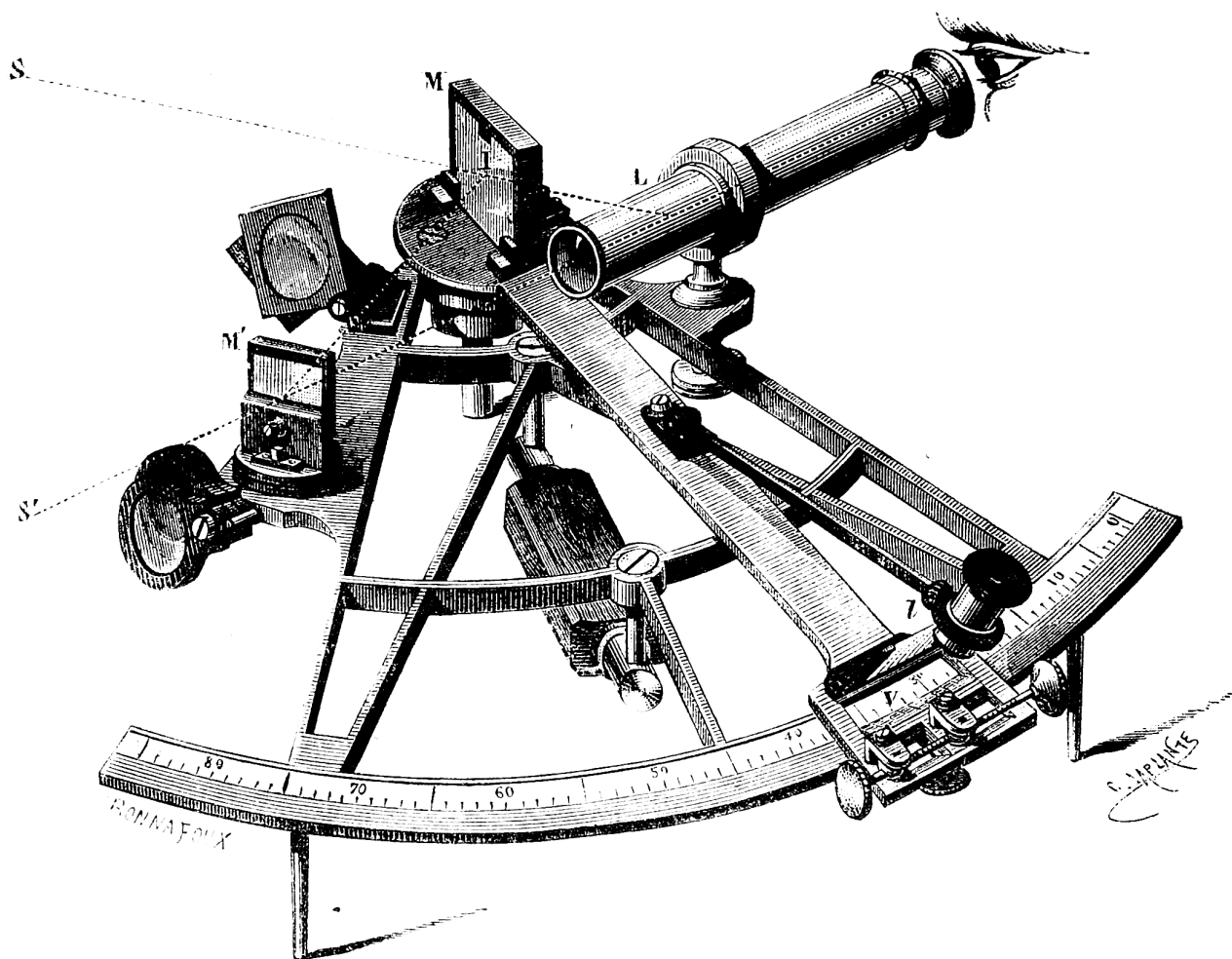




ALMANAQUE NÁUTICO PERSEIS 2017

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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 presentan 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 7			Edad: 2 ^d 7 PHE { SD: 15'3 PMG: 14 ^h 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	08.4	-22	59.9	147	06.1	-15 20.2	60 N	7 09	8 05	9 02	10 17	23	19 14 77	
1	194	08.1		59.7	161	36.2 ¹¹¹	13.9 63	58	7 02	7 54	8 45	08 26		22 75	
2	209	07.8		59.5	176	06.3 ¹¹¹	07.6 63	56	6 56	44	31	10 01	27	29 73	
3	224	07.5		59.3	190	36.4 ¹¹¹	-15 01.2 64	54	50	35	19	9 54	29	35 71	
4	239	07.2		59.1	205	06.5 ¹¹¹	-14 54.7 65	52	44	28	8 08	48 30		41 69	
5	254	06.9	-22	58.9	219	36.6 ¹¹¹	-14 48.1 66	50	6 39	7 20	7 58	9 42	32	19 46 68	
6	269	06.6	-22	58.7	234	06.8 ¹¹²	-14 41.4 67	45	6 28	7 05	7 38	9 30	35	19 57 65	
7	284	06.3		58.5	248	36.9 ¹¹¹	34.7 67	40	18	6 51	22	20 37		20 06 62	
8	299	06.0		58.3	263	07.1 ¹¹²	27.9 68	35	08	40	7 08	12 39		14 60	
9	314	05.7		58.1	277	37.3 ¹¹²	21.0 69	30	6 00	30	6 56	9 04	41	21 58	
10	329	05.4		57.8	292	07.5 ¹¹²	14.0 70	20	5 44	6 11	35	8 51	44	33 54	
11	344	05.1	-22	57.6	306	37.7 ¹¹²	-14 07.0 70	10 N	5 28	5 54	6 17	8 40	46	20 43 52	
12	359	04.8	-22	57.4	321	07.9 ¹¹²	-13 59.9 71	0	5 11	5 37	6 00	8 29	49	20 53 48	
13	14	04.5		57.2	335	38.1 ¹¹²	52.7 72	10 S	4 53	20	5 43	18 52		21 02 46	
14	29	04.3		57.0	350	08.4 ¹¹³	45.4 73	20	31	5 00	24	8 07	54	12 44	
15	44	04.0		56.8	4	38.6 ¹¹²	38.0 74	30	4 02	4 35	5 03	7 54	57	24 40	
16	59	03.7		56.6	19	08.9 ¹¹³	30.6 74	35	3 44	20	4 50	46 59		30 38	
17	74	03.4	-22	56.3	33	39.2 ¹¹³	-13 23.1 75	40	3 21	4 02	4 35	7 37	61	21 38 36	
18	89	03.1	-22	56.1	48	09.5 ¹¹³	-13 15.6 75	45	2 51	3 40	4 17	7 27	64	21 47 33	
19	104	02.8		55.9	62	39.8 ¹¹³	07.9 77	50	2 08	3 11	3 55	15 66		21 57 30	
20	119	02.5		55.7	77	10.1 ¹¹³	-13 00.2 77	52	1 41	2 57	45	09 68		22 02 29	
21	134	02.2		55.5	91	40.4 ¹¹³	-12 52.4 78	54	1 01	39	33	7 03	69	07 27	
22	149	01.9		55.2	106	10.8 ¹¹⁴	44.6 78	56	** **	2 18	19	6 56	71	13 25	
23	164	01.6		55.0	120	41.1 ¹¹³	36.7 79	58	** **	1 50	3 03	48 73		20 23	
24	179	01.3	-22	54.8	135	11.5 ¹¹⁴	-12 28.7 80	60 S	** **	1 07	2 43	6 38	76	22 27 21	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 17 ^h 13 ^m 8			Mag: -4.4 PMG: 15 ^h 18 ^m			Mag: +0.9 PMG: 16 ^h 02 ^m			Mag: -2.0 PMG: 6 ^h 36 ^m			Mag: +0.5 PMG: 10 ^h 38 ^m		
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	100	50.2	130	38.5	-13	41.9	119	24.8	-8	48.6	260	48.8	-7	03.6	
1	115	52.6	145	38.4		40.8	134	25.5		47.8	275	51.0		03.7	
2	130	55.1	160	38.3		39.7	149	26.2		47.1	290	53.2		03.8	
3	145	57.6	175	38.2		38.6	164	27.0		46.3	305	55.5		03.9	
4	161	00.0	190	38.1		37.5	179	27.7		45.6	320	57.7		04.0	
5	176	02.5	205	38.0	-13	36.4	194	28.4	-8	44.8	335	59.9	-7	04.0	
6	191	05.0	220	37.9	-13	35.3	209	29.1	-8	44.1	351	02.1	-7	04.1	
7	206	07.4	235	37.8		34.2	224	29.8		43.3	6	04.3		04.2	
8	221	09.9	250	37.7		33.1	239	30.5		42.6	21	06.5		04.3	
9	236	12.4	265	37.7		32.0	254	31.2		41.8	36	08.7		04.4	
10	251	14.8	280	37.6		30.9	269	31.9		41.1	51	11.0		04.5	
11	266	17.3	295	37.5	-13	29.8	284	32.7	-8	40.3	66	13.2	-7	04.6	
12	281	19.7	310	37.4	-13	28.7	299	33.4	-8	39.6	81	15.4	-7	04.7	
13	296	22.2	325	37.3		27.6	314	34.1		38.8	96	17.6		04.8	
14	311	24.7	340	37.2		26.5	329	34.8		38.1	111	19.8		04.9	
15	326	27.1	355	37.1		25.4	344	35.5		37.3	126	22.0		04.9	
16	341	29.6	10	37.1		24.3	359	36.2		36.6	141	24.3		05.0	
17	356	32.1	25	37.0	-13	23.2	14	36.9	-8	35.8	156	26.5	-7	05.1	
18	11	34.5	40	36.9	-13	22.1	29	37.6	-8	35.0	171	28.7	-7	05.2	
19	26	37.0	55	36.8		21.0	44	38.4		34.3	186	30.9		05.3	
20	41	39.5	70	36.7		19.9	59	39.1		33.5	201	33.1		05.4	
21	56	41.9	85	36.7		18.8	74	39.8		32.8	216	35.4		05.5	
22	71	44.4	100	36.6		17.7	89	40.5		32.0	231	37.6		05.6	
23	86	46.9	115	36.5		16.6	104	41.2		31.3	246	39.8		05.6	
24	101	49.3	130	36.4	-13	15.5	119	41.9	-8	30.5	261	42.0	-7	05.7	
Dif	—			-1	+11		+7	+8		+22	-1		+22		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 04 ^m 1			Edad: 3 ^d 7 PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'0 R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	01.3	-22 54.8	135	11.5	-12 28.7		60 N	15 07	16 03	17 00	10 40 19		20 31 80
1	194	01.0		149	41.9 ¹¹⁴	20.6 ⁸¹		58	24	15	07	34 21		37 77
2	209	00.7	54.3	164	12.3 ¹¹⁴	12.5 ⁸¹		56	38	24	13	28 24		42 75
3	224	00.4	54.1	178	42.7 ¹¹⁴	-12 04.3 ⁸²		54	15 50	33	19	23 26		46 73
4	239	00.2	53.9	193	13.1 ¹¹⁴	-11 56.1 ⁸²		52	16 01	41	24	18 28		50 71
5	253	59.9	-22 53.6	207	43.5 ¹¹⁴	-11 47.7 ⁸⁴		50	16 10	16 48	17 29	10 14 29		20 54 70
6	268	59.6	-22 53.4	222	13.9 ¹¹⁴	-11 39.4 ⁸³		45	16 30	17 04	17 41	10 05 32		21 02 66
7	283	59.3	53.2	236	44.4 ¹¹⁵	30.9 ⁸⁵		40	16 46	17	17 51	9 57 35		08 64
8	298	59.0	53.0	251	14.8 ¹¹⁴	22.4 ⁸⁵		35	17 00	28	18 00	51 37		14 61
9	313	58.7	52.7	265	45.3 ¹¹⁵	13.8 ⁸⁶		30	12	38	08	45 39		19 58
10	328	58.4	52.5	280	15.7 ¹¹⁴	-11 05.2 ⁸⁶		20	33	17 57	24	35 43		27 55
11	343	58.1	-22 52.3	294	46.2 ¹¹⁵	-10 56.5 ⁸⁷		10 N	17 51	18 14	18 40	9 26 46		21 35 51
12	358	57.8	-22 52.0	309	16.7 ¹¹⁵	-10 47.7 ⁸⁸		0	18 08	18 30	18 56	9 18 49		21 41 49
13	13	57.5	51.8	323	47.2 ¹¹⁵	38.9 ⁸⁸		10 S	25	18 48	19 15	10 51		48 46
14	28	57.2	51.6	338	17.7 ¹¹⁵	30.0 ⁸⁹		20	18 43	19 08	19 37	9 01 55		21 56 42
15	43	57.0	51.3	352	48.2 ¹¹⁵	21.0 ⁹⁰		30	19 05	32	20 05	8 51 58		22 04 38
16	58	56.7	51.1	7	18.7 ¹¹⁵	12.0 ⁹⁰		35	18	19 47	23	45 60		08 37
17	73	56.4	-22 50.9	21	49.3 ¹¹⁶	-10 03.0 ⁹⁰		40	19 32	20 05	20 46	8 38 63		22 14 34
18	88	56.1	-22 50.6	36	19.8 ¹¹⁵	-9 53.9 ⁹¹		45	19 50	20 27	21 15	8 31 65		22 20 31
19	103	55.8	50.4	50	50.4 ¹¹⁶	44.7 ⁹²		50	20 11	20 55	21 58	21 69		27 28
20	118	55.5	50.1	65	20.9 ¹¹⁵	35.4 ⁹³		52	22	21 10	22 24	17 70		31 26
21	133	55.2	49.9	79	51.5 ¹¹⁶	26.2 ⁹²		54	34	27	23 02	12 72		34 25
22	148	54.9	49.7	94	22.0 ¹¹⁵	16.8 ⁹⁴		56	20 47	21 47	** **	07 74		38 23
23	163	54.6	49.4	108	52.6 ¹¹⁶	-9 07.4 ⁹⁴		58	21 03	22 15	** **	8 01 76		43 21
24	178	54.4	-22 49.2	123	23.2 ¹¹⁶	-8 58.0 ⁹⁴		60 S	21 22	22 56	** **	7 54 79		22 48 18
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 09 ^m 9		Mag: -4.5 PMG: 15 ^h 18 ^m			Mag: +0.9 PMG: 16 ^h 00 ^m			Mag: -2.0 PMG: 6 ^h 32 ^m			Mag: +0.5 PMG: 10 ^h 34 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'
0	101	49.3	130 36.4	-13 15.5		119 41.9	-8 30.5		261 42.0	-7 05.7		201 00.1	-21 52.9	
1	116	51.8	145 36.4	14.4		134 42.6	29.8		276 44.2	05.8		216 02.3	52.9	
2	131	54.2	160 36.3	13.3		149 43.3	29.0		291 46.5	05.9		231 04.5	52.9	
3	146	56.7	175 36.2	12.2		164 44.1	28.3		306 48.7	06.0		246 06.6	52.9	
4	161	59.2	190 36.1	11.1		179 44.8	27.5		321 50.9	06.1		261 08.8	53.0	
5	177	01.6	205 36.1	-13 10.0		194 45.5	-8 26.8		336 53.1	-7 06.2		276 10.9	-21 53.0	
6	192	04.1	220 36.0	-13 08.9		209 46.2	-8 26.0		351 55.3	-7 06.3		291 13.1	-21 53.0	
7	207	06.6	235 35.9	07.8		224 46.9	25.2		6 57.6	06.3		306 15.3	53.0	
8	222	09.0	250 35.9	06.7		239 47.6	24.5		21 59.8	06.4		321 17.4	53.0	
9	237	11.5	265 35.8	05.6		254 48.3	23.7		37 02.0	06.5		336 19.6	53.1	
10	252	14.0	280 35.7	04.5		269 49.1	23.0		52 04.2	06.6		351 21.7	53.1	
11	267	16.4	295 35.7	-13 03.4		284 49.8	-8 22.2		67 06.5	-7 06.7		6 23.9	-21 53.1	
12	282	18.9	310 35.6	-13 02.3		299 50.5	-8 21.5		82 08.7	-7 06.8		21 26.1	-21 53.1	
13	297	21.4	325 35.5	01.2		314 51.2	20.7		97 10.9	06.9		36 28.2	53.1	
14	312	23.8	340 35.5	-13 00.1		329 51.9	20.0		112 13.1	07.0		51 30.4	53.1	
15	327	26.3	355 35.4	-12 59.0		344 52.6	19.2		127 15.3	07.0		66 32.5	53.2	
16	342	28.7	10 35.4	57.9		359 53.4	18.4		142 17.6	07.1		81 34.7	53.2	
17	357	31.2	25 35.3	-12 56.8		14 54.1	-8 17.7		157 19.8	-7 07.2		96 36.9	-21 53.2	
18	12	33.7	40 35.2	-12 55.6		29 54.8	-8 16.9		172 22.0	-7 07.3		111 39.0	-21 53.2	
19	27	36.1	55 35.2	54.5		44 55.5	16.2		187 24.2	07.4		126 41.2	53.2	
20	42	38.6	70 35.1	53.4		59 56.2	15.4		202 26.5	07.5		141 43.3	53.3	
21	57	41.1	85 35.1	52.3		74 56.9	14.7		217 28.7	07.6		156 45.5	53.3	
22	72	43.5	100 35.0	51.2		89 57.6	13.9		232 30.9	07.6		171 47.7	53.3	
23	87	46.0	115 35.0	50.1		104 58.4	13.2		247 33.1	07.7		186 49.8	53.3	
24	102	48.5	130 34.9	-12 49.0		119 59.1	-8 12.4		262 35.4	-7 07.8		201 52.0	-21 53.3	
Dif	—	—	-1	+11		+7	+8		+22	-1		+22		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 04 ^m 6			Edad: 4 ^d 7 PHE { SD: 15 ^h 5 PMG: 16 ^h 18 ^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	178	54.4	-22 49.2	123	23.2	-8 58.0	60 N	7 09	8 05	9 01	10 59 18	21 51 82		
1	193	54.1	48.9	137	53.8 ¹¹⁶	48.5 ⁹⁵	58	7 02	7 54	8 44	55 21	54 79		
2	208	53.8	48.7	152	24.3 ¹¹⁵	38.9 ⁹⁶	56	6 55	44	30	52 22	57 77		
3	223	53.5	48.4	166	54.9 ¹¹⁶	29.3 ⁹⁶	54	49	35	18	49 24	21 59 75		
4	238	53.2	48.2	181	25.5 ¹¹⁶	19.7 ⁹⁶	52	44	27	8 08	46 26	22 01 74		
5	253	52.9	-22 47.9	195	56.1 ¹¹⁶	-8 10.0 ⁹⁷	50	6 39	7 20	7 58	10 43 28	22 04 71		
6	268	52.6	-22 47.7	210	26.7 ¹¹⁶	-8 00.2 ⁹⁸	45	6 28	7 05	7 38	10 37 31	22 08 68		
7	283	52.3	47.4	224	57.3 ¹¹⁶	-7 50.4 ⁹⁸	40	18	6 52	22	32 34	12 64		
8	298	52.1	47.2	239	27.9 ¹¹⁶	40.6 ⁹⁸	35	09	40	7 08	28 36	15 62		
9	313	51.8	46.9	253	58.5 ¹¹⁶	30.7 ⁹⁹	30	6 00	30	6 56	24 39	17 60		
10	328	51.5	46.7	268	29.1 ¹¹⁶	20.8 ⁹⁹	20	5 45	6 12	36	18 42	22 56		
11	343	51.2	-22 46.4	282	59.7 ¹¹⁶	-7 10.8 ¹⁰⁰	10 N	5 29	5 55	6 18	10 12 46	22 26 52		
12	358	50.9	-22 46.2	297	30.3 ¹¹⁶	-7 00.8 ¹⁰⁰	0	5 12	5 38	6 01	10 07 49	22 30 49		
13	13	50.6	45.9	312	00.9 ¹¹⁶	-6 50.7 ¹⁰¹	10 S	4 54	21	5 44	10 01 52	34 46		
14	28	50.3	45.7	326	31.5 ¹¹⁶	40.6 ¹⁰¹	20	32	5 01	25	9 56 55	38 42		
15	43	50.0	45.4	341	02.1 ¹¹⁶	30.4 ¹⁰²	30	4 04	4 37	5 04	49 59	42 39		
16	58	49.8	45.2	355	32.7 ¹¹⁶	20.2 ¹⁰²	35	3 46	22	4 51	45 62	45 36		
17	73	49.5	-22 44.9	10	03.3 ¹¹⁶	-6 10.0 ¹⁰²	40	3 23	4 04	4 37	9 41 64	22 48 33		
18	88	49.2	-22 44.7	24	33.9 ¹¹⁶	-5 59.7 ¹⁰³	45	2 54	3 42	4 19	9 36 67	22 51 31		
19	103	48.9	44.4	39	04.4 ¹¹⁵	49.4 ¹⁰³	50	2 11	3 14	3 58	30 71	55 27		
20	118	48.6	44.1	53	35.0 ¹¹⁶	39.1 ¹⁰³	52	1 45	2 59	47	27 73	57 26		
21	133	48.3	43.9	68	05.6 ¹¹⁶	28.7 ¹⁰⁴	54	1 07	42	35	24 74	22 59 24		
22	148	48.1	43.6	82	36.2 ¹¹⁶	18.3 ¹⁰⁴	56	** ** *	2 22	22	21 76	23 01 22		
23	163	47.8	43.4	97	06.7 ¹¹⁵	-5 07.8 ¹⁰⁵	58	** ** *	1 54	3 06	17 79	04 19		
24	178	47.5	-22 43.1	111	37.3 ¹¹⁶	-4 57.4 ¹⁰⁴	60 S	** ** *	1 13	2 47	9 13 81	23 06 18		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 17 ^h 06 ^m 0		Mag: -4.5 PMG: 15 ^h 18 ^m			Mag: +0.9 PMG: 15 ^h 59 ^m			Mag: -2.0 PMG: 6 ^h 29 ^m			Mag: +0.5 PMG: 10 ^h 31 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	102	48.5	130 34.9	-12 49.0	119 59.1	-8 12.4	262 35.4	-7 07.8	201 52.0	-21 53.3				
1	117	50.9	145 34.9	47.9	134 59.8	11.6	277 37.6	07.9	216 54.1	53.3				
2	132	53.4	160 34.8	46.8	150 00.5	10.9	292 39.8	08.0	231 56.3	53.4				
3	147	55.8	175 34.8	45.6	165 01.2	10.1	307 42.0	08.1	246 58.5	53.4				
4	162	58.3	190 34.7	44.5	180 01.9	09.4	322 44.3	08.1	262 00.6	53.4				
5	178	00.8	205 34.7	-12 43.4	195 02.7	-8 08.6	337 46.5	-7 08.2	277 02.8	-21 53.4				
6	193	03.2	220 34.6	-12 42.3	210 03.4	-8 07.9	352 48.7	-7 08.3	292 04.9	-21 53.4				
7	208	05.7	235 34.6	41.2	225 04.1	07.1	7 50.9	08.4	307 07.1	53.5				
8	223	08.2	250 34.5	40.1	240 04.8	06.3	22 53.2	08.5	322 09.3	53.5				
9	238	10.6	265 34.5	39.0	255 05.5	05.6	37 55.4	08.6	337 11.4	53.5				
10	253	13.1	280 34.4	37.8	270 06.3	04.8	52 57.6	08.7	352 13.6	53.5				
11	268	15.6	295 34.4	-12 36.7	285 07.0	-8 04.1	67 59.9	-7 08.7	7 15.8	-21 53.5				
12	283	18.0	310 34.4	-12 35.6	300 07.7	-8 03.3	83 02.1	-7 08.8	22 17.9	-21 53.6				
13	298	20.5	325 34.3	34.5	315 08.4	02.6	98 04.3	08.9	37 20.1	53.6				
14	313	23.0	340 34.3	33.4	330 09.1	01.8	113 06.5	09.0	52 22.2	53.6				
15	328	25.4	355 34.2	32.3	345 09.8	01.0	128 08.8	09.1	67 24.4	53.6				
16	343	27.9	10 34.2	31.1	0 10.6	-8 00.3	143 11.0	09.2	82 26.6	53.6				
17	358	30.3	25 34.2	-12 30.0	15 11.3	-7 59.5	158 13.2	-7 09.2	97 28.7	-21 53.6				
18	13	32.8	40 34.1	-12 28.9	30 12.0	-7 58.8	173 15.5	-7 09.3	112 30.9	-21 53.7				
19	28	35.3	55 34.1	27.8	45 12.7	58.0	188 17.7	09.4	127 33.0	53.7				
20	43	37.7	70 34.1	26.7	60 13.4	57.2	203 19.9	09.5	142 35.2	53.7				
21	58	40.2	85 34.0	25.5	75 14.2	56.5	218 22.2	09.6	157 37.4	53.7				
22	73	42.7	100 34.0	24.4	90 14.9	55.7	233 24.4	09.7	172 39.5	53.7				
23	88	45.1	115 34.0	23.3	105 15.6	55.0	248 26.6	09.7	187 41.7	53.8				
24	103	47.6	130 33.9	-12 22.2	120 16.3	-7 54.2	263 28.9	-7 09.8	202 43.8	-21 53.8				
Dif	—		0	+11	+7 +8		+22		-1		+22		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 5 ^d 7	PHE { 4 ^h : 57:7 12 ^h : 57:9 20 ^h : 58:1	SD: 15:7			Rº: 50 ^m						
	PMG: 12 ^h 05 ^m 1														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	47.5	-22 43.1	111	37.3	-4 57.4		60 N	15 10	16 06	17 02	11 17 18	23 13 84		
1	193	47.2	42.8	126	07.8 ¹¹⁵	46.8 ¹⁰⁶		58	27	17	09	16 19	13 81		
2	208	46.9	42.6	140	38.4 ¹¹⁶	36.3 ¹⁰⁵		56	40	27	15	14 22	14 79		
3	223	46.6	42.3	155	08.9 ¹¹⁵	25.7 ¹⁰⁶		54	15 52	35	21	13 24	14 77		
4	238	46.3	42.0	169	39.4 ¹¹⁵	15.1 ¹⁰⁶		52	16 03	43	26	12 25	15 74		
5	253	46.1	-22 41.8	184	09.9 ¹¹⁵	-4 04.4 ¹⁰⁷		50	16 12	16 50	17 31	11 11 27	23 15 73		
6	268	45.8	-22 41.5	198	40.4 ¹¹⁵	-3 53.7 ¹⁰⁷		45	16 32	17 06	17 43	11 08 31	23 16 69		
7	283	45.5	41.2	213	10.9 ¹¹⁵	43.0 ¹⁰⁷		40	16 48	19	17 52	06 34	16 66		
8	298	45.2	41.0	227	41.4 ¹¹⁵	32.3 ¹⁰⁷		35	17 02	30	18 01	04 37	17 63		
9	313	44.9	40.7	242	11.8 ¹¹⁴	21.6 ¹⁰⁷		30	14	40	10	03 38	17 61		
10	328	44.7	40.4	256	42.3 ¹¹⁵	-3 10.8 ¹⁰⁸		20	34	17 58	25	11 00 43	18 57		
11	343	44.4	-22 40.2	271	12.7 ¹¹⁴	-3 00.0 ¹⁰⁸		10 N	17 52	18 15	18 41	10 58 46	23 18 54		
12	358	44.1	-22 39.9	285	43.1 ¹¹⁴	-2 49.1 ¹⁰⁹		0	18 09	18 31	18 57	10 56 49	23 19 50		
13	13	43.8	39.6	300	13.5 ¹¹⁴	38.3 ¹⁰⁸		10 S	26	18 49	19 16	53 53	20 46		
14	28	43.5	39.4	314	43.9 ¹¹⁴	27.4 ¹⁰⁹		20	18 44	19 08	19 37	51 56	20 43		
15	43	43.2	39.1	329	14.3 ¹¹⁴	16.5 ¹⁰⁹		30	19 05	32	20 05	48 61	21 39		
16	58	43.0	38.8	343	44.6 ¹¹³	-2 05.6 ¹⁰⁹		35	18	19 47	23	47 63	21 37		
17	73	42.7	-22 38.5	358	14.9 ¹¹³	-1 54.6 ¹¹⁰		40	19 32	20 05	20 46	10 45 66	23 21 34		
18	88	42.4	-22 38.3	12	45.3 ¹¹⁴	-1 43.7 ¹⁰⁹		45	19 49	20 26	21 15	10 43 69	23 22 31		
19	103	42.1	38.0	27	15.5 ¹¹²	32.7 ¹¹⁰		50	20 11	20 54	21 57	41 72	22 28		
20	118	41.8	37.7	41	45.8 ¹¹³	21.7 ¹¹⁰		52	21	21 09	22 21	40 74	23 25		
21	133	41.6	37.4	56	16.1 ¹¹³	-1 10.7 ¹¹⁰		54	33	25	22 57	38 76	23 24		
22	148	41.3	37.1	70	46.3 ¹¹²	-0 59.7 ¹¹⁰		56	20 46	21 46	** **	37 78	23 22		
23	163	41.0	36.9	85	16.5 ¹¹²	48.6 ¹¹¹		58	21 02	22 12	** **	36 80	23 20		
24	178	40.7	-22 36.6	99	46.7 ¹¹²	-0 37.6 ¹¹⁰		60 S	21 21	22 51	** **	10 34 83	23 24 17		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 02 ^m 0		Mag: -4.5 PMG: 15 ^h 18 ^m			Mag: +0.9 PMG: 15 ^h 58 ^m			Mag: -2.0 PMG: 6 ^h 25 ^m			Mag: +0.5 PMG: 10 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	103	47.6	130	33.9	-12 22.2	120	16.3	-7 54.2	263	28.9	-7 09.8	202	43.8	-21 53.8	
1	118	50.1	145	33.9	21.1	135	17.0	53.4	278	31.1	09.9	217	46.0	53.8	
2	133	52.5	160	33.9	19.9	150	17.8	52.7	293	33.3	10.0	232	48.2	53.8	
3	148	55.0	175	33.8	18.8	165	18.5	51.9	308	35.5	10.1	247	50.3	53.8	
4	163	57.5	190	33.8	17.7	180	19.2	51.2	323	37.8	10.2	262	52.5	53.8	
5	178	59.9	205	33.8	-12 16.6	195	19.9	-7 50.4	338	40.0	-7 10.2	277	54.7	-21 53.9	
6	194	02.4	220	33.8	-12 15.5	210	20.6	-7 49.7	353	42.2	-7 10.3	292	56.8	-21 53.9	
7	209	04.8	235	33.7	14.3	225	21.3	48.9	8	44.5	10.4	307	59.0	53.9	
8	224	07.3	250	33.7	13.2	240	22.1	48.1	23	46.7	10.5	323	01.1	53.9	
9	239	09.8	265	33.7	12.1	255	22.8	47.4	38	48.9	10.6	338	03.3	53.9	
10	254	12.2	280	33.7	11.0	270	23.5	46.6	53	51.2	10.6	353	05.5	53.9	
11	269	14.7	295	33.7	-12 09.8	285	24.2	-7 45.9	68	53.4	-7 10.7	8	07.6	-21 54.0	
12	284	17.2	310	33.6	-12 08.7	300	25.0	-7 45.1	83	55.6	-7 10.8	23	09.8	-21 54.0	
13	299	19.6	325	33.6	07.6	315	25.7	44.3	98	57.9	10.9	38	12.0	54.0	
14	314	22.1	340	33.6	06.5	330	26.4	43.6	114	00.1	11.0	53	14.1	54.0	
15	329	24.6	355	33.6	05.3	345	27.1	42.8	129	02.4	11.0	68	16.3	54.0	
16	344	27.0	10	33.6	04.2	0	27.8	42.1	144	04.6	11.1	83	18.4	54.1	
17	359	29.5	25	33.6	-12 03.1	15	28.6	-7 41.3	159	06.8	-7 11.2	98	20.6	-21 54.1	
18	14	31.9	40	33.5	-12 01.9	30	29.3	-7 40.5	174	09.1	-7 11.3	113	22.8	-21 54.1	
19	29	34.4	55	33.5	-12 00.8	45	30.0	39.8	189	11.3	11.4	128	24.9	54.1	
20	44	36.9	70	33.5	-11 59.7	60	30.7	39.0	204	13.5	11.5	143	27.1	54.1	
21	59	39.3	85	33.5	58.6	75	31.4	38.2	219	15.8	11.5	158	29.3	54.1	
22	74	41.8	100	33.5	57.4	90	32.2	37.5	234	18.0	11.6	173	31.4	54.2	
23	89	44.3	115	33.5	56.3	105	32.9	36.7	249	20.2	11.7	188	33.6	54.2	
24	104	46.7	130	33.5	-11 55.2	120	33.6	-7 36.0	264	22.5	-7 11.8	203	35.7	-21 54.2	
Dif	—		0 +11			+7 +8			+22 -1			+22 0			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 5				Edad: 6 ^d 7 PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 5 20 ^h : 58 ^h 7 PMG: 17 ^h 57 ^m R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	40.7	-22	36.6	99	46.7	-0	37.6	60 N	7 08	8 04	8 59	11 35	18	**	**	**	**	**	**
1	193	40.4		36.3	114	16.8 ¹¹¹		26.5 ¹¹¹	58	7 01	7 53	43	35	21	**	**	**	**	**	**
2	208	40.2		36.0	128	47.0 ¹¹²		15.4 ¹¹¹	56	6 55	43	30	36	23	**	**	**	**	**	**
3	223	39.9		35.7	143	17.1 ¹¹¹		-0 04.3 ¹¹¹	54	49	35	18	37	25	**	**	**	**	**	**
4	238	39.6		35.5	157	47.2 ¹¹¹		+0 06.8 ¹¹¹	52	44	27	8 07	37	27	**	**	**	**	**	**
5	253	39.3	-22	35.2	172	17.2 ¹¹⁰		+0 17.9 ¹¹¹	50	6 39	7 20	7 58	11 38	28	**	**	**	**	**	**
6	268	39.0	-22	34.9	186	47.3 ¹¹¹		+0 29.0 ¹¹¹	45	6 28	7 05	7 38	11 39	32	**	**	**	**	**	**
7	283	38.8		34.6	201	17.3 ¹¹⁰		40.1 ¹¹¹	40	18	6 52	22	40	35	**	**	**	**	**	**
8	298	38.5		34.3	215	47.2 ¹⁰⁹		+0 51.2 ¹¹¹	35	09	41	7 09	41	37	**	**	**	**	**	**
9	313	38.2		34.0	230	17.2 ¹¹⁰		+1 02.4 ¹¹²	30	6 01	31	6 57	41	40	**	**	**	**	**	**
10	328	37.9		33.7	244	47.1 ¹⁰⁹		13.5 ¹¹¹	20	5 45	6 12	36	43	44	**	**	**	**	**	**
11	343	37.7	-22	33.4	259	16.9 ¹⁰⁸		+1 24.6 ¹¹¹	10 N	5 30	5 56	6 19	11 44	47	**	**	**	**	**	**
12	358	37.4	-22	33.2	273	46.8 ¹⁰⁹		+1 35.8 ¹¹²	0	5 13	5 39	6 02	11 45	51	**	**	**	**	**	**
13	13	37.1		32.9	288	16.6 ¹⁰⁸		46.9 ¹¹¹	10 S	4 55	22	5 45	46	54	**	**	**	**	**	**
14	28	36.8		32.6	302	46.4 ¹⁰⁸		+1 58.0 ¹¹¹	20	33	5 02	27	47	58	**	**	**	**	**	**
15	43	36.6		32.3	317	16.1 ¹⁰⁷		+2 09.2 ¹¹²	30	4 05	4 38	5 05	49	62	**	**	**	**	**	**
16	58	36.3		32.0	331	45.8 ¹⁰⁷		20.3 ¹¹¹	35	3 47	24	4 53	50	64	23	58	38			
17	73	36.0	-22	31.7	346	15.5 ¹⁰⁷		+2 31.4 ¹¹¹	40	3 25	4 06	4 39	11 51	67	23	55	36			
18	88	35.7	-22	31.4	0	45.1 ¹⁰⁶		+2 42.6 ¹¹²	45	2 56	3 45	4 21	11 52	70	23	53	33			
19	103	35.4		31.1	15	14.7 ¹⁰⁶		+2 53.7 ¹¹¹	50	2 14	16	4 00	53	74	50	29				
20	118	35.2		30.8	29	44.3 ¹⁰⁶		+3 04.8 ¹¹¹	52	1 49	3 02	3 50	54	75	48	28				
21	133	34.9		30.5	44	13.8 ¹⁰⁵		15.9 ¹¹¹	54	1 13	2 46	38	54	78	47	26				
22	148	34.6		30.2	58	43.3 ¹⁰⁵		27.0 ¹¹¹	56	** **	2 25	25	55	80	45	24				
23	163	34.3		29.9	73	12.8 ¹⁰⁵		38.1 ¹¹¹	58	** **	1 59	3 09	56	82	43	22				
24	178	34.1	-22	29.6	87	42.2 ¹⁰⁴		+3 49.2 ¹¹¹	60 S	** **	1 20	2 50	11 57	85	23	41	19			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 58 ^m 1		Mag: -4.5 PMG: 15 ^h 18 ^m				Mag: +0.9 PMG: 15 ^h 57 ^m				Mag: -2.0 PMG: 6 ^h 22 ^m				Mag: +0.5 PMG: 10 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	104	46.7	130	33.5	-11	55.2	120	33.6	-7	36.0	264	22.5	-7	11.8	203	35.7	-21	54.2
1	119	49.2	145	33.5		54.0	135	34.3		35.2	279	24.7		11.9	218	37.9		54.2
2	134	51.7	160	33.5		52.9	150	35.1		34.4	294	27.0		11.9	233	40.1		54.2
3	149	54.1	175	33.5		51.8	165	35.8		33.7	309	29.2		12.0	248	42.2		54.2
4	164	56.6	190	33.5		50.6	180	36.5		32.9	324	31.4		12.1	263	44.4		54.3
5	179	59.1	205	33.5	-11	49.5	195	37.2	-7	32.2	339	33.7	-7	12.2	278	46.6	-21	54.3
6	195	01.5	220	33.5	-11	48.4	210	37.9	-7	31.4	354	35.9	-7	12.3	293	48.7	-21	54.3
7	210	04.0	235	33.5		47.2	225	38.7		30.6	9	38.2		12.3	308	50.9		54.3
8	225	06.4	250	33.5		46.1	240	39.4		29.9	24	40.4		12.4	323	53.0		54.3
9	240	08.9	265	33.5		45.0	255	40.1		29.1	39	42.6		12.5	338	55.2		54.4
10	255	11.4	280	33.5		43.8	270	40.8		28.3	54	44.9		12.6	353	57.4		54.4
11	270	13.8	295	33.5	-11	42.7	285	41.6	-7	27.6	69	47.1	-7	12.6	8	59.5	-21	54.4
12	285	16.3	310	33.5	-11	41.6	300	42.3	-7	26.8	84	49.4	-7	12.7	24	01.7	-21	54.4
13	300	18.8	325	33.5		40.4	315	43.0		26.1	99	51.6		12.8	39	03.9		54.4
14	315	21.2	340	33.5		39.3	330	43.7		25.3	114	53.8		12.9	54	06.0		54.4
15	330	23.7	355	33.5		38.2	345	44.5		24.5	129	56.1		13.0	69	08.2		54.5
16	345	26.2	10	33.5		37.0	0	45.2		23.8	144	58.3		13.0	84	10.4		54.5
17	0	28.6	25	33.5	-11	35.9	15	45.9	-7	23.0	160	00.6	-7	13.1	99	12.5	-21	54.5
18	15	31.1	40	33.5	-11	34.8	30	46.6	-7	22.2	175	02.8	-7	13.2	114	14.7	-21	54.5
19	30	33.5	55	33.5		33.6	45	47.3		21.5	190	05.0		13.3	129	16.9		54.5
20	45	36.0	70	33.5		32.5	60	48.1		20.7	205	07.3		13.4	144	19.0		54.5
21	60	38.5	85	33.5		31.4	75	48.8		20.0	220	09.5		13.4	159	21.2		54.6
22	75	40.9	100	33.5		30.2	90	49.5		19.2	235	11.8		13.5	174	23.3		54.6
23	90	43.4	115	33.6		29.1	105	50.2		18.4	250	14.0		13.6	189	25.5		54.6
24	105	45.9	130	33.6	-11	27.9	120	51.0	-7	17.7	265	16.3	-7	13.7	204	27.7	-21	54.6
Dif	—		0		+11		+7		+8		+22		-1		+22		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 05 ^m 9			Edad: 7 ^d 7 PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'3 R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	178	34.1	-22	29.6	87	42.2	+3 49.2	60 N	15 14	16 09	17 05	11 53 21	0 37 85		
1	193	33.8		29.3	102	11.5 ¹⁰³	+4 00.2 ¹¹⁰	58	30	20	12	56 24	34 83		
2	208	33.5		29.0	116	40.8 ¹⁰³	11.3 ¹¹¹	56	43	29	18	11 59 26	33 80		
3	223	33.2		28.7	131	10.1 ¹⁰³	22.3 ¹¹⁰	54	15 55	38	23	12 02 27	31 78		
4	238	33.0		28.4	145	39.3 ¹⁰²	33.3 ¹¹⁰	52	16 05	46	29	04 29	29 77		
5	253	32.7	-22	28.1	160	08.5 ¹⁰²	+4 44.3 ¹¹⁰	50	16 15	16 52	17 34	12 06 31	0 28 74		
6	268	32.4	-22	27.8	174	37.7 ¹⁰²	+4 55.3 ¹¹⁰	45	16 34	17 08	17 44	12 11 34	0 25 71		
7	283	32.2		27.5	189	06.8 ¹⁰¹	+5 06.3 ¹¹⁰	40	16 50	20	17 54	15 37	22 68		
8	298	31.9		27.2	203	35.8 ¹⁰⁰	17.2 ¹⁰⁹	35	17 03	31	18 03	18 40	20 65		
9	313	31.6		26.9	218	04.8 ¹⁰⁰	28.2 ¹¹⁰	30	15	41	11	21 43	18 63		
10	328	31.3		26.6	232	33.8 ¹⁰⁰	39.1 ¹⁰⁹	20	35	17 59	27	27 46	15 58		
11	343	31.1	-22	26.3	247	02.7 ⁹⁹	+5 50.0 ¹⁰⁹	10 N	17 53	18 16	18 42	12 31 50	0 12 55		
12	358	30.8	-22	26.0	261	31.5 ⁹⁸	+6 00.8 ¹⁰⁸	0	18 10	18 32	18 58	12 36 53	0 09 52		
13	13	30.5		25.7	276	00.4 ⁹⁹	11.6 ¹⁰⁸	10 S	26	18 49	19 16	40 56	06 48		
14	28	30.2		25.3	290	29.1 ⁹⁷	22.5 ¹⁰⁹	20	18 44	19 09	19 38	45 60	03 45		
15	43	30.0		25.0	304	57.8 ⁹⁷	33.2 ¹⁰⁷	30	19 05	33	20 05	51 63	0 00 41		
16	58	29.7		24.7	319	26.5 ⁹⁷	44.0 ¹⁰⁸	35	18	19 47	23	54 66	** ** *		
17	73	29.4	-22	24.4	333	55.1 ⁹⁶	+6 54.7 ¹⁰⁷	40	19 32	20 04	20 45	12 58 68	** ** *		
18	88	29.2	-22	24.1	348	23.6 ⁹⁵	+7 05.4 ¹⁰⁷	45	19 49	20 26	21 14	13 02 71	** ** *		
19	103	28.9		23.8	2	52.1 ⁹⁵	16.1 ¹⁰⁷	50	20 10	20 53	21 55	07 75	** ** *		
20	118	28.6		23.5	17	20.6 ⁹⁵	26.7 ¹⁰⁶	52	20	21 07	22 19	09 78	** ** *		
21	133	28.4		23.2	31	49.0 ⁹⁴	37.3 ¹⁰⁶	54	32	24	22 53	12 79	** ** *		
22	148	28.1		22.8	46	17.3 ⁹³	47.8 ¹⁰⁵	56	20 45	21 44	** ** *	15 81	** ** *		
23	163	27.8		22.5	60	45.6 ⁹³	+7 58.3 ¹⁰⁵	58	21 00	22 09	** ** *	18 84	** ** *		
24	178	27.5	-22	22.2	75	13.8 ⁹²	+8 08.8 ¹⁰⁵	60 S	21 19	22 46	** ** *	13 22 86	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 54 ^m 2		Mag: -4.5 PMG: 15 ^h 18 ^m		Mag: +0.9 PMG: 15 ^h 56 ^m		Mag: -2.0 PMG: 6 ^h 18 ^m		Mag: +0.5 PMG: 10 ^h 21 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	105	45.9	130	33.6	-11	27.9	120	51.0	-7	17.7
1	120	48.3	145	33.6		26.8	135	51.7		16.9
2	135	50.8	160	33.6		25.7	150	52.4		16.1
3	150	53.3	175	33.6		24.5	165	53.1		15.4
4	165	55.7	190	33.6		23.4	180	53.9		14.6
5	180	58.2	205	33.7	-11	22.2	195	54.6	-7	13.9
6	196	00.7	220	33.7	-11	21.1	210	55.3	-7	13.1
7	211	03.1	235	33.7		20.0	225	56.0		12.3
8	226	05.6	250	33.7		18.8	240	56.8		11.6
9	241	08.0	265	33.8		17.7	255	57.5		10.8
10	256	10.5	280	33.8		16.5	270	58.2		10.0
11	271	13.0	295	33.8	-11	15.4	285	58.9	-7	09.3
12	286	15.4	310	33.8	-11	14.3	300	59.7	-7	08.5
13	301	17.9	325	33.9		13.1	316	00.4		07.7
14	316	20.4	340	33.9		12.0	331	01.1		07.0
15	331	22.8	355	33.9		10.8	346	01.9		06.2
16	346	25.3	10	33.9		09.7	1	02.6		05.4
17	1	27.8	25	34.0	-11	08.5	16	03.3	-7	04.7
18	16	30.2	40	34.0	-11	07.4	31	04.0	-7	03.9
19	31	32.7	55	34.0		06.3	46	04.8		03.2
20	46	35.2	70	34.1		05.1	61	05.5		02.4
21	61	37.6	85	34.1		04.0	76	06.2		01.6
22	76	40.1	100	34.1		02.8	91	06.9		00.9
23	91	42.5	115	34.2		01.7	106	07.7	-7	00.1
24	106	45.0	130	34.2	-11	00.5	121	08.4	-6	59.3
Dif	—		0 +11		+7 +8		+22		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 06 ^m 4				Edad: 8 ^d 7 PHE { SD: 16/2 PMG: 19 ^h 42 ^m R ^c : 56 ^m 4 ^h : 59/4 12 ^h : 59/6 20 ^h : 59/8													
	hG ☉	Dec			hG ☾	Dif Dec Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	27.5	-22	22.2	75	13.8	+8	08.8	60 N	7	07	8	02	8	58	12	14	25
1	193	27.3		21.9	89	42.0	92	19.2	58	7	00	7	52	42		20	28	1
2	208	27.0		21.6	104	10.1	91	29.6	56	6	54	42	28		25	30	53	81
3	223	26.7		21.2	118	38.1	90	40.0	54		48	34	17		29	32	49	7
4	238	26.5		20.9	133	06.1	90	+8	50.3	52	43	26	8	06	33	34	46	77
5	253	26.2	-22	20.6	147	34.0	89	+9	00.6	50	6	38	7	19	7	57	12	37
6	268	25.9	-22	20.3	162	01.9	89	+9	10.8	45	6	28	7	04	7	38	12	45
7	283	25.7		20.0	176	29.7	88		21.0	40	18	6	52	22		52	42	30
8	298	25.4		19.6	190	57.5	88		31.1	35	09	41	7	09	12	58	44	25
9	313	25.1		19.3	205	25.2	87		41.2	30	6	01	31	6	57	13	04	46
10	328	24.9		19.0	219	52.8	86	+9	51.2	20	5	46	6	13	37	13	49	13
11	343	24.6	-22	18.7	234	20.4	86	+10	01.2	10 N	5	30	5	57	6	19	13	21
12	358	24.3	-22	18.3	248	47.9	85	+10	11.1	0	5	14	5	40	6	03	13	29
13	13	24.1		18.0	263	15.4	85		20.9	10 S	4	56	23	5	46	36	59	0
14	28	23.8		17.7	277	42.7	83		30.7	20	35	5	04	28		45	61	48
15	43	23.5		17.3	292	10.1	84		40.5	30	4	07	4	40	5	07	13	54
16	58	23.3		17.0	306	37.3	82		50.2	35	3	49	25	4	55	14	00	67
17	73	23.0	-22	16.7	321	04.5	82	+10	59.8	40	3	28	4	08	4	41	14	06
18	88	22.7	-22	16.4	335	31.7	82	+11	09.4	45	2	59	3	47	4	24	14	13
19	103	22.5		16.0	349	58.7	80		18.9	50	2	18	19	4	02	22	76	19
20	118	22.2		15.7	4	25.8	81		28.4	52	1	54	3	05	3	52	27	77
21	133	21.9		15.4	18	52.7	79		37.7	54	1	20	2	49	41	31	79	13
22	148	21.7		15.0	33	19.6	79		47.0	56	** ** *		29	28		36	82	09
23	163	21.4		14.7	47	46.4	78	+11	56.3	58	** ** *	2	04	3	12	42	84	05
24	178	21.1	-22	14.4	62	13.2	78	+12	05.5	60 S	** ** *	1	27	2	54	14	48	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 50 ^m 2		Mag: -4.5 PMG: 15 ^h 18 ^m		Mag: +0.9 PMG: 15 ^h 55 ^m		Mag: -2.0 PMG: 6 ^h 14 ^m		Mag: +0.5 PMG: 10 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	106	45.0	130	34.2	-11	00.5	121	08.4	-6	59.3	266	10.2	-7	15.5	205	19.6	-21	55.0
1	121	47.5	145	34.3	-10	59.4	136	09.1		58.6	281	12.4		15.6	220	21.8		55.0
2	136	49.9	160	34.3		58.2	151	09.9		57.8	296	14.7		15.6	235	24.0		55.1
3	151	52.4	175	34.3		57.1	166	10.6		57.0	311	16.9		15.7	250	26.1		55.1
4	166	54.9	190	34.4		55.9	181	11.3		56.3	326	19.2		15.8	265	28.3		55.1
5	181	57.3	205	34.4	-10	54.8	196	12.0	-6	55.5	341	21.4	-7	15.9	280	30.5	-21	55.1
6	196	59.8	220	34.5	-10	53.6	211	12.8	-6	54.7	356	23.7	-7	15.9	295	32.6	-21	55.1
7	212	02.3	235	34.5		52.5	226	13.5		54.0	11	25.9		16.0	310	34.8		55.1
8	227	04.7	250	34.5		51.3	241	14.2		53.2	26	28.2		16.1	325	37.0		55.2
9	242	07.2	265	34.6		50.2	256	14.9		52.4	41	30.4		16.2	340	39.1		55.2
10	257	09.6	280	34.6		49.0	271	15.7		51.7	56	32.7		16.2	355	41.3		55.2
11	272	12.1	295	34.7	-10	47.9	286	16.4	-6	50.9	71	34.9	-7	16.3	10	43.5	-21	55.2
12	287	14.6	310	34.7	-10	46.7	301	17.1	-6	50.1	86	37.2	-7	16.4	25	45.6	-21	55.2
13	302	17.0	325	34.8		45.6	316	17.9		49.4	101	39.4		16.5	40	47.8		55.2
14	317	19.5	340	34.8		44.4	331	18.6		48.6	116	41.7		16.5	55	50.0		55.3
15	332	22.0	355	34.9		43.3	346	19.3		47.8	131	44.0		16.6	70	52.1		55.3
16	347	24.4	10	34.9		42.1	1	20.0		47.1	146	46.2		16.7	85	54.3		55.3
17	2	26.9	25	35.0	-10	41.0	16	20.8	-6	46.3	161	48.5	-7	16.8	100	56.5	-21	55.3
18	17	29.4	40	35.1	-10	39.8	31	21.5	-6	45.5	176	50.7	-7	16.8	115	58.6	-21	55.3
19	32	31.8	55	35.1		38.7	46	22.2		44.8	191	53.0		16.9	131	00.8		55.3
20	47	34.3	70	35.2		37.5	61	23.0		44.0	206	55.2		17.0	146	03.0		55.4
21	62	36.8	85	35.2		36.4	76	23.7		43.2	221	57.5		17.0	161	05.1		55.4
22	77	39.2	100	35.3		35.2	91	24.4		42.5	236	59.7		17.1	176	07.3		55.4
23	92	41.7	115	35.3		34.1	106	25.2		41.7	252	02.0		17.2	191	09.5		55.4
24	107	44.1	130	35.4	-10	32.9	121	25.9	-6	40.9	267	04.2	-7	17.3	206	11.6	-21	55.4
Dif	—		0 +11		+7 +8		+23 -1		+22 0									

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 06 ^m 8			Edad: 9 ^d 7 PHE { SD: 16'3 PMG: 20 ^h 38 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	178	21.1	-22	14.4	62	13.2	+12	05.5	60 N	15 17	16 12	17 08	12 39 33	3 29 85				
1	193	20.9		14.0	76	39.9	77	14.6	58	33	23	14	48 35	21 83				
2	208	20.6		13.7	91	06.5	76	23.6	56	46	32	20	12 55 37	14 81				
3	223	20.4		13.3	105	33.0	75	32.6	54	15 58	40	26	13 01 40	08 79				
4	238	20.1		13.0	119	59.5	75	41.5	52	16 08	48	31	07 41	3 03 77				
5	253	19.8	-22	12.7	134	26.0	75	+12 50.3	50	16 17	16 55	17 36	13 13 42	2 58 75				
6	268	19.6	-22	12.3	148	52.3	73	+12 59.0	45	16 36	17 10	17 46	13 24 45	2 48 72				
7	283	19.3		12.0	163	18.7	74	+13 07.7	40	16 52	22	17 56	34 47	39 69				
8	298	19.0		11.6	177	44.9	72	16.3	35	17 05	33	18 04	42 49	32 67				
9	313	18.8		11.3	192	11.1	72	24.8	30	17	17 43	12	13 50 50	25 65				
10	328	18.5		11.0	206	37.2	71	33.2	20	37	18 00	28	14 02 54	14 62				
11	343	18.3	-22	10.6	221	03.2	70	+13 41.6	10 N	17 54	18 17	18 43	14 14 56	2 04 59				
12	358	18.0	-22	10.3	235	29.2	70	+13 49.8	0	18 11	18 33	18 59	14 24 58	1 55 57				
13	13	17.7		09.9	249	55.1	69	+13 58.0	10 S	27	18 50	19 17	35 60	46 54				
14	28	17.5		09.6	264	21.0	69	+14 06.1	20	18 45	19 09	19 38	46 63	36 51				
15	43	17.2		09.2	278	46.8	68	14.1	30	19 06	33	20 05	14 59 66	25 48				
16	58	17.0		08.9	293	12.5	67	22.0	35	18	19 47	23	15 07 67	18 46				
17	73	16.7	-22	08.5	307	38.2	67	+14 29.8	40	19 32	20 04	20 44	15 16 69	1 11 44				
18	88	16.4	-22	08.2	322	03.8	66	+14 37.5	45	19 48	20 25	21 12	15 26 71	1 02 42				
19	103	16.2		07.8	336	29.4	66	45.2	50	20 09	20 52	21 53	38 74	0 52 39				
20	118	15.9		07.5	350	54.8	64	+14 52.7	52	19	21 06	22 16	44 76	47 37				
21	133	15.7		07.1	5	20.3	65	+15 00.1	54	30	22	22 48	50 78	42 35				
22	148	15.4		06.8	19	45.6	63	07.5	56	43	21 41	** **	15 58 78	37 33				
23	163	15.1		06.4	34	10.9	63	14.7	58	20 58	22 06	** **	16 06 81	30 31				
24	178	14.9	-22	06.1	48	36.2	63	+15 21.9	60 S	21 16	22 40	** **	16 15 83	0 23 28				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 46 ^m 3		Mag: -4.5 PMG: 15 ^h 18 ^m			Mag: +0.9 PMG: 15 ^h 53 ^m			Mag: -2.0 PMG: 6 ^h 11 ^m			Mag: +0.5 PMG: 10 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	107	44.1	130	35.4	-10	32.9	121	25.9	-6	40.9	267	04.2	-7	17.3	206	11.6	-21	55.4
1	122	46.6	145	35.5		31.8	136	26.6		40.2	282	06.5		17.3	221	13.8		55.4
2	137	49.1	160	35.5		30.6	151	27.3		39.4	297	08.8		17.4	236	16.0		55.5
3	152	51.5	175	35.6		29.5	166	28.1		38.6	312	11.0		17.5	251	18.1		55.5
4	167	54.0	190	35.7		28.3	181	28.8		37.9	327	13.3		17.6	266	20.3		55.5
5	182	56.5	205	35.7	-10	27.2	196	29.5	-6	37.1	342	15.5	-7	17.6	281	22.5	-21	55.5
6	197	58.9	220	35.8	-10	26.0	211	30.3	-6	36.3	357	17.8	-7	17.7	296	24.6	-21	55.5
7	213	01.4	235	35.9		24.8	226	31.0		35.6	12	20.0		17.8	311	26.8		55.5
8	228	03.9	250	35.9		23.7	241	31.7		34.8	27	22.3		17.8	326	29.0		55.6
9	243	06.3	265	36.0		22.5	256	32.5		34.0	42	24.6		17.9	341	31.1		55.6
10	258	08.8	280	36.1		21.4	271	33.2		33.3	57	26.8		18.0	356	33.3		55.6
11	273	11.3	295	36.1	-10	20.2	286	33.9	-6	32.5	72	29.1	-7	18.1	11	35.5	-21	55.6
12	288	13.7	310	36.2	-10	19.1	301	34.7	-6	31.7	87	31.3	-7	18.1	26	37.6	-21	55.6
13	303	16.2	325	36.3		17.9	316	35.4		31.0	102	33.6		18.2	41	39.8		55.6
14	318	18.6	340	36.4		16.8	331	36.1		30.2	117	35.9		18.3	56	42.0		55.7
15	333	21.1	355	36.4		15.6	346	36.8		29.4	132	38.1		18.3	71	44.1		55.7
16	348	23.6	10	36.5		14.4	1	37.6		28.7	147	40.4		18.4	86	46.3		55.7
17	3	26.0	25	36.6	-10	13.3	16	38.3	-6	27.9	162	42.6	-7	18.5	101	48.5	-21	55.7
18	18	28.5	40	36.7	-10	12.1	31	39.0	-6	27.1	177	44.9	-7	18.6	116	50.6	-21	55.7
19	33	31.0	55	36.7		11.0	46	39.8		26.3	192	47.2		18.6	131	52.8		55.7
20	48	33.4	70	36.8		09.8	61	40.5		25.6	207	49.4		18.7	146	55.0		55.7
21	63	35.9	85	36.9		08.6	76	41.2		24.8	222	51.7		18.8	161	57.1		55.8
22	78	38.4	100	37.0		07.5	91	42.0		24.0	237	53.9		18.8	176	59.3		55.8
23	93	40.8	115	37.1		06.3	106	42.7		23.3	252	56.2		18.9	192	01.5		55.8
24	108	43.3	130	37.1	-10	05.2	121	43.4	-6	22.5	267	58.5	-7	19.0	207	03.7	-21	55.8
Dif	—		+1		+12		+7		+8		+23		-1		+22		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16:3 PMG: 12 ^h 07 ^m 2				Edad: 10 ^d 7 PHE { SD: 16:4 PMG: 21 ^h 37 ^m 4 ^h : 60:2 12 ^h : 60:3 20 ^h : 60:3 R ^o : 60 ^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	14.9	-22	06.1	48	36.2	+15	21.9	70	58	60 N	7	06	8	01	8	55	13	12	44	4	54	79	
1	193	14.6		05.7	63	01.4		28.9	70	58		6	59	7	50		40		23	45		44	77	
2	208	14.4		05.4	77	26.5		35.9	70	56			53		41		27		32	47		35	76	
3	223	14.1		05.0	91	51.6		42.7	68	54			48		33		15		41	48		27	74	
4	238	13.8		04.6	106	16.6		49.5	68	52			43		26		8	05	48	49		20	73	
5	253	13.6	-22	04.3	120	41.5	+15	56.1	66	50		6	38	7	19	7	56	13	55	50		4	13	73
6	268	13.3	-22	03.9	135	06.4	+16	02.7	66	45		6	27	7	04	7	37	14	09	52		4	00	70
7	283	13.1		03.6	149	31.3		09.1	64	40			18	6	52		22		21	54		3	48	69
8	298	12.8		03.2	163	56.1		15.4	63	35			09		41	7	08		31	55		39	66	
9	313	12.6		02.8	178	20.8		21.6	62	30		6	01		31	6	57		40	56		30	66	
10	328	12.3		02.5	192	45.5		27.8	62	20		5	46	6	13		37	14	56	57		16	63	
11	343	12.1	-22	02.1	207	10.1	+16	33.7	59	10 N		5	31	5	57	6	20	15	10	58		3	03	61
12	358	11.8	-22	01.8	221	34.7	+16	39.6	59	0		5	15	5	41	6	04	15	22	60		2	52	59
13	13	11.5		01.4	235	59.3		45.4	58	10 S		4	57		24	5	47		35	62		40	57	
14	28	11.3		01.0	250	23.7		51.1	57	20			36		5	05	29	15	49	63		27	56	
15	43	11.0		00.7	264	48.2	+16	56.6	55	30		4	09	4	42	5	09	16	05	64		13	53	
16	58	10.8	-22	00.3	279	12.6	+17	02.0	54	35		3	51		27	4	57		14	66		2	04	52
17	73	10.5	-21	59.9	293	36.9	+17	07.3	53	40		3	30	4	10	4	43	16	25	66		1	55	50
18	88	10.3	-21	59.6	308	01.2	+17	12.5	52	45		3	02	3	49	4	26	16	37	68		1	44	48
19	103	10.0		59.2	322	25.5		17.6	51	50		2	22		22	4	05	16	52	70		31	45	
20	118	09.8		58.8	336	49.7		22.6	50	52		1	59	3	09	3	55	17	00	70		24	45	
21	133	09.5		58.5	351	13.8		27.4	48	54		1	27	2	53	44		08	71		17	44		
22	148	09.3		58.1	5	38.0		32.1	47	56		** ** *		33		31		16	73		10	41		
23	163	09.0		57.7	20	02.1		36.7	46	58		** ** *		2	09	3	16		27	73		1	01	40
24	178	08.8	-21	57.3	34	26.1	+17	41.2	45	60 S		** ** *		1	34	2	58	17	38	75		0	51	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 42 ^m 4		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.0 PMG: 15 ^h 52 ^m		Mag: -2.0 PMG: 6 ^h 07 ^m		Mag: +0.5 PMG: 10 ^h 10 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	108	43.3	130	37.1	-10	05.2	267	58.5	-7	19.0
1	123	45.8	145	37.2		04.0	283	00.7		19.0
2	138	48.2	160	37.3		02.8	298	03.0		19.1
3	153	50.7	175	37.4		01.7	313	05.3		19.2
4	168	53.1	190	37.5	-10	00.5	328	07.5		19.3
5	183	55.6	205	37.6	-9	59.4	343	09.8	-7	19.3
6	198	58.1	220	37.7	-9	58.2	358	12.0	-7	19.4
7	214	00.5	235	37.8		57.0	13	14.3		19.5
8	229	03.0	250	37.9		55.9	28	16.6		19.5
9	244	05.5	265	37.9		54.7	43	18.8		19.6
10	259	07.9	280	38.0		53.6	58	21.1		19.7
11	274	10.4	295	38.1	-9	52.4	73	23.4	-7	19.7
12	289	12.9	310	38.2	-9	51.2	88	25.6	-7	19.8
13	304	15.3	325	38.3		50.1	103	27.9		19.9
14	319	17.8	340	38.4		48.9	118	30.2		19.9
15	334	20.2	355	38.5		47.7	133	32.4		20.0
16	349	22.7	10	38.6		46.6	148	34.7		20.1
17	4	25.2	25	38.7	-9	45.4	163	37.0	-7	20.1
18	19	27.6	40	38.8	-9	44.2	178	39.2	-7	20.2
19	34	30.1	55	38.9		43.1	193	41.5		20.3
20	49	32.6	70	39.0		41.9	208	43.8		20.3
21	64	35.0	85	39.1		40.8	223	46.0		20.4
22	79	37.5	100	39.2		39.6	238	48.3		20.5
23	94	40.0	115	39.3		38.4	253	50.6		20.5
24	109	42.4	130	39.4	-9	37.3	268	52.8	-7	20.6
Dif	—		+1		+12		+23		-1	
									+22	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 07 ^m 6			Edad: 11 ^d 7 PHE { 4 ^h : 60 ^h 4 12 ^h : 60 ^h 4 20 ^h : 60 ^h 3 R°: 61 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m	
0	178	08.8	-21 57.3	34	26.1	+17 41.2	43	60 N	15 21	16 16	17 11	57	13 56	57	
1	193	08.5	57.0	48	50.1	50 45.5	50	58	37	26	17		14 08	58	
2	208	08.2	56.6	63	14.1	50 49.7	42	56	15 50	35	23		19 58	5 51	
3	223	08.0	56.2	77	38.0	49 53.8	41	54	16 01	43	28		29 58	41 67	
4	238	07.7	55.9	92	01.9	49 +17 57.8	40	52	11	51	33		37 58	33 66	
5	253	07.5	-21 55.5	106	25.8	49 +18 01.6	38	50	16 20	16 57	17 38		14 45	58	
6	268	07.2	-21 55.1	120	49.7	49 +18 05.4	38	45	16 39	17 12	17 48		15 01	59	
7	283	07.0	54.7	135	13.5	48 08.9	35	40	16 54	24	17 58		15 59	4 57	
8	298	06.7	54.3	149	37.3	48 12.4	35	35	17 07	35	18 06		26 60	45 64	
9	313	06.5	54.0	164	01.0	47 15.7	33	30	18	17 44	14		36 60	36 63	
10	328	06.2	53.6	178	24.8	48 18.9	32	20	38	18 02	29		15 53	60	
11	343	06.0	-21 53.2	192	48.5	47 +18 22.0	31	10 N	17 55	18 18	18 44		16 08	61	
12	358	05.7	-21 52.8	207	12.2	47 +18 25.0	30	0	18 11	18 34	19 00		16 22	61	
13	13	05.5	52.4	221	35.9	47 27.8	28	10 S	28	18 50	17		37 61	37 60	
14	28	05.2	52.1	235	59.5	46 30.4	26	20	18 45	19 09	19 38		16 52	61	
15	43	05.0	51.7	250	23.1	46 33.0	26	30	19 06	32	20 05		17 09	62	
16	58	04.7	51.3	264	46.8	47 35.4	24	35	17	19 47	22		20 61	2 56	
17	73	04.5	-21 50.9	279	10.4	46 +18 37.7	23	40	19 31	20 03	20 43		17 31	62	
18	88	04.3	-21 50.5	293	33.9	45 +18 39.8	21	45	19 48	20 24	21 11		17 45	62	
19	103	04.0	50.1	307	57.5	46 41.9	21	50	20 08	20 51	21 50		18 02	62	
20	118	03.8	49.8	322	21.1	46 43.8	19	52	18	21 04	22 12		10 62	09 54	
21	133	03.5	49.4	336	44.7	46 45.5	17	54	29	20	22 43		19 61	2 01	
22	148	03.3	49.0	351	08.2	45 47.1	16	56	42	21 38	** **		29 61	1 51	
23	163	03.0	48.6	5 31.8	46 48.6	15 48.6	15	58	20 56	22 02	** **		40 62	41 51	
24	178	02.8	-21 48.2	19	55.3	45 +18 49.9	13	60 S	21 14	22 35	** **		18 53	62	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 38 ^m 4		Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.0 PMG: 15 ^h 51 ^m			Mag: -2.1 PMG: 6 ^h 04 ^m			Mag: +0.5 PMG: 10 ^h 07 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	'	°	°	'	°	'	°	'	
0	109	42.4	130	39.4	-9 37.3	122	01.1	-6 04.0	268	52.8	-7 20.6	207	55.7	-21 56.2	
1	124	44.9	145	39.6	36.1	137	01.8	03.3	283	55.1	20.7	222	57.9	56.2	
2	139	47.4	160	39.7	34.9	152	02.5	02.5	298	57.4	20.8	238	00.1	56.2	
3	154	49.8	175	39.8	33.8	167	03.3	01.7	313	59.6	20.8	253	02.2	56.2	
4	169	52.3	190	39.9	32.6	182	04.0	00.9	329	01.9	20.9	268	04.4	56.3	
5	184	54.7	205	40.0	-9 31.4	197	04.7	-6 00.2	344	04.2	-7 21.0	283	06.6	-21 56.3	
6	199	57.2	220	40.1	-9 30.3	212	05.5	-5 59.4	359	06.4	-7 21.0	298	08.7	-21 56.3	
7	214	59.7	235	40.2	29.1	227	06.2	58.6	14	08.7	21.1	313	10.9	56.3	
8	230	02.1	250	40.3	27.9	242	06.9	57.9	29	11.0	21.2	328	13.1	56.3	
9	245	04.6	265	40.5	26.8	257	07.7	57.1	44	13.3	21.2	343	15.2	56.3	
10	260	07.1	280	40.6	25.6	272	08.4	56.3	59	15.5	21.3	358	17.4	56.4	
11	275	09.5	295	40.7	-9 24.4	287	09.1	-5 55.6	74	17.8	-7 21.3	13	19.6	-21 56.4	
12	290	12.0	310	40.8	-9 23.2	302	09.9	-5 54.8	89	20.1	-7 21.4	28	21.8	-21 56.4	
13	305	14.5	325	40.9	22.1	317	10.6	54.0	104	22.3	21.5	43	23.9	56.4	
14	320	16.9	340	41.1	20.9	332	11.4	53.2	119	24.6	21.5	58	26.1	56.4	
15	335	19.4	355	41.2	19.7	347	12.1	52.5	134	26.9	21.6	73	28.3	56.4	
16	350	21.9	10 41.3	18.6	2 12.8	51.7	12.8	51.7	149	29.2	21.7	88	30.4	56.4	
17	5 24.3	25 41.4	-9 17.4	17 13.6	-5 50.9	164	31.4	-7 21.7	103	32.6	-21 56.5				
18	20 26.8	40 41.5	-9 16.2	32 14.3	-5 50.2	179	33.7	-7 21.8	118	34.8	-21 56.5				
19	35 29.2	55 41.7	15.1	47 15.0	49.4	194	36.0	21.9	133	37.0	56.5				
20	50 31.7	70 41.8	13.9	62 15.8	48.6	209	38.3	21.9	148	39.1	56.5				
21	65 34.2	85 41.9	12.7	77 16.5	47.8	224	40.5	22.0	163	41.3	56.5				
22	80 36.6	100 42.1	11.6	92 17.2	47.1	239	42.8	22.1	178	43.5	56.5				
23	95 39.1	115 42.2	10.4	107 18.0	46.3	254	45.1	22.1	193	45.6	56.6				
24	110 41.6	130 42.3	-9 09.2	122 18.7	-5 45.5	269	47.4	-7 22.2	208	47.8	-21 56.6				
Dif	—	+1	+12	+7	+8	+23	-1	+22							

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 08 ^m 0			Edad: 12 ^d 7 PHE { 4 ^h : 60/3 12 ^h : 60/2 20 ^h : 60/1 Rº: 59 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	02.8	-21	48.2	19	55.3	+18	49.9	13	60 N	7	04	7	59	8	53	14	53
1	193	02.5		47.8	34	18.8	45	51.2	13	58	6	58		49	38	15	06	
2	208	02.3		47.4	48	42.4	46	52.2	10	56		52		40	25	17	67	
3	223	02.0		47.0	63	05.9	45	53.2	10	54		47		32	14	27	67	
4	238	01.8		46.6	77	29.5	46	54.0	8	52		42		25	8	04	35	
5	253	01.5	-21	46.2	91	53.0	45	+18 54.7	7	50		6	37	7	18	7	55	
6	268	01.3	-21	45.8	106	16.6	46	+18 55.2	5	45		6	27	7	03	7	37	
7	283	01.1		45.5	120	40.1	45	55.6	4	40			18	6	51	21	14	
8	298	00.8		45.1	135	03.7	46	55.9	3	35			09	41	7	08	26	
9	313	00.6		44.7	149	27.3	46	56.0	1	30			6	01	31	6	57	
10	328	00.3		44.3	163	50.9	46	56.0	0	20			5	47	6	14	37	
11	343	00.1	-21	43.9	178	14.5	46	+18 55.9	1	10 N			5	32	5	58	6	20
12	357	59.8	-21	43.5	192	38.1	46	+18 55.6	3	0			5	16	5	42	6	04
13	12	59.6		43.1	207	01.8	47	55.2	4	10 S			4	59	25	5	48	38
14	27	59.3		42.7	221	25.4	46	54.7	5	20			38	5	06	31	17	53
15	42	59.1		42.3	235	49.1	47	54.0	7	30			4	11	4	43	5	10
16	57	58.9		41.9	250	12.8	47	53.2	8	35			3	54	29	4	58	21
17	72	58.6	-21	41.5	264	36.6	48	+18 52.3	9	40			3	32	4	13	4	45
18	87	58.4	-21	41.1	279	00.3	47	+18 51.2	11	45			3	05	3	52	4	28
19	102	58.1		40.7	293	24.1	48	50.0	12	50			2	26	25	4	08	19
20	117	57.9		40.3	307	47.9	48	48.7	13	52			2	03	3	12	3	58
21	132	57.7		39.8	322	11.8	49	47.2	15	54			1	33	2	56	47	20
22	147	57.4		39.4	336	35.6	48	45.6	16	56			0	34	38	34	30	50
23	162	57.2		39.0	350	59.5	49	43.9	17	58			** **	2	14	20	42	49
24	177	56.9	-21	38.6	5	23.5	50	+18 42.0	19	60 S			** **	1	42	3	02	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 34 ^m 5		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.0 PMG: 15 ^h 50 ^m		Mag: -2.1 PMG: 6 ^h 00 ^m		Mag: +0.5 PMG: 10 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	110	41.6	130	42.3	-9	09.2	122	18.7	-5	45.5
1	125	44.0	145	42.4		08.0	137	19.5		44.8
2	140	46.5	160	42.6		06.9	152	20.2		44.0
3	155	49.0	175	42.7		05.7	167	20.9		43.2
4	170	51.4	190	42.8		04.5	182	21.7		42.4
5	185	53.9	205	43.0	-9	03.3	197	22.4	-5	41.7
6	200	56.4	220	43.1	-9	02.2	212	23.2	-5	40.9
7	215	58.8	235	43.3	-9	01.0	227	23.9		40.1
8	231	01.3	250	43.4	-8	59.8	242	24.6		39.3
9	246	03.7	265	43.5		58.7	257	25.4		38.6
10	261	06.2	280	43.7		57.5	272	26.1		37.8
11	276	08.7	295	43.8	-8	56.3	287	26.8	-5	37.0
12	291	11.1	310	44.0	-8	55.1	302	27.6	-5	36.3
13	306	13.6	325	44.1		54.0	317	28.3		35.5
14	321	16.1	340	44.2		52.8	332	29.1		34.7
15	336	18.5	355	44.4		51.6	347	29.8		33.9
16	351	21.0	10	44.5		50.4	2	30.5		33.2
17	6	23.5	25	44.7	-8	49.3	17	31.3	-5	32.4
18	21	25.9	40	44.8	-8	48.1	32	32.0	-5	31.6
19	36	28.4	55	45.0		46.9	47	32.8		30.8
20	51	30.9	70	45.1		45.7	62	33.5		30.1
21	66	33.3	85	45.3		44.6	77	34.2		29.3
22	81	35.8	100	45.4		43.4	92	35.0		28.5
23	96	38.2	115	45.6		42.2	107	35.7		27.8
24	111	40.7	130	45.7	-8	41.0	122	36.5	-5	27.0
Dif	—		+1 +12		+7 +8		+23 -1		+22 0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 08 ^m 4			Edad: 13 ^d 7 PHE { 4 ^h : 59'9 12 ^h : 59'8 20 ^h : 59'6 R°: ***m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	177	56.9	-21	38.6	5	23.5	+18	42.0	60 N	15 26	16 19	17 14	16 02 78	8 17 41				
1	192	56.7		38.2	19	47.5	50	40.0	58	40	29	20	14 76	8 05 43				
2	207	56.5		37.8	34	11.5	50	37.9	56	15 53	38	26	24 74	7 54 45				
3	222	56.2		37.4	48	35.5	50	35.7	54	16 04	46	31	34 72	45 45				
4	237	56.0		37.0	62	59.6	51	33.3	52	14	16 53	36	42 71	36 47				
5	252	55.7	-21	36.6	77	23.8	52	+18 30.8	50	16 23	17 00	17 40	16 49 70	7 29 47				
6	267	55.5	-21	36.2	91	48.0	52	+18 28.2	45	16 41	17 14	17 51	17 05 68	7 12 50				
7	282	55.3		35.8	106	12.2	52	25.4	40	16 56	26	18 00	18 66	6 59 52				
8	297	55.0		35.3	120	36.5	53	22.5	35	17 09	37	08	29 64	48 52				
9	312	54.8		34.9	135	00.8	53	19.5	30	20	17 46	15	38 63	38 54				
10	327	54.5		34.5	149	25.1	53	16.4	20	39	18 03	30	17 55 61	21 55				
11	342	54.3	-21	34.1	163	49.6	55	+18 13.2	10 N	17 56	18 19	18 45	18 09 59	6 06 57				
12	357	54.1	-21	33.7	178	14.0	54	+18 09.8	0	18 12	18 34	19 00	18 23 57	5 52 58				
13	12	53.8		33.3	192	38.6	56	06.3	10 S	28	18 51	17	36 55	38 60				
14	27	53.6		32.9	207	03.2	56	+18 02.7	20	18 45	19 10	19 38	18 51 53	23 61				
15	42	53.4		32.4	221	27.8	56	+17 59.0	30	19 05	32	20 05	19 07 51	5 05 63				
16	57	53.1		32.0	235	52.5	57	55.1	35	17	19 46	22	17 49	4 55 64				
17	72	52.9	-21	31.6	250	17.2	57	+17 51.2	40	19 31	20 03	20 42	19 28 47	4 44 65				
18	87	52.7	-21	31.2	264	42.0	58	+17 47.1	45	19 47	20 23	21 09	19 40 46	4 30 67				
19	102	52.4		30.8	279	06.9	59	42.9	50	20 07	20 49	21 48	19 56 43	13 69				
20	117	52.2		30.3	293	31.8	59	38.6	52	16	21 02	22 09	20 03 42	4 05 70				
21	132	52.0		29.9	307	56.8	60	34.1	54	27	17	22 37	11 41	3 57 70				
22	147	51.7		29.5	322	21.9	61	29.6	56	39	35	23 26	20 40	47 71				
23	162	51.5		29.1	336	47.0	61	24.9	58	20 54	21 58	** **	31 37	35 73				
24	177	51.3	-21	28.6	351	12.2	62	+17 20.2	60 S	21 11	22 29	** **	20 42 35	3 22 75				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 30 ^m 6		Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.0 PMG: 15 ^h 49 ^m			Mag: -2.1 PMG: 5 ^h 56 ^m			Mag: +0.5 PMG: 10 ^h 00 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	111	40.7	130	45.7	-8	41.0	122	36.5	-5	27.0	270	42.0	-7	23.7				
1	126	43.2	145	45.9		39.9	137	37.2		26.2	285	44.3		23.8				
2	141	45.6	160	46.1		38.7	152	37.9		25.4	300	46.6		23.8				
3	156	48.1	175	46.2		37.5	167	38.7		24.7	315	48.9		23.9				
4	171	50.6	190	46.4		36.3	182	39.4		23.9	330	51.2		24.0				
5	186	53.0	205	46.5	-8	35.2	197	40.2	-5	23.1	345	53.4	-7	24.0				
6	201	55.5	220	46.7	-8	34.0	212	40.9	-5	22.3	0	55.7	-7	24.1				
7	216	58.0	235	46.9		32.8	227	41.6		21.6	15	58.0		24.1				
8	232	00.4	250	47.0		31.6	242	42.4		20.8	31	00.3		24.2				
9	247	02.9	265	47.2		30.4	257	43.1		20.0	46	02.6		24.3				
10	262	05.4	280	47.3		29.3	272	43.9		19.2	61	04.9		24.3				
11	277	07.8	295	47.5	-8	28.1	287	44.6	-5	18.5	76	07.1	-7	24.4				
12	292	10.3	310	47.7	-8	26.9	302	45.3	-5	17.7	91	09.4	-7	24.5				
13	307	12.7	325	47.8		25.7	317	46.1		16.9	106	11.7		24.5				
14	322	15.2	340	48.0		24.6	332	46.8		16.2	121	14.0		24.6				
15	337	17.7	355	48.2		23.4	347	47.6		15.4	136	16.3		24.6				
16	352	20.1	10	48.4		22.2	2	48.3		14.6	151	18.6		24.7				
17	7	22.6	25	48.5	-8	21.0	17	49.0	-5	13.8	166	20.8	-7	24.8				
18	22	25.1	40	48.7	-8	19.8	32	49.8	-5	13.1	181	23.1	-7	24.8				
19	37	27.5	55	48.9		18.7	47	50.5		12.3	196	25.4		24.9				
20	52	30.0	70	49.0		17.5	62	51.3		11.5	211	27.7		24.9				
21	67	32.5	85	49.2		16.3	77	52.0		10.7	226	30.0		25.0				
22	82	34.9	100	49.4		15.1	92	52.8		10.0	241	32.3		25.1				
23	97	37.4	115	49.6		13.9	107	53.5		09.2	256	34.6		25.1				
24	112	39.8	130	49.7	-8	12.8	122	54.2	-5	08.4	271	36.9	-7	25.2				
Dif	—		+2		+12		+7		+8		+23		-1		+22		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 08 ^m 8			Edad: 14 ^d 7 PHE { SD: 16:2 PMG: 0 ^h 37 ^m 4 ^h : 59/4 12 ^h : 59/1 20 ^h : 58/9 R°: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	51.3	-21	28.6	351	12.2	+17	20.2	49	60 N	7 03	7 57	8 50	17 20	81	8 58	31
1	192	51.0		28.2	5	37.4		15.3	49	58	6 56	47	36	30	78	48	33
2	207	50.8		27.8	20	02.8		10.3	50	56	51	38	23	38	77	39	35
3	222	50.6		27.4	34	28.1		05.2	51	54	46	30	12	46	75	30	33
4	237	50.3		26.9	48	53.6		00.0	52	52	41	23	8 03	53	73	23	38
5	252	50.1	-21	26.5	63	19.1		54.7	53	50	6 36	7 17	7 54	17 59	72	8 16	40
6	267	49.9	-21	26.1	77	44.7		49.3	54	45	6 26	7 03	7 36	18 13	68	8 02	43
7	282	49.6		25.6	92	10.4		43.8	55	40	17	6 51	21	24	66	7 51	44
8	297	49.4		25.2	106	36.1		38.2	56	35	09	40	7 08	33	64	40	47
9	312	49.2		24.8	121	01.9		32.4	58	30	6 02	31	6 57	41	62	32	48
10	327	48.9		24.4	135	27.8		26.6	58	20	5 47	6 14	38	18 56	59	16	51
11	342	48.7	-21	23.9	149	53.8		20.7	59	10 N	5 32	5 58	6 21	19 08	56	7 03	53
12	357	48.5	-21	23.5	164	19.8		14.7	60	0	5 17	5 43	6 05	19 20	53	6 50	56
13	12	48.2		23.1	178	45.9		08.6	61	10 S	5 00	26	5 49	31	51	38	57
14	27	48.0		22.6	193	12.1		02.4	62	20	4 39	5 08	32	44	48	24	60
15	42	47.8		22.2	207	38.3		56.1	63	30	4 13	4 45	12	19 58	45	6 08	63
16	57	47.6		21.7	222	04.7		49.7	64	35	3 56	31	5 00	20 06	44	5 59	65
17	72	47.3	-21	21.3	236	31.1		43.2	65	40	3 35	4 15	4 47	20 15	42	5 49	66
18	87	47.1	-21	20.9	250	57.6		36.6	66	45	3 08	3 55	4 31	20 26	39	5 37	68
19	102	46.9		20.4	265	24.1		29.9	67	50	2 30	29	11	39 36		22	71
20	117	46.6		20.0	279	50.8		23.2	67	52	2 09	16	4 01	45 35		15	72
21	132	46.4		19.6	294	17.5		16.3	69	54	1 40	3 00	3 50	20 52	33	5 07	74
22	147	46.2		19.1	308	44.3		09.4	69	56	0 51	2 42	38	21 00	31	4 58	76
23	162	46.0		18.7	323	11.2		02.4	70	58	** **	2 20	24	08 29		48	78
24	177	45.7	-21	18.2	337	38.2		55.3	71	60 S	** **	1 49	3 07	21 17	27	4 37	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 26 ^m 6		Mag: -4.6 PMG: 15 ^h 16 ^m		Mag: +1.0 PMG: 15 ^h 48 ^m		Mag: -2.1 PMG: 5 ^h 53 ^m		Mag: +0.5 PMG: 9 ^h 56 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	112	39.8	130	49.7	-8	12.8	122	54.2	-5	08.4	271	36.9	-7	25.2	210	32.1	-21	57.3
1	127	42.3	145	49.9		11.6	137	55.0		07.6	286	39.1		25.2	225	34.3		57.3
2	142	44.8	160	50.1		10.4	152	55.7		06.9	301	41.4		25.3	240	36.5		57.3
3	157	47.2	175	50.3		09.2	167	56.5		06.1	316	43.7		25.3	255	38.7		57.3
4	172	49.7	190	50.5		08.0	182	57.2		05.3	331	46.0		25.4	270	40.8		57.4
5	187	52.2	205	50.7	-8	06.9	197	58.0	-5	04.5	346	48.3	-7	25.5	285	43.0	-21	57.4
6	202	54.6	220	50.8	-8	05.7	212	58.7	-5	03.8	1	50.6	-7	25.5	300	45.2	-21	57.4
7	217	57.1	235	51.0		04.5	227	59.4		03.0	16	52.9		25.6	315	47.4		57.4
8	232	59.6	250	51.2		03.3	243	00.2		02.2	31	55.2		25.6	330	49.5		57.4
9	248	02.0	265	51.4		02.1	258	00.9		01.4	46	57.5		25.7	345	51.7		57.4
10	263	04.5	280	51.6	-8	01.0	273	01.7	-5	00.7	61	59.7		25.8	0	53.9		57.4
11	278	07.0	295	51.8	-7	59.8	288	02.4	-4	59.9	77	02.0	-7	25.8	15	56.1	-21	57.5
12	293	09.4	310	52.0	-7	58.6	303	03.2	-4	59.1	92	04.3	-7	25.9	30	58.2	-21	57.5
13	308	11.9	325	52.2		57.4	318	03.9		58.3	107	06.6		25.9	46	00.4		57.5
14	323	14.3	340	52.3		56.2	333	04.6		57.6	122	08.9		26.0	61	02.6		57.5
15	338	16.8	355	52.5		55.0	348	05.4		56.8	137	11.2		26.0	76	04.8		57.5
16	353	19.3	10	52.7		53.9	3	06.1		56.0	152	13.5		26.1	91	06.9		57.5
17	8	21.7	25	52.9	-7	52.7	18	06.9	-4	55.2	167	15.8	-7	26.2	106	09.1	-21	57.5
18	23	24.2	40	53.1	-7	51.5	33	07.6	-4	54.5	182	18.1	-7	26.2	121	11.3	-21	57.6
19	38	26.7	55	53.3		50.3	48	08.4		53.7	197	20.4		26.3	136	13.5		57.6
20	53	29.1	70	53.5		49.1	63	09.1		52.9	212	22.7		26.3	151	15.6		57.6
21	68	31.6	85	53.7		47.9	78	09.9		52.1	227	25.0		26.4	166	17.8		57.6
22	83	34.1	100	53.9		46.8	93	10.6		51.4	242	27.2		26.4	181	20.0		57.6
23	98	36.5	115	54.1		45.6	108	11.3		50.6	257	29.5		26.5	196	22.2		57.6
24	113	39.0	130	54.3	-7	44.4	123	12.1	-4	49.8	272	31.8	-7	26.6	211	24.4	-21	57.6
Dif	—		+2 +12		+7 +8		+23 -1		+22									

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 09 ^m 1				Edad: 15 ^d 7 PHE { 4 ^h : 58'6 12 ^h : 58'4 20 ^h : 58'1 SD: 16'0 PMG: 1 ^h 33 ^m R°: 53 ^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	177	45.7	-21	18.2	337	38.2	+14	55.3	60 N	15 30	16 23	17 17	18 41	80	9 29	24	
1	192	45.5		17.8	352	05.2	80	48.1	58	44	33	23	48	78	21	26	
2	207	45.3		17.3	6	32.3	81	40.8	56	15 57	41	29	18 55	75	14	28	
3	222	45.1		16.9	20	59.5	82	33.5	54	16 07	49	34	19 01	73	07	30	
4	237	44.8		16.5	35	26.8	83	26.1	52	17	16 56	39	06	72	9 01	32	
5	252	44.6	-21	16.0	49	54.2	84	+14 18.6	50	16 25	17 02	17 43	19 11	70	8 56	33	
6	267	44.4	-21	15.6	64	21.6	84	+14 11.0	45	16 43	17 16	17 53	19 21	67	8 45	36	
7	282	44.2		15.1	78	49.2	86	+14 03.3	40	16 58	28	18 01	30	64	35	39	
8	297	43.9		14.7	93	16.8	86	+13 55.6	35	17 11	38	09	37	62	27	41	
9	312	43.7		14.2	107	44.5	87	47.8	30	22	17 48	17	43	60	20	43	
10	327	43.5		13.8	122	12.2	87	39.9	20	41	18 04	31	19 55	56	8 07	47	
11	342	43.3	-21	13.3	136	40.1	89	+13 32.0	10 N	17 57	18 20	18 46	20 04	53	7 56	50	
12	357	43.0	-21	12.9	151	08.0	89	+13 24.0	0	18 13	18 35	19 01	20 13	51	7 46	52	
13	12	42.8		12.4	165	36.0	90	15.9	10 S	29	18 51	18	22	48	35	55	
14	27	42.6		12.0	180	04.1	91	+13 07.8	20	18 45	19 10	19 38	32	45	24	58	
15	42	42.4		11.5	194	32.3	92	+12 59.5	30	19 05	32	20 04	43	41	11	61	
16	57	42.1		11.1	209	00.6	93	51.3	35	17	19 46	21	50	38	7 04	63	
17	72	41.9	-21	10.6	223	28.9	93	+12 42.9	40	19 30	20 02	20 41	20 57	36	6 55	66	
18	87	41.7	-21	10.2	237	57.3	94	+12 34.5	45	19 46	20 21	21 08	21 05	34	6 45	68	
19	102	41.5		09.7	252	25.8	95	26.1	50	20 05	20 47	21 45	15	31	33	71	
20	117	41.3		09.3	266	54.4	96	17.6	52	15	21 00	22 05	20	29	27	73	
21	132	41.0		08.8	281	23.0	96	09.0	54	25	14	22 32	25	27	21	75	
22	147	40.8		08.3	295	51.8	98	+12 00.4	56	37	32	23 14	31	25	14	77	
23	162	40.6		07.9	310	20.6	98	+11 51.7	58	20 51	21 54	** **	37	23	6 06	79	
24	177	40.4	-21	07.4	324	49.5	99	+11 42.9	60 S	21 07	22 23	** **	21 44	21	5 57	82	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 16 ^h 22 ^m 7		Mag: -4.6 PMG: 15 ^h 16 ^m		Mag: +1.0 PMG: 15 ^h 46 ^m		Mag: -2.1 PMG: 5 ^h 49 ^m		Mag: +0.5 PMG: 9 ^h 53 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	113	39.0	130	54.3	123	12.1	272	31.8	211	24.4							
1	128	41.5	145	54.5	138	12.8	287	34.1	226	26.5							
2	143	43.9	160	54.7	153	13.6	302	36.4	241	28.7							
3	158	46.4	175	54.9	168	14.3	317	38.7	256	30.9							
4	173	48.8	190	55.1	183	15.1	332	41.0	271	33.1							
5	188	51.3	205	55.4	198	15.8	347	43.3	286	35.2							
6	203	53.8	220	55.6	213	16.6	2	45.6	301	37.4							
7	218	56.2	235	55.8	228	17.3	17	47.9	316	39.6							
8	233	58.7	250	56.0	243	18.0	32	50.2	331	41.8							
9	249	01.2	265	56.2	258	18.8	47	52.5	346	43.9							
10	264	03.6	280	56.4	273	19.5	62	54.8	1	46.1							
11	279	06.1	295	56.6	288	20.3	77	57.1	16	48.3							
12	294	08.6	310	56.8	303	21.0	92	59.4	31	50.5							
13	309	11.0	325	57.0	318	21.8	108	01.7	46	52.7							
14	324	13.5	340	57.3	333	22.5	123	04.0	61	54.8							
15	339	16.0	355	57.5	348	23.3	138	06.3	76	57.0							
16	354	18.4	10	57.7	3	24.0	153	08.6	91	59.2							
17	9	20.9	25	57.9	18	24.8	168	10.9	107	01.4							
18	24	23.3	40	58.1	33	25.5	183	13.2	122	03.5							
19	39	25.8	55	58.4	48	26.2	198	15.5	137	05.7							
20	54	28.3	70	58.6	63	27.0	213	17.8	152	07.9							
21	69	30.7	85	58.8	78	27.7	228	20.1	167	10.1							
22	84	33.2	100	59.0	93	28.5	243	22.4	182	12.3							
23	99	35.7	115	59.3	108	29.2	258	24.7	197	14.4							
24	114	38.1	130	59.5	123	30.0	273	27.0	212	16.6							
Dif	—		+2		+12		+23		+22								

