.0	19	20	10		36	5	59	20	07	57	
11	349	00.2	-12	29.1	129	01.5	+24	10.7	17	10 N	5	03	5	28	5	49	20	27	
12	4	00.3	-12	29.9	143	28.4	+24	12.2	15	0	4	55	5	19	5	41	20	46	
13	19	00.3		30.8	157	55.3		13.6	14	10 S	45	5	10	32		21	05	55	
14	34	00.4		31.6	172	22.2		14.9	13	20	33	4	59	22		25	55	39	
15	49	00.5		32.5	186	49.0		16.0	11	30	17		46	11		21	49	54	
16	64	00.5		33.3	201	15.7		17.0	10	35	4	06	38	5	04	22	03	53	
17	79	00.6	-12	34.2	215	42.5	+24	17.9	9	40	3	54	4	28	4	57	22	19	
18	94	00.6	-12	35.0	230	09.2	+24	18.6	7	45	3	39	4	17	4	48	22	38	
19	109	00.7		35.9	244	35.9		19.2	6	50	19	4	03	38		23	02	51	
20	124	00.8		36.7	259	02.5		19.6	4	52	3	09	3	56	33		14	50	
21	139	00.8		37.6	273	29.1		19.9	3	54	2	58	48	27		27	49	40	
22	154	00.9		38.4	287	55.7		20.1	2	56	44		40	21		23	42	48	
23	169	01.0		39.3	302	22.3		20.1	0	58	29		30	15		**	**	**	
24	184	01.0	-12	40.1	316	48.9	+24	20.0	1	60 S	2	10	3	18	4	07	**	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 39 ^m 4		Mag: -4.3 PMG: 11 ^h 51 ^m		Mag: +1.4 PMG: 13 ^h 26 ^m		Mag: -2.8 PMG: 21 ^h 21 ^m		Mag: +0.9 PMG: 10 ^h 24 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	34	15.9	181	30.9	-20	05.3	158	15.8	-20	17.9
1	49	18.3	196	34.7		04.5	173	16.4		18.3
2	64	20.8	211	38.5		03.6	188	17.0		18.7
3	79	23.3	226	42.3		02.8	203	17.6		19.1
4	94	25.7	241	46.1		01.9	218	18.2		19.5
5	109	28.2	256	49.9	-20	01.1	233	18.8	-20	20.0
6	124	30.7	271	53.7	-20	00.2	248	19.5	-20	20.4
7	139	33.1	286	57.5	-19	59.4	263	20.1		20.8
8	154	35.6	302	01.3		58.5	278	20.7		21.2
9	169	38.0	317	05.1		57.7	293	21.3		21.6
10	184	40.5	332	08.9		56.8	308	21.9		22.0
11	199	43.0	347	12.7	-19	56.0	323	22.5	-20	22.5
12	214	45.4	2	16.5	-19	55.1	338	23.1	-20	22.9
13	229	47.9	17	20.3		54.2	353	23.7		23.3
14	244	50.4	32	24.1		53.4	8	24.3		23.7
15	259	52.8	47	28.0		52.5	23	25.0		24.1
16	274	55.3	62	31.8		51.6	38	25.6		24.5
17	289	57.8	77	35.6	-19	50.7	53	26.2	-20	25.0
18	305	00.2	92	39.4	-19	49.9	68	26.8	-20	25.4
19	320	02.7	107	43.2		49.0	83	27.4		25.8
20	335	05.2	122	47.0		48.1	98	28.0		26.2
21	350	07.6	137	50.8		47.2	113	28.6		26.6
22	5	10.1	152	54.6		46.4	128	29.2		27.0
23	20	12.5	167	58.4		45.5	143	29.8		27.4
24	35	15.0	183	02.3	-19	44.6	158	30.4	-20	27.9
Dif	—		+38		+9		+6		-4	

					</														

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: 19 ^d 2 PHE { SD: 15:5 PMG: 2 ^h 59 ^m R°: 56 ^m 4 ^h : 57/0 12 ^h : 57/2 20 ^h : 57/3											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	184	01.0	-12 40.1	316	48.9	+24 20.0	3	60 N	16 18	17 02	17 51	18 15	80	12 43	36
1	199	01.1	41.0	331	15.4	19.7	75	58	25	06	52	36	76	22	39
2	214	01.1	41.8	345	41.9	19.3	4	56	31	10	53	18	53	73	12 05
3	229	01.2	42.7	0	08.4	18.8	5	54	36	13	55	19	07	72	11 50
4	244	01.3	43.5	14	34.8	18.1	7	52	41	16	56	19	71	38	44
5	259	01.3	-12 44.4	29	01.3	+24 17.3	8	50	16 46	17 19	17 57	19 31	69	11 26	46
6	274	01.4	-12 45.2	43	27.7	+24 16.3	10	45	16 56	17 26	18 00	19 54	66	11 03	48
7	289	01.4	46.1	57	54.1	15.2	11	40	17 04	32	04	20 12	65	10 44	50
8	304	01.5	46.9	72	20.5	13.9	13	35	11	37	07	27	63	29	50
9	319	01.6	47.8	86	46.9	12.5	14	30	17	42	10	20	41	61	10 15
10	334	01.6	48.6	101	13.3	11.0	15	20	28	17 51	17	21	04	59	9 52
11	349	01.7	-12 49.5	115	39.7	+24 09.3	17	10 N	17 38	18 00	18 24	21 23	58	9 32	54
12	4	01.7	-12 50.3	130	06.0	+24 07.5	18	0	17 47	18 08	18 33	21 42	56	9 13	56
13	19	01.8	51.1	144	32.4	05.5	20	10 S	17 57	18	43	22	00	54	8 54
14	34	01.8	52.0	158	58.7	03.4	21	20	18 07	29	18 56	20	52	34	58
15	49	01.9	52.8	173	25.1	+24 01.1	23	30	18	43	19 13	43	49	8	10
16	64	02.0	53.7	187	51.4	+23 58.7	24	35	25	18 52	24	22	56	48	7 56
17	79	02.0	-12 54.5	202	17.8	+23 56.2	25	40	18 33	19 02	19 36	23	12	46	7 40
18	94	02.1	-12 55.4	216	44.1	+23 53.5	27	45	18 42	19 14	19 52	23	30	44	7 21
19	109	02.1	56.2	231	10.4	50.6	29	50	53	28	20 13	23	53	41	6 57
20	124	02.2	57.0	245	36.8	47.7	29	52	18 58	36	23	***	***	***	46
21	139	02.2	57.9	260	03.1	44.5	32	54	19 04	44	35	***	***	***	33
22	154	02.3	58.7	274	29.5	41.3	32	56	10	19 53	20 49	***	***	***	18
23	169	02.3	-12 59.6	288	55.8	37.9	34	58	17	20 03	21 06	0	00	46	6
24	184	02.4	-13 00.4	303	22.2	+23 34.4	35	60 S	19 25	20 15	21 26	0	22	44	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 35 ^m 5		Mag: -4.3 PMG: 11 ^h 45 ^m		Mag: +1.4 PMG: 13 ^h 25 ^m		Mag: -2.8 PMG: 21 ^h 17 ^m		Mag: +0.9 PMG: 10 ^h 21 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	35	15.0	183	02.3	158	30.4	39	48.5	204	22.5
1	50	17.5	198	06.1	173	31.1	54	51.2	219	24.7
2	65	19.9	213	09.9	188	31.7	69	53.8	234	26.9
3	80	22.4	228	13.7	203	32.3	84	56.4	249	29.1
4	95	24.9	243	17.5	218	32.9	99	59.1	264	31.3
5	110	27.3	258	21.3	233	33.5	115	01.7	279	33.5
6	125	29.8	273	25.1	248	34.1	130	04.4	294	35.7
7	140	32.3	288	29.0	263	34.7	145	07.0	309	37.9
8	155	34.7	303	32.8	278	35.3	160	09.6	324	40.0
9	170	37.2	318	36.6	293	35.9	175	12.3	339	42.2
10	185	39.7	333	40.4	308	36.5	190	14.9	354	44.4
11	200	42.1	348	44.2	323	37.1	205	17.5	9	46.6
12	215	44.6	3	48.0	338	37.7	220	20.2	24	48.8
13	230	47.0	18	51.8	353	38.3	235	22.8	39	51.0
14	245	49.5	33	55.7	8	38.9	250	25.5	54	53.2
15	260	52.0	48	59.5	23	39.5	265	28.1	69	55.4
16	275	54.4	64	03.3	38	40.1	280	30.7	84	57.6
17	290	56.9	79	07.1	53	40.7	295	33.4	99	59.8
18	305	59.4	94	10.9	68	41.3	310	36.0	115	02.0
19	321	01.8	109	14.7	83	41.9	325	38.6	130	04.2
20	336	04.3	124	18.5	98	42.5	340	41.3	145	06.4
21	351	06.8	139	22.4	113	43.2	355	43.9	160	08.6
22	6	09.2	154	26.2	128	43.8	10	46.5	175	10.8
23	21	11.7	169	30.0	143	44.4	25	49.2	190	12.9
24	36	14.2	184	33.8	158	45.0	40	51.8	205	15.1
Dif	—		+38	+9	+6	-4	+26	-1	+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: 20 ^d 2 PHE { 4 ^h : 57/5 12 ^h : 57/7 20 ^h : 57/9 SD: 15'6 PMG: 3 ^h 55 ^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	184	02.4	-13	00.4	303	22.2	+23	34.4	60 N	5 38	6 27	7 12	19 35	90	13 19	23
1	199	02.4		01.2	317	48.6		30.7	58	37	23	7 04	19 52	86	13 01	27
2	214	02.5		02.1	332	14.9		26.8	56	35	19	6 58	20 06	83	12 46	3
3	229	02.6		02.9	346	41.3		22.9	54	34	15	52	19 80		33	33
4	244	02.6		03.8	1	07.7		18.8	52	33	12	47	30 78		22	35
5	259	02.7	-13	04.6	15	34.1	+23	14.5	50	5 31	6 09	6 43	20 40	75	12 12	37
6	274	02.7	-13	05.4	30	00.5	+23	10.1	45	5 28	6 02	6 33	21 00	72	11 51	40
7	289	02.8		06.3	44	27.0		05.6	40	25	5 56	24	17 68		34	43
8	304	02.8		07.1	58	53.4	+23	00.9	35	21	51	17	30 67		19	46
9	319	02.9		07.9	73	19.9	+22	56.1	30	18	46	11	21 42	64	11 07	47
10	334	02.9		08.8	87	46.4		51.2	20	11	37	6 00	22 03	60	10 45	50
11	349	03.0	-13	09.6	102	12.9	+22	46.1	10 N	5 03	5 28	5 50	22 21	57	10 26	53
12	4	03.0	-13	10.4	116	39.4	+22	40.9	0	4 55	5 19	5 40	22 38	54	10 09	55
13	19	03.1		11.3	131	06.0		35.5	10 S	44	5 09	31	22 54	52	9 51	57
14	34	03.1		12.1	145	32.5		30.0	20	31	4 58	21	23 12	48	9 32	60
15	49	03.2		13.0	159	59.1		24.4	30	14	44	09	32 45		9 10	63
16	64	03.2		13.8	174	25.7		18.6	35	4 04	36	5 02	44 43		8 57	65
17	79	03.2	-13	14.6	188	52.3	+22	12.7	40	3 51	4 26	4 54	23 58	40	8 42	67
18	94	03.3	-13	15.5	203	19.0	+22	06.7	45	3 35	4 14	4 45	*** ** *	**	8 24	70
19	109	03.3		16.3	217	45.7	+22	00.5	50	14	3 59	34	*** ** *	**	8 02	73
20	124	03.4		17.1	232	12.4	+21	54.2	52	3 04	51	29	0 04	39	7 51	75
21	139	03.4		18.0	246	39.1		47.7	54	2 52	43	23	16 37		39	77
22	154	03.5		18.8	261	05.9		41.2	56	38	34	17	30 35		25	79
23	169	03.5		19.6	275	32.7		34.4	58	21	24	10	0 46	33	7 09	82
24	184	03.6	-13	20.5	289	59.5	+21	27.6	60 S	2 00	3 12	4 02	1 06	29	6 50	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 31 ^m 5		Mag: -4.3 PMG: 11 ^h 39 ^m		Mag: +1.4 PMG: 13 ^h 24 ^m		Mag: -2.8 PMG: 21 ^h 13 ^m		Mag: +0.9 PMG: 10 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	36	14.2	184	33.8	-19	22.9	158	45.0	-20	37.7
1	51	16.6	199	37.6		22.0	173	45.6		38.1
2	66	19.1	214	41.4		21.0	188	46.2		38.5
3	81	21.5	229	45.2		20.1	203	46.8		38.9
4	96	24.0	244	49.1		19.2	218	47.4		39.3
5	111	26.5	259	52.9	-19	18.2	233	48.0	-20	39.7
6	126	28.9	274	56.7	-19	17.3	248	48.6	-20	40.1
7	141	31.4	290	00.5		16.4	263	49.2		40.5
8	156	33.9	305	04.3		15.5	278	49.8		40.9
9	171	36.3	320	08.1		14.5	293	50.4		41.3
10	186	38.8	335	11.9		13.6	308	51.0		41.7
11	201	41.3	350	15.7	-19	12.6	323	51.6	-20	42.1
12	216	43.7	5	19.6	-19	11.7	338	52.2	-20	42.5
13	231	46.2	20	23.4		10.8	353	52.8		42.9
14	246	48.6	35	27.2		09.8	8	53.3		43.3
15	261	51.1	50	31.0		08.9	23	53.9		43.7
16	276	53.6	65	34.8		07.9	38	54.5		44.1
17	291	56.0	80	38.6	-19	07.0	53	55.1	-20	44.5
18	306	58.5	95	42.4	-19	06.0	68	55.7	-20	44.9
19	322	01.0	110	46.2		05.1	83	56.3		45.3
20	337	03.4	125	50.0		04.1	98	56.9		45.7
21	352	05.9	140	53.8		03.2	113	57.5		46.1
22	7	08.4	155	57.6		02.2	128	58.1		46.5
23	22	10.8	171	01.5		01.3	143	58.7		46.9
24	37	13.3	186	05.3	-19	00.3	158	59.3	-20	47.3
Dif	—		+38		+9		+6		-4	
								+26		-1
									+22	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°1 PMG: 11 ^h 43 ^m 7			Edad: 21 ^d 2 PHE { 4 ^h : 58°1 12 ^h : 58°2 20 ^h : 58°4 SD: 15°8 PMG: 4 ^h 51 ^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	184	03.6	-13 20.5	289	59.5	+21 27.6	70	60 N	16 12	16 57	17 46	21 05 95	13 42 15	
1	199	03.6		21.3	304 26.4	79 20.6	70	58	20	17 01	48	18 91	28 19	
2	214	03.7		22.1	318 53.2	78 13.5	71	56	26	06	49	29 87	17 22	
3	229	03.7		22.9	333 20.1	+21 06.3	72	54	32	09	51	39 84	13 06 25	
4	244	03.8		23.8	347 47.1	+20 58.9	74	52	38	13	52	48 81	12 57 28	
5	259	03.8	-13 24.6		2 14.1	+20 51.5	74	50	16 42	17 16	17 54	21 55 80	12 49 29	
6	274	03.8	-13 25.4		16 41.1	+20 43.8	77	45	16 53	17 23	17 58	22 12 74	12 31 34	
7	289	03.9		26.3	31 08.1	36.1	77	40	17 02	29	18 01	25 71	17 37	
8	304	03.9		27.1	45 35.2	28.2	79	35	09	35	05	37 67	12 05 40	
9	319	04.0		27.9	60 02.3	20.2	80	30	16	40	08	22 46 65	11 54 43	
10	334	04.0		28.7	74 29.5	12.1	81	20	27	50	16	23 03 61	35 47	
11	349	04.1	-13 29.6		88 56.6	+20 03.9	82	10 N	17 37	17 59	18 24	23 18 57	11 19 50	
12	4	04.1	-13 30.4		103 23.9	+19 55.5	84	0	17 47	18 08	18 33	23 32 53	11 04 53	
13	19	04.1		31.2	117 51.1	47.0	85	10 S	17 57	19	44	23 46 49	10 48 57	
14	34	04.2		32.1	132 18.4	38.4	86	20	18 08	30	18 57	*** ** *	32 60	
15	49	04.2		32.9	146 45.7	29.7	87	30	20	45	19 15	*** ** *	13 64	
16	64	04.3		33.7	161 13.1	20.8	89	35	27	18 54	26	*** ** *	10 02 67	
17	79	04.3	-13 34.5		175 40.5	+19 11.9	89	40	18 35	19 04	19 39	*** ** *	9 49 70	
18	94	04.3	-13 35.4		190 07.9	+19 02.8	91	45	18 45	19 17	19 56	0 14 37	9 34 73	
19	109	04.4		36.2	204 35.4	+18 53.6	92	50	18 56	32	20 17	34 32	15 78	
20	124	04.4		37.0	219 02.9	44.3	93	52	19 02	40	28	43 31	9 06 80	
21	139	04.4		37.8	233 30.5	34.8	95	54	08	48	41	0 53 29	8 56 82	
22	154	04.5		38.6	247 58.1	25.3	95	56	14	19 58	20 55	1 05 26	44 86	
23	169	04.5		39.5	262 25.7	15.6	97	58	22	20 09	21 13	19 22	31 89	
24	184	04.6	-13 40.3		276 53.4	+18 05.9	97	60 S	19 31	20 21	21 36	1 35 18	8 16 93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 21 ^h 27 ^m 6		Mag: -4.3 PMG: 11 ^h 33 ^m		Mag: +1.4 PMG: 13 ^h 24 ^m		Mag: -2.8 PMG: 21 ^h 09 ^m		Mag: +0.9 PMG: 10 ^h 14 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	37	13.3	186 05.3	-19 00.3	158 59.3	-20 47.3	41	54.9	-3 42.1	206 07.8	-2 22.9
1	52	15.8	201 09.1	-18 59.4	173 59.9	47.7	56	57.5	42.1	221 10.0	23.1
2	67	18.2	216 12.9		189 00.5	48.1	72	00.2	42.2	236 12.2	23.2
3	82	20.7	231 16.7		57.5	204 01.1	48.5	87	02.8	42.3	251 14.4
4	97	23.1	246 20.5		56.5	219 01.7	48.9	102	05.4	42.3	266 16.6
5	112	25.6	261 24.3	-18 55.5	234 02.3	-20 49.3	117	08.0	-3 42.4	281 18.8	-2 23.5
6	127	28.1	276 28.1	-18 54.6	249 02.9	-20 49.7	132	10.7	-3 42.4	296 21.0	-2 23.6
7	142	30.5	291 31.9		53.6	264 03.5	50.1	147	13.3	42.5	311 23.2
8	157	33.0	306 35.7		52.6	279 04.1	50.5	162	15.9	42.6	326 25.4
9	172	35.5	321 39.5		51.7	294 04.6	50.9	177	18.5	42.6	341 27.6
10	187	37.9	336 43.3		50.7	309 05.2	51.3	192	21.2	42.7	356 29.8
11	202	40.4	351 47.1	-18 49.7	324 05.8	-20 51.7	207	23.8	-3 42.7	11 31.9	-2 24.1
12	217	42.9	6 50.9	-18 48.8	339 06.4	-20 52.1	222	26.4	-3 42.8	26 34.1	-2 24.3
13	232	45.3	21 54.7		47.8	354 07.0	52.4	237	29.0	42.9	41 36.3
14	247	47.8	36 58.5		46.8	9 07.6	52.8	252	31.7	42.9	56 38.5
15	262	50.3	52 02.3		45.9	24 08.2	53.2	267	34.3	43.0	71 40.7
16	277	52.7	67 06.1		44.9	39 08.8	53.6	282	36.9	43.0	86 42.9
17	292	55.2	82 09.9	-18 43.9	54 09.4	-20 54.0	297	39.5	-3 43.1	101 45.1	-2 24.8
18	307	57.6	97 13.6	-18 42.9	69 10.0	-20 54.4	312	42.1	-3 43.1	116 47.3	-2 24.9
19	323	00.1	112 17.4		41.9	84 10.6	54.8	327	44.8	43.2	131 49.5
20	338	02.6	127 21.2		41.0	99 11.1	55.2	342	47.4	43.3	146 51.7
21	353	05.0	142 25.0		40.0	114 11.7	55.6	357	50.0	43.3	161 53.9
22	8	07.5	157 28.8		39.0	129 12.3	56.0	12	52.6	43.4	176 56.1
23	23	10.0	172 32.6		38.0	144 12.9	56.4	27	55.2	43.4	191 58.3
24	38	12.4	187 36.4	-18 37.0	159 13.5	-20 56.8	42	57.9	-3 43.5	207 00.5	-2 25.6
Dif	—		+38	+10	+6	-4	+26	-1		+22	-1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 22 ^d 2	PHE	$\left\{ \begin{array}{l} 4^h: 58'6'' \\ 12^h: 58'8'' \\ 20^h: 59'0'' \end{array} \right.$											
	PMG: 11 ^h 43 ^m 7																SD: 15 ^h 9
	hG ☉	Dec		hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	184	04.6	-13	40.3	276	53.4	+18	05.9	60 N	5	43	6	32	7	17	22 40 96	
1	199	04.6		41.1	291	21.1	+17	56.0	58	41	27		09		49	92 47 15	
2	214	04.6		41.9	305	48.8		46.0	56	39	23	7	02	22	56	89 39 17	
3	229	04.7		42.8	320	16.6		35.9	54	37	19	6	56	23	03	86 31 21	
4	244	04.7		43.6	334	44.4		25.7	52	36	16		51		09	83 25 22	
5	259	04.7	-13	44.4	349	12.3	+17	15.3	50	5	34	6	12	6	46	23 15 80	
6	274	04.8	-13	45.2		3	40.2	89	45	5	30	6	05	6	35	23 26 76	
7	289	04.8		46.0	18	08.1	+16	54.4	40	27	5	59		27	36	72 12 54	
8	304	04.8		46.9	32	36.1		43.7	35	23	53		19		44	68 45 36	
9	319	04.9		47.7	47	04.1		33.0	30	19	48		12	23	51	66 37 39	
10	334	04.9		48.5	61	32.2		22.2	20	12	38	6	00	**	**	** 22 44	
11	349	04.9	-13	49.3	76	00.3	+16	11.2	10 N	5	04	5	29	5	50	** ** 12 09	
12	4	05.0	-13	50.1	90	28.4	+16	00.2	0	4	54	5	19	5	40	** ** 11 57	
13	19	05.0		51.0	104	56.6	+15	49.0	10 S	43	5	09		30	**	** 45 56	
14	34	05.0		51.8	119	24.8		37.8	20	30	4	57		20	0	00 46 32 61	
15	49	05.1		52.6	133	53.0		26.5	30	12	42		07		17	41 17 66	
16	64	05.1		53.4	148	21.3		15.0	35	4	01	33	5	00	27	38 11 09	
17	79	05.1	-13	54.2	162	49.6	+15	03.5	40	3	48	4	23	4	52	0	38 35 10 59
18	94	05.2	-13	55.0	177	18.0	+14	51.9	45	3	31	4	10	4	42	0	51 31 10 47
19	109	05.2		55.9	191	46.3		40.2	50	3	09	3	55		30	1	06 27 33 80
20	124	05.2		56.7	206	14.8		28.3	52	2	59		47	25	14	25 26 82	
21	139	05.3		57.5	220	43.2		16.4	54		46	39	19		22	22 18 86	
22	154	05.3		58.3	235	11.7	+14	04.5	56		31	29	12		31	19 10 88	
23	169	05.3		59.1	249	40.2	+13	52.4	58	2	13	18	4	05	41	16 10 00	
24	184	05.3	-13	59.9	264	08.8	+13	40.2	60 S	1	51	3	05	3	56	1	53 12 9 49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.3		Mag: +1.4		Mag: -2.8		Mag: +0.9	
	21 ^h 23 ^m 7		PMG: 11 ^h 27 ^m		PMG: 13 ^h 23 ^m		PMG: 21 ^h 04 ^m		PMG: 10 ^h 10 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	38	12.4	187	36.4	159	13.5	42	57.9	207	00.5
1	53	14.9	202	40.2	174	14.1	58	00.5	222	02.7
2	68	17.4	217	44.0	189	14.7	73	03.1	237	04.9
3	83	19.8	232	47.7	204	15.3	88	05.7	252	07.1
4	98	22.3	247	51.5	219	15.8	103	08.3	267	09.3
5	113	24.8	262	55.3	234	16.4	118	11.0	282	11.5
6	128	27.2	277	59.1	249	17.0	133	13.6	297	13.7
7	143	29.7	293	02.9	264	17.6	148	16.2	312	15.9
8	158	32.1	308	06.6	279	18.2	163	18.8	327	18.1
9	173	34.6	323	10.4	294	18.8	178	21.4	342	20.3
10	188	37.1	338	14.2	309	19.4	193	24.0	357	22.5
11	203	39.5	353	18.0	324	19.9	208	26.7	12	24.6
12	218	42.0	8	21.8	339	20.5	223	29.3	27	26.8
13	233	44.5	23	25.5	354	21.1	238	31.9	42	29.0
14	248	46.9	38	29.3	9	21.7	253	34.5	57	31.2
15	263	49.4	53	33.1	24	22.3	268	37.1	72	33.4
16	278	51.9	68	36.8	39	22.9	283	39.7	87	35.6
17	293	54.3	83	40.6	54	23.4	298	42.3	102	37.8
18	308	56.8	98	44.4	69	24.0	313	45.0	117	40.0
19	323	59.2	113	48.1	84	24.6	328	47.6	132	42.2
20	339	01.7	128	51.9	99	25.2	343	50.2	147	44.4
21	354	04.2	143	55.7	114	25.8	358	52.8	162	46.6
22	9	06.6	158	59.4	129	26.4	13	55.4	177	48.8
23	24	09.1	174	03.2	144	26.9	28	58.0	192	51.0
24	39	11.6	189	07.0	159	27.5	44	00.6	207	53.2
Dif	—		+38	+10	+6	-4	+26	-1	+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: 23 ^d 2 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 3 20 ^h : 59 ^m 5 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	184	05.3	-13 59.9	264	08.8	+13 40.2	122	60 N	16 07	16 52	17 41	** ** *	**	14 08	8
1	199	05.4	-14 00.7	278	37.4	96	28.0	58	15	16 57	17 43	** ** *	**	14 02	12
2	214	05.4	01.6	293	06.0	96	15.6	56	22	17 01	17 45	** ** *	**	13 56	15
3	229	05.4	02.4	307	34.7	97	+13 03.2	54	28	05	17 47	** ** *	**	52	1
4	244	05.5	03.2	322	03.4	97	+12 50.7	52	34	09	17 49	** ** *	**	47	20
5	259	05.5	-14 04.0	336	32.1	97	+12 38.2	50	16 39	17 13	17 51	** ** *	**	13 43	22
6	274	05.5	-14 04.8	351	00.8	97	+12 25.5	45	16 50	17 20	17 55	** ** *	**	13 35	26
7	289	05.5	05.6	5	29.6	98	+12 12.8	40	16 59	17 27	17 59	** ** *	**	27	31
8	304	05.6	06.4	19	58.4	98	+12 00.0	35	17 07	17 33	18 03	** ** *	**	21	34
9	319	05.6	07.2	34	27.3	99	+11 47.1	30	14	39	18 07	** ** *	**	16	37
10	334	05.6	08.0	48	56.1	98	34.1	20	26	49	18 15	0 04	60	13 06	42
11	349	05.6	-14 08.8	63	25.0	99	+11 21.1	10 N	17 37	17 58	18 23	0 15	55	12 58	46
12	4	05.7	-14 09.7	77	54.0	100	+11 07.9	0	17 47	18 08	18 33	0 25	51	12 49	51
13	19	05.7	10.5	92	22.9	99	+10 54.8	10 S	17 57	18 19	18 45	0 35	47	12 41	56
14	34	05.7	11.3	106	51.9	100	41.5	20	18 09	18 31	18 58	0 46	43	12 33	60
15	49	05.7	12.1	121	20.9	100	28.2	30	21	47	19 17	0 58	38	12 23	65
16	64	05.8	12.9	135	49.9	100	14.8	35	29	18 56	19 28	1 05	35	12 17	68
17	79	05.8	-14 13.7	150	19.0	101	+10 01.4	40	18 37	19 07	19 42	1 13	32	12 10	72
18	94	05.8	-14 14.5	164	48.0	100	+9 47.8	45	18 48	19 20	19 59	1 22	28	12 02	76
19	109	05.8	15.3	179	17.1	101	34.2	50	19 00	19 36	20 22	33 24	33	11 53	81
20	124	05.8	16.1	193	46.3	102	20.6	52	05	44	20 33	39 21	39	11 48	84
21	139	05.9	16.9	208	15.4	101	+9 06.9	54	12	19 53	20 46	44 19	44	11 44	86
22	154	05.9	17.7	222	44.6	102	+8 53.1	56	19	20 03	21 02	50 16	50	11 38	89
23	169	05.9	18.5	237	13.7	101	39.3	58	27	14	21 21	1 57	13	11 32	92
24	184	05.9	-14 19.3	251	42.9	102	+8 25.4	60 S	19 36	20 28	21 46	2 05	10	11 25	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 21 ^h 19 ^m 7		Mag: -4.3 PMG: 11 ^h 21 ^m		Mag: +1.4 PMG: 13 ^h 22 ^m		Mag: -2.8 PMG: 21 ^h 00 ^m		Mag: +0.9 PMG: 10 ^h 07 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	39	11.6	189	07.0	-18	13.2	159	27.5	-21	06.0	44	00.6	-3	44.8	207	53.2	-2	28.2	
1	54	14.0	204	10.7		12.2	174	28.1		06.4	59	03.3		44.9	222	55.4		28.3	
2	69	16.5	219	14.5		11.2	189	28.7		06.8	74	05.9		44.9	237	57.6		28.4	
3	84	19.0	234	18.2		10.2	204	29.3		07.2	89	08.5		45.0	252	59.8		28.5	
4	99	21.4	249	22.0		09.1	219	29.8		07.6	104	11.1		45.0	268	02.0		28.6	
5	114	23.9	264	25.7	-18	08.1	234	30.4	-21	07.9	119	13.7	-3	45.1	283	04.2	-2	28.7	
6	129	26.4	279	29.5	-18	07.1	249	31.0	-21	08.3	134	16.3	-3	45.1	298	06.4	-2	28.8	
7	144	28.8	294	33.2		06.1	264	31.6		08.7	149	18.9		45.2	313	08.6		28.9	
8	159	31.3	309	37.0		05.1	279	32.2		09.1	164	21.5		45.3	328	10.8		29.0	
9	174	33.7	324	40.7		04.1	294	32.7		09.5	179	24.1		45.3	343	13.0		29.1	
10	189	36.2	339	44.5		03.1	309	33.3		09.8	194	26.7		45.4	358	15.2		29.2	
11	204	38.7	354	48.2	-18	02.1	324	33.9	-21	10.2	209	29.4	-3	45.4	13	17.4	-2	29.3	
12	219	41.1	9	52.0	-18	01.1	339	34.5	-21	10.6	224	32.0	-3	45.5	28	19.6	-2	29.4	
13	234	43.6	24	55.7	-18	00.0	354	35.1		11.0	239	34.6		45.5	43	21.8		29.6	
14	249	46.1	39	59.4	-17	59.0	9	35.6		11.4	254	37.2		45.6	58	24.0		29.7	
15	264	48.5	55	03.2		58.0	24	36.2		11.7	269	39.8		45.6	73	26.2		29.8	
16	279	51.0	70	06.9		57.0	39	36.8		12.1	284	42.4		45.7	88	28.4		29.9	
17	294	53.5	85	10.7	-17	56.0	54	37.4	-21	12.5	299	45.0	-3	45.7	103	30.6	-2	30.0	
18	309	55.9	100	14.4	-17	55.0	69	37.9	-21	12.9	314	47.6	-3	45.8	118	32.8	-2	30.1	
19	324	58.4	115	18.1		53.9	84	38.5		13.2	329	50.2		45.8	133	35.0		30.2	
20	340	00.9	130	21.9		52.9	99	39.1		13.6	344	52.8		45.9	148	37.2		30.3	
21	355	03.3	145	25.6		51.9	114	39.7		14.0	359	55.4		45.9	163	39.4		30.4	
22	10	05.8	160	29.3		50.9	129	40.2		14.4	14	58.0		46.0	178	41.6		30.5	
23	25	08.2	175	33.0		49.9	144	40.8		14.8	30	00.6		46.0	193	43.8		30.6	
24	40	10.7	190	36.8	-17	48.8	159	41.4	-21	15.1	45	03.2	-3	46.1	208	46.0	-2	30.7	
Dif	—		+37		+10		+6		-4		+26		-1		+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: 24 ^d 2 PHE { 4 ^h : 59'6 12 ^h : 59'7 20 ^h : 59'9 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	184	05.9	-14	19.3	251	42.9	+8	25.4	60 N	5	47	6	37	7	22	0	16
1	199	06.0		20.1	266	12.1	+8	11.5	58	45	32		14		21	92	
2	214	06.0		20.9	280	41.4	+7	57.5	56	43	27		07		25	89	
3	229	06.0		21.7	295	10.6		43.4	54	41	23	7	00		29	86	
4	244	06.0		22.5	309	39.9		29.4	52	39	19	6	55		32	84	
5	259	06.0	-14	23.3	324	09.2	+7	15.2	50	5	37	6	15	6	49	0	35
6	274	06.0	-14	24.2	338	38.4	+7	01.0	45	5	33	6	08	6	38	0	42
7	289	06.1		25.0	353	07.7	+6	46.8	40	29	6	01	29		48	72	
8	304	06.1		25.8	7	37.1		32.5	35	25	5	55	21		52	69	
9	319	06.1		26.6	22	06.4		18.1	30	21	49		14		0	57	
10	334	06.1		27.4	36	35.7	+6	03.8	20	13	39	6	01		1	04	
11	349	06.1	-14	28.2	51	05.1	+5	49.3	10 N	5	04	5	29	5	50	1	10
12	4	06.1	-14	29.0	65	34.4	+5	34.9	0	4	54	5	19	5	40	1	16
13	19	06.2		29.8	80	03.8		20.4	10 S	43	5	08	30		22	47	
14	34	06.2		30.5	94	33.1	+5	05.8	20	29	4	56	18		29	41	
15	49	06.2		31.3	109	02.5	+4	51.3	30	4	10	40	5	05		36	
16	64	06.2		32.1	123	31.9		36.7	35	3	59	31	4	58		40	
17	79	06.2	-14	32.9	138	01.3	+4	22.0	40	3	45	4	20	4	49	1	45
18	94	06.2	-14	33.7	152	30.7	+4	07.3	45	3	27	4	07	4	39	1	50
19	109	06.3		34.5	167	00.0	+3	52.6	50	3	05	3	51	27		1	57
20	124	06.3		35.3	181	29.4		37.9	52	2	53	43	21		2	00	
21	139	06.3		36.1	195	58.8		23.1	54	40	34	15		03	16		10
22	154	06.3		36.9	210	28.2	+3	08.3	56	25	24	08		06	14		07
23	169	06.3		37.7	224	57.6	+2	53.5	58	2	05	3	12	4	00	10	11
24	184	06.3	-14	38.5	239	26.9	+2	38.7	60 S	1	41	2	59	3	50	2	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 21 ^h 15 ^m 8		Mag: -4.3 PMG: 11 ^h 15 ^m		Mag: +1.4 PMG: 13 ^h 21 ^m		Mag: -2.8 PMG: 20 ^h 56 ^m		Mag: +0.9 PMG: 10 ^h 03 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	40	10.7	190	36.8	-17	48.8	159	41.4	-21	15.1	
1	55	13.2	205	40.5		47.8	174	42.0		15.5	
2	70	15.6	220	44.2		46.8	189	42.5		15.9	
3	85	18.1	235	47.9		45.8	204	43.1		16.3	
4	100	20.6	250	51.6		44.8	219	43.7		16.6	
5	115	23.0	265	55.3	-17	43.7	234	44.3	-21	17.0	
6	130	25.5	280	59.1	-17	42.7	249	44.8	-21	17.4	
7	145	28.0	296	02.8		41.7	264	45.4		17.7	
8	160	30.4	311	06.5		40.7	279	46.0		18.1	
9	175	32.9	326	10.2		39.6	294	46.5		18.5	
10	190	35.3	341	13.9		38.6	309	47.1		18.9	
11	205	37.8	356	17.6	-17	37.6	324	47.7	-21	19.2	
12	220	40.3	11	21.3	-17	36.6	339	48.3	-21	19.6	
13	235	42.7	26	25.0		35.5	354	48.8		20.0	
14	250	45.2	41	28.7		34.5	9	49.4		20.3	
15	265	47.7	56	32.4		33.5	24	50.0		20.7	
16	280	50.1	71	36.1		32.4	39	50.5		21.1	
17	295	52.6	86	39.8	-17	31.4	54	51.1	-21	21.5	
18	310	55.1	101	43.5	-17	30.4	69	51.7	-21	21.8	
19	325	57.5	116	47.1		29.4	84	52.2		22.2	
20	341	00.0	131	50.8		28.3	99	52.8		22.6	
21	356	02.5	146	54.5		27.3	114	53.4		22.9	
22	11	04.9	161	58.2		26.3	129	54.0		23.3	
23	26	07.4	177	01.9		25.2	144	54.5		23.7	
24	41	09.8	192	05.6	-17	24.2	159	55.1	-21	24.0	
Dif	—		+37	+10	+6		-4	+26		0	
										+22	-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6				Edad: 25 ^d 2 PHE { SD: 16'3 PMG: 8 ^h 19 ^m						4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'1 R°: 51 ^m							
	hG ☉		Dec		hG ☾		Dif				Civl		Náutico		Hora		R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	184	06.3	-14	38.5	239	26.9	+2	38.7	60 N	16 02	16 47	17 37	1 52 97		14 24 8			
1	199	06.3		39.3	253	56.3 ¹⁰⁴		23.8 ¹⁴⁹	58	10	53	39	53 94		24 12			
2	214	06.3		40.1	268	25.7 ¹⁰⁴	+2	08.9 ¹⁴⁹	56	18	16 57	41	54 91		25 14			
3	229	06.3		40.9	282	55.1 ¹⁰⁴	+1	54.0 ¹⁴⁹	54	24	17 02	44	55 88		25 17			
4	244	06.4		41.7	297	24.4 ¹⁰³		39.1 ¹⁴⁹	52	30	06	46	56 85		26 19			
5	259	06.4	-14	42.5	311	53.8 ¹⁰⁴	+1	24.2 ¹⁴⁹	50	16 35	17 09	17 48	1 57 82		14 26 22			
6	274	06.4	-14	43.3	326	23.1 ¹⁰³	+1	09.2 ¹⁵⁰	45	16 47	17 18	17 52	1 59 77		14 27 26			
7	289	06.4		44.1	340	52.4 ¹⁰³	+0	54.3 ¹⁴⁹	40	16 57	25	17 57	2 00 73		28 30			
8	304	06.4		44.9	355	21.8 ¹⁰⁴		39.3 ¹⁵⁰	35	17 05	31	18 01	01 69		28 34			
9	319	06.4		45.6	9	51.1 ¹⁰³		24.3 ¹⁵⁰	30	12	37	05	02 66		29 37			
10	334	06.4		46.4	24	20.4 ¹⁰³	+0	09.3 ¹⁵⁰	20	25	48	14	04 60		30 42			
11	349	06.4	-14	47.2	38	49.6 ¹⁰²	-0	05.7 ¹⁵⁰	10 N	17 36	17 58	18 23	2 06 55		14 31 47			
12	4	06.4	-14	48.0	53	18.9 ¹⁰³	-0	20.7 ¹⁵⁰	0	17 47	18 08	18 33	2 07 51		14 31 52			
13	19	06.4		48.8	67	48.2 ¹⁰³		35.7 ¹⁵⁰	10 S	17 58	20	18 45	09 46		32 56			
14	34	06.4		49.6	82	17.4 ¹⁰²	-0	50.7 ¹⁵⁰	20	18 09	32	19 00	10 42		33 61			
15	49	06.4		50.4	96	46.6 ¹⁰²	-1	05.8 ¹⁵¹	30	23	48	18	12 37		34 66			
16	64	06.5		51.2	111	15.8 ¹⁰²		20.8 ¹⁵⁰	35	31	18 58	30	13 34		34 70			
17	79	06.5	-14	52.0	125	45.0 ¹⁰²	-1	35.8 ¹⁵⁰	40	18 40	19 09	19 45	2 15 29		14 34 74			
18	94	06.5	-14	52.7	140	14.2 ¹⁰²	-1	50.8 ¹⁵⁰	45	18 50	19 23	20 03	2 16 26		14 35 78			
19	109	06.5		53.5	154	43.3 ¹⁰¹	-2	05.8 ¹⁵⁰	50	19 03	40	26	18 21		36 83			
20	124	06.5		54.3	169	12.4 ¹⁰¹		20.8 ¹⁵⁰	52	09	48	38	19 18		36 85			
21	139	06.5		55.1	183	41.5 ¹⁰¹		35.8 ¹⁵⁰	54	16	19 57	20 52	19 17		36 88			
22	154	06.5		55.9	198	10.6 ¹⁰¹	-2	50.7 ¹⁴⁹	56	23	20 08	21 09	20 14		37 91			
23	169	06.5		56.7	212	39.6 ¹⁰⁰	-3	05.7 ¹⁵⁰	58	32	20	29	21 11		37 94			
24	184	06.5	-14	57.5	227	08.7 ¹⁰¹	-3	20.7 ¹⁵⁰	60 S	19 41	20 34	21 56	2 23 7		14 38 98			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 11 ^m 9		Mag: -4.3 PMG: 11 ^h 09 ^m			Mag: +1.4 PMG: 13 ^h 20 ^m			Mag: -2.8 PMG: 20 ^h 52 ^m			Mag: +0.9 PMG: 10 ^h 00 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	41	09.8	192	05.6	-17	24.2	159	55.1	-21	24.0	46	05.7	-3	47.3	209	38.7		
1	56	12.3	207	09.2		23.2	174	55.7		24.4	61	08.3		47.3	224	40.9		
2	71	14.8	222	12.9		22.1	189	56.2		24.8	76	10.9		47.4	239	43.1		
3	86	17.2	237	16.6		21.1	204	56.8		25.1	91	13.5		47.4	254	45.3		
4	101	19.7	252	20.3		20.1	219	57.4		25.5	106	16.1		47.4	269	47.5		
5	116	22.2	267	23.9	-17	19.0	234	57.9	-21	25.9	121	18.7	-3	47.5	284	49.7		
6	131	24.6	282	27.6	-17	18.0	249	58.5	-21	26.2	136	21.3	-3	47.5	299	51.9		
7	146	27.1	297	31.2		17.0	264	59.1		26.6	151	23.9		47.6	314	54.1		
8	161	29.6	312	34.9		16.0	279	59.6		27.0	166	26.5		47.6	329	56.3		
9	176	32.0	327	38.6		14.9	295	00.2		27.3	181	29.1		47.7	344	58.5		
10	191	34.5	342	42.2		13.9	310	00.7		27.7	196	31.7		47.7	0	00.7		
11	206	36.9	357	45.9	-17	12.8	325	01.3	-21	28.0	211	34.2	-3	47.8	15	02.9		
12	221	39.4	12	49.5	-17	11.8	340	01.9	-21	28.4	226	36.8	-3	47.8	30	05.1		
13	236	41.9	27	53.2		10.8	355	02.4		28.8	241	39.4		47.9	45	07.3		
14	251	44.3	42	56.8		09.7	10	03.0		29.1	256	42.0		47.9	60	09.5		
15	266	46.8	58	00.5		08.7	25	03.6		29.5	271	44.6		48.0	75	11.7		
16	281	49.3	73	04.1		07.7	40	04.1		29.9	286	47.2		48.0	90	13.9		
17	296	51.7	88	07.8	-17	06.6	55	04.7	-21	30.2	301	49.8	-3	48.0	105	16.1		
18	311	54.2	103	11.4	-17	05.6	70	05.3	-21	30.6	316	52.4	-3	48.1	120	18.3		
19	326	56.7	118	15.0		04.6	85	05.8		30.9	331	55.0		48.1	135	20.5		
20	341	59.1	133	18.7		03.5	100	06.4		31.3	346	57.6		48.2	150	22.7		
21	357	01.6	148	22.3		02.5	115	06.9		31.7	2	00.2		48.2	165	24.9		
22	12	04.1	163	25.9		01.5	130	07.5		32.0	17	02.8		48.3	180	27.1		
23	27	06.5	178	29.6	-17	00.4	145	08.1		32.4	32	05.4		48.3	195	29.3		
24	42	09.0	193	33.2	-16	59.4	160	08.6	-21	32.7	47	07.9	-3	48.4	210	31.5		
Dif	—		+37			+10	+6			-4	+26			0			+22	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 26 ^d 2 PHE { 4 ^h : 60'2 12 ^h : 60'2 20 ^h : 60'2 SD: 16'4 PMG: 9 ^h 10 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	06.5	-14	57.5	227	08.7	-3	20.7	60 N	5 52	6 41	7 27	3 29	99	14 32	9
1	199	06.5		58.2	241	37.7 ¹⁰⁰		35.6 ¹⁴⁹	58	49	36	18	27	95	36	13
2	214	06.5		59.0	256	06.6 ⁹⁹	-3	50.5 ¹⁴⁹	56	47	31	11	25	91	39	16
3	229	06.5	-14	59.8	270	35.6 ¹⁰⁰	-4	05.4 ¹⁴⁹	54	44	26	7 04	23	88	42	19
4	244	06.5	-15	00.6	285	04.5 ⁹⁹		20.3 ¹⁴⁹	52	42	22	6 58	21	86	45	21
5	259	06.5	-15	01.4	299	33.4 ⁹⁹	-4	35.2 ¹⁴⁹	50	5 40	6 18	6 53	3 19	84	14 48	23
6	274	06.5	-15	02.2	314	02.2 ⁹⁸	-4	50.0 ¹⁴⁸	45	5 35	6 10	6 41	3 16	78	14 53	29
7	289	06.5		02.9	328	31.0 ⁹⁸	-5	04.8 ¹⁴⁸	40	31	6 03	31	13	74	14 58	32
8	304	06.5		03.7	342	59.8 ⁹⁸		19.6 ¹⁴⁸	35	26	5 56	23	10	71	15	02
9	319	06.5		04.5	357	28.6 ⁹⁸		34.3 ¹⁴⁷	30	22	50	15	08	67	06	39
10	334	06.5		05.3	11	57.3 ⁹⁷	-5	49.1 ¹⁴⁸	20	13	40	6 02	04	62	12	44
11	349	06.5	-15	06.1	26	26.0 ⁹⁷	-6	03.8 ¹⁴⁷	10 N	5 04	5 29	5 51	3 01	57	15 18	48
12	4	06.5	-15	06.8	40	54.6 ⁹⁶	-6	18.4 ¹⁴⁶	0	4 54	5 19	5 40	2 58	52	15 23	53
13	19	06.5		07.6	55	23.2 ⁹⁶		33.1 ¹⁴⁷	10 S	42	5 07	29	55	48	28	58
14	34	06.5		08.4	69	51.8 ⁹⁶	-6	47.7 ¹⁴⁶	20	27	4 54	17	52	43	34	62
15	49	06.5		09.2	84	20.3 ⁹⁵	-7	02.2 ¹⁴⁵	30	4 08	39	5 04	49	37	40	68
16	64	06.5		10.0	98	48.8 ⁹⁵		16.7 ¹⁴⁵	35	3 56	29	4 56	47	34	44	70
17	79	06.5	-15	10.7	113	17.3 ⁹⁵	-7	31.2 ¹⁴⁵	40	3 42	4 18	4 47	2 44	32	15 48	74
18	94	06.5	-15	11.5	127	45.7 ⁹⁴	-7	45.6 ¹⁴⁴	45	3 24	4 04	4 36	2 42	27	15 53	78
19	109	06.5		12.3	142	14.1 ⁹⁴	-8	00.0 ¹⁴⁴	50	3 00	3 47	23	39	22	15 59	83
20	124	06.5		13.1	156	42.4 ⁹³	-8	14.4 ¹⁴⁴	52	2 48	39	17	37	21	16 01	87
21	139	06.5		13.8	171	10.7 ⁹³		28.6 ¹⁴²	54	34	29	11	36	18	04	89
22	154	06.5		14.6	185	38.9 ⁹²		42.9 ¹⁴³	56	2 18	19	4 03	34	15	08	92
23	169	06.5		15.4	200	07.1 ⁹²	-8	57.1 ¹⁴²	58	1 57	3 06	3 55	32	12	11	96
24	184	06.5	-15	16.2	214	35.3 ⁹²	-9	11.2 ¹⁴¹	60 S	1 30	2 52	3 45	2 30	9	16 16	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 07 ^m 9		Mag: -4.2 PMG: 11 ^h 03 ^m		Mag: +1.4 PMG: 13 ^h 19 ^m		Mag: -2.8 PMG: 20 ^h 48 ^m		Mag: +0.9 PMG: 9 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	42	09.0	193	33.2	-16	59.4	160	08.6	-21	32.7	47	07.9	-3	48.4	210	31.5	-2	35.8
1	57	11.4	208	36.8		58.4	175	09.2		33.1	62	10.5		48.4	225	33.7		35.9
2	72	13.9	223	40.4		57.3	190	09.8		33.5	77	13.1		48.4	240	35.9		36.0
3	87	16.4	238	44.0		56.3	205	10.3		33.8	92	15.7		48.5	255	38.1		36.2
4	102	18.8	253	47.7		55.3	220	10.9		34.2	107	18.3		48.5	270	40.3		36.3
5	117	21.3	268	51.3	-16	54.2	235	11.4	-21	34.5	122	20.9	-3	48.6	285	42.5	-2	36.4
6	132	23.8	283	54.9	-16	53.2	250	12.0	-21	34.9	137	23.5	-3	48.6	300	44.7	-2	36.5
7	147	26.2	298	58.5		52.1	265	12.6		35.2	152	26.1		48.7	315	46.9		36.6
8	162	28.7	314	02.1		51.1	280	13.1		35.6	167	28.7		48.7	330	49.1		36.7
9	177	31.2	329	05.7		50.1	295	13.7		36.0	182	31.3		48.8	345	51.3		36.8
10	192	33.6	344	09.3		49.0	310	14.2		36.3	197	33.8		48.8	0	53.6		36.9
11	207	36.1	359	12.9	-16	48.0	325	14.8	-21	36.7	212	36.4	-3	48.8	15	55.8	-2	37.0
12	222	38.6	14	16.5	-16	47.0	340	15.3	-21	37.0	227	39.0	-3	48.9	30	58.0	-2	37.1
13	237	41.0	29	20.1		45.9	355	15.9		37.4	242	41.6		48.9	46	00.2		37.2
14	252	43.5	44	23.7		44.9	10	16.5		37.7	257	44.2		49.0	61	02.4		37.3
15	267	45.9	59	27.3		43.9	25	17.0		38.1	272	46.8		49.0	76	04.6		37.4
16	282	48.4	74	30.8		42.8	40	17.6		38.4	287	49.4		49.0	91	06.8		37.5
17	297	50.9	89	34.4	-16	41.8	55	18.1	-21	38.8	302	51.9	-3	49.1	106	09.0	-2	37.6
18	312	53.3	104	38.0	-16	40.8	70	18.7	-21	39.2	317	54.5	-3	49.1	121	11.2	-2	37.7
19	327	55.8	119	41.6		39.7	85	19.2		39.5	332	57.1		49.2	136	13.4		37.8
20	342	58.3	134	45.2		38.7	100	19.8		39.9	347	59.7		49.2	151	15.6		37.9
21	358	00.7	149	48.7		37.7	115	20.3		40.2	3	02.3		49.3	166	17.8		38.0
22	13	03.2	164	52.3		36.6	130	20.9		40.6	18	04.9		49.3	181	20.0		38.1
23	28	05.7	179	55.9		35.6	145	21.5		40.9	33	07.5		49.3	196	22.2		38.3
24	43	08.1	194	59.4	-16	34.6	160	22.0	-21	41.3	48	10.0	-3	49.4	211	24.4	-2	38.4
Dif	—		+36		+10		+6		-4		+26		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 27 ^d 2 PHE { 4 ^h : 60'2 12 ^h : 60'1 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 m	h m m	h m m	h m m			
0	184	06.5	-15	16.2	214	35.3	-9	11.2	60 N	15 57	16 43	17 32	5 08 100	14 41 13				
1	199	06.5		16.9	229	03.4	91	25.3 ¹⁴¹	58	16 06	48	35	5 02 96	49 16				
2	214	06.4		17.7	243	31.5	91	39.3 ¹⁴⁰	56	13	53	38	4 56 92	14 55 20				
3	229	06.4		18.5	257	59.5	90	-9 53.3 ¹⁴⁰	54	20	16 58	40	51 89	15 01 23				
4	244	06.4		19.2	272	27.5	90	-10 07.2 ¹³⁹	52	27	17 02	43	47 86	06 26				
5	259	06.4	-15	20.0	286	55.4	89	-10 21.1 ¹³⁹	50	16 32	17 06	17 45	4 43 84	15 11 28				
6	274	06.4	-15	20.8	301	23.3	89	-10 34.8 ¹³⁷	45	16 44	17 15	17 50	4 34 79	15 22 32				
7	289	06.4		21.6	315	51.1	88	-10 48.6 ¹³⁸	40	16 54	23	55	27 74	30 37				
8	304	06.4		22.3	330	18.9	88	-11 02.2 ¹³⁶	35	17 03	29	17 59	21 71	38 40				
9	319	06.4		23.1	344	46.6	87	15.8 ¹³⁶	30	11	36	18 04	15 68	45 42				
10	334	06.4		23.9	359	14.3	87	29.3 ¹³⁵	20	24	47	13	4 06 63	15 56 48				
11	349	06.4	-15	24.6	13	41.9	86	-11 42.8 ¹³⁵	10 N	17 36	17 58	18 23	3 58 58	16 06 52				
12	4	06.4	-15	25.4	28	09.5	86	-11 56.1 ¹³³	0	17 47	18 08	18 33	3 50 55	16 16 55				
13	19	06.4		26.2	42	37.0	85	-12 09.4 ¹³³	10 S	17 58	20	18 46	43 50	26 59				
14	34	06.3		26.9	57	04.5	85	22.7 ¹³³	20	18 10	34	19 01	35 46	36 63				
15	49	06.3		27.7	71	32.0	85	35.8 ¹³¹	30	25	18 50	20	26 41	48 68				
16	64	06.3		28.5	85	59.3	83	-12 48.9 ¹³¹	35	33	19 00	33	21 38	16 54 72				
17	79	06.3	-15	29.3	100	26.7	84	-13 01.9 ¹³⁰	40	18 42	19 12	19 48	3 16 34	17 02 75				
18	94	06.3	-15	30.0	114	53.9	82	-13 14.8 ¹²⁹	45	18 53	19 26	20 06	3 09 30	17 11 79				
19	109	06.3		30.8	129	21.2	83	27.6 ¹²⁸	50	19 07	44	31	3 01 26	22 84				
20	124	06.3		31.5	143	48.3	81	40.3 ¹²⁷	52	13	19 52	43	2 58 23	28 85				
21	139	06.3		32.3	158	15.4	81	-13 52.9 ¹²⁶	54	20	20 02	20 58	54 20	33 89				
22	154	06.2		33.1	172	42.5	81	-14 05.5 ¹²⁶	56	28	13	21 15	49 18	40 91				
23	169	06.2		33.8	187	09.5	80	18.0 ¹²⁵	58	36	26	21 38	44 15	47 95				
24	184	06.2	-15	34.6	201	36.5	80	-14 30.3 ¹²³	60 S	19 47	20 41	22 08	2 39 11	17 55 100				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 04 ^m 0		Mag: -4.2 PMG: 10 ^h 57 ^m			Mag: +1.4 PMG: 13 ^h 18 ^m			Mag: -2.8 PMG: 20 ^h 44 ^m			Mag: +0.9 PMG: 9 ^h 53 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	43	08.1	194	59.4	-16	34.6	160	22.0	-21	41.3	48	10.0	-3	49.4	211	24.4		
1	58	10.6	210	03.0		33.5	175	22.6		41.6	63	12.6		49.4	226	26.6		
2	73	13.0	225	06.6		32.5	190	23.1		42.0	78	15.2		49.5	241	28.8		
3	88	15.5	240	10.1		31.5	205	23.7		42.3	93	17.8		49.5	256	31.0		
4	103	18.0	255	13.7		30.4	220	24.2		42.7	108	20.4		49.5	271	33.2		
5	118	20.4	270	17.2	-16	29.4	235	24.8	-21	43.0	123	22.9	-3	49.6	286	35.4		
6	133	22.9	285	20.8	-16	28.4	250	25.3	-21	43.4	138	25.5	-3	49.6	301	37.6		
7	148	25.4	300	24.3		27.3	265	25.9		43.7	153	28.1		49.7	316	39.8		
8	163	27.8	315	27.9		26.3	280	26.4		44.1	168	30.7		49.7	331	42.0		
9	178	30.3	330	31.4		25.3	295	27.0		44.4	183	33.3		49.7	346	44.2		
10	193	32.8	345	34.9		24.2	310	27.5		44.8	198	35.9		49.8	1	46.4		
11	208	35.2	0	38.5	-16	23.2	325	28.1	-21	45.1	213	38.4	-3	49.8	16	48.6		
12	223	37.7	15	42.0	-16	22.2	340	28.6	-21	45.4	228	41.0	-3	49.9	31	50.8		
13	238	40.2	30	45.5		21.1	355	29.2		45.8	243	43.6		49.9	46	53.0		
14	253	42.6	45	49.1		20.1	10	29.7		46.1	258	46.2		49.9	61	55.2		
15	268	45.1	60	52.6		19.1	25	30.3		46.5	273	48.7		50.0	76	57.4		
16	283	47.5	75	56.1		18.0	40	30.8		46.8	288	51.3		50.0	91	59.6		
17	298	50.0	90	59.6	-16	17.0	55	31.4	-21	47.2	303	53.9	-3	50.1	107	01.8		
18	313	52.5	106	03.1	-16	16.0	70	31.9	-21	47.5	318	56.5	-3	50.1	122	04.0		
19	328	54.9	121	06.6		15.0	85	32.5		47.9	333	59.1		50.1	137	06.2		
20	343	57.4	136	10.1		13.9	100	33.0		48.2	349	01.6		50.2	152	08.4		
21	358	59.9	151	13.7		12.9	115	33.6		48.6	4	04.2		50.2	167	10.6		
22	14	02.3	166	17.2		11.9	130	34.1		48.9	19	06.8		50.2	182	12.8		
23	29	04.8	181	20.7		10.8	145	34.7		49.2	34	09.4		50.3	197	15.0		
24	44	07.3	196	24.2	-16	09.8	160	35.2	-21	49.6	49	11.9	-3	50.3	212	17.3		
Dif	—		+35			+10	+6			-3	+26			0	+22			-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 28 ^d 2 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'7 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	184	06.2	-15 34.6	201	36.5	-14 30.3	60 N	5 56	6 46	7 32	6 48	99	14 54	19	
1	199	06.2	35.4	216	03.4	79 42.6 ¹²³	58	53	40	23	38	94	15 05	24	
2	214	06.2	36.1	230	30.2	78 -14 54.8 ¹²²	56	50	35	15	28	91	15	27	
3	229	06.2	36.9	244	57.0	78 -15 06.9 ¹²¹	54	48	30	08	20	88	24	30	
4	244	06.2	37.7	259	23.8	78 18.9 ¹²⁰	52	45	26	7 02	13	85	32	32	
5	259	06.1	-15 38.4	273	50.4	76 -15 30.8 ¹¹⁹	50	5 43	6 22	6 56	6 07	82	15 39	34	
6	274	06.1	-15 39.2	288	17.1	77 -15 42.5 ¹¹⁷	45	5 38	6 13	6 44	5 53	77	15 54	39	
7	289	06.1	39.9	302	43.7	76 -15 54.2 ¹¹⁷	40	33	6 05	33	41	74	16 07	42	
8	304	06.1	40.7	317	10.2	75 -16 05.8 ¹¹⁶	35	28	5 58	25	32	71	18	44	
9	319	06.1	41.5	331	36.7	75 17.3 ¹¹⁵	30	23	52	17	23	69	27	47	
10	334	06.1	42.2	346	03.1	74 28.6 ¹¹³	20	14	40	6 03	5 09	64	44	51	
11	349	06.0	-15 43.0	0	29.5	74 -16 39.9 ¹¹³	10 N	5 04	5 30	5 51	4 56	60	16 58	54	
12	4	06.0	-15 43.7	14	55.8	73 -16 51.0 ¹¹¹	0	4 54	5 19	5 40	4 45	56	17 11	58	
13	19	06.0	44.5	29	22.1	73 -17 02.1 ¹¹¹	10 S	41	5 07	29	33	53	25	60	
14	34	06.0	45.3	43	48.3	72 13.0 ¹⁰⁹	20	26	4 53	16	21	49	39	64	
15	49	06.0	46.0	58	14.5	72 23.8 ¹⁰⁸	30	4 07	37	5 02	4 07	45	17 56	68	
16	64	05.9	46.8	72	40.6	71 34.5 ¹⁰⁷	35	3 54	27	4 54	3 59	42	18 06	70	
17	79	05.9	-15 47.5	87	06.6	70 -17 45.0 ¹⁰⁵	40	3 39	4 15	4 45	3 50	39	18 17	72	
18	94	05.9	-15 48.3	101	32.7	71 -17 55.5 ¹⁰⁵	45	3 20	4 01	4 33	3 39	36	18 30	76	
19	109	05.9	49.0	115	58.6	69 -18 05.8 ¹⁰³	50	2 56	3 43	20	27	31	46	80	
20	124	05.9	49.8	130	24.5	69 16.0 ¹⁰²	52	43	34	14	21	28	18 53	83	
21	139	05.8	50.5	144	50.4	69 26.1 ¹⁰¹	54	29	25	4 07	14	26	19 02	85	
22	154	05.8	51.3	159	16.2	68 36.1 ¹⁰⁰	56	2 11	14	3 59	3 07	23	11	88	
23	169	05.8	52.0	173	42.0	68 45.9 ⁹⁸	58	1 49	3 01	50	2 59	20	22	91	
24	184	05.8	-15 52.8	188	07.8	68 -18 55.7 ⁹⁸	60 S	1 19	2 46	3 40	2 50	16	19 35	95	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 00 ^m 1		Mag: -4.2 PMG: 10 ^h 52 ^m			Mag: +1.4 PMG: 13 ^h 17 ^m			Mag: -2.8 PMG: 20 ^h 40 ^m			Mag: +0.9 PMG: 9 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	44	07.3	196 24.2	-16 09.8	160 35.2	-21 49.6	49	11.9	-3 50.3	212	17.3	-2 40.9	212	17.3	-2 40.9
1	59	09.7	211 27.7	08.8	175 35.8	49.9	64	14.5	50.4	227	19.5	41.0	227	19.5	41.0
2	74	12.2	226 31.1	07.8	190 36.3	50.3	79	17.1	50.4	242	21.7	41.1	242	21.7	41.1
3	89	14.6	241 34.6	06.7	205 36.9	50.6	94	19.7	50.4	257	23.9	41.2	257	23.9	41.2
4	104	17.1	256 38.1	05.7	220 37.4	51.0	109	22.2	50.5	272	26.1	41.3	272	26.1	41.3
5	119	19.6	271 41.6	-16 04.7	235 38.0	-21 51.3	124	24.8	-3 50.5	287	28.3	-2 41.4	287	28.3	-2 41.4
6	134	22.0	286 45.1	-16 03.7	250 38.5	-21 51.6	139	27.4	-3 50.5	302	30.5	-2 41.5	302	30.5	-2 41.5
7	149	24.5	301 48.6	02.6	265 39.1	52.0	154	30.0	50.6	317	32.7	41.6	317	32.7	41.6
8	164	27.0	316 52.0	01.6	280 39.6	52.3	169	32.5	50.6	332	34.9	41.7	332	34.9	41.7
9	179	29.4	331 55.5	-16 00.6	295 40.2	52.7	184	35.1	50.6	347	37.1	41.8	347	37.1	41.8
10	194	31.9	346 59.0	-15 59.6	310 40.7	53.0	199	37.7	50.7	2	39.3	41.9	2	39.3	41.9
11	209	34.4	2 02.4	-15 58.5	325 41.3	-21 53.3	214	40.3	-3 50.7	17	41.5	-2 42.0	17	41.5	-2 42.0
12	224	36.8	17 05.9	-15 57.5	340 41.8	-21 53.7	229	42.8	-3 50.8	32	43.7	-2 42.1	32	43.7	-2 42.1
13	239	39.3	32 09.4	56.5	355 42.3	54.0	244	45.4	50.8	47	45.9	42.2	47	45.9	42.2
14	254	41.8	47 12.8	55.5	10 42.9	54.3	259	48.0	50.8	62	48.1	42.3	62	48.1	42.3
15	269	44.2	62 16.3	54.5	25 43.4	54.7	274	50.5	50.9	77	50.3	42.4	77	50.3	42.4
16	284	46.7	77 19.7	53.4	40 44.0	55.0	289	53.1	50.9	92	52.5	42.5	92	52.5	42.5
17	299	49.1	92 23.2	-15 52.4	55 44.5	-21 55.4	304	55.7	-3 50.9	107	54.7	-2 42.6	107	54.7	-2 42.6
18	314	51.6	107 26.6	-15 51.4	70 45.1	-21 55.7	319	58.3	-3 51.0	122	56.9	-2 42.7	122	56.9	-2 42.7
19	329	54.1	122 30.0	50.4	85 45.6	56.0	335	00.8	51.0	137	59.1	42.8	137	59.1	42.8
20	344	56.5	137 33.5	49.4	100 46.1	56.4	350	03.4	51.0	153	01.3	42.9	153	01.3	42.9
21	359	59.0	152 36.9	48.4	115 46.7	56.7	5	06.0	51.1	168	03.5	43.0	168	03.5	43.0
22	15	01.5	167 40.3	47.3	130 47.2	57.0	20	08.5	51.1	183	05.7	43.1	183	05.7	43.1
23	30	03.9	182 43.8	46.3	145 47.8	57.4	35	11.1	51.1	198	08.0	43.2	198	08.0	43.2
24	45	06.4	197 47.2	-15 45.3	160 48.3	-21 57.7	50	13.7	-3 51.2	213	10.2	-2 43.4	213	10.2	-2 43.4
Dif	—		+35	+10	+5	-3	+26		0	+22		-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 29 ^d 2 PHE { 4 ^h : 59:5 12 ^h : 59:4 20 ^h : 59:1 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	184	05.8	-15 52.8	188	07.8	-18 55.7	95	60 N	15 52	16 38	17 28	8 27 91	15 13 30		
1	199	05.8	53.6	202	33.4	-19 05.2	95	58	16 01	44	31	8 12 87	29 34		
2	214	05.7	54.3	216	59.1	14.7	95	56	09	50	34	7 59 84	42 37		
3	229	05.7	55.1	231	24.7	24.0	93	54	17	55	37	48 81	15 54 39		
4	244	05.7	55.8	245	50.2	33.2	92	52	23	16 59	40	38 79	16 04 42		
5	259	05.7	-15 56.6	260	15.8	-19 42.3	91	50	16 29	17 03	17 42	7 29 77	16 13 44		
6	274	05.6	-15 57.3	274	41.2	-19 51.2	89	45	16 42	17 13	17 48	7 10 74	16 33 46		
7	289	05.6	58.1	289	06.7	-20 00.0	88	40	16 52	21	53	6 55 71	16 49 49		
8	304	05.6	58.8	303	32.1	-20 08.7	87	35	17 01	28	17 58	43 68	17 02 51		
9	319	05.6	-15 59.6	317	57.4	17.2	85	30	09	34	18 03	32 66	14 52		
10	334	05.5	-16 00.3	332	22.7	25.6	84	20	23	46	12	6 13 63	35 54		
11	349	05.5	-16 01.1	346	48.0	-20 33.8	82	10 N	17 36	17 57	18 23	5 56 61	17 52 57		
12	4	05.5	-16 01.8	1	13.3	-20 41.9	81	0	17 47	18 09	18 34	5 41 58	18 09 58		
13	19	05.4	02.5	15	38.5	49.9	80	10 S	17 59	21	18 46	26 56	25 61		
14	34	05.4	03.3	30	03.6	-20 57.7	78	20	18 11	35	19 02	5 10 53	18 43 63		
15	49	05.4	04.0	44	28.8	-21 05.4	77	30	26	18 52	22	4 52 49	19 04 64		
16	64	05.4	04.8	58	53.9	12.9	75	35	35	19 02	35	41 48	16 66		
17	79	05.3	-16 05.5	73	19.0	-21 20.3	74	40	18 44	19 14	19 50	4 29 45	19 29 68		
18	94	05.3	-16 06.3	87	44.0	-21 27.6	73	45	18 56	19 29	20 10	4 15 42	19 46 70		
19	109	05.3	07.0	102	09.1	34.7	71	50	19 10	47	36	3 58 38	20 06 73		
20	124	05.2	07.8	116	34.1	41.7	70	52	17	19 56	20 49	49 37	16 74		
21	139	05.2	08.5	130	59.1	48.5	68	54	24	20 06	21 04	40 35	27 75		
22	154	05.2	09.2	145	24.0	-21 55.1	66	56	32	18	23	30 32	39 78		
23	169	05.1	10.0	159	49.0	-22 01.6	65	58	41	31	21 46	19 28	20 53 81		
24	184	05.1	-16 10.7	174	13.9	-22 08.0	64	60 S	19 52	20 47	22 20	3 06 24	21 10 84		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 56 ^m 1		Mag: -4.3 PMG: 10 ^h 46 ^m		Mag: +1.4 PMG: 13 ^h 16 ^m		Mag: -2.8 PMG: 20 ^h 36 ^m		Mag: +0.9 PMG: 9 ^h 46 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	45	06.4	197	47.2	-15 45.3	160	48.3	-21 57.7	50	13.7	-3 51.2	213	10.2	-2 43.4
1	60	08.9	212	50.6	44.3	175	48.9	58.0	65	16.2	51.2	228	12.4	43.5
2	75	11.3	227	54.0	43.3	190	49.4	58.4	80	18.8	51.2	243	14.6	43.6
3	90	13.8	242	57.5	42.3	205	49.9	58.7	95	21.4	51.3	258	16.8	43.7
4	105	16.3	258	00.9	41.3	220	50.5	59.0	110	23.9	51.3	273	19.0	43.8
5	120	18.7	273	04.3	-15 40.3	235	51.0	-21 59.4	125	26.5	-3 51.3	288	21.2	-2 43.9
6	135	21.2	288	07.7	-15 39.2	250	51.6	-21 59.7	140	29.1	-3 51.4	303	23.4	-2 44.0
7	150	23.6	303	11.1	38.2	265	52.1	-22 00.0	155	31.6	51.4	318	25.6	44.1
8	165	26.1	318	14.5	37.2	280	52.6	-22 00.4	170	34.2	51.4	333	27.8	44.2
9	180	28.6	333	17.9	36.2	295	53.2	00.7	185	36.8	51.5	348	30.0	44.3
10	195	31.0	348	21.3	35.2	310	53.7	01.0	200	39.3	51.5	3	32.2	44.4
11	210	33.5	3	24.7	-15 34.2	325	54.3	-22 01.4	215	41.9	-3 51.5	18	34.4	-2 44.5
12	225	36.0	18	28.0	-15 33.2	340	54.8	-22 01.7	230	44.5	-3 51.6	33	36.6	-2 44.6
13	240	38.4	33	31.4	32.2	355	55.3	02.0	245	47.0	51.6	48	38.8	44.7
14	255	40.9	48	34.8	31.2	10	55.9	02.4	260	49.6	51.6	63	41.0	44.8
15	270	43.4	63	38.2	30.2	25	56.4	02.7	275	52.2	51.7	78	43.2	44.9
16	285	45.8	78	41.6	29.2	40	56.9	03.0	290	54.7	51.7	93	45.4	45.0
17	300	48.3	93	44.9	-15 28.2	55	57.5	-22 03.3	305	57.3	-3 51.7	108	47.7	-2 45.1
18	315	50.8	108	48.3	-15 27.2	70	58.0	-22 03.7	320	59.8	-3 51.8	123	49.9	-2 45.2
19	330	53.2	123	51.7	26.2	85	58.6	04.0	336	02.4	51.8	138	52.1	45.3
20	345	55.7	138	55.0	25.2	100	59.1	04.3	351	05.0	51.8	153	54.3	45.4
21	0	58.1	153	58.4	24.2	115	59.6	04.7	6	07.5	51.9	168	56.5	45.5
22	16	00.6	169	01.7	23.2	131	00.2	05.0	21	10.1	51.9	183	58.7	45.6
23	31	03.1	184	05.1	22.2	146	00.7	05.3	36	12.7	51.9	199	00.9	45.7
24	46	05.5	199	08.4	-15 21.2	161	01.2	-22 05.6	51	15.2	-3 51.9	214	03.1	-2 45.8
Dif	—		+34 +10		+5 -3		+26 0		+22 -1					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7				Edad: 0 ^d 8 PHE { SD: 16 ^h 1 PMG: 12 ^h 53 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	05.1	-16	10.7	174	13.9	-22	08.0	62	58	60 N	6 00	6 51	7 37	9 58	74	15 43	47		
1	199	05.1		11.5	188	38.8	59	14.2	62	58	58	5 57	44	28	39	72	16 03	49		
2	214	05.1		12.2	203	03.6	58	20.3	61	56	54	54	39	19	23	70	19 51			
3	229	05.0		13.0	217	28.5	59	26.2	59	54	51	51	34	12	9 09	69	33 52			
4	244	05.0		13.7	231	53.4	59	32.0	58	52	49	29	7 05	8 57	68	46 52				
5	259	05.0	-16	14.4	246	18.2	58	-22	37.6	56	50	5 46	6 25	6 59	8 46	67	16 57	53		
6	274	04.9	-16	15.2	260	43.0	58	-22	43.0	54	45	5 40	6 15	6 46	8 24	65	17 19	55		
7	289	04.9		15.9	275	07.8	58	48.3	53	40	35	07	36	8 06	64	38 55				
8	304	04.9		16.6	289	32.6	58	53.5	52	35	30	6 00	26	7 51	63	17 53	56			
9	319	04.8		17.4	303	57.4	58	-22	58.5	50	30	25	5 53	18	38 62	18 06	57			
10	334	04.8		18.1	318	22.2	58	-23	03.3	48	20	15	41	6 04	7 16	61	29 57			
11	349	04.7	-16	18.9	332	47.0	58	-23	08.0	47	10 N	5 05	5 30	5 52	6 57	60	18 49	57		
12	4	04.7	-16	19.6	347	11.8	58	-23	12.6	46	0	4 54	5 19	5 40	6 39	59	19 07	58		
13	19	04.7		20.3	1	36.6	58	17.0	44	20	10 S	41	5 06	28	22 57	26 58				
14	34	04.6		21.1	16	01.4	58	21.2	42	20	25	4 52	16	6 03	56	19 46	59			
15	49	04.6		21.8	30	26.1	57	25.3	41	30	4 05	35	5 01	5 41	54	20 08	60			
16	64	04.6		22.5	44	50.9	58	29.2	39	35	3 52	25	4 52	29 53	22 60					
17	79	04.5	-16	23.3	59	15.7	58	-23	32.9	37	40	3 37	4 13	4 42	5 14	52	20 37	61		
18	94	04.5	-16	24.0	73	40.5	58	-23	36.5	36	45	3 17	3 58	4 31	4 57	50	20 56	60		
19	109	04.4		24.7	88	05.4	59	40.0	35	50	2 51	39	17	36 48	21 19	61				
20	124	04.4		25.5	102	30.2	58	43.3	33	52	38	30	10	26 47	30 61					
21	139	04.4		26.2	116	55.0	58	46.4	31	54	23	20	4 03	15 45	42 62					
22	154	04.3		26.9	131	19.9	59	49.4	30	56	2 04	3 09	3 54	4 02 44	21 57	62				
23	169	04.3		27.7	145	44.7	58	52.2	28	58	1 40	2 55	45	3 47 42	22 14	62				
24	184	04.3	-16	28.4	160	09.6	59	-23	54.9	27	60 S	1 06	2 39	3 34	3 30 38	22 34	63			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 52 ^m 2				Mag: -4.3 PMG: 10 ^h 41 ^m				Mag: +1.4 PMG: 13 ^h 15 ^m				Mag: -2.8 PMG: 20 ^h 31 ^m				Mag: +0.9 PMG: 9 ^h 42 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	46	05.5	199	08.4	-15	21.2	161	01.2	-22	05.6	51	15.2	-3	51.9	214	03.1	-2	45.8		
1	61	08.0	214	11.8		20.2	176	01.8		06.0	66	17.8		52.0	229	05.3		45.9		
2	76	10.5	229	15.1		19.2	191	02.3		06.3	81	20.3		52.0	244	07.5		46.0		
3	91	12.9	244	18.5		18.2	206	02.8		06.6	96	22.9		52.0	259	09.7		46.1		
4	106	15.4	259	21.8		17.2	221	03.4		06.9	111	25.5		52.1	274	11.9		46.2		
5	121	17.9	274	25.1	-15	16.2	236	03.9	-22	07.3	126	28.0	-3	52.1	289	14.1	-2	46.3		
6	136	20.3	289	28.4	-15	15.2	251	04.4	-22	07.6	141	30.6	-3	52.1	304	16.3	-2	46.4		
7	151	22.8	304	31.8		14.2	266	05.0		07.9	156	33.1		52.2	319	18.6		46.5		
8	166	25.2	319	35.1		13.2	281	05.5		08.2	171	35.7		52.2	334	20.8		46.6		
9	181	27.7	334	38.4		12.3	296	06.0		08.5	186	38.2		52.2	349	23.0		46.7		
10	196	30.2	349	41.7		11.3	311	06.6		08.9	201	40.8		52.2	4	25.2		46.8		
11	211	32.6	4	45.0	-15	10.3	326	07.1	-22	09.2	216	43.4	-3	52.3	19	27.4	-2	46.9		
12	226	35.1	19	48.3	-15	09.3	341	07.6	-22	09.5	231	45.9	-3	52.3	34	29.6	-2	47.0		
13	241	37.6	34	51.6		08.3	356	08.2		09.8	246	48.5		52.3	49	31.8		47.1		
14	256	40.0	49	54.9		07.3	11	08.7		10.2	261	51.0		52.4	64	34.0		47.3		
15	271	42.5	64	58.2		06.3	26	09.2		10.5	276	53.6		52.4	79	36.2		47.4		
16	286	45.0	80	01.5		05.4	41	09.8		10.8	291	56.1		52.4	94	38.4		47.5		
17	301	47.4	95	04.8	-15	04.4	56	10.3	-22	11.1	306	58.7	-3	52.4	109	40.6	-2	47.6		
18	316	49.9	110	08.1	-15	03.4	71	10.8	-22	11.4	322	01.2	-3	52.5	124	42.8	-2	47.7		
19	331	52.4	125	11.4		02.4	86	11.3		11.8	337	03.8		52.5	139	45.0		47.8		
20	346	54.8	140	14.7		01.4	101	11.9		12.1	352	06.4		52.5	154	47.2		47.9		
21	1	57.3	155	17.9	-15	00.5	116	12.4		12.4	7	08.9		52.6	169	49.5		48.0		
22	16	59.7	170	21.2	-14	59.5	131	12.9		12.7	22	11.5		52.6	184	51.7		48.1		
23	32	02.2	185	24.5		58.5	146	13.5		13.0	37	14.0		52.6	199	53.9		48.2		
24	47	04.7	200	27.7	-14	57.5	161	14.0	-22	13.3	52	16.6	-3	52.6	214	56.1	-2	48.3		
Dif	—				+33 +10				+5 -3				+26 0				+22 -1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7			Edad: 1 ^d 8 PHE { 4 ^h : 58/2 12 ^h : 57/9 20 ^h : 57/6 PMG: 13 ^h 52 ^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	184	04.3	-16	28.4	160	09.6	-23 54.9	60 N	15 47	16 34	17 24	11 12 51	16 30 67		
1	199	04.2		29.1	174	34.5	59 57.4	58	15 57	40	28	10 51 52	16 52 65		
2	214	04.2		29.8	188	59.5	60 -23 59.8	56	16 05	46	31	33 53	17 10 64		
3	229	04.1		30.6	203	24.4	59 -24 02.0	54	13	51	34	18 53	25 63		
4	244	04.1		31.3	217	49.4	60 04.0	52	20	16 56	37	10 05 54	38 63		
5	259	04.0	-16	32.0	232	14.4	60 -24 05.9	50	16 26	17 01	17 39	9 53 55	17 50 61		
6	274	04.0	-16	32.8	246	39.4	60 -24 07.7	45	16 39	17 10	17 45	9 29 56	18 14 60		
7	289	04.0		33.5	261	04.5	61 09.2	40	16 50	19	51	9 10 56	33 60		
8	304	03.9		34.2	275	29.6	61 10.7	35	17 00	26	17 56	8 54 56	18 49 59		
9	319	03.9		34.9	289	54.7	61 12.0	30	08	33	18 02	40 57	19 03 58		
10	334	03.8		35.7	304	19.9	62 13.1	20	22	45	12	8 17 57	26 58		
11	349	03.8	-16	36.4	318	45.0	61 -24 14.1	10 N	17 35	17 57	18 22	7 57 57	19 46 57		
12	4	03.7	-16	37.1	333	10.3	63 -24 14.9	0	17 47	18 09	18 34	7 38 57	20 05 56		
13	19	03.7		37.8	347	35.5	62 15.5	10 S	17 59	21	18 47	7 19 57	24 55		
14	34	03.7		38.6	2	00.9	64 16.1	20	18 13	36	19 03	6 59 57	20 45 54		
15	49	03.6		39.3	16	26.2	63 16.4	30	28	18 53	24	35 58	21 08 53		
16	64	03.6		40.0	30	51.6	64 16.6	35	37	19 04	37	22 57	22 52		
17	79	03.5	-16	40.7	45	17.1	65 -24 16.7	40	18 47	19 17	19 53	6 06 58	21 38 51		
18	94	03.5	-16	41.5	59	42.5	64 -24 16.6	45	18 59	19 32	20 13	5 47 58	21 56 50		
19	109	03.4		42.2	74	08.1	66 16.4	50	19 13	19 51	40	24 58	22 20 48		
20	124	03.4		42.9	88	33.7	66 16.0	52	20	20 00	20 54	13 58	31 48		
21	139	03.3		43.6	102	59.3	66 15.5	54	28	11	21 10	5 00 58	44 46		
22	154	03.3		44.3	117	25.0	67 14.8	56	36	23	30	4 46 57	22 59 45		
23	169	03.2		45.1	131	50.7	67 14.0	58	46	37	21 56	29 57	23 16 44		
24	184	03.2	-16	45.8	146	16.5	68 -24 13.0	60 S	19 57	20 54	22 35	4 08 57	23 37 41		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 48 ^m 3		Mag: -4.4 PMG: 10 ^h 36 ^m			Mag: +1.4 PMG: 13 ^h 15 ^m			Mag: -2.8 PMG: 20 ^h 27 ^m			Mag: +0.9 PMG: 9 ^h 39 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	h m	°	'	°	'	°	'	
0	47	04.7	200	27.7	-14	57.5	161 14.0	-22 13.3	52	16.6	-3	52.6	214	56.1	-2 48.3
1	62	07.1	215	31.0		56.6	176 14.5	13.7	67	19.1		52.7	229	58.3	48.4
2	77	09.6	230	34.3		55.6	191 15.1	14.0	82	21.7		52.7	245	00.5	48.5
3	92	12.1	245	37.5		54.6	206 15.6	14.3	97	24.2		52.7	260	02.7	48.6
4	107	14.5	260	40.8		53.7	221 16.1	14.6	112	26.8		52.7	275	04.9	48.7
5	122	17.0	275	44.0	-14	52.7	236 16.6	-22 14.9	127	29.3	-3	52.8	290	07.1	-2 48.8
6	137	19.5	290	47.3	-14	51.7	251 17.2	-22 15.2	142	31.9	-3	52.8	305	09.3	-2 48.9
7	152	21.9	305	50.5		50.8	266 17.7	15.6	157	34.4		52.8	320	11.5	49.0
8	167	24.4	320	53.7		49.8	281 18.2	15.9	172	37.0		52.9	335	13.8	49.1
9	182	26.9	335	57.0		48.8	296 18.7	16.2	187	39.5		52.9	350	16.0	49.2
10	197	29.3	351	00.2		47.9	311 19.3	16.5	202	42.1		52.9	5	18.2	49.3
11	212	31.8	6	03.4	-14	46.9	326 19.8	-22 16.8	217	44.6	-3	52.9	20	20.4	-2 49.4
12	227	34.2	21	06.6	-14	45.9	341 20.3	-22 17.1	232	47.2	-3	53.0	35	22.6	-2 49.5
13	242	36.7	36	09.9		45.0	356 20.8	17.4	247	49.7		53.0	50	24.8	49.6
14	257	39.2	51	13.1		44.0	11 21.4	17.8	262	52.3		53.0	65	27.0	49.7
15	272	41.6	66	16.3		43.1	26 21.9	18.1	277	54.8		53.0	80	29.2	49.8
16	287	44.1	81	19.5		42.1	41 22.4	18.4	292	57.4		53.1	95	31.4	49.9
17	302	46.6	96	22.7	-14	41.2	56 22.9	-22 18.7	307	59.9	-3	53.1	110	33.6	-2 50.0
18	317	49.0	111	25.9	-14	40.2	71 23.5	-22 19.0	323	02.5	-3	53.1	125	35.8	-2 50.1
19	332	51.5	126	29.1		39.3	86 24.0	19.3	338	05.0		53.1	140	38.1	50.2
20	347	54.0	141	32.3		38.3	101 24.5	19.6	353	07.6		53.2	155	40.3	50.3
21	2	56.4	156	35.5		37.4	116 25.0	19.9	8	10.1		53.2	170	42.5	50.4
22	17	58.9	171	38.7		36.4	131 25.6	20.2	23	12.7		53.2	185	44.7	50.5
23	33	01.4	186	41.9		35.5	146 26.1	20.6	38	15.2		53.2	200	46.9	50.6
24	48	03.8	201	45.0	-14	34.5	161 26.6	-22 20.9	53	17.7	-3	53.3	215	49.1	-2 50.7
Dif	—		+32 +10			+5 -3			+25 0			+22 -1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 2 ^d 8 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 1 20 ^h : 56 ^m 8 R°: 54 ^m														
	PMG: 11 ^h 43 ^m 8			SD: 15 ^h 7 PMG: 14 ^h 48 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	03.2	-16	45.8	146	16.5	-24	13.0	60 N	6 04	6 55	7 42	12 03	32	17 37	79		
1	199	03.1		46.5	160	42.4	69	11.9	58	6 01	48	32	11 43	35	17 57	75		
2	214	03.1		47.2	175	08.3	69	10.6	56	5 58	43	24	26	37	18 14	72		
3	229	03.0		47.9	189	34.3	70	09.2	54	55	37	16	11 11	40	28	70		
4	244	03.0		48.6	204	00.3	70	07.7	52	52	32	09	10 59	41	41	68		
5	259	02.9	-16	49.4	218	26.4	71	-24	50	5 49	6 28	7 03	10 48	42	18 51	68		
6	274	02.9	-16	50.1	232	52.6	72	-24	45	5 43	6 18	6 49	10 25	44	19 14	65		
7	289	02.8		50.8	247	18.8	72	02.2	40	37	09	38	10 06	46	33	62		
8	304	02.8		51.5	261	45.1	73	-24	35	32	6 02	28	9 50	48	19 48	60		
9	319	02.7		52.2	276	11.5	74	-23	30	26	5 55	20	37	49	20 01	59		
10	334	02.7		52.9	290	37.9	74	55.4	20	16	42	6 05	9 14	51	24	56		
11	349	02.6	-16	53.6	305	04.4	75	-23	10 N	5 05	5 31	5 53	8 54	52	20 43	55		
12	4	02.6	-16	54.4	319	31.0	76	-23	0	4 54	5 19	5 40	8 35	54	21 01	53		
13	19	02.5		55.1	333	57.6	76	47.5	10 S	40	5 06	28	8 16	56	19	51		
14	34	02.5		55.8	348	24.3	77	44.5	20	24	4 52	15	7 56	57	21 39	48		
15	49	02.4		56.5	2	51.1	78	41.5	30	4 03	34	5 00	33	59	22 01	46		
16	64	02.3		57.2	17	17.9	78	38.3	32	3 50	23	4 51	19	60	14	44		
17	79	02.3	-16	57.9	31	44.9	80	-23	40	3 34	4 10	4 40	7 04	61	22 29	42		
18	94	02.2	-16	58.6	46	11.9	80	-23	45	3 14	3 55	4 28	6 45	63	22 46	41		
19	109	02.2	-16	59.3	60	39.0	81	27.9	50	2 47	36	14	22	65	23 08	38		
20	124	02.1	-17	00.0	75	06.1	81	24.2	52	33	26	4 07	6 11	65	19	35		
21	139	02.1	-17	00.7	89	33.4	83	20.4	54	2 17	16	3 59	5 58	67	30	34		
22	154	02.0		01.5	104	00.7	83	16.4	56	1 57	3 04	50	43	69	23 44	32		
23	169	02.0		02.2	118	28.1	84	12.3	58	1 31	2 50	41	26	71	** ** *	**		
24	184	01.9	-17	02.9	132	55.6	85	-23	60 S	0 52	2 33	3 29	5 05	73	** ** *	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 44 ^m 3		Mag: -4.4 PMG: 10 ^h 31 ^m				Mag: +1.4 PMG: 13 ^h 14 ^m				Mag: -2.8 PMG: 20 ^h 23 ^m				Mag: +0.9 PMG: 9 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	48	03.8	201	45.0	-14	34.5	161	26.6	-22	20.9	53	17.7	-3	53.3	215	49.1	-2	50.7
1	63	06.3	216	48.2		33.6	176	27.1		21.2	68	20.3		53.3	230	51.3		50.8
2	78	08.7	231	51.4		32.6	191	27.7		21.5	83	22.8		53.3	245	53.5		50.9
3	93	11.2	246	54.5		31.7	206	28.2		21.8	98	25.4		53.3	260	55.7		51.0
4	108	13.7	261	57.7		30.7	221	28.7		22.1	113	27.9		53.3	275	57.9		51.1
5	123	16.1	277	00.9	-14	29.8	236	29.2	-22	22.4	128	30.5	-3	53.4	291	00.2	-2	51.2
6	138	18.6	292	04.0	-14	28.9	251	29.7	-22	22.7	143	33.0	-3	53.4	306	02.4	-2	51.3
7	153	21.1	307	07.2		27.9	266	30.3		23.0	158	35.6		53.4	321	04.6		51.4
8	168	23.5	322	10.3		27.0	281	30.8		23.3	173	38.1		53.4	336	06.8		51.5
9	183	26.0	337	13.5		26.0	296	31.3		23.6	188	40.6		53.5	351	09.0		51.6
10	198	28.5	352	16.6		25.1	311	31.8		23.9	203	43.2		53.5	6	11.2		51.7
11	213	30.9	7	19.8	-14	24.2	326	32.3	-22	24.2	218	45.7	-3	53.5	21	13.4	-2	51.8
12	228	33.4	22	22.9	-14	23.2	341	32.9	-22	24.5	233	48.3	-3	53.5	36	15.6	-2	51.9
13	243	35.9	37	26.0		22.3	356	33.4		24.8	248	50.8		53.5	51	17.8		52.0
14	258	38.3	52	29.2		21.4	11	33.9		25.1	263	53.3		53.6	66	20.0		52.1
15	273	40.8	67	32.3		20.5	26	34.4		25.4	278	55.9		53.6	81	22.3		52.2
16	288	43.2	82	35.4		19.5	41	34.9		25.8	293	58.4		53.6	96	24.5		52.3
17	303	45.7	97	38.5	-14	18.6	56	35.5	-22	26.1	309	01.0	-3	53.6	111	26.7	-2	52.4
18	318	48.2	112	41.6	-14	17.7	71	36.0	-22	26.4	324	03.5	-3	53.7	126	28.9	-2	52.5
19	333	50.6	127	44.7		16.8	86	36.5		26.7	339	06.0		53.7	141	31.1		52.6
20	348	53.1	142	47.8		15.8	101	37.0		27.0	354	08.6		53.7	156	33.3		52.7
21	3	55.6	157	50.9		14.9	116	37.5		27.3	9	11.1		53.7	171	35.5		52.8
22	18	58.0	172	54.0		14.0	131	38.0		27.6	24	13.7		53.7	186	37.7		52.9
23	34	00.5	187	57.1		13.1	146	38.6		27.9	39	16.2		53.8	201	39.9		53.0
24	49	03.0	203	00.2	-14	12.2	161	39.1	-22	28.2	54	18.7	-3	53.8	216	42.2	-2	53.1
Dif	—		+31		+9		+5		-3		+25		0		+22		-	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 9				Edad: 3 ^d 8 PHE { 4 ^h : 56/5 12 ^h : 56/3 20 ^h : 56/0 PMG: 15 ^h 42 ^m R°: 49 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	01.9	-17	02.9	132	55.6	-23	08.1	60 N	15 42	16 30	17 20	12 35 19	18 56 82		
1	199	01.8		03.6	147	23.1 ⁸⁵	-23	03.8 ⁴³	58	15 52	36	24	18 23	19 12 79		
2	214	01.8		04.3	161	50.8 ⁸⁷	-22	59.3 ⁴⁵	56	16 01	43	28	12 03 27	26 76		
3	229	01.7		05.0	176	18.5 ⁸⁷		54.7 ⁴⁶	54	09	48	31	11 51 29	38 74		
4	244	01.7		05.7	190	46.3 ⁸⁸		50.0 ⁴⁷	52	16	53	34	40 31	49 71		
5	259	01.6	-17	06.4	205	14.2 ⁸⁹	-22	45.2 ⁴⁸	50	16 23	16 58	17 37	11 30 33	19 59 69		
6	274	01.5	-17	07.1	219	42.2 ⁹⁰	-22	40.3 ⁴⁹	45	16 37	17 08	17 43	11 09 36	20 19 65		
7	289	01.5		07.8	234	10.3 ⁹¹		35.2 ⁵¹	40	48	17	49	10 52 39	35 62		
8	304	01.4		08.5	248	38.4 ⁹¹		30.0 ⁵²	35	16 58	25	17 55	38 41	20 48 60		
9	319	01.4		09.2	263	06.7 ⁹³		24.8 ⁵²	30	17 07	32	18 00	26 43	21 00 58		
10	334	01.3		09.9	277	35.0 ⁹³		19.4 ⁵⁴	20	22	45	11	10 05 45	20 55		
11	349	01.2	-17	10.6	292	03.4 ⁹⁴	-22	13.9 ⁵⁵	10 N	17 35	17 57	18 22	9 46 49	21 38 51		
12	4	01.2	-17	11.3	306	31.9 ⁹⁵	-22	08.2 ⁵⁷	0	17 47	18 09	18 34	9 29 51	21 54 49		
13	19	01.1		12.0	321	00.5 ⁹⁶	-22	02.5 ⁵⁷	10 S	18 00	22	18 48	9 12 53	22 10 46		
14	34	01.1		12.7	335	29.1 ⁹⁶	-21	56.7 ⁵⁸	20	14	37	19 05	8 53 56	27 43		
15	49	01.0		13.4	349	57.9 ⁹⁸		50.7 ⁶⁰	30	29	18 55	26	32 58	47 40		
16	64	00.9		14.1	4	26.7 ⁹⁸		44.7 ⁶⁰	35	39	19 06	40	19 61	22 58 38		
17	79	00.9	-17	14.8	18	55.6 ⁹⁹	-21	38.5 ⁶²	40	18 49	19 19	19 56	8 05 62	23 11 36		
18	94	00.8	-17	15.5	33	24.7 ¹⁰¹	-21	32.2 ⁶³	45	19 02	19 35	20 17	7 48 65	23 27 32		
19	109	00.7		16.2	47	53.8 ¹⁰¹		25.9 ⁶³	50	17	19 55	45	27 68	46 28		
20	124	00.7		16.9	62	23.0 ¹⁰²		19.4 ⁶⁵	52	24	20 05	20 59	16 70	23 54 28		
21	139	00.6		17.6	76	52.2 ¹⁰²		12.8 ⁶⁶	54	32	16	21 16	7 05 72	*** ** *		
22	154	00.5		18.3	91	21.6 ¹⁰⁴	-21	06.1 ⁶⁷	56	41	28	21 37	6 52 74	*** ** *		
23	169	00.5		19.0	105	51.1 ¹⁰⁵	-20	59.4 ⁶⁷	58	19 51	20 43	22 06	37 77	*** ** *		
24	184	00.4	-17	19.7	120	20.6 ¹⁰⁵	-20	52.5 ⁶⁹	60 S	20 03	21 01	22 53	6 18 81	0 18 25		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 20 ^h 40 ^m 4		Mag: -4.5 PMG: 10 ^h 26 ^m		Mag: +1.4 PMG: 13 ^h 13 ^m		Mag: -2.7 PMG: 20 ^h 19 ^m		Mag: +0.9 PMG: 9 ^h 32 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	49	03.0	203	00.2	161	39.1	54	18.7	216	42.2						
1	64	05.4	218	03.3	176	39.6	69	21.3	231	44.4						
2	79	07.9	233	06.4	191	40.1	84	23.8	246	46.6						
3	94	10.3	248	09.5	206	40.6	99	26.3	261	48.8						
4	109	12.8	263	12.5	221	41.1	114	28.9	276	51.0						
5	124	15.3	278	15.6	236	41.7	129	31.4	291	53.2						
6	139	17.7	293	18.7	251	42.2	144	33.9	306	55.4						
7	154	20.2	308	21.8	266	42.7	159	36.5	321	57.6						
8	169	22.7	323	24.8	281	43.2	174	39.0	336	59.9						
9	184	25.1	338	27.9	296	43.7	189	41.6	352	02.1						
10	199	27.6	353	30.9	311	44.2	204	44.1	7	04.3						
11	214	30.1	8	34.0	326	44.7	219	46.6	22	06.5						
12	229	32.5	23	37.0	341	45.3	234	49.2	37	08.7						
13	244	35.0	38	40.1	356	45.8	249	51.7	52	10.9						
14	259	37.5	53	43.1	11	46.3	264	54.2	67	13.1						
15	274	39.9	68	46.1	26	46.8	279	56.8	82	15.3						
16	289	42.4	83	49.2	41	47.3	294	59.3	97	17.6						
17	304	44.8	98	52.2	56	47.8	310	01.8	112	19.8						
18	319	47.3	113	55.2	71	48.3	325	04.3	127	22.0						
19	334	49.8	128	58.2	86	48.9	340	06.9	142	24.2						
20	349	52.2	144	01.2	101	49.4	355	09.4	157	26.4						
21	4	54.7	159	04.2	116	49.9	10	11.9	172	28.6						
22	19	57.2	174	07.3	131	50.4	25	14.5	187	30.8						
23	34	59.6	189	10.3	146	50.9	40	17.0	202	33.0						
24	50	02.1	204	13.3	161	51.4	55	19.5	217	35.3						
Dif	—		+30		+9		+25		0							
									-1							