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 09 ^m 5				Edad: 16 ^d 7 PHE { SD: 15 ^h 8 PMG: 2 ^h 26 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	177	40.4	-21	07.4	324	49.5	+11	42.9	60 N	7	01	7	55	8	47	20	01	79
1	192	40.1		07.0	339	18.5 ¹⁰⁰		34.1 ⁸⁸	58	6	55	45	33		06	76	47	21
2	207	39.9		06.5	353	47.5 ¹⁰⁰		25.3 ⁸⁸	56		49	36	21		10	74	42	21
3	222	39.7		06.0	8	16.7 ¹⁰²		16.4 ⁸⁹	54		44	29	10		14	72	37	26
4	237	39.5		05.6	22	45.9 ¹⁰²	+11	07.4 ⁹⁰	52		40	22	8	01	18	70	33	27
5	252	39.3	-21	05.1	37	15.2 ¹⁰³	+10	58.4 ⁹⁰	50	6	35	7	16	7	52	20	21	69
6	267	39.1	-21	04.7	51	44.5 ¹⁰³	+10	49.4 ⁹⁰	45	6	26	7	02	7	35	20	28	65
7	282	38.8		04.2	66	14.0 ¹⁰⁵		40.3 ⁹¹	40		17	6	50	20	34	62	14	35
8	297	38.6		03.7	80	43.5 ¹⁰⁵		31.2 ⁹¹	35		09	40	7	07	39	59	08	37
9	312	38.4		03.3	95	13.1 ¹⁰⁶		22.0 ⁹²	30	6	01	31	6	57	43	58	9	03
10	327	38.2		02.8	109	42.7 ¹⁰⁶		12.7 ⁹³	20	5	47	6	14	38	51	54	8	54
11	342	38.0	-21	02.3	124	12.5 ¹⁰⁸	+10	03.5 ⁹²	10 N	5	33	5	59	6	21	20	57	51
12	357	37.7	-21	01.9	138	42.3 ¹⁰⁸	+9	54.2 ⁹³	0	5	18	5	44	6	06	21	04	47
13	12	37.5		01.4	153	12.2 ¹⁰⁹		44.8 ⁹⁴	10 S	5	01	28	5	50	10	44	30	52
14	27	37.3		00.9	167	42.2 ¹¹⁰		35.4 ⁹⁴	20	4	41	5	09	33	17	41	22	55
15	42	37.1	-21	00.5	182	12.2 ¹¹⁰		26.0 ⁹⁴	30	4	15	4	47	14	24	38	12	59
16	57	36.9	-21	00.0	196	42.3 ¹¹¹		16.6 ⁹⁴	35	3	58	33	5	02	28	36	07	61
17	72	36.7	-20	59.5	211	12.5 ¹¹²	+9	07.1 ⁹⁵	40	3	38	4	17	4	49	21	33	33
18	87	36.5	-20	59.0	225	42.8 ¹¹³	+8	57.5 ⁹⁶	45	3	11	3	57	4	33	21	39	30
19	102	36.2		58.6	240	13.1 ¹¹³		48.0 ⁹⁵	50	2	34	32	14		46	27	44	70
20	117	36.0		58.1	254	43.5 ¹¹⁴		38.4 ⁹⁶	52	2	14	19	4	04	49	25	40	72
21	132	35.8		57.6	269	13.9 ¹¹⁴		28.7 ⁹⁶	54	1	47	3	05	3	54	52	24	36
22	147	35.6		57.2	283	44.5 ¹¹⁶		19.1 ⁹⁷	56	1	05	2	47	42	21	56	22	31
23	162	35.4		56.7	298	15.1 ¹¹⁶	+8	09.4 ⁹⁷	58	** *	** *	2	25	28	22	00	20	25
24	177	35.2	-20	56.2	312	45.8 ¹¹⁷	+7	59.7 ⁹⁷	60 S	** *	** *	1	56	3	12	22	05	17
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 18 ^m 8		Mag: -4.6 PMG: 15 ^h 16 ^m				Mag: +1.0 PMG: 15 ^h 45 ^m				Mag: -2.1 PMG: 5 ^h 45 ^m				Mag: +0.5 PMG: 9 ^h 49 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	114	38.1	130	59.5	-7	16.0	123	30.0	-4	31.2	273	27.0	-7	27.9	212	16.6	-21	58.0
1	129	40.6	145	59.7		14.8	138	30.7		30.4	288	29.3		27.9	227	18.8		58.0
2	144	43.1	160	59.9		13.6	153	31.5		29.6	303	31.6		28.0	242	21.0		58.0
3	159	45.5	176	00.2		12.4	168	32.2		28.9	318	33.9		28.0	257	23.2		58.0
4	174	48.0	191	00.4		11.2	183	33.0		28.1	333	36.2		28.1	272	25.3		58.0
5	189	50.4	206	00.6	-7	10.0	198	33.7	-4	27.3	348	38.5	-7	28.2	287	27.5	-21	58.0
6	204	52.9	221	00.9	-7	08.8	213	34.5	-4	26.5	3	40.8	-7	28.2	302	29.7	-21	58.1
7	219	55.4	236	01.1		07.6	228	35.2		25.8	18	43.1		28.3	317	31.9		58.1
8	234	57.8	251	01.3		06.5	243	36.0		25.0	33	45.4		28.3	332	34.0		58.1
9	250	00.3	266	01.6		05.3	258	36.7		24.2	48	47.7		28.4	347	36.2		58.1
10	265	02.8	281	01.8		04.1	273	37.4		23.4	63	50.0		28.4	2	38.4		58.1
11	280	05.2	296	02.0	-7	02.9	288	38.2	-4	22.6	78	52.3	-7	28.5	17	40.6	-21	58.1
12	295	07.7	311	02.3	-7	01.7	303	38.9	-4	21.9	93	54.6	-7	28.5	32	42.8	-21	58.1
13	310	10.2	326	02.5	-7	00.5	318	39.7		21.1	108	56.9		28.6	47	44.9		58.2
14	325	12.6	341	02.8	-6	59.3	333	40.4		20.3	123	59.2		28.6	62	47.1		58.2
15	340	15.1	356	03.0		58.1	348	41.2		19.5	139	01.5		28.7	77	49.3		58.2
16	355	17.6	11	03.2		56.9	3	41.9		18.8	154	03.8		28.7	92	51.5		58.2
17	10	20.0	26	03.5	-6	55.8	18	42.7	-4	18.0	169	06.1	-7	28.8	107	53.7	-21	58.2
18	25	22.5	41	03.7	-6	54.6	33	43.4	-4	17.2	184	08.4	-7	28.8	122	55.8	-21	58.2
19	40	24.9	56	04.0		53.4	48	44.2		16.4	199	10.7		28.9	137	58.0		58.2
20	55	27.4	71	04.2		52.2	63	44.9		15.7	214	13.0		28.9	153	00.2		58.3
21	70	29.9	86	04.5		51.0	78	45.7		14.9	229	15.4		29.0	168	02.4		58.3
22	85	32.3	101	04.7		49.8	93	46.4		14.1	244	17.7		29.0	183	04.6		58.3
23	100	34.8	116	05.0		48.6	108	47.2		13.3	259	20.0		29.1	198	06.7		58.3
24	115	37.3	131	05.2	-6	47.4	123	47.9	-4	12.5	274	22.3	-7	29.1	213	08.9	-21	58.3
Dif	—		+2		+12		+7		+8		+23		-1		+22		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3			Edad: 17 ^d 7 PHE { 4 ^h : 56.9 12 ^h : 56.7 20 ^h : 56.4					Civil		Náutico		Hora R°	
	PMG: 12 ^h 09 ^m 8			SD: 15 ^h 5 PMG: 3 ^h 15 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m
0	177	35.2	-20 56.2	312	45.8	+7 59.7	60 N	15 34	16 27	17 21	21 20	75	10 12	17
1	192	35.0	55.7	327	16.5 ¹¹⁷	49.9 ⁹⁸	58	15 48	36	27	22 73		08 19	
2	207	34.7	55.2	341	47.3 ¹¹⁸	40.2 ⁹⁷	56	16 00	45	32	24 71		05 21	
3	222	34.5	54.8	356	18.2 ¹¹⁹	30.4 ⁹⁸	54	11	52	37	26 70		03 22	
4	237	34.3	54.3	10	49.1 ¹¹⁹	20.5 ⁹⁹	52	20	16 59	41	28 68	10 00	25	
5	252	34.1	-20 53.8	25	20.1 ¹²⁰	+7 10.7 ⁹⁸	50	16 28	17 05	17 45	21 30	66	9 58	26
6	267	33.9	-20 53.3	39	51.2 ¹²¹	+7 00.8 ⁹⁹	45	16 46	17 19	17 55	21 33	63	9 53	29
7	282	33.7	52.9	54	22.3 ¹²¹	+6 51.0 ⁹⁸	40	17 00	30	18 03	36 60		49 32	
8	297	33.5	52.4	68	53.5 ¹²²	41.0 ¹⁰⁰	35	13	40	11	38 58		45 34	
9	312	33.3	51.9	83	24.8 ¹²³	31.1 ⁹⁹	30	23	17 49	19	41 55		42 36	
10	327	33.1	51.4	97	56.1 ¹²³	21.2 ⁹⁹	20	42	18 06	33	45 51		36 40	
11	342	32.8	-20 50.9	112	27.4 ¹²³	+6 11.2 ¹⁰⁰	10 N	17 58	18 21	18 46	21 48	48	9 31	44
12	357	32.6	-20 50.4	126	58.9 ¹²⁵	+6 01.2 ¹⁰⁰	0	18 13	18 36	19 01	21 51	45	9 27	46
13	12	32.4	50.0	141	30.4 ¹²⁵	+5 51.2 ¹⁰⁰	10 S	29	18 52	18	54	42	22	49
14	27	32.2	49.5	156	01.9 ¹²⁵	41.2 ¹⁰⁰	20	18 46	19 10	19 38	21 58	39	17	53
15	42	32.0	49.0	170	33.5 ¹²⁶	31.2 ¹⁰⁰	30	19 05	31	20 04	22 02	35	11	56
16	57	31.8	48.5	185	05.2 ¹²⁷	21.2 ¹⁰⁰	35	16	19 45	20	04 33		08 58	
17	72	31.6	-20 48.0	199	36.9 ¹²⁷	+5 11.1 ¹⁰¹	40	19 29	20 01	20 40	22 06	31	9 04	61
18	87	31.4	-20 47.5	214	08.7 ¹²⁸	+5 01.0 ¹⁰¹	45	19 45	20 20	21 06	22 09	28	8 59	64
19	102	31.2	47.0	228	40.5 ¹²⁸	+4 51.0 ¹⁰⁰	50	20 04	45	21 42	13 25		54 67	
20	117	31.0	46.5	243	12.4 ¹²⁹	40.9 ¹⁰¹	52	13	20 57	22 01	14 24		52 68	
21	132	30.8	46.1	257	44.4 ¹³⁰	30.8 ¹⁰¹	54	23	21 12	22 27	16 22		49 70	
22	147	30.6	45.6	272	16.4 ¹³⁰	20.7 ¹⁰¹	56	35	29	23 04	18 20		46 72	
23	162	30.3	45.1	286	48.4 ¹³⁰	10.6 ¹⁰¹	58	20 48	21 49	** **	20 18		42 75	
24	177	30.1	-20 44.6	301	20.5 ¹³¹	+4 00.5 ¹⁰¹	60 S	21 04	22 17	** **	22 22	16	8 39	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 14 ^m 8		Mag: -4.6 PMG: 15 ^h 15 ^m		Mag: +1.0 PMG: 15 ^h 44 ^m		Mag: -2.1 PMG: 5 ^h 42 ^m		Mag: +0.5 PMG: 9 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	115	37.3	131	05.2	-6	47.4	123	47.9	-4	12.5
1	130	39.7	146	05.5		46.2	138	48.7		11.8
2	145	42.2	161	05.7		45.1	153	49.4		11.0
3	160	44.7	176	06.0		43.9	168	50.2		10.2
4	175	47.1	191	06.2		42.7	183	50.9		09.4
5	190	49.6	206	06.5	-6	41.5	198	51.7	-4	08.7
6	205	52.1	221	06.8	-6	40.3	213	52.4	-4	07.9
7	220	54.5	236	07.0		39.1	228	53.2		07.1
8	235	57.0	251	07.3		37.9	243	53.9		06.3
9	250	59.4	266	07.5		36.7	258	54.7		05.5
10	266	01.9	281	07.8		35.5	273	55.4		04.8
11	281	04.4	296	08.1	-6	34.4	288	56.2	-4	04.0
12	296	06.8	311	08.3	-6	33.2	303	56.9	-4	03.2
13	311	09.3	326	08.6		32.0	318	57.7		02.4
14	326	11.8	341	08.8		30.8	333	58.4		01.7
15	341	14.2	356	09.1		29.6	348	59.2		00.9
16	356	16.7	11	09.4		28.4	3	59.9	-4	00.1
17	11	19.2	26	09.7	-6	27.2	19	00.7	-3	59.3
18	26	21.6	41	09.9	-6	26.0	34	01.4	-3	58.5
19	41	24.1	56	10.2		24.8	49	02.2		57.8
20	56	26.5	71	10.5		23.6	64	02.9		57.0
21	71	29.0	86	10.7		22.4	79	03.7		56.2
22	86	31.5	101	11.0		21.3	94	04.4		55.4
23	101	33.9	116	11.3		20.1	109	05.2		54.7
24	116	36.4	131	11.6	-6	18.9	124	05.9	-3	53.9
Dif	—		+3		+12		+7		+8	
							+23		0	
									+22	
									0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 10 ^m 2			Edad: 18 ^d 7 PHE { SD: 15'3 PMG: 4 ^h 02 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	177	30.1	-20	44.6		301	20.5	+4	00.5	60 N	6 58	7 52	8 44	22 35 74
1	192	29.9		44.1		315	52.7 ¹³²	+3	50.3 ¹⁰²	58	53	43	30	35 72 27 18
2	207	29.7		43.6		330	24.8 ¹³¹		40.2 ¹⁰¹	56	47	34	19	35 70 26 20
3	222	29.5		43.1		344	57.1 ¹³³		30.1 ¹⁰¹	54	43	27	8 08	36 67 25 22
4	237	29.3		42.6		359	29.4 ¹³³		19.9 ¹⁰²	52	38	20	7 59	36 65 25 23
5	252	29.1	-20	42.1		14	01.7 ¹³³	+3	09.8 ¹⁰¹	50	6 34	7 14	7 51	22 36 64 10 24 24
6	267	28.9	-20	41.6		28	34.1 ¹³⁴	+2	59.7 ¹⁰¹	45	6 25	7 01	7 33	22 36 61 10 22 28
7	282	28.7		41.1		43	06.5 ¹³⁴		49.5 ¹⁰²	40	16	6 49	19	36 58 21 30
8	297	28.5		40.6		57	39.0 ¹³⁵		39.4 ¹⁰¹	35	09	40	7 07	36 56 19 33
9	312	28.3		40.1		72	11.5 ¹³⁵		29.2 ¹⁰²	30	6 01	31	6 56	36 54 18 35
10	327	28.1		39.6		86	44.1 ¹³⁶		19.1 ¹⁰¹	20	5 47	6 14	38	36 50 16 39
11	342	27.9	-20	39.1		101	16.7 ¹³⁶	+2	09.0 ¹⁰¹	10 N	5 33	5 59	6 22	22 36 47 10 15 41
12	357	27.7	-20	38.6		115	49.3 ¹³⁶	+1	58.8 ¹⁰²	0	5 19	5 44	6 07	22 36 44 10 13 45
13	12	27.5		38.1		130	22.0 ¹³⁷		48.7 ¹⁰¹	10 S	5 02	29	5 51	36 41 11 48
14	27	27.3		37.6		144	54.8 ¹³⁸		38.6 ¹⁰¹	20	4 42	5 11	35	37 37 10 50
15	42	27.1		37.1		159	27.5 ¹³⁷		28.4 ¹⁰²	30	17	4 49	15	37 34 07 55
16	57	26.9		36.6		174	00.3 ¹³⁸		18.3 ¹⁰¹	35	4 00	35	5 04	37 32 06 57
17	72	26.7	-20	36.1		188	33.2 ¹³⁹	+1	08.2 ¹⁰¹	40	3 40	4 20	4 51	22 37 30 10 05 59
18	87	26.5	-20	35.6		203	06.0 ¹³⁸	+0	58.1 ¹⁰¹	45	3 15	4 00	4 36	22 37 28 10 03 62
19	102	26.3		35.1		217	39.0 ¹⁴⁰		48.0 ¹⁰¹	50	2 39	3 35	17	38 24 01 66
20	117	26.1		34.6		232	11.9 ¹³⁹		37.9 ¹⁰¹	52	2 19	23	4 08	38 22 10 00 67
21	132	25.9		34.1		246	44.9 ¹⁴⁰		27.8 ¹⁰¹	54	1 54	3 09	3 57	38 21 9 59 69
22	147	25.7		33.6		261	17.9 ¹⁴⁰		17.7 ¹⁰¹	56	1 16	2 52	46	38 19 58 71
23	162	25.5		33.1		275	51.0 ¹⁴¹	+0	07.7 ¹⁰⁰	58	** **	31	33	38 17 57 73
24	177	25.3	-20	32.6		290	24.0 ¹⁴⁰	-0	02.4 ¹⁰¹	60 S	** **	2 04	3 17	22 38 15 9 56 75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 10 ^m 9		Mag: -4.6 PMG: 15 ^h 15 ^m		Mag: +1.0 PMG: 15 ^h 43 ^m		Mag: -2.1 PMG: 5 ^h 38 ^m		Mag: +0.5 PMG: 9 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	116	36.4	131	11.6	-6	18.9	275	17.7	-7	30.3
1	131	38.9	146	11.8		17.7	290	20.0		30.4
2	146	41.3	161	12.1		16.5	305	22.4		30.4
3	161	43.8	176	12.4		15.3	320	24.7		30.5
4	176	46.3	191	12.7		14.1	335	27.0		30.5
5	191	48.7	206	13.0	-6	12.9	350	29.3	-7	30.6
6	206	51.2	221	13.2	-6	11.7	5	31.6	-7	30.6
7	221	53.7	236	13.5		10.5	20	33.9		30.7
8	236	56.1	251	13.8		09.3	35	36.3		30.7
9	251	58.6	266	14.1		08.2	50	38.6		30.8
10	267	01.0	281	14.4		07.0	65	40.9		30.8
11	282	03.5	296	14.7	-6	05.8	80	43.2	-7	30.9
12	297	06.0	311	15.0	-6	04.6	95	45.5	-7	30.9
13	312	08.4	326	15.2		03.4	110	47.8		31.0
14	327	10.9	341	15.5		02.2	125	50.2		31.0
15	342	13.4	356	15.8	-6	01.0	140	52.5		31.1
16	357	15.8	11	16.1	-5	59.8	155	54.8		31.1
17	12	18.3	26	16.4	-5	58.6	170	57.1	-7	31.1
18	27	20.8	41	16.7	-5	57.4	185	59.4	-7	31.2
19	42	23.2	56	17.0		56.2	201	01.8		31.2
20	57	25.7	71	17.3		55.0	216	04.1		31.3
21	72	28.2	86	17.6		53.8	231	06.4		31.3
22	87	30.6	101	17.9		52.7	246	08.7		31.4
23	102	33.1	116	18.2		51.5	261	11.0		31.4
24	117	35.5	131	18.5	-5	50.3	276	13.4	-7	31.5
Dif	—		+3		+12		+8		+23	
									0	
									+22	
									0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16/3 PMG: 12 ^h 10 ^m 5				Edad: 19 ^d 7 PHE { SD: 15/1 PMG: 4 ^h 47 ^m R°: 44 ^m																
	hG ☉	Dec			hG ☾	Dif								Civil	Náutico		Hora	R°		Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	m
0	177	25.3	-20	32.6	290	24.0	-0	02.4	60 N	15 39	16 31	17 24	23 49	72	10 44	16					
1	192	25.1		32.1	304	57.2 ¹⁴²		12.4 ¹⁰⁰	58	15 53		40	30		47 69	45 18					
2	207	24.9		31.5	319	30.3 ¹⁴¹		22.5 ¹⁰¹	56	16 04		48	35		45 67	46 19					
3	222	24.7		31.0	334	03.5 ¹⁴²		32.5 ¹⁰⁰	54	14	16 55	40	43 66	47 21							
4	237	24.5		30.5	348	36.7 ¹⁴²		42.5 ¹⁰⁰	52	23	17 02	44	41 64	48 22							
5	252	24.3	-20	30.0	3	09.9 ¹⁴²	-0	52.5 ¹⁰⁰	50	16 31	17 08	17 48	23 40	62	10 48	24					
6	267	24.1	-20	29.5	17	43.2 ¹⁴³	-1	02.5 ¹⁰⁰	45	16 49	17 21	17 57	23 37	59	10 50	27					
7	282	23.9		29.0	32	16.4 ¹⁴²		12.4 ⁹⁹	40	17 03		32	18 05		34 57	51 30					
8	297	23.7		28.5	46	49.8 ¹⁴⁴		22.4 ¹⁰⁰	35	15	42	13	32 54		52 32						
9	312	23.5		28.0	61	23.1 ¹⁴³		32.3 ⁹⁹	30	25	17 51	20	30 52		53 34						
10	327	23.3		27.4	75	56.4 ¹⁴³		42.2 ⁹⁹	20	43	18 07	34	26 49		55 37						
11	342	23.1	-20	26.9	90	29.8 ¹⁴⁴	-1	52.1 ⁹⁹	10 N	17 59	18 21	18 47	23 23	46	10 56	41					
12	357	22.9	-20	26.4	105	03.2 ¹⁴⁴	-2	02.0 ⁹⁹	0	18 14	18 36	19 02	23 20	44	10 58	43					
13	12	22.7		25.9	119	36.6 ¹⁴⁴		11.9 ⁹⁹	10 S	29	18 52	18	17 41		10 59	46					
14	27	22.5		25.4	134	10.1 ¹⁴⁵		21.7 ⁹⁸	20	18 45	19 09	19 38	14 38		11 00	50					
15	42	22.3		24.9	148	43.6 ¹⁴⁵		31.6 ⁹⁹	30	19 04	31	20 03	11 34		02 53						
16	57	22.1		24.3	163	17.0 ¹⁴⁴		41.4 ⁹⁸	35	15	44	19	09 32		03 55						
17	72	21.9	-20	23.8	177	50.5 ¹⁴⁵	-2	51.2 ⁹⁸	40	19 28	19 59	20 38	23 07	30	11 04	57					
18	87	21.8	-20	23.3	192	24.1 ¹⁴⁶	-3	00.9 ⁹⁷	45	19 43	20 18	21 03	23 05	27	11 05	60					
19	102	21.6		22.8	206	57.6 ¹⁴⁵		10.7 ⁹⁸	50	20 02	43	38	02 24		07 63						
20	117	21.4		22.3	221	31.2 ¹⁴⁶		20.4 ⁹⁷	52	11	20 55	21 57	23 00	23	07 65						
21	132	21.2		21.7	236	04.7 ¹⁴⁵		30.1 ⁹⁷	54	21	21 08	22 21	22 59	21	08 67						
22	147	21.0		21.2	250	38.3 ¹⁴⁶		39.8 ⁹⁷	56	32	25	22 55	57 20		09 68						
23	162	20.8		20.7	265	11.9 ¹⁴⁶		49.4 ⁹⁶	58	20 45	21 45	** **	55 18		10 70						
24	177	20.6	-20	20.2	279	45.5 ¹⁴⁶	-3	59.1 ⁹⁷	60 S	21 00	22 10	** **	22 53	16	11 11	72					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 16 ^h 07 ^m 0		Mag: -4.6 PMG: 15 ^h 14 ^m				Mag: +1.0 PMG: 15 ^h 42 ^m				Mag: -2.1 PMG: 5 ^h 34 ^m				Mag: +0.5 PMG: 9 ^h 39 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	117	35.5	131	18.5	-5	50.3	124	23.9	-3	35.2	276	13.4	-7	31.5	214	53.7	-21	58.9			
1	132	38.0	146	18.8		49.1	139	24.7		34.4	291	15.7		31.5	229	55.8		59.0			
2	147	40.5	161	19.1		47.9	154	25.4		33.6	306	18.0		31.6	244	58.0		59.0			
3	162	42.9	176	19.4		46.7	169	26.2		32.9	321	20.3		31.6	260	00.2		59.0			
4	177	45.4	191	19.7		45.5	184	26.9		32.1	336	22.6		31.7	275	02.4		59.0			
5	192	47.9	206	20.0	-5	44.3	199	27.7	-3	31.3	351	25.0	-7	31.7	290	04.6	-21	59.0			
6	207	50.3	221	20.3	-5	43.1	214	28.5	-3	30.5	6	27.3	-7	31.7	305	06.8	-21	59.0			
7	222	52.8	236	20.6		41.9	229	29.2		29.8	21	29.6		31.8	320	09.0		59.0			
8	237	55.3	251	20.9		40.7	244	30.0		29.0	36	31.9		31.8	335	11.1		59.0			
9	252	57.7	266	21.2		39.5	259	30.7		28.2	51	34.3		31.9	350	13.3		59.1			
10	268	00.2	281	21.6		38.3	274	31.5		27.4	66	36.6		31.9	5	15.5		59.1			
11	283	02.6	296	21.9	-5	37.2	289	32.2	-3	26.6	81	38.9	-7	32.0	20	17.7	-21	59.1			
12	298	05.1	311	22.2	-5	36.0	304	33.0	-3	25.9	96	41.2	-7	32.0	35	19.9	-21	59.1			
13	313	07.6	326	22.5		34.8	319	33.7		25.1	111	43.5		32.1	50	22.1		59.1			
14	328	10.0	341	22.8		33.6	334	34.5		24.3	126	45.9		32.1	65	24.2		59.1			
15	343	12.5	356	23.1		32.4	349	35.2		23.5	141	48.2		32.1	80	26.4		59.1			
16	358	15.0	11	23.4		31.2	4	36.0		22.7	156	50.5		32.2	95	28.6		59.1			
17	13	17.4	26	23.8	-5	30.0	19	36.7	-3	22.0	171	52.8	-7	32.2	110	30.8	-21	59.2			
18	28	19.9	41	24.1	-5	28.8	34	37.5	-3	21.2	186	55.2	-7	32.3	125	33.0	-21	59.2			
19	43	22.4	56	24.4		27.6	49	38.2		20.4	201	57.5		32.3	140	35.2		59.2			
20	58	24.8	71	24.7		26.4	64	39.0		19.6	216	59.8		32.4	155	37.4		59.2			
21	73	27.3	86	25.0		25.2	79	39.8		18.8	232	02.2		32.4	170	39.5		59.2			
22	88	29.8	101	25.4		24.0	94	40.5		18.1	247	04.5		32.4	185	41.7		59.2			
23	103	32.2	116	25.7		22.8	109	41.3		17.3	262	06.8		32.5	200	43.9		59.2			
24	118	34.7	131	26.0	-5	21.6	124	42.0	-3	16.5	277	09.1	-7	32.5	215	46.1	-21	59.2			
Dif	—		+3		+12		+8		+8		+23		0		+22		0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3			Edad: 20 ^d 7 PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6										
	PMG: 12 ^h 10 ^m 8			SD: 15 ^m 0 PMG: 5 ^h 31 ^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	m
0	177	20.6	-20	279	45.5	-3	59.1	60 N	6 56	7 49	8 41	** ** *	11 00	16
1	192	20.4		294	19.1 ¹⁴⁶	-4	08.7 ⁹⁶	58	51	40	27	** ** *	03	18
2	207	20.2		308	52.8 ¹⁴⁷		18.3 ⁹⁶	56	46	32	16	** ** *	05	21
3	222	20.0		323	26.4 ¹⁴⁶		27.8 ⁹⁵	54	41	25	8 06	** ** *	08	22
4	237	19.8		338	00.1 ¹⁴⁷		37.3 ⁹⁵	52	37	19	7 57	** ** *	10	24
5	252	19.6	-20	352	33.7 ¹⁴⁶	-4	46.8 ⁹⁵	50	6 33	7 13	7 49	** ** *	11 12	26
6	267	19.5	-20	7	07.4 ¹⁴⁷	-4	56.3 ⁹⁵	45	6 24	7 00	7 32	** ** *	11 17	28
7	282	19.3		21	41.1 ¹⁴⁷	-5	05.8 ⁹⁵	40	15	6 49	18	** ** *	21	30
8	297	19.1		36	14.8 ¹⁴⁷		15.2 ⁹⁴	35	08	39	7 06	** ** *	24	33
9	312	18.9		50	48.5 ¹⁴⁷		24.6 ⁹⁴	30	6 01	30	6 56	** ** *	27	35
10	327	18.7		65	22.2 ¹⁴⁷		33.9 ⁹³	20	5 47	14	38	** ** *	32	38
11	342	18.5	-20	79	55.9 ¹⁴⁷	-5	43.3 ⁹⁴	10 N	5 34	6 00	6 22	** ** *	11 37	41
12	357	18.3	-20	94	29.6 ¹⁴⁷	-5	52.6 ⁹³	0	5 19	5 45	6 07	** ** *	11 41	43
13	12	18.1	13.3	109	03.3 ¹⁴⁷	-6	01.8 ⁹³	10 S	5 03	30	5 52	23 58	41	45
14	27	18.0	12.8	123	37.0 ¹⁴⁷		11.1 ⁹³	20	4 44	5 12	36	52 38	50	49
15	42	17.8	12.2	138	10.7 ¹⁴⁷		20.3 ⁹²	30	19	4 51	17	45 35	55	52
16	57	17.6	11.7	152	44.5 ¹⁴⁸		29.4 ⁹¹	35	4 03	38	5 06	41 34	11 58	54
17	72	17.4	-20	167	18.2 ¹⁴⁷	-6	38.6 ⁹²	40	3 43	4 22	4 53	23 37	31	12 01
18	87	17.2	-20	181	51.9 ¹⁴⁷	-6	47.7 ⁹¹	45	3 18	4 03	4 38	23 32	29	12 05
19	102	17.0		196	25.6 ¹⁴⁷	-6	56.8 ⁹¹	50	2 43	3 39	20	26 26	10	62
20	117	16.8		210	59.3 ¹⁴⁷	-7	05.8 ⁹⁰	52	25	27	11	23 25	12	64
21	132	16.6		225	33.1 ¹⁴⁸		14.8 ⁹⁰	54	2 01	3 13	4 01	20 23	15	65
22	147	16.5		240	06.8 ¹⁴⁷		23.8 ⁹⁰	56	1 27	2 57	3 50	17 21	17	67
23	162	16.3		254	40.5 ¹⁴⁷		32.7 ⁸⁹	58	** ** *	37	37	13 20	20	69
24	177	16.1	-20	269	14.2 ¹⁴⁷	-7	41.6 ⁸⁹	60 S	** ** *	2 11	3 22	23 09	18	12 23
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 03 ^m 1		Mag: -4.6 PMG: 15 ^h 14 ^m			Mag: +1.0 PMG: 15 ^h 40 ^m			Mag: -2.1 PMG: 5 ^h 31 ^m			Mag: +0.5 PMG: 9 ^h 36 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	118	34.7	131	26.0	-5	21.6	124	42.0	-3	16.5	277	09.1	-7	32.5
1	133	37.1	146	26.4		20.4	139	42.8		15.7	292	11.5		32.6
2	148	39.6	161	26.7		19.3	154	43.5		15.0	307	13.8		32.6
3	163	42.1	176	27.0		18.1	169	44.3		14.2	322	16.1		32.7
4	178	44.5	191	27.3		16.9	184	45.0		13.4	337	18.4		32.7
5	193	47.0	206	27.7	-5	15.7	199	45.8	-3	12.6	352	20.8	-7	32.7
6	208	49.5	221	28.0	-5	14.5	214	46.5	-3	11.8	7	23.1	-7	32.8
7	223	51.9	236	28.3		13.3	229	47.3		11.1	22	25.4		32.8
8	238	54.4	251	28.7		12.1	244	48.0		10.3	37	27.8		32.9
9	253	56.9	266	29.0		10.9	259	48.8		09.5	52	30.1		32.9
10	268	59.3	281	29.3		09.7	274	49.6		08.7	67	32.4		33.0
11	284	01.8	296	29.7	-5	08.5	289	50.3	-3	07.9	82	34.8	-7	33.0
12	299	04.2	311	30.0	-5	07.3	304	51.1	-3	07.2	97	37.1	-7	33.0
13	314	06.7	326	30.4		06.1	319	51.8		06.4	112	39.4		33.1
14	329	09.2	341	30.7		04.9	334	52.6		05.6	127	41.8		33.1
15	344	11.6	356	31.0		03.7	349	53.3		04.8	142	44.1		33.2
16	359	14.1	11	31.4		02.6	4	54.1		04.0	157	46.4		33.2
17	14	16.6	26	31.7	-5	01.4	19	54.8	-3	03.3	172	48.7	-7	33.2
18	29	19.0	41	32.1	-5	00.2	34	55.6	-3	02.5	187	51.1	-7	33.3
19	44	21.5	56	32.4	-4	59.0	49	56.4		01.7	202	53.4		33.3
20	59	24.0	71	32.8		57.8	64	57.1		00.9	217	55.7		33.4
21	74	26.4	86	33.1		56.6	79	57.9	-3	00.1	232	58.1		33.4
22	89	28.9	101	33.5		55.4	94	58.6	-2	59.4	248	00.4		33.4
23	104	31.4	116	33.8		54.2	109	59.4		58.6	263	02.8		33.5
24	119	33.8	131	34.2	-4	53.0	125	00.1	-2	57.8	278	05.1	-7	33.5
Dif	—		+3		+12		+8		+8		+23		0	
													+22	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 11 ^m 1			Edad: 21 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 6 ^h 14 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'		h m	h m	h m	h m m	h m m	h m m	
0	177	16.1	-20 07.4	269	14.2	-7 41.6	89	60 N	15 44	16 35	17 28	1 01 70	11 16 19	
1	192	15.9	06.8	283	47.9 ¹⁴⁷	50.5	89	58	15 57	44	33	0 56 68	21 21	
2	207	15.7	06.3	298	21.6 ¹⁴⁷	-7 59.3	88	56	16 08	52	38	52 67	26 23	
3	222	15.5	05.8	312	55.3 ¹⁴⁷	-8 08.1	88	54	18	16 59	43	49 64	30 22	
4	237	15.4	05.2	327	29.0 ¹⁴⁷	16.8	87	52	27	17 05	47	45 63	34 26	
5	252	15.2	-20 04.7	342	02.6 ¹⁴⁶	-8 25.5	87	50	16 35	17 11	17 51	0 42 62	11 38 27	
6	267	15.0	-20 04.1	356	36.3 ¹⁴⁷	-8 34.2	87	45	16 51	17 24	18 00	0 36 59	11 45 30	
7	282	14.8	03.6	11	10.0 ¹⁴⁷	42.8	86	40	17 05	34	07	31 56	51 33	
8	297	14.6	03.0	25	43.6 ¹⁴⁶	-8 51.4	86	35	17	44	15	26 54	11 57 34	
9	312	14.5	02.5	40	17.2 ¹⁴⁶	-9 00.0	86	30	27	17 52	22	22 52	12 02 36	
10	327	14.3	01.9	54	50.9 ¹⁴⁷	-9 08.5	85	20	17 45	18 08	35	15 49	10 39	
11	342	14.1	-20 01.4	69	24.5 ¹⁴⁶	-9 17.0	85	10 N	18 00	18 22	18 48	0 09 46	12 18 41	
12	357	13.9	-20 00.8	83	58.1 ¹⁴⁶	-9 25.4	84	0	18 15	18 37	19 02	0 04 43	12 24 44	
13	12	13.7	-20 00.3	98	31.7 ¹⁴⁶	33.8	84	10 S	29	18 52	18	** ** *	31 47	
14	27	13.6	-19 59.7	113	05.3 ¹⁴⁶	42.1	83	20	18 45	19 09	19 37	** ** *	39 49	
15	42	13.4	59.2	127	38.8 ¹⁴⁵	50.4	83	30	19 04	30	20 02	** ** *	47 52	
16	57	13.2	58.6	142	12.4 ¹⁴⁶	-9 58.7	83	35	15	43	18	** ** *	52 54	
17	72	13.0	-19 58.1	156	45.9 ¹⁴⁵	-10 06.9	82	40	19 27	19 58	20 37	** ** *	12 58 56	
18	87	12.8	-19 57.5	171	19.4 ¹⁴⁵	-10 15.1	82	45	19 42	20 16	21 01	** ** *	13 04 58	
19	102	12.7	57.0	185	53.0 ¹⁴⁶	23.2	81	50	20 00	40	35	23 52 28	12 61	
20	117	12.5	56.4	200	26.4 ¹⁴⁴	31.2	80	52	08	20 52	21 53	48 27	16 62	
21	132	12.3	55.9	214	59.9 ¹⁴⁵	39.3	81	54	18	21 05	22 15	43 26	20 64	
22	147	12.1	55.3	229	33.4 ¹⁴⁵	47.3	80	56	29	21	22 47	38 25	24 66	
23	162	11.9	54.8	244	06.8 ¹⁴⁴	-10 55.2	79	58	41	21 40	** ** *	33 22	29 67	
24	177	11.8	-19 54.2	258	40.2 ¹⁴⁴	-11 03.1	79	60 S	20 56	22 04	** ** *	23 27 20	13 35 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 59 ^m 1		Mag: -4.6 PMG: 15 ^h 13 ^m			Mag: +1.0 PMG: 15 ^h 39 ^m			Mag: -2.1 PMG: 5 ^h 27 ^m			Mag: +0.5 PMG: 9 ^h 32 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	119	33.8	131 34.2	-4 53.0	125 00.1	-2 57.8	278 05.1	-7 33.5	216 38.6	-21 59.5				
1	134	36.3	146 34.5	51.8	140 00.9	57.0	293 07.4	33.6	231 40.8	59.6				
2	149	38.7	161 34.9	50.6	155 01.6	56.2	308 09.8	33.6	246 43.0	59.6				
3	164	41.2	176 35.2	49.4	170 02.4	55.5	323 12.1	33.6	261 45.2	59.6				
4	179	43.7	191 35.6	48.2	185 03.2	54.7	338 14.4	33.7	276 47.3	59.6				
5	194	46.1	206 35.9	-4 47.0	200 03.9	-2 53.9	353 16.8	-7 33.7	291 49.5	-21 59.6				
6	209	48.6	221 36.3	-4 45.8	215 04.7	-2 53.1	8 19.1	-7 33.8	306 51.7	-21 59.6				
7	224	51.1	236 36.7	44.7	230 05.4	52.3	23 21.4	33.8	321 53.9	59.6				
8	239	53.5	251 37.0	43.5	245 06.2	51.6	38 23.8	33.8	336 56.1	59.6				
9	254	56.0	266 37.4	42.3	260 06.9	50.8	53 26.1	33.9	351 58.3	59.6				
10	269	58.5	281 37.7	41.1	275 07.7	50.0	68 28.4	33.9	7 00.5	59.7				
11	285	00.9	296 38.1	-4 39.9	290 08.4	-2 49.2	83 30.8	-7 34.0	22 02.7	-21 59.7				
12	300	03.4	311 38.5	-4 38.7	305 09.2	-2 48.4	98 33.1	-7 34.0	37 04.9	-21 59.7				
13	315	05.9	326 38.8	37.5	320 10.0	47.7	113 35.5	34.0	52 07.0	59.7				
14	330	08.3	341 39.2	36.3	335 10.7	46.9	128 37.8	34.1	67 09.2	59.7				
15	345	10.8	356 39.6	35.1	350 11.5	46.1	143 40.1	34.1	82 11.4	59.7				
16	0	13.2	11 39.9	33.9	5 12.2	45.3	158 42.5	34.2	97 13.6	59.7				
17	15	15.7	26 40.3	-4 32.7	20 13.0	-2 44.6	173 44.8	-7 34.2	112 15.8	-21 59.7				
18	30	18.2	41 40.7	-4 31.5	35 13.7	-2 43.8	188 47.2	-7 34.2	127 18.0	-21 59.8				
19	45	20.6	56 41.1	30.3	50 14.5	43.0	203 49.5	34.3	142 20.2	59.8				
20	60	23.1	71 41.4	29.1	65 15.3	42.2	218 51.8	34.3	157 22.4	59.8				
21	75	25.6	86 41.8	28.0	80 16.0	41.4	233 54.2	34.3	172 24.6	59.8				
22	90	28.0	101 42.2	26.8	95 16.8	40.7	248 56.5	34.4	187 26.8	59.8				
23	105	30.5	116 42.6	25.6	110 17.5	39.9	263 58.9	34.4	202 28.9	59.8				
24	120	33.0	131 42.9	-4 24.4	125 18.3	-2 39.1	279 01.2	-7 34.5	217 31.1	-21 59.8				
Dif	—		+4	+12	+8	+8	+23	0	+22	0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'3 PMG: 12 ^h 11 ^m 4			Edad: 22 ^d 7 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 6 ^h 58 ^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	h	m	
0	177	11.8	-19	54.2	258	40.2	-11	03.1	60 N	6 53	7 46	8 37	2 11	69	11 35	22			
1	192	11.6		53.7	273	13.6 ¹⁴⁴		10.9 ⁷⁸	58	48	38	24	2 04	67	42	25			
2	207	11.4		53.1	287	47.0 ¹⁴⁴		18.7 ⁷⁸	56	43	30	13	1 59	64	49	26			
3	222	11.2		52.5	302	20.4 ¹⁴⁴		26.5 ⁷⁸	54	39	23	8 03	53	63	11 54	28			
4	237	11.1		52.0	316	53.7 ¹⁴³		34.1 ⁷⁶	52	35	17	7 55	48	62	12 00	29			
5	252	10.9	-19	51.4	331	27.0 ¹⁴³	-11	41.8 ⁷⁷	50	6 31	7 11	7 47	1 44	60	12 05	30			
6	267	10.7	-19	50.9	346	00.3 ¹⁴³	-11	49.4 ⁷⁶	45	6 22	6 58	7 31	1 35	57	12 15	33			
7	282	10.5		50.3	0	33.6 ¹⁴³	-11	56.9 ⁷⁵	40	15	48	17	27	55	24	34			
8	297	10.4		49.7	15	06.8 ¹⁴²	-12	04.4 ⁷⁵	35	07	38	7 05	20	54	31	37			
9	312	10.2		49.2	29	40.0 ¹⁴²		11.9 ⁷⁵	30	6 01	30	6 55	14	52	38	38			
10	327	10.0		48.6	44	13.2 ¹⁴²		19.2 ⁷³	20	5 47	14	38	1 04	49	49	41			
11	342	09.9	-19	48.1	58	46.4 ¹⁴²	-12	26.6 ⁷⁴	10 N	5 34	6 00	6 22	0 55	47	12 59	43			
12	357	09.7	-19	47.5	73	19.6 ¹⁴²	-12	33.9 ⁷³	0	5 20	5 46	6 08	0 47	44	13 08	45			
13	12	09.5		46.9	87	52.7 ¹⁴¹		41.1 ⁷²	10 S	5 04	31	5 53	39	42	18	47			
14	27	09.3		46.4	102	25.8 ¹⁴¹		48.3 ⁷²	20	4 45	5 13	37	30	40	28	49			
15	42	09.2		45.8	116	58.9 ¹⁴¹	-12	55.4 ⁷¹	30	21	4 53	19	20	37	39	52			
16	57	09.0		45.2	131	31.9 ¹⁴⁰	-13	02.4 ⁷⁰	35	4 05	40	5 08	15	35	46	53			
17	72	08.8	-19	44.7	146	05.0 ¹⁴¹	-13	09.5 ⁷¹	40	3 46	4 25	4 56	0 08	34	13 54	55			
18	87	08.7	-19	44.1	160	37.9 ¹³⁹	-13	16.4 ⁶⁹	45	3 22	4 06	4 41	0 01	31	14 02	57			
19	102	08.5		43.5	175	10.9 ¹⁴⁰		23.3 ⁶⁹	50	2 48	3 43	23	** ** *	**	13	60			
20	117	08.3		43.0	189	43.9 ¹⁴⁰		30.1 ⁶⁸	52	30	31	15	** ** *	**	18	61			
21	132	08.1		42.4	204	16.8 ¹³⁹		36.9 ⁶⁸	54	2 08	18	4 05	** ** *	**	24	62			
22	147	08.0		41.8	218	49.6 ¹³⁸		43.7 ⁶⁸	56	1 36	3 02	3 54	** ** *	**	30	63			
23	162	07.8		41.2	233	22.5 ¹³⁹		50.3 ⁶⁶	58	0 30	2 43	42	23	55	27	36	66		
24	177	07.6	-19	40.7	247	55.3 ¹³⁸	-13	56.9 ⁶⁶	60 S	** ** *	2 19	3 27	23	47	25	14 44	68		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 55 ^m 2			Mag: -4.6 PMG: 15 ^h 13 ^m			Mag: +1.0 PMG: 15 ^h 38 ^m			Mag: -2.1 PMG: 5 ^h 23 ^m			Mag: +0.5 PMG: 9 ^h 29 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	120	33.0	131	42.9	-4	24.4	125	18.3	-2	29.1	279	01.2	-7	34.5	217	31.1	-21	59.8	
1	135	35.4	146	43.3		23.2	140	19.0		38.3	294	03.5		34.5	232	33.3		59.8	
2	150	37.9	161	43.7		22.0	155	19.8		37.5	309	05.9		34.5	247	35.5		59.9	
3	165	40.3	176	44.1		20.8	170	20.6		36.8	324	08.2		34.6	262	37.7		59.9	
4	180	42.8	191	44.5		19.6	185	21.3		36.0	339	10.6		34.6	277	39.9		59.9	
5	195	45.3	206	44.8	-4	18.4	200	22.1	-2	35.2	354	12.9	-7	34.6	292	42.1	-21	59.9	
6	210	47.7	221	45.2	-4	17.2	215	22.8	-2	34.4	9	15.3	-7	34.7	307	44.3	-21	59.9	
7	225	50.2	236	45.6		16.0	230	23.6		33.6	24	17.6		34.7	322	46.5		59.9	
8	240	52.7	251	46.0		14.8	245	24.3		32.9	39	19.9		34.8	337	48.7		59.9	
9	255	55.1	266	46.4		13.6	260	25.1		32.1	54	22.3		34.8	352	50.8		59.9	
10	270	57.6	281	46.8		12.4	275	25.9		31.3	69	24.6		34.8	7	53.0	-21	59.9	
11	286	00.1	296	47.2	-4	11.3	290	26.6	-2	30.5	84	27.0	-7	34.9	22	55.2	-22	00.0	
12	301	02.5	311	47.6	-4	10.1	305	27.4	-2	29.7	99	29.3	-7	34.9	37	57.4	-22	00.0	
13	316	05.0	326	47.9		08.9	320	28.1		29.0	114	31.7		34.9	52	59.6		00.0	
14	331	07.5	341	48.3		07.7	335	28.9		28.2	129	34.0		35.0	68	01.8		00.0	
15	346	09.9	356	48.7		06.5	350	29.6		27.4	144	36.4		35.0	83	04.0		00.0	
16	1	12.4	11	49.1		05.3	5	30.4		26.6	159	38.7		35.0	98	06.2		00.0	
17	16	14.8	26	49.5	-4	04.1	20	31.2	-2	25.8	174	41.1	-7	35.1	113	08.4	-22	00.0	
18	31	17.3	41	49.9	-4	02.9	35	31.9	-2	25.1	189	43.4	-7	35.1	128	10.6	-22	00.0	
19	46	19.8	56	50.3		01.7	50	32.7		24.3	204	45.7		35.1	143	12.8	-22	00.0	
20	61	22.2	71	50.7	-4	00.5	65	33.4		23.5	219	48.1		35.2	158	15.0	-22	00.1	
21	76	24.7	86	51.1	-3	59.3	80	34.2		22.7	234	50.4		35.2	173	17.1		00.1	
22	91	27.2	101	51.5		58.1	95	35.0		21.9	249	52.8		35.2	188	19.3		00.1	
23	106	29.6	116	51.9		57.0	110	35.7		21.2	264	55.1		35.3	203	21.5		00.1	
24	121	32.1	131	52.3	-3	55.8	125	36.5	-2	20.4	279	57.5	-7	35.3	218	23.7	-22	00.1	
Dif	—			+4	+12		+8	+8		+23	0		+22						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 23 ^d 7 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 6			PMG: 7 ^h 42 ^m R°: 46 ^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	
0	177	07.6	-19 40.7	247	55.3	-13 56.9	66	60 N	15 49	16 39	17 32	3 20 66	11 57 28		
1	192	07.5	40.1	262	28.1 ¹³⁸	-14 03.5	66	58	16 01	48	37	11 64	12 07 29		
2	207	07.3	39.5	277	00.9 ¹³⁸	10.0	65	56	12	16 55	42	3 03 63	15 31		
3	222	07.1	39.0	291	33.6 ¹³⁷	16.4	64	54	22	17 02	46	2 56 61	22 33		
4	237	07.0	38.4	306	06.3 ¹³⁷	22.8	64	52	30	08	50	50 60	29 34		
5	252	06.8	-19 37.8	320	39.0 ¹³⁷	-14 29.1	63	50	16 38	17 14	17 54	2 44 59	12 35 35		
6	267	06.6	-19 37.2	335	11.6 ¹³⁶	-14 35.3	62	45	16 54	17 26	18 02	2 32 57	12 48 37		
7	282	06.5	36.7	349	44.2 ¹³⁶	41.5	62	40	17 07	37	10	22 55	12 58 39		
8	297	06.3	36.1	4	16.8 ¹³⁶	47.6	61	35	19	46	17	14 53	13 08 39		
9	312	06.1	35.5	18	49.3 ¹³⁵	53.7	61	30	29	17 54	23	2 06 52	16 41		
10	327	06.0	34.9	33	21.8 ¹³⁵	-14 59.7	60	20	17 46	18 09	36	1 53 50	30 43		
11	342	05.8	-19 34.3	47	54.3 ¹³⁵	-15 05.6	59	10 N	18 01	18 23	18 49	1 42 47	13 42 45		
12	357	05.6	-19 33.8	62	26.7 ¹³⁴	-15 11.4	58	0	18 15	18 37	19 03	1 31 46	13 53 47		
13	12	05.5	33.2	76	59.1 ¹³⁴	17.2	58	10 S	30	18 52	18	21 44	14 05 48		
14	27	05.3	32.6	91	31.5 ¹³⁴	23.0	58	20	18 45	19 09	19 37	1 10 42	17 50		
15	42	05.1	32.0	106	03.9 ¹³⁴	28.6	56	30	19 03	29	20 01	0 57 40	31 52		
16	57	05.0	31.4	120	36.2 ¹³³	34.2	56	35	14	42	16	50 38	39 53		
17	72	04.8	-19 30.9	135	08.4 ¹³²	-15 39.8	56	40	19 26	19 57	20 35	0 42 36	14 49 54		
18	87	04.7	-19 30.3	149	40.7 ¹³³	-15 45.2	54	45	19 40	20 15	20 59	0 32 35	14 59 56		
19	102	04.5	29.7	164	12.9 ¹³²	50.6	54	50	19 58	37	21 31	20 33	15 13 57		
20	117	04.3	29.1	178	45.0 ¹³¹	-15 56.0	54	52	20 06	20 49	21 48	15 31	19 59		
21	132	04.2	28.5	193	17.2 ¹³²	-16 01.2	52	54	15	21 02	22 10	09 30	26 59		
22	147	04.0	27.9	207	49.3 ¹³¹	06.4	52	56	26	17	22 38	0 03 28	33 61		
23	162	03.8	27.4	222	21.3 ¹³⁰	11.5	51	58	38	35	23 27	** ** *	42 62		
24	177	03.7	-19 26.8	236	53.3 ¹³⁰	-16 16.6	51	60 S	20 52	21 58	** ** *	** ** *	15 52 64		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 51 ^m 3		Mag: -4.6 PMG: 15 ^h 12 ^m			Mag: +1.0 PMG: 15 ^h 37 ^m			Mag: -2.1 PMG: 5 ^h 19 ^m			Mag: +0.5 PMG: 9 ^h 25 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	°	°	'	°	°	°	'	
0	121	32.1	131 52.3	-3 55.8	125 36.5	-2 20.4	279 57.5	-7 35.3	218 23.7	-22 00.1					
1	136	34.6	146 52.7	54.6	140 37.2	19.6	294 59.8	35.4	233 25.9	00.1					
2	151	37.0	161 53.1	53.4	155 38.0	18.8	310 02.2	35.4	248 28.1	00.1					
3	166	39.5	176 53.6	52.2	170 38.7	18.0	325 04.5	35.4	263 30.3	00.1					
4	181	42.0	191 54.0	51.0	185 39.5	17.3	340 06.9	35.5	278 32.5	00.2					
5	196	44.4	206 54.4	-3 49.8	200 40.3	-2 16.5	355 09.2	-7 35.5	293 34.7	-22 00.2					
6	211	46.9	221 54.8	-3 48.6	215 41.0	-2 15.7	10 11.6	-7 35.5	308 36.9	-22 00.2					
7	226	49.3	236 55.2	47.4	230 41.8	14.9	25 13.9	35.6	323 39.1	00.2					
8	241	51.8	251 55.6	46.2	245 42.5	14.1	40 16.3	35.6	338 41.3	00.2					
9	256	54.3	266 56.0	45.0	260 43.3	13.4	55 18.6	35.6	353 43.5	00.2					
10	271	56.7	281 56.4	43.8	275 44.1	12.6	70 21.0	35.7	8 45.6	00.2					
11	286	59.2	296 56.9	-3 42.7	290 44.8	-2 11.8	85 23.3	-7 35.7	23 47.8	-22 00.2					
12	302	01.7	311 57.3	-3 41.5	305 45.6	-2 11.0	100 25.7	-7 35.7	38 50.0	-22 00.2					
13	317	04.1	326 57.7	40.3	320 46.3	10.2	115 28.0	35.8	53 52.2	00.3					
14	332	06.6	341 58.1	39.1	335 47.1	09.5	130 30.4	35.8	68 54.4	00.3					
15	347	09.1	356 58.5	37.9	350 47.9	08.7	145 32.7	35.8	83 56.6	00.3					
16	2	11.5	11 59.0	36.7	5 48.6	07.9	160 35.1	35.9	98 58.8	00.3					
17	17	14.0	26 59.4	-3 35.5	20 49.4	-2 07.1	175 37.5	-7 35.9	114 01.0	-22 00.3					
18	32	16.5	41 59.8	-3 34.3	35 50.1	-2 06.3	190 39.8	-7 35.9	129 03.2	-22 00.3					
19	47	18.9	57 00.2	33.1	50 50.9	05.6	205 42.2	36.0	144 05.4	00.3					
20	62	21.4	72 00.7	31.9	65 51.7	04.8	220 44.5	36.0	159 07.6	00.3					
21	77	23.8	87 01.1	30.8	80 52.4	04.0	235 46.9	36.0	174 09.8	00.3					
22	92	26.3	102 01.5	29.6	95 53.2	03.2	250 49.2	36.0	189 12.0	00.4					
23	107	28.8	117 01.9	28.4	110 53.9	02.4	265 51.6	36.1	204 14.2	00.4					
24	122	31.2	132 02.4	-3 27.2	125 54.7	-2 01.7	280 53.9	-7 36.1	219 16.4	-22 00.4					
Dif	—		+4	+12	+8	+8	+24	0	+22	0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'2 PMG: 12 ^h 11 ^m 9			Edad: 24 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 8 ^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	177	03.7	-19	26.8	236	53.3	-16	16.6	60 N	6 51	7 43	8 33	4 26	62	12 25	36								
1	192	03.5		26.2	251	25.3 ¹³⁰		21.6	58	46	35	21	15	61	36	37								
2	207	03.4		25.6	265	57.3 ¹³⁰		26.5	56	41	27	10	4 06	59	46	38								
3	222	03.2		25.0	280	29.2 ¹²⁹		31.3	54	37	21	8 01	3 57	59	12 55	39								
4	237	03.0		24.4	295	01.1 ¹²⁹		36.1	52	33	15	7 52	50	57	13 03	39								
5	252	02.9	-19	23.8	309	32.9 ¹²⁸	-16	40.8	50	6 29	7 09	7 45	3 43	57	13 10	40								
6	267	02.7	-19	23.2	324	04.7 ¹²⁸	-16	45.4	45	6 21	6 57	7 29	3 29	55	13 25	41								
7	282	02.6		22.6	338	36.5 ¹²⁸		49.9	40	14	46	16	17	53	37	43								
8	297	02.4		22.1	353	08.2 ¹²⁷		54.4	35	07	37	7 04	3 07	52	47	44								
9	312	02.3		21.5	7	39.9 ¹²⁷	-16	58.8	30	6 00	29	6 55	2 58	51	13 57	44								
10	327	02.1		20.9	22	11.6 ¹²⁷	-17	03.1	20	5 47	14	37	43	50	14 13	45								
11	342	01.9	-19	20.3	36	43.2 ¹²⁶	-17	07.4	10 N	5 35	6 00	6 22	2 29	49	14 27	47								
12	357	01.8	-19	19.7	51	14.8 ¹²⁶	-17	11.5	0	5 21	5 46	6 08	2 17	47	14 40	48								
13	12	01.6		19.1	65	46.3 ¹²⁵		15.6	10 S	5 05	32	5 54	2 05	46	14 53	49								
14	27	01.5		18.5	80	17.9 ¹²⁶		19.6	20	4 47	5 15	39	1 52	44	15 07	50								
15	42	01.3		17.9	94	49.3 ¹²⁴		23.6	30	23	4 54	21	37	43	23	51								
16	57	01.2		17.3	109	20.8 ¹²⁵		27.4	38	4 08	42	5 10	28	42	32	52								
17	72	01.0	-19	16.7	123	52.2 ¹²⁴	-17	31.2	40	3 49	4 27	4 58	1 18	41	15 43	52								
18	87	00.8	-19	16.1	138	23.6 ¹²⁴	-17	34.9	45	3 25	4 09	4 44	1 07	39	15 55	54								
19	102	00.7		15.5	152	54.9 ¹²³		38.5	50	2 53	3 47	26	0 53	37	16 10	55								
20	117	00.5		14.9	167	26.2 ¹²³		42.1	52	36	35	18	46	37	18	55								
21	132	00.4		14.3	181	57.4 ¹²²		45.6	54	2 14	22	4 09	39	36	25	57								
22	147	00.2		13.7	196	28.7 ¹²³		48.9	56	1 46	3 07	3 58	31	35	34	57								
23	162	00.1		13.1	210	59.9 ¹²²		52.2	58	0 57	2 49	46	22	33	44	58								
24	176	59.9	-19	12.5	225	31.0 ¹²¹	-17	55.5	60 S	** **	2 26	3 32	0 12	32	16 56	59								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 15 ^h 47 ^m 3			Mag: -4.7 PMG: 15 ^h 11 ^m			Mag: +1.1 PMG: 15 ^h 36 ^m			Mag: -2.1 PMG: 5 ^h 16 ^m			Mag: +0.5 PMG: 9 ^h 22 ^m											
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	122	31.2	132	02.4	-3	27.2	125	54.7	-2	01.7	280	53.9	-7	36.1	219	16.4								
1	137	33.7	147	02.8		26.0	140	55.5		00.9	295	56.3		36.1	234	18.6								
2	152	36.2	162	03.2		24.8	155	56.2	-2	00.1	310	58.6		36.2	249	20.7								
3	167	38.6	177	03.7		23.6	170	57.0	-1	59.3	326	01.0		36.2	264	22.9								
4	182	41.1	192	04.1		22.4	185	57.7		58.5	341	03.4		36.2	279	25.1								
5	197	43.6	207	04.5	-3	21.2	200	58.5	-1	57.8	356	05.7	-7	36.3	294	27.3								
6	212	46.0	222	05.0	-3	20.0	215	59.3	-1	57.0	11	08.1	-7	36.3	309	29.5								
7	227	48.5	237	05.4		18.9	231	00.0		56.2	26	10.4		36.3	324	31.7								
8	242	50.9	252	05.9		17.7	246	00.8		55.4	41	12.8		36.4	339	33.9								
9	257	53.4	267	06.3		16.5	261	01.5		54.6	56	15.1		36.4	354	36.1								
10	272	55.9	282	06.8		15.3	276	02.3		53.9	71	17.5		36.4	9	38.3								
11	287	58.3	297	07.2	-3	14.1	291	03.1	-1	53.1	86	19.9	-7	36.5	24	40.5								
12	303	00.8	312	07.6	-3	12.9	306	03.8	-1	52.3	101	22.2	-7	36.5	39	42.7								
13	318	03.3	327	08.1		11.7	321	04.6		51.5	116	24.6		36.5	54	44.9								
14	333	05.7	342	08.5		10.5	336	05.3		50.7	131	26.9		36.5	69	47.1								
15	348	08.2	357	09.0		09.3	351	06.1		50.0	146	29.3		36.6	84	49.3								
16	3	10.7	12	09.4		08.2	6	06.9		49.2	161	31.7		36.6	99	51.5								
17	18	13.1	27	09.9	-3	07.0	21	07.6	-1	48.4	176	34.0	-7	36.6	114	53.7								
18	33	15.6	42	10.3	-3	05.8	36	08.4	-1	47.6	191	36.4	-7	36.7	129	55.9								
19	48	18.1	57	10.8		04.6	51	09.1		46.8	206	38.7		36.7	144	58.1								
20	63	20.5	72	11.2		03.4	66	09.9		46.1	221	41.1		36.7	160	00.3								
21	78	23.0	87	11.7		02.2	81	10.7		45.3	236	43.5		36.7	175	02.5								
22	93	25.4	102	12.2	-3	01.0	96	11.4		44.5	251	45.8		36.8	190	04.7								
23	108	27.9	117	12.6	-2	59.8	111	12.2		43.7	266	48.2		36.8	205	06.9								
24	123	30.4	132	13.1	-2	58.6	126	13.0	-1	42.9	281	50.6	-7	36.8	220	09.1								
Dif	—			+4			+12			+8			+8			+24			0			+22		

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: 25 ^d 7 PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/7 Rº: 49 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	176	59.9	-19	12.5	225	31.0	-17	55.5	60 N	15 54	16 44	17 36	5 28 56	13 01 45						
1	191	59.8		11.9	240	02.1 ¹²¹	-17	58.6 ³¹	58	16 06		52 41	16 55	13 46						
2	206	59.6		11.3	254	33.2 ¹²¹	-18	01.7 ³¹	56	16	16 59	45	5 05 54	24 46						
3	221	59.5		10.7	269	04.3 ¹²¹		04.6 ²⁹	54	25	17 06	49	4 56 53	34 46						
4	236	59.3		10.1	283	35.3 ¹²⁰		07.5 ²⁹	52	34		11 53	47 54	42 47						
5	251	59.2	-19	09.5	298	06.2 ¹¹⁹	-18	10.3 ²⁸	50	16 41	17 17	17 56	4 40 53	13 50 47						
6	266	59.0	-19	08.9	312	37.2 ¹²⁰	-18	13.1 ²⁸	45	16 57	17 29	18 04	4 24 52	14 06 48						
7	281	58.9		08.3	327	08.1 ¹¹⁹		15.7 ²⁶	40	17 10		39 12	4 10 52	20 48						
8	296	58.7		07.7	341	39.0 ¹¹⁹		18.3 ²⁶	35	21	48	18	3 59 51	31 48						
9	311	58.6		07.1	356	09.8 ¹¹⁸		20.7 ²⁴	30	30	17 56	25	49 51	41 49						
10	326	58.4		06.5	10	40.6 ¹¹⁸		23.1 ²⁴	20	17 47	18 10	37	33 49	14 58 49						
11	341	58.3	-19	05.9	25	11.4 ¹¹⁸	-18	25.4 ²³	10 N	18 02	18 24	18 50	3 18 49	15 14 48						
12	356	58.1	-19	05.2	39	42.1 ¹¹⁷	-18	27.6 ²²	0	18 16	18 38	19 03	3 04 49	15 28 49						
13	11	58.0		04.6	54	12.8 ¹¹⁷		29.8 ²²	10 S	30	18 52	18	2 51 48	42 49						
14	26	57.8		04.0	68	43.5 ¹¹⁷		31.8 ²⁰	20	18 45	19 08	19 36	36 47	15 57 49						
15	41	57.7		03.4	83	14.1 ¹¹⁶		33.8 ²⁰	30	19 02	28	20 00	20 46	16 14 50						
16	56	57.5		02.8	97	44.7 ¹¹⁶		35.6 ¹⁸	35	12	41	15	2 10 46	24 50						
17	71	57.4	-19	02.2	112	15.3 ¹¹⁶	-18	37.4 ¹⁸	40	19 24	19 55	20 33	1 59 45	16 35 51						
18	86	57.2	-19	01.6	126	45.8 ¹¹⁵	-18	39.1 ¹⁷	45	19 38	20 12	20 56	1 46 45	16 49 50						
19	101	57.1		01.0	141	16.4 ¹¹⁶		40.7 ¹⁶	50	19 55	35	21 27	30 44	17 05 51						
20	116	56.9	-19	00.4	155	46.8 ¹¹⁴		42.2 ¹⁵	52	20 03	46	21 44	23 43	13 51						
21	131	56.8	-18	59.7	170	17.3 ¹¹⁵		43.7 ¹⁵	54	12	20 58	22 04	15 43	22 50						
22	146	56.6		59.1	184	47.7 ¹¹⁴		45.0 ¹³	56	22	21 12	22 30	1 06 42	31 51						
23	161	56.5		58.5	199	18.1 ¹¹⁴		46.2 ¹²	58	34	30	23 11	0 55 42	42 51						
24	176	56.4	-18	57.9	213	48.5 ¹¹⁴	-18	47.4 ¹²	60 S	20 48	21 51	** **	0 44 40	17 55 51						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 43 ^m 4				Mag: -4.7 PMG: 15 ^h 11 ^m				Mag: +1.1 PMG: 15 ^h 34 ^m				Mag: -2.1 PMG: 5 ^h 12 ^m				Mag: +0.5 PMG: 9 ^h 18 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	123	30.4	132	13.1	-2	58.6	126	13.0	-1	42.9	281	50.6	-7	36.8	220	09.1	-22	00.6		
1	138	32.8	147	13.5		57.5	141	13.7		42.2	296	52.9		36.9	235	11.2		00.6		
2	153	35.3	162	14.0		56.3	156	14.5		41.4	311	55.3		36.9	250	13.4		00.7		
3	168	37.8	177	14.5		55.1	171	15.2		40.6	326	57.6		36.9	265	15.6		00.7		
4	183	40.2	192	14.9		53.9	186	16.0		39.8	342	00.0		36.9	280	17.8		00.7		
5	198	42.7	207	15.4	-2	52.7	201	16.8	-1	39.0	357	02.4	-7	37.0	295	20.0	-22	00.7		
6	213	45.2	222	15.8	-2	51.5	216	17.5	-1	38.3	12	04.7	-7	37.0	310	22.2	-22	00.7		
7	228	47.6	237	16.3		50.3	231	18.3		37.5	27	07.1		37.0	325	24.4		00.7		
8	243	50.1	252	16.8		49.2	246	19.0		36.7	42	09.5		37.1	340	26.6		00.7		
9	258	52.6	267	17.3		48.0	261	19.8		35.9	57	11.8		37.1	355	28.8		00.7		
10	273	55.0	282	17.7		46.8	276	20.6		35.1	72	14.2		37.1	10	31.0		00.7		
11	288	57.5	297	18.2	-2	45.6	291	21.3	-1	34.4	87	16.6	-7	37.1	25	33.2	-22	00.8		
12	303	59.9	312	18.7	-2	44.4	306	22.1	-1	33.6	102	18.9	-7	37.2	40	35.4	-22	00.8		
13	319	02.4	327	19.1		43.2	321	22.9		32.8	117	21.3		37.2	55	37.6		00.8		
14	334	04.9	342	19.6		42.0	336	23.6		32.0	132	23.7		37.2	70	39.8		00.8		
15	349	07.3	357	20.1		40.8	351	24.4		31.2	147	26.0		37.3	85	42.0		00.8		
16	4	09.8	12	20.6		39.7	6	25.1		30.5	162	28.4		37.3	100	44.2		00.8		
17	19	12.3	27	21.0	-2	38.5	21	25.9	-1	29.7	177	30.8	-7	37.3	115	46.4	-22	00.8		
18	34	14.7	42	21.5	-2	37.3	36	26.7	-1	28.9	192	33.1	-7	37.3	130	48.6	-22	00.8		
19	49	17.2	57	22.0		36.1	51	27.4		28.1	207	35.5		37.4	145	50.8		00.8		
20	64	19.7	72	22.5		34.9	66	28.2		27.3	222	37.9		37.4	160	53.0		00.8		
21	79	22.1	87	23.0		33.7	81	28.9		26.6	237	40.2		37.4	175	55.2		00.9		
22	94	24.6	102	23.5		32.5	96	29.7		25.8	252	42.6		37.4	190	57.4		00.9		
23	109	27.1	117	23.9		31.4	111	30.5		25.0	267	45.0		37.5	205	59.6		00.9		
24	124	29.5	132	24.4	-2	30.2	126	31.2	-1	24.2	282	47.4	-7	37.5	221	01.8	-22	00.9		
Dif	—		+5		+12		+8		+8		+24		0		+22					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 4			Edad: 26 ^d 7 PHE { SD: 14'9 PMG: 10 ^h 05 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	56.4	-18	57.9	213	48.5	-18	47.4	10	60 N	6 48	7 40	8 29	6 24	47	13 46 55
1	191	56.2		57.3	228	18.8 ¹¹³		48.4	10	58	43	32	17	6 11	47	13 59 55
2	206	56.1		56.7	242	49.1 ¹¹³		49.4	10	56	39	24	8 07	5 59	48	14 10 55
3	221	55.9		56.0	257	19.4 ¹¹³		50.3	9	54	35	18	7 58	49	49	20 54
4	236	55.8		55.4	271	49.6 ¹¹²		51.1	8	52	31	12	50	41	48	29 54
5	251	55.6	-18	54.8	286	19.8 ¹¹²	-18	51.8	7	50	6 27	7 07	7 43	5 33	48	14 37 53
6	266	55.5	-18	54.2	300	50.0 ¹¹²	-18	52.4	6	45	6 20	6 55	7 27	5 16	49	14 54 53
7	281	55.4		53.6	315	20.2 ¹¹²		52.9	5	40	12	45	14	5 02	49	15 08 52
8	296	55.2		52.9	329	50.3 ¹¹¹		53.3	4	35	6 06	36	7 03	4 50	49	19 52
9	311	55.1		52.3	344	20.4 ¹¹¹		53.7	4	30	5 59	28	6 54	40	49	30 51
10	326	54.9		51.7	358	50.5 ¹¹¹		53.9	2	20	47	14	37	22	50	15 47 51
11	341	54.8	-18	51.1	13	20.5 ¹¹⁰	-18	54.0	1	10 N	5 35	6 00	6 23	4 07	50	16 02 51
12	356	54.7	-18	50.5	27	50.6 ¹¹¹	-18	54.1	1	0	5 22	5 47	6 09	3 53	50	16 17 50
13	11	54.5		49.8	42	20.6 ¹¹⁰		54.0	1	10 S	5 06	33	5 55	39	50	31 50
14	26	54.4		49.2	56	50.6 ¹¹⁰		53.9	1	20	4 48	5 16	40	23	50	16 46 49
15	41	54.2		48.6	71	20.5 ¹⁰⁹		53.7	2	30	25	4 56	23	3 06	50	17 04 48
16	56	54.1		48.0	85	50.5 ¹¹⁰		53.3	4	35	4 10	44	12	2 56	50	14 48
17	71	54.0	-18	47.3	100	20.4 ¹⁰⁹	-18	52.9	4	40	3 52	4 30	5 01	2 44	50	17 26 47
18	86	53.8	-18	46.7	114	50.3 ¹⁰⁹	-18	52.4	5	45	3 29	4 13	4 47	2 31	50	17 39 47
19	101	53.7		46.1	129	20.2 ¹⁰⁹		51.8	6	50	2 58	3 50	30	14	50	17 56 46
20	116	53.5		45.4	143	50.0 ¹⁰⁸		51.1	7	52	41	39	22	2 06	51	18 04 45
21	131	53.4		44.8	158	19.8 ¹⁰⁸		50.3	8	54	2 21	27	13	1 58	50	12 45
22	146	53.3		44.2	172	49.7 ¹⁰⁹		49.4	9	56	1 55	3 13	4 03	48	50	22 45
23	161	53.1		43.6	187	19.5 ¹⁰⁸		48.4	10	58	1 14	2 55	3 51	37	50	33 44
24	176	53.0	-18	42.9	201	49.2 ¹⁰⁷	-18	47.3	11	60 S	** **	2 34	3 38	1 24	50	18 46 43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 39 ^m 5		Mag: -4.7 PMG: 15 ^h 10 ^m		Mag: +1.1 PMG: 15 ^h 33 ^m		Mag: -2.1 PMG: 5 ^h 08 ^m		Mag: +0.5 PMG: 9 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	124	29.5	132	24.4	-2	30.2	126	31.2	-1	24.2	282	47.4	-7	37.5	221	01.8	-22	00.9
1	139	32.0	147	24.9		29.0	141	32.0		23.4	297	49.7		37.5	236	04.0		00.9
2	154	34.4	162	25.4		27.8	156	32.8		22.7	312	52.1		37.5	251	06.2		00.9
3	169	36.9	177	25.9		26.6	171	33.5		21.9	327	54.5		37.6	266	08.4		00.9
4	184	39.4	192	26.4		25.4	186	34.3		21.1	342	56.8		37.6	281	10.6		00.9
5	199	41.8	207	26.9	-2	24.3	201	35.0	-1	20.3	357	59.2	-7	37.6	296	12.8	-22	00.9
6	214	44.3	222	27.4	-2	23.1	216	35.8	-1	19.5	13	01.6	-7	37.6	311	15.0	-22	01.0
7	229	46.8	237	27.9		21.9	231	36.6		18.8	28	03.9		37.7	326	17.2		01.0
8	244	49.2	252	28.4		20.7	246	37.3		18.0	43	06.3		37.7	341	19.4		01.0
9	259	51.7	267	28.9		19.5	261	38.1		17.2	58	08.7		37.7	356	21.6		01.0
10	274	54.2	282	29.4		18.3	276	38.9		16.4	73	11.1		37.7	11	23.8		01.0
11	289	56.6	297	29.9	-2	17.2	291	39.6	-1	15.6	88	13.4	-7	37.8	26	26.0	-22	01.0
12	304	59.1	312	30.4	-2	16.0	306	40.4	-1	14.9	103	15.8	-7	37.8	41	28.2	-22	01.0
13	320	01.5	327	30.9		14.8	321	41.2		14.1	118	18.2		37.8	56	30.4		01.0
14	335	04.0	342	31.4		13.6	336	41.9		13.3	133	20.6		37.8	71	32.6		01.0
15	350	06.5	357	31.9		12.4	351	42.7		12.5	148	22.9		37.9	86	34.8		01.0
16	5	08.9	12	32.4		11.2	6	43.4		11.7	163	25.3		37.9	101	37.0		01.1
17	20	11.4	27	32.9	-2	10.1	21	44.2	-1	11.0	178	27.7	-7	37.9	116	39.2	-22	01.1
18	35	13.9	42	33.4	-2	08.9	36	45.0	-1	10.2	193	30.1	-7	37.9	131	41.4	-22	01.1
19	50	16.3	57	33.9		07.7	51	45.7		09.4	208	32.4		38.0	146	43.6		01.1
20	65	18.8	72	34.4		06.5	66	46.5		08.6	223	34.8		38.0	161	45.8		01.1
21	80	21.3	87	34.9		05.3	81	47.3		07.8	238	37.2		38.0	176	48.0		01.1
22	95	23.7	102	35.4		04.2	96	48.0		07.1	253	39.6		38.0	191	50.2		01.1
23	110	26.2	117	36.0		03.0	111	48.8		06.3	268	41.9		38.1	206	52.4		01.1
24	125	28.7	132	36.5	-2	01.8	126	49.5	-1	05.5	283	44.3	-7	38.1	221	54.6	-22	01.1
Dif	—		+5	+12			+8	+8			+24			0		+22		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 13 ^m 0			Edad: 29 ^d 7 PHE { 4 ^h : 56:4 12 ^h : 56:5 20 ^h : 56:7 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	176	46.8	-18	12.0	177	26.5	-16	03.3	60 N	16 04	16 53	17 44	8 21	25	16 59 78			
1	191	46.7		11.3	191	56.0 ¹⁰⁵	-15	57.6	58	15	17 00	48	11	28	17 08 75			
2	206	46.6		10.7	206	25.5 ¹⁰⁵		51.8	56	25	07	52	8 03	29	16 73			
3	221	46.5		10.0	220	55.0 ¹⁰⁵		45.9	54	33	13	56	7 55	32	23 77			
4	236	46.4		09.3	235	24.5 ¹⁰⁵		40.0	52	41	18	17 59	49	32	29 70			
5	251	46.3	-18	08.7	249	54.0 ¹⁰⁵	-15	34.0	50	16 48	17 23	18 02	7 43	34	17 35 68			
6	266	46.1	-18	08.0	264	23.5 ¹⁰⁵	-15	27.8	45	17 02	17 34	18 09	7 30	36	17 47 65			
7	281	46.0		07.4	278	53.0 ¹⁰⁵		21.6	40	14	43	16	19	39	17 57 63			
8	296	45.9		06.7	293	22.5 ¹⁰⁵		15.3	35	25	52	22	10	41	18 06 60			
9	311	45.8		06.0	307	52.1 ¹⁰⁶		08.9	30	34	17 59	28	7 02	42	13 59			
10	326	45.7		05.4	322	21.6 ¹⁰⁵	-15	02.5	20	17 50	18 13	39	6 48	45	26 56			
11	341	45.6	-18	04.7	336	51.2 ¹⁰⁶	-14	55.9	10 N	18 03	18 25	18 51	6 35	48	18 37 53			
12	356	45.4	-18	04.0	351	20.7 ¹⁰⁵	-14	49.3	0	18 17	18 38	19 04	6 24	50	18 48 50			
13	11	45.3		03.4	5	50.3 ¹⁰⁶		42.6	10 S	30	18 52	18	12	53	18 58 48			
14	26	45.2		02.7	20	19.9 ¹⁰⁶		35.8	20	18 44	19 07	35	6 00	55	19 09 45			
15	41	45.1		02.0	34	49.4 ¹⁰⁵		28.9	30	19 00	26	19 57	5 46	58	22 42			
16	56	45.0		01.4	49	19.0 ¹⁰⁶		21.9	35	10	38	20 11	37	60	29 40			
17	71	44.9	-18	00.7	63	48.6 ¹⁰⁶	-14	14.9	40	19 21	19 51	20 29	5 28	62	19 37 38			
18	86	44.8	-18	00.0	78	18.3 ¹⁰⁷	-14	07.8	45	19 34	20 08	20 50	5 17	64	19 47 35			
19	101	44.6	-17	59.4	92	47.9 ¹⁰⁶	-14	00.6	50	50	29	21 19	5 04	67	19 59 32			
20	116	44.5		58.7	107	17.5 ¹⁰⁶	-13	53.3	52	19 57	39	34	4 58	68	20 04 31			
21	131	44.4		58.0	121	47.2 ¹⁰⁷		46.0	54	20 06	20 50	21 53	51	69	10 29			
22	146	44.3		57.4	136	16.8 ¹⁰⁶		38.5	56	15	21 04	22 15	43	71	16 27			
23	161	44.2		56.7	150	46.5 ¹⁰⁷		31.0	58	26	19	22 47	34	74	23 26			
24	176	44.1	-17	56.0	165	16.2 ¹⁰⁷	-13	23.4	60 S	20 38	21 39	** **	4 24	76	20 32 23			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 27 ^m 7		Mag: -4.7 PMG: 15 ^h 07 ^m			Mag: +1.1 PMG: 15 ^h 29 ^m			Mag: -2.2 PMG: 4 ^h 57 ^m			Mag: +0.5 PMG: 9 ^h 04 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	127	26.9	133	02.7	-1	05.3	127	26.3	-0	28.1	285	38.8	-7	39.1	223	40.4	-22	01.6
1	142	29.4	148	03.3		04.1	142	27.0		27.3	300	41.2		39.1	238	42.6		01.6
2	157	31.9	163	03.8		03.0	157	27.8		26.6	315	43.6		39.1	253	44.8		01.6
3	172	34.3	178	04.4		01.8	172	28.5		25.8	330	45.9		39.1	268	47.0		01.6
4	187	36.8	193	05.0	-1	00.6	187	29.3		25.0	345	48.3		39.1	283	49.2		01.6
5	202	39.3	208	05.6	-0	59.4	202	30.1	-0	24.2	0	50.7	-7	39.1	298	51.4	-22	01.7
6	217	41.7	223	06.2	-0	58.3	217	30.8	-0	23.4	15	53.1	-7	39.2	313	53.6	-22	01.7
7	232	44.2	238	06.7		57.1	232	31.6		22.7	30	55.5		39.2	328	55.8		01.7
8	247	46.6	253	07.3		55.9	247	32.4		21.9	45	57.9		39.2	343	58.0		01.7
9	262	49.1	268	07.9		54.8	262	33.1		21.1	61	00.3		39.2	359	00.2		01.7
10	277	51.6	283	08.5		53.6	277	33.9		20.3	76	02.7		39.2	14	02.4		01.7
11	292	54.0	298	09.1	-0	52.4	292	34.7	-0	19.5	91	05.1	-7	39.2	29	04.7	-22	01.7
12	307	56.5	313	09.7	-0	51.3	307	35.4	-0	18.8	106	07.5	-7	39.3	44	06.9	-22	01.7
13	322	59.0	328	10.3		50.1	322	36.2		18.0	121	09.9		39.3	59	09.1		01.7
14	338	01.4	343	10.9		48.9	337	37.0		17.2	136	12.3		39.3	74	11.3		01.7
15	353	03.9	358	11.5		47.7	352	37.7		16.4	151	14.7		39.3	89	13.5		01.7
16	8	06.4	13	12.1		46.6	7	38.5		15.7	166	17.1		39.3	104	15.7		01.8
17	23	08.8	28	12.7	-0	45.4	22	39.3	-0	14.9	181	19.5	-7	39.3	119	17.9	-22	01.8
18	38	11.3	43	13.3	-0	44.2	37	40.0	-0	14.1	196	21.9	-7	39.3	134	20.1	-22	01.8
19	53	13.8	58	13.9		43.1	52	40.8		13.3	211	24.3		39.4	149	22.3		01.8
20	68	16.2	73	14.5		41.9	67	41.6		12.5	226	26.7		39.4	164	24.5		01.8
21	83	18.7	88	15.1		40.7	82	42.3		11.8	241	29.1		39.4	179	26.7		01.8
22	98	21.1	103	15.7		39.6	97	43.1		11.0	256	31.5		39.4	194	28.9		01.8
23	113	23.6	118	16.3		38.4	112	43.9		10.2	271	33.9		39.4	209	31.1		01.8
24	128	26.1	133	16.9	-0	37.2	127	44.6	-0	09.4	286	36.3	-7	39.4	224	33.4	-22	01.8
Dif	—		+6		+12		+8		+8		+24		0		+22			

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 2 ^d 0	PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 5 20 ^h : 57 ^m 7 R°: 49 ^m									
	PMG: 12 ^h 13 ^m 3					SD: 15 ^h 6			PMG: 14 ^h 16 ^m					
	hG ☉	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	41.5	-17 39.7	153	11.7	-10 00.2		60 N	16 09	16 57	17 48	9 07 19	19 38 82	
1	191	41.4	39.0	167	41.7 ¹¹⁰	-9 50.9	93	58	20	17 04	52	9 02 21	42 79	
2	206	41.3	38.4	182	11.7 ¹¹⁰	41.6	94	56	29	11	56	8 58 23	45 77	
3	221	41.2	37.7	196	41.6 ¹⁰⁹	32.2	95	54	37	16	17 59	54 25	48 76	
4	236	41.1	37.0	211	11.6 ¹¹⁰	22.7	95	52	44	21	18 02	50 27	51 74	
5	251	41.0	-17 36.3	225	41.6 ¹¹⁰	-9 13.2	95	50	16 51	17 26	18 05	8 47 29	19 54 71	
6	266	40.9	-17 35.6	240	11.6 ¹¹⁰	-9 03.7	95	45	17 05	17 37	18 12	8 40 32	19 59 68	
7	281	40.8	34.9	254	41.6 ¹¹⁰	-8 54.1	96	40	17	46	18	34 35	20 04 65	
8	296	40.7	34.2	269	11.6 ¹¹⁰	44.4	97	35	27	17 54	24	29 37	08 62	
9	311	40.6	33.5	283	41.6 ¹¹⁰	34.7	97	30	36	18 01	29	25 39	11 61	
10	326	40.5	32.8	298	11.7 ¹¹¹	25.0	97	20	17 51	14	40	17 43	17 57	
11	341	40.4	-17 32.2	312	41.7 ¹¹⁰	-8 15.1	99	10 N	18 04	18 26	18 52	8 10 47	20 23 52	
12	356	40.3	-17 31.5	327	11.7 ¹¹⁰	-8 05.3	98	0	18 17	18 39	19 04	8 04 49	20 28 49	
13	11	40.2	30.8	341	41.8 ¹¹¹	-7 55.4	99	10 S	30	18 52	18	7 57 53	32 47	
14	26	40.1	30.1	356	11.8 ¹¹⁰	45.4	100	20	43	19 07	34	51 56	38 42	
15	41	40.0	29.4	10	41.9 ¹¹¹	35.4	100	30	18 59	25	19 56	43 60	43 39	
16	56	39.9	28.7	25	12.0 ¹¹¹	25.4	100	35	19 09	36	20 10	38 62	47 36	
17	71	39.8	-17 28.0	39	42.1 ¹¹¹	-7 15.3	101	40	19 19	19 49	20 26	7 33 65	20 50 35	
18	86	39.7	-17 27.3	54	12.1 ¹¹⁰	-7 05.1	102	45	19 32	20 05	20 47	7 27 68	20 55 31	
19	101	39.6	26.6	68	42.2 ¹¹¹	-6 55.0	101	50	47	25	21 15	20 71	21 00 28	
20	116	39.5	25.9	83	12.3 ¹¹¹	44.7	103	52	19 54	35	30	17 72	02 26	
21	131	39.4	25.2	97	42.4 ¹¹¹	34.5	102	54	20 02	46	21 47	13 75	05 24	
22	146	39.3	24.5	112	12.5 ¹¹¹	24.2	103	56	11	20 59	22 08	09 77	08 22	
23	161	39.3	23.8	126	42.6 ¹¹¹	13.8	104	58	22	21 14	22 37	7 04 79	11 20	
24	176	39.2	-17 23.1	141	12.7 ¹¹¹	-6 03.4	104	60 S	20 34	21 32	23 26	6 59 82	21 14 18	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 19 ^m 8		Mag: -4.7 PMG: 15 ^h 05 ^m			Mag: +1.1 PMG: 15 ^h 27 ^m			Mag: -2.2 PMG: 4 ^h 49 ^m			Mag: +0.5 PMG: 8 ^h 57 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	129	25.2	133	31.8	-0 09.3	128	03.0	+0 09.2	287	33.9	-7 39.7	225	26.4	-22 02.0
1	144	27.7	148	32.5	08.2	143	03.8	10.0	302	36.3	39.8	240	28.6	02.0
2	159	30.1	163	33.1	07.0	158	04.6	10.8	317	38.7	39.8	255	30.8	02.1
3	174	32.6	178	33.7	05.8	173	05.3	11.6	332	41.1	39.8	270	33.0	02.1
4	189	35.1	193	34.4	04.7	188	06.1	12.3	347	43.6	39.8	285	35.2	02.1
5	204	37.5	208	35.0	-0 03.5	203	06.9	+0 13.1	2	46.0	-7 39.8	300	37.5	-22 02.1
6	219	40.0	223	35.7	-0 02.4	218	07.7	+0 13.9	17	48.4	-7 39.8	315	39.7	-22 02.1
7	234	42.5	238	36.3	-0 01.2	233	08.4	14.7	32	50.8	39.8	330	41.9	02.1
8	249	44.9	253	37.0	+0 00.0	248	09.2	15.4	47	53.2	39.8	345	44.1	02.1
9	264	47.4	268	37.6	+0 01.1	263	10.0	16.2	62	55.6	39.8	0	46.3	02.1
10	279	49.9	283	38.3	02.3	278	10.7	17.0	77	58.0	39.9	15	48.5	02.1
11	294	52.3	298	38.9	+0 03.4	293	11.5	+0 17.8	93	00.4	-7 39.9	30	50.7	-22 02.1
12	309	54.8	313	39.6	+0 04.6	308	12.3	+0 18.6	108	02.8	-7 39.9	45	52.9	-22 02.1
13	324	57.2	328	40.2	05.7	323	13.0	19.3	123	05.2	39.9	60	55.1	02.2
14	339	59.7	343	40.9	06.9	338	13.8	20.1	138	07.6	39.9	75	57.4	02.2
15	355	02.2	358	41.6	08.1	353	14.6	20.9	153	10.1	39.9	90	59.6	02.2
16	10	04.6	13	42.2	09.2	8	15.3	21.7	168	12.5	39.9	106	01.8	02.2
17	25	07.1	28	42.9	+0 10.4	23	16.1	+0 22.4	183	14.9	-7 39.9	121	04.0	-22 02.2
18	40	09.6	43	43.5	+0 11.5	38	16.9	+0 23.2	198	17.3	-7 39.9	136	06.2	-22 02.2
19	55	12.0	58	44.2	12.7	53	17.6	24.0	213	19.7	39.9	151	08.4	02.2
20	70	14.5	73	44.9	13.8	68	18.4	24.8	228	22.1	39.9	166	10.6	02.2
21	85	17.0	88	45.5	15.0	83	19.2	25.5	243	24.5	40.0	181	12.9	02.2
22	100	19.4	103	46.2	16.1	98	19.9	26.3	258	26.9	40.0	196	15.1	02.2
23	115	21.9	118	46.9	17.3	113	20.7	27.1	273	29.4	40.0	211	17.3	02.2
24	130	24.3	133	47.6	+0 18.4	128	21.5	+0 27.9	288	31.8	-7 40.0	226	19.5	-22 02.2
Dif	—		+7	+12		+8	+8		+24	0		+22	0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 5			Edad: 3 ^d 0	PHE { 4 ^h : 57/8 12 ^h : 58/0 20 ^h : 58/1 R°: 50 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	39.2	-17 23.1	141	12.7	-6 03.4	104	6 37	7 28	8 16		9 26 17	21 00 83		
1	191	39.1	22.4	155	42.8 ¹¹¹	-5 53.0 ¹⁰⁴	104	34	21	8 05		23 20	01 81		
2	206	39.0	21.7	170	13.0 ¹¹²	42.6 ¹⁰⁴	104	30	15	7 56		21 22	02 79		
3	221	38.9	21.0	184	43.1 ¹¹¹	32.1 ¹⁰⁵	105	27	10	48		19 24	04 76		
4	236	38.8	20.3	199	13.2 ¹¹¹	21.6 ¹⁰⁵	105	24	04	41		17 26	05 74		
5	251	38.7	-17 19.6	213	43.3 ¹¹¹	-5 11.0 ¹⁰⁶	106	6 21	7 00	7 35		9 16 27	21 05 73		
6	266	38.6	-17 18.9	228	13.4 ¹¹¹	-5 00.4 ¹⁰⁶	106	6 14	6 50	7 21		9 12 31	21 07 69		
7	281	38.5	18.2	242	43.5 ¹¹¹	-4 49.8 ¹⁰⁶	106	08	41	7 09		09 34	09 66		
8	296	38.4	17.5	257	13.7 ¹¹²	39.1 ¹⁰⁷	107	6 03	33	6 59		06 37	10 64		
9	311	38.3	16.8	271	43.8 ¹¹¹	28.4 ¹⁰⁷	107	5 57	26	51		04 39	12 60		
10	326	38.2	16.1	286	13.9 ¹¹¹	17.7 ¹⁰⁷	107	46	13	36		9 00 43	14 56		
11	341	38.2	-17 15.4	300	44.0 ¹¹¹	-4 07.0 ¹⁰⁷	107	5 35	6 01	6 22		8 57 46	21 15 54		
12	356	38.1	-17 14.7	315	14.1 ¹¹¹	-3 56.2 ¹⁰⁸	108	5 23	5 48	6 10		8 53 50	21 17 50		
13	11	38.0	14.0	329	44.2 ¹¹¹	45.4 ¹⁰⁸	108	5 09	35	5 57		50 53	19 46		
14	26	37.9	13.3	344	14.3 ¹¹¹	34.6 ¹⁰⁸	108	4 53	20	44		47 56	20 43		
15	41	37.8	12.6	358	44.4 ¹¹¹	23.7 ¹⁰⁹	109	31	5 02	28		43 60	22 39		
16	56	37.7	11.9	13	14.5 ¹¹¹	12.9 ¹⁰⁸	108	18	4 51	19		40 63	23 37		
17	71	37.6	-17 11.2	27	44.6 ¹¹¹	-3 02.0 ¹⁰⁹	109	4 01	4 38	5 08		8 38 65	21 25 34		
18	86	37.5	-17 10.5	42	14.7 ¹¹¹	-2 51.1 ¹⁰⁹	109	3 40	4 22	4 55		8 35 68	21 26 31		
19	101	37.4	09.8	56	44.8 ¹¹¹	40.1 ¹¹⁰	110	3 12	4 02	40		31 73	28 27		
20	116	37.4	09.1	71	14.9 ¹¹¹	29.2 ¹⁰⁹	109	2 58	3 52	33		29 75	28 26		
21	131	37.3	08.3	85	44.9 ¹¹⁰	18.2 ¹¹⁰	110	41	41	25		28 76	29 24		
22	146	37.2	07.6	100	15.0 ¹¹¹	-2 07.2 ¹¹⁰	110	2 19	29	16		26 78	30 22		
23	161	37.1	06.9	114	45.1 ¹¹¹	-1 56.2 ¹¹⁰	110	1 51	3 14	4 06		23 81	31 20		
24	176	37.0	-17 06.2	129	15.1 ¹¹⁰	-1 45.2 ¹¹⁰	110	1 02	2 55	3 54		8 21 83	21 32 18		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 15 ^h 15 ^m 9		Mag: -4.7 PMG: 15 ^h 04 ^m			Mag: +1.1 PMG: 15 ^h 26 ^m			Mag: -2.2 PMG: 4 ^h 45 ^m			Mag: +0.5 PMG: 8 ^h 53 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	130	24.3	133 47.6	+0 18.4	128 21.5	+0 27.9	288 31.8	-7 40.0	226 19.5	-22 02.2		226 19.5	-22 02.2		
1	145	26.8	148 48.2	19.6	143 22.2	28.6	303 34.2	40.0	241 21.7	02.3		241 21.7	02.3		
2	160	29.3	163 48.9	20.7	158 23.0	29.4	318 36.6	40.0	256 23.9	02.3		256 23.9	02.3		
3	175	31.7	178 49.6	21.9	173 23.8	30.2	333 39.0	40.0	271 26.1	02.3		271 26.1	02.3		
4	190	34.2	193 50.3	23.1	188 24.5	31.0	348 41.4	40.0	286 28.4	02.3		286 28.4	02.3		
5	205	36.7	208 50.9	+0 24.2	203 25.3	+0 31.8	3 43.8	-7 40.0	301 30.6	-22 02.3		301 30.6	-22 02.3		
6	220	39.1	223 51.6	+0 25.4	218 26.1	+0 32.5	18 46.3	-7 40.0	316 32.8	-22 02.3		316 32.8	-22 02.3		
7	235	41.6	238 52.3	26.5	233 26.9	33.3	33 48.7	40.0	331 35.0	02.3		331 35.0	02.3		
8	250	44.1	253 53.0	27.7	248 27.6	34.1	48 51.1	40.0	346 37.2	02.3		346 37.2	02.3		
9	265	46.5	268 53.7	28.8	263 28.4	34.9	63 53.5	40.1	1 39.4	02.3		1 39.4	02.3		
10	280	49.0	283 54.3	30.0	278 29.2	35.6	78 55.9	40.1	16 41.6	02.3		16 41.6	02.3		
11	295	51.5	298 55.0	+0 31.1	293 29.9	+0 36.4	93 58.3	-7 40.1	31 43.9	-22 02.3		31 43.9	-22 02.3		
12	310	53.9	313 55.7	+0 32.3	308 30.7	+0 37.2	109 00.8	-7 40.1	46 46.1	-22 02.3		46 46.1	-22 02.3		
13	325	56.4	328 56.4	33.4	323 31.5	38.0	124 03.2	40.1	61 48.3	02.4		61 48.3	02.4		
14	340	58.8	343 57.1	34.6	338 32.2	38.7	139 05.6	40.1	76 50.5	02.4		76 50.5	02.4		
15	356	01.3	358 57.8	35.7	353 33.0	39.5	154 08.0	40.1	91 52.7	02.4		91 52.7	02.4		
16	11	03.8	13 58.5	36.9	8 33.8	40.3	169 10.4	40.1	106 54.9	02.4		106 54.9	02.4		
17	26	06.2	28 59.2	+0 38.0	23 34.5	+0 41.1	184 12.9	-7 40.1	121 57.1	-22 02.4		121 57.1	-22 02.4		
18	41	08.7	43 59.9	+0 39.1	38 35.3	+0 41.8	199 15.3	-7 40.1	136 59.4	-22 02.4		136 59.4	-22 02.4		
19	56	11.2	59 00.6	40.3	53 36.1	42.6	214 17.7	40.1	152 01.6	02.4		152 01.6	02.4		
20	71	13.6	74 01.3	41.4	68 36.8	43.4	229 20.1	40.1	167 03.8	02.4		167 03.8	02.4		
21	86	16.1	89 02.0	42.6	83 37.6	44.2	244 22.5	40.1	182 06.0	02.4		182 06.0	02.4		
22	101	18.6	104 02.7	43.7	98 38.4	44.9	259 24.9	40.1	197 08.2	02.4		197 08.2	02.4		
23	116	21.0	119 03.4	44.9	113 39.2	45.7	274 27.4	40.2	212 10.4	02.4		212 10.4	02.4		
24	131	23.5	134 04.1	+0 46.0	128 39.9	+0 46.5	289 29.8	-7 40.2	227 12.7	-22 02.4		227 12.7	-22 02.4		
Dif	—		+7	+11	+8	+8	+24	0	+22						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 4 ^d 0	PHE { 4 ^h : 58 ^h /2 12 ^h : 58 ^h /4 20 ^h : 58 ^h /5 Rº: 50 ^m										
	PMG: 12 ^h 13 ^m 6														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	37.0	-17 06.2	129	15.1	-1 45.2		60 N	16 15	17 02	17 53	9 43 18	22 23 85		
1	191	36.9	05.5	143	45.1 ¹¹⁰	34.2 ¹¹⁰		58	25	09	17 56	43 21	22 82		
2	206	36.8	04.8	158	15.2 ¹¹¹	23.1 ¹¹¹		56	33	15	18 00	43 23	21 79		
3	221	36.8	04.1	172	45.2 ¹¹⁰	12.0 ¹¹¹		54	41	20	03	43 25	20 77		
4	236	36.7	03.4	187	15.2 ¹¹⁰	-1 01.0 ¹¹⁰		52	48	25	05	43 26	19 75		
5	251	36.6	-17 02.7	201	45.2 ¹¹⁰	-0 49.9 ¹¹¹		50	16 54	17 29	18 08	9 43 28	22 18 74		
6	266	36.5	-17 01.9	216	15.2 ¹¹⁰	-0 38.8 ¹¹¹		45	17 08	17 39	18 14	9 43 32	22 16 70		
7	281	36.4	01.2	230	45.1 ¹⁰⁹	27.7 ¹¹¹		40	19	48	20	43 34	15 67		
8	296	36.3	-17 00.5	245	15.1 ¹¹⁰	16.6 ¹¹¹		35	29	17 55	26	43 37	14 64		
9	311	36.3	-16 59.8	259	45.0 ¹⁰⁹	-0 05.5 ¹¹¹		30	37	18 02	31	43 39	12 62		
10	326	36.2	59.1	274	14.9 ¹⁰⁹	+0 05.7 ¹¹²		20	17 52	15	41	43 43	10 58		
11	341	36.1	-16 58.4	288	44.9 ¹¹⁰	+0 16.8 ¹¹¹		10 N	18 05	18 27	18 52	9 43 47	22 09 54		
12	356	36.0	-16 57.6	303	14.7 ¹⁰⁸	+0 27.9 ¹¹¹		0	18 17	18 39	19 04	9 43 50	22 07 51		
13	11	35.9	56.9	317	44.6 ¹⁰⁹	39.0 ¹¹¹		10 S	29	18 51	17	43 54	05 48		
14	26	35.9	56.2	332	14.5 ¹⁰⁹	+0 50.2 ¹¹²		20	43	19 06	34	43 57	03 44		
15	41	35.8	55.5	346	44.3 ¹⁰⁸	+1 01.3 ¹¹¹		30	18 58	24	19 54	43 61	01 40		
16	56	35.7	54.8	1	14.2 ¹⁰⁹	12.4 ¹¹¹		35	19 07	35	20 08	43 64	22 00 38		
17	71	35.6	-16 54.1	15	44.0 ¹⁰⁸	+1 23.6 ¹¹²		40	19 17	19 47	20 24	9 43 67	21 59 35		
18	86	35.5	-16 53.3	30	13.8 ¹⁰⁸	+1 34.7 ¹¹¹		45	19 29	20 03	20 44	9 43 70	21 57 32		
19	101	35.5	52.6	44	43.5 ¹⁰⁷	45.8 ¹¹¹		50	44	22	21 11	44 73	55 29		
20	116	35.4	51.9	59	13.3 ¹⁰⁸	+1 56.9 ¹¹¹		52	51	31	25	44 75	54 27		
21	131	35.3	51.2	73	43.0 ¹⁰⁷	+2 08.0 ¹¹¹		54	19 59	42	21 41	44 77	53 25		
22	146	35.2	50.5	88	12.7 ¹⁰⁷	19.2 ¹¹²		56	20 07	20 54	22 01	44 79	52 23		
23	161	35.1	49.7	102	42.4 ¹⁰⁷	30.3 ¹¹¹		58	17	21 08	22 27	44 81	51 21		
24	176	35.1	-16 49.0	117	12.0 ¹⁰⁶	+2 41.3 ¹¹⁰		60 S	20 29	21 26	23 07	9 44 84	21 50 18		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 11 ^m 9		Mag: -4.7 PMG: 15 ^h 03 ^m			Mag: +1.1 PMG: 15 ^h 25 ^m			Mag: -2.2 PMG: 4 ^h 41 ^m			Mag: +0.5 PMG: 8 ^h 50 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	131	23.5	134	04.1	+0 46.0	128	39.9	+0 46.5	289	29.8	-7 40.2	227	12.7	-22 02.4	
1	146	26.0	149	04.8	47.2	143	40.7	47.3	304	32.2	40.2	242	14.9	02.5	
2	161	28.4	164	05.5	48.3	158	41.5	48.0	319	34.6	40.2	257	17.1	02.5	
3	176	30.9	179	06.2	49.5	173	42.2	48.8	334	37.1	40.2	272	19.3	02.5	
4	191	33.3	194	06.9	50.6	188	43.0	49.6	349	39.5	40.2	287	21.5	02.5	
5	206	35.8	209	07.6	+0 51.8	203	43.8	+0 50.4	4	41.9	-7 40.2	302	23.7	-22 02.5	
6	221	38.3	224	08.3	+0 52.9	218	44.5	+0 51.1	19	44.3	-7 40.2	317	26.0	-22 02.5	
7	236	40.7	239	09.1	54.0	233	45.3	51.9	34	46.7	40.2	332	28.2	02.5	
8	251	43.2	254	09.8	55.2	248	46.1	52.7	49	49.2	40.2	347	30.4	02.5	
9	266	45.7	269	10.5	56.3	263	46.8	53.5	64	51.6	40.2	2	32.6	02.5	
10	281	48.1	284	11.2	57.5	278	47.6	54.2	79	54.0	40.2	17	34.8	02.5	
11	296	50.6	299	11.9	+0 58.6	293	48.4	+0 55.0	94	56.4	-7 40.2	32	37.0	-22 02.5	
12	311	53.1	314	12.7	+0 59.7	308	49.2	+0 55.8	109	58.9	-7 40.2	47	39.3	-22 02.5	
13	326	55.5	329	13.4	+1 00.9	323	49.9	56.6	125	01.3	40.2	62	41.5	02.6	
14	341	58.0	344	14.1	02.0	338	50.7	57.3	140	03.7	40.2	77	43.7	02.6	
15	357	00.4	359	14.8	03.2	353	51.5	58.1	155	06.1	40.2	92	45.9	02.6	
16	12	02.9	14	15.6	04.3	8	52.2	58.9	170	08.6	40.2	107	48.1	02.6	
17	27	05.4	29	16.3	+1 05.5	23	53.0	+0 59.7	185	11.0	-7 40.2	122	50.4	-22 02.6	
18	42	07.8	44	17.0	+1 06.6	38	53.8	+1 00.4	200	13.4	-7 40.2	137	52.6	-22 02.6	
19	57	10.3	59	17.8	07.7	53	54.5	01.2	215	15.8	40.2	152	54.8	02.6	
20	72	12.8	74	18.5	08.9	68	55.3	02.0	230	18.3	40.2	167	57.0	02.6	
21	87	15.2	89	19.2	10.0	83	56.1	02.8	245	20.7	40.2	182	59.2	02.6	
22	102	17.7	104	20.0	11.1	98	56.9	03.5	260	23.1	40.3	198	01.4	02.6	
23	117	20.2	119	20.7	12.3	113	57.6	04.3	275	25.6	40.3	213	03.7	02.6	
24	132	22.6	134	21.4	+1 13.4	128	58.4	+1 05.1	290	28.0	-7 40.3	228	05.9	-22 02.6	
Dif	—		+7		+11	+8		+8	+24		0	+22		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 5 ^d 0 SD: 15:9 PMG: 16 ^h 45 ^m	PHE { 4 ^h : 58:6 12 ^h : 58:7 20 ^h : 58:8 R°: 52 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	35.1	-16	49.0	117	12.0	+2 41.3	60 N	6 34	7 24	8 11	10 01	20	23 48	85
1	191	35.0		48.3	131	41.7 ¹⁰⁷	+2 52.4 ¹¹¹	58	30	18	8 01	04 22		44 82	
2	206	34.9		47.6	146	11.3 ¹⁰⁶	+3 03.5 ¹¹¹	56	27	12	7 53	06 24		40 80	
3	221	34.8		46.8	160	40.9 ¹⁰⁶	14.5 ¹¹⁰	54	24	06	45	08 26		37 78	
4	236	34.8		46.1	175	10.4 ¹⁰⁵	25.6 ¹¹¹	52	21	7 02	38	09 28		34 76	
5	251	34.7	-16	45.4	189	40.0 ¹⁰⁶	+3 36.6 ¹¹⁰	50	6 18	6 57	7 32	10 11	30	23 32	74
6	266	34.6	-16	44.7	204	09.5 ¹⁰⁵	+3 47.6 ¹¹⁰	45	6 12	6 47	7 19	10 15	33	23 26	71
7	281	34.5		43.9	218	39.0 ¹⁰⁵	+3 58.6 ¹¹⁰	40	07	39	7 07	17 37		22 67	
8	296	34.5		43.2	233	08.4 ¹⁰⁴	+4 09.6 ¹¹⁰	35	6 01	31	6 58	20 39		18 64	
9	311	34.4		42.5	247	37.8 ¹⁰⁴	20.6 ¹¹⁰	30	5 56	25	50	22 41		14 63	
10	326	34.3		41.7	262	07.2 ¹⁰⁴	31.5 ¹⁰⁹	20	46	12	35	26 45		08 59	
11	341	34.3	-16	41.0	276	36.6 ¹⁰⁴	+4 42.4 ¹⁰⁹	10 N	5 35	6 00	6 22	10 30	48	23 03	55
12	356	34.2	-16	40.3	291	05.9 ¹⁰³	+4 53.3 ¹⁰⁹	0	5 24	5 49	6 10	10 33	52	22 58	52
13	11	34.1		39.6	305	35.2 ¹⁰³	+5 04.2 ¹⁰⁹	10 S	5 10	36	5 58	37 54		53 49	
14	26	34.0		38.8	320	04.5 ¹⁰³	15.0 ¹⁰⁸	20	4 54	22	45	40 59		47 46	
15	41	34.0		38.1	334	33.8 ¹⁰³	25.9 ¹⁰⁹	30	33	5 04	30	44 63		41 42	
16	56	33.9		37.4	349	03.0 ¹⁰²	36.7 ¹⁰⁸	35	20	4 53	21	47 64		38 40	
17	71	33.8	-16	36.6	3	32.1 ¹⁰¹	+5 47.4 ¹⁰⁷	40	4 04	4 41	5 10	10 50	67	22 34	37
18	86	33.8	-16	35.9	18	01.3 ¹⁰²	+5 58.2 ¹⁰⁸	45	3 44	4 25	4 58	10 53	70	22 29	35
19	101	33.7		35.2	32	30.4 ¹⁰¹	+6 08.9 ¹⁰⁷	50	17	4 06	44	57 74		24 31	
20	116	33.6		34.4	46	59.5 ¹⁰¹	19.6 ¹⁰⁷	52	3 03	3 57	37	10 59	75	21 30	
21	131	33.5		33.7	61	28.5 ¹⁰⁰	30.2 ¹⁰⁶	54	2 47	46	29	11 01	77	18 28	
22	146	33.5		33.0	75	57.5 ¹⁰⁰	40.9 ¹⁰⁷	56	27	34	21	03 80		15 26	
23	161	33.4		32.2	90	26.5 ¹⁰⁰	+6 51.4 ¹⁰⁵	58	2 01	20	11	05 82		12 23	
24	176	33.3	-16	31.5	104	55.4 ⁹⁹	+7 02.0 ¹⁰⁶	60 S	1 21	3 03	4 00	11 08	85	22 08	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 15 ^h 08 ^m 0		Mag: -4.8 PMG: 15 ^h 02 ^m		Mag: +1.1 PMG: 15 ^h 23 ^m		Mag: -2.2 PMG: 4 ^h 37 ^m		Mag: +0.5 PMG: 8 ^h 46 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	132	22.6	134	21.4	+1 13.4	128	58.4	+1 05.1	290	28.0	-7 40.3	228	05.9	-22 02.6	
1	147	25.1	149	22.2	14.6	143	59.2	05.9	305	30.4	40.3	243	08.1	02.6	
2	162	27.6	164	22.9	15.7	158	59.9	06.6	320	32.8	40.3	258	10.3	02.7	
3	177	30.0	179	23.7	16.8	174	00.7	07.4	335	35.3	40.3	273	12.5	02.7	
4	192	32.5	194	24.4	18.0	189	01.5	08.2	350	37.7	40.3	288	14.8	02.7	
5	207	34.9	209	25.2	+1 19.1	204	02.2	+1 08.9	5	40.1	-7 40.3	303	17.0	-22 02.7	
6	222	37.4	224	25.9	+1 20.2	219	03.0	+1 09.7	20	42.6	-7 40.3	318	19.2	-22 02.7	
7	237	39.9	239	26.7	21.4	234	03.8	10.5	35	45.0	40.3	333	21.4	02.7	
8	252	42.3	254	27.4	22.5	249	04.5	11.3	50	47.4	40.3	348	23.6	02.7	
9	267	44.8	269	28.2	23.6	264	05.3	12.0	65	49.9	40.3	3	25.9	02.7	
10	282	47.3	284	28.9	24.8	279	06.1	12.8	80	52.3	40.3	18	28.1	02.7	
11	297	49.7	299	29.7	+1 25.9	294	06.9	+1 13.6	95	54.7	-7 40.3	33	30.3	-22 02.7	
12	312	52.2	314	30.4	+1 27.0	309	07.6	+1 14.4	110	57.2	-7 40.3	48	32.5	-22 02.7	
13	327	54.7	329	31.2	28.2	324	08.4	15.1	125	59.6	40.3	63	34.7	02.7	
14	342	57.1	344	32.0	29.3	339	09.2	15.9	141	02.0	40.3	78	37.0	02.7	
15	357	59.6	359	32.7	30.4	354	09.9	16.7	156	04.5	40.3	93	39.2	02.8	
16	13	02.0	14	33.5	31.6	9	10.7	17.5	171	06.9	40.3	108	41.4	02.8	
17	28	04.5	29	34.3	+1 32.7	24	11.5	+1 18.2	186	09.3	-7 40.3	123	43.6	-22 02.8	
18	43	07.0	44	35.0	+1 33.8	39	12.3	+1 19.0	201	11.8	-7 40.3	138	45.9	-22 02.8	
19	58	09.4	59	35.8	35.0	54	13.0	19.8	216	14.2	40.3	153	48.1	02.8	
20	73	11.9	74	36.6	36.1	69	13.8	20.5	231	16.6	40.3	168	50.3	02.8	
21	88	14.4	89	37.3	37.2	84	14.6	21.3	246	19.1	40.3	183	52.5	02.8	
22	103	16.8	104	38.1	38.3	99	15.3	22.1	261	21.5	40.3	198	54.7	02.8	
23	118	19.3	119	38.9	39.5	114	16.1	22.9	276	23.9	40.3	213	57.0	02.8	
24	133	21.8	134	39.7	+1 40.6	129	16.9	+1 23.6	291	26.4	-7 40.3	228	59.2	-22 02.8	
Dif	—		+8		+11	+8		+8	+24		0	+22			