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 4 ^d 8	PHE { 4 ^h : 55'8 12 ^h : 55'5 20 ^h : 55'3									
	PMG: 11 ^h 44 ^m 0					SD: 15'2		PMG: 16 ^h 31 ^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	184	00.4	-17	120	20.6	-20	52.5	6	09	7	00	7	47	12
1	199	00.3		134	50.2 ¹⁰⁶		45.5	05	6	53	37		41	16
2	214	00.3		149	20.0 ¹⁰⁸		38.5	01	46	28			30	19
3	229	00.2		163	49.8 ¹⁰⁸		31.3	58	41	20			20	21
4	244	00.1		178	19.7 ¹⁰⁹		24.1	55	36	13			11	23
5	259	00.1	-17	192	49.7 ¹¹⁰	-20	16.7	52	6	31	7	06	12	03
6	274	00.0	-17	207	19.7 ¹¹⁰	-20	09.3	45	6	20	6	52	11	45
7	288	59.9		221	49.9 ¹¹²	-20	01.8	40	39	12	40		31	33
8	303	59.9		236	20.1 ¹¹²	-19	54.1	35	33	6	04	30	19	35
9	318	59.8		250	50.5 ¹¹⁴		46.4	30	28	5	56	22	11	09
10	333	59.7		265	20.9 ¹¹⁴		38.6	20	17	43	6	06	10	50
11	348	59.7	-17	279	51.4 ¹¹⁵	-19	30.8	10 N	5	06	5	53	10	35
12	3	59.6	-17	294	22.0 ¹¹⁶	-19	22.8	0	4	54	5	19	5	41
13	18	59.5		308	52.7 ¹¹⁷		14.8	10 S	40	5	06	28	10	05
14	33	59.4		323	23.4 ¹¹⁷	-19	06.6	20	23	4	51	5	14	9
15	48	59.4		337	54.3 ¹¹⁹	-18	58.4	30	4	02	32	4	58	30
16	63	59.3		352	25.2 ¹¹⁹		50.1	35	3	48	21	49	20	59
17	78	59.2	-17	6	56.2 ¹²⁰	-18	41.8	40	3	31	4	08	9	07
18	93	59.2	-17	21	27.3 ¹²¹	-18	33.3	45	3	10	3	52	8	53
19	108	59.1		35	58.5 ¹²²		24.8	50	2	43	32	11	35	69
20	123	59.0		50	29.8 ¹²³		16.2	52	28	23	4	03	26	71
21	138	58.9		65	01.1 ¹²³	-18	07.5	54	2	11	3	12	3	55
22	153	58.9		79	32.6 ¹²⁵	-17	58.7	56	1	50	2	59	46	8
23	168	58.8		94	04.1 ¹²⁵		49.9	58	1	22	44	36	7	54
24	183	58.7	-17	108	35.7 ¹²⁶	-17	41.0	60 S	0	34	2	26	3	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 20 ^h 36 ^m 5		Mag: -4.5 PMG: 10 ^h 21 ^m		Mag: +1.4 PMG: 13 ^h 12 ^m		Mag: -2.7 PMG: 20 ^h 15 ^m		Mag: +0.9 PMG: 9 ^h 28 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	50	02.1	204	13.3	161	51.4	55	19.5	217	35.3	
1	65	04.6	219	16.3	176	51.9	70	22.1	232	37.5	
2	80	07.0	234	19.2	191	52.4	85	24.6	247	39.7	
3	95	09.5	249	22.2	206	52.9	100	27.1	262	41.9	
4	110	12.0	264	25.2	221	53.4	115	29.6	277	44.1	
5	125	14.4	279	28.2	236	54.0	130	32.2	292	46.3	
6	140	16.9	294	31.2	251	54.5	145	34.7	307	48.5	
7	155	19.3	309	34.1	266	55.0	160	37.2	322	50.8	
8	170	21.8	324	37.1	281	55.5	175	39.8	337	53.0	
9	185	24.3	339	40.1	296	56.0	190	42.3	352	55.2	
10	200	26.7	354	43.0	311	56.5	205	44.8	7	57.4	
11	215	29.2	9	46.0	326	57.0	220	47.3	22	59.6	
12	230	31.7	24	48.9	341	57.5	235	49.9	38	01.8	
13	245	34.1	39	51.9	356	58.0	250	52.4	53	04.0	
14	260	36.6	54	54.8	38.5	11	58.5	265	54.9		
15	275	39.1	69	57.8	37.6	26	59.0	280	57.4		
16	290	41.5	85	00.7	36.7	41	59.5	296	00.0		
17	305	44.0	100	03.6	57	00.1	-22	40.1	311	02.5	
18	320	46.5	115	06.6	72	00.6	-22	40.4	326	05.0	
19	335	48.9	130	09.5	87	01.1		40.7	341	07.5	
20	350	51.4	145	12.4	102	01.6		41.0	356	10.1	
21	5	53.8	160	15.3	117	02.1		41.3	11	12.6	
22	20	56.3	175	18.3	132	02.6		41.6	26	15.1	
23	35	58.8	190	21.2	147	03.1		41.8	41	17.6	
24	51	01.2	205	24.1	162	03.6	-22	42.1	56	20.1	
Dif	—		+30	+9	+5	-3		+25	0	+22	-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 44 ^m 1			Edad: 5 ^d 8 PHE { 4 ^h : 55:1 12 ^h : 55:0 20 ^h : 54:8 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	183	58.7	-17	36.2	108	35.7	-17	41.0	60 N	15 38	16 26	17 17	13 07 9	21 41 79	
1	198	58.6		36.9	123	07.3 ¹²⁶		32.0 ⁹⁰	58	48	33	21	12 57 12	50 76	
2	213	58.6		37.5	137	39.1 ¹²⁸		23.0 ⁹⁰	56	15 58	39	25	49 14	21 57 74	
3	228	58.5		38.2	152	10.9 ¹²⁸		13.9 ⁹¹	54	16 06	45	28	41 17	22 04 72	
4	243	58.4		38.9	166	42.8 ¹²⁹	-17	04.7 ⁹²	52	13	50	31	34 19	11 69	
5	258	58.3	-17	39.6	181	14.8 ¹³⁰	-16	55.4 ⁹³	50	16 20	16 55	17 34	12 28 21	22 16 67	
6	273	58.3	-17	40.3	195	46.9 ¹³¹	-16	46.1 ⁹³	45	16 35	17 06	17 41	12 15 24	22 28 63	
7	288	58.2		40.9	210	19.0 ¹³¹		36.7 ⁹⁴	40	46	15	48	12 04 28	38 60	
8	303	58.1		41.6	224	51.2 ¹³²		27.3 ⁹⁴	35	16 57	23	54	11 54 31	47 56	
9	318	58.0		42.3	239	23.5 ¹³³		17.8 ⁹⁵	30	17 06	31	17 59	46 33	22 54 54	
10	333	57.9		43.0	253	55.9 ¹³⁴	-16	08.2 ⁹⁶	20	21	44	18 11	31 37	23 07 50	
11	348	57.9	-17	43.6	268	28.3 ¹³⁴	-15	58.6 ⁹⁶	10 N	17 35	17 57	18 22	11 19 40	23 18 46	
12	3	57.8	-17	44.3	283	00.8 ¹³⁵	-15	48.9 ⁹⁷	0	17 48	18 09	18 35	11 07 44	23 28 43	
13	18	57.7		45.0	297	33.4 ¹³⁶		39.1 ⁹⁸	10 S	18 01	23	18 49	10 55 47	39 39	
14	33	57.6		45.7	312	06.1 ¹³⁷		29.3 ⁹⁸	20	15	38	19 06	42 51	23 49 36	
15	48	57.5		46.3	326	38.8 ¹³⁷		19.4 ⁹⁹	30	31	18 57	28	27 55	*** ** **	
16	63	57.5		47.0	341	11.6 ¹³⁸	-15	09.5 ⁹⁹	35	41	19 08	42	19 57	*** ** **	
17	78	57.4	-17	47.7	355	44.5 ¹³⁹	-14	59.5 ¹⁰⁰	40	18 52	19 22	19 59	10 09 60	*** ** **	
18	93	57.3	-17	48.4	10	17.4 ¹³⁹	-14	49.4 ¹⁰¹	45	19 04	19 38	20 21	9 58 63	*** ** **	
19	108	57.2		49.0	24	50.4 ¹⁴⁰		39.3 ¹⁰¹	50	20	19 59	20 50	44 67	0 14 24	
20	123	57.1		49.7	39	23.5 ¹⁴¹		29.2 ¹⁰¹	52	28	20 09	21 04	37 70	22 21	
21	138	57.1		50.4	53	56.6 ¹⁴¹		19.0 ¹⁰²	54	36	20	22	30 72	29 19	
22	153	57.0		51.0	68	29.8 ¹⁴²	-14	08.7 ¹⁰³	56	45	34	21 45	22 74	38 17	
23	168	56.9		51.7	83	03.1 ¹⁴³	-13	58.4 ¹⁰³	58	19 56	20 49	22 17	12 78	48 14	
24	183	56.8	-17	52.4	97	36.4 ¹⁴³	-13	48.0 ¹⁰⁴	60 S	20 08	21 08	23 22	9 02 81	0 59 11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 32 ^m 5		Mag: -4.6 PMG: 10 ^h 16 ^m		Mag: +1.4 PMG: 13 ^h 11 ^m		Mag: -2.7 PMG: 20 ^h 11 ^m		Mag: +0.9 PMG: 9 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	51	01.2	205	24.1	162	03.6	56	20.1	218	28.4
1	66	03.7	220	27.0	177	04.1	71	22.7	233	30.6
2	81	06.2	235	29.9	192	04.6	86	25.2	248	32.8
3	96	08.6	250	32.8	207	05.1	101	27.7	263	35.0
4	111	11.1	265	35.7	222	05.6	116	30.2	278	37.3
5	126	13.6	280	38.5	237	06.1	131	32.7	293	39.5
6	141	16.0	295	41.4	252	06.6	146	35.3	308	41.7
7	156	18.5	310	44.3	267	07.1	161	37.8	323	43.9
8	171	20.9	325	47.2	282	07.6	176	40.3	338	46.1
9	186	23.4	340	50.1	297	08.1	191	42.8	353	48.3
10	201	25.9	355	52.9	312	08.6	206	45.3	8	50.6
11	216	28.3	10	55.8	327	09.1	221	47.9	23	52.8
12	231	30.8	25	58.6	342	09.6	236	50.4	38	55.0
13	246	33.3	41	01.5	357	10.1	251	52.9	53	57.2
14	261	35.7	56	04.3	12	10.6	266	55.4	68	59.4
15	276	38.2	71	07.2	27	11.1	281	57.9	84	01.6
16	291	40.7	86	10.0	42	11.6	297	00.4	99	03.8
17	306	43.1	101	12.9	57	12.1	312	03.0	114	06.1
18	321	45.6	116	15.7	72	12.6	327	05.5	129	08.3
19	336	48.1	131	18.5	87	13.1	342	08.0	144	10.5
20	351	50.5	146	21.4	102	13.6	357	10.5	159	12.7
21	6	53.0	161	24.2	117	14.1	12	13.0	174	14.9
22	21	55.4	176	27.0	132	14.6	27	15.5	189	17.1
23	36	57.9	191	29.8	147	15.1	42	18.0	204	19.4
24	52	00.4	206	32.6	162	15.6	57	20.6	219	21.6
Dif	—		+29		+8		+25		+22	
							0		-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 3			Edad: 6 ^d 8	PHE { 4 ^h : 54'7 12 ^h : 54'5 20 ^h : 54'4 R°: 41 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	56.8	-17	52.4	97	36.4	-13	48.0	60 N	6 13	7 04	7 53	13 16	6	23 00	78		
1	198	56.7		53.0	112	09.8 ¹⁴⁴		37.6 ¹⁰⁴	58	09	6 57	42	09 10		06 75			
2	213	56.6		53.7	126	43.3 ¹⁴⁵		27.1 ¹⁰⁵	56	05	50	32	13 03	12	11 72			
3	228	56.6		54.4	141	16.8 ¹⁴⁵		16.6 ¹⁰⁵	54	6 01	44	24	12 58	14	16 69			
4	243	56.5		55.1	155	50.4 ¹⁴⁶	-13	06.1 ¹⁰⁵	52	5 58	39	16	53 16		20 67			
5	258	56.4	-17	55.7	170	24.0 ¹⁴⁶	-12	55.5 ¹⁰⁶	50	5 55	6 34	7 09	12 49	18	23 23	66		
6	273	56.3	-17	56.4	184	57.7 ¹⁴⁷	-12	44.8 ¹⁰⁷	45	5 48	6 23	6 55	12 39	22	23 31	62		
7	288	56.2		57.0	199	31.5 ¹⁴⁸		34.1 ¹⁰⁷	40	41	14	43	32 25		38 58			
8	303	56.1		57.7	214	05.3 ¹⁴⁸		23.4 ¹⁰⁷	35	35	6 05	32	25 28		43 56			
9	318	56.0		58.4	228	39.1 ¹⁴⁸		12.6 ¹⁰⁸	30	29	5 58	23	19 30		48 53			
10	333	55.9		59.0	243	13.1 ¹⁵⁰	-12	01.7 ¹⁰⁹	20	18	44	6 08	12 08	35	23 57	48		
11	348	55.9	-17	59.7	257	47.0 ¹⁴⁹	-11	50.9 ¹⁰⁸	10 N	5 06	5 32	5 54	11 59	39	** ** *	**		
12	3	55.8	-18	00.4	272	21.1 ¹⁵¹	-11	39.9 ¹¹⁰	0	4 54	5 19	5 41	11 51	42	** ** *	**		
13	18	55.7		01.0	286	55.2 ¹⁵¹		29.0 ¹⁰⁹	10 S	39	5 05	28	42 45		** ** *	**		
14	33	55.6		01.7	301	29.3 ¹⁵¹		18.0 ¹¹⁰	20	22	4 50	5 13	33 49		** ** *	**		
15	48	55.5		02.3	316	03.5 ¹⁵²	-11	07.0 ¹¹⁰	30	4 00	31	4 57	22 54		0 02	31		
16	63	55.4		03.0	330	37.7 ¹⁵²	-10	55.9 ¹¹¹	35	3 46	20	47	16 56		09 29			
17	78	55.3	-18	03.7	345	12.0 ¹⁵³	-10	44.8 ¹¹¹	40	3 29	4 06	4 36	11 09	59	0 17	26		
18	93	55.2	-18	04.3	359	46.3 ¹⁵³	-10	33.6 ¹¹²	45	3 07	3 50	4 24	11 01	62	0 26	24		
19	108	55.1		05.0	14	20.7 ¹⁵⁴		22.5 ¹¹¹	50	2 38	29	08	10 51	66	38 19			
20	123	55.1		05.6	28	55.1 ¹⁵⁴	-10	11.2 ¹¹³	52	23	19	4 00	47 68		43 17			
21	138	55.0		06.3	43	29.6 ¹⁵⁵	-10	00.0 ¹¹²	54	2 05	3 08	3 52	42 70		48 16			
22	153	54.9		07.0	58	04.1 ¹⁵⁵	-9	48.7 ¹¹³	56	1 43	2 54	42	36 73		0 55	13		
23	168	54.8		07.6	72	38.7 ¹⁵⁶		37.4 ¹¹³	58	1 11	39	32	30 75		1 02	11		
24	183	54.7	-18	08.3	87	13.3 ¹⁵⁶	-9	26.0 ¹¹⁴	60 S	0 06	2 20	3 20	10 23	78	1 10	8		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 28 ^m 6		Mag: -4.6 PMG: 10 ^h 12 ^m			Mag: +1.4 PMG: 13 ^h 11 ^m			Mag: -2.7 PMG: 20 ^h 07 ^m			Mag: +0.9 PMG: 9 ^h 21 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	52	00.4	206	32.6	-13	10.2	162	15.6	-22	48.8	57	20.6	-3	54.9	219	21.6	-3	00.2
1	67	02.8	221	35.5		09.4	177	16.1		49.1	72	23.1		54.9	234	23.8		00.3
2	82	05.3	236	38.3		08.6	192	16.6		49.3	87	25.6		54.9	249	26.0		00.4
3	97	07.8	251	41.1		07.8	207	17.1		49.6	102	28.1		54.9	264	28.2		00.5
4	112	10.2	266	43.9		07.0	222	17.6		49.9	117	30.6		54.9	279	30.4		00.6
5	127	12.7	281	46.6	-13	06.2	237	18.1	-22	50.1	132	33.1	-3	54.9	294	32.7	-3	00.7
6	142	15.2	296	49.4	-13	05.5	252	18.6	-22	50.4	147	35.6	-3	54.9	309	34.9	-3	00.8
7	157	17.6	311	52.2		04.7	267	19.1		50.7	162	38.1		54.9	324	37.1		00.9
8	172	20.1	326	55.0		03.9	282	19.6		50.9	177	40.7		54.9	339	39.3		01.0
9	187	22.6	341	57.8		03.1	297	20.1		51.2	192	43.2		54.9	354	41.5		01.1
10	202	25.0	357	00.5		02.3	312	20.6		51.5	207	45.7		54.9	9	43.8		01.2
11	217	27.5	12	03.3	-13	01.5	327	21.1	-22	51.8	222	48.2	-3	55.0	24	46.0	-3	01.3
12	232	29.9	27	06.1	-13	00.7	342	21.6	-22	52.0	237	50.7	-3	55.0	39	48.2	-3	01.4
13	247	32.4	42	08.8	-13	00.0	357	22.1		52.3	252	53.2		55.0	54	50.4		01.4
14	262	34.9	57	11.6	-12	59.2	12	22.6		52.6	267	55.7		55.0	69	52.6		01.5
15	277	37.3	72	14.3		58.4	27	23.1		52.8	282	58.2		55.0	84	54.8		01.6
16	292	39.8	87	17.1		57.6	42	23.6		53.1	298	00.7		55.0	99	57.1		01.7
17	307	42.3	102	19.8	-12	56.9	57	24.1	-22	53.4	313	03.2	-3	55.0	114	59.3	-3	01.8
18	322	44.7	117	22.6	-12	56.1	72	24.6	-22	53.6	328	05.8	-3	55.0	130	01.5	-3	01.9
19	337	47.2	132	25.3		55.3	87	25.1		53.9	343	08.3		55.0	145	03.7		02.0
20	352	49.7	147	28.1		54.6	102	25.6		54.2	358	10.8		55.0	160	05.9		02.1
21	7	52.1	162	30.8		53.8	117	26.1		54.4	13	13.3		55.0	175	08.2		02.2
22	22	54.6	177	33.5		53.0	132	26.5		54.7	28	15.8		55.0	190	10.4		02.3
23	37	57.0	192	36.2		52.3	147	27.0		55.0	43	18.3		55.0	205	12.6		02.4
24	52	59.5	207	38.9	-12	51.5	162	27.5	-22	55.2	58	20.8	-3	55.0	220	14.8	-3	02.5
Dif	—		+28		+8		+5		-3		+25		0		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°2			Edad: 7 ^d 8	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2	SD: 14°8			PMG: 18 ^h 42 ^m	R°: 41 ^m						
	PMG: 11 ^h 44 ^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	183	54.7	-18 08.3	87	13.3	-9 26.0		60 N	15 33	16 22	17 13	13 22	6	** ** *	** ** *	
1	198	54.6	08.9	101	47.9 ¹⁵⁶	14.6 ¹¹⁴		58	44	29	18	19	8	** ** *	** ** *	
2	213	54.5	09.6	116	22.6 ¹⁵⁷	-9 03.2 ¹¹⁴		56	15 54	36	22	15	11	** ** *	** ** *	
3	228	54.4	10.2	130	57.3 ¹⁵⁷	-8 51.8 ¹¹⁴		54	16 03	42	25	12	13	** ** *	** ** *	
4	243	54.3	10.9	145	32.0 ¹⁵⁷	40.3 ¹¹⁵		52	10	48	29	09	15	** ** *	** ** *	
5	258	54.2	-18 11.5	160	06.8 ¹⁵⁸	-8 28.8 ¹¹⁵		50	16 17	16 53	17 32	13 07	16	** ** *	** ** *	
6	273	54.1	-18 12.2	174	41.7 ¹⁵⁹	-8 17.2 ¹¹⁶		45	16 32	17 04	17 40	13 01	21	** ** *	** ** *	
7	288	54.0	12.8	189	16.5 ¹⁵⁸	-8 05.7 ¹¹⁵		40	45	14	46	12 57	23	** ** *	** ** *	
8	303	53.9	13.5	203	51.4 ¹⁵⁹	-7 54.1 ¹¹⁶		35	16 55	22	53	53	26	** ** *	** ** *	
9	318	53.8	14.1	218	26.4 ¹⁶⁰	42.5 ¹¹⁶		30	17 04	30	17 59	49	29	** ** *	** ** *	
10	333	53.7	14.8	233	01.3 ¹⁵⁹	30.8 ¹¹⁷		20	21	44	18 10	43	33	** ** *	** ** *	
11	348	53.7	-18 15.4	247	36.3 ¹⁶⁰	-7 19.1 ¹¹⁷		10 N	17 35	17 57	18 22	12 38	37	0 04	45	
12	3	53.6	-18 16.1	262	11.4 ¹⁶¹	-7 07.5 ¹¹⁶		0	17 48	18 10	18 35	12 33	40	0 11	41	
13	18	53.5	16.7	276	46.4 ¹⁶⁰	-6 55.7 ¹¹⁸		10 S	18 01	24	18 50	27	45	18	37	
14	33	53.4	17.4	291	21.5 ¹⁶¹	44.0 ¹¹⁷		20	16	40	19 07	22	48	25	34	
15	48	53.3	18.0	305	56.6 ¹⁶¹	32.2 ¹¹⁸		30	33	18 59	30	16	52	33	30	
16	63	53.2	18.7	320	31.8 ¹⁶²	20.4 ¹¹⁸		35	43	19 11	19 44	12	55	38	27	
17	78	53.1	-18 19.3	335	07.0 ¹⁶²	-6 08.6 ¹¹⁸		40	18 54	19 24	20 02	12 08	58	0 43	25	
18	93	53.0	-18 20.0	349	42.2 ¹⁶²	-5 56.8 ¹¹⁸		45	19 07	19 41	20 24	12 03	61	0 50	21	
19	108	52.9	20.6	4	17.4 ¹⁶²	44.9 ¹¹⁹		50	24	20 03	20 54	11 57	66	0 57	17	
20	123	52.8	21.3	18	52.6 ¹⁶²	33.1 ¹¹⁸		52	31	13	21 10	55	67	1 00	16	
21	138	52.7	21.9	33	27.9 ¹⁶³	21.2 ¹¹⁹		54	40	25	29	52	69	04	13	
22	153	52.6	22.6	48	03.2 ¹⁶³	-5 09.3 ¹¹⁹		56	19 50	39	21 53	49	71	08	11	
23	168	52.5	23.2	62	38.5 ¹⁶³	-4 57.4 ¹¹⁹		58	20 01	20 55	22 28	45	74	13	8	
24	183	52.4	-18 23.8	77	13.8 ¹⁶³	-4 45.4 ¹²⁰		60 S	20 14	21 15	** **	11 41	77	1 18	6	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 24 ^m 7		Mag: -4.6 PMG: 10 ^h 08 ^m			Mag: +1.4 PMG: 13 ^h 10 ^m			Mag: -2.7 PMG: 20 ^h 03 ^m			Mag: +0.9 PMG: 9 ^h 18 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'
0	52	59.5	207	38.9	-12 51.5	162	27.5	-22 55.2	58	20.8	-3 55.0	220	14.8	-3 02.5		
1	68	02.0	222	41.7	50.8	177	28.0	55.5	73	23.3	55.1	235	17.0	02.6		
2	83	04.4	237	44.4	50.0	192	28.5	55.7	88	25.8	55.1	250	19.2	02.7		
3	98	06.9	252	47.1	49.3	207	29.0	56.0	103	28.3	55.1	265	21.5	02.8		
4	113	09.4	267	49.8	48.5	222	29.5	56.3	118	30.8	55.1	280	23.7	02.9		
5	128	11.8	282	52.5	-12 47.7	237	30.0	-22 56.5	133	33.3	-3 55.1	295	25.9	-3 03.0		
6	143	14.3	297	55.2	-12 47.0	252	30.5	-22 56.8	148	35.8	-3 55.1	310	28.1	-3 03.1		
7	158	16.8	312	57.9	46.3	267	31.0	57.0	163	38.3	55.1	325	30.3	03.2		
8	173	19.2	328	00.5	45.5	282	31.5	57.3	178	40.8	55.1	340	32.6	03.3		
9	188	21.7	343	03.2	44.8	297	32.0	57.6	193	43.3	55.1	355	34.8	03.4		
10	203	24.2	358	05.9	44.0	312	32.5	57.8	208	45.8	55.1	10	37.0	03.5		
11	218	26.6	13	08.6	-12 43.3	327	32.9	-22 58.1	223	48.3	-3 55.1	25	39.2	-3 03.6		
12	233	29.1	28	11.2	-12 42.6	342	33.4	-22 58.3	238	50.8	-3 55.1	40	41.4	-3 03.7		
13	248	31.5	43	13.9	41.8	357	33.9	58.6	253	53.3	55.1	55	43.7	03.8		
14	263	34.0	58	16.6	41.1	12	34.4	58.9	268	55.8	55.1	70	45.9	03.8		
15	278	36.5	73	19.2	40.4	27	34.9	59.1	283	58.3	55.1	85	48.1	03.9		
16	293	38.9	88	21.9	39.6	42	35.4	59.4	299	00.8	55.1	100	50.3	04.0		
17	308	41.4	103	24.5	-12 38.9	57	35.9	-22 59.6	314	03.3	-3 55.1	115	52.5	-3 04.1		
18	323	43.9	118	27.2	-12 38.2	72	36.4	-22 59.9	329	05.8	-3 55.1	130	54.8	-3 04.2		
19	338	46.3	133	29.8	37.5	87	36.9	-23 00.2	344	08.3	55.1	145	57.0	04.3		
20	353	48.8	148	32.5	36.7	102	37.4	00.4	359	10.8	55.1	160	59.2	04.4		
21	8	51.3	163	35.1	36.0	117	37.8	00.7	14	13.3	55.1	176	01.4	04.5		
22	23	53.7	178	37.7	35.3	132	38.3	00.9	29	15.8	55.2	191	03.6	04.6		
23	38	56.2	193	40.3	34.6	147	38.8	01.2	44	18.3	55.2	206	05.9	04.7		
24	53	58.7	208	43.0	-12 33.9	162	39.3	-23 01.4	59	20.8	-3 55.2	221	08.1	-3 04.8		
Dif	—		+27		+7	+5		-3	+25		0	+22		-1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44 ^m 6			Edad: 8 ^d 8 SD: 14'8 PMG: 19 ^h 23 ^m												
				PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 R°: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	'	'	'	°	h	m	h	m	h	m	h	m
0	183	52.4	-18	23.8	77	13.8	-4 45.4	60 N	6 17	7 09	7 58	13 28	6	0 18	77	
1	198	52.3		24.5	91	49.1	33.5	58	12	7 01	46	27	8	21	74	
2	213	52.2		25.1	106	24.5	21.5	56	08	6 54	36	26	10	23	72	
3	228	52.1		25.8	120	59.9	09.5	54	04	48	27	25	13	25	70	
4	243	52.0		26.4	135	35.2	57.5	52	6 01	42	20	24	15	27	67	
5	258	51.9	-18	27.0	150	10.6	45.5	50	5 58	6 37	7 12	13 23	17	0 29	65	
6	273	51.8	-18	27.7	164	46.1	33.4	45	5 50	6 26	6 57	13 22	20	0 33	61	
7	288	51.7		28.3	179	21.5	21.4	40	43	16	45	20	24	36	58	
8	303	51.5		29.0	193	56.9	09.3	35	37	07	34	19	26	39	55	
9	318	51.4		29.6	208	32.4	57.2	30	31	6 00	25	18	29	41	52	
10	333	51.3		30.2	223	07.8	45.2	20	19	5 46	6 09	16	33	45	48	
11	348	51.2	-18	30.9	237	43.3	33.1	10 N	5 07	5 32	5 54	13 15	36	0 49	44	
12	3	51.1	-18	31.5	252	18.8	21.0	0	4 54	5 19	5 41	13 13	41	0 52	41	
13	18	51.0		32.1	266	54.2	08.9	10 S	39	5 05	5 27	12	44	55	37	
14	33	50.9		32.8	281	29.7	56.7	20	4 21	4 49	5 13	10	48	0 59	33	
15	48	50.8		33.4	296	05.2	44.6	30	3 59	30	4 56	08	53	1 03	29	
16	63	50.7		34.0	310	40.7	32.5	35	44	18	46	07	55	05	26	
17	78	50.6	-18	34.7	325	16.2	20.3	40	3 27	4 04	4 35	13 06	58	1 08	23	
18	93	50.5	-18	35.3	339	51.7	08.2	45	3 04	3 47	4 21	13 04	62	1 11	20	
19	108	50.4		35.9	354	27.2	56.0	50	2 34	26	4 05	03	65	14	16	
20	123	50.3		36.6	9	02.7	43.9	52	19	15	3 57	02	67	16	14	
21	138	50.2		37.2	23	38.2	31.7	54	2 00	3 04	48	01	70	17	13	
22	153	50.1		37.8	38	13.7	19.5	56	1 35	2 50	39	13 00	72	19	11	
23	168	50.0		38.5	52	49.2	07.4	58	1 00	33	28	12 59	74	21	9	
24	183	49.8	-18	39.1	67	24.6	04.8	60 S	** **	2 13	3 15	12 58	77	1 24	5	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 20 ^m 7		Mag: -4.7 PMG: 10 ^h 03 ^m		Mag: +1.4 PMG: 13 ^h 09 ^m		Mag: -2.7 PMG: 19 ^h 59 ^m		Mag: +0.9 PMG: 9 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	53	58.7	208	43.0	-12	33.9	162	39.3	-23	01.4
1	69	01.1	223	45.6		33.2	177	39.8		01.7
2	84	03.6	238	48.2		32.4	192	40.3		01.9
3	99	06.0	253	50.8		31.7	207	40.8		02.2
4	114	08.5	268	53.4		31.0	222	41.3		02.4
5	129	11.0	283	56.0	-12	30.3	237	41.7	-23	02.7
6	144	13.4	298	58.6	-12	29.6	252	42.2	-23	02.9
7	159	15.9	314	01.2		28.9	267	42.7		03.2
8	174	18.4	329	03.8		28.2	282	43.2		03.4
9	189	20.8	344	06.4		27.5	297	43.7		03.7
10	204	23.3	359	09.0		26.8	312	44.2		03.9
11	219	25.8	14	11.6	-12	26.1	327	44.7	-23	04.2
12	234	28.2	29	14.1	-12	25.4	342	45.1	-23	04.4
13	249	30.7	44	16.7		24.8	357	45.6		04.7
14	264	33.1	59	19.3		24.1	12	46.1		04.9
15	279	35.6	74	21.8		23.4	27	46.6		05.2
16	294	38.1	89	24.4		22.7	42	47.1		05.4
17	309	40.5	104	26.9	-12	22.0	57	47.6	-23	05.7
18	324	43.0	119	29.5	-12	21.3	72	48.0	-23	05.9
19	339	45.5	134	32.0		20.7	87	48.5		06.2
20	354	47.9	149	34.6		20.0	102	49.0		06.4
21	9	50.4	164	37.1		19.3	117	49.5		06.7
22	24	52.9	179	39.7		18.6	132	50.0		06.9
23	39	55.3	194	42.2		18.0	147	50.5		07.2
24	54	57.8	209	44.7	-12	17.3	162	50.9	-23	07.4
Dif	—		+26		+7		+5		-2	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2		Edad: 9 ^d 8	PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/3	SD: 14:8				Rº: 42 ^m						
	PMG: 11 ^h 44 ^m 8				PMG: 20 ^h 03 ^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	49.8	-18	39.1	67	24.6	+0 04.8	60 N	15 29	16 18	17 10	13 34 6	1 35 77		
1	198	49.7		39.7	82	00.1 ¹⁶⁵	17.0 ¹²²	58	40	26	15	35 9	35 74		
2	213	49.6		40.3	96	35.6 ¹⁶⁵	29.2 ¹²²	56	15 51	33	19	36 12	35 72		
3	228	49.5		41.0	111	11.0 ¹⁶⁴	41.3 ¹²¹	54	16 00	39	23	38 13	35 69		
4	243	49.4		41.6	125	46.5 ¹⁶⁵	+0 53.5 ¹²²	52	08	45	27	39 15	34 68		
5	258	49.3	-18	42.2	140	21.9 ¹⁶⁴	+1 05.7 ¹²²	50	16 15	16 51	17 30	13 40 17	1 34 66		
6	273	49.2	-18	42.9	154	57.4 ¹⁶⁵	+1 17.9 ¹²²	45	16 30	17 02	17 38	13 42 21	1 34 62		
7	288	49.1		43.5	169	32.8 ¹⁶⁴	30.0 ¹²¹	40	43	12	45	44 24	34 58		
8	303	49.0		44.1	184	08.2 ¹⁶⁴	42.2 ¹²²	35	16 54	21	52	45 27	34 55		
9	318	48.8		44.7	198	43.6 ¹⁶⁴	+1 54.4 ¹²²	30	17 04	29	17 58	47 29	33 53		
10	333	48.7		45.3	213	19.0 ¹⁶⁴	+2 06.6 ¹²²	20	20	43	18 10	49 34	33 48		
11	348	48.6	-18	46.0	227	54.3 ¹⁶³	+2 18.7 ¹²¹	10 N	17 35	17 57	18 22	13 51 38	1 33 44		
12	3	48.5	-18	46.6	242	29.7 ¹⁶⁴	+2 30.9 ¹²²	0	17 48	18 10	18 36	13 54 41	1 33 40		
13	18	48.4		47.2	257	05.0 ¹⁶³	43.0 ¹²¹	10 S	18 02	25	18 51	56 44	32 37		
14	33	48.3		47.8	271	40.3 ¹⁶³	+2 55.2 ¹²²	20	17	18 41	19 09	13 58 49	32 33		
15	48	48.2		48.5	286	15.6 ¹⁶³	+3 07.3 ¹²¹	30	34	19 01	32	14 01 53	32 28		
16	63	48.0		49.1	300	50.9 ¹⁶³	19.4 ¹²¹	35	45	13	19 47	02 56	31 27		
17	78	47.9	-18	49.7	315	26.1 ¹⁶²	+3 31.6 ¹²²	40	18 56	19 27	20 05	14 04 58	1 31 24		
18	93	47.8	-18	50.3	330	01.4 ¹⁶³	+3 43.7 ¹²¹	45	19 10	19 44	20 28	14 06 62	1 31 20		
19	108	47.7		50.9	344	36.6 ¹⁶²	+3 55.8 ¹²¹	50	27	20 06	20 59	08 66	30 17		
20	123	47.6		51.5	359	11.8 ¹⁶²	+4 07.9 ¹²¹	52	35	17	21 15	09 68	30 15		
21	138	47.5		52.2	13	46.9 ¹⁶¹	20.0 ¹²¹	54	44	29	21 35	11 70	30 13		
22	153	47.3		52.8	28	22.1 ¹⁶²	32.0 ¹²⁰	56	19 54	20 44	22 01	12 73	30 11		
23	168	47.2		53.4	42	57.2 ¹⁶¹	44.1 ¹²¹	58	20 05	21 01	22 42	13 76	30 8		
24	183	47.1	-18	54.0	57	32.2 ¹⁶⁰	+4 56.1 ¹²⁰	60 S	20 19	21 22	** **	14 15 78	1 29 6		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 16 ^m 8		Mag: -4.7 PMG: 9 ^h 59 ^m			Mag: +1.4 PMG: 13 ^h 08 ^m			Mag: -2.7 PMG: 19 ^h 55 ^m			Mag: +0.9 PMG: 9 ^h 11 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	'	°	'	'	°	'	°	'	
0	54	57.8	209	44.7	-12	17.3	162 50.9	-23 07.4	60 20.7	-3 55.2	222 01.4	-3 07.1			
1	70	00.3	224	47.2		16.6	177 51.4	07.7	75 23.2	55.2	237 03.6	07.2			
2	85	02.7	239	49.8		16.0	192 51.9	07.9	90 25.7	55.2	252 05.8	07.3			
3	100	05.2	254	52.3		15.3	207 52.4	08.1	105 28.2	55.2	267 08.1	07.4			
4	115	07.6	269	54.8		14.7	222 52.9	08.4	120 30.6	55.2	282 10.3	07.4			
5	130	10.1	284	57.3	-12	14.0	237 53.4	-23 08.6	135 33.1	-3 55.2	297 12.5	-3 07.5			
6	145	12.6	299	59.8	-12	13.4	252 53.8	-23 08.9	150 35.6	-3 55.2	312 14.7	-3 07.6			
7	160	15.0	315	02.3		12.7	267 54.3	09.1	165 38.1	55.2	327 17.0	07.7			
8	175	17.5	330	04.8		12.0	282 54.8	09.4	180 40.6	55.2	342 19.2	07.8			
9	190	20.0	345	07.3		11.4	297 55.3	09.6	195 43.1	55.2	357 21.4	07.9			
10	205	22.4	0	09.8		10.7	312 55.8	09.8	210 45.6	55.2	12 23.6	08.0			
11	220	24.9	15	12.3	-12	10.1	327 56.2	-23 10.1	225 48.1	-3 55.2	27 25.9	-3 08.1			
12	235	27.4	30	14.7	-12	09.5	342 56.7	-23 10.3	240 50.5	-3 55.2	42 28.1	-3 08.2			
13	250	29.8	45	17.2		08.8	357 57.2	10.6	255 53.0	55.2	57 30.3	08.3			
14	265	32.3	60	19.7		08.2	12 57.7	10.8	270 55.5	55.2	72 32.5	08.4			
15	280	34.8	75	22.2		07.5	27 58.1	11.0	285 58.0	55.2	87 34.7	08.5			
16	295	37.2	90	24.6		06.9	42 58.6	11.3	301 00.5	55.2	102 37.0	08.6			
17	310	39.7	105	27.1	-12	06.3	57 59.1	-23 11.5	316 03.0	-3 55.2	117 39.2	-3 08.7			
18	325	42.1	120	29.5	-12	05.6	72 59.6	-23 11.8	331 05.5	-3 55.1	132 41.4	-3 08.8			
19	340	44.6	135	32.0		05.0	88 00.1	12.0	346 07.9	55.1	147 43.6	08.9			
20	355	47.1	150	34.4		04.4	103 00.5	12.2	1 10.4	55.1	162 45.9	08.9			
21	10	49.5	165	36.9		03.8	118 01.0	12.5	16 12.9	55.1	177 48.1	09.0			
22	25	52.0	180	39.3		03.1	133 01.5	12.7	31 15.4	55.1	192 50.3	09.1			
23	40	54.5	195	41.8		02.5	148 02.0	12.9	46 17.9	55.1	207 52.5	09.2			
24	55	56.9	210	44.2	-12	01.9	163 02.4	-23 13.2	61 20.3	-3 55.1	222 54.8	-3 09.3			
Dif	—		+25		+6		+5		-2		+25		-1		

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'2			Edad: 10 ^d 8 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 Rº: 43 ^m																	
	PMG: 11 ^h 45 ^m 0			SD: 14'8 PMG: 20 ^h 45 ^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	47.1	-18	54.0	57	32.2	+4	56.1	60 N	6	21	7	13	8	03	13	40	7			
1	198	47.0		54.6	72	07.3 ¹⁶¹	+5	08.2 ¹²¹	58	16	7	05	7	51	44	10	49	76			
2	213	46.9		55.2	86	42.3 ¹⁶⁰		20.2 ¹²⁰	56	12	6	58		40	48	12	47	73			
3	228	46.8		55.9	101	17.3 ¹⁶⁰		32.2 ¹²⁰	54	08	51	31		31	51	15	44	71			
4	243	46.6		56.5	115	52.2 ¹⁵⁹		44.2 ¹²⁰	52	04	45	23		23	54	17	42	69			
5	258	46.5	-18	57.1	130	27.2 ¹⁶⁰	+5	56.2 ¹²⁰	50	6	00	6	40	7	16	13	57	19			
6	273	46.4	-18	57.7	145	02.1 ¹⁵⁹	+6	08.1 ¹¹⁹	45	5	52	6	28	7	00	14	03	23			
7	288	46.3		58.3	159	36.9 ¹⁵⁸		20.0 ¹¹⁹	40	45	18	6	47		08	26	32	59			
8	303	46.2		58.9	174	11.7 ¹⁵⁸		32.0 ¹²⁰	35	39	09	36		36	12	29	29	56			
9	318	46.0	-18	59.5	188	46.5 ¹⁵⁸		43.9 ¹¹⁹	30	32	6	01	27		16	32	26	54			
10	333	45.9	-19	00.1	203	21.3 ¹⁵⁸	+6	55.7 ¹¹⁸	20	20	5	47	6	10	23	36	21	50			
11	348	45.8	-19	00.7	217	56.0 ¹⁵⁷	+7	07.6 ¹¹⁹	10 N	5	07	5	33	5	55	14	29	39			
12	3	45.7	-19	01.3	232	30.6 ¹⁵⁶	+7	19.4 ¹¹⁸	0	4	54	5	20	5	41	14	35	43			
13	18	45.5		02.0	247	05.3 ¹⁵⁷		31.3 ¹¹⁹	10 S	39	5	05		27	40	47	09	39			
14	33	45.4		02.6	261	39.8 ¹⁵⁵		43.1 ¹¹⁸	20	4	21	4	49	5	12	47	50	05	35		
15	48	45.3		03.2	276	14.4 ¹⁵⁶	+7	54.8 ¹¹⁷	30	3	57	29	4	55	54	54	2	00	31		
16	63	45.2		03.8	290	48.9 ¹⁵⁵	+8	06.6 ¹¹⁸	35		43	17	45		14	58	57	1	58	27	
17	78	45.0	-19	04.4	305	23.4 ¹⁵⁵	+8	18.3 ¹¹⁷	40	3	25	4	02	4	33	15	02	61	1	55	25
18	93	44.9	-19	05.0	319	57.8 ¹⁵⁴	+8	30.0 ¹¹⁷	45	3	02	3	45	4	19	15	08	64	1	51	22
19	108	44.8		05.6	334	32.1 ¹⁵³		41.6 ¹¹⁶	50	2	30	23	4	02		14	68		47	18	
20	123	44.7		06.2	349	06.5 ¹⁵⁴	+8	53.3 ¹¹⁷	52	2	14	12	3	54	17	70		45	16		
21	138	44.5		06.8	3	40.7 ¹⁵²	+9	04.9 ¹¹⁶	54	1	54	3	00	45	21	72		43	14		
22	153	44.4		07.4	18	15.0 ¹⁵³		16.5 ¹¹⁶	56	1	28	2	45	35	25	74		41	11		
23	168	44.3		08.0	32	49.2 ¹⁵²		28.0 ¹¹⁵	58	0	47	28	24		29	77		38	9		
24	183	44.2	-19	08.6	47	23.3 ¹⁵¹	+9	39.6 ¹¹⁶	60 S	** *	2	07	3	10	15	33	81	1	35	7	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 20 ^h 12 ^m 9		Mag: -4.7 PMG: 9 ^h 55 ^m			Mag: +1.4 PMG: 13 ^h 07 ^m			Mag: -2.7 PMG: 19 ^h 51 ^m			Mag: +0.9 PMG: 9 ^h 07 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	55	56.9	210	44.2	-12	01.9	163	02.4	-23	13.2	61	20.3	-3	55.1	222	54.8	-3	09.3	
1	70	59.4	225	46.6		01.3	178	02.9		13.4	76	22.8		55.1	237	57.0		09.4	
2	86	01.9	240	49.1	-12	00.7	193	03.4		13.6	91	25.3		55.1	252	59.2		09.5	
3	101	04.3	255	51.5	-12	00.0	208	03.9		13.9	106	27.8		55.1	268	01.4		09.6	
4	116	06.8	270	53.9	-11	59.4	223	04.4		14.1	121	30.3		55.1	283	03.7		09.7	
5	131	09.2	285	56.3	-11	58.8	238	04.8	-23	14.3	136	32.8	-3	55.1	298	05.9	-3	09.8	
6	146	11.7	300	58.7	-11	58.2	253	05.3	-23	14.6	151	35.2	-3	55.1	313	08.1	-3	09.9	
7	161	14.2	316	01.1		57.6	268	05.8		14.8	166	37.7		55.1	328	10.3		10.0	
8	176	16.6	331	03.5		57.0	283	06.3		15.0	181	40.2		55.1	343	12.6		10.1	
9	191	19.1	346	05.9		56.4	298	06.7		15.3	196	42.7		55.1	358	14.8		10.2	
10	206	21.6		08.3		55.8	313	07.2		15.5	211	45.2		55.1	13	17.0		10.2	
11	221	24.0	16	10.7	-11	55.2	328	07.7	-23	15.7	226	47.6	-3	55.1	28	19.2	-3	10.3	
12	236	26.5	31	13.1	-11	54.6	343	08.2	-23	16.0	241	50.1	-3	55.1	43	21.5	-3	10.4	
13	251	29.0	46	15.5		54.0	358	08.6		16.2	256	52.6		55.1	58	23.7		10.5	
14	266	31.4	61	17.9		53.4	13	09.1		16.4	271	55.1		55.1	73	25.9		10.6	
15	281	33.9	76	20.2		52.8	28	09.6		16.7	286	57.5		55.1	88	28.1		10.7	
16	296	36.4	91	22.6		52.3	43	10.0		16.9	302	00.0		55.0	103	30.4		10.8	
17	311	38.8	106	25.0	-11	51.7	58	10.5	-23	17.1	317	02.5	-3	55.0	118	32.6	-3	10.9	
18	326	41.3	121	27.3	-11	51.1	73	11.0	-23	17.3	332	05.0	-3	55.0	133	34.8	-3	11.0	
19	341	43.7	136	29.7		50.5	88	11.5		17.6	347	07.4		55.0	148	37.0		11.1	
20	356	46.2	151	32.0		49.9	103	11.9		17.8	2	09.9		55.0	163	39.3		11.2	
21	11	48.7	166	34.4		49.4	118	12.4		18.0	17	12.4		55.0	178	41.5		11.3	
22	26	51.1	181	36.7		48.8	133	12.9		18.2	32	14.9		55.0	193	43.7		11.4	
23	41	53.6	196	39.1		48.2	148	13.4		18.5	47	17.3		55.0	208	45.9		11.4	
24	56	56.1	211	41.4	-11	47.6	163	13.8	-23	18.7	62	19.8	-3	55.0	223	48.2	-3	11.5	
Dif	—		+24			+6	+5			-2	+25		0		+22			-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 45 ^m 2			Edad: 11 ^d 8 PHE { SD: 14/9 PMG: 21 ^h 28 ^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	44.2	-19 08.6	47	23.3	+9 39.6		60 N	15 25	16 15	17 07	13 47 10	4 11 82	
1	198	44.0	09.2	61	57.4 ¹⁵¹	+9 51.0 ¹¹⁴		58	37	23	12	13 54 13	05 79	
2	213	43.9	09.8	76	31.4 ¹⁵⁰	+10 02.5 ¹¹⁵		56	47	30	16	14 00 16	4 00 75	
3	228	43.8	10.4	91	05.4 ¹⁵⁰	13.9 ¹¹⁴		54	15 57	37	21	06 18	3 55 77	
4	243	43.7	11.0	105	39.3 ¹⁴⁹	25.3 ¹¹⁴		52	16 05	43	24	11 20	51 70	
5	258	43.5	-19 11.6	120	13.2 ¹⁴⁹	+10 36.7 ¹¹⁴		50	16 13	16 48	17 28	14 16 22	3 47 68	
6	273	43.4	-19 12.2	134	47.0 ¹⁴⁸	+10 48.0 ¹¹³		45	16 28	17 01	17 36	14 26 26	3 38 65	
7	288	43.3	12.8	149	20.7 ¹⁴⁷	+10 59.3 ¹¹³		40	42	11	44	34 30	31 61	
8	303	43.1	13.4	163	54.4 ¹⁴⁷	+11 10.5 ¹¹²		35	16 53	20	51	41 33	25 58	
9	318	43.0	14.0	178	28.1 ¹⁴⁷	21.7 ¹¹²		30	17 03	28	17 57	48 34	20 55	
10	333	42.9	14.6	193	01.7 ¹⁴⁶	32.9 ¹¹²		20	20	43	18 10	14 59 38	11 51	
11	348	42.8	-19 15.2	207	35.2 ¹⁴⁵	+11 44.0 ¹¹¹		10 N	17 35	17 57	18 22	15 08 43	3 03 47	
12	3	42.6	-19 15.8	222	08.7 ¹⁴⁵	+11 55.1 ¹¹¹		0	17 49	18 11	18 36	15 18 45	2 55 44	
13	18	42.5	16.3	236	42.1 ¹⁴⁴	+12 06.1 ¹¹⁰		10 S	18 03	25	18 52	27 49	48 40	
14	33	42.4	16.9	251	15.4 ¹⁴³	17.2 ¹¹¹		20	18	18 42	19 10	37 52	40 37	
15	48	42.2	17.5	265	48.7 ¹⁴³	28.1 ¹⁰⁹		30	36	19 02	34	48 57	31 32	
16	63	42.1	18.1	280	21.9 ¹⁴²	39.0 ¹⁰⁹		35	47	15	19 49	15 55 59	25 31	
17	78	42.0	-19 18.7	294	55.1 ¹⁴²	+12 49.9 ¹⁰⁹		40	18 59	19 29	20 08	16 03 62	2 20 27	
18	93	41.8	-19 19.3	309	28.2 ¹⁴¹	+13 00.7 ¹⁰⁸		45	19 13	19 47	20 31	16 12 65	2 13 24	
19	108	41.7	19.9	324	01.2 ¹⁴⁰	11.5 ¹⁰⁸		50	30	20 10	21 04	22 70	05 20	
20	123	41.6	20.5	338	34.2 ¹⁴⁰	22.2 ¹⁰⁷		52	38	21	21	27 72	2 01 18	
21	138	41.4	21.1	353	07.1 ¹³⁹	32.9 ¹⁰⁷		54	48	34	21 42	33 74	1 57 16	
22	153	41.3	21.7	7	39.9 ¹³⁸	43.5 ¹⁰⁶		56	19 58	20 49	22 10	39 77	52 14	
23	168	41.2	22.2	22	12.7 ¹³⁸	+13 54.1 ¹⁰⁶		58	20 10	21 07	22 58	46 80	47 12	
24	183	41.0	-19 22.8	36	45.4 ¹³⁷	+14 04.6 ¹⁰⁵		60 S	20 24	21 30	** **	16 54 83	1 42 8	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 09 ^m 0		Mag: -4.7 PMG: 9 ^h 52 ^m		Mag: +1.4 PMG: 13 ^h 07 ^m		Mag: -2.7 PMG: 19 ^h 47 ^m		Mag: +0.9 PMG: 9 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	56	56.1	211	41.4	-11	47.6	163	13.8	-23	18.7
1	71	58.5	226	43.8		47.1	178	14.3		18.9
2	87	01.0	241	46.1		46.5	193	14.8		19.2
3	102	03.5	256	48.4		45.9	208	15.2		19.4
4	117	05.9	271	50.8		45.4	223	15.7		19.6
5	132	08.4	286	53.1	-11	44.8	238	16.2	-23	19.8
6	147	10.8	301	55.4	-11	44.3	253	16.7	-23	20.0
7	162	13.3	316	57.7		43.7	268	17.1		20.3
8	177	15.8	332	00.0		43.1	283	17.6		20.5
9	192	18.2	347	02.3		42.6	298	18.1		20.7
10	207	20.7	2	04.6		42.0	313	18.5		20.9
11	222	23.2	17	06.9	-11	41.5	328	19.0	-23	21.2
12	237	25.6	32	09.2	-11	40.9	343	19.5	-23	21.4
13	252	28.1	47	11.5		40.4	358	19.9		21.6
14	267	30.6	62	13.8		39.9	13	20.4		21.8
15	282	33.0	77	16.1		39.3	28	20.9		22.0
16	297	35.5	92	18.4		38.8	43	21.3		22.3
17	312	38.0	107	20.6	-11	38.2	58	21.8	-23	22.5
18	327	40.4	122	22.9	-11	37.7	73	22.3	-23	22.7
19	342	42.9	137	25.2		37.2	88	22.7		22.9
20	357	45.3	152	27.4		36.6	103	23.2		23.1
21	12	47.8	167	29.7		36.1	118	23.7		23.3
22	27	50.3	182	32.0		35.6	133	24.1		23.6
23	42	52.7	197	34.2		35.1	148	24.6		23.8
24	57	55.2	212	36.5	-11	34.5	163	25.1	-23	24.0
Dif	—		+23		+5		+5		-2	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 45 ^m 4			Edad: 12 ^d 8 PHE { 4 ^h : 55/2 12 ^h : 55/3 20 ^h : 55/5 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	183	41.0	-19 22.8	36	45.4	+14 04.6	60 N	6 25	7 17	8 07	13 57	15	5 33	84	
1	198	40.9	23.4	51	18.0 ¹³⁶	15.1 ¹⁰⁵	58	20	09	7 55	14 07	18	24	80	
2	213	40.8	24.0	65	50.6 ¹³⁶	25.5 ¹⁰⁴	56	15	7 01	44	16 21		15 77		
3	228	40.6	24.6	80	23.1 ¹³⁵	35.9 ¹⁰⁴	54	11	6 55	35	24 24		08 74		
4	243	40.5	25.2	94	55.5 ¹³⁴	46.2 ¹⁰³	52	07	48	26	31 26		5 01 72		
5	258	40.3	-19 25.8	109	27.9 ¹³⁴	+14 56.4 ¹⁰²	50	6 03	6 43	7 19	14 38	28	4 55	70	
6	273	40.2	-19 26.3	124	00.1 ¹³²	+15 06.6 ¹⁰²	45	5 55	6 31	7 03	14 52	31	4 43	66	
7	288	40.1	26.9	138	32.3 ¹³²	16.7 ¹⁰¹	40	47	20	6 49	15 04	34	32	63	
8	303	39.9	27.5	153	04.5 ¹³²	26.8 ¹⁰¹	35	40	11	38	14 37		23 60		
9	318	39.8	28.1	167	36.5 ¹³⁰	36.8 ¹⁰⁰	30	34	6 03	28	22 39		15 58		
10	333	39.7	28.7	182	08.5 ¹³⁰	46.8 ¹⁰⁰	20	21	5 48	6 11	37 43		4 02 54		
11	348	39.5	-19 29.2	196	40.4 ¹²⁹	+15 56.7 ⁹⁹	10 N	5 08	5 34	5 56	15 51	46	3 50	50	
12	3	39.4	-19 29.8	211	12.3 ¹²⁹	+16 06.5 ⁹⁸	0	4 54	5 20	5 42	16 03	49	3 39	47	
13	18	39.2	30.4	225	44.0 ¹²⁷	16.2 ⁹⁷	10 S	39	5 05	27	16 52		28 44		
14	33	39.1	31.0	240	15.7 ¹²⁷	25.9 ⁹⁷	20	4 20	4 48	5 12	29 55		17 40		
15	48	39.0	31.6	254	47.3 ¹²⁶	35.5 ⁹⁶	30	3 56	28	4 54	45 59		3 03 37		
16	63	38.8	32.1	269	18.9 ¹²⁶	45.1 ⁹⁶	35	41	15	44	16 54	61	2 56	34	
17	78	38.7	-19 32.7	283	50.3 ¹²⁴	+16 54.6 ⁹⁵	40	3 23	4 01	4 32	17 05	63	2 47	32	
18	93	38.5	-19 33.3	298	21.7 ¹²⁴	+17 04.0 ⁹⁴	45	2 59	3 43	4 17	17 17	66	2 37	29	
19	108	38.4	33.9	312	53.0 ¹²³	13.3 ⁹³	50	26	20	4 00	32 70		25 24		
20	123	38.2	34.4	327	24.2 ¹²²	22.6 ⁹³	52	2 09	3 09	3 52	39 72		19 23		
21	138	38.1	35.0	341	55.4 ¹²²	31.8 ⁹²	54	1 48	2 56	42	47 74		13 21		
22	153	38.0	35.6	356	26.4 ¹²⁰	40.9 ⁹¹	56	1 20	41	32	17 56	77	2 06	18	
23	168	37.8	36.1	10	57.4 ¹²⁰	50.0 ⁹¹	58	0 32	23	20	18 06	80	1 59	15	
24	183	37.7	-19 36.7	25	28.3 ¹¹⁹	+17 58.9 ⁸⁹	60 S	** **	2 00	3 06	18 17	85	1 50	11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 05 ^m 0		Mag: -4.8 PMG: 9 ^h 48 ^m			Mag: +1.4 PMG: 13 ^h 06 ^m			Mag: -2.7 PMG: 19 ^h 43 ^m			Mag: +0.9 PMG: 9 ^h 00 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	57	55.2	212 36.5	-11 34.5		163 25.1	-23 24.0		63 19.1	-3 54.8		224 41.6	-3 13.7		
1	72	57.7	227 38.7	34.0		178 25.5	24.2		78 21.6	54.8		239 43.9	13.8		
2	88	00.1	242 40.9	33.5		193 26.0	24.4		93 24.0	54.7		254 46.1	13.9		
3	103	02.6	257 43.2	33.0		208 26.5	24.6		108 26.5	54.7		269 48.3	14.0		
4	118	05.1	272 45.4	32.5		223 26.9	24.9		123 29.0	54.7		284 50.5	14.1		
5	133	07.5	287 47.6	-11 32.0		238 27.4	-23 25.1		138 31.4	-3 54.7		299 52.8	-3 14.2		
6	148	10.0	302 49.9	-11 31.5		253 27.9	-23 25.3		153 33.9	-3 54.7		314 55.0	-3 14.3		
7	163	12.5	317 52.1	30.9		268 28.3	25.5		168 36.4	54.7		329 57.2	14.4		
8	178	14.9	332 54.3	30.4		283 28.8	25.7		183 38.8	54.7		344 59.5	14.5		
9	193	17.4	347 56.5	29.9		298 29.3	25.9		198 41.3	54.7		0 01.7	14.6		
10	208	19.8	2 58.7	29.4		313 29.7	26.1		213 43.7	54.6		15 03.9	14.6		
11	223	22.3	18 00.9	-11 28.9		328 30.2	-23 26.3		228 46.2	-3 54.6		30 06.2	-3 14.7		
12	238	24.8	33 03.1	-11 28.4		343 30.7	-23 26.6		243 48.7	-3 54.6		45 08.4	-3 14.8		
13	253	27.2	48 05.3	27.9		358 31.1	26.8		258 51.1	54.6		60 10.6	14.9		
14	268	29.7	63 07.5	27.5		13 31.6	27.0		273 53.6	54.6		75 12.8	15.0		
15	283	32.2	78 09.7	27.0		28 32.0	27.2		288 56.1	54.6		90 15.1	15.1		
16	298	34.6	93 11.9	26.5		43 32.5	27.4		303 58.5	54.6		105 17.3	15.2		
17	313	37.1	108 14.1	-11 26.0		58 33.0	-23 27.6		319 01.0	-3 54.6		120 19.5	-3 15.3		
18	328	39.6	123 16.3	-11 25.5		73 33.4	-23 27.8		334 03.4	-3 54.5		135 21.8	-3 15.4		
19	343	42.0	138 18.5	25.0		88 33.9	28.0		349 05.9	54.5		150 24.0	15.5		
20	358	44.5	153 20.6	24.5		103 34.4	28.2		4 08.4	54.5		165 26.2	15.5		
21	13	46.9	168 22.8	24.1		118 34.8	28.4		19 10.8	54.5		180 28.5	15.6		
22	28	49.4	183 25.0	23.6		133 35.3	28.6		34 13.3	54.5		195 30.7	15.7		
23	43	51.9	198 27.1	23.1		148 35.7	28.9		49 15.7	54.5		210 32.9	15.8		
24	58	54.3	213 29.3	-11 22.6		163 36.2	-23 29.1		64 18.2	-3 54.5		225 35.1	-3 15.9		
Dif	—		+22	+5		+5	-2		+25	0		+22	-1		

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2		Edad: 13 ^d 8 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0 R°: 53 ^m											
	PMG: 11 ^h 45 ^m 6		SD: 15 ^h 1 PMG: 23 ^h 04 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	183	37.7	-19 36.7		25 28.3	+17 58.9	60 N	15 21	16 11	17 04	14 12 22		6 57 83	
1	198	37.5		37.3	39 59.1 ¹¹⁸	+18 07.8 ⁸⁹	58	33	20	09	25 27		44 79	
2	213	37.4		37.9	54 29.9 ¹¹⁸	16.6 ⁸⁸	56	44	28	14	37 30		32 76	
3	228	37.2		38.4	69 00.6 ¹¹⁷	25.4 ⁸⁸	54	15 54	34	18	48 32		22 74	
4	243	37.1		39.0	83 31.1 ¹¹⁵	34.0 ⁸⁶	52	16 03	41	22	14 57 34		13 72	
5	258	37.0	-19 39.6		98 01.7 ¹¹⁶	+18 42.6 ⁸⁶	50	16 10	16 46	17 26	15 06 35		6 05 70	
6	273	36.8	-19 40.1		112 32.1 ¹¹⁴	+18 51.1 ⁸⁵	45	16 27	16 59	17 35	15 23 39		5 49 66	
7	288	36.7		40.7	127 02.4 ¹¹³	+18 59.5 ⁸⁴	40	40	17 10	43	38 41		35 63	
8	303	36.5		41.3	141 32.7 ¹¹³	+19 07.8 ⁸³	35	16 52	19	50	15 51 43		23 61	
9	318	36.4		41.8	156 02.9 ¹¹²	16.0 ⁸²	30	17 02	27	17 57	16 01 45		5 13 59	
10	333	36.2		42.4	170 33.0 ¹¹¹	24.1 ⁸¹	20	19	43	18 10	20 48		4 56 55	
11	348	36.1	-19 43.0		185 03.0 ¹¹⁰	+19 32.2 ⁸¹	10 N	17 35	17 57	18 23	16 37 50		4 40 53	
12	3	35.9	-19 43.5		199 32.9 ¹⁰⁹	+19 40.1 ⁷⁹	0	17 49	18 11	18 37	16 52 52		4 26 51	
13	18	35.8		44.1	214 02.8 ¹⁰⁹	48.0 ⁷⁹	10 S	18 04	26	18 53	17 08 54		4 12 48	
14	33	35.6		44.7	228 32.6 ¹⁰⁸	+19 55.8 ⁷⁸	20	20	18 43	19 12	24 57		3 57 45	
15	48	35.5		45.2	243 02.3 ¹⁰⁷	+20 03.5 ⁷⁷	30	38	19 04	36	44 59		40 42	
16	63	35.3		45.8	257 31.9 ¹⁰⁶	11.1 ⁷⁶	35	18 49	17	19 52	17 55 61		30 40	
17	78	35.2	-19 46.3		272 01.4 ¹⁰⁵	+20 18.5 ⁷⁴	40	19 01	19 32	20 10	18 08 63		3 19 37	
18	93	35.0	-19 46.9		286 30.9 ¹⁰⁵	+20 25.9 ⁷⁴	45	19 15	19 50	20 35	18 23 66		3 06 34	
19	108	34.9		47.5	301 00.2 ¹⁰³	33.2 ⁷³	50	33	20 14	21 08	42 69		2 49 31	
20	123	34.7		48.0	315 29.5 ¹⁰³	40.4 ⁷²	52	42	25	26	18 51 70		42 29	
21	138	34.6		48.6	329 58.7 ¹⁰²	47.5 ⁷¹	54	19 52	39	21 48	19 01 72		34 26	
22	153	34.4		49.1	344 27.9 ¹⁰²	+20 54.5 ⁷⁰	56	20 02	20 54	22 19	13 74		24 25	
23	168	34.3		49.7	358 56.9 ¹⁰⁰	+21 01.4 ⁶⁹	58	15	21 13	23 21	26 77		14 21	
24	183	34.1	-19 50.3		13 25.9 ¹⁰⁰	+21 08.2 ⁶⁸	60 S	20 29	21 37	** **	19 42 81		2 01 18	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 01 ^m 1		Mag: -4.8 PMG: 9 ^h 45 ^m			Mag: +1.4 PMG: 13 ^h 05 ^m			Mag: -2.7 PMG: 19 ^h 40 ^m			Mag: +0.9 PMG: 8 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	58	54.3	213	29.3	-11 22.6	163	36.2	-23 29.1	64	18.2	-3 54.5	225	35.1	
1	73	56.8	228	31.4	22.2	178	36.7	29.3	79	20.6	54.4	240	37.4	
2	88	59.3	243	33.6	21.7	193	37.1	29.5	94	23.1	54.4	255	39.6	
3	104	01.7	258	35.7	21.2	208	37.6	29.7	109	25.6	54.4	270	41.8	
4	119	04.2	273	37.9	20.8	223	38.0	29.9	124	28.0	54.4	285	44.1	
5	134	06.7	288	40.0	-11 20.3	238	38.5	-23 30.1	139	30.5	-3 54.4	300	46.3	
6	149	09.1	303	42.2	-11 19.8	253	39.0	-23 30.3	154	32.9	-3 54.4	315	48.5	
7	164	11.6	318	44.3	19.4	268	39.4	30.5	169	35.4	54.4	330	50.8	
8	179	14.1	333	46.4	18.9	283	39.9	30.7	184	37.8	54.3	345	53.0	
9	194	16.5	348	48.5	18.5	298	40.3	30.9	199	40.3	54.3	0	55.2	
10	209	19.0	3	50.7	18.0	313	40.8	31.1	214	42.8	54.3	15	57.5	
11	224	21.4	18	52.8	-11 17.6	328	41.3	-23 31.3	229	45.2	-3 54.3	30	59.7	
12	239	23.9	33	54.9	-11 17.1	343	41.7	-23 31.5	244	47.7	-3 54.3	46	01.9	
13	254	26.4	48	57.0	16.7	358	42.2	31.7	259	50.1	54.3	61	04.2	
14	269	28.8	63	59.1	16.2	13	42.6	31.9	274	52.6	54.2	76	06.4	
15	284	31.3	79	01.2	15.8	28	43.1	32.1	289	55.0	54.2	91	08.6	
16	299	33.8	94	03.3	15.3	43	43.6	32.3	304	57.5	54.2	106	10.8	
17	314	36.2	109	05.4	-11 14.9	58	44.0	-23 32.5	319	59.9	-3 54.2	121	13.1	
18	329	38.7	124	07.5	-11 14.5	73	44.5	-23 32.7	335	02.4	-3 54.2	136	15.3	
19	344	41.2	139	09.6	14.0	88	44.9	32.9	350	04.8	54.2	151	17.5	
20	359	43.6	154	11.7	13.6	103	45.4	33.1	5	07.3	54.1	166	19.8	
21	14	46.1	169	13.8	13.2	118	45.8	33.3	20	09.7	54.1	181	22.0	
22	29	48.6	184	15.8	12.8	133	46.3	33.5	35	12.2	54.1	196	24.2	
23	44	51.0	199	17.9	12.3	148	46.8	33.7	50	14.6	54.1	211	26.5	
24	59	53.5	214	20.0	-11 11.9	163	47.2	-23 33.9	65	17.1	-3 54.1	226	28.7	
Dif	—		+21		+4	+5		-2	+25		0	+22		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 14 ^d 8 PHE { 4 ^h : 56'2 12 ^h : 56'4 20 ^h : 56'6 Rº: 56 ^m													
	PMG: 11 ^h 45 ^m 8			SD: 15'3 PMG: 23 ^h 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	34.1	-19	50.3	13	25.9	+21	08.2	60 N	6	28	7	21	8	12	14	34
1	198	34.0		50.8	27	54.8	99	14.9	58	23	13	7	59	14	52	39	8
2	213	33.8		51.4	42	23.6	98	21.5	56	18	7	05	48	15	07	41	7
3	228	33.7		51.9	56	52.3	97	27.9	54	14	6	58	38	20	43	36	69
4	243	33.5		52.5	71	21.0	97	34.3	52	10	52	30	31	44	25	67	67
5	258	33.4	-19	53.0	85	49.6	96	+21	50	6	06	6	46	7	22	15	41
6	273	33.2	-19	53.6	100	18.1	95	+21	45	5	57	6	33	7	05	16	02
7	288	33.1		54.1	114	46.5	94	52.7	40	49	22	6	52	19	49	38	62
8	303	32.9		54.7	129	14.9	94	+21	35	42	13	40		34	50	24	61
9	318	32.7		55.2	143	43.2	93	+22	30	35	6	04	30	16	46	51	6
10	333	32.6		55.8	158	11.4	92	10.1	20	22	5	49	6	12	17	08	52
11	348	32.4	-19	56.3	172	39.5	91	+22	10 N	5	09	5	35	5	57	17	27
12	3	32.3	-19	56.9	187	07.5	90	+22	0	4	55	5	20	5	42	17	44
13	18	32.1		57.4	201	35.5	90	26.5	10 S	39	5	05	28	18	02	56	5
14	33	32.0		58.0	216	03.4	89	31.8	20	4	20	4	48	5	12	21	57
15	48	31.8		58.5	230	31.3	89	36.9	30	3	55	27	4	53	43	59	22
16	63	31.7		59.1	244	59.1	88	41.9	35	40	4	14	43	18	56	60	4
17	78	31.5	-19	59.6	259	26.8	87	+22	40	3	21	3	59	4	30	19	11
18	93	31.3	-20	00.2	273	54.4	86	+22	45	2	56	3	41	4	16	19	29
19	108	31.2		00.7	288	22.0	86	+22	50	23	17	3	58	19	51	63	20
20	123	31.0		01.3	302	49.4	84	+23	52	2	05	3	06	49	20	01	65
21	138	30.9		01.8	317	16.9	85	05.0	54	1	42	2	52	39	13	66	3
22	153	30.7		02.3	331	44.2	83	09.2	56	1	12	37	29	29	27	67	2
23	168	30.5		02.9	346	11.5	83	13.3	58	0	10	2	18	16	20	43	68
24	183	30.4	-20	03.4	0	38.8	83	+23	60 S	**	**	1	54	3	02	21	03

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 57 ^m 2		Mag: -4.8 PMG: 9 ^h 41 ^m		Mag: +1.4 PMG: 13 ^h 04 ^m		Mag: -2.7 PMG: 19 ^h 36 ^m		Mag: +0.9 PMG: 8 ^h 53 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	59	53.5	214	20.0	-11	11.9	163	47.2	-23	33.9
1	74	55.9	229	22.0		11.5	178	47.7		34.1
2	89	58.4	244	24.1		11.1	193	48.1		34.3
3	105	00.9	259	26.2		10.6	208	48.6		34.5
4	120	03.3	274	28.2		10.2	223	49.0		34.7
5	135	05.8	289	30.3	-11	09.8	238	49.5	-23	34.9
6	150	08.3	304	32.3	-11	09.4	253	49.9	-23	35.1
7	165	10.7	319	34.4		09.0	268	50.4		35.2
8	180	13.2	334	36.4		08.6	283	50.9		35.4
9	195	15.7	349	38.4		08.2	298	51.3		35.6
10	210	18.1	4	40.5		07.8	313	51.8		35.8
11	225	20.6	19	42.5	-11	07.4	328	52.2	-23	36.0
12	240	23.1	34	44.5	-11	07.0	343	52.7	-23	36.2
13	255	25.5	49	46.6		06.6	358	53.1		36.4
14	270	28.0	64	48.6		06.2	13	53.6		36.6
15	285	30.4	79	50.6		05.8	28	54.0		36.8
16	300	32.9	94	52.6		05.4	43	54.5		37.0
17	315	35.4	109	54.6	-11	05.0	58	54.9	-23	37.2
18	330	37.8	124	56.6	-11	04.6	73	55.4	-23	37.3
19	345	40.3	139	58.6		04.2	88	55.8		37.5
20	0	42.8	155	00.6		03.9	103	56.3		37.7
21	15	45.2	170	02.6		03.5	118	56.7		37.9
22	30	47.7	185	04.6		03.1	133	57.2		38.1
23	45	50.2	200	06.6		02.7	148	57.6		38.3
24	60	52.6	215	08.6	-11	02.3	163	58.1	-23	38.5
Dif	—		+20		+4		+5		-2	
							+24		0	
									+22	
									-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°2 PMG: 11 ^h 46 ^m 1			Edad: 15 ^d 8 PHE { SD: 15°4 PMG: *** **m R°: ***											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	183	30.4	-20 03.4	0	38.8	+23 17.3	39	60 N	15 17	16 08	17 01	15 11 56	9 36 62		
1	198	30.2	04.0	15	06.0	21.2	37	58	30	17 07	17 01	31 56	9 16 61		
2	213	30.1	04.5	29	33.1	24.9	37	56	41	25 12	15 48 57	8 59 60			
3	228	29.9	05.1	44	00.1	28.5	36	54	15 51	32 16	16 03 56	45 60			
4	243	29.7	05.6	58	27.1	32.0	35	52	16 00	39 21	15 57	32 60			
5	258	29.6	-20 06.1	72	54.1	+23 35.3	33	50	16 08	16 45	17 25	16 26 57	8 21 60		
6	273	29.4	-20 06.7	87	20.9	+23 38.5	32	45	16 25	16 58	17 34	16 49 57	7 59 58		
7	288	29.2	07.2	101	47.8	41.6	31	40	39	17 09	42 17 08 57	40 58			
8	303	29.1	07.7	116	14.5	44.5	29	35	16 51	18 49	24 57	25 58			
9	318	28.9	08.3	130	41.2	47.4	29	30	17 01	27 17 56	17 37 57	7 11 58			
10	333	28.8	08.8	145	07.9	50.0	26	20	19 43	18 10	18 00 57	6 49 57			
11	348	28.6	-20 09.3	159	34.5	+23 52.6	26	10 N	17 35	17 57	18 23	18 21 56	6 29 56		
12	3	28.4	-20 09.9	174	01.1	+23 55.0	24	0	17 50	18 12	18 37	18 39 57	6 10 56		
13	18	28.3	10.4	188	27.6	57.2	22	10 S	18 05	27 18 54	18 58 57	5 52 56			
14	33	28.1	10.9	202	54.0	+23 59.3	21	20	21 18 45	19 13	19 18 57	32 55			
15	48	27.9	11.5	217	20.5	+24 01.3	20	30	40 19 06	38 42 56	5 10 54				
16	63	27.8	12.0	231	46.8	03.2	19	35	18 50	19 54	19 56 55	4 56 54			
17	78	27.6	-20 12.5	246	13.2	+24 04.9	17	40	19 03	19 34	20 13	20 12 55	4 41 53		
18	93	27.4	-20 13.1	260	39.5	+24 06.4	15	45	19 18	19 53	20 38	20 31 55	4 23 52		
19	108	27.3	13.6	275	05.7	07.8	14	50	37 20 17	21 13	20 54 55	4 00 51			
20	123	27.1	14.1	289	31.9	09.1	13	52	45 29	31 21 06 54	3 49 51				
21	138	26.9	14.7	303	58.1	10.3	12	54	19 55	43 21 55	19 54	37 50			
22	153	26.8	15.2	318	24.2	11.3	10	56	20 06	20 59	22 29	34 53	23 49		
23	168	26.6	15.7	332	50.3	12.1	8	58	19 21 19	** **	21 51 53	3 07 47			
24	183	26.4	-20 16.2	347	16.4	+24 12.8	7	60 S	20 34	21 44	** **	22 13 52	2 47 45		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 53 ^m 2			Mag: -4.8 PMG: 9 ^h 38 ^m			Mag: +1.4 PMG: 13 ^h 04 ^m			Mag: -2.7 PMG: 19 ^h 32 ^m			Mag: +0.9 PMG: 8 ^h 49 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	60	52.6	215 08.6	-11 02.3	163 58.1	-23 38.5	66 15.8	-3 53.6	227 22.3	-3 20.2					
1	75	55.1	230 10.5	02.0	178 58.5	38.7	81 18.2	53.6	242 24.6	20.3					
2	90	57.5	245 12.5	01.6	193 59.0	38.8	96 20.7	53.6	257 26.8	20.4					
3	106	00.0	260 14.5	01.2	208 59.5	39.0	111 23.1	53.5	272 29.0	20.4					
4	121	02.5	275 16.5	00.9	223 59.9	39.2	126 25.6	53.5	287 31.3	20.5					
5	136	04.9	290 18.4	-11 00.5	239 00.4	-23 39.4	141 28.0	-3 53.5	302 33.5	-3 20.6					
6	151	07.4	305 20.4	-11 00.1	254 00.8	-23 39.6	156 30.5	-3 53.5	317 35.7	-3 20.7					
7	166	09.9	320 22.4	-10 59.8	269 01.3	39.8	171 32.9	53.4	332 38.0	20.8					
8	181	12.3	335 24.3	59.4	284 01.7	39.9	186 35.3	53.4	347 40.2	20.9					
9	196	14.8	350 26.3	59.1	299 02.2	40.1	201 37.8	53.4	2 42.4	21.0					
10	211	17.3	5 28.2	58.7	314 02.6	40.3	216 40.2	53.4	17 44.7	21.1					
11	226	19.7	20 30.1	-10 58.4	329 03.0	-23 40.5	231 42.6	-3 53.4	32 46.9	-3 21.1					
12	241	22.2	35 32.1	-10 58.0	344 03.5	-23 40.7	246 45.1	-3 53.3	47 49.1	-3 21.2					
13	256	24.7	50 34.0	57.7	359 03.9	40.9	261 47.5	53.3	62 51.4	21.3					
14	271	27.1	65 36.0	57.3	14 04.4	41.0	276 50.0	53.3	77 53.6	21.4					
15	286	29.6	80 37.9	57.0	29 04.8	41.2	291 52.4	53.3	92 55.9	21.5					
16	301	32.0	95 39.8	56.6	44 05.3	41.4	306 54.8	53.2	107 58.1	21.6					
17	316	34.5	110 41.7	-10 56.3	59 05.7	-23 41.6	321 57.3	-3 53.2	123 00.3	-3 21.7					
18	331	37.0	125 43.7	-10 55.9	74 06.2	-23 41.8	336 59.7	-3 53.2	138 02.6	-3 21.7					
19	346	39.4	140 45.6	55.6	89 06.6	41.9	352 02.1	53.2	153 04.8	21.8					
20	1	41.9	155 47.5	55.3	104 07.1	42.1	7 04.6	53.1	168 07.0	21.9					
21	16	44.4	170 49.4	54.9	119 07.5	42.3	22 07.0	53.1	183 09.3	22.0					
22	31	46.8	185 51.3	54.6	134 08.0	42.5	37 09.5	53.1	198 11.5	22.1					
23	46	49.3	200 53.2	54.3	149 08.4	42.6	52 11.9	53.1	213 13.7	22.2					
24	61	51.8	215 55.1	-10 54.0	164 08.9	-23 42.8	67 14.3	-3 53.0	228 16.0	-3 22.3					
Dif	—		+19	+3	+4	-2	+24	0	+22	-1					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 46 ^m 4			Edad: 16 ^d 8 PHE { 4 ^h : 57/3 12 ^h : 57/4 20 ^h : 57/6 SD: 15:6 PMG: 0 ^h 53 ^m R ^o : 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	26.4	-20	16.2	347	16.4	+24	12.8	60 N	6	32	7	25	8	17	16	07
1	198	26.3		16.8	1	42.5		13.4	58	26	16	8	04	27	74	10	17
2	213	26.1		17.3	16	08.5		13.8	56	21	08	7	52	45	71	9	59
3	228	25.9		17.8	30	34.5		14.1	54	17	7	01	42	16	59	70	45
4	243	25.8		18.3	45	00.4		14.2	52	12	6	55	33	17	12	69	32
5	258	25.6	-20	18.9	59	26.3	+24	14.2	50	6	08	6	49	7	25	17	23
6	273	25.4	-20	19.4	73	52.2	+24	14.0	45	5	59	6	35	7	08	17	46
7	288	25.2		19.9	88	18.1		13.7	40	51	24	6	54	18	05	64	38
8	303	25.1		20.4	102	44.0		13.2	35	44	15	42		21	62	23	53
9	318	24.9		21.0	117	09.8		12.6	30	37	6	06	32	34	62	8	09
10	333	24.7		21.5	131	35.6		11.9	20	23	5	50	6	13	18	57	60
11	348	24.6	-20	22.0	146	01.5	+24	11.0	10 N	5	10	5	35	5	58	19	17
12	3	24.4	-20	22.5	160	27.2	+24	10.0	0	4	55	5	21	5	43	19	36
13	18	24.2		23.0	174	53.0		08.8	10 S	39	5	05	28	19	55	55	6
14	33	24.0		23.5	189	18.8		07.4	20	4	19	4	48	5	11	20	15
15	48	23.9		24.1	203	44.6		05.9	30	3	54	26	4	53	38	52	6
16	63	23.7		24.6	218	10.3		04.3	35	38	4	13	42	20	51	51	5
17	78	23.5	-20	25.1	232	36.0	+24	02.5	40	3	19	3	58	4	29	21	07
18	93	23.3	-20	25.6	247	01.8	+24	00.6	45	2	54	3	39	4	14	21	26
19	108	23.2		26.1	261	27.5	+23	58.5	50	19	15	3	55	21	49	44	4
20	123	23.0		26.6	275	53.3		56.3	52	2	01	3	03	47	22	00	43
21	138	22.8		27.1	290	19.0		53.9	54	1	37	2	49	37	13	41	27
22	153	22.6		27.7	304	44.7		51.4	56	1	03	33	26	27	40	4	12
23	168	22.5		28.2	319	10.4		48.8	58	**	**	2	13	3	13	22	44
24	183	22.3	-20	28.7	333	36.2	+23	46.0	60 S	**	**	1	48	2	58	23	05