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: 6 ^d 0 PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1 R°: 54 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	m
0	176	33.3	-16	31.5	104	55.4	+7 02.0	60 N	16 20	17 07	17 57	10 21	23	** ** *
1	191	33.3		30.8	119	24.3	12.5 ¹⁰⁵	58	29	13	18 00	26	25	** ** *
2	206	33.2		30.0	133	53.1	23.0 ¹⁰⁵	56	38	19	03	30	28	** ** *
3	221	33.1		29.3	148	21.9	33.4 ¹⁰⁴	54	45	24	06	34	30	** ** *
4	236	33.1		28.6	162	50.7	43.8 ¹⁰⁴	52	52	28	09	37	32	** ** *
5	251	33.0	-16	27.8	177	19.4	+7 54.2 ¹⁰⁴	50	16 58	17 33	18 11	10 41	33	** ** *
6	266	32.9	-16	27.1	191	48.1	+8 04.5 ¹⁰³	45	17 11	17 42	18 17	10 48	36	** ** *
7	281	32.9		26.3	206	16.8	14.8 ¹⁰³	40	22	50	22	54	39	** ** *
8	296	32.8		25.6	220	45.4	25.0 ¹⁰²	35	31	17 57	28	10 59	41	** ** *
9	311	32.7		24.9	235	13.9	35.2 ¹⁰²	30	39	18 04	33	11 03	44	** ** *
10	326	32.7		24.1	249	42.5	45.3 ¹⁰¹	20	17 53	16	42	11	47	** ** *
11	341	32.6	-16	23.4	264	11.0	+8 55.4 ¹⁰¹	10 N	18 06	18 27	18 53	11 18	51	23 58 57
12	356	32.5	-16	22.6	278	39.4	+9 05.5 ¹⁰¹	0	18 17	18 39	19 04	11 25	53	23 50 54
13	11	32.5		21.9	293	07.8	15.5 ¹⁰⁰	10 S	29	18 51	17	31	57	42 51
14	26	32.4		21.2	307	36.1	25.4 ⁹⁹	20	42	19 05	33	39	59	33 49
15	41	32.4		20.4	322	04.4	35.3 ⁹⁹	30	18 57	22	19 53	47	63	23 46
16	56	32.3		19.7	336	32.7	45.2 ⁹⁹	35	19 05	33	20 06	51	66	18 43
17	71	32.2	-16	18.9	351	00.9	+9 55.0 ⁹⁸	40	19 15	19 45	20 21	11 57	68	23 11 41
18	86	32.2	-16	18.2	5	29.1	+10 04.7 ⁹⁷	45	19 27	20 00	20 41	12 03	71	23 04 38
19	101	32.1		17.4	19	57.2	14.4 ⁹⁷	50	41	18	21 07	11	74	22 55 35
20	116	32.1		16.7	34	25.3	24.0 ⁹⁶	52	48	27	20	14	76	51 33
21	131	32.0		16.0	48	53.3	33.6 ⁹⁶	54	19 55	38	35	18	78	46 32
22	146	31.9		15.2	63	21.3	43.1 ⁹⁵	56	20 03	20 49	21 54	23	79	41 30
23	161	31.9		14.5	77	49.3	+10 52.5 ⁹⁴	58	13	21 03	22 18	27	82	35 28
24	176	31.8	-16	13.7	92	17.2	+11 01.9 ⁹⁴	60 S	20 23	21 19	22 53	12 33	84	22 29 26
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 04 ^m 1		Mag: -4.8 PMG: 15 ^h 01 ^m		Mag: +1.1 PMG: 15 ^h 22 ^m		Mag: -2.2 PMG: 4 ^h 34 ^m		Mag: +0.5 PMG: 8 ^h 43 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	133	21.8	134	39.7	+1	40.6	129	16.9	+1	23.6				
1	148	24.2	149	40.4		41.7	144	17.6		24.4				
2	163	26.7	164	41.2		42.9	159	18.4		25.2				
3	178	29.2	179	42.0		44.0	174	19.2		26.0				
4	193	31.6	194	42.8		45.1	189	20.0		26.7				
5	208	34.1	209	43.6	+1	46.2	204	20.7	+1	27.5				
6	223	36.5	224	44.4	+1	47.4	219	21.5	+1	28.3				
7	238	39.0	239	45.1		48.5	234	22.3		29.1				
8	253	41.5	254	45.9		49.6	249	23.0		29.8				
9	268	43.9	269	46.7		50.7	264	23.8		30.6				
10	283	46.4	284	47.5		51.9	279	24.6		31.4				
11	298	48.9	299	48.3	+1	53.0	294	25.3	+1	32.1				
12	313	51.3	314	49.1	+1	54.1	309	26.1	+1	32.9				
13	328	53.8	329	49.9		55.2	324	26.9		33.7				
14	343	56.3	344	50.7		56.4	339	27.7		34.5				
15	358	58.7	359	51.5		57.5	354	28.4		35.2				
16	14	01.2	14	52.3		58.6	9	29.2		36.0				
17	29	03.7	29	53.1	+1	59.7	24	30.0	+1	36.8				
18	44	06.1	44	53.9	+2	00.8	39	30.7	+1	37.5				
19	59	08.6	59	54.7		02.0	54	31.5		38.3				
20	74	11.0	74	55.5		03.1	69	32.3		39.1				
21	89	13.5	89	56.3		04.2	84	33.1		39.9				
22	104	16.0	104	57.1		05.3	99	33.8		40.6				
23	119	18.4	119	58.0		06.4	114	34.6		41.4				
24	134	20.9	134	58.8	+2	07.6	129	35.4	+1	42.2				
Dif	—		+8		+11		+8		+8					
							+24		0					
									+22					
									0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 9			Edad: 7 ^d 0 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/3 R°: 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	31.8	-16	13.7	92	17.2	+11	01.9	60 N	6 30	7 20	8 06	10 44	29	1 13	83
1	191	31.8		13.0	106	45.0		11.2	58	26	14	7 57	51	32	06	81
2	206	31.7		12.2	121	12.8		20.5	56	24	08	49	10 58	33	1 00	79
3	221	31.6		11.5	135	40.5		29.7	54	21	7 03	41	11 04	35	0 55	77
4	236	31.6		10.7	150	08.2		38.8	52	18	6 59	35	09 37	50	50	75
5	251	31.5	-16	10.0	164	35.9	+11	47.9	50	6 16	6 54	7 29	11 14	38	0 46	73
6	266	31.5	-16	09.2	179	03.5	+11	56.8	45	6 10	6 45	7 16	11 24	41	0 37	70
7	281	31.4		08.5	193	31.0	+12	05.8	40	05	37	7 05	33	43	29	68
8	296	31.4		07.7	207	58.6		14.6	35	6 00	30	6 56	40	46	22	66
9	311	31.3		07.0	222	26.0		23.4	30	5 55	23	48	47	47	17	63
10	326	31.2		06.2	236	53.4		32.1	20	45	12	34	11 58	51	0 07	60
11	341	31.2	-16	05.5	251	20.8	+12	40.8	10 N	5 35	6 00	6 22	12 09	53	**	**
12	356	31.1	-16	04.7	265	48.1	+12	49.3	0	5 24	5 49	6 10	12 18	56	**	**
13	11	31.1		04.0	280	15.3	+12	57.8	10 S	5 11	37	5 59	28	58	**	**
14	26	31.0		03.2	294	42.5	+13	06.2	20	4 55	23	46	38	60	**	**
15	41	31.0		02.4	309	09.7		14.5	30	35	5 06	31	50	63	**	**
16	56	30.9		01.7	323	36.8		22.8	35	22	4 55	23	12 57	65	**	**
17	71	30.9	-16	00.9	338	03.8	+13	31.0	40	4 07	4 43	5 13	13 05	67	23	52
18	86	30.8	-16	00.2	352	30.8	+13	39.1	45	3 47	4 28	5 01	13 14	69	23	42
19	101	30.8	-15	59.4	6	57.8		47.1	50	22	10	4 47	25	73	30	44
20	116	30.7		58.7	21	24.7	+13	55.0	52	3 09	4 01	41	30	74	24	40
21	131	30.7		57.9	35	51.6	+14	02.9	54	2 53	3 51	33	36	76	18	39
22	146	30.6		57.2	50	18.4		10.6	56	34	39	25	42	78	11	37
23	161	30.5		56.4	64	45.1		18.3	58	2 10	26	16	49	80	23	03
24	176	30.5	-15	55.6	79	11.8	+14	25.9	60 S	1 36	3 09	4 05	13 57	83	22	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 00 ^m 1		Mag: -4.8 PMG: 14 ^h 59 ^m		Mag: +1.1 PMG: 15 ^h 21 ^m		Mag: -2.2 PMG: 4 ^h 30 ^m		Mag: +0.5 PMG: 8 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	134	20.9	134	58.8	+2	07.6	129	35.4	+1	42.2
1	149	23.4	149	59.6		08.7	144	36.1		42.9
2	164	25.8	165	00.4		09.8	159	36.9		43.7
3	179	28.3	180	01.2		10.9	174	37.7		44.5
4	194	30.8	195	02.0		12.0	189	38.5		45.3
5	209	33.2	210	02.9	+2	13.1	204	39.2	+1	46.0
6	224	35.7	225	03.7	+2	14.3	219	40.0	+1	46.8
7	239	38.1	240	04.5		15.4	234	40.8		47.6
8	254	40.6	255	05.3		16.5	249	41.5		48.3
9	269	43.1	270	06.2		17.6	264	42.3		49.1
10	284	45.5	285	07.0		18.7	279	43.1		49.9
11	299	48.0	300	07.8	+2	19.8	294	43.9	+1	50.7
12	314	50.5	315	08.7	+2	20.9	309	44.6	+1	51.4
13	329	52.9	330	09.5		22.0	324	45.4		52.2
14	344	55.4	345	10.3		23.2	339	46.2		53.0
15	359	57.9	0	11.2		24.3	354	46.9		53.7
16	15	00.3	15	12.0		25.4	9	47.7		54.5
17	30	02.8	30	12.8	+2	26.5	24	48.5	+1	55.3
18	45	05.3	45	13.7	+2	27.6	39	49.3	+1	56.0
19	60	07.7	60	14.5		28.7	54	50.0		56.8
20	75	10.2	75	15.4		29.8	69	50.8		57.6
21	90	12.6	90	16.2		30.9	84	51.6		58.4
22	105	15.1	105	17.1		32.0	99	52.3		59.1
23	120	17.6	120	17.9		33.1	114	53.1	+1	59.9
24	135	20.0	135	18.8	+2	34.3	129	53.9	+2	00.7
Dif	—		+8		+11		+8		+8	
							+24		0	
									+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 8 ^d 0 PHE { 4 ^h : 59/3 12 ^h : 59/4 20 ^h : 59/4 R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	176	30.5	-15	55.6	79	11.8	+14	25.9	60 N	16 25	17 11	18 01	11 13 37	2 36 80	
1	191	30.4		54.9	93	38.5		33.4	58	34	17	04	23 39	27 77	
2	206	30.4		54.1	108	05.1		40.8	56	42	23	07	31 41	19 75	
3	221	30.3		53.4	122	31.6		48.1	54	49	27	10	39 43	12 73	
4	236	30.3		52.6	136	58.2	+14	55.3	52	16 56	32	12	46 44	2 05 73	
5	251	30.2	-15	51.8	151	24.6	+15	02.5	50	17 01	17 36	18 14	11 52 45	1 59 72	
6	266	30.2	-15	51.1	165	51.0	+15	09.5	70	17 14	17 45	18 20	12 05 48	1 47 68	
7	281	30.2		50.3	180	17.4		16.5	40	24	52	25	16 49	37 66	
8	296	30.1		49.6	194	43.7		23.3	35	33	17 59	29	26 50	28 65	
9	311	30.1		48.8	209	10.0		30.1	30	41	18 06	34	34 52	20 63	
10	326	30.0		48.0	223	36.2		36.8	20	17 54	17	43	12 49 54	1 07 60	
11	341	30.0	-15	47.3	238	02.4	+15	43.3	10 N	18 06	18 28	18 53	13 02 55	0 55 59	
12	356	29.9	-15	46.5	252	28.5	+15	49.8	0	18 17	18 39	19 04	13 14 57	0 44 57	
13	11	29.9		45.7	266	54.6	+15	56.2	10 S	29	18 51	16	26 59	33 55	
14	26	29.8		45.0	281	20.6	+16	02.4	20	41	19 04	32	38 61	22 52	
15	41	29.8		44.2	295	46.6		08.6	30	18 55	21	19 51	13 53 63	09 49	
16	56	29.7		43.4	310	12.6		14.7	35	19 04	31	20 04	14 02 64	0 01 48	
17	71	29.7	-15	42.7	324	38.5	+16	20.6	40	19 13	19 43	20 19	14 12 65	** ** *	
18	86	29.6	-15	41.9	339	04.3	+16	26.5	45	19 24	19 57	20 37	14 23 68	** ** *	
19	101	29.6		41.1	353	30.1		32.2	50	38	20 15	21 02	38 69	** ** *	
20	116	29.6		40.4	7	55.9		37.9	52	44	23	15	44 70	** ** *	
21	131	29.5		39.6	22	21.7		43.4	54	51	33	29	14 52 71	23 57 47	
22	146	29.5		38.8	36	47.3		48.8	56	19 59	44	21 47	15 00 72	48 46	
23	161	29.4		38.1	51	13.0		54.2	58	20 08	20 57	22 09	09 74	38 45	
24	176	29.4	-15	37.3	65	38.6	+16	59.4	60 S	20 18	21 13	22 40	15 20 76	23 27 43	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 56 ^m 2		Mag: -4.8 PMG: 14 ^h 58 ^m		Mag: +1.1 PMG: 15 ^h 20 ^m		Mag: -2.2 PMG: 4 ^h 26 ^m		Mag: +0.5 PMG: 8 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	135	20.0	135	18.8	129	53.9	293	23.6	230	46.0
1	150	22.5	150	19.6	144	54.7	308	26.1	245	48.2
2	165	25.0	165	20.5	159	55.4	323	28.5	260	50.4
3	180	27.4	180	21.4	174	56.2	338	31.0	275	52.7
4	195	29.9	195	22.2	189	57.0	353	33.5	290	54.9
5	210	32.4	210	23.1	204	57.7	8	35.9	305	57.1
6	225	34.8	225	23.9	219	58.5	23	38.4	320	59.3
7	240	37.3	240	24.8	234	59.3	38	40.8	336	01.6
8	255	39.8	255	25.7	250	00.1	53	43.3	351	03.8
9	270	42.2	270	26.5	265	00.8	68	45.7	6	06.0
10	285	44.7	285	27.4	280	01.6	83	48.2	21	08.3
11	300	47.1	300	28.3	295	02.4	98	50.6	36	10.5
12	315	49.6	315	29.1	310	03.1	113	53.1	51	12.7
13	330	52.1	330	30.0	325	03.9	128	55.5	66	14.9
14	345	54.5	345	30.9	340	04.7	143	58.0	81	17.2
15	0	57.0	0	31.8	355	05.5	159	00.4	96	19.4
16	15	59.5	15	32.7	51.9	06.2	174	02.9	111	21.6
17	31	01.9	30	33.5	25	07.0	189	05.4	126	23.9
18	46	04.4	45	34.4	40	07.8	204	07.8	141	26.1
19	61	06.9	60	35.3	55	08.5	219	10.3	156	28.3
20	76	09.3	75	36.2	70	09.3	234	12.7	171	30.5
21	91	11.8	90	37.1	85	10.1	249	15.2	186	32.8
22	106	14.2	105	38.0	100	10.9	264	17.6	201	35.0
23	121	16.7	120	38.9	115	11.6	279	20.1	216	37.2
24	136	19.2	135	39.8	130	12.4	294	22.6	231	39.5
Dif	—		+9		+11		+25		+22	

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: 9 ^d 0 PHE { 4 ^h : 59/4 12 ^h : 59/5 20 ^h : 59/5 PMG: 20 ^h 25 ^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	176	29.4	-15 37.3	65	38.6	+16	59.4	60 N	6 26	7 15	8 01	11 50	50	3 56	71			
1	191	29.3	36.5	80	04.2	+17	04.5	58	23	10	7 52	12 02	50	44	70			
2	206	29.3	35.8	94	29.7	65	09.5	56	20	04	45	12 52		34	69			
3	221	29.3	35.0	108	55.2	65	14.4	54	18	7 00	38	22 51		25	68			
4	236	29.2	34.2	123	20.7	65	19.1	52	15	6 55	31	30 52		18	67			
5	251	29.2	-15 33.4	137	46.1	64	+17 23.8	50	6 13	6 51	7 26	12 37	53	3 11	66			
6	266	29.1	-15 32.7	152	11.5	64	+17 28.3	45	6 08	6 43	7 14	12 53	54	2 55	65			
7	281	29.1	31.9	166	36.8	63	32.8	45	6 03	35	7 03	13 05	55	43	64			
8	296	29.1	31.1	181	02.1	63	37.1	43	5 58	28	6 55	16 56		33	62			
9	311	29.0	30.4	195	27.4	63	41.3	42	30	54	22	47	26	56	23	62		
10	326	29.0	29.6	209	52.7	63	45.4	41	20	45	11	43	57	2 07	61			
11	341	28.9	-15 28.8	224	17.9	62	+17 49.4	40	10 N	5 35	6 00	13 57	58	1 54	59			
12	356	28.9	-15 28.0	238	43.1	62	+17 53.2	38	0	5 24	5 49	14 11	58	1 41	58			
13	11	28.9	27.3	253	08.2	61	+17 56.9	37	10 S	5 12	37	25 59		28	56			
14	26	28.8	26.5	267	33.4	62	+18 00.6	37	20	4 57	24	39 60		1 14	55			
15	41	28.8	25.7	281	58.5	61	04.1	35	30	37	5 08	14 56	61	0 58	54			
16	56	28.8	24.9	296	23.5	60	07.4	33	35	25	4 58	15 06	61	49	53			
17	71	28.7	-15 24.1	310	48.6	61	+18 10.7	33	40	4 10	4 46	15 17	62	0 38	52			
18	86	28.7	-15 23.4	325	13.6	60	+18 13.8	31	45	3 51	4 32	15 31	62	0 26	51			
19	101	28.7	22.6	339	38.6	60	16.8	30	50	26	14	4 51	47	63	11	49		
20	116	28.6	21.8	354	03.6	60	19.7	29	52	3 14	4 05	15 54	64	0 04	48			
21	131	28.6	21.0	8	28.6	60	22.5	28	54	2 59	3 56	16 03	64	** ** *	**			
22	146	28.6	20.2	22	53.5	59	25.2	27	56	42	44	12 65		** ** *	**			
23	161	28.5	19.5	37	18.4	59	27.7	25	58	2 19	32	21 23	65	** ** *	**			
24	176	28.5	-15 18.7	51	43.3	59	+18 30.1	24	60 S	1 49	3 16	16 36	65	** ** *	**			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 52 ^m 3		Mag: -4.8 PMG: 14 ^h 56 ^m			Mag: +1.2 PMG: 15 ^h 18 ^m			Mag: -2.2 PMG: 4 ^h 22 ^m			Mag: +0.5 PMG: 8 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	136	19.2	135	39.8	+3	00.7	130	12.4	+2	19.1	294	22.6	-7	40.0	231	39.5	-22	03.3
1	151	21.6	150	40.6		01.8	145	13.2		19.9	309	25.0		40.0	246	41.7		03.3
2	166	24.1	165	41.5		02.9	160	14.0		20.7	324	27.5		39.9	261	43.9		03.3
3	181	26.6	180	42.4		04.0	175	14.7		21.4	339	29.9		39.9	276	46.2		03.3
4	196	29.0	195	43.3		05.1	190	15.5		22.2	354	32.4		39.9	291	48.4		03.4
5	211	31.5	210	44.2	+3	06.2	205	16.3	+2	23.0	9	34.8	-7	39.9	306	50.6	-22	03.4
6	226	34.0	225	45.1	+3	07.3	220	17.0	+2	23.7	24	37.3	-7	39.9	321	52.9	-22	03.4
7	241	36.4	240	46.1		08.3	235	17.8		24.5	39	39.8		39.9	336	55.1		03.4
8	256	38.9	255	47.0		09.4	250	18.6		25.3	54	42.2		39.9	351	57.3		03.4
9	271	41.4	270	47.9		10.5	265	19.4		26.0	69	44.7		39.9	6	59.5		03.4
10	286	43.8	285	48.8		11.6	280	20.1		26.8	84	47.1		39.9	22	01.8		03.4
11	301	46.3	300	49.7	+3	12.7	295	20.9	+2	27.6	99	49.6	-7	39.9	37	04.0	-22	03.4
12	316	48.7	315	50.6	+3	13.8	310	21.7	+2	28.3	114	52.1	-7	39.9	52	06.2	-22	03.4
13	331	51.2	330	51.5		14.9	325	22.4		29.1	129	54.5		39.8	67	08.5		03.4
14	346	53.7	345	52.4		16.0	340	23.2		29.9	144	57.0		39.8	82	10.7		03.4
15	1	56.1	0	53.4		17.1	355	24.0		30.7	159	59.5		39.8	97	12.9		03.4
16	16	58.6	15	54.3		18.2	10	24.8		31.4	175	01.9		39.8	112	15.2		03.4
17	32	01.1	30	55.2	+3	19.2	25	25.5	+2	32.2	190	04.4	-7	39.8	127	17.4	-22	03.4
18	47	03.5	45	56.1	+3	20.3	40	26.3	+2	33.0	205	06.8	-7	39.8	142	19.6	-22	03.4
19	62	06.0	60	57.0		21.4	55	27.1		33.7	220	09.3		39.8	157	21.9		03.4
20	77	08.5	75	58.0		22.5	70	27.9		34.5	235	11.8		39.8	172	24.1		03.5
21	92	10.9	90	58.9		23.6	85	28.6		35.3	250	14.2		39.8	187	26.3		03.5
22	107	13.4	105	59.8		24.7	100	29.4		36.0	265	16.7		39.7	202	28.6		03.5
23	122	15.9	121	00.8		25.7	115	30.2		36.8	280	19.2		39.7	217	30.8		03.5
24	137	18.3	136	01.7	+3	26.8	130	30.9	+2	37.6	295	21.6	-7	39.7	232	33.0	-22	03.5
Dif	—		+9 +11		+8 +8		+25 0		+22 0		+22 0		+22 0		+22 0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 14 ^m 1			Edad: 10 ^d 0 PHE { SD: 16'2 PMG: 21 ^h 23 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	28.5	-15	18.7	51	43.3	+18	30.1	60 N	16 30	17 16	18 06	12 40 61	5 07 59
1	191	28.5		17.9	66	08.2	59	32.4	58	39	22	08	12 52 62	4 54 59
2	206	28.4		17.1	80	33.1	59	34.5	56	47	27	11	13 04 61	43 59
3	221	28.4		16.3	94	57.9	58	36.6	54	53	31	13	13 61	33 60
4	236	28.4		15.6	109	22.7	58	38.5	52	16 59	35	15	22 61	25 59
5	251	28.3	-15	14.8	123	47.6	59	+18 40.2	50	17 05	17 39	18 17	13 30 61	4 17 59
6	266	28.3	-15	14.0	138	12.4	58	+18 41.9	45	17 17	17 47	18 22	13 47 60	4 00 60
7	281	28.3		13.2	152	37.2	58	43.4	40	26	17 55	27	14 00 60	3 47 59
8	296	28.2		12.4	167	02.0	58	44.8	35	35	18 01	31	12 60	35 59
9	311	28.2		11.6	181	26.8	58	46.1	30	42	07	36	22 60	25 59
10	326	28.2		10.9	195	51.5	57	47.3	20	17 55	18	44	40 59	3 08 59
11	341	28.1	-15	10.1	210	16.3	58	+18 48.3	10 N	18 07	18 28	18 54	14 55 59	2 53 59
12	356	28.1	-15	09.3	224	41.1	58	+18 49.2	0	18 18	18 39	19 04	15 09 59	2 39 58
13	11	28.1		08.5	239	05.9	58	50.0	10 S	29	18 50	16	24 58	24 59
14	26	28.1		07.7	253	30.6	57	50.6	20	40	19 03	30	39 58	2 09 59
15	41	28.0		06.9	267	55.4	58	51.2	30	18 54	19	19 49	15 57 57	1 52 58
16	56	28.0		06.1	282	20.2	58	51.6	35	19 02	29	20 01	16 07 57	42 58
17	71	28.0	-15	05.4	296	44.9	57	+18 51.8	40	19 11	19 40	20 16	16 19 56	1 30 58
18	86	27.9	-15	04.6	311	09.7	58	+18 52.0	45	19 22	19 54	20 34	16 33 56	1 17 57
19	101	27.9		03.8	325	34.5	58	52.0	50	35	20 11	20 58	50 55	1 00 57
20	116	27.9		03.0	339	59.3	58	51.9	52	41	19	21 10	16 58 54	0 52 57
21	131	27.9		02.2	354	24.0	57	51.7	54	47	29	24	17 07 54	44 56
22	146	27.8		01.4	8	48.8	58	51.3	56	19 55	39	21 40	17 54	34 56
23	161	27.8	-15	00.6	23	13.6	58	50.8	58	20 03	20 52	22 01	28 53	23 56
24	176	27.8	-14	59.8	37	38.5	59	+18 50.2	60 S	20 13	21 06	22 28	17 41 53	0 10 56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 14 ^h 48 ^m 3		Mag: -4.8 PMG: 14 ^h 55 ^m		Mag: +1.2 PMG: 15 ^h 17 ^m		Mag: -2.2 PMG: 4 ^h 18 ^m		Mag: +0.5 PMG: 8 ^h 29 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	137	18.3	136	01.7	+3	26.8	130	30.9	+2	37.6						
1	152	20.8	151	02.6		27.9	145	31.7		38.3						
2	167	23.2	166	03.6		29.0	160	32.5		39.1						
3	182	25.7	181	04.5		30.1	175	33.3		39.9						
4	197	28.2	196	05.5		31.2	190	34.0		40.6						
5	212	30.6	211	06.4	+3	32.2	205	34.8	+2	41.4						
6	227	33.1	226	07.3	+3	33.3	220	35.6	+2	42.2						
7	242	35.6	241	08.3		34.4	235	36.4		42.9						
8	257	38.0	256	09.2		35.5	250	37.1		43.7						
9	272	40.5	271	10.2		36.6	265	37.9		44.5						
10	287	43.0	286	11.1		37.6	280	38.7		45.2						
11	302	45.4	301	12.1	+3	38.7	295	39.4	+2	46.0						
12	317	47.9	316	13.1	+3	39.8	310	40.2	+2	46.7						
13	332	50.4	331	14.0		40.9	325	41.0		47.5						
14	347	52.8	346	15.0		41.9	340	41.8		48.3						
15	2	55.3	1	15.9		43.0	355	42.5		49.0						
16	17	57.7	16	16.9		44.1	10	43.3		49.8						
17	33	00.2	31	17.9	+3	45.2	25	44.1	+2	50.6						
18	48	02.7	46	18.8	+3	46.2	40	44.9	+2	51.3						
19	63	05.1	61	19.8		47.3	55	45.6		52.1						
20	78	07.6	76	20.8		48.4	70	46.4		52.9						
21	93	10.1	91	21.7		49.5	85	47.2		53.6						
22	108	12.5	106	22.7		50.5	100	47.9		54.4						
23	123	15.0	121	23.7		51.6	115	48.7		55.2						
24	138	17.5	136	24.7	+3	52.7	130	49.5	+2	55.9						
Dif	—		+10		+11		+8		+8		+25		0		+22	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 11 ^d 0 PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/1 PMG: 22 ^h 22 ^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	176	27.8	-14 59.8	37	38.5	+18 50.2	7	60 N	6 21	7 11	7 56	13 41	73	6 06	46	
1	191	27.8	59.0	52	03.3	49.5	8	58	19	05	48	13 54	71	5 53	48	
2	206	27.7	58.2	66	28.1	48.6	9	56	16	7 01	40	14 05	70	42	49	
3	221	27.7	57.4	80	53.0	47.6	10	54	14	6 56	34	14 69		33	49	
4	236	27.7	56.7	95	17.9	46.5	11	52	12	52	28	23 68		24	50	
5	251	27.7	-14 55.9	109	42.8	45.3	12	50	6 10	6 48	7 22	14 31	66	5 16	51	
6	266	27.6	-14 55.1	124	07.7	43.9	14	45	6 05	6 40	7 11	14 47	65	5 00	52	
7	281	27.6	54.3	138	32.6	42.4	15	40	6 01	33	7 01	15 00	64	4 46	53	
8	296	27.6	53.5	152	57.6	40.8	16	35	5 57	27	6 53	12 62		34	54	
9	311	27.6	52.7	167	22.5	39.1	17	30	52	21	45	22 61		24	55	
10	326	27.6	51.9	181	47.5	37.2	19	20	44	10	33	39 60		4 07	56	
11	341	27.5	-14 51.1	196	12.5	35.2	20	10 N	5 35	6 00	6 21	15 54	58	3 52	57	
12	356	27.5	-14 50.3	210	37.6	33.1	21	0	5 24	5 49	6 11	16 08	57	3 37	58	
13	11	27.5	49.5	225	02.7	30.9	22	10 S	5 13	38	6 00	22 55		23	59	
14	26	27.5	48.7	239	27.8	28.6	23	20	4 58	25	5 48	37 54		3 08	59	
15	41	27.4	47.9	253	52.9	26.1	25	30	39	09	35	16 54	52	2 50	61	
16	56	27.4	47.1	268	18.1	23.5	26	35	27	5 00	27	17 04	51	40	61	
17	71	27.4	-14 46.3	282	43.3	20.8	27	40	4 13	4 49	5 18	17 15	50	2 28	62	
18	86	27.4	-14 45.5	297	08.5	18.0	28	45	3 55	4 35	5 07	17 29	48	2 14	63	
19	101	27.4	44.7	311	33.7	15.0	30	50	31	18	4 54	45 46		1 57	64	
20	116	27.4	43.9	325	59.0	12.0	30	52	19	10	48	17 52	46	49	65	
21	131	27.3	43.1	340	24.4	08.8	32	54	3 05	4 00	42	18 01	45	40	66	
22	146	27.3	42.3	354	49.7	05.5	33	56	2 49	3 50	34	11 43		30	66	
23	161	27.3	41.5	9	15.1	02.1	34	58	28	38	26	21 42		19	67	
24	176	27.3	-14 40.7	23	40.6	58.5	36	60 S	2 01	3 23	4 16	18 34	40	1 06	67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 44 ^m 4		Mag: -4.8 PMG: 14 ^h 53 ^m		Mag: +1.2 PMG: 15 ^h 16 ^m		Mag: -2.2 PMG: 4 ^h 14 ^m		Mag: +0.5 PMG: 8 ^h 25 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	138	17.5	136	24.7	+3 52.7	130	49.5	+2 55.9	296	20.9	-7 39.4	233	26.7	-22 03.6
1	153	19.9	151	25.6	53.7	145	50.3	56.7	311	23.4	39.4	248	28.9	03.6
2	168	22.4	166	26.6	54.8	160	51.0	57.5	326	25.8	39.4	263	31.1	03.6
3	183	24.9	181	27.6	55.9	175	51.8	58.2	341	28.3	39.4	278	33.4	03.6
4	198	27.3	196	28.6	56.9	190	52.6	59.0	356	30.8	39.3	293	35.6	03.7
5	213	29.8	211	29.6	+3 58.0	205	53.4	+2 59.8	11	33.3	-7 39.3	308	37.9	-22 03.7
6	228	32.2	226	30.6	+3 59.1	220	54.1	+3 00.5	26	35.7	-7 39.3	323	40.1	-22 03.7
7	243	34.7	241	31.6	+4 00.1	235	54.9	01.3	41	38.2	39.3	338	42.3	03.7
8	258	37.2	256	32.6	01.2	250	55.7	02.0	56	40.7	39.3	353	44.6	03.7
9	273	39.6	271	33.6	02.3	265	56.4	02.8	71	43.2	39.3	8	46.8	03.7
10	288	42.1	286	34.5	03.3	280	57.2	03.6	86	45.6	39.3	23	49.0	03.7
11	303	44.6	301	35.5	+4 04.4	295	58.0	+3 04.3	101	48.1	-7 39.2	38	51.3	-22 03.7
12	318	47.0	316	36.5	+4 05.5	310	58.8	+3 05.1	116	50.6	-7 39.2	53	53.5	-22 03.7
13	333	49.5	331	37.5	06.5	325	59.5	05.9	131	53.1	39.2	68	55.8	03.7
14	348	52.0	346	38.6	07.6	341	00.3	06.6	146	55.6	39.2	83	58.0	03.7
15	3	54.4	1	39.6	08.6	356	01.1	07.4	161	58.0	39.2	99	00.2	03.7
16	18	56.9	16	40.6	09.7	11	01.9	08.2	177	00.5	39.2	114	02.5	03.7
17	33	59.3	31	41.6	+4 10.8	26	02.6	+3 08.9	192	03.0	-7 39.1	129	04.7	-22 03.7
18	49	01.8	46	42.6	+4 11.8	41	03.4	+3 09.7	207	05.5	-7 39.1	144	07.0	-22 03.7
19	64	04.3	61	43.6	12.9	56	04.2	10.4	222	07.9	39.1	159	09.2	03.7
20	79	06.7	76	44.6	13.9	71	05.0	11.2	237	10.4	39.1	174	11.4	03.7
21	94	09.2	91	45.6	15.0	86	05.7	12.0	252	12.9	39.1	189	13.7	03.8
22	109	11.7	106	46.6	16.1	101	06.5	12.7	267	15.4	39.1	204	15.9	03.8
23	124	14.1	121	47.7	17.1	116	07.3	13.5	282	17.9	39.0	219	18.1	03.8
24	139	16.6	136	48.7	+4 18.2	131	08.0	+3 14.3	297	20.3	-7 39.0	234	20.4	-22 03.8
Dif	—		+10	+11	+8	+8			+25	0	+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2			Edad: 12 ^d 0 PHE { 4 ^h : 59'0 12 ^h : 58'9 20 ^h : 58'7													
	PMG: 12 ^h 14 ^m 2			SD: 16:1					PMG: 23 ^h 18 ^m			R°: 54 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	176	27.3	-14 40.7	23	40.6	+17 58.5	65	60 N	16 36	17 21	18 10	14 54 79	6 52 35				
1	191	27.3	39.9	38	06.1	54.9	36	58	44	26	13	15 05 76	41 37				
2	206	27.3	39.1	52	31.6	51.1	38	56	51	31	15	15 74	31 39				
3	221	27.2	38.3	66	57.2	47.3	38	54	16 57	35	17	23 73	22 40				
4	236	27.2	37.5	81	22.8	43.3	40	52	17 03	39	19	31 71	14 42				
5	251	27.2	-14 36.7	95	48.4	+17 39.2	41	50	17 08	17 42	18 20	15 37 71	6 07 43				
6	266	27.2	-14 35.9	110	14.2	+17 35.0	42	45	17 20	17 50	18 25	15 52 68	5 52 45				
7	281	27.2	35.1	124	39.9	30.6	44	40	29	17 57	29	16 04 65	39 47				
8	296	27.2	34.3	139	05.7	26.2	44	35	37	18 03	33	14 64	28 49				
9	311	27.1	33.5	153	31.5	21.7	45	30	44	09	37	23 62	19 50				
10	326	27.1	32.7	167	57.4	17.0	47	20	17 56	19	45	39 59	5 03 52				
11	341	27.1	-14 31.9	182	23.4	+17 12.2	48	10 N	18 07	18 29	18 54	16 52 57	4 49 54				
12	356	27.1	-14 31.0	196	49.4	+17 07.4	48	0	18 18	18 39	19 04	17 05 54	4 35 56				
13	11	27.1	30.2	211	15.4	+17 02.4	50	10 S	28	18 50	15	17 53	22 58				
14	26	27.1	29.4	225	41.5	+16 57.3	51	20	39	19 02	29	31 50	4 07 60				
15	41	27.1	28.6	240	07.7	52.1	52	30	18 52	18	48	46 48	3 51 62				
16	56	27.1	27.8	254	33.9	46.9	52	35	19 00	27	19 59	17 55 46	41 64				
17	71	27.1	-14 27.0	269	00.1	+16 41.5	54	40	19 09	19 38	20 13	18 05 44	3 30 65				
18	86	27.0	-14 26.2	283	26.5	+16 36.0	55	45	19 19	19 51	20 31	18 17 42	3 17 67				
19	101	27.0	25.4	297	52.8	30.4	56	50	31	20 07	20 53	31 39	3 01 69				
20	116	27.0	24.6	312	19.2	24.7	57	52	37	15	21 05	38 38	2 54 70				
21	131	27.0	23.8	326	45.7	18.9	58	54	43	24	18	46 36	46 71				
22	146	27.0	23.0	341	12.3	13.0	59	56	50	34	34	18 54 34	36 73				
23	161	27.0	22.1	355	38.9	07.0	60	58	19 58	20 46	21 53	19 03 33	26 74				
24	176	27.0	-14 21.3	10	05.5	+16 01.0	60	60 S	20 08	21 00	22 18	19 14 30	2 13 77				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 40 ^m 5		Mag: -4.8 PMG: 14 ^h 52 ^m		Mag: +1.2 PMG: 15 ^h 15 ^m		Mag: -2.2 PMG: 4 ^h 10 ^m		Mag: +0.5 PMG: 8 ^h 21 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	139	16.6	136	48.7	+4 18.2	131	08.0	+3 14.3	297	20.3	-7 39.0	234	20.4	-22 03.8
1	154	19.1	151	49.7	19.2	146	08.8	15.0	312	22.8	39.0	249	22.6	03.8
2	169	21.5	166	50.7	20.3	161	09.6	15.8	327	25.3	39.0	264	24.9	03.8
3	184	24.0	181	51.8	21.3	176	10.4	16.6	342	27.8	39.0	279	27.1	03.8
4	199	26.5	196	52.8	22.4	191	11.1	17.3	357	30.3	39.0	294	29.3	03.8
5	214	28.9	211	53.8	+4 23.4	206	11.9	+3 18.1	12	32.7	-7 38.9	309	31.6	-22 03.8
6	229	31.4	226	54.9	+4 24.5	221	12.7	+3 18.8	27	35.2	-7 38.9	324	33.8	-22 03.8
7	244	33.8	241	55.9	25.5	236	13.5	19.6	42	37.7	38.9	339	36.1	03.8
8	259	36.3	256	56.9	26.6	251	14.2	20.4	57	40.2	38.9	354	38.3	03.8
9	274	38.8	271	58.0	27.6	266	15.0	21.1	72	42.7	38.9	9	40.5	03.8
10	289	41.2	286	59.0	28.7	281	15.8	21.9	87	45.2	38.8	24	42.8	03.8
11	304	43.7	302	00.1	+4 29.7	296	16.5	+3 22.7	102	47.6	-7 38.8	39	45.0	-22 03.8
12	319	46.2	317	01.1	+4 30.8	311	17.3	+3 23.4	117	50.1	-7 38.8	54	47.3	-22 03.8
13	334	48.6	332	02.2	31.8	326	18.1	24.2	132	52.6	38.8	69	49.5	03.8
14	349	51.1	347	03.2	32.9	341	18.9	24.9	147	55.1	38.8	84	51.8	03.8
15	4 53.6	2 04.3	33.9	356 19.6	25.7	356	19.6	25.7	162	57.6	38.7	99	54.0	03.9
16	19 56.0	17 05.3	35.0	11 20.4	26.5	178	00.1	26.5	178	00.1	38.7	114	56.2	03.9
17	34 58.5	32 06.4	+4 36.0	26 21.2	+3 27.2	193	02.6	-7 38.7	193	02.6	-7 38.7	129	58.5	-22 03.9
18	50 01.0	47 07.4	+4 37.1	41 22.0	+3 28.0	208	05.0	-7 38.7	208	05.0	-7 38.7	145	00.7	-22 03.9
19	65 03.4	62 08.5	38.1	56 22.7	28.7	223	07.5	38.7	223	07.5	38.7	160	03.0	03.9
20	80 05.9	77 09.5	39.2	71 23.5	29.5	238	10.0	38.7	238	10.0	38.7	175	05.2	03.9
21	95 08.3	92 10.6	40.2	86 24.3	30.3	253	12.5	38.6	253	12.5	38.6	190	07.4	03.9
22	110 10.8	107 11.7	41.2	101 25.1	31.0	268	15.0	38.6	268	15.0	38.6	205	09.7	03.9
23	125 13.3	122 12.7	42.3	116 25.8	31.8	283	17.5	38.6	283	17.5	38.6	220	11.9	03.9
24	140 15.7	137 13.8	+4 43.3	131 26.6	+3 32.6	298	20.0	-7 38.6	298	20.0	-7 38.6	235	14.2	-22 03.9
Dif	—	+10	+10	+8	+8	+25	0		+22					

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: 13 ^d 0 PHE { 4 ^h : 58'6 12 ^h : 58'4 20 ^h : 58'2 R°: ***															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	27.0	-14	21.3	10	05.5	+16	01.0	60 N	6 17	7 06	7 51	16 13	81	7 27	27				
1	191	27.0		20.5	24	32.3	+15	54.8	58	15	7 01	43	21	79	18	29				
2	206	27.0		19.7	38	59.0		48.5	56	13	6 57	36	29	76	10	31				
3	221	27.0		18.9	53	25.9		42.2	54	11	53	30	36	74	7 02	33				
4	236	27.0		18.1	67	52.8		35.7	52	09	49	24	42	73	6 56	34				
5	251	26.9	-14	17.3	82	19.7	+15	29.2	50	6 07	6 45	7 19	16 48	71	6 50	36				
6	266	26.9	-14	16.5	96	46.8	+15	22.5	45	6 03	6 38	7 08	17 00	67	6 37	39				
7	281	26.9		15.6	111	13.9		15.8	40	5 59	31	6 59	09	65	26	42				
8	296	26.9		14.8	125	41.0		09.0	35	55	25	51	18	63	17	44				
9	311	26.9		14.0	140	08.2	+15	02.1	30	51	19	44	25	61	6 09	45				
10	326	26.9		13.2	154	35.5	+14	55.1	20	43	6 09	32	38	57	5 55	48				
11	341	26.9	-14	12.4	169	02.8	+14	48.1	10 N	5 34	5 59	6 21	17 49	55	5 43	51				
12	356	26.9	-14	11.6	183	30.3	+14	40.9	0	5 25	5 49	6 11	17 59	52	5 31	54				
13	11	26.9		10.7	197	57.7		33.7	10 S	5 13	39	6 00	18 10	49	20	56				
14	26	26.9		09.9	212	25.3		26.4	20	4 59	26	5 49	21	46	5 07	59				
15	41	26.9		09.1	226	52.9		19.0	30	41	11	36	34	43	4 53	61				
16	56	26.9		08.3	241	20.5		11.5	35	30	5 02	29	41	41	45	63				
17	71	26.9	-14	07.5	255	48.3	+14	04.0	40	4 16	4 51	5 20	18 49	39	4 35	66				
18	86	26.9	-14	06.7	270	16.1	+13	56.4	45	3 58	4 38	5 10	18 59	36	4 24	68				
19	101	26.9		05.8	284	43.9		48.7	50	36	22	4 58	19 10	33	10	71				
20	116	26.9		05.0	299	11.9		40.9	52	24	14	52	16	31	4 04	72				
21	131	26.9		04.2	313	39.9		33.1	54	3 11	4 05	46	22	30	3 57	74				
22	146	26.9		03.4	328	07.9		25.1	56	2 56	3 55	39	28	28	49	76				
23	161	26.9		02.6	342	36.1		17.2	58	36	43	31	36	26	40	78				
24	176	26.9	-14	01.7	357	04.3	+13	09.1	60 S	2 12	3 30	4 22	19 44	23	3 30	80				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 36 ^m 6		Mag: -4.8 PMG: 14 ^h 50 ^m		Mag: +1.2 PMG: 15 ^h 13 ^m		Mag: -2.3 PMG: 4 ^h 06 ^m		Mag: +0.5 PMG: 8 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	140	15.7	137	13.8	+4	43.3	131	26.6	+3	32.6	298	20.0	-7	38.6	235	14.2	-22	03.9
1	155	18.2	152	14.9		44.4	146	27.4		33.3	313	22.4		38.6	250	16.4		03.9
2	170	20.7	167	15.9		45.4	161	28.1		34.1	328	24.9		38.5	265	18.7		03.9
3	185	23.1	182	17.0		46.4	176	28.9		34.8	343	27.4		38.5	280	20.9		03.9
4	200	25.6	197	18.1		47.5	191	29.7		35.6	358	29.9		38.5	295	23.1		03.9
5	215	28.1	212	19.2	+4	48.5	206	30.5	+3	36.4	13	32.4	-7	38.5	310	25.4	-22	03.9
6	230	30.5	227	20.3	+4	49.6	221	31.2	+3	37.1	28	34.9	-7	38.4	325	27.6	-22	03.9
7	245	33.0	242	21.3		50.6	236	32.0		37.9	43	37.4		38.4	340	29.9		03.9
8	260	35.5	257	22.4		51.6	251	32.8		38.6	58	39.9		38.4	355	32.1		03.9
9	275	37.9	272	23.5		52.7	266	33.6		39.4	73	42.4		38.4	10	34.4		04.0
10	290	40.4	287	24.6		53.7	281	34.3		40.2	88	44.9		38.4	25	36.6		04.0
11	305	42.8	302	25.7	+4	54.7	296	35.1	+3	40.9	103	47.3	-7	38.3	40	38.8	-22	04.0
12	320	45.3	317	26.8	+4	55.8	311	35.9	+3	41.7	118	49.8	-7	38.3	55	41.1	-22	04.0
13	335	47.8	332	27.9		56.8	326	36.7		42.4	133	52.3		38.3	70	43.3		04.0
14	350	50.2	347	29.0		57.8	341	37.4		43.2	148	54.8		38.3	85	45.6		04.0
15	5	52.7	2	30.1		58.9	356	38.2		44.0	163	57.3		38.3	100	47.8		04.0
16	20	55.2	17	31.2	+4	59.9	11	39.0		44.7	178	59.8		38.2	115	50.1		04.0
17	35	57.6	32	32.3	+5	00.9	26	39.8	+3	45.5	194	02.3	-7	38.2	130	52.3	-22	04.0
18	51	00.1	47	33.4	+5	01.9	41	40.5	+3	46.2	209	04.8	-7	38.2	145	54.6	-22	04.0
19	66	02.6	62	34.5		03.0	56	41.3		47.0	224	07.3		38.2	160	56.8		04.0
20	81	05.0	77	35.6		04.0	71	42.1		47.8	239	09.8		38.1	175	59.0		04.0
21	96	07.5	92	36.7		05.0	86	42.8		48.5	254	12.3		38.1	191	01.3		04.0
22	111	09.9	107	37.8		06.1	101	43.6		49.3	269	14.8		38.1	206	03.5		04.0
23	126	12.4	122	38.9		07.1	116	44.4		50.0	284	17.3		38.1	221	05.8		04.0
24	141	14.9	137	40.0	+5	08.1	131	45.2	+3	50.8	299	19.8	-7	38.0	236	08.0	-22	04.0
Dif	—		+11 +10		+8 +8		+25 0		+22 0									

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			Edad: 14 ^d 0 PHE { 4 ^h : 58 ⁰ 12 ^h : 57 ⁸ 20 ^h : 57 ⁶ PMG: 0 ^h 12 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	26.9	-14	01.7	357	04.3	+13	09.1	60 N	16 41	17 26	18 15	17 34 80	7 54 21
1	191	26.9		00.9	11	32.5	+13	01.0	58	49	30	17	40 77	47 24
2	206	26.9	-14	00.1	26	00.8	+12	52.8	56	16 55	35	19	45 76	41 26
3	221	26.9	-13	59.3	40	29.2		44.5	54	17 01	39	20	50 73	35 28
4	236	26.9		58.4	54	57.7		36.2	52	07	42	22	55 71	30 30
5	251	26.9	-13	57.6	69	26.2	+12	27.8	50	17 12	17 45	18 24	17 59 70	7 26 31
6	266	26.9	-13	56.8	83	54.8	+12	19.4	45	17 22	17 53	18 27	18 07 67	7 16 34
7	281	26.9		56.0	98	23.5		10.9	40	31	17 59	31	14 64	08 37
8	296	26.9		55.1	112	52.2	+12	02.3	35	39	18 05	35	21 61	7 01 39
9	311	26.9		54.3	127	21.0	+11	53.7	30	46	10	38	26 59	6 54 41
10	326	26.9		53.5	141	49.9		45.0	20	17 57	20	46	35 56	43 45
11	341	26.9	-13	52.7	156	18.8	+11	36.2	10 N	18 08	18 29	18 54	18 44 52	6 34 47
12	356	26.9	-13	51.8	170	47.8	+11	27.4	0	18 18	18 39	19 04	18 51 50	6 25 50
13	11	26.9		51.0	185	16.9		18.6	10 S	28	18 49	15	18 59 46	16 53
14	26	26.9		50.2	199	46.0		09.6	20	38	19 01	28	19 07 43	6 06 56
15	41	26.9		49.4	214	15.2	+11	00.7	30	51	16	46	17 39	5 54 61
16	56	26.9		48.5	228	44.5	+10	51.7	35	18 58	25	19 57	22 37	48 62
17	71	26.9	-13	47.7	243	13.8	+10	42.6	40	19 06	19 35	20 10	19 28 35	5 41 64
18	86	26.9	-13	46.9	257	43.2	+10	33.5	45	19 16	19 48	20 27	19 35 32	5 32 67
19	101	26.9		46.0	272	12.7		24.3	50	28	20 04	20 49	43 29	21 71
20	116	26.9		45.2	286	42.2		15.1	52	33	11	21 00	47 28	16 73
21	131	26.9		44.4	301	11.8	+10	05.8	54	39	19	12	52 25	11 74
22	146	26.9		43.6	315	41.4	+9	56.5	56	46	29	27	19 56 24	5 05 76
23	161	27.0		42.7	330	11.1		47.2	58	19 54	40	21 45	20 02 21	4 58 79
24	176	27.0	-13	41.9	344	40.9	+9	37.8	60 S	20 02	20 53	22 08	20 07 20	4 50 81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 32 ^m 6		Mag: -4.8 PMG: 14 ^h 48 ^m		Mag: +1.2 PMG: 15 ^h 12 ^m		Mag: -2.3 PMG: 4 ^h 02 ^m		Mag: +0.5 PMG: 8 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	141	14.9	137	40.0	+5	08.1	131	45.2	+3	50.8
1	156	17.3	152	41.2		09.1	146	45.9		51.5
2	171	19.8	167	42.3		10.1	161	46.7		52.3
3	186	22.3	182	43.4		11.2	176	47.5		53.1
4	201	24.7	197	44.5		12.2	191	48.3		53.8
5	216	27.2	212	45.7	+5	13.2	206	49.0	+3	54.6
6	231	29.7	227	46.8	+5	14.2	221	49.8	+3	55.3
7	246	32.1	242	47.9		15.3	236	50.6		56.1
8	261	34.6	257	49.0		16.3	251	51.4		56.9
9	276	37.1	272	50.2		17.3	266	52.1		57.6
10	291	39.5	287	51.3		18.3	281	52.9		58.4
11	306	42.0	302	52.5	+5	19.3	296	53.7	+3	59.1
12	321	44.4	317	53.6	+5	20.3	311	54.4	+3	59.9
13	336	46.9	332	54.7		21.4	326	55.2	+4	00.6
14	351	49.4	347	55.9		22.4	341	56.0		01.4
15	6	51.8	2	57.0		23.4	356	56.8		02.2
16	21	54.3	17	58.2		24.4	11	57.5		02.9
17	36	56.8	32	59.3	+5	25.4	26	58.3	+4	03.7
18	51	59.2	48	00.5	+5	26.4	41	59.1	+4	04.4
19	67	01.7	63	01.6		27.4	56	59.9		05.2
20	82	04.2	78	02.8		28.4	72	00.6		05.9
21	97	06.6	93	04.0		29.5	87	01.4		06.7
22	112	09.1	108	05.1		30.5	102	02.2		07.5
23	127	11.6	123	06.3		31.5	117	03.0		08.2
24	142	14.0	138	07.5	+5	32.5	132	03.7	+4	09.0
Dif	—		+11 +10		+8 +8		+25 0		+22 0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 15 ^d 0 PHE { 4 ^h : 57/4 12 ^h : 57/1 20 ^h : 56/9 SD: 15:7 PMG: 1 ^h 03 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.0	-13	41.9	344	40.9	+9 37.8	60 N	6 12	7 01	7 46	18 54	78	8 15	18
1	191	27.0		41.1	359	10.8 ¹⁰⁹	28.4 ⁹⁴	58	10	6 57	38	18 57	76	11	20
2	206	27.0		40.2	13	40.7 ¹⁰⁹	18.9 ⁹⁵	56	09	53	32	19 01	73	07	22
3	221	27.0		39.4	28	10.6 ¹⁰⁹	+9 09.4 ⁹⁵	54	07	49	26	03	72	03	24
4	236	27.0		38.6	42	40.6 ¹¹⁰	+8 59.8 ⁹⁶	52	06	45	20	06	70	8	00
5	251	27.0	-13	37.7	57	10.7 ¹¹¹	+8 50.3 ⁹⁵	50	6 04	6 42	7 16	19 09	68	7	57
6	266	27.0	-13	36.9	71	40.9 ¹¹²	+8 40.6 ⁹⁷	45	6 00	6 35	7 05	19 14	64	7	50
7	281	27.0		36.1	86	11.1 ¹¹²	31.0 ⁹⁶	40	5 57	29	6 56	18	62	45	33
8	296	27.0		35.2	100	41.4 ¹¹³	21.3 ⁹⁷	35	53	23	49	22	59	40	36
9	311	27.0		34.4	115	11.7 ¹¹³	11.6 ⁹⁷	30	50	18	42	25	57	35	39
10	326	27.1		33.6	129	42.1 ¹¹⁴	+8 01.8 ⁹⁸	20	42	6 08	31	31	53	28	42
11	341	27.1	-13	32.7	144	12.5 ¹¹⁴	+7 52.0 ⁹⁸	10 N	5 34	5 59	6 21	19 36	50	7	21
12	356	27.1	-13	31.9	158	43.1 ¹¹⁶	+7 42.2 ⁹⁸	0	5 25	5 50	6 11	19 41	46	7	15
13	11	27.1		31.1	173	13.6 ¹¹⁵	32.4 ⁹⁹	10 S	14	39	6 01	45	44	09	51
14	26	27.1		30.2	187	44.3 ¹¹⁷	22.5 ⁹⁹	20	5 01	27	5 50	50	41	7	02
15	41	27.1		29.4	202	14.9 ¹¹⁶	12.6 ⁹⁹	30	4 43	13	38	56	37	6	55
16	56	27.1		28.5	216	45.7 ¹¹⁸	+7 02.6 ¹⁰⁰	35	32	5 04	31	19 59	35	50	60
17	71	27.1	-13	27.7	231	16.5 ¹¹⁸	+6 52.7 ⁹⁹	40	4 19	4 54	5 23	20 03	32	6	45
18	86	27.1	-13	26.9	245	47.3 ¹¹⁸	+6 42.7 ¹⁰⁰	45	4 02	4 41	5 13	20 07	30	6	39
19	101	27.2		26.0	260	18.2 ¹¹⁹	32.7 ¹⁰⁰	50	3 40	26	5 01	12	27	32	66
20	116	27.2		25.2	274	49.2 ¹²⁰	22.7 ¹⁰⁰	52	30	18	4 56	15	24	29	71
21	131	27.2		24.4	289	20.2 ¹²⁰	12.7 ¹⁰⁰	54	17	10	50	17	23	25	73
22	146	27.2		23.5	303	51.3 ¹²¹	+6 02.6 ¹⁰¹	56	3 02	4 00	43	20	21	21	75
23	161	27.2		22.7	318	22.4 ¹²¹	+5 52.5 ¹⁰¹	58	2 44	3 49	36	23	19	17	76
24	176	27.2	-13	21.8	332	53.6 ¹²²	+5 42.4 ¹⁰¹	60 S	2 22	3 36	4 27	20 27	17	6	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 28 ^m 7		Mag: -4.8 PMG: 14 ^h 46 ^m		Mag: +1.2 PMG: 15 ^h 11 ^m		Mag: -2.3 PMG: 3 ^h 58 ^m		Mag: +0.5 PMG: 8 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	142	14.0	138	07.5	+5	32.5	132	03.7	+4	09.0
1	157	16.5	153	08.6		33.5	147	04.5		09.7
2	172	18.9	168	09.8		34.5	162	05.3		10.5
3	187	21.4	183	11.0		35.5	177	06.1		11.2
4	202	23.9	198	12.1		36.5	192	06.8		12.0
5	217	26.3	213	13.3	+5	37.5	207	07.6	+4	12.7
6	232	28.8	228	14.5	+5	38.5	222	08.4	+4	13.5
7	247	31.3	243	15.7		39.5	237	09.1		14.3
8	262	33.7	258	16.9		40.5	252	09.9		15.0
9	277	36.2	273	18.0		41.5	267	10.7		15.8
10	292	38.7	288	19.2		42.5	282	11.5		16.5
11	307	41.1	303	20.4	+5	43.5	297	12.2	+4	17.3
12	322	43.6	318	21.6	+5	44.5	312	13.0	+4	18.0
13	337	46.0	333	22.8		45.5	327	13.8		18.8
14	352	48.5	348	24.0		46.5	342	14.6		19.5
15	7	51.0	3	25.2		47.5	357	15.3		20.3
16	22	53.4	18	26.4		48.5	12	16.1		21.1
17	37	55.9	33	27.6	+5	49.5	27	16.9	+4	21.8
18	52	58.4	48	28.8	+5	50.5	42	17.7	+4	22.6
19	68	00.8	63	30.0		51.5	57	18.4		23.3
20	83	03.3	78	31.2		52.5	72	19.2		24.1
21	98	05.8	93	32.4		53.5	87	20.0		24.8
22	113	08.2	108	33.6		54.5	102	20.7		25.6
23	128	10.7	123	34.9		55.4	117	21.5		26.3
24	143	13.2	138	36.1	+5	56.4	132	22.3	+4	27.1
Dif	—		+12		+10		+8		+8	
							+25		0	
									+23	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 16 ^d 0 PHE { 4 ^h : 56:7 12 ^h : 56:4 20 ^h : 56:2 PMG: 1 ^h 52 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	176	27.2	-13	21.8	332	53.6	+5	42.4	60 N	16 46	17 31	18 20	20 12 76	8 33 17		
1	191	27.3		21.0	347	24.8 ¹²²		32.3 ¹⁰¹	58	16 53	35	21	13 73	31 19		
2	206	27.3		20.2	1	56.1 ¹²³		22.2 ¹⁰¹	56	17 00	39	23	14 71	29 21		
3	221	27.3		19.3	16	27.4 ¹²³		12.0 ¹⁰²	54	05	42	24	15 69	27 22		
4	236	27.3		18.5	30	58.8 ¹²⁴	+5	01.9 ¹⁰¹	52	11	46	25	16 68	26 24		
5	251	27.3	-13	17.6	45	30.2 ¹²⁴	+4	51.7 ¹⁰²	50	17 15	17 49	18 27	20 17 66	8 24 26		
6	266	27.3	-13	16.8	60	01.7 ¹²⁵	+4	41.5 ¹⁰²	45	17 25	17 56	18 30	20 18 63	8 21 29		
7	281	27.4		15.9	74	33.3 ¹²⁶		31.3 ¹⁰²	40	34	18 01	33	20 60	18 32		
8	296	27.4		15.1	89	04.8 ¹²⁵		21.1 ¹⁰²	35	41	07	37	21 58	16 34		
9	311	27.4		14.3	103	36.5 ¹²⁷		10.9 ¹⁰²	30	47	12	40	22 56	14 36		
10	326	27.4		13.4	118	08.1 ¹²⁶	+4	00.6 ¹⁰³	20	17 58	21	47	24 52	10 39		
11	341	27.4	-13	12.6	132	39.9 ¹²⁸	+3	50.4 ¹⁰²	10 N	18 08	18 30	18 55	20 26 48	8 06 43		
12	356	27.4	-13	11.7	147	11.6 ¹²⁷	+3	40.2 ¹⁰²	0	18 18	18 39	19 03	20 27 46	8 03 46		
13	11	27.5		10.9	161	43.4 ¹²⁸		29.9 ¹⁰³	10 S	27	18 49	14	29 42	8 00 49		
14	26	27.5		10.0	176	15.3 ¹²⁹		19.6 ¹⁰³	20	37	19 00	27	31 39	7 57 52		
15	41	27.5		09.2	190	47.2 ¹²⁹	+3	09.4 ¹⁰²	30	49	14	44	33 35	53 56		
16	56	27.5		08.3	205	19.1 ¹²⁹	+2	59.1 ¹⁰³	35	18 56	23	19 54	34 33	50 59		
17	71	27.5	-13	07.5	219	51.1 ¹³⁰	+2	48.9 ¹⁰²	40	19 04	19 32	20 07	20 35 31	7 48 61		
18	86	27.6	-13	06.6	234	23.1 ¹³⁰	+2	38.6 ¹⁰³	45	19 13	19 45	20 23	20 37 28	7 45 64		
19	101	27.6		05.8	248	55.2 ¹³¹		28.3 ¹⁰³	50	24	20 00	44	39 24	41 68		
20	116	27.6		04.9	263	27.3 ¹³¹		18.0 ¹⁰³	52	29	07	20 54	39 24	40 68		
21	131	27.6		04.1	277	59.5 ¹³²	+2	07.8 ¹⁰²	54	35	15	21 06	40 22	38 70		
22	146	27.6		03.3	292	31.7 ¹³²	+1	57.5 ¹⁰³	56	41	24	20	41 20	36 72		
23	161	27.7		02.4	307	03.9 ¹³²		47.2 ¹⁰³	58	49	34	37	42 18	33 75		
24	176	27.7	-13	01.6	321	36.2 ¹³³	+1	37.0 ¹⁰²	60 S	19 57	20 46	21 58	20 44 15	7 31 77		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 14 ^h 24 ^m 8		Mag: -4.8 PMG: 14 ^h 44 ^m			Mag: +1.2 PMG: 15 ^h 10 ^m			Mag: -2.3 PMG: 3 ^h 54 ^m			Mag: +0.5 PMG: 8 ^h 07 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	143	13.2	138	36.1	+5	56.4	132	22.3	+4	27.1	301	19.9	-7	36.8		
1	158	15.6	153	37.3		57.4	147	23.1		27.8	316	22.4		36.8		
2	173	18.1	168	38.5		58.4	162	23.8		28.6	331	24.9		36.7		
3	188	20.5	183	39.7	+5	59.4	177	24.6		29.4	346	27.4		36.7		
4	203	23.0	198	41.0	+6	00.4	192	25.4		30.1	1	29.9		36.7		
5	218	25.5	213	42.2	+6	01.4	207	26.2	+4	30.9	16	32.4	-7	36.7		
6	233	27.9	228	43.4	+6	02.4	222	26.9	+4	31.6	31	34.9	-7	36.6		
7	248	30.4	243	44.7		03.3	237	27.7		32.4	46	37.5		36.6		
8	263	32.9	258	45.9		04.3	252	28.5		33.1	61	40.0		36.6		
9	278	35.3	273	47.1		05.3	267	29.3		33.9	76	42.5		36.5		
10	293	37.8	288	48.4		06.3	282	30.0		34.6	91	45.0		36.5		
11	308	40.3	303	49.6	+6	07.3	297	30.8	+4	35.4	106	47.5	-7	36.5		
12	323	42.7	318	50.9	+6	08.3	312	31.6	+4	36.1	121	50.0	-7	36.4		
13	338	45.2	333	52.1		09.2	327	32.4		36.9	136	52.5		36.4		
14	353	47.6	348	53.3		10.2	342	33.1		37.6	151	55.1		36.4		
15	8	50.1	3	54.6		11.2	357	33.9		38.4	166	57.6		36.4		
16	23	52.6	18	55.8		12.2	12	34.7		39.1	182	00.1		36.3		
17	38	55.0	33	57.1	+6	13.1	27	35.4	+4	39.9	197	02.6	-7	36.3		
18	53	57.5	48	58.4	+6	14.1	42	36.2	+4	40.7	212	05.1	-7	36.3		
19	69	00.0	63	59.6		15.1	57	37.0		41.4	227	07.6		36.2		
20	84	02.4	79	00.9		16.1	72	37.8		42.2	242	10.1		36.2		
21	99	04.9	94	02.1		17.0	87	38.5		42.9	257	12.7		36.2		
22	114	07.4	109	03.4		18.0	102	39.3		43.7	272	15.2		36.1		
23	129	09.8	124	04.7		19.0	117	40.1		44.4	287	17.7		36.1		
24	144	12.3	139	05.9	+6	19.9	132	40.9	+4	45.2	302	20.2	-7	36.1		
Dif	—		+12		+10		+8		+8		+25		0		+23	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 17 ^d 0 PHE { 4 ^h : 56/0 12 ^h : 55/8 20 ^h : 55/6 SD: 15/3 PMG: 2 ^h 38 ^m R°: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	176	27.7	-13	01.6	321	36.2	+1 37.0	60 N	6 08	6 56	7 40	21 28	73	8 50	15		
1	191	27.7	-13	00.7	336	08.5 ¹³³	26.7 ¹⁰³	58	06	52	33	26	72	50	18		
2	206	27.7	-12	59.9	350	40.8 ¹³³	16.5 ¹⁰²	56	05	48	27	25	70	50	20		
3	221	27.8		59.0	5	13.2 ¹³⁴	+1 06.2 ¹⁰³	54	03	45	22	24	68	50	22		
4	236	27.8		58.2	19	45.6 ¹³⁴	+0 56.0 ¹⁰²	52	02	42	17	24	66	50	23		
5	251	27.8	-12	57.3	34	18.0 ¹³⁴	+0 45.7 ¹⁰³	50	6 01	6 39	7 12	21 23	64	8 50	24		
6	266	27.8	-12	56.5	48	50.5 ¹³⁵	+0 35.5 ¹⁰²	45	5 58	6 32	7 02	21 21	61	8 50	27		
7	281	27.9		55.6	63	23.0 ¹³⁵	25.3 ¹⁰²	40	54	26	6 54	20	58	50	30		
8	296	27.9		54.7	77	55.6 ¹³⁶	15.1 ¹⁰²	35	51	21	47	19	56	50	32		
9	311	27.9		53.9	92	28.1 ¹³⁵	+0 04.9 ¹⁰²	30	48	16	41	18	53	50	34		
10	326	27.9		53.0	107	00.8 ¹³⁷	-0 05.3 ¹⁰²	20	41	6 07	30	16	50	49	39		
11	341	28.0	-12	52.2	121	33.4 ¹³⁶	-0 15.5 ¹⁰²	10 N	5 34	5 58	6 20	21 14	47	8 49	42		
12	356	28.0	-12	51.3	136	06.1 ¹³⁷	-0 25.7 ¹⁰²	0	5 25	5 50	6 11	21 13	44	8 49	45		
13	11	28.0		50.5	150	38.8 ¹³⁷	35.9 ¹⁰²	10 S	15	40	6 01	11	42	49	48		
14	26	28.0		49.6	165	11.5 ¹³⁷	46.0 ¹⁰¹	20	5 02	29	5 51	10	38	49	51		
15	41	28.1		48.8	179	44.3 ¹³⁸	-0 56.1 ¹⁰¹	30	4 45	15	40	08	35	49	55		
16	56	28.1		47.9	194	17.0 ¹³⁷	-1 06.2 ¹⁰¹	35	34	5 06	33	07	33	49	57		
17	71	28.1	-12	47.1	208	49.9 ¹³⁹	-1 16.3 ¹⁰¹	40	4 22	4 56	5 25	21 06	30	8 49	59		
18	86	28.2	-12	46.2	223	22.7 ¹³⁸	-1 26.4 ¹⁰¹	45	4 06	4 44	5 16	21 05	28	8 49	62		
19	101	28.2		45.3	237	55.6 ¹³⁹	36.5 ¹⁰¹	50	3 45	29	05	03	25	49	65		
20	116	28.2		44.5	252	28.4 ¹³⁸	46.6 ¹⁰¹	52	35	22	5 00	03	23	48	67		
21	131	28.2		43.6	267	01.4 ¹⁴⁰	-1 56.6 ¹⁰⁰	54	23	14	4 54	02	22	48	69		
22	146	28.3		42.8	281	34.3 ¹³⁹	-2 06.6 ¹⁰⁰	56	3 09	4 05	48	01	20	48	71		
23	161	28.3		41.9	296	07.2 ¹³⁹	16.6 ¹⁰⁰	58	2 52	3 55	41	21 00	18	48	73		
24	176	28.3	-12	41.1	310	40.2 ¹⁴⁰	-2 26.6 ¹⁰⁰	60 S	2 31	3 43	4 33	20 59	16	8 48	75		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 14 ^h 20 ^m 8			Mag: -4.8 PMG: 14 ^h 42 ^m			Mag: +1.2 PMG: 15 ^h 08 ^m			Mag: -2.3 PMG: 3 ^h 50 ^m			Mag: +0.5 PMG: 8 ^h 03 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	144	12.3	139 05.9	+6	19.9	132 40.9	+4	45.2	302 20.2	-7	36.1	238 50.0	-22	04.4			
1	159	14.8	154 07.2		20.9	147 41.6		45.9	317 22.7		36.0	253 52.3		04.4			
2	174	17.2	169 08.5		21.9	162 42.4		46.7	332 25.2		36.0	268 54.6		04.4			
3	189	19.7	184 09.8		22.9	177 43.2		47.4	347 27.8		36.0	283 56.8		04.4			
4	204	22.1	199 11.1		23.8	192 44.0		48.2	2 30.3		35.9	298 59.1		04.4			
5	219	24.6	214 12.3	+6	24.8	207 44.7	+4	48.9	17 32.8	-7	35.9	314 01.3	-22	04.4			
6	234	27.1	229 13.6	+6	25.8	222 45.5	+4	49.7	32 35.3	-7	35.9	329 03.6	-22	04.4			
7	249	29.5	244 14.9		26.7	237 46.3		50.4	47 37.8		35.8	344 05.8		04.4			
8	264	32.0	259 16.2		27.7	252 47.0		51.2	62 40.4		35.8	359 08.1		04.4			
9	279	34.5	274 17.5		28.6	267 47.8		51.9	77 42.9		35.8	14 10.4		04.4			
10	294	36.9	289 18.8		29.6	282 48.6		52.7	92 45.4		35.7	29 12.6		04.4			
11	309	39.4	304 20.1	+6	30.6	297 49.4	+4	53.4	107 47.9	-7	35.7	44 14.9	-22	04.4			
12	324	41.9	319 21.4	+6	31.5	312 50.1	+4	54.2	122 50.4	-7	35.7	59 17.1	-22	04.4			
13	339	44.3	334 22.7		32.5	327 50.9		54.9	137 53.0		35.7	74 19.4		04.4			
14	354	46.8	349 24.0		33.4	342 51.7		55.7	152 55.5		35.6	89 21.6		04.4			
15	9	49.2	4 25.3		34.4	357 52.5		56.4	167 58.0		35.6	104 23.9		04.4			
16	24	51.7	19 26.6		35.4	12 53.2		57.2	183 00.5		35.6	119 26.1		04.4			
17	39	54.2	34 27.9	+6	36.3	27 54.0	+4	57.9	198 03.0	-7	35.5	134 28.4	-22	04.5			
18	54	56.6	49 29.2	+6	37.3	42 54.8	+4	58.7	213 05.6	-7	35.5	149 30.7	-22	04.5			
19	69	59.1	64 30.5		38.2	57 55.6	+4	59.4	228 08.1		35.4	164 32.9		04.5			
20	85	01.6	79 31.8		39.2	72 56.3	+5	00.2	243 10.6		35.4	179 35.2		04.5			
21	100	04.0	94 33.1		40.1	87 57.1		00.9	258 13.1		35.4	194 37.4		04.5			
22	115	06.5	109 34.5		41.1	102 57.9		01.7	273 15.7		35.3	209 39.7		04.5			
23	130	09.0	124 35.8		42.0	117 58.6		02.4	288 18.2		35.3	224 42.0		04.5			
24	145	11.4	139 37.1	+6	43.0	132 59.4	+5	03.2	303 20.7	-7	35.3	239 44.2	-22	04.5			
Dif	—		+13	+10		+8	+8		+25	0		+23					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 18 ^d 0 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 2 20 ^h : 55 ^h 0 PMG: 3 ^h 23 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	28.3	-12	41.1	310	40.2	-2 26.6	60 N	16 52	17 35	18 24	22 41	72	9 05	17
1	191	28.4		40.2	325	13.2 ¹⁴⁰	36.5 ⁹⁹	58	16 58	39	25	38 70		08 18	
2	206	28.4		39.3	339	46.3 ¹⁴¹	46.5 ¹⁰⁰	56	17 04	43	26	35 67		10 20	
3	221	28.4		38.5	354	19.3 ¹⁴⁰	-2 56.4 ⁹⁹	54	09	46	28	32 66		11 22	
4	236	28.5		37.6	8	52.4 ¹⁴¹	-3 06.3 ⁹⁹	52	14	49	29	30 64		13 23	
5	251	28.5	-12	36.8	23	25.4 ¹⁴⁰	-3 16.1 ⁹⁸	50	17 19	17 52	18 30	22 27	63	9 14	25
6	266	28.5	-12	35.9	37	58.5 ¹⁴¹	-3 26.0 ⁹⁹	45	17 28	17 58	18 33	22 22	60	9 17	29
7	281	28.6		35.0	52	31.7 ¹⁴²	35.8 ⁹⁸	40	36	18 04	35	18 57		20 31	
8	296	28.6		34.2	67	04.8 ¹⁴¹	45.6 ⁹⁸	35	43	09	38	15 54		22 33	
9	311	28.6		33.3	81	37.9 ¹⁴¹	-3 55.4 ⁹⁸	30	49	13	41	11 53		24 35	
10	326	28.6		32.5	96	11.1 ¹⁴²	-4 05.1 ⁹⁷	20	17 59	22	48	06 50		28 38	
11	341	28.7	-12	31.6	110	44.3 ¹⁴²	-4 14.8 ⁹⁷	10 N	18 09	18 30	18 55	22 01	47	9 31	41
12	356	28.7	-12	30.7	125	17.5 ¹⁴²	-4 24.5 ⁹⁷	0	18 17	18 39	19 03	21 57	44	9 34	44
13	11	28.8		29.9	139	50.7 ¹⁴²	34.2 ⁹⁷	10 S	26	48	13	53 41		37 47	
14	26	28.8		29.0	154	23.9 ¹⁴²	43.8 ⁹⁶	20	36	18 59	25	48 38		40 50	
15	41	28.8		28.1	168	57.1 ¹⁴²	-4 53.4 ⁹⁶	30	47	19 12	42	43 35		44 53	
16	56	28.9		27.3	183	30.4 ¹⁴³	-5 03.0 ⁹⁶	35	18 54	20	19 52	40 33		46 55	
17	71	28.9	-12	26.4	198	03.6 ¹⁴²	-5 12.5 ⁹⁵	40	19 01	19 30	20 04	21 36	31	9 48	58
18	86	28.9	-12	25.6	212	36.9 ¹⁴³	-5 22.0 ⁹⁵	45	19 10	19 41	20 20	21 33	28	9 51	60
19	101	29.0		24.7	227	10.2 ¹⁴³	31.5 ⁹⁵	50	20	19 56	40	28 25		54 64	
20	116	29.0		23.8	241	43.5 ¹⁴³	41.0 ⁹⁵	52	25	20 02	20 49	26 24		55 65	
21	131	29.0		23.0	256	16.7 ¹⁴²	50.4 ⁹⁴	54	31	10	21 01	24 22		57 67	
22	146	29.1		22.1	270	50.0 ¹⁴³	-5 59.8 ⁹⁴	56	37	19	14	21 21		9 59 68	
23	161	29.1		21.2	285	23.3 ¹⁴³	-6 09.1 ⁹³	58	43	28	29	18 19		10 01 70	
24	176	29.1	-12	20.4	299	56.7 ¹⁴⁴	-6 18.5 ⁹⁴	60 S	19 51	20 40	21 49	21 15	17	10 03	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 16 ^m 9		Mag: -4.8 PMG: 14 ^h 40 ^m		Mag: +1.2 PMG: 15 ^h 07 ^m		Mag: -2.3 PMG: 3 ^h 46 ^m		Mag: +0.5 PMG: 8 ^h 00 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	145	11.4	139	37.1	132	59.4	303	20.7	239	44.2
1	160	13.9	154	38.4	148	00.2	318	23.2	254	46.5
2	175	16.4	169	39.8	163	01.0	333	25.8	269	48.7
3	190	18.8	184	41.1	178	01.7	348	28.3	284	51.0
4	205	21.3	199	42.4	193	02.5	3	30.8	299	53.2
5	220	23.7	214	43.8	208	03.3	18	33.3	314	55.5
6	235	26.2	229	45.1	223	04.1	33	35.9	329	57.8
7	250	28.7	244	46.5	238	04.8	48	38.4	345	00.0
8	265	31.1	259	47.8	253	05.6	63	40.9	350	02.3
9	280	33.6	274	49.1	268	06.4	78	43.4	350	04.5
10	295	36.1	289	50.5	283	07.1	93	46.0	34.9	06.8
11	310	38.5	304	51.8	298	07.9	108	48.5	45	09.1
12	325	41.0	319	53.2	313	08.7	123	51.0	60	11.3
13	340	43.5	334	54.6	328	09.5	138	53.6	75	13.6
14	355	45.9	349	55.9	343	10.2	153	56.1	90	15.8
15	10	48.4	4	57.3	358	11.0	168	58.6	105	18.1
16	25	50.9	19	58.6	13	11.8	184	01.1	120	20.4
17	40	53.3	35	00.0	28	12.6	199	03.7	135	22.6
18	55	55.8	50	01.4	43	13.3	214	06.2	150	24.9
19	70	58.2	65	02.7	58	14.1	229	08.7	165	27.1
20	86	00.7	80	04.1	73	14.9	244	11.3	180	29.4
21	101	03.2	95	05.5	88	15.6	259	13.8	195	31.7
22	116	05.6	110	06.9	103	16.4	274	16.3	210	33.9
23	131	08.1	125	08.2	118	17.2	289	18.9	225	36.2
24	146	10.6	140	09.6	133	18.0	304	21.4	240	38.5
Dif	—		+14		+9		+25		+23	
							0		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2			Edad: 19 ^d 0	PHE { 4 ^h : 54:9 12 ^h : 54:7 20 ^h : 54:6												
	PMG: 12 ^h 14 ^m 0																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	29.1	-12	20.4	299	56.7	-6	18.5	60 N	6 03	6 51	7 35	23 53	70	9 22	18	
1	191	29.2		19.5	314	30.0 ¹⁴³	27.7	92	58	02	47	28	48	67	26	20	
2	206	29.2		18.6	329	03.3 ¹⁴³	37.0	93	56	01	44	23	42	66	30	22	
3	221	29.3		17.8	343	36.6 ¹⁴³	46.2	92	54	6 00	41	17	38	64	33	24	
4	236	29.3		16.9	358	10.0 ¹⁴⁴	-6	55.4	52	5 59	38	13	34	62	36	25	
5	251	29.3	-12	16.0	12	43.3 ¹⁴³	-7	04.5	50	5 57	6 35	7 08	23 30	61	9 39	27	
6	266	29.4	-12	15.2	27	16.6 ¹⁴³	-7	13.6	45	5 55	6 29	6 59	23 22	58	9 46	29	
7	281	29.4		14.3	41	50.0 ¹⁴⁴	22.7	91	40	52	24	51	15	56	51	32	
8	296	29.5		13.4	56	23.3 ¹⁴³	31.7	90	35	49	19	45	09	55	55	34	
9	311	29.5		12.6	70	56.7 ¹⁴⁴	40.7	90	30	46	14	39	23	04	53	9 59	36
10	326	29.5		11.7	85	30.0 ¹⁴³	49.7	90	20	40	6 06	29	22	56	49	10 06	39
11	341	29.6	-12	10.8	100	03.3 ¹⁴³	-7	58.6	10 N	5 33	5 58	6 19	22	48	47	10 12	42
12	356	29.6	-12	09.9	114	36.7 ¹⁴⁴	-8	07.5	0	5 25	5 49	6 11	22	41	44	10 18	44
13	11	29.7		09.1	129	10.0 ¹⁴³	16.3	88	10 S	15	40	6 02	34	42	24	47	
14	26	29.7		08.2	143	43.4 ¹⁴⁴	25.1	88	20	5 03	30	5 52	26	40	30	49	
15	41	29.7		07.3	158	16.7 ¹⁴³	33.8	87	30	4 47	16	41	18	36	37	53	
16	56	29.8		06.5	172	50.0 ¹⁴³	42.5	87	35	37	5 08	35	13	35	41	55	
17	71	29.8	-12	05.6	187	23.3 ¹⁴³	-8	51.2	40	4 24	4 59	5 27	22	07	33	10 46	56
18	86	29.9	-12	04.7	201	56.7 ¹⁴⁴	-8	59.8	45	4 09	4 47	5 19	22	01	30	10 51	59
19	101	29.9		03.8	216	30.0 ¹⁴³	-9	08.4	50	3 49	33	08	21	53	28	10 58	62
20	116	30.0		03.0	231	03.3 ¹⁴³	16.9	85	52	40	26	5 04	50	26	11 00	64	
21	131	30.0		02.1	245	36.6 ¹⁴³	25.4	85	54	28	19	4 58	46	25	04	65	
22	146	30.0		01.2	260	09.9 ¹⁴³	33.9	85	56	15	10	52	42	23	07	67	
23	161	30.1	-12	00.3	274	43.2 ¹⁴³	42.3	84	58	3 00	4 01	46	37	21	11	69	
24	176	30.1	-11	59.5	289	16.5 ¹⁴³	-9	50.6	60 S	2 40	3 49	4 38	21	32	19	11 16	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 13 ^m 0		Mag: -4.8 PMG: 14 ^h 38 ^m		Mag: +1.2 PMG: 15 ^h 06 ^m		Mag: -2.3 PMG: 3 ^h 42 ^m		Mag: +0.5 PMG: 7 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	146	10.6	140	09.6	133	18.0	124	51.8	240	38.5
1	161	13.0	155	11.0	148	18.7	319	23.9	255	40.7
2	176	15.5	170	12.4	163	19.5	334	26.5	270	43.0
3	191	18.0	185	13.8	178	20.3	349	29.0	285	45.2
4	206	20.4	200	15.2	193	21.1	4	31.5	300	47.5
5	221	22.9	215	16.6	208	21.8	19	34.1	315	49.8
6	236	25.3	230	18.0	223	22.6	34	36.6	330	52.0
7	251	27.8	245	19.4	238	23.4	49	39.1	345	54.3
8	266	30.3	260	20.8	253	24.1	64	41.7	0	56.6
9	281	32.7	275	22.2	268	24.9	79	44.2	15	58.8
10	296	35.2	290	23.6	283	25.7	94	46.7	31	01.1
11	311	37.7	305	25.0	298	26.5	109	49.3	46	03.3
12	326	40.1	320	26.4	313	27.2	124	51.8	61	05.6
13	341	42.6	335	27.8	328	28.0	139	54.3	76	07.9
14	356	45.1	350	29.2	343	28.8	154	56.9	91	10.1
15	11	47.5	5	30.7	358	29.6	169	59.4	106	12.4
16	26	50.0	20	32.1	13	30.3	185	01.9	121	14.7
17	41	52.5	35	33.5	28	31.1	200	04.5	136	16.9
18	56	54.9	50	34.9	43	31.9	215	07.0	151	19.2
19	71	57.4	65	36.4	58	32.6	230	09.6	166	21.4
20	86	59.8	80	37.8	73	33.4	245	12.1	181	23.7
21	102	02.3	95	39.2	88	34.2	260	14.6	196	26.0
22	117	04.8	110	40.7	103	35.0	275	17.2	211	28.2
23	132	07.2	125	42.1	118	35.7	290	19.7	226	30.5
24	147	09.7	140	43.5	133	36.5	305	22.2	241	32.8
Dif	—		+14	+9	+8	+7	+25	0	+23	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 20 ^d 0 PHE { 4 ^h : 54 ⁵ / ₅ 12 ^h : 54 ⁴ / ₄ 20 ^h : 54 ³ / ₃ SD: 14:9 PMG: 4 ^h 52 ^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	176	30.1	-11 59.5	289	16.5	-9 50.6		60 N	16 57	17 40	18 29	** ** *		9 40	20
1	191	30.2		303	49.8 ¹⁴³	-9 58.9 ⁸³		58	17 03		44	30	** ** *	46	23
2	206	30.2		318	23.0 ¹⁴²	-10 07.2 ⁸³		56	09		47	30	** ** *	52	24
3	221	30.3		332	56.3 ¹⁴³	15.4 ⁸²		54	13		50	31	** ** *	9 57	26
4	236	30.3		347	29.5 ¹⁴²	23.6 ⁸²		52	18		53	32	** ** *	10 01	28
5	251	30.4	-11 55.1	2	02.8 ¹⁴³	-10 31.7 ⁸¹		50	17 22	17 55	18 33	** ** *		10 06	29
6	266	30.4	-11 54.2	16	36.0 ¹⁴²	-10 39.7 ⁸⁰		45	17 31	18 01	18 35	** ** *		10 15	31
7	281	30.5		31	09.2 ¹⁴²	47.8 ⁸¹		40	38		06	38	** ** *	23	33
8	296	30.5		45	42.4 ¹⁴²	-10 55.7 ⁷⁹		35	45		10	40	** ** *	29	36
9	311	30.6		60	15.6 ¹⁴²	-11 03.6 ⁷⁹		30	17 50	15	43	23 57 52		35	37
10	326	30.6		74	48.8 ¹⁴²	11.5 ⁷⁹		20	18 00	23	49	45 49		45	40
11	341	30.6	-11 49.8	89	21.9 ¹⁴¹	-11 19.3 ⁷⁸		10 N	18 09	18 30	18 55	23 35 47		10 54	42
12	356	30.7	-11 48.9	103	55.1 ¹⁴²	-11 27.1 ⁷⁸		0	18 17	18 38	19 03	23 25 45		11 02	45
13	11	30.7		118	28.2 ¹⁴¹	34.8 ⁷⁷		10 S	26		47	12	16 43	11	46
14	26	30.8		133	01.3 ¹⁴¹	42.5 ⁷⁷		20	35	18 58	24	23 06 41		19	50
15	41	30.8		147	34.4 ¹⁴¹	50.1 ⁷⁶		30	45	19 10	39	22 54 39		30	52
16	56	30.9		162	07.5 ¹⁴¹	-11 57.6 ⁷⁵		35	52	18	19 49	48 36		36	53
17	71	30.9	-11 44.5	176	40.6 ¹⁴¹	-12 05.1 ⁷⁵		40	18 59	19 27	20 01	22 40 35		11 42	56
18	86	31.0	-11 43.7	191	13.6 ¹⁴⁰	-12 12.6 ⁷⁵		45	19 07	19 38	20 16	22 31 34		11 50	58
19	101	31.0		205	46.7 ¹⁴¹	20.0 ⁷⁴		50	17		51	35	21 31	12 00	60
20	116	31.1		220	19.7 ¹⁴⁰	27.3 ⁷³		52	21	19 58	44	16 30		04	62
21	131	31.1		234	52.7 ¹⁴⁰	34.6 ⁷³		54	26	20 05	20 55	11 28		09	63
22	146	31.2		249	25.7 ¹⁴⁰	41.8 ⁷²		56	32	13	21 07	22 05 27		14	65
23	161	31.2		263	58.6 ¹³⁹	49.0 ⁷²		58	38	23	22	21 58 25		20	67
24	176	31.3	-11 38.4	278	31.6 ¹⁴⁰	-12 56.1 ⁷¹		60 S	19 45	20 33	21 40	21 51 23		12 27	69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 09 ^m 0		Mag: -4.8 PMG: 14 ^h 36 ^m		Mag: +1.2 PMG: 15 ^h 05 ^m		Mag: -2.3 PMG: 3 ^h 38 ^m		Mag: +0.5 PMG: 7 ^h 53 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	147	09.7	140	43.5	+7 27.6	133	36.5	+5 39.0	305	22.2	-7 33.5	241	32.8	-22 04.7
1	162	12.2	155	45.0	28.5	148	37.3	39.7	320	24.8	33.4	256	35.0	04.7
2	177	14.6	170	46.4	29.4	163	38.1	40.5	335	27.3	33.4	271	37.3	04.7
3	192	17.1	185	47.9	30.3	178	38.8	41.2	350	29.9	33.4	286	39.6	04.7
4	207	19.6	200	49.3	31.2	193	39.6	42.0	5	32.4	33.3	301	41.8	04.7
5	222	22.0	215	50.8	+7 32.1	208	40.4	+5 42.7	20	34.9	-7 33.3	316	44.1	-22 04.7
6	237	24.5	230	52.2	+7 33.0	223	41.1	+5 43.5	35	37.5	-7 33.2	331	46.4	-22 04.7
7	252	26.9	245	53.7	33.9	238	41.9	44.2	50	40.0	33.2	346	48.6	04.7
8	267	29.4	260	55.2	34.8	253	42.7	44.9	65	42.6	33.2	1	50.9	04.7
9	282	31.9	275	56.6	35.7	268	43.5	45.7	80	45.1	33.1	16	53.2	04.7
10	297	34.3	290	58.1	36.6	283	44.2	46.4	95	47.7	33.1	31	55.4	04.7
11	312	36.8	305	59.6	+7 37.5	298	45.0	+5 47.2	110	50.2	-7 33.0	46	57.7	-22 04.7
12	327	39.3	321	01.0	+7 38.4	313	45.8	+5 47.9	125	52.7	-7 33.0	62	00.0	-22 04.7
13	342	41.7	336	02.5	39.2	328	46.5	48.7	140	55.3	33.0	77	02.2	04.7
14	357	44.2	351	04.0	40.1	343	47.3	49.4	155	57.8	32.9	92	04.5	04.7
15	12	46.7	6	05.5	41.0	358	48.1	50.1	171	00.4	32.9	107	06.8	04.7
16	27	49.1	21	06.9	41.9	13	48.9	50.9	186	02.9	32.8	122	09.0	04.7
17	42	51.6	36	08.4	+7 42.8	28	49.6	+5 51.6	201	05.5	-7 32.8	137	11.3	-22 04.7
18	57	54.1	51	09.9	+7 43.7	43	50.4	+5 52.4	216	08.0	-7 32.7	152	13.6	-22 04.7
19	72	56.5	66	11.4	44.6	58	51.2	53.1	231	10.6	32.7	167	15.8	04.7
20	87	59.0	81	12.9	45.5	73	51.9	53.9	246	13.1	32.7	182	18.1	04.7
21	103	01.4	96	14.4	46.4	88	52.7	54.6	261	15.6	32.6	197	20.4	04.7
22	118	03.9	111	15.9	47.2	103	53.5	55.3	276	18.2	32.6	212	22.6	04.7
23	133	06.4	126	17.4	48.1	118	54.3	56.1	291	20.7	32.5	227	24.9	04.7
24	148	08.8	141	18.9	+7 49.0	133	55.0	+5 56.8	306	23.3	-7 32.5	242	27.2	-22 04.8
Dif	—		+15	+9		+8	+7		+25	0		+23		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 9				Edad: 21 ^d 0 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 5 ^h 36 ^m R°: 45 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	31.3	-11	38.4	278	31.6	-12	56.1	60 N	5	58	6	46	7	29	1	03
1	191	31.3		37.5	293	04.5 ¹³⁹	-13	03.2	58	57	43	23		0	55	66	09
2	206	31.4		36.6	307	37.4 ¹³⁹		10.2	56	56	40	18		48	64	16	29
3	221	31.5		35.7	322	10.3 ¹³⁹		17.1	54	56	37	13		42	62	23	30
4	236	31.5		34.8	336	43.2 ¹³⁹		24.0	52	55	34	09		36	61	29	32
5	251	31.6	-11	34.0	351	16.0 ¹³⁸	-13	30.8	50	5	54	6	32	7	05	0	31
6	266	31.6	-11	33.1	5	48.8 ¹³⁸	-13	37.6	45	5	52	6	26	6	56	0	20
7	281	31.7		32.2	20	21.6 ¹³⁸		44.3	40	50	21	49		11	55	10	46
8	296	31.7		31.3	34	54.4 ¹³⁸		50.9	35	47	17	43		0	04	53	11
9	311	31.8		30.4	49	27.1 ¹³⁷	-13	57.5	30	45	13	37		**	**	**	12
10	326	31.8		29.5	63	59.8 ¹³⁷	-14	04.0	20	39	6	05	27	**	**	**	25
11	341	31.9	-11	28.7	78	32.5 ¹³⁷	-14	10.5	10 N	5	33	5	57	6	19	**	**
12	356	31.9	-11	27.8	93	05.2 ¹³⁷	-14	16.9	0	5	25	5	49	6	10	**	**
13	11	32.0		26.9	107	37.9 ¹³⁷		23.2	10 S	16	41	6	02	23	59	45	11
14	26	32.1		26.0	122	10.5 ¹³⁶		29.5	20	5	04	31	5	53	47	43	12
15	41	32.1		25.1	136	43.1 ¹³⁶		35.7	30	4	49	18	43	33	41	22	51
16	56	32.2		24.2	151	15.7 ¹³⁶		41.8	35	39	10	37		24	40	29	53
17	71	32.2	-11	23.3	165	48.2 ¹³⁵	-14	47.9	40	4	27	5	01	5	30	23	15
18	86	32.3	-11	22.4	180	20.7 ¹³⁵	-14	53.9	45	4	13	4	51	5	22	23	05
19	101	32.3		21.6	194	53.2 ¹³⁵	-14	59.9	50	3	54	37	12	22	52	35	13
20	116	32.4		20.7	209	25.7 ¹³⁵	-15	05.8	59	52	44	31	07	46	34	06	59
21	131	32.4		19.8	223	58.2 ¹³⁵		11.6	58	54	34	23	5	02	39	33	12
22	146	32.5		18.9	238	30.6 ¹³⁴		17.3	57	56	21	15	4	57	32	31	19
23	161	32.6		18.0	253	03.0 ¹³⁴		23.0	57	58	3	07	4	06	51	23	31
24	176	32.6	-11	17.1	267	35.3 ¹³³	-15	28.7	57	60 S	2	49	3	55	4	43	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 05 ^m 1		Mag: -4.8 PMG: 14 ^h 33 ^m		Mag: +1.2 PMG: 15 ^h 04 ^m		Mag: -2.3 PMG: 3 ^h 34 ^m		Mag: +0.5 PMG: 7 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	148	08.8	141	18.9	+7	49.0	133	55.0	+5	56.8
1	163	11.3	156	20.4		49.9	148	55.8		57.6
2	178	13.8	171	21.9		50.8	163	56.6		58.3
3	193	16.2	186	23.4		51.7	178	57.4		59.0
4	208	18.7	201	24.9		52.5	193	58.1	+5	59.8
5	223	21.2	216	26.4	+7	53.4	208	58.9	+6	00.5
6	238	23.6	231	28.0	+7	54.3	223	59.7	+6	01.3
7	253	26.1	246	29.5		55.2	239	00.4		02.0
8	268	28.6	261	31.0		56.0	254	01.2		02.7
9	283	31.0	276	32.5		56.9	269	02.0		03.5
10	298	33.5	291	34.1		57.8	284	02.8		04.2
11	313	35.9	306	35.6	+7	58.7	299	03.5	+6	05.0
12	328	38.4	321	37.1	+7	59.5	314	04.3	+6	05.7
13	343	40.9	336	38.7	+8	00.4	329	05.1		06.4
14	358	43.3	351	40.2		01.3	344	05.8		07.2
15	13	45.8	6	41.7		02.1	359	06.6		07.9
16	28	48.3	21	43.3		03.0	14	07.4		08.7
17	43	50.7	36	44.8	+8	03.9	29	08.2	+6	09.4
18	58	53.2	51	46.4	+8	04.7	44	08.9	+6	10.1
19	73	55.7	66	47.9		05.6	59	09.7		10.9
20	88	58.1	81	49.5		06.5	74	10.5		11.6
21	104	00.6	96	51.0		07.3	89	11.2		12.4
22	119	03.0	111	52.6		08.2	104	12.0		13.1
23	134	05.5	126	54.2		09.0	119	12.8		13.8
24	149	08.0	141	55.7	+8	09.9	134	13.6	+6	14.6
Dif	—		+15 +9		+8 +7		+26 0		+23 0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2				Edad: 22 ^d 0 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3												
	PMG: 12 ^h 13 ^m 8				SD: 14'8												
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	176	32.6	-11	17.1	267	35.3	-15	28.7	60 N	17 02	17 45	18 34	2 11 64		10 26 31		
1	191	32.7		16.2	282	07.6 ¹³³		34.2 ⁵⁵	58	08	48	34	2 01 62		36 33		
2	206	32.7		15.3	296	40.0 ¹³⁴		39.7 ⁵⁵	56	13	51	34	1 52 61		45 35		
3	221	32.8		14.4	311	12.2 ¹³²		45.1 ⁵⁴	54	17	54	35	44 60		10 53 36		
4	236	32.9		13.5	325	44.5 ¹³³		50.4 ⁵³	52	22	56	36	37 58		11 01 36		
5	251	32.9	-11	12.7	340	16.7 ¹³²	-15	55.7 ⁵³	50	17 25	17 59	18 36	1 31 57		11 07 38		
6	266	33.0	-11	11.8	354	48.9 ¹³²	-16	00.9 ⁵²	45	17 34	18 04	18 38	1 17 56		11 21 40		
7	281	33.0		10.9	9	21.0 ¹³¹		06.1 ⁵⁰	40	41	08	40	1 06 54		33 41		
8	296	33.1		10.0	23	53.2 ¹³²		11.1 ⁵⁰	35	47	12	42	0 57 52		43 42		
9	311	33.2		09.1	38	25.3 ¹³¹		16.1 ⁵⁰	30	17 52	16	44	49 51		11 52 43		
10	326	33.2		08.2	52	57.3 ¹³⁰		21.1 ⁵⁰	20	18 01	23	49	34 50		12 07 44		
11	341	33.3	-11	07.3	67	29.4 ¹³¹	-16	25.9 ⁴⁸	10 N	18 09	18 31	18 55	0 22 48		12 20 46		
12	356	33.3	-11	06.4	82	01.4 ¹³⁰	-16	30.7 ⁴⁷	0	18 17	18 38	19 03	0 10 47		12 33 46		
13	11	33.4		05.5	96	33.3 ¹²⁹		35.4 ⁴⁶	10 S	25	46	11	** ** *		45 48		
14	26	33.5		04.6	111	05.3 ¹³⁰		40.0 ⁴⁶	20	34	18 56	23	** ** *		12 58 50		
15	41	33.5		03.7	125	37.2 ¹²⁹		44.6 ⁴⁶	30	43	19 08	37	** ** *		13 13 51		
16	56	33.6		02.8	140	09.1 ¹²⁹		49.1 ⁴⁵	35	49	15	47	** ** *		22 52		
17	71	33.7	-11	01.9	154	40.9 ¹²⁸	-16	53.5 ⁴⁴	40	18 56	19 24	19 58	23 54 43		13 32 53		
18	86	33.7	-11	01.0	169	12.7 ¹²⁸	-16	57.8 ⁴³	45	19 03	19 34	20 12	23 42 42		13 44 54		
19	101	33.8	-11	00.1	183	44.5 ¹²⁸	-17	02.1 ⁴²	50	13	47	30	27 40		13 59 55		
20	116	33.9	-10	59.2	198	16.3 ¹²⁸		06.3 ⁴¹	52	17	19 53	39	20 40		14 05 57		
21	131	33.9		58.3	212	48.0 ¹²⁷		10.4 ⁴⁰	54	22	20 00	20 49	12 39		13 57		
22	146	34.0		57.4	227	19.7 ¹²⁷		14.4 ⁴⁰	56	27	08	21 01	23 03 39		21 59		
23	161	34.0		56.6	241	51.4 ¹²⁷		18.4 ³⁹	58	33	17	15	22 54 37		31 59		
24	176	34.1	-10	55.7	256	23.0 ¹²⁶	-17	22.3	60 S	19 40	20 27	21 31	22 42 36		14 41 61		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 14 ^h 01 ^m 2		Mag: -4.8 PMG: 14 ^h 31 ^m		Mag: +1.2 PMG: 15 ^h 02 ^m		Mag: -2.3 PMG: 3 ^h 30 ^m		Mag: +0.5 PMG: 7 ^h 45 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	149	08.0	141	55.7	+8	09.9	134	13.6	+6	14.6						
1	164	10.4	156	57.3		10.8	149	14.3		15.3						
2	179	12.9	171	58.9		11.6	164	15.1		16.0						
3	194	15.4	187	00.4		12.5	179	15.9		16.8						
4	209	17.8	202	02.0		13.3	194	16.6		17.5						
5	224	20.3	217	03.6	+8	14.2	209	17.4	+6	18.3						
6	239	22.8	232	05.2	+8	15.0	224	18.2	+6	19.0						
7	254	25.2	247	06.8		15.9	239	19.0		19.7						
8	269	27.7	262	08.3		16.7	254	19.7		20.5						
9	284	30.2	277	09.9		17.6	269	20.5		21.2						
10	299	32.6	292	11.5		18.4	284	21.3		21.9						
11	314	35.1	307	13.1	+8	19.3	299	22.0	+6	22.7						
12	329	37.5	322	14.7	+8	20.1	314	22.8	+6	23.4						
13	344	40.0	337	16.3		20.9	329	23.6		24.2						
14	359	42.5	352	17.9		21.8	344	24.3		24.9						
15	14	44.9	7	19.5		22.6	359	25.1		25.6						
16	29	47.4	22	21.1		23.5	14	25.9		26.4						
17	44	49.9	37	22.8	+8	24.3	29	26.7	+6	27.1						
18	59	52.3	52	24.4	+8	25.2	44	27.4	+6	27.8						
19	74	54.8	67	26.0		26.0	59	28.2		28.6						
20	89	57.3	82	27.6		26.8	74	29.0		29.3						
21	104	59.7	97	29.2		27.7	89	29.7		30.0						
22	120	02.2	112	30.9		28.5	104	30.5		30.8						
23	135	04.7	127	32.5		29.3	119	31.3		31.5						
24	150	07.1	142	34.1	+8	30.2	134	32.1	+6	32.2						
Dif	—		+16		+8		+8		+7		+26		0	+23		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 7			Edad: 23 ^d 0 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 SD: 14'8 PMG: 7 ^h 08 ^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	34.1	-10	55.7	256	23.0	-17	22.3	60 N	5 53	6 41	7 24	3 15	58	10 57	41
1	191	34.2		54.8	270	54.6 ¹²⁶		26.1 ³⁸	58	52	38	18	3 03	57	11 09	42
2	206	34.2		53.9	285	26.2 ¹²⁶		29.8 ³⁷	56	52	35	13	2 53	56	20	42
3	221	34.3		53.0	299	57.7 ¹²⁵		33.4 ³⁶	54	52	33	09	44	55	29	43
4	236	34.4		52.1	314	29.2 ¹²⁵		37.0 ³⁶	52	51	30	05	35	55	37	44
5	251	34.4	-10	51.2	329	00.7 ¹²⁵	-17	40.5 ³⁵	50	5 50	6 28	7 01	2 28	54	11 45	43
6	266	34.5	-10	50.3	343	32.1 ¹²⁴	-17	43.9 ³⁴	45	5 49	6 23	6 53	2 13	53	12 01	44
7	281	34.6		49.4	358	03.5 ¹²⁴		47.2 ³³	40	47	19	46	2 00	52	14	45
8	296	34.6		48.5	12	34.9 ¹²⁴		50.5 ³³	35	45	15	40	1 49	52	25	46
9	311	34.7		47.6	27	06.2 ¹²³		53.6 ³¹	30	43	11	35	40	51	35	46
10	326	34.8		46.7	41	37.5 ¹²³		56.7 ³¹	20	38	6 04	26	24	49	12 51	47
11	341	34.9	-10	45.8	56	08.8 ¹²³	-17	59.7 ³⁰	10 N	5 32	5 57	6 18	1 10	48	13 06	47
12	356	34.9	-10	44.9	70	40.0 ¹²²	-18	02.6 ²⁹	0	5 25	5 49	6 10	0 57	47	13 19	49
13	11	35.0		44.0	85	11.2 ¹²²		05.5 ²⁹	10 S	16	41	6 03	44	46	33	49
14	26	35.1		43.1	99	42.4 ¹²²		08.2 ²⁷	20	5 05	32	5 54	30	45	13 48	49
15	41	35.1		42.2	114	13.6 ¹²²		10.9 ²⁷	30	4 50	20	44	14	44	14 04	51
16	56	35.2		41.3	128	44.7 ¹²¹		13.5 ²⁶	35	41	12	39	0 04	44	14	51
17	71	35.3	-10	40.4	143	15.8 ¹²¹	-18	16.0 ²⁵	40	4 30	5 04	5 32	** *	** *	14 25	51
18	86	35.3	-10	39.5	157	46.8 ¹²⁰	-18	18.4 ²⁴	45	4 16	4 54	5 25	** *	** *	14 38	52
19	101	35.4		38.6	172	17.8 ¹²⁰		20.8 ²⁴	50	3 58	41	15	** *	** *	14 54	53
20	116	35.5		37.6	186	48.8 ¹²⁰		23.0 ²²	52	49	35	11	** *	** *	15 02	52
21	131	35.5		36.7	201	19.8 ¹²⁰		25.2 ²²	54	39	28	07	23	51	47	10 53
22	146	35.6		35.8	215	50.7 ¹¹⁹		27.3 ²¹	56	27	20	5 01	42	46	20	53
23	161	35.7		34.9	230	21.6 ¹¹⁹		29.3 ²⁰	58	3 14	12	4 55	31	46	30	54
24	176	35.8	-10	34.0	244	52.5 ¹¹⁹	-18	31.2 ¹⁹	60 S	2 57	4 02	4 49	23	18	46	15 42 55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 57 ^m 2		Mag: -4.8 PMG: 14 ^h 28 ^m		Mag: +1.2 PMG: 15 ^h 01 ^m		Mag: -2.3 PMG: 3 ^h 26 ^m		Mag: +0.5 PMG: 7 ^h 42 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	150	07.1	142	34.1	134	32.1	308	25.9	244	16.2
1	165	09.6	157	35.7	149	32.8	323	28.4	259	18.5
2	180	12.0	172	37.4	164	33.6	338	31.0	274	20.8
3	195	14.5	187	39.0	179	34.4	353	33.5	289	23.1
4	210	17.0	202	40.7	194	35.1	8	36.1	304	25.3
5	225	19.4	217	42.3	209	35.9	23	38.7	319	27.6
6	240	21.9	232	44.0	224	36.7	38	41.2	334	29.9
7	255	24.4	247	45.6	239	37.4	53	43.8	349	32.2
8	270	26.8	262	47.3	254	38.2	68	46.4	4	34.4
9	285	29.3	277	48.9	269	39.0	83	48.9	19	36.7
10	300	31.8	292	50.6	284	39.8	98	51.5	34	39.0
11	315	34.2	307	52.2	299	40.5	113	54.1	49	41.3
12	330	36.7	322	53.9	314	41.3	128	56.6	64	43.5
13	345	39.1	337	55.6	329	42.1	143	59.2	79	45.8
14	0	41.6	352	57.2	344	42.8	159	01.7	94	48.1
15	15	44.1	7	58.9	359	43.6	174	04.3	109	50.4
16	30	46.5	23	00.6	43.3	14 44.4	189	06.9	124	52.7
17	45	49.0	38	02.3	44.1	29 45.1	204	09.4	139	54.9
18	60	51.5	53	03.9	44.9	44 45.9	219	12.0	154	57.2
19	75	53.9	68	05.6	45.7	59 46.7	234	14.6	169	59.5
20	90	56.4	83	07.3	46.6	74 47.5	249	17.1	185	01.8
21	105	58.9	98	09.0	47.4	89 48.2	264	19.7	200	04.0
22	121	01.3	113	10.7	48.2	104 49.0	279	22.3	215	06.3
23	136	03.8	128	12.4	49.0	119 49.8	294	24.8	230	08.6
24	151	06.3	143	14.1	49.8	134 50.5	309	27.4	245	10.9
Dif	—		+17		+8	+8	+7	+26	0	+23