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 49 ^m 3		Mag: -4.8 PMG: 9 ^h 35 ^m			Mag: +1.3 PMG: 13 ^h 03 ^m			Mag: -2.7 PMG: 19 ^h 28 ^m			Mag: +0.9 PMG: 8 ^h 46 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	61	51.8	215	55.1	-10	54.0	164	08.9	-23	42.8	67	14.3	-3	53.0	228	16.0	
1	76	54.2	230	57.0		53.6	179	09.3		43.0	82	16.8		53.0	243	18.2	
2	91	56.7	245	58.9		53.3	194	09.8		43.2	97	19.2		53.0	258	20.5	
3	106	59.2	261	00.8		53.0	209	10.2		43.3	112	21.6		53.0	273	22.7	
4	122	01.6	276	02.7		52.7	224	10.7		43.5	127	24.1		52.9	288	24.9	
5	137	04.1	291	04.5	-10	52.3	239	11.1	-23	43.7	142	26.5	-3	52.9	303	27.2	
6	152	06.5	306	06.4	-10	52.0	254	11.5	-23	43.9	157	28.9	-3	52.9	318	29.4	
7	167	09.0	321	08.3		51.7	269	12.0		44.0	172	31.4		52.9	333	31.6	
8	182	11.5	336	10.2		51.4	284	12.4		44.2	187	33.8		52.8	348	33.9	
9	197	13.9	351	12.0		51.1	299	12.9		44.4	202	36.2		52.8	3	36.1	
10	212	16.4	6	13.9		50.8	314	13.3		44.6	217	38.7		52.8	18	38.4	
11	227	18.9	21	15.8	-10	50.5	329	13.8	-23	44.7	232	41.1	-3	52.8	33	40.6	
12	242	21.3	36	17.6	-10	50.2	344	14.2	-23	44.9	247	43.5	-3	52.7	48	42.8	
13	257	23.8	51	19.5		49.9	359	14.7		45.1	262	45.9		52.7	63	45.1	
14	272	26.3	66	21.3		49.6	14	15.1		45.2	277	48.4		52.7	78	47.3	
15	287	28.7	81	23.2		49.3	29	15.5		45.4	292	50.8		52.7	93	49.6	
16	302	31.2	96	25.0		49.0	44	16.0		45.6	307	53.2		52.6	108	51.8	
17	317	33.7	111	26.9	-10	48.7	59	16.4	-23	45.8	322	55.7	-3	52.6	123	54.0	
18	332	36.1	126	28.7	-10	48.4	74	16.9	-23	45.9	337	58.1	-3	52.6	138	56.3	
19	347	38.6	141	30.5		48.1	89	17.3		46.1	353	00.5		52.5	153	58.5	
20	2	41.0	156	32.4		47.8	104	17.8		46.3	8	02.9		52.5	169	00.7	
21	17	43.5	171	34.2		47.5	119	18.2		46.4	23	05.4		52.5	184	03.0	
22	32	46.0	186	36.0		47.3	134	18.6		46.6	38	07.8		52.5	199	05.2	
23	47	48.4	201	37.8		47.0	149	19.1		46.8	53	10.2		52.4	214	07.5	
24	62	50.9	216	39.6	-10	46.7	164	19.5	-23	46.9	68	12.7	-3	52.4	229	09.7	
Dif	—		+19		+3		+4		-2		+24		0		+22		-1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 46 ^m 7				Edad: 17 ^d 8 PHE { 4 ^h : 57'7 12 ^h : 57'9 20 ^h : 58'0 PMG: 1 ^h 50 ^m R°: 56 ^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	22.3	-20	28.7	333	36.2	+23	46.0	60 N	15 13	16 05	16 59	17 23	89	11 20	27				
1	198	22.1		29.2	348	01.9		43.0	58	27	15	17 05	41	85	11 01	31				
2	213	21.9		29.7	2	27.7		39.9	56	39	23	10	17 56	82	10 46	34				
3	228	21.8		30.2	16	53.4		36.7	54	49	30	15	18 09	79	32	37				
4	243	21.6		30.7	31	19.2		33.3	52	15 58	37	19	21 76	21	32	38				
5	258	21.4	-20	31.2	45	45.0	+23	29.7	50	16 06	16 43	17 23	18 31	75	10 10	40				
6	273	21.2	-20	31.7	60	10.8	+23	26.0	45	16 24	16 56	17 32	18 52	71	9 48	44				
7	288	21.0		32.2	74	36.6		22.2	40	38	17 08	41	19 09	68	31	45				
8	303	20.9		32.7	89	02.4		18.2	35	16 50	17	48	23	67	16	47				
9	318	20.7		33.2	103	28.2		14.1	30	17 01	26	17 56	36	64	9 03	49				
10	333	20.5		33.8	117	54.1		09.9	20	19	43	18 10	19 57	61	8 41	52				
11	348	20.3	-20	34.3	132	20.0	+23	05.4	10 N	17 35	17 58	18 23	20 16	58	8 21	55				
12	3	20.1	-20	34.8	146	45.8	+23	00.9	0	17 50	18 12	18 38	20 33	55	8 03	57				
13	18	20.0		35.3	161	11.8	+22	56.2	10 S	18 06	28	18 55	20 50	53	7 45	59				
14	33	19.8		35.8	175	37.7		51.4	20	22	18 46	19 14	21 08	50	26	60				
15	48	19.6		36.3	190	03.7		46.4	30	41	19 08	40	30	46	7 03	63				
16	63	19.4		36.8	204	29.7		41.3	35	18 52	21	19 56	42	45	6 50	65				
17	78	19.2	-20	37.3	218	55.7	+22	36.0	40	19 05	19 37	20 16	21 56	42	6 35	66				
18	93	19.0	-20	37.8	233	21.7	+22	30.6	45	19 21	19 56	20 42	22 13	39	6 16	69				
19	108	18.9		38.3	247	47.8		25.1	50	40	20 21	21 17	33	36	5 54	71				
20	123	18.7		38.8	262	13.9		19.4	52	49	33	21 37	43	34	43	73				
21	138	18.5		39.3	276	40.0		13.6	58	54	19 59	20 47	22 02	31	30	75				
22	153	18.3		39.8	291	06.2		07.6	60	56	20 10	21 04	22 39	28	5	16	77			
23	168	18.1		40.2	305	32.4	+22	01.6	60	58	24	25	** **	21	4	59	80			
24	183	17.9	-20	40.7	319	58.6	+21	55.3	60 S	20 39	21 52	** **	23 38	21	4	39	84			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 45 ^m 4				Mag: -4.8 PMG: 9 ^h 32 ^m				Mag: +1.3 PMG: 13 ^h 02 ^m				Mag: -2.7 PMG: 19 ^h 24 ^m				Mag: +0.9 PMG: 8 ^h 42 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	62	50.9	216	39.6	-10	46.7	164	19.5	-23	46.9	68	12.7	-3	52.4	229	09.7	-3	24.3		
1	77	53.4	231	41.5		46.4	179	20.0		47.1	83	15.1		52.4	244	11.9		24.4		
2	92	55.8	246	43.3		46.2	194	20.4		47.3	98	17.5		52.4	259	14.2		24.5		
3	107	58.3	261	45.1		45.9	209	20.9		47.4	113	19.9		52.3	274	16.4		24.6		
4	123	00.8	276	46.9		45.6	224	21.3		47.6	128	22.4		52.3	289	18.7		24.7		
5	138	03.2	291	48.7	-10	45.3	239	21.7	-23	47.7	143	24.8	-3	52.3	304	20.9	-3	24.8		
6	153	05.7	306	50.5	-10	45.1	254	22.2	-23	47.9	158	27.2	-3	52.2	319	23.1	-3	24.9		
7	168	08.2	321	52.3		44.8	269	22.6		48.1	173	29.6		52.2	334	25.4		24.9		
8	183	10.6	336	54.0		44.5	284	23.1		48.2	188	32.1		52.2	349	27.6		25.0		
9	198	13.1	351	55.8		44.3	299	23.5		48.4	203	34.5		52.1	4	29.9		25.1		
10	213	15.5	6	57.6		44.0	314	23.9		48.6	218	36.9		52.1	19	32.1		25.2		
11	228	18.0	21	59.4	-10	43.8	329	24.4	-23	48.7	233	39.3	-3	52.1	34	34.3	-3	25.3		
12	243	20.5	37	01.2	-10	43.5	344	24.8	-23	48.9	248	41.8	-3	52.1	49	36.6	-3	25.4		
13	258	22.9	52	02.9		43.3	359	25.3		49.0	263	44.2		52.0	64	38.8		25.4		
14	273	25.4	67	04.7		43.0	14	25.7		49.2	278	46.6		52.0	79	41.1		25.5		
15	288	27.9	82	06.5		42.7	29	26.1		49.4	293	49.0		52.0	94	43.3		25.6		
16	303	30.3	97	08.2		42.5	44	26.6		49.5	308	51.4		51.9	109	45.5		25.7		
17	318	32.8	112	10.0	-10	42.3	59	27.0	-23	49.7	323	53.9	-3	51.9	124	47.8	-3	25.8		
18	333	35.3	127	11.8	-10	42.0	74	27.4	-23	49.8	338	56.3	-3	51.9	139	50.0	-3	25.9		
19	348	37.7	142	13.5		41.8	89	27.9		50.0	353	58.7		51.8	154	52.3		26.0		
20	3	40.2	157	15.3		41.5	104	28.3		50.2	9	01.1		51.8	169	54.5		26.0		
21	18	42.7	172	17.0		41.3	119	28.8		50.3	24	03.5		51.8	184	56.8		26.1		
22	33	45.1	187	18.8		41.1	134	29.2		50.5	39	06.0		51.8	199	59.0		26.2		
23	48	47.6	202	20.5		40.8	149	29.6		50.6	54	08.4		51.7	215	01.2		26.3		
24	63	50.0	217	22.2	-10	40.6	164	30.1	-23	50.8	69	10.8	-3	51.7	230	03.5	-3	26.4		
Dif	—				+18 +3				+4 -2				+24 0				+22 -1			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 47 ^m 0			Edad: 18 ^d 8 PHE { 4 ^h : 58/2 12 ^h : 58/3 20 ^h : 58/4 PMG: 2 ^h 46 ^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	183	17.9	-20 40.7	319	58.6	+21 55.3	63	60 N	6 36	7 29	8 22	18 52	94	11 47	17		
1	198	17.8		334	24.9		49.0	58	30		8 08	19 06	89	32	21		
2	213	17.6		348	51.2		42.5	56	25	12	7 56	18 86		20	24		
3	228	17.4			3 17.5		35.8	54	20	7 04	46	28 83		11 09	27		
4	243	17.2			17 43.9		29.1	52	15	6 57	36	37 81		10 59	29		
5	258	17.0	-20 43.2	32	10.3	74	+21 22.2	50	6 11	6 51	7 28	19 46	78	10 50	32		
6	273	16.8	-20 43.7	46	36.8	75	+21 15.2	45	6 02	6 38	7 10	20 03	74	10 32	35		
7	288	16.6		61	03.3	75		40	5 53	26	6 56	17 71		16	39		
8	303	16.5		75	29.9	76	+21 00.7	35	45	16	44	30 67		10 03	42		
9	318	16.3		89	56.4	75	+20 53.3	30	38	6 07	33	40 65		9 52	44		
10	333	16.1		104	23.1	77		20	24	5 51	6 15	20 58	61	33	48		
11	348	15.9	-20 46.1	118	49.7	76	+20 38.1	10 N	5 10	5 36	5 59	21 14	57	9 16	51		
12	3	15.7	-20 46.6	133	16.5	78	+20 30.3	0	4 55	5 21	5 43	21 28	54	9 00	54		
13	18	15.5		147	43.2	77		10 S	39	5 05	28	43 50		8 44	57		
14	33	15.3		162	10.0	78		20	4 19	4 47	5 11	21 58	47	26	61		
15	48	15.1		176	36.9	79	+20 06.1	30	3 53		4 52	22 16	42	8 06	65		
16	63	14.9		191	03.8	79	+19 57.9	35	37	4 12	41	27 39		7 55	67		
17	78	14.7	-20 49.1	205	30.7	79	+19 49.4	40	3 17	3 56	4 28	22 38	37	7 41	70		
18	93	14.6	-20 49.5	219	57.7	80	+19 40.9	45	2 52	3 37	4 13	22 52	33	7 25	73		
19	108	14.4		234	24.8	81		50	2 16	12	3 53	23 09	28	7 05	78		
20	123	14.2		248	51.9	81		52	1 56	3 00	44	17 26		6 56	79		
21	138	14.0		263	19.0	81		54	1 31	2 46	34	25 24		45	82		
22	153	13.8		277	46.2	82	+19 05.6	56	0 54	29	23	35 21		33	85		
23	168	13.6		292	13.4	82	+18 56.4	58	** **	2 08	3 09	46 18		19	88		
24	183	13.4	-20 52.4	306	40.7	83	+18 47.2	60 S	** **	1 41	2 54	23 59	14	6 03	92		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 41 ^m 4		Mag: -4.8 PMG: 9 ^h 29 ^m			Mag: +1.3 PMG: 13 ^h 02 ^m			Mag: -2.6 PMG: 19 ^h 20 ^m			Mag: +0.9 PMG: 8 ^h 38 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	63	50.0	217 22.2	-10 40.6	164 30.1	-23 50.8	69 10.8	-3 51.7	230 03.5	-3 26.4							
1	78	52.5	232 24.0	40.4	179 30.5	50.9	84 13.2	51.7	245 05.7	26.5							
2	93	55.0	247 25.7	40.1	194 30.9	51.1	99 15.6	51.6	260 08.0	26.6							
3	108	57.4	262 27.4	39.9	209 31.4	51.2	114 18.1	51.6	275 10.2	26.6							
4	123	59.9	277 29.1	39.7	224 31.8	51.4	129 20.5	51.6	290 12.4	26.7							
5	139	02.4	292 30.9	-10 39.4	239 32.3	-23 51.6	144 22.9	-3 51.5	305 14.7	-3 26.8							
6	154	04.8	307 32.6	-10 39.2	254 32.7	-23 51.7	159 25.3	-3 51.5	320 16.9	-3 26.9							
7	169	07.3	322 34.3	39.0	269 33.1	51.9	174 27.7	51.5	335 19.2	27.0							
8	184	09.8	337 36.0	38.8	284 33.6	52.0	189 30.1	51.4	350 21.4	27.1							
9	199	12.2	352 37.7	38.6	299 34.0	52.2	204 32.6	51.4	5 23.7	27.1							
10	214	14.7	7 39.4	38.4	314 34.4	52.3	219 35.0	51.4	20 25.9	27.2							
11	229	17.1	22 41.1	-10 38.2	329 34.9	-23 52.5	234 37.4	-3 51.3	35 28.1	-3 27.3							
12	244	19.6	37 42.8	-10 37.9	344 35.3	-23 52.6	249 39.8	-3 51.3	50 30.4	-3 27.4							
13	259	22.1	52 44.5	37.7	359 35.7	52.8	264 42.2	51.3	65 32.6	27.5							
14	274	24.5	67 46.2	37.5	14 36.2	52.9	279 44.6	51.2	80 34.9	27.6							
15	289	27.0	82 47.9	37.3	29 36.6	53.1	294 47.0	51.2	95 37.1	27.6							
16	304	29.5	97 49.6	37.1	44 37.0	53.2	309 49.5	51.2	110 39.4	27.7							
17	319	31.9	112 51.2	-10 36.9	59 37.5	-23 53.4	324 51.9	-3 51.1	125 41.6	-3 27.8							
18	334	34.4	127 52.9	-10 36.7	74 37.9	-23 53.5	339 54.3	-3 51.1	140 43.8	-3 27.9							
19	349	36.9	142 54.6	36.5	89 38.3	53.7	354 56.7	51.1	155 46.1	28.0							
20	4	39.3	157 56.3	36.3	104 38.8	53.8	9 59.1	51.0	170 48.3	28.1							
21	19	41.8	172 57.9	36.1	119 39.2	54.0	25 01.5	51.0	185 50.6	28.1							
22	34	44.3	187 59.6	35.9	134 39.6	54.1	40 03.9	51.0	200 52.8	28.2							
23	49	46.7	203 01.3	35.8	149 40.1	54.2	55 06.3	50.9	215 55.1	28.3							
24	64	49.2	218 02.9	-10 35.6	164 40.5	-23 54.4	70 08.8	-3 50.9	230 57.3	-3 28.4							
Dif	—		+17	+2	+4	-2	+24	0	+22	-1							

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2				Edad: 19 ^d 8 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 6 20 ^h : 58 ^m 7														
	PMG: 11 ^h 47 ^m 3				PMG: 3 ^h 41 ^m R°: 53 ^m														
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	183	13.4	-20	52.4	306	40.7	+18	47.2	60 N	15 10	16 03	16 57	20 26 94		12 04 12				
1	198	13.2		52.9	321	08.1		37.9	58	24	12	17 03	35 91		11 53 16				
2	213	13.0		53.4	335	35.5		28.4	56	36	21	08	44 87		44 19				
3	228	12.8		53.9	350	02.9		18.8	54	47	28	13	51 85		36 22				
4	243	12.6		54.3	4	30.4	+18	09.1	52	15 56	35	17	20 58 82		28 24				
5	258	12.4	-20	54.8	18	58.0	+17	59.3	50	16 05	16 41	17 22	21 04 80		11 22 26				
6	273	12.2	-20	55.3	33	25.5	+17	49.4	45	16 22	16 55	17 31	21 17 75		11 07 31				
7	288	12.0		55.8	47	53.2		39.4	40	37	17 07	40	28 71		10 55 35				
8	303	11.9		56.2	62	20.9		29.3	35	16 49	17	48	37 67		45 38				
9	318	11.7		56.7	76	48.6		19.1	30	17 00	26	17 55	45 65		36 40				
10	333	11.5		57.2	91	16.5	+17	08.8	20	19	43	18 10	21 59 59		21 44				
11	348	11.3	-20	57.6	105	44.3	+16	58.3	10 N	17 35	17 58	18 24	22 11 55		10 07 49				
12	3	11.1	-20	58.1	120	12.2	+16	47.8	0	17 51	18 13	18 39	22 22 51		9 54 52				
13	18	10.9		58.6	134	40.2		37.2	10 S	18 07	29	18 56	33 47		41 56				
14	33	10.7		59.1	149	08.2		26.4	20	23	18 47	19 16	45 43		27 60				
15	48	10.5	-20	59.5	163	36.2		15.6	30	43	19 10	42	22 58 38		11 65				
16	63	10.3	-21	00.0	178	04.4	+16	04.7	35	18 54	23	19 58	23 06 35		9 02 67				
17	78	10.1	-21	00.5	192	32.5	+15	53.7	40	19 08	19 39	20 19	23 15 32		8 51 71				
18	93	09.9	-21	00.9	207	00.7	+15	42.6	45	19 23	19 59	20 45	23 25 28		8 38 75				
19	108	09.7		01.4	221	29.0		31.4	50	43	20 24	21 22	37 24		23 79				
20	123	09.5		01.9	235	57.3		20.1	52	19 52	37	21 42	43 22		15 82				
21	138	09.3		02.3	250	25.7	+15	08.7	54	20 02	20 52	22 09	49 20		8 07 84				
22	153	09.1		02.8	264	54.1	+14	57.2	56	14	21 09	22 50	23 56 17		7 58 87				
23	168	08.9		03.2	279	22.5		45.6	58	28	31	** ** *	** ** *		47 91				
24	183	08.7	-21	03.7	293	51.1	+14	34.0	60 S	20 44	21 59	** ** *	** ** *		7 35 95				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 37 ^m 5		Mag: -4.9 PMG: 9 ^h 27 ^m				Mag: +1.3 PMG: 13 ^h 01 ^m				Mag: -2.6 PMG: 19 ^h 16 ^m				Mag: +0.9 PMG: 8 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	64	49.2	218	02.9	-10	35.6	164	40.5	-23	54.4	70	08.8	-3	50.9	230	57.3	-3	28.4
1	79	51.6	233	04.6		35.4	179	40.9		54.5	85	11.2		50.9	245	59.6		28.5
2	94	54.1	248	06.2		35.2	194	41.4		54.7	100	13.6		50.8	261	01.8		28.6
3	109	56.6	263	07.9		35.0	209	41.8		54.8	115	16.0		50.8	276	04.0		28.6
4	124	59.0	278	09.5		34.8	224	42.2		55.0	130	18.4		50.8	291	06.3		28.7
5	140	01.5	293	11.2	-10	34.7	239	42.7	-23	55.1	145	20.8	-3	50.7	306	08.5	-3	28.8
6	155	04.0	308	12.8	-10	34.5	254	43.1	-23	55.3	160	23.2	-3	50.7	321	10.8	-3	28.9
7	170	06.4	323	14.4		34.3	269	43.5		55.4	175	25.6		50.6	336	13.0		29.0
8	185	08.9	338	16.1		34.1	284	44.0		55.5	190	28.0		50.6	351	15.3		29.1
9	200	11.4	353	17.7		34.0	299	44.4		55.7	205	30.4		50.6	6	17.5		29.1
10	215	13.8	8	19.3		33.8	314	44.8		55.8	220	32.9		50.5	21	19.8		29.2
11	230	16.3	23	21.0	-10	33.6	329	45.3	-23	56.0	235	35.3	-3	50.5	36	22.0	-3	29.3
12	245	18.8	38	22.6	-10	33.5	344	45.7	-23	56.1	250	37.7	-3	50.5	51	24.2	-3	29.4
13	260	21.2	53	24.2		33.3	359	46.1		56.2	265	40.1		50.4	66	26.5		29.5
14	275	23.7	68	25.8		33.1	14	46.6		56.4	280	42.5		50.4	81	28.7		29.6
15	290	26.1	83	27.4		33.0	29	47.0		56.5	295	44.9		50.4	96	31.0		29.6
16	305	28.6	98	29.0		32.8	44	47.4		56.7	310	47.3		50.3	111	33.2		29.7
17	320	31.1	113	30.6	-10	32.7	59	47.8	-23	56.8	325	49.7	-3	50.3	126	35.5	-3	29.8
18	335	33.5	128	32.2	-10	32.5	74	48.3	-23	56.9	340	52.1	-3	50.2	141	37.7	-3	29.9
19	350	36.0	143	33.8		32.4	89	48.7		57.1	355	54.5		50.2	156	40.0		30.0
20	5	38.5	158	35.4		32.2	104	49.1		57.2	10	56.9		50.2	171	42.2		30.1
21	20	40.9	173	37.0		32.1	119	49.6		57.4	25	59.3		50.1	186	44.5		30.1
22	35	43.4	188	38.6		31.9	134	50.0		57.5	41	01.7		50.1	201	46.7		30.2
23	50	45.9	203	40.2		31.8	149	50.4		57.6	56	04.1		50.1	216	48.9		30.3
24	65	48.3	218	41.8	-10	31.6	164	50.8	-23	57.8	71	06.5	-3	50.0	231	51.2	-3	30.4
Dif	—		+16		+2		+4		-1		+24		0		+22		-	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 47 ^m 6			Edad: 20 ^d 8 PHE { SD: 16'0 PMG: 4 ^h 34 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	08.7	-21	03.7	293	51.1	+14	34.0	60 N	6 39	7 33	8 26	22 00	94	12 16	9
1	198	08.5		04.2	308	19.6		22.3	58	33	24	12	06	91	09	12
2	213	08.3		04.6	322	48.2	+14	10.4	56	28	15	8 00	11	88	12	03
3	228	08.1		05.1	337	16.9	+13	58.7	54	23	07	7 49	16	84	11	57
4	243	07.9		05.5	351	45.6		46.6	52	18	7 00	39	20	82	52	21
5	258	07.7	-21	06.0	6	14.3	+13	34.5	50	6 14	6 54	7 31	22 24	79	11 48	22
6	273	07.5	-21	06.5	20	43.1	+13	22.4	45	6 04	6 40	7 13	22 32	75	11 38	27
7	288	07.3		06.9	35	12.0	+13	10.1	40	5 55	28	6 58	39	70	30	30
8	303	07.1		07.4	49	40.9	+12	57.8	35	47	18	46	44	68	23	34
9	318	06.9		07.8	64	09.8		45.5	30	40	6 09	35	50	64	16	37
10	333	06.7		08.3	78	38.8		33.0	20	25	5 52	6 16	22 58	59	11 05	42
11	348	06.5	-21	08.7	93	07.8	+12	20.5	10 N	5 11	5 37	5 59	23 06	54	10 56	46
12	3	06.2	-21	09.2	107	36.8	+12	07.9	0	4 56	5 22	5 44	23 13	50	10 46	51
13	18	06.0		09.7	122	06.0	+11	55.2	10 S	39	5 06	28	20	46	37	55
14	33	05.8		10.1	136	35.1		42.5	20	4 19	4 47	5 11	28	41	27	59
15	48	05.6		10.6	151	04.3		29.7	30	3 53	25	4 52	36	36	16	64
16	63	05.4		11.0	165	33.5		16.8	35	36	4 11	40	41	33	09	67
17	78	05.2	-21	11.5	180	02.8	+11	03.9	40	3 16	3 55	4 27	23 47	30	10 02	70
18	93	05.0	-21	11.9	194	32.1	+10	50.9	45	2 50	3 36	4 11	23 53	26	9 53	74
19	108	04.8		12.4	209	01.4		37.8	50	2 13	3 10	3 52	** ** *	**	42	80
20	123	04.6		12.8	223	30.8		24.7	52	1 52	2 58	42	** ** *	**	37	82
21	138	04.4		13.3	238	00.3	+10	11.5	54	1 26	43	32	** ** *	**	31	85
22	153	04.2		13.7	252	29.7	+9	58.3	56	0 44	25	20	** ** *	**	25	88
23	168	04.0		14.2	266	59.2		45.0	58	** ** *	2 04	3 06	0 04	14	18	91
24	183	03.8	-21	14.6	281	28.7	+9	31.6	60 S	** ** *	1 35	2 50	0 13	10	9 10	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 33 ^m 6		Mag: -4.9 PMG: 9 ^h 24 ^m		Mag: +1.3 PMG: 13 ^h 00 ^m		Mag: -2.6 PMG: 19 ^h 12 ^m		Mag: +0.9 PMG: 8 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	65	48.3	218	41.8	-10	31.6	164	50.8	-23	57.8
1	80	50.8	233	43.4		31.5	179	51.3		57.9
2	95	53.3	248	44.9		31.4	194	51.7		58.0
3	110	55.7	263	46.5		31.2	209	52.1		58.2
4	125	58.2	278	48.1		31.1	224	52.6		58.3
5	141	00.6	293	49.6	-10	30.9	239	53.0	-23	58.4
6	156	03.1	308	51.2	-10	30.8	254	53.4	-23	58.6
7	171	05.6	323	52.8		30.7	269	53.8		58.7
8	186	08.0	338	54.3		30.6	284	54.3		58.8
9	201	10.5	353	55.9		30.4	299	54.7		59.0
10	216	13.0	8	57.4		30.3	314	55.1		59.1
11	231	15.4	23	59.0	-10	30.2	329	55.5	-23	59.2
12	246	17.9	39	00.5	-10	30.1	344	56.0	-23	59.3
13	261	20.4	54	02.1		29.9	359	56.4		59.5
14	276	22.8	69	03.6		29.8	14	56.8		59.6
15	291	25.3	84	05.2		29.7	29	57.2		59.7
16	306	27.7	99	06.7		29.6	44	57.7	-23	59.9
17	321	30.2	114	08.2	-10	29.5	59	58.1	-24	00.0
18	336	32.7	129	09.8	-10	29.4	74	58.5	-24	00.1
19	351	35.1	144	11.3		29.3	89	59.0		00.2
20	6	37.6	159	12.8		29.2	104	59.4		00.4
21	21	40.1	174	14.3		29.0	119	59.8		00.5
22	36	42.5	189	15.8		28.9	135	00.2		00.6
23	51	45.0	204	17.3		28.8	150	00.6		00.7
24	66	47.5	219	18.9	-10	28.7	165	01.1	-24	00.9
Dif	—		+15 +1		+4 -1		+24 0		+22 -1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 47 ^m 9			Edad: 21 ^d 8 PHE { 4 ^h : 59:1 12 ^h : 59:1 20 ^h : 59:2 PMG: 5 ^h 25 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	03.8	-21	14.6	281	28.7	+9	31.6	60 N	15 07	16 00	16 55	23 34	94	12 25	8		
1	198	03.6		15.0	295	58.3 ¹⁰⁶		18.2 ¹³⁴	58	22	10	17 01	37	90	21	11		
2	213	03.3		15.5	310	27.9 ¹⁰⁶	+9	04.8 ¹³⁴	56	34	19	06	39	87	18	14		
3	228	03.1		15.9	324	57.5 ¹⁰⁶	+8	51.2 ¹³⁶	54	45	27	11	40	85	15	16		
4	243	02.9		16.4	339	27.2 ¹⁰⁷		37.7 ¹³⁵	52	15 54	34	16	42	82	13	18		
5	258	02.7	-21	16.8	353	56.9 ¹⁰⁷	+8	24.1 ¹³⁶	50	16 03	16 40	17 21	23 43	80	12 10	21		
6	273	02.5	-21	17.3	8	26.6 ¹⁰⁷	+8	10.4 ¹³⁷	45	16 21	16 54	17 31	23 47	74	12 05	25		
7	288	02.3		17.7	22	56.3 ¹⁰⁷	+7	56.7 ¹³⁷	40	36	17 06	40	49	71	12 00	30		
8	303	02.1		18.1	37	26.1 ¹⁰⁸		42.9 ¹³⁸	35	16 49	17	48	52	67	11 57	32		
9	318	01.9		18.6	51	55.9 ¹⁰⁸		29.1 ¹³⁸	30	17 00	26	17 55	54	63	53	36		
10	333	01.7		19.0	66	25.7 ¹⁰⁸		15.2 ¹³⁹	20	19	43	18 10	23 57	59	47	41		
11	348	01.5	-21	19.5	80	55.6 ¹⁰⁹	+7	01.4 ¹³⁸	10 N	17 36	17 58	18 24	** ** *	**	11 42	45		
12	3	01.2	-21	19.9	95	25.5 ¹⁰⁹	+6	47.4 ¹⁴⁰	0	17 52	18 14	18 40	** ** *	**	11 37	49		
13	18	01.0		20.3	109	55.4 ¹⁰⁹		33.4 ¹⁴⁰	10 S	18 07	30	18 57	** ** *	**	32	54		
14	33	00.8		20.8	124	25.3 ¹⁰⁹		19.4 ¹⁴⁰	20	25	18 49	19 17	** ** *	**	26	59		
15	48	00.6		21.2	138	55.2 ¹⁰⁹	+6	05.4 ¹⁴⁰	30	45	19 11	19 44	** ** *	**	20	64		
16	63	00.4		21.6	153	25.2 ¹¹⁰	+5	51.3 ¹⁴¹	35	18 56	25	20 01	** ** *	**	16	67		
17	78	00.2	-21	22.1	167	55.2 ¹¹⁰	+5	37.2 ¹⁴¹	40	19 10	19 42	20 21	** ** *	**	11 12	71		
18	93	00.0	-21	22.5	182	25.2 ¹¹⁰	+5	23.0 ¹⁴²	45	19 26	20 02	20 48	** ** *	**	11 07	75		
19	107	59.7		22.9	196	55.2 ¹¹⁰	+5	08.8 ¹⁴²	50	46	28	21 26	0 01	21	11 02	79		
20	122	59.5		23.4	211	25.3 ¹¹¹	+4	54.6 ¹⁴²	52	19 55	41	21 47	05	19	10 59	82		
21	137	59.3		23.8	225	55.3 ¹¹⁰		40.4 ¹⁴²	54	20 06	20 56	22 15	09	16	56	84		
22	152	59.1		24.2	240	25.4 ¹¹¹		26.1 ¹⁴³	56	18	21 14	23 03	13	14	53	87		
23	167	58.9		24.7	254	55.5 ¹¹¹	+4	11.8 ¹⁴³	58	32	21 36	** ** *	18	11	49	90		
24	182	58.7	-21	25.1	269	25.6 ¹¹¹	+3	57.5 ¹⁴³	60 S	20 49	22 07	** ** *	0 23	8	10 45	94		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 29 ^m 6		Mag: -4.9 PMG: 9 ^h 22 ^m			Mag: +1.3 PMG: 13 ^h 00 ^m			Mag: -2.6 PMG: 19 ^h 09 ^m			Mag: +0.9 PMG: 8 ^h 28 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	66	47.5	219	18.9	-10	28.7	165	01.1	-24	00.9	72	04.1	-3	49.1	232	45.1	-3	32.3
1	81	49.9	234	20.4		28.6	180	01.5		01.0	87	06.5		49.0	247	47.4		32.4
2	96	52.4	249	21.9		28.5	195	01.9		01.1	102	08.9		49.0	262	49.6		32.5
3	111	54.9	264	23.4		28.5	210	02.3		01.2	117	11.3		48.9	277	51.9		32.6
4	126	57.3	279	24.9		28.4	225	02.8		01.4	132	13.7		48.9	292	54.1		32.7
5	141	59.8	294	26.4	-10	28.3	240	03.2	-24	01.5	147	16.1	-3	48.8	307	56.4	-3	32.7
6	157	02.2	309	27.9	-10	28.2	255	03.6	-24	01.6	162	18.5	-3	48.8	322	58.6	-3	32.8
7	172	04.7	324	29.3		28.1	270	04.0		01.7	177	20.9		48.8	338	00.9		32.9
8	187	07.2	339	30.8		28.0	285	04.5		01.9	192	23.3		48.7	353	03.1		33.0
9	202	09.6	354	32.3		27.9	300	04.9		02.0	207	25.7		48.7	8	05.4		33.1
10	217	12.1	9	33.8		27.8	315	05.3		02.1	222	28.0		48.6	23	07.6		33.1
11	232	14.6	24	35.3	-10	27.8	330	05.7	-24	02.2	237	30.4	-3	48.6	38	09.9	-3	33.2
12	247	17.0	39	36.7	-10	27.7	345	06.2	-24	02.3	252	32.8	-3	48.5	53	12.1	-3	33.3
13	262	19.5	54	38.2		27.6	0	06.6		02.5	267	35.2		48.5	68	14.4		33.4
14	277	22.0	69	39.7		27.5	15	07.0		02.6	282	37.6		48.5	83	16.6		33.5
15	292	24.4	84	41.2		27.5	30	07.4		02.7	297	40.0		48.4	98	18.9		33.6
16	307	26.9	99	42.6		27.4	45	07.8		02.8	312	42.4		48.4	113	21.1		33.6
17	322	29.4	114	44.1	-10	27.3	60	08.3	-24	02.9	327	44.8	-3	48.3	128	23.4	-3	33.7
18	337	31.8	129	45.5	-10	27.2	75	08.7	-24	03.0	342	47.2	-3	48.3	143	25.6	-3	33.8
19	352	34.3	144	47.0		27.2	90	09.1		03.2	357	49.6		48.2	158	27.9		33.9
20	7	36.7	159	48.4		27.1	105	09.5		03.3	12	51.9		48.2	173	30.1		34.0
21	22	39.2	174	49.9		27.0	120	09.9		03.4	27	54.3		48.1	188	32.4		34.0
22	37	41.7	189	51.3		27.0	135	10.4		03.5	42	56.7		48.1	203	34.6		34.1
23	52	44.1	204	52.8		26.9	150	10.8		03.6	57	59.1		48.1	218	36.9		34.2
24	67	46.6	219	54.2	-10	26.9	165	11.2	-24	03.7	73	01.5	-3	48.0	233	39.1	-3	34.3
Dif	—		+15		+1	+4		-1	+24		0		+23		-1			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 11 ^h 48 ^m 3			Edad: 22 ^d 8 PHE { 4 ^h : 59'2 12 ^h : 59'3 20 ^h : 59'3 R°: 49 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m				
0	182	58.7	-21	25.1	269	25.6	+3	57.5	60 N	6	42	7	37	8	30	** ** *	12	33	7	
1	197	58.5		25.5	283	55.7 ¹¹¹		43.1 ¹⁴⁴	58	36		27		16		** ** *		32	11	
2	212	58.2		25.9	298	25.8 ¹¹¹		28.8 ¹⁴³	56	30		18		8	03	** ** *		32	13	
3	227	58.0		26.4	312	55.9 ¹¹¹	+3	14.4 ¹⁴⁴	54	25		10		7	52	** ** *		31	16	
4	242	57.8		26.8	327	26.0 ¹¹¹	+3	00.0 ¹⁴⁴	52	20		7	03		42	** ** *		31	18	
5	257	57.6	-21	27.2	341	56.2 ¹¹²	+2	45.5 ¹⁴⁵	50	6	16	6	57	7	34	** ** *	12	31	20	
6	272	57.4	-21	27.7	356	26.3 ¹¹¹	+2	31.1 ¹⁴⁴	45	6	06	6	42	7	15	** ** *	12	30	25	
7	287	57.2		28.1	10	56.5 ¹¹²		16.6 ¹⁴⁵	40	5	57		30	7	00	** ** *		30	29	
8	302	56.9		28.5	25	26.7 ¹¹²	+2	02.1 ¹⁴⁵	35	49		20	6	48		** ** *		29	32	
9	317	56.7		28.9	39	56.8 ¹¹¹	+1	47.6 ¹⁴⁵	30	41	6	11		36		** ** *		29	35	
10	332	56.5		29.3	54	27.0 ¹¹²		33.1 ¹⁴⁵	20	26	5	54		17		** ** *		28	40	
11	347	56.3	-21	29.8	68	57.1 ¹¹¹	+1	18.6 ¹⁴⁵	10 N	5	12	5	38	6	00	0 00	54	12	27	45
12	2	56.1	-21	30.2	83	27.3 ¹¹²	+1	04.1 ¹⁴⁵	0	4	57	5	22	5	45	0 03	49	12	26	50
13	17	55.8		30.6	97	57.5 ¹¹²	+0	49.6 ¹⁴⁵	10 S	39		5	06	29		06	45		26	54
14	32	55.6		31.0	112	27.6 ¹¹¹		35.0 ¹⁴⁶	20	4	19	4	47	5	11	09	40		25	59
15	47	55.4		31.4	126	57.8 ¹¹²		20.5 ¹⁴⁵	30	3	52		25	4	51	12	36		24	64
16	62	55.2		31.9	141	27.9 ¹¹¹	+0	05.9 ¹⁴⁶	35		35	4	11		40	14	33		23	68
17	77	55.0	-21	32.3	155	58.1 ¹¹²	-0	08.6 ¹⁴⁵	40	3	15	3	54	4	26	0 17	29	12	23	71
18	92	54.7	-21	32.7	170	28.2 ¹¹¹	-0	23.2 ¹⁴⁶	45	2	48	3	34	4	10	0 19	25	12	22	75
19	107	54.5		33.1	184	58.4 ¹¹²		37.8 ¹⁴⁶	50	2	10	3	08	3	50	22	21		21	80
20	122	54.3		33.5	199	28.5 ¹¹¹	-0	52.3 ¹⁴⁵	52	1	48	2	55		41	24	18		21	82
21	137	54.1		33.9	213	58.6 ¹¹¹	-1	06.9 ¹⁴⁶	54	1	20		40	30		25	16		20	85
22	152	53.8		34.4	228	28.7 ¹¹¹		21.4 ¹⁴⁵	56	0	33		22	18		27	14		20	87
23	167	53.6		34.8	242	58.8 ¹¹¹		36.0 ¹⁴⁶	58	** ** *	2	00	3	04	29	11		19	91	
24	182	53.4	-21	35.2	257	28.9 ¹¹¹	-1	50.5 ¹⁴⁵	60 S	** ** *	1	29		2	47	0 31	8	12	19	94
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 25 ^m 7			Mag: -4.9 PMG: 9 ^h 19 ^m			Mag: +1.3 PMG: 12 ^h 59 ^m			Mag: -2.6 PMG: 19 ^h 05 ^m			Mag: +0.9 PMG: 8 ^h 24 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	67	46.6	219	54.2	-10	26.9	165	11.2	-24	03.7	73	01.5	-3	48.0	233	39.1	-3	34.3		
1	82	49.1	234	55.7		26.8	180	11.6		03.8	88	03.9		48.0	248	41.4		34.3		
2	97	51.5	249	57.1		26.8	195	12.0		04.0	103	06.3		47.9	263	43.6		34.4		
3	112	54.0	264	58.5		26.7	210	12.5		04.1	118	08.7		47.9	278	45.9		34.5		
4	127	56.5	279	59.9		26.6	225	12.9		04.2	133	11.0		47.8	293	48.2		34.6		
5	142	58.9	295	01.4	-10	26.6	240	13.3	-24	04.3	148	13.4	-3	47.8	308	50.4	-3	34.7		
6	158	01.4	310	02.8	-10	26.6	255	13.7	-24	04.4	163	15.8	-3	47.7	323	52.7	-3	34.7		
7	173	03.8	325	04.2		26.5	270	14.1		04.5	178	18.2		47.7	338	54.9		34.8		
8	188	06.3	340	05.6		26.5	285	14.6		04.6	193	20.6		47.6	353	57.2		34.9		
9	203	08.8	355	07.0		26.4	300	15.0		04.7	208	23.0		47.6	8	59.4		35.0		
10	218	11.2	10	08.5		26.4	315	15.4		04.8	223	25.4		47.6	24	01.7		35.1		
11	233	13.7	25	09.9	-10	26.3	330	15.8	-24	05.0	238	27.7	-3	47.5	39	03.9	-3	35.1		
12	248	16.2	40	11.3	-10	26.3	345	16.2	-24	05.1	253	30.1	-3	47.5	54	06.2	-3	35.2		
13	263	18.6	55	12.7		26.3	0	16.7		05.2	268	32.5		47.4	69	08.4		35.3		
14	278	21.1	70	14.1		26.2	15	17.1		05.3	283	34.9		47.4	84	10.7		35.4		
15	293	23.6	85	15.5		26.2	30	17.5		05.4	298	37.3		47.3	99	12.9		35.5		
16	308	26.0	100	16.9		26.2	45	17.9		05.5	313	39.7		47.3	114	15.2		35.5		
17	323	28.5	115	18.3	-10	26.1	60	18.3	-24	05.6	328	42.0	-3	47.2	129	17.4	-3	35.6		
18	338	31.0	130	19.6	-10	26.1	75	18.7	-24	05.7	343	44.4	-3	47.2	144	19.7	-3	35.7		
19	353	33.4	145	21.0		26.1	90	19.2		05.8	358	46.8		47.1	159	21.9		35.8		
20	8	35.9	160	22.4		26.1	105	19.6		05.9	13	49.2		47.1	174	24.2		35.9		
21	23	38.3	175	23.8		26.0	120	20.0		06.0	28	51.6		47.0	189	26.4		35.9		
22	38	40.8	190	25.2		26.0	135	20.4		06.1	43	54.0		47.0	204	28.7		36.0		
23	53	43.3	205	26.5		26.0	150	20.8		06.2	58	56.3		46.9	219	31.0		36.1		
24	68	45.7	220	27.9	-10	26.0	165	21.2	-24	06.3	73	58.7	-3	46.9	234	33.2	-3	36.2		
Dif	—		+14		0		+4		-1		+24		0		+23		-		-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 48 ^m 6				Edad: 23 ^d 8 PHE { SD: 16'2 PMG: 7 ^h 04 ^m														
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	182	53.4	-21	35.2	257	28.9	-1	50.5	60 N	15 04	15 58	16 53	1 08 95	12 40 9					
1	197	53.2		35.6	271	59.0 ¹¹¹	-2	05.0 ¹⁴⁵	58	19	16 08	16 59	07 91	43 12					
2	212	52.9		36.0	286	29.1 ¹¹¹		19.6 ¹⁴⁶	56	32	17	17 05	06 88	45 15					
3	227	52.7		36.4	300	59.1 ¹¹⁰		34.1 ¹⁴⁵	54	43	25	10	05 85	47 17					
4	242	52.5		36.8	315	29.1 ¹¹⁰	-2	48.6 ¹⁴⁵	52	15 53	32	15	04 83	49 20					
5	257	52.3	-21	37.2	329	59.1 ¹¹⁰	-3	03.1 ¹⁴⁵	50	16 02	16 39	17 20	1 03 80	12 51 22					
6	272	52.0	-21	37.6	344	29.1 ¹¹⁰	-3	17.5 ¹⁴⁴	45	16 20	16 53	17 30	1 01 76	12 55 27					
7	287	51.8		38.0	358	59.1 ¹¹⁰		32.0 ¹⁴⁵	40	36	17 06	39	1 00 71	12 59 30					
8	302	51.6		38.5	13	29.0 ¹⁰⁹	-3	46.4 ¹⁴⁴	35	16 49	16	47	0 59 67	13 01 34					
9	317	51.4		38.9	27	59.0 ¹¹⁰	-4	00.8 ¹⁴⁴	30	17 00	26	17 55	57 65	04 37					
10	332	51.1		39.3	42	28.9 ¹⁰⁹		15.2 ¹⁴⁴	20	19	43	18 10	56 59	08 42					
11	347	50.9	-21	39.7	56	58.7 ¹⁰⁸	-4	29.6 ¹⁴⁴	10 N	17 36	17 59	18 25	0 54 54	13 12 47					
12	2	50.7	-21	40.1	71	28.6 ¹⁰⁹	-4	44.0 ¹⁴⁴	0	17 52	18 15	18 40	0 52 50	13 16 51					
13	17	50.5		40.5	85	58.4 ¹⁰⁸	-4	58.3 ¹⁴³	10 S	18 08	31	18 58	51 46	20 55					
14	32	50.2		40.9	100	28.2 ¹⁰⁸	-5	12.6 ¹⁴³	20	26	18 50	19 19	49 41	24 59					
15	47	50.0		41.3	114	58.0 ¹⁰⁸		26.9 ¹⁴³	30	46	19 13	19 46	48 36	28 65					
16	62	49.8		41.7	129	27.8 ¹⁰⁸		41.2 ¹⁴³	35	18 58	27	20 03	47 33	31 68					
17	77	49.6	-21	42.1	143	57.5 ¹⁰⁷	-5	55.4 ¹⁴²	40	19 12	19 44	20 24	0 46 29	13 34 71					
18	92	49.3	-21	42.5	158	27.2 ¹⁰⁷	-6	09.6 ¹⁴²	45	19 28	20 04	20 51	0 44 26	13 37 76					
19	107	49.1		42.9	172	56.8 ¹⁰⁶		23.7 ¹⁴¹	50	49	31	21 30	43 21	41 81					
20	122	48.9		43.3	187	26.4 ¹⁰⁶		37.8 ¹⁴¹	52	19 58	20 44	21 52	42 19	43 83					
21	137	48.6		43.7	201	56.0 ¹⁰⁶	-6	51.9 ¹⁴¹	54	20 09	21 00	22 22	41 17	45 86					
22	152	48.4		44.1	216	25.6 ¹⁰⁶	-7	06.0 ¹⁴¹	56	22	18	23 19	41 14	47 89					
23	167	48.2		44.5	230	55.1 ¹⁰⁵		20.0 ¹⁴⁰	58	36	21 42	** **	40 11	50 92					
24	182	47.9	-21	44.9	245	24.6 ¹⁰⁵	-7	34.0 ¹⁴⁰	60 S	20 53	22 14	** **	0 39 8	13 53 95					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 21 ^m 8		Mag: -4.9 PMG: 9 ^h 17 ^m			Mag: +1.3 PMG: 12 ^h 58 ^m			Mag: -2.6 PMG: 19 ^h 01 ^m			Mag: +0.9 PMG: 8 ^h 21 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	68	45.7	220	27.9	-10	26.0	165	21.2	-24	06.3	73	58.7	-3	46.9	234	33.2	-3	36.2	
1	83	48.2		235	29.3	26.0	180	21.7		06.4	89	01.1		46.8	249	35.5		36.2	
2	98	50.7		250	30.6	25.9	195	22.1		06.5	104	03.5		46.8	264	37.7		36.3	
3	113	53.1		265	32.0	25.9	210	22.5		06.6	119	05.8		46.7	279	40.0		36.4	
4	128	55.6		280	33.4	25.9	225	22.9		06.7	134	08.2		46.7	294	42.2		36.5	
5	143	58.1		295	34.7	-10	25.9	240	23.3	-24	06.8	149	10.6	-3	46.6	309	44.5	-3	36.6
6	159	00.5		310	36.1	-10	25.9	255	23.7	-24	06.9	164	13.0	-3	46.6	324	46.7	-3	36.6
7	174	03.0		325	37.4	25.9	270	24.1		07.0	179	15.4		46.5	339	49.0		36.7	
8	189	05.5		340	38.8	25.9	285	24.6		07.1	194	17.7		46.5	354	51.2		36.8	
9	204	07.9		355	40.1	25.9	300	25.0		07.2	209	20.1		46.5	9	53.5		36.9	
10	219	10.4		10	41.5	25.9	315	25.4		07.3	224	22.5		46.4	24	55.8		37.0	
11	234	12.8		25	42.8	-10	25.9	330	25.8	-24	07.4	239	24.9	-3	46.4	39	58.0	-3	37.0
12	249	15.3		40	44.2	-10	25.9	345	26.2	-24	07.5	254	27.2	-3	46.3	55	00.3	-3	37.1
13	264	17.8		55	45.5	25.9	0	26.6		07.6	269	29.6		46.3	70	02.5		37.2	
14	279	20.2		70	46.8	25.9	15	27.0		07.7	284	32.0		46.2	85	04.8		37.3	
15	294	22.7		85	48.2	25.9	30	27.5		07.8	299	34.4		46.2	100	07.0		37.3	
16	309	25.2		100	49.5	25.9	45	27.9		07.9	314	36.7		46.1	115	09.3		37.4	
17	324	27.6		115	50.8	-10	25.9	60	28.3	-24	08.0	329	39.1	-3	46.0	130	11.5	-3	37.5
18	339	30.1		130	52.1	-10	25.9	75	28.7	-24	08.1	344	41.5	-3	46.0	145	13.8	-3	37.6
19	354	32.6		145	53.5	25.9	90	29.1		08.2	359	43.9		45.9	160	16.1		37.7	
20	9	35.0		160	54.8	26.0	105	29.5		08.3	14	46.2		45.9	175	18.3		37.7	
21	24	37.5		175	56.1	26.0	120	29.9		08.4	29	48.6		45.8	190	20.6		37.8	
22	39	39.9		190	57.4	26.0	135	30.4		08.5	44	51.0		45.8	205	22.8		37.9	
23	54	42.4		205	58.7	26.0	150	30.8		08.6	59	53.4		45.7	220	25.1		38.0	
24	69	44.9		221	00.0	-10	26.0	165	31.2	-24	08.7	74	55.7	-3	45.7	235	27.3	-3	38.0
Dif	—		+13			0	+4			-1	+24		+1		+23		-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 0			Edad: 24 ^d 8 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 SD: 16/2 PMG: 7 ^h 55 ^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	182	47.9	-21	44.9	245	24.6	-7	34.0	60 N	6	46	7	40	8	35	2	43	96			
1	197	47.7		45.3	259	54.1 ¹⁰⁵	-7	47.9 ¹³⁹	58	39		30		19		38	92	12	55	14	
2	212	47.5		45.6	274	23.5 ¹⁰⁴	-8	01.8 ¹³⁹	56	33		21	8	07		34	89	13	00	18	
3	227	47.3		46.0	288	52.8 ¹⁰³		15.6 ¹³⁸	54	28		13	7	55		30	86		05	20	
4	242	47.0		46.4	303	22.2 ¹⁰⁴		29.4 ¹³⁸	52	23		7	06	45		27	83		09	23	
5	257	46.8	-21	46.8	317	51.5 ¹⁰³	-8	43.2 ¹³⁸	50	6	18	6	59	7	36	2	23	81	13	13	25
6	272	46.6	-21	47.2	332	20.7 ¹⁰²	-8	56.9 ¹³⁷	45	6	08	6	45	7	18	2	17	76	13	22	30
7	287	46.3		47.6	346	49.9 ¹⁰²	-9	10.6 ¹³⁷	40	5	59		32	7	02		11	72		29	34
8	302	46.1		48.0	1	19.1 ¹⁰²		24.2 ¹³⁶	35	50		22	6	49		06	69		35	37	
9	317	45.9		48.4	15	48.2 ¹⁰¹		37.7 ¹³⁵	30	43		6	12	38		2	02	65	41	39	
10	332	45.6		48.8	30	17.3 ¹⁰¹	-9	51.2 ¹³⁵	20	28		5	55	19		1	55	60	50	45	
11	347	45.4	-21	49.2	44	46.4 ¹⁰¹	-10	04.7 ¹³⁵	10 N	5	13	5	39	6	01	1	48	56	13	59	49
12	2	45.2	-21	49.5	59	15.3 ⁹⁹	-10	18.1 ¹³⁴	0	4	57	5	23	5	45	1	42	52	14	07	52
13	17	44.9		49.9	73	44.3 ¹⁰⁰		31.4 ¹³³	10 S	40		5	06	29		37	47		15	56	
14	32	44.7		50.3	88	13.2 ⁹⁹		44.7 ¹³³	20	4	19	4	47	5	12	30	44	23	61		
15	47	44.5		50.7	102	42.0 ⁹⁸	-10	57.9 ¹³²	30	3	52		24	4	51	24	38		33	66	
16	62	44.2		51.1	117	10.8 ⁹⁸	-11	11.0 ¹³¹	35	35		4	10	39		20	35		39	68	
17	77	44.0	-21	51.5	131	39.6 ⁹⁸	-11	24.1 ¹³¹	40	3	13	3	54	4	26	1	15	32	14	45	72
18	92	43.7	-21	51.8	146	08.3 ⁹⁷	-11	37.1 ¹³⁰	45	2	46	3	33	4	09	1	10	28	14	53	76
19	107	43.5		52.2	160	37.0 ⁹⁷	-11	50.1 ¹³⁰	50	2	07	3	06	3	49	04	23	15	02	81	
20	122	43.3		52.6	175	05.6 ⁹⁶	-12	03.0 ¹²⁹	52	1	45	2	53	39		1	01	21	06	83	
21	137	43.0		53.0	189	34.1 ⁹⁵		15.8 ¹²⁸	54	1	15	38	28		0	58	19		11	86	
22	152	42.8		53.4	204	02.6 ⁹⁵		28.5 ¹²⁷	56	0	18	2	19	16		55	16		16	89	
23	167	42.6		53.7	218	31.1 ⁹⁵		41.2 ¹²⁷	58	** **		1	55	3	01	51	13		22	92	
24	182	42.3	-21	54.1	232	59.5 ⁹⁴	-12	53.8 ¹²⁶	60 S	** **	1	23	2	44		0	47	9	15	28	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 17 ^m 8		Mag: -4.9 PMG: 9 ^h 15 ^m		Mag: +1.3 PMG: 12 ^h 58 ^m		Mag: -2.6 PMG: 18 ^h 57 ^m		Mag: +0.9 PMG: 8 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	69	44.9	221	00.0	-10	26.0	165	31.2	-24	08.7	74	55.7	-3	45.7	235	27.3	-3	38.0
1	84	47.3	236	01.3		26.1	180	31.6		08.8	89	58.1		45.6	250	29.6		38.1
2	99	49.8	251	02.6		26.1	195	32.0		08.9	105	00.5		45.6	265	31.8		38.2
3	114	52.3	266	03.9		26.1	210	32.4		09.0	120	02.8		45.5	280	34.1		38.3
4	129	54.7	281	05.2		26.1	225	32.8		09.1	135	05.2		45.5	295	36.4		38.3
5	144	57.2	296	06.5	-10	26.2	240	33.2	-24	09.1	150	07.6	-3	45.4	310	38.6	-3	38.4
6	159	59.7	311	07.8	-10	26.2	255	33.6	-24	09.2	165	10.0	-3	45.4	325	40.9	-3	38.5
7	175	02.1	326	09.1		26.2	270	34.1		09.3	180	12.3		45.3	340	43.1		38.6
8	190	04.6	341	10.4		26.3	285	34.5		09.4	195	14.7		45.3	355	45.4		38.7
9	205	07.1	356	11.6		26.3	300	34.9		09.5	210	17.1		45.2	10	47.6		38.7
10	220	09.5	11	12.9		26.3	315	35.3		09.6	225	19.4		45.2	25	49.9		38.8
11	235	12.0	26	14.2	-10	26.4	330	35.7	-24	09.7	240	21.8	-3	45.1	40	52.2	-3	38.9
12	250	14.4	41	15.5	-10	26.4	345	36.1	-24	09.8	255	24.2	-3	45.1	55	54.4	-3	39.0
13	265	16.9	56	16.7		26.4	0	36.5		09.9	270	26.5		45.0	70	56.7		39.0
14	280	19.4	71	18.0		26.5	15	36.9		09.9	285	28.9		45.0	85	58.9		39.1
15	295	21.8	86	19.3		26.5	30	37.3		10.0	300	31.3		44.9	101	01.2		39.2
16	310	24.3	101	20.5		26.6	45	37.8		10.1	315	33.6		44.8	116	03.5		39.3
17	325	26.8	116	21.8	-10	26.6	60	38.2	-24	10.2	330	36.0	-3	44.8	131	05.7	-3	39.3
18	340	29.2	131	23.1	-10	26.7	75	38.6	-24	10.3	345	38.4	-3	44.7	146	08.0	-3	39.4
19	355	31.7	146	24.3		26.7	90	39.0		10.4	0	40.7		44.7	161	10.2		39.5
20	10	34.2	161	25.6		26.8	105	39.4		10.4	15	43.1		44.6	176	12.5		39.6
21	25	36.6	176	26.8		26.8	120	39.8		10.5	30	45.5		44.6	191	14.7		39.7
22	40	39.1	191	28.1		26.9	135	40.2		10.6	45	47.8		44.5	206	17.0		39.7
23	55	41.6	206	29.3		26.9	150	40.6		10.7	60	50.2		44.5	221	19.3		39.8
24	70	44.0	221	30.6	-10	27.0	165	41.0	-24	10.8	75	52.6	-3	44.4	236	21.5	-3	39.9
Dif	—		+13		0		+4		-1		+24		+1		+23		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 49 ^m 4			Edad: 25 ^d 8 PHE { 4 ^h : 59°2 12 ^h : 59°2 20 ^h : 59°1 SD: 16°1 PMG: 8 ^h 47 ^m R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	42.3	-21 54.1	232	59.5	-12 53.8	93	60 N	15 02	15 56	16 51	4 19 97	12 59 16	
1	197	42.1	54.5	247	27.8	-13 06.3	125	58	17	16 07	16 58	10 93	13 09 20	
2	212	41.9	54.9	261	56.1	18.8	125	56	30	16	17 04	4 03 89	18 23	
3	227	41.6	55.2	276	24.3	31.1	123	54	42	24	09	3 56 86	25 26	
4	242	41.4	55.6	290	52.5	43.4	123	52	15 52	31	14	50 83	32 28	
5	257	41.1	-21 56.0	305	20.6	-13 55.6	122	50	16 01	16 38	17 19	3 44 81	13 38 31	
6	272	40.9	-21 56.4	319	48.7	-14 07.8	122	45	16 20	16 53	17 29	3 33 76	13 52 34	
7	287	40.7	56.7	334	16.7	19.8	120	40	35	17 05	39	23 72	14 03 38	
8	302	40.4	57.1	348	44.7	31.8	120	35	16 48	16	47	15 69	12 41	
9	317	40.2	57.5	3	12.6	43.6	118	30	17 00	26	17 55	3 07 67	20 44	
10	332	39.9	57.9	17	40.4	-14 55.4	118	20	19	43	18 10	2 55 62	35 48	
11	347	39.7	-21 58.2	32	08.2	-15 07.1	117	10 N	17 37	17 59	18 25	2 44 58	14 48 51	
12	2	39.5	-21 58.6	46	36.0	-15 18.7	116	0	17 53	18 15	18 41	2 34 54	14 59 56	
13	17	39.2	59.0	61	03.7	30.2	115	10 S	18 09	32	18 59	24 50	15 11 59	
14	32	39.0	59.3	75	31.3	41.6	114	20	27	18 51	19 20	14 46	24 62	
15	47	38.7	-21 59.7	89	58.8	-15 53.0	114	30	18 48	19 15	19 48	2 02 41	39 66	
16	62	38.5	-22 00.1	104	26.3	-16 04.2	112	35	19 00	29	20 05	1 55 39	47 69	
17	77	38.2	-22 00.4	118	53.8	-16 15.3	111	40	19 14	19 46	20 26	1 47 36	15 57 72	
18	92	38.0	-22 00.8	133	21.2	-16 26.3	110	45	19 31	20 07	20 54	1 38 32	16 09 75	
19	107	37.8	01.2	147	48.5	37.3	110	50	19 51	34	21 34	27 28	23 80	
20	122	37.5	01.5	162	15.8	48.1	108	52	20 01	20 48	21 57	22 26	29 82	
21	137	37.3	01.9	176	43.0	-16 58.8	107	54	12	21 03	22 29	17 23	37 84	
22	152	37.0	02.2	191	10.2	-17 09.4	106	56	25	23	** **	11 20	45 87	
23	167	36.8	02.6	205	37.3	20.0	106	58	40	21 47	** **	1 04 17	16 54 91	
24	182	36.5	-22 03.0	220	04.4	-17 30.4	104	60 S	20 58	22 21	** **	0 56 13	17 05 95	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 13 ^m 9		Mag: -4.9 PMG: 9 ^h 13 ^m		Mag: +1.3 PMG: 12 ^h 57 ^m		Mag: -2.6 PMG: 18 ^h 54 ^m		Mag: +0.9 PMG: 8 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	70	44.0	221 30.6	-10 27.0	165 41.0	-24 10.8	75 52.6	-3 44.4	236 21.5	-3 39.9
1	85	46.5	236 31.8	27.1	180 41.4	10.9	90 54.9	44.4	251 23.8	40.0
2	100	48.9	251 33.0	27.1	195 41.8	10.9	105 57.3	44.3	266 26.0	40.0
3	115	51.4	266 34.3	27.2	210 42.3	11.0	120 59.7	44.2	281 28.3	40.1
4	130	53.9	281 35.5	27.2	225 42.7	11.1	136 02.0	44.2	296 30.6	40.2
5	145	56.3	296 36.7	-10 27.3	240 43.1	-24 11.2	151 04.4	-3 44.1	311 32.8	-3 40.3
6	160	58.8	311 38.0	-10 27.4	255 43.5	-24 11.3	166 06.8	-3 44.1	326 35.1	-3 40.3
7	176	01.3	326 39.2	27.4	270 43.9	11.3	181 09.1	44.0	341 37.3	40.4
8	191	03.7	341 40.4	27.5	285 44.3	11.4	196 11.5	44.0	356 39.6	40.5
9	206	06.2	356 41.6	27.6	300 44.7	11.5	211 13.8	43.9	11 41.9	40.6
10	221	08.7	11 42.8	27.7	315 45.1	11.6	226 16.2	43.9	26 44.1	40.6
11	236	11.1	26 44.1	-10 27.7	330 45.5	-24 11.7	241 18.6	-3 43.8	41 46.4	-3 40.7
12	251	13.6	41 45.3	-10 27.8	345 45.9	-24 11.7	256 20.9	-3 43.7	56 48.6	-3 40.8
13	266	16.0	56 46.5	27.9	0 46.3	11.8	271 23.3	43.7	71 50.9	40.9
14	281	18.5	71 47.7	28.0	15 46.7	11.9	286 25.6	43.6	86 53.2	40.9
15	296	21.0	86 48.9	28.1	30 47.1	12.0	301 28.0	43.6	101 55.4	41.0
16	311	23.4	101 50.1	28.1	45 47.5	12.0	316 30.4	43.5	116 57.7	41.1
17	326	25.9	116 51.3	-10 28.2	60 48.0	-24 12.1	331 32.7	-3 43.5	131 59.9	-3 41.2
18	341	28.4	131 52.5	-10 28.3	75 48.4	-24 12.2	346 35.1	-3 43.4	147 02.2	-3 41.2
19	356	30.8	146 53.7	28.4	90 48.8	12.3	1 37.4	43.3	162 04.5	41.3
20	11	33.3	161 54.9	28.5	105 49.2	12.3	16 39.8	43.3	177 06.7	41.4
21	26	35.8	176 56.1	28.6	120 49.6	12.4	31 42.2	43.2	192 09.0	41.5
22	41	38.2	191 57.2	28.7	135 50.0	12.5	46 44.5	43.2	207 11.3	41.5
23	56	40.7	206 58.4	28.8	150 50.4	12.5	61 46.9	43.1	222 13.5	41.6
24	71	43.2	221 59.6	-10 28.8	165 50.8	-24 12.6	76 49.2	-3 43.1	237 15.8	-3 41.7
Dif	—	+12	-1	+4	-1	+24	+1	+23	-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 8			Edad: 26 ^d 8 PHE { 4 ^h : 59'0 12 ^h : 58'9 20 ^h : 58'8 R°: 57 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m				
0	182	36.5	-22	03.0	220	04.4	-17	30.4	60 N	6 49	7 44	8 39	5 56	93	13 15	24				
1	197	36.3		03.3	234	31.3	79	40.7	58	42	33	23	43	89	29	28				
2	212	36.1		03.7	248	58.3	80	-17 50.9	56	36	24	8 10	32	85	41	31				
3	227	35.8		04.0	263	25.2	79	-18 00.9	54	30	16	7 58	22	82	13 51	34				
4	242	35.6		04.4	277	52.0	78	10.9	52	25	08	48	13	80	14 00	37				
5	257	35.3	-22	04.7	292	18.8	78	-18 20.8	50	6 21	7 01	7 39	5 05	78	14 09	38				
6	272	35.1	-22	05.1	306	45.5	77	-18 30.5	45	6 10	6 47	7 20	4 49	74	14 26	42				
7	287	34.8		05.5	321	12.1	76	40.1	40	6 01	34	7 04	35	71	41	45				
8	302	34.6		05.8	335	38.7	76	49.6	35	5 52	23	6 51	24	68	14 53	47				
9	317	34.3		06.2	350	05.3	76	-18 59.0	30	44	6 14	40	4 14	66	15 04	49				
10	332	34.1		06.5	4	31.8	75	-19 08.3	20	29	5 56	20	3 57	62	23	52				
11	347	33.8	-22	06.9	18	58.2	74	-19 17.5	10 N	5 14	5 40	6 02	3 42	59	15 39	55				
12	2	33.6	-22	07.2	33	24.6	74	-19 26.5	0	4 58	5 24	5 46	3 28	56	15 55	57				
13	17	33.4		07.6	47	51.0	74	35.4	10 S	40	5 07	30	14	54	16 10	59				
14	32	33.1		07.9	62	17.3	73	44.2	20	4 19	4 48	5 12	3 00	50	26	62				
15	47	32.9		08.3	76	43.5	72	-19 52.8	30	3 51	24	4 51	2 43	47	45	65				
16	62	32.6		08.6	91	09.7	72	-20 01.4	35	34	4 10	39	34	44	16 56	67				
17	77	32.4	-22	09.0	105	35.8	71	-20 09.8	40	3 13	3 53	4 25	2 23	41	17 09	69				
18	92	32.1	-22	09.3	120	01.9	71	-20 18.0	45	2 45	3 32	4 08	2 10	38	17 24	72				
19	107	31.9		09.7	134	28.0	71	26.2	50	2 04	3 05	3 48	1 55	34	43	75				
20	122	31.6		10.0	148	54.0	70	34.2	52	1 42	2 51	38	48	32	17 51	77				
21	137	31.4		10.3	163	19.9	69	42.1	54	1 10	35	26	40	30	18 01	79				
22	152	31.1		10.7	177	45.8	69	49.8	56	** **	2 16	3 14	31	27	12	82				
23	167	30.9		11.0	192	11.7	69	-20 57.5	58	** **	1 52	2 59	21	24	25	84				
24	182	30.6	-22	11.4	206	37.5	68	-21 04.9	60 S	** **	1 17	2 41	1 09	20	18 40	89				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 19 ^h 10 ^m 0		Mag: -4.9 PMG: 9 ^h 11 ^m				Mag: +1.3 PMG: 12 ^h 56 ^m				Mag: -2.6 PMG: 18 ^h 50 ^m				Mag: +0.9 PMG: 8 ^h 10 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	71	43.2	221	59.6	-10	28.8			165	50.8	-24	12.6	76	49.2	-3	43.1	237	15.8	-3	41.7
1	86	45.6	237	00.8		28.9			180	51.2		12.7	91	51.6		43.0	252	18.0		41.8
2	101	48.1	252	02.0		29.0			195	51.6		12.8	106	53.9		42.9	267	20.3		41.8
3	116	50.5	267	03.1		29.1			210	52.0		12.8	121	56.3		42.9	282	22.6		41.9
4	131	53.0	282	04.3		29.2			225	52.4		12.9	136	58.6		42.8	297	24.8		42.0
5	146	55.5	297	05.5	-10	29.3			240	52.8	-24	13.0	152	01.0	-3	42.8	312	27.1	-3	42.1
6	161	57.9	312	06.6	-10	29.4			255	53.2	-24	13.0	167	03.4	-3	42.7	327	29.4	-3	42.1
7	177	00.4	327	07.8		29.5			270	53.6		13.1	182	05.7		42.6	342	31.6		42.2
8	192	02.9	342	09.0		29.6			285	54.0		13.2	197	08.1		42.6	357	33.9		42.3
9	207	05.3	357	10.1		29.8			300	54.4		13.2	212	10.4		42.5	12	36.1		42.4
10	222	07.8	12	11.3		29.9			315	54.8		13.3	227	12.8		42.5	27	38.4		42.4
11	237	10.3	27	12.4	-10	30.0			330	55.2	-24	13.4	242	15.1	-3	42.4	42	40.7	-3	42.5
12	252	12.7	42	13.6	-10	30.1			345	55.6	-24	13.4	257	17.5	-3	42.3	57	42.9	-3	42.6
13	267	15.2	57	14.7		30.2			0	56.0		13.5	272	19.8		42.3	72	45.2		42.7
14	282	17.7	72	15.9		30.3			15	56.4		13.6	287	22.2		42.2	87	47.5		42.7
15	297	20.1	87	17.0		30.4			30	56.9		13.6	302	24.5		42.2	102	49.7		42.8
16	312	22.6	102	18.2		30.5			45	57.3		13.7	317	26.9		42.1	117	52.0		42.9
17	327	25.0	117	19.3	-10	30.7			60	57.7	-24	13.8	332	29.2	-3	42.0	132	54.2	-3	43.0
18	342	27.5	132	20.5	-10	30.8			75	58.1	-24	13.8	347	31.6	-3	42.0	147	56.5	-3	43.0
19	357	30.0	147	21.6		30.9			90	58.5		13.9	2	33.9		41.9	162	58.8		43.1
20	12	32.4	162	22.7		31.0			105	58.9		13.9	17	36.3		41.9	178	01.0		43.2
21	27	34.9	177	23.9		31.2			120	59.3		14.0	32	38.6		41.8	193	03.3		43.2
22	42	37.4	192	25.0		31.3			135	59.7		14.1	47	41.0		41.7	208	05.6		43.3
23	57	39.8	207	26.1		31.4			151	00.1		14.1	62	43.3		41.7	223	07.8		43.4
24	72	42.3	222	27.2	-10	31.5			166	00.5	-24	14.2	77	45.7	-3	41.6	238	10.1	-3	43.5
Dif	—		+12		-1		+4		-1		+24		+1		+23		-1			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°2 PMG: 11 ^h 50 ^m 2				Edad: 27 ^d 8 PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'4 PMG: 10 ^h 38 ^m R°: 58 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	182	30.6	-22	11.4	206	37.5	-21	04.9	60 N	14 59	15 55	16 50	7 29 82	13 39 39				
1	197	30.4		11.7	221	03.3		12.3	58	15 15	16 05	16 57	7 12 78	13 57 42				
2	212	30.1		12.1	235	29.0		19.5	56	29	15	17 03	6 57 76	14 12 44				
3	227	29.9		12.4	249	54.7		26.6	54	40	23	08	44 74	25 46				
4	242	29.6		12.7	264	20.4		33.5	52	15 51	30	14	33 73	37 47				
5	257	29.4	-22	13.1	278	46.0	66	-21 40.3	50	16 00	16 37	17 18	6 23 71	14 47 48				
6	272	29.1	-22	13.4	293	11.6	66	-21 47.0	45	16 19	16 52	17 29	6 03 68	15 08 51				
7	287	28.9		13.8	307	37.2	66	53.5	40	35	17 05	39	5 46 66	26 52				
8	302	28.6		14.1	322	02.7	65	-21 59.9	35	16 48	16	47	32 65	40 54				
9	317	28.3		14.4	336	28.2	65	-22 06.1	30	17 00	26	17 55	5 20 63	15 53 54				
10	332	28.1		14.8	350	53.6	64	12.2	20	20	17 44	18 11	4 59 61	16 15 56				
11	347	27.8	-22	15.1	5	19.0	64	-22 18.2	10 N	17 37	18 00	18 26	4 41 59	16 34 57				
12	2	27.6	-22	15.4	19	44.4	64	-22 24.0	0	17 54	18 16	18 42	4 24 58	16 52 58				
13	17	27.3		15.8	34	09.8	64	29.6	10 S	18 11	33	19 00	4 08 55	17 09 60				
14	32	27.1		16.1	48	35.1	63	35.1	20	28	18 53	22	3 50 54	28 61				
15	47	26.8		16.4	63	00.4	63	40.5	30	18 49	19 16	19 49	30 51	17 50 62				
16	62	26.6		16.7	77	25.7	63	45.7	35	19 02	31	20 07	18 50	18 03 63				
17	77	26.3	-22	17.1	91	51.0	63	-22 50.8	40	19 16	19 48	20 29	3 04 49	18 18 63				
18	92	26.1	-22	17.4	106	16.2	62	-22 55.7	45	19 33	20 09	20 57	2 48 47	18 36 64				
19	107	25.8		17.7	120	41.4	62	-23 00.5	50	19 54	37	21 38	29 43	18 58 66				
20	122	25.5		18.1	135	06.6	62	05.2	52	20 04	20 51	22 02	20 41	19 08 67				
21	137	25.3		18.4	149	31.8	62	09.6	54	20 15	21 07	22 36	2 10 39	20 68				
22	152	25.0		18.7	163	57.0	62	14.0	56	28	27	** **	1 58 37	34 69				
23	167	24.8		19.0	178	22.2	62	18.2	58	20 44	21 52	** **	45 34	19 49 71				
24	182	24.5	-22	19.4	192	47.3	61	-23 22.2	60 S	21 02	22 28	** **	1 29 31	20 09 72				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 06 ^m 0		Mag: -4.9 PMG: 9 ^h 10 ^m				Mag: +1.3 PMG: 12 ^h 56 ^m				Mag: -2.6 PMG: 18 ^h 46 ^m				Mag: +0.9 PMG: 8 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	72	42.3	222	27.2	-10	31.5	166	00.5	-24	14.2	77	45.7	-3	41.6	238	10.1	-3	43.5
1	87	44.8	237	28.3		31.7	181	00.9		14.2	92	48.0		41.5	253	12.4		43.5
2	102	47.2	252	29.5		31.8	196	01.3		14.3	107	50.4		41.5	268	14.6		43.6
3	117	49.7	267	30.6		31.9	211	01.7		14.4	122	52.7		41.4	283	16.9		43.7
4	132	52.1	282	31.7		32.1	226	02.1		14.4	137	55.1		41.4	298	19.2		43.8
5	147	54.6	297	32.8	-10	32.2	241	02.5	-24	14.5	152	57.4	-3	41.3	313	21.4	-3	43.8
6	162	57.1	312	33.9	-10	32.3	256	02.9	-24	14.5	167	59.8	-3	41.2	328	23.7	-3	43.9
7	177	59.5	327	35.0		32.5	271	03.3		14.6	183	02.1		41.2	343	26.0		44.0
8	193	02.0	342	36.1		32.6	286	03.7		14.6	198	04.5		41.1	358	28.2		44.1
9	208	04.5	357	37.2		32.8	301	04.1		14.7	213	06.8		41.1	13	30.5		44.1
10	223	06.9	12	38.3		32.9	316	04.5		14.8	228	09.2		41.0	28	32.7		44.2
11	238	09.4	27	39.4	-10	33.0	331	04.9	-24	14.8	243	11.5	-3	40.9	43	35.0	-3	44.3
12	253	11.9	42	40.5	-10	33.2	346	05.3	-24	14.9	258	13.9	-3	40.9	58	37.3	-3	44.3
13	268	14.3	57	41.6		33.3	1	05.7		14.9	273	16.2		40.8	73	39.5		44.4
14	283	16.8	72	42.7		33.5	16	06.1		15.0	288	18.5		40.7	88	41.8		44.5
15	298	19.3	87	43.8		33.6	31	06.5		15.0	303	20.9		40.7	103	44.1		44.6
16	313	21.7	102	44.9		33.8	46	06.9		15.1	318	23.2		40.6	118	46.3		44.6
17	328	24.2	117	46.0	-10	33.9	61	07.3	-24	15.1	333	25.6	-3	40.5	133	48.6	-3	44.7
18	343	26.6	132	47.0	-10	34.1	76	07.7	-24	15.2	348	27.9	-3	40.5	148	50.9	-3	44.8
19	358	29.1	147	48.1		34.2	91	08.1		15.2	3	30.3		40.4	163	53.1		44.9
20	13	31.6	162	49.2		34.4	106	08.5		15.3	18	32.6		40.4	178	55.4		44.9
21	28	34.0	177	50.3		34.6	121	08.9		15.3	33	35.0		40.3	193	57.7		45.0
22	43	36.5	192	51.3		34.7	136	09.3		15.4	48	37.3		40.2	208	59.9		45.1
23	58	39.0	207	52.4		34.9	151	09.7		15.4	63	39.6		40.2	224	02.2		45.1
24	73	41.4	222	53.5	-10	35.0	166	10.1	-24	15.5	78	42.0	-3	40.1	239	04.5	-3	45.2
Dif	—		+11		-1		+4		-1		+23		+1		+23		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 50 ^m 6			Edad: 28 ^d 8 PHE { SD: 15/9 PMG: 11 ^h 36 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	182	24.5	-22	19.4	192	47.3	-23	22.2	39	60 N	6 51	7 47	8 42	8 51	62
1	197	24.3		19.7	207	12.5	62	26.1	39	58	45	36	26	30	62
2	212	24.0		20.0	221	37.6	61	29.8	37	56	38	27	13	8 13	61
3	227	23.8		20.3	236	02.7	61	33.4	36	54	33	18	8 01	7 58	61
4	242	23.5		20.7	250	27.8	61	36.8	34	52	28	11	7 51	46	60
5	257	23.2	-22	21.0	264	52.9	61	-23	40.1	33	50	6 23	7 04	7 42	7 34
6	272	23.0	-22	21.3	279	18.1	62	-23	43.2	31	45	6 12	6 49	7 22	7 11
7	287	22.7		21.6	293	43.2	61	46.2	30	40	6 02	36	7 06	6 52	60
8	302	22.5		21.9	308	08.3	61	49.0	28	35	5 54	25	6 53	37	59
9	317	22.2		22.2	322	33.4	61	51.7	27	30	45	6 15	41	23	59
10	332	21.9		22.6	336	58.5	61	54.2	25	20	30	5 57	21	6 00	59
11	347	21.7	-22	22.9	351	23.6	61	-23	56.6	24	10 N	5 15	5 41	6 03	5 40
12	2	21.4	-22	23.2	5	48.8	62	-23	58.8	22	0	4 58	5 25	5 47	5 22
13	17	21.2		23.5	20	13.9	61	-24	00.8	20	10 S	40	5 07	30	5 03
14	32	20.9		23.8	34	39.1	62	02.8	20	20	4 19	4 48	5 12	4 44	57
15	47	20.6		24.1	49	04.3	62	04.5	17	30	3 51	24	4 51	21	56
16	62	20.4		24.4	63	29.4	61	06.1	16	35	34	4 10	39	4 08	56
17	77	20.1	-22	24.8	77	54.6	62	-24	07.6	15	40	3 12	3 52	4 25	3 53
18	92	19.9	-22	25.1	92	19.9	63	-24	08.9	13	45	2 43	3 31	4 08	3 35
19	107	19.6		25.4	106	45.1	62	10.0	11	50	2 02	3 04	3 47	12	53
20	122	19.3		25.7	121	10.4	63	11.0	10	52	1 38	2 50	37	3 01	53
21	137	19.1		26.0	135	35.7	63	11.9	9	54	1 05	33	25	2 49	52
22	152	18.8		26.3	150	01.0	63	12.6	7	56	** **	2 14	3 12	35	51
23	167	18.6		26.6	164	26.3	63	13.1	5	58	** **	1 48	2 57	19	50
24	182	18.3	-22	26.9	178	51.7	64	-24	13.5	4	60 S	** **	1 12	2 38	2 00

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 02 ^m 1		Mag: -4.9 PMG: 9 ^h 08 ^m		Mag: +1.3 PMG: 12 ^h 55 ^m		Mag: -2.6 PMG: 18 ^h 42 ^m		Mag: +0.9 PMG: 8 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	73	41.4	222	53.5	-10	35.0	166	10.1	-24	15.5
1	88	43.9	237	54.5		35.2	181	10.5		15.5
2	103	46.4	252	55.6		35.4	196	10.9		15.6
3	118	48.8	267	56.6		35.5	211	11.3		15.6
4	133	51.3	282	57.7		35.7	226	11.7		15.7
5	148	53.8	297	58.8	-10	35.9	241	12.1	-24	15.7
6	163	56.2	312	59.8	-10	36.0	256	12.5	-24	15.8
7	178	58.7	328	00.9		36.2	271	12.9		15.8
8	194	01.1	343	01.9		36.4	286	13.3		15.9
9	209	03.6	358	03.0		36.5	301	13.7		15.9
10	224	06.1	373	04.0		36.7	316	14.1		16.0
11	239	08.5	388	05.0	-10	36.9	331	14.5	-24	16.0
12	254	11.0	403	06.1	-10	37.1	346	14.9	-24	16.1
13	269	13.5	418	07.1		37.2	1	15.3		16.1
14	284	15.9	433	08.1		37.4	16	15.6		16.1
15	299	18.4	448	09.2		37.6	31	16.0		16.2
16	314	20.9	463	10.2		37.8	46	16.4		16.2
17	329	23.3	478	11.2	-10	38.0	61	16.8	-24	16.3
18	344	25.8	493	12.3	-10	38.2	76	17.2	-24	16.3
19	359	28.3	508	13.3		38.3	91	17.6		16.3
20	14	30.7	523	14.3		38.5	106	18.0		16.4
21	29	33.2	538	15.3		38.7	121	18.4		16.4
22	44	35.6	553	16.3		38.9	136	18.8		16.5
23	59	38.1	568	17.4		39.1	151	19.2		16.5
24	74	40.6	583	18.4	-10	39.3	166	19.6	-24	16.5
Dif	—		+10	-2			+4	0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 51 ^m 0			Edad: 29 ^d 8 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/2 R°: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	h m	m
0	182	18.3	-22	26.9	178	51.7	-24	13.5	60 N	14 58	15 53	16 49	9 53	40	15 16	74	
1	197	18.0		27.2	193	17.1		13.7	58	15 14	16 04	16 56		32 42		37 72	
2	212	17.8		27.5	207	42.5		13.8	56		14	17 02	9 14	45	15 54	70	
3	227	17.5		27.8	222	08.0		13.8	54		39	22 08	8 59	46	16 09	68	
4	242	17.2		28.1	236	33.5		13.6	52		50	30 13		46 47		22 67	
5	257	17.0	-22	28.4	250	59.0	-24	13.2	50	15 59	16 37	17 18	8 35	48	16 33	66	
6	272	16.7	-22	28.7	265	24.6	-24	12.7	45	16 19	16 52	17 29	8 11	50	16 57	64	
7	287	16.5		29.0	279	50.2		12.1	40		35	17 05 39	7 52	51	17 16	62	
8	302	16.2		29.3	294	15.8		11.3	35	16 48		16 47		36 52		31 61	
9	317	15.9		29.6	308	41.5		10.3	30	17 00		26 17 56	7 22	53	17 45	60	
10	332	15.7		29.9	323	07.3		09.2	20		20 17 44	18 11	6 59	54	18 08	58	
11	347	15.4	-22	30.2	337	33.1	-24	08.0	10 N	17 38	18 01	18 27	6 39	55	18 28	56	
12	2	15.1	-22	30.5	351	58.9	-24	06.6	15	0	17 55	18 17	18 43	6 20	56	18 47	55
13	17	14.9		30.8	6	24.8		05.1	10 S	18 12	34	19 01	6 01	57	19 05	54	
14	32	14.6		31.1	20	50.7		03.4	17	20	30	18 54	5 41	57		25 52	
15	47	14.3		31.4	35	16.7	-24	01.6	18	30	18 51	19 18	19 51		17 59	19 48	50
16	62	14.1		31.7	49	42.8	-23	59.7	19	35	19 03	33	20 09	5 04	59	20 02	48
17	77	13.8	-22	32.0	64	08.9	-23	57.6	21	40	19 18	19 50	20 31	4 48	60	20 17	47
18	92	13.5	-22	32.3	78	35.0	-23	55.3	23	45	19 35	20 12	21 00	4 29	61	20 35	45
19	107	13.3		32.6	93	01.2		53.0	23	50	19 56	40	21 42	4 05	63	20 58	43
20	122	13.0		32.9	107	27.5		50.5	25	52	20 07	20 54	22 06	3 54	63	21 09	41
21	137	12.7		33.2	121	53.8		47.8	27	54	18	21 10	22 42	41	64	21	40
22	152	12.5		33.5	136	20.2		45.0	28	56	31	31	** ** *	26	65	36	37
23	167	12.2		33.7	150	46.7		42.1	29	58	20 47	21 57	** ** *	3 09	66	21 52	35
24	182	11.9	-22	34.0	165	13.2	-23	39.0	31	60 S	21 06	22 35	** ** *	2 48	67	22 12	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 58 ^m 2		Mag: -4.9 PMG: 9 ^h 06 ^m		Mag: +1.3 PMG: 12 ^h 54 ^m		Mag: -2.6 PMG: 18 ^h 39 ^m		Mag: +0.9 PMG: 7 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	74	40.6	223	18.4	-10	39.3	166	19.6	-3	38.5
1	89	43.0	238	19.4		39.5	181	20.0		38.4
2	104	45.5	253	20.4		39.7	196	20.4		38.4
3	119	48.0	268	21.4		39.9	211	20.8		38.3
4	134	50.4	283	22.4		40.1	226	21.2		38.2
5	149	52.9	298	23.4	-10	40.3	241	21.6	-24	38.2
6	164	55.4	313	24.4	-10	40.5	256	22.0	-24	38.1
7	179	57.8	328	25.4		40.7	271	22.4		38.0
8	195	00.3	343	26.4		40.9	286	22.8		37.9
9	210	02.8	358	27.4		41.1	301	23.2		37.9
10	225	05.2	13	28.4		41.3	316	23.6		37.8
11	240	07.7	28	29.3	-10	41.5	331	24.0	-24	37.7
12	255	10.1	43	30.3	-10	41.7	346	24.4	-24	37.7
13	270	12.6	58	31.3		41.9	1	24.7		37.6
14	285	15.1	73	32.3		42.1	16	25.1		37.5
15	300	17.5	88	33.3		42.3	31	25.5		37.5
16	315	20.0	103	34.3		42.6	46	25.9		37.4
17	330	22.5	118	35.2	-10	42.8	61	26.3	-24	37.3
18	345	24.9	133	36.2	-10	43.0	76	26.7	-24	37.2
19	0	27.4	148	37.2		43.2	91	27.1		37.2
20	15	29.9	163	38.1		43.4	106	27.5		37.1
21	30	32.3	178	39.1		43.6	121	27.9		37.0
22	45	34.8	193	40.1		43.9	136	28.3		37.0
23	60	37.3	208	41.0		44.1	151	28.7		36.9
24	75	39.7	223	42.0	-10	44.3	166	29.1	-24	36.8
Dif	—		+10		-2		+4		0	