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 24 ^d 0 PHE { 4 ^h : 54:7 12 ^h : 54:8 20 ^h : 55:0											
	PMG: 12 ^h 13 ^m 6		SD: 14:9 PMG: 7 ^h 56 ^m R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	35.8	-10	34.0	244	52.5	-18 31.2	60 N	17 07	17 50	18 38	4 13 50	11 38 50	
1	191	35.8		33.1	259	23.3 ¹¹⁸	33.0 ¹⁸	58	13	53	38	4 00 50	11 51 50	
2	206	35.9		32.2	273	54.1 ¹¹⁸	34.8 ¹⁸	56	17	55	39	3 49 50	12 02 50	
3	221	36.0		31.3	288	24.9 ¹¹⁸	36.4 ¹⁶	54	21	17 58	39	39 50	12 50	
4	236	36.1		30.4	302	55.6 ¹¹⁷	38.0 ¹⁶	52	25	18 00	39	30 51	21 50	
5	251	36.1	-10	29.5	317	26.3 ¹¹⁷	-18 39.5 ¹⁵	50	17 29	18 02	18 39	3 22 51	12 28 51	
6	266	36.2	-10	28.6	331	57.0 ¹¹⁷	-18 40.9 ¹⁴	45	17 37	18 06	18 40	3 06 50	12 45 50	
7	281	36.3		27.7	346	27.6 ¹¹⁶	42.2 ¹³	40	43	10	42	2 52 50	12 59 50	
8	296	36.3		26.8	0	58.2 ¹¹⁶	43.4 ¹²	35	48	14	44	41 49	13 11 50	
9	311	36.4		25.9	15	28.8 ¹¹⁶	44.5 ¹¹	30	17 53	18	46	31 49	21 50	
10	326	36.5		25.0	29	59.4 ¹¹⁶	45.5 ¹⁰	20	18 02	24	50	2 13 50	38 50	
11	341	36.6	-10	24.1	44	29.9 ¹¹⁵	-18 46.5 ¹⁰	10 N	18 10	18 31	18 56	1 58 49	13 53 50	
12	356	36.6	-10	23.2	59	00.4 ¹¹⁵	-18 47.3 ⁸	0	18 17	18 38	19 02	1 44 49	14 08 49	
13	11	36.7		22.3	73	30.9 ¹¹⁵	48.1 ⁸	10 S	24	46	11	30 49	22 49	
14	26	36.8		21.3	88	01.4 ¹¹⁵	48.8 ⁷	20	32	18 55	21	1 15 49	37 49	
15	41	36.9		20.4	102	31.8 ¹¹⁴	49.4 ⁶	30	42	19 06	35	0 58 48	14 55 48	
16	56	37.0		19.5	117	02.2 ¹¹⁴	49.9 ⁵	35	47	13	44	48 48	15 05 48	
17	71	37.0	-10	18.6	131	32.5 ¹¹³	-18 50.3 ⁴	40	18 53	19 21	19 55	0 37 48	15 16 49	
18	86	37.1	-10	17.7	146	02.9 ¹¹⁴	-18 50.6 ³	45	19 00	19 31	20 08	0 24 47	15 30 48	
19	101	37.2		16.8	160	33.2 ¹¹³	50.8 ²	50	09	43	25	07 47	47 47	
20	116	37.3		15.9	175	03.4 ¹¹²	50.9 ¹	52	13	49	34	0 00 46	15 54 48	
21	131	37.3		15.0	189	33.7 ¹¹³	50.9 ⁰	54	17	19 55	43	** ** *	16 03 48	
22	146	37.4		14.1	204	03.9 ¹¹²	50.9 ⁰	56	22	20 03	20 54	** ** *	13 47	
23	161	37.5		13.2	218	34.1 ¹¹²	50.7 ²	58	28	11	21 07	** ** *	24 47	
24	176	37.6	-10	12.2	233	04.3 ¹¹²	-18 50.5 ²	60 S	19 34	20 20	21 23	** ** *	16 37 46	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 53 ^m 3		Mag: -4.8 PMG: 14 ^h 25 ^m		Mag: +1.3 PMG: 15 ^h 00 ^m		Mag: -2.3 PMG: 3 ^h 22 ^m		Mag: +0.5 PMG: 7 ^h 38 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	151	06.3	143	14.1	134	50.5	309	27.4	245	10.9				
1	166	08.7	158	15.8	149	51.3	324	30.0	260	13.2				
2	181	11.2	173	17.5	164	52.1	339	32.6	275	15.4				
3	196	13.6	188	19.2	179	52.8	354	35.1	290	17.7				
4	211	16.1	203	20.9	194	53.6	9	37.7	305	20.0				
5	226	18.6	218	22.6	209	54.4	24	40.3	320	22.3				
6	241	21.0	233	24.3	224	55.2	39	42.8	335	24.6				
7	256	23.5	248	26.1	239	55.9	54	45.4	350	26.8				
8	271	26.0	263	27.8	254	56.7	69	48.0	5	29.1				
9	286	28.4	278	29.5	269	57.5	84	50.5	20	31.4				
10	301	30.9	293	31.2	284	58.2	99	53.1	35	33.7				
11	316	33.4	308	33.0	299	59.0	114	55.7	50	36.0				
12	331	35.8	323	34.7	314	59.8	129	58.3	65	38.2				
13	346	38.3	338	36.4	330	00.5	145	00.8	80	40.5				
14	1	40.8	353	38.2	345	01.3	160	03.4	95	42.8				
15	16	43.2	8	39.9	0	02.1	175	06.0	110	45.1				
16	31	45.7	23	41.7	15	02.8	190	08.5	125	47.4				
17	46	48.1	38	43.4	30	03.6	205	11.1	140	49.6				
18	61	50.6	53	45.2	45	04.4	220	13.7	155	51.9				
19	76	53.1	68	46.9	60	05.2	235	16.3	170	54.2				
20	91	55.5	83	48.7	75	05.9	250	18.8	185	56.5				
21	106	58.0	98	50.4	90	06.7	265	21.4	200	58.8				
22	122	00.5	113	52.2	105	07.5	280	24.0	216	01.1				
23	137	02.9	128	54.0	120	08.2	295	26.6	231	03.3				
24	152	05.4	143	55.7	135	09.0	310	29.1	246	05.6				
Dif	—		+17		+8		+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 4			Edad: 25 ^d 0 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5 SD: 15'0 PMG: 8 ^h 45 ^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	37.6	-10	12.2	233	04.3	-18	50.5	3	60 N	5	47	6	36	7	18
1	191	37.7		11.3	247	34.5 ¹¹²		50.2	5	58	48		33	13	4	50
2	206	37.7		10.4	262	04.6 ¹¹¹		49.7	5	56	47		31	08	39	44
3	221	37.8		09.5	276	34.7 ¹¹¹		49.2	5	54	47		28	04	29	45
4	236	37.9		08.6	291	04.8 ¹¹¹		48.6	6	52	47		26	7	01	21
5	251	38.0	-10	07.7	305	34.8 ¹¹⁰	-18	47.9	7	50	5	47	6	24	6	57
6	266	38.0	-10	06.8	320	04.8 ¹¹⁰	-18	47.1	8	45	5	46	6	20	6	50
7	281	38.1		05.9	334	34.9 ¹¹¹		46.2	9	40	45		16	43	42	47
8	296	38.2		04.9	349	04.8 ¹⁰⁹		45.2	10	35	43		12	38	30	48
9	311	38.3		04.0	3	34.8 ¹¹⁰	3	44.1	11	30	41		09	33	20	48
10	326	38.4		03.1	18	04.7 ¹⁰⁹		42.9	12	20	37	6	02	25	3	03
11	341	38.5	-10	02.2	32	34.7 ¹¹⁰	-18	41.6	13	10 N	5	31	5	56	6	17
12	356	38.5	-10	01.3	47	04.6 ¹⁰⁹	-18	40.3	13	0	5	25	5	49	6	10
13	11	38.6	-10	00.4	61	34.4 ¹⁰⁸		38.8	15	10 S	17		41	6	03	19
14	26	38.7	-9	59.5	76	04.3 ¹⁰⁹		37.2	16	20	5	06	32	5	55	2
15	41	38.8		58.5	90	34.1 ¹⁰⁸		35.6	16	30	4	52	21	46	1	46
16	56	38.9		57.6	105	03.9 ¹⁰⁸		33.8	18	35	43		14	41	36	52
17	71	38.9	-9	56.7	119	33.7 ¹⁰⁸	-18	32.0	18	40	4	33	5	06	5	35
18	86	39.0	-9	55.8	134	03.5 ¹⁰⁸	-18	30.1	19	45	4	19	4	57	5	27
19	101	39.1		54.9	148	33.3 ¹⁰⁸		28.0	21	50	4	02	45	19	1	11
20	116	39.2		54.0	163	03.0 ¹⁰⁷		25.9	21	52	3	54	39	15	0	54
21	131	39.3		53.1	177	32.7 ¹⁰⁷		23.7	22	54	44		32	11	46	55
22	146	39.4		52.1	192	02.4 ¹⁰⁷		21.3	24	56	33		25	06	38	54
23	161	39.4		51.2	206	32.1 ¹⁰⁷		18.9	24	58	20		17	5	28	55
24	176	39.5	-9	50.3	221	01.8 ¹⁰⁷	-18	16.4	25	60 S	3	05	4	08	17	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 49 ^m 4		Mag: -4.8 PMG: 14 ^h 23 ^m		Mag: +1.3 PMG: 14 ^h 59 ^m		Mag: -2.3 PMG: 3 ^h 17 ^m		Mag: +0.5 PMG: 7 ^h 34 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	152	05.4	143	55.7	135	09.0	310	29.1	246	05.6
1	167	07.9	158	57.5	150	09.8	325	31.7	261	07.9
2	182	10.3	173	59.3	165	10.5	340	34.3	276	10.2
3	197	12.8	189	01.1	180	11.3	355	36.9	291	12.5
4	212	15.3	204	02.8	195	12.1	10	39.4	306	14.7
5	227	17.7	219	04.6	210	12.8	25	42.0	321	17.0
6	242	20.2	234	06.4	225	13.6	40	44.6	336	19.3
7	257	22.6	249	08.2	240	14.4	55	47.2	351	21.6
8	272	25.1	264	10.0	255	15.2	70	49.8	6	23.9
9	287	27.6	279	11.8	270	15.9	85	52.3	21	26.2
10	302	30.0	294	13.6	285	16.7	100	54.9	36	28.4
11	317	32.5	309	15.4	300	17.5	115	57.5	51	30.7
12	332	35.0	324	17.2	315	18.2	131	00.1	66	33.0
13	347	37.4	339	19.0	330	19.0	146	02.6	81	35.3
14	2	39.9	354	20.8	345	19.8	161	05.2	96	37.6
15	17	42.4	9	22.6	0	20.5	176	07.8	111	39.9
16	32	44.8	24	24.4	15	21.3	191	10.4	126	42.2
17	47	47.3	39	26.3	30	22.1	206	13.0	141	44.4
18	62	49.7	54	28.1	45	22.8	221	15.5	156	46.7
19	77	52.2	69	29.9	60	23.6	236	18.1	171	49.0
20	92	54.7	84	31.7	75	24.4	251	20.7	186	51.3
21	107	57.1	99	33.6	90	25.1	266	23.3	201	53.6
22	122	59.6	114	35.4	105	25.9	281	25.9	216	55.9
23	138	02.1	129	37.2	120	26.7	296	28.4	231	58.2
24	153	04.5	144	39.1	135	27.4	311	31.0	247	00.4
Dif	—		+18	+8	+8	+7	+26	+1	+23	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16:2		Edad: 26 ^d 0 PHE { 4 ^h : 55:7 12 ^h : 55:9 20 ^h : 56:1																
	PMG: 12 ^h 13 ^m 3		SD: 15:1 PMG: 9 ^h 35 ^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	176	39.5	-9	50.3	221	01.8	-18 16.4	60 N	17 12	17 55	18 43	5 46 34	13 29 70						
1	191	39.6		49.4	235	31.4 ¹⁰⁶	13.8 26	58	17	57	43	34 36	41 68						
2	206	39.7		48.5	250	01.1 ¹⁰⁷	11.1 27	56	22	17 59	43	23 38	13 51 67						
3	221	39.8		47.5	264	30.7 ¹⁰⁶	08.3 28	54	25	18 01	42	14 38	14 00 66						
4	236	39.9		46.6	279	00.3 ¹⁰⁶	05.4 29	52	29	03	42	5 06 39	08 64						
5	251	40.0	-9	45.7	293	29.9 ¹⁰⁶	-18 02.4 30	50	17 32	18 05	18 43	4 58 41	14 16 63						
6	266	40.0	-9	44.8	307	59.4 ¹⁰⁵	-17 59.3 31	45	17 39	18 09	18 43	4 42 43	14 31 61						
7	281	40.1		43.9	322	29.0 ¹⁰⁶	56.1 32	40	45	13	44	29 44	44 59						
8	296	40.2		43.0	336	58.5 ¹⁰⁵	52.8 33	35	50	16	45	18 45	14 55 57						
9	311	40.3		42.0	351	28.1 ¹⁰⁶	49.4 34	30	17 55	19	47	4 08 46	15 04 56						
10	326	40.4		41.1	5	57.6 ¹⁰⁵	46.0 34	20	18 03	25	51	3 52 47	20 55						
11	341	40.5	-9	40.2	20	27.1 ¹⁰⁵	-17 42.4 36	10 N	18 10	18 31	18 56	3 37 49	15 34 53						
12	356	40.6	-9	39.3	34	56.6 ¹⁰⁵	-17 38.7 37	0	18 17	18 38	19 02	3 23 51	15 47 51						
13	11	40.7		38.4	49	26.1 ¹⁰⁵	35.0 37	10 S	23	45	10	3 10 51	16 01 49						
14	26	40.7		37.4	63	55.6 ¹⁰⁵	31.1 39	20	31	18 53	20	2 55 53	15 47						
15	41	40.8		36.5	78	25.0 ¹⁰⁴	27.2 39	30	39	19 04	33	38 55	30 45						
16	56	40.9		35.6	92	54.5 ¹⁰⁵	23.1 41	35	44	10	41	28 56	40 43						
17	71	41.0	-9	34.7	107	23.9 ¹⁰⁴	-17 19.0 41	40	18 50	19 18	19 52	2 17 57	16 50 42						
18	86	41.1	-9	33.7	121	53.4 ¹⁰⁵	-17 14.8 42	45	18 57	19 27	20 04	2 04 59	17 02 41						
19	101	41.2		32.8	136	22.8 ¹⁰⁴	10.4 44	50	19 05	39	21	1 48 60	17 39						
20	116	41.3		31.9	150	52.2 ¹⁰⁴	06.0 44	52	09	44	29	41 61	24 37						
21	131	41.4		31.0	165	21.6 ¹⁰⁴	-17 01.5 45	54	13	50	38	32 62	32 36						
22	146	41.5		30.1	179	51.0 ¹⁰⁴	-16 56.9 46	56	17	19 57	20 48	23 63	41 34						
23	161	41.5		29.1	194	20.4 ¹⁰⁴	52.2 47	58	22	20 05	21 00	12 64	17 50 33						
24	176	41.6	-9	28.2	208	49.8 ¹⁰⁴	-16 47.4 48	60 S	19 28	20 14	21 15	1 00 66	18 01 31						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 13 ^h 45 ^m 4		Mag: -4.8 PMG: 14 ^h 20 ^m			Mag: +1.3 PMG: 14 ^h 57 ^m			Mag: -2.3 PMG: 3 ^h 13 ^m			Mag: +0.5 PMG: 7 ^h 31 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	153	04.5	144	39.1	+9	26.9	135	27.4	+7	24.8	311	31.0	-7	26.5	247	00.4	-22	05.1	
1	168	07.0	159	40.9		27.7	150	28.2		25.5	326	33.6		26.5	262	02.7		05.1	
2	183	09.5	174	42.8		28.4	165	29.0		26.3	341	36.2		26.4	277	05.0		05.1	
3	198	11.9	189	44.6		29.1	180	29.8		27.0	356	38.8		26.3	292	07.3		05.1	
4	213	14.4	204	46.5		29.9	195	30.5		27.7	11	41.4		26.3	307	09.6		05.1	
5	228	16.9	219	48.3	+9	30.6	210	31.3	+7	28.4	26	43.9	-7	26.2	322	11.9	-22	05.1	
6	243	19.3	234	50.2	+9	31.4	225	32.1	+7	29.2	41	46.5	-7	26.2	337	14.2	-22	05.1	
7	258	21.8	249	52.0		32.1	240	32.8		29.9	56	49.1		26.1	352	16.4		05.1	
8	273	24.2	264	53.9		32.8	255	33.6		30.6	71	51.7		26.1	7	18.7		05.1	
9	288	26.7	279	55.8		33.6	270	34.4		31.3	86	54.3		26.0	22	21.0		05.1	
10	303	29.2	294	57.7		34.3	285	35.1		32.1	101	56.9		25.9	37	23.3		05.1	
11	318	31.6	309	59.5	+9	35.0	300	35.9	+7	32.8	116	59.5	-7	25.9	52	25.6	-22	05.1	
12	333	34.1	325	01.4	+9	35.7	315	36.7	+7	33.5	132	02.0	-7	25.8	67	27.9	-22	05.1	
13	348	36.6	340	03.3		36.5	330	37.4		34.2	147	04.6		25.8	82	30.2		05.1	
14	3	39.0	355	05.2		37.2	345	38.2		35.0	162	07.2		25.7	97	32.5		05.1	
15	18	41.5	10	07.1		37.9	0	39.0		35.7	177	09.8		25.6	112	34.7		05.1	
16	33	44.0	25	08.9		38.6	15	39.7		36.4	192	12.4		25.6	127	37.0		05.1	
17	48	46.4	40	10.8	+9	39.4	30	40.5	+7	37.1	207	15.0	-7	25.5	142	39.3	-22	05.1	
18	63	48.9	55	12.7	+9	40.1	45	41.3	+7	37.9	222	17.6	-7	25.5	157	41.6	-22	05.1	
19	78	51.4	70	14.6		40.8	60	42.0		38.6	237	20.2		25.4	172	43.9		05.1	
20	93	53.8	85	16.5		41.5	75	42.8		39.3	252	22.7		25.4	187	46.2		05.1	
21	108	56.3	100	18.4		42.2	90	43.6		40.0	267	25.3		25.3	202	48.5		05.1	
22	123	58.7	115	20.4		43.0	105	44.3		40.7	282	27.9		25.2	217	50.8		05.1	
23	139	01.2	130	22.3		43.7	120	45.1		41.5	297	30.5		25.2	232	53.1		05.1	
24	154	03.7	145	24.2	+9	44.4	135	45.9	+7	42.2	312	33.1	-7	25.1	247	55.4	-22	05.1	
Dif	—		+19		+7		+8		+7		+26		+1		+23				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 13 ^m 1			Edad: 27 ^d 0 PHE { 4 ^h : 56/4 12 ^h : 56/6 20 ^h : 56/8 R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	41.6	-9 28.2	208	49.8	-16 47.4	49	60 N	5 42	6 30	7 13	6 20 28	14 39 77	
1	191	41.7	27.3	223	19.1 ¹⁰³	42.5	49	58	43	28	08	10 30	49 74	
2	206	41.8	26.4	237	48.5 ¹⁰⁴	37.5	50	56	43	26	04	6 01 31	14 58 72	
3	221	41.9	25.4	252	17.9 ¹⁰⁴	32.4	51	54	43	24	7 00	5 52 34	15 06 70	
4	236	42.0	24.5	266	47.2 ¹⁰³	27.3	51	52	43	22	6 56	45 35	12 69	
5	251	42.1	-9 23.6	281	16.6 ¹⁰⁴	-16 22.0	53	50	5 43	6 20	6 53	5 39 36	15 19 67	
6	266	42.2	-9 22.7	295	45.9 ¹⁰³	-16 16.7	53	45	5 43	6 17	6 46	5 25 38	15 32 65	
7	281	42.3	21.7	310	15.2 ¹⁰³	11.2	55	40	42	13	41	13 41	43 62	
8	296	42.4	20.8	324	44.6 ¹⁰⁴	-16 05.7	55	35	41	10	36	5 03 43	15 52 61	
9	311	42.5	19.9	339	13.9 ¹⁰³	-16 00.0	57	30	39	07	31	4 54 44	16 00 59	
10	326	42.6	19.0	353	43.2 ¹⁰³	-15 54.3	57	20	35	6 01	23	39 47	15 55	
11	341	42.7	-9 18.0	8	12.6 ¹⁰⁴	-15 48.5	58	10 N	5 31	5 55	6 16	4 26 49	16 27 53	
12	356	42.8	-9 17.1	22	41.9 ¹⁰³	-15 42.6	59	0	5 25	5 49	6 10	4 14 51	16 38 51	
13	11	42.8	16.2	37	11.2 ¹⁰³	36.6	60	10 S	17	42	6 03	4 01 53	16 50 48	
14	26	42.9	15.3	51	40.5 ¹⁰³	30.6	60	20	5 07	33	5 56	3 48 55	17 02 46	
15	41	43.0	14.3	66	09.8 ¹⁰³	24.4	62	30	4 54	23	47	33 58	15 43	
16	56	43.1	13.4	80	39.1 ¹⁰³	18.1	63	35	46	16	42	24 60	23 42	
17	71	43.2	-9 12.5	95	08.4 ¹⁰³	-15 11.8	63	40	4 35	5 09	5 37	3 14 61	17 32 40	
18	86	43.3	-9 11.5	109	37.7 ¹⁰³	-15 05.4	64	45	4 23	5 00	5 30	3 03 62	17 43 37	
19	101	43.4	10.6	124	07.0 ¹⁰³	-14 58.8	66	50	4 06	4 48	22	2 48 66	17 56 34	
20	116	43.5	09.7	138	36.3 ¹⁰³	52.2	66	52	3 59	43	19	42 66	18 01 33	
21	131	43.6	08.8	153	05.6 ¹⁰³	45.6	66	54	50	37	15	34 68	08 31	
22	146	43.7	07.8	167	34.9 ¹⁰³	38.8	68	56	39	30	10	26 69	15 30	
23	161	43.8	06.9	182	04.2 ¹⁰³	31.9	69	58	27	22	05	16 72	23 28	
24	176	43.9	-9 06.0	196	33.5 ¹⁰³	-14 25.0	69	60 S	3 13	4 14	5 00	2 06 73	18 32 26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 41 ^m 5		Mag: -4.8 PMG: 14 ^h 17 ^m		Mag: +1.3 PMG: 14 ^h 56 ^m		Mag: -2.3 PMG: 3 ^h 09 ^m		Mag: +0.5 PMG: 7 ^h 27 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	154	03.7	145	24.2	135	45.9	312	33.1	247	55.4
1	169	06.1	160	26.1	150	46.6	327	35.7	262	57.6
2	184	08.6	175	28.0	165	47.4	342	38.3	277	59.9
3	199	11.1	190	29.9	180	48.2	357	40.9	293	02.2
4	214	13.5	205	31.9	195	48.9	12	43.5	308	04.5
5	229	16.0	220	33.8	210	49.7	27	46.0	323	06.8
6	244	18.5	235	35.7	225	50.5	42	48.6	338	09.1
7	259	20.9	250	37.7	240	51.2	57	51.2	353	11.4
8	274	23.4	265	39.6	255	52.0	72	53.8	8	13.7
9	289	25.8	280	41.6	270	52.8	87	56.4	23	16.0
10	304	28.3	295	43.5	285	53.5	102	59.0	38	18.3
11	319	30.8	310	45.5	300	54.3	118	01.6	53	20.5
12	334	33.2	325	47.4	315	55.1	133	04.2	68	22.8
13	349	35.7	340	49.4	330	55.8	148	06.8	83	25.1
14	4	38.2	355	51.3	345	56.6	163	09.4	98	27.4
15	19	40.6	10	53.3	0	57.4	178	12.0	113	29.7
16	34	43.1	25	55.3	15	58.1	193	14.6	128	32.0
17	49	45.6	40	57.2	30	58.9	208	17.2	143	34.3
18	64	48.0	55	59.2	45	59.7	223	19.7	158	36.6
19	79	50.5	71	01.2	61	00.4	238	22.3	173	38.9
20	94	53.0	86	03.2	76	01.2	253	24.9	188	41.2
21	109	55.4	101	05.1	91	02.0	268	27.5	203	43.5
22	124	57.9	116	07.1	106	02.7	283	30.1	218	45.8
23	140	00.3	131	09.1	121	03.5	298	32.7	233	48.1
24	155	02.8	146	11.1	136	04.3	313	35.3	248	50.4
Dif	—		+20	+7	+8	+7	+26	+1	+23	0

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16'2		Edad: 28 ^d 0 PHE { 4 ^h : 57'0 12 ^h : 57'3 20 ^h : 57'5 R°: 51 ^m																
	PMG: 12 ^h 13 ^m 0		PMG: 11 ^h 17 ^m																
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m						
0	176	43.9	-9	06.0	196	33.5	-14 25.0	60 N	17 17	18 00	18 48	6 48 23	15 56 81						
1	191	44.0		05.0	211	02.8 ¹⁰³	17.9 71	58	22	02	47	40 25	16 03 79						
2	206	44.1		04.1	225	32.1 ¹⁰³	10.8 71	56	26	04	47	32 28	10 76						
3	221	44.2		03.2	240	01.4 ¹⁰³	-14 03.6 72	54	29	05	46	26 29	16 74						
4	236	44.3		02.2	254	30.7 ¹⁰³	-13 56.3 73	52	33	07	46	20 31	21 73						
5	251	44.4	-9	01.3	269	00.0 ¹⁰³	-13 49.0 73	50	17 36	18 08	18 46	6 15 32	16 26 71						
6	266	44.5	-9	00.4	283	29.3 ¹⁰³	-13 41.5 75	45	17 42	18 12	18 46	6 03 36	16 37 67						
7	281	44.6	-8	59.5	297	58.6 ¹⁰³	34.0 75	40	47	15	46	5 54 38	45 65						
8	296	44.7		58.5	312	27.9 ¹⁰³	26.4 76	35	52	18	47	46 40	53 62						
9	311	44.8		57.6	326	57.2 ¹⁰³	18.7 77	30	17 56	20	48	38 43	16 59 60						
10	326	44.9		56.7	341	26.5 ¹⁰³	10.9 78	20	18 04	26	52	26 45	17 10 57						
11	341	45.0	-8	55.7	355	55.8 ¹⁰³	-13 03.1 78	10 N	18 10	18 31	18 56	5 15 48	17 20 54						
12	356	45.1	-8	54.8	10	25.1 ¹⁰³	-12 55.1 80	0	18 16	18 37	19 02	5 05 51	17 29 51						
13	11	45.2		53.9	24	54.4 ¹⁰³	47.1 80	10 S	23	44	09	4 54 54	38 48						
14	26	45.3		52.9	39	23.7 ¹⁰³	39.1 80	20	29	18 52	18	43 57	48 44						
15	41	45.4		52.0	53	53.0 ¹⁰³	30.9 82	30	37	19 02	31	31 59	17 58 42						
16	56	45.5		51.1	68	22.3 ¹⁰³	22.7 82	35	42	08	39	24 61	18 05 39						
17	71	45.6	-8	50.1	82	51.6 ¹⁰³	-12 14.4 83	40	18 47	19 15	19 48	4 15 64	18 12 37						
18	86	45.7	-8	49.2	97	20.9 ¹⁰³	-12 06.0 84	45	18 53	19 24	20 00	4 05 67	18 20 34						
19	101	45.8		48.3	111	50.2 ¹⁰³	-11 57.5 85	50	19 01	35	16	3 54 69	30 31						
20	116	45.9		47.3	126	19.5 ¹⁰³	49.0 85	52	04	40	24	48 71	34 30						
21	131	46.0		46.4	140	48.9 ¹⁰⁴	40.4 86	54	08	45	32	42 73	39 28						
22	146	46.1		45.5	155	18.2 ¹⁰³	31.7 87	56	12	52	42	35 75	45 25						
23	161	46.2		44.5	169	47.5 ¹⁰³	23.0 87	58	17	19 59	20 53	28 76	51 23						
24	176	46.3	-8	43.6	184	16.8 ¹⁰³	-11 14.1 89	60 S	19 22	20 07	21 07	3 19 79	18 58 21						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 13 ^h 37 ^m 6		Mag: -4.8 PMG: 14 ^h 13 ^m			Mag: +1.3 PMG: 14 ^h 55 ^m			Mag: -2.3 PMG: 3 ^h 05 ^m			Mag: +0.5 PMG: 7 ^h 24 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	155	02.8	146	11.1	+10	01.0	136	04.3	+7	59.5	313	35.3	-7	23.7	248	50.4	-22	05.2	
1	170	05.3	161	13.1		01.7	151	05.0	+8	00.2	328	37.9		23.6	263	52.6		05.2	
2	185	07.7	176	15.1		02.4	166	05.8		00.9	343	40.5		23.5	278	54.9		05.2	
3	200	10.2	191	17.1		03.1	181	06.6		01.6	358	43.1		23.5	293	57.2		05.2	
4	215	12.7	206	19.1		03.7	196	07.3		02.3	13	45.7		23.4	308	59.5		05.2	
5	230	15.1	221	21.1	+10	04.4	211	08.1	+8	03.1	28	48.3	-7	23.4	324	01.8	-22	05.2	
6	245	17.6	236	23.1	+10	05.1	226	08.9	+8	03.8	43	50.9	-7	23.3	339	04.1	-22	05.2	
7	260	20.1	251	25.1		05.7	241	09.6		04.5	58	53.5		23.2	354	06.4		05.2	
8	275	22.5	266	27.2		06.4	256	10.4		05.2	73	56.1		23.2	9	08.7		05.2	
9	290	25.0	281	29.2		07.1	271	11.2		05.9	88	58.7		23.1	24	11.0		05.2	
10	305	27.5	296	31.2		07.7	286	11.9		06.6	104	01.3		23.0	39	13.3		05.2	
11	320	29.9	311	33.2	+10	08.4	301	12.7	+8	07.4	119	03.9	-7	23.0	54	15.6	-22	05.2	
12	335	32.4	326	35.3	+10	09.1	316	13.5	+8	08.1	134	06.5	-7	22.9	69	17.9	-22	05.2	
13	350	34.8	341	37.3		09.7	331	14.2		08.8	149	09.1		22.9	84	20.2		05.2	
14	5	37.3	356	39.3		10.4	346	15.0		09.5	164	11.7		22.8	99	22.5		05.2	
15	20	39.8	11	41.4		11.0	1	15.8		10.2	179	14.3		22.7	114	24.8		05.2	
16	35	42.2	26	43.4		11.7	16	16.5		10.9	194	16.9		22.7	129	27.1		05.2	
17	50	44.7	41	45.5	+10	12.3	31	17.3	+8	11.7	209	19.5	-7	22.6	144	29.4	-22	05.2	
18	65	47.2	56	47.5	+10	13.0	46	18.1	+8	12.4	224	22.1	-7	22.5	159	31.7	-22	05.2	
19	80	49.6	71	49.6		13.6	61	18.8		13.1	239	24.7		22.5	174	34.0		05.2	
20	95	52.1	86	51.6		14.3	76	19.6		13.8	254	27.3		22.4	189	36.3		05.2	
21	110	54.6	101	53.7		14.9	91	20.3		14.5	269	29.9		22.3	204	38.5		05.2	
22	125	57.0	116	55.8		15.6	106	21.1		15.2	284	32.5		22.3	219	40.8		05.2	
23	140	59.5	131	57.8		16.2	121	21.9		16.0	299	35.1		22.2	234	43.1		05.2	
24	156	01.9	146	59.9	+10	16.9	136	22.6	+8	16.7	314	37.7	-7	22.2	249	45.4	-22	05.2	
Dif	—		+20		+7		+8		+7		+26		+1		+23				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'2 PMG: 12 ^h 12 ^m 8			Edad: 29 ^d 0 PHE { 4 ^h : 57'7 12 ^h : 57'9 20 ^h : 58'1 R°: 50 ^m															
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	176	46.3	-8	43.6	184	16.8	-11 14.1	60 N	5 37	6 25	7 07	7 11	20	17 17	84				
1	191	46.4		42.7	198	46.2	-11 05.3	58	38	23	7 02	05	23	22	81				
2	206	46.5		41.7	213	15.5	-10 56.3	56	38	21	6 59	7 00	25	26	79				
3	221	46.6		40.8	227	44.8	47.3	54	39	20	55	6 55	27	30	77				
4	236	46.7		39.9	242	14.2	38.2	52	39	18	52	51	28	34	75				
5	251	46.8	-8	38.9	256	43.5	-10 29.0	50	5 39	6 17	6 49	6 47	30	17 37	73				
6	266	46.9	-8	38.0	271	12.8	-10 19.8	45	5 39	6 13	6 43	6 39	33	17 44	70				
7	281	47.0		37.0	285	42.2	10.5	40	39	10	38	32	36	50	66				
8	296	47.1		36.1	300	11.5	-10 01.2	35	38	08	33	26	38	55	64				
9	311	47.2		35.2	314	40.9	-9 51.8	30	37	05	29	21	40	17 59	62				
10	326	47.3		34.2	329	10.2	42.3	20	34	6 00	22	11	45	18 07	57				
11	341	47.4	-8	33.3	343	39.6	-9 32.7	10 N	5 30	5 54	6 16	6 03	48	18 14	54				
12	356	47.5	-8	32.4	358	08.9	-9 23.1	0	5 24	5 49	6 09	5 56	50	18 20	51				
13	11	47.7		31.4	12	38.3	13.5	10 S	17	42	6 03	48	54	26	47				
14	26	47.8		30.5	27	07.6	-9 03.8	20	5 08	34	5 57	40	57	32	44				
15	41	47.9		29.5	41	37.0	-8 54.0	30	4 56	24	49	30	61	40	40				
16	56	48.0		28.6	56	06.3	44.1	35	48	18	44	25	63	44	38				
17	71	48.1	-8	27.7	70	35.7	-8 34.3	40	4 38	5 11	5 39	5 19	66	18 49	35				
18	86	48.2	-8	26.7	85	05.1	-8 24.3	45	4 26	5 03	5 33	5 12	68	18 54	33				
19	101	48.3		25.8	99	34.4	14.3	50	11	4 52	26	5 03	72	19 01	29				
20	116	48.4		24.8	114	03.8	-8 04.3	52	4 03	47	22	4 59	74	04	27				
21	131	48.5		23.9	128	33.1	-7 54.2	54	3 55	41	19	55	75	07	25				
22	146	48.6		23.0	143	02.5	44.0	56	45	35	15	50	78	10	24				
23	161	48.7		22.0	157	31.8	33.8	58	33	28	10	44	80	14	22				
24	176	48.8	-8	21.1	172	01.2	-7 23.5	60 S	3 20	4 19	5 05	4 38	83	19 19	19				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 13 ^h 33 ^m 6		Mag: -4.8 PMG: 14 ^h 10 ^m			Mag: +1.3 PMG: 14 ^h 54 ^m			Mag: -2.3 PMG: 3 ^h 01 ^m			Mag: +0.5 PMG: 7 ^h 20 ^m							
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°				
0	156	01.9	146	59.9	+10	16.9	136	22.6	+8	16.7	314	37.7	-7	22.2	249	45.4	-22	05.2	
1	171	04.4	162	02.0		17.5	151	23.4		17.4	329	40.3		22.1	264	47.7		05.2	
2	186	06.9	177	04.1		18.1	166	24.2		18.1	344	42.9		22.0	279	50.0		05.2	
3	201	09.3	192	06.1		18.8	181	24.9		18.8	359	45.5		22.0	294	52.3		05.2	
4	216	11.8	207	08.2		19.4	196	25.7		19.5	14	48.1		21.9	309	54.6		05.2	
5	231	14.3	222	10.3	+10	20.0	211	26.5	+8	20.2	29	50.7	-7	21.8	324	56.9	-22	05.2	
6	246	16.7	237	12.4	+10	20.7	226	27.2	+8	21.0	44	53.3	-7	21.8	339	59.2	-22	05.2	
7	261	19.2	252	14.5		21.3	241	28.0		21.7	59	55.9		21.7	355	01.5		05.2	
8	276	21.7	267	16.6		21.9	256	28.8		22.4	74	58.6		21.6	10	03.8		05.3	
9	291	24.1	282	18.7		22.6	271	29.5		23.1	90	01.2		21.6	25	06.1		05.3	
10	306	26.6	297	20.8		23.2	286	30.3		23.8	105	03.8		21.5	40	08.4		05.3	
11	321	29.1	312	22.9	+10	23.8	301	31.1	+8	24.5	120	06.4	-7	21.4	55	10.7	-22	05.3	
12	336	31.5	327	25.0	+10	24.4	316	31.8	+8	25.2	135	09.0	-7	21.4	70	13.0	-22	05.3	
13	351	34.0	342	27.1		25.1	331	32.6		26.0	150	11.6		21.3	85	15.3		05.3	
14	6	36.4	357	29.3		25.7	346	33.3		26.7	165	14.2		21.2	100	17.6		05.3	
15	21	38.9	12	31.4		26.3	1	34.1		27.4	180	16.8		21.2	115	19.9		05.3	
16	36	41.4	27	33.5		26.9	16	34.9		28.1	195	19.4		21.1	130	22.2		05.3	
17	51	43.8	42	35.6	+10	27.5	31	35.6	+8	28.8	210	22.0	-7	21.0	145	24.5	-22	05.3	
18	66	46.3	57	37.8	+10	28.2	46	36.4	+8	29.5	225	24.6	-7	21.0	160	26.8	-22	05.3	
19	81	48.8	72	39.9		28.8	61	37.2		30.2	240	27.2		20.9	175	29.1		05.3	
20	96	51.2	87	42.0		29.4	76	37.9		30.9	255	29.8		20.8	190	31.4		05.3	
21	111	53.7	102	44.2		30.0	91	38.7		31.6	270	32.4		20.8	205	33.7		05.3	
22	126	56.2	117	46.3		30.6	106	39.5		32.4	285	35.1		20.7	220	36.0		05.3	
23	141	58.6	132	48.5		31.2	121	40.2		33.1	300	37.7		20.6	235	38.3		05.3	
24	157	01.1	147	50.6	+10	31.8	136	41.0	+8	33.8	315	40.3	-7	20.6	250	40.6	-22	05.3	
Dif	—		+21			+6	+8		+7		+26		+1		+23			0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 30 ^d 0 PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 5 20 ^h : 58 ^h 6 R°: 51 ^m					Civil			Náutico		Hora R°	
	PMG: 12 ^h 12 ^m 7	hG ☉	Dec	hG ☾	Dif	Dec			Dif	h m	h m	h m	h m m	h m m	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	R°		
0	176	48.8	-8 21.1	172	01.2	-7 23.5	60 N	17 23	18 05	18 53	7 31 18	18 41 85			
1	191	48.9	20.2	186	30.6 ¹⁰⁴	13.2 ¹⁰³	58	27	06	52	28 20	43 83			
2	206	49.1	19.2	200	59.9 ¹⁰³	-7 02.9 ¹⁰³	56	30	08	51	25 23	45 80			
3	221	49.2	18.3	215	29.3 ¹⁰⁴	-6 52.5 ¹⁰⁴	54	33	09	50	22 25	47 78			
4	236	49.3	17.3	229	58.6 ¹⁰³	42.0 ¹⁰⁵	52	36	10	49	19 27	49 76			
5	251	49.4	-8 16.4	244	28.0 ¹⁰⁴	-6 31.5 ¹⁰⁵	50	17 39	18 12	18 49	7 17 29	18 50 75			
6	266	49.5	-8 15.4	258	57.3 ¹⁰³	-6 21.0 ¹⁰⁵	45	17 45	18 14	18 48	7 12 32	18 54 70			
7	281	49.6	14.5	273	26.7 ¹⁰⁴	-6 10.4 ¹⁰⁶	40	50	17	48	08 35	56 68			
8	296	49.7	13.6	287	56.0 ¹⁰³	-5 59.8 ¹⁰⁶	35	54	19	49	04 38	18 59 64			
9	311	49.8	12.6	302	25.4 ¹⁰⁴	49.1 ¹⁰⁷	30	17 58	22	50	7 01 40	19 01 62			
10	326	49.9	11.7	316	54.7 ¹⁰³	38.4 ¹⁰⁷	20	18 04	27	52	6 56 44	04 59			
11	341	50.0	-8 10.7	331	24.1 ¹⁰⁴	-5 27.7 ¹⁰⁷	10 N	18 10	18 31	18 56	6 51 47	19 08 54			
12	356	50.2	-8 09.8	345	53.4 ¹⁰³	-5 16.9 ¹⁰⁸	0	18 16	18 37	19 01	6 46 51	19 11 51			
13	11	50.3	08.8	0	22.7 ¹⁰³	-5 06.1 ¹⁰⁸	10 S	22	43	08	42 54	13 48			
14	26	50.4	07.9	14	52.1 ¹⁰⁴	-4 55.2 ¹⁰⁹	20	28	18 50	16	37 58	16 44			
15	41	50.5	07.0	29	21.4 ¹⁰³	44.4 ¹⁰⁸	30	35	19 00	28	31 62	20 40			
16	56	50.6	06.0	43	50.7 ¹⁰³	33.4 ¹¹⁰	35	39	05	36	28 65	22 37			
17	71	50.7	-8 05.1	58	20.0 ¹⁰³	-4 22.5 ¹⁰⁹	40	18 44	19 12	19 45	6 25 67	19 24 35			
18	86	50.8	-8 04.1	72	49.3 ¹⁰³	-4 11.5 ¹¹⁰	45	18 50	19 20	19 57	6 20 71	19 27 31			
19	101	50.9	03.2	87	18.6 ¹⁰³	-4 00.5 ¹¹⁰	50	18 57	30	20 11	15 74	30 28			
20	116	51.1	02.2	101	47.9 ¹⁰³	-3 49.4 ¹¹¹	52	19 00	35	18	13 76	31 27			
21	131	51.2	01.3	116	17.2 ¹⁰³	38.4 ¹¹⁰	54	03	40	26	10 78	32 25			
22	146	51.3	-8 00.4	130	46.5 ¹⁰³	27.3 ¹¹¹	56	07	46	36	08 79	34 23			
23	161	51.4	-7 59.4	145	15.8 ¹⁰³	16.1 ¹¹²	58	11	19 53	46	04 83	36 21			
24	176	51.5	-7 58.5	159	45.1 ¹⁰³	-3 05.0 ¹¹¹	60 S	19 16	20 01	20 59	6 01 85	19 38 18			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 13 ^h 29 ^m 7		Mag: -4.8 PMG: 14 ^h 07 ^m			Mag: +1.3 PMG: 14 ^h 53 ^m			Mag: -2.4 PMG: 2 ^h 57 ^m			Mag: +0.5 PMG: 7 ^h 16 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	157	01.1	147	50.6	+10 31.8	136	41.0	+8 33.8	315	40.3	-7 20.6	250	40.6	-22 05.3
1	172	03.6	162	52.8	32.4	151	41.8	34.5	330	42.9	20.5	265	42.9	05.3
2	187	06.0	177	54.9	33.0	166	42.5	35.2	345	45.5	20.4	280	45.2	05.3
3	202	08.5	192	57.1	33.6	181	43.3	35.9	0	48.1	20.4	295	47.5	05.3
4	217	10.9	207	59.3	34.2	196	44.0	36.6	15	50.7	20.3	310	49.8	05.3
5	232	13.4	223	01.4	+10 34.8	211	44.8	+8 37.3	30	53.3	-7 20.2	325	52.1	-22 05.3
6	247	15.9	238	03.6	+10 35.4	226	45.6	+8 38.0	45	55.9	-7 20.2	340	54.4	-22 05.3
7	262	18.3	253	05.8	36.0	241	46.3	38.8	60	58.6	20.1	355	56.7	05.3
8	277	20.8	268	08.0	36.6	256	47.1	39.5	76	01.2	20.0	10	59.0	05.3
9	292	23.3	283	10.2	37.2	271	47.9	40.2	91	03.8	20.0	26	01.3	05.3
10	307	25.7	298	12.4	37.8	286	48.6	40.9	106	06.4	19.9	41	03.6	05.3
11	322	28.2	313	14.5	+10 38.3	301	49.4	+8 41.6	121	09.0	-7 19.8	56	05.9	-22 05.3
12	337	30.7	328	16.7	+10 38.9	316	50.2	+8 42.3	136	11.6	-7 19.8	71	08.2	-22 05.3
13	352	33.1	343	18.9	39.5	331	50.9	43.0	151	14.2	19.7	86	10.5	05.3
14	7	35.6	358	21.1	40.1	346	51.7	43.7	166	16.8	19.6	101	12.9	05.3
15	22	38.0	13	23.3	40.7	1	52.4	44.4	181	19.5	19.6	116	15.2	05.3
16	37	40.5	28	25.5	41.3	16	53.2	45.1	196	22.1	19.5	131	17.5	05.3
17	52	43.0	43	27.8	+10 41.8	31	54.0	+8 45.8	211	24.7	-7 19.4	146	19.8	-22 05.3
18	67	45.4	58	30.0	+10 42.4	46	54.7	+8 46.6	226	27.3	-7 19.4	161	22.1	-22 05.3
19	82	47.9	73	32.2	43.0	61	55.5	47.3	241	29.9	19.3	176	24.4	05.3
20	97	50.4	88	34.4	43.6	76	56.3	48.0	256	32.5	19.2	191	26.7	05.3
21	112	52.8	103	36.6	44.1	91	57.0	48.7	271	35.1	19.1	206	29.0	05.3
22	127	55.3	118	38.9	44.7	106	57.8	49.4	286	37.8	19.1	221	31.3	05.3
23	142	57.8	133	41.1	45.3	121	58.5	50.1	301	40.4	19.0	236	33.6	05.3
24	158	00.2	148	43.3	+10 45.8	136	59.3	+8 50.8	316	43.0	-7 18.9	251	35.9	-22 05.3
Dif	—		+22		+6	+8		+7	+26		+1	+23		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 12 ^m 5			Edad: 1 ^d 4 PHE { SD: 16'0 PMG: 13 ^h 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	51.5	-7 58.5	159	45.1	-3 05.0	60 N	5 31	6 19	7 01	7 49	19	20 06	86	
1	191	51.6		174	14.3 ¹⁰²	-2 53.8 ¹¹²	58	32	18	6 57	48	21	06	83	
2	206	51.7		188	43.6 ¹⁰³	42.6 ¹¹²	56	33	16	54	48	23	05	82	
3	221	51.9		203	12.8 ¹⁰²	31.4 ¹¹²	54	34	15	51	47	25	05	79	
4	236	52.0		217	42.1 ¹⁰³	20.2 ¹¹²	52	35	14	48	46	27	05	77	
5	251	52.1	-7 53.7	232	11.3 ¹⁰²	-2 08.9 ¹¹³	50	5 35	6 13	6 45	7 46	28	20 05	75	
6	266	52.2	-7 52.8	246	40.5 ¹⁰²	-1 57.6 ¹¹³	45	5 36	6 10	6 39	7 44	32	20 04	72	
7	281	52.3		261	09.7 ¹⁰²	46.3 ¹¹³	40	36	08	35	43	35	04	68	
8	296	52.4		275	38.9 ¹⁰²	35.0 ¹¹³	35	36	05	31	42	38	03	66	
9	311	52.5		290	08.1 ¹⁰²	23.7 ¹¹³	30	35	6 03	27	41	40	03	63	
10	326	52.7		304	37.3 ¹⁰²	12.4 ¹¹³	20	33	5 58	20	40	44	03	58	
11	341	52.8	-7 48.1	319	06.5 ¹⁰²	-1 01.0 ¹¹⁴	10 N	5 29	5 54	6 15	7 38	48	20 02	55	
12	356	52.9	-7 47.1	333	35.6 ¹⁰¹	-0 49.7 ¹¹³	0	5 24	5 48	6 09	7 37	52	20 02	51	
13	11	53.0		348	04.8 ¹⁰²	38.3 ¹¹⁴	10 S	18	42	6 04	36	55	01	48	
14	26	53.1		2	33.9 ¹⁰¹	26.9 ¹¹⁴	20	5 09	35	5 57	35	58	00	45	
15	41	53.2		17	03.0 ¹⁰¹	15.5 ¹¹⁴	30	4 57	26	50	33	63	20 00	40	
16	56	53.4		31	32.1 ¹⁰¹	-0 04.1 ¹¹⁴	35	50	20	46	33	65	19 59	39	
17	71	53.5	-7 42.4	46	01.2 ¹⁰¹	+0 07.3 ¹¹⁴	40	4 41	5 14	5 41	7 32	68	19 59	36	
18	86	53.6	-7 41.4	60	30.3 ¹⁰¹	+0 18.7 ¹¹⁴	45	4 29	5 06	5 36	7 31	71	19 58	33	
19	101	53.7		74	59.3 ¹⁰⁰	30.1 ¹¹⁴	50	15	4 56	29	29	75	58	29	
20	116	53.8		89	28.4 ¹⁰¹	41.5 ¹¹⁴	52	08	51	26	29	76	58	27	
21	131	54.0		103	57.4 ¹⁰⁰	+0 52.9 ¹¹⁴	54	4 00	46	23	28	79	57	26	
22	146	54.1		118	26.4 ¹⁰⁰	+1 04.3 ¹¹⁴	56	3 50	40	19	27	81	57	23	
23	161	54.2		132	55.4 ¹⁰⁰	15.7 ¹¹⁴	58	40	33	15	27	83	57	21	
24	176	54.3	-7 35.7	147	24.4 ¹⁰⁰	+1 27.1 ¹¹⁴	60 S	3 27	4 25	5 10	7 26	86	19 56	19	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 13 ^h 25 ^m 8		Mag: -4.8 PMG: 14 ^h 03 ^m			Mag: +1.3 PMG: 14 ^h 51 ^m			Mag: -2.4 PMG: 2 ^h 53 ^m			Mag: +0.5 PMG: 7 ^h 12 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	158	00.2	148	43.3	+10 45.8	136	59.3	+8 50.8	316	43.0	-7 18.9	251	35.9	-22 05.3
1	173	02.7	163	45.6	46.4	152	00.1	51.5	331	45.6	18.9	266	38.2	05.3
2	188	05.2	178	47.8	46.9	167	00.8	52.2	346	48.2	18.8	281	40.5	05.3
3	203	07.6	193	50.1	47.5	182	01.6	52.9	1	50.8	18.7	296	42.8	05.3
4	218	10.1	208	52.3	48.1	197	02.4	53.6	16	53.5	18.7	311	45.1	05.3
5	233	12.5	223	54.6	+10 48.6	212	03.1	+8 54.3	31	56.1	-7 18.6	326	47.4	-22 05.3
6	248	15.0	238	56.8	+10 49.2	227	03.9	+8 55.0	46	58.7	-7 18.5	341	49.7	-22 05.3
7	263	17.5	253	59.1	49.7	242	04.6	55.7	62	01.3	18.4	356	52.0	05.3
8	278	19.9	269	01.4	50.3	257	05.4	56.5	77	03.9	18.4	11	54.3	05.3
9	293	22.4	284	03.6	50.8	272	06.2	57.2	92	06.6	18.3	26	56.6	05.3
10	308	24.9	299	05.9	51.4	287	06.9	57.9	107	09.2	18.2	41	59.0	05.3
11	323	27.3	314	08.2	+10 51.9	302	07.7	+8 58.6	122	11.8	-7 18.2	57	01.3	-22 05.3
12	338	29.8	329	10.5	+10 52.5	317	08.5	+8 59.3	137	14.4	-7 18.1	72	03.6	-22 05.3
13	353	32.3	344	12.7	53.0	332	09.2	+9 00.0	152	17.0	18.0	87	05.9	05.3
14	8	34.7	359	15.0	53.6	347	10.0	+9 00.7	167	19.7	18.0	102	08.2	05.3
15	23	37.2	14	17.3	54.1	2	10.7	01.4	182	22.3	17.9	117	10.5	05.3
16	38	39.6	29	19.6	54.6	17	11.5	02.1	197	24.9	17.8	132	12.8	05.3
17	53	42.1	44	21.9	+10 55.2	32	12.3	+9 02.8	212	27.5	-7 17.7	147	15.1	-22 05.3
18	68	44.6	59	24.2	+10 55.7	47	13.0	+9 03.5	227	30.1	-7 17.7	162	17.4	-22 05.3
19	83	47.0	74	26.5	56.2	62	13.8	04.2	242	32.8	17.6	177	19.7	05.3
20	98	49.5	89	28.8	56.8	77	14.6	04.9	257	35.4	17.5	192	22.0	05.3
21	113	52.0	104	31.1	57.3	92	15.3	05.6	272	38.0	17.5	207	24.3	05.3
22	128	54.4	119	33.4	57.8	107	16.1	06.3	287	40.6	17.4	222	26.6	05.3
23	143	56.9	134	35.8	58.3	122	16.8	07.0	302	43.2	17.3	237	28.9	05.3
24	158	59.4	149	38.1	+10 58.9	137	17.6	+9 07.7	317	45.9	-7 17.2	252	31.3	-22 05.3
Dif	—		+23 +5			+8 +7			+26 +1			+23 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 12 ^m 3			Edad: 2 ^d 4 PHE { 4 ^h : 59'1 12 ^h : 59'2 20 ^h : 59'3 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	54.3	-7 35.7	147	24.4	99	+1 27.1	60 N	17 28	18 10	18 58	8 08	19	21 32	87
1	191	54.4		161	53.3	99	38.5 ¹¹⁴	58	31	11	56	09 22		29	84
2	206	54.6		176	22.3	100	+1 49.9 ¹¹⁴	56	34	12	55	11 24		27	81
3	221	54.7		190	51.2	99	+2 01.3 ¹¹⁴	54	37	13	54	12 26		24	79
4	236	54.8		205	20.1	99	12.7 ¹¹⁴	52	40	14	53	13 28		22	77
5	251	54.9	-7 31.0	219	49.0	99	+2 24.0 ¹¹³	50	17 42	18 15	18 52	8 14	30	21 20	76
6	266	55.0	-7 30.0	234	17.8	98	+2 35.4 ¹¹⁴	45	17 48	18 17	18 51	8 16	34	21 16	71
7	281	55.2		248	46.7	99	46.7 ¹¹³	40	52	19	50	18 37		12	69
8	296	55.3		263	15.5	98	+2 58.1 ¹¹⁴	35	56	21	50	20 39		09	66
9	311	55.4		277	44.3	98	+3 09.4 ¹¹³	30	17 59	23	51	21 42		06	64
10	326	55.5		292	13.1	98	20.7 ¹¹³	20	18 05	27	53	24 45		21 01	60
11	341	55.6	-7 25.3	306	41.8	97	+3 32.0 ¹¹³	10 N	18 10	18 32	18 56	8 26	49	20 57	56
12	356	55.8	-7 24.3	321	10.5	97	+3 43.3 ¹¹³	0	18 16	18 36	19 01	8 29	52	20 53	53
13	11	55.9		335	39.3	98	+3 54.5 ¹¹²	10 S	21	42	07	31 55		49	50
14	26	56.0		350	07.9	96	+4 05.8 ¹¹³	20	27	49	15	33 59		45	46
15	41	56.1		4	36.6	97	17.0 ¹¹²	30	33	18 57	26	36 63		40	43
16	56	56.3		19	05.2	96	28.2 ¹¹²	35	37	19 03	33	38 65		38	40
17	71	56.4	-7 19.5	33	33.9	97	+4 39.4 ¹¹²	40	18 41	19 09	19 42	8 40	68	20 35	37
18	86	56.5	-7 18.6	48	02.4	95	+4 50.5 ¹¹¹	45	18 46	19 17	19 53	8 42	71	20 31	34
19	101	56.6		62	31.0	96	+5 01.6 ¹¹¹	50	53	26	20 06	44 76		27	30
20	116	56.8		76	59.5	95	12.7 ¹¹¹	52	55	30	13	45 78		25	29
21	131	56.9		91	28.1	96	23.8 ¹¹¹	54	18 59	35	21	47 79		23	27
22	146	57.0		105	56.5	94	34.8 ¹¹⁰	56	19 02	41	30	48 82		20	25
23	161	57.1		120	25.0	95	45.8 ¹¹⁰	58	06	47	40	50 84		18	23
24	176	57.3	-7 12.9	134	53.4	94	+5 56.8 ¹¹⁰	60 S	19 10	19 55	20 51	8 52	86	20 15	20
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 21 ^m 8		Mag: -4.8 PMG: 13 ^h 59 ^m			Mag: +1.3 PMG: 14 ^h 50 ^m			Mag: -2.4 PMG: 2 ^h 48 ^m			Mag: +0.5 PMG: 7 ^h 09 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°
0	158	59.4	149 38.1	+10 58.9		137 17.6	+9 07.7		317 45.9	-7 17.2	252 31.3	-22 05.3			
1	174	01.8	164 40.4	59.4		152 18.4	08.4		332 48.5	17.2	267 33.6	05.3			
2	189	04.3	179 42.7	+10 59.9		167 19.1	09.1		347 51.1	17.1	282 35.9	05.3			
3	204	06.8	194 45.1	+11 00.4		182 19.9	09.8		2 53.7	17.0	297 38.2	05.3			
4	219	09.2	209 47.4	00.9		197 20.6	10.5		17 56.4	16.9	312 40.5	05.3			
5	234	11.7	224 49.7	+11 01.5		212 21.4	+9 11.2		32 59.0	-7 16.9	327 42.8	-22 05.3			
6	249	14.1	239 52.1	+11 02.0		227 22.2	+9 11.9		48 01.6	-7 16.8	342 45.1	-22 05.3			
7	264	16.6	254 54.4	02.5		242 22.9	12.6		63 04.2	16.7	357 47.4	05.3			
8	279	19.1	269 56.8	03.0		257 23.7	13.4		78 06.9	16.7	12 49.7	05.3			
9	294	21.5	284 59.1	03.5		272 24.5	14.1		93 09.5	16.6	27 52.0	05.3			
10	309	24.0	300 01.5	04.0		287 25.2	14.8		108 12.1	16.5	42 54.4	05.4			
11	324	26.5	315 03.9	+11 04.5		302 26.0	+9 15.5		123 14.7	-7 16.4	57 56.7	-22 05.4			
12	339	28.9	330 06.2	+11 05.0		317 26.7	+9 16.2		138 17.4	-7 16.4	72 59.0	-22 05.4			
13	354	31.4	345 08.6	05.5		332 27.5	16.9		153 20.0	16.3	88 01.3	05.4			
14	9	33.9	0 11.0	06.0		347 28.3	17.6		168 22.6	16.2	103 03.6	05.4			
15	24	36.3	15 13.3	06.5		2 29.0	18.3		183 25.2	16.1	118 05.9	05.4			
16	39	38.8	30 15.7	07.0		17 29.8	19.0		198 27.9	16.1	133 08.2	05.4			
17	54	41.2	45 18.1	+11 07.5		32 30.5	+9 19.7		213 30.5	-7 16.0	148 10.5	-22 05.4			
18	69	43.7	60 20.5	+11 08.0		47 31.3	+9 20.4		228 33.1	-7 15.9	163 12.8	-22 05.4			
19	84	46.2	75 22.9	08.5		62 32.1	21.1		243 35.8	15.8	178 15.2	05.4			
20	99	48.6	90 25.3	09.0		77 32.8	21.8		258 38.4	15.8	193 17.5	05.4			
21	114	51.1	105 27.7	09.5		92 33.6	22.5		273 41.0	15.7	208 19.8	05.4			
22	129	53.6	120 30.1	09.9		107 34.3	23.2		288 43.6	15.6	223 22.1	05.4			
23	144	56.0	135 32.5	10.4		122 35.1	23.9		303 46.3	15.6	238 24.4	05.4			
24	159	58.5	150 34.9	+11 10.9		137 35.9	+9 24.6		318 48.9	-7 15.5	253 26.7	-22 05.4			
Dif	—		+24	+5		+8	+7		+26	+1	+23				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 3 ^d 4	PHE {	4 ^h : 59'3 12 ^h : 59'4 20 ^h : 59'4		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 12 ^m 1														SD: 16'2	PMG: 15 ^h 33 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	'	'	°	'	°	h	m	h	m	h	m	h	m
0	176	57.3	-7	12.9	134	53.4	+5 56.8	60 N	5	25	6	13	6	55	8	27
1	191	57.4		11.9	149	21.8	+6 07.7	58		27		12		52	31	25
2	206	57.5		11.0	163	50.2	18.6	56	28		11	49		35	27	48
3	221	57.6		10.0	178	18.6	29.5	54	30		10	46		38	29	43
4	236	57.8		09.1	192	46.9	40.3	52	31		10	43		41	31	39
5	251	57.9	-7	08.1	207	15.2	+6 51.1	50	5	31	6	09	6	41	8	44
6	266	58.0	-7	07.1	221	43.4	+7 01.9	45	5	33	6	07	6	36	8	50
7	281	58.1		06.2	236	11.6	12.6	40	33		05	32		55	38	21
8	296	58.3		05.2	250	39.8	23.3	35	33		03	28		8	59	41
9	311	58.4		04.3	265	08.0	33.9	30	33		6	01	25	9	03	43
10	326	58.5		03.3	279	36.1	44.5	20	31		5	57	19	09	47	22
11	341	58.6	-7	02.4	294	04.3	+7 55.0	10 N	5	28	5	53	6	14	9	15
12	356	58.8	-7	01.4	308	32.3	+8 05.5	0	5	24	5	48	6	09	9	21
13	11	58.9	-7	00.4	323	00.4	16.0	10 S		18	42	6	04		26	57
14	26	59.0	-6	59.5	337	28.4	26.4	20	5	10	36	5	58		32	61
15	41	59.2		58.5	351	56.4	36.8	30	4	59	27	52		39	64	23
16	56	59.3		57.6	6	24.3	47.1	35	52		22	48		43	67	18
17	71	59.4	-6	56.6	20	52.2	+8 57.3	40	4	43	5	16	5	44	9	48
18	86	59.5	-6	55.7	35	20.1	+9 07.5	45	4	32	5	09	5	39	9	53
19	101	59.7		54.7	49	47.9	17.6	50	19		4	59	33	10	00	75
20	116	59.8		53.7	64	15.7	27.7	52	12		55	30		03	77	54
21	131	59.9		52.8	78	43.5	37.8	54	4	04	50	27		06	79	50
22	147	00.1		51.8	93	11.3	47.7	56	3	56	44	23		10	81	45
23	162	00.2		50.9	107	39.0	+9 57.6	58	46		38	19		14	83	41
24	177	00.3	-6	49.9	122	06.6	+10 07.5	60 S	3	34	4	31	5	15	10	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 17 ^m 9		Mag: -4.8 PMG: 13 ^h 55 ^m		Mag: +1.3 PMG: 14 ^h 49 ^m		Mag: -2.4 PMG: 2 ^h 44 ^m		Mag: +0.5 PMG: 7 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	159	58.5	150	34.9	+11	10.9	318	48.9	-7	15.5
1	175	01.0	165	37.3		11.4	333	51.5		15.4
2	190	03.4	180	39.7		11.9	348	54.2		15.3
3	205	05.9	195	42.1		12.3	3	56.8		15.3
4	220	08.4	210	44.6		12.8	18	59.4		15.2
5	235	10.8	225	47.0	+11	13.3	34	02.1	-7	15.1
6	250	13.3	240	49.4	+11	13.7	49	04.7	-7	15.0
7	265	15.7	255	51.9		14.2	64	07.3		15.0
8	280	18.2	270	54.3		14.7	79	09.9		14.9
9	295	20.7	285	56.7		15.1	94	12.6		14.8
10	310	23.1	300	59.2		15.6	109	15.2		14.7
11	325	25.6	316	01.6	+11	16.1	124	17.8	-7	14.7
12	340	28.1	331	04.1	+11	16.5	139	20.5	-7	14.6
13	355	30.5	346	06.6		17.0	154	23.1		14.5
14	10	33.0	1	09.0		17.4	169	25.7		14.4
15	25	35.5	16	11.5		17.9	184	28.4		14.3
16	40	37.9	31	13.9		18.3	199	31.0		14.3
17	55	40.4	46	16.4	+11	18.8	214	33.6	-7	14.2
18	70	42.8	61	18.9	+11	19.2	229	36.3	-7	14.1
19	85	45.3	76	21.4		19.7	244	38.9		14.0
20	100	47.8	91	23.9		20.1	259	41.6		14.0
21	115	50.2	106	26.3		20.6	274	44.2		13.9
22	130	52.7	121	28.8		21.0	289	46.8		13.8
23	145	55.2	136	31.3		21.4	304	49.5		13.7
24	160	57.6	151	33.8	+11	21.9	319	52.1	-7	13.7
Dif	—		+25	+5	+8	+7	+26	+1	+23	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 4 ^d 4	PHE	SD: 16 ^h 2			PMG: 16 ^h 27 ^m	Rº: 56 ^m		Rº		Rº	
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	00.3	-6 49.9	122	06.6	+10 07.5	87	60 N	17 33	18 15	19 03	8 49 27	** ** *	** ** *	
1	192	00.4	49.0	136	34.3	17.3	98	58	36	15	19 01	8 56 29	** ** *	** ** *	
2	207	00.6	48.0	151	01.9	27.0	97	56	39	16	18 59	9 02 31	** ** *	** ** *	
3	222	00.7	47.0	165	29.4	36.7	97	54	41	17	58	07 33	** ** *	** ** *	
4	237	00.8	46.1	179	57.0	46.3	96	52	44	17	56	12 35	23 56	73	
5	252	01.0	-6 45.1	194	24.5	+10 55.8	95	50	17 46	18 18	18 55	9 16 37	23 50	72	
6	267	01.1	-6 44.2	208	51.9	+11 05.3	95	45	17 50	18 20	18 54	9 25 40	23 39	69	
7	282	01.2	43.2	223	19.4	14.7	94	40	54	21	53	33 43	29 67		
8	297	01.4	42.2	237	46.7	24.0	93	35	17 57	23	52	40 45	21 65		
9	312	01.5	41.3	252	14.1	33.3	93	30	18 01	25	52	46 46	14 63		
10	327	01.6	40.3	266	41.4	42.5	92	20	06	28	54	9 56 50	23 01	61	
11	342	01.8	-6 39.4	281	08.7	+11 51.6	91	10 N	18 11	18 32	18 56	10 06 52	22 51	58	
12	357	01.9	-6 38.4	295	35.9	+12 00.7	91	0	18 15	18 36	19 00	10 14 55	22 40	56	
13	12	02.0	37.4	310	03.1	09.6	89	10 S	20	41	06	23 58	30 54		
14	27	02.2	36.5	324	30.3	18.5	89	20	25	47	13	33 60	20 51		
15	42	02.3	35.5	338	57.5	27.3	88	30	31	18 55	23	43 64	07 48		
16	57	02.4	34.6	353	24.6	36.1	88	35	34	19 00	30	50 65	22 00	47	
17	72	02.6	-6 33.6	7	51.6	+12 44.8	87	40	18 38	19 06	19 38	10 57 68	21 52	45	
18	87	02.7	-6 32.6	22	18.6	+12 53.3	85	45	18 43	19 13	19 49	11 05 71	21 43	42	
19	102	02.8	31.7	36	45.6	+13 01.8	85	50	48	22	20 02	15 74	32 39		
20	117	03.0	30.7	51	12.6	10.3	85	52	51	26	08	20 75	26 38		
21	132	03.1	29.8	65	39.5	18.6	83	54	54	30	15	25 77	21 36		
22	147	03.2	28.8	80	06.4	26.9	83	56	18 57	36	23	31 79	14 35		
23	162	03.4	27.8	94	33.2	35.0	81	58	19 00	41	33	37 81	21 07	33	
24	177	03.5	-6 26.9	109	00.1	+13 43.1	81	60 S	19 04	19 48	20 44	11 45 83	20 59	30	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 14 ^m 0		Mag: -4.8 PMG: 13 ^h 51 ^m			Mag: +1.3 PMG: 14 ^h 48 ^m			Mag: -2.4 PMG: 2 ^h 40 ^m			Mag: +0.5 PMG: 7 ^h 01 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	160	57.6	151 33.8	+11 21.9	137 54.1	+9 41.3	319 52.1	-7 13.7	254 22.3	-22 05.4					
1	176	00.1	166 36.3	22.3	152 54.9	42.0	334 54.7	13.6	269 24.6	05.4					
2	191	02.6	181 38.8	22.7	167 55.6	42.7	349 57.4	13.5	284 26.9	05.4					
3	206	05.0	196 41.3	23.2	182 56.4	43.4	5 00.0	13.4	299 29.2	05.4					
4	221	07.5	211 43.9	23.6	197 57.1	44.1	20 02.6	13.4	314 31.5	05.4					
5	236	10.0	226 46.4	+11 24.0	212 57.9	+9 44.8	35 05.3	-7 13.3	329 33.9	-22 05.4					
6	251	12.4	241 48.9	+11 24.4	227 58.7	+9 45.5	50 07.9	-7 13.2	344 36.2	-22 05.4					
7	266	14.9	256 51.4	24.9	242 59.4	46.2	65 10.6	13.1	359 38.5	05.4					
8	281	17.3	271 54.0	25.3	258 00.2	46.9	80 13.2	13.0	14 40.8	05.4					
9	296	19.8	286 56.5	25.7	273 00.9	47.5	95 15.8	13.0	29 43.1	05.4					
10	311	22.3	301 59.0	26.1	288 01.7	48.2	110 18.5	12.9	44 45.4	05.4					
11	326	24.7	317 01.6	+11 26.5	303 02.4	+9 48.9	125 21.1	-7 12.8	59 47.8	-22 05.4					
12	341	27.2	332 04.1	+11 26.9	318 03.2	+9 49.6	140 23.7	-7 12.7	74 50.1	-22 05.4					
13	356	29.7	347 06.7	27.3	333 04.0	50.3	155 26.4	12.7	89 52.4	05.4					
14	11	32.1	2 09.2	27.7	348 04.7	51.0	170 29.0	12.6	104 54.7	05.4					
15	26	34.6	17 11.8	28.1	3 05.5	51.7	185 31.7	12.5	119 57.0	05.4					
16	41	37.1	32 14.3	28.6	18 06.2	52.4	200 34.3	12.4	134 59.4	05.4					
17	56	39.5	47 16.9	+11 29.0	33 07.0	+9 53.1	215 36.9	-7 12.3	150 01.7	-22 05.4					
18	71	42.0	62 19.4	+11 29.4	48 07.8	+9 53.8	230 39.6	-7 12.3	165 04.0	-22 05.4					
19	86	44.5	77 22.0	29.8	63 08.5	54.5	245 42.2	12.2	180 06.3	05.4					
20	101	46.9	92 24.6	30.1	78 09.3	55.2	260 44.9	12.1	195 08.6	05.4					
21	116	49.4	107 27.2	30.5	93 10.0	55.9	275 47.5	12.0	210 11.0	05.4					
22	131	51.8	122 29.7	30.9	108 10.8	56.5	290 50.1	11.9	225 13.3	05.4					
23	146	54.3	137 32.3	31.3	123 11.5	57.2	305 52.8	11.9	240 15.6	05.4					
24	161	56.8	152 34.9	+11 31.7	138 12.3	+9 57.9	320 55.4	-7 11.8	255 17.9	-22 05.4					
Dif	—		+25	+4	+8		+7	+26		+1	+23		0		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 11 ^m 7			Edad: 5 ^d 4 PHE { 4 ^h : 59'4 12 ^h : 59'3 20 ^h : 59'3 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	03.5	-6 26.9	109	00.1	+13 43.1	60 N	5 20	6 08	6 49	9 16	35	0 24	81	
1	192	03.6	25.9	123	26.8	51.1	58	22	07	46	25	37	16	78	
2	207	03.8	24.9	137	53.6	78	56	24	06	44	33	39	08	77	
3	222	03.9	24.0	152	20.3	77	54	25	06	41	40	40	0 01	75	
4	237	04.0	23.0	166	47.0	77	52	26	05	39	47	41	** ** *	**	
5	252	04.2	-6 22.1	181	13.6	76	50	5 27	6 05	6 37	9 53	42	** ** *	**	
6	267	04.3	-6 21.1	195	40.2	76	45	5 29	6 03	6 32	10 05	45	** ** *	**	
7	282	04.5	20.1	210	06.8	76	40	30	02	29	16	47	** ** *	**	
8	297	04.6	19.2	224	33.3	75	35	31	6 00	25	25	48	** ** *	**	
9	312	04.7	18.2	238	59.8	75	30	31	5 59	23	32	51	** ** *	**	
10	327	04.9	17.2	253	26.3	75	20	30	55	17	46	53	** ** *	**	
11	342	05.0	-6 16.3	267	52.7	74	10 N	5 27	5 52	6 13	10 58	55	23 49	58	
12	357	05.1	-6 15.3	282	19.1	74	0	5 23	5 48	6 08	11 09	57	23 36	57	
13	12	05.3	14.3	296	45.5	74	10 S	18	43	6 04	21 58		24	55	
14	27	05.4	13.4	311	11.8	73	20	11	37	5 59	33 60		23 11	53	
15	42	05.6	12.4	325	38.1	73	30	5 00	29	53	47 63		22 55	52	
16	57	05.7	11.5	340	04.4	73	35	4 54	24	50	11 55	64	47	51	
17	72	05.8	-6 10.5	354	30.6	72	40	4 46	5 18	5 46	12 05	65	22 37	49	
18	87	06.0	-6 09.5	8	56.8	72	45	4 36	5 11	5 41	12 16	67	22 25	48	
19	102	06.1	08.6	23	23.0	72	50	23	5 03	36	29 70		11	46	
20	117	06.2	07.6	37	49.2	72	52	16	4 59	33	35 71		22 04	45	
21	132	06.4	06.6	52	15.3	71	54	09	54	31	42 72		21 57	44	
22	147	06.5	05.7	66	41.4	71	56	4 01	49	28	50 74		49	42	
23	162	06.7	04.7	81	07.5	71	58	3 52	43	24	12 58	76	40	41	
24	177	06.8	-6 03.7	95	33.5	70	60 S	3 41	4 36	5 20	13 08	78	21 29	39	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 10 ^m 1		Mag: -4.7 PMG: 13 ^h 47 ^m		Mag: +1.3 PMG: 14 ^h 46 ^m		Mag: -2.4 PMG: 2 ^h 36 ^m		Mag: +0.5 PMG: 6 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	161	56.8	152	34.9	+11	31.7	138	12.3	+9	57.9
1	176	59.2	167	37.5		32.1	153	13.1		58.6
2	192	01.7	182	40.1		32.5	168	13.8	+9	59.3
3	207	04.2	197	42.7		32.9	183	14.6	+10	00.0
4	222	06.6	212	45.3		33.2	198	15.3	+10	00.7
5	237	09.1	227	47.9	+11	33.6	213	16.1	+10	01.4
6	252	11.6	242	50.5	+11	34.0	228	16.8	+10	02.1
7	267	14.0	257	53.2		34.4	243	17.6		02.8
8	282	16.5	272	55.8		34.7	258	18.4		03.5
9	297	18.9	287	58.4		35.1	273	19.1		04.1
10	312	21.4	303	01.0		35.5	288	19.9		04.8
11	327	23.9	318	03.7	+11	35.8	303	20.6	+10	05.5
12	342	26.3	333	06.3	+11	36.2	318	21.4	+10	06.2
13	357	28.8	348	08.9		36.6	333	22.1		06.9
14	12	31.3	3	11.6		36.9	348	22.9		07.6
15	27	33.7	18	14.2		37.3	3	23.7		08.3
16	42	36.2	33	16.9		37.6	18	24.4		09.0
17	57	38.7	48	19.5	+11	38.0	33	25.2	+10	09.7
18	72	41.1	63	22.2	+11	38.3	48	25.9	+10	10.3
19	87	43.6	78	24.8		38.7	63	26.7		11.0
20	102	46.1	93	27.5		39.0	78	27.4		11.7
21	117	48.5	108	30.2		39.4	93	28.2		12.4
22	132	51.0	123	32.8		39.7	108	29.0		13.1
23	147	53.4	138	35.5		40.1	123	29.7		13.8
24	162	55.9	153	38.2	+11	40.4	138	30.5	+10	14.5
Dif	—		+26		+4		+8		+7	
							+26		+1	
									+23	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 6 ^d 4	PHE	SD: 16 ^h 1				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 4	PMG: 18 ^h 20 ^m			Civil	Náutico			Hora	R°	Hora	R°		
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177	06.8	-6	03.7	95	33.5	+16 29.2	60 N	17 38	18 19	19 08	9 51 44	1 45 73	
1	192	06.9		02.8	109	59.5	70 34.9 57	58	40	20	05	10 02 46	34 72	
2	207	07.1		01.8	124	25.5	70 40.4 55	56	43	20	03	12 47	25 70	
3	222	07.2	-6	00.8	138	51.4	69 45.9 55	54	45	20	01	20 48	16 70	
4	237	07.4	-5	59.9	153	17.4	70 51.2 53	52	47	21	19 00	28 49	09 68	
5	252	07.5	-5	58.9	167	43.3	69 +16 56.5 53	50	17 49	18 21	18 59	10 35 50	1 02 68	
6	267	07.6	-5	57.9	182	09.2	69 +17 01.6 51	45	17 53	18 22	18 56	10 50 51	0 48 65	
7	282	07.8		57.0	196	35.0	68 06.6 50	40	56	23	55	11 03 52	36 64	
8	297	07.9		56.0	211	00.9	69 11.5 49	35	17 59	25	54	13 53	26 63	
9	312	08.1		55.0	225	26.7	68 16.3 48	30	18 02	26	54	23 53	17 62	
10	327	08.2		54.1	239	52.5	68 21.0 47	20	07	29	54	39 55	0 02 60	
11	342	08.4	-5	53.1	254	18.2	67 +17 25.5 45	10 N	18 11	18 32	18 56	11 53 56	*** **	
12	357	08.5	-5	52.1	268	44.0	68 +17 30.0 45	0	18 15	18 35	19 00	12 06 57	*** **	
13	12	08.6		51.2	283	09.7	67 34.3 43	10 S	19	40	05	19 58	*** **	
14	27	08.8		50.2	297	35.4	67 38.5 42	20	23	46	11	33 60	*** **	
15	42	08.9		49.2	312	01.1	67 42.6 41	30	29	53	21	50 60	23 47 56	
16	57	09.1		48.3	326	26.8	67 46.6 40	35	32	18 57	27	12 59 62	38 55	
17	72	09.2	-5	47.3	340	52.5	67 +17 50.5 39	40	18 35	19 03	19 35	13 10 62	23 26 55	
18	87	09.4	-5	46.3	355	18.1	66 +17 54.3 38	45	18 39	19 09	19 45	13 23 63	23 13 54	
19	102	09.5		45.4	9	43.8	67 +17 57.9 36	50	44	17	19 57	39 64	22 57 53	
20	117	09.6		44.4	24	09.4	66 +18 01.4 35	52	47	21	20 03	46 65	49 53	
21	132	09.8		43.4	38	35.0	66 04.8 34	54	49	25	10	13 54 66	41 52	
22	147	09.9		42.4	53	00.6	66 08.1 33	56	52	30	17	14 04 66	31 52	
23	162	10.1		41.5	67	26.1	65 11.3 32	58	55	36	26	14 67	21 51	
24	177	10.2	-5	40.5	81	51.7	66 +18 14.4 31	60 S	18 58	19 42	20 36	14 26 68	22 08 51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 06 ^m 1		Mag: -4.7 PMG: 13 ^h 43 ^m		Mag: +1.3 PMG: 14 ^h 45 ^m		Mag: -2.4 PMG: 2 ^h 32 ^m		Mag: +0.5 PMG: 6 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	162	55.9	153	38.2	138	30.5	321	58.9	256	13.7
1	177	58.4	168	40.9	153	31.2	337	01.6	271	16.0
2	193	00.8	183	43.6	168	32.0	352	04.2	286	18.3
3	208	03.3	198	46.3	183	32.7	7	06.9	301	20.6
4	223	05.8	213	49.0	198	33.5	22	09.5	316	23.0
5	238	08.2	228	51.7	213	34.3	37	12.2	331	25.3
6	253	10.7	243	54.4	228	35.0	52	14.8	346	27.6
7	268	13.2	258	57.1	243	35.8	67	17.5	1	29.9
8	283	15.6	273	59.8	258	36.5	82	20.1	16	32.3
9	298	18.1	289	02.5	273	37.3	97	22.8	31	34.6
10	313	20.6	304	05.2	288	38.0	112	25.4	46	36.9
11	328	23.0	319	07.9	303	38.8	127	28.1	61	39.2
12	343	25.5	334	10.7	318	39.5	142	30.7	76	41.6
13	358	27.9	349	13.4	333	40.3	157	33.4	91	43.9
14	13	30.4	4	16.1	348	41.1	172	36.0	106	46.2
15	28	32.9	19	18.9	3	41.8	187	38.7	121	48.5
16	43	35.3	34	21.6	18	42.6	202	41.3	136	50.9
17	58	37.8	49	24.4	33	43.3	217	44.0	151	53.2
18	73	40.3	64	27.1	48	44.1	232	46.6	166	55.5
19	88	42.7	79	29.9	63	44.8	247	49.3	181	57.9
20	103	45.2	94	32.6	78	45.6	262	51.9	197	00.2
21	118	47.7	109	35.4	93	46.3	277	54.6	212	02.5
22	133	50.1	124	38.1	108	47.1	292	57.2	227	04.8
23	148	52.6	139	40.9	123	47.9	307	59.9	242	07.2
24	163	55.1	154	43.7	138	48.6	323	02.6	257	09.5
Dif	—		+27	+3	+8	+7	+27	+1	+23	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 7 ^d 4	PHE { 4 ^h : 59 ^o 0 12 ^h : 59 ^o 0 20 ^h : 58 ^o 9	R ^o : 57 ^m		Náutico			Civil		Hora		R ^o		
	PMG: 12 ^h 11 ^m 2																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	m	
0	177	10.2	-5 40.5	81	51.7	+18 14.4	29	60 N	5 14	6 02	6 43	10 35	57	2 58	62		
1	192	10.4	39.5	96	17.3	17.3	29	58	16	02	41	48	56	46	62		
2	207	10.5	38.6	110	42.8	20.1	28	56	18	01	38	10 59	56	35	61		
3	222	10.7	37.6	125	08.4	22.8	27	54	20	01	36	11 08	57	26	61		
4	237	10.8	36.6	139	33.9	25.4	26	52	22	01	34	17	57	17	61		
5	252	10.9	-5 35.7	153	59.4	+18 27.9	25	50	5 23	6 00	6 33	11 25	57	2 10	60		
6	267	11.1	-5 34.7	168	24.9	+18 30.2	23	45	5 26	6 00	6 29	11 41	57	1 53	60		
7	282	11.2	33.7	182	50.4	32.4	22	40	27	5 59	26	11 55	57	40	60		
8	297	11.4	32.8	197	16.0	34.5	21	35	28	58	23	12 06	57	29	59		
9	312	11.5	31.8	211	41.5	36.5	20	30	29	56	20	16	58	19	59		
10	327	11.7	30.8	226	07.0	38.4	19	20	28	54	16	34	57	1 02	58		
11	342	11.8	-5 29.8	240	32.5	+18 40.1	17	10 N	5 26	5 51	6 12	12 49	57	0 47	58		
12	357	12.0	-5 28.9	254	58.0	+18 41.7	16	0	5 23	5 47	6 08	13 03	57	0 33	58		
13	12	12.1	27.9	269	23.5	43.2	15	10 S	18	43	04	17	58	19	57		
14	27	12.3	26.9	283	49.0	44.6	14	20	11	37	6 00	33	57	0 04	57		
15	42	12.4	26.0	298	14.5	45.8	12	30	5 02	30	5 54	13 50	57	***	***	***	
16	57	12.6	25.0	312	40.0	47.0	12	35	4 56	26	51	14 01	56	***	***	***	
17	72	12.7	-5 24.0	327	05.5	+18 48.0	10	40	4 48	5 21	5 48	14 12	57	***	***	***	
18	87	12.9	-5 23.0	341	31.1	+18 48.9	9	45	4 39	5 14	5 44	14 26	57	***	***	***	
19	102	13.0	22.1	355	56.6	49.6	7	50	26	06	39	43	56	23	50		
20	117	13.2	21.1	10	22.1	50.3	7	52	20	5 02	37	14 51	56	42	61		
21	132	13.3	20.1	24	47.7	50.8	5	54	14	4 58	35	15 00	56	33	61		
22	147	13.4	19.2	39	13.2	51.2	4	56	4 06	53	32	10	56	23	62		
23	162	13.6	18.2	53	38.8	51.5	3	58	3 57	48	29	21	56	23	12	62	
24	177	13.7	-5 17.2	68	04.4	+18 51.6	1	60 S	3 47	4 42	5 25	15 34	56	22	59	62	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: -4.7		Mag: +1.3		Mag: -2.4		Mag: +0.5						
	13 ^h 02 ^m 2		PMG: 13 ^h 39 ^m		PMG: 14 ^h 44 ^m		PMG: 2 ^h 27 ^m		PMG: 6 ^h 50 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	163	55.1	154	43.7	+11 47.9	138	48.6	+10 30.9	323	02.6	-7 07.9	257	09.5	-22 05.4	
1	178	57.5	169	46.5	48.1	153	49.4	31.6	338	05.2	07.8	272	11.8	05.4	
2	194	00.0	184	49.2	48.4	168	50.1	32.3	353	07.9	07.7	287	14.2	05.4	
3	209	02.4	199	52.0	48.7	183	50.9	32.9	8	10.5	07.6	302	16.5	05.4	
4	224	04.9	214	54.8	49.0	198	51.6	33.6	23	13.2	07.5	317	18.8	05.4	
5	239	07.4	229	57.6	+11 49.2	213	52.4	+10 34.3	38	15.8	-7 07.5	332	21.1	-22 05.4	
6	254	09.8	245	00.4	+11 49.5	228	53.1	+10 35.0	53	18.5	-7 07.4	347	23.5	-22 05.4	
7	269	12.3	260	03.2	49.8	243	53.9	35.7	68	21.1	07.3	2	25.8	05.4	
8	284	14.8	275	06.0	50.1	258	54.7	36.3	83	23.8	07.2	17	28.1	05.4	
9	299	17.2	290	08.8	50.3	273	55.4	37.0	98	26.4	07.1	32	30.5	05.4	
10	314	19.7	305	11.6	50.6	288	56.2	37.7	113	29.1	07.0	47	32.8	05.4	
11	329	22.2	320	14.4	+11 50.9	303	56.9	+10 38.4	128	31.8	-7 06.9	62	35.1	-22 05.4	
12	344	24.6	335	17.3	+11 51.1	318	57.7	+10 39.1	143	34.4	-7 06.9	77	37.4	-22 05.4	
13	359	27.1	350	20.1	51.4	333	58.4	39.7	158	37.1	06.8	92	39.8	05.4	
14	14	29.5	5	22.9	51.6	348	59.2	40.4	173	39.7	06.7	107	42.1	05.4	
15	29	32.0	20	25.7	51.9	3	59.9	41.1	188	42.4	06.6	122	44.4	05.4	
16	44	34.5	35	28.6	52.1	19	00.7	41.8	203	45.1	06.5	137	46.8	05.4	
17	59	36.9	50	31.4	+11 52.4	34	01.4	+10 42.5	218	47.7	-7 06.4	152	49.1	-22 05.4	
18	74	39.4	65	34.2	+11 52.6	49	02.2	+10 43.1	233	50.4	-7 06.4	167	51.4	-22 05.4	
19	89	41.9	80	37.1	52.9	64	03.0	43.8	248	53.0	06.3	182	53.8	05.4	
20	104	44.3	95	39.9	53.1	79	03.7	44.5	263	55.7	06.2	197	56.1	05.4	
21	119	46.8	110	42.8	53.3	94	04.5	45.2	278	58.3	06.1	212	58.4	05.4	
22	134	49.3	125	45.7	53.6	109	05.2	45.9	294	01.0	06.0	228	00.8	05.4	
23	149	51.7	140	48.5	53.8	124	06.0	46.5	309	03.7	05.9	243	03.1	05.4	
24	164	54.2	155	51.4	+11 54.1	139	06.7	+10 47.2	324	06.3	-7 05.8	258	05.4	-22 05.4	
Dif	—		+28		+3	+8		+7	+27		+1	+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 8 ^d 4	PHE { 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'6	SD: 16 ^h 0			R°: 56 ^m						
	PMG: 12 ^h 11 ^m 0					PMG: 20 ^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	m	h m m	m
0	177	13.7	-5 17.2	68	04.4	+18 51.6	1	60 N	17 43	18 24	19 13	11 32 67	4 00 50		
1	192	13.9	16.2	82	30.0	66 51.7	1	58	45	24	10	44 67	3 48 50		
2	207	14.0	15.3	96	55.6	66 51.6	2	56	47	24	07	11 55 66	36 51		
3	222	14.2	14.3	111	21.2	66 51.4	3	54	49	24	05	12 05 65	27 51		
4	237	14.3	13.3	125	46.8	66 51.1	3	52	51	24	03	14 64	18 52		
5	252	14.5	-5 12.4	140	12.5	67 +18 50.6	5	50	17 52	18 24	19 02	12 22 63	3 10 52		
6	267	14.6	-5 11.4	154	38.2	67 +18 50.1	5	45	17 56	18 25	18 59	12 38 62	2 53 54		
7	282	14.8	10.4	169	03.8	66 49.4	7	40	17 58	26	57	12 52 61	40 53		
8	297	14.9	09.4	183	29.5	67 48.6	8	35	18 01	26	56	13 03 61	28 54		
9	312	15.1	08.5	197	55.3	68 47.6	10	30	03	27	55	14 59	18 55		
10	327	15.2	07.5	212	21.0	67 46.6	10	20	07	29	55	31 58	2 00 56		
11	342	15.4	-5 06.5	226	46.8	68 +18 45.4	12	10 N	18 11	18 32	18 56	13 46 57	1 45 56		
12	357	15.5	-5 05.5	241	12.6	68 +18 44.2	12	0	18 14	18 35	18 59	14 00 56	1 31 56		
13	12	15.7	04.6	255	38.4	68 42.8	14	10 S	18	39	19 03	15 55	16 57		
14	27	15.9	03.6	270	04.2	68 41.2	16	20	22	44	10	30 54	1 01 58		
15	42	16.0	02.6	284	30.1	69 39.6	16	30	26	50	19	47 53	0 43 59		
16	57	16.2	01.6	298	56.0	69 37.8	18	35	29	54	24	14 57 52	33 59		
17	72	16.3	-5 00.7	313	21.9	69 +18 36.0	18	40	18 32	18 59	19 32	15 09 51	0 21 59		
18	87	16.5	-4 59.7	327	47.9	70 +18 34.0	20	45	18 36	19 05	19 41	15 23 49	0 07 60		
19	102	16.6	58.7	342	13.8	69 31.9	21	50	40	13	52	39 48	** ** *		
20	117	16.8	57.7	356	39.8	70 29.7	22	52	42	16	58	47 48	** ** *		
21	132	16.9	56.8	11	05.9	71 27.3	24	54	44	20	04	15 56 46	** ** *		
22	147	17.1	55.8	25	32.0	71 24.9	24	56	47	25	11	16 06 45	** ** *		
23	162	17.2	54.8	39	58.1	71 22.3	26	58	49	30	20	17 44	** ** *		
24	177	17.4	-4 53.9	54	24.2	71 +18 19.6	27	60 S	18 52	19 35	20 29	16 30 43	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 12 ^h 58 ^m 3		Mag: -4.7 PMG: 13 ^h 34 ^m			Mag: +1.3 PMG: 14 ^h 43 ^m			Mag: -2.4 PMG: 2 ^h 23 ^m			Mag: +0.5 PMG: 6 ^h 47 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'
0	164	54.2	155 51.4	+11 54.1	139 06.7	+10 47.2	324 06.3	-7 05.8	258 05.4	-22 05.4					
1	179	56.7	170 54.2	54.3	154 07.5	47.9	339 09.0	05.8	273 07.8	05.4					
2	194	59.1	185 57.1	54.5	169 08.2	48.6	354 11.6	05.7	288 10.1	05.4					
3	210	01.6	201 00.0	54.7	184 09.0	49.2	9 14.3	05.6	303 12.4	05.4					
4	225	04.0	216 02.9	55.0	199 09.7	49.9	24 17.0	05.5	318 14.8	05.4					
5	240	06.5	231 05.8	+11 55.2	214 10.5	+10 50.6	39 19.6	-7 05.4	333 17.1	-22 05.4					
6	255	09.0	246 08.6	+11 55.4	229 11.2	+10 51.3	54 22.3	-7 05.3	348 19.4	-22 05.4					
7	270	11.4	261 11.5	55.6	244 12.0	52.0	69 25.0	05.2	3 21.8	05.4					
8	285	13.9	276 14.4	55.8	259 12.7	52.6	84 27.6	05.1	18 24.1	05.4					
9	300	16.4	291 17.3	56.0	274 13.5	53.3	99 30.3	05.1	33 26.4	05.4					
10	315	18.8	306 20.2	56.2	289 14.3	54.0	114 32.9	05.0	48 28.8	05.4					
11	330	21.3	321 23.1	+11 56.5	304 15.0	+10 54.7	129 35.6	-7 04.9	63 31.1	-22 05.4					
12	345	23.8	336 26.1	+11 56.7	319 15.8	+10 55.3	144 38.3	-7 04.8	78 33.4	-22 05.4					
13	0	26.2	351 29.0	56.9	334 16.5	56.0	159 40.9	04.7	93 35.8	05.4					
14	15	28.7	6 31.9	57.1	349 17.3	56.7	174 43.6	04.6	108 38.1	05.4					
15	30	31.2	21 34.8	57.3	4 18.0	57.4	189 46.3	04.5	123 40.4	05.4					
16	45	33.6	36 37.7	57.5	19 18.8	58.0	204 48.9	04.5	138 42.8	05.4					
17	60	36.1	51 40.7	+11 57.6	34 19.5	+10 58.7	219 51.6	-7 04.4	153 45.1	-22 05.4					
18	75	38.5	66 43.6	+11 57.8	49 20.3	+10 59.4	234 54.2	-7 04.3	168 47.4	-22 05.4					
19	90	41.0	81 46.5	58.0	64 21.0	+11 00.1	249 56.9	04.2	183 49.8	05.4					
20	105	43.5	96 49.5	58.2	79 21.8	00.7	264 59.6	04.1	198 52.1	05.4					
21	120	45.9	111 52.4	58.4	94 22.5	01.4	280 02.2	04.0	213 54.4	05.4					
22	135	48.4	126 55.4	58.6	109 23.3	02.1	295 04.9	03.9	228 56.8	05.4					
23	150	50.9	141 58.3	58.8	124 24.0	02.8	310 07.6	03.8	243 59.1	05.4					
24	165	53.3	157 01.3	+11 58.9	139 24.8	+11 03.4	325 10.2	-7 03.8	259 01.5	-22 05.4					
Dif	—		+29	+2	+8	+7	+27	+1	+23		0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 9 ^d 4	PHE { 4 ^h : 58 ^m /4 12 ^h : 58 ^m /3 20 ^h : 58 ^m /2											
	PMG: 12 ^h 10 ^m 7					SD: 15 ^h 9		PMG: 21 ^h 10 ^m			R ^o : 53 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	177	17.4	-4	53.9	54	24.2	+18	19.6	58	08	5	56	6	37	12 39 75	
1	192	17.5		52.9	68	50.4	72	16.9	58	11		56	35	12 51 72	4 50 37	
2	207	17.7		51.9	83	16.6	72	14.0	56	13		56	33	13 01 71	38 39	
3	222	17.8		50.9	97	42.8	72	10.9	54	15		56	32	10 69	27 41	
4	237	18.0		50.0	112	09.1	73	07.8	52	17		56	30	18 68	18 42	
5	252	18.1	-4	49.0	126	35.4	73	+18	50	19	5	56	6	28	10 43	
6	267	18.3	-4	48.0	141	01.8	74	+18	45	22	5	56	6	25	4 02 45	
7	282	18.5		47.0	155	28.2	74	+17	40	24		56	23	13 40 65	3 47 46	
8	297	18.6		46.0	169	54.6	74		35	26		55	20	13 53 63	33 48	
9	312	18.8		45.1	184	21.1	75		30	26		54	18	14 04 61	22 50	
10	327	18.9		44.1	198	47.6	75		20	27		52	14	13 60	3 13 50	
11	342	19.1	-4	43.1	213	14.1	75	+17	10	25	5	50	6	11	29 58	
12	357	19.2	-4	42.1	227	40.7	76	+17	5	23	5	47	6	07	2 56 52	
13	12	19.4		41.2	242	07.4	77		0	18		43	04	14 43 56	2 41 54	
14	27	19.5		40.2	256	34.1	77		10	12		38	6	00	14 56 55	
15	42	19.7		39.2	271	00.8	77		20	12		38	6	00	2 27 56	
16	57	19.8		38.2	285	27.6	78		30	5	03	32	5	56	2 13 57	
17	72	20.0	-4	37.3	299	54.4	78	+17	30	4	58	28	53	15 49 47	1 59 58	
18	87	20.2	-4	36.3	314	21.2	78	+17	30	4	51	5	23	5	50	42 60
19	102	20.3		35.3	328	48.2	80		40	4	51	5	23	5	50	32 61
20	117	20.5		34.3	343	15.1	79	+17	45	4	42	5	17	5	47	1 20 63
21	132	20.6		33.4	357	42.1	80	+16	50	30		10	43	16 12 43	1 07 64	
22	147	20.8		32.4	12	09.2	81		50	30		10	43	27 41	0 50 66	
23	162	20.9		31.4	26	36.3	81		52	25		06	41	35 39	43 66	
24	177	21.1	-4	30.4	41	03.4	81	+16	54	18	5	02	38	42 39	34 68	
									56	11	4	58	36	16 51 37	25 68	
									58	4	03	53	33	17 01 35	14 70	
									60	3	54	4	47	5	30	17 13 32
									60	3	54	4	47	5	30	0 01 72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 54 ^m 3		Mag: -4.6 PMG: 13 ^h 29 ^m		Mag: +1.3 PMG: 14 ^h 42 ^m		Mag: -2.4 PMG: 2 ^h 19 ^m		Mag: +0.5 PMG: 6 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	165	53.3	157	01.3	139	24.8	325	10.2	259	01.5
1	180	55.8	172	04.2	154	25.5	340	12.9	274	03.8
2	195	58.3	187	07.2	169	26.3	355	15.6	289	06.1
3	211	00.7	202	10.2	184	27.1	10	18.2	304	08.5
4	226	03.2	217	13.2	199	27.8	25	20.9	319	10.8
5	241	05.7	232	16.1	214	28.6	40	23.6	334	13.1
6	256	08.1	247	19.1	229	29.3	55	26.2	349	15.5
7	271	10.6	262	22.1	244	30.1	70	28.9	4	17.8
8	286	13.0	277	25.1	259	30.8	85	31.6	19	20.2
9	301	15.5	292	28.1	274	31.6	100	34.2	34	22.5
10	316	18.0	307	31.1	289	32.3	115	36.9	49	24.8
11	331	20.4	322	34.1	304	33.1	130	39.6	64	27.2
12	346	22.9	337	37.1	319	33.8	145	42.2	79	29.5
13	1	25.4	352	40.1	334	34.6	160	44.9	94	31.9
14	16	27.8	7	43.1	349	35.3	175	47.6	109	34.2
15	31	30.3	22	46.1	4	36.1	190	50.3	124	36.5
16	46	32.8	37	49.1	19	36.8	205	52.9	139	38.9
17	61	35.2	52	52.1	34	37.6	220	55.6	154	41.2
18	76	37.7	67	55.2	49	38.3	235	58.3	169	43.5
19	91	40.1	82	58.2	64	39.1	251	00.9	184	45.9
20	106	42.6	98	01.2	79	39.8	266	03.6	199	48.2
21	121	45.1	113	04.3	94	40.6	281	06.3	214	50.6
22	136	47.5	128	07.3	109	41.3	296	08.9	229	52.9
23	151	50.0	143	10.3	124	42.1	311	11.6	244	55.2
24	166	52.5	158	13.4	139	42.8	326	14.3	259	57.6
Dif	—		+30	+1	+8	+7	+27	+1	+23	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 4 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 9 20 ^h : 57 ^m 8 R°: 51 ^m											
	PMG: 12 ^h 10 ^m 5			SD: 15 ^h 8 PMG: 22 ^h 03 ^m					Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177	21.1	-4 30.4	41	03.4	+16 42.7	53	60 N	17 48	18 29	19 18	13 54 78	5 27 29		
1	192	21.3	29.4	55	30.6	82 37.4	53	58	50	29	14	14 03 76	17 31		
2	207	21.4	28.5	69	57.9	83 32.0	54	56	51	28	12	12 74	08 33		
3	222	21.6	27.5	84	25.2	83 26.5	55	54	53	28	09	19 73	5 00 35		
4	237	21.7	26.5	98	52.6	84 20.9	56	52	54	28	07	26 71	4 53 36		
5	252	21.9	-4 25.5	113	20.0	84 +16 15.2	57	50	17 55	18 28	19 05	14 32 69	4 47 37		
6	267	22.0	-4 24.6	127	47.4	84 +16 09.4	58	45	17 58	18 28	19 02	14 45 66	4 33 40		
7	282	22.2	23.6	142	15.0	86 +16 03.5	59	40	18 01	28	18 59	14 56 64	21 43		
8	297	22.4	22.6	156	42.5	85 +15 57.5	60	35	03	28	57	15 05 62	12 44		
9	312	22.5	21.6	171	10.1	86 51.4	61	30	05	28	56	13 60	4 03 46		
10	327	22.7	20.6	185	37.8	87 45.3	61	20	08	30	55	27 57	3 48 49		
11	342	22.8	-4 19.7	200	05.5	87 +15 39.0	63	10 N	18 11	18 32	18 56	15 39 55	3 35 51		
12	357	23.0	-4 18.7	214	33.3	88 +15 32.7	63	0	18 14	18 34	18 59	15 51 51	3 23 53		
13	12	23.2	17.7	229	01.2	89 26.2	65	10 S	17	38	19 02	16 02 49	3 10 55		
14	27	23.3	16.7	243	29.0	88 19.7	65	20	20	42	08	14 47	2 57 58		
15	42	23.5	15.8	257	57.0	90 13.1	66	30	24	48	16	28 43	42 60		
16	57	23.6	14.8	272	25.0	90 +15 06.4	67	35	26	52	22	36 42	33 62		
17	72	23.8	-4 13.8	286	53.0	90 +14 59.7	67	40	18 29	18 56	19 28	16 45 40	2 23 63		
18	87	24.0	-4 12.8	301	21.1	91 +14 52.8	69	45	18 32	19 02	19 37	16 55 38	2 11 66		
19	102	24.1	11.8	315	49.3	92 45.9	69	50	36	08	48	17 08 34	1 56 69		
20	117	24.3	10.9	330	17.5	92 38.9	70	52	37	12	53	14 33	49 70		
21	132	24.4	09.9	344	45.8	93 31.8	71	54	39	15	19 59	21 31	42 71		
22	147	24.6	08.9	359	14.1	93 24.6	72	56	41	19	20 05	28 29	33 73		
23	162	24.8	07.9	13	42.5	94 17.4	72	58	44	24	13	36 28	24 75		
24	177	24.9	-4 06.9	28	11.0	95 +14 10.1	73	60 S	18 46	19 29	20 22	17 45 25	1 13 77		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 50 ^m 4		Mag: -4.6 PMG: 13 ^h 24 ^m		Mag: +1.4 PMG: 14 ^h 40 ^m		Mag: -2.4 PMG: 2 ^h 15 ^m		Mag: +0.5 PMG: 6 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	166	52.5	158 13.4	+12 02.5	139 42.8	+11 19.5	326 14.3	-7 01.6	259 57.6	-22 05.4
1	181	54.9	173 16.4	02.6	154 43.6	20.2	341 17.0	01.5	274 59.9	05.4
2	196	57.4	188 19.5	02.7	169 44.3	20.9	356 19.6	01.4	290 02.3	05.4
3	211	59.9	203 22.6	02.8	184 45.1	21.5	11 22.3	01.3	305 04.6	05.4
4	227	02.3	218 25.6	02.9	199 45.8	22.2	26 25.0	01.2	320 07.0	05.4
5	242	04.8	233 28.7	+12 03.0	214 46.6	+11 22.9	41 27.7	-7 01.2	335 09.3	-22 05.4
6	257	07.3	248 31.8	+12 03.1	229 47.3	+11 23.5	56 30.3	-7 01.1	350 11.6	-22 05.4
7	272	09.7	263 34.8	03.2	244 48.1	24.2	71 33.0	01.0	5 14.0	05.4
8	287	12.2	278 37.9	03.3	259 48.8	24.9	86 35.7	00.9	20 16.3	05.4
9	302	14.6	293 41.0	03.4	274 49.6	25.5	101 38.3	00.8	35 18.7	05.4
10	317	17.1	308 44.1	03.5	289 50.3	26.2	116 41.0	00.7	50 21.0	05.4
11	332	19.6	323 47.2	+12 03.6	304 51.1	+11 26.9	131 43.7	-7 00.6	65 23.3	-22 05.4
12	347	22.0	338 50.3	+12 03.7	319 51.8	+11 27.5	146 46.4	-7 00.5	80 25.7	-22 05.4
13	2	24.5	353 53.4	03.8	334 52.6	28.2	161 49.0	00.4	95 28.0	05.4
14	17	27.0	8 56.5	03.9	349 53.3	28.9	176 51.7	00.3	110 30.4	05.4
15	32	29.4	23 59.6	04.0	4 54.1	29.5	191 54.4	00.2	125 32.7	05.4
16	47	31.9	39 02.7	04.0	19 54.8	30.2	206 57.1	00.2	140 35.1	05.4
17	62	34.4	54 05.8	+12 04.1	34 55.6	+11 30.9	221 59.7	-7 00.1	155 37.4	-22 05.4
18	77	36.8	69 08.9	+12 04.2	49 56.3	+11 31.5	237 02.4	-7 00.0	170 39.8	-22 05.4
19	92	39.3	84 12.0	04.3	64 57.1	32.2	252 05.1	-6 59.9	185 42.1	05.4
20	107	41.8	99 15.1	04.3	79 57.8	32.9	267 07.8	59.8	200 44.4	05.4
21	122	44.2	114 18.3	04.4	94 58.6	33.5	282 10.4	59.7	215 46.8	05.4
22	137	46.7	129 21.4	04.5	109 59.3	34.2	297 13.1	59.6	230 49.1	05.4
23	152	49.1	144 24.5	04.5	125 00.1	34.8	312 15.8	59.5	245 51.5	05.4
24	167	51.6	159 27.7	+12 04.6	140 00.8	+11 35.5	327 18.5	-6 59.4	260 53.8	-22 05.4
Dif	—		+31	+1	+8	+7	+27	+1	+23	0