UT	SOL			● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 51 ^m 4			Edad: 1 ^d 3 PHE { 4 ^h : 56'9 12 ^h : 56'7 20 ^h : 56'5 R°: 52 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	182	11.9	-22	34.0	165	13.2	-23	39.0	60 N	6	54	7	50	8	46	10	33	24	
1	197	11.7		34.3	179	39.8	76	35.8	58	47		39		30		10	14	29	
2	212	11.4		34.6	194	06.4	76	32.5	56	41		29		16		9	59	31	
3	227	11.1		34.9	208	33.1	77	29.1	54	35		21		8	04		45	34	
4	242	10.9		35.2	222	59.9	78	25.5	52	30		13		7	53		33	36	
5	257	10.6	-22	35.5	237	26.8	79	-23	50	6	25	7	06	7	44	9	23	37	
6	272	10.3	-22	35.7	251	53.7	79	-23	45	6	14	6	51	7	24	9	01	40	
7	287	10.1		36.0	266	20.7	80	13.9	40	6	04		38	7	08	8	43	43	
8	302	09.8		36.3	280	47.8	81	09.8	41	5	55		27	6	55		28	45	
9	317	09.5		36.6	295	14.9	81	05.5	43	30	47	6	16	43		8	15	46	
10	332	09.2		36.9	309	42.1	82	-23	20	31		5	58		22	7	53	49	
11	347	09.0	-22	37.1	324	09.4	83	-22	10 N	5	16		5	42	6	04	7	34	
12	2	08.7	-22	37.4	338	36.8	84	-22	0	4	59		5	25	5	48	7	16	
13	17	08.4		37.7	353	04.2	84	47.3	10 S	41		5	08		31	6	58	55	
14	32	08.2		38.0	7	31.8	86	42.5	20	4	19		4	48	5	13	38	58	
15	47	07.9		38.3	21	59.4	86	37.5	30	3	51		24		4	51	16	60	
16	62	07.6		38.5	36	27.1	87	32.4	35	33		4	10		39	6	03	61	
17	77	07.4	-22	38.8	50	54.8	87	-22	40	3	11		3	52	4	25	5	48	
18	92	07.1	-22	39.1	65	22.7	89	-22	45	2	42		3	31	4	07	5	30	
19	107	06.8		39.4	79	50.6	89	16.4	50	2	00		3	02	3	46	5	08	
20	122	06.5		39.6	94	18.6	90	10.8	52	1	36		2	48	36		4	57	
21	137	06.3		39.9	108	46.7	91	-22	54	1	00		32		24	45	71		
22	152	06.0		40.2	123	14.8	91	-21	56	** ** *		2	11		3	11	31	73	
23	167	05.7		40.4	137	43.1	93	53.4	58	** ** *		1	45		2	55	4	15	
24	182	05.5	-22	40.7	152	11.4	93	-21	60 S	** ** *		1	07		2	36	3	55	
UT	ARIES			VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 54 ^m 2			Mag: -4.9 PMG: 9 ^h 05 ^m				Mag: +1.3 PMG: 12 ^h 54 ^m				Mag: -2.6 PMG: 18 ^h 35 ^m				Mag: +0.9 PMG: 7 ^h 55 ^m			
	hG ♈			hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	75	39.7	223	42.0	-10	44.3	166	29.1	-24	17.3	80	34.0	-3	36.8	240	53.4	-3	48.6	
1	90	42.2	238	42.9		44.5	181	29.5		17.4	95	36.3		36.8	255	55.7		48.7	
2	105	44.6	253	43.9		44.7	196	29.9		17.4	110	38.7		36.7	270	58.0		48.8	
3	120	47.1	268	44.8		45.0	211	30.3		17.4	125	41.0		36.6	286	00.3		48.8	
4	135	49.6	283	45.8		45.2	226	30.6		17.4	140	43.3		36.5	301	02.5		48.9	
5	150	52.0	298	46.7	-10	45.4	241	31.0	-24	17.5	155	45.6	-3	36.5	316	04.8	-3	49.0	
6	165	54.5	313	47.7	-10	45.7	256	31.4	-24	17.5	170	48.0	-3	36.4	331	07.1	-3	49.0	
7	180	57.0	328	48.6		45.9	271	31.8		17.5	185	50.3		36.3	346	09.4		49.1	
8	195	59.4	343	49.6		46.1	286	32.2		17.5	200	52.6		36.2	1	11.6		49.2	
9	211	01.9	358	50.5		46.4	301	32.6		17.6	215	54.9		36.2	16	13.9		49.2	
10	226	04.4	13	51.5		46.6	316	33.0		17.6	230	57.3		36.1	31	16.2		49.3	
11	241	06.8	28	52.4	-10	46.8	331	33.4	-24	17.6	245	59.6	-3	36.0	46	18.5	-3	49.4	
12	256	09.3	43	53.3	-10	47.1	346	33.8	-24	17.6	261	01.9	-3	36.0	61	20.7	-3	49.4	
13	271	11.8	58	54.3		47.3	1	34.2		17.6	276	04.2		35.9	76	23.0		49.5	
14	286	14.2	73	55.2		47.5	16	34.6		17.7	291	06.5		35.8	91	25.3		49.6	
15	301	16.7	88	56.1		47.8	31	35.0		17.7	306	08.9		35.7	106	27.6		49.7	
16	316	19.1	103	57.0		48.0	46	35.3		17.7	321	11.2		35.7	121	29.8		49.7	
17	331	21.6	118	58.0	-10	48.3	61	35.7	-24	17.7	336	13.5	-3	35.6	136	32.1	-3	49.8	
18	346	24.1	133	58.9	-10	48.5	76	36.1	-24	17.7	351	15.8	-3	35.5	151	34.4	-3	49.9	
19	1	26.5	148	59.8		48.8	91	36.5		17.8	6	18.2		35.4	166	36.7		49.9	
20	16	29.0	164	00.7		49.0	106	36.9		17.8	21	20.5		35.4	181	38.9		50.0	
21	31	31.5	179	01.6		49.3	121	37.3		17.8	36	22.8		35.3	196	41.2		50.1	
22	46	33.9	194	02.5		49.5	136	37.7		17.8	51	25.1		35.2	211	43.5		50.1	
23	61	36.4	209	03.5		49.8	151	38.1		17.8	66	27.4		35.1	226	45.8		50.2	
24	76	38.9	224	04.4	-10	50.0	166	38.5	-24	17.8	81	29.8	-3	35.1	241	48.0	-3	50.3	
Dif	—			+9 -2				+4 0				+23 +1				+23 -1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 51 ^m 9			Edad: 2 ^d 3 PHE { SD: 15'4 PMG: 14 ^h 21 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	05.5	-22 40.7	152	11.4	-21 47.4	62	60 N	14 56	15 52	16 48	10 57 16	17 54 84	
1	197	05.2	41.0	166	39.9	95 41.2	62	58	15 12	16 03	16 55	43 19	18 08 80	
2	212	04.9	41.2	181	08.4	95 35.0	62	56	26	13	17 01	30 22	20 77	
3	227	04.6	41.5	195	37.0	96 28.6	64	54	38	22	07	19 24	31 77	
4	242	04.4	41.8	210	05.6	96 22.2	64	52	49	29	13	09 27	40 72	
5	257	04.1	-22 42.0	224	34.4	98 -21 15.6	66	50	15 58	16 36	17 18	10 00 29	18 49 70	
6	272	03.8	-22 42.3	239	03.2	98 -21 09.0	66	45	16 18	16 52	17 29	9 41 33	19 07 66	
7	287	03.5	42.6	253	32.2	100 -21 02.2	68	40	35	17 05	39	26 35	21 63	
8	302	03.3	42.8	268	01.2	100 -20 55.3	69	35	16 48	16	48	13 38	33 60	
9	317	03.0	43.1	282	30.3	101 48.3	70	30	17 00	26	17 56	9 01 40	19 44 58	
10	332	02.7	43.4	296	59.5	102 41.3	70	20	21	17 45	18 12	8 42 43	20 02 54	
11	347	02.4	-22 43.6	311	28.8	103 -20 34.1	72	10 N	17 39	18 01	18 28	8 25 46	20 18 51	
12	2	02.2	-22 43.9	325	58.1	103 -20 26.8	73	0	17 56	18 18	18 44	8 09 49	20 33 48	
13	17	01.9	44.1	340	27.6	105 19.4	74	10 S	18 13	36	19 03	7 53 52	20 48 44	
14	32	01.6	44.4	354	57.1	105 12.0	74	20	31	18 55	24	36 55	21 03 41	
15	47	01.3	44.7	9	26.8	107 -20 04.4	76	30	18 52	19 20	19 53	16 58	21 37	
16	62	01.1	44.9	23	56.5	107 -19 56.8	76	35	19 05	34	20 11	7 04 61	31 36	
17	77	00.8	-22 45.2	38	26.3	108 -19 49.0	78	40	19 20	19 52	20 33	6 51 63	21 43 33	
18	92	00.5	-22 45.4	52	56.2	109 -19 41.2	78	45	19 37	20 14	21 02	6 35 66	21 57 29	
19	107	00.2	45.7	67	26.1	109 33.3	79	50	19 59	42	21 45	16 69	22 13 26	
20	122	00.0	45.9	81	56.2	111 25.3	80	52	20 09	20 57	22 11	6 06 72	21 24	
21	136	59.7	46.2	96	26.4	112 17.2	81	54	21	21 14	22 48	5 56 74	30 22	
22	151	59.4	46.4	110	56.6	112 09.0	82	56	34	21 34	** **	44 77	40 19	
23	166	59.1	46.7	125	26.9	113 -19 00.7	83	58	20 50	22 01	** **	30 80	22 51 16	
24	181	58.8	-22 46.9	139	57.3	114 -18 52.4	83	60 S	21 09	22 42	** **	5 14 84	23 04 13	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 50 ^m 3		Mag: -4.9 PMG: 9 ^h 03 ^m			Mag: +1.3 PMG: 12 ^h 53 ^m			Mag: -2.6 PMG: 18 ^h 31 ^m			Mag: +0.9 PMG: 7 ^h 52 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	76	38.9	224 04.4	-10 50.0	166 38.5	-24 17.8	81 29.8	-3 35.1	241 48.0	-3 35.1	241 48.0	-3 35.1	241 48.0	-3 35.1
1	91	41.3	239 05.3	50.3	181 38.9	17.9	96 32.1	35.0	256 50.3	35.0	256 50.3	35.0	256 50.3	35.0
2	106	43.8	254 06.2	50.5	196 39.3	17.9	111 34.4	34.9	271 52.6	34.9	271 52.6	34.9	271 52.6	34.9
3	121	46.2	269 07.1	50.8	211 39.6	17.9	126 36.7	34.9	286 54.9	34.9	286 54.9	34.9	286 54.9	34.9
4	136	48.7	284 08.0	51.0	226 40.0	17.9	141 39.0	34.8	301 57.1	34.8	301 57.1	34.8	301 57.1	34.8
5	151	51.2	299 08.9	-10 51.3	241 40.4	-24 17.9	156 41.3	-3 34.7	316 59.4	-3 34.7	316 59.4	-3 34.7	316 59.4	-3 34.7
6	166	53.6	314 09.8	-10 51.5	256 40.8	-24 17.9	171 43.7	-3 34.6	332 01.7	-3 34.6	332 01.7	-3 34.6	332 01.7	-3 34.6
7	181	56.1	329 10.7	51.8	271 41.2	17.9	186 46.0	34.5	347 04.0	34.5	347 04.0	34.5	347 04.0	34.5
8	196	58.6	344 11.6	52.1	286 41.6	18.0	201 48.3	34.5	2 06.3	34.5	2 06.3	34.5	2 06.3	34.5
9	212	01.0	359 12.4	52.3	301 42.0	18.0	216 50.6	34.4	17 08.5	34.4	17 08.5	34.4	17 08.5	34.4
10	227	03.5	14 13.3	52.6	316 42.4	18.0	231 52.9	34.3	32 10.8	34.3	32 10.8	34.3	32 10.8	34.3
11	242	06.0	29 14.2	-10 52.8	331 42.8	-24 18.0	246 55.2	-3 34.2	47 13.1	-3 34.2	47 13.1	-3 34.2	47 13.1	-3 34.2
12	257	08.4	44 15.1	-10 53.1	346 43.1	-24 18.0	261 57.6	-3 34.2	62 15.4	-3 34.2	62 15.4	-3 34.2	62 15.4	-3 34.2
13	272	10.9	59 16.0	53.4	1 43.5	18.0	276 59.9	34.1	77 17.6	34.1	77 17.6	34.1	77 17.6	34.1
14	287	13.4	74 16.9	53.6	16 43.9	18.0	292 02.2	34.0	92 19.9	34.0	92 19.9	34.0	92 19.9	34.0
15	302	15.8	89 17.7	53.9	31 44.3	18.0	307 04.5	33.9	107 22.2	33.9	107 22.2	33.9	107 22.2	33.9
16	317	18.3	104 18.6	54.2	46 44.7	18.0	322 06.8	33.9	122 24.5	33.9	122 24.5	33.9	122 24.5	33.9
17	332	20.7	119 19.5	-10 54.4	61 45.1	-24 18.1	337 09.1	-3 33.8	137 26.7	-3 33.8	137 26.7	-3 33.8	137 26.7	-3 33.8
18	347	23.2	134 20.4	-10 54.7	76 45.5	-24 18.1	352 11.4	-3 33.7	152 29.0	-3 33.7	152 29.0	-3 33.7	152 29.0	-3 33.7
19	2	25.7	149 21.2	55.0	91 45.9	18.1	7 13.8	33.6	167 31.3	33.6	167 31.3	33.6	167 31.3	33.6
20	17	28.1	164 22.1	55.3	106 46.3	18.1	22 16.1	33.6	182 33.6	33.6	182 33.6	33.6	182 33.6	33.6
21	32	30.6	179 23.0	55.5	121 46.6	18.1	37 18.4	33.5	197 35.9	33.5	197 35.9	33.5	197 35.9	33.5
22	47	33.1	194 23.8	55.8	136 47.0	18.1	52 20.7	33.4	212 38.1	33.4	212 38.1	33.4	212 38.1	33.4
23	62	35.5	209 24.7	56.1	151 47.4	18.1	67 23.0	33.3	227 40.4	33.3	227 40.4	33.3	227 40.4	33.3
24	77	38.0	224 25.5	-10 56.4	166 47.8	-24 18.1	82 25.3	-3 33.2	242 42.7	-3 33.2	242 42.7	-3 33.2	242 42.7	-3 33.2
Dif	—		+9 -3		+4 0		+23 +1		+23 +1		+23 -1		-1 -1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 52 ^m 3			Edad: 3 ^d 3 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 Rº: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	181	58.8	-22	46.9	139	57.3	-18	52.4	60 N	6 57	7 53	8 49	11 13	10
1	196	58.6		47.2	154	27.8 ¹¹⁵		43.9 ⁸⁵	58	50	42	32	11 02	13
2	211	58.3		47.4	168	58.4 ¹¹⁶		35.4 ⁸⁵	56	43	32	18	10 52	16
3	226	58.0		47.7	183	29.1 ¹¹⁷		26.8 ⁸⁶	54	37	23	8 06	43	19
4	241	57.7		47.9	197	59.8 ¹¹⁷		18.1 ⁸⁷	52	32	15	7 56	36	21
5	256	57.5	-22	48.2	212	30.7 ¹¹⁹	-18	09.4 ⁸⁷	50	6 27	7 08	7 46	10 29	23
6	271	57.2	-22	48.4	227	01.6 ¹¹⁹	-18	00.5 ⁸⁹	45	6 16	6 53	7 26	10 14	27
7	286	56.9		48.7	241	32.6 ¹²⁰	-17	51.6 ⁸⁹	40	6 06	39	7 10	10 01	30
8	301	56.6		48.9	256	03.7 ¹²¹		42.6 ⁹⁰	35	5 57	28	6 56	9 51	33
9	316	56.3		49.2	270	34.8 ¹²¹		33.6 ⁹⁰	30	48	18	44	41	36
10	331	56.1		49.4	285	06.1 ¹²³		24.4 ⁹²	20	32	6 00	24	25	40
11	346	55.8	-22	49.6	299	37.4 ¹²³	-17	15.2 ⁹²	10 N	5 17	5 43	6 06	9 11	43
12	1	55.5	-22	49.9	314	08.8 ¹²⁴	-17	06.0 ⁹²	0	5 00	5 26	5 49	8 58	46
13	16	55.2		50.1	328	40.3 ¹²⁵	-16	56.6 ⁹⁴	10 S	4 42	5 09	31	45	49
14	31	54.9		50.4	343	11.9 ¹²⁶		47.2 ⁹⁴	20	4 20	4 49	5 13	31	52
15	46	54.7		50.6	357	43.6 ¹²⁷		37.7 ⁹⁵	30	3 51	24	4 52	14	57
16	61	54.4		50.8	12	15.3 ¹²⁷		28.2 ⁹⁵	35	33	4 10	39	8 05	59
17	76	54.1	-22	51.1	26	47.1 ¹²⁸	-16	18.6 ⁹⁶	40	3 11	3 52	4 24	7 54	62
18	91	53.8	-22	51.3	41	19.0 ¹²⁹	-16	08.9 ⁹⁷	45	2 41	3 30	4 07	7 41	65
19	106	53.5		51.6	55	51.0 ¹³⁰	-15	59.1 ⁹⁸	50	1 59	3 02	3 45	25	70
20	121	53.3		51.8	70	23.0 ¹³⁰		49.3 ⁹⁸	52	1 33	2 47	35	18	71
21	136	53.0		52.0	84	55.2 ¹³²		39.5 ⁹⁸	54	0 56	30	23	10	73
22	151	52.7		52.3	99	27.4 ¹³²		29.5 ¹⁰⁰	56	** ** *	2 09	3 10	7 01	76
23	166	52.4		52.5	113	59.7 ¹³³		19.6 ⁹⁹	58	** ** *	1 42	2 54	6 50	79
24	181	52.1	-22	52.7	128	32.0 ¹³³	-15	09.5 ¹⁰¹	60 S	** ** *	1 02	2 34	6 38	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 46 ^m 4		Mag: -4.8 PMG: 9 ^h 02 ^m		Mag: +1.3 PMG: 12 ^h 52 ^m		Mag: -2.5 PMG: 18 ^h 27 ^m		Mag: +0.9 PMG: 7 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	77	38.0	224	25.5	-10	56.4	166	47.8	-24	18.1
1	92	40.5	239	26.4		56.7	181	48.2		18.1
2	107	42.9	254	27.3		56.9	196	48.6		18.1
3	122	45.4	269	28.1		57.2	211	49.0		18.1
4	137	47.9	284	29.0		57.5	226	49.4		18.1
5	152	50.3	299	29.8	-10	57.8	241	49.8	-24	18.1
6	167	52.8	314	30.7	-10	58.1	256	50.1	-24	18.1
7	182	55.2	329	31.5		58.3	271	50.5		18.1
8	197	57.7	344	32.3		58.6	286	50.9		18.1
9	213	00.2	359	33.2		58.9	301	51.3		18.1
10	228	02.6	14	34.0		59.2	316	51.7		18.1
11	243	05.1	29	34.9	-10	59.5	331	52.1	-24	18.1
12	258	07.6	44	35.7	-10	59.8	346	52.5	-24	18.1
13	273	10.0	59	36.5	-11	00.1	1	52.8		18.1
14	288	12.5	74	37.4		00.4	16	53.2		18.1
15	303	15.0	89	38.2		00.7	31	53.6		18.1
16	318	17.4	104	39.0		01.0	46	54.0		18.1
17	333	19.9	119	39.8	-11	01.3	61	54.4	-24	18.1
18	348	22.4	134	40.7	-11	01.6	76	54.8	-24	18.1
19	3	24.8	149	41.5		01.9	91	55.2		18.1
20	18	27.3	164	42.3		02.2	106	55.6		18.1
21	33	29.7	179	43.1		02.5	121	55.9		18.1
22	48	32.2	194	43.9		02.8	136	56.3		18.1
23	63	34.7	209	44.8		03.1	151	56.7		18.1
24	78	37.1	224	45.6	-11	03.4	166	57.1	-24	18.1
Dif	—		+8 -3		+4 0		+23 +1		+23 -1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2			Edad: 4 ^d 3	PHE { 4 ^h : 55/1 12 ^h : 54/9 20 ^h : 54/8	Puesta de Sol			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 52 ^m 7					R°: 42 ^m			Hora R°		Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	52.1	-22 52.7	128	32.0	-15 09.5		60 N	14 55	15 51	16 47	11 23 8	20 39 80	
1	196	51.8	53.0	143	04.4 ¹³⁴	-14 59.4 ¹⁰¹		58	15 11	16 02	16 55	15 11	46 76	
2	211	51.6	53.2	157	36.9 ¹³⁵	49.2 ¹⁰²		56	26	12	17 01	08 14	53 73	
3	226	51.3	53.4	172	09.5 ¹³⁶	39.0 ¹⁰²		54	38	21	07	11 02 16	20 58 7	
4	241	51.0	53.6	186	42.2 ¹³⁷	28.8 ¹⁰²		52	49	29	13	10 57 17	21 03 69	
5	256	50.7	-22 53.9	201	14.9 ¹³⁷	-14 18.4 ¹⁰⁴		50	15 58	16 36	17 18	10 52 19	21 07 67	
6	271	50.4	-22 54.1	215	47.7 ¹³⁸	-14 08.1 ¹⁰³		45	16 18	16 52	17 29	10 41 23	21 17 63	
7	286	50.2	54.3	230	20.5 ¹³⁸	-13 57.6 ¹⁰⁵		40	35	17 05	39	31 27	25 59	
8	301	49.9	54.6	244	53.5 ¹⁴⁰	47.2 ¹⁰⁴		35	16 48	17	48	24 29	32 56	
9	316	49.6	54.8	259	26.5 ¹⁴⁰	36.6 ¹⁰⁶		30	17 01	27	17 57	17 31	38 53	
10	331	49.3	55.0	273	59.5 ¹⁴⁰	26.0 ¹⁰⁶		20	21	17 45	18 13	10 05 35	48 49	
11	346	49.0	-22 55.2	288	32.7 ¹⁴²	-13 15.4 ¹⁰⁶		10 N	17 39	18 02	18 28	9 54 40	21 57 45	
12	1	48.7	-22 55.4	303	05.9 ¹⁴²	-13 04.7 ¹⁰⁷		0	17 56	18 19	18 45	9 44 43	22 05 42	
13	16	48.5	55.7	317	39.1 ¹⁴²	-12 54.0 ¹⁰⁷		10 S	18 14	37	19 04	34 47	13 39	
14	31	48.2	55.9	332	12.5 ¹⁴⁴	43.3 ¹⁰⁷		20	32	18 57	26	23 51	22 35	
15	46	47.9	56.1	346	45.8 ¹⁴³	32.4 ¹⁰⁹		30	18 54	19 21	19 54	11 55	32 30	
16	61	47.6	56.3	1	19.3 ¹⁴⁵	21.6 ¹⁰⁸		35	19 07	36	20 13	9 04 57	38 28	
17	76	47.3	-22 56.5	15	52.8 ¹⁴⁵	-12 10.7 ¹⁰⁹		40	19 21	19 54	20 35	8 56 60	22 44 25	
18	91	47.0	-22 56.8	30	26.4 ¹⁴⁶	-11 59.8 ¹⁰⁹		45	19 39	20 16	21 05	8 46 64	22 51 22	
19	106	46.7	57.0	45	00.0 ¹⁴⁶	48.8 ¹¹⁰		50	20 01	45	21 48	35 67	23 00 18	
20	121	46.5	57.2	59	33.7 ¹⁴⁷	37.7 ¹¹¹		52	11	20 59	22 14	29 70	04 17	
21	136	46.2	57.4	74	07.5 ¹⁴⁸	26.7 ¹¹⁰		54	23	21 17	22 54	23 72	09 14	
22	151	45.9	57.6	88	41.3 ¹⁴⁸	15.6 ¹¹¹		56	37	21 38	** **	17 74	14 12	
23	166	45.6	57.8	103	15.2 ¹⁴⁹	-11 04.4 ¹¹²		58	20 53	22 06	** **	09 77	19 10	
24	181	45.3	-22 58.1	117	49.1 ¹⁴⁹	-10 53.3 ¹¹¹		60 S	21 13	22 49	** **	8 01 80	23 26 6	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 18 ^h 42 ^m 5	Mag: -4.8 PMG: 9 ^h 00 ^m	Mag: +1.3 PMG: 12 ^h 52 ^m	Mag: -2.5 PMG: 18 ^h 24 ^m	Mag: +0.9 PMG: 7 ^h 44 ^m									
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄									
h	°	'	°	'	°									
0	78 37.1	224 45.6	-11 03.4	166 57.1	-24 18.1									
1	93 39.6	239 46.4	03.7	181 57.5	18.1									
2	108 42.1	254 47.2	04.0	196 57.9	18.1									
3	123 44.5	269 48.0	04.3	211 58.3	18.1									
4	138 47.0	284 48.8	04.6	226 58.6	18.1									
5	153 49.5	299 49.6	-11 04.9	241 59.0	-24 18.1									
6	168 51.9	314 50.4	-11 05.2	256 59.4	-24 18.0									
7	183 54.4	329 51.2	05.5	271 59.8	18.0									
8	198 56.9	344 52.0	05.8	287 00.2	18.0									
9	213 59.3	359 52.8	06.2	302 00.6	18.0									
10	229 01.8	14 53.6	06.5	317 00.9	18.0									
11	244 04.2	29 54.4	-11 06.8	332 01.3	-24 18.0									
12	259 06.7	44 55.2	-11 07.1	347 01.7	-24 18.0									
13	274 09.2	59 55.9	07.4	2 02.1	18.0									
14	289 11.6	74 56.7	07.7	17 02.5	18.0									
15	304 14.1	89 57.5	08.1	32 02.9	17.9									
16	319 16.6	104 58.3	08.4	47 03.3	17.9									
17	334 19.0	119 59.1	-11 08.7	62 03.6	-24 17.9									
18	349 21.5	134 59.8	-11 09.0	77 04.0	-24 17.9									
19	4 24.0	150 00.6	09.3	92 04.4	17.9									
20	19 26.4	165 01.4	09.7	107 04.8	17.9									
21	34 28.9	180 02.2	10.0	122 05.2	17.9									
22	49 31.3	195 02.9	10.3	137 05.6	17.8									
23	64 33.8	210 03.7	10.6	152 05.9	17.8									
24	79 36.3	225 04.5	-11 11.0	167 06.3	-24 17.8									
Dif	—	+8	-3	+4	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 2			Edad: 5 ^d 3 SD: 14'9 PMG: 16 ^h 37 ^m	PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 41 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	45.3	-22	58.1	117	49.1	-10	53.3	60 N	6 59	7 55	8 52	11 31	6	21 59	77
1	196	45.0		58.3	132	23.1		42.1	58	52	44	35	26	9	22 02	75
2	211	44.7		58.5	146	57.1		30.8	56	45	34	21	22	11	06	72
3	226	44.5		58.7	161	31.2		19.5	54	39	25	8 09	18	13	09	69
4	241	44.2		58.9	176	05.3		176 05.3	52	34	17	7 58	14	16	12	67
5	256	43.9	-22	59.1	190	39.5		-9 56.9	50	6 29	7 10	7 48	11 11	17	22 14	66
6	271	43.6	-22	59.3	205	13.8		-9 45.5	45	6 17	6 54	7 28	11 04	21	22 20	61
7	286	43.3		59.5	219	48.1		34.1	40	6 07	41	7 12	10 58	24	24	58
8	301	43.0		59.7	234	22.4		22.6	35	5 58	30	6 58	53	27	28	55
9	316	42.7	-22	59.9	248	56.8		-9 11.2	30	49	19	46	48	30	31	53
10	331	42.4	-23	00.1	263	31.2		-8 59.7	20	33	6 01	25	40	34	37	48
11	346	42.2	-23	00.3	278	05.7		-8 48.1	10 N	5 18	5 44	6 07	10 34	37	22 42	45
12	1	41.9	-23	00.5	292	40.2		-8 36.6	0	5 01	5 27	5 49	10 27	41	22 47	41
13	16	41.6		00.8	307	14.8		25.0	10 S	4 42	5 09	32	21	44	52	37
14	31	41.3		01.0	321	49.4		13.4	20	4 20	4 49	5 14	14	48	22 57	33
15	46	41.0		01.2	336	24.1		-8 01.7	30	3 52	25	4 52	06	53	23 02	29
16	61	40.7		01.4	350	58.8		-7 50.1	35	33	4 10	39	10 01	56	06	26
17	76	40.4	-23	01.6	5	33.5		-7 38.4	40	3 11	3 52	4 25	9 56	58	23 09	24
18	91	40.1	-23	01.8	20	08.3		-7 26.6	45	2 41	3 30	4 07	9 50	62	23 13	21
19	106	39.8		02.0	34	43.1		14.9	50	1 57	3 01	3 45	42	66	18	17
20	121	39.6		02.2	49	17.9		-7 03.2	52	1 31	2 46	34	39	68	21	15
21	136	39.3		02.3	63	52.8		-6 51.4	54	0 52	29	23	35	70	23	13
22	151	39.0		02.5	78	27.7		39.6	56	** **	2 08	3 09	31	72	26	11
23	166	38.7		02.7	93	02.7		27.8	58	** **	1 40	2 53	26	75	29	9
24	181	38.4	-23	02.9	107	37.7		-6 15.9	60 S	** **	0 57	2 33	9 21	78	23 32	6
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 18 ^h 38 ^m 5			Mag: -4.8 PMG: 8 ^h 59 ^m			Mag: +1.3 PMG: 12 ^h 51 ^m			Mag: -2.5 PMG: 18 ^h 20 ^m			Mag: +0.9 PMG: 7 ^h 41 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	79	36.3	225	04.5	-11	11.0	167	06.3	-24	17.8	84	15.9	-3	29.4	244	32.2
1	94	38.7	240	05.2		11.3	182	06.7		17.8	99	18.2		29.3	259	34.5
2	109	41.2	255	06.0		11.6	197	07.1		17.8	114	20.5		29.2	274	36.8
3	124	43.7	270	06.8		12.0	212	07.5		17.8	129	22.8		29.1	289	39.1
4	139	46.1	285	07.5		12.3	227	07.9		17.7	144	25.1		29.0	304	41.4
5	154	48.6	300	08.3	-11	12.6	242	08.2	-24	17.7	159	27.4	-3	29.0	319	43.7
6	169	51.1	315	09.0	-11	13.0	257	08.6	-24	17.7	174	29.7	-3	28.9	334	45.9
7	184	53.5	330	09.8		13.3	272	09.0		17.7	189	32.0		28.8	349	48.2
8	199	56.0	345	10.5		13.6	287	09.4		17.7	204	34.3		28.7	4	50.5
9	214	58.5	0	11.3		14.0	302	09.8		17.6	219	36.6		28.6	19	52.8
10	230	00.9	15	12.0		14.3	317	10.2		17.6	234	38.9		28.5	34	55.1
11	245	03.4	30	12.8	-11	14.7	332	10.5	-24	17.6	249	41.2	-3	28.4	49	57.4
12	260	05.8	45	13.5	-11	15.0	347	10.9	-24	17.6	264	43.5	-3	28.4	64	59.7
13	275	08.3	60	14.3		15.3	2	11.3		17.5	279	45.8		28.3	80	01.9
14	290	10.8	75	15.0		15.7	17	11.7		17.5	294	48.1		28.2	95	04.2
15	305	13.2	90	15.7		16.0	32	12.1		17.5	309	50.3		28.1	110	06.5
16	320	15.7	105	16.5		16.4	47	12.5		17.5	324	52.6		28.0	125	08.8
17	335	18.2	120	17.2	-11	16.7	62	12.8	-24	17.4	339	54.9	-3	27.9	140	11.1
18	350	20.6	135	17.9	-11	17.1	77	13.2	-24	17.4	354	57.2	-3	27.8	155	13.4
19	5	23.1	150	18.7		17.4	92	13.6		17.4	9	59.5		27.8	170	15.7
20	20	25.6	165	19.4		17.7	107	14.0		17.4	25	01.8		27.7	185	18.0
21	35	28.0	180	20.1		18.1	122	14.4		17.3	40	04.1		27.6	200	20.2
22	50	30.5	195	20.9		18.4	137	14.7		17.3	55	06.4		27.5	215	22.5
23	65	33.0	210	21.6		18.8	152	15.1		17.3	70	08.7		27.4	230	24.8
24	80	35.4	225	22.3	-11	19.1	167	15.5	-24	17.3	85	11.0	-3	27.3	245	27.1
Dif	—		+7	-3		-3	+4	0		0	+23	+1		+23		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 6 ^d 3	PHE	SD: 14'8			R°: 40 ^m						
	PMG: 11 ^h 53 ^m 7														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	181	38.4	-23 02.9	107	37.7	-6 15.9		60 N	14 54	15 51	16 47	11 37 6	23 16 77		
1	196	38.1	03.1	122	12.7 ¹⁶⁰	-6 04.1 ¹¹⁸		58	15 11	16 02	16 54	35 8	17 74		
2	211	37.8	03.3	136	47.7 ¹⁶⁰	-5 52.2 ¹¹⁹		56	25	12	17 01	33 10	18 71		
3	226	37.5	03.5	151	22.8 ¹⁶¹	40.3 ¹¹⁹		54	37	21	07	31 13	18 70		
4	241	37.2	03.7	165	57.9 ¹⁶¹	28.4 ¹¹⁹		52	48	29	13	30 14	19 67		
5	256	37.0	-23 03.9	180	33.1 ¹⁶²	-5 16.4 ¹²⁰		50	15 58	16 36	17 18	11 28 16	23 20 65		
6	271	36.7	-23 04.1	195	08.2 ¹⁶¹	-5 04.5 ¹¹⁹		45	16 18	16 52	17 29	11 25 20	23 21 61		
7	286	36.4	04.3	209	43.4 ¹⁶²	-4 52.5 ¹²⁰		40	35	17 05	39	22 24	22 58		
8	301	36.1	04.5	224	18.6 ¹⁶²	40.6 ¹¹⁹		35	16 49	17	49	20 26	23 55		
9	316	35.8	04.6	238	53.9 ¹⁶³	28.6 ¹²⁰		30	17 01	27	17 57	18 29	24 52		
10	331	35.5	04.8	253	29.1 ¹⁶²	16.6 ¹²⁰		20	22	17 46	18 13	14 33	25 48		
11	346	35.2	-23 05.0	268	04.4 ¹⁶³	-4 04.6 ¹²⁰		10 N	17 40	18 03	18 29	11 11 37	23 27 44		
12	1	34.9	-23 05.2	282	39.7 ¹⁶³	-3 52.5 ¹²¹		0	17 57	18 20	18 46	11 08 41	23 28 40		
13	16	34.6	05.4	297	15.1 ¹⁶⁴	40.5 ¹²⁰		10 S	18 15	38	19 05	05 44	29 37		
14	31	34.3	05.6	311	50.4 ¹⁶³	28.5 ¹²⁰		20	33	18 58	27	11 02 48	30 33		
15	46	34.0	05.7	326	25.8 ¹⁶⁴	16.4 ¹²¹		30	18 55	19 23	19 56	10 59 52	31 29		
16	61	33.7	05.9	341	01.2 ¹⁶⁴	-3 04.3 ¹²¹		35	19 08	38	20 14	57 54	32 26		
17	76	33.5	-23 06.1	355	36.6 ¹⁶⁴	-2 52.3 ¹²⁰		40	19 23	19 56	20 37	10 54 58	23 33 23		
18	91	33.2	-23 06.3	10	12.0 ¹⁶⁴	-2 40.2 ¹²¹		45	19 41	20 18	21 07	10 52 61	23 34 20		
19	106	32.9	06.5	24	47.4 ¹⁶⁴	28.1 ¹²¹		50	20 03	20 47	21 51	48 66	35 16		
20	121	32.6	06.6	39	22.8 ¹⁶⁴	16.0 ¹²¹		52	13	21 02	22 18	47 67	36 14		
21	136	32.3	06.8	53	58.3 ¹⁶⁵	-2 03.9 ¹²¹		54	25	19	23 00	45 69	36 13		
22	151	32.0	07.0	68	33.8 ¹⁶⁵	-1 51.8 ¹²¹		56	39	21 41	** **	43 72	37 10		
23	166	31.7	07.2	83	09.2 ¹⁶⁴	39.7 ¹²¹		58	20 56	22 09	** **	41 74	38 8		
24	181	31.4	-23 07.4	97	44.7 ¹⁶⁵	-1 27.5 ¹²²		60 S	21 16	22 55	** **	10 39 77	23 38 6		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 34 ^m 6		Mag: -4.8 PMG: 8 ^h 58 ^m		Mag: +1.3 PMG: 12 ^h 51 ^m		Mag: -2.5 PMG: 18 ^h 16 ^m		Mag: +0.8 PMG: 7 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	80	35.4	225 22.3	-11 19.1	167 15.5	-24 17.3	85 11.0	-3 27.3	245 27.1	-3 56.5
1	95	37.9	240 23.0	19.5	182 15.9	17.2	100 13.3	27.2	260 29.4	56.6
2	110	40.3	255 23.7	19.9	197 16.3	17.2	115 15.5	27.2	275 31.7	56.7
3	125	42.8	270 24.4	20.2	212 16.7	17.2	130 17.8	27.1	290 34.0	56.7
4	140	45.3	285 25.2	20.6	227 17.0	17.1	145 20.1	27.0	305 36.3	56.8
5	155	47.7	300 25.9	-11 20.9	242 17.4	-24 17.1	160 22.4	-3 26.9	320 38.6	-3 56.9
6	170	50.2	315 26.6	-11 21.3	257 17.8	-24 17.1	175 24.7	-3 26.8	335 40.8	-3 56.9
7	185	52.7	330 27.3	21.6	272 18.2	17.0	190 27.0	26.7	350 43.1	57.0
8	200	55.1	345 28.0	22.0	287 18.6	17.0	205 29.3	26.6	5 45.4	57.0
9	215	57.6	0 28.7	22.3	302 18.9	17.0	220 31.6	26.5	20 47.7	57.1
10	231	00.1	15 29.4	22.7	317 19.3	16.9	235 33.8	26.4	35 50.0	57.2
11	246	02.5	30 30.1	-11 23.1	332 19.7	-24 16.9	250 36.1	-3 26.4	50 52.3	-3 57.2
12	261	05.0	45 30.8	-11 23.4	347 20.1	-24 16.9	265 38.4	-3 26.3	65 54.6	-3 57.3
13	276	07.4	60 31.5	23.8	2 20.5	16.8	280 40.7	26.2	80 56.9	57.4
14	291	09.9	75 32.2	24.2	17 20.9	16.8	295 43.0	26.1	95 59.2	57.4
15	306	12.4	90 32.9	24.5	32 21.2	16.8	310 45.3	26.0	111 01.4	57.5
16	321	14.8	105 33.6	24.9	47 21.6	16.7	325 47.6	25.9	126 03.7	57.5
17	336	17.3	120 34.3	-11 25.3	62 22.0	-24 16.7	340 49.8	-3 25.8	141 06.0	-3 57.6
18	351	19.8	135 35.0	-11 25.6	77 22.4	-24 16.7	355 52.1	-3 25.7	156 08.3	-3 57.7
19	6	22.2	150 35.7	26.0	92 22.8	16.6	10 54.4	25.7	171 10.6	57.7
20	21	24.7	165 36.3	26.4	107 23.1	16.6	25 56.7	25.6	186 12.9	57.8
21	36	27.2	180 37.0	26.7	122 23.5	16.6	40 59.0	25.5	201 15.2	57.8
22	51	29.6	195 37.7	27.1	137 23.9	16.5	56 01.3	25.4	216 17.5	57.9
23	66	32.1	210 38.4	27.5	152 24.3	16.5	71 03.5	25.3	231 19.8	58.0
24	81	34.6	225 39.1	-11 27.8	167 24.7	-24 16.4	86 05.8	-3 25.2	246 22.1	-3 58.0
Dif	—		+7	-4	+4	0	+23	+1	+23	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 54 ^m 1			Edad: 7 ^d 3 PHE { SD: 14'8 PMG: 17 ^h 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	31.4	-23	07.4	97	44.7	-1	27.5	60 N	7 01	7 58	8 55	11 43	5	***	***
1	196	31.1		07.5	112	20.2 ¹⁶⁵		15.4 ¹²¹	58	6 54	46	38	43	8	***	***
2	211	30.8		07.7	126	55.7 ¹⁶⁵	-1	03.3 ¹²¹	56	47	36	23	43	11	***	***
3	226	30.5		07.9	141	31.2 ¹⁶⁵	-0	51.2 ¹²¹	54	41	27	11	44	13	***	***
4	241	30.2		08.0	156	06.7 ¹⁶⁵		39.0 ¹²²	52	35	19	8 00	44	15	***	***
5	256	29.9	-23	08.2	170	42.2 ¹⁶⁵	-0	26.9 ¹²¹	50	6 30	7 12	7 50	11 44	17	***	***
6	271	29.6	-23	08.4	185	17.7 ¹⁶⁵	-0	14.8 ¹²¹	45	6 19	6 56	7 30	11 45	20	***	***
7	286	29.3		08.6	199	53.3 ¹⁶⁶	-0	02.6 ¹²²	40	6 09	43	7 13	46	23	***	***
8	301	29.1		08.7	214	28.8 ¹⁶⁵	+0	09.5 ¹²¹	35	5 59	31	6 59	46	26	***	***
9	316	28.8		08.9	229	04.3 ¹⁶⁵		21.6 ¹²¹	30	51	21	47	47	28	***	***
10	331	28.5		09.1	243	39.8 ¹⁶⁵		33.8 ¹²²	20	34	6 02	26	47	33	***	***
11	346	28.2	-23	09.2	258	15.3 ¹⁶⁵	+0	45.9 ¹²¹	10 N	5 19	5 45	6 08	11 48	37	***	***
12	1	27.9	-23	09.4	272	50.9 ¹⁶⁶	+0	58.0 ¹²¹	0	5 02	5 28	5 50	11 49	40	***	***
13	16	27.6		09.6	287	26.4 ¹⁶⁵	+1	10.2 ¹²²	10 S	4 43	5 10	33	49	45	***	***
14	31	27.3		09.7	302	01.9 ¹⁶⁵		22.3 ¹²¹	20	4 21	4 50	5 14	50	48	***	***
15	46	27.0		09.9	316	37.4 ¹⁶⁵		34.4 ¹²¹	30	3 52	25	4 53	51	52	***	***
16	61	26.7		10.0	331	12.8 ¹⁶⁴		46.5 ¹²¹	35	34	4 10	40	51	55	23 58	27
17	76	26.4	-23	10.2	345	48.3 ¹⁶⁵	+1	58.6 ¹²¹	40	3 11	3 52	4 25	11 52	58	23 56	24
18	91	26.1	-23	10.4	0	23.8 ¹⁶⁵	+2	10.7 ¹²¹	45	2 41	3 30	4 07	11 53	61	23 54	21
19	106	25.8		10.5	14	59.3 ¹⁶⁵		22.8 ¹²¹	50	1 56	3 01	3 45	54	65	51	17
20	121	25.5		10.7	29	34.7 ¹⁶⁴		34.9 ¹²¹	52	1 30	2 46	34	54	67	50	15
21	136	25.2		10.8	44	10.1 ¹⁶⁴		47.0 ¹²¹	54	0 48	28	22	54	70	49	13
22	151	24.9		11.0	58	45.6 ¹⁶⁵	+2	59.1 ¹²¹	56	*** **	2 07	3 08	55	71	47	11
23	166	24.6		11.2	73	21.0 ¹⁶⁴	+3	11.1 ¹²⁰	58	*** **	1 38	2 52	55	74	46	8
24	181	24.3	-23	11.3	87	56.4 ¹⁶⁴	+3	23.2 ¹²¹	60 S	*** **	0 53	2 32	11 56	77	23 44	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 30 ^m 7		Mag: -4.8 PMG: 8 ^h 57 ^m		Mag: +1.3 PMG: 12 ^h 50 ^m		Mag: -2.5 PMG: 18 ^h 13 ^m		Mag: +0.8 PMG: 7 ^h 33 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	81	34.6	225	39.1	-11	27.8	167	24.7	-24	16.4	86	05.8	-3	25.2	246	22.1	-3	58.0
1	96	37.0	240	39.7		28.2	182	25.0		16.4	101	08.1		25.1	261	24.4		58.1
2	111	39.5	255	40.4		28.6	197	25.4		16.4	116	10.4		25.0	276	26.6		58.1
3	126	41.9	270	41.1		29.0	212	25.8		16.3	131	12.7		24.9	291	28.9		58.2
4	141	44.4	285	41.8		29.4	227	26.2		16.3	146	15.0		24.8	306	31.2		58.3
5	156	46.9	300	42.4	-11	29.7	242	26.6	-24	16.2	161	17.2	-3	24.8	321	33.5	-3	58.3
6	171	49.3	315	43.1	-11	30.1	257	26.9	-24	16.2	176	19.5	-3	24.7	336	35.8	-3	58.4
7	186	51.8	330	43.8		30.5	272	27.3		16.2	191	21.8		24.6	351	38.1		58.5
8	201	54.3	345	44.4		30.9	287	27.7		16.1	206	24.1		24.5	6	40.4		58.5
9	216	56.7	0	45.1		31.2	302	28.1		16.1	221	26.4		24.4	21	42.7		58.6
10	231	59.2	15	45.8		31.6	317	28.5		16.0	236	28.6		24.3	36	45.0		58.6
11	247	01.7	30	46.4	-11	32.0	332	28.8	-24	16.0	251	30.9	-3	24.2	51	47.3	-3	58.7
12	262	04.1	45	47.1	-11	32.4	347	29.2	-24	15.9	266	33.2	-3	24.1	66	49.6	-3	58.8
13	277	06.6	60	47.7		32.8	2	29.6		15.9	281	35.5		24.0	81	51.9		58.8
14	292	09.1	75	48.4		33.2	17	30.0		15.8	296	37.8		23.9	96	54.2		58.9
15	307	11.5	90	49.0		33.5	32	30.4		15.8	311	40.0		23.8	111	56.4		58.9
16	322	14.0	105	49.7		33.9	47	30.7		15.7	326	42.3		23.7	126	58.7		59.0
17	337	16.4	120	50.3	-11	34.3	62	31.1	-24	15.7	341	44.6	-3	23.7	142	01.0	-3	59.1
18	352	18.9	135	51.0	-11	34.7	77	31.5	-24	15.6	356	46.9	-3	23.6	157	03.3	-3	59.1
19	7	21.4	150	51.6		35.1	92	31.9		15.6	11	49.1		23.5	172	05.6		59.2
20	22	23.8	165	52.3		35.5	107	32.2		15.6	26	51.4		23.4	187	07.9		59.2
21	37	26.3	180	52.9		35.9	122	32.6		15.5	41	53.7		23.3	202	10.2		59.3
22	52	28.8	195	53.6		36.3	137	33.0		15.5	56	56.0		23.2	217	12.5		59.4
23	67	31.2	210	54.2		36.7	152	33.4		15.4	71	58.3		23.1	232	14.8		59.4
24	82	33.7	225	54.8	-11	37.1	167	33.8	-24	15.4	87	00.5	-3	23.0	247	17.1	-3	59.5
Dif	—		+7		-4		+4		0		+23		+1		+23		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 8 ^d 3	PHE {	4 ^h : 54:3 12 ^h : 54:3 20 ^h : 54:4									
	PMG: 11 ^h 54 ^m 6														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	181	24.3	-23 11.3	87	56.4	+3 23.2	120	60 N	14 53	15 50	16 47	11 48	7	0 33	77
1	196	24.0		102	31.8 ¹⁶⁴		35.2 ¹²⁰	58	15 10	16 02	16 54	51	10	31	74
2	211	23.7		117	07.1 ¹⁶³		47.2 ¹²⁰	56	25	12	17 01	54	12	29	72
3	226	23.4		131	42.5 ¹⁶⁴	+3 59.3	121	54	37	21	07	57	14	28	69
4	241	23.1		146	17.8 ¹⁶³	+4 11.3	120	52	48	29	13	11 59	16	26	68
5	256	22.8	-23 12.1	160	53.1 ¹⁶³	+4 23.3	120	50	15 58	16 37	17 18	12 01	18	0 25	66
6	271	22.5	-23 12.2	175	28.4 ¹⁶³	+4 35.2	119	45	16 19	16 52	17 30	12 05	22	0 22	62
7	286	22.2		190	03.6 ¹⁶²		47.2 ¹²⁰	40	35	17 06	40	09	25	20	58
8	301	22.0		204	38.9 ¹⁶³	+4 59.2	120	35	16 49	18	49	12	28	18	55
9	316	21.7		219	14.1 ¹⁶²	+5 11.1	119	30	17 02	28	17 58	15	31	16	53
10	331	21.4		233	49.3 ¹⁶²		23.0 ¹¹⁹	20	23	17 47	18 14	20	35	13	49
11	346	21.1	-23 13.0	248	24.4 ¹⁶¹	+5 34.9	119	10 N	17 41	18 04	18 30	12 25	38	0 11	44
12	1	20.8	-23 13.1	262	59.5 ¹⁶¹	+5 46.8	119	0	17 58	18 21	18 47	12 29	42	0 08	41
13	16	20.5		277	34.7 ¹⁶²	+5 58.7	119	10 S	18 16	39	19 06	34	45	06	37
14	31	20.2		292	09.7 ¹⁶⁰	+6 10.5	118	20	35	18 59	28	38	49	03	34
15	46	19.9		306	44.8 ¹⁶¹		22.4 ¹¹⁹	30	18 56	19 24	19 57	43	54	0 00	29
16	61	19.6		321	19.8 ¹⁶⁰		34.2 ¹¹⁸	35	19 09	39	20 16	46	57	**	**
17	76	19.3	-23 13.8	335	54.8 ¹⁶⁰	+6 46.0	118	40	19 24	19 57	20 39	12 50	59	**	**
18	91	19.0	-23 14.0	350	29.7 ¹⁵⁹	+6 57.7	117	45	19 42	20 19	21 09	12 54	62	**	**
19	106	18.7		5	04.6 ¹⁵⁹	+7 09.5	118	50	20 05	20 49	21 54	12 59	66	**	**
20	121	18.4		19	39.5 ¹⁵⁹		21.2 ¹¹⁷	52	15	21 04	22 21	13 01	69	**	**
21	136	18.1		34	14.3 ¹⁵⁸		32.9 ¹¹⁷	54	27	22	23 05	04	70	**	**
22	151	17.8		48	49.1 ¹⁵⁸		44.6 ¹¹⁷	56	41	21 43	**	06	73	23	58
23	166	17.5		63	23.9 ¹⁵⁸	+7 56.3	117	58	20 58	22 13	**	09	76	54	11
24	181	17.2	-23 14.8	77	58.6 ¹⁵⁷	+8 07.9	116	60 S	21 18	23 00	**	13	79	23	50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 26 ^m 7		Mag: -4.8 PMG: 8 ^h 56 ^m		Mag: +1.3 PMG: 12 ^h 49 ^m		Mag: -2.5 PMG: 18 ^h 09 ^m		Mag: +0.8 PMG: 7 ^h 30 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	82	33.7	225	54.8	-11	37.1	87	00.5	-3	23.0
1	97	36.2	240	55.5		37.5	102	02.8		22.9
2	112	38.6	255	56.1		37.8	117	05.1		22.8
3	127	41.1	270	56.7		38.2	132	07.4		22.7
4	142	43.5	285	57.4		38.6	147	09.6		22.6
5	157	46.0	300	58.0	-11	39.0	162	11.9	-3	22.5
6	172	48.5	315	58.6	-11	39.4	177	14.2	-3	22.4
7	187	50.9	330	59.2		39.8	192	16.5		22.4
8	202	53.4	345	59.9		40.2	207	18.7		22.3
9	217	55.9	1	00.5		40.6	222	21.0		22.2
10	232	58.3	16	01.1		41.0	237	23.3		22.1
11	248	00.8	31	01.7	-11	41.4	252	25.5	-3	22.0
12	263	03.3	46	02.3	-11	41.8	267	27.8	-3	21.9
13	278	05.7	61	03.0		42.2	282	30.1		21.8
14	293	08.2	76	03.6		42.7	297	32.4		21.7
15	308	10.7	91	04.2		43.1	312	34.6		21.6
16	323	13.1	106	04.8		43.5	327	36.9		21.5
17	338	15.6	121	05.4	-11	43.9	342	39.2	-3	21.4
18	353	18.0	136	06.0	-11	44.3	357	41.4	-3	21.3
19	8	20.5	151	06.6		44.7	12	43.7		21.2
20	23	23.0	166	07.2		45.1	27	46.0		21.1
21	38	25.4	181	07.8		45.5	42	48.3		21.0
22	53	27.9	196	08.4		45.9	57	50.5		20.9
23	68	30.4	211	09.0		46.3	72	52.8		20.8
24	83	32.8	226	09.6	-11	46.7	87	55.1	-3	20.7
Dif	—		+6		-4		+4		+1	
							+23		+1	
									+23	
									-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 55 ^m 1			Edad: 9 ^d 3 PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/8 R°: 45 ^m PMG: 19 ^h 21 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	17.2	-23	14.8	77	58.6	+8	07.9	60 N	7 03	8 00	8 57	11 55	9	1 50	80
1	196	16.9		14.9	92	33.3 ¹⁵⁷		19.5 ¹¹⁶	58	6 55	7 48	40	12 01	11	45	77
2	211	16.6		15.1	107	07.9 ¹⁵⁶		31.1 ¹¹⁶	56	49	38	25	06	14	41	74
3	226	16.3		15.2	121	42.5 ¹⁵⁶		42.6 ¹¹⁵	54	43	29	13	11	16	37	7
4	241	16.0		15.4	136	17.1 ¹⁵⁶	+8	54.1 ¹¹⁵	52	37	21	8 02	15	19	34	69
5	256	15.7	-23	15.5	150	51.6 ¹⁵⁵	+9	05.6 ¹¹⁵	50	6 32	7 13	7 52	12 19	20	1 31	67
6	271	15.4	-23	15.6	165	26.1 ¹⁵⁵	+9	17.1 ¹¹⁵	45	6 20	6 57	7 31	12 27	25	1 24	63
7	286	15.1		15.7	180	00.5 ¹⁵⁴		28.5 ¹¹⁴	40	10	44	15	34	28	18	60
8	301	14.8		15.9	194	34.9 ¹⁵⁴		39.9 ¹¹⁴	35	6 01	32	7 00	40	31	13	57
9	316	14.5		16.0	209	09.2 ¹⁵³	+9	51.3 ¹¹⁴	30	5 52	22	6 48	46	32	09	54
10	331	14.2		16.1	223	43.5 ¹⁵³	+10	02.7 ¹¹⁴	20	36	6 03	27	12 55	37	1 02	50
11	346	13.9	-23	16.3	238	17.7 ¹⁵²	+10	14.0 ¹¹³	10 N	5 20	5 46	6 09	13 03	41	0 55	46
12	1	13.6	-23	16.4	252	51.9 ¹⁵²	+10	25.2 ¹¹²	0	5 03	5 29	5 51	13 11	44	0 49	43
13	16	13.3		16.5	267	26.0 ¹⁵¹		36.5 ¹¹³	10 S	4 44	5 11	34	19	47	43	39
14	31	13.0		16.6	282	00.1 ¹⁵¹		47.7 ¹¹²	20	4 21	4 51	5 15	27	51	37	35
15	46	12.7		16.8	296	34.1 ¹⁵⁰	+10	58.9 ¹¹²	30	3 52	26	4 53	37	55	29	32
16	61	12.4		16.9	311	08.1 ¹⁵⁰	+11	10.0 ¹¹¹	35	34	4 11	40	43	57	25	29
17	76	12.1	-23	17.0	325	42.0 ¹⁴⁹	+11	21.1 ¹¹¹	40	3 11	3 53	4 25	13 49	60	0 20	26
18	91	11.8	-23	17.1	340	15.8 ¹⁴⁸	+11	32.1 ¹¹⁰	45	2 41	3 30	4 07	13 56	64	0 15	23
19	106	11.5		17.3	354	49.6 ¹⁴⁸		43.2 ¹¹¹	50	1 56	3 01	3 45	14 05	69	08	19
20	121	11.2		17.4	9	23.3 ¹⁴⁷	+11	54.1 ¹⁰⁹	52	1 29	2 46	34	10	70	05	17
21	136	10.9		17.5	23	57.0 ¹⁴⁷	+12	05.1 ¹¹⁰	54	0 45	28	22	14	73	0 02	15
22	151	10.6		17.6	38	30.6 ¹⁴⁶		16.0 ¹⁰⁹	56	** **	2 06	3 08	19	75	** **	**
23	166	10.3		17.7	53	04.2 ¹⁴⁶		26.8 ¹⁰⁸	58	** **	1 37	2 52	25	78	** **	**
24	181	10.0	-23	17.8	67	37.7 ¹⁴⁵	+12	37.6 ¹⁰⁸	60 S	** **	0 50	2 31	14 32	81	23 57	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 22 ^m 8		Mag: -4.8 PMG: 8 ^h 55 ^m		Mag: +1.3 PMG: 12 ^h 49 ^m		Mag: -2.5 PMG: 18 ^h 06 ^m		Mag: +0.8 PMG: 7 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	83	32.8	226	09.6	-11	46.7	167	42.8	-24	14.0	87	55.1	-3	20.7	248	12.2	-4	00.9
1	98	35.3	241	10.2		47.2	182	43.2		13.9	102	57.3		20.6	263	14.5		00.9
2	113	37.8	256	10.8		47.6	197	43.6		13.9	117	59.6		20.6	278	16.8		01.0
3	128	40.2	271	11.4		48.0	212	44.0		13.8	133	01.9		20.5	293	19.1		01.1
4	143	42.7	286	12.0		48.4	227	44.3		13.7	148	04.1		20.4	308	21.4		01.1
5	158	45.1	301	12.6	-11	48.8	242	44.7	-24	13.7	163	06.4	-3	20.3	323	23.7	-4	01.2
6	173	47.6	316	13.2	-11	49.2	257	45.1	-24	13.6	178	08.7	-3	20.2	338	26.0	-4	01.2
7	188	50.1	331	13.7		49.7	272	45.5		13.5	193	10.9		20.1	353	28.3		01.3
8	203	52.5	346	14.3		50.1	287	45.8		13.5	208	13.2		20.0	8	30.6		01.4
9	218	55.0	1	14.9		50.5	302	46.2		13.4	223	15.5		19.9	23	32.9		01.4
10	233	57.5	16	15.5		50.9	317	46.6		13.3	238	17.7		19.8	38	35.2		01.5
11	248	59.9	31	16.1	-11	51.3	332	47.0	-24	13.3	253	20.0	-3	19.7	53	37.5	-4	01.5
12	264	02.4	46	16.6	-11	51.8	347	47.4	-24	13.2	268	22.3	-3	19.6	68	39.8	-4	01.6
13	279	04.9	61	17.2		52.2	2	47.7		13.1	283	24.5		19.5	83	42.1		01.6
14	294	07.3	76	17.8		52.6	17	48.1		13.1	298	26.8		19.4	98	44.4		01.7
15	309	09.8	91	18.4		53.0	32	48.5		13.0	313	29.1		19.3	113	46.7		01.8
16	324	12.3	106	18.9		53.4	47	48.9		12.9	328	31.3		19.2	128	49.0		01.8
17	339	14.7	121	19.5	-11	53.9	62	49.2	-24	12.9	343	33.6	-3	19.1	143	51.3	-4	01.9
18	354	17.2	136	20.1	-11	54.3	77	49.6	-24	12.8	358	35.8	-3	19.0	158	53.6	-4	01.9
19	9	19.6	151	20.6		54.7	92	50.0		12.7	13	38.1		18.9	173	55.9		02.0
20	24	22.1	166	21.2		55.2	107	50.4		12.7	28	40.4		18.8	188	58.2		02.0
21	39	24.6	181	21.8		55.6	122	50.7		12.6	43	42.6		18.7	204	00.5		02.1
22	54	27.0	196	22.3		56.0	137	51.1		12.5	58	44.9		18.6	219	02.8		02.2
23	69	29.5	211	22.9		56.4	152	51.5		12.4	73	47.2		18.5	234	05.1		02.2
24	84	32.0	226	23.4	-11	56.9	167	51.9	-24	12.4	88	49.4	-3	18.4	249	07.4	-4	02.3
Dif	—		+6		-4		+4		+1		+23		+1		+23		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/3 PMG: 11 ^h 55 ^m 6			Edad: 10 ^d 3 PHE { SD: 14/9 PMG: 20 ^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
0	181	10.0	-23	17.8	67	37.7	+12	37.6	60 N	14 53	15 51	16 47	12 04	12	3 10	82	
1	196	09.7		18.0	82	11.1 ¹⁴⁴		48.4 ¹⁰⁸	58	15 10	16 02	16 55	12 16		3 02	79	
2	211	09.4		18.1	96	44.5 ¹⁴⁴	+12	59.1 ¹⁰⁷	56	25	12	17 01	20 19		2 55	76	
3	226	09.1		18.2	111	17.8 ¹⁴³	+13	09.8 ¹⁰⁷	54	38	21	08	27 21		49	77	
4	241	08.8		18.3	125	51.0 ¹⁴²		20.4 ¹⁰⁶	52	49	30	13	34 23		43	71	
5	256	08.5	-23	18.4	140	24.2 ¹⁴²	+13	31.0 ¹⁰⁶	50	15 58	16 37	17 18	12 39	25	2 38	69	
6	271	08.2	-23	18.5	154	57.3 ¹⁴¹	+13	41.5 ¹⁰⁵	45	16 19	16 53	17 30	12 52	28	2 27	65	
7	286	07.9		18.6	169	30.4 ¹⁴¹	+13	52.0 ¹⁰⁵	40	36	17 06	40	13 02	32	18	61	
8	301	07.6		18.8	184	03.3 ¹³⁹	+14	02.4 ¹⁰⁴	35	16 50	18	50	11 34		10	59	
9	316	07.2		18.9	198	36.2 ¹³⁹		12.8 ¹⁰⁴	30	17 02	29	17 59	18 37		2 03	56	
10	331	06.9		19.0	213	09.1 ¹³⁹		23.1 ¹⁰³	20	23	17 47	18 15	32 41		1 52	52	
11	346	06.6	-23	19.1	227	41.8 ¹³⁷	+14	33.4 ¹⁰³	10 N	17 42	18 05	18 31	13 44	44	1 41	49	
12	1	06.3	-23	19.2	242	14.5 ¹³⁷	+14	43.6 ¹⁰²	0	17 59	18 22	18 48	13 55	47	1 32	45	
13	16	06.0		19.3	256	47.1 ¹³⁶	+14	53.8 ¹⁰²	10 S	18 17	18 40	19 07	14 06	50	22	42	
14	31	05.7		19.4	271	19.7 ¹³⁶	+15	03.9 ¹⁰¹	20	36	19 00	30	18 54		12	39	
15	46	05.4		19.5	285	52.2 ¹³⁵		14.0 ¹⁰¹	30	18 58	25	19 59	32 58		1 01	34	
16	61	05.1		19.6	300	24.6 ¹³⁴		24.0 ¹⁰⁰	35	19 11	40	20 17	40 60		0 54	32	
17	76	04.8	-23	19.7	314	56.9 ¹³³	+15	33.9 ⁹⁹	40	19 26	19 59	20 40	14 49	63	0 46	30	
18	91	04.5	-23	19.8	329	29.1 ¹³²	+15	43.8 ⁹⁹	45	19 44	20 21	21 11	15 00	66	0 38	26	
19	106	04.2		19.9	344	01.3 ¹³²	+15	53.6 ⁹⁸	50	20 06	20 51	21 56	14 69		27	23	
20	121	03.9		20.0	358	33.4 ¹³¹	+16	03.4 ⁹⁸	52	17	21 06	22 24	20 71		22	21	
21	136	03.6		20.1	13	05.4 ¹³⁰		13.0 ⁹⁶	54	29	24	23 09	27 74		17	18	
22	151	03.3		20.2	27	37.4 ¹³⁰		22.7 ⁹⁷	56	20 43	21 46	** ** *	34 77		11	16	
23	166	03.0		20.3	42	09.2 ¹²⁸		32.2 ⁹⁵	58	21 00	22 15	** ** *	43 80		0 05	13	
24	181	02.7	-23	20.4	56	41.0 ¹²⁸	+16	41.7 ⁹⁵	60 S	21 20	23 04	** ** *	15 53	84	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 18 ^m 9		Mag: -4.8 PMG: 8 ^h 54 ^m		Mag: +1.3 PMG: 12 ^h 48 ^m		Mag: -2.5 PMG: 18 ^h 02 ^m		Mag: +0.8 PMG: 7 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	84	32.0	226	23.4	-11	56.9	167	51.9	-24	12.4
1	99	34.4	241	24.0		57.3	182	52.2		12.3
2	114	36.9	256	24.5		57.7	197	52.6		12.2
3	129	39.4	271	25.1		58.2	212	53.0		12.1
4	144	41.8	286	25.6		58.6	227	53.4		12.1
5	159	44.3	301	26.2	-11	59.0	242	53.8	-24	12.0
6	174	46.8	316	26.7	-11	59.5	257	54.1	-24	11.9
7	189	49.2	331	27.3	-11	59.9	272	54.5		11.8
8	204	51.7	346	27.8	-12	00.3	287	54.9		11.8
9	219	54.1	1	28.4		00.8	302	55.3		11.7
10	234	56.6	16	28.9		01.2	317	55.6		11.6
11	249	59.1	31	29.5	-12	01.6	332	56.0	-24	11.5
12	265	01.5	46	30.0	-12	02.1	347	56.4	-24	11.5
13	280	04.0	61	30.5		02.5	2	56.8		11.4
14	295	06.5	76	31.1		03.0	17	57.1		11.3
15	310	08.9	91	31.6		03.4	32	57.5		11.2
16	325	11.4	106	32.1		03.8	47	57.9		11.1
17	340	13.9	121	32.7	-12	04.3	62	58.3	-24	11.0
18	355	16.3	136	33.2	-12	04.7	77	58.6	-24	11.0
19	10	18.8	151	33.7		05.2	92	59.0		10.9
20	25	21.2	166	34.2		05.6	107	59.4		10.8
21	40	23.7	181	34.8		06.1	122	59.8		10.7
22	55	26.2	196	35.3		06.5	138	00.1		10.6
23	70	28.6	211	35.8		07.0	153	00.5		10.6
24	85	31.1	226	36.3	-12	07.4	168	00.9	-24	10.5
Dif	—		+5		-4		+4		+1	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 11 ^d 3	PHE	4 ^h : 55:4 12 ^h : 55:6 20 ^h : 55:9				Náutico	Civil		Hora	R°	Hora	R°
	PMG: 11 ^h 56 ^m 1					R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	02.7	-23	56	41.0	+16	41.7	95	60 N	7 05	8 01	8 59	12 16	18	4 32	84
1	196	02.4		71	12.7 ¹²⁷	+16	51.2	95	58	6 57	7 50	42	28	22	21	79
2	211	02.1		85	44.3 ¹²⁶	+17	00.5	93	56	50	39	27	39	25	11	76
3	226	01.8		100	15.9 ¹²⁶		09.8	93	54	44	30	14	48	28	4 02	74
4	241	01.5		114	47.3 ¹²⁴		19.1	93	52	39	22	8 03	12 57	29	3 54	72
5	256	01.2	-23	129	18.7 ¹²⁴	+17	28.2	91	50	6 33	7 15	7 53	13 04	32	3 47	70
6	271	00.9	-23	143	50.0 ¹²³	+17	37.3	91	45	6 22	6 59	7 33	13 20	36	3 32	65
7	286	00.6		158	21.2 ¹²²		46.3	90	40	11	45	16	34	38	19	63
8	301	00.3		172	52.3 ¹²¹	+17	55.3	90	35	6 02	34	7 02	45	41	3 09	60
9	316	00.0		187	23.4 ¹²¹	+18	04.1	88	30	5 53	23	6 49	13 55	42	2 59	59
10	330	59.7		201	54.3 ¹¹⁹		12.9	88	20	37	6 04	28	14 13	45	44	54
11	345	59.4	-23	216	25.2 ¹¹⁹	+18	21.6	87	10 N	5 21	5 47	6 10	14 28	48	2 30	52
12	0	59.0	-23	230	56.0 ¹¹⁸	+18	30.2	86	0	5 04	5 30	5 52	14 42	51	2 17	49
13	15	58.7		245	26.7 ¹¹⁷		38.8	86	10 S	4 45	5 12	35	14 56	54	2 04	46
14	30	58.4		259	57.3 ¹¹⁶		47.3	85	20	4 22	4 51	5 16	15 12	56	1 51	43
15	45	58.1		274	27.9 ¹¹⁶	+18	55.7	84	30	3 53	26	4 54	30	59	35	39
16	60	57.8		288	58.3 ¹¹⁴	+19	04.0	83	35	34	4 11	41	40	61	26	37
17	75	57.5	-23	303	28.7 ¹¹⁴	+19	12.2	82	40	3 11	3 53	4 26	15 52	63	1 16	35
18	90	57.2	-23	317	58.9 ¹¹²	+19	20.3	81	45	2 41	3 31	4 08	16 06	66	1 04	32
19	105	56.9		332	29.1 ¹¹²		28.4	81	50	1 56	3 01	3 45	23	70	0 50	27
20	120	56.6		346	59.2 ¹¹¹		36.3	79	52	1 28	2 46	35	31	72	43	26
21	135	56.3		1	29.2 ¹¹⁰		44.2	79	54	0 43	28	22	41	73	35	24
22	150	56.0		15	59.1 ¹⁰⁹		52.0	78	56	** ** *	2 06	3 08	16 51	76	27	21
23	165	55.7		30	29.0 ¹⁰⁹	+19	59.7	77	58	** ** *	1 36	2 51	17 03	79	18	18
24	180	55.4	-23	44	58.7 ¹⁰⁷	+20	07.3	76	60 S	** ** *	0 47	2 31	17 17	83	0 07	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 18 ^h 14 ^m 9		Mag: -4.8 PMG: 8 ^h 53 ^m		Mag: +1.3 PMG: 12 ^h 48 ^m		Mag: -2.5 PMG: 17 ^h 58 ^m		Mag: +0.8 PMG: 7 ^h 19 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	85	31.1	226	36.3	-12	07.4	168	00.9	-24	10.5		
1	100	33.6	241	36.8		07.9	183	01.3		10.4		
2	115	36.0	256	37.4		08.3	198	01.6		10.3		
3	130	38.5	271	37.9		08.8	213	02.0		10.2		
4	145	41.0	286	38.4		09.2	228	02.4		10.1		
5	160	43.4	301	38.9	-12	09.7	243	02.8	-24	10.0		
6	175	45.9	316	39.4	-12	10.1	258	03.1	-24	09.9		
7	190	48.4	331	39.9		10.6	273	03.5		09.9		
8	205	50.8	346	40.4		11.0	288	03.9		09.8		
9	220	53.3	1	40.9		11.5	303	04.3		09.7		
10	235	55.7	16	41.4		11.9	318	04.6		09.6		
11	250	58.2	31	41.9	-12	12.4	333	05.0	-24	09.5		
12	266	00.7	46	42.4	-12	12.8	348	05.4	-24	09.4		
13	281	03.1	61	42.9		13.3	3	05.8		09.3		
14	296	05.6	76	43.4		13.7	18	06.1		09.2		
15	311	08.1	91	43.9		14.2	33	06.5		09.1		
16	326	10.5	106	44.4		14.6	48	06.9		09.1		
17	341	13.0	121	44.9	-12	15.1	63	07.3	-24	09.0		
18	356	15.5	136	45.4	-12	15.6	78	07.6	-24	08.9		
19	11	17.9	151	45.9		16.0	93	08.0		08.8		
20	26	20.4	166	46.4		16.5	108	08.4		08.7		
21	41	22.9	181	46.9		16.9	123	08.8		08.6		
22	56	25.3	196	47.4		17.4	138	09.1		08.5		
23	71	27.8	211	47.8		17.9	153	09.5		08.4		
24	86	30.2	226	48.3	-12	18.3	168	09.9	-24	08.3		
Dif	—		+5	-5		+4	+1		+23	+1	+23	-1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 56 ^m 6				Edad: 12 ^d 3 PHE { SD: 15:2 PMG: 21 ^h 45 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora		Rº
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	55.4	-23	22.5	44	58.7	+20	07.3	60 N	14	53	15	51	16	48	12	34
1	195	55.1		22.6	59	28.4 ¹⁰⁷		14.8 ⁷⁵	58	15	11	16	03	16	55	12	50
2	210	54.8		22.7	73	57.9 ¹⁰⁵		22.2 ⁷⁴	56	25		13	17	02	13	04	
3	225	54.5		22.8	88	27.4 ¹⁰⁵		29.6 ⁷⁴	54	38	22	08		16	38	16	71
4	240	54.2		22.8	102	56.8 ¹⁰⁴		36.8 ⁷²	52	49	30	14		26	40	5	06
5	255	53.9	-23	22.9	117	26.1 ¹⁰³	+20	43.9 ⁷¹	50	15	59	16	38	17	19	13	36
6	270	53.6	-23	23.0	131	55.3 ¹⁰²	+20	51.0 ⁷¹	45	16	20	16	54	17	31	13	56
7	285	53.2		23.1	146	24.5 ¹⁰²	+20	57.9 ⁶⁹	40	37	17	07	41		14	12	
8	300	52.9		23.1	160	53.5 ¹⁰⁰	+21	04.7 ⁶⁸	35	16	51	19	51		26	47	
9	315	52.6		23.2	175	22.5 ¹⁰⁰		11.5 ⁶⁸	30	17	03	29	17	59	37	49	
10	330	52.3		23.3	189	51.3 ⁹⁸		18.1 ⁶⁶	20	24	17	48	18	16	14	58	
11	345	52.0	-23	23.3	204	20.1 ⁹⁸	+21	24.6 ⁶⁵	10 N	17	43	18	06	18	32	15	16
12	0	51.7	-23	23.4	218	48.8 ⁹⁷	+21	31.0 ⁶⁴	0	18	00	18	23	18	49	15	33
13	15	51.4		23.5	233	17.4 ⁹⁶		37.3 ⁶³	10 S	18	18	41	19	08		15	50
14	30	51.1		23.5	247	45.9 ⁹⁵		43.5 ⁶²	20	37	19	01	19	31		16	08
15	45	50.8		23.6	262	14.3 ⁹⁴		49.6 ⁶¹	30	18	59	26	20	00		29	59
16	60	50.5		23.7	276	42.7 ⁹⁴	+21	55.6 ⁶⁰	35	19	12	19	42	18		41	61
17	75	50.2	-23	23.7	291	11.0 ⁹³	+22	01.5 ⁵⁹	40	19	27	20	00	20	42	16	55
18	90	49.9	-23	23.8	305	39.1 ⁹¹	+22	07.2 ⁵⁷	45	19	45	20	22	21	12	17	12
19	105	49.6		23.9	320	07.2 ⁹¹		12.9 ⁵⁷	50	20	08	20	52	21	58	33	67
20	120	49.3		23.9	334	35.2 ⁹⁰		18.4 ⁵⁵	52	18	21	07	22	26		43	68
21	135	49.0		24.0	349	03.2 ⁹⁰		23.8 ⁵⁴	54	31	25	23	12		17	54	
22	150	48.6		24.0	3	31.0 ⁸⁸		29.1 ⁵³	56	20	45	21	48	** **	18	07	
23	165	48.3		24.1	17	58.8 ⁸⁸		34.3 ⁵²	58	21	02	22	17	** **	22	73	
24	180	48.0	-23	24.2	32	26.4 ⁸⁶	+22	39.4 ⁵¹	60 S	21	22	23	08	** **	18	40	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 18 ^h 11 ^m 0		Mag: -4.8 PMG: 8 ^h 52 ^m		Mag: +1.3 PMG: 12 ^h 47 ^m		Mag: -2.5 PMG: 17 ^h 55 ^m		Mag: +0.8 PMG: 7 ^h 15 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	86	30.2	226	48.3	-12	18.3	90	37.7	-3	13.5							
1	101	32.7	241	48.8		18.8	105	39.9		13.4							
2	116	35.2	256	49.3		19.3	120	42.1		13.3							
3	131	37.6	271	49.8		19.7	135	44.4		13.2							
4	146	40.1	286	50.2		20.2	150	46.6		13.1							
5	161	42.6	301	50.7	-12	20.7	165	48.9	-3	13.0							
6	176	45.0	316	51.2	-12	21.1	180	51.1	-3	12.9							
7	191	47.5	331	51.7		21.6	195	53.4		12.8							
8	206	50.0	346	52.1		22.1	210	55.6		12.7							
9	221	52.4	1	52.6		22.5	225	57.9		12.6							
10	236	54.9	16	53.1		23.0	241	00.1		12.5							
11	251	57.4	31	53.5	-12	23.5	256	02.4	-3	12.4							
12	266	59.8	46	54.0	-12	23.9	271	04.6	-3	12.3							
13	282	02.3	61	54.4		24.4	286	06.9		12.2							
14	297	04.7	76	54.9		24.9	301	09.1		12.0							
15	312	07.2	91	55.4		25.3	316	11.3		11.9							
16	327	09.7	106	55.8		25.8	331	13.6		11.8							
17	342	12.1	121	56.3	-12	26.3	346	15.8	-3	11.7							
18	357	14.6	136	56.7	-12	26.8	1	18.1	-3	11.6							
19	12	17.1	151	57.2		27.2	16	20.3		11.5							
20	27	19.5	166	57.6		27.7	31	22.6		11.4							
21	42	22.0	181	58.1		28.2	46	24.8		11.3							
22	57	24.5	196	58.5		28.7	61	27.0		11.2							
23	72	26.9	211	59.0		29.1	76	29.3		11.1							
24	87	29.4	226	59.4	-12	29.6	91	31.5	-3	11.0							
Dif	—		+5 -5		+4 +1		+22 +1		+23 -1								

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 11 ^h 57 ^m 0			Edad: 13 ^d 3 PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'2 R°: 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	48.0	-23	24.2	32	26.4	+22	39.4	60 N	7	06	8	03	9	01	13	04
1	195	47.7		24.2	46	54.0	86	44.3	58	6	58	7	51	8	43	24	49
2	210	47.4		24.3	61	21.5	85	49.2	56		52	41		28	40	51	
3	225	47.1		24.3	75	49.0	85	53.9	54		46	32		16	13	54	51
4	240	46.8		24.4	90	16.3	83	+22	58.4	52	40	24		8	05	14	06
5	255	46.5	-23	24.4	104	43.6	83	+23	02.9	50	6	35	7	16	7	55	14
6	270	46.2	-23	24.5	119	10.8	82	+23	07.2	45	6	23	7	00	7	34	14
7	285	45.9		24.6	133	37.9	81		11.4	40	12	6	46		17	14	58
8	300	45.6		24.6	148	05.0	81		15.5	35	6	03		35	7	03	15
9	315	45.3		24.7	162	32.0	80		19.5	30	5	54		24	6	51	26
10	330	45.0		24.7	176	58.9	79		23.3	20		38	6	05	29	15	49
11	345	44.7	-23	24.8	191	25.7	78	+23	27.0	10 N	5	22	5	48	6	11	16
12	0	44.3	-23	24.8	205	52.4	77	+23	30.5	0	5	05	5	31	5	53	16
13	15	44.0		24.9	220	19.1	77		33.9	10 S	4	46	5	13	36	16	45
14	30	43.7		24.9	234	45.7	76		37.2	20	4	23	4	52	5	17	05
15	45	43.4		24.9	249	12.3	76		40.4	30	3	54		27	4	55	28
16	60	43.1		25.0	263	38.8	75		43.4	35		35	4	12	42	42	58
17	75	42.8	-23	25.0	278	05.2	74	+23	46.3	40	3	12	3	54	4	27	17
18	90	42.5	-23	25.1	292	31.5	73	+23	49.0	45	2	41	3	31	4	09	18
19	105	42.2		25.1	306	57.8	73		51.7	50	1	56	3	01	3	46	40
20	120	41.9		25.2	321	24.0	72		54.1	52	1	28		2	46	35	18
21	135	41.6		25.2	335	50.2	72		56.5	54	0	41		28	23	19	04
22	150	41.3		25.3	350	16.3	71	+23	58.7	56	**	**	2	06	3	09	18
23	165	41.0		25.3	4	42.3	70	+24	00.7	58	**	**	1	36	2	52	35
24	180	40.6	-23	25.3	19	08.3	70	+24	02.6	60 S	**	**	0	46	2	31	19

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 18 ^h 07 ^m 1		Mag: -4.8 PMG: 8 ^h 52 ^m			Mag: +1.3 PMG: 12 ^h 46 ^m			Mag: -2.5 PMG: 17 ^h 51 ^m			Mag: +0.8 PMG: 7 ^h 11 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	29.4	226	59.4	-12	29.6	168	18.9	-24	05.9	91	31.5	-3	11.0
1	102	31.8	241	59.9		30.1	183	19.2		05.7	106	33.8		10.9
2	117	34.3	257	00.3		30.6	198	19.6		05.6	121	36.0		10.8
3	132	36.8	272	00.8		31.0	213	20.0		05.5	136	38.2		10.7
4	147	39.2	287	01.2		31.5	228	20.3		05.4	151	40.5		10.5
5	162	41.7	302	01.6	-12	32.0	243	20.7	-24	05.3	166	42.7	-3	10.4
6	177	44.2	317	02.1	-12	32.5	258	21.1	-24	05.2	181	45.0	-3	10.3
7	192	46.6	332	02.5		33.0	273	21.5		05.1	196	47.2		10.2
8	207	49.1	347	02.9		33.4	288	21.8		05.0	211	49.4		10.1
9	222	51.6	2	03.4		33.9	303	22.2		04.9	226	51.7		10.0
10	237	54.0	17	03.8		34.4	318	22.6		04.8	241	53.9		09.9
11	252	56.5	32	04.2	-12	34.9	333	23.0	-24	04.6	256	56.2	-3	09.8
12	267	59.0	47	04.7	-12	35.4	348	23.3	-24	04.5	271	58.4	-3	09.7
13	283	01.4	62	05.1		35.9	3	23.7		04.4	287	00.6		09.6
14	298	03.9	77	05.5		36.3	18	24.1		04.3	302	02.9		09.5
15	313	06.3	92	05.9		36.8	33	24.5		04.2	317	05.1		09.4
16	328	08.8	107	06.4		37.3	48	24.8		04.1	332	07.3		09.2
17	343	11.3	122	06.8	-12	37.8	63	25.2	-24	04.0	347	09.6	-3	09.1
18	358	13.7	137	07.2	-12	38.3	78	25.6	-24	03.8	2	11.8	-3	09.0
19	13	16.2	152	07.6		38.8	93	25.9		03.7	17	14.1		08.9
20	28	18.7	167	08.0		39.3	108	26.3		03.6	32	16.3		08.8
21	43	21.1	182	08.5		39.8	123	26.7		03.5	47	18.5		08.7
22	58	23.6	197	08.9		40.2	138	27.1		03.4	62	20.8		08.6
23	73	26.1	212	09.3		40.7	153	27.4		03.3	77	23.0		08.5
24	88	28.5	227	09.7	-12	41.2	168	27.8	-24	03.1	92	25.2	-3	08.4
Dif	—		+4 -5			+4 +1			+22 +1			+23 -1		

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 57 ^m 5				Edad: 14 ^d 3 PHE { 4 ^h : 57:5 12 ^h : 57:7 20 ^h : 57:9 R°: 58 ^m														
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m	m	
0	180	40.6	-23	25.3	19	08.3	+24	02.6	18	60 N	14 54	15 52	16 48	13 52	70	8 26	50		
1	195	40.3		25.4	33	34.3	70	04.4	18	58	15 11	16 03	16 56	14 13	69	8 04	53		
2	210	40.0		25.4	48	00.1	68	06.0	16	56	26	14	17 03	31	67	7 47	53		
3	225	39.7		25.4	62	25.9	68	07.5	15	54	39	23	09	45	67	32	54		
4	240	39.4		25.5	76	51.7	68	08.8	13	52	15 50	31	15	14 58	66	20	54		
5	255	39.1	-23	25.5	91	17.4	67	+24 10.0	12	50	16 00	16 38	17 20	15 10	64	7 08	55		
6	270	38.8	-23	25.6	105	43.1	67	+24 11.1	11	45	16 21	16 54	17 32	15 33	64	6 45	55		
7	285	38.5		25.6	120	08.7	66	12.0	9	40	37	17 08	42	15 52	63	26	56		
8	300	38.2		25.6	134	34.3	66	12.7	7	35	16 52	20	17 52	16 08	62	6 10	57		
9	315	37.9		25.7	148	59.8	65	13.4	7	30	17 04	30	18 00	21	62	5 56	57		
10	330	37.6		25.7	163	25.3	65	13.8	4	20	25	17 49	17	16 45	60	33	57		
11	345	37.3	-23	25.7	177	50.8	65	+24 14.1	3	10 N	17 44	18 07	18 33	17 05	59	5 13	57		
12	0	36.9	-23	25.7	192	16.2	64	+24 14.3	2	0	18 01	18 24	18 50	17 24	58	4 54	58		
13	15	36.6		25.8	206	41.5	63	14.3	0	10 S	19	18 42	19 09	17 43	57	35	58		
14	30	36.3		25.8	221	06.9	64	14.2	1	20	18 38	19 02	19 32	18 03	56	4 15	58		
15	45	36.0		25.8	235	32.2	63	13.9	3	30	19 00	27	20 01	27	55	3 52	58		
16	60	35.7		25.9	249	57.5	63	13.4	5	35	13	19 43	20	40	54	38	58		
17	75	35.4	-23	25.9	264	22.7	62	+24 12.8	6	40	19 28	20 01	20 43	18 56	53	3 22	59		
18	90	35.1	-23	25.9	278	47.9	62	+24 12.1	7	45	19 46	20 24	21 13	19 15	52	3 03	59		
19	105	34.8		25.9	293	13.1	62	11.2	9	50	20 09	20 53	21 59	39	50	2 39	59		
20	120	34.5		25.9	307	38.2	61	10.1	11	52	20	21 09	22 27	19 51	48	28	59		
21	135	34.2		26.0	322	03.4	62	08.9	12	54	32	27	23 14	20 03	48	15	59		
22	150	33.9		26.0	336	28.5	61	07.6	13	56	20 46	21 49	** **	18	46	2 00	59		
23	165	33.5		26.0	350	53.5	60	06.1	15	58	21 03	22 19	** **	36	44	1 43	59		
24	180	33.2	-23	26.0	5	18.6	61	+24 04.4	17	60 S	21 24	23 10	** **	20 57	42	1 22	58		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 03 ^m 1		Mag: -4.8 PMG: 8 ^h 51 ^m		Mag: +1.2 PMG: 12 ^h 46 ^m		Mag: -2.5 PMG: 17 ^h 48 ^m		Mag: +0.8 PMG: 7 ^h 08 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	88	28.5	227	09.7	-12	41.2	168	27.8	-24	03.1
1	103	31.0	242	10.1		41.7	183	28.2		03.0
2	118	33.5	257	10.5		42.2	198	28.6		02.9
3	133	35.9	272	10.9		42.7	213	28.9		02.8
4	148	38.4	287	11.3		43.2	228	29.3		02.7
5	163	40.8	302	11.7	-12	43.7	243	29.7	-24	02.5
6	178	43.3	317	12.1	-12	44.2	258	30.1	-24	02.4
7	193	45.8	332	12.5		44.7	273	30.4		02.3
8	208	48.2	347	12.9		45.2	288	30.8		02.2
9	223	50.7	2	13.3		45.7	303	31.2		02.1
10	238	53.2	17	13.7		46.2	318	31.5		01.9
11	253	55.6	32	14.1	-12	46.6	333	31.9	-24	01.8
12	268	58.1	47	14.5	-12	47.1	348	32.3	-24	01.7
13	284	00.6	62	14.9		47.6	3	32.7		01.6
14	299	03.0	77	15.3		48.1	18	33.0		01.4
15	314	05.5	92	15.7		48.6	33	33.4		01.3
16	329	08.0	107	16.1		49.1	48	33.8		01.2
17	344	10.4	122	16.5	-12	49.6	63	34.2	-24	01.1
18	359	12.9	137	16.8	-12	50.1	78	34.5	-24	00.9
19	14	15.3	152	17.2		50.6	93	34.9		00.8
20	29	17.8	167	17.6		51.1	108	35.3		00.7
21	44	20.3	182	18.0		51.6	123	35.6		00.5
22	59	22.7	197	18.4		52.1	138	36.0		00.4
23	74	25.2	212	18.7		52.6	153	36.4		00.3
24	89	27.7	227	19.1	-12	53.1	168	36.8	-24	00.2
Dif	—		+4		-5		+4		+1	
							+22		+1	
									+23	
									-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 58 ^m 0			Edad: 15 ^d 3 PHE { SD: 15'8 PMG: *** **m 4 ^h : 58'1 12 ^h : 58'3 20 ^h : 58'5 R°: ***														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	33.2	-23	26.0	5	18.6	+24	04.4	60 N	7 07	8 04	9 02	15 02	88	9 16	33		
1	195	32.9		26.1	19	43.7		02.6	58	7 00	7 52	8 44		22 83	8 57	36		
2	210	32.6		26.1	34	08.7	+24	00.7	56	6 53	42	30		38 80	40	40		
3	225	32.3		26.1	48	33.7	+23	58.5	54		47	33	17	15 52	78	26	42	
4	240	32.0		26.1	62	58.7		56.3	52		41	25	8 06	16 04	76	14	43	
5	255	31.7	-23	26.1	77	23.7	+23	53.8	50	6 36	7 17	7 56	16 14	75	8 03	45		
6	270	31.4	-23	26.1	91	48.7	+23	51.3	45	6 24	7 01	7 35	16 37	71	7 40	48		
7	285	31.1		26.1	106	13.7		48.5	40		13	6 48	18	16 55	69	22	49	
8	300	30.8		26.2	120	38.7		45.6	35	6 04	36	7 04	17 10	67	7 07	51		
9	315	30.5		26.2	135	03.6		42.6	30	5 55	25	6 52		23 65	6 53	53		
10	330	30.1		26.2	149	28.6		39.4	20		39	6 06	30	17 45	62	30	55	
11	345	29.8	-23	26.2	163	53.6	+23	36.1	10 N	5 23	5 49	6 12	18 04	60	6 10	57		
12	0	29.5	-23	26.2	178	18.5	+23	32.6	0	5 06	5 32	5 54	18 22	58	5 52	58		
13	15	29.2		26.2	192	43.5		28.9	10 S	4 46	5 14	37		40 56	33	60		
14	30	28.9		26.2	207	08.5		25.1	20	4 24	4 53	5 18	18 59	53	5 13	62		
15	45	28.6		26.2	221	33.5		21.2	30	3 55	28	4 56	19 22	49	4 50	64		
16	60	28.3		26.2	235	58.5		17.0	35		36	4 13	43	34 49	36	65		
17	75	28.0	-23	26.2	250	23.5	+23	12.8	40	3 13	3 55	4 27	19 49	46	4 21	66		
18	90	27.7	-23	26.2	264	48.5	+23	08.4	45	2 42	3 32	4 09	20 07	43	4 02	68		
19	105	27.4		26.3	279	13.5	+23	03.8	50	1 56	3 02	3 47		29 40	3 38	70		
20	120	27.1		26.3	293	38.5	+22	59.1	52	1 28	2 47	36		39 38	27	71		
21	135	26.7		26.3	308	03.6		54.2	54	0 41	29	24	20 51	36	3 14	73		
22	150	26.4		26.3	322	28.7		49.2	56	** ** *	2 07	3 09	21 04	34	2 59	75		
23	165	26.1		26.3	336	53.8		44.1	58	** ** *	1 37	2 52		20 30	42	77		
24	180	25.8	-23	26.3	351	18.9	+22	38.8	60 S	** ** *	0 45	2 32	21 39	25	2 20	80		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 59 ^m 2			Mag: -4.8 PMG: 8 ^h 51 ^m			Mag: +1.2 PMG: 12 ^h 45 ^m			Mag: -2.5 PMG: 17 ^h 44 ^m			Mag: +0.8 PMG: 7 ^h 04 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	89	27.7	227	19.1	-12	53.1	168	36.8	-24	00.2	93	18.8	-3	05.7	253	44.5	-4	08.6
1	104	30.1	242	19.5		53.6	183	37.1	-24	00.0	108	21.0		05.6	268	46.8		08.7
2	119	32.6	257	19.9		54.1	198	37.5	-23	59.9	123	23.2		05.5	283	49.1		08.7
3	134	35.1	272	20.2		54.6	213	37.9		59.8	138	25.5		05.3	298	51.4		08.8
4	149	37.5	287	20.6		55.1	228	38.3		59.6	153	27.7		05.2	313	53.7		08.8
5	164	40.0	302	21.0	-12	55.7	243	38.6	-23	59.5	168	29.9	-3	05.1	328	56.1	-4	08.9
6	179	42.5	317	21.3	-12	56.2	258	39.0	-23	59.4	183	32.1	-3	05.0	343	58.4	-4	08.9
7	194	44.9	332	21.7		56.7	273	39.4		59.2	198	34.4		04.9	359	00.7		09.0
8	209	47.4	347	22.1		57.2	288	39.7		59.1	213	36.6		04.8	14	03.0		09.0
9	224	49.8	2	22.4		57.7	303	40.1		59.0	228	38.8		04.7	29	05.3		09.1
10	239	52.3	17	22.8		58.2	318	40.5		58.8	243	41.1		04.5	44	07.6		09.1
11	254	54.8	32	23.2	-12	58.7	333	40.9	-23	58.7	258	43.3	-3	04.4	59	10.0	-4	09.2
12	269	57.2	47	23.5	-12	59.2	348	41.2	-23	58.6	273	45.5	-3	04.3	74	12.3	-4	09.2
13	284	59.7	62	23.9	-12	59.7	3	41.6		58.4	288	47.7		04.2	89	14.6		09.3
14	300	02.2	77	24.2	-13	00.2	18	42.0		58.3	303	50.0		04.1	104	16.9		09.3
15	315	04.6	92	24.6		00.7	33	42.4		58.2	318	52.2		04.0	119	19.2		09.4
16	330	07.1	107	24.9		01.2	48	42.7		58.0	333	54.4		03.9	134	21.6		09.4
17	345	09.6	122	25.3	-13	01.7	63	43.1	-23	57.9	348	56.6	-3	03.7	149	23.9	-4	09.5
18	0	12.0	137	25.7	-13	02.2	78	43.5	-23	57.7	3	58.8	-3	03.6	164	26.2	-4	09.5
19	15	14.5	152	26.0		02.8	93	43.8		57.6	19	01.1		03.5	179	28.5		09.6
20	30	17.0	167	26.4		03.3	108	44.2		57.5	34	03.3		03.4	194	30.8		09.6
21	45	19.4	182	26.7		03.8	123	44.6		57.3	49	05.5		03.3	209	33.2		09.7
22	60	21.9	197	27.0		04.3	138	45.0		57.2	64	07.7		03.2	224	35.5		09.7
23	75	24.3	212	27.4		04.8	153	45.3		57.0	79	10.0		03.1	239	37.8		09.8
24	90	26.8	227	27.7	-13	05.3	168	45.7	-23	56.9	94	12.2	-3	02.9	254	40.1	-4	09.8
Dif	—		+4		-5		+4		+1		+22		+1		+23			

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 58 ^m 5				Edad: 16 ^d 3 PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 59'0 PMG: 0 ^h 36 ^m R°: 57 ^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	25.8	-23	26.3	351	18.9	+22	38.8	60 N	14 55	15 52	16 49	16 30 95	9 49 21				
1	195	25.5		26.3	5	44.0		33.3	58	15 12	16 04	16 57	45 91	33 25				
2	210	25.2		26.3	20	09.2		27.7	56	27	14	17 04	16 58 88	20 28				
3	225	24.9		26.3	34	34.4		21.9	58	54	40	24	10	17 10 85	9 08 31			
4	240	24.6		26.3	48	59.6		16.1	58	52	15 51	32	16	20 82	8 57 34			
5	255	24.3	-23	26.3	63	24.8	+22	10.0	50	16 01	16 39	17 21	17 29 80	8 48 35				
6	270	24.0	-23	26.2	77	50.1	+22	03.8	62	45	16 22	16 55	17 33	17 48 76	8 28 39			
7	285	23.6		26.2	92	15.4	+21	57.5	63	40	38	17 09	43	18 04 72	8 11 43			
8	300	23.3		26.2	106	40.7		51.0	65	35	16 53	21	17 52	17 69	7 58 45			
9	315	23.0		26.2	121	06.1		44.4	66	30	17 05	31	18 01	28 67	46 47			
10	330	22.7		26.2	135	31.5		37.6	68	20	26	17 50	18	18 47 63	25 51			
11	345	22.4	-23	26.2	149	56.9	+21	30.7	69	10 N	17 45	18 08	18 34	19 04 59	7 07 54			
12	0	22.1	-23	26.2	164	22.4	+21	23.7	70	0	18 02	18 25	18 51	19 20 56	6 50 57			
13	15	21.8		26.2	178	47.9		16.5	72	10 S	20	18 43	19 10	36 52	33 60			
14	30	21.5		26.2	193	13.4		09.2	73	20	18 39	19 03	19 33	19 52 49	6 15 62			
15	45	21.2		26.2	207	39.0	+21	01.7	75	30	19 01	28	20 02	20 11 45	5 54 66			
16	60	20.9		26.2	222	04.6	+20	54.1	76	35	14	19 44	21	23 42	41 68			
17	75	20.5	-23	26.1	236	30.3	+20	46.4	77	40	19 29	20 02	20 44	20 35 40	5 27 71			
18	90	20.2	-23	26.1	250	56.0	+20	38.6	78	45	19 47	20 25	21 14	20 50 36	5 10 74			
19	105	19.9		26.1	265	21.8		30.6	80	50	20 10	20 54	22 00	21 09 31	4 48 78			
20	120	19.6		26.1	279	47.6		22.4	82	52	21	21 10	22 28	17 30	38 80			
21	135	19.3		26.1	294	13.4		14.2	84	54	33	28	23 15	27 27	27 82			
22	150	19.0		26.1	308	39.3	+20	05.8	84	56	20 47	21 50	** **	38 24	4 14 85			
23	165	18.7		26.0	323	05.3	+19	57.3	85	58	21 04	22 20	** **	21 50 21	3 59 88			
24	180	18.4	-23	26.0	337	31.3	+19	48.6	87	60 S	21 25	23 11	** **	22 04 17	3 40 93			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 55 ^m 3		Mag: -4.7 PMG: 8 ^h 50 ^m				Mag: +1.2 PMG: 12 ^h 45 ^m				Mag: -2.5 PMG: 17 ^h 41 ^m				Mag: +0.8 PMG: 7 ^h 00 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	90	26.8	227	27.7	-13	05.3	168	45.7	-23	56.9	94	12.2	-3	02.9	254	40.1	-4	09.8
1	105	29.3	242	28.1		05.8	183	46.1		56.8	109	14.4		02.8	269	42.4		09.9
2	120	31.7	257	28.4		06.3	198	46.4		56.6	124	16.6		02.7	284	44.8		09.9
3	135	34.2	272	28.8		06.9	213	46.8		56.5	139	18.8		02.6	299	47.1		09.9
4	150	36.7	287	29.1		07.4	228	47.2		56.3	154	21.1		02.5	314	49.4		10.0
5	165	39.1	302	29.4	-13	07.9	243	47.6	-23	56.2	169	23.3	-3	02.4	329	51.7	-4	10.0
6	180	41.6	317	29.8	-13	08.4	258	47.9	-23	56.1	184	25.5	-3	02.2	344	54.1	-4	10.1
7	195	44.1	332	30.1		08.9	273	48.3		55.9	199	27.7		02.1	359	56.4		10.1
8	210	46.5	347	30.4		09.4	288	48.7		55.8	214	29.9		02.0	14	58.7		10.2
9	225	49.0	2	30.8		10.0	303	49.1		55.6	229	32.2		01.9	30	01.0		10.2
10	240	51.5	17	31.1		10.5	318	49.4		55.5	244	34.4		01.8	45	03.3		10.3
11	255	53.9	32	31.4	-13	11.0	333	49.8	-23	55.3	259	36.6	-3	01.7	60	05.7	-4	10.3
12	270	56.4	47	31.7	-13	11.5	348	50.2	-23	55.2	274	38.8	-3	01.5	75	08.0	-4	10.4
13	285	58.8	62	32.1		12.0	3	50.5		55.0	289	41.0		01.4	90	10.3		10.4
14	301	01.3	77	32.4		12.5	18	50.9		54.9	304	43.3		01.3	105	12.6		10.5
15	316	03.8	92	32.7		13.1	33	51.3		54.7	319	45.5		01.2	120	15.0		10.5
16	331	06.2	107	33.0		13.6	48	51.7		54.6	334	47.7		01.1	135	17.3		10.6
17	346	08.7	122	33.3	-13	14.1	63	52.0	-23	54.4	349	49.9	-3	01.0	150	19.6	-4	10.6
18	1	11.2	137	33.7	-13	14.6	78	52.4	-23	54.3	4	52.1	-3	00.8	165	21.9	-4	10.7
19	16	13.6	152	34.0		15.1	93	52.8		54.1	19	54.3		00.7	180	24.2		10.7
20	31	16.1	167	34.3		15.7	108	53.2		54.0	34	56.6		00.6	195	26.6		10.7
21	46	18.6	182	34.6		16.2	123	53.5		53.8	49	58.8		00.5	210	28.9		10.8
22	61	21.0	197	34.9		16.7	138	53.9		53.7	65	01.0		00.4	225	31.2		10.8
23	76	23.5	212	35.2		17.2	153	54.3		53.5	80	03.2		00.2	240	33.5		10.9
24	91	26.0	227	35.5	-13	17.8	168	54.6	-23	53.4	95	05.4	-3	00.1	255	35.9	-4	10.9
Dif	—		+3		-5		+4		+1		+22		+1		+23		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 0				Edad: 17 ^d 3 PHE { 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/3 SD: 16/1 PMG: 1 ^h 33 ^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
0	180	18.4	-23	26.0	337	31.3	+19	48.6	60 N	7 08	8 05	9 03	18 05	98	10 10	14		
1	195	18.1		26.0	351	57.3	70	39.8	58	7 01	7 53	8 45	16 94		9 58	18		
2	210	17.8		26.0	6	23.4	71	30.9	56	6 54	43	31	26 90		48	21		
3	225	17.4		26.0	20	49.5	71	21.9	54	48	34	18	35 86		39	24		
4	240	17.1		25.9	35	15.7	72	12.7	52	42	26	8 07	42 84		31	26		
5	255	16.8	-23	25.9	49	42.0	73	+19 03.5	50	6 37	7 18	7 57	18 49	82	9 23	29		
6	270	16.5	-23	25.9	64	08.3	73	+18 54.1	45	6 25	7 02	7 36	19 04	76	9 07	33		
7	285	16.2		25.9	78	34.6	73	44.5	40	14	6 49	19	16 72		8 54	37		
8	300	15.9		25.8	93	01.0	74	34.9	35	6 05	37	7 05	26 69		43	40		
9	315	15.6		25.8	107	27.5	75	25.2	30	5 56	26	6 53	35 66		33	42		
10	330	15.3		25.8	121	54.0	75	15.3	20	40	6 07	31	19 50	62	16	47		
11	345	15.0	-23	25.8	136	20.6	76	+18 05.3	10 N	5 24	5 50	6 13	20 03	58	8 01	51		
12	0	14.7	-23	25.7	150	47.2	76	+17 55.2	0	5 06	5 33	5 55	20 16	53	7 47	54		
13	15	14.3		25.7	165	13.9	77	45.0	10 S	4 47	5 15	38	28 50		33	58		
14	30	14.0		25.7	179	40.6	77	34.7	20	4 25	4 54	5 19	41 46		17	63		
15	45	13.7		25.6	194	07.4	78	24.2	30	3 56	29	4 57	20 56	41	7 00	67		
16	60	13.4		25.6	208	34.2	78	13.7	35	37	4 14	44	21 05	38	6 49	70		
17	75	13.1	-23	25.6	223	01.1	79	+17 03.0	40	3 14	3 56	4 28	21 15	34	6 38	72		
18	90	12.8	-23	25.5	237	28.1	80	+16 52.3	45	2 43	3 33	4 10	21 26	31	6 24	76		
19	105	12.5		25.5	251	55.1	80	41.4	50	1 57	3 03	3 48	40 26		6 06	82		
20	120	12.2		25.5	266	22.2	81	30.4	52	1 29	2 48	37	47 23		5 58	84		
21	135	11.9		25.4	280	49.3	81	19.4	54	0 42	30	25	21 54	21	49	86		
22	150	11.6		25.4	295	16.5	82	+16 08.2	56	** **	2 08	3 10	22 02	18	39	89		
23	165	11.2		25.4	309	43.8	83	+15 56.9	58	** **	1 38	2 53	11 15	27	93			
24	180	10.9	-23	25.3	324	11.1	83	+15 45.6	60 S	** **	0 46	2 33	22 21	11	5 13	98		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 51 ^m 3		Mag: -4.7 PMG: 8 ^h 49 ^m		Mag: +1.2 PMG: 12 ^h 44 ^m		Mag: -2.4 PMG: 17 ^h 37 ^m		Mag: +0.8 PMG: 6 ^h 57 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	91	26.0	227	35.5	-13	17.8	168	54.6	-23	53.4	95	05.4	-3	00.1	255	35.9	-4	10.9
1	106	28.4	242	35.9		18.3	183	55.0		53.2	110	07.6	-3	00.0	270	38.2		11.0
2	121	30.9	257	36.2		18.8	198	55.4		53.1	125	09.9	-2	59.9	285	40.5		11.0
3	136	33.3	272	36.5		19.3	213	55.8		52.9	140	12.1		59.8	300	42.8		11.1
4	151	35.8	287	36.8		19.8	228	56.1		52.8	155	14.3		59.7	315	45.2		11.1
5	166	38.3	302	37.1	-13	20.4	243	56.5	-23	52.6	170	16.5	-2	59.5	330	47.5	-4	11.2
6	181	40.7	317	37.4	-13	20.9	258	56.9	-23	52.5	185	18.7	-2	59.4	345	49.8	-4	11.2
7	196	43.2	332	37.7		21.4	273	57.2		52.3	200	20.9		59.3	0	52.1		11.3
8	211	45.7	347	38.0		21.9	288	57.6		52.2	215	23.1		59.2	15	54.5		11.3
9	226	48.1	2	38.3		22.5	303	58.0		52.0	230	25.3		59.1	30	56.8		11.3
10	241	50.6	17	38.6		23.0	318	58.4		51.8	245	27.6		58.9	45	59.1		11.4
11	256	53.1	32	38.9	-13	23.5	333	58.7	-23	51.7	260	29.8	-2	58.8	61	01.4	-4	11.4
12	271	55.5	47	39.2	-13	24.1	348	59.1	-23	51.5	275	32.0	-2	58.7	76	03.8	-4	11.5
13	286	58.0	62	39.5		24.6	3	59.5		51.4	290	34.2		58.6	91	06.1		11.5
14	302	00.4	77	39.8		25.1	18	59.9		51.2	305	36.4		58.5	106	08.4		11.6
15	317	02.9	92	40.0		25.6	34	00.2		51.0	320	38.6		58.3	121	10.7		11.6
16	332	05.4	107	40.3		26.2	49	00.6		50.9	335	40.8		58.2	136	13.1		11.7
17	347	07.8	122	40.6	-13	26.7	64	01.0	-23	50.7	350	43.0	-2	58.1	151	15.4	-4	11.7
18	2	10.3	137	40.9	-13	27.2	79	01.3	-23	50.6	5	45.3	-2	58.0	166	17.7	-4	11.8
19	17	12.8	152	41.2		27.7	94	01.7		50.4	20	47.5		57.9	181	20.1		11.8
20	32	15.2	167	41.5		28.3	109	02.1		50.2	35	49.7		57.7	196	22.4		11.8
21	47	17.7	182	41.8		28.8	124	02.5		50.1	50	51.9		57.6	211	24.7		11.9
22	62	20.2	197	42.0		29.3	139	02.8		49.9	65	54.1		57.5	226	27.0		11.9
23	77	22.6	212	42.3		29.9	154	03.2		49.8	80	56.3		57.4	241	29.4		12.0
24	92	25.1	227	42.6	-13	30.4	169	03.6	-23	49.6	95	58.5	-2	57.2	256	31.7	-4	12.0
Dif	—		+3 -5		+4 +2		+22 +1		+23 0									

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°3				Edad: 18 ^d 3 PHE { 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/5													
	PMG: 11 ^h 59 ^m 5				SD: 16°2 PMG: 2 ^h 29 ^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	h m m	m		
0	180	10.9	-23	25.3	324	11.1	+15	45.6	60 N	14 56	15 54	16 51	19 43 96	10 24 10				
1	195	10.6		25.3	338	38.4 83		34.1 ¹¹⁵	58	15 13	16 05	16 58	50 92	16 14				
2	210	10.3		25.2	353	05.9 85		22.5 ¹¹⁶	56	28	16	17 05	19 56 89	09 17				
3	225	10.0		25.2	7	33.3 84	+15	10.9 ¹¹⁶	54	41	25	11	20 01 86	10 03 19				
4	240	09.7		25.1	22	00.9 86	+14	59.1 ¹¹⁸	52	15 52	33	17	06 84	9 57 22				
5	255	09.4	-23	25.1	36	28.5 86	+14	47.3 ¹¹⁸	50	16 02	16 40	17 22	20 11 81	9 52 24				
6	270	09.1	-23	25.1	50	56.1 86	+14	35.4 ¹¹⁹	45	16 23	16 57	17 34	20 20 77	9 40 29				
7	285	08.8		25.0	65	23.8 87		23.4 ¹²⁰	40	39	17 10	44	28 72	31 32				
8	300	08.5		25.0	79	51.6 88	+14	11.3 ¹²¹	35	16 54	22	17 54	35 69	23 35				
9	315	08.2		24.9	94	19.4 88	+13	59.1 ¹²²	30	17 06	32	18 02	41 66	15 39				
10	330	07.8		24.9	108	47.3 89		46.8 ¹²³	20	27	17 51	19	20 52 60	9 03 44				
11	345	07.5	-23	24.8	123	15.2 89	+13	34.5 ¹²³	10 N	17 46	18 09	18 35	21 01 55	8 52 48				
12	0	07.2	-23	24.8	137	43.2 90	+13	22.0 ¹²⁵	0	18 03	18 26	18 52	21 09 51	8 41 53				
13	15	06.9		24.7	152	11.3 91	+13	09.5 ¹²⁵	10 S	21	18 44	19 11	18 47	31 56				
14	30	06.6		24.7	166	39.4 91	+12	57.0 ¹²⁵	20	18 40	19 04	19 34	27 42	20 60				
15	45	06.3		24.6	181	07.5 91		44.3 ¹²⁷	30	19 02	29	20 03	37 37	8 07 66				
16	60	06.0		24.6	195	35.7 92		31.6 ¹²⁷	35	15	19 45	21	43 34	7 59 69				
17	75	05.7	-23	24.5	210	04.0 93	+12	18.7 ¹²⁹	40	19 30	20 03	20 45	21 49 31	7 50 73				
18	90	05.4	-23	24.5	224	32.3 93	+12	05.9 ¹²⁸	45	19 48	20 25	21 15	21 57 27	7 40 77				
19	105	05.1		24.4	239	00.6 93	+11	52.9 ¹³⁰	50	20 11	20 55	22 01	22 06 22	28 81				
20	120	04.7		24.4	253	29.1 95		39.9 ¹³⁰	52	21	21 10	22 29	10 21	22 84				
21	135	04.4		24.3	267	57.5 94		26.8 ¹³¹	54	34	28	23 15	15 18	15 87				
22	150	04.1		24.2	282	26.1 96		13.6 ¹³²	56	20 48	21 51	** **	20 15	08 90				
23	165	03.8		24.2	296	54.6 95	+11	00.4 ¹³²	58	21 05	22 20	** **	26 12	7 00 93				
24	180	03.5	-23	24.1	311	23.2 96	+10	47.1 ¹³³	60 S	21 25	23 11	** **	22 32 9	6 51 97				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 47 ^m 4		Mag: -4.7 PMG: 8 ^h 49 ^m				Mag: +1.2 PMG: 12 ^h 43 ^m				Mag: -2.4 PMG: 17 ^h 34 ^m				Mag: +0.8 PMG: 6 ^h 53 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	25.1	227	42.6	-13	30.4	169	03.6	-23	49.6	95	58.5	-2	57.2	256	31.7	-4	12.0
1	107	27.6	242	42.9		30.9	184	04.0		49.4	111	00.7		57.1	271	34.0		12.1
2	122	30.0	257	43.1		31.5	199	04.3		49.3	126	02.9		57.0	286	36.3		12.1
3	137	32.5	272	43.4		32.0	214	04.7		49.1	141	05.1		56.9	301	38.7		12.2
4	152	34.9	287	43.7		32.5	229	05.1		48.9	156	07.3		56.8	316	41.0		12.2
5	167	37.4	302	44.0	-13	33.1	244	05.4	-23	48.8	171	09.6	-2	56.6	331	43.3	-4	12.2
6	182	39.9	317	44.2	-13	33.6	259	05.8	-23	48.6	186	11.8	-2	56.5	346	45.7	-4	12.3
7	197	42.3	332	44.5		34.1	274	06.2		48.4	201	14.0		56.4	1	48.0		12.3
8	212	44.8	347	44.8		34.7	289	06.6		48.3	216	16.2		56.3	16	50.3		12.4
9	227	47.3	2	45.0		35.2	304	06.9		48.1	231	18.4		56.2	31	52.7		12.4
10	242	49.7	17	45.3		35.7	319	07.3		47.9	246	20.6		56.0	46	55.0		12.5
11	257	52.2	32	45.6	-13	36.3	334	07.7	-23	47.8	261	22.8	-2	55.9	61	57.3	-4	12.5
12	272	54.7	47	45.8	-13	36.8	349	08.0	-23	47.6	276	25.0	-2	55.8	76	59.6	-4	12.6
13	287	57.1	62	46.1		37.3	4	08.4		47.4	291	27.2		55.7	92	02.0		12.6
14	302	59.6	77	46.4		37.9	19	08.8		47.3	306	29.4		55.5	107	04.3		12.6
15	318	02.1	92	46.6		38.4	34	09.2		47.1	321	31.6		55.4	122	06.6		12.7
16	333	04.5	107	46.9		38.9	49	09.5		46.9	336	33.8		55.3	137	09.0		12.7
17	348	07.0	122	47.1	-13	39.5	64	09.9	-23	46.7	351	36.0	-2	55.2	152	11.3	-4	12.8
18	3	09.4	137	47.4	-13	40.0	79	10.3	-23	46.6	6	38.2	-2	55.0	167	13.6	-4	12.8
19	18	11.9	152	47.6		40.6	94	10.7		46.4	21	40.4		54.9	182	15.9		12.9
20	33	14.4	167	47.9		41.1	109	11.0		46.2	36	42.6		54.8	197	18.3		12.9
21	48	16.8	182	48.1		41.6	124	11.4		46.0	51	44.8		54.7	212	20.6		12.9
22	63	19.3	197	48.4		42.2	139	11.8		45.9	66	47.0		54.6	227	22.9		13.0
23	78	21.8	212	48.6		42.7	154	12.1		45.7	81	49.2		54.4	242	25.3		13.0
24	93	24.2	227	48.9	-13	43.2	169	12.5	-23	45.5	96	51.4	-2	54.3	257	27.6	-4	13.1
Dif	—		+3		-5		+4		+2		+22		+1		+23		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 0				Edad: 19 ^d 3 PHE { 4 ^h : 59/5 12 ^h : 59/5 20 ^h : 59/5 PMG: 3 ^h 21 ^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	180	03.5	-23	24.1	311	23.2	+10	47.1	60 N	7 09	8 06	9 03	21 19	94	10 34	8		
1	195	03.2		24.1	325	51.9 ⁹⁷		33.8 ¹³³	58	7 01	7 54	8 46	22 91		30 11			
2	210	02.9		24.0	340	20.6 ⁹⁷		20.4 ¹³⁴	56	6 55	44	31	25 88		26 14			
3	225	02.6		24.0	354	49.4 ⁹⁸	+10	06.9 ¹³⁵	54	48	35	19	27 86		22 17			
4	240	02.3		23.9	9	18.2 ⁹⁸	+9	53.4 ¹³⁵	52	43	26	8 07	30 82		19 19			
5	255	02.0	-23	23.8	23	47.1 ⁹⁹	+9	39.8 ¹³⁶	50	6 37	7 19	7 58	21 32	80	10 16	21		
6	270	01.7	-23	23.8	38	16.0 ⁹⁹	+9	26.2 ¹³⁶	45	6 26	7 03	7 37	21 37	75	10 09	26		
7	285	01.3		23.7	52	44.9 ⁹⁹	+9	12.5 ¹³⁷	40	15	6 49	20	40 72		10 03	30		
8	300	01.0		23.6	67	13.9 ¹⁰⁰	+8	58.8 ¹³⁷	35	6 06	38	7 06	44 67		9 58	34		
9	315	00.7		23.6	81	43.0 ¹⁰¹		45.0 ¹³⁸	30	5 57	27	6 53	47 64		54 36			
10	330	00.4		23.5	96	12.0 ¹⁰⁰		31.2 ¹³⁸	20	41	6 08	32	52 59		47 41			
11	345	00.1	-23	23.4	110	41.2 ¹⁰²	+8	17.3 ¹³⁹	10 N	5 25	5 51	6 14	21 56	55	9 40	46		
12	359	59.8	-23	23.4	125	10.3 ¹⁰¹	+8	03.4 ¹³⁹	0	5 07	5 34	5 56	22 00	50	9 34	50		
13	14	59.5		23.3	139	39.5 ¹⁰²	+7	49.4 ¹⁴⁰	10 S	4 49	5 16	39	05 45		27 55			
14	29	59.2		23.2	154	08.8 ¹⁰³		35.4 ¹⁴⁰	20	4 26	4 55	5 20	09 41		20 60			
15	44	58.9		23.2	168	38.1 ¹⁰³		21.4 ¹⁴⁰	30	3 57	30	4 58	14 36		13 64			
16	59	58.6		23.1	183	07.4 ¹⁰³	+7	07.3 ¹⁴¹	35	38	4 15	45	17 33		08 68			
17	74	58.2	-23	23.0	197	36.8 ¹⁰⁴	+6	53.1 ¹⁴²	40	3 15	3 57	4 30	22 20	29	9 03	71		
18	89	57.9	-23	22.9	212	06.2 ¹⁰⁴	+6	39.0 ¹⁴¹	45	2 44	3 34	4 12	22 24	25	8 57	75		
19	104	57.6		22.9	226	35.6 ¹⁰⁴		24.8 ¹⁴²	50	1 59	3 04	3 49	28 21		49 81			
20	119	57.3		22.8	241	05.1 ¹⁰⁵	+6	10.5 ¹⁴³	52	1 31	2 49	38	31 18		46 83			
21	134	57.0		22.7	255	34.6 ¹⁰⁵	+5	56.3 ¹⁴²	54	0 44	31	26	33 16		42 86			
22	149	56.7		22.6	270	04.1 ¹⁰⁵		42.0 ¹⁴³	56	** **	2 09	3 12	35 14		38 89			
23	164	56.4		22.6	284	33.7 ¹⁰⁶		27.7 ¹⁴³	58	** **	1 39	2 55	38 11		33 92			
24	179	56.1	-23	22.5	299	03.2 ¹⁰⁵	+5	13.3 ¹⁴⁴	60 S	** **	0 49	2 34	22 41	8	8 28	95		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 43 ^m 5		Mag: -4.7 PMG: 8 ^h 49 ^m				Mag: +1.2 PMG: 12 ^h 43 ^m				Mag: -2.4 PMG: 17 ^h 30 ^m				Mag: +0.8 PMG: 6 ^h 49 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	93	24.2	227	48.9	-13	43.2	169	12.5	-23	45.5	96	51.4	-2	54.3	257	27.6	-4	13.1
1	108	26.7	242	49.1		43.8	184	12.9		45.4	111	53.6		54.2	272	29.9		13.1
2	123	29.2	257	49.4		44.3	199	13.3		45.2	126	55.8		54.1	287	32.3		13.2
3	138	31.6	272	49.6		44.9	214	13.6		45.0	141	58.1		53.9	302	34.6		13.2
4	153	34.1	287	49.9		45.4	229	14.0		44.8	157	00.3		53.8	317	36.9		13.3
5	168	36.6	302	50.1	-13	45.9	244	14.4	-23	44.6	172	02.5	-2	53.7	332	39.3	-4	13.3
6	183	39.0	317	50.3	-13	46.5	259	14.8	-23	44.5	187	04.7	-2	53.6	347	41.6	-4	13.3
7	198	41.5	332	50.6		47.0	274	15.1		44.3	202	06.9		53.4	2	43.9		13.4
8	213	43.9	347	50.8		47.6	289	15.5		44.1	217	09.1		53.3	17	46.3		13.4
9	228	46.4	2	51.1		48.1	304	15.9		43.9	232	11.3		53.2	32	48.6		13.5
10	243	48.9	17	51.3		48.7	319	16.2		43.8	247	13.5		53.1	47	50.9		13.5
11	258	51.3	32	51.5	-13	49.2	334	16.6	-23	43.6	262	15.7	-2	52.9	62	53.3	-4	13.5
12	273	53.8	47	51.8	-13	49.7	349	17.0	-23	43.4	277	17.9	-2	52.8	77	55.6	-4	13.6
13	288	56.3	62	52.0		50.3	4	17.4		43.2	292	20.1		52.7	92	57.9		13.6
14	303	58.7	77	52.2		50.8	19	17.7		43.0	307	22.3		52.6	108	00.3		13.7
15	319	01.2	92	52.4		51.4	34	18.1		42.9	322	24.5		52.4	123	02.6		13.7
16	334	03.7	107	52.7		51.9	49	18.5		42.7	337	26.7		52.3	138	04.9		13.8
17	349	06.1	122	52.9	-13	52.5	64	18.9	-23	42.5	352	28.9	-2	52.2	153	07.3	-4	13.8
18	4	08.6	137	53.1	-13	53.0	79	19.2	-23	42.3	7	31.0	-2	52.1	168	09.6	-4	13.8
19	19	11.0	152	53.3		53.5	94	19.6		42.1	22	33.2		51.9	183	11.9		13.9
20	34	13.5	167	53.6		54.1	109	20.0		41.9	37	35.4		51.8	198	14.3		13.9
21	49	16.0	182	53.8		54.6	124	20.4		41.7	52	37.6		51.7	213	16.6		14.0
22	64	18.4	197	54.0		55.2	139	20.7		41.6	67	39.8		51.6	228	18.9		14.0
23	79	20.9	212	54.2		55.7	154	21.1		41.4	82	42.0		51.4	243	21.3		14.1
24	94	23.4	227	54.4	-13	56.3	169	21.5	-23	41.2	97	44.2	-2	51.3	258	23.6	-4	14.1
Dif	—		+2		-5		+4		+2		+22		+1		+23			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 00 ^m 5			Edad: 20 ^d 3 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'4 PMG: 4 ^h 12 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	179	56.1	-23	22.5	299	03.2	+5 13.3	60 N	14 58	15 55	16 52	22 53 94	10 42 8					
1	194	55.8		22.4	313	32.9 ¹⁰⁷	+4 58.9 ¹⁴⁴	58	15 15	16 07	16 59	53 91	41 11					
2	209	55.5		22.3	328	02.5 ¹⁰⁶	44.5 ¹⁴⁴	56	30	17	17 06	53 87	40 13					
3	224	55.2		22.2	342	32.2 ¹⁰⁷	30.1 ¹⁴⁴	54	42	26	12	53 84	39 16					
4	239	54.9		22.2	357	01.9 ¹⁰⁷	15.7 ¹⁴⁴	52	15 53	34	18	52 82	38 18					
5	254	54.5	-23	22.1	11	31.7 ¹⁰⁸	+4 01.2 ¹⁴⁵	50	16 03	16 42	17 23	22 52 80	10 37 20					
6	269	54.2	-23	22.0	26	01.4 ¹⁰⁷	+3 46.7 ¹⁴⁵	45	16 24	16 58	17 35	22 52 75	10 35 25					
7	284	53.9		21.9	40	31.2 ¹⁰⁸	32.2 ¹⁴⁵	40	41	17 11	45	52 70	33 29					
8	299	53.6		21.8	55	01.0 ¹⁰⁸	17.7 ¹⁴⁵	35	16 55	23	17 55	51 67	32 32					
9	314	53.3		21.7	69	30.8 ¹⁰⁸	+3 03.2 ¹⁴⁵	30	17 07	34	18 03	51 64	30 36					
10	329	53.0		21.7	84	00.7 ¹⁰⁹	+2 48.6 ¹⁴⁶	20	28	17 52	20	51 58	28 41					
11	344	52.7	-23	21.6	98	30.6 ¹⁰⁹	+2 34.0 ¹⁴⁶	10 N	17 47	18 10	18 36	22 51 54	10 26 45					
12	359	52.4	-23	21.5	113	00.5 ¹⁰⁹	+2 19.5 ¹⁴⁵	0	18 04	18 27	18 53	22 50 50	10 24 50					
13	14	52.1		21.4	127	30.4 ¹⁰⁹	+2 04.9 ¹⁴⁶	10 S	22	18 45	19 12	50 45	22 54					
14	29	51.8		21.3	142	00.3 ¹⁰⁹	+1 50.3 ¹⁴⁶	20	18 41	19 05	19 34	50 41	20 59					
15	44	51.5		21.2	156	30.3 ¹¹⁰	35.7 ¹⁴⁶	30	19 03	30	20 04	50 35	17 65					
16	59	51.2		21.1	171	00.2 ¹⁰⁹	21.1 ¹⁴⁶	35	16	19 45	22	50 32	16 67					
17	74	50.8	-23	21.0	185	30.2 ¹¹⁰	+1 06.5 ¹⁴⁶	40	19 31	20 04	20 45	22 49 29	10 14 71					
18	89	50.5	-23	20.9	200	00.2 ¹¹⁰	+0 51.9 ¹⁴⁶	45	19 49	20 26	21 16	22 49 25	10 12 75					
19	104	50.2		20.8	214	30.2 ¹¹⁰	37.3 ¹⁴⁶	50	20 11	20 56	22 01	49 21	10 80					
20	119	49.9		20.7	229	00.2 ¹¹⁰	22.7 ¹⁴⁶	52	22	21 11	22 29	49 19	09 82					
21	134	49.6		20.7	243	30.2 ¹¹⁰	+0 08.1 ¹⁴⁶	54	34	29	23 14	49 16	08 85					
22	149	49.3		20.6	258	00.2 ¹¹⁰	-0 06.5 ¹⁴⁶	56	20 48	21 51	** **	49 14	07 87					
23	164	49.0		20.5	272	30.3 ¹¹¹	21.1 ¹⁴⁶	58	21 05	22 20	** **	49 11	05 91					
24	179	48.7	-23	20.4	287	00.3 ¹¹⁰	-0 35.7 ¹⁴⁶	60 S	21 25	23 09	** **	22 49 7	10 03 95					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 39 ^m 5		Mag: -4.7 PMG: 8 ^h 48 ^m			Mag: +1.2 PMG: 12 ^h 42 ^m			Mag: -2.4 PMG: 17 ^h 27 ^m			Mag: +0.8 PMG: 6 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	94	23.4	227	54.4	-13	56.3	169	21.5	-23	41.2	97	44.2	-2	51.3	258	23.6	-4	14.1
1	109	25.8	242	54.7		56.8	184	21.8		41.0	112	46.4		51.2	273	25.9		14.1
2	124	28.3	257	54.9		57.4	199	22.2		40.8	127	48.6		51.1	288	28.3		14.2
3	139	30.8	272	55.1		57.9	214	22.6		40.6	142	50.8		50.9	303	30.6		14.2
4	154	33.2	287	55.3		58.4	229	23.0		40.4	157	53.0		50.8	318	32.9		14.3
5	169	35.7	302	55.5	-13	59.0	244	23.3	-23	40.3	172	55.2	-2	50.7	333	35.3	-4	14.3
6	184	38.2	317	55.7	-13	59.5	259	23.7	-23	40.1	187	57.4	-2	50.5	348	37.6	-4	14.3
7	199	40.6	332	55.9	-14	00.1	274	24.1		39.9	202	59.6		50.4	3	40.0		14.4
8	214	43.1	347	56.1		00.6	289	24.5		39.7	218	01.8		50.3	18	42.3		14.4
9	229	45.5	2	56.3		01.2	304	24.8		39.5	233	04.0		50.2	33	44.6		14.5
10	244	48.0	17	56.5		01.7	319	25.2		39.3	248	06.2		50.0	48	47.0		14.5
11	259	50.5	32	56.7	-14	02.3	334	25.6	-23	39.1	263	08.4	-2	49.9	63	49.3	-4	14.5
12	274	52.9	47	56.9	-14	02.8	349	25.9	-23	38.9	278	10.6	-2	49.8	78	51.6	-4	14.6
13	289	55.4	62	57.1		03.4	4	26.3		38.7	293	12.8		49.7	93	54.0		14.6
14	304	57.9	77	57.3		03.9	19	26.7		38.5	308	15.0		49.5	108	56.3		14.7
15	320	00.3	92	57.5		04.5	34	27.1		38.3	323	17.1		49.4	123	58.6		14.7
16	335	02.8	107	57.7		05.0	49	27.4		38.2	338	19.3		49.3	139	01.0		14.8
17	350	05.3	122	57.9	-14	05.6	64	27.8	-23	38.0	353	21.5	-2	49.1	154	03.3	-4	14.8
18	5	07.7	137	58.1	-14	06.1	79	28.2	-23	37.8	8	23.7	-2	49.0	169	05.7	-4	14.8
19	20	10.2	152	58.3		06.7	94	28.6		37.6	23	25.9		48.9	184	08.0		14.9
20	35	12.7	167	58.5		07.2	109	28.9		37.4	38	28.1		48.8	199	10.3		14.9
21	50	15.1	182	58.7		07.8	124	29.3		37.2	53	30.3		48.6	214	12.7		15.0
22	65	17.6	197	58.9		08.3	139	29.7		37.0	68	32.5		48.5	229	15.0		15.0
23	80	20.0	212	59.1		08.9	154	30.1		36.8	83	34.7		48.4	244	17.3		15.0
24	95	22.5	227	59.3	-14	09.4	169	30.4	-23	36.6	98	36.9	-2	48.2	259	19.7	-4	15.1
Dif	—		+2		-5		+4		+2		+22		+1		+23		0	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 01 ^m 0			Edad: 21 ^d 3 PHE { 4 ^h : 59/4 12 ^h : 59/3 20 ^h : 59/2 PMG: 5 ^h 02 ^m R ^o : 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	48.7	-23	20.4	287	00.3	-0	35.7	60 N	7 09	8 06	9 04	** ** *	10 50	8
1	194	48.4		20.3	301	30.4 ¹¹¹	-0	50.3 ¹⁴⁶	58	7 02	7 54	8 46	** ** *	52	11
2	209	48.1		20.2	316	00.4 ¹¹⁰	-1	04.9 ¹⁴⁶	56	6 55	44	32	** ** *	53	15
3	224	47.8		20.1	330	30.5 ¹¹¹		19.5 ¹⁴⁶	54	49	35	19	** ** *	55	1
4	239	47.5		20.0	345	00.5 ¹¹⁰		34.0 ¹⁴⁵	52	43	27	8 08	** ** *	56	19
5	254	47.1	-23	19.9	359	30.6 ¹¹¹	-1	48.6 ¹⁴⁶	50	6 38	7 20	7 58	** ** *	10 57	22
6	269	46.8	-23	19.8	14	00.7 ¹¹¹	-2	03.1 ¹⁴⁵	45	6 26	7 04	7 37	** ** *	11 00	26
7	284	46.5		19.7	28	30.7 ¹¹⁰		17.6 ¹⁴⁵	40	16	6 50	21	** ** *	02	30
8	299	46.2		19.5	43	00.8 ¹¹¹		32.1 ¹⁴⁵	35	6 07	38	7 07	23 58 68	04	33
9	314	45.9		19.4	57	30.8 ¹¹⁰	-2	46.6 ¹⁴⁵	30	5 58	28	6 54	55 64	06	36
10	329	45.6		19.3	72	00.9 ¹¹¹	-3	01.1 ¹⁴⁵	20	42	6 09	33	49 60	09	41
11	344	45.3	-23	19.2	86	30.9 ¹¹⁰	-3	15.5 ¹⁴⁴	10 N	5 25	5 52	6 15	23 45 54	11 11	46
12	359	45.0	-23	19.1	101	01.0 ¹¹¹	-3	29.9 ¹⁴⁴	0	5 09	5 35	5 57	23 40 50	11 14	50
13	14	44.7		19.0	115	31.0 ¹¹⁰		44.3 ¹⁴⁴	10 S	4 50	5 17	40	35 47	16	54
14	29	44.4		18.9	130	01.1 ¹¹¹	-3	58.7 ¹⁴⁴	20	4 27	4 56	5 21	31 41	19	59
15	44	44.1		18.8	144	31.1 ¹¹⁰	-4	13.0 ¹⁴³	30	3 58	31	4 59	25 37	22	64
16	59	43.8		18.7	159	01.1 ¹¹⁰		27.3 ¹⁴³	35	39	4 16	46	22 34	23	68
17	74	43.5	-23	18.6	173	31.1 ¹¹⁰	-4	41.6 ¹⁴³	40	3 16	3 58	4 31	23 18 31	11 25	71
18	89	43.2	-23	18.5	188	01.1 ¹¹⁰	-4	55.9 ¹⁴³	45	2 46	3 36	4 13	23 14 27	11 27	75
19	104	42.8		18.3	202	31.1 ¹¹⁰	-5	10.1 ¹⁴²	50	2 01	3 06	3 50	10 22	30	80
20	119	42.5		18.2	217	01.0 ¹⁰⁹		24.3 ¹⁴²	52	1 33	2 51	40	08 20	31	82
21	134	42.2		18.1	231	31.0 ¹¹⁰		38.5 ¹⁴²	54	0 48	33	27	05 18	33	84
22	149	41.9		18.0	246	00.9 ¹⁰⁹	-5	52.6 ¹⁴¹	56	** ** *	2 11	3 13	03 15	34	87
23	164	41.6		17.9	260	30.8 ¹⁰⁹	-6	06.7 ¹⁴¹	58	** ** *	1 41	2 57	23 00 12	36	90
24	179	41.3	-23	17.8	275	00.7 ¹⁰⁹	-6	20.8 ¹⁴¹	60 S	** ** *	0 52	2 36	22 56 9	11 38	94

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 35 ^m 6		Mag: -4.7 PMG: 8 ^h 48 ^m			Mag: +1.2 PMG: 12 ^h 42 ^m			Mag: -2.4 PMG: 17 ^h 23 ^m			Mag: +0.8 PMG: 6 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	95	22.5	227	59.3	-14	09.4	169	30.4	-23	36.6	98	36.9	-2	48.2	259	19.7	-4	15.1
1	110	25.0	242	59.5		10.0	184	30.8		36.4	113	39.1		48.1	274	22.0		15.1
2	125	27.4	257	59.6		10.5	199	31.2		36.2	128	41.2		48.0	289	24.4		15.2
3	140	29.9	272	59.8		11.1	214	31.5		36.0	143	43.4		47.9	304	26.7		15.2
4	155	32.4	288	00.0		11.6	229	31.9		35.8	158	45.6		47.7	319	29.0		15.2
5	170	34.8	303	00.2	-14	12.2	244	32.3	-23	35.6	173	47.8	-2	47.6	334	31.4	-4	15.3
6	185	37.3	318	00.4	-14	12.7	259	32.7	-23	35.4	188	50.0	-2	47.5	349	33.7	-4	15.3
7	200	39.8	333	00.5		13.3	274	33.0		35.2	203	52.2		47.3	4	36.1		15.4
8	215	42.2	348	00.7		13.8	289	33.4		35.0	218	54.4		47.2	19	38.4		15.4
9	230	44.7	3	00.9		14.4	304	33.8		34.8	233	56.6		47.1	34	40.7		15.4
10	245	47.1	18	01.1		14.9	319	34.2		34.6	248	58.8		46.9	49	43.1		15.5
11	260	49.6	33	01.2	-14	15.5	334	34.5	-23	34.4	264	00.9	-2	46.8	64	45.4	-4	15.5
12	275	52.1	48	01.4	-14	16.0	349	34.9	-23	34.2	279	03.1	-2	46.7	79	47.8	-4	15.5
13	290	54.5	63	01.6		16.6	4	35.3		34.0	294	05.3		46.6	94	50.1		15.6
14	305	57.0	78	01.8		17.1	19	35.7		33.8	309	07.5		46.4	109	52.4		15.6
15	320	59.5	93	01.9		17.7	34	36.0		33.6	324	09.7		46.3	124	54.8		15.7
16	336	01.9	108	02.1		18.3	49	36.4		33.4	339	11.9		46.2	139	57.1		15.7
17	351	04.4	123	02.3	-14	18.8	64	36.8	-23	33.2	354	14.1	-2	46.0	154	59.5	-4	15.7
18	6	06.9	138	02.4	-14	19.4	79	37.2	-23	33.0	9	16.2	-2	45.9	170	01.8	-4	15.8
19	21	09.3	153	02.6		19.9	94	37.5		32.8	24	18.4		45.8	185	04.1		15.8
20	36	11.8	168	02.8		20.5	109	37.9		32.5	39	20.6		45.6	200	06.5		15.9
21	51	14.3	183	02.9		21.0	124	38.3		32.3	54	22.8		45.5	215	08.8		15.9
22	66	16.7	198	03.1		21.6	139	38.7		32.1	69	25.0		45.4	230	11.2		15.9
23	81	19.2	213	03.2		22.1	154	39.0		31.9	84	27.2		45.2	245	13.5		16.0
24	96	21.6	228	03.4	-14	22.7	169	39.4	-23	31.7	99	29.4	-2	45.1	260	15.9	-4	16.0
Dif	—		+2	-6			+4	+2			+22	+1			+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 01 ^m 5			Edad: 22 ^d 3 PHE { 4 ^h : 59:1 12 ^h : 59:0 20 ^h : 59:0 Rº: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	179	41.3	-23	17.8	275	00.7	-6	20.8	60 N	15 00	15 57	16 54	0 27 95	10 58 10				
1	194	41.0		17.7	289	30.6 ¹⁰⁹		34.8 ¹⁴⁰	58	17	16 09	17 01	24 90	11 03 13				
2	209	40.7		17.5	304	00.5 ¹⁰⁹		48.8 ¹⁴⁰	56	31		19 08	20 88	08 16				
3	224	40.4		17.4	318	30.3 ¹⁰⁸		02.7 ¹³⁹	54	44		28 14	17 85	12 18				
4	239	40.1		17.3	333	00.2 ¹⁰⁹		16.6 ¹³⁹	52	15 55		36 20	14 82	15 22				
5	254	39.8	-23	17.2	347	30.0 ¹⁰⁸		7 30.4 ¹³⁸	50	16 05	16 43	17 25	0 12 80	11 19 23				
6	269	39.5	-23	17.0	1	59.7 ¹⁰⁷		7 44.2 ¹³⁸	45	16 25	16 59	17 36	0 07 74	11 26 28				
7	284	39.2		16.9	16	29.5 ¹⁰⁸		7 58.0 ¹³⁸	40	42	17 13	47	0 02 71	32 32				
8	299	38.9		16.8	30	59.2 ¹⁰⁷		8 11.7 ¹³⁷	35	16 56	24	17 56	** ** *	37 35				
9	314	38.6		16.7	45	28.9 ¹⁰⁷		25.4 ¹³⁷	30	17 08	35	18 05	** ** *	42 38				
10	329	38.3		16.6	59	58.6 ¹⁰⁷		39.0 ¹³⁶	20	30	17 54	21	** ** *	50 43				
11	344	37.9	-23	16.4	74	28.3 ¹⁰⁷		8 52.5 ¹³⁵	10 N	17 48	18 11	18 37	** ** *	11 57 47				
12	359	37.6	-23	16.3	88	57.9 ¹⁰⁶		9 06.0 ¹³⁵	0	18 05	18 28	18 54	** ** *	12 04 51				
13	14	37.3		16.2	103	27.5 ¹⁰⁶		19.5 ¹³⁵	10 S	23	18 46	19 13	** ** *	10 55				
14	29	37.0		16.0	117	57.0 ¹⁰⁵		32.9 ¹³⁴	20	18 42	19 06	19 35	** ** *	18 59				
15	44	36.7		15.9	132	26.6 ¹⁰⁶		46.2 ¹³³	30	19 03	31	20 04	** ** *	26 64				
16	59	36.4		15.8	146	56.1 ¹⁰⁵		9 59.5 ¹³³	35	16	19 46	23	23 56 37	31 67				
17	74	36.1	-23	15.6	161	25.5 ¹⁰⁴		10 12.7 ¹³²	40	19 31	20 04	20 46	23 49 34	12 36 71				
18	89	35.8	-23	15.5	175	55.0 ¹⁰⁵		10 25.9 ¹³²	45	19 49	20 26	21 16	23 41 30	12 42 75				
19	104	35.5		15.4	190	24.4 ¹⁰⁴		39.0 ¹³¹	50	20 12	20 56	22 01	32 25	50 79				
20	119	35.2		15.3	204	53.7 ¹⁰³		10 52.0 ¹³⁰	52	22	21 11	22 28	28 23	53 82				
21	134	34.9		15.1	219	23.1 ¹⁰⁴		11 05.0 ¹³⁰	54	34	29	23 12	23 21	12 57 85				
22	149	34.6		15.0	233	52.4 ¹⁰³		17.9 ¹²⁹	56	20 49	21 50	** ** *	18 18	13 01 88				
23	164	34.3		14.8	248	21.6 ¹⁰²		30.8 ¹²⁹	58	21 05	22 19	** ** *	12 15	06 91				
24	179	34.0	-23	14.7	262	50.9 ¹⁰³		11 43.5 ¹²⁷	60 S	21 25	23 07	** ** *	23 05 12	13 12 94				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 31 ^m 7			Mag: -4.7 PMG: 8 ^h 48 ^m			Mag: +1.2 PMG: 12 ^h 41 ^m			Mag: -2.4 PMG: 17 ^h 20 ^m			Mag: +0.8 PMG: 6 ^h 38 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	96	21.6	228	03.4	-14	22.7	169	39.4	-23	31.7	99	29.4	-2	45.1	260	15.9	-4	16.0
1	111	24.1	243	03.6		23.2	184	39.8		31.5	114	31.5		45.0	275	18.2		16.0
2	126	26.6	258	03.7		23.8	199	40.2		31.3	129	33.7		44.8	290	20.5		16.1
3	141	29.0	273	03.9		24.4	214	40.5		31.1	144	35.9		44.7	305	22.9		16.1
4	156	31.5	288	04.0		24.9	229	40.9		30.9	159	38.1		44.6	320	25.2		16.2
5	171	34.0	303	04.2	-14	25.5	244	41.3	-23	30.7	174	40.3	-2	44.4	335	27.6	-4	16.2
6	186	36.4	318	04.3	-14	26.0	259	41.6	-23	30.5	189	42.5	-2	44.3	350	29.9	-4	16.2
7	201	38.9	333	04.5		26.6	274	42.0		30.2	204	44.6		44.2	5	32.3		16.3
8	216	41.4	348	04.6		27.1	289	42.4		30.0	219	46.8		44.1	20	34.6		16.3
9	231	43.8	3	04.8		27.7	304	42.8		29.8	234	49.0		43.9	35	36.9		16.4
10	246	46.3	18	04.9		28.3	319	43.1		29.6	249	51.2		43.8	50	39.3		16.4
11	261	48.8	33	05.1	-14	28.8	334	43.5	-23	29.4	264	53.4	-2	43.7	65	41.6	-4	16.4
12	276	51.2	48	05.2	-14	29.4	349	43.9	-23	29.2	279	55.5	-2	43.5	80	44.0	-4	16.5
13	291	53.7	63	05.3		29.9	4	44.3		29.0	294	57.7		43.4	95	46.3		16.5
14	306	56.1	78	05.5		30.5	19	44.6		28.8	309	59.9		43.3	110	48.7		16.5
15	321	58.6	93	05.6		31.0	34	45.0		28.5	325	02.1		43.1	125	51.0		16.6
16	337	01.1	108	05.8		31.6	49	45.4		28.3	340	04.3		43.0	140	53.4		16.6
17	352	03.5	123	05.9	-14	32.2	64	45.8	-23	28.1	355	06.4	-2	42.9	155	55.7	-4	16.7
18	7	06.0	138	06.0	-14	32.7	79	46.1	-23	27.9	10	08.6	-2	42.7	170	58.0	-4	16.7
19	22	08.5	153	06.2		33.3	94	46.5		27.7	25	10.8		42.6	186	00.4		16.7
20	37	10.9	168	06.3		33.8	109	46.9		27.5	40	13.0		42.5	201	02.7		16.8
21	52	13.4	183	06.5		34.4	124	47.3		27.2	55	15.2		42.3	216	05.1		16.8
22	67	15.9	198	06.6		34.9	139	47.6		27.0	70	17.3		42.2	231	07.4		16.8
23	82	18.3	213	06.7		35.5	154	48.0		26.8	85	19.5		42.1	246	09.8		16.9
24	97	20.8	228	06.8	-14	36.1	169	48.4	-23	26.6	100	21.7	-2	41.9	261	12.1	-4	16.9
Dif	—			+1 -6			+4 +2			+22 +1			+23 0					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 02 ^m 0				Edad: 23 ^d 3 PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'6 PMG: 6 ^h 42 ^m R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	34.0	-23	14.7	262	50.9	-11	43.5	60 N	7	10	8	06	9	03	2	02	
1	194	33.7		14.6	277	20.0 ¹⁰¹	-11	56.3 ¹²⁸	58	7	02	7	55	8	46	1	54	
2	209	33.4		14.4	291	49.2 ¹⁰²	-12	08.9 ¹²⁶	56	6	55		44	32	48	87	24	
3	224	33.1		14.3	306	18.3 ¹⁰¹		21.4 ¹²⁵	54		49		35	19	42	84	30	
4	239	32.8		14.2	320	47.4 ¹⁰¹		33.9 ¹²⁵	52		44		27	8	08	36	82	
5	254	32.5	-23	14.0	335	16.4 ¹⁰⁰	-12	46.4 ¹²⁵	50	6	39	7	20	7	58	1	32	
6	269	32.2	-23	13.9	349	45.4 ¹⁰⁰	-12	58.7 ¹²³	45	6	27	7	04	7	38	1	21	
7	284	31.8		13.7	4	14.3 ⁹⁹	-13	11.0 ¹²³	40		17		6	51	21	13	71	
8	299	31.5		13.6	18	43.2 ⁹⁹		23.2 ¹²²	35	6	07		39	7	07	1	06	
9	314	31.2		13.4	33	12.1 ⁹⁹		35.3 ¹²¹	30	5	59		29	6	55	0	59	
10	329	30.9		13.3	47	40.9 ⁹⁸		47.3 ¹²⁰	20		42	6	10	34	49	59	33	
11	344	30.6	-23	13.2	62	09.6 ⁹⁷	-13	59.2 ¹¹⁹	10 N	5	26	5	53	6	16	0	39	
12	359	30.3	-23	13.0	76	38.4 ⁹⁸	-14	11.1 ¹¹⁹	0	5	10	5	36	5	58	0	30	
13	14	30.0		12.9	91	07.1 ⁹⁷		22.9 ¹¹⁸	10 S	4	51	5	18	41	22	48	13	
14	29	29.7		12.7	105	35.7 ⁹⁶		34.6 ¹¹⁷	20	4	28	4	57	22	12	44	17	
15	44	29.4		12.6	120	04.3 ⁹⁶		46.2 ¹¹⁶	30	3	59		33	5	00	0	02	
16	59	29.1		12.4	134	32.8 ⁹⁵	-14	57.7 ¹¹⁵	35		41	4	18	4	47	**	**	
17	74	28.8	-23	12.3	149	01.3 ⁹⁵	-15	09.2 ¹¹⁵	40	3	18	3	59	4	32	**	**	
18	89	28.5	-23	12.1	163	29.8 ⁹⁵	-15	20.5 ¹¹³	45	2	48	3	37	4	14	**	**	
19	104	28.2		12.0	177	58.2 ⁹⁴		31.8 ¹¹³	50	2	03	3	08	3	52	23	57	
20	119	27.9		11.8	192	26.5 ⁹³		42.9 ¹¹¹	52	1	36	2	53	41	51	29	15	
21	134	27.6		11.6	206	54.8 ⁹³	-15	54.0 ¹¹¹	54	0	52		35	29	44	26	22	
22	149	27.3		11.5	221	23.1 ⁹³	-16	05.0 ¹¹⁰	56	**	**	2	13	3	15	36	23	
23	164	27.0		11.3	235	51.3 ⁹²		15.8 ¹⁰⁸	58	**	**	1	44	2	59	27	20	
24	179	26.7	-23	11.2	250	19.5 ⁹²	-16	26.6 ¹⁰⁸	60 S	**	**	0	57	2	38	23	17	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 27 ^m 7		Mag: -4.7 PMG: 8 ^h 47 ^m				Mag: +1.2 PMG: 12 ^h 40 ^m				Mag: -2.4 PMG: 17 ^h 16 ^m				Mag: +0.8 PMG: 6 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	97	20.8	228	06.8	-14	36.1	169	48.4	-23	26.6	100	21.7	-2	41.9	261	12.1	-4	16.9
1	112	23.2	243	07.0		36.6	184	48.8		26.4	115	23.9		41.8	276	14.5		16.9
2	127	25.7	258	07.1		37.2	199	49.1		26.1	130	26.1		41.6	291	16.8		17.0
3	142	28.2	273	07.2		37.7	214	49.5		25.9	145	28.2		41.5	306	19.2		17.0
4	157	30.6	288	07.4		38.3	229	49.9		25.7	160	30.4		41.4	321	21.5		17.1
5	172	33.1	303	07.5	-14	38.9	244	50.3	-23	25.5	175	32.6	-2	41.2	336	23.8	-4	17.1
6	187	35.6	318	07.6	-14	39.4	259	50.6	-23	25.2	190	34.8	-2	41.1	351	26.2	-4	17.1
7	202	38.0	333	07.7		40.0	274	51.0		25.0	205	36.9		41.0	6	28.5		17.2
8	217	40.5	348	07.8		40.5	289	51.4		24.8	220	39.1		40.8	21	30.9		17.2
9	232	43.0	3	08.0		41.1	304	51.8		24.6	235	41.3		40.7	36	33.2		17.2
10	247	45.4	18	08.1		41.7	319	52.1		24.4	250	43.5		40.6	51	35.6		17.3
11	262	47.9	33	08.2	-14	42.2	334	52.5	-23	24.1	265	45.6	-2	40.4	66	37.9	-4	17.3
12	277	50.4	48	08.3	-14	42.8	349	52.9	-23	23.9	280	47.8	-2	40.3	81	40.3	-4	17.3
13	292	52.8	63	08.4		43.3	4	53.3		23.7	295	50.0		40.2	96	42.6		17.4
14	307	55.3	78	08.5		43.9	19	53.6		23.5	310	52.2		40.0	111	45.0		17.4
15	322	57.7	93	08.7		44.5	34	54.0		23.2	325	54.3		39.9	126	47.3		17.5
16	338	00.2	108	08.8		45.0	49	54.4		23.0	340	56.5		39.8	141	49.7		17.5
17	353	02.7	123	08.9	-14	45.6	64	54.8	-23	22.8	355	58.7	-2	39.6	156	52.0	-4	17.5
18	8	05.1	138	09.0	-14	46.1	79	55.1	-23	22.5	11	00.9	-2	39.5	171	54.4	-4	17.6
19	23	07.6	153	09.1		46.7	94	55.5		22.3	26	03.0		39.3	186	56.7		17.6
20	38	10.1	168	09.2		47.3	109	55.9		22.1	41	05.2		39.2	201	59.1		17.6
21	53	12.5	183	09.3		47.8	124	56.3		21.9	56	07.4		39.1	217	01.4		17.7
22	68	15.0	198	09.4		48.4	139	56.7		21.6	71	09.6		38.9	232	03.8		17.7
23	83	17.5	213	09.5		48.9	154	57.0		21.4	86	11.7		38.8	247	06.1		17.7
24	98	19.9	228	09.6	-14	49.5	169	57.4	-23	21.2	101	13.9	-2	38.7	262	08.5	-4	17.8
Dif	—		+1		-6		+4		+2		+22		+1		+23			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 02 ^m 5				Edad: 24 ^d 3 PHE { 4 ^h : 58/5 12 ^h : 58/4 20 ^h : 58/3 PMG: 7 ^h 35 ^m R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	179	26.7	-23	11.2	250	19.5	-16	26.6	60 N	15 02	15 59	16 56	3 36	93	11 21	20		
1	194	26.4		11.0	264	47.6 91		37.3 107	58	19	16 11	17 03	25	88	33	25		
2	209	26.1		10.9	279	15.7 91		47.9 106	56	33	21	10	15	85	44	28		
3	224	25.8		10.7	293	43.7 90		-16 58.4 105	54	46	30	16	3 06	82	11 54	30		
4	239	25.5		10.5	308	11.7 90		-17 08.8 104	52	15 57	38	21	2 58	79	12 02	33		
5	254	25.2	-23	10.4	322	39.6 89		-17 19.1 103	50	16 07	16 45	17 26	2 51	77	12 10	34		
6	269	24.9	-23	10.2	337	07.5 89		-17 29.2 101	45	16 27	17 01	17 38	2 36	73	12 26	38		
7	284	24.6		10.1	351	35.3 88		39.3 101	40	44	14	48	24	69	40	41		
8	299	24.3		09.9	6	03.1 88		49.3 100	35	16 58	26	17 57	13	67	12 51	44		
9	314	24.0		09.7	20	30.8 87		-17 59.1 98	30	17 10	36	18 06	2 04	64	13 01	46		
10	329	23.7		09.6	34	58.5 87		-18 08.9 98	20	31	17 55	22	1 48	61	18	50		
11	344	23.4	-23	09.4	49	26.1 86		-18 18.5 96	10 N	17 49	18 12	18 38	1 35	57	13 33	53		
12	359	23.1	-23	09.2	63	53.7 86		-18 28.1 96	0	18 06	18 29	18 55	1 22	54	13 48	55		
13	14	22.8		09.1	78	21.2 85		37.5 94	10 S	24	18 47	19 14	1 10	51	14 02	58		
14	29	22.5		08.9	92	48.7 85		46.8 93	20	18 42	19 07	19 36	0 56	48	17	61		
15	44	22.2		08.7	107	16.1 84		-18 56.0 92	30	19 04	31	20 05	41	44	35	64		
16	59	21.9		08.6	121	43.5 84		-19 05.1 91	35	17	19 46	23	33	41	45	66		
17	74	21.6	-23	08.4	136	10.9 84		-19 14.1 90	40	19 32	20 04	20 46	0 23	38	14 57	68		
18	89	21.3	-23	08.2	150	38.2 83		-19 23.0 89	45	19 49	20 27	21 16	0 11	35	15 11	71		
19	104	21.0		08.1	165	05.4 82		31.7 87	50	20 12	20 56	22 00	** ** *	**	28	75		
20	119	20.7		07.9	179	32.6 82		40.3 86	52	22	21 11	22 27	** ** *	**	36	77		
21	134	20.4		07.7	193	59.8 82		48.8 85	54	34	28	23 09	** ** *	**	45	79		
22	149	20.1		07.5	208	26.9 81		-19 57.2 84	56	20 48	21 50	** ** *	23 59	33	15 55	82		
23	164	19.8		07.4	222	53.9 80		-20 05.5 83	58	21 05	22 18	** ** *	47	30	16 07	85		
24	179	19.5	-23	07.2	237	21.0 81		-20 13.6 81	60 S	21 25	23 04	** ** *	23 33	25	16 20	90		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 23 ^m 8		Mag: -4.7 PMG: 8 ^h 47 ^m				Mag: +1.2 PMG: 12 ^h 40 ^m				Mag: -2.4 PMG: 17 ^h 13 ^m				Mag: +0.8 PMG: 6 ^h 30 ^m			
h	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	98	19.9	228	09.6	-14	49.5	169	57.4	-23	21.2	101	13.9	-2	38.7	262	08.5	-4	17.8
1	113	22.4	243	09.7		50.1	184	57.8		20.9	116	16.1		38.5	277	10.8		17.8
2	128	24.9	258	09.8		50.6	199	58.2		20.7	131	18.2		38.4	292	13.2		17.8
3	143	27.3	273	09.9		51.2	214	58.5		20.5	146	20.4		38.3	307	15.5		17.9
4	158	29.8	288	10.0		51.7	229	58.9		20.2	161	22.6		38.1	322	17.9		17.9
5	173	32.2	303	10.1	-14	52.3	244	59.3	-23	20.0	176	24.8	-2	38.0	337	20.2	-4	17.9
6	188	34.7	318	10.2	-14	52.9	259	59.7	-23	19.8	191	26.9	-2	37.8	352	22.6	-4	18.0
7	203	37.2	333	10.3		53.4	275	00.0		19.5	206	29.1		37.7	7	24.9		18.0
8	218	39.6	348	10.4		54.0	290	00.4		19.3	221	31.3		37.6	22	27.3		18.1
9	233	42.1	3	10.5		54.6	305	00.8		19.1	236	33.4		37.4	37	29.6		18.1
10	248	44.6	18	10.6		55.1	320	01.2		18.8	251	35.6		37.3	52	32.0		18.1
11	263	47.0	33	10.7	-14	55.7	335	01.5	-23	18.6	266	37.8	-2	37.2	67	34.3	-4	18.2
12	278	49.5	48	10.8	-14	56.2	350	01.9	-23	18.4	281	39.9	-2	37.0	82	36.7	-4	18.2
13	293	52.0	63	10.9		56.8	5	02.3		18.1	296	42.1		36.9	97	39.0		18.2
14	308	54.4	78	10.9		57.4	20	02.7		17.9	311	44.3		36.7	112	41.4		18.3
15	323	56.9	93	11.0		57.9	35	03.0		17.7	326	46.5		36.6	127	43.7		18.3
16	338	59.3	108	11.1		58.5	50	03.4		17.4	341	48.6		36.5	142	46.1		18.3
17	354	01.8	123	11.2	-14	59.0	65	03.8	-23	17.2	356	50.8	-2	36.3	157	48.4	-4	18.4
18	9	04.3	138	11.3	-14	59.6	80	04.2	-23	16.9	11	53.0	-2	36.2	172	50.8	-4	18.4
19	24	06.7	153	11.4	-15	00.2	95	04.6		16.7	26	55.1		36.0	187	53.1		18.4
20	39	09.2	168	11.4		00.7	110	04.9		16.5	41	57.3		35.9	202	55.5		18.5
21	54	11.7	183	11.5		01.3	125	05.3		16.2	56	59.5		35.8	217	57.8		18.5
22	69	14.1	198	11.6		01.9	140	05.7		16.0	72	01.6		35.6	233	00.2		18.5
23	84	16.6	213	11.7		02.4	155	06.1		15.7	87	03.8		35.5	248	02.5		18.6
24	99	19.1	228	11.7	-15	03.0	170	06.4	-23	15.5	102	06.0	-2	35.4	263	04.9	-4	18.6
Dif	—		+1		-6		+4		+2		+22		+1		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 02 ^m 9			Edad: 25 ^d 3 PHE { 4 ^h : 58'1 12 ^h : 58'0 20 ^h : 57'9 SD: 15'9 PMG: 8 ^h 29 ^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	179	19.5	-23	07.2	237	21.0	-20	13.6	60 N	7 09	8 06	9 03	5 09	85	11 41	32
1	194	19.2		07.0	251	47.9	79	21.6	58	7 02	7 54	8 46	4 53	81	11 58	35
2	209	18.9		06.8	266	14.9	80	29.5	56	6 56	44	31	40	78	12 12	37
3	224	18.6		06.7	280	41.7	78	37.3	54	50	36	19	28	75	24	40
4	239	18.3		06.5	295	08.6	79	44.9	52	44	28	8 08	17	74	35	41
5	254	18.0	-23	06.3	309	35.4	78	-20 52.5	50	6 39	7 20	7 59	4 08	72	12 44	43
6	269	17.7	-23	06.1	324	02.2	78	-20 59.9	45	6 27	7 05	7 38	3 49	69	13 04	46
7	284	17.4		05.9	338	28.9	77	-21 07.1	40	17	6 51	22	33	67	21	48
8	299	17.1		05.8	352	55.6	77	14.3	35	6 08	40	7 08	20	65	35	49
9	314	16.8		05.6	7	22.2	76	21.3	30	5 59	29	6 56	3 08	64	13 47	51
10	329	16.5		05.4	21	48.8	76	28.2	20	43	6 11	35	2 49	60	14 08	53
11	344	16.2	-23	05.2	36	15.4	76	-21 34.9	10 N	5 27	5 54	6 16	2 32	58	14 26	54
12	359	15.9	-23	05.0	50	41.9	75	-21 41.5	0	5 11	5 37	5 59	2 16	56	14 43	56
13	14	15.6		04.8	65	08.4	75	48.0	10 S	4 52	5 19	42	2 01	53	15 00	58
14	29	15.3		04.6	79	34.8	74	-21 54.3	20	30	4 59	23	1 44	51	18	60
15	44	15.0		04.5	94	01.2	74	-22 00.6	30	4 01	34	5 01	25	48	39	61
16	59	14.7		04.3	108	27.6	74	06.6	35	3 42	19	4 49	14	46	15 51	63
17	74	14.4	-23	04.1	122	54.0	74	-22 12.6	40	3 20	4 01	4 34	1 01	45	16 05	65
18	89	14.1	-23	03.9	137	20.3	73	-22 18.4	45	2 50	3 39	4 16	0 46	42	16 22	66
19	104	13.8		03.7	151	46.6	73	24.1	50	2 05	3 10	3 54	28	39	43	68
20	119	13.5		03.5	166	12.9	73	29.6	52	1 39	2 55	43	20	36	16 53	69
21	134	13.2		03.3	180	39.1	72	35.0	54	0 57	37	31	0 10	35	17 04	71
22	149	12.9		03.1	195	05.3	72	40.3	56	** ** *	2 16	17	** ** *	**	17	72
23	164	12.6		02.9	209	31.5	72	45.4	58	** ** *	1 47	3 01	** ** *	**	32	75
24	179	12.3	-23	02.7	223	57.6	71	-22 50.4	60 S	** ** *	1 02	2 41	23 58	40	17 50	77