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 11 ^d 4 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 5 20 ^h : 57 ^m 3 Rº: 49 ^m													
	PMG: 12 ^h 10 ^m 2			SD: 15 ^h 7 PMG: 22 ^h 54 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m	
0	177	24.9	-4	06.9	28	11.0	+14	10.1	60 N	5	02	5	50	6	31	15 12 80	
1	192	25.1		06.0	42	39.5	+14	02.7	58	05	51		51	30	19 77	5 56 23	
2	207	25.2		05.0	57	08.0	+13	55.2	56	08	51		28		26 74	48 25	
3	222	25.4		04.0	71	36.7		47.7	54	11	52		27		32 72	41 27	
4	237	25.6		03.0	86	05.3		40.1	52	13	52		25		37 71	35 29	
5	252	25.7	-4	02.0	100	34.1	+13	32.4	50	5	15	5	52	6	24	29 31	5 24 32
6	267	25.9	-4	01.1	115	02.9	+13	24.6	45	5	18	5	52	6	22	15 41 70	5 13 35
7	282	26.0	-4	00.1	129	31.7		16.8	40	21	52		19		15 51 66	5 04 38	
8	297	26.2	-3	59.1	144	00.6		08.9	35	23	52		17		16 00 63	5 04 38	
9	312	26.4		58.1	158	29.6	+13	00.9	30	24	52		16		07 61	4 56 40	
10	327	26.5		57.1	172	58.6	+12	52.9	20	25	51		13		13 59	49 42	
11	342	26.7	-3	56.2	187	27.6	+12	44.8	10 N	5	24	5	49	6	10	24 55	37 45
12	357	26.9	-3	55.2	201	56.8	+12	36.6	0	5	22	5	46	6	07	16 34 52	4 26 48
13	12	27.0		54.2	216	25.9		28.4	10 S	18	43		04		16 42 50	4 16 50	
14	27	27.2		53.2	230	55.2		20.1	20	13	39		6	01	16 51 47	4 05 54	
15	42	27.4		52.2	245	24.5		11.8	30	05	33		5	57	17 01 43	3 55 56	
16	57	27.5		51.3	259	53.8	+12	03.4	35	5	00		29		11 40	42 60	
17	72	27.7	-3	50.3	274	23.2	+11	54.9	40	4	53	5	25	5	52	18 38	35 61
18	87	27.8	-3	49.3	288	52.7	+11	46.4	45	4	45	5	20	5	49	17 25 35	3 26 64
19	102	28.0		48.3	303	22.2		37.8	50	34	13		46		17 33 33	3 17 66	
20	117	28.2		47.3	317	51.8		29.1	52	29	10		44		42 30	3 05 69	
21	132	28.3		46.4	332	21.4		20.4	54	23	06		42		47 28	2 59 71	
22	147	28.5		45.4	346	51.1		11.7	56	16	5	02	40		52 27	53 73	
23	162	28.7		44.4	1	20.8	+11	02.9	58	09	4	58	38		17 57 25	46 75	
24	177	28.8	-3	43.4	15	50.6	+10	54.0	60 S	4	00	4	53	5	36	18 04 22	39 77
																18 10 21	2 30 80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 46 ^m 5		Mag: -4.6 PMG: 13 ^h 19 ^m		Mag: +1.4 PMG: 14 ^h 39 ^m		Mag: -2.4 PMG: 2 ^h 10 ^m		Mag: +0.5 PMG: 6 ^h 35 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	167	51.6	159	27.7	140	00.8	327	18.5	260	53.8
1	182	54.1	174	30.8	155	01.6	342	21.2	275	56.2
2	197	56.5	189	33.9	170	02.3	357	23.8	290	58.5
3	212	59.0	204	37.1	185	03.1	12	26.5	306	00.9
4	228	01.5	219	40.3	200	03.8	27	29.2	321	03.2
5	243	03.9	234	43.4	215	04.6	42	31.9	336	05.5
6	258	06.4	249	46.6	230	05.3	57	34.5	351	07.9
7	273	08.9	264	49.7	245	06.1	72	37.2	6	10.2
8	288	11.3	279	52.9	260	06.8	87	39.9	21	12.6
9	303	13.8	294	56.1	275	07.6	102	42.6	36	14.9
10	318	16.2	309	59.2	290	08.3	117	45.3	51	17.3
11	333	18.7	325	02.4	305	09.1	132	47.9	66	19.6
12	348	21.2	340	05.6	320	09.8	147	50.6	81	22.0
13	3	23.6	355	08.8	335	10.6	162	53.3	96	24.3
14	18	26.1	10	12.0	350	11.3	177	56.0	111	26.7
15	33	28.6	25	15.2	5	12.1	192	58.7	126	29.0
16	48	31.0	40	18.4	20	12.8	208	01.3	141	31.4
17	63	33.5	55	21.6	35	13.6	223	04.0	156	33.7
18	78	36.0	70	24.8	50	14.3	238	06.7	171	36.1
19	93	38.4	85	28.0	65	15.1	253	09.4	186	38.4
20	108	40.9	100	31.2	80	15.8	268	12.1	201	40.7
21	123	43.4	115	34.4	95	16.6	283	14.7	216	43.1
22	138	45.8	130	37.6	110	17.3	298	17.4	231	45.4
23	153	48.3	145	40.8	125	18.1	313	20.1	246	47.8
24	168	50.7	160	44.1	140	18.8	328	22.8	261	50.1
Dif	—		+32	0	+7	+7	+27	+1	+23	0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 09 ^m 9		Edad: 12 ^d 4 PHE { 4 ^h : 57/2 12 ^h : 57/0 20 ^h : 56/8 R°: 47 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	177	28.8	-3 43.4	15	50.6	+10 54.0	60 N	17 53	18 34	19 23	16 32	78	6 19	19	
1	192	29.0		30	20.5 ¹⁰⁹	45.1 ⁸⁹	58	54	33	19	36	76	13	22	
2	207	29.2	41.4	44	50.4 ¹⁰⁹	36.1 ⁹⁰	56	55	33	16	40	74	08	24	
3	222	29.3	40.5	59	20.4 ¹¹⁰	27.1 ⁹⁰	54	57	32	13	44	72	04	25	
4	237	29.5	39.5	73	50.4 ¹¹⁰	18.0 ⁹¹	52	58	31	11	48	70	6 00	27	
5	252	29.6	-3 38.5	88	20.4 ¹¹⁰	+10 08.9 ⁹¹	50	17 59	18 31	19 08	16 51	68	5 56	29	
6	267	29.8	-3 37.5	102	50.5 ¹¹¹	+9 59.8 ⁹¹	45	18 01	18 30	19 04	16 57	65	5 48	32	
7	282	30.0	36.5	117	20.7 ¹¹²	50.6 ⁹²	40	03	30	19 01	17 03	62	42	34	
8	297	30.1	35.6	131	50.9 ¹¹²	41.3 ⁹³	35	04	30	18 59	08 59		36	36	
9	312	30.3	34.6	146	21.2 ¹¹³	32.0 ⁹³	30	06	30	57	12 58		31	38	
10	327	30.5	33.6	160	51.5 ¹¹³	22.7 ⁹³	20	08	30	56	19 54		22	42	
11	342	30.6	-3 32.6	175	21.9 ¹¹⁴	+9 13.3 ⁹⁴	10 N	18 11	18 32	18 56	17 26	50	5 14	45	
12	357	30.8	-3 31.6	189	52.4 ¹¹⁵	+9 03.9 ⁹⁴	0	18 13	18 34	18 58	17 32	47	5 06	49	
13	12	31.0	30.6	204	22.8 ¹¹⁴	+8 54.5 ⁹⁴	10 S	16	37	19 01	38 44		4 59	51	
14	27	31.1	29.7	218	53.4 ¹¹⁶	45.0 ⁹⁵	20	18	40	06	44 41		51	54	
15	42	31.3	28.7	233	24.0 ¹¹⁶	35.4 ⁹⁶	30	22	46	14	51 38		42	58	
16	57	31.5	27.7	247	54.6 ¹¹⁶	25.9 ⁹⁵	35	24	49	19	17 56	35	36	61	
17	72	31.6	-3 26.7	262	25.3 ¹¹⁷	+8 16.3 ⁹⁶	40	18 26	18 53	19 25	18 00	33	4 30	63	
18	87	31.8	-3 25.7	276	56.0 ¹¹⁷	+8 06.6 ⁹⁷	45	18 28	18 58	19 33	18 06	30	4 23	66	
19	102	32.0	24.8	291	26.8 ¹¹⁸	+7 56.9 ⁹⁷	50	31	19 04	43	12 27	14	70		
20	117	32.1	23.8	305	57.6 ¹¹⁸	47.2 ⁹⁷	52	33	07	48	15 26		10	71	
21	132	32.3	22.8	320	28.5 ¹¹⁹	37.5 ⁹⁷	54	34	10	19 53	19 23		06	73	
22	147	32.5	21.8	334	59.4 ¹¹⁹	27.7 ⁹⁸	56	36	14	20 00	22 22		4 01	75	
23	162	32.6	20.8	349	30.4 ¹²⁰	17.9 ⁹⁸	58	38	18	07	26 20		3 56	76	
24	177	32.8	-3 19.8	4	01.4 ¹²⁰	+7 08.1 ⁹⁸	60 S	18 40	19 23	20 15	18 31	17	3 50	79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 42 ^m 5		Mag: -4.5 PMG: 13 ^h 14 ^m		Mag: +1.4 PMG: 14 ^h 38 ^m		Mag: -2.4 PMG: 2 ^h 06 ^m		Mag: +0.5 PMG: 6 ^h 32 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	168	50.7	160	44.1	+12 05.3	140	18.8	+11 51.4	328	22.8	-6 57.2	261	50.1	-22 05.4
1	183	53.2	175	47.3	05.3	155	19.5	52.0	343	25.5	57.1	276	52.5	05.4
2	198	55.7	190	50.5	05.3	170	20.3	52.7	358	28.2	57.0	291	54.8	05.4
3	213	58.1	205	53.8	05.3	185	21.0	53.4	13	30.8	56.9	306	57.2	05.4
4	229	00.6	220	57.0	05.3	200	21.8	54.0	28	33.5	56.8	321	59.5	05.4
5	244	03.1	236	00.2	+12 05.3	215	22.5	+11 54.7	43	36.2	-6 56.7	337	01.9	-22 05.4
6	259	05.5	251	03.5	+12 05.2	230	23.3	+11 55.3	58	38.9	-6 56.6	352	04.2	-22 05.4
7	274	08.0	266	06.7	05.2	245	24.0	56.0	73	41.6	56.5	7	06.6	05.4
8	289	10.5	281	10.0	05.2	260	24.8	56.6	88	44.3	56.4	22	08.9	05.4
9	304	12.9	296	13.2	05.2	275	25.5	57.3	103	46.9	56.3	37	11.3	05.4
10	319	15.4	311	16.5	05.2	290	26.3	58.0	118	49.6	56.2	52	13.6	05.4
11	334	17.8	326	19.8	+12 05.1	305	27.0	+11 58.6	133	52.3	-6 56.1	67	16.0	-22 05.4
12	349	20.3	341	23.0	+12 05.1	320	27.8	+11 59.3	148	55.0	-6 56.0	82	18.3	-22 05.4
13	4	22.8	356	26.3	05.1	335	28.5	+11 59.9	163	57.7	56.0	97	20.7	05.4
14	19	25.2	11	29.6	05.0	350	29.3	+12 00.6	179	00.4	55.9	112	23.0	05.4
15	34	27.7	26	32.9	05.0	5	30.0	01.2	194	03.1	55.8	127	25.4	05.4
16	49	30.2	41	36.1	04.9	20	30.8	01.9	209	05.7	55.7	142	27.7	05.4
17	64	32.6	56	39.4	+12 04.9	35	31.5	+12 02.6	224	08.4	-6 55.6	157	30.1	-22 05.4
18	79	35.1	71	42.7	+12 04.9	50	32.2	+12 03.2	239	11.1	-6 55.5	172	32.5	-22 05.4
19	94	37.6	86	46.0	04.8	65	33.0	03.9	254	13.8	55.4	187	34.8	05.4
20	109	40.0	101	49.3	04.8	80	33.7	04.5	269	16.5	55.3	202	37.2	05.4
21	124	42.5	116	52.6	04.7	95	34.5	05.2	284	19.2	55.2	217	39.5	05.4
22	139	45.0	131	55.9	04.6	110	35.2	05.8	299	21.9	55.1	232	41.9	05.4
23	154	47.4	146	59.2	04.6	125	36.0	06.5	314	24.5	55.0	247	44.2	05.4
24	169	49.9	162	02.5	+12 04.5	140	36.7	+12 07.1	329	27.2	-6 54.9	262	46.6	-22 05.4
Dif	—	+33	0	+7	+7	+27	+1	+24						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 13 ^d .4 PHE { 4 ^h : 56'6 12 ^h : 56'5 20 ^h : 56'3												
	PMG: 12 ^h 09 ^m 7			SD: 15'4 PMG: **h **m R°: **m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	32.8	-3 19.8	4	01.4	+7 08.1	98	60 N	4 56	5 44	6 25	17 50	77	6 38	17	
1	192	33.0		18	32.5 ¹²¹	+6 58.3	98	58	4 59	45	24	52	75	35	19	
2	207	33.1		33	03.6 ¹²¹		99	56	5 03	46	23	54	72	32	21	
3	222	33.3		47	34.7 ¹²¹		99	54	06	47	22	56	70	29	23	
4	237	33.5		62	05.9 ¹²²		100	52	08	47	21	58	68	27	24	
5	252	33.6	-3 14.9	76	37.2 ¹²³	+6 18.6	99	50	5 10	5 48	6 20	17 59	67	6 25	26	
6	267	33.8	-3 13.9	91	08.5 ¹²³	+6 08.6	100	45	5 15	5 49	6 18	18 02	64	6 20	29	
7	282	34.0		105	39.8 ¹²³	+5 58.6	100	40	18	49	16	05	61	16	32	
8	297	34.2		120	11.2 ¹²⁴		100	35	20	49	15	07	59	12	35	
9	312	34.3		134	42.6 ¹²⁴		101	30	22	49	13	10	56	09	37	
10	327	34.5		149	14.1 ¹²⁵		101	20	23	49	11	13	52	6 04	40	
11	342	34.7	-3 09.0	163	45.6 ¹²⁵	+5 18.4	100	10 N	5 23	5 48	6 09	18 16	49	5 59	44	
12	357	34.8	-3 08.0	178	17.1 ¹²⁵	+5 08.3	101	0	5 22	5 46	6 06	18 19	46	5 55	46	
13	12	35.0		192	48.7 ¹²⁶	+4 58.1	102	10 S	19	43	04	22	43	50	50	
14	27	35.2		207	20.3 ¹²⁶		101	20	14	39	6 01	25	40	45	53	
15	42	35.3		221	52.0 ¹²⁷		102	30	06	34	5 58	29	36	40	57	
16	57	35.5		236	23.7 ¹²⁷		101	35	5 01	31	57	31	34	37	59	
17	72	35.7	-3 03.1	250	55.5 ¹²⁸	+4 17.5	102	40	4 55	5 27	5 55	18 33	32	5 33	61	
18	87	35.8	-3 02.1	265	27.2 ¹²⁷	+4 07.3	102	45	4 47	5 23	5 52	18 36	29	5 29	64	
19	102	36.0		279	59.1 ¹²⁹	+3 57.1	102	50	38	16	49	39	26	24	67	
20	117	36.2	-3 00.2	294	30.9 ¹²⁸		102	52	33	14	48	41	24	21	70	
21	132	36.4	-2 59.2	309	02.8 ¹²⁹		102	54	27	10	46	42	22	19	71	
22	147	36.5		323	34.7 ¹²⁹		103	56	21	07	45	44	20	16	73	
23	162	36.7		338	06.7 ¹³⁰		102	58	14	5 03	43	46	18	12	76	
24	177	36.9	-2 56.2	352	38.7 ¹³⁰	+3 05.9	103	60 S	4 06	4 58	5 41	18 48	16	5 09	78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 38 ^m 6		Mag: -4.5 PMG: 13 ^h 09 ^m			Mag: +1.4 PMG: 14 ^h 37 ^m			Mag: -2.4 PMG: 2 ^h 02 ^m			Mag: +0.5 PMG: 6 ^h 28 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	169	49.9	162	02.5	+12 04.5	140	36.7	+12 07.1	329	27.2	-6 54.9	262	46.6	-22 05.4		
1	184	52.3	177	05.8	04.5	155	37.5	07.8	344	29.9	54.8	277	48.9	05.4		
2	199	54.8	192	09.1	04.4	170	38.2	08.4	359	32.6	54.7	292	51.3	05.4		
3	214	57.3	207	12.5	04.3	185	39.0	09.1	14	35.3	54.6	307	53.6	05.4		
4	229	59.7	222	15.8	04.3	200	39.7	09.7	29	38.0	54.5	322	56.0	05.4		
5	245	02.2	237	19.1	+12 04.2	215	40.5	+12 10.4	44	40.7	-6 54.4	337	58.3	-22 05.4		
6	260	04.7	252	22.4	+12 04.1	230	41.2	+12 11.1	59	43.4	-6 54.3	353	00.7	-22 05.4		
7	275	07.1	267	25.8	04.0	245	41.9	11.7	74	46.0	54.2	8	03.0	05.4		
8	290	09.6	282	29.1	03.9	260	42.7	12.4	89	48.7	54.1	23	05.4	05.4		
9	305	12.1	297	32.4	03.9	275	43.4	13.0	104	51.4	54.0	38	07.8	05.4		
10	320	14.5	312	35.8	03.8	290	44.2	13.7	119	54.1	53.9	53	10.1	05.4		
11	335	17.0	327	39.1	+12 03.7	305	44.9	+12 14.3	134	56.8	-6 53.8	68	12.5	-22 05.4		
12	350	19.5	342	42.5	+12 03.6	320	45.7	+12 15.0	149	59.5	-6 53.7	83	14.8	-22 05.4		
13	5	21.9	357	45.8	03.5	335	46.4	15.6	165	02.2	53.6	98	17.2	05.4		
14	20	24.4	12	49.2	03.4	350	47.2	16.3	180	04.9	53.5	113	19.5	05.4		
15	35	26.8	27	52.6	03.3	5	47.9	16.9	195	07.6	53.4	128	21.9	05.4		
16	50	29.3	42	55.9	03.2	20	48.7	17.6	210	10.3	53.3	143	24.2	05.4		
17	65	31.8	57	59.3	+12 03.1	35	49.4	+12 18.2	225	13.0	-6 53.3	158	26.6	-22 05.4		
18	80	34.2	73	02.7	+12 03.0	50	50.1	+12 18.9	240	15.6	-6 53.2	173	29.0	-22 05.4		
19	95	36.7	88	06.0	02.9	65	50.9	19.5	255	18.3	53.1	188	31.3	05.4		
20	110	39.2	103	09.4	02.7	80	51.6	20.2	270	21.0	53.0	203	33.7	05.4		
21	125	41.6	118	12.8	02.6	95	52.4	20.8	285	23.7	52.9	218	36.0	05.4		
22	140	44.1	133	16.2	02.5	110	53.1	21.5	300	26.4	52.8	233	38.4	05.4		
23	155	46.6	148	19.6	02.4	125	53.9	22.1	315	29.1	52.7	248	40.7	05.4		
24	170	49.0	163	22.9	+12 02.3	140	54.6	+12 22.8	330	31.8	-6 52.6	263	43.1	-22 05.4		
Dif	—		+34		-1	+7		+7	+27		+1	+24				

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 14 ^d 4 PHE { 4 ^h : 56 ^h 1 12 ^h : 55 ^h 9 20 ^h : 55 ^h 7						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	177	36.9	-2	56.2	352	38.7	+3 05.9	60 N	17 58	18 39	19 28	19 07 75	6 55 15		
1	192	37.0		55.2	7	10.7 ¹³⁰	+2 55.7 ¹⁰²	58	17 59	38	24	07 72	54 18		
2	207	37.2		54.3	21	42.8 ¹³¹	45.4 ¹⁰³	56	18 00	37	20	06 71	53 20		
3	222	37.4		53.3	36	14.9 ¹³¹	35.2 ¹⁰²	54	00	36	17	06 69	52 22		
4	237	37.6		52.3	50	47.0 ¹³¹	24.9 ¹⁰³	52	01	35	14	06 67	51 24		
5	252	37.7	-2	51.3	65	19.2 ¹³²	+2 14.6 ¹⁰³	50	18 02	18 34	19 12	19 06 66	6 51 25		
6	267	37.9	-2	50.3	79	51.4 ¹³²	+2 04.4 ¹⁰²	45	18 03	18 33	19 07	19 06 62	6 49 28		
7	282	38.1		49.3	94	23.6 ¹³²	+1 54.1 ¹⁰³	40	05	32	03	06 59	48 31		
8	297	38.2		48.3	108	55.9 ¹³³	43.8 ¹⁰³	35	06	31	19 01	06 57	47 33		
9	312	38.4		47.4	123	28.2 ¹³³	33.5 ¹⁰³	30	07	31	18 59	06 54	46 35		
10	327	38.6		46.4	138	00.5 ¹³³	23.3 ¹⁰²	20	09	31	57	05 51	44 39		
11	342	38.8	-2	45.4	152	32.9 ¹³⁴	+1 13.0 ¹⁰³	10 N	18 11	18 32	18 56	19 05 48	6 43 42		
12	357	38.9	-2	44.4	167	05.3 ¹³⁴	+1 02.7 ¹⁰³	0	18 13	18 33	18 57	19 05 45	6 41 46		
13	12	39.1		43.4	181	37.7 ¹³⁴	+0 52.5 ¹⁰²	10 S	15	36	19 00	05 42	40 48		
14	27	39.3		42.4	196	10.1 ¹³⁴	42.2 ¹⁰³	20	17	39	04	05 38	38 52		
15	42	39.4		41.4	210	42.6 ¹³⁵	31.9 ¹⁰³	30	19	43	11	05 35	37 55		
16	57	39.6		40.5	225	15.1 ¹³⁵	21.7 ¹⁰²	35	21	46	16	05 33	36 57		
17	72	39.8	-2	39.5	239	47.6 ¹³⁵	+0 11.4 ¹⁰³	40	18 23	18 50	19 22	19 05 30	6 34 60		
18	87	40.0	-2	38.5	254	20.1 ¹³⁵	+0 01.2 ¹⁰²	45	18 25	18 54	19 29	19 05 27	6 33 63		
19	102	40.1		37.5	268	52.7 ¹³⁶	-0 09.0 ¹⁰²	50	27	19 00	38	05 24	31 67		
20	117	40.3		36.5	283	25.3 ¹³⁶	19.2 ¹⁰²	52	28	02	43	05 23	31 68		
21	132	40.5		35.5	297	57.9 ¹³⁶	29.5 ¹⁰³	54	30	05	48	04 22	30 69		
22	147	40.6		34.5	312	30.5 ¹³⁶	39.7 ¹⁰²	56	31	08	19 54	04 20	29 71		
23	162	40.8		33.6	327	03.2 ¹³⁷	-0 49.8 ¹⁰¹	58	33	12	20 00	04 18	28 73		
24	177	41.0	-2	32.6	341	35.8 ¹³⁶	-1 00.0 ¹⁰²	60 S	18 34	19 16	20 08	19 04 16	6 27 76		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 12 ^h 34 ^m 7		Mag: -4.5 PMG: 13 ^h 03 ^m		Mag: +1.4 PMG: 14 ^h 36 ^m		Mag: -2.4 PMG: 1 ^h 58 ^m		Mag: +0.5 PMG: 6 ^h 24 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	170	49.0	163	22.9	+12	02.3	140	54.6	+12	22.8					
1	185	51.5	178	26.3		02.1	155	55.4		23.4					
2	200	53.9	193	29.7		02.0	170	56.1		24.1					
3	215	56.4	208	33.1		01.9	185	56.8		24.7					
4	230	58.9	223	36.5		01.7	200	57.6		25.4					
5	246	01.3	238	39.9	+12	01.6	215	58.3	+12	26.0					
6	261	03.8	253	43.4	+12	01.5	230	59.1	+12	26.7					
7	276	06.3	268	46.8		01.3	245	59.8		27.3					
8	291	08.7	283	50.2		01.2	261	00.6		27.9					
9	306	11.2	298	53.6		01.0	276	01.3		28.6					
10	321	13.7	313	57.0		00.9	291	02.1		29.2					
11	336	16.1	329	00.4	+12	00.7	306	02.8	+12	29.9					
12	351	18.6	344	03.9	+12	00.6	321	03.5	+12	30.5					
13	6	21.1	359	07.3		00.4	336	04.3		31.2					
14	21	23.5	14	10.7		00.2	351	05.0		31.8					
15	36	26.0	29	14.2	+12	00.1	6	05.8		32.5					
16	51	28.4	44	17.6	+11	59.9	21	06.5		33.1					
17	66	30.9	59	21.1	+11	59.7	36	07.3	+12	33.8					
18	81	33.4	74	24.5	+11	59.6	51	08.0	+12	34.4					
19	96	35.8	89	28.0		59.4	66	08.7		35.1					
20	111	38.3	104	31.4		59.2	81	09.5		35.7					
21	126	40.8	119	34.9		59.0	96	10.2		36.3					
22	141	43.2	134	38.3		58.9	111	11.0		37.0					
23	156	45.7	149	41.8		58.7	126	11.7		37.6					
24	171	48.2	164	45.3	+11	58.5	141	12.5	+12	38.3					
Dif	—		+34		-2		+7		+6						
								+27		+1					
										+24					
										0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 15 ^d 4 PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /4 20 ^h : 55 ^m /2						Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 09 ^m 1			SD: 15 ^d 2 PMG: 1 ^h 16 ^m R°: 45 ^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	m	
0	177	41.0	-2 32.6	341	35.8		-1 00.0		60 N	4 49	5 38	6 19	20 22	73	7 10	16		
1	192	41.2		356	08.5 ¹³⁷		-1 10.2 ¹⁰²		58		54	40	19	19	71	12	18	
2	207	41.3		10	41.3 ¹³⁸		20.3 ¹⁰¹		56	4 57	41	18	17	69		13	20	
3	222	41.5		25	14.0 ¹³⁷		30.5 ¹⁰²		54	5 01	42	17	15	67		14	22	
4	237	41.7		39	46.8 ¹³⁸		40.6 ¹⁰¹		52		03	43	16	13	66		15	23
5	252	41.9	-2 27.6	54	19.6 ¹³⁸	-1 50.7 ¹⁰¹			50	5 06	5 44	6 16	20 12	64	7 16	24		
6	267	42.0	-2 26.7	68	52.4 ¹³⁸	-2 00.8 ¹⁰¹			45	5 11	5 45	6 14	20 08	61	7 17	28		
7	282	42.2		83	25.2 ¹³⁸		10.9 ¹⁰¹		40		15	46	13	05	58		19	30
8	297	42.4		97	58.0 ¹³⁸		20.9 ¹⁰⁰		35		17	47	12	03	55		20	33
9	312	42.6		112	30.9 ¹³⁹		31.0 ¹⁰¹		30		19	47	11	20 00	54		21	35
10	327	42.7		127	03.7 ¹³⁸		41.0 ¹⁰⁰		20		22	47	09	19 56	51		23	39
11	342	42.9	-2 21.7	141	36.6 ¹³⁹	-2 51.0 ¹⁰⁰			10 N	5 22	5 47	6 08	19 53	47	7 25	42		
12	357	43.1	-2 20.7	156	09.5 ¹³⁹	-3 00.9 ⁹⁹			0	5 21	5 45	6 06	19 50	44	7 27	44		
13	12	43.3		170	42.4 ¹³⁹		10.9 ¹⁰⁰		10 S		19	43	04	47	41	28	48	
14	27	43.4		185	15.4 ¹⁴⁰		20.8 ⁹⁹		20		14	40	02	43	39	30	51	
15	42	43.6		199	48.3 ¹³⁹		30.7 ⁹⁹		30		08	36	6 00	40	35	32	54	
16	57	43.8		214	21.3 ¹⁴⁰		40.6 ⁹⁹		35	5 03	33	5 58	38	33	33	57		
17	72	44.0	-2 15.8	228	54.2 ¹³⁹	-3 50.5 ⁹⁹			40	4 58	5 29	5 57	19 35	31	7 34	59		
18	87	44.1	-2 14.8	243	27.2 ¹⁴⁰	-4 00.3 ⁹⁸			45	4 50	5 25	5 55	19 32	29	7 36	61		
19	102	44.3		258	00.2 ¹⁴⁰		10.1 ⁹⁸		50		41	20	52	29	25	38	65	
20	117	44.5		272	33.2 ¹⁴⁰		19.9 ⁹⁸		52		37	17	51	28	23	39	66	
21	132	44.7		287	06.2 ¹⁴⁰		29.7 ⁹⁸		54		32	14	50	26	22	39	68	
22	147	44.8		301	39.2 ¹⁴⁰		39.4 ⁹⁷		56		26	11	49	24	21	40	70	
23	162	45.0		316	12.3 ¹⁴¹		49.1 ⁹⁷		58		19	07	47	22	19	41	72	
24	177	45.2	-2 08.9	330	45.3 ¹⁴⁰	-4 58.8 ⁹⁷			60 S	4 12	5 03	5 46	19 20	16	7 43	74		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 30 ^m 7		Mag: -4.4 PMG: 12 ^h 58 ^m			Mag: +1.4 PMG: 14 ^h 34 ^m			Mag: -2.4 PMG: 1 ^h 53 ^m			Mag: +0.5 PMG: 6 ^h 20 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	171	48.2	164	45.3	+11 58.5	141	12.5	+12 38.3	331	36.5	-6 50.2	264	39.7	-22 05.4				
1	186	50.6	179	48.7	58.3	156	13.2	38.9	346	39.2	50.1	279	42.1	05.4				
2	201	53.1	194	52.2	58.1	171	13.9	39.6	1	41.9	50.0	294	44.4	05.4				
3	216	55.5	209	55.7	57.9	186	14.7	40.2	16	44.6	49.9	309	46.8	05.4				
4	231	58.0	224	59.2	57.7	201	15.4	40.8	31	47.3	49.8	324	49.2	05.4				
5	247	00.5	240	02.6	+11 57.5	216	16.2	+12 41.5	46	50.0	-6 49.7	339	51.5	-22 05.4				
6	262	02.9	255	06.1	+11 57.3	231	16.9	+12 42.1	61	52.7	-6 49.6	354	53.9	-22 05.4				
7	277	05.4	270	09.6	57.1	246	17.7	42.8	76	55.4	49.5	9	56.3	05.4				
8	292	07.9	285	13.1	56.9	261	18.4	43.4	91	58.1	49.4	24	58.6	05.4				
9	307	10.3	300	16.6	56.7	276	19.1	44.1	107	00.8	49.3	40	01.0	05.4				
10	322	12.8	315	20.1	56.5	291	19.9	44.7	122	03.5	49.2	55	03.3	05.4				
11	337	15.3	330	23.6	+11 56.3	306	20.6	+12 45.3	137	06.2	-6 49.1	70	05.7	-22 05.4				
12	352	17.7	345	27.1	+11 56.0	321	21.4	+12 46.0	152	08.9	-6 49.0	85	08.1	-22 05.4				
13	7	20.2	0	30.6	55.8	336	22.1	46.6	167	11.6	48.9	100	10.4	05.4				
14	22	22.7	15	34.1	55.6	351	22.8	47.3	182	14.3	48.8	115	12.8	05.4				
15	37	25.1	30	37.6	55.4	6	23.6	47.9	197	17.0	48.7	130	15.2	05.4				
16	52	27.6	45	41.1	55.1	21	24.3	48.5	212	19.7	48.6	145	17.5	05.3				
17	67	30.0	60	44.6	+11 54.9	36	25.1	+12 49.2	227	22.4	-6 48.5	160	19.9	-22 05.3				
18	82	32.5	75	48.2	+11 54.7	51	25.8	+12 49.8	242	25.1	-6 48.4	175	22.3	-22 05.3				
19	97	35.0	90	51.7	54.4	66	26.6	50.5	257	27.8	48.3	190	24.6	05.3				
20	112	37.4	105	55.2	54.2	81	27.3	51.1	272	30.5	48.2	205	27.0	05.3				
21	127	39.9	120	58.7	53.9	96	28.0	51.7	287	33.2	48.1	220	29.4	05.3				
22	142	42.4	136	02.3	53.7	111	28.8	52.4	302	35.9	48.0	235	31.7	05.3				
23	157	44.8	151	05.8	53.5	126	29.5	53.0	317	38.6	47.9	250	34.1	05.3				
24	172	47.3	166	09.3	+11 53.2	141	30.3	+12 53.7	332	41.3	-6 47.8	265	36.5	-22 05.3				
Dif	—		+35	-2		+7	+6		+27	+1		+24						

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 08 ^m 8		Edad: 16 ^d 4 PHE { SD: 15:0 PMG: 2 ^h 01 ^m		4 ^h : 55:1 12 ^h : 54:9 20 ^h : 54:8 Rº: 44 ^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	177	45.2	-2 08.9	330	45.3	-4 58.8	60 N	18 03	18 44	19 33	21 35 72	7 26 17		
1	192	45.4	07.9	345	18.4 ¹⁴¹	-5 08.5 ⁹⁷	58	03	42	29	30 70	30 19		
2	207	45.5	06.9	359	51.4 ¹⁴⁰	18.1 ⁹⁶	56	04	41	25	26 67	33 21		
3	222	45.7	05.9	14	24.5 ¹⁴¹	27.7 ⁹⁶	54	04	39	21	22 66	36 22		
4	237	45.9	05.0	28	57.6 ¹⁴¹	37.2 ⁹⁵	52	05	38	18	19 64	38 25		
5	252	46.1	-2 04.0	43	30.6 ¹⁴⁰	-5 46.8 ⁹⁶	50	18 05	18 37	19 15	21 16 62	7 40 26		
6	267	46.2	-2 03.0	58	03.7 ¹⁴¹	-5 56.3 ⁹⁵	45	18 06	18 35	19 10	21 09 59	7 45 29		
7	282	46.4	02.0	72	36.8 ¹⁴¹	-6 05.7 ⁹⁴	40	07	34	05	21 03 57	49 32		
8	297	46.6	-2 01.0	87	09.9 ¹⁴¹	15.1 ⁹⁴	35	08	33	02	20 58 55	53 34		
9	312	46.8	-2 00.0	101	43.0 ¹⁴¹	24.5 ⁹⁴	30	08	32	19 00	54 53	7 56 36		
10	327	46.9	-1 59.0	116	16.1 ¹⁴¹	33.9 ⁹⁴	20	10	32	18 57	47 50	8 02 39		
11	342	47.1	-1 58.0	130	49.2 ¹⁴¹	-6 43.2 ⁹³	10 N	18 11	18 32	18 56	20 40 47	8 07 41		
12	357	47.3	-1 57.1	145	22.3 ¹⁴¹	-6 52.5 ⁹³	0	18 12	18 33	18 57	20 34 45	8 11 45		
13	12	47.5	56.1	159	55.4 ¹⁴¹	-7 01.8 ⁹³	10 S	13	34	18 59	28 42	16 47		
14	27	47.7	55.1	174	28.5 ¹⁴¹	11.0 ⁹²	20	15	37	19 03	22 39	21 50		
15	42	47.8	54.1	189	01.7 ¹⁴²	20.2 ⁹²	30	17	41	09	15 36	26 54		
16	57	48.0	53.1	203	34.8 ¹⁴¹	29.3 ⁹¹	35	18	43	13	11 34	30 55		
17	72	48.2	-1 52.1	218	07.9 ¹⁴¹	-7 38.4 ⁹¹	40	18 19	18 46	19 18	20 06 32	8 33 58		
18	87	48.4	-1 51.1	232	41.0 ¹⁴¹	-7 47.5 ⁹¹	45	18 21	18 50	19 25	20 01 29	8 37 61		
19	102	48.5	50.1	247	14.1 ¹⁴¹	-7 56.5 ⁹⁰	50	23	55	34	19 54 27	43 63		
20	117	48.7	49.2	261	47.2 ¹⁴¹	-8 05.5 ⁹⁰	52	24	18 57	38	51 26	45 65		
21	132	48.9	48.2	276	20.3 ¹⁴¹	14.4 ⁸⁹	54	25	19 00	43	48 24	47 67		
22	147	49.1	47.2	290	53.4 ¹⁴¹	23.3 ⁸⁹	56	26	03	48	45 22	50 69		
23	162	49.3	46.2	305	26.5 ¹⁴¹	32.2 ⁸⁹	58	27	06	19 54	41 20	53 71		
24	177	49.4	-1 45.2	319	59.6 ¹⁴¹	-8 41.0 ⁸⁸	60 S	18 28	19 10	20 01	19 36 19	8 57 73		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 26 ^m 8		Mag: -4.4 PMG: 12 ^h 52 ^m		Mag: +1.4 PMG: 14 ^h 33 ^m		Mag: -2.4 PMG: 1 ^h 49 ^m		Mag: +0.5 PMG: 6 ^h 17 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	172	47.3	166 09.3	+11 53.2	141 30.3	+12 53.7	332 41.3	-6 47.8	265 36.5	-22 05.3				
1	187	49.8	181 12.9	53.0	156 31.0	54.3	347 44.0	47.7	280 38.8	05.3				
2	202	52.2	196 16.4	52.7	171 31.7	54.9	2 46.7	47.6	295 41.2	05.3				
3	217	54.7	211 20.0	52.4	186 32.5	55.6	17 49.4	47.5	310 43.6	05.3				
4	232	57.1	226 23.5	52.2	201 33.2	56.2	32 52.1	47.4	325 45.9	05.3				
5	247	59.6	241 27.1	+11 51.9	216 34.0	+12 56.8	47 54.8	-6 47.3	340 48.3	-22 05.3				
6	263	02.1	256 30.6	+11 51.6	231 34.7	+12 57.5	62 57.5	-6 47.2	355 50.7	-22 05.3				
7	278	04.5	271 34.2	51.4	246 35.4	58.1	78 00.2	47.1	10 53.0	05.3				
8	293	07.0	286 37.7	51.1	261 36.2	58.8	93 02.9	47.0	25 55.4	05.3				
9	308	09.5	301 41.3	50.8	276 36.9	+12 59.4	108 05.6	46.9	40 57.8	05.3				
10	323	11.9	316 44.9	50.6	291 37.7	+13 00.0	123 08.3	46.8	56 00.1	05.3				
11	338	14.4	331 48.4	+11 50.3	306 38.4	+13 00.7	138 11.0	-6 46.7	71 02.5	-22 05.3				
12	353	16.9	346 52.0	+11 50.0	321 39.1	+13 01.3	153 13.7	-6 46.5	86 04.9	-22 05.3				
13	8 19.3	1 55.6	49.7	336 39.9	01.9	168 16.4	168 16.4	46.4	101 07.2	05.3				
14	23 21.8	16 59.2	49.4	351 40.6	02.6	183 19.1	183 19.1	46.3	116 09.6	05.3				
15	38 24.3	32 02.7	49.1	6 41.4	03.2	198 21.8	198 21.8	46.2	131 12.0	05.3				
16	53 26.7	47 06.3	48.8	21 42.1	03.8	213 24.5	213 24.5	46.1	146 14.3	05.3				
17	68 29.2	62 09.9	+11 48.5	36 42.8	+13 04.5	228 27.3	-6 46.0	161 16.7	-22 05.3					
18	83 31.6	77 13.5	+11 48.2	51 43.6	+13 05.1	243 30.0	-6 45.9	176 19.1	-22 05.3					
19	98 34.1	92 17.1	47.9	66 44.3	05.7	258 32.7	45.8	191 21.4	05.3					
20	113 36.6	107 20.7	47.6	81 45.1	06.4	273 35.4	45.7	206 23.8	05.3					
21	128 39.0	122 24.3	47.3	96 45.8	07.0	288 38.1	45.6	221 26.2	05.3					
22	143 41.5	137 27.9	47.0	111 46.5	07.6	303 40.8	45.5	236 28.5	05.3					
23	158 44.0	152 31.5	46.7	126 47.3	08.3	318 43.5	45.4	251 30.9	05.3					
24	173 46.4	167 35.1	+11 46.4	141 48.0	+13 08.9	333 46.2	-6 45.3	266 33.3	-22 05.3					
Dif	—		+36	-3	+7	+6	+27	+1	+24					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 17 ^d 4 PHE { 4 ^h : 54 ^m /7 12 ^h : 54 ^m /6 20 ^h : 54 ^m /5												
	PMG: 12 ^h 08 ^m 6			SD: 14 ^h 9 PMG: 2 ^h 45 ^m R ^o : 45 ^m												
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	49.4	-1 45.2	319	59.6	-8 41.0	87	60 N	4 43	5 32	6 13	22 47	69	7 43	20	
1	192	49.6		44.2	334 32.7 ¹⁴¹		49.7	58	48	34	13	40	67	49	22	
2	207	49.8		43.2	349 05.8 ¹⁴¹		-8 58.5	56	52	36	12	33	65	54	23	
3	222	50.0		42.2	3 38.9 ¹⁴¹		-9 07.2	54	56	37	12	28	63	7 58	26	
4	237	50.1		41.3	18 12.0 ¹⁴¹		15.8	52	4 59	38	12	23	62	8 03	26	
5	252	50.3	-1 40.3	32 45.1 ¹⁴¹		-9 24.4	86	50	5 01	5 39	6 11	22 18	61	8 06	28	
6	267	50.5	-1 39.3	47 18.2 ¹⁴¹		-9 32.9	85	45	5 07	5 41	6 11	22 08	58	8 14	31	
7	282	50.7		38.3	61 51.2 ¹⁴⁰		41.4	40	11	43	10	22 00	56	21	33	
8	297	50.9		37.3	76 24.3 ¹⁴¹		49.9	35	15	44	09	21 53	54	27	35	
9	312	51.0		36.3	90 57.3 ¹⁴⁰		-9 58.3	30	17	45	09	47	52	32	36	
10	327	51.2		35.3	105 30.4 ¹⁴¹		-10 06.7	20	20	46	07	37	49	41	39	
11	342	51.4	-1 34.3	120 03.4 ¹⁴⁰		-10 15.0	83	10 N	5 21	5 45	6 06	21 27	48	8 48	43	
12	357	51.6	-1 33.4	134 36.5 ¹⁴¹		-10 23.2	82	0	5 21	5 45	6 05	21 19	45	8 56	44	
13	12	51.8		32.4	149 09.5 ¹⁴⁰		31.5	10 S	19	43	04	10	43	9 03	47	
14	27	51.9		31.4	163 42.5 ¹⁴⁰		39.6	20	15	41	03	21 01	40	11	50	
15	42	52.1		30.4	178 15.5 ¹⁴⁰		47.7	30	09	37	01	20 51	37	20	52	
16	57	52.3		29.4	192 48.5 ¹⁴⁰		-10 55.8	35	05	35	6 00	45	36	25	54	
17	72	52.5	-1 28.4	207 21.5 ¹⁴⁰		-11 03.8	81	40	5 00	5 32	5 59	20 38	34	9 31	56	
18	87	52.6	-1 27.4	221 54.4 ¹³⁹		-11 11.8	80	45	4 53	5 28	5 57	20 30	32	9 38	58	
19	102	52.8		26.4	236 27.4 ¹⁴⁰		19.7	50	45	23	56	21	29	46	62	
20	117	53.0		25.5	251 00.4 ¹⁴⁰		27.5	52	40	21	55	17	28	50	63	
21	132	53.2		24.5	265 33.3 ¹³⁹		35.3	54	36	18	54	12	27	54	64	
22	147	53.4		23.5	280 06.2 ¹³⁹		43.1	56	30	15	53	07	25	9 59	66	
23	162	53.5		22.5	294 39.1 ¹³⁹		50.8	58	24	12	52	20 01	23	10 04	68	
24	177	53.7	-1 21.5	309 12.0 ¹³⁹		-11 58.4	76	60 S	4 17	5 08	5 50	19 55	21	10 10	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 22 ^m 9		Mag: -4.3 PMG: 12 ^h 47 ^m		Mag: +1.4 PMG: 14 ^h 32 ^m		Mag: -2.4 PMG: 1 ^h 45 ^m		Mag: +0.5 PMG: 6 ^h 13 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	173	46.4	167	35.1	+11 141	48.0	+13 08.9	333	46.2	-6 45.3	266	33.3	-22 05.3	
1	188	48.9	182	38.7		46.1	09.5	348	48.9	45.2	281	35.7	05.3	
2	203	51.4	197	42.3		45.8	10.2	3	51.6	45.1	296	38.0	05.3	
3	218	53.8	212	45.9		45.4	10.8	18	54.3	45.0	311	40.4	05.3	
4	233	56.3	227	49.5		45.1	11.4	33	57.0	44.9	326	42.8	05.3	
5	248	58.7	242	53.1	+11 44.8	216	51.7	+13 12.1	48	59.7	-6 44.8	341	45.1	-22 05.3
6	264	01.2	257	56.7	+11 44.5	231	52.4	+13 12.7	64	02.4	-6 44.7	356	47.5	-22 05.3
7	279	03.7	273	00.4		44.1	13.3	79	05.2	44.6	11	49.9	05.3	
8	294	06.1	288	04.0		43.8	14.0	94	07.9	44.5	26	52.2	05.3	
9	309	08.6	303	07.6		43.5	14.6	109	10.6	44.4	41	54.6	05.3	
10	324	11.1	318	11.2		43.1	15.2	124	13.3	44.3	56	57.0	05.3	
11	339	13.5	333	14.9	+11 42.8	306	56.1	+13 15.9	139	16.0	-6 44.2	71	59.4	-22 05.3
12	354	16.0	348	18.5	+11 42.4	321	56.9	+13 16.5	154	18.7	-6 44.1	87	01.7	-22 05.3
13	9	18.5	3	22.1		42.1	17.1	169	21.4	44.0	102	04.1	05.3	
14	24	20.9	18	25.8		41.7	17.8	184	24.1	43.9	117	06.5	05.3	
15	39	23.4	33	29.4		41.4	18.4	199	26.8	43.8	132	08.9	05.3	
16	54	25.9	48	33.1		41.0	19.0	214	29.5	43.7	147	11.2	05.3	
17	69	28.3	63	36.7	+11 40.7	37	00.6	+13 19.6	229	32.2	-6 43.5	162	13.6	-22 05.3
18	84	30.8	78	40.4	+11 40.3	52	01.3	+13 20.3	244	35.0	-6 43.4	177	16.0	-22 05.3
19	99	33.2	93	44.0		39.9	20.9	259	37.7	43.3	192	18.3	05.3	
20	114	35.7	108	47.7		39.6	21.5	274	40.4	43.2	207	20.7	05.3	
21	129	38.2	123	51.3		39.2	22.2	289	43.1	43.1	222	23.1	05.3	
22	144	40.6	138	55.0		38.8	22.8	304	45.8	43.0	237	25.5	05.3	
23	159	43.1	153	58.6		38.5	23.4	319	48.5	42.9	252	27.8	05.3	
24	174	45.6	169	02.3	+11 38.1	142	05.7	+13 24.0	334	51.2	-6 42.8	267	30.2	-22 05.3
Dif	—		+36		-3	+7		+6	+27		+1	+24		

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 18 ^d 4	PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 3 20 ^h : 54 ^m 3	SD: 14 ^h 8										
	PMG: 12 ^h 08 ^m 3					PMG: 3 ^h 30 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m	
0	177	53.7	-1 21.5	309	12.0	-11 58.4	76	60 N	18 08	18 49	19 39	23 56 66	8 03 23			
1	192	53.9	20.5	323	44.9 ¹³⁹	-12 06.0	76	58	08	47	33	47 63	11 25			
2	207	54.1	19.5	338	17.8 ¹³⁹	13.5	75	56	08	45	29	38 63	17 27			
3	222	54.3	18.5	352	50.6 ¹³⁸	21.0	75	54	08	43	25	31 61	24 28			
4	237	54.4	17.5	7	23.5 ¹³⁹	28.4	74	52	08	42	22	25 59	29 30			
5	252	54.6	-1 16.6	21	56.3 ¹³⁸	-12 35.8	74	50	18 08	18 41	19 18	23 19 58	8 34 31			
6	267	54.8	-1 15.6	36	29.1 ¹³⁸	-12 43.1	73	45	18 09	18 38	19 12	23 06 57	8 45 33			
7	282	55.0	14.6	51	01.9 ¹³⁸	50.3	72	40	09	36	08	22 56 54	8 54 35			
8	297	55.2	13.6	65	34.7 ¹³⁸	-12 57.5	72	35	09	35	04	47 53	9 02 37			
9	312	55.3	12.6	80	07.5 ¹³⁸	-13 04.6	71	30	10	33	19 01	39 52	08 39			
10	327	55.5	11.6	94	40.2 ¹³⁷	11.7	71	20	10	32	18 58	26 50	20 41			
11	342	55.7	-1 10.6	109	12.9 ¹³⁷	-13 18.7	70	10 N	18 11	18 32	18 56	22 15 47	9 31 43			
12	357	55.9	-1 09.6	123	45.7 ¹³⁸	-13 25.6	69	0	18 12	18 32	18 56	22 04 46	9 40 46			
13	12	56.1	08.7	138	18.4 ¹³⁷	32.5	69	10 S	12	33	18 58	21 53 44	9 50 47			
14	27	56.3	07.7	152	51.0 ¹³⁶	39.3	68	20	13	35	19 01	41 43	10 01 49			
15	42	56.4	06.7	167	23.7 ¹³⁷	46.1	68	30	14	38	06	28 40	12 52			
16	57	56.6	05.7	181	56.3 ¹³⁶	52.8	67	35	15	40	10	21 39	19 54			
17	72	56.8	-1 04.7	196	29.0 ¹³⁷	-13 59.4	66	40	18 16	18 43	19 15	21 12 37	10 27 55			
18	87	57.0	-1 03.7	211	01.6 ¹³⁶	-14 06.0	66	45	18 17	18 46	19 21	21 02 36	10 36 58			
19	102	57.2	02.7	225	34.2 ¹³⁶	12.5	65	50	18	51	29	20 50 33	48 59			
20	117	57.3	01.7	240	06.7 ¹³⁵	19.0	65	52	19	53	33	45 32	53 61			
21	132	57.5	-1 00.7	254	39.3 ¹³⁶	25.4	64	54	20	55	37	39 31	10 58 63			
22	147	57.7	-0 59.8	269	11.8 ¹³⁵	31.7	63	56	20	18 58	42	32 29	11 05 63			
23	162	57.9	58.8	283	44.3 ¹³⁵	37.9	62	58	21	19 01	48	24 28	12 65			
24	177	58.1	-0 57.8	298	16.8 ¹³⁵	-14 44.1	62	60 S	18 22	19 04	19 54	20 16 26	11 20 67			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 18 ^m 9		Mag: -4.3 PMG: 12 ^h 41 ^m		Mag: +1.4 PMG: 14 ^h 31 ^m		Mag: -2.4 PMG: 1 ^h 40 ^m		Mag: +0.5 PMG: 6 ^h 09 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	174	45.6	169	02.3	+11	38.1	142	05.7	+13	24.0
1	189	48.0	184	06.0		37.7	157	06.5		24.7
2	204	50.5	199	09.6		37.3	172	07.2		25.3
3	219	53.0	214	13.3		36.9	187	07.9		25.9
4	234	55.4	229	17.0		36.6	202	08.7		26.6
5	249	57.9	244	20.6	+11	36.2	217	09.4	+13	27.2
6	265	00.4	259	24.3	+11	35.8	232	10.1	+13	27.8
7	280	02.8	274	28.0		35.4	247	10.9		28.4
8	295	05.3	289	31.7		35.0	262	11.6		29.1
9	310	07.7	304	35.3		34.6	277	12.4		29.7
10	325	10.2	319	39.0		34.2	292	13.1		30.3
11	340	12.7	334	42.7	+11	33.8	307	13.8	+13	30.9
12	355	15.1	349	46.4	+11	33.4	322	14.6	+13	31.6
13	10	17.6	4	50.1		33.0	337	15.3		32.2
14	25	20.1	19	53.8		32.6	352	16.0		32.8
15	40	22.5	34	57.5		32.1	7	16.8		33.4
16	55	25.0	50	01.2		31.7	22	17.5		34.1
17	70	27.5	65	04.9	+11	31.3	37	18.2	+13	34.7
18	85	29.9	80	08.6	+11	30.9	52	19.0	+13	35.3
19	100	32.4	95	12.3		30.5	67	19.7		35.9
20	115	34.8	110	16.0		30.0	82	20.4		36.6
21	130	37.3	125	19.7		29.6	97	21.2		37.2
22	145	39.8	140	23.4		29.2	112	21.9		37.8
23	160	42.2	155	27.1		28.7	127	22.7		38.4
24	175	44.7	170	30.8	+11	28.3	142	23.4	+13	39.0
Dif	—		+37		-4		+7		+6	
									+27	+1
										+24
										0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 08 ^m 0			Edad: 19 ^d 4 PHE { SD: 14'8 PMG: 4 ^h 15 ^m R°: 46 ^m 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	177	58.1	-0	57.8	298	16.8	-14	44.1	61	60 N	4	36	5	26	6	07	**	**	**
1	192	58.2		56.8	312	49.3 ¹³⁵		50.2	61	58		42	28		07	**	**	**	
2	207	58.4		55.8	327	21.7 ¹³⁴	-14	56.3	61	56		46	30		07	**	**	**	
3	222	58.6		54.8	341	54.1 ¹³⁴	-15	02.3	60	54		50	32		07	**	**	**	
4	237	58.8		53.8	356	26.5 ¹³⁴		08.2	59	52		54	33		07	**	**	**	
5	252	59.0	-0	52.8	10	58.9 ¹³⁴	-15	14.1	59	50		4	57	5	35	6	07	**	
6	267	59.2	-0	51.9	25	31.3 ¹³⁴	-15	19.9	58	45		5	03	5	38	6	07	**	
7	282	59.3		50.9	40	03.6 ¹³³		25.6	57	40		08	40		07	23	50	53	
8	297	59.5		49.9	54	35.9 ¹³³		31.2	56	35		12	41		06	40	52	39	
9	312	59.7		48.9	69	08.2 ¹³³		36.8	56	30		15	42		06	31	51	41	
10	327	59.9		47.9	83	40.5 ¹³³		42.3	55	20		18	44		06	16	49	44	
11	343	00.1	-0	46.9	98	12.8 ¹³³	-15	47.8	55	10 N	5	20	5	44	6	05	23	02	
12	358	00.3	-0	45.9	112	45.0 ¹³²	-15	53.1	53	0	5	20	5	44	6	05	22	50	
13	13	00.4		44.9	127	17.2 ¹³²	-15	58.4	53	10 S		19	43		04	37	46	48	
14	28	00.6		43.9	141	49.4 ¹³²	-16	03.7	53	20		16	41		03	24	44	49	
15	43	00.8		43.0	156	21.5 ¹³¹		08.8	51	30		10	38		02	08	43	52	
16	58	01.0		42.0	170	53.7 ¹³²		13.9	51	35		07	36		02	22	00	41	
17	73	01.2	-0	41.0	185	25.8 ¹³¹	-16	18.9	50	40		5	02	5	34	6	01	41	
18	88	01.4	-0	40.0	199	57.9 ¹³¹	-16	23.9	50	45		4	56	5	31	6	00	39	
19	103	01.5		39.0	214	29.9 ¹³⁰		28.8	49	50		48	26		5	59	23	38	
20	118	01.7		38.0	229	02.0 ¹³¹		33.5	47	52		44	24		58	17	37	57	
21	133	01.9		37.0	243	34.0 ¹³⁰		38.3	48	54		40	22		58	10	36	58	
22	148	02.1		36.0	258	06.0 ¹³⁰		42.9	46	56		35	20		57	21	01	58	
23	163	02.3		35.1	272	37.9 ¹²⁹		47.5	46	58		29	17		56	20	52	62	
24	178	02.4	-0	34.1	287	09.9 ¹³⁰	-16	52.0	45	60 S	4	23	5	14	5	55	20	42	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 15 ^m 0		Mag: -4.2 PMG: 12 ^h 35 ^m			Mag: +1.4 PMG: 14 ^h 30 ^m			Mag: -2.4 PMG: 1 ^h 36 ^m			Mag: +0.5 PMG: 6 ^h 05 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	175	44.7	170	30.8	+11	28.3	142	23.4	+13	39.0	335	56.4	-6	40.3	
1	190	47.2	185	34.5		27.9	157	24.1		39.7	350	59.1		40.2	
2	205	49.6	200	38.3		27.4	172	24.9		40.3	6	01.8		40.1	
3	220	52.1	215	42.0		27.0	187	25.6		40.9	21	04.5		40.0	
4	235	54.6	230	45.7		26.5	202	26.3		41.5	36	07.2		39.8	
5	250	57.0	245	49.4	+11	26.1	217	27.1	+13	42.2	51	09.9	-6	39.7	
6	265	59.5	260	53.2	+11	25.6	232	27.8	+13	42.8	66	12.7	-6	39.6	
7	281	02.0	275	56.9		25.2	247	28.5		43.4	81	15.4		39.5	
8	296	04.4	291	00.6		24.7	262	29.3		44.0	96	18.1		39.4	
9	311	06.9	306	04.3		24.3	277	30.0		44.6	111	20.8		39.3	
10	326	09.3	321	08.1		23.8	292	30.7		45.3	126	23.5		39.2	
11	341	11.8	336	11.8	+11	23.3	307	31.5	+13	45.9	141	26.2	-6	39.1	
12	356	14.3	351	15.5	+11	22.9	322	32.2	+13	46.5	156	29.0	-6	39.0	
13	11	16.7	6	19.3		22.4	337	32.9		47.1	171	31.7		38.9	
14	26	19.2	21	23.0		21.9	352	33.7		47.7	186	34.4		38.8	
15	41	21.7	36	26.8		21.4	7	34.4		48.4	201	37.1		38.7	
16	56	24.1	51	30.5		21.0	22	35.1		49.0	216	39.8		38.6	
17	71	26.6	66	34.3	+11	20.5	37	35.9	+13	49.6	231	42.6	-6	38.5	
18	86	29.1	81	38.0	+11	20.0	52	36.6	+13	50.2	246	45.3	-6	38.3	
19	101	31.5	96	41.8		19.5	67	37.3		50.8	261	48.0		38.2	
20	116	34.0	111	45.5		19.0	82	38.1		51.4	276	50.7		38.1	
21	131	36.5	126	49.3		18.5	97	38.8		52.1	291	53.4		38.0	
22	146	38.9	141	53.0		18.1	112	39.5		52.7	306	56.2		37.9	
23	161	41.4	156	56.8		17.6	127	40.3		53.3	321	58.9		37.8	
24	176	43.8	172	00.5	+11	17.1	142	41.0	+13	53.9	337	01.6	-6	37.7	
Dif	—		+37		-5		+7		+6		+27		+1		
														+24	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 07 ^m 7			Edad: 20 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 SD: 14'8 PMG: 5 ^h 01 ^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		
0	178	02.4	-0 34.1	287	09.9	-16 52.0	60 N	18 12	18 54	19 44	1 02 60		8 55 36		
1	193	02.6		301	41.8 ¹²⁹	-16 56.4 ⁴⁴	58	12	51	38	0 50 59		9 06 38		
2	208	02.8		316	13.7 ¹²⁹	-17 00.8 ⁴⁴	56	12	49	33	41 57		17 38		
3	223	03.0		330	45.6 ¹²⁹	05.0 ⁴²	54	12	47	29	32 57		25 40		
4	238	03.2		345	17.4 ¹²⁸	09.2 ⁴²	52	12	45	25	24 56		33 40		
5	253	03.4	-0 29.1	359	49.2 ¹²⁸	-17 13.4 ⁴²	50	18 12	18 44	19 22	0 17 56		9 40 41		
6	268	03.5	-0 28.1	14	21.0 ¹²⁸	-17 17.4 ⁴⁰	45	18 11	18 41	19 15	0 03 53		9 56 42		
7	283	03.7		28	52.8 ¹²⁸	21.4 ⁴⁰	40	11	38	10	** ** *		10 08 43		
8	298	03.9		43	24.5 ¹²⁷	25.3 ³⁹	35	11	36	06	** ** *		19 44		
9	313	04.1		57	56.2 ¹²⁷	29.1 ³⁸	30	11	35	19 03	** ** *		28 45		
10	328	04.3		72	27.9 ¹²⁷	32.8 ³⁷	20	11	33	18 58	** ** *		45 45		
11	343	04.5	-0 23.2	86	59.6 ¹²⁷	-17 36.4 ³⁶	10 N	18 11	18 32	18 56	23 50 49		10 59 46		
12	358	04.7	-0 22.2	101	31.2 ¹²⁶	-17 40.0 ³⁶	0	18 11	18 32	18 56	23 36 48		11 12 47		
13	13	04.8		116	02.9 ¹²⁷	43.5 ³⁵	10 S	11	32	57	23 47		25 49		
14	28	05.0		130	34.5 ¹²⁶	46.9 ³⁴	20	12	34	18 59	23 08 47		39 50		
15	43	05.2		145	06.0 ¹²⁵	50.3 ³⁴	30	12	36	19 04	22 51 46		11 56 50		
16	58	05.4		159	37.6 ¹²⁶	53.5 ³²	35	12	38	07	41 46		12 05 51		
17	73	05.6	-0 17.3	174	09.1 ¹²⁵	-17 56.7 ³²	40	18 13	18 40	19 11	22 30 45		12 16 51		
18	88	05.8	-0 16.3	188	40.6 ¹²⁵	-17 59.8 ³¹	45	18 13	18 43	19 17	22 17 45		12 29 52		
19	103	05.9		203	12.0 ¹²⁴	-18 02.8 ³⁰	50	14	46	24	22 01 44		44 54		
20	118	06.1		217	43.5 ¹²⁵	05.7 ²⁹	52	14	48	28	21 54 43		51 54		
21	133	06.3		232	14.9 ¹²⁴	08.6 ²⁹	54	15	50	32	46 43		12 59 55		
22	148	06.5		246	46.3 ¹²⁴	11.3 ²⁷	56	15	52	36	36 43		13 09 55		
23	163	06.7		261	17.7 ¹²⁴	14.0 ²⁷	58	16	55	42	26 42		19 56		
24	178	06.9	-0 10.3	275	49.0 ¹²³	-18 16.6 ²⁶	60 S	18 16	18 58	19 48	21 14 41		13 31 57		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 11 ^m 1		Mag: -4.2 PMG: 12 ^h 29 ^m			Mag: +1.4 PMG: 14 ^h 29 ^m			Mag: -2.4 PMG: 1 ^h 32 ^m			Mag: +0.5 PMG: 6 ^h 01 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	176	43.8	172	00.5	+11 17.1	142	41.0	+13 53.9	337	01.6	-6 37.7	269	24.4	-22 05.2	
1	191	46.3	187	04.3	16.6	157	41.7	54.5	352	04.3	37.6	284	26.8	05.2	
2	206	48.8	202	08.0	16.1	172	42.5	55.1	7	07.0	37.5	299	29.2	05.2	
3	221	51.2	217	11.8	15.6	187	43.2	55.8	22	09.8	37.4	314	31.5	05.2	
4	236	53.7	232	15.6	15.1	202	43.9	56.4	37	12.5	37.3	329	33.9	05.2	
5	251	56.2	247	19.3	+11 14.5	217	44.7	+13 57.0	52	15.2	-6 37.2	344	36.3	-22 05.2	
6	266	58.6	262	23.1	+11 14.0	232	45.4	+13 57.6	67	17.9	-6 37.1	359	38.7	-22 05.2	
7	282	01.1	277	26.9	13.5	247	46.1	58.2	82	20.6	36.9	14	41.1	05.2	
8	297	03.6	292	30.6	13.0	262	46.9	58.8	97	23.4	36.8	29	43.5	05.2	
9	312	06.0	307	34.4	12.5	277	47.6	+13 59.5	112	26.1	36.7	44	45.8	05.2	
10	327	08.5	322	38.2	12.0	292	48.3	+14 00.1	127	28.8	36.6	59	48.2	05.2	
11	342	10.9	337	42.0	+11 11.4	307	49.1	+14 00.7	142	31.5	-6 36.5	74	50.6	-22 05.2	
12	357	13.4	352	45.7	+11 10.9	322	49.8	+14 01.3	157	34.2	-6 36.4	89	53.0	-22 05.2	
13	12	15.9	7	49.5	10.4	337	50.5	01.9	172	37.0	36.3	104	55.4	05.2	
14	27	18.3	22	53.3	09.9	352	51.3	02.5	187	39.7	36.2	119	57.8	05.2	
15	42	20.8	37	57.1	09.3	7	52.0	03.1	202	42.4	36.1	135	00.2	05.2	
16	57	23.3	53	00.9	08.8	22	52.7	03.8	217	45.1	36.0	150	02.5	05.2	
17	72	25.7	68	04.6	+11 08.3	37	53.5	+14 04.4	232	47.9	-6 35.9	165	04.9	-22 05.2	
18	87	28.2	83	08.4	+11 07.7	52	54.2	+14 05.0	247	50.6	-6 35.7	180	07.3	-22 05.2	
19	102	30.7	98	12.2	07.2	67	54.9	05.6	262	53.3	35.6	195	09.7	05.2	
20	117	33.1	113	16.0	06.6	82	55.6	06.2	277	56.0	35.5	210	12.1	05.2	
21	132	35.6	128	19.8	06.1	97	56.4	06.8	292	58.8	35.4	225	14.5	05.2	
22	147	38.1	143	23.6	05.5	112	57.1	07.4	308	01.5	35.3	240	16.9	05.2	
23	162	40.5	158	27.4	05.0	127	57.8	08.0	323	04.2	35.2	255	19.2	05.2	
24	177	43.0	173	31.2	+11 04.4	142	58.6	+14 08.7	338	06.9	-6 35.1	270	21.6	-22 05.2	
Dif	—		+38 -5			+7 +6			+27 +1			+24 0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 12 ^h 07 ^m 4			Edad: 21 ^d 4 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 5 ^h 48 ^m R°: 48 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m		
0	178	06.9	-0	275	49.0	-18	60 N	4	30	5	20	6	01	2	02	53	9	31	46
1	193	07.0		290	20.3 ¹²³		58		36		23	02		1	49	53		44	46
2	208	07.2		304	51.6 ¹²³		56		41		25	02		38	53		9	55	46
3	223	07.4		319	22.9 ¹²³		54		45		27	02		29	52		10	05	46
4	238	07.6		333	54.1 ¹²²		52		49		29	02		20	52		13	47	
5	253	07.8	-0	348	25.3 ¹²²	-18	50	4	52	5	30	6	03	1	13	51	10	21	47
6	268	08.0	-0	2	56.5 ¹²²	-18	45	4	59	5	34	6	03	0	56	51	10	38	47
7	283	08.2		17	27.7 ¹²²		40	5	05		36	03		43	50		10	51	48
8	298	08.3		31	58.8 ¹²¹		35		09		38	04		32	50		11	03	47
9	313	08.5		46	30.0 ¹²²		30		12		40	04		22	49		13	48	
10	328	08.7	-0	61	01.0 ¹²⁰		20		16		42	04		0	05	49		30	48
11	343	08.9	+0	75	32.1 ¹²¹	-18	10 N	5	19	5	43	6	04	**	**	**	11	45	48
12	358	09.1	+0	90	03.2 ¹²¹	-18	0	5	19	5	43	6	04	**	**	**	11	59	49
13	13	09.3		104	34.2 ¹²⁰		10 S		19		43	04		**	**	**	12	14	48
14	28	09.5		119	05.2 ¹²⁰		20		16		42	04		23	55	49		29	48
15	43	09.6		133	36.2 ¹²⁰		30		12		40	03		37	50		46	49	
16	58	09.8		148	07.1 ¹¹⁹		35		08		38	03		27	50		12	56	49
17	73	10.0	+0	162	38.0 ¹¹⁹	-18	40	5	04	5	36	6	03	23	15	50	13	07	49
18	88	10.2	+0	177	08.9 ¹¹⁹	-18	45	4	59	5	33	6	02	23	02	50	13	21	49
19	103	10.4		191	39.8 ¹¹⁹		50		52		30	02		22	45	50		38	49
20	118	10.6		206	10.7 ¹¹⁹		52		48		28	02		37	50		45	50	
21	133	10.8		220	41.5 ¹¹⁸		54		44		26	01		29	50		13	54	49
22	148	10.9		235	12.3 ¹¹⁸		56		40		24	01		19	50		14	04	49
23	163	11.1		249	43.1 ¹¹⁸		58		34		21	01		22	08	50		15	49
24	178	11.3	+0	264	13.9 ¹¹⁸	-18	60 S	4	28	5	19	6	00	21	55	50	14	28	49

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 12 ^h 07 ^m 1		Mag: -4.1 PMG: 12 ^h 23 ^m			Mag: +1.4 PMG: 14 ^h 27 ^m			Mag: -2.4 PMG: 1 ^h 27 ^m			Mag: +0.5 PMG: 5 ^h 58 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	177	43.0	173	31.2	+11	142	58.6	+14	338	06.9	-6	270	21.6	-22	05.2					
1	192	45.4	188	35.0		157	59.3		353	09.7		285	24.0		05.2					
2	207	47.9	203	38.8		173	00.0		8	12.4		300	26.4		05.2					
3	222	50.4	218	42.6		188	00.8		23	15.1		315	28.8		05.2					
4	237	52.8	233	46.4		203	01.5		38	17.8		330	31.2		05.2					
5	252	55.3	248	50.2	+11	218	02.2	+14	53	20.6	-6	345	33.6	-22	05.2					
6	267	57.8	263	54.0	+11	233	03.0	+14	68	23.3	-6	0	36.0	-22	05.2					
7	283	00.2	278	57.8	+11	248	03.7		83	26.0		15	38.4		05.2					
8	298	02.7	294	01.6	+10	263	04.4		98	28.7		30	40.7		05.2					
9	313	05.2	309	05.4		278	05.1		113	31.5		45	43.1		05.2					
10	328	07.6	324	09.2		293	05.9		128	34.2		60	45.5		05.2					
11	343	10.1	339	13.0	+10	308	06.6	+14	143	36.9	-6	75	47.9	-22	05.2					
12	358	12.6	354	16.8	+10	323	07.3	+14	158	39.6	-6	90	50.3	-22	05.2					
13	13	15.0	9	20.6		338	08.1		173	42.4		105	52.7		05.2					
14	28	17.5	24	24.4		353	08.8		188	45.1		120	55.1		05.2					
15	43	19.9	39	28.2		8	09.5		203	47.8		135	57.5		05.2					
16	58	22.4	54	32.0		23	10.3		218	50.5		150	59.9		05.2					
17	73	24.9	69	35.8	+10	38	11.0	+14	233	53.3	-6	166	02.2	-22	05.2					
18	88	27.3	84	39.7	+10	53	11.7	+14	248	56.0	-6	181	04.6	-22	05.2					
19	103	29.8	99	43.5		68	12.4		263	58.7		196	07.0		05.2					
20	118	32.3	114	47.3		83	13.2		279	01.4		211	09.4		05.2					
21	133	34.7	129	51.1		98	13.9		294	04.2		226	11.8		05.2					
22	148	37.2	144	54.9		113	14.6		309	06.9		241	14.2		05.2					
23	163	39.7	159	58.7		128	15.4		324	09.6		256	16.6		05.2					
24	178	42.1	175	02.6	+10	143	16.1	+14	339	12.4	-6	271	19.0	-22	05.2					
Dif	—		+38			-6			+27			+1			+24			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 1			Edad: 22 ^d 4 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0 PMG: 6 ^h 36 ^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	178	11.3	+0	13.4	264	13.9	-18	53.5	60 N	18 17	18 59	19 49	2 55 46	10 17 55	
1	193	11.5		14.3	278	44.6 ¹¹⁷		53.9	58	17	56	43	42 46	30 55	
2	208	11.7		15.3	293	15.3 ¹¹⁷		54.2	56	16	53	38	31 46	41 55	
3	223	11.9		16.3	307	46.0 ¹¹⁷		54.5	54	16	51	33	21 46	10 51 54	
4	238	12.1		17.3	322	16.7 ¹¹⁷		54.7	52	15	49	29	12 47	11 00 54	
5	253	12.2	+0	18.3	336	47.4 ¹¹⁷	-18	54.8	50	18 15	18 47	19 25	2 04 47	11 08 53	
6	268	12.4	+0	19.3	351	18.0 ¹¹⁶	-18	54.7	45	18 14	18 43	19 18	1 47 48	11 25 52	
7	283	12.6		20.3	5	48.6 ¹¹⁶		54.6	40	13	40	12	33 48	39 52	
8	298	12.8		21.3	20	19.2 ¹¹⁶		54.5	35	13	38	07	22 48	11 50 52	
9	313	13.0		22.2	34	49.8 ¹¹⁶		54.2	30	12	36	19 04	1 11 49	12 01 51	
10	328	13.2		23.2	49	20.3 ¹¹⁵		53.8	20	11	33	18 59	0 54 48	18 51	
11	343	13.4	+0	24.2	63	50.9 ¹¹⁶	-18	53.3	10 N	18 11	18 32	18 56	0 39 48	12 33 50	
12	358	13.5	+0	25.2	78	21.4 ¹¹⁵	-18	52.8	0	18 10	18 31	18 55	0 24 49	12 48 49	
13	13	13.7		26.2	92	51.9 ¹¹⁵		52.1	10 S	10	31	55	0 10 49	13 02 49	
14	28	13.9		27.2	107	22.4 ¹¹⁵		51.4	20	10	32	18 57	** ** *	17 48	
15	43	14.1		28.2	121	52.8 ¹¹⁴		50.6	30	10	34	19 01	** ** *	35 47	
16	58	14.3		29.2	136	23.2 ¹¹⁴		49.7	35	10	35	04	** ** *	45 46	
17	73	14.5	+0	30.1	150	53.7 ¹¹⁵	-18	48.6	40	18 10	18 37	19 08	** ** *	13 56 46	
18	88	14.7	+0	31.1	165	24.0 ¹¹³	-18	47.5	45	18 10	18 39	19 13	23 52 55	14 10 45	
19	103	14.8		32.1	179	54.4 ¹¹⁴		46.3	50	10	42	20	35 57	27 44	
20	118	15.0		33.1	194	24.8 ¹¹⁴		45.0	52	10	43	23	27 58	35 43	
21	133	15.2		34.1	208	55.1 ¹¹³		43.7	54	10	45	27	19 58	43 44	
22	148	15.4		35.1	223	25.4 ¹¹³		42.2	56	10	47	31	23 09 59	14 53 43	
23	163	15.6		36.1	237	55.7 ¹¹³		40.6	58	10	49	36	22 58 60	15 04 42	
24	178	15.8	+0	37.1	252	26.0 ¹¹³	-18	39.0	60 S	18 10	18 52	19 41	22 45 61	15 17 41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 03 ^m 2		Mag: -4.2 PMG: 12 ^h 17 ^m		Mag: +1.4 PMG: 14 ^h 26 ^m		Mag: -2.4 PMG: 1 ^h 23 ^m		Mag: +0.5 PMG: 5 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	178	42.1	175	02.6	+10	50.4	143	16.1	+14	23.3	339	12.4	-6	32.4	271	19.0	-22	05.2
1	193	44.6	190	06.4		49.8	158	16.8		23.9	354	15.1		32.3	286	21.4		05.2
2	208	47.0	205	10.2		49.2	173	17.5		24.5	9	17.8		32.2	301	23.8		05.2
3	223	49.5	220	14.0		48.6	188	18.3		25.1	24	20.5		32.1	316	26.2		05.2
4	238	52.0	235	17.8		48.0	203	19.0		25.7	39	23.3		32.0	331	28.6		05.2
5	253	54.4	250	21.7	+10	47.4	218	19.7	+14	26.3	54	26.0	-6	31.9	346	30.9	-22	05.2
6	268	56.9	265	25.5	+10	46.7	233	20.5	+14	26.9	69	28.7	-6	31.8	1	33.3	-22	05.1
7	283	59.4	280	29.3		46.1	248	21.2		27.5	84	31.5		31.7	16	35.7		05.1
8	299	01.8	295	33.2		45.5	263	21.9		28.1	99	34.2		31.6	31	38.1		05.1
9	314	04.3	310	37.0		44.9	278	22.6		28.7	114	36.9		31.4	46	40.5		05.1
10	329	06.8	325	40.8		44.2	293	23.4		29.3	129	39.6		31.3	61	42.9		05.1
11	344	09.2	340	44.6	+10	43.6	308	24.1	+14	29.9	144	42.4	-6	31.2	76	45.3	-22	05.1
12	359	11.7	355	48.5	+10	43.0	323	24.8	+14	30.5	159	45.1	-6	31.1	91	47.7	-22	05.1
13	14	14.2	10	52.3		42.3	338	25.6		31.1	174	47.8		31.0	106	50.1		05.1
14	29	16.6	25	56.1		41.7	353	26.3		31.7	189	50.6		30.9	121	52.5		05.1
15	44	19.1	41	00.0		41.1	8	27.0		32.3	204	53.3		30.8	136	54.9		05.1
16	59	21.5	56	03.8		40.4	23	27.7		32.9	219	56.0		30.7	151	57.3		05.1
17	74	24.0	71	07.6	+10	39.8	38	28.5	+14	33.5	234	58.8	-6	30.6	166	59.7	-22	05.1
18	89	26.5	86	11.5	+10	39.1	53	29.2	+14	34.1	250	01.5	-6	30.4	182	02.1	-22	05.1
19	104	28.9	101	15.3		38.5	68	29.9		34.7	265	04.2		30.3	197	04.5		05.1
20	119	31.4	116	19.1		37.8	83	30.6		35.3	280	06.9		30.2	212	06.9		05.1
21	134	33.9	131	23.0		37.2	98	31.4		35.9	295	09.7		30.1	227	09.2		05.1
22	149	36.3	146	26.8		36.5	113	32.1		36.5	310	12.4		30.0	242	11.6		05.1
23	164	38.8	161	30.6		35.8	128	32.8		37.1	325	15.1		29.9	257	14.0		05.1
24	179	41.3	176	34.5	+10	35.2	143	33.6	+14	37.7	340	17.9	-6	29.8	272	16.4	-22	05.1
Dif	—		+38		-6		+7		+6		+27		+1		+24		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 23 ^d 4	PHE {	4 ^h : 55 ^m 2 12 ^h : 55 ^m 4 20 ^h : 55 ^m 6											
	PMG: 12 ^h 06 ^m 8							SD: 15 ^h 0			PMG: 7 ^h 25 ^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	178	15.8	+0	37.1		252	26.0	-18	39.0	18	60 N	4	23	5	14	5	55
1	193	16.0		38.0		266	56.3 ¹¹³		37.2	18	58	30	17	56	28	38	
2	208	16.1		39.0		281	26.5 ¹¹²		35.4	18	56	35	20	57	17	40	
3	223	16.3		40.0		295	56.8 ¹¹³		33.4	20	54	40	22	57	3	07	
4	238	16.5		41.0		310	27.0 ¹¹²		31.4	20	52	44	24	58	2	59	
5	253	16.7	+0	42.0		324	57.2 ¹¹²	-18	29.3	21	50	4	48	5	26	5	58
6	268	16.9	+0	43.0		339	27.4 ¹¹²	-18	27.0	23	45	4	56	5	30	5	59
7	283	17.1		44.0		353	57.5 ¹¹¹		24.7	23	40	5	01	33	6	00	
8	298	17.3		44.9		8	27.7 ¹¹²		22.3	24	35	06	36	01	10	45	
9	313	17.5		45.9		22	57.8 ¹¹¹		19.8	25	30	10	37	01	2	00	
10	328	17.6		46.9		37	27.9 ¹¹¹		17.2	26	20	15	40	02	1	42	
11	343	17.8	+0	47.9		51	58.0 ¹¹¹	-18	14.5	27	10 N	5	18	5	42	6	03
12	358	18.0	+0	48.9		66	28.1 ¹¹¹	-18	11.8	27	0	5	19	5	43	6	04
13	13	18.2		49.9		80	58.2 ¹¹¹		08.9	29	10 S	19	43	04	0	59	
14	28	18.4		50.9		95	28.3 ¹¹¹		05.9	30	20	17	42	04	44	52	
15	43	18.6		51.8		109	58.3 ¹¹⁰	-18	02.9	30	30	13	41	05	27	53	
16	58	18.8		52.8		124	28.3 ¹¹⁰	-17	59.7	32	35	10	40	05	17	53	
17	73	18.9	+0	53.8		138	58.4 ¹¹¹	-17	56.5	32	40	5	06	5	38	6	05
18	88	19.1	+0	54.8		153	28.4 ¹¹⁰	-17	53.1	34	45	5	01	5	36	6	05
19	103	19.3		55.8		167	58.4 ¹¹⁰		49.7	34	50	4	55	33	05	**	**
20	118	19.5		56.8		182	28.3 ¹⁰⁹		46.2	35	52	52	31	05	**	**	
21	133	19.7		57.8		196	58.3 ¹¹⁰		42.6	36	54	48	30	05	**	**	
22	148	19.9		58.7		211	28.3 ¹¹⁰		38.8	38	56	44	28	05	**	**	
23	163	20.1	+0	59.7		225	58.2 ¹⁰⁹		35.0	38	58	39	26	05	23	58	
24	178	20.3	+1	00.7		240	28.1 ¹⁰⁹	-17	31.1	39	60 S	4	34	5	24	6	05

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 59 ^m 3		Mag: -4.2 PMG: 12 ^h 11 ^m		Mag: +1.4 PMG: 14 ^h 25 ^m		Mag: -2.4 PMG: 1 ^h 19 ^m		Mag: +0.5 PMG: 5 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	179	41.3	176	34.5	143	33.6	340	17.9	272	16.4
1	194	43.7	191	38.3	158	34.3	355	20.6	287	18.8
2	209	46.2	206	42.2	173	35.0	10	23.3	302	21.2
3	224	48.7	221	46.0	188	35.7	25	26.1	317	23.6
4	239	51.1	236	49.8	203	36.5	40	28.8	332	26.0
5	254	53.6	251	53.7	218	37.2	55	31.5	347	28.4
6	269	56.0	266	57.5	233	37.9	70	34.3	2	30.8
7	284	58.5	282	01.4	248	38.6	85	37.0	17	33.2
8	300	01.0	297	05.2	263	39.4	100	39.7	32	35.6
9	315	03.4	312	09.1	278	40.1	115	42.5	47	38.0
10	330	05.9	327	12.9	293	40.8	130	45.2	62	40.4
11	345	08.4	342	16.7	308	41.5	145	47.9	77	42.8
12	0	10.8	357	20.6	323	42.3	160	50.7	92	45.2
13	15	13.3	12	24.4	338	43.0	175	53.4	107	47.6
14	30	15.8	27	28.3	353	43.7	190	56.1	122	50.0
15	45	18.2	42	32.1	8	44.4	205	58.9	137	52.4
16	60	20.7	57	36.0	23	45.2	221	01.6	152	54.8
17	75	23.1	72	39.8	38	45.9	236	04.3	167	57.2
18	90	25.6	87	43.7	53	46.6	251	07.1	182	59.6
19	105	28.1	102	47.5	68	47.3	266	09.8	198	02.0
20	120	30.5	117	51.3	83	48.1	281	12.5	213	04.4
21	135	33.0	132	55.2	98	48.8	296	15.3	228	06.8
22	150	35.5	147	59.0	113	49.5	311	18.0	243	09.2
23	165	37.9	163	02.9	128	50.2	326	20.7	258	11.6
24	180	40.4	178	06.7	143	51.0	341	23.5	273	14.0
Dif	—		+38	-7	+7	+6	+27	+1	+24	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 06 ^m 5			Edad: 24 ^d 4 PHE { 4 ^h : 55:8 12 ^h : 56:1 20 ^h : 56:3 PMG: 8 ^h 15 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	20.3	+1 00.7	240	28.1	-17 31.1		60 N	18 22	19 04	19 55	4 18 30	12 17 73		
1	193	20.4		254	58.0 ¹⁰⁹	27.2	39	58	21	19 01	48	4 06 33	28 71		
2	208	20.6	02.7	269	27.9 ¹⁰⁹	23.1	41	56	20	18 58	42	3 57 33	38 69		
3	223	20.8	03.7	283	57.8 ¹⁰⁹	18.9	42	54	19	55	37	48 35	46 68		
4	238	21.0	04.7	298	27.7 ¹⁰⁹	14.6	43	52	19	52	33	40 36	12 54 66		
5	253	21.2	+1 05.6	312	57.6 ¹⁰⁹	-17 10.3	43	50	18 18	18 50	19 29	3 33 38	13 01 64		
6	268	21.4	+1 06.6	327	27.4 ¹⁰⁸	-17 05.8	45	45	18 16	18 46	19 20	3 18 40	13 15 62		
7	283	21.6	07.6	341	57.3 ¹⁰⁹	-17 01.3	47	40	15	42	14	3 06 41	27 60		
8	298	21.8	08.6	356	27.1 ¹⁰⁸	-16 56.6	45	35	14	39	09	2 55 43	37 59		
9	313	21.9	09.6	10	56.9 ¹⁰⁸	51.9	47	30	13	37	05	46 44	13 46 57		
10	328	22.1	10.6	25	26.7 ¹⁰⁸	47.1	48	20	12	34	19 00	30 46	14 01 55		
11	343	22.3	+1 11.6	39	56.5 ¹⁰⁸	-16 42.2	49	10 N	18 11	18 32	18 56	2 16 48	14 14 53		
12	358	22.5	+1 12.5	54	26.3 ¹⁰⁸	-16 37.2	50	0	18 10	18 30	18 54	2 03 50	14 27 50		
13	13	22.7	13.5	68	56.1 ¹⁰⁸	32.1	51	10 S	09	30	54	1 50 51	39 48		
14	28	22.9	14.5	83	25.9 ¹⁰⁸	26.9	52	20	08	30	56	36 53	14 52 46		
15	43	23.1	15.5	97	55.7 ¹⁰⁸	21.6	53	30	07	31	18 59	20 55	15 07 43		
16	58	23.3	16.5	112	25.4 ¹⁰⁷	16.2	54	35	07	32	19 01	10 57	16 41		
17	73	23.4	+1 17.5	126	55.1 ¹⁰⁷	-16 10.8	54	40	18 06	18 33	19 05	1 00 58	15 25 40		
18	88	23.6	+1 18.5	141	24.9 ¹⁰⁸	-16 05.2	56	45	18 06	18 35	19 09	0 47 60	15 37 38		
19	103	23.8	19.4	155	54.6 ¹⁰⁷	-15 59.6	56	50	05	38	15	32 62	51 35		
20	118	24.0	20.4	170	24.3 ¹⁰⁷	53.8	58	52	05	39	18	25 63	15 57 34		
21	133	24.2	21.4	184	54.0 ¹⁰⁷	48.0	58	54	05	40	22	17 64	16 04 33		
22	148	24.4	22.4	199	23.7 ¹⁰⁷	42.1	59	56	05	42	25	0 08 66	12 31		
23	163	24.6	23.4	213	53.4 ¹⁰⁷	36.1	60	58	04	43	30	** ** *	21 29		
24	178	24.8	+1 24.4	228	23.1 ¹⁰⁷	-15 30.0	61	60 S	18 04	18 45	19 35	** ** *	16 31 27		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 55 ^m 3		Mag: -4.2 PMG: 12 ^h 04 ^m			Mag: +1.4 PMG: 14 ^h 24 ^m			Mag: -2.4 PMG: 1 ^h 14 ^m			Mag: +0.5 PMG: 5 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	180	40.4	178 06.7	+10 18.8		143 51.0	+14 52.0		341 23.5	-6 27.1		273 14.0	-22 05.1		
1	195	42.9	193 10.6	18.0		158 51.7	52.6		356 26.2	27.0		288 16.4	05.1		
2	210	45.3	208 14.4	17.3		173 52.4	53.2		11 28.9	26.8		303 18.8	05.1		
3	225	47.8	223 18.3	16.6		188 53.1	53.8		26 31.7	26.7		318 21.2	05.1		
4	240	50.3	238 22.1	15.9		203 53.9	54.4		41 34.4	26.6		333 23.6	05.1		
5	255	52.7	253 26.0	+10 15.2		218 54.6	+14 55.0		56 37.2	-6 26.5		348 26.0	-22 05.1		
6	270	55.2	268 29.8	+10 14.5		233 55.3	+14 55.6		71 39.9	-6 26.4		3 28.4	-22 05.1		
7	285	57.6	283 33.7	13.7		248 56.0	56.2		86 42.6	26.3		18 30.8	05.1		
8	301	00.1	298 37.5	13.0		263 56.8	56.8		101 45.4	26.2		33 33.2	05.1		
9	316	02.6	313 41.4	12.3		278 57.5	57.4		116 48.1	26.0		48 35.6	05.1		
10	331	05.0	328 45.2	11.6		293 58.2	58.0		131 50.8	25.9		63 38.0	05.1		
11	346	07.5	343 49.1	+10 10.8		308 58.9	+14 58.6		146 53.6	-6 25.8		78 40.4	-22 05.1		
12	1	10.0	358 52.9	+10 10.1		323 59.7	+14 59.1		161 56.3	-6 25.7		93 42.8	-22 05.1		
13	16	12.4	13 56.8	09.4		339 00.4	+14 59.7		176 59.0	25.6		108 45.2	05.1		
14	31	14.9	29 00.6	08.6		354 01.1	+15 00.3		192 01.8	25.5		123 47.6	05.1		
15	46	17.4	44 04.4	07.9		9 01.8	00.9		207 04.5	25.4		138 50.0	05.1		
16	61	19.8	59 08.3	07.2		24 02.5	01.5		222 07.3	25.2		153 52.4	05.1		
17	76	22.3	74 12.1	+10 06.4		39 03.3	+15 02.1		237 10.0	-6 25.1		168 54.8	-22 05.1		
18	91	24.8	89 16.0	+10 05.7		54 04.0	+15 02.7		252 12.7	-6 25.0		183 57.2	-22 05.0		
19	106	27.2	104 19.8	05.0		69 04.7	03.3		267 15.5	24.9		198 59.6	05.0		
20	121	29.7	119 23.7	04.2		84 05.4	03.9		282 18.2	24.8		214 02.0	05.0		
21	136	32.1	134 27.5	03.5		99 06.2	04.5		297 20.9	24.7		229 04.4	05.0		
22	151	34.6	149 31.4	02.7		114 06.9	05.0		312 23.7	24.6		244 06.9	05.0		
23	166	37.1	164 35.2	02.0		129 07.6	05.6		327 26.4	24.4		259 09.3	05.0		
24	181	39.5	179 39.1	+10 01.2		144 08.3	+15 06.2		342 29.2	-6 24.3		274 11.7	-22 05.0		
Dif	—		+38		-7	+7		+6	+27		+1	+24		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 05 ^m 9			Edad: 26 ^d 4 PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 7 20 ^h : 58 ^m 0 SD: 15 ^m 6 PMG: 9 ^h 55 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	29.3	+1 48.0	216	13.1	-12 38.3	81	60 N	18 27	19 09	20 01	5 13 21	14 49 83		
1	193	29.5		49.0	230	42.6 ¹⁰⁵	30.2	81	58	26	05	19 53	5 06 23	14 56 80	
2	208	29.6		49.9	245	12.1 ¹⁰⁵	21.9	83	56	24	19 02	47	4 59 26	15 01 78	
3	223	29.8		50.9	259	41.5 ¹⁰⁴	13.6	83	54	23	18 59	41	54 27	06 76	
4	238	30.0		51.9	274	11.0 ¹⁰⁵	-12 05.2	84	52	22	56	36	49 29	11 74	
5	253	30.2	+1 52.9	288	40.5 ¹⁰⁵	-11 56.7	85	50	18 21	18 54	19 32	4 44 31	15 15 72		
6	268	30.4	+1 53.9	303	09.9 ¹⁰⁴	-11 48.1	86	45	18 19	18 48	19 23	4 34 34	15 23 69		
7	283	30.6		54.9	317	39.4 ¹⁰⁵	39.5	86	40	17	44	16	26 37	31 66	
8	298	30.8		55.8	332	08.8 ¹⁰⁴	30.8	87	35	16	41	11	19 39	37 63	
9	313	31.0		56.8	346	38.2 ¹⁰⁴	22.0	88	30	15	38	06	13 41	42 62	
10	328	31.1		57.8	1	07.6 ¹⁰⁴	13.1	89	20	12	34	19 00	4 02 45	15 52 57	
11	343	31.3	+1 58.8	15	37.0 ¹⁰⁴	-11 04.2	89	10 N	18 11	18 32	18 56	3 52 48	16 00 54		
12	358	31.5	+1 59.8	30	06.4 ¹⁰⁴	-10 55.2	90	0	18 09	18 30	18 54	3 43 51	16 07 51		
13	13	31.7	+2 00.7	44	35.8 ¹⁰⁴	46.1	91	10 S	08	29	53	34 54	15 48		
14	28	31.9		01.7	59	05.2 ¹⁰⁴	37.0	91	20	06	28	54	25 56	23 45	
15	43	32.1		02.7	73	34.6 ¹⁰⁴	27.8	92	30	05	29	56	14 60	32 41	
16	58	32.3		03.7	88	04.0 ¹⁰⁴	18.5	93	35	04	29	18 59	07 63	37 39	
17	73	32.5	+2 04.7	102	33.3 ¹⁰³	-10 09.1	94	40	18 03	18 30	19 02	3 00 65	16 43 36		
18	88	32.7	+2 05.7	117	02.7 ¹⁰⁴	-9 59.7	94	45	18 02	18 31	19 05	2 52 67	16 50 33		
19	103	32.8		06.6	131	32.0 ¹⁰³	50.3	94	50	01	33	11	41 71	16 58 30	
20	118	33.0		07.6	146	01.3 ¹⁰³	40.7	96	52	01	34	13	37 72	17 02 28	
21	133	33.2		08.6	160	30.6 ¹⁰³	31.1	96	54	18 00	35	16	31 75	06 26	
22	148	33.4		09.6	174	59.9 ¹⁰³	21.4	97	56	17 59	36	20	26 76	11 24	
23	163	33.6		10.6	189	29.2 ¹⁰³	11.7	97	58	59	38	24	19 79	16 22	
24	178	33.8	+2 11.5	203	58.5 ¹⁰³	-9 01.9	98	60 S	17 58	18 39	19 28	2 12 81	17 21 20		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 11 ^h 47 ^m 5		Mag: -4.2 PMG: 11 ^h 52 ^m			Mag: +1.4 PMG: 14 ^h 22 ^m			Mag: -2.5 PMG: 1 ^h 05 ^m			Mag: +0.4 PMG: 5 ^h 38 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	182	38.7	181	11.3	+9 42.7	144	25.6	+15 20.3	343	34.9	-6 21.6	275	09.4	-22 05.0	
1	197	41.1	196	15.1	41.9	159	26.4	20.8	358	37.7	21.5	290	11.8	05.0	
2	212	43.6	211	18.9	41.1	174	27.1	21.4	13	40.4	21.3	305	14.3	05.0	
3	227	46.1	226	22.8	40.3	189	27.8	22.0	28	43.1	21.2	320	16.7	05.0	
4	242	48.5	241	26.6	39.5	204	28.5	22.6	43	45.9	21.1	335	19.1	05.0	
5	257	51.0	256	30.4	+9 38.7	219	29.2	+15 23.2	58	48.6	-6 21.0	350	21.5	-22 05.0	
6	272	53.5	271	34.3	+9 37.9	234	30.0	+15 23.7	73	51.4	-6 20.9	5	23.9	-22 05.0	
7	287	55.9	286	38.1	37.1	249	30.7	24.3	88	54.1	20.8	20	26.3	05.0	
8	302	58.4	301	41.9	36.3	264	31.4	24.9	103	56.9	20.6	35	28.7	05.0	
9	318	00.9	316	45.8	35.5	279	32.1	25.5	118	59.6	20.5	50	31.1	05.0	
10	333	03.3	331	49.6	34.7	294	32.8	26.1	134	02.3	20.4	65	33.5	05.0	
11	348	05.8	346	53.4	+9 33.9	309	33.6	+15 26.6	149	05.1	-6 20.3	80	35.9	-22 05.0	
12	3 08.2	1 57.3	+9 33.1	324	34.3	+15 27.2	164	07.8	-6 20.2	95	38.4	-22 05.0			
13	18 10.7	17 01.1	32.3	339	35.0	27.8	179	10.6	20.1	110	40.8	05.0			
14	33 13.2	32 04.9	31.5	354	35.7	28.4	194	13.3	20.0	125	43.2	05.0			
15	48 15.6	47 08.7	30.7	9 36.4	29.0	209	16.1	19.8	140	45.6	05.0				
16	63 18.1	62 12.6	29.9	24 37.1	29.5	224	18.8	19.7	155	48.0	05.0				
17	78 20.6	77 16.4	+9 29.0	39 37.9	+15 30.1	239	21.5	-6 19.6	170	50.4	-22 05.0				
18	93 23.0	92 20.2	+9 28.2	54 38.6	+15 30.7	254	24.3	-6 19.5	185	52.8	-22 05.0				
19	108 25.5	107 24.0	27.4	69 39.3	31.3	269	27.0	19.4	200	55.2	05.0				
20	123 28.0	122 27.8	26.6	84 40.0	31.8	284	29.8	19.3	215	57.7	05.0				
21	138 30.4	137 31.7	25.8	99 40.7	32.4	299	32.5	19.1	231	00.1	05.0				
22	153 32.9	152 35.5	25.0	114 41.5	33.0	314	35.3	19.0	246	02.5	05.0				
23	168 35.3	167 39.3	24.1	129 42.2	33.6	329	38.0	18.9	261	04.9	05.0				
24	183 37.8	182 43.1	+9 23.3	144 42.9	+15 34.2	344	40.8	-6 18.8	276	07.3	-22 04.9				
Dif	—	+38	-8	+7	+6	+27	+1	+24							

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 6			Edad: 27 ^d 4 PHE { 4 ^h : 58'3 12 ^h : 58'5 20 ^h : 58'8 Rº: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	33.8	+2	11.5	203	58.5	-9 01.9	60 N	4 10	5 01	5 43	5 34	19	16 12	87
1	193	34.0		12.5	218	27.8 ¹⁰³	-8 52.0 ⁹⁹	58	17	05	45	29	22	16	84
2	208	34.2		13.5	232	57.1 ¹⁰³	42.1 ⁹⁹	56	24	09	46	25	24	19	81
3	223	34.3		14.5	247	26.3 ¹⁰²	32.1 ¹⁰⁰	54	29	12	47	21	26	22	79
4	238	34.5		15.5	261	55.6 ¹⁰³	22.0 ¹⁰¹	52	34	15	49	18	28	25	77
5	253	34.7	+2	16.4	276	24.8 ¹⁰²	-8 11.9 ¹⁰¹	50	4 39	5 17	5 50	5 15	29	16 27	75
6	268	34.9	+2	17.4	290	54.0 ¹⁰²	-8 01.8 ¹⁰¹	45	4 48	5 22	5 52	5 08	33	16 32	72
7	283	35.1		18.4	305	23.2 ¹⁰²	-7 51.6 ¹⁰²	40	4 55	27	54	5 03	36	37	68
8	298	35.3		19.4	319	52.4 ¹⁰²	41.3 ¹⁰³	35	5 00	30	55	4 58	38	40	66
9	313	35.5		20.4	334	21.6 ¹⁰²	30.9 ¹⁰⁴	30	05	33	57	54	41	44	62
10	328	35.7		21.3	348	50.8 ¹⁰²	20.6 ¹⁰³	20	11	37	5 59	47	44	49	59
11	343	35.8	+2	22.3	3	19.9 ¹⁰¹	-7 10.1 ¹⁰⁵	10 N	5 15	5 40	6 01	4 40	48	16 54	55
12	358	36.0	+2	23.3	17	49.1 ¹⁰²	-6 59.6 ¹⁰⁵	0	5 18	5 42	6 02	4 34	51	16 58	52
13	13	36.2		24.3	32	18.2 ¹⁰¹	49.1 ¹⁰⁵	10 S	19	43	04	28	55	17 03	48
14	28	36.4		25.3	46	47.3 ¹⁰¹	38.5 ¹⁰⁶	20	18	43	05	21	59	08	44
15	43	36.6		26.3	61	16.4 ¹⁰¹	27.9 ¹⁰⁶	30	15	43	07	14	62	13	40
16	58	36.8		27.2	75	45.5 ¹⁰¹	17.2 ¹⁰⁷	35	13	43	08	10	64	16	38
17	73	37.0	+2	28.2	90	14.6 ¹⁰¹	-6 06.4 ¹⁰⁸	40	5 11	5 42	6 09	4 05	67	17 19	36
18	88	37.2	+2	29.2	104	43.6 ¹⁰⁰	-5 55.6 ¹⁰⁸	45	5 07	5 41	6 10	3 59	70	17 23	33
19	103	37.4		30.2	119	12.7 ¹⁰¹	44.8 ¹⁰⁸	50	5 02	39	11	52	74	28	29
20	118	37.5		31.1	133	41.7 ¹⁰⁰	33.9 ¹⁰⁹	52	4 59	38	12	49	76	30	27
21	133	37.7		32.1	148	10.7 ¹⁰⁰	23.0 ¹⁰⁹	54	56	37	13	46	77	32	26
22	148	37.9		33.1	162	39.7 ¹⁰⁰	12.0 ¹¹⁰	56	53	36	13	42	80	35	23
23	163	38.1		34.1	177	08.7 ¹⁰⁰	-5 01.0 ¹¹⁰	58	49	35	14	38	82	38	21
24	178	38.3	+2	35.1	191	37.7 ¹⁰⁰	-4 50.0 ¹¹⁰	60 S	4 44	5 33	6 15	3 33	85	17 41	19
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 43 ^m 6			Mag: -4.2 PMG: 11 ^h 46 ^m			Mag: +1.4 PMG: 14 ^h 20 ^m			Mag: -2.5 PMG: 1 ^h 01 ^m			Mag: +0.4 PMG: 5 ^h 35 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	183	37.8		182	43.1	+9 23.3	144	42.9	+15 34.2	344	40.8	-6 18.8	276	07.3	-22 04.9
1	198	40.3		197	46.9	22.5	159	43.6	34.7	359	43.5	18.7	291	09.7	04.9
2	213	42.7		212	50.8	21.7	174	44.3	35.3	14	46.2	18.6	306	12.1	04.9
3	228	45.2		227	54.6	20.8	189	45.0	35.9	29	49.0	18.4	321	14.6	04.9
4	243	47.7		242	58.4	20.0	204	45.8	36.5	44	51.7	18.3	336	17.0	04.9
5	258	50.1		258	02.2	+9 19.2	219	46.5	+15 37.0	59	54.5	-6 18.2	351	19.4	-22 04.9
6	273	52.6		273	06.0	+9 18.3	234	47.2	+15 37.6	74	57.2	-6 18.1	6	21.8	-22 04.9
7	288	55.1		288	09.8	17.5	249	47.9	38.2	90	00.0	18.0	21	24.2	04.9
8	303	57.5		303	13.6	16.7	264	48.6	38.8	105	02.7	17.9	36	26.6	04.9
9	319	00.0		318	17.4	15.8	279	49.3	39.3	120	05.5	17.7	51	29.0	04.9
10	334	02.5		333	21.2	15.0	294	50.1	39.9	135	08.2	17.6	66	31.5	04.9
11	349	04.9		348	25.0	+9 14.2	309	50.8	+15 40.5	150	11.0	-6 17.5	81	33.9	-22 04.9
12	4	07.4		3	28.8	+9 13.3	324	51.5	+15 41.0	165	13.7	-6 17.4	96	36.3	-22 04.9
13	19	09.8		18	32.6	12.5	339	52.2	41.6	180	16.4	17.3	111	38.7	04.9
14	34	12.3		33	36.5	11.6	354	52.9	42.2	195	19.2	17.2	126	41.1	04.9
15	49	14.8		48	40.3	10.8	9	53.6	42.8	210	21.9	17.0	141	43.5	04.9
16	64	17.2		63	44.1	09.9	24	54.4	43.3	225	24.7	16.9	156	46.0	04.9
17	79	19.7		78	47.8	+9 09.1	39	55.1	+15 43.9	240	27.4	-6 16.8	171	48.4	-22 04.9
18	94	22.2		93	51.6	+9 08.3	54	55.8	+15 44.5	255	30.2	-6 16.7	186	50.8	-22 04.9
19	109	24.6		108	55.4	07.4	69	56.5	45.0	270	32.9	16.6	201	53.2	04.9
20	124	27.1		123	59.2	06.6	84	57.2	45.6	285	35.7	16.4	216	55.6	04.9
21	139	29.6		139	03.0	05.7	99	57.9	46.2	300	38.4	16.3	231	58.0	04.9
22	154	32.0		154	06.8	04.9	114	58.7	46.8	315	41.2	16.2	247	00.5	04.9
23	169	34.5		169	10.6	04.0	129	59.4	47.3	330	43.9	16.1	262	02.9	04.9
24	184	36.9		184	14.4	+9 03.2	145	00.1	+15 47.9	345	46.7	-6 16.0	277	05.3	-22 04.9
Dif	—			+38	-8		+7	+6		+27	+1		+24		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 3			Edad: 28 ^d 4 PHE { 4 ^h : 59'0 12 ^h : 59'2 20 ^h : 59'4 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	38.3	+2 35.1	191	37.7	-4 50.0		60 N	18 32	19 14	20 06	5 53 18	17 39 88	
1	193	38.5		206	06.6	99 38.9	111	58	30	10	19 58	51 21	40 85	
2	208	38.7		220	35.5	99 27.8	111	56	28	06	52	49 23	40 83	
3	223	38.9		235	04.5	100 16.6	112	54	27	03	46	47 25	41 81	
4	238	39.0		249	33.3	98 -4 05.4	112	52	25	19 00	40	46 27	42 79	
5	253	39.2	+2 40.0	264	02.2	99 -3 54.2	112	50	18 24	18 57	19 36	5 44 29	17 42 77	
6	268	39.4	+2 40.9	278	31.1	99 -3 42.9	113	45	18 21	18 51	19 26	5 41 33	17 44 73	
7	283	39.6		292	59.9	98 31.7	112	40	19	46	18	39 35	45 69	
8	298	39.8		307	28.7	98 20.3	114	35	17	43	13	36 39	46 66	
9	313	40.0		321	57.5	98 -3 09.0	113	30	16	40	08	35 40	46 65	
10	328	40.2		336	26.3	98 -2 57.6	114	20	13	35	19 01	31 45	48 60	
11	343	40.4	+2 45.8	350	55.1	98 -2 46.2	114	10 N	18 11	18 32	18 56	5 28 49	17 49 56	
12	358	40.5	+2 46.8	5	23.8	97 -2 34.7	115	0	18 09	18 29	18 53	5 25 52	17 50 53	
13	13	40.7		19	52.5	97 23.2	115	10 S	07	28	52	23 55	51 49	
14	28	40.9		34	21.2	97 11.8	114	20	05	27	52	20 59	52 45	
15	43	41.1		48	49.9	97 -2 00.2	116	30	02	26	54	16 64	53 41	
16	58	41.3		63	18.5	96 -1 48.7	115	35	01	26	56	14 66	54 39	
17	73	41.5	+2 51.7	77	47.1	96 -1 37.1	116	40	18 00	18 27	18 58	5 12 69	17 55 36	
18	88	41.7	+2 52.7	92	15.7	96 -1 25.6	115	45	17 58	18 28	19 02	5 09 73	17 56 32	
19	103	41.9		106	44.3	96 14.0	116	50	57	29	06	06 77	57 29	
20	118	42.1		121	12.9	96 -1 02.3	117	52	56	29	09	05 78	57 27	
21	133	42.2		135	41.4	95 -0 50.7	116	54	55	30	11	03 81	58 25	
22	148	42.4		150	09.9	95 39.1	116	56	54	31	14	02 82	58 24	
23	163	42.6		164	38.4	95 27.4	117	58	53	32	18	5 00 85	17 59 21	
24	178	42.8	+2 58.5	179	06.8	94 -0 15.7	117	60 S	17 52	18 33	19 22	4 58 87	18 00 18	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 39 ^m 6		Mag: -4.2 PMG: 11 ^h 40 ^m			Mag: +1.4 PMG: 14 ^h 19 ^m			Mag: -2.5 PMG: 0 ^h 57 ^m			Mag: +0.4 PMG: 5 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	184	36.9	184 14.4	+9 03.2		145 00.1	+15 47.9		345 46.7	-6 16.0		277 05.3	-22 04.9	
1	199	39.4	199 18.2	02.3		160 00.8	48.5		0 49.4	15.9		292 07.7	04.9	
2	214	41.9	214 22.0	01.4		175 01.5	49.0		15 52.1	15.7		307 10.1	04.9	
3	229	44.3	229 25.8	+9 00.6		190 02.2	49.6		30 54.9	15.6		322 12.6	04.9	
4	244	46.8	244 29.5	+8 59.7		205 03.0	50.2		45 57.6	15.5		337 15.0	04.9	
5	259	49.3	259 33.3	+8 58.9		220 03.7	+15 50.7		61 00.4	-6 15.4		352 17.4	-22 04.9	
6	274	51.7	274 37.1	+8 58.0		235 04.4	+15 51.3		76 03.1	-6 15.3		7 19.8	-22 04.9	
7	289	54.2	289 40.9	57.2		250 05.1	51.9		91 05.9	15.2		22 22.2	04.9	
8	304	56.7	304 44.7	56.3		265 05.8	52.5		106 08.6	15.0		37 24.6	04.9	
9	319	59.1	319 48.4	55.4		280 06.5	53.0		121 11.4	14.9		52 27.1	04.9	
10	335	01.6	334 52.2	54.6		295 07.2	53.6		136 14.1	14.8		67 29.5	04.9	
11	350	04.1	349 56.0	+8 53.7		310 08.0	+15 54.2		151 16.9	-6 14.7		82 31.9	-22 04.9	
12	5	06.5	4 59.8	+8 52.8		325 08.7	+15 54.7		166 19.6	-6 14.6		97 34.3	-22 04.9	
13	20	09.0	20 03.5	52.0		340 09.4	55.3		181 22.4	14.4		112 36.8	04.9	
14	35	11.4	35 07.3	51.1		355 10.1	55.9		196 25.1	14.3		127 39.2	04.9	
15	50	13.9	50 11.1	50.2		10 10.8	56.4		211 27.9	14.2		142 41.6	04.9	
16	65	16.4	65 14.8	49.4		25 11.5	57.0		226 30.6	14.1		157 44.0	04.9	
17	80	18.8	80 18.6	+8 48.5		40 12.2	+15 57.5		241 33.4	-6 14.0		172 46.4	-22 04.9	
18	95	21.3	95 22.4	+8 47.6		55 13.0	+15 58.1		256 36.1	-6 13.9		187 48.9	-22 04.9	
19	110	23.8	110 26.1	46.7		70 13.7	58.7		271 38.9	13.7		202 51.3	04.9	
20	125	26.2	125 29.9	45.9		85 14.4	59.2		286 41.6	13.6		217 53.7	04.9	
21	140	28.7	140 33.6	45.0		100 15.1	+15 59.8		301 44.4	13.5		232 56.1	04.9	
22	155	31.2	155 37.4	44.1		115 15.8	+16 00.4		316 47.1	13.4		247 58.5	04.9	
23	170	33.6	170 41.1	43.3		130 16.5	00.9		331 49.9	13.3		263 01.0	04.9	
24	185	36.1	185 44.9	+8 42.4		145 17.2	+16 01.5		346 52.6	-6 13.2		278 03.4	-22 04.9	
Dif	—		+38	-9		+7	+6		+27	+1		+24	0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16/0 PMG: 12 ^h 05 ^m 0			Edad: 29 ^d 4 PHE { 4 ^h : 59/6 12 ^h : 59/8 20 ^h : 59/9 PMG: 12 ^h 30 ^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	178	42.8	+2	58.5	179	06.8	-0	15.7	60 N	4	03	4	55	5	37	6	11	19	07	89
1	193	43.0	+2	59.5	193	35.3	95	-0	04.0	117	58	11	4	59	39	12	21	05	87	
2	208	43.2	+3	00.5	208	03.7	94	+0	07.6	116	56	18	5	03	41	12	24	03	85	
3	223	43.4		01.5	222	32.1	94		19.3	117	54	24	07	42	12	27	02	82		
4	238	43.6		02.4	237	00.4	93		31.1	118	52	29	10	44	13	28	19	01	79	
5	253	43.7	+3	03.4	251	28.7	93	+0	42.8	117	50	4	34	5	13	5	45	6	13	30
6	268	43.9	+3	04.4	265	57.0	93	+0	54.5	117	45	4	44	5	19	5	48	6	14	33
7	283	44.1		05.4	280	25.3	93	+1	06.2	117	40	51	23	50	14	37	54	71		
8	298	44.3		06.3	294	53.5	92		17.9	117	35	4	57	27	52	15	39	52	68	
9	313	44.5		07.3	309	21.7	92		29.7	118	30	5	02	30	54	15	42	51	65	
10	328	44.7		08.3	323	49.9	92		41.4	117	20	09	35	5	57	16	46	48	61	
11	343	44.9	+3	09.3	338	18.1	92	+1	53.1	117	10 N	5	14	5	38	6	00	6	17	50
12	358	45.1	+3	10.3	352	46.2	91	+2	04.8	117	0	5	17	5	41	6	02	6	17	54
13	13	45.2		11.2	7	14.3	91		16.5	117	10 S	18	43	04	18	57	40	51		
14	28	45.4		12.2	21	42.4	91		28.2	117	20	18	44	06	19	61	37	47		
15	43	45.6		13.2	36	10.4	90		39.9	117	30	17	44	08	20	65	34	43		
16	58	45.8		14.2	50	38.4	90	+2	51.6	117	35	15	44	10	20	68	33	40		
17	73	46.0	+3	15.1	65	06.4	90	+3	03.3	117	40	5	13	5	44	6	11	6	21	70
18	88	46.2	+3	16.1	79	34.3	89	+3	15.0	117	45	5	09	5	43	6	13	6	22	73
19	103	46.4		17.1	94	02.2	89		26.6	116	50	05	42	15	23	77	26	30		
20	118	46.6		18.1	108	30.1	89		38.3	117	52	02	42	15	23	80	24	29		
21	133	46.7		19.0	122	57.9	88	+3	49.9	116	54	5	00	41	16	24	81	23	27	
22	148	46.9		20.0	137	25.7	88	+4	01.5	116	56	4	57	40	17	24	84	22	24	
23	163	47.1		21.0	151	53.5	88		13.1	116	58	53	39	19	25	86	20	22		
24	178	47.3	+3	22.0	166	21.3	88	+4	24.7	116	60 S	4	49	5	38	6	20	6	25	89
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 11 ^h 35 ^m 7		Mag: -4.2 PMG: 11 ^h 34 ^m			Mag: +1.5 PMG: 14 ^h 18 ^m			Mag: -2.5 PMG: 0 ^h 52 ^m			Mag: +0.4 PMG: 5 ^h 27 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	185	36.1	185	44.9	+8	42.4	145	17.2	+16	01.5	346	52.6	-6	13.2	278	03.4	-22	04.9		
1	200	38.5	200	48.6		41.5	160	18.0		02.1	1	55.4		13.0	293	05.8		04.9		
2	215	41.0	215	52.4		40.6	175	18.7		02.6	16	58.1		12.9	308	08.2		04.8		
3	230	43.5	230	56.1		39.7	190	19.4		03.2	32	00.9		12.8	323	10.7		04.8		
4	245	45.9	245	59.9		38.9	205	20.1		03.8	47	03.6		12.7	338	13.1		04.8		
5	260	48.4	261	03.6	+8	38.0	220	20.8	+16	04.3	62	06.4	-6	12.6	353	15.5	-22	04.8		
6	275	50.9	276	07.4	+8	37.1	235	21.5	+16	04.9	77	09.1	-6	12.4	8	17.9	-22	04.8		
7	290	53.3	291	11.1		36.2	250	22.2		05.4	92	11.9		12.3	23	20.4		04.8		
8	305	55.8	306	14.8		35.3	265	22.9		06.0	107	14.6		12.2	38	22.8		04.8		
9	320	58.3	321	18.6		34.4	280	23.7		06.6	122	17.4		12.1	53	25.2		04.8		
10	336	00.7	336	22.3		33.6	295	24.4		07.1	137	20.1		12.0	68	27.6		04.8		
11	351	03.2	351	26.0	+8	32.7	310	25.1	+16	07.7	152	22.9	-6	11.8	83	30.1	-22	04.8		
12	6	05.7	6	29.8	+8	31.8	325	25.8	+16	08.2	167	25.6	-6	11.7	98	32.5	-22	04.8		
13	21	08.1	21	33.5		30.9	340	26.5		08.8	182	28.4		11.6	113	34.9		04.8		
14	36	10.6	36	37.2		30.0	355	27.2		09.4	197	31.1		11.5	128	37.3		04.8		
15	51	13.0	51	41.0		29.1	10	27.9		09.9	212	33.9		11.4	143	39.8		04.8		
16	66	15.5	66	44.7		28.2	25	28.6		10.5	227	36.6		11.3	158	42.2		04.8		
17	81	18.0	81	48.4	+8	27.3	40	29.4	+16	11.0	242	39.4	-6	11.1	173	44.6	-22	04.8		
18	96	20.4	96	52.1	+8	26.5	55	30.1	+16	11.6	257	42.1	-6	11.0	188	47.0	-22	04.8		
19	111	22.9	111	55.8		25.6	70	30.8		12.2	272	44.9		10.9	203	49.5		04.8		
20	126	25.4	126	59.6		24.7	85	31.5		12.7	287	47.6		10.8	218	51.9		04.8		
21	141	27.8	142	03.3		23.8	100	32.2		13.3	302	50.4		10.7	233	54.3		04.8		
22	156	30.3	157	07.0		22.9	115	32.9		13.8	317	53.1		10.5	248	56.7		04.8		
23	171	32.8	172	10.7		22.0	130	33.6		14.4	332	55.9		10.4	263	59.2		04.8		
24	186	35.2	187	14.4	+8	21.1	145	34.3	+16	14.9	347	58.6	-6	10.3	279	01.6	-22	04.8		
Dif	—		+37		-9		+7		+6		+28		+1		+24					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 7			Edad: 30 ^d 4 PHE { 4 ^h : 60'1 12 ^h : 60'1 20 ^h : 60'2 R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	47.3	+3 22.0	166	21.3	+4 24.7	87	60 N	18 37	19 19	20 12	6 30	22	20 36	89
1	193	47.5		180	49.0		87	58	35	15	20 04	33	24	32	86
2	208	47.7		195	16.6		86	56	32	10	19 56	36	26	28	83
3	223	47.9		209	44.3		87	54	31	06	50	39	28	24	81
4	238	48.1		224	11.9		86	52	29	03	44	41	30	20	80
5	253	48.2	+3 26.8	238	39.4		85	50	18 27	19 00	19 39	6 43	32	20 17	78
6	268	48.4	+3 27.8	253	07.0		86	45	18 24	18 54	19 29	6 47	36	20 11	74
7	283	48.6		267	34.5		85	40	21	49	21	51	39	05	71
8	298	48.8		282	01.9		84	35	19	44	14	54	42	20 00	69
9	313	49.0		296	29.4		85	30	17	41	09	6 57	44	19 56	66
10	328	49.2		310	56.8		84	20	14	36	19 01	7 02	48	49	62
11	343	49.4	+3 32.7	325	24.1		83	10 N	18 11	18 32	18 56	7 07	51	19 43	58
12	358	49.6	+3 33.6	339	51.4		83	0	18 08	18 29	18 53	7 11	55	19 37	55
13	13	49.7		354	18.7		83	10 S	05	26	51	15	58	31	52
14	28	49.9		8	46.0		83	20	03	25	50	20	61	24	49
15	43	50.1		23	13.2		82	30	18 00	24	52	25	66	17	45
16	58	50.3		37	40.3		81	35	17 58	24	53	28	68	13	43
17	73	50.5	+3 38.5	52	07.5		82	40	17 57	18 24	18 55	7 31	72	19 08	41
18	88	50.7	+3 39.5	66	34.6		81	45	17 55	18 24	18 58	7 35	75	19 03	37
19	103	50.9		81	01.6		80	50	52	24	19 02	40	79	18 56	34
20	118	51.0		95	28.7		81	52	51	25	04	43	80	53	32
21	133	51.2		109	55.6		79	54	50	25	06	45	82	50	30
22	148	51.4		124	22.6		80	56	49	26	09	48	84	46	29
23	163	51.6		143	49.5		79	58	47	26	12	51	87	42	26
24	178	51.8	+3 45.3	153	16.4		79	60 S	17 46	18 27	19 16	7 54	90	18 38	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 31 ^m 8		Mag: -4.2 PMG: 11 ^h 28 ^m		Mag: +1.5 PMG: 14 ^h 17 ^m		Mag: -2.5 PMG: 0 ^h 48 ^m		Mag: +0.4 PMG: 5 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	186	35.2	187 14.4	+8 21.1	145 34.3	+16 14.9	347 58.6	-6 10.3	279 01.6	-22 04.8
1	201	37.7	202 18.1	20.2	160 35.0	15.5	3 01.4	10.2	294 04.0	04.8
2	216	40.2	217 21.8	19.3	175 35.8	16.1	18 04.1	10.1	309 06.4	04.8
3	231	42.6	232 25.5	18.4	190 36.5	16.6	33 06.9	09.9	324 08.9	04.8
4	246	45.1	247 29.2	17.5	205 37.2	17.2	48 09.6	09.8	339 11.3	04.8
5	261	47.5	262 32.9	+8 16.6	220 37.9	+16 17.7	63 12.4	-6 09.7	354 13.7	-22 04.8
6	276	50.0	277 36.6	+8 15.7	235 38.6	+16 18.3	78 15.2	-6 09.6	9 16.2	-22 04.8
7	291	52.5	292 40.3	14.8	250 39.3	18.8	93 17.9	09.5	24 18.6	04.8
8	306	54.9	307 44.0	13.9	265 40.0	19.4	108 20.7	09.3	39 21.0	04.8
9	321	57.4	322 47.7	13.0	280 40.7	20.0	123 23.4	09.2	54 23.4	04.8
10	336	59.9	337 51.4	12.1	295 41.4	20.5	138 26.2	09.1	69 25.9	04.8
11	352	02.3	352 55.0	+8 11.2	310 42.1	+16 21.1	153 28.9	-6 09.0	84 28.3	-22 04.8
12	7 04.8	7 58.7	+8 10.3	325 42.9	+16 21.6	168 31.7	-6 08.9	99 30.7	-22 04.8	
13	22 07.3	23 02.4	09.4	340 43.6	22.2	183 34.4	08.8	114 33.2	04.8	
14	37 09.7	38 06.1	08.5	355 44.3	22.7	198 37.2	08.6	129 35.6	04.8	
15	52 12.2	53 09.8	07.6	10 45.0	23.3	213 39.9	08.5	144 38.0	04.8	
16	67 14.6	68 13.4	06.7	25 45.7	23.8	228 42.7	08.4	159 40.5	04.8	
17	82 17.1	83 17.1	+8 05.8	40 46.4	+16 24.4	243 45.4	-6 08.3	174 42.9	-22 04.8	
18	97 19.6	98 20.8	+8 04.9	55 47.1	+16 24.9	258 48.2	-6 08.2	189 45.3	-22 04.8	
19	112 22.0	113 24.4	04.0	70 47.8	25.5	273 50.9	08.0	204 47.7	04.8	
20	127 24.5	128 28.1	03.1	85 48.5	26.0	288 53.7	07.9	219 50.2	04.8	
21	142 27.0	143 31.8	02.2	100 49.2	26.6	303 56.4	07.8	234 52.6	04.8	
22	157 29.4	158 35.4	01.3	115 49.9	27.1	318 59.2	07.7	249 55.0	04.8	
23	172 31.9	173 39.1	+8 00.4	130 50.7	27.7	334 02.0	07.6	264 57.5	04.7	
24	187 34.4	188 42.7	+7 59.4	145 51.4	+16 28.2	349 04.7	-6 07.4	279 59.9	-22 04.7	
Dif	—		+37	-9	+7	+6	+28	+1	+24	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:0 PMG: 12 ^h 04 ^m 4			Edad: 1 ^d 9 PHE { 4 ^h : 60/3 12 ^h : 60/3 20 ^h : 60/3 R°: 57 ^m SD: 16:4 PMG: 14 ^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	178	51.8	+3	45.3	153	16.4	+8	52.7	60 N	3 56	4 48	5 31	6 52	25	22 05	86		
1	193	52.0		46.3	167	43.2	78	+9	03.3	58	4 04	53	33	6 57	29	21 58	83	
2	208	52.2		47.2	182	10.0	78		13.9	56	12	4 58	36	7 02	31	51	81	
3	223	52.4		48.2	196	36.7	77		24.4	54	18	5 02	38	07	33	45	79	
4	238	52.5		49.2	211	03.4	77		34.8	52	24	05	39	11	34	40	77	
5	253	52.7	+3	50.2	225	30.1	77	+9	45.2	50	4 29	5 08	5 41	7 15	36	21 35	76	
6	268	52.9	+3	51.1	239	56.8	77	+9	55.5	45	4 40	5 15	5 44	7 23	39	21 25	72	
7	283	53.1		52.1	254	23.4	76	+10	05.8	40	48	20	47	30	42	16	70	
8	298	53.3		53.1	268	49.9	75		16.0	35	4 54	24	50	36	44	09	68	
9	313	53.5		54.0	283	16.4	75		26.1	30	5 00	28	52	41	47	21 02	66	
10	328	53.7		55.0	297	42.9	75		36.2	20	07	33	55	50	50	20 51	63	
11	343	53.9	+3	56.0	312	09.4	75	+10	46.2	10 N	5 13	5 37	5 58	7 58	53	20 41	60	
12	358	54.0	+3	56.9	326	35.8	74	+10	56.1	0	5 16	5 40	6 01	8 06	56	20 32	57	
13	13	54.2		57.9	341	02.2	74	+11	06.0	10 S	18	43	04	13	60	23	55	
14	28	54.4		58.9	355	28.5	73		15.7	20	19	45	07	21	63	13	52	
15	43	54.6	+3	59.9	9	54.8	73		25.4	30	18	46	10	31	66	20 02	49	
16	58	54.8	+4	00.8	24	21.0	72		35.1	35	17	46	11	36	69	19 56	46	
17	73	55.0	+4	01.8	38	47.3	73	+11	44.6	40	5 15	5 46	6 13	8 43	70	19 49	44	
18	88	55.2	+4	02.8	53	13.5	72	+11	54.1	45	5 12	5 46	6 15	8 50	73	19 40	42	
19	103	55.3		03.7	67	39.6	71	+12	03.5	50	08	45	18	8 59	77	30	38	
20	118	55.5		04.7	82	05.7	71		12.8	52	06	45	19	9 03	79	25	37	
21	133	55.7		05.7	96	31.8	71		22.1	54	04	45	20	07	81	20	35	
22	148	55.9		06.6	110	57.8	70		31.2	56	5 01	44	21	12	83	15	33	
23	163	56.1		07.6	125	23.8	70		40.3	58	4 58	44	23	18	85	08	31	
24	178	56.3	+4	08.6	139	49.8	70	+12	49.3	60 S	4 54	5 43	6 25	9 24	88	19 01	29	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 27 ^m 8			Mag: -4.1 PMG: 11 ^h 22 ^m			Mag: +1.5 PMG: 14 ^h 16 ^m			Mag: -2.5 PMG: 0 ^h 44 ^m			Mag: +0.4 PMG: 5 ^h 19 ^m					
	hG ♂	Dec		hG ♀	Dec		hG ♂	Dec		hG ♀	Dec		hG ♀	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	187	34.4	188	42.7	+7	59.4	145	51.4	+16	28.2	349	04.7	-6	07.4	279	59.9	-22	04.7
1	202	36.8	203	46.4		58.5	160	52.1		28.8	4	07.5		07.3	295	02.3		04.7
2	217	39.3	218	50.0		57.6	175	52.8		29.3	19	10.2		07.2	310	04.8		04.7
3	232	41.8	233	53.7		56.7	190	53.5		29.9	34	13.0		07.1	325	07.2		04.7
4	247	44.2	248	57.3		55.8	205	54.2		30.4	49	15.7		07.0	340	09.6		04.7
5	262	46.7	264	01.0	+7	54.9	220	54.9	+16	31.0	64	18.5	-6	06.8	355	12.1	-22	04.7
6	277	49.1	279	04.6	+7	54.0	235	55.6	+16	31.5	79	21.2	-6	06.7	10	14.5	-22	04.7
7	292	51.6	294	08.2		53.1	250	56.3		32.1	94	24.0		06.6	25	16.9		04.7
8	307	54.1	309	11.9		52.2	265	57.0		32.6	109	26.7		06.5	40	19.4		04.7
9	322	56.5	324	15.5		51.3	280	57.7		33.2	124	29.5		06.4	55	21.8		04.7
10	337	59.0	339	19.1		50.3	295	58.5		33.7	139	32.3		06.2	70	24.2		04.7
11	353	01.5	354	22.8	+7	49.4	310	59.2	+16	34.3	154	35.0	-6	06.1	85	26.7	-22	04.7
12	8	03.9	9	26.4	+7	48.5	325	59.9	+16	34.8	169	37.8	-6	06.0	100	29.1	-22	04.7
13	23	06.4	24	30.0		47.6	341	00.6		35.4	184	40.5		05.9	115	31.5		04.7
14	38	08.9	39	33.6		46.7	356	01.3		35.9	199	43.3		05.8	130	34.0		04.7
15	53	11.3	54	37.3		45.8	11	02.0		36.5	214	46.0		05.6	145	36.4		04.7
16	68	13.8	69	40.9		44.9	26	02.7		37.0	229	48.8		05.5	160	38.8		04.7
17	83	16.2	84	44.5	+7	44.0	41	03.4	+16	37.6	244	51.5	-6	05.4	175	41.3	-22	04.7
18	98	18.7	99	48.1	+7	43.0	56	04.1	+16	38.1	259	54.3	-6	05.3	190	43.7	-22	04.7
19	113	21.2	114	51.7		42.1	71	04.8		38.7	274	57.0		05.2	205	46.1		04.7
20	128	23.6	129	55.3		41.2	86	05.5		39.2	289	59.8		05.0	220	48.6		04.7
21	143	26.1	144	58.9		40.3	101	06.2		39.7	305	02.6		04.9	235	51.0		04.7
22	158	28.6	160	02.5		39.4	116	06.9		40.3	320	05.3		04.8	250	53.4		04.7
23	173	31.0	175	06.1		38.5	131	07.6		40.8	335	08.1		04.7	265	55.9		04.7
24	188	33.5	190	09.7	+7	37.6	146	08.4	+16	41.4	350	10.8	-6	04.6	280	58.3	-22	04.7
Dif	—		+36		-9		+7		+5		+28		+1		+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 04 ^m 1			Edad: 2 ^d 9 PHE { 4 ^h : 60/2 12 ^h : 60/2 20 ^h : 60/1 PMG: 15 ^h 16 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	56.3	+4 08.6	139	49.8	+12 49.3	89	60 N	18 42	19 25	20 18	7 17 33	23 31 79	
1	193	56.5	09.5	154	15.7	+12 58.2	89	58	39	19	09	26 35	21 77	
2	208	56.6	10.5	168	41.6	+13 07.0	88	56	37	15	20 01	33 37	12 75	
3	223	56.8	11.5	183	07.5	15.7	87	54	34	10	19 54	40 38	23 04 74	
4	238	57.0	12.5	197	33.3	24.4	87	52	32	07	48	45 41	22 57 72	
5	253	57.2	+4 13.4	211	59.1	+13 32.9	85	50	18 30	19 03	19 43	7 51 41	22 51 71	
6	268	57.4	+4 14.4	226	24.9	+13 41.4	85	45	18 27	18 56	19 32	8 02 45	22 37 69	
7	283	57.6	15.4	240	50.6	49.8	84	40	23	51	23	12 47	26 67	
8	298	57.8	16.3	255	16.3	+13 58.0	82	35	21	46	16	20 49	17 65	
9	313	57.9	17.3	269	41.9	+14 06.2	82	30	18	42	10	28 50	22 08 64	
10	328	58.1	18.3	284	07.6	14.3	81	20	14	36	19 02	40 53	21 54 62	
11	343	58.3	+4 19.2	298	33.2	+14 22.3	80	10 N	18 11	18 32	18 56	8 51 56	21 41 60	
12	358	58.5	+4 20.2	312	58.7	+14 30.2	79	0	18 07	18 28	18 52	9 02 58	21 29 58	
13	13	58.7	21.2	327	24.3	38.0	78	10 S	04	25	50	13 60	18 56	
14	28	58.9	22.1	341	49.8	45.7	77	20	18 01	23	49	24 62	21 05 54	
15	43	59.1	23.1	356	15.2	+14 53.3	76	30	17 58	22	49	37 65	20 51 52	
16	58	59.2	24.1	10	40.7	+15 00.7	74	35	56	21	50	45 66	42 51	
17	73	59.4	+4 25.0	25	06.1	+15 08.1	74	40	17 53	18 20	18 52	9 53 69	20 33 49	
18	88	59.6	+4 26.0	39	31.5	+15 15.4	73	45	17 51	18 20	18 54	10 03 71	20 22 47	
19	103	59.8	27.0	53	56.9	22.6	72	50	48	20	58	16 74	08 45	
20	119	00.0	27.9	68	22.2	29.7	71	52	47	20	18 59	22 75	20 02 44	
21	134	00.2	28.9	82	47.5	36.6	69	54	45	20	19 01	28 77	19 55 43	
22	149	00.4	29.9	97	12.8	43.5	69	56	44	21	04	35 78	48 40	
23	164	00.5	30.8	111	38.1	50.2	67	58	42	21	06	43 81	39 39	
24	179	00.7	+4 31.8	126	03.3	+15 56.9	67	60 S	17 40	18 21	19 10	10 52 83	19 30 36	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 23 ^m 9		Mag: -4.1 PMG: 11 ^h 17 ^m		Mag: +1.5 PMG: 14 ^h 15 ^m		Mag: -2.5 PMG: 0 ^h 39 ^m		Mag: +0.4 PMG: 5 ^h 15 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	188	33.5	190	09.7	+7 37.6	146 08.4	+16 41.4	350 10.8	-6 04.6	280 58.3	-22 04.7
1	203	36.0	205	13.3	36.6	161 09.1	41.9	5 13.6	04.4	296 00.8	04.7
2	218	38.4	220	16.9	35.7	176 09.8	42.5	20 16.3	04.3	311 03.2	04.7
3	233	40.9	235	20.5	34.8	191 10.5	43.0	35 19.1	04.2	326 05.6	04.7
4	248	43.4	250	24.1	33.9	206 11.2	43.6	50 21.8	04.1	341 08.1	04.7
5	263	45.8	265	27.6	+7 33.0	221 11.9	+16 44.1	65 24.6	-6 04.0	356 10.5	-22 04.7
6	278	48.3	280	31.2	+7 32.1	236 12.6	+16 44.6	80 27.4	-6 03.8	11 12.9	-22 04.7
7	293	50.7	295	34.8	31.1	251 13.3	45.2	95 30.1	03.7	26 15.4	04.7
8	308	53.2	310	38.4	30.2	266 14.0	45.7	110 32.9	03.6	41 17.8	04.7
9	323	55.7	325	41.9	29.3	281 14.7	46.3	125 35.6	03.5	56 20.3	04.7
10	338	58.1	340	45.5	28.4	296 15.4	46.8	140 38.4	03.4	71 22.7	04.7
11	354	00.6	355	49.1	+7 27.5	311 16.1	+16 47.4	155 41.1	-6 03.2	86 25.1	-22 04.7
12	9	03.1	10	52.6	+7 26.6	326 16.8	+16 47.9	170 43.9	-6 03.1	101 27.6	-22 04.7
13	24	05.5	25	56.2	25.6	341 17.5	48.4	185 46.7	03.0	116 30.0	04.7
14	39	08.0	40	59.8	24.7	356 18.2	49.0	200 49.4	02.9	131 32.4	04.7
15	54	10.5	56	03.3	23.8	11 18.9	49.5	215 52.2	02.8	146 34.9	04.7
16	69	12.9	71	06.9	22.9	26 19.6	50.1	230 54.9	02.6	161 37.3	04.7
17	84	15.4	86	10.4	+7 22.0	41 20.3	+16 50.6	245 57.7	-6 02.5	176 39.8	-22 04.7
18	99	17.9	101	14.0	+7 21.1	56 21.1	+16 51.1	261 00.4	-6 02.4	191 42.2	-22 04.6
19	114	20.3	116	17.5	20.1	71 21.8	51.7	276 03.2	02.3	206 44.6	04.6
20	129	22.8	131	21.0	19.2	86 22.5	52.2	291 06.0	02.2	221 47.1	04.6
21	144	25.2	146	24.6	18.3	101 23.2	52.8	306 08.7	02.0	236 49.5	04.6
22	159	27.7	161	28.1	17.4	116 23.9	53.3	321 11.5	01.9	251 52.0	04.6
23	174	30.2	176	31.6	16.5	131 24.6	53.8	336 14.2	01.8	266 54.4	04.6
24	189	32.6	191	35.2	+7 15.6	146 25.3	+16 54.4	351 17.0	-6 01.7	281 56.8	-22 04.6
Dif	—		+36	-9		+7	+5	+28	+1	+24	0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 03 ^m 8			Edad: 3 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'7 PMG: 16 ^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	m
0	179	00.7	+4	31.8	126	03.3	+15	56.9	60 N	3	49	4	42	5	25	7	50	42
1	194	00.9		32.7	140	28.5	+16	03.4	58	3	58		48		28	8	01	43
2	209	01.1		33.7	154	53.7		09.8	56	4	06		52		30	10	45	
3	224	01.3		34.7	169	18.9		16.1	54	13	4	57	33		33	18	46	
4	239	01.5		35.6	183	44.0		22.3	52	19	5	00	35		35	26	47	
5	254	01.7	+4	36.6	198	09.2	+16	28.4	50	4	24	5	04	5	37	8	32	49
6	269	01.8	+4	37.6	212	34.3	+16	34.4	45	4	36	5	11	5	41	8	47	50
7	284	02.0		38.5	226	59.4		40.3	40		44		17		44	8	59	51
8	299	02.2		39.5	241	24.4		46.0	35		51		21		47	9	09	53
9	314	02.4		40.5	255	49.5		51.6	30	4	57	25	49		49	18	54	
10	329	02.6		41.4	270	14.5	+16	57.2	20	5	06	31	54		54	33	56	
11	344	02.8	+4	42.4	284	39.6	+17	02.6	10 N	5	12	5	36	5	57	9	47	57
12	359	02.9	+4	43.4	299	04.6	+17	07.8	0	5	16	5	40	6	01	10	00	58
13	14	03.1		44.3	313	29.6		13.0	10 S	18		43	04		04	13	59	
14	29	03.3		45.3	327	54.6		18.1	20	19		45	07		07	26	61	
15	44	03.5		46.2	342	19.5		23.0	30	19		47	11		11	42	63	
16	59	03.7		47.2	356	44.5		27.8	35	18		48	13		13	10	51	64
17	74	03.9	+4	48.2	11	09.4	+17	32.5	40	5	17	5	48	6	15	11	02	65
18	89	04.1	+4	49.1	25	34.4	+17	37.0	45	5	14	5	48	6	18	11	14	66
19	104	04.2		50.1	39	59.3		41.5	50	11		49	21		21	30	67	
20	119	04.4		51.1	54	24.3		45.8	52	09		49	22		22	37	68	
21	134	04.6		52.0	68	49.2		50.0	54	07		48	24		24	45	69	
22	149	04.8		53.0	83	14.1		54.1	56	05		48	25		25	11	53	71
23	164	05.0		53.9	97	39.0	+17	58.0	58	5	03	48	27		27	12	04	71
24	179	05.2	+4	54.9	112	03.9	+18	01.9	60 S	4	59	5	48	6	29	12	15	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 20 ^m 0		Mag: -4.2 PMG: 11 ^h 11 ^m		Mag: +1.5 PMG: 14 ^h 14 ^m		Mag: -2.5 PMG: 0 ^h 35 ^m		Mag: +0.4 PMG: 5 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	189	32.6	191	35.2	+7	15.6	146	25.3	+16	54.4
1	204	35.1	206	38.7		14.6	161	26.0		54.9
2	219	37.6	221	42.2		13.7	176	26.7		55.4
3	234	40.0	236	45.7		12.8	191	27.4		56.0
4	249	42.5	251	49.3		11.9	206	28.1		56.5
5	264	45.0	266	52.8	+7	11.0	221	28.8	+16	57.1
6	279	47.4	281	56.3	+7	10.1	236	29.5	+16	57.6
7	294	49.9	296	59.8		09.1	251	30.2		58.1
8	309	52.3	312	03.3		08.2	266	30.9		58.7
9	324	54.8	327	06.8		07.3	281	31.6		59.2
10	339	57.3	342	10.3		06.4	296	32.3	+16	59.7
11	354	59.7	357	13.8	+7	05.5	311	33.0	+17	00.3
12	10	02.2	12	17.3	+7	04.6	326	33.7	+17	00.8
13	25	04.7	27	20.8		03.6	341	34.4		01.3
14	40	07.1	42	24.3		02.7	356	35.1		01.9
15	55	09.6	57	27.7		01.8	11	35.8		02.4
16	70	12.1	72	31.2	+7	00.9	26	36.5		02.9
17	85	14.5	87	34.7	+7	00.0	41	37.2	+17	03.5
18	100	17.0	102	38.2	+6	59.1	56	37.9	+17	04.0
19	115	19.5	117	41.7		58.2	71	38.6		04.5
20	130	21.9	132	45.1		57.2	86	39.4		05.1
21	145	24.4	147	48.6		56.3	101	40.1		05.6
22	160	26.8	162	52.1		55.4	116	40.8		06.1
23	175	29.3	177	55.5		54.5	131	41.5		06.7
24	190	31.8	192	59.0	+6	53.6	146	42.2	+17	07.2
Dif	—		+35 -9		+7 +5		+28 +1		+24 0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16:0			Edad: 4 ^d 9	PHE {	4 ^h : 59/6 12 ^h : 59/4 20 ^h : 59/3 R°: 58 ^m			Civil			Náutico		Hora	R°	Hora	R°			
	PMG: 12 ^h 03 ^m 5	hG ☉	Dec						hG ☾	Dif	Dec	Dif	h					m	h	m
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	m	m
0	179	05.2	+4	54.9	112	03.9	+18	01.9	60 N	18 47	19 30	20 24	8 32 53	0 50 67						
1	194	05.3		55.9	126	28.8	59	05.6	58	43	24	14	44 54	38 66						
2	209	05.5		56.8	140	53.7	59	09.2	56	41	19	20 06	8 55 54	27 66						
3	224	05.7		57.8	155	18.6	59	12.7	54	38	14	19 58	9 04 55	18 65						
4	239	05.9		58.7	169	43.5	59	16.0	52	36	10	52	13 55	09 65						
5	254	06.1	+4	59.7	184	08.5	60	+18 19.2	50	18 34	19 07	19 46	9 21 55	0 02 64						
6	269	06.3	+5	00.7	198	33.4	59	+18 22.3	45	18 29	18 59	19 34	9 37 56	*** ** *						
7	284	06.5		01.6	212	58.3	59	25.3	40	25	53	25	9 50 57	*** ** *						
8	299	06.6		02.6	227	23.2	59	28.1	35	22	48	18	10 02 56	*** ** *						
9	314	06.8		03.6	241	48.1	59	30.8	30	19	43	12	12 57	*** ** *						
10	329	07.0		04.5	256	13.1	60	33.4	20	15	37	19 03	29 57	23 56 56						
11	344	07.2	+5	05.5	270	38.0	59	+18 35.9	10 N	18 11	18 32	18 56	10 44 58	23 40 57						
12	359	07.4	+5	06.4	285	02.9	59	+18 38.2	0	18 07	18 28	18 52	10 58 58	23 26 57						
13	14	07.6		07.4	299	27.9	60	40.5	10 S	18 03	24	49	11 12 58	23 11 58						
14	29	07.7		08.3	313	52.9	60	42.5	20	17 59	21	47	27 59	22 56 58						
15	44	07.9		09.3	328	17.9	60	44.5	30	55	19	47	45 59	38 58						
16	59	08.1		10.3	342	42.9	60	46.4	35	53	18	47	11 55 59	28 58						
17	74	08.3	+5	11.2	357	07.9	60	+18 48.1	40	17 50	18 17	18 49	12 07 59	22 16 58						
18	89	08.5	+5	12.2	11	32.9	60	+18 49.7	45	17 47	18 17	18 50	12 20 60	22 02 59						
19	104	08.7		13.1	25	57.9	60	51.1	50	44	16	53	37 60	21 45 59						
20	119	08.8		14.1	40	23.0	61	52.5	52	42	16	55	45 60	37 59						
21	134	09.0		15.1	54	48.1	61	53.7	54	40	16	56	12 54 60	28 59						
22	149	09.2		16.0	69	13.2	61	54.8	56	38	15	18 58	13 04 60	18 59						
23	164	09.4		17.0	83	38.3	61	55.7	58	36	15	19 01	15 60	21 07 59						
24	179	09.6	+5	17.9	98	03.4	61	+18 56.6	60 S	17 34	18 15	19 04	13 28 60	20 54 59						