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 19 ^m 9		Mag: -4.7 PMG: 8 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 39 ^m			Mag: -2.4 PMG: 17 ^h 09 ^m			Mag: +0.8 PMG: 6 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	99	19.1	228	11.7	-15	03.0	170	06.4	-23	15.5	102	06.0	-2	35.4	263	04.9	-4	18.6
1	114	21.5	243	11.8		03.5	185	06.8		15.3	117	08.1		35.2	278	07.3		18.6
2	129	24.0	258	11.9		04.1	200	07.2		15.0	132	10.3		35.1	293	09.6		18.7
3	144	26.5	273	12.0		04.7	215	07.6		14.8	147	12.5		34.9	308	12.0		18.7
4	159	28.9	288	12.0		05.2	230	07.9		14.5	162	14.6		34.8	323	14.3		18.7
5	174	31.4	303	12.1	-15	05.8	245	08.3	-23	14.3	177	16.8	-2	34.7	338	16.7	-4	18.8
6	189	33.8	318	12.2	-15	06.4	260	08.7	-23	14.0	192	18.9	-2	34.5	353	19.0	-4	18.8
7	204	36.3	333	12.2		06.9	275	09.1		13.8	207	21.1		34.4	8	21.4		18.8
8	219	38.8	348	12.3		07.5	290	09.5		13.5	222	23.3		34.2	23	23.7		18.9
9	234	41.2	3	12.4		08.1	305	09.8		13.3	237	25.4		34.1	38	26.1		18.9
10	249	43.7	18	12.4		08.6	320	10.2		13.0	252	27.6		34.0	53	28.4		18.9
11	264	46.2	33	12.5	-15	09.2	335	10.6	-23	12.8	267	29.8	-2	33.8	68	30.8	-4	19.0
12	279	48.6	48	12.6	-15	09.7	350	11.0	-23	12.6	282	31.9	-2	33.7	83	33.2	-4	19.0
13	294	51.1	63	12.6		10.3	5	11.3		12.3	297	34.1		33.5	98	35.5		19.0
14	309	53.6	78	12.7		10.9	20	11.7		12.1	312	36.3		33.4	113	37.9		19.1
15	324	56.0	93	12.8		11.4	35	12.1		11.8	327	38.4		33.3	128	40.2		19.1
16	339	58.5	108	12.8		12.0	50	12.5		11.6	342	40.6		33.1	143	42.6		19.1
17	355	01.0	123	12.9	-15	12.6	65	12.9	-23	11.3	357	42.7	-2	33.0	158	44.9	-4	19.2
18	10	03.4	138	12.9	-15	13.1	80	13.2	-23	11.1	12	44.9	-2	32.8	173	47.3	-4	19.2
19	25	05.9	153	13.0		13.7	95	13.6		10.8	27	47.1		32.7	188	49.6		19.2
20	40	08.3	168	13.0		14.2	110	14.0		10.6	42	49.2		32.5	203	52.0		19.3
21	55	10.8	183	13.1		14.8	125	14.4		10.3	57	51.4		32.4	218	54.4		19.3
22	70	13.3	198	13.1		15.4	140	14.7		10.1	72	53.5		32.3	233	56.7		19.3
23	85	15.7	213	13.2		15.9	155	15.1		09.8	87	55.7		32.1	248	59.1		19.3
24	100	18.2	228	13.2	-15	16.5	170	15.5	-23	09.6	102	57.9	-2	32.0	264	01.4	-4	19.4
Dif	—		+1 -6			+4 +2			+22 +1			+24 0						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 03 ^m 4			Edad: 26 ^d 3 PHE { 4 ^h : 57:7 12 ^h : 57:6 20 ^h : 57:4 Rº: 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	12.3	-23	02.7	223	57.6	-22	50.4	60 N	15 05	16 01	16 58	6 34 69	12 13 48		
1	194	12.0		02.5	238	23.8	72	55.2	58	22	13	17 05	6 14 67	33 50		
2	209	11.7		02.3	252	49.9	71	-22 59.9	56	36	23	11	5 58 65	12 49 52		
3	224	11.4		02.1	267	16.0	71	-23 04.5	54	48	31	17	43 65	13 04 52		
4	239	11.1		01.9	281	42.0	70	08.9	52	15 59	39	23	31 64	16 53		
5	254	10.8	-23	01.7	296	08.1	71	-23 13.2	50	16 08	16 47	17 28	5 20 64	13 27 53		
6	269	10.5	-23	01.5	310	34.1	70	-23 17.3	45	16 29	17 02	17 39	4 58 62	13 50 54		
7	284	10.2		01.3	325	00.1	70	21.3	40	45	16	50	40 61	14 09 54		
8	299	09.9		01.1	339	26.1	70	25.2	39	16 59	27	17 59	25 60	24 55		
9	314	09.6		00.9	353	52.1	70	28.9	37	17 11	37	18 07	4 12 59	14 38 55		
10	329	09.3		00.7	8	18.1	70	32.4	35	32	17 56	23	3 49 59	15 01 55		
11	344	09.0	-23	00.5	22	44.0	69	-23 35.8	34	10 N	17 50	18 39	3 30 57	15 20 57		
12	359	08.7	-23	00.3	37	10.0	70	-23 39.1	33	0	18 07	18 30	3 12 57	15 39 57		
13	14	08.4	-23	00.1	51	35.9	69	42.3	32	10 S	24	18 47	2 54 56	15 58 56		
14	29	08.1	-22	59.9	66	01.8	69	45.2	29	20	18 43	19 07	19 37	35 54	16 18 57	
15	44	07.8		59.7	80	27.8	70	48.1	29	30	19 05	32	20 05	13 53	40 58	
16	59	07.5		59.5	94	53.7	69	50.8	27	35	17	19 47	2 00 53	16 54 58		
17	74	07.2	-22	59.3	109	19.6	69	-23 53.3	25	40	19 32	20 05	20 46	1 46 51	17 10 57	
18	89	06.9	-22	59.1	123	45.5	69	-23 55.7	24	45	19 50	20 27	21 16	1 28 50	17 28 58	
19	104	06.6		58.9	138	11.4	69	-23 58.0	23	50	20 12	20 56	21 59	1 07 48	17 51 58	
20	119	06.4		58.7	152	37.4	70	-24 00.1	21	52	22	21 10	22 25	0 56 47	18 02 59	
21	134	06.1		58.5	167	03.3	69	02.1	20	54	34	27	23 05	45 46	15 58	
22	149	05.8		58.2	181	29.2	69	03.9	18	56	20 48	21 49	** ** *	32 44	29 59	
23	164	05.5		58.0	195	55.1	69	05.6	17	58	21 04	22 16	** ** *	0 17 42	18 47 58	
24	179	05.2	-22	57.8	210	21.1	70	-24 07.1	15	60 S	21 24	22 59	** ** *	** ** *	19 07 59	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 17 ^h 16 ^m 0		Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 39 ^m			Mag: -2.4 PMG: 17 ^h 06 ^m			Mag: +0.8 PMG: 6 ^h 23 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	100	18.2	228	13.2	-15	16.5	170	15.5	-23	09.6	102	57.9	-2	32.0	264	01.4
1	115	20.7	243	13.3		17.1	185	15.9		09.3	118	00.0		31.8	279	03.8
2	130	23.1	258	13.3		17.6	200	16.3		09.0	133	02.2		31.7	294	06.1
3	145	25.6	273	13.4		18.2	215	16.6		08.8	148	04.4		31.6	309	08.5
4	160	28.1	288	13.4		18.7	230	17.0		08.5	163	06.5		31.4	324	10.9
5	175	30.5	303	13.5	-15	19.3	245	17.4	-23	08.3	178	08.7	-2	31.3	339	13.2
6	190	33.0	318	13.5	-15	19.9	260	17.8	-23	08.0	193	10.8	-2	31.1	354	15.6
7	205	35.5	333	13.6		20.4	275	18.2		07.8	208	13.0		31.0	9	17.9
8	220	37.9	348	13.6		21.0	290	18.5		07.5	223	15.1		30.8	24	20.3
9	235	40.4	3	13.6		21.6	305	18.9		07.3	238	17.3		30.7	39	22.7
10	250	42.8	18	13.7		22.1	320	19.3		07.0	253	19.5		30.6	54	25.0
11	265	45.3	33	13.7	-15	22.7	335	19.7	-23	06.7	268	21.6	-2	30.4	69	27.4
12	280	47.8	48	13.7	-15	23.3	350	20.1	-23	06.5	283	23.8	-2	30.3	84	29.7
13	295	50.2	63	13.8		23.8	5	20.4		06.2	298	25.9		30.1	99	32.1
14	310	52.7	78	13.8		24.4	20	20.8		06.0	313	28.1		30.0	114	34.4
15	325	55.2	93	13.8		24.9	35	21.2		05.7	328	30.2		29.8	129	36.8
16	340	57.6	108	13.9		25.5	50	21.6		05.4	343	32.4		29.7	144	39.2
17	356	00.1	123	13.9	-15	26.1	65	21.9	-23	05.2	358	34.6	-2	29.6	159	41.5
18	11	02.6	138	13.9	-15	26.6	80	22.3	-23	04.9	13	36.7	-2	29.4	174	43.9
19	26	05.0	153	14.0		27.2	95	22.7		04.7	28	38.9		29.3	189	46.2
20	41	07.5	168	14.0		27.8	110	23.1		04.4	43	41.0		29.1	204	48.6
21	56	10.0	183	14.0		28.3	125	23.5		04.1	58	43.2		29.0	219	51.0
22	71	12.4	198	14.1		28.9	140	23.8		03.9	73	45.3		28.8	234	53.3
23	86	14.9	213	14.1		29.4	155	24.2		03.6	88	47.5		28.7	249	55.7
24	101	17.3	228	14.1	-15	30.0	170	24.6	-23	03.3	103	49.6	-2	28.6	264	58.1
Dif	—		0			-6	+4		+3		+22		+1		+24	

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	46.3	46.4	46.4	46.3	46.1	45.9	45.6	45.4	45.3	45.2	45.3	45.3
2 - β Cas	<i>Caph</i>	2.3	357	34.3	34.5	34.5	34.4	34.1	33.7	33.4	33.0	32.8	32.8	32.9	33.1
3 - γ Peg	<i>Algenib</i>	2.8	356	33.6	33.6	33.6	33.6	33.4	33.2	32.9	32.7	32.6	32.6	32.6	32.7
4 - α Phe	<i>Ankaa</i>	2.4	353	18.2	18.3	18.3	18.3	18.1	17.9	17.6	17.3	17.2	17.1	17.2	17.3
5 - α Cas	<i>Schedar</i>	2.2	349	43.7	43.9	44.0	43.9	43.7	43.3	43.0	42.6	42.4	42.3	42.4	42.5
6 - β Cet	<i>Diphda</i>	2.0	348	58.4	58.5	58.5	58.5	58.4	58.1	57.9	57.7	57.5	57.5	57.5	57.6
7 - γ Cas	<i>Navi</i>	1.6	345	40.0	40.3	40.4	40.4	40.2	39.8	39.4	39.0	38.7	38.6	38.6	38.8
8 - β And	<i>Mirach</i>	2.1	342	25.3	25.4	25.5	25.5	25.4	25.1	24.8	24.6	24.4	24.3	24.3	24.3
9 - α Eri	<i>Achernar</i>	0.5	335	28.4	28.7	28.8	28.9	28.8	28.6	28.2	27.9	27.6	27.5	27.5	27.7
10 - γ And	<i>Almak</i>	2.3	328	51.9	52.0	52.1	52.2	52.1	51.8	51.5	51.2	51.0	50.8	50.7	50.8
12 - α Ari	<i>Hamal</i>	2.0	328	3.5	3.7	3.7	3.8	3.7	3.5	3.2	3.0	2.8	2.6	2.6	2.6
11 - α UMi	<i>Polaris</i>	2.0	318	51.3	64.8	75.6	82.0	80.3	71.6	58.7	43.6	29.5	19.6	15.6	18.7
13 - θ Eri	<i>Acamar</i>	3.3	315	20.0	20.1	20.3	20.4	20.4	20.3	20.0	19.8	19.5	19.3	19.3	19.3
14 - α Cet	<i>Menkar</i>	2.5	314	17.5	17.6	17.7	17.8	17.7	17.6	17.4	17.2	16.9	16.8	16.7	16.7
15 - β Per	<i>Algol</i>	2.1	312	47.1	47.3	47.4	47.5	47.4	47.3	47.0	46.7	46.4	46.2	46.1	46.0
16 - α Per	<i>Mirfak</i>	1.8	308	43.7	43.9	44.1	44.2	44.2	44.0	43.7	43.4	43.0	42.8	42.6	42.5
17 - η Tau	<i>Alcyone</i>	2.9	302	58.2	58.4	58.5	58.6	58.6	58.4	58.2	58.0	57.7	57.5	57.4	57.3
18 - γ Eri	<i>Zaurak</i>	3.0	300	22.1	22.2	22.3	22.4	22.4	22.3	22.1	21.9	21.7	21.5	21.4	21.3
19 - α Tau	<i>Aldebaran</i>	0.9	290	52.0	52.1	52.2	52.3	52.3	52.2	52.1	51.8	51.6	51.4	51.2	51.1
20 - β Ori	<i>Rigel</i>	0.1	281	14.2	14.2	14.4	14.5	14.5	14.5	14.4	14.2	13.9	13.7	13.5	13.4
21 - α Aur	<i>Capella</i>	0.1	280	37.7	37.8	38.0	38.2	38.3	38.2	38.0	37.7	37.4	37.1	36.8	36.6
22 - γ Ori	<i>Bellatrix</i>	1.6	278	34.4	34.4	34.6	34.7	34.7	34.7	34.6	34.4	34.1	33.9	33.7	33.6
23 - β Tau	<i>Elnath</i>	1.7	278	15.4	15.5	15.6	15.8	15.8	15.8	15.6	15.4	15.1	14.9	14.7	14.5
24 - δ Ori	<i>Mintaka</i>	2.2	276	51.6	51.7	51.8	51.9	52.0	52.0	51.8	51.7	51.4	51.2	51.0	50.9
25 - ε Ori	<i>Alnilam</i>	1.7	275	48.6	48.7	48.8	48.9	49.0	48.9	48.8	48.6	48.4	48.2	48.0	47.9
26 - ζ Ori	<i>Alnitak</i>	1.9	274	40.5	40.5	40.6	40.8	40.8	40.8	40.7	40.5	40.3	40.0	39.9	39.7
27 - κ Ori	<i>Saiph</i>	2.1	272	55.9	56.0	56.1	56.3	56.3	56.3	56.2	56.0	55.8	55.6	55.4	55.3
28 - α Ori	<i>Betelgeuse</i>	0.4	271	3.7	3.7	3.8	4.0	4.0	4.0	3.9	3.7	3.5	3.3	3.1	2.9
29 - β Aur	<i>Menkalinan</i>	1.9	269	55.2	55.3	55.4	55.6	55.7	55.7	55.5	55.3	55.0	54.7	54.4	54.2
30 - β CMa	<i>Mirzam</i>	2.0	264	12.3	12.4	12.5	12.6	12.7	12.7	12.6	12.5	12.3	12.1	11.8	11.7
31 - α Car	<i>Canopus</i>	-0.7	263	56.7	56.9	57.1	57.4	57.6	57.7	57.6	57.4	57.2	56.9	56.6	56.4
32 - γ Gem	<i>Alhena</i>	1.9	260	25.0	25.0	25.1	25.2	25.3	25.3	25.2	25.1	24.8	24.6	24.4	24.2
33 - α CMa	<i>Sirius</i>	-1.5	258	35.6	35.6	35.7	35.9	36.0	36.0	35.9	35.8	35.6	35.4	35.1	35.0
34 - ε CMa	<i>Adhara</i>	1.5	255	14.1	14.2	14.3	14.4	14.6	14.6	14.6	14.4	14.2	14.0	13.8	13.6
35 - δ CMa	<i>Wezen</i>	1.9	252	47.4	47.5	47.6	47.7	47.9	47.9	47.9	47.7	47.5	47.3	47.1	46.9
36 - η CMa	<i>Aludra</i>	2.5	248	52.0	52.1	52.2	52.3	52.5	52.5	52.5	52.4	52.2	52.0	51.7	51.5
37 - α Gem	<i>Castor</i>	2.0	246	10.7	10.6	10.7	10.9	11.0	11.0	11.0	10.8	10.6	10.4	10.1	9.9
38 - α CMi	<i>Procyon</i>	0.4	245	2.0	2.0	2.0	2.2	2.3	2.3	2.3	2.1	2.0	1.8	1.5	1.3
39 - β Gem	<i>Pollux</i>	1.1	243	30.4	30.3	30.4	30.5	30.7	30.7	30.7	30.5	30.3	30.1	29.8	29.6
40 - ζ Pup	<i>Naos</i>	2.3	238	60.3	60.3	60.4	60.6	60.8	60.9	60.9	60.9	60.7	60.4	60.2	59.9
41 - γ Vel	<i>Regor</i>	1.8	237	31.7	31.7	31.9	32.1	32.3	32.4	32.5	32.4	32.2	32.0	31.6	31.4
42 - ε Car	<i>Avior</i>	1.9	234	18.5	18.5	18.7	19.0	19.3	19.5	19.6	19.6	19.4	19.0	18.6	18.3
43 - δ Velorum		2.0	228	44.6	44.6	44.7	45.0	45.2	45.4	45.5	45.5	45.3	45.0	44.7	44.4
44 - ζ Hydrae		3.1	225	60.5	60.5	60.5	60.6	60.7	60.8	60.8	60.7	60.6	60.4	60.2	59.9
45 - λ Vel	<i>Suhail</i>	2.2	222	53.9	53.9	53.9	54.1	54.3	54.4	54.5	54.5	54.3	54.1	53.8	53.5
46 - β Car	<i>Miaplacidus</i>	1.7	221	39.6	39.5	39.7	40.1	40.5	40.9	41.2	41.2	41.1	40.7	40.1	39.6
47 - ι Car	<i>Aspidiske</i>	2.3	220	38.9	38.9	39.0	39.2	39.5	39.7	39.9	39.9	39.8	39.5	39.1	38.7
48 - α Lyn	<i>Elvashak</i>	3.1	219	34.3	34.2	34.2	34.4	34.5	34.6	34.6	34.6	34.4	34.2	33.9	33.7
49 - α Hyd	<i>Alphard</i>	2.0	217	58.2	58.1	58.2	58.2	58.3	58.4	58.5	58.4	58.3	58.2	57.9	57.7
50 - α Leo	<i>Regulus</i>	1.4	207	45.9	45.7	45.7	45.8	45.9	45.9	46.0	46.0	45.9	45.8	45.5	45.3

ESTRELLAS, 2010
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	+29	9.0	8.9	8.8	8.8	8.8	8.8	8.9	9.1	9.2	9.3	9.3	9.3
2 - β Cas	<i>Caph</i>	2.3	+59	12.7	12.6	12.4	12.3	12.2	12.3	12.3	12.5	12.7	12.8	13.0	13.0
3 - γ Peg	<i>Algenib</i>	2.8	+15	14.5	14.5	14.4	14.4	14.4	14.5	14.6	14.7	14.8	14.9	14.9	14.9
4 - α Phe	<i>Ankaa</i>	2.4	-42	15.2	15.2	15.1	14.9	14.8	14.6	14.6	14.6	14.6	14.7	14.8	14.9
5 - α Cas	<i>Schedar</i>	2.2	+56	35.9	35.8	35.7	35.6	35.5	35.5	35.6	35.7	35.9	36.0	36.2	36.2
6 - β Cet	<i>Diphda</i>	2.0	-17	55.9	55.9	55.9	55.8	55.7	55.6	55.5	55.4	55.4	55.4	55.5	55.6
7 - γ Cas	<i>Navi</i>	1.6	+60	46.6	46.6	46.5	46.3	46.2	46.2	46.3	46.4	46.5	46.7	46.9	46.9
8 - β And	<i>Mirach</i>	2.1	+35	40.7	40.6	40.6	40.5	40.4	40.5	40.5	40.6	40.8	40.9	41.0	41.0
9 - α Eri	<i>Achernar</i>	0.5	-57	11.4	11.3	11.2	11.0	10.9	10.7	10.6	10.6	10.6	10.8	10.9	11.0
10 - γ And	<i>Almak</i>	2.3	+42	23.0	22.9	22.9	22.8	22.7	22.7	22.7	22.8	22.9	23.0	23.1	23.2
12 - α Ari	<i>Hamal</i>	2.0	+23	30.8	30.7	30.7	30.6	30.6	30.7	30.7	30.8	30.9	31.0	31.0	31.0
11 - α UMi	<i>Polaris</i>	2.0	+89	18.9	18.9	18.8	18.7	18.5	18.4	18.4	18.4	18.5	18.6	18.8	19.0
13 - θ Eri	<i>Acamar</i>	3.3	-40	16.0	16.0	16.0	15.9	15.7	15.6	15.4	15.4	15.4	15.5	15.6	15.7
14 - α Cet	<i>Menkar</i>	2.5	+4	7.8	7.8	7.8	7.8	7.8	7.9	8.0	8.0	8.1	8.1	8.1	8.0
15 - β Per	<i>Algol</i>	2.1	+40	59.9	59.9	59.8	59.8	59.7	59.7	59.7	59.7	59.8	59.9	60.0	60.1
16 - α Per	<i>Mirfak</i>	1.8	+49	54.1	54.1	54.0	53.9	53.9	53.8	53.8	53.8	53.9	54.0	54.1	54.2
17 - η Tau	<i>Alcyone</i>	2.9	+24	8.3	8.3	8.3	8.2	8.2	8.2	8.2	8.3	8.3	8.4	8.4	8.4
18 - γ Eri	<i>Zaurak</i>	3.0	-13	28.9	28.9	28.9	28.9	28.8	28.7	28.6	28.5	28.4	28.5	28.5	28.6
19 - α Tau	<i>Aldebaran</i>	0.9	+16	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.9	31.9	31.9	31.9	31.9
20 - β Ori	<i>Rigel</i>	0.1	-8	11.5	11.5	11.5	11.5	11.5	11.4	11.3	11.2	11.2	11.2	11.3	11.3
21 - α Aur	<i>Capella</i>	0.1	+46	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6	21.6
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	37.0	37.0	37.0
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.5	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	11.8	11.8	11.8	11.8	11.7	11.7	11.6	11.6	11.6	11.6	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.3	56.4	56.3	56.3	56.2	56.2	56.1	56.1	56.1	56.1	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.0	40.1	40.1	40.1	40.1	40.0	39.9	39.8	39.8	39.8	39.9	40.0
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.5	24.5	24.5	24.5	24.5	24.5	24.6	24.6	24.6	24.6	24.6	24.5
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.9	57.0	57.0	57.0	57.0	56.9	56.8	56.8	56.8	56.8	56.8	56.8
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.7	57.8	57.9	57.9	57.8	57.7	57.6	57.5	57.5	57.5	57.6	57.7
31 - α Car	<i>Canopus</i>	-0.7	-52	42.2	42.3	42.4	42.4	42.3	42.2	42.0	41.9	41.8	41.8	41.9	42.1
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.3
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.9	44.0	44.0	44.0	44.0	43.9	43.8	43.7	43.7	43.7	43.8	43.9
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.2	59.4	59.4	59.4	59.4	59.3	59.2	59.0	59.0	59.0	59.1	59.2
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.6	24.8	24.8	24.8	24.8	24.7	24.6	24.5	24.4	24.4	24.5	24.6
36 - η CMa	<i>Aludra</i>	2.5	-29	19.4	19.6	19.7	19.7	19.6	19.5	19.4	19.3	19.2	19.2	19.3	19.4
37 - α Gem	<i>Castor</i>	2.0	+31	51.9	51.9	52.0	52.0	52.0	51.9	51.9	51.9	51.8	51.8	51.7	51.7
38 - α CMi	<i>Procyon</i>	0.4	+5	11.9	11.8	11.8	11.8	11.8	11.8	11.9	11.9	11.9	11.9	11.8	11.7
39 - β Gem	<i>Pollux</i>	1.1	+27	60.0	60.0	60.1	60.1	60.1	60.1	60.0	60.0	59.9	59.9	59.8	59.8
40 - ζ Pup	<i>Naos</i>	2.3	-40	1.9	2.1	2.2	2.3	2.2	2.2	2.0	1.9	1.8	1.8	1.8	2.0
41 - γ Vel	<i>Regor</i>	1.8	-47	22.0	22.2	22.3	22.4	22.4	22.3	22.1	22.0	21.9	21.8	21.9	22.0
42 - ϵ Car	<i>Avior</i>	1.9	-59	32.5	32.7	32.8	32.9	32.9	32.9	32.7	32.6	32.4	32.4	32.4	32.6
43 - δ Velorum		2.0	-54	44.7	44.9	45.1	45.2	45.2	45.1	45.0	44.8	44.7	44.7	44.7	44.8
44 - ζ Hydrae		3.1	+5	54.3	54.2	54.2	54.2	54.2	54.3	54.3	54.3	54.3	54.3	54.2	54.1
45 - λ Vel	<i>Suhail</i>	2.2	-43	28.4	28.6	28.7	28.8	28.8	28.8	28.7	28.5	28.4	28.4	28.4	28.5
46 - β Car	<i>Miaplacidus</i>	1.7	-69	45.5	45.7	45.8	45.9	46.0	45.9	45.8	45.7	45.5	45.5	45.5	45.6
47 - ι Car	<i>Aspidiske</i>	2.3	-59	19.0	19.2	19.4	19.5	19.5	19.5	19.4	19.2	19.1	19.0	19.0	19.1
48 - α Lyn	<i>Elvashak</i>	3.1	+34	20.8	20.8	20.9	20.9	21.0	20.9	20.9	20.8	20.8	20.7	20.6	20.5
49 - α Hyd	<i>Alphard</i>	2.0	-8	42.2	42.3	42.4	42.4	42.4	42.4	42.3	42.3	42.2	42.3	42.3	42.4
50 - α Leo	<i>Regulus</i>	1.4	+11	54.9	54.8	54.8	54.9	54.9	54.9	54.9	54.9	54.9	54.8	54.7	54.7

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	11.4	11.3	11.2	11.3	11.4	11.6	11.7	11.8	11.8	11.6	11.4	11.0
52 - ν	Hydrae	3.1	197	27.7	27.6	27.5	27.6	27.6	27.7	27.8	27.8	27.8	27.6	27.4	27.2
53 - β	UMa Merak	2.4	194	22.6	22.4	22.3	22.4	22.6	22.8	22.9	23.0	23.0	22.8	22.5	22.2
54 - α	UMa Dubhe	1.8	193	54.1	53.8	53.7	53.8	54.0	54.3	54.5	54.6	54.6	54.4	54.1	53.7
55 - β	Leo Denebola	2.1	182	36.0	35.8	35.7	35.7	35.8	35.8	35.9	36.0	36.0	35.9	35.7	35.5
56 - γ	Crv Gienah	2.6	175	54.8	54.6	54.5	54.4	54.5	54.5	54.6	54.7	54.7	54.6	54.5	54.2
57 - α	Cru Acrux	1.4	173	12.2	11.8	11.6	11.5	11.6	11.8	12.1	12.3	12.4	12.4	12.1	11.7
58 - γ	Cru Gacrux	1.6	172	3.7	3.4	3.2	3.1	3.2	3.3	3.5	3.7	3.8	3.8	3.6	3.2
59 - γ	Cen Muhlifain	2.2	169	28.5	28.2	28.1	28.0	28.0	28.1	28.3	28.4	28.5	28.5	28.3	28.0
60 - β	Cru Mimosa	1.3	167	54.9	54.6	54.4	54.3	54.3	54.5	54.7	54.9	55.0	55.0	54.8	54.4
61 - ε	UMa Alioth	1.8	166	22.6	22.2	22.0	22.0	22.1	22.3	22.5	22.7	22.8	22.8	22.6	22.4
62 - α^2	CVn Cor Caroli	2.9	165	52.2	51.9	51.8	51.7	51.8	51.9	52.0	52.1	52.2	52.2	52.1	51.8
63 - ε	Vir Vindemiatrix	2.8	164	19.5	19.3	19.2	19.1	19.1	19.2	19.2	19.3	19.4	19.4	19.3	19.1
64 - ζ	UMa Mizar	2.3	158	54.8	54.4	54.2	54.1	54.2	54.3	54.5	54.7	54.9	55.0	54.8	54.6
65 - α	Vir Spica	1.0	158	33.9	33.6	33.5	33.4	33.4	33.4	33.5	33.6	33.6	33.6	33.5	33.3
66 - η	UMa Alkaid	1.9	153	0.8	0.4	0.2	0.1	0.1	0.2	0.4	0.6	0.7	0.8	0.7	0.5
67 - β	Cen Hadar	0.6	148	51.7	51.3	51.0	50.7	50.7	50.9	51.2	51.4	51.4	51.4	51.3	51.0
68 - θ	Cen Menkent	2.1	148	10.6	10.3	10.1	10.0	9.9	9.9	10.0	10.2	10.3	10.3	10.2	10.0
69 - α	Boo Arcturus	0.0	145	58.0	57.8	57.6	57.5	57.4	57.5	57.5	57.6	57.8	57.8	57.7	57.6
70 - α^1	Cen Rigil Kentaurus	0.0	139	55.6	55.1	54.8	54.5	54.4	54.4	54.6	54.9	55.1	55.2	55.2	54.9
71 - α^2	Lib Zubenelgenubi	2.8	137	8.3	8.1	7.9	7.7	7.6	7.6	7.6	7.7	7.8	7.9	7.9	7.7
72 - β	UMi Kochab	2.1	137	20.0	19.4	18.8	18.5	18.5	18.7	19.2	19.8	20.4	20.8	20.9	20.7
73 - β	Lib Zubeneschamali	2.6	130	36.7	36.4	36.2	36.0	35.9	35.9	35.9	36.0	36.1	36.2	36.2	36.1
74 - α	CrB Alphecca	2.2	126	13.3	13.0	12.8	12.6	12.5	12.5	12.6	12.7	12.8	12.9	12.9	12.8
75 - α	Ser Unukalhai	2.7	123	48.5	48.2	48.0	47.9	47.8	47.7	47.7	47.8	47.9	48.0	48.0	47.9
76 - α	Sco Antares	0.9	112	29.6	29.3	29.1	28.9	28.7	28.6	28.6	28.7	28.8	28.9	28.9	28.9
77 - α	TrA Atria	1.9	107	34.2	33.6	33.1	32.5	32.1	31.9	31.9	32.2	32.5	32.9	33.0	32.9
78 - ε	Scorpii	2.3	107	17.8	17.5	17.2	17.0	16.8	16.6	16.6	16.7	16.9	17.0	17.0	17.0
79 - η	Oph Sabik	2.4	102	15.7	15.5	15.2	15.0	14.8	14.7	14.7	14.7	14.8	15.0	15.0	15.0
80 - α	Her Rasalgethi	3.1	101	13.5	13.3	13.0	12.8	12.7	12.6	12.5	12.6	12.7	12.9	12.9	12.9
81 - λ	Sco Shaula	1.6	96	25.7	25.4	25.1	24.9	24.6	24.5	24.4	24.5	24.6	24.7	24.8	24.8
82 - α	Oph Rasalhague	2.1	96	9.1	8.9	8.6	8.4	8.2	8.1	8.1	8.2	8.3	8.4	8.5	8.5
83 - θ	Sco Sargas	1.9	95	29.4	29.1	28.9	28.6	28.3	28.1	28.1	28.1	28.3	28.4	28.5	28.5
84 - γ	Dra Eltanin	2.2	90	47.8	47.6	47.3	47.0	46.7	46.6	46.6	46.8	47.0	47.2	47.5	47.5
85 - ε	Sgr Kaus Australis	1.9	83	47.5	47.3	47.0	46.7	46.5	46.3	46.2	46.2	46.3	46.5	46.6	46.6
86 - α	Lyr Vega	0.0	80	41.1	40.9	40.7	40.4	40.2	40.0	40.0	40.0	40.2	40.4	40.5	40.6
87 - σ	Sgr Nunki	2.0	76	1.7	1.6	1.4	1.1	0.9	0.6	0.5	0.5	0.6	0.8	0.9	0.9
88 - α	Aql Altair	0.8	62	11.0	10.9	10.7	10.5	10.3	10.1	10.0	9.9	10.0	10.1	10.2	10.3
89 - γ	Cyg Sadr	2.2	54	21.4	21.4	21.2	21.0	20.7	20.4	20.3	20.3	20.4	20.5	20.7	20.8
90 - α	Pav Peacock	1.9	53	23.6	23.5	23.2	22.9	22.5	22.1	21.9	21.8	21.9	22.1	22.3	22.5
91 - α	Cyg Deneb	1.3	49	33.7	33.7	33.5	33.2	33.0	32.7	32.5	32.5	32.6	32.7	32.9	33.1
92 - α	Cep Alderamin	2.4	40	18.3	18.4	18.2	17.9	17.5	17.1	16.8	16.7	16.8	17.1	17.4	17.7
93 - ε	Peg Enif	0.7	33	49.9	49.8	49.7	49.6	49.4	49.1	48.9	48.8	48.8	48.9	49.0	49.1
94 - δ	Cap Deneb Algedi	2.9	33	6.1	6.1	6.0	5.8	5.6	5.3	5.1	5.0	5.0	5.0	5.1	5.2
95 - α	Gru Al Na'ir	1.7	27	47.1	47.1	47.0	46.8	46.5	46.2	45.9	45.7	45.7	45.8	45.9	46.1
96 - β	Gruis	2.1	19	11.0	11.1	11.0	10.8	10.6	10.3	10.0	9.8	9.7	9.7	9.9	10.1
97 - α	PsA Fomalhaut	1.2	15	26.9	26.9	26.9	26.7	26.5	26.3	26.0	25.8	25.7	25.8	25.9	26.0
98 - β	Peg Scheat	2.4	13	56.1	56.1	56.1	56.0	55.8	55.5	55.2	55.1	55.0	55.0	55.1	55.2
99 - α	Peg Markab	2.5	13	41.0	41.1	41.0	40.9	40.7	40.5	40.2	40.1	40.0	40.0	40.1	40.2

ESTRELLAS, 2010

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Posiciones aparentes

DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	28.3	28.5	28.7	28.8	28.9	28.9	28.8	28.7	28.6	28.5	28.5	28.5
52 - ν	Hydrae	3.1	-16	14.9	15.0	15.1	15.1	15.1	15.1	15.1	15.0	15.0	14.9	15.0	15.1
53 - β	UMa Merak	2.4	+56	19.3	19.4	19.5	19.6	19.7	19.7	19.7	19.6	19.4	19.3	19.1	19.0
54 - α	UMa Dubhe	1.8	+61	41.4	41.5	41.6	41.7	41.8	41.8	41.8	41.7	41.5	41.3	41.2	41.1
55 - β	Leo Denebola	2.1	+14	30.7	30.7	30.7	30.7	30.7	30.8	30.8	30.8	30.8	30.7	30.6	30.5
56 - γ	Crv Gienah	2.6	-17	35.9	36.0	36.1	36.2	36.2	36.2	36.2	36.1	36.1	36.1	36.1	36.2
57 - α	Cru Acrux	1.4	-63	9.1	9.3	9.4	9.6	9.7	9.8	9.8	9.7	9.6	9.5	9.4	9.4
58 - γ	Cru Gacrux	1.6	-57	10.0	10.2	10.3	10.5	10.6	10.7	10.7	10.6	10.5	10.4	10.3	10.3
59 - γ	Cen Muhlifain	2.2	-49	0.8	0.9	1.1	1.2	1.3	1.4	1.4	1.3	1.2	1.1	1.0	1.0
60 - β	Cru Mimosa	1.3	-59	44.5	44.6	44.8	44.9	45.1	45.1	45.1	45.1	45.0	44.8	44.7	44.7
61 - ϵ	UMa Alioth	1.8	+55	53.9	53.9	54.0	54.1	54.3	54.3	54.4	54.3	54.2	54.0	53.8	53.7
62 - α^2	CVn Cor Caroli	2.9	+38	15.5	15.5	15.5	15.6	15.7	15.8	15.8	15.8	15.7	15.6	15.4	15.3
63 - ϵ	Vir Vindemiatrix	2.8	+10	54.1	54.0	54.0	54.0	54.1	54.1	54.2	54.2	54.1	54.1	54.0	53.9
64 - ζ	UMa Mizar	2.3	+54	52.0	51.9	52.0	52.2	52.3	52.4	52.4	52.4	52.3	52.1	51.9	51.8
65 - α	Vir Spica	1.0	-11	12.9	13.0	13.1	13.1	13.1	13.1	13.1	13.1	13.0	13.0	13.1	13.1
66 - η	UMa Alkaid	1.9	+49	15.4	15.4	15.4	15.5	15.7	15.8	15.8	15.8	15.7	15.6	15.4	15.2
67 - β	Cen Hadar	0.6	-60	25.1	25.2	25.3	25.5	25.6	25.7	25.8	25.7	25.7	25.5	25.4	25.4
68 - θ	Cen Menkent	2.1	-36	25.1	25.2	25.3	25.4	25.5	25.5	25.5	25.5	25.5	25.4	25.3	25.3
69 - α	Boo Arcturus	0.0	+19	7.5	7.5	7.5	7.5	7.6	7.7	7.7	7.7	7.7	7.6	7.5	7.4
70 - α^1	Cen Rigil Kentaurus	0.0	-60	52.4	52.5	52.6	52.7	52.9	53.0	53.1	53.0	53.0	52.9	52.7	52.7
71 - α^2	Lib Zubenelgenubi	2.8	-16	5.1	5.1	5.2	5.2	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2
72 - β	UMi Kochab	2.1	+74	6.4	6.4	6.4	6.6	6.7	6.9	7.0	7.0	6.9	6.7	6.5	6.3
73 - β	Lib Zubeneshamali	2.6	-9	25.3	25.4	25.4	25.4	25.4	25.4	25.4	25.3	25.3	25.3	25.3	25.4
74 - α	CrB Alphecca	2.2	+26	40.6	40.5	40.5	40.6	40.7	40.8	40.9	40.9	40.9	40.8	40.7	40.6
75 - α	Ser Unukalhai	2.7	+6	23.5	23.4	23.4	23.4	23.5	23.5	23.6	23.6	23.6	23.6	23.5	23.4
76 - α	Sco Antares	0.9	-26	27.2	27.3	27.3	27.3	27.4	27.4	27.4	27.4	27.4	27.4	27.3	27.3
77 - α	TrA Atria	1.9	-69	2.6	2.5	2.6	2.6	2.7	2.9	3.0	3.1	3.1	3.0	2.9	2.7
78 - ϵ	Scorpii	2.3	-34	18.6	18.7	18.7	18.7	18.7	18.8	18.8	18.8	18.8	18.8	18.8	18.7
79 - η	Oph Sabik	2.4	-15	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.2	44.2	44.2	44.3
80 - α	Her Rasalgethi	3.1	+14	22.6	22.5	22.5	22.5	22.6	22.7	22.8	22.9	22.9	22.9	22.8	22.7
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.8	6.8	6.7	6.7	6.6
82 - α	Oph Rasalhague	2.1	+12	33.0	33.0	32.9	33.0	33.0	33.1	33.2	33.3	33.3	33.3	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.1	28.9	28.9	28.9	29.1	29.2	29.4	29.5	29.6	29.6	29.5	29.3
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.8	22.7	22.7	22.7	22.7	22.7	22.7	22.8	22.8	22.8	22.8	22.7
86 - α	Lyr Vega	0.0	+38	47.5	47.3	47.3	47.3	47.4	47.6	47.7	47.8	47.9	47.9	47.9	47.7
87 - σ	Sgr Nunki	2.0	-26	17.1	17.0	17.0	17.0	17.0	16.9	16.9	16.9	17.0	17.0	17.0	16.9
88 - α	Aql Altair	0.8	+8	53.7	53.6	53.6	53.6	53.7	53.8	53.9	54.0	54.0	54.0	54.0	54.0
89 - γ	Cyg Sadr	2.2	+40	17.4	17.2	17.1	17.1	17.2	17.3	17.5	17.6	17.8	17.8	17.8	17.8
90 - α	Pav Peacock	1.9	-56	42.2	42.1	42.0	41.9	41.8	41.8	41.9	42.0	42.1	42.1	42.1	42.1
91 - α	Cyg Deneb	1.3	+45	19.1	18.9	18.8	18.8	18.8	19.0	19.1	19.3	19.4	19.5	19.5	19.5
92 - α	Cep Alderamin	2.4	+62	37.9	37.7	37.6	37.5	37.5	37.6	37.8	38.0	38.1	38.3	38.3	38.3
93 - ϵ	Peg Enif	0.7	+9	55.3	55.3	55.2	55.2	55.3	55.4	55.5	55.6	55.7	55.7	55.7	55.7
94 - δ	Cap Deneb Algedi	2.9	-16	4.9	4.9	4.9	4.8	4.7	4.6	4.6	4.5	4.5	4.6	4.6	4.6
95 - α	Gru Al Na'ir	1.7	-46	54.8	54.7	54.6	54.5	54.4	54.3	54.3	54.3	54.4	54.5	54.6	54.6
96 - β	Gruis	2.1	-46	50.0	49.9	49.8	49.7	49.6	49.5	49.4	49.5	49.6	49.7	49.7	49.8
97 - α	PsA Fomalhaut	1.2	-29	34.2	34.2	34.1	34.0	33.9	33.7	33.7	33.7	33.7	33.8	33.9	33.9
98 - β	Peg Scheat	2.4	+28	8.4	8.3	8.3	8.2	8.2	8.3	8.4	8.6	8.7	8.8	8.8	8.8
99 - α	Peg Markab	2.5	+15	15.7	15.6	15.6	15.6	15.6	15.7	15.8	15.9	16.0	16.1	16.1	16.1

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

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

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

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2010

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	-31.1	26 00	-39.9	52 00	-40.6	78 00	-33.1	104 00	-18.9	130 00	-0.8	156 00	+17.4
0 30	-31.3	26 30	-40.0	52 30	-40.5	78 30	-32.9	104 30	-18.6	130 30	-0.5	156 30	+17.7
1 00	-31.6	27 00	-40.1	53 00	-40.4	79 00	-32.6	105 00	-18.2	131 00	-0.1	157 00	+18.0
1 30	-31.8	27 30	-40.2	53 30	-40.4	79 30	-32.4	105 30	-17.9	131 30	+0.2	157 30	+18.3
2 00	-32.0	28 00	-40.2	54 00	-40.3	80 00	-32.2	106 00	-17.6	132 00	+0.6	158 00	+18.6
2 30	-32.3	28 30	-40.3	54 30	-40.2	80 30	-32.0	106 30	-17.3	132 30	+1.0	158 30	+19.0
3 00	-32.5	29 00	-40.4	55 00	-40.1	81 00	-31.7	107 00	-16.9	133 00	+1.3	159 00	+19.3
3 30	-32.7	29 30	-40.5	55 30	-40.0	81 30	-31.5	107 30	-16.6	133 30	+1.7	159 30	+19.6
4 00	-32.9	30 00	-40.5	56 00	-39.9	82 00	-31.3	108 00	-16.3	134 00	+2.0	160 00	+19.9
4 30	-33.1	30 30	-40.6	56 30	-39.9	82 30	-31.0	108 30	-15.9	134 30	+2.4	160 30	+20.2
5 00	-33.4	31 00	-40.7	57 00	-39.8	83 00	-30.8	109 00	-15.6	135 00	+2.8	161 00	+20.6
5 30	-33.6	31 30	-40.7	57 30	-39.7	83 30	-30.6	109 30	-15.3	135 30	+3.1	161 30	+20.9
6 00	-33.8	32 00	-40.8	58 00	-39.6	84 00	-30.3	110 00	-14.9	136 00	+3.5	162 00	+21.2
6 30	-34.0	32 30	-40.9	58 30	-39.4	84 30	-30.1	110 30	-14.6	136 30	+3.8	162 30	+21.5
7 00	-34.2	33 00	-40.9	59 00	-39.3	85 00	-29.8	111 00	-14.3	137 00	+4.2	163 00	+21.8
7 30	-34.4	33 30	-41.0	59 30	-39.2	85 30	-29.6	111 30	-13.9	137 30	+4.6	163 30	+22.1
8 00	-34.6	34 00	-41.0	60 00	-39.1	86 00	-29.3	112 00	-13.6	138 00	+4.9	164 00	+22.4
8 30	-34.8	34 30	-41.0	60 30	-39.0	86 30	-29.1	112 30	-13.2	138 30	+5.3	164 30	+22.7
9 00	-35.0	35 00	-41.1	61 00	-38.9	87 00	-28.8	113 00	-12.9	139 00	+5.6	165 00	+23.0
9 30	-35.2	35 30	-41.1	61 30	-38.8	87 30	-28.5	113 30	-12.5	139 30	+6.0	165 30	+23.3
10 00	-35.4	36 00	-41.2	62 00	-38.6	88 00	-28.3	114 00	-12.2	140 00	+6.3	166 00	+23.6
10 30	-35.5	36 30	-41.2	62 30	-38.5	88 30	-28.0	114 30	-11.9	140 30	+6.7	166 30	+23.9
11 00	-35.7	37 00	-41.2	63 00	-38.4	89 00	-27.7	115 00	-11.5	141 00	+7.1	167 00	+24.2
11 30	-35.9	37 30	-41.2	63 30	-38.2	89 30	-27.5	115 30	-11.2	141 30	+7.4	167 30	+24.5
12 00	-36.1	38 00	-41.3	64 00	-38.1	90 00	-27.2	116 00	-10.8	142 00	+7.8	168 00	+24.8
12 30	-36.3	38 30	-41.3	64 30	-37.9	90 30	-26.9	116 30	-10.5	142 30	+8.1	168 30	+25.1
13 00	-36.4	39 00	-41.3	65 00	-37.8	91 00	-26.7	117 00	-10.1	143 00	+8.5	169 00	+25.3
13 30	-36.6	39 30	-41.3	65 30	-37.7	91 30	-26.4	117 30	-9.8	143 30	+8.8	169 30	+25.6
14 00	-36.8	40 00	-41.3	66 00	-37.5	92 00	-26.1	118 00	-9.4	144 00	+9.2	170 00	+25.9
14 30	-36.9	40 30	-41.3	66 30	-37.4	92 30	-25.8	118 30	-9.1	144 30	+9.5	170 30	+26.2
15 00	-37.1	41 00	-41.3	67 00	-37.2	93 00	-25.5	119 00	-8.7	145 00	+9.9	171 00	+26.5
15 30	-37.2	41 30	-41.3	67 30	-37.0	93 30	-25.3	119 30	-8.4	145 30	+10.2	171 30	+26.7
16 00	-37.4	42 00	-41.3	68 00	-36.9	94 00	-25.0	120 00	-8.0	146 00	+10.6	172 00	+27.0
16 30	-37.6	42 30	-41.3	68 30	-36.7	94 30	-24.7	120 30	-7.7	146 30	+10.9	172 30	+27.3
17 00	-37.7	43 00	-41.3	69 00	-36.5	95 00	-24.4	121 00	-7.3	147 00	+11.3	173 00	+27.6
17 30	-37.8	43 30	-41.3	69 30	-36.4	95 30	-24.1	121 30	-6.9	147 30	+11.6	173 30	+27.8
18 00	-38.0	44 00	-41.3	70 00	-36.2	96 00	-23.8	122 00	-6.6	148 00	+12.0	174 00	+28.1
18 30	-38.1	44 30	-41.3	70 30	-36.0	96 30	-23.5	122 30	-6.2	148 30	+12.3	174 30	+28.4
19 00	-38.3	45 00	-41.2	71 00	-35.8	97 00	-23.2	123 00	-5.9	149 00	+12.7	175 00	+28.6
19 30	-38.4	45 30	-41.2	71 30	-35.7	97 30	-22.9	123 30	-5.5	149 30	+13.0	175 30	+28.9
20 00	-38.5	46 00	-41.2	72 00	-35.5	98 00	-22.6	124 00	-5.2	150 00	+13.3	176 00	+29.1
20 30	-38.7	46 30	-41.1	72 30	-35.3	98 30	-22.3	124 30	-4.8	150 30	+13.7	176 30	+29.4
21 00	-38.8	47 00	-41.1	73 00	-35.1	99 00	-22.0	125 00	-4.4	151 00	+14.0	177 00	+29.6
21 30	-38.9	47 30	-41.1	73 30	-34.9	99 30	-21.7	125 30	-4.1	151 30	+14.4	177 30	+29.9
22 00	-39.0	48 00	-41.0	74 00	-34.7	100 00	-21.4	126 00	-3.7	152 00	+14.7	178 00	+30.1
22 30	-39.1	48 30	-41.0	74 30	-34.5	100 30	-21.1	126 30	-3.4	152 30	+15.0	178 30	+30.4
23 00	-39.3	49 00	-40.9	75 00	-34.3	101 00	-20.8	127 00	-3.0	153 00	+15.4	179 00	+30.6
23 30	-39.4	49 30	-40.9	75 30	-34.1	101 30	-20.5	127 30	-2.6	153 30	+15.7	179 30	+30.9
24 00	-39.5	50 00	-40.8	76 00	-33.9	102 00	-20.1	128 00	-2.3	154 00	+16.0	180 00	+31.1
24 30	-39.6	50 30	-40.8	76 30	-33.7	102 30	-19.8	128 30	-1.9	154 30	+16.4	180 30	+31.3
25 00	-39.7	51 00	-40.7	77 00	-33.5	103 00	-19.5	129 00	-1.6	155 00	+16.7	181 00	+31.6
25 30	-39.8	51 30	-40.7	77 30	-33.3	103 30	-19.2	129 30	-1.2	155 30	+17.0	181 30	+31.8
26 00	-39.9	52 00	-40.6	78 00	-33.1	104 00	-18.9	130 00	-0.8	156 00	+17.4	182 00	+32.0

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2010

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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	+32.0	208 00	+40.2	234 00	+40.3	260 00	+32.2	286 00	+17.6	312 00	-0.6	338 00	-18.6
182 30	+32.3	208 30	+40.3	234 30	+40.2	260 30	+32.0	286 30	+17.3	312 30	-1.0	338 30	-19.0
183 00	+32.5	209 00	+40.4	235 00	+40.1	261 00	+31.7	287 00	+16.9	313 00	-1.3	339 00	-19.3
183 30	+32.7	209 30	+40.5	235 30	+40.0	261 30	+31.5	287 30	+16.6	313 30	-1.7	339 30	-19.6
184 00	+32.9	210 00	+40.5	236 00	+39.9	262 00	+31.3	288 00	+16.3	314 00	-2.0	340 00	-19.9
184 30	+33.1	210 30	+40.6	236 30	+39.9	262 30	+31.0	288 30	+15.9	314 30	-2.4	340 30	-20.2
185 00	+33.4	211 00	+40.7	237 00	+39.8	263 00	+30.8	289 00	+15.6	315 00	-2.8	341 00	-20.6
185 30	+33.6	211 30	+40.7	237 30	+39.7	263 30	+30.6	289 30	+15.3	315 30	-3.1	341 30	-20.9
186 00	+33.8	212 00	+40.8	238 00	+39.6	264 00	+30.3	290 00	+14.9	316 00	-3.5	342 00	-21.2
186 30	+34.0	212 30	+40.9	238 30	+39.4	264 30	+30.1	290 30	+14.6	316 30	-3.8	342 30	-21.5
187 00	+34.2	213 00	+40.9	239 00	+39.3	265 00	+29.8	291 00	+14.3	317 00	-4.2	343 00	-21.8
187 30	+34.4	213 30	+41.0	239 30	+39.2	265 30	+29.6	291 30	+13.9	317 30	-4.6	343 30	-22.1
188 00	+34.6	214 00	+41.0	240 00	+39.1	266 00	+29.3	292 00	+13.6	318 00	-4.9	344 00	-22.4
188 30	+34.8	214 30	+41.0	240 30	+39.0	266 30	+29.1	292 30	+13.2	318 30	-5.3	344 30	-22.7
189 00	+35.0	215 00	+41.1	241 00	+38.9	267 00	+28.8	293 00	+12.9	319 00	-5.6	345 00	-23.0
189 30	+35.2	215 30	+41.1	241 30	+38.8	267 30	+28.5	293 30	+12.5	319 30	-6.0	345 30	-23.3
190 00	+35.4	216 00	+41.2	242 00	+38.6	268 00	+28.3	294 00	+12.2	320 00	-6.3	346 00	-23.6
190 30	+35.5	216 30	+41.2	242 30	+38.5	268 30	+28.0	294 30	+11.9	320 30	-6.7	346 30	-23.9
191 00	+35.7	217 00	+41.2	243 00	+38.4	269 00	+27.7	295 00	+11.5	321 00	-7.1	347 00	-24.2
191 30	+35.9	217 30	+41.2	243 30	+38.2	269 30	+27.5	295 30	+11.2	321 30	-7.4	347 30	-24.5
192 00	+36.1	218 00	+41.3	244 00	+38.1	270 00	+27.2	296 00	+10.8	322 00	-7.8	348 00	-24.8
192 30	+36.3	218 30	+41.3	244 30	+37.9	270 30	+26.9	296 30	+10.5	322 30	-8.1	348 30	-25.1
193 00	+36.4	219 00	+41.3	245 00	+37.8	271 00	+26.7	297 00	+10.1	323 00	-8.5	349 00	-25.3
193 30	+36.6	219 30	+41.3	245 30	+37.7	271 30	+26.4	297 30	+9.8	323 30	-8.8	349 30	-25.6
194 00	+36.8	220 00	+41.3	246 00	+37.5	272 00	+26.1	298 00	+9.4	324 00	-9.2	350 00	-25.9
194 30	+36.9	220 30	+41.3	246 30	+37.4	272 30	+25.8	298 30	+9.1	324 30	-9.5	350 30	-26.2
195 00	+37.1	221 00	+41.3	247 00	+37.2	273 00	+25.5	299 00	+8.7	325 00	-9.9	351 00	-26.5
195 30	+37.2	221 30	+41.3	247 30	+37.0	273 30	+25.3	299 30	+8.4	325 30	-10.2	351 30	-26.7
196 00	+37.4	222 00	+41.3	248 00	+36.9	274 00	+25.0	300 00	+8.0	326 00	-10.6	352 00	-27.0
196 30	+37.6	222 30	+41.3	248 30	+36.7	274 30	+24.7	300 30	+7.7	326 30	-10.9	352 30	-27.3
197 00	+37.7	223 00	+41.3	249 00	+36.5	275 00	+24.4	301 00	+7.3	327 00	-11.3	353 00	-27.6
197 30	+37.8	223 30	+41.3	249 30	+36.4	275 30	+24.1	301 30	+6.9	327 30	-11.6	353 30	-27.8
198 00	+38.0	224 00	+41.3	250 00	+36.2	276 00	+23.8	302 00	+6.6	328 00	-12.0	354 00	-28.1
198 30	+38.1	224 30	+41.3	250 30	+36.0	276 30	+23.5	302 30	+6.2	328 30	-12.3	354 30	-28.4
199 00	+38.3	225 00	+41.2	251 00	+35.8	277 00	+23.2	303 00	+5.9	329 00	-12.7	355 00	-28.6
199 30	+38.4	225 30	+41.2	251 30	+35.7	277 30	+22.9	303 30	+5.5	329 30	-13.0	355 30	-28.9
200 00	+38.5	226 00	+41.2	252 00	+35.5	278 00	+22.6	304 00	+5.2	330 00	-13.3	356 00	-29.1
200 30	+38.7	226 30	+41.1	252 30	+35.3	278 30	+22.3	304 30	+4.8	330 30	-13.7	356 30	-29.4
201 00	+38.8	227 00	+41.1	253 00	+35.1	279 00	+22.0	305 00	+4.4	331 00	-14.0	357 00	-29.6
201 30	+38.9	227 30	+41.1	253 30	+34.9	279 30	+21.7	305 30	+4.1	331 30	-14.4	357 30	-29.9
202 00	+39.0	228 00	+41.0	254 00	+34.7	280 00	+21.4	306 00	+3.7	332 00	-14.7	358 00	-30.1
202 30	+39.1	228 30	+41.0	254 30	+34.5	280 30	+21.1	306 30	+3.4	332 30	-15.0	358 30	-30.4
203 00	+39.3	229 00	+40.9	255 00	+34.3	281 00	+20.8	307 00	+3.0	333 00	-15.4	359 00	-30.6
203 30	+39.4	229 30	+40.9	255 30	+34.1	281 30	+20.5	307 30	+2.6	333 30	-15.7	359 30	-30.9
204 00	+39.5	230 00	+40.8	256 00	+33.9	282 00	+20.1	308 00	+2.3	334 00	-16.0	360 00	-31.1
204 30	+39.6	230 30	+40.8	256 30	+33.7	282 30	+19.8	308 30	+1.9	334 30	-16.4		
205 00	+39.7	231 00	+40.7	257 00	+33.5	283 00	+19.5	309 00	+1.6	335 00	-16.7		
205 30	+39.8	231 30	+40.7	257 30	+33.3	283 30	+19.2	309 30	+1.2	335 30	-17.0		
206 00	+39.9	232 00	+40.6	258 00	+33.1	284 00	+18.9	310 00	+0.8	336 00	-17.4		
206 30	+40.0	232 30	+40.5	258 30	+32.9	284 30	+18.6	310 30	+0.5	336 30	-17.7		
207 00	+40.1	233 00	+40.4	259 00	+32.6	285 00	+18.2	311 00	+0.1	337 00	-18.0		
207 30	+40.2	233 30	+40.4	259 30	+32.4	285 30	+17.9	311 30	-0.2	337 30	-18.3		
208 00	+40.2	234 00	+40.3	260 00	+32.2	286 00	+17.6	312 00	-0.6	338 00	-18.6		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2010

TABLA II

(SIEMPRE POSITIVA)

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

TABLA III

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

Dic 32 corresponde al 1 de enero del año siguiente

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

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2010**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2010)	
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 27	-0'2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 1	-0'1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Sep 25	0'0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	44 30	+15.2			Oct 17	+0'1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	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 15	+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.