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 16 ^m 0	Mag: -4.2 PMG: 11 ^h 06 ^m	Mag: +1.5 PMG: 14 ^h 13 ^m	Mag: -2.5 PMG: 0 ^h 30 ^m	Mag: +0.4 PMG: 5 ^h 07 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	190	31.8	192	59.0	+6	53.6	146	42.2	+17	07.2	352	23.2	-5	58.8	282	55.5	-22	04.6
1	205	34.2	208	02.4		52.7	161	42.9		07.7	7	25.9		58.6	297	57.9		04.6
2	220	36.7	223	05.9		51.8	176	43.6		08.3	22	28.7		58.5	313	00.4		04.6
3	235	39.2	238	09.3		50.8	191	44.3		08.8	37	31.5		58.4	328	02.8		04.6
4	250	41.6	253	12.8		49.9	206	45.0		09.3	52	34.2		58.3	343	05.3		04.6
5	265	44.1	268	16.2	+6	49.0	221	45.7	+17	09.8	67	37.0	-5	58.2	358	07.7	-22	04.6
6	280	46.6	283	19.6	+6	48.1	236	46.4	+17	10.4	82	39.7	-5	58.0	13	10.1	-22	04.6
7	295	49.0	298	23.1		47.2	251	47.1		10.9	97	42.5		57.9	28	12.6		04.6
8	310	51.5	313	26.5		46.3	266	47.8		11.4	112	45.3		57.8	43	15.0		04.6
9	325	54.0	328	29.9		45.4	281	48.5		12.0	127	48.0		57.7	58	17.5		04.6
10	340	56.4	343	33.4		44.5	296	49.2		12.5	142	50.8		57.6	73	19.9		04.6
11	355	58.9	358	36.8	+6	43.5	311	49.9	+17	13.0	157	53.5	-5	57.4	88	22.4	-22	04.6
12	11	01.3	13	40.2	+6	42.6	326	50.6	+17	13.5	172	56.3	-5	57.3	103	24.8	-22	04.5
13	26	03.8	28	43.6		41.7	341	51.3		14.1	187	59.0		57.2	118	27.3		04.5
14	41	06.3	43	47.0		40.8	356	52.0		14.6	203	01.8		57.1	133	29.7		04.5
15	56	08.7	58	50.4		39.9	11	52.7		15.1	218	04.6		57.0	148	32.2		04.5
16	71	11.2	73	53.8		39.0	26	53.4		15.7	233	07.3		56.8	163	34.6		04.5
17	86	13.7	88	57.2	+6	38.1	41	54.1	+17	16.2	248	10.1	-5	56.7	178	37.1	-22	04.5
18	101	16.1	104	00.6	+6	37.2	56	54.8	+17	16.7	263	12.8	-5	56.6	193	39.5	-22	04.5
19	116	18.6	119	04.0		36.3	71	55.5		17.2	278	15.6		56.5	208	42.0		04.5
20	131	21.1	134	07.4		35.4	86	56.2		17.8	293	18.4		56.3	223	44.4		04.5
21	146	23.5	149	10.8		34.5	101	56.9		18.3	308	21.1		56.2	238	46.9		04.5
22	161	26.0	164	14.2		33.6	116	57.6		18.8	323	23.9		56.1	253	49.3		04.5
23	176	28.5	179	17.6		32.6	131	58.3		19.3	338	26.6		56.0	268	51.8		04.5
24	191	30.9	194	21.0	+6	31.7	146	59.0	+17	19.9	353	29.4	-5	55.9	283	54.2	-22	04.5
Dif	—		+34		-9		+7		+5		+28		+1		+24		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 03 ^m 2			Edad: 5 ^d 9 SD: 16'1 PMG: 18 ^h 10 ^m	PHE { 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'7 R°: 56 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	09.6	+5 17.9	98	03.4	+18 56.6	7	60 N	3 41	4 36	5 19	9 25	64	1 57	53	
1	194	09.8	18.9	112	28.6	57.3	6	58	3 51	42	22	38	64	44	54	
2	209	09.9	19.8	126	53.8	57.9	6	56	4 00	47	25	49	63	33	54	
3	224	10.1	20.8	141	19.0	58.3	4	54	07	52	28	9 59	63	23	54	
4	239	10.3	21.8	155	44.2	58.7	4	52	14	56	30	10 08	62	14	55	
5	254	10.5	+5 22.7	170	09.5	+18 58.9	2	50	4 20	4 59	5 32	10 16	61	1 06	55	
6	269	10.7	+5 23.7	184	34.7	+18 59.0	1	45	4 32	5 07	5 37	10 33	60	0 49	56	
7	284	10.9	24.6	199	00.1	58.9	1	40	41	13	41	47	60	35	56	
8	299	11.0	25.6	213	25.4	58.8	1	35	48	19	44	10 58	60	24	56	
9	314	11.2	26.5	227	50.8	58.5	3	30	4 55	23	47	11 09	58	0 13	57	
10	329	11.4	27.5	242	16.2	58.1	4	20	5 04	30	52	26	58	**	**	**
11	344	11.6	+5 28.5	256	41.6	+18 57.6	5	10 N	5 10	5 35	5 56	11 42	57	**	**	**
12	359	11.8	+5 29.4	271	07.1	+18 56.9	7	0	5 15	5 39	6 00	11 56	57	**	**	**
13	14	11.9	30.4	285	32.6	56.2	7	10 S	18	43	04	12 10	56	**	**	**
14	29	12.1	31.3	299	58.1	55.3	9	20	20	46	08	26	55	23	54	58
15	44	12.3	32.3	314	23.7	54.3	10	30	20	48	12	44	54	36	60	
16	59	12.5	33.2	328	49.3	53.1	12	35	20	49	14	12 54	53	26	61	
17	74	12.7	+5 34.2	343	15.0	+18 51.9	12	40	5 19	5 50	6 17	13 06	52	23	14	62
18	89	12.9	+5 35.1	357	40.6	+18 50.5	14	45	5 17	5 51	6 20	13 20	51	23	01	62
19	104	13.0	36.1	12	06.4	49.0	15	50	14	52	24	37	50	22	44	64
20	119	13.2	37.1	26	32.1	47.4	16	52	13	52	26	45	50	36	65	
21	134	13.4	38.0	40	57.9	45.7	17	54	11	52	27	13 54	49	27	66	
22	149	13.6	39.0	55	23.8	43.8	19	56	09	52	29	14 04	48	17	67	
23	164	13.8	39.9	69	49.7	41.9	19	58	07	53	32	15	48	22	06	68
24	179	13.9	+5 40.9	84	15.6	+18 39.8	21	60 S	5 04	5 53	6 34	14 28	47	21	53	69
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 11 ^h 12 ^m 1		Mag: -4.3 PMG: 11 ^h 00 ^m			Mag: +1.5 PMG: 14 ^h 11 ^m			Mag: -2.5 PMG: 0 ^h 26 ^m			Mag: +0.4 PMG: 5 ^h 04 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	191	30.9	194	21.0	+6 31.7	146	59.0	+17 19.9	353	29.4	-5 55.9	283	54.2	-22 04.5		
1	206	33.4	209	24.4	30.8	161	59.7	20.4	8	32.2	55.7	298	56.7	04.5		
2	221	35.8	224	27.7	29.9	177	00.4	20.9	23	34.9	55.6	313	59.1	04.5		
3	236	38.3	239	31.1	29.0	192	01.1	21.4	38	37.7	55.5	329	01.6	04.5		
4	251	40.8	254	34.5	28.1	207	01.8	22.0	53	40.4	55.4	344	04.0	04.5		
5	266	43.2	269	37.8	+6 27.2	222	02.5	+17 22.5	68	43.2	-5 55.3	359	06.5	-22 04.5		
6	281	45.7	284	41.2	+6 26.3	237	03.2	+17 23.0	83	46.0	-5 55.1	14	08.9	-22 04.5		
7	296	48.2	299	44.5	25.4	252	03.9	23.5	98	48.7	55.0	29	11.4	04.5		
8	311	50.6	314	47.9	24.5	267	04.6	24.0	113	51.5	54.9	44	13.8	04.5		
9	326	53.1	329	51.2	23.6	282	05.3	24.6	128	54.2	54.8	59	16.3	04.5		
10	341	55.6	344	54.6	22.7	297	06.0	25.1	143	57.0	54.6	74	18.7	04.5		
11	356	58.0	359	57.9	+6 21.8	312	06.7	+17 25.6	158	59.8	-5 54.5	89	21.2	-22 04.5		
12	12	00.5	15	01.3	+6 20.9	327	07.4	+17 26.1	174	02.5	-5 54.4	104	23.6	-22 04.5		
13	27	02.9	30	04.6	20.0	342	08.1	26.7	189	05.3	54.3	119	26.1	04.5		
14	42	05.4	45	07.9	19.1	357	08.8	27.2	204	08.1	54.2	134	28.5	04.5		
15	57	07.9	60	11.3	18.2	12	09.5	27.7	219	10.8	54.0	149	31.0	04.5		
16	72	10.3	75	14.6	17.3	27	10.2	28.2	234	13.6	53.9	164	33.4	04.5		
17	87	12.8	90	17.9	+6 16.4	42	10.9	+17 28.7	249	16.3	-5 53.8	179	35.9	-22 04.5		
18	102	15.3	105	21.2	+6 15.5	57	11.6	+17 29.3	264	19.1	-5 53.7	194	38.3	-22 04.5		
19	117	17.7	120	24.5	14.6	72	12.3	29.8	279	21.9	53.6	209	40.8	04.5		
20	132	20.2	135	27.9	13.7	87	13.0	30.3	294	24.6	53.4	224	43.2	04.5		
21	147	22.7	150	31.2	12.8	102	13.7	30.8	309	27.4	53.3	239	45.7	04.5		
22	162	25.1	165	34.5	11.9	117	14.4	31.3	324	30.1	53.2	254	48.2	04.5		
23	177	27.6	180	37.8	11.0	132	15.1	31.8	339	32.9	53.1	269	50.6	04.5		
24	192	30.1	195	41.1	+6 10.2	147	15.8	+17 32.4	354	35.7	-5 52.9	284	53.1	-22 04.5		
Dif	—		+33		-9	+7		+5	+28		+1	+25		0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna				
	SD: 16 ^h 0		Edad: 6 ^d 9	PHE { 4 ^h : 58 ^h /6 12 ^h : 58 ^h /4 20 ^h : 58 ^h /2	SD: 16 ^h 0	PMG: 19 ^h 06 ^m								R°: 53 ^m		
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil		Náutico	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	13.9	+5 40.9	84	15.6	+18 39.8	22	60 N	18 51	19 35	20 30	10 29 73	2 50 41			
1	194	14.1		41.8	98	41.6	70	58	48	29	20	42 70	38 42			
2	209	14.3		42.8	113	07.6	70	56	45	23	11	10 52 69	27 43			
3	224	14.5		43.7	127	33.7	71	54	42	18	20 03	11 02 68	17 45			
4	239	14.7		44.7	141	59.8	71	52	39	14	19 56	10 67	09 45			
5	254	14.9	+5 45.6	156	26.0	72	27	50	18 37	19 10	19 50	11 17 66	2 01 46			
6	269	15.0	+5 46.6	170	52.2	72	28	45	18 32	19 02	19 37	11 33 64	1 45 48			
7	284	15.2		47.5	185	18.4	72	40	27	18 55	27	47 62	31 50			
8	299	15.4		48.5	199	44.7	73	35	24	49	20	11 58 61	20 50			
9	314	15.6		49.4	214	11.1	74	30	21	45	13	12 07 60	1 10 51			
10	329	15.8		50.4	228	37.5	74	20	15	37	19 03	24 58	0 52 53			
11	344	15.9	+5 51.3	243	03.9	74	35	10 N	18 10	18 32	18 56	12 39 56	0 37 55			
12	359	16.1	+5 52.3	257	30.5	76	33	0	18 06	18 27	18 51	12 53 54	0 23 56			
13	14	16.3		53.3	271	57.0	75	10 S	18 02	23	48	13 06 53	0 09 57			
14	29	16.5		54.2	286	23.6	76	20	17 58	20	45	21 51	** * *			
15	44	16.7		55.2	300	50.3	77	30	53	17	45	38 48	** * *			
16	59	16.8		56.1	315	17.0	77	35	50	15	45	47 48	** * *			
17	74	17.0	+5 57.1	329	43.8	78	40	40	17 47	18 14	18 45	13 58 47	** * *			
18	89	17.2	+5 58.0	344	10.6	78	41	45	17 44	18 13	18 47	14 11 45	** * *			
19	104	17.4		59.0	358	37.5	79	50	40	12	49	27 43	23 48 67			
20	119	17.6	+5 59.9	13	04.4	79	43	52	38	11	50	35 41	41 68			
21	134	17.7	+6 00.9	27	31.4	80	44	54	36	11	52	43 40	33 70			
22	149	17.9		01.8	41	58.5	81	56	33	10	53	14 52 39	24 71			
23	164	18.1		02.8	56	25.6	81	58	31	10	55	15 03 37	14 73			
24	179	18.3	+6 03.7	70	52.7	81	47	60 S	17 28	18 10	18 58	15 15 35	23 02 75			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 08 ^m 2		Mag: -4.3 PMG: 10 ^h 55 ^m		Mag: +1.5 PMG: 14 ^h 10 ^m		Mag: -2.5 PMG: 0 ^h 22 ^m		Mag: +0.4 PMG: 5 ^h 00 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	192	30.1	195 41.1	+6 10.2	147 15.8	+17 32.4	354 35.7	-5 52.9	284 53.1	-22 04.5
1	207	32.5	210 44.4		09.3	162 16.5	32.9	9 38.4	52.8	299 55.5
2	222	35.0	225 47.7		08.4	177 17.2	33.4	24 41.2	52.7	314 58.0
3	237	37.4	240 50.9		07.5	192 17.9	33.9	39 43.9	52.6	330 00.4
4	252	39.9	255 54.2		06.6	207 18.5	34.4	54 46.7	52.5	345 02.9
5	267	42.4	270 57.5	+6 05.7	222 19.2	+17 34.9	69 49.5	-5 52.3	0 05.3	-22 04.4
6	282	44.8	286 00.8	+6 04.8	237 19.9	+17 35.5	84 52.2	-5 52.2	15 07.8	-22 04.4
7	297	47.3	301 04.1		03.9	252 20.6	36.0	99 55.0	52.1	30 10.2
8	312	49.8	316 07.3		03.0	267 21.3	36.5	114 57.7	52.0	45 12.7
9	327	52.2	331 10.6		02.1	282 22.0	37.0	130 00.5	51.9	60 15.2
10	342	54.7	346 13.9		01.3	297 22.7	37.5	145 03.3	51.7	75 17.6
11	357	57.2	1 17.1	+6 00.4	312 23.4	+17 38.0	160 06.0	-5 51.6	90 20.1	-22 04.4
12	12	59.6	16 20.4	+5 59.5	327 24.1	+17 38.6	175 08.8	-5 51.5	105 22.5	-22 04.4
13	28	02.1	31 23.6		58.6	342 24.8	39.1	190 11.6	51.4	120 25.0
14	43	04.6	46 26.9		57.7	357 25.5	39.6	205 14.3	51.2	135 27.4
15	58	07.0	61 30.1		56.8	12 26.2	40.1	220 17.1	51.1	150 29.9
16	73	09.5	76 33.4		56.0	27 26.9	40.6	235 19.8	51.0	165 32.4
17	88	11.9	91 36.6	+5 55.1	42 27.6	+17 41.1	250 22.6	-5 50.9	180 34.8	-22 04.4
18	103	14.4	106 39.8	+5 54.2	57 28.3	+17 41.6	265 25.4	-5 50.8	195 37.3	-22 04.4
19	118	16.9	121 43.1		53.3	72 29.0	42.1	280 28.1	50.6	210 39.7
20	133	19.3	136 46.3		52.4	87 29.7	42.7	295 30.9	50.5	225 42.2
21	148	21.8	151 49.5		51.6	102 30.4	43.2	310 33.6	50.4	240 44.6
22	163	24.3	166 52.7		50.7	117 31.1	43.7	325 36.4	50.3	255 47.1
23	178	26.7	181 55.9		49.8	132 31.8	44.2	340 39.2	50.2	270 49.6
24	193	29.2	196 59.1	+5 48.9	147 32.5	+17 44.7	355 41.9	-5 50.0	285 52.0	-22 04.4
Dif	—		+33	-9	+7	+5	+28	+1	+25	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 6			Edad: 7 ^d 9 PHE { 4 ^h : 58 ^m 0 12 ^h : 57 ^m 8 20 ^h : 57 ^m 6 PMG: 19 ^h 59 ^m R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	18.3	+6	03.7	70	52.7	+17	16.7	60 N	3 34	4 29	5 13	11 42	77 3 31 30
1	194	18.5		04.7	85	20.0	83	11.9	58	45	36	17	11 52	75 20 33
2	209	18.6		05.6	99	47.2	82	07.0	56	3 54	41	20	12 01	73 10 35
3	224	18.8		06.6	114	14.6	84	+17	02.1	54	4 02	46	23	10 70 3 02 36
4	239	19.0		07.5	128	42.0	84	+16	57.0	52	09	51	26	17 69 2 54 38
5	254	19.2	+6	08.4	143	09.4	84	+16	51.8	50	4 15	4 55	5 28	12 23 68 2 47 39
6	269	19.4	+6	09.4	157	36.9	85	+16	46.6	52	4 28	5 03	5 33	12 37 65 2 33 41
7	284	19.5		10.3	172	04.5	86	41.2	54	40	38	10	38	49 63 21 43
8	299	19.7		11.3	186	32.2	87	35.8	54	35	46	16	41	12 59 60 10 45
9	314	19.9		12.2	200	59.8	86	30.2	56	30	4 52	20	45	13 07 59 2 01 47
10	329	20.1		13.2	215	27.6	88	24.6	56	20	5 02	28	50	22 56 1 45 49
11	344	20.3	+6	14.1	229	55.4	88	+16	18.9	57	5 09	5 34	5 55	13 35 54 1 32 51
12	359	20.4	+6	15.1	244	23.3	89	+16	13.1	58	5 14	5 39	5 59	13 47 52 1 19 53
13	14	20.6		16.0	258	51.2	89	07.2	59	10 S	18	43	6 04	13 59 49 1 06 55
14	29	20.8		17.0	273	19.2	90	+16	01.2	60	20	46	08	14 12 47 0 52 57
15	44	21.0		17.9	287	47.3	91	+15	55.1	61	30	21	49	13 26 45 36 60
16	59	21.2		18.9	302	15.4	91	49.0	61	35	21	51	16	35 42 27 61
17	74	21.3	+6	19.8	316	43.6	92	+15	42.7	63	40	5 21	5 52	6 19 14 45 40 0 16 63
18	89	21.5	+6	20.8	331	11.8	92	+15	36.4	63	45	5 19	5 53	6 23 14 56 38 0 03 65
19	104	21.7		21.7	345	40.1	93	30.0	64	50	17	55	27	15 10 35 ** ** *
20	119	21.9		22.7	0	08.4	93	23.5	65	52	16	55	29	16 34 ** ** *
21	134	22.1		23.6	14	36.9	95	16.9	66	54	15	56	31	23 32 ** ** *
22	149	22.2		24.5	29	05.4	95	10.3	66	56	13	56	34	31 31 ** ** *
23	164	22.4		25.5	43	33.9	95	+15	03.5	68	58	11	57	36 40 28 ** ** *
24	179	22.6	+6	26.4	58	02.5	96	+14	56.7	68	60 S	5 09	5 57	6 39 15 50 26 ** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 04 ^m 2		Mag: -4.4 PMG: 10 ^h 50 ^m		Mag: +1.5 PMG: 14 ^h 09 ^m		Mag: -2.5 PMG: 0 ^h 17 ^m		Mag: +0.4 PMG: 4 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	193	29.2	196	59.1	+5	48.9	147	32.5	+17	44.7	355	41.9	-5	50.0	285	52.0	-22	04.4
1	208	31.7	212	02.4		48.1	162	33.2		45.2	10	44.7		49.9	300	54.5		04.4
2	223	34.1	227	05.6		47.2	177	33.9		45.7	25	47.5		49.8	315	56.9		04.4
3	238	36.6	242	08.8		46.3	192	34.6		46.2	40	50.2		49.7	330	59.4		04.4
4	253	39.0	257	12.0		45.4	207	35.3		46.7	55	53.0		49.5	346	01.8		04.4
5	268	41.5	272	15.2	+5	44.6	222	36.0	+17	47.3	70	55.7	-5	49.4	1	04.3	-22	04.4
6	283	44.0	287	18.3	+5	43.7	237	36.7	+17	47.8	85	58.5	-5	49.3	16	06.8	-22	04.4
7	298	46.4	302	21.5		42.8	252	37.3		48.3	101	01.3		49.2	31	09.2		04.4
8	313	48.9	317	24.7		42.0	267	38.0		48.8	116	04.0		49.1	46	11.7		04.4
9	328	51.4	332	27.9		41.1	282	38.7		49.3	131	06.8		48.9	61	14.1		04.4
10	343	53.8	347	31.1		40.2	297	39.4		49.8	146	09.5		48.8	76	16.6		04.4
11	358	56.3	2	34.2	+5	39.4	312	40.1	+17	50.3	161	12.3	-5	48.7	91	19.1	-22	04.4
12	13	58.8	17	37.4	+5	38.5	327	40.8	+17	50.8	176	15.1	-5	48.6	106	21.5	-22	04.4
13	29	01.2	32	40.6		37.6	342	41.5		51.3	191	17.8		48.5	121	24.0		04.4
14	44	03.7	47	43.7		36.8	357	42.2		51.8	206	20.6		48.3	136	26.5		04.4
15	59	06.2	62	46.9		35.9	12	42.9		52.3	221	23.4		48.2	151	28.9		04.4
16	74	08.6	77	50.0		35.0	27	43.6		52.8	236	26.1		48.1	166	31.4		04.4
17	89	11.1	92	53.2	+5	34.2	42	44.3	+17	53.3	251	28.9	-5	48.0	181	33.8	-22	04.4
18	104	13.5	107	56.3	+5	33.3	57	45.0	+17	53.9	266	31.6	-5	47.8	196	36.3	-22	04.4
19	119	16.0	122	59.5		32.5	72	45.7		54.4	281	34.4		47.7	211	38.8		04.4
20	134	18.5	138	02.6		31.6	87	46.4		54.9	296	37.2		47.6	226	41.2		04.3
21	149	20.9	153	05.8		30.8	102	47.1		55.4	311	39.9		47.5	241	43.7		04.3
22	164	23.4	168	08.9		29.9	117	47.8		55.9	326	42.7		47.4	256	46.1		04.3
23	179	25.9	183	12.0		29.0	132	48.5		56.4	341	45.5		47.2	271	48.6		04.3
24	194	28.3	198	15.1	+5	28.2	147	49.2	+17	56.9	356	48.2	-5	47.1	286	51.1	-22	04.3
Dif	—		+32		-9		+7		+5		+28		+1		+25		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:0 PMG: 12 ^h 02 ^m 4			Edad: 8 ^d 9 PHE { 4 ^h : 57/4 12 ^h : 57/3 20 ^h : 57/1 PMG: 20 ^h 51 ^m R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	179	22.6	+6 26.4	58	02.5	+14 56.7	69	60 N	18 56	19 40	20 37	12 59 78	4 01 24				
1	194	22.8		72	31.2 ⁹⁷	49.8	69	58	52	34	25	13 07 75	3 53 26				
2	209	22.9		86	59.9 ⁹⁷	42.8	70	56	49	28	16	14 73	45 28				
3	224	23.1		101	28.7 ⁹⁸	35.8	70	54	45	22	07	20 72	38 30				
4	239	23.3		115	57.5 ⁹⁸	28.7	71	52	43	17	20 00	26 70	32 31				
5	254	23.5	+6 31.2	130	26.4 ⁹⁹	+14 21.5	72	50	18 40	19 13	19 54	13 31 68	3 26 33				
6	269	23.7	+6 32.1	144	55.4 ¹⁰⁰	+14 14.2	73	45	18 34	19 04	19 40	13 42 65	3 14 36				
7	284	23.8		159	24.4 ¹⁰⁰	+14 06.9	73	40	29	18 57	30	52 62	3 04 38				
8	299	24.0		173	53.5 ¹⁰¹	+13 59.4	75	35	25	51	21	13 59 61	2 55 41				
9	314	24.2		188	22.7 ¹⁰²	52.0	74	30	22	46	15	14 06 59	48 42				
10	329	24.4		202	51.9 ¹⁰²	44.4	76	20	16	38	19 04	18 55	34 46				
11	344	24.5	+6 36.8	217	21.1 ¹⁰²	+13 36.8	77	10 N	18 10	18 32	18 56	14 29 52	2 23 48				
12	359	24.7	+6 37.8	231	50.5 ¹⁰⁴	+13 29.1	77	0	18 06	18 26	18 51	14 39 49	2 12 50				
13	14	24.9		38.7	246 19.9 ¹⁰⁴	21.3	78	10 S	18 01	22	46	48 47	2 01 53				
14	29	25.1		39.6	260 49.3 ¹⁰⁴	13.5	78	20	17 56	18	44	14 59 43	1 49 56				
15	44	25.2		40.6	275 18.8 ¹⁰⁵	+13 05.6	79	30	51	15	42	15 11 40	36 58				
16	59	25.4		41.5	289 48.4 ¹⁰⁶	+12 57.7	79	35	47	13	42	17 39	28 60				
17	74	25.6	+6 42.5	304	18.0 ¹⁰⁶	+12 49.6	81	40	17 44	18 11	18 42	15 25 36	1 19 62				
18	89	25.8	+6 43.4	318	47.7 ¹⁰⁷	+12 41.6	80	45	17 40	18 09	18 43	15 34 34	1 08 65				
19	104	26.0		44.3	333 17.4 ¹⁰⁷	33.4	82	50	35	08	45	45 30	0 55 69				
20	119	26.1		45.3	347 47.2 ¹⁰⁸	25.2	82	52	33	07	46	50 29	49 70				
21	134	26.3		46.2	2 17.1 ¹⁰⁹	17.0	82	54	31	06	47	15 55 28	43 71				
22	149	26.5		47.2	16 47.0 ¹⁰⁹	08.6	84	56	28	05	48	16 02 25	35 74				
23	164	26.7		48.1	31 17.0 ¹¹⁰	+12 00.3	83	58	25	05	50	08 24	27 75				
24	179	26.8	+6 49.0	45	47.0 ¹¹⁰	+11 51.8	85	60 S	17 22	18 04	18 52	16 16 21	0 17 78				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 00 ^m 3		Mag: -4.4 PMG: 10 ^h 45 ^m			Mag: +1.5 PMG: 14 ^h 08 ^m			Mag: -2.5 PMG: 0 ^h 13 ^m			Mag: +0.4 PMG: 4 ^h 52 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	194	28.3	198	15.1	+5 28.2		147	49.2	+17 56.9		356	48.2	-5 47.1		286	51.1	-22 04.3
1	209	30.8	213	18.3		27.3	162	49.8	57.4		11	51.0	47.0		301	53.5	04.3
2	224	33.3	228	21.4		26.5	177	50.5	57.9		26	53.7	46.9		316	56.0	04.3
3	239	35.7	243	24.5		25.6	192	51.2	58.4		41	56.5	46.7		331	58.5	04.3
4	254	38.2	258	27.6		24.8	207	51.9	58.9		56	59.3	46.6		347	00.9	04.3
5	269	40.7	273	30.7	+5 23.9		222	52.6	+17 59.4		72	02.0	-5 46.5		2	03.4	-22 04.3
6	284	43.1	288	33.8	+5 23.1		237	53.3	+17 59.9		87	04.8	-5 46.4		17	05.9	-22 04.3
7	299	45.6	303	36.9		22.2	252	54.0	+18 00.4		102	07.6	46.3		32	08.3	04.3
8	314	48.0	318	40.0		21.4	267	54.7	00.9		117	10.3	46.1		47	10.8	04.3
9	329	50.5	333	43.1		20.5	282	55.4	01.4		132	13.1	46.0		62	13.2	04.3
10	344	53.0	348	46.2		19.7	297	56.1	01.9		147	15.8	45.9		77	15.7	04.3
11	359	55.4	3	49.2	+5 18.9		312	56.8	+18 02.4		162	18.6	-5 45.8		92	18.2	-22 04.3
12	14	57.9	18	52.3	+5 18.0		327	57.5	+18 02.9		177	21.4	-5 45.7		107	20.6	-22 04.3
13	30	00.4	33	55.4		17.2	342	58.2	03.4		192	24.1	45.5		122	23.1	04.3
14	45	02.8	48	58.5		16.3	357	58.9	03.9		207	26.9	45.4		137	25.6	04.3
15	60	05.3	64	01.5		15.5	12	59.5	04.4		222	29.7	45.3		152	28.0	04.3
16	75	07.8	79	04.6		14.7	28	00.2	04.9		237	32.4	45.2		167	30.5	04.3
17	90	10.2	94	07.6	+5 13.8		43	00.9	+18 05.4		252	35.2	-5 45.0		182	33.0	-22 04.3
18	105	12.7	109	10.7	+5 13.0		58	01.6	+18 05.9		267	37.9	-5 44.9		197	35.4	-22 04.3
19	120	15.1	124	13.8		12.2	73	02.3	06.4		282	40.7	44.8		212	37.9	04.3
20	135	17.6	139	16.8		11.3	88	03.0	06.9		297	43.5	44.7		227	40.4	04.3
21	150	20.1	154	19.8		10.5	103	03.7	07.4		312	46.2	44.6		242	42.8	04.3
22	165	22.5	169	22.9		09.7	118	04.4	07.9		327	49.0	44.4		257	45.3	04.3
23	180	25.0	184	25.9		08.8	133	05.1	08.4		342	51.8	44.3		272	47.8	04.3
24	195	27.5	199	29.0	+5 08.0		148	05.8	+18 08.9		357	54.5	-5 44.2		287	50.2	-22 04.3
Dif	—		+31		-8		+7		+5		+28		+1		+25		0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 8			Edad: 10 ^d 9 PHE { SD: 15 ^h 4 PMG: 22 ^h 26 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	179	31.0	+7	11.5	34	03.7	+8	14.8	60 N	19 01	19 46	20 43	15 34	77	4 44	17		
1	194	31.2		12.5	48	35.0 ¹²³	+8	05.3 ⁹⁵	58	18 57	38	31	37	74	40	19		
2	209	31.4		13.4	63	06.4 ¹²⁴	+7	55.7 ⁹⁶	56	53	32	21	40	72	37	21		
3	224	31.6		14.4	77	37.8 ¹²⁴		46.1 ⁹⁶	54	49	26	12	43	70	33	23		
4	239	31.7		15.3	92	09.2 ¹²⁴		36.4 ⁹⁷	52	46	21	20 04	45	68	31	24		
5	254	31.9	+7	16.2	106	40.7 ¹²⁵	+7	26.7 ⁹⁷	50	18 43	19 17	19 57	15 47	67	4 28	26		
6	269	32.1	+7	17.2	121	12.3 ¹²⁶	+7	17.0 ⁹⁷	45	18 37	19 07	19 43	15 52	63	4 22	29		
7	284	32.3		18.1	135	43.8 ¹²⁵	+7	07.3 ⁹⁷	40	31	18 59	32	55	61	17	32		
8	299	32.4		19.0	150	15.5 ¹²⁷	+6	57.5 ⁹⁸	35	27	53	23	15 59	57	13	34		
9	314	32.6		20.0	164	47.1 ¹²⁶		47.7 ⁹⁸	30	23	47	16	16 02	55	09	36		
10	329	32.8		20.9	179	18.8 ¹²⁷		37.9 ⁹⁸	20	16	39	19 05	06	52	4 02	40		
11	344	32.9	+7	21.8	193	50.6 ¹²⁸	+6	28.1 ⁹⁸	10 N	18 10	18 32	18 56	16 11	48	3 56	44		
12	359	33.1	+7	22.8	208	22.4 ¹²⁸	+6	18.2 ⁹⁹	0	18 05	18 26	18 50	16 15	46	3 51	46		
13	14	33.3		23.7	222	54.2 ¹²⁸	+6	08.3 ⁹⁹	10 S	18 00	21	45	19	43	45	49		
14	29	33.5		24.6	237	26.1 ¹²⁹	+5	58.4 ⁹⁹	20	17 54	16	42	23	40	39	53		
15	44	33.6		25.5	251	58.0 ¹²⁹		48.4 ¹⁰⁰	30	48	12	40	28	36	32	56		
16	59	33.8		26.5	266	29.9 ¹²⁹		38.5 ⁹⁹	35	45	10	39	31	34	28	59		
17	74	34.0	+7	27.4	281	01.9 ¹³⁰	+5	28.5 ¹⁰⁰	40	17 41	18 08	18 39	16 34	31	3 24	60		
18	89	34.2	+7	28.3	295	33.9 ¹³⁰	+5	18.5 ¹⁰⁰	45	17 36	18 06	18 40	16 38	28	3 18	64		
19	104	34.3		29.3	310	05.9 ¹³⁰	+5	08.5 ¹⁰⁰	50	31	03	41	43	25	12	67		
20	119	34.5		30.2	324	38.0 ¹³¹	+4	58.5 ¹⁰⁰	52	29	02	41	45	23	09	69		
21	134	34.7		31.1	339	10.2 ¹³²		48.4 ¹⁰¹	54	26	01	42	47	22	06	70		
22	149	34.8		32.1	353	42.3 ¹³¹		38.3 ¹⁰¹	56	23	18 00	43	49	20	3 02	73		
23	164	35.0		33.0	8	14.5 ¹³²		28.3 ¹⁰⁰	58	20	17 59	44	52	18	2 58	75		
24	179	35.2	+7	33.9	22	46.7 ¹³²	+4	18.2 ¹⁰¹	60 S	17 16	17 58	18 46	16 55	16	2 54	77		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 52 ^m 4			Mag: -4.5 PMG: 10 ^h 35 ^m			Mag: +1.5 PMG: 14 ^h 06 ^m			Mag: -2.5 PMG: 0 ^h 04 ^m			Mag: +0.4 PMG: 4 ^h 44 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♅	Dec			
h	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°			
0	196	26.6	200 40.6	+4 48.5	148 22.3	+18 20.7	359 00.8	-5 41.3	288 49.5	-22 04.2								
1	211	29.1	215 43.5	47.7	163 23.0	21.2	14 03.6	41.2	303 52.0	04.2								
2	226	31.5	230 46.4	46.9	178 23.7	21.7	29 06.3	41.0	318 54.5	04.2								
3	241	34.0	245 49.3	46.1	193 24.4	22.2	44 09.1	40.9	333 56.9	04.2								
4	256	36.5	260 52.3	45.3	208 25.1	22.7	59 11.9	40.8	348 59.4	04.2								
5	271	38.9	275 55.2	+4 44.5	223 25.8	+18 23.2	74 14.6	-5 40.7	4 01.9	-22 04.2								
6	286	41.4	290 58.1	+4 43.7	238 26.5	+18 23.7	89 17.4	-5 40.5	19 04.4	-22 04.2								
7	301	43.9	306 01.0	42.9	253 27.2	24.1	104 20.2	40.4	34 06.8	04.2								
8	316	46.3	321 03.9	42.1	268 27.8	24.6	119 22.9	40.3	49 09.3	04.2								
9	331	48.8	336 06.8	41.3	283 28.5	25.1	134 25.7	40.2	64 11.8	04.2								
10	346	51.2	351 09.7	40.5	298 29.2	25.6	149 28.5	40.1	79 14.2	04.2								
11	1	53.7	6 12.6	+4 39.7	313 29.9	+18 26.1	164 31.2	-5 39.9	94 16.7	-22 04.2								
12	16	56.2	21 15.5	+4 39.0	328 30.6	+18 26.6	179 34.0	-5 39.8	109 19.2	-22 04.2								
13	31	58.6	36 18.4	38.2	343 31.3	27.1	194 36.7	39.7	124 21.7	04.2								
14	47	01.1	51 21.3	37.4	358 32.0	27.6	209 39.5	39.6	139 24.1	04.2								
15	62	03.6	66 24.2	36.6	13 32.7	28.0	224 42.3	39.5	154 26.6	04.2								
16	77	06.0	81 27.0	35.8	28 33.4	28.5	239 45.0	39.3	169 29.1	04.2								
17	92	08.5	96 29.9	+4 35.1	43 34.0	+18 29.0	254 47.8	-5 39.2	184 31.6	-22 04.2								
18	107	11.0	111 32.8	+4 34.3	58 34.7	+18 29.5	269 50.6	-5 39.1	199 34.0	-22 04.2								
19	122	13.4	126 35.6	33.5	73 35.4	30.0	284 53.3	39.0	214 36.5	04.2								
20	137	15.9	141 38.5	32.7	88 36.1	30.5	299 56.1	38.8	229 39.0	04.2								
21	152	18.4	156 41.4	32.0	103 36.8	30.9	314 58.8	38.7	244 41.5	04.2								
22	167	20.8	171 44.2	31.2	118 37.5	31.4	330 01.6	38.6	259 43.9	04.2								
23	182	23.3	186 47.1	30.4	133 38.2	31.9	345 04.4	38.5	274 46.4	04.1								
24	197	25.7	201 49.9	+4 29.6	148 38.9	+18 32.4	0 07.1	-5 38.4	289 48.9	-22 04.1								
Dif	—	+29	-8	+7	+5	-8972	+1	+25	0									

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 11 ^d 9 PHE { 4 ^h : 55:9 12 ^h : 55:7 20 ^h : 55:6 Rº: 45 ^m												
	PMG: 12 ^h 01 ^m 5			SD: 15:2 PMG: 23 ^h 11 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	35.2	+7 33.9	22	46.7	+4 18.2	102	60 N	3 19	4 16	5 01	16 51	75	5 01	16	
1	194	35.4	34.9	37	19.0 ¹³³	+4 08.0 ¹⁰²	58	58	31	24	05	51	73	4 59	18	
2	209	35.5	35.8	51	51.3 ¹³³	+3 57.9 ¹⁰¹	56	56	42	30	10	52	71	58	20	
3	224	35.7	36.7	66	23.6 ¹³³	47.8 ¹⁰¹	54	54	51	36	13	53	68	56	22	
4	239	35.9	37.6	80	56.0 ¹³⁴	37.6 ¹⁰²	52	52	3 58	41	16	53	67	55	23	
5	254	36.0	+7 38.6	95	28.3 ¹³³	+3 27.5 ¹⁰¹	50	50	4 05	4 46	5 19	16 54	65	4 54	24	
6	269	36.2	+7 39.5	110	00.8 ¹³⁵	+3 17.3 ¹⁰²	45	45	4 20	4 56	5 26	16 55	62	4 51	28	
7	284	36.4	40.4	124	33.2 ¹³⁴	+3 07.1 ¹⁰²	40	40	31	5 04	31	56	59	49	31	
8	299	36.6	41.4	139	05.7 ¹³⁵	+2 57.0 ¹⁰¹	35	35	40	10	36	56	57	47	33	
9	314	36.7	42.3	153	38.2 ¹³⁵	46.8 ¹⁰²	30	30	47	16	40	57	55	45	35	
10	329	36.9	43.2	168	10.7 ¹³⁵	36.6 ¹⁰²	20	20	4 58	25	47	58	51	42	39	
11	344	37.1	+7 44.1	182	43.3 ¹³⁶	+2 26.4 ¹⁰²	10 N	10 N	5 07	5 32	5 53	16 59	48	4 40	42	
12	359	37.2	+7 45.1	197	15.8 ¹³⁵	+2 16.1 ¹⁰³	0	0	5 13	5 37	5 58	17 01	44	4 37	45	
13	14	37.4	46.0	211	48.4 ¹³⁶	+2 05.9 ¹⁰²	10 S	10 S	18	42	6 04	02	41	34	49	
14	29	37.6	46.9	226	21.1 ¹³⁷	+1 55.7 ¹⁰²	20	20	21	47	09	03	38	32	51	
15	44	37.7	47.8	240	53.7 ¹³⁶	45.5 ¹⁰²	30	30	24	51	16	04	35	28	56	
16	59	37.9	48.8	255	26.4 ¹³⁷	35.3 ¹⁰²	35	35	24	54	19	05	32	27	57	
17	74	38.1	+7 49.7	269	59.1 ¹³⁷	+1 25.1 ¹⁰²	40	40	5 24	5 56	6 23	17 05	31	4 24	60	
18	89	38.3	+7 50.6	284	31.9 ¹³⁸	+1 14.8 ¹⁰³	45	45	5 24	5 58	6 28	17 06	28	4 22	63	
19	104	38.4	51.5	299	04.6 ¹³⁷	+1 04.6 ¹⁰²	50	50	23	6 01	33	08	24	19	66	
20	119	38.6	52.5	313	37.4 ¹³⁸	+0 54.4 ¹⁰²	52	52	23	02	36	08	23	18	67	
21	134	38.8	53.4	328	10.2 ¹³⁸	44.2 ¹⁰²	54	54	22	03	38	09	21	16	70	
22	149	38.9	54.3	342	43.0 ¹³⁸	34.0 ¹⁰²	56	56	21	04	42	09	20	15	71	
23	164	39.1	55.2	357	15.8 ¹³⁸	23.7 ¹⁰³	58	58	20	05	45	10	18	13	73	
24	179	39.3	+7 56.2	11	48.7 ¹³⁹	+0 13.5 ¹⁰²	60 S	60 S	5 18	6 07	6 49	17 11	15	4 11	76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG 10 ^h 48 ^m 5		Mag: -4.5 PMG: 10 ^h 31 ^m		Mag: +1.5 PMG: 14 ^h 05 ^m		Mag: -2.5 PMG: 23 ^h 55 ^m		Mag: +0.4 PMG: 4 ^h 40 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	197	25.7	201	49.9	+4 29.6	148	38.9	+18 32.4	0 07.1	-5 38.4	289	48.9	-22 04.1
1	212	28.2	216	52.7	28.9	163	39.5	32.9	15 09.9	38.2	304	51.4	04.1
2	227	30.7	231	55.6	28.1	178	40.2	33.4	30 12.7	38.1	319	53.8	04.1
3	242	33.1	246	58.4	27.3	193	40.9	33.8	45 15.4	38.0	334	56.3	04.1
4	257	35.6	262	01.2	26.6	208	41.6	34.3	60 18.2	37.9	349	58.8	04.1
5	272	38.1	277	04.1	+4 25.8	223	42.3	+18 34.8	75 20.9	-5 37.8	5 01.3	-22 04.1	
6	287	40.5	292	06.9	+4 25.1	238	43.0	+18 35.3	90 23.7	-5 37.6	20 03.8	-22 04.1	
7	302	43.0	307	09.7	24.3	253	43.7	35.8	105 26.5	37.5	35 06.2	04.1	
8	317	45.5	322	12.5	23.5	268	44.3	36.2	120 29.2	37.4	50 08.7	04.1	
9	332	47.9	337	15.3	22.8	283	45.0	36.7	135 32.0	37.3	65 11.2	04.1	
10	347	50.4	352	18.1	22.0	298	45.7	37.2	150 34.8	37.2	80 13.7	04.1	
11	2	52.8	7	20.9	+4 21.3	313	46.4	+18 37.7	165 37.5	-5 37.0	95 16.1	-22 04.1	
12	17	55.3	22	23.7	+4 20.5	328	47.1	+18 38.2	180 40.3	-5 36.9	110 18.6	-22 04.1	
13	32	57.8	37	26.5	19.8	343	47.8	38.6	195 43.0	36.8	125 21.1	04.1	
14	48	00.2	52	29.3	19.0	358	48.5	39.1	210 45.8	36.7	140 23.6	04.1	
15	63	02.7	67	32.1	18.3	13	49.2	39.6	225 48.6	36.5	155 26.1	04.1	
16	78	05.2	82	34.9	17.5	28	49.8	40.1	240 51.3	36.4	170 28.5	04.1	
17	93	07.6	97	37.6	+4 16.8	43	50.5	+18 40.6	255 54.1	-5 36.3	185 31.0	-22 04.1	
18	108	10.1	112	40.4	+4 16.0	58	51.2	+18 41.0	270 56.9	-5 36.2	200 33.5	-22 04.1	
19	123	12.6	127	43.2	15.3	73	51.9	41.5	285 59.6	36.1	215 36.0	04.1	
20	138	15.0	142	45.9	14.6	88	52.6	42.0	301 02.4	35.9	230 38.5	04.1	
21	153	17.5	157	48.7	13.8	103	53.3	42.5	316 05.1	35.8	245 40.9	04.1	
22	168	20.0	172	51.5	13.1	118	53.9	42.9	331 07.9	35.7	260 43.4	04.1	
23	183	22.4	187	54.2	12.4	133	54.6	43.4	346 10.7	35.6	275 45.9	04.1	
24	198	24.9	202	57.0	+4 11.6	148	55.3	+18 43.9	1 13.4	-5 35.5	290 48.4	-22 04.1	
Dif	—		+28 -8		+7 +5		+28 +1		+25				

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°0 PMG: 12 ^h 01 ^m 2		Edad: 12 ^d 9 PHE { 4 ^h : 55'4 12 ^h : 55'3 20 ^h : 55'2 R°: 44 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	179	39.3	+7	56.2	11	48.7	+0 13.5	60 N	19 06	19 51	20 50	18 06 74	5 17 15					
1	194	39.4		57.1	26	21.6 ¹³⁹	+0 03.3 ¹⁰²	58	19 01	43	37	04 72	17 18					
2	209	39.6		58.0	40	54.5 ¹³⁹	-0 06.9 ¹⁰²	56	18 57	36	26	03 69	18 19					
3	224	39.8		58.9	55	27.4 ¹³⁹	17.0 ¹⁰¹	54	53	30	17	01 68	18 21					
4	239	39.9	+7	59.9	70	00.3 ¹³⁹	27.2 ¹⁰²	52	49	25	08	18 00 66	18 23					
5	254	40.1	+8	00.8	84	33.3 ¹⁴⁰	-0 37.4 ¹⁰²	50	18 46	19 20	20 01	17 59 65	5 18 25					
6	269	40.3	+8	01.7	99	06.2 ¹³⁹	-0 47.6 ¹⁰²	45	18 39	19 10	19 46	17 57 61	5 19 28					
7	284	40.4		02.6	113	39.2 ¹⁴⁰	-0 57.7 ¹⁰¹	40	33	19 01	34	55 58	20 30					
8	299	40.6		03.6	128	12.2 ¹⁴⁰	-1 07.9 ¹⁰²	35	29	18 54	25	53 56	20 33					
9	314	40.8		04.5	142	45.2 ¹⁴⁰	18.0 ¹⁰¹	30	24	49	17	52 54	20 35					
10	329	41.0		05.4	157	18.2 ¹⁴⁰	28.1 ¹⁰¹	20	17	39	19 05	49 51	21 38					
11	344	41.1	+8	06.3	171	51.3 ¹⁴¹	-1 38.3 ¹⁰²	10 N	18 10	18 32	18 56	17 47 47	5 22 41					
12	359	41.3	+8	07.2	186	24.3 ¹⁴⁰	-1 48.3 ¹⁰⁰	0	18 05	18 25	18 50	17 45 44	5 22 44					
13	14	41.5		08.2	200	57.4 ¹⁴¹	-1 58.4 ¹⁰¹	10 S	17 59	20	44	43 41	23 47					
14	29	41.6		09.1	215	30.4 ¹⁴⁰	-2 08.5 ¹⁰¹	20	53	15	41	41 38	23 51					
15	44	41.8		10.0	230	03.5 ¹⁴¹	18.6 ¹⁰¹	30	46	10	38	39 34	24 54					
16	59	42.0		10.9	244	36.6 ¹⁴¹	28.6 ¹⁰⁰	35	42	08	37	37 33	24 56					
17	74	42.1	+8	11.8	259	09.7 ¹⁴¹	-2 38.6 ¹⁰⁰	40	17 38	18 05	18 36	17 36 30	5 24 59					
18	89	42.3	+8	12.8	273	42.9 ¹⁴²	-2 48.6 ¹⁰⁰	45	17 33	18 02	18 36	17 34 28	5 25 61					
19	104	42.5		13.7	288	16.0 ¹⁴¹	-2 58.6 ¹⁰⁰	50	27	17 59	37	32 24	25 65					
20	119	42.6		14.6	302	49.1 ¹⁴¹	-3 08.6 ¹⁰⁰	52	24	58	37	31 23	25 67					
21	134	42.8		15.5	317	22.3 ¹⁴²	18.5 ⁹⁹	54	21	57	38	30 21	26 68					
22	149	43.0		16.4	331	55.4 ¹⁴¹	28.5 ¹⁰⁰	56	18	55	38	29 20	26 70					
23	164	43.1		17.4	346	28.6 ¹⁴²	38.4 ⁹⁹	58	14	54	39	28 17	26 72					
24	179	43.3	+8	18.3	1	01.7 ¹⁴¹	-3 48.3 ⁹⁹	60 S	17 10	17 52	18 40	17 26 16	5 27 74					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 44 ^m 6		Mag: -4.5 PMG: 10 ^h 26 ^m			Mag: +1.5 PMG: 14 ^h 04 ^m			Mag: -2.5 PMG: 23 ^h 51 ^m			Mag: +0.4 PMG: 4 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	198	24.9	202	57.0	+4	11.6	148	55.3	+18	43.9	1	13.4	-5	35.5	290	48.4	-22	04.1
1	213	27.3	217	59.7		10.9	163	56.0		44.4	16	16.2		35.3	305	50.9		04.1
2	228	29.8	233	02.5		10.2	178	56.7		44.8	31	19.0		35.2	320	53.3		04.1
3	243	32.3	248	05.2		09.4	193	57.4		45.3	46	21.7		35.1	335	55.8		04.1
4	258	34.7	263	07.9		08.7	208	58.1		45.8	61	24.5		35.0	350	58.3		04.1
5	273	37.2	278	10.7	+4	08.0	223	58.7	+18	46.3	76	27.2	-5	34.9	6	00.8	-22	04.1
6	288	39.7	293	13.4	+4	07.2	238	59.4	+18	46.7	91	30.0	-5	34.7	21	03.3	-22	04.1
7	303	42.1	308	16.1		06.5	254	00.1		47.2	106	32.8		34.6	36	05.8		04.1
8	318	44.6	323	18.8		05.8	269	00.8		47.7	121	35.5		34.5	51	08.2		04.1
9	333	47.1	338	21.5		05.1	284	01.5		48.2	136	38.3		34.4	66	10.7		04.1
10	348	49.5	353	24.2		04.4	299	02.2		48.6	151	41.1		34.2	81	13.2		04.1
11	3	52.0	8	26.9	+4	03.6	314	02.8	+18	49.1	166	43.8	-5	34.1	96	15.7	-22	04.0
12	18	54.4	23	29.6	+4	02.9	329	03.5	+18	49.6	181	46.6	-5	34.0	111	18.2	-22	04.0
13	33	56.9	38	32.3		02.2	344	04.2		50.0	196	49.3		33.9	126	20.6		04.0
14	48	59.4	53	35.0		01.5	359	04.9		50.5	211	52.1		33.8	141	23.1		04.0
15	64	01.8	68	37.7		00.8	14	05.6		51.0	226	54.9		33.6	156	25.6		04.0
16	79	04.3	83	40.4	+4	00.1	29	06.3		51.5	241	57.6		33.5	171	28.1		04.0
17	94	06.8	98	43.1	+3	59.4	44	07.0	+18	51.9	257	00.4	-5	33.4	186	30.6	-22	04.0
18	109	09.2	113	45.8	+3	58.7	59	07.6	+18	52.4	272	03.2	-5	33.3	201	33.1	-22	04.0
19	124	11.7	128	48.4		58.0	74	08.3		52.9	287	05.9		33.2	216	35.6		04.0
20	139	14.2	143	51.1		57.2	89	09.0		53.3	302	08.7		33.0	231	38.0		04.0
21	154	16.6	158	53.8		56.5	104	09.7		53.8	317	11.4		32.9	246	40.5		04.0
22	169	19.1	173	56.4		55.8	119	10.4		54.3	332	14.2		32.8	261	43.0		04.0
23	184	21.6	188	59.1		55.1	134	11.1		54.7	347	17.0		32.7	276	45.5		04.0
24	199	24.0	204	01.8	+3	54.4	149	11.7	+18	55.2	2	19.7	-5	32.6	291	48.0	-22	04.0
Dif	—		+27		-7		+7		+5		+28		+1		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'0			Edad: 13 ^d 9 PHE	SD: 15'0			R°: ***	Náutico		Civil	Hora	R°	Hora	R°							
	PMG: 12 ^h 01 ^m 0																					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif															
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m							
0	179	43.3	+8	18.3	1	01.7	-3	48.3	60 N	3	11	4	10	4	55	19	20	72	5	32	16	
1	194	43.5		19.2	15	34.9 ¹⁴²	-3	58.1 ⁹⁸	58		24	18	5	00		16	70		35	18		
2	209	43.6		20.1	30	08.1 ¹⁴²	-4	08.0 ⁹⁹	56		35	25		04		12	68		37	20		
3	224	43.8		21.0	44	41.3 ¹⁴²		17.8 ⁹⁸	54		45	31		08		09	66		39	22		
4	239	43.9		22.0	59	14.5 ¹⁴²		27.6 ⁹⁸	52		3	53		37		12	65		41	24		
5	254	44.1	+8	22.9	73	47.6 ¹⁴¹	-4	37.4 ⁹⁸	50		4	00	4	42	5	15	19	04	63	5	43	25
6	269	44.3	+8	23.8	88	20.8 ¹⁴²	-4	47.1 ⁹⁷	45		4	16	4	52	5	22	18	58	60	5	47	28
7	284	44.4		24.7	102	54.0 ¹⁴²	-4	56.8 ⁹⁷	40		27	5	00		28		53	58		50	31	
8	299	44.6		25.6	117	27.2 ¹⁴²	-5	06.5 ⁹⁷	35		37	07		33		49	55		53	32		
9	314	44.8		26.5	132	00.4 ¹⁴²		16.2 ⁹⁷	30		45	13		38		46	53		55	35		
10	329	44.9		27.5	146	33.7 ¹⁴³		25.8 ⁹⁶	20		4	57	23	45		40	50		5	59	39	
11	344	45.1	+8	28.4	161	06.9 ¹⁴²	-5	35.4 ⁹⁶	10 N		5	06	5	30	5	52	18	34	47	6	03	41
12	359	45.3	+8	29.3	175	40.1 ¹⁴²	-5	45.0 ⁹⁶	0		5	13	5	37	5	58	18	29	45	6	06	45
13	14	45.4		30.2	190	13.3 ¹⁴²	-5	54.6 ⁹⁶	10 S		18	42	6	04		24	42		10	47		
14	29	45.6		31.1	204	46.5 ¹⁴²	-6	04.1 ⁹⁵	20		22	48	10			19	39		14	50		
15	44	45.8		32.0	219	19.7 ¹⁴²		13.6 ⁹⁵	30		25	53	17			13	36		18	53		
16	59	45.9		32.9	233	52.9 ¹⁴²		23.0 ⁹⁴	35		26	55	21			10	33		20	56		
17	74	46.1	+8	33.9	248	26.1 ¹⁴²	-6	32.5 ⁹⁵	40		5	26	5	58	6	25	18	06	31	6	23	58
18	89	46.2	+8	34.8	262	59.3 ¹⁴²	-6	41.8 ⁹³	45		5	27	6	01	6	30	18	02	28	6	26	61
19	104	46.4		35.7	277	32.5 ¹⁴²	-6	51.2 ⁹⁴	50		26	04	36			17	56	26		30	64	
20	119	46.6		36.6	292	05.7 ¹⁴²	-7	00.5 ⁹³	52		26	05	39			54	24		32	65		
21	134	46.7		37.5	306	38.9 ¹⁴²		09.8 ⁹³	54		25	06	42			51	23		34	67		
22	149	46.9		38.4	321	12.1 ¹⁴²		19.1 ⁹³	56		25	08	46			49	21		36	69		
23	164	47.1		39.3	335	45.3 ¹⁴²		28.3 ⁹²	58		24	10	49			45	19		38	71		
24	179	47.2	+8	40.3	350	18.5 ¹⁴²	-7	37.5 ⁹²	60 S		5	23	6	11	6	53	17	42	17	6	41	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 40 ^m 6		Mag: -4.6 PMG: 10 ^h 22 ^m		Mag: +1.5 PMG: 14 ^h 03 ^m		Mag: -2.5 PMG: 23 ^h 46 ^m		Mag: +0.4 PMG: 4 ^h 32 ^m									
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	199	24.0	204	01.8	+3	54.4	149	11.7	+18	55.2	2	19.7	-5	32.6	291	48.0	-22	04.0
1	214	26.5	219	04.4		53.7	164	12.4		55.7	17	22.5		32.4	306	50.5		04.0
2	229	28.9	234	07.0		53.1	179	13.1		56.2	32	25.2		32.3	321	52.9		04.0
3	244	31.4	249	09.7		52.4	194	13.8		56.6	47	28.0		32.2	336	55.4		04.0
4	259	33.9	264	12.3		51.7	209	14.5		57.1	62	30.8		32.1	351	57.9		04.0
5	274	36.3	279	15.0	+3	51.0	224	15.1	+18	57.6	77	33.5	-5	32.0	7	00.4	-22	04.0
6	289	38.8	294	17.6	+3	50.3	239	15.8	+18	58.0	92	36.3	-5	31.8	22	02.9	-22	04.0
7	304	41.3	309	20.2		49.6	254	16.5		58.5	107	39.1		31.7	37	05.4		04.0
8	319	43.7	324	22.8		48.9	269	17.2		59.0	122	41.8		31.6	52	07.9		04.0
9	334	46.2	339	25.5		48.2	284	17.9		59.4	137	44.6		31.5	67	10.3		04.0
10	349	48.7	354	28.1		47.6	299	18.6	+18	59.9	152	47.3		31.4	82	12.8		04.0
11	4	51.1	9	30.7	+3	46.9	314	19.2	+19	00.3	167	50.1	-5	31.2	97	15.3	-22	04.0
12	19	53.6	24	33.3	+3	46.2	329	19.9	+19	00.8	182	52.9	-5	31.1	112	17.8	-22	04.0
13	34	56.1	39	35.9		45.5	344	20.6		01.3	197	55.6		31.0	127	20.3		04.0
14	49	58.5	54	38.5		44.8	359	21.3		01.7	212	58.4		30.9	142	22.8		04.0
15	65	01.0	69	41.1		44.2	14	22.0		02.2	228	01.2		30.8	157	25.3		04.0
16	80	03.4	84	43.7		43.5	29	22.6		02.7	243	03.9		30.6	172	27.8		04.0
17	95	05.9	99	46.3	+3	42.8	44	23.3	+19	03.1	258	06.7	-5	30.5	187	30.2	-22	04.0
18	110	08.4	114	48.8	+3	42.2	59	24.0	+19	03.6	273	09.4	-5	30.4	202	32.7	-22	04.0
19	125	10.8	129	51.4		41.5	74	24.7		04.1	288	12.2		30.3	217	35.2		04.0
20	140	13.3	144	54.0		40.8	89	25.4		04.5	303	15.0		30.2	232	37.7		04.0
21	155	15.8	159	56.6		40.2	104	26.1		05.0	318	17.7		30.0	247	40.2		04.0
22	170	18.2	174	59.1		39.5	119	26.7		05.4	333	20.5		29.9	262	42.7		03.9
23	185	20.7	190	01.7		38.8	134	27.4		05.9	348	23.2		29.8	277	45.2		03.9
24	200	23.2	205	04.3	+3	38.2	149	28.1	+19	06.4	3	26.0	-5	29.7	292	47.7	-22	03.9
Dif	—		+26		-7		+7		+5		+28		+1		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 00 ^m 7			Edad: 14 ^d 9 PHE { 4 ^h : 54:7 12 ^h : 54:6 20 ^h : 54:5 SD: 14:9 PMG: 0 ^h 40 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	47.2	+8 40.3	350	18.5	-7 37.5	91	60 N	19 11	19 57	20 57	20 32 71	5 48 18		
1	194	47.4		4	51.6 ¹⁴¹	46.6	91	58	06	48	43	26 68	53 20		
2	209	47.6		19	24.8 ¹⁴²	-7 55.7	91	56	19 01	41	31	20 67	5 57 23		
3	224	47.7		33	58.0 ¹⁴²	-8 04.8	91	54	18 57	34	21	15 65	6 01 24		
4	239	47.9		48	31.1 ¹⁴¹	13.8	90	52	53	28	12	11 63	05 25		
5	254	48.0	+8 44.8	63	04.3 ¹⁴²	-8 22.8	90	50	18 49	19 23	20 05	20 07 62	6 08 27		
6	269	48.2	+8 45.7	77	37.4 ¹⁴¹	-8 31.7	89	45	18 42	19 12	19 49	19 58 59	6 15 29		
7	284	48.4		92	10.6 ¹⁴²	40.6	89	40	35	19 03	37	51 56	21 32		
8	299	48.5		106	43.7 ¹⁴¹	49.5	89	35	30	18 56	27	44 55	25 35		
9	314	48.7		121	16.8 ¹⁴¹	-8 58.3	88	30	25	50	19	39 53	30 36		
10	329	48.9		135	49.9 ¹⁴¹	-9 07.1	88	20	17	40	19 06	30 49	38 39		
11	344	49.0	+8 50.3	150	23.1 ¹⁴²	-9 15.8	87	10 N	18 10	18 32	18 57	19 21 48	6 44 42		
12	359	49.2	+8 51.2	164	56.2 ¹⁴¹	-9 24.5	87	0	18 04	18 25	18 49	19 14 44	6 51 44		
13	14	49.3		179	29.2 ¹⁴⁰	33.2	87	10 S	17 58	19	44	19 06 42	6 57 47		
14	29	49.5		194	02.3 ¹⁴¹	41.8	86	20	51	13	39	18 58 40	7 04 50		
15	44	49.7		208	35.4 ¹⁴¹	50.3	85	30	44	08	36	49 37	11 54		
16	59	49.8		223	08.4 ¹⁴⁰	-9 58.8	85	35	40	05	34	43 36	16 55		
17	74	50.0	+8 55.7	237	41.5 ¹⁴¹	-10 07.3	85	40	17 35	18 02	18 33	18 37 34	7 21 57		
18	89	50.1	+8 56.6	252	14.5 ¹⁴⁰	-10 15.7	84	45	17 29	17 59	18 33	18 30 31	7 27 59		
19	104	50.3		266	47.5 ¹⁴⁰	24.1	84	50	23	55	33	22 28	34 63		
20	119	50.5		281	20.5 ¹⁴⁰	32.4	83	52	20	54	33	18 27	37 64		
21	134	50.6	+8 59.4	295	53.5 ¹⁴⁰	40.7	83	54	17	52	33	14 25	41 65		
22	149	50.8	+9 00.3	310	26.5 ¹⁴⁰	48.9	82	56	13	51	34	10 23	45 67		
23	164	50.9		324	59.5 ¹⁴⁰	-10 57.1	82	58	09	49	34	18 04 22	49 70		
24	179	51.1	+9 02.1	339	32.5 ¹⁴⁰	-11 05.2	81	60 S	17 04	17 47	18 35	17 59 19	7 54 72		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 36 ^m 7		Mag: -4.6 PMG: 10 ^h 18 ^m		Mag: +1.5 PMG: 14 ^h 01 ^m		Mag: -2.5 PMG: 23 ^h 42 ^m		Mag: +0.4 PMG: 4 ^h 28 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	200	23.2	205	40.3	+3 38.2	149	28.1	+19 06.4	3	26.0	-5 29.7	292	47.7	-22 03.9
1	215	25.6	220	06.8	37.5	164	28.8	06.8	18	28.8	29.5	307	50.2	03.9
2	230	28.1	235	09.4	36.9	179	29.5	07.3	33	31.5	29.4	322	52.7	03.9
3	245	30.5	250	11.9	36.2	194	30.1	07.7	48	34.3	29.3	337	55.1	03.9
4	260	33.0	265	14.5	35.5	209	30.8	08.2	63	37.0	29.2	352	57.6	03.9
5	275	35.5	280	17.0	+3 34.9	224	31.5	+19 08.7	78	39.8	-5 29.1	8	00.1	-22 03.9
6	290	37.9	295	19.5	+3 34.2	239	32.2	+19 09.1	93	42.6	-5 28.9	23	02.6	-22 03.9
7	305	40.4	310	22.1	33.6	254	32.9	09.6	108	45.3	28.8	38	05.1	03.9
8	320	42.9	325	24.6	33.0	269	33.5	10.0	123	48.1	28.7	53	07.6	03.9
9	335	45.3	340	27.1	32.3	284	34.2	10.5	138	50.9	28.6	68	10.1	03.9
10	350	47.8	355	29.6	31.7	299	34.9	11.0	153	53.6	28.5	83	12.6	03.9
11	5	50.3	10	32.1	+3 31.0	314	35.6	+19 11.4	168	56.4	-5 28.3	98	15.1	-22 03.9
12	20	52.7	25	34.7	+3 30.4	329	36.3	+19 11.9	183	59.1	-5 28.2	113	17.6	-22 03.9
13	35	55.2	40	37.2	29.7	344	36.9	12.3	199	01.9	28.1	128	20.1	03.9
14	50	57.7	55	39.7	29.1	359	37.6	12.8	214	04.7	28.0	143	22.5	03.9
15	66	00.1	70	42.2	28.5	14	38.3	13.2	229	07.4	27.9	158	25.0	03.9
16	81	02.6	85	44.7	27.8	29	39.0	13.7	244	10.2	27.8	173	27.5	03.9
17	96	05.0	100	47.2	+3 27.2	44	39.7	+19 14.2	259	12.9	-5 27.6	188	30.0	-22 03.9
18	111	07.5	115	49.6	+3 26.6	59	40.3	+19 14.6	274	15.7	-5 27.5	203	32.5	-22 03.9
19	126	10.0	130	52.1	26.0	74	41.0	15.1	289	18.5	27.4	218	35.0	03.9
20	141	12.4	145	54.6	25.3	89	41.7	15.5	304	21.2	27.3	233	37.5	03.9
21	156	14.9	160	57.1	24.7	104	42.4	16.0	319	24.0	27.2	248	40.0	03.9
22	171	17.4	175	59.6	24.1	119	43.1	16.4	334	26.7	27.0	263	42.5	03.9
23	186	19.8	191	02.0	23.5	134	43.7	16.9	349	29.5	26.9	278	45.0	03.9
24	201	22.3	206	04.5	+3 22.8	149	44.4	+19 17.3	4	32.3	-5 26.8	293	47.5	-22 03.9
Dif	—		+25 -6		+7 +5		+28 +1		+25 0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 00 ^m 5			Edad: 15 ^d 9 PHE { SD: 14'8 PMG: 1 ^h 24 ^m R°: 45 ^m 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	179	51.1	+9	02.1	339	32.5	-11	05.2	60 N	3	04	4	03	4	49	21	43	67	
1	194	51.3		03.0	354	05.4 ¹³⁹		13.2	80	17	12		54		34	66	13	24	
2	209	51.4		03.9	8	38.3 ¹³⁹		21.3	81	29	19	4	59		27	63	20	25	
3	224	51.6		04.8	23	11.3 ¹⁴⁰		29.2	79	39	26	5	04		20	62	25	27	
4	239	51.7		05.7	37	44.2 ¹³⁹		37.1	79	48	32		08		14	61	30	28	
5	254	51.9	+9	06.6	52	17.1 ¹³⁹	-11	45.0	79	50	3	56	4	37	5	11	21	09	
6	269	52.1	+9	07.5	66	49.9 ¹³⁸	-11	52.8	78	45	4	12	4	48	5	19	20	57	
7	284	52.2		08.4	81	22.8 ¹³⁹	-12	00.5	77	40	24	4	57		25	47	55	6	
8	299	52.4		09.3	95	55.6 ¹³⁸		08.2	77	35	34	5	05	31	39	54	7	00	
9	314	52.5		10.2	110	28.5 ¹³⁹		15.9	77	30	42	11	35		32	52	06	38	
10	329	52.7		11.1	125	01.3 ¹³⁸		23.5	76	20	4	55	21	44	19	50	17	40	
11	344	52.8	+9	12.0	139	34.1 ¹³⁸	-12	31.0	75	10 N	5	04	5	29	5	51	20	09	
12	359	53.0	+9	12.9	154	06.8 ¹³⁷	-12	38.5	75	0	5	12	5	36	5	57	19	58	
13	14	53.2		13.8	168	39.6 ¹³⁸		45.9	74	10 S	18	42		6	04	48	44	44	
14	29	53.3		14.7	183	12.3 ¹³⁷	-12	53.2	73	20	22	48	10		38	41	7	54	
15	44	53.5		15.6	197	45.1 ¹³⁸	-13	00.5	73	30	26	54	18		26	39	8	05	
16	59	53.6		16.6	212	17.8 ¹³⁷		07.8	73	35	27	5	57	22	19	37	11	54	
17	74	53.8	+9	17.5	226	50.5 ¹³⁷	-13	14.9	71	40	5	28	6	00	6	27	19	11	
18	89	53.9	+9	18.4	241	23.1 ¹³⁶	-13	22.1	72	45	5	29	6	03	6	33	19	01	
19	104	54.1		19.3	255	55.8 ¹³⁷		29.1	70	50	29	07	39		39	18	50	32	
20	119	54.3		20.2	270	28.4 ¹³⁶		36.1	70	52	29	08	42		45	30	41	62	
21	134	54.4		21.1	285	01.1 ¹³⁷		43.0	69	54	29	10	46		39	29	46	64	
22	149	54.6		22.0	299	33.7 ¹³⁶		49.9	69	56	29	12	50		33	28	52	65	
23	164	54.7		22.9	314	06.2 ¹³⁵	-13	56.7	68	58	28	14	54		26	26	8	59	
24	179	54.9	+9	23.8	328	38.8 ¹³⁶	-14	03.5	68	60 S	5	28	6	16	6	58	18	18	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 10 ^h 32 ^m 8		Mag: -4.6 PMG: 10 ^h 14 ^m			Mag: +1.5 PMG: 14 ^h 00 ^m			Mag: -2.5 PMG: 23 ^h 38 ^m			Mag: +0.4 PMG: 4 ^h 24 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	201	22.3	206	04.5	+3	22.8	149	44.4	+19	17.3	185	05.4	-5	26.8	293	47.5	-22	03.9	
1	216	24.8	221	06.9		22.2	164	45.1		17.8	19	35.0		26.7	308	50.0		03.9	
2	231	27.2	236	09.4		21.6	179	45.8		18.2	34	37.8		26.6	323	52.5		03.9	
3	246	29.7	251	11.9		21.0	194	46.4		18.7	49	40.5		26.4	338	55.0		03.9	
4	261	32.1	266	14.3		20.4	209	47.1		19.1	64	43.3		26.3	353	57.5		03.9	
5	276	34.6	281	16.8	+3	19.8	224	47.8	+19	19.6	79	46.1	-5	26.2	8	59.9	-22	03.9	
6	291	37.1	296	19.2	+3	19.2	239	48.5	+19	20.0	94	48.8	-5	26.1	24	02.4	-22	03.9	
7	306	39.5	311	21.6		18.5	254	49.2		20.5	109	51.6		26.0	39	04.9		03.9	
8	321	42.0	326	24.1		17.9	269	49.8		21.0	124	54.3		25.8	54	07.4		03.9	
9	336	44.5	341	26.5		17.3	284	50.5		21.4	139	57.1		25.7	69	09.9		03.8	
10	351	46.9	356	28.9		16.7	299	51.2		21.9	154	59.9		25.6	84	12.4		03.8	
11	6	49.4	11	31.3	+3	16.1	314	51.9	+19	22.3	170	02.6	-5	25.5	99	14.9	-22	03.8	
12	21	51.9	26	33.8	+3	15.5	329	52.5	+19	22.8	185	05.4	-5	25.4	114	17.4	-22	03.8	
13	36	54.3	41	36.2		14.9	344	53.2		23.2	200	08.1		25.2	129	19.9		03.8	
14	51	56.8	56	38.6		14.3	359	53.9		23.7	215	10.9		25.1	144	22.4		03.8	
15	66	59.3	71	41.0		13.7	14	54.6		24.1	230	13.7		25.0	159	24.9		03.8	
16	82	01.7	86	43.4		13.2	29	55.3		24.5	245	16.4		24.9	174	27.4		03.8	
17	97	04.2	101	45.8	+3	12.6	44	55.9	+19	25.0	260	19.2	-5	24.8	189	29.9	-22	03.8	
18	112	06.6	116	48.2	+3	12.0	59	56.6	+19	25.4	275	21.9	-5	24.6	204	32.4	-22	03.8	
19	127	09.1	131	50.6		11.4	74	57.3		25.9	290	24.7		24.5	219	34.9		03.8	
20	142	11.6	146	53.0		10.8	89	58.0		26.3	305	27.5		24.4	234	37.4		03.8	
21	157	14.0	161	55.3		10.2	104	58.6		26.8	320	30.2		24.3	249	39.9		03.8	
22	172	16.5	176	57.7		09.6	119	59.3		27.2	335	33.0		24.2	264	42.4		03.8	
23	187	19.0	192	00.1		09.1	135	00.0		27.7	350	35.7		24.1	279	44.9		03.8	
24	202	21.4	207	02.5	+3	08.5	150	00.7	+19	28.1	5	38.5	-5	23.9	294	47.4	-22	03.8	
Dif	—		+24			-6	+7			+4	+28		+1	+25			0		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 16 ^d 9		PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1				Civil		Náutico		Hora R°	
	PMG: 12 ^h 00 ^m 2		SD: 14'8		PMG: 2 ^h 09 ^m	R°: 46 ^m								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	54.9	+9 23.8		328 38.8	-14 03.5	60 N	19 16	20 02	21 04	22 50 63	6 28 26		
1	194	55.0			343 11.3 ¹³⁵	10.2 ⁶⁷	58	10	19 53	20 49	40 61	37 28		
2	209	55.2			357 43.9 ¹³⁶	16.8 ⁶⁶	56	05	45	37	30 60	45 30		
3	224	55.3			12 16.4 ¹³⁵	23.3 ⁶⁵	54	19 00	38	26	22 59	52 31		
4	239	55.5			26 48.9 ¹³⁵	29.8 ⁶⁵	52	18 56	32	17	15 58	6 58 33		
5	254	55.7	+9 28.3		41 21.3 ¹³⁴	-14 36.3 ⁶⁵	50	18 52	19 27	20 09	22 08 57	7 04 34		
6	269	55.8	+9 29.2		55 53.8 ¹³⁵	-14 42.6 ⁶³	45	18 44	19 15	19 52	21 54 55	7 17 35		
7	284	56.0			70 26.2 ¹³⁴	48.9 ⁶²	40	38	19 06	39	42 54	27 38		
8	299	56.1			84 58.6 ¹³⁴	-14 55.1 ⁶³	35	32	18 58	29	33 52	36 39		
9	314	56.3			99 31.0 ¹³⁴	-15 01.3 ⁶²	30	27	51	20	24 51	44 40		
10	329	56.4			114 03.4 ¹³⁴	07.4 ⁶¹	20	18	40	19 07	21 09 50	7 57 43		
11	344	56.6	+9 33.6		128 35.7 ¹³³	-15 13.4 ⁶⁰	10 N	18 10	18 32	18 57	20 56 48	8 09 44		
12	359	56.7	+9 34.5		143 08.0 ¹³³	-15 19.4 ⁶⁰	0	18 04	18 25	18 49	20 44 46	8 20 46		
13	14	56.9			157 40.3 ¹³³	25.3 ⁵⁹	10 S	17 57	18	43	32 45	31 48		
14	29	57.1			172 12.6 ¹³³	31.1 ⁵⁸	20	50	12	38	19 44	43 50		
15	44	57.2			186 44.9 ¹³³	36.8 ⁵⁷	30	42	06	34	20 05 41	8 57 52		
16	59	57.4			201 17.1 ¹³²	42.5 ⁵⁷	35	37	18 02	32	19 56 41	9 05 53		
17	74	57.5	+9 39.0		215 49.4 ¹³³	-15 48.1 ⁵⁶	40	17 32	17 59	18 31	19 46 40	9 14 54		
18	89	57.7	+9 39.9		230 21.6 ¹³²	-15 53.7 ⁵⁶	45	17 26	17 55	18 30	19 35 38	9 25 56		
19	104	57.8			244 53.7 ¹³¹	-15 59.2 ⁵⁵	50	19	51	29	22 35	37 59		
20	119	58.0			259 25.9 ¹³²	-16 04.6 ⁵⁴	52	15	50	29	15 35	43 60		
21	134	58.1			273 58.0 ¹³¹	09.9 ⁵³	54	12	48	29	08 34	50 61		
22	149	58.3			288 30.1 ¹³¹	15.1 ⁵²	56	08	46	29	19 01 32	9 57 62		
23	164	58.4			303 02.2 ¹³¹	20.3 ⁵²	58	17 04	44	29	18 52 31	10 06 63		
24	179	58.6	+9 45.3		317 34.3 ¹³¹	-16 25.4 ⁵¹	60 S	16 59	17 41	18 29	18 42 29	10 15 66		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 28 ^m 8		Mag: -4.6 PMG: 10 ^h 10 ^m		Mag: +1.5 PMG: 13 ^h 59 ^m		Mag: -2.5 PMG: 23 ^h 33 ^m		Mag: +0.3 PMG: 4 ^h 20 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec					
h	°	°	°	°	°	°	°	°	°					
0	202 21.4	207 02.5	+3 08.5	150 00.7	+19 28.1	5 38.5	-5 23.9	294 47.4	-22 03.8					
1	217 23.9	222 04.8	07.9	165 01.3	28.6	20 41.3	23.8	309 49.9	03.8					
2	232 26.4	237 07.2	07.3	180 02.0	29.0	35 44.0	23.7	324 52.4	03.8					
3	247 28.8	252 09.6	06.8	195 02.7	29.5	50 46.8	23.6	339 54.9	03.8					
4	262 31.3	267 11.9	06.2	210 03.4	29.9	65 49.5	23.5	354 57.4	03.8					
5	277 33.8	282 14.3	+3 05.6	225 04.0	+19 30.4	80 52.3	-5 23.3	9 59.9	-22 03.8					
6	292 36.2	297 16.6	+3 05.0	240 04.7	+19 30.8	95 55.1	-5 23.2	25 02.4	-22 03.8					
7	307 38.7	312 19.0	04.5	255 05.4	31.2	110 57.8	23.1	40 04.9	03.8					
8	322 41.1	327 21.3	03.9	270 06.1	31.7	126 00.6	23.0	55 07.4	03.8					
9	337 43.6	342 23.6	03.3	285 06.8	32.1	141 03.3	22.9	70 09.9	03.8					
10	352 46.1	357 26.0	02.8	300 07.4	32.6	156 06.1	22.7	85 12.4	03.8					
11	7 48.5	12 28.3	+3 02.2	315 08.1	+19 33.0	171 08.9	-5 22.6	100 14.9	-22 03.8					
12	22 51.0	27 30.6	+3 01.7	330 08.8	+19 33.5	186 11.6	-5 22.5	115 17.4	-22 03.8					
13	37 53.5	42 33.0	01.1	345 09.5	33.9	201 14.4	22.4	130 19.9	03.8					
14	52 55.9	57 35.3	+3 00.6	0 10.1	34.3	216 17.1	22.3	145 22.4	03.8					
15	67 58.4	72 37.6	+3 00.0	15 10.8	34.8	231 19.9	22.2	160 24.9	03.8					
16	83 00.9	87 39.9	+2 59.5	30 11.5	35.2	246 22.7	22.0	175 27.4	03.8					
17	98 03.3	102 42.2	+2 58.9	45 12.2	+19 35.7	261 25.4	-5 21.9	190 29.9	-22 03.8					
18	113 05.8	117 44.5	+2 58.4	60 12.8	+19 36.1	276 28.2	-5 21.8	205 32.4	-22 03.8					
19	128 08.2	132 46.8	57.8	75 13.5	36.5	291 30.9	21.7	220 34.9	03.7					
20	143 10.7	147 49.1	57.3	90 14.2	37.0	306 33.7	21.6	235 37.4	03.7					
21	158 13.2	162 51.4	56.7	105 14.9	37.4	321 36.4	21.4	250 39.9	03.7					
22	173 15.6	177 53.7	56.2	120 15.5	37.9	336 39.2	21.3	265 42.4	03.7					
23	188 18.1	192 56.0	55.7	135 16.2	38.3	351 42.0	21.2	280 44.9	03.7					
24	203 20.6	207 58.2	+2 55.1	150 16.9	+19 38.7	6 44.7	-5 21.1	295 47.4	-22 03.7					
Dif	—	+23	-6	+7	+4	+28	+1	+25	0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 12 ^h 00 ^m 0			Edad: 17 ^d 9 PHE { SD: 14'7 PMG: 2 ^h 55 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	58.6	+9	45.3	317	34.3	-16	25.4	51	60 N	2 55	3 57	4 43	23 53	56
1	194	58.7		46.2	332	06.4 ¹³¹		30.5	49	58	3 10	4 06	49	41 55	7 05 34
2	209	58.9		47.1	346	38.4 ¹³⁰		35.4	49	56	23	14	54	30 55	15 35
3	224	59.0		48.0	1	10.4 ¹³⁰		40.3	49	54	33	21	4 59	21 54	23 3
4	239	59.2		48.9	15	42.4 ¹³⁰		45.1	48	52	43	27	5 03	13 53	31 37
5	254	59.3	+9	49.7	30	14.4 ¹³⁰	-16	49.8	47	50	3 51	4 33	5 07	23 05	53
6	269	59.5	+9	50.6	44	46.3 ¹²⁹	-16	54.5	47	45	4 08	4 45	5 15	22 49	52
7	284	59.6		51.5	59	18.2 ¹²⁹	-16	59.1	46	40	21	4 54	22	36 51	8 05 41
8	299	59.8		52.4	73	50.2 ¹³⁰	-17	03.6	45	35	31	5 02	28	25 50	15 42
9	314	59.9		53.3	88	22.0 ¹²⁸		08.0	44	30	40	09	33	22 15	50
10	330	00.1		54.2	102	53.9 ¹²⁹		12.4	44	20	4 53	19	42	21 59	48
11	345	00.2	+9	55.1	117	25.7 ¹²⁸	-17	16.7	43	10 N	5 03	5 28	5 50	21 44	48
12	0	00.4	+9	56.0	131	57.6 ¹²⁹	-17	20.9	42	0	5 11	5 36	5 57	21 30	48
13	15	00.5		56.9	146	29.4 ¹²⁸		25.0	41	10 S	18	42	6 04	17 46	19 48
14	30	00.7		57.8	161	01.1 ¹²⁷		29.0	40	20	23	49	11	21 03	45
15	45	00.8		58.7	175	32.9 ¹²⁸		33.0	40	30	27	55	19	20 46	45
16	60	01.0	+9	59.5	190	04.6 ¹²⁷		36.9	39	35	29	5 58	24	37 44	9 58 51
17	75	01.1	+10	00.4	204	36.4 ¹²⁸	-17	40.7	38	40	5 30	6 02	6 29	20 26	43
18	90	01.3	+10	01.3	219	08.0 ¹²⁶	-17	44.4	37	45	5 31	6 05	6 35	20 13	42
19	105	01.4		02.2	233	39.7 ¹²⁷		48.1	37	50	32	10	42	19 57	42
20	120	01.6		03.1	248	11.4 ¹²⁷		51.7	36	52	32	11	46	50 41	43 55
21	135	01.7		04.0	262	43.0 ¹²⁶		55.1	34	54	32	13	49	42 40	51 56
22	150	01.9		04.9	277	14.6 ¹²⁶	-17	58.6	35	56	32	16	53	33 39	10 59 58
23	165	02.0		05.8	291	46.2 ¹²⁶	-18	01.9	33	58	32	18	6 58	23 38	11 09 59
24	180	02.2	+10	06.6	306	17.8 ¹²⁶	-18	05.1	32	60 S	5 32	6 20	7 03	19 11	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 24 ^m 9		Mag: -4.7 PMG: 10 ^h 07 ^m		Mag: +1.5 PMG: 13 ^h 58 ^m		Mag: -2.5 PMG: 23 ^h 29 ^m		Mag: +0.3 PMG: 4 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	203	20.6	207	58.2	+2	55.1	150	16.9	+19	38.7	6	44.7	-5	21.1	295	47.4	-22	03.7
1	218	23.0	223	00.5		54.6	165	17.6		39.2	21	47.5		21.0	310	49.9		03.7
2	233	25.5	238	02.8		54.0	180	18.2		39.6	36	50.2		20.9	325	52.4		03.7
3	248	28.0	253	05.1		53.5	195	18.9		40.1	51	53.0		20.7	340	54.9		03.7
4	263	30.4	268	07.3		53.0	210	19.6		40.5	66	55.8		20.6	355	57.4		03.7
5	278	32.9	283	09.6	+2	52.5	225	20.2	+19	40.9	81	58.5	-5	20.5	10	59.9	-22	03.7
6	293	35.4	298	11.8	+2	51.9	240	20.9	+19	41.4	97	01.3	-5	20.4	26	02.4	-22	03.7
7	308	37.8	313	14.1		51.4	255	21.6		41.8	112	04.0		20.3	41	04.9		03.7
8	323	40.3	328	16.4		50.9	270	22.3		42.2	127	06.8		20.1	56	07.4		03.7
9	338	42.7	343	18.6		50.4	285	22.9		42.7	142	09.5		20.0	71	09.9		03.7
10	353	45.2	358	20.8		49.8	300	23.6		43.1	157	12.3		19.9	86	12.4		03.7
11	8	47.7	13	23.1	+2	49.3	315	24.3	+19	43.5	172	15.1	-5	19.8	101	14.9	-22	03.7
12	23	50.1	28	25.3	+2	48.8	330	25.0	+19	44.0	187	17.8	-5	19.7	116	17.4	-22	03.7
13	38	52.6	43	27.5		48.3	345	25.6		44.4	202	20.6		19.6	131	19.9		03.7
14	53	55.1	58	29.8		47.8	0	26.3		44.9	217	23.3		19.4	146	22.4		03.7
15	68	57.5	73	32.0		47.3	15	27.0		45.3	232	26.1		19.3	161	24.9		03.7
16	84	00.0	88	34.2		46.8	30	27.7		45.7	247	28.8		19.2	176	27.5		03.7
17	99	02.5	103	36.4	+2	46.3	45	28.3	+19	46.2	262	31.6	-5	19.1	191	30.0	-22	03.7
18	114	04.9	118	38.6	+2	45.8	60	29.0	+19	46.6	277	34.4	-5	19.0	206	32.5	-22	03.7
19	129	07.4	133	40.9		45.3	75	29.7		47.0	292	37.1		18.8	221	35.0		03.7
20	144	09.9	148	43.1		44.8	90	30.3		47.5	307	39.9		18.7	236	37.5		03.7
21	159	12.3	163	45.3		44.3	105	31.0		47.9	322	42.6		18.6	251	40.0		03.7
22	174	14.8	178	47.5		43.8	120	31.7		48.3	337	45.4		18.5	266	42.5		03.7
23	189	17.2	193	49.7		43.3	135	32.4		48.7	352	48.1		18.4	281	45.0		03.7
24	204	19.7	208	51.8	+2	42.8	150	33.0	+19	49.2	7	50.9	-5	18.3	296	47.5	-22	03.7
Dif	—		+22		-5		+7		+4		+28		+1		+25		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 7			Edad: 18 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2 SD: 14'7 PMG: 3 ^h 42 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	02.2	+10 06.6	306	17.8	-18 05.1	32	60 N	19 21	20 08	21 11	** ** *	7 27	41	
1	195	02.3	07.5	320	49.3 ¹²⁵	08.3	31	58	15	19 58	20 55	** ** *	39	42	
2	210	02.5	08.4	335	20.9 ¹²⁶	11.4	30	56	09	50	42	** ** *	7 50	43	
3	225	02.6	09.3	349	52.4 ¹²⁵	14.4	30	54	04	42	31	** ** *	8 00	44	
4	240	02.8	10.2	4	23.9 ¹²⁵	17.3	29	52	19 00	36	21	** ** *	08	44	
5	255	02.9	+10 11.1	18	55.4 ¹²⁵	-18 20.1	28	50	18 56	19 30	20 13	23 58 48	8 16	44	
6	270	03.1	+10 12.0	33	26.8 ¹²⁴	-18 22.9	28	45	18 47	19 18	19 55	23 41 48	8 32	45	
7	285	03.2	12.8	47	58.3 ¹²⁵	25.5	26	40	40	08	42	27 48	46	45	
8	300	03.4	13.7	62	29.7 ¹²⁴	28.1	26	35	33	19 00	31	15 49	8 57	46	
9	315	03.5	14.6	77	01.1 ¹²⁴	30.6	25	30	28	18 53	22	23 05 48	9 07	46	
10	330	03.7	15.5	91	32.4 ¹²³	33.1	25	20	19	41	19 08	22 47 49	24	47	
11	345	03.8	+10 16.4	106	03.8 ¹²⁴	-18 35.4	23	10 N	18 11	18 32	18 57	22 32 48	9 39	47	
12	0	04.0	+10 17.3	120	35.2 ¹²⁴	-18 37.6	22	0	18 03	18 24	18 48	22 18 48	9 53	48	
13	15	04.1	18.1	135	06.5 ¹²³	39.8	22	10 S	17 56	17	42	22 03 48	10 07	48	
14	30	04.3	19.0	149	37.8 ¹²³	41.9	21	20	48	10	36	21 48 48	22	49	
15	45	04.4	19.9	164	09.1 ¹²³	43.9	20	30	39	04	31	31 47	39	49	
16	60	04.5	20.8	178	40.3 ¹²²	45.8	19	35	34	18 00	29	21 47	10 49	50	
17	75	04.7	+10 21.7	193	11.6 ¹²³	-18 47.6	18	40	17 29	17 56	18 28	21 09 47	11 01	50	
18	90	04.8	+10 22.6	207	42.8 ¹²²	-18 49.3	17	45	17 22	17 52	18 26	20 55 48	11 14	50	
19	105	05.0	23.4	222	14.0 ¹²²	51.0	17	50	15	48	25	39 47	31	50	
20	120	05.1	24.3	236	45.2 ¹²²	52.5	15	52	11	46	25	31 47	38	51	
21	135	05.3	25.2	251	16.4 ¹²²	54.0	15	54	07	43	24	22 47	47	51	
22	150	05.4	26.1	265	47.6 ¹²²	55.4	14	56	17 03	41	24	12 47	11 57	51	
23	165	05.6	27.0	280	18.7 ¹²¹	56.7	13	58	16 58	38	24	20 01 47	12 08	51	
24	180	05.7	+10 27.8	294	49.9 ¹²²	-18 57.9	12	60 S	16 53	17 36	18 24	19 48 46	12 20	53	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 21 ^m 0		Mag: -4.7 PMG: 10 ^h 03 ^m		Mag: +1.5 PMG: 13 ^h 57 ^m		Mag: -2.5 PMG: 23 ^h 24 ^m		Mag: +0.3 PMG: 4 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	204	19.7	208 51.8	+2 42.8	150 33.0	+19 49.2	7 50.9	-5 18.3	296 47.5	-22 03.7
1	219	22.2	223 54.0	42.3	165 33.7	49.6	22 53.7	18.1	311 50.0	03.7
2	234	24.6	238 56.2	41.8	180 34.4	50.0	37 56.4	18.0	326 52.5	03.7
3	249	27.1	253 58.4	41.3	195 35.1	50.5	52 59.2	17.9	341 55.0	03.7
4	264	29.6	269 00.6	40.8	210 35.7	50.9	68 01.9	17.8	356 57.5	03.7
5	279	32.0	284 02.7	+2 40.3	225 36.4	+19 51.3	83 04.7	-5 17.7	12 00.0	-22 03.6
6	294	34.5	299 04.9	+2 39.8	240 37.1	+19 51.8	98 07.4	-5 17.6	27 02.5	-22 03.6
7	309	37.0	314 07.1	39.4	255 37.7	52.2	113 10.2	17.4	42 05.1	03.6
8	324	39.4	329 09.2	38.9	270 38.4	52.6	128 12.9	17.3	57 07.6	03.6
9	339	41.9	344 11.4	38.4	285 39.1	53.0	143 15.7	17.2	72 10.1	03.6
10	354	44.3	359 13.5	37.9	300 39.8	53.5	158 18.5	17.1	87 12.6	03.6
11	9	46.8	14 15.7	+2 37.5	315 40.4	+19 53.9	173 21.2	-5 17.0	102 15.1	-22 03.6
12	24	49.3	29 17.8	+2 37.0	330 41.1	+19 54.3	188 24.0	-5 16.9	117 17.6	-22 03.6
13	39	51.7	44 20.0	36.5	345 41.8	54.8	203 26.7	16.7	132 20.1	03.6
14	54	54.2	59 22.1	36.0	0 42.4	55.2	218 29.5	16.6	147 22.6	03.6
15	69	56.7	74 24.3	35.6	15 43.1	55.6	233 32.2	16.5	162 25.1	03.6
16	84	59.1	89 26.4	35.1	30 43.8	56.0	248 35.0	16.4	177 27.6	03.6
17	100	01.6	104 28.5	+2 34.6	45 44.4	+19 56.5	263 37.8	-5 16.3	192 30.1	-22 03.6
18	115	04.1	119 30.6	+2 34.2	60 45.1	+19 56.9	278 40.5	-5 16.2	207 32.7	-22 03.6
19	130	06.5	134 32.8	33.7	75 45.8	57.3	293 43.3	16.0	222 35.2	03.6
20	145	09.0	149 34.9	33.3	90 46.5	57.7	308 46.0	15.9	237 37.7	03.6
21	160	11.5	164 37.0	32.8	105 47.1	58.2	323 48.8	15.8	252 40.2	03.6
22	175	13.9	179 39.1	32.4	120 47.8	58.6	338 51.5	15.7	267 42.7	03.6
23	190	16.4	194 41.2	31.9	135 48.5	59.0	353 54.3	15.6	282 45.2	03.6
24	205	18.8	209 43.3	+2 31.5	150 49.1	+19 59.4	8 57.0	-5 15.5	297 47.7	-22 03.6
Dif	—		+21	-5	+7	+4	+28	+1	+25	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 59 ^m 5				Edad: 19 ^d 9 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5 SD: 14/8 PMG: 4 ^h 29 ^m R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	05.7	+10	27.8	294	49.9	-18	57.9	60 N	2 47	3 50	4 37	0 49	49		8 08	51			
1	195	05.8		28.7	309	21.0	-18	59.1	58	3 03	4 00	44	36	48		21	51			
2	210	06.0		29.6	323	52.1	-19	00.1	56	16	09	49	25	48		33	50			
3	225	06.1		30.5	338	23.2		01.1	54	28	16	54	15	48		43	50			
4	240	06.3		31.4	352	54.2		01.9	52	37	23	4 59	0 06	48		8 52	50			
5	255	06.4	+10	32.2	7	25.3	-19	02.7	50	3 46	4 29	5 03	**	**	*	9 00	50			
6	270	06.6	+10	33.1	21	56.3	-19	03.4	45	4 04	4 41	5 12	**	**	*	9 17	50			
7	285	06.7		34.0	36	27.4		04.0	40	17	51	19	**	**	*	31	50			
8	300	06.9		34.9	50	58.4		04.5	35	28	4 59	25	**	**	*	43	49			
9	315	07.0		35.7	65	29.4		04.9	30	37	5 06	31	23	53	47	9 53	49			
10	330	07.1		36.6	80	00.3		05.3	20	4 51	18	40	36	47		10 11	49			
11	345	07.3	+10	37.5	94	31.3	-19	05.5	10 N	5 02	5 27	5 49	23	20	48	10 26	49			
12	0	07.4	+10	38.4	109	02.2	-19	05.7	0	5 11	5 35	5 56	23	06	48	10 41	48			
13	15	07.6		39.3	123	33.2		05.8	10 S	18	42	6 04	22	51	50	10 55	48			
14	30	07.7		40.1	138	04.1		05.7	20	23	49	12	36	50		11 11	47			
15	45	07.9		41.0	152	35.0		05.6	30	28	5 56	20	18	51		28	48			
16	60	08.0		41.9	167	05.9		05.4	35	30	6 00	25	22	08	51	39	47			
17	75	08.1	+10	42.8	181	36.8	-19	05.1	40	5 32	6 04	6 31	21	56	52	11 51	46			
18	90	08.3	+10	43.6	196	07.7	-19	04.8	45	5 34	6 08	6 38	21	43	52	12 04	47			
19	105	08.4		44.5	210	38.5		04.3	50	35	13	46	26	53		21	46			
20	120	08.6		45.4	225	09.4		03.7	52	35	15	49	18	53		29	46			
21	135	08.7		46.2	239	40.2		03.1	54	36	17	53	21	09	54	38	45			
22	150	08.8		47.1	254	11.0		02.3	56	36	19	6 57	20	59	54	48	45			
23	165	09.0		48.0	268	41.8		01.5	58	36	22	7 02	48	55		12 59	45			
24	180	09.1	+10	48.9	283	12.6	-19	00.6	60 S	5 36	6 25	7 08	20	34	56	13 13	43			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 10 ^h 17 ^m 1		Mag: -4.7 PMG: 10 ^h 00 ^m			Mag: +1.5 PMG: 13 ^h 56 ^m			Mag: -2.5 PMG: 23 ^h 20 ^m			Mag: +0.3 PMG: 4 ^h 08 ^m								
	hG ♂		hG ♀			hG ♂			hG ♀			hG ♀								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	205	18.8	209	43.3	+2	31.5	150	49.1	+19	59.4	8	57.0	-5	15.5	297	47.7	-22	03.6		
1	220	21.3	224	45.4		31.0	165	49.8	+19	59.9	23	59.8		15.3	312	50.2		03.6		
2	235	23.8	239	47.5		30.6	180	50.5	+20	00.3	39	02.5		15.2	327	52.7		03.6		
3	250	26.2	254	49.6		30.1	195	51.2		00.7	54	05.3		15.1	342	55.3		03.6		
4	265	28.7	269	51.7		29.7	210	51.8		01.1	69	08.1		15.0	357	57.8		03.6		
5	280	31.2	284	53.8	+2	29.2	225	52.5	+20	01.5	84	10.8	-5	14.9	13	00.3	-22	03.6		
6	295	33.6	299	55.9	+2	28.8	240	53.2	+20	02.0	99	13.6	-5	14.8	28	02.8	-22	03.6		
7	310	36.1	314	57.9		28.3	255	53.8		02.4	114	16.3		14.6	43	05.3		03.6		
8	325	38.6	330	00.0		27.9	270	54.5		02.8	129	19.1		14.5	58	07.8		03.6		
9	340	41.0	345	02.1		27.5	285	55.2		03.2	144	21.8		14.4	73	10.3		03.6		
10	355	43.5	0	04.1		27.0	300	55.8		03.6	159	24.6		14.3	88	12.8		03.6		
11	10	46.0	15	06.2	+2	26.6	315	56.5	+20	04.1	174	27.3	-5	14.2	103	15.4	-22	03.6		
12	25	48.4	30	08.3	+2	26.2	330	57.2	+20	04.5	189	30.1	-5	14.1	118	17.9	-22	03.6		
13	40	50.9	45	10.3		25.8	345	57.8		04.9	204	32.8		13.9	133	20.4		03.6		
14	55	53.3	60	12.4		25.3	0	58.5		05.3	219	35.6		13.8	148	22.9		03.5		
15	70	55.8	75	14.4		24.9	15	59.2		05.7	234	38.4		13.7	163	25.4		03.5		
16	85	58.3	90	16.5		24.5	30	59.9		06.2	249	41.1		13.6	178	27.9		03.5		
17	101	00.7	105	18.5	+2	24.1	46	00.5	+20	06.6	264	43.9	-5	13.5	193	30.4	-22	03.5		
18	116	03.2	120	20.6	+2	23.6	61	01.2	+20	07.0	279	46.6	-5	13.4	208	33.0	-22	03.5		
19	131	05.7	135	22.6		23.2	76	01.9		07.4	294	49.4		13.2	223	35.5		03.5		
20	146	08.1	150	24.6		22.8	91	02.5		07.8	309	52.1		13.1	238	38.0		03.5		
21	161	10.6	165	26.7		22.4	106	03.2		08.3	324	54.9		13.0	253	40.5		03.5		
22	176	13.1	180	28.7		22.0	121	03.9		08.7	339	57.6		12.9	268	43.0		03.5		
23	191	15.5	195	30.7		21.6	136	04.5		09.1	355	00.4		12.8	283	45.5		03.5		
24	206	18.0	210	32.7	+2	21.2	151	05.2	+20	09.5	10	03.1	-5	12.7	298	48.0	-22	03.5		
Dif	—		+21			-4		+7		+4		+28		+1		+25			0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 59 ^m 3			Edad: 20 ^d 9 PHE { 4 ^h : 54/6 12 ^h : 54/8 20 ^h : 55/0 SD: 14°9 PMG: 5 ^h 17 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	09.1	+10 48.9	283	12.6	-19 00.6	10	60 N	19 26	20 14	21 19	1 38 39	8 59 60	
1	195	09.3	49.7	297	43.4 ¹¹⁸	-18 59.6	10	58	19	20 03	21 02	24 41	9 12 59	
2	210	09.4	50.6	312	14.2 ¹¹⁸	58.5	11	56	13	19 54	20 48	13 42	23 59	
3	225	09.5	51.5	326	44.9 ¹¹⁷	57.3	12	54	08	47	36	1 03 42	33 58	
4	240	09.7	52.4	341	15.7 ¹¹⁸	56.0	13	52	19 03	40	25	0 54 43	42 57	
5	255	09.8	+10 53.2	355	46.4 ¹¹⁷	-18 54.6	14	50	18 59	19 33	20 16	0 46 43	9 50 56	
6	270	10.0	+10 54.1	10	17.2 ¹¹⁸	-18 53.2	14	45	18 49	19 20	19 58	0 29 45	10 07 54	
7	285	10.1	55.0	24	47.9 ¹¹⁷	51.6	16	40	42	10	44	15 45	21 53	
8	300	10.2	55.8	39	18.6 ¹¹⁷	50.0	16	35	35	19 01	33	0 04 45	32 53	
9	315	10.4	56.7	53	49.3 ¹¹⁷	48.3	17	30	29	18 54	23	** ** *	10 42 52	
10	330	10.5	57.6	68	20.0 ¹¹⁷	46.4	19	20	19	42	19 08	** ** *	11 00 51	
11	345	10.6	+10 58.4	82	50.7 ¹¹⁷	-18 44.5	19	10 N	18 11	18 32	18 57	** ** *	11 15 50	
12	0	10.8	+10 59.3	97	21.3 ¹¹⁶	-18 42.5	20	0	18 03	18 24	18 48	23 54 49	11 29 49	
13	15	10.9	+11 00.2	111	52.0 ¹¹⁷	40.4	21	10 S	17 55	16	41	41 50	43 48	
14	30	11.1	01.0	126	22.7 ¹¹⁷	38.2	22	20	47	09	35	26 52	11 58 47	
15	45	11.2	01.9	140	53.3 ¹¹⁶	36.0	22	30	37	18 02	29	23 09 54	12 16 45	
16	60	11.3	02.8	155	23.9 ¹¹⁶	33.6	24	35	32	17 58	27	22 59 55	26 44	
17	75	11.5	+11 03.7	169	54.6 ¹¹⁷	-18 31.1	25	40	17 26	17 53	18 25	22 48 56	12 37 44	
18	90	11.6	+11 04.5	184	25.2 ¹¹⁶	-18 28.6	25	45	17 19	17 49	18 23	22 35 57	12 51 42	
19	105	11.7	05.4	198	55.8 ¹¹⁶	25.9	27	50	11	44	21	19 59	13 07 41	
20	120	11.9	06.3	213	26.4 ¹¹⁶	23.2	27	52	07	41	21	11 60	15 40	
21	135	12.0	07.1	227	57.0 ¹¹⁶	20.4	28	54	17 03	39	20	22 03 60	23 39	
22	150	12.2	08.0	242	27.6 ¹¹⁶	17.5	29	56	16 58	36	20	21 53 62	33 38	
23	165	12.3	08.8	256	58.2 ¹¹⁶	14.5	30	58	53	33	19	43 63	44 37	
24	180	12.4	+11 09.7	271	28.7 ¹¹⁵	-18 11.4	31	60 S	16 47	17 30	18 19	21 30 65	13 56 36	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 10 ^h 13 ^m 1		Mag: -4.7 PMG: 9 ^h 56 ^m			Mag: +1.5 PMG: 13 ^h 55 ^m			Mag: -2.5 PMG: 23 ^h 16 ^m		Mag: +0.3 PMG: 4 ^h 04 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	206	18.0	210 32.7	+2 21.2	151 05.2	+20 09.5	10	03.1	-5 12.7	298 48.0	-22 03.5			
1	221	20.5	225 34.7	20.8	166 05.9	09.9	25	05.9	12.6	313 50.6	03.5			
2	236	22.9	240 36.7	20.4	181 06.5	10.3	40	08.6	12.4	328 53.1	03.5			
3	251	25.4	255 38.7	20.0	196 07.2	10.7	55	11.4	12.3	343 55.6	03.5			
4	266	27.8	270 40.7	19.6	211 07.9	11.2	70	14.2	12.2	358 58.1	03.5			
5	281	30.3	285 42.7	+2 19.2	226 08.5	+20 11.6	85	16.9	-5 12.1	14 00.6	-22 03.5			
6	296	32.8	300 44.7	+2 18.8	241 09.2	+20 12.0	100	19.7	-5 12.0	29 03.1	-22 03.5			
7	311	35.2	315 46.7	18.4	256 09.9	12.4	115	22.4	11.9	44 05.7	03.5			
8	326	37.7	330 48.7	18.0	271 10.5	12.8	130	25.2	11.7	59 08.2	03.5			
9	341	40.2	345 50.7	17.6	286 11.2	13.2	145	27.9	11.6	74 10.7	03.5			
10	356	42.6	0 52.7	17.2	301 11.9	13.6	160	30.7	11.5	89 13.2	03.5			
11	11	45.1	15 54.7	+2 16.8	316 12.5	+20 14.1	175	33.4	-5 11.4	104 15.7	-22 03.5			
12	26	47.6	30 56.7	+2 16.4	331 13.2	+20 14.5	190	36.2	-5 11.3	119 18.2	-22 03.5			
13	41	50.0	45 58.6	16.0	346 13.9	14.9	205	38.9	11.2	134 20.8	03.5			
14	56	52.5	61 00.6	15.7	1 14.5	15.3	220	41.7	11.1	149 23.3	03.5			
15	71	54.9	76 02.6	15.3	16 15.2	15.7	235	44.4	10.9	164 25.8	03.5			
16	86	57.4	91 04.5	14.9	31 15.9	16.1	250	47.2	10.8	179 28.3	03.5			
17	101	59.9	106 06.5	+2 14.5	46 16.5	+20 16.5	265	49.9	-5 10.7	194 30.8	-22 03.5			
18	117	02.3	121 08.4	+2 14.1	61 17.2	+20 16.9	280	52.7	-5 10.6	209 33.4	-22 03.5			
19	132	04.8	136 10.4	13.8	76 17.9	17.3	295	55.4	10.5	224 35.9	03.5			
20	147	07.3	151 12.3	13.4	91 18.5	17.8	310	58.2	10.4	239 38.4	03.5			
21	162	09.7	166 14.3	13.0	106 19.2	18.2	326	00.9	10.3	254 40.9	03.5			
22	177	12.2	181 16.2	12.7	121 19.9	18.6	341	03.7	10.1	269 43.4	03.5			
23	192	14.7	196 18.2	12.3	136 20.5	19.0	356	06.4	10.0	284 45.9	03.4			
24	207	17.1	211 20.1	+2 11.9	151 21.2	+20 19.4	11	09.2	-5 09.9	299 48.5	-22 03.4			
Dif	—		+20	-4	+7	+4	+28		+1	+25				

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: 21 ^d 9 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'6 PMG: 6 ^h 06 ^m R°: 49 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m			
0	180	12.4	+11	09.7	271	28.7	-18	11.4	60 N	2	39	3	44	4	31				
1	195	12.6		10.6	285	59.3 ¹¹⁶		08.2	58	2	56	3	54	38	2	05			
2	210	12.7		11.4	300	29.9 ¹¹⁶		04.9	56	3	10	4	03	44	1	55			
3	225	12.8		12.3	315	00.4 ¹¹⁵	-18	01.6	54	22	11	50		45	37	31			
4	240	13.0		13.2	329	31.0 ¹¹⁶	-17	58.1	52	32	18	54		37	37	39			
5	255	13.1	+11	14.0	344	01.5 ¹¹⁵	-17	54.6	50	3	41	4	24	4	59	1			
6	270	13.2	+11	14.9	358	32.0 ¹¹⁵	-17	50.9	45	4	00	4	37	5	08	1			
7	285	13.4		15.8	13	02.5 ¹¹⁵		47.2	40	14	48	16		1	00				
8	300	13.5		16.6	27	33.1 ¹¹⁶		43.4	38	25	4	57	23	0	49				
9	315	13.6		17.5	42	03.6 ¹¹⁵		39.5	39	35	5	04	29	40	44				
10	330	13.8		18.3	56	34.1 ¹¹⁵		35.5	40	4	50	16	39	23	46				
11	345	13.9	+11	19.2	71	04.6 ¹¹⁵	-17	31.4	10 N	5	01	5	26	5	48				
12	0	14.0	+11	20.1	85	35.1 ¹¹⁵	-17	27.3	0	5	10	5	35	5	56				
13	15	14.2		20.9	100	05.6 ¹¹⁵		23.0	10 S	18	42	6	04	**	**				
14	30	14.3		21.8	114	36.0 ¹¹⁴		18.6	20	24	50	12		**	**				
15	45	14.4		22.7	129	06.5 ¹¹⁵		14.2	44	29	5	57	22	**	**				
16	60	14.6		23.5	143	37.0 ¹¹⁵		09.7	45	32	6	01	27	23	54				
17	75	14.7	+11	24.4	158	07.5 ¹¹⁵	-17	05.1	46	5	34	6	05	6	33				
18	90	14.8	+11	25.2	172	37.9 ¹¹⁴	-17	00.4	47	5	36	6	10	6	40				
19	105	15.0		26.1	187	08.4 ¹¹⁵	-16	55.6	48	50	38	15	49	23	32				
20	120	15.1		26.9	201	38.8 ¹¹⁴		50.7	49	52	38	18	52	18	63				
21	135	15.2		27.8	216	09.3 ¹¹⁵		45.7	50	54	39	20	6	11	65				
22	150	15.4		28.7	230	39.7 ¹¹⁴		40.7	50	56	40	23	7	23	03				
23	165	15.5		29.5	245	10.1 ¹¹⁴		35.5	52	58	40	26	07	22	55				
24	180	15.6	+11	30.4	259	40.5 ¹¹⁴	-16	30.3	52	60 S	5	41	6	29	46	70			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 10 ^h 09 ^m 2		Mag: -4.7 PMG: 9 ^h 53 ^m				Mag: +1.6 PMG: 13 ^h 54 ^m				Mag: -2.5 PMG: 23 ^h 11 ^m				Mag: +0.3 PMG: 4 ^h 00 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	207	17.1	211	20.1	+2	11.9	151	21.2	+20	19.4	11	09.2	-5	09.9	299	48.5	-22	03.4	
1	222	19.6	226	22.0		11.6	166	21.9		19.8	26	11.9		09.8	314	51.0		03.4	
2	237	22.1	241	23.9		11.2	181	22.5		20.2	41	14.7		09.7	329	53.5		03.4	
3	252	24.5	256	25.9		10.8	196	23.2		20.6	56	17.4		09.6	344	56.0		03.4	
4	267	27.0	271	27.8		10.5	211	23.9		21.0	71	20.2		09.5	359	58.5		03.4	
5	282	29.4	286	29.7	+2	10.1	226	24.5	+20	21.4	86	22.9	-5	09.3	15	01.1	-22	03.4	
6	297	31.9	301	31.6	+2	09.8	241	25.2	+20	21.8	101	25.7	-5	09.2	30	03.6	-22	03.4	
7	312	34.4	316	33.5		09.4	256	25.9		22.2	116	28.5		09.1	45	06.1		03.4	
8	327	36.8	331	35.4		09.1	271	26.5		22.6	131	31.2		09.0	60	08.6		03.4	
9	342	39.3	346	37.3		08.7	286	27.2		23.0	146	34.0		08.9	75	11.2		03.4	
10	357	41.8	1	39.2		08.4	301	27.9		23.5	161	36.7		08.8	90	13.7		03.4	
11	12	44.2	16	41.1	+2	08.0	316	28.5	+20	23.9	176	39.5	-5	08.7	105	16.2	-22	03.4	
12	27	46.7	31	43.0	+2	07.7	331	29.2	+20	24.3	191	42.2	-5	08.5	120	18.7	-22	03.4	
13	42	49.2	46	44.9		07.4	346	29.9		24.7	206	45.0		08.4	135	21.2		03.4	
14	57	51.6	61	46.8		07.0	1	30.5		25.1	221	47.7		08.3	150	23.8		03.4	
15	72	54.1	76	48.7		06.7	16	31.2		25.5	236	50.5		08.2	165	26.3		03.4	
16	87	56.6	91	50.6		06.3	31	31.8		25.9	251	53.2		08.1	180	28.8		03.4	
17	102	59.0	106	52.5	+2	06.0	46	32.5	+20	26.3	266	56.0	-5	08.0	195	31.3	-22	03.4	
18	118	01.5	121	54.3	+2	05.7	61	33.2	+20	26.7	281	58.7	-5	07.9	210	33.9	-22	03.4	
19	133	03.9	136	56.2		05.3	76	33.8		27.1	297	01.5		07.7	225	36.4		03.4	
20	148	06.4	151	58.1		05.0	91	34.5		27.5	312	04.2		07.6	240	38.9		03.4	
21	163	08.9	166	59.9		04.7	106	35.2		27.9	327	06.9		07.5	255	41.4		03.4	
22	178	11.3	182	01.8		04.4	121	35.8		28.3	342	09.7		07.4	270	43.9		03.4	
23	193	13.8	197	03.6		04.0	136	36.5		28.7	357	12.4		07.3	285	46.5		03.4	
24	208	16.3	212	05.5	+2	03.7	151	37.2	+20	29.1	12	15.2	-5	07.2	300	49.0	-22	03.4	
Dif	—		+19		-3		+7		+4		+28		+1		+25			0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 58 ^m 9				Edad: 22 ^d 9 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/3 SD: 15°2 PMG: 6 ^h 55 ^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			
0	180	15.6	+11	30.4	259	40.5	-16	30.3	60 N	19 31	20 19	21 26	2 49 26		11 08 75			
1	195	15.8		31.2	274	11.0 ¹¹⁵		25.0 ⁵³	58	24	20 08	21 08	39 28		18 72			
2	210	15.9		32.1	288	41.4 ¹¹⁴		19.6 ⁵⁴	56	17	19 59	20 53	30 30		27 70			
3	225	16.0		32.9	303	11.8 ¹¹⁴		14.1 ⁵⁵	54	12	51	41	22 31		34 69			
4	240	16.2		33.8	317	42.2 ¹¹⁴		08.5 ⁵⁶	52	06	43	30	14 33		41 67			
5	255	16.3	+11	34.7	332	12.6 ¹¹⁴	-16	02.8 ⁵⁷	50	19 02	19 37	20 20	2 08 34		11 47 66			
6	270	16.4	+11	35.5	346	43.0 ¹¹⁴	-15	57.1 ⁵⁷	45	18 52	19 23	20 01	1 54 37		12 01 63			
7	285	16.5		36.4	1	13.4 ¹¹⁴		51.3 ⁵⁸	40	44	12	19 46	42 39		12 60			
8	300	16.7		37.2	15	43.8 ¹¹⁴		45.3 ⁶⁰	35	37	19 03	34	32 41		21 59			
9	315	16.8		38.1	30	14.1 ¹¹³		39.3 ⁶⁰	30	30	18 55	25	24 42		29 57			
10	330	16.9		38.9	44	44.5 ¹¹⁴		33.2 ⁶¹	20	20	42	19 09	1 09 44		43 54			
11	345	17.1	+11	39.8	59	14.9 ¹¹⁴	-15	27.1 ⁶¹	10 N	18 11	18 32	18 57	0 55 48		12 55 52			
12	0	17.2	+11	40.6	73	45.2 ¹¹³	-15	20.8 ⁶³	0	18 02	18 23	18 48	0 43 49		13 07 49			
13	15	17.3		41.5	88	15.6 ¹¹⁴		14.5 ⁶³	10 S	17 54	15	40	31 51		18 47			
14	30	17.5		42.3	102	45.9 ¹¹³		08.0 ⁶⁵	20	45	07	33	18 53		30 44			
15	45	17.6		43.2	117	16.3 ¹¹⁴	-15	01.5 ⁶⁵	30	35	18 00	28	0 03 55		44 41			
16	60	17.7		44.1	131	46.6 ¹¹³	-14	54.9 ⁶⁶	35	29	17 55	25	*** ** *		13 52 39			
17	75	17.8	+11	44.9	146	16.9 ¹¹³	-14	48.3 ⁶⁶	40	17 23	17 51	18 22	*** ** *		14 01 37			
18	90	18.0	+11	45.8	160	47.2 ¹¹³	-14	41.5 ⁶⁸	45	17 16	17 46	18 20	*** ** *		14 11 36			
19	105	18.1		46.6	175	17.6 ¹¹⁴		34.7 ⁶⁸	50	07	40	18	*** ** *		24 32			
20	120	18.2		47.5	189	47.9 ¹¹³		27.7 ⁷⁰	52	17 03	37	17	*** ** *		30 31			
21	135	18.3		48.3	204	18.2 ¹¹³		20.7 ⁷⁰	54	16 58	35	16	*** ** *		36 30			
22	150	18.5		49.2	218	48.5 ¹¹³		13.6 ⁷¹	56	53	32	15	*** ** *		43 28			
23	165	18.6		50.0	233	18.8 ¹¹³	-14	06.5 ⁷¹	58	48	29	14	23 56 75		14 52 25			
24	180	18.7	+11	50.9	247	49.0 ¹¹²	-13	59.2 ⁷³	60 S	16 42	17 25	18 13	23 47 78		15 01 23			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 05 ^m 3		Mag: -4.7 PMG: 9 ^h 50 ^m				Mag: +1.6 PMG: 13 ^h 53 ^m				Mag: -2.5 PMG: 23 ^h 07 ^m				Mag: +0.3 PMG: 3 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	208	16.3	212	05.5	+2	03.7	151	37.2	+20	29.1	12	15.2	-5	07.2	300	49.0	-22	03.4
1	223	18.7	227	07.4		03.4	166	37.8		29.5	27	17.9		07.1	315	51.5		03.4
2	238	21.2	242	09.2		03.1	181	38.5		29.9	42	20.7		07.0	330	54.0		03.4
3	253	23.7	257	11.0		02.8	196	39.2		30.3	57	23.4		06.8	345	56.6		03.4
4	268	26.1	272	12.9		02.5	211	39.8		30.7	72	26.2		06.7	0	59.1		03.4
5	283	28.6	287	14.7	+2	02.1	226	40.5	+20	31.1	87	28.9	-5	06.6	16	01.6	-22	03.4
6	298	31.0	302	16.6	+2	01.8	241	41.1	+20	31.5	102	31.7	-5	06.5	31	04.1	-22	03.4
7	313	33.5	317	18.4		01.5	256	41.8		31.9	117	34.4		06.4	46	06.7		03.4
8	328	36.0	332	20.2		01.2	271	42.5		32.3	132	37.2		06.3	61	09.2		03.3
9	343	38.4	347	22.0		00.9	286	43.1		32.7	147	39.9		06.2	76	11.7		03.3
10	358	40.9	2	23.9		00.6	301	43.8		33.1	162	42.7		06.0	91	14.2		03.3
11	13	43.4	17	25.7	+2	00.3	316	44.5	+20	33.5	177	45.4	-5	05.9	106	16.8	-22	03.3
12	28	45.8	32	27.5	+2	00.0	331	45.1	+20	33.9	192	48.2	-5	05.8	121	19.3	-22	03.3
13	43	48.3	47	29.3	+1	59.7	346	45.8		34.3	207	50.9		05.7	136	21.8		03.3
14	58	50.8	62	31.1		59.4	1	46.4		34.7	222	53.7		05.6	151	24.3		03.3
15	73	53.2	77	32.9		59.1	16	47.1		35.1	237	56.4		05.5	166	26.9		03.3
16	88	55.7	92	34.7		58.8	31	47.8		35.5	252	59.2		05.4	181	29.4		03.3
17	103	58.2	107	36.5	+1	58.5	46	48.4	+20	35.8	268	01.9	-5	05.3	196	31.9	-22	03.3
18	119	00.6	122	38.3	+1	58.2	61	49.1	+20	36.2	283	04.7	-5	05.1	211	34.5	-22	03.3
19	134	03.1	137	40.1		58.0	76	49.8		36.6	298	07.4		05.0	226	37.0		03.3
20	149	05.5	152	41.9		57.7	91	50.4		37.0	313	10.2		04.9	241	39.5		03.3
21	164	08.0	167	43.7		57.4	106	51.1		37.4	328	12.9		04.8	256	42.0		03.3
22	179	10.5	182	45.5		57.1	121	51.7		37.8	343	15.7		04.7	271	44.6		03.3
23	194	12.9	197	47.2		56.8	136	52.4		38.2	358	18.4		04.6	286	47.1		03.3
24	209	15.4	212	49.0	+1	56.5	151	53.1	+20	38.6	13	21.1	-5	04.5	301	49.6	-22	03.3
Dif	—		+18		-3		+7		+4		+27		+1		+25			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 58 ^m 7				Edad: 23 ^d 9 PHE { 4 ^h : 56'6 12 ^h : 56'9 20 ^h : 57'2 PMG: 7 ^h 44 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	18.7	+11	50.9	247	49.0	-13	59.2	60 N	2	30	3	37	4	26	3	15	22
1	195	18.9		51.7	262	19.3 ¹¹³		51.9 ⁷³	58	2	49		48	33		07	24	30
2	210	19.0		52.6	276	49.6 ¹¹³		44.5 ⁷⁴	56	3	04	3	58	39		3	00	26
3	225	19.1		53.4	291	19.8 ¹¹²		37.0 ⁷⁵	54		16	4	06	45		2	53	28
4	240	19.2		54.2	305	50.1 ¹¹³		29.4 ⁷⁶	52		27		13	50		4	47	30
5	255	19.4	+11	55.1	320	20.3 ¹¹²	-13	21.8 ⁷⁶	50	3	36	4	20	4	55	2	42	31
6	270	19.5	+11	55.9	334	50.6 ¹¹³	-13	14.1 ⁷⁷	45	3	56	4	34	5	05	2	31	34
7	285	19.6		56.8	349	20.8 ¹¹²	-13	06.3 ⁷⁸	40	4	11		45	13		21	37	
8	300	19.7		57.6	3	51.0 ¹¹²	-12	58.4 ⁷⁹	35		23	4	54	20		13	39	
9	315	19.9		58.5	18	21.2 ¹¹²		50.4 ⁸⁰	30		33	5	02	27		2	06	41
10	330	20.0	+11	59.3	32	51.4 ¹¹²		42.4 ⁸⁰	20	4	48		15	37		1	53	44
11	345	20.1	+12	00.2	47	21.6 ¹¹²	-12	34.3 ⁸¹	10 N	5	00	5	25	5	47	1	43	46
12	0	20.2	+12	01.0	61	51.8 ¹¹²	-12	26.1 ⁸²	0	5	10	5	34	5	55	1	32	50
13	15	20.4		01.9	76	22.0 ¹¹²		17.9 ⁸²	10 S		18		42	6	04		22	52
14	30	20.5		02.7	90	52.1 ¹¹¹		09.5 ⁸⁴	20		24		50	13		1	11	55
15	45	20.6		03.6	105	22.3 ¹¹²	-12	01.1 ⁸⁴	30		30	5	58	23		0	58	59
16	60	20.7		04.4	119	52.4 ¹¹¹	-11	52.6 ⁸⁵	35		33	6	03	29		51	60	
17	75	20.9	+12	05.2	134	22.6 ¹¹²	-11	44.1 ⁸⁵	40	5	36	6	07	6	35	0	43	62
18	90	21.0	+12	06.1	148	52.7 ¹¹¹	-11	35.5 ⁸⁶	45	5	38	6	13	6	43	0	33	65
19	105	21.1		06.9	163	22.8 ¹¹¹		26.8 ⁸⁷	50		41		18	52		21	68	
20	120	21.2		07.8	177	52.9 ¹¹¹		18.0 ⁸⁸	52		42		21	6	56	16	69	
21	135	21.3		08.6	192	23.0 ¹¹¹		09.2 ⁸⁸	54		42		24	7	00	10	71	
22	150	21.5		09.5	206	53.1 ¹¹¹	-11	00.2 ⁹⁰	56		43		27	05		0	03	73
23	165	21.6		10.3	221	23.1 ¹¹⁰	-10	51.3 ⁸⁹	58		44		30	11		**	**	**
24	180	21.7	+12	11.1	235	53.2 ¹¹¹	-10	42.2 ⁹¹	60 S	5	45	6	34	7	17	**	**	**
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 01 ^m 3		Mag: -4.7 PMG: 9 ^h 48 ^m				Mag: +1.6 PMG: 13 ^h 52 ^m				Mag: -2.5 PMG: 23 ^h 02 ^m				Mag: +0.3 PMG: 3 ^h 52 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	209	15.4	212	49.0	+1	56.5	151	53.1	+20	38.6	13	21.1	-5	04.5	301	49.6	-22	03.3
1	224	17.9	227	50.8		56.3	166	53.7		39.0	28	23.9		04.4	316	52.1		03.3
2	239	20.3	242	52.6		56.0	181	54.4		39.4	43	26.6		04.2	331	54.7		03.3
3	254	22.8	257	54.3		55.7	196	55.1		39.8	58	29.4		04.1	346	57.2		03.3
4	269	25.3	272	56.1		55.4	211	55.7		40.2	73	32.1		04.0	1	59.7		03.3
5	284	27.7	287	57.8	+1	55.2	226	56.4	+20	40.6	88	34.9	-5	03.9	17	02.3	-22	03.3
6	299	30.2	302	59.6	+1	54.9	241	57.0	+20	41.0	103	37.6	-5	03.8	32	04.8	-22	03.3
7	314	32.7	318	01.4		54.6	256	57.7		41.3	118	40.4		03.7	47	07.3		03.3
8	329	35.1	333	03.1		54.4	271	58.4		41.7	133	43.1		03.6	62	09.9		03.3
9	344	37.6	348	04.8		54.1	286	59.0		42.1	148	45.9		03.5	77	12.4		03.3
10	359	40.0	3	06.6		53.8	301	59.7		42.5	163	48.6		03.4	92	14.9		03.3
11	14	42.5	18	08.3	+1	53.6	317	00.3	+20	42.9	178	51.3	-5	03.2	107	17.4	-22	03.3
12	29	45.0	33	10.1	+1	53.3	332	01.0	+20	43.3	193	54.1	-5	03.1	122	20.0	-22	03.3
13	44	47.4	48	11.8		53.1	347	01.7		43.7	208	56.8		03.0	137	22.5		03.3
14	59	49.9	63	13.5		52.8	2	02.3		44.1	223	59.6		02.9	152	25.0		03.3
15	74	52.4	78	15.3		52.6	17	03.0		44.5	239	02.3		02.8	167	27.6		03.3
16	89	54.8	93	17.0		52.3	32	03.7		44.8	254	05.1		02.7	182	30.1		03.3
17	104	57.3	108	18.7	+1	52.1	47	04.3	+20	45.2	269	07.8	-5	02.6	197	32.6	-22	03.2
18	119	59.8	123	20.4	+1	51.8	62	05.0	+20	45.6	284	10.6	-5	02.5	212	35.2	-22	03.2
19	135	02.2	138	22.1		51.6	77	05.6		46.0	299	13.3		02.3	227	37.7		03.2
20	150	04.7	153	23.9		51.3	92	06.3		46.4	314	16.1		02.2	242	40.2		03.2
21	165	07.1	168	25.6		51.1	107	07.0		46.8	329	18.8		02.1	257	42.8		03.2
22	180	09.6	183	27.3		50.8	122	07.6		47.2	344	21.5		02.0	272	45.3		03.2
23	195	12.1	198	29.0		50.6	137	08.3		47.5	359	24.3		01.9	287	47.8		03.2
24	210	14.5	213	30.7	+1	50.4	152	08.9	+20	47.9	14	27.0	-5	01.8	302	50.3	-22	03.2
Dif	—		+17		-3		+7		+4		+27		+1		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 58 ^m 5			Edad: 24 ^d 9 PHE { 4 ^h : 57/5 12 ^h : 57/8 20 ^h : 58/1 SD: 15/6 PMG: 8 ^h 34 ^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	180	21.7	+12	11.1	235	53.2	-10	42.2	60 N	19 36	20 25	21 35	3 37 19	13 43 83				
1	195	21.8		12.0	250	23.2 ¹¹⁰		33.1 ⁹¹	58	28	13	21 15	31 22	48 81				
2	210	22.0		12.8	264	53.2 ¹¹⁰		23.9 ⁹²	56	21	20 04	20 59	26 24	52 79				
3	225	22.1		13.7	279	23.2 ¹¹⁰		14.6 ⁹³	54	15	19 55	46	21 26	13 56 77				
4	240	22.2		14.5	293	53.2 ¹¹⁰		-10 05.3 ⁹³	52	10	47	34	17 28	14 00 74				
5	255	22.3	+12	15.3	308	23.2 ¹¹⁰		-9 55.9 ⁹⁴	50	19 05	19 40	20 24	3 13 29	14 03 73				
6	270	22.4	+12	16.2	322	53.2 ¹¹⁰		-9 46.5 ⁹⁴	45	18 54	19 26	20 04	3 05 32	14 10 69				
7	285	22.6		17.0	337	23.1 ¹⁰⁹		37.0 ⁹⁵	40	46	14	19 49	2 58 35	16 66				
8	300	22.7		17.9	351	53.1 ¹¹⁰		27.4 ⁹⁶	35	38	19 05	36	52 38	21 63				
9	315	22.8		18.7	6	23.0 ¹⁰⁹		17.7 ⁹⁷	30	32	18 57	26	47 40	25 61				
10	330	22.9		19.5	20	52.9 ¹⁰⁹		-9 08.0 ⁹⁷	20	20	43	19 10	37 44	33 57				
11	345	23.0	+12	20.4	35	22.8 ¹⁰⁹		-8 58.3 ⁹⁷	10 N	18 11	18 32	18 58	2 29 47	14 39 54				
12	0	23.2	+12	21.2	49	52.6 ¹⁰⁸		-8 48.4 ⁹⁹	0	18 02	18 23	18 48	2 22 50	14 45 51				
13	15	23.3		22.0	64	22.5 ¹⁰⁹		38.5 ⁹⁹	10 S	17 53	14	39	14 53	52 47				
14	30	23.4		22.9	78	52.3 ¹⁰⁸		28.6 ⁹⁹	20	44	18 06	32	2 06 56	14 58 44				
15	45	23.5		23.7	93	22.2 ¹⁰⁹		18.6 ¹⁰⁰	30	33	17 58	26	1 57 60	15 05 40				
16	60	23.6		24.5	107	51.9 ¹⁰⁷		-8 08.5 ¹⁰¹	35	27	53	23	51 63	10 37				
17	75	23.8	+12	25.4	122	21.7 ¹⁰⁸		-7 58.4 ¹⁰¹	40	17 20	17 48	18 20	1 45 65	15 14 35				
18	90	23.9	+12	26.2	136	51.5 ¹⁰⁸		-7 48.2 ¹⁰²	45	17 12	17 43	18 17	1 38 68	15 20 32				
19	105	24.0		27.1	151	21.2 ¹⁰⁷		37.9 ¹⁰³	50	17 03	36	14	29 72	26 29				
20	120	24.1		27.9	165	50.9 ¹⁰⁷		27.6 ¹⁰³	52	16 59	34	13	25 74	29 27				
21	135	24.2		28.7	180	20.6 ¹⁰⁷		17.3 ¹⁰³	54	54	31	12	21 75	33 25				
22	150	24.3		29.6	194	50.3 ¹⁰⁷		-7 06.8 ¹⁰⁵	56	49	27	11	16 77	36 23				
23	165	24.5		30.4	209	20.0 ¹⁰⁷		-6 56.4 ¹⁰⁴	58	43	24	10	11 79	40 21				
24	180	24.6	+12	31.2	223	49.6 ¹⁰⁶		-6 45.9 ¹⁰⁵	60 S	16 36	17 20	18 08	1 05 81	15 45 18				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 57 ^m 4		Mag: -4.7 PMG: 9 ^h 45 ^m			Mag: +1.6 PMG: 13 ^h 51 ^m			Mag: -2.5 PMG: 22 ^h 58 ^m			Mag: +0.3 PMG: 3 ^h 48 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	210	14.5	213	30.7	+1	50.4	152	08.9	+20	47.9	14	27.0	-5	01.8	302	50.3	-22	03.2
1	225	17.0	228	32.4		50.1	167	09.6		48.3	29	29.8		01.7	317	52.9		03.2
2	240	19.5	243	34.1		49.9	182	10.3		48.7	44	32.5		01.6	332	55.4		03.2
3	255	21.9	258	35.8		49.7	197	10.9		49.1	59	35.3		01.5	347	57.9		03.2
4	270	24.4	273	37.5		49.4	212	11.6		49.5	74	38.0		01.3	3	00.5		03.2
5	285	26.9	288	39.1	+1	49.2	227	12.2	+20	49.8	89	40.7	-5	01.2	18	03.0	-22	03.2
6	300	29.3	303	40.8	+1	49.0	242	12.9	+20	50.2	104	43.5	-5	01.1	33	05.5	-22	03.2
7	315	31.8	318	42.5		48.8	257	13.5		50.6	119	46.2		01.0	48	08.1		03.2
8	330	34.3	333	44.2		48.5	272	14.2		51.0	134	49.0		00.9	63	10.6		03.2
9	345	36.7	348	45.8		48.3	287	14.9		51.4	149	51.7		00.8	78	13.1		03.2
10	0	39.2	3	47.5		48.1	302	15.5		51.8	164	54.5		00.7	93	15.7		03.2
11	15	41.6	18	49.2	+1	47.9	317	16.2	+20	52.1	179	57.2	-5	00.6	108	18.2	-22	03.2
12	30	44.1	33	50.8	+1	47.7	332	16.8	+20	52.5	194	59.9	-5	00.5	123	20.7	-22	03.2
13	45	46.6	48	52.5		47.5	347	17.5		52.9	210	02.7		00.4	138	23.3		03.2
14	60	49.0	63	54.2		47.2	2	18.2		53.3	225	05.4		00.2	153	25.8		03.2
15	75	51.5	78	55.8		47.0	17	18.8		53.7	240	08.2	-5	00.1	168	28.4		03.2
16	90	54.0	93	57.5		46.8	32	19.5		54.0	255	10.9	-5	00.0	183	30.9		03.2
17	105	56.4	108	59.1	+1	46.6	47	20.1	+20	54.4	270	13.7	-4	59.9	198	33.4	-22	03.2
18	120	58.9	124	00.8	+1	46.4	62	20.8	+20	54.8	285	16.4	-4	59.8	213	36.0	-22	03.2
19	136	01.4	139	02.4		46.2	77	21.5		55.2	300	19.1		59.7	228	38.5		03.2
20	151	03.8	154	04.0		46.0	92	22.1		55.6	315	21.9		59.6	243	41.0		03.2
21	166	06.3	169	05.7		45.8	107	22.8		55.9	330	24.6		59.5	258	43.6		03.2
22	181	08.7	184	07.3		45.6	122	23.4		56.3	345	27.4		59.4	273	46.1		03.2
23	196	11.2	199	09.0		45.4	137	24.1		56.7	0	30.1		59.3	288	48.6		03.2
24	211	13.7	214	10.6	+1	45.2	152	24.7	+20	57.1	15	32.9	-4	59.1	303	51.2	-22	03.2
Dif	—		+17		-2		+7		+4		+27		+1		+25		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 58 ^m 3				Edad: 25 ^d 9 PHE { 4 ^h : 58'4 12 ^h : 58'7 20 ^h : 59'0 SD: 15'9 PMG: 9 ^h 24 ^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	24.6	+12	31.2	223	49.6	-6	45.9	60 N	2 21	3 31	4 20	3 56	18	15 06	87		
1	195	24.7		32.1	238	19.2 ¹⁰⁶		35.3 ¹⁰⁶	58	41	42	28	53	20	09	84		
2	210	24.8		32.9	252	48.8 ¹⁰⁶		24.7 ¹⁰⁶	56	2 57	3 52	35	50	23	11	82		
3	225	24.9		33.7	267	18.4 ¹⁰⁶		14.0 ¹⁰⁷	54	3 10	4 01	41	47	25	13	79		
4	240	25.0		34.5	281	47.9 ¹⁰⁵	-6	03.3 ¹⁰⁷	52	22	09	46	45	26	14	78		
5	255	25.2	+12	35.4	296	17.4 ¹⁰⁵	-5	52.5 ¹⁰⁸	50	3 32	4 16	4 51	3 42	29	15 16	76		
6	270	25.3	+12	36.2	310	46.9 ¹⁰⁵	-5	41.7 ¹⁰⁸	45	3 52	4 30	5 02	3 37	32	15 19	72		
7	285	25.4		37.0	325	16.4 ¹⁰⁵		30.8 ¹⁰⁹	40	4 07	42	11	33	35	22	68		
8	300	25.5		37.9	339	45.8 ¹⁰⁴		19.9 ¹⁰⁹	35	20	4 52	18	30	37	24	66		
9	315	25.6		38.7	354	15.2 ¹⁰⁴	-5	09.0 ¹⁰⁹	30	30	5 00	25	27	40	26	64		
10	330	25.7		39.5	8	44.6 ¹⁰⁴	-4	58.0 ¹¹⁰	20	47	13	36	21	44	30	59		
11	345	25.8	+12	40.4	23	14.0 ¹⁰⁴	-4	46.9 ¹¹¹	10 N	4 59	5 24	5 46	3 16	48	15 33	55		
12	0	26.0	+12	41.2	37	43.3 ¹⁰³	-4	35.8 ¹¹¹	0	5 09	5 34	5 55	3 12	51	15 36	52		
13	15	26.1		42.0	52	12.6 ¹⁰³		24.7 ¹¹¹	10 S	18	42	6 04	07	55	39	48		
14	30	26.2		42.8	66	41.9 ¹⁰³		13.6 ¹¹¹	20	25	5 51	13	3	02	59	42	44	
15	45	26.3		43.7	81	11.2 ¹⁰³	-4	02.4 ¹¹²	30	31	6 00	24	2	57	62	45	40	
16	60	26.4		44.5	95	40.4 ¹⁰²	-3	51.1 ¹¹³	35	35	04	30	54	64	47	38		
17	75	26.5	+12	45.3	110	09.6 ¹⁰²	-3	39.8 ¹¹³	40	5 38	6 09	6 37	2	50	68	15	49	35
18	90	26.6	+12	46.1	124	38.7 ¹⁰¹	-3	28.5 ¹¹³	45	5 40	6 15	6 45	2	46	71	15	52	32
19	105	26.8		47.0	139	07.8 ¹⁰¹		17.2 ¹¹³	50	43	21	55	41	74	55	28		
20	120	26.9		47.8	153	36.9 ¹⁰¹	-3	05.8 ¹¹⁴	52	45	24	6 59	39	76	56	27		
21	135	27.0		48.6	168	06.0 ¹⁰¹	-2	54.4 ¹¹⁴	54	46	27	7 04	36	78	58	24		
22	150	27.1		49.5	182	35.0 ¹⁰⁰		42.9 ¹¹⁵	56	47	31	09	33	81	15	59	23	
23	165	27.2		50.3	197	04.0 ¹⁰⁰		31.4 ¹¹⁵	58	48	34	15	30	83	16	01	20	
24	180	27.3	+12	51.1	211	33.0 ¹⁰⁰	-2	19.9 ¹¹⁵	60 S	5 49	6 38	7 22	2	26	86	16	03	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 53 ^m 5		Mag: -4.7 PMG: 9 ^h 42 ^m		Mag: +1.6 PMG: 13 ^h 50 ^m		Mag: -2.5 PMG: 22 ^h 54 ^m		Mag: +0.3 PMG: 3 ^h 44 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	211	13.7	214	10.6	+1	45.2	152	24.7	+20	57.1	15	32.9	-4	59.1	303	51.2	-22	03.2
1	226	16.1	229	12.2		45.0	167	25.4		57.4	30	35.6		59.0	318	53.7		03.1
2	241	18.6	244	13.8		44.8	182	26.1		57.8	45	38.3		58.9	333	56.2		03.1
3	256	21.1	259	15.4		44.6	197	26.7		58.2	60	41.1		58.8	348	58.8		03.1
4	271	23.5	274	17.1		44.4	212	27.4		58.6	75	43.8		58.7	4	01.3		03.1
5	286	26.0	289	18.7	+1	44.3	227	28.0	+20	58.9	90	46.6	-4	58.6	19	03.9	-22	03.1
6	301	28.5	304	20.3	+1	44.1	242	28.7	+20	59.3	105	49.3	-4	58.5	34	06.4	-22	03.1
7	316	30.9	319	21.9		43.9	257	29.3	+20	59.7	120	52.0		58.4	49	08.9		03.1
8	331	33.4	334	23.5		43.7	272	30.0	+21	00.1	135	54.8		58.3	64	11.5		03.1
9	346	35.9	349	25.1		43.5	287	30.7		00.4	150	57.5		58.2	79	14.0		03.1
10	1	38.3	4	26.7		43.4	302	31.3		00.8	166	00.3		58.1	94	16.5		03.1
11	16	40.8	19	28.3	+1	43.2	317	32.0	+21	01.2	181	03.0	-4	57.9	109	19.1	-22	03.1
12	31	43.2	34	29.9	+1	43.0	332	32.6	+21	01.6	196	05.7	-4	57.8	124	21.6	-22	03.1
13	46	45.7	49	31.5		42.8	347	33.3		01.9	211	08.5		57.7	139	24.2		03.1
14	61	48.2	64	33.1		42.7	2	33.9		02.3	226	11.2		57.6	154	26.7		03.1
15	76	50.6	79	34.6		42.5	17	34.6		02.7	241	14.0		57.5	169	29.2		03.1
16	91	53.1	94	36.2		42.3	32	35.3		03.1	256	16.7		57.4	184	31.8		03.1
17	106	55.6	109	37.8	+1	42.2	47	35.9	+21	03.4	271	19.4	-4	57.3	199	34.3	-22	03.1
18	121	58.0	124	39.4	+1	42.0	62	36.6	+21	03.8	286	22.2	-4	57.2	214	36.9	-22	03.1
19	137	00.5	139	40.9		41.8	77	37.2		04.2	301	24.9		57.1	229	39.4		03.1
20	152	03.0	154	42.5		41.7	92	37.9		04.5	316	27.7		57.0	244	41.9		03.1
21	167	05.4	169	44.1		41.5	107	38.5		04.9	331	30.4		56.9	259	44.5		03.1
22	182	07.9	184	45.6		41.3	122	39.2		05.3	346	33.1		56.8	274	47.0		03.1
23	197	10.4	199	47.2		41.2	137	39.9		05.6	1	35.9		56.6	289	49.6		03.1
24	212	12.8	214	48.8	+1	41.0	152	40.5	+21	06.0	16	38.6	-4	56.5	304	52.1	-22	03.1
Dif	—		+16		-2		+7		+4		+27		+1		+25			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9		Edad: 26 ^d 9	PHE { 4 ^h : 59/3 12 ^h : 59/6 20 ^h : 59/9 R°: 53 ^m	SD: 16°1				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 1	PMG: 10 ^h 15 ^m			Civil	Náutico			Hora	R°	Hora	R°		
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	27.3	+12 51.1	211	33.0	-2 19.9	60 N	19 41	20 31	21 43	4 14 19	16 33 90		
1	195	27.4	51.9	226	01.9	-2 08.4 ¹¹⁵	58	33	19	22	13 21	33 87		
2	210	27.5	52.7	240	30.8	-1 56.8 ¹¹⁶	56	25	20 08	21 05	13 23	33 84		
3	225	27.7	53.6	254	59.6	45.2 ¹¹⁶	54	19	19 59	20 51	12 25	32 82		
4	240	27.8	54.4	269	28.5	33.6 ¹¹⁶	52	13	51	39	11 27	32 80		
5	255	27.9	+12 55.2	283	57.2	-1 22.0 ¹¹⁶	50	19 08	19 44	20 28	4 11 29	16 32 78		
6	270	28.0	+12 56.0	298	26.0	-1 10.3 ¹¹⁷	45	18 57	19 29	20 07	4 09 33	16 31 74		
7	285	28.1	56.9	312	54.7	-0 58.6 ¹¹⁷	40	48	16	19 51	08 36	30 71		
8	300	28.2	57.7	327	23.4	46.9 ¹¹⁷	35	40	19 06	38	07 39	30 68		
9	315	28.3	58.5	341	52.0	35.2 ¹¹⁷	30	33	18 58	28	07 41	30 65		
10	330	28.4	+12 59.3	356	20.6	23.5 ¹¹⁷	20	21	44	19 11	05 45	29 61		
11	345	28.5	+13 00.1	10	49.2	-0 11.7 ¹¹⁸	10 N	18 11	18 33	18 58	4 04 49	16 28 57		
12	0	28.6	+13 01.0	25	17.7	+0 00.1 ¹¹⁸	0	18 01	18 23	18 47	4 03 52	16 28 53		
13	15	28.8	01.8	39	46.1	11.9 ¹¹⁸	10 S	17 52	14	39	02 56	27 50		
14	30	28.9	02.6	54	14.6	23.7 ¹¹⁸	20	42	18 05	31	4 01 60	26 46		
15	45	29.0	03.4	68	43.0	35.5 ¹¹⁸	30	31	17 56	24	3 59 65	25 42		
16	60	29.1	04.2	83	11.3	47.3 ¹¹⁸	35	25	51	20	58 67	25 39		
17	75	29.2	+13 05.1	97	39.6	+0 59.1 ¹¹⁸	40	17 18	17 45	18 17	3 58 69	16 24 37		
18	90	29.3	+13 05.9	112	07.9	+1 11.0 ¹¹⁹	45	17 09	17 40	18 14	3 57 73	16 24 33		
19	105	29.4	06.7	126	36.1	22.8 ¹¹⁸	50	16 59	33	11	55 78	23 29		
20	120	29.5	07.5	141	04.3	34.7 ¹¹⁹	52	55	30	09	55 79	23 27		
21	135	29.6	08.3	155	32.4	46.5 ¹¹⁸	54	50	26	08	54 81	22 26		
22	150	29.7	09.1	170	00.5	+1 58.4 ¹¹⁹	56	44	23	06	54 83	22 23		
23	165	29.8	10.0	184	28.6	+2 10.3 ¹¹⁹	58	38	19	05	53 86	21 22		
24	180	29.9	+13 10.8	198	56.6	+2 22.1 ¹¹⁸	60 S	16 31	17 15	18 04	3 52 89	16 21 18		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 49 ^m 5		Mag: -4.7			Mag: +1.6			Mag: -2.5			Mag: +0.3		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	212	12.8	214	48.8	+1 41.0	152	40.5	+21 06.0	16	38.6	-4 56.5	304	52.1	-22 03.1
1	227	15.3	229	50.3	40.9	167	41.2	06.4	31	41.3	56.4	319	54.6	03.1
2	242	17.7	244	51.9	40.7	182	41.8	06.8	46	44.1	56.3	334	57.2	03.1
3	257	20.2	259	53.4	40.6	197	42.5	07.1	61	46.8	56.2	349	59.7	03.1
4	272	22.7	274	55.0	40.4	212	43.1	07.5	76	49.6	56.1	5	02.3	03.1
5	287	25.1	289	56.5	+1 40.3	227	43.8	+21 07.9	91	52.3	-4 56.0	20	04.8	-22 03.1
6	302	27.6	304	58.1	+1 40.1	242	44.4	+21 08.2	106	55.0	-4 55.9	35	07.3	-22 03.1
7	317	30.1	319	59.6	40.0	257	45.1	08.6	121	57.8	55.8	50	09.9	03.1
8	332	32.5	335	01.1	39.9	272	45.8	09.0	137	00.5	55.7	65	12.4	03.0
9	347	35.0	350	02.7	39.7	287	46.4	09.3	152	03.2	55.6	80	15.0	03.0
10	2	37.5	5	04.2	39.6	302	47.1	09.7	167	06.0	55.5	95	17.5	03.0
11	17	39.9	20	05.7	+1 39.5	317	47.7	+21 10.1	182	08.7	-4 55.3	110	20.1	-22 03.0
12	32	42.4	35	07.2	+1 39.3	332	48.4	+21 10.4	197	11.5	-4 55.2	125	22.6	-22 03.0
13	47	44.8	50	08.8	39.2	347	49.0	10.8	212	14.2	55.1	140	25.1	03.0
14	62	47.3	65	10.3	39.1	2	49.7	11.1	227	16.9	55.0	155	27.7	03.0
15	77	49.8	80	11.8	38.9	17	50.3	11.5	242	19.7	54.9	170	30.2	03.0
16	92	52.2	95	13.3	38.8	32	51.0	11.9	257	22.4	54.8	185	32.8	03.0
17	107	54.7	110	14.8	+1 38.7	47	51.7	+21 12.2	272	25.1	-4 54.7	200	35.3	-22 03.0
18	122	57.2	125	16.3	+1 38.5	62	52.3	+21 12.6	287	27.9	-4 54.6	215	37.9	-22 03.0
19	137	59.6	140	17.8	38.4	77	53.0	13.0	302	30.6	54.5	230	40.4	03.0
20	153	02.1	155	19.3	38.3	92	53.6	13.3	317	33.3	54.4	245	42.9	03.0
21	168	04.6	170	20.8	38.2	107	54.3	13.7	332	36.1	54.3	260	45.5	03.0
22	183	07.0	185	22.3	38.1	122	54.9	14.0	347	38.8	54.2	275	48.0	03.0
23	198	09.5	200	23.8	37.9	137	55.6	14.4	2	41.5	54.1	290	50.6	03.0
24	213	12.0	215	25.3	+1 37.8	152	56.2	+21 14.8	17	44.3	-4 54.0	305	53.1	-22 03.0
Dif	—		+15	-1		+7	+4		+27	+1		+25		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 9				Edad: 27 ^d 9 PHE { 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'5 R°: 55 ^m SD: 16'3 PMG: 11 ^h 08 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	29.9	+13	10.8	198	56.6	+2	22.1	60 N	2	12	3	24	4	14	4	33	20		
1	195	30.1		11.6	213	24.5	89	34.0 ¹¹⁹	58		33		37		22	34	23	18 00 89		
2	210	30.2		12.4	227	52.4	89	45.9 ¹¹⁹	56	2	50		47		30	36	25	17 57 86		
3	225	30.3		13.2	242	20.3	89	+2 57.7 ¹¹⁸	54	3	04	3	56		36	37	27	54 84		
4	240	30.4		14.0	256	48.1	88	+3 09.6 ¹¹⁹	52		17	4	04		42	38	29	52 82		
5	255	30.5	+13	14.8	271	15.9	88	+3 21.4 ¹¹⁸	50	3	27	4	12	4	47	4	40	30 17 50 80		
6	270	30.6	+13	15.7	285	43.6	87	+3 33.2 ¹¹⁸	45	3	48	4	27	4	59	4	42	35 17 45 76		
7	285	30.7		16.5	300	11.2	86	45.1 ¹¹⁹	40	4	04		39	5	08	44	38	41 73		
8	300	30.8		17.3	314	38.9	87	+3 56.9 ¹¹⁸	35		17		49		16	46	41	38 70		
9	315	30.9		18.1	329	06.4	85	+4 08.7 ¹¹⁸	30		28	4	58		23	48	43	35 67		
10	330	31.0		18.9	343	33.9	85	20.5 ¹¹⁸	20		45	5	12		35	50	48	30 63		
11	345	31.1	+13	19.7	358	01.4	85	+4 32.2 ¹¹⁷	10 N	4	58	5	23	5	45	4	53	51 17 25 60		
12	0	31.2	+13	20.5	12	28.8	84	+4 44.0 ¹¹⁸	0	5	09	5	33	5	55	4	55	55 17 21 56		
13	15	31.3		21.3	26	56.2	84	+4 55.7 ¹¹⁷	10 S		18		42	6	04	4	58	58 17 52		
14	30	31.4		22.1	41	23.5	83	+5 07.4 ¹¹⁷	20		25	5	51		14	5	01	62 12 49		
15	45	31.5		23.0	55	50.8	83	19.1 ¹¹⁷	30		33	6	01		25	04	66	07 45		
16	60	31.6		23.8	70	18.0	82	30.8 ¹¹⁷	35		36		06		32	05	69	04 42		
17	75	31.7	+13	24.6	84	45.2	82	+5 42.4 ¹¹⁶	40	5	39	6	11	6	39	5	07	72 17 01 39		
18	90	31.8	+13	25.4	99	12.3	81	+5 54.0 ¹¹⁶	45	5	43	6	17	6	48	5	10	75 16 57 36		
19	105	31.9		26.2	113	39.3	80	+6 05.6 ¹¹⁶	50		46		24	6	58	13	79	52 33		
20	120	32.0		27.0	128	06.3	80	17.2 ¹¹⁶	52		48		27	7	02	14	81	50 31		
21	135	32.1		27.8	142	33.3	80	28.7 ¹¹⁵	54		49		31		08	15	84	48 29		
22	150	32.2		28.6	157	00.2	79	40.2 ¹¹⁵	56		50		34		13	17	86	45 27		
23	165	32.3		29.4	171	27.0	78	+6 51.7 ¹¹⁵	58		52		38		20	19	88	43 24		
24	180	32.4	+13	30.2	185	53.8	78	+7 03.1 ¹¹⁴	60 S	5	54	6	43	7	27	5	21	91 16 39 22		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 45 ^m 6				Mag: -4.7 PMG: 9 ^h 37 ^m				Mag: +1.6 PMG: 13 ^h 48 ^m				Mag: -2.4 PMG: 22 ^h 45 ^m				Mag: +0.3 PMG: 3 ^h 36 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	213	12.0	215	25.3	+1	37.8	152	56.2	+21	14.8	17	44.3	-4	54.0	305	53.1	-22	03.0		
1	228	14.4	230	26.8		37.7	167	56.9		15.1	32	47.0		53.9	320	55.7		03.0		
2	243	16.9	245	28.3		37.6	182	57.5		15.5	47	49.8		53.7	335	58.2		03.0		
3	258	19.3	260	29.8		37.5	197	58.2		15.9	62	52.5		53.6	351	00.8		03.0		
4	273	21.8	275	31.2		37.4	212	58.9		16.2	77	55.2		53.5	6	03.3		03.0		
5	288	24.3	290	32.7	+1	37.3	227	59.5	+21	16.6	92	58.0	-4	53.4	21	05.9	-22	03.0		
6	303	26.7	305	34.2	+1	37.2	243	00.2	+21	16.9	108	00.7	-4	53.3	36	08.4	-22	03.0		
7	318	29.2	320	35.7		37.1	258	00.8		17.3	123	03.4		53.2	51	10.9		03.0		
8	333	31.7	335	37.1		37.0	273	01.5		17.6	138	06.2		53.1	66	13.5		03.0		
9	348	34.1	350	38.6		36.9	288	02.1		18.0	153	08.9		53.0	81	16.0		03.0		
10	3	36.6	5	40.1		36.8	303	02.8		18.4	168	11.6		52.9	96	18.6		03.0		
11	18	39.1	20	41.5	+1	36.7	318	03.4	+21	18.7	183	14.4	-4	52.8	111	21.1	-22	03.0		
12	33	41.5	35	43.0	+1	36.6	333	04.1	+21	19.1	198	17.1	-4	52.7	126	23.7	-22	03.0		
13	48	44.0	50	44.4		36.5	348	04.7		19.4	213	19.8		52.6	141	26.2		03.0		
14	63	46.4	65	45.9		36.4	3	05.4		19.8	228	22.6		52.5	156	28.8		03.0		
15	78	48.9	80	47.3		36.3	18	06.0		20.1	243	25.3		52.4	171	31.3		02.9		
16	93	51.4	95	48.8		36.2	33	06.7		20.5	258	28.0		52.3	186	33.9		02.9		
17	108	53.8	110	50.2	+1	36.1	48	07.3	+21	20.9	273	30.8	-4	52.2	201	36.4	-22	02.9		
18	123	56.3	125	51.7	+1	36.1	63	08.0	+21	21.2	288	33.5	-4	52.0	216	39.0	-22	02.9		
19	138	58.8	140	53.1		36.0	78	08.6		21.6	303	36.2		51.9	231	41.5		02.9		
20	154	01.2	155	54.5		35.9	93	09.3		21.9	318	39.0		51.8	246	44.1		02.9		
21	169	03.7	170	56.0		35.8	108	10.0		22.3	333	41.7		51.7	261	46.6		02.9		
22	184	06.2	185	57.4		35.7	123	10.6		22.6	348	44.4		51.6	276	49.2		02.9		
23	199	08.6	200	58.8		35.7	138	11.3		23.0	3	47.1		51.5	291	51.7		02.9		
24	214	11.1	216	00.3	+1	35.6	153	11.9	+21	23.3	18	49.9	-4	51.4	306	54.3	-22	02.9		
Dif	—		+15		-1		+7		+4		+27		+1		+25		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: 28 ^d 9 PHE { SD: 16'5 PMG: 12 ^h 03 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	32.4	+13 30.2	185	53.8	+7 03.1	60 N	19 46	20 37	21 52	4 53 23	19 35 91				
1	195	32.6	31.0	200	20.5	14.5 ¹¹⁴	58	37	24	29	4 57 26	29 88				
2	210	32.7	31.8	214	47.2	25.9 ¹¹⁴	56	30	13	21 11	5 01 28	23 86				
3	225	32.8	32.6	229	13.8	37.2 ¹¹³	54	23	20 03	20 56	04 31	18 83				
4	240	32.9	33.4	243	40.4	48.4 ¹¹²	52	17	19 55	43	07 33	14 81				
5	255	33.0	+13 34.2	258	06.9	59.7 ¹¹³	50	19 11	19 47	20 33	5 10 35	19 10 79				
6	270	33.1	+13 35.0	272	33.4	10.9 ¹¹²	45	18 59	19 31	20 11	5 17 38	19 01 76				
7	285	33.2	35.9	286	59.8	22.0 ¹¹¹	40	50	19	19 54	22 41	18 54 73				
8	300	33.3	36.7	301	26.2	33.1 ¹¹¹	35	41	19 08	40	27 43	48 70				
9	315	33.4	37.5	315	52.5	44.1 ¹¹⁰	30	34	18 59	29	31 46	42 68				
10	330	33.5	38.3	330	18.7	55.1 ¹¹⁰	20	22	45	19 12	38 50	33 64				
11	345	33.6	+13 39.1	344	44.9	06.1 ¹¹⁰	10 N	18 11	18 33	18 58	5 44 54	18 25 61				
12	0	33.7	+13 39.9	359	11.0	16.9 ¹⁰⁸	0	18 01	18 22	18 47	5 50 57	18 17 58				
13	15	33.8	40.7	13	37.1	27.8 ¹⁰⁹	10 S	17 51	13	38	5 56 60	09 55				
14	30	33.9	41.5	28	03.1	38.5 ¹⁰⁷	20	41	18 04	30	6 03 63	18 01 52				
15	45	33.9	42.3	42	29.1	49.3 ¹⁰⁸	30	29	17 54	22	10 68	17 52 48				
16	60	34.0	43.1	56	55.0	59.9 ¹⁰⁶	35	23	49	18	14 71	46 46				
17	75	34.1	+13 43.9	71	20.9	10.5 ¹⁰⁶	40	17 15	17 43	18 15	6 19 73	17 40 43				
18	90	34.2	+13 44.7	85	46.7	21.0 ¹⁰⁵	45	17 06	17 37	18 11	6 25 76	17 33 40				
19	105	34.3	45.5	100	12.4	31.5 ¹⁰⁵	50	16 56	29	07	32 80	25 36				
20	120	34.4	46.3	114	38.1	41.9 ¹⁰⁴	52	51	26	06	35 82	21 35				
21	135	34.5	47.1	129	03.8	52.2 ¹⁰³	54	45	22	04	39 84	17 33				
22	150	34.6	47.9	143	29.4	02.5 ¹⁰³	56	39	19	02	43 86	12 31				
23	165	34.7	48.7	157	54.9	12.7 ¹⁰²	58	33	14	18 01	47 89	07 28				
24	180	34.8	+13 49.4	172	20.4	22.8 ¹⁰¹	60 S	16 25	17 10	17 59	6 52 92	17 01 26				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 9 ^h 41 ^m 7		Mag: -4.7 PMG: 9 ^h 35 ^m			Mag: +1.6 PMG: 13 ^h 47 ^m			Mag: -2.4 PMG: 22 ^h 41 ^m			Mag: +0.3 PMG: 3 ^h 32 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	214	11.1	216 00.3	+1 35.6	153 11.9	+21 23.3	18 49.9	-4 51.4	306 54.3	-22 02.9						
1	229	13.6	231 01.7	35.5	168 12.6	23.7	33 52.6	51.3	321 56.8	02.9						
2	244	16.0	246 03.1	35.4	183 13.2	24.0	48 55.3	51.2	336 59.3	02.9						
3	259	18.5	261 04.5	35.4	198 13.9	24.4	63 58.1	51.1	352 01.9	02.9						
4	274	20.9	276 05.9	35.3	213 14.5	24.7	79 00.8	51.0	7 04.4	02.9						
5	289	23.4	291 07.4	+1 35.2	228 15.2	+21 25.1	94 03.5	-4 50.9	22 07.0	-22 02.9						
6	304	25.9	306 08.8	+1 35.2	243 15.8	+21 25.4	109 06.3	-4 50.8	37 09.5	-22 02.9						
7	319	28.3	321 10.2	35.1	258 16.5	25.8	124 09.0	50.7	52 12.1	02.9						
8	334	30.8	336 11.6	35.0	273 17.1	26.1	139 11.7	50.6	67 14.6	02.9						
9	349	33.3	351 13.0	35.0	288 17.8	26.5	154 14.5	50.5	82 17.2	02.9						
10	4	35.7	6 14.4	34.9	303 18.4	26.8	169 17.2	50.4	97 19.7	02.9						
11	19	38.2	21 15.8	+1 34.9	318 19.1	+21 27.2	184 19.9	-4 50.3	112 22.3	-22 02.9						
12	34	40.7	36 17.2	+1 34.8	333 19.7	+21 27.5	199 22.6	-4 50.2	127 24.8	-22 02.9						
13	49	43.1	51 18.6	34.8	348 20.4	27.9	214 25.4	50.1	142 27.4	02.9						
14	64	45.6	66 19.9	34.7	3 21.0	28.2	229 28.1	50.0	157 30.0	02.9						
15	79	48.1	81 21.3	34.6	18 21.7	28.6	244 30.8	49.8	172 32.5	02.9						
16	94	50.5	96 22.7	34.6	33 22.3	28.9	259 33.6	49.7	187 35.1	02.9						
17	109	53.0	111 24.1	+1 34.5	48 23.0	+21 29.3	274 36.3	-4 49.6	202 37.6	-22 02.9						
18	124	55.4	126 25.5	+1 34.5	63 23.6	+21 29.6	289 39.0	-4 49.5	217 40.2	-22 02.9						
19	139	57.9	141 26.9	34.5	78 24.3	30.0	304 41.8	49.4	232 42.7	02.9						
20	155	00.4	156 28.2	34.4	93 24.9	30.3	319 44.5	49.3	247 45.3	02.9						
21	170	02.8	171 29.6	34.4	108 25.6	30.7	334 47.2	49.2	262 47.8	02.9						
22	185	05.3	186 31.0	34.3	123 26.2	31.0	349 49.9	49.1	277 50.4	02.8						
23	200	07.8	201 32.3	34.3	138 26.9	31.4	4 52.7	49.0	292 52.9	02.8						
24	215	10.2	216 33.7	+1 34.3	153 27.5	+21 31.7	19 55.4	-4 48.9	307 55.5	-22 02.8						
Dif	—		+14		-1		+7		+3		+27		+1		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 6			Edad: 0 ^d 5 PHE { 4 ^h : 61 ^o 0 12 ^h : 61 ^o 0 20 ^h : 61 ^o 0 PMG: 13 ^h 01 ^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				
0	180	34.8	+13	49.4	172	20.4	+11 22.8	60 N	2 02	3 18	4 09	5 16	29	21 06	86				
1	195	34.9		50.2	186	45.8	64 32.8 ¹⁰⁰	58	26	31	17	23	32	20 57	83				
2	210	35.0		51.0	201	11.2	64 42.8 ¹⁰⁰	56	44	42	25	29	35	49	81				
3	225	35.1		51.8	215	36.5	63 +11 52.7 ⁹⁹	54	2 59	3 51	32	35	36	41	80				
4	240	35.2		52.6	230	01.8	63 +12 02.5 ⁹⁸	52	3 11	4 00	38	40	38	35	78				
5	255	35.3	+13	53.4	244	27.0	62 +12 12.2 ⁹⁷	50	3 22	4 08	4 43	5 45	39	20 29	77				
6	270	35.4	+13	54.2	258	52.1	61 +12 21.9 ⁹⁷	45	3 44	4 23	4 55	5 55	43	20 17	73				
7	285	35.5		55.0	273	17.3	62 31.4 ⁹⁵	40	4 01	36	5 05	6 03	46	20 07	71				
8	300	35.6		55.8	287	42.3	60 40.9 ⁹⁵	35	15	47	13	10	48	19 58	69				
9	315	35.7		56.6	302	07.3	60 50.3 ⁹⁴	30	26	4 56	21	17	50	50	68				
10	330	35.8		57.4	316	32.3	60 +12 59.6 ⁹³	20	44	5 10	33	28	53	37	65				
11	345	35.9	+13	58.2	330	57.2	59 +13 08.8 ⁹²	10 N	4 57	5 22	5 44	6 38	56	19 26	62				
12	0	36.0	+13	59.0	345	22.1	59 +13 18.0 ⁹²	0	5 08	5 33	5 54	6 47	59	19 15	60				
13	15	36.1	+13	59.8	359	46.9	58 27.0 ⁹⁰	10 S	18	43	6 04	6 56	62	19 04	58				
14	30	36.2	+14	00.6	14	11.7	58 35.9 ⁸⁹	20	26	5 52	15	7 06	65	18 53	55				
15	45	36.2		01.4	28	36.4	57 44.8 ⁸⁹	30	34	6 02	27	18	68	40	52				
16	60	36.3		02.1	43	01.0	56 +13 53.5 ⁸⁷	35	37	07	33	25	70	32	50				
17	75	36.4	+14	02.9	57	25.7	57 +14 02.2 ⁸⁷	40	5 41	6 13	6 41	7 32	73	18 23	49				
18	90	36.5	+14	03.7	71	50.3	56 +14 10.8 ⁸⁶	45	5 45	6 20	6 50	7 41	75	18 13	46				
19	105	36.6		04.5	86	14.8	55 19.2 ⁸⁴	50	49	27	7 01	52	79	18 01	43				
20	120	36.7		05.3	100	39.3	55 27.6 ⁸⁴	52	51	30	06	7 57	80	17 56	41				
21	135	36.8		06.1	115	03.7	54 35.8 ⁸²	54	52	34	11	8 03	82	50	40				
22	150	36.9		06.9	129	28.1	54 44.0 ⁸²	56	54	38	17	09	84	43	38				
23	165	37.0		07.7	143	52.5	54 +14 52.1 ⁸¹	58	56	42	24	16	86	35	36				
24	180	37.1	+14	08.5	158	16.8	53 +15 00.0 ⁷⁹	60 S	5 58	6 47	7 32	8 24	89	17 27	33				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 9 ^h 37 ^m 7		Mag: -4.7 PMG: 9 ^h 33 ^m			Mag: +1.6 PMG: 13 ^h 46 ^m			Mag: -2.4 PMG: 22 ^h 36 ^m			Mag: +0.3 PMG: 3 ^h 28 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	215	10.2	216	33.7	+1	34.3	153	27.5	+21	31.7	19	55.4	-4	48.9	307	55.5	-22	02.8	
1	230	12.7	231	35.1		34.2	168	28.2		32.1	34	58.1		48.8	322	58.0		02.8	
2	245	15.2	246	36.4		34.2	183	28.8		32.4	50	00.8		48.7	338	00.6		02.8	
3	260	17.6	261	37.8		34.2	198	29.5		32.7	65	03.6		48.6	353	03.1		02.8	
4	275	20.1	276	39.1		34.1	213	30.2		33.1	80	06.3		48.5	8	05.7		02.8	
5	290	22.5	291	40.5	+1	34.1	228	30.8	+21	33.4	95	09.0	-4	48.4	23	08.2	-22	02.8	
6	305	25.0	306	41.8	+1	34.1	243	31.5	+21	33.8	110	11.8	-4	48.3	38	10.8	-22	02.8	
7	320	27.5	321	43.2		34.0	258	32.1		34.1	125	14.5		48.2	53	13.3		02.8	
8	335	29.9	336	44.5		34.0	273	32.8		34.5	140	17.2		48.1	68	15.9		02.8	
9	350	32.4	351	45.9		34.0	288	33.4		34.8	155	19.9		48.0	83	18.5		02.8	
10	5	34.9	6	47.2		34.0	303	34.1		35.1	170	22.7		47.9	98	21.0		02.8	
11	20	37.3	21	48.5	+1	34.0	318	34.7	+21	35.5	185	25.4	-4	47.8	113	23.6	-22	02.8	
12	35	39.8	36	49.9	+1	33.9	333	35.4	+21	35.8	200	28.1	-4	47.7	128	26.1	-22	02.8	
13	50	42.3	51	51.2		33.9	348	36.0		36.2	215	30.8		47.6	143	28.7		02.8	
14	65	44.7	66	52.5		33.9	3	36.7		36.5	230	33.6		47.5	158	31.2		02.8	
15	80	47.2	81	53.9		33.9	18	37.3		36.8	245	36.3		47.4	173	33.8		02.8	
16	95	49.7	96	55.2		33.9	33	37.9		37.2	260	39.0		47.3	188	36.3		02.8	
17	110	52.1	111	56.5	+1	33.9	48	38.6	+21	37.5	275	41.7	-4	47.2	203	38.9	-22	02.8	
18	125	54.6	126	57.8	+1	33.9	63	39.2	+21	37.9	290	44.5	-4	47.1	218	41.4	-22	02.8	
19	140	57.0	141	59.1		33.9	78	39.9		38.2	305	47.2		47.0	233	44.0		02.8	
20	155	59.5	157	00.5		33.8	93	40.5		38.5	320	49.9		46.9	248	46.6		02.8	
21	171	02.0	172	01.8		33.8	108	41.2		38.9	335	52.6		46.8	263	49.1		02.8	
22	186	04.4	187	03.1		33.8	123	41.8		39.2	350	55.4		46.7	278	51.7		02.8	
23	201	06.9	202	04.4		33.8	138	42.5		39.5	5	58.1		46.6	293	54.2		02.8	
24	216	09.4	217	05.7	+1	33.8	153	43.1	+21	39.9	21	00.8	-4	46.5	308	56.8	-22	02.8	
Dif	—		+13			0	+6		+3		+27		+1		+26			0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 5			Edad: 1 ^d 5 SD: 16'6 PMG: 14 ^h 00 ^m	PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'8 R°: 61 ^m									
	hG ☉	Dec				hG ☾								
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	37.1	+14	08.5	158	16.8	+15	00.0	60 N	19 51	20 43	22 02	5 45 39	22 32 75
1	195	37.2		09.2	172	41.1	+15	07.8	58	42	29	21 36	5 55 41	20 74
2	210	37.3		10.0	187	05.4		15.6	56	34	17	17	6 04 42	10 72
3	225	37.4		10.8	201	29.6		23.2	54	26	20 07	21 01	11 45	22 01 71
4	240	37.4		11.6	215	53.7		30.7	52	20	19 58	20 48	18 46	21 53 71
5	255	37.5	+14	12.4	230	17.9	+15	38.1	50	19 14	19 51	20 37	6 24 47	21 46 70
6	270	37.6	+14	13.2	244	42.0	+15	45.4	45	19 02	19 34	20 14	6 38 49	21 30 69
7	285	37.7		14.0	259	06.0		52.6	40	18 52	21	19 56	49 51	18 67
8	300	37.8		14.7	273	30.1	+15	59.6	35	43	10	42	6 58 53	21 07 66
9	315	37.9		15.5	287	54.1	+16	06.6	30	36	19 01	31	7 07 54	20 58 65
10	330	38.0		16.3	302	18.0		13.4	20	23	18 45	19 13	21 57	42 63
11	345	38.1	+14	17.1	316	42.0	+16	20.1	10 N	18 11	18 33	18 58	7 34 59	20 28 62
12	0	38.2	+14	17.9	331	05.9	+16	26.7	0	18 01	18 22	18 47	7 46 61	20 15 61
13	15	38.2		18.6	345	29.8		33.2	10 S	17 51	12	37	7 58 63	20 02 59
14	30	38.3		19.4	359	53.6		39.5	20	40	18 02	28	8 11 64	19 48 58
15	45	38.4		20.2	14	17.4		45.7	30	27	17 52	20	26 67	32 56
16	60	38.5		21.0	28	41.2		51.8	35	20	46	16	35 68	22 56
17	75	38.6	+14	21.8	43	05.0	+16	57.8	40	17 12	17 40	18 12	8 45 69	19 12 54
18	90	38.7	+14	22.6	57	28.8	+17	03.7	45	17 03	17 34	18 08	8 56 72	18 59 53
19	105	38.8		23.3	71	52.5		09.4	50	16 52	26	04	9 11 73	44 51
20	120	38.9		24.1	86	16.2		15.0	52	47	22	02	17 75	37 50
21	135	38.9		24.9	100	39.9		20.5	54	41	19	18 00	25 76	30 48
22	150	39.0		25.7	115	03.6		25.8	56	35	14	17 58	33 77	21 47
23	165	39.1		26.4	129	27.2		31.1	58	28	10	56	42 80	11 46
24	180	39.2	+14	27.2	143	50.9	+17	36.2	60 S	16 20	17 05	17 54	9 53 81	18 00 44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 33 ^m 8		Mag: -4.7 PMG: 9 ^h 31 ^m		Mag: +1.6 PMG: 13 ^h 45 ^m		Mag: -2.4 PMG: 22 ^h 32 ^m		Mag: +0.3 PMG: 3 ^h 24 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	216	09.4	217	05.7	+1	33.8	153	43.1	+21	39.9	21	00.8	-4	46.5	308	56.8	-22	02.8
1	231	11.8	232	07.0		33.8	168	43.8		40.2	36	03.5		46.4	323	59.3		02.8
2	246	14.3	247	08.3		33.8	183	44.4		40.6	51	06.3		46.3	339	01.9		02.8
3	261	16.8	262	09.6		33.9	198	45.1		40.9	66	09.0		46.2	354	04.5		02.8
4	276	19.2	277	10.9		33.9	213	45.7		41.2	81	11.7		46.1	9	07.0		02.7
5	291	21.7	292	12.2	+1	33.9	228	46.4	+21	41.6	96	14.4	-4	45.9	24	09.6	-22	02.7
6	306	24.2	307	13.5	+1	33.9	243	47.0	+21	41.9	111	17.2	-4	45.8	39	12.1	-22	02.7
7	321	26.6	322	14.7		33.9	258	47.7		42.2	126	19.9		45.7	54	14.7		02.7
8	336	29.1	337	16.0		33.9	273	48.3		42.6	141	22.6		45.6	69	17.2		02.7
9	351	31.5	352	17.3		33.9	288	49.0		42.9	156	25.3		45.5	84	19.8		02.7
10	6	34.0	7	18.6		33.9	303	49.6		43.2	171	28.1		45.4	99	22.4		02.7
11	21	36.5	22	19.9	+1	33.9	318	50.3	+21	43.6	186	30.8	-4	45.3	114	24.9	-22	02.7
12	36	38.9	37	21.1	+1	34.0	333	50.9	+21	43.9	201	33.5	-4	45.2	129	27.5	-22	02.7
13	51	41.4	52	22.4		34.0	348	51.6		44.2	216	36.2		45.1	144	30.0		02.7
14	66	43.9	67	23.7		34.0	3	52.2		44.6	231	38.9		45.0	159	32.6		02.7
15	81	46.3	82	25.0		34.0	18	52.9		44.9	246	41.7		44.9	174	35.2		02.7
16	96	48.8	97	26.2		34.1	33	53.5		45.2	261	44.4		44.8	189	37.7		02.7
17	111	51.3	112	27.5	+1	34.1	48	54.2	+21	45.6	276	47.1	-4	44.7	204	40.3	-22	02.7
18	126	53.7	127	28.7	+1	34.1	63	54.8	+21	45.9	291	49.8	-4	44.6	219	42.8	-22	02.7
19	141	56.2	142	30.0		34.1	78	55.5		46.2	306	52.6		44.5	234	45.4		02.7
20	156	58.6	157	31.3		34.2	93	56.1		46.5	321	55.3		44.4	249	48.0		02.7
21	172	01.1	172	32.5		34.2	108	56.8		46.9	336	58.0		44.3	264	50.5		02.7
22	187	03.6	187	33.8		34.2	123	57.4		47.2	352	00.7		44.2	279	53.1		02.7
23	202	06.0	202	35.0		34.3	138	58.1		47.5	7	03.4		44.1	294	55.6		02.7
24	217	08.5	217	36.3	+1	34.3	153	58.7	+21	47.9	22	06.2	-4	44.0	309	58.2	-22	02.7
Dif	—		+13		0		+6		+3		+27		+1		+26			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 3				Edad: 2 ^d 5 PHE { SD: 16 ^h 6 PMG: 15 ^h 01 ^m 4 ^h : 60 ^m 7 12 ^h : 60 ^m 6 20 ^h : 60 ^m 4 R ^o : 60 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	m	
0	180	39.2	+14	27.2	143	50.9	+17	36.2	60 N	1	52	3	11	4	03	6	24	50	23 47 60	
1	195	39.3		28.0	158	14.5	46	41.1	58	2	18		25	12		36	51		34 60	
2	210	39.4		28.8	172	38.1	46	46.0	56		37		37	20		46	53		22 61	
3	225	39.5		29.6	187	01.7	46	50.7	54	2	53		47	28		6	56	53	12 61	
4	240	39.5		30.3	201	25.3	46	55.3	52	3	06		3	56	34	7	04	54	23 04 60	
5	255	39.6	+14	31.1	215	48.9	46	+17 59.7	50	3	18		4	04	4	40	7	11	55	22 56 60
6	270	39.7	+14	31.9	230	12.5	46	+18 04.0	45	3	40		4	20	4	52	7	27	56	22 39 60
7	285	39.8		32.7	244	36.1	46	08.2	40	3	58		33	5	03		40	57		25 61
8	300	39.9		33.4	258	59.6	45	12.3	35	4	12		44	11		7	51	58		13 61
9	315	40.0		34.2	273	23.2	46	16.2	30		24		4	54	19	8	01	58		22 03 60
10	330	40.1		35.0	287	46.8	46	20.0	20		42		5	09	32		18	59		21 45 61
11	345	40.1	+14	35.7	302	10.3	45	+18 23.6	10 N	4	56		5	22	5	43	8	33	59	21 30 60
12	0	40.2	+14	36.5	316	33.9	46	+18 27.1	0	5	08		5	33	5	54	8	47	60	21 16 60
13	15	40.3		37.3	330	57.5	46	30.5	10 S		18		43	6	04		9	01	61	21 01 60
14	30	40.4		38.1	345	21.1	46	33.8	20		26		5	53	15		15	62		20 46 59
15	45	40.5		38.8	359	44.6	45	36.9	30		35		6	03	28		33	63		28 59
16	60	40.6		39.6	14	08.2	46	39.9	35		39		09	35			43	63		18 59
17	75	40.6	+14	40.4	28	31.8	46	+18 42.7	40	5	43		6	15	6	43	9	54	64	20 06 59
18	90	40.7	+14	41.1	42	55.4	46	+18 45.4	45	5	47		6	22	6	52	10	08	64	19 52 59
19	105	40.8		41.9	57	19.0	46	48.0	50		52		30	7	04		24	66		35 58
20	120	40.9		42.7	71	42.7	47	50.4	52		53		33	09			32	66		27 58
21	135	41.0		43.4	86	06.3	46	52.7	54		55		37	15			41	66		18 58
22	150	41.0		44.2	100	30.0	47	54.9	56		5	57		41	21		10	50	67	19 08 58
23	165	41.1		45.0	114	53.6	46	56.9	58		6	00		46	28		11	02	67	18 57 57
24	180	41.2	+14	45.8	129	17.3	47	+18 58.8	60 S	6	02		6	51	7	37	11	14	69	18 44 57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 29 ^m 9		Mag: -4.7 PMG: 9 ^h 29 ^m		Mag: +1.6 PMG: 13 ^h 43 ^m		Mag: -2.4 PMG: 22 ^h 28 ^m		Mag: +0.3 PMG: 3 ^h 20 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	217	08.5	217	36.3	+1	34.3	153	58.7	+21	47.9	22	06.2	-4	44.0	309	58.2	-22	02.7
1	232	11.0	232	37.5		34.3	168	59.3		48.2	37	08.9		43.9	325	00.8		02.7
2	247	13.4	247	38.8		34.4	184	00.0		48.5	52	11.6		43.8	340	03.3		02.7
3	262	15.9	262	40.0		34.4	199	00.6		48.8	67	14.3		43.7	355	05.9		02.7
4	277	18.4	277	41.2		34.5	214	01.3		49.2	82	17.0		43.6	10	08.4		02.7
5	292	20.8	292	42.5	+1	34.5	229	01.9	+21	49.5	97	19.8	-4	43.5	25	11.0	-22	02.7
6	307	23.3	307	43.7	+1	34.6	244	02.6	+21	49.8	112	22.5	-4	43.4	40	13.6	-22	02.7
7	322	25.8	322	44.9		34.6	259	03.2		50.2	127	25.2		43.3	55	16.1		02.7
8	337	28.2	337	46.2		34.7	274	03.9		50.5	142	27.9		43.2	70	18.7		02.7
9	352	30.7	352	47.4		34.7	289	04.5		50.8	157	30.6		43.1	85	21.2		02.7
10	7	33.1	7	48.6		34.8	304	05.2		51.1	172	33.3		43.0	100	23.8		02.6
11	22	35.6	22	49.8	+1	34.8	319	05.8	+21	51.5	187	36.1	-4	42.9	115	26.4	-22	02.6
12	37	38.1	37	51.1	+1	34.9	334	06.5	+21	51.8	202	38.8	-4	42.8	130	28.9	-22	02.6
13	52	40.5	52	52.3		34.9	349	07.1		52.1	217	41.5		42.7	145	31.5		02.6
14	67	43.0	67	53.5		35.0	4	07.8		52.4	232	44.2		42.7	160	34.1		02.6
15	82	45.5	82	54.7		35.0	19	08.4		52.8	247	46.9		42.6	175	36.6		02.6
16	97	47.9	97	55.9		35.1	34	09.1		53.1	262	49.7		42.5	190	39.2		02.6
17	112	50.4	112	57.1	+1	35.2	49	09.7	+21	53.4	277	52.4	-4	42.4	205	41.7	-22	02.6
18	127	52.9	127	58.3	+1	35.2	64	10.3	+21	53.7	292	55.1	-4	42.3	220	44.3	-22	02.6
19	142	55.3	142	59.5		35.3	79	11.0		54.0	307	57.8		42.2	235	46.9		02.6
20	157	57.8	158	00.7		35.4	94	11.6		54.4	323	00.5		42.1	250	49.4		02.6
21	173	00.3	173	01.9		35.4	109	12.3		54.7	338	03.2		42.0	265	52.0		02.6
22	188	02.7	188	03.1		35.5	124	12.9		55.0	353	06.0		41.9	280	54.6		02.6
23	203	05.2	203	04.3		35.6	139	13.6		55.3	8	08.7		41.8	295	57.1		02.6
24	218	07.6	218	05.5	+1	35.6	154	14.2	+21	55.6	23	11.4	-4	41.7	310	59.7	-22	02.6
Dif	—		+12		+1		+6		+3		+27		+1		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 2			Edad: 3 ^d 5 PHE { 4 ^h : 60 ^h /2 12 ^h : 60 ^h /0 20 ^h : 59 ^h /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	180	41.2	+14 45.8	129	17.3	+18 58.8	18	60 N	19 56	20 49	22 12	7 14 63	** ** *	** ** *	
1	195	41.3	46.5	143	41.1	+19 00.6	18	58	46	34	21 44	27 63	** ** *	** ** *	
2	210	41.4	47.3	158	04.8	02.2	16	56	38	22	23	39 62	** ** *	** ** *	
3	225	41.4	48.1	172	28.6	03.7	15	54	30	12	21 07	49 62	** ** *	** ** *	
4	240	41.5	48.8	186	52.3	05.0	13	52	23	20 02	20 53	7 58 61	** ** *	** ** *	
5	255	41.6	+14 49.6	201	16.1	+19 06.2	12	50	19 17	19 54	20 41	8 06 61	23 56 51		
6	270	41.7	+14 50.3	215	40.0	+19 07.3	11	45	19 04	19 37	20 17	8 23 61	23 39 53		
7	285	41.8	51.1	230	03.8	08.3	10	40	18 54	23	19 59	37 61	26 53		
8	300	41.8	51.9	244	27.7	09.1	8	35	45	12	44	49 60	14 54		
9	315	41.9	52.6	258	51.7	09.8	7	30	37	19 02	32	8 59 60	23 03 55		
10	330	42.0	53.4	273	15.6	10.3	5	20	23	18 46	19 13	9 17 60	22 46 56		
11	345	42.1	+14 54.2	287	39.6	+19 10.7	4	10 N	18 11	18 33	18 59	9 32 60	22 30 57		
12	0	42.2	+14 54.9	302	03.6	+19 11.0	3	0	18 01	18 22	18 47	9 47 59	22 16 58		
13	15	42.2	55.7	316	27.7	11.1	1	10 S	17 50	12	37	10 02 58	22 01 59		
14	30	42.3	56.5	330	51.8	11.1	0	20	38	18 01	27	17 59	21 45 60		
15	45	42.4	57.2	345	15.9	11.0	1	30	26	17 50	19	36 57	27 61		
16	60	42.5	58.0	359	40.1	10.8	2	35	18	44	14	46 57	17 61		
17	75	42.5	+14 58.7	14	04.3	+19 10.4	4	40	17 10	17 38	18 10	10 58 57	21 05 62		
18	90	42.6	+14 59.5	28	28.6	+19 09.8	6	45	17 00	17 31	18 06	11 12 57	20 51 63		
19	105	42.7	+15 00.3	42	52.9	09.2	6	50	16 48	23	18 01	30 55	33 65		
20	120	42.8	01.0	57	17.3	08.4	8	52	43	19	17 59	38 55	25 65		
21	135	42.9	01.8	71	41.7	07.5	9	54	37	15	57	47 55	16 66		
22	150	42.9	02.5	86	06.1	06.5	10	56	30	10	54	11 57 54	20 06 66		
23	165	43.0	03.3	100	30.6	05.3	12	58	23	05	52	12 09 54	19 54 67		
24	180	43.1	+15 04.0	114	55.1	+19 04.0	13	60 S	16 15	17 00	17 50	12 23 52	19 41 68		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 25 ^m 9		Mag: -4.7 PMG: 9 ^h 27 ^m		Mag: +1.6 PMG: 13 ^h 42 ^m		Mag: -2.4 PMG: 22 ^h 23 ^m		Mag: +0.3 PMG: 3 ^h 15 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	°	'	°	°	°	'					
0	218	07.6	218 05.5	+1 35.6	154 14.2	+21 55.6	23 11.4	-4 41.7	310 59.7	-22 02.6					
1	233	10.1	233 06.7	35.7	169 14.9	56.0	38 14.1	41.6	326 02.3	02.6					
2	248	12.6	248 07.9	35.8	184 15.5	56.3	53 16.8	41.5	341 04.8	02.6					
3	263	15.0	263 09.1	35.9	199 16.2	56.6	68 19.5	41.4	356 07.4	02.6					
4	278	17.5	278 10.3	35.9	214 16.8	56.9	83 22.3	41.3	11 10.0	02.6					
5	293	20.0	293 11.4	+1 36.0	229 17.4	+21 57.2	98 25.0	-4 41.2	26 12.5	-22 02.6					
6	308	22.4	308 12.6	+1 36.1	244 18.1	+21 57.6	113 27.7	-4 41.1	41 15.1	-22 02.6					
7	323	24.9	323 13.8	36.2	259 18.7	57.9	128 30.4	41.0	56 17.7	02.6					
8	338	27.4	338 15.0	36.3	274 19.4	58.2	143 33.1	40.9	71 20.2	02.6					
9	353	29.8	353 16.1	36.4	289 20.0	58.5	158 35.8	40.8	86 22.8	02.6					
10	8	32.3	8 17.3	36.4	304 20.7	58.8	173 38.5	40.7	101 25.3	02.6					
11	23	34.8	23 18.5	+1 36.5	319 21.3	+21 59.1	188 41.3	-4 40.6	116 27.9	-22 02.6					
12	38	37.2	38 19.6	+1 36.6	334 22.0	+21 59.5	203 44.0	-4 40.5	131 30.5	-22 02.6					
13	53	39.7	53 20.8	36.7	349 22.6	+21 59.8	218 46.7	40.4	146 33.0	02.6					
14	68	42.1	68 22.0	36.8	4 23.3	+22 00.1	233 49.4	40.3	161 35.6	02.6					
15	83	44.6	83 23.1	36.9	19 23.9	00.4	248 52.1	40.2	176 38.2	02.5					
16	98	47.1	98 24.3	37.0	34 24.5	00.7	263 54.8	40.1	191 40.7	02.5					
17	113	49.5	113 25.4	+1 37.1	49 25.2	+22 01.0	278 57.5	-4 40.0	206 43.3	-22 02.5					
18	128	52.0	128 26.6	+1 37.2	64 25.8	+22 01.4	294 00.3	-4 39.9	221 45.9	-22 02.5					
19	143	54.5	143 27.7	37.3	79 26.5	01.7	309 03.0	39.8	236 48.5	02.5					
20	158	56.9	158 28.9	37.4	94 27.1	02.0	324 05.7	39.7	251 51.0	02.5					
21	173	59.4	173 30.0	37.5	109 27.8	02.3	339 08.4	39.6	266 53.6	02.5					
22	189	01.9	188 31.2	37.6	124 28.4	02.6	354 11.1	39.5	281 56.2	02.5					
23	204	04.3	203 32.3	37.7	139 29.1	02.9	9 13.8	39.4	296 58.7	02.5					
24	219	06.8	218 33.5	+1 37.8	154 29.7	+22 03.2	24 16.5	-4 39.3	312 01.3	-22 02.5					
Dif	—		+12	+1	+6	+3	+27	+1	+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: 4 ^d 5 PHE { 4 ^h : 59/5 12 ^h : 59/3 20 ^h : 59/0 PMG: 17 ^h 00 ^m R ^o : 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	43.1	+15 04.0	114	55.1	+19 04.0	60 N	1 42	3 04	3 58	8 17	72	0 47	46
1	195	43.2	04.8	129	19.7	02.6	58	2 09	19	4 07	30 70		34	48
2	210	43.2	05.6	143	44.4	57	56	30	31	16	41 69		23	48
3	225	43.3	06.3	158	09.1	57	54	2 47	42	23	51 68		13	48
4	240	43.4	07.1	172	33.8	57	52	3 01	3 51	30	8 59	68	0 04	50
5	255	43.5	+15 07.8	186	58.6	58	50	3 13	4 00	4 36	9 07	67	**	**
6	270	43.5	+15 08.6	201	23.5	59	45	3 37	4 17	4 49	9 24	65	**	**
7	285	43.6	09.3	215	48.4	59	40	3 55	31	5 00	38 63		**	**
8	300	43.7	10.1	230	13.4	60	35	4 10	42	09	49 62		**	**
9	315	43.7	10.8	244	38.4	60	30	22	4 52	17	9 59	61	23	58
10	330	43.8	11.6	259	03.5	61	20	41	5 08	31	10 17	59	42	51
11	345	43.9	+15 12.3	273	28.7	62	10 N	4 55	5 21	5 43	10 32	58	23	27
12	0	44.0	+15 13.1	287	53.9	62	0	5 07	5 32	5 54	10 46	57	23	14
13	15	44.0	13.8	302	19.2	63	10 S	18	43	6 05	11 00	55	23	00
14	30	44.1	14.6	316	44.6	64	20	27	5 53	16	16 53		22	45
15	45	44.2	15.3	331	10.0	64	30	36	6 04	29	33 52		28	61
16	60	44.3	16.1	345	35.4	64	35	40	10	37	43 51		18	63
17	75	44.3	+15 16.8	0	01.0	66	40	5 45	6 17	6 45	11 55	49	22	07
18	90	44.4	+15 17.6	14	26.6	66	45	5 49	6 24	6 55	12 09	47	21	54
19	105	44.5	18.3	28	52.3	67	50	54	33	7 07	25 46		38	68
20	120	44.5	19.1	43	18.0	67	52	56	36	12	33 45		30	69
21	135	44.6	19.8	57	43.8	68	54	5 58	41	18	42 43		22	70
22	150	44.7	20.6	72	09.7	69	56	6 01	45	25	12 51	43	12	72
23	165	44.8	21.3	86	35.6	69	58	03	50	33	13 03	40	21	01
24	180	44.8	+15 22.1	101	01.6	70	60 S	6 06	6 56	7 41	13 15	39	20	49
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 22 ^m 0		Mag: -4.7 PMG: 9 ^h 25 ^m			Mag: +1.6 PMG: 13 ^h 41 ^m			Mag: -2.4 PMG: 22 ^h 19 ^m			Mag: +0.3 PMG: 3 ^h 11 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	°	°	'				
0	219	06.8	218	33.5	+1 37.8	154	29.7	+22 03.2	24	16.5	-4 39.3	312	01.3	-22 02.5
1	234	09.3	233	34.6	37.9	169	30.4	03.5	39	19.2	39.2	327	03.9	02.5
2	249	11.7	248	35.7	38.0	184	31.0	03.9	54	22.0	39.1	342	06.4	02.5
3	264	14.2	263	36.9	38.1	199	31.6	04.2	69	24.7	39.1	357	09.0	02.5
4	279	16.6	278	38.0	38.3	214	32.3	04.5	84	27.4	39.0	12	11.6	02.5
5	294	19.1	293	39.1	+1 38.4	229	32.9	+22 04.8	99	30.1	-4 38.9	27	14.1	-22 02.5
6	309	21.6	308	40.3	+1 38.5	244	33.6	+22 05.1	114	32.8	-4 38.8	42	16.7	-22 02.5
7	324	24.0	323	41.4	38.6	259	34.2	05.4	129	35.5	38.7	57	19.3	02.5
8	339	26.5	338	42.5	38.7	274	34.9	05.7	144	38.2	38.6	72	21.8	02.5
9	354	29.0	353	43.6	38.8	289	35.5	06.0	159	40.9	38.5	87	24.4	02.5
10	9	31.4	8	44.7	39.0	304	36.1	06.3	174	43.6	38.4	102	27.0	02.5
11	24	33.9	23	45.9	+1 39.1	319	36.8	+22 06.6	189	46.4	-4 38.3	117	29.6	-22 02.5
12	39	36.4	38	47.0	+1 39.2	334	37.4	+22 07.0	204	49.1	-4 38.2	132	32.1	-22 02.5
13	54	38.8	53	48.1	39.3	349	38.1	07.3	219	51.8	38.1	147	34.7	02.5
14	69	41.3	68	49.2	39.5	4	38.7	07.6	234	54.5	38.0	162	37.3	02.5
15	84	43.7	83	50.3	39.6	19	39.4	07.9	249	57.2	37.9	177	39.8	02.5
16	99	46.2	98	51.4	39.7	34	40.0	08.2	264	59.9	37.8	192	42.4	02.5
17	114	48.7	113	52.5	+1 39.8	49	40.7	+22 08.5	280	02.6	-4 37.7	207	45.0	-22 02.5
18	129	51.1	128	53.6	+1 40.0	64	41.3	+22 08.8	295	05.3	-4 37.6	222	47.5	-22 02.5
19	144	53.6	143	54.7	40.1	79	41.9	09.1	310	08.0	37.5	237	50.1	02.5
20	159	56.1	158	55.8	40.2	94	42.6	09.4	325	10.7	37.4	252	52.7	02.5
21	174	58.5	173	56.9	40.4	109	43.2	09.7	340	13.4	37.3	267	55.3	02.4
22	190	01.0	188	58.0	40.5	124	43.9	10.0	355	16.1	37.2	282	57.8	02.4
23	205	03.5	203	59.1	40.7	139	44.5	10.3	10	18.9	37.2	298	00.4	02.4
24	220	05.9	219	00.2	+1 40.8	154	45.2	+22 10.6	25	21.6	-4 37.1	313	03.0	-22 02.4
Dif	—		+11	+1		+6	+3		+27	+1		+26		0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 0			Edad: 5 ^d 5 SD: 16'0 PMG: 17 ^h 56 ^m	PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'2 R°: 52 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	44.8	+15	22.1	101	01.6	+17 56.4	60 N	20 01	20 55	22 23	9 29 77	1 33 34	
1	195	44.9		22.8	115	27.7	71 52.1	58	19 51	40	21 52	40 75	22 36	
2	210	45.0		23.6	129	53.9	72 47.8	56	42	27	30	50 73	11 38	
3	225	45.0		24.3	144	20.1	72 43.3	54	34	16	21 12	9 59 71	1 02 40	
4	240	45.1		25.1	158	46.4	73 38.7	52	27	20 06	20 57	10 07 69	0 54 41	
5	255	45.2	+15	25.8	173	12.8	74 +17 34.1	50	19 20	19 57	20 45	10 14 68	0 47 42	
6	270	45.2	+15	26.5	187	39.2	74 +17 29.3	45	19 07	19 40	20 20	10 29 65	0 32 44	
7	285	45.3		27.3	202	05.8	76 24.4	40	18 56	25	20 01	41 64	19 46	
8	300	45.4		28.0	216	32.4	76 19.4	35	46	14	19 46	10 51 62	0 08 47	
9	315	45.4		28.8	230	59.0	76 14.3	30	38	19 04	34	11 00 61	** ** *	
10	330	45.5		29.5	245	25.8	78 09.2	20	24	18 47	19 14	16 58	** ** *	
11	345	45.6	+15	30.3	259	52.6	78 +17 03.9	10 N	18 12	18 34	18 59	11 30 55	** ** *	
12	0	45.6	+15	31.0	274	19.5	79 +16 58.5	0	18 00	18 22	18 47	11 43 53	** ** *	
13	15	45.7		31.7	288	46.4	79 53.0	10 S	17 49	11	36	11 55 52	23 57 54	
14	30	45.8		32.5	303	13.5	81 47.5	20	37	18 00	26	12 09 49	44 57	
15	45	45.8		33.2	317	40.6	81 41.8	30	24	17 49	17	25 46	29 60	
16	60	45.9		34.0	332	07.8	82 36.0	35	16	43	13	34 44	21 61	
17	75	46.0	+15	34.7	346	35.1	83 +16 30.2	40	17 07	17 36	18 08	12 44 43	23 11 64	
18	90	46.0	+15	35.4	1	02.4	83 +16 24.2	45	16 57	17 28	18 03	12 56 41	23 00 66	
19	105	46.1		36.2	15	29.8	84 18.2	50	45	19	17 58	13 11 38	22 46 69	
20	120	46.2		36.9	29	57.3	85 12.1	52	39	15	55	18 36	39 71	
21	135	46.2		37.6	44	24.9	86 +16 05.9	54	33	11	53	25 35	32 72	
22	150	46.3		38.4	58	52.5	86 +15 59.6	56	26	06	51	34 33	24 74	
23	165	46.4		39.1	73	20.3	88 53.2	58	18	17 01	48	43 32	15 76	
24	180	46.4	+15	39.9	87	48.0	87 +15 46.7	60 S	16 09	16 55	17 45	13 54 29	22 04 79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 18 ^m 1		Mag: -4.7 PMG: 9 ^h 23 ^m		Mag: +1.6 PMG: 13 ^h 40 ^m		Mag: -2.4 PMG: 22 ^h 15 ^m		Mag: +0.2 PMG: 3 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	220	05.9	219	00.2	+1	40.8	154	45.2	+22	10.6
1	235	08.4	234	01.3		40.9	169	45.8		10.9
2	250	10.9	249	02.4		41.1	184	46.4		11.2
3	265	13.3	264	03.4		41.2	199	47.1		11.5
4	280	15.8	279	04.5		41.4	214	47.7		11.8
5	295	18.2	294	05.6	+1	41.5	229	48.4	+22	12.1
6	310	20.7	309	06.7	+1	41.7	244	49.0	+22	12.4
7	325	23.2	324	07.7		41.8	259	49.7		12.7
8	340	25.6	339	08.8		42.0	274	50.3		13.0
9	355	28.1	354	09.9		42.1	289	50.9		13.3
10	10	30.6	9	11.0		42.3	304	51.6		13.6
11	25	33.0	24	12.0	+1	42.4	319	52.2	+22	13.9
12	40	35.5	39	13.1	+1	42.6	334	52.9	+22	14.2
13	55	38.0	54	14.2		42.7	349	53.5		14.5
14	70	40.4	69	15.2		42.9	4	54.2		14.8
15	85	42.9	84	16.3		43.1	19	54.8		15.1
16	100	45.4	99	17.3		43.2	34	55.4		15.4
17	115	47.8	114	18.4	+1	43.4	49	56.1	+22	15.7
18	130	50.3	129	19.4	+1	43.6	64	56.7	+22	16.0
19	145	52.7	144	20.5		43.7	79	57.4		16.3
20	160	55.2	159	21.5		43.9	94	58.0		16.6
21	175	57.7	174	22.6		44.1	109	58.7		16.9
22	191	00.1	189	23.6		44.2	124	59.3		17.2
23	206	02.6	204	24.7		44.4	139	59.9		17.5
24	221	05.1	219	25.7	+1	44.6	155	00.6	+22	17.8
Dif	—		+11	+2		+6	+3	+27		+1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15:9 PMG: 11 ^h 56 ^m 9			Edad: 6 ^d 5 PHE { 4 ^h : 57/9 12 ^h : 57/7 20 ^h : 57/4 PMG: 18 ^h 48 ^m R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	46.4	+15	39.9	87	48.0	+15	46.7	60 N	1 30	2 58	3 52	10 46	79	2 07	26	
1	195	46.5		40.6	102	15.9 89		40.2 65	58	2 01	3 13	4 02	10 55	76	1 58	28	
2	210	46.6		41.3	116	43.9 90		33.6 66	56		23	26	11	11 03	74	49 30	
3	225	46.6		42.1	131	11.9 90		26.8 68	54	41	37	19	10 72		42 3		
4	240	46.7		42.8	145	40.0 91		20.0 68	52	2 56	47	26	16 71		35 33		
5	255	46.8	+15	43.5	160	08.2 92	+15	13.2 68	50	3 08	3 56	4 33	11 22	69	1 29	35	
6	270	46.8	+15	44.3	174	36.4 92	+15	06.2 70	45	3 33	4 14	4 46	11 34	66	1 16	37	
7	285	46.9		45.0	189	04.8 94	+14	59.2 70	40	3 52	28	4 58	45 63		1 05	40	
8	300	46.9		45.7	203	33.2 94		52.1 71	35	4 07	40	5 07	11 53	61	0 55	42	
9	315	47.0		46.5	218	01.7 95		44.9 72	30	20	4 50	15	12 01	59	47 44		
10	330	47.1		47.2	232	30.2 95		37.6 73	20	39	5 07	30	14 56		33 47		
11	345	47.1	+15	47.9	246	58.8 96	+14	30.3 73	10 N	4 54	5 20	5 42	12 25	53	0 20	50	
12	0	47.2	+15	48.6	261	27.6 98	+14	22.9 74	0	5 07	5 32	5 53	12 36	50	0 09	51	
13	15	47.3		49.4	275	56.3 97		15.4 75	10 S	18	43	6 05	47 47		*** ** *		
14	30	47.3		50.1	290	25.2 99		07.9 75	20	28	5 54	17	12 58	45	*** ** *		
15	45	47.4		50.8	304	54.1 99	+14	00.3 76	30	37	6 05	30	13 11	41	*** ** *		
16	60	47.4		51.6	319	23.1 100	+13	52.6 77	35	42	12	38	18 40		*** ** *		
17	75	47.5	+15	52.3	333	52.2 101	+13	44.8 78	40	5 46	6 19	6 47	13 27	37	*** ** *		
18	90	47.6	+15	53.0	348	21.3 101	+13	37.0 78	45	5 51	6 26	6 57	13 37	35	*** ** *		
19	105	47.6		53.7	2	50.6 103		29.1 79	50	57	35	7 10	49 32		23 55	68	
20	120	47.7		54.5	17	19.8 102		21.2 79	52	5 59	39	16	13 54	31	50 70		
21	135	47.7		55.2	31	49.2 104		13.2 80	54	6 02	44	22	14 00	29	44 72		
22	150	47.8		55.9	46	18.6 104	+13	05.1 81	56	04	49	29	07 27		38 74		
23	165	47.9		56.7	60	48.1 105	+12	57.0 81	58	07	6 54	37	15 24		31 76		
24	180	47.9	+15	57.4	75	17.7 106	+12	48.8 82	60 S	6 10	7 00	7 46	14 23	23	23 23	79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 14 ^m 1		Mag: -4.7 PMG: 9 ^h 22 ^m		Mag: +1.6 PMG: 13 ^h 39 ^m		Mag: -2.4 PMG: 22 ^h 10 ^m		Mag: +0.2 PMG: 3 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	221	05.1	219	25.7	+1	44.6	155	00.6	+22	17.8	26	26.5	-4	34.8	314	04.7	-22	02.4
1	236	07.5	234	26.8		44.7	170	01.2		18.1	41	29.2		34.7	329	07.3		02.4
2	251	10.0	249	27.8		44.9	185	01.9		18.4	56	31.9		34.6	344	09.9		02.3
3	266	12.5	264	28.8		45.1	200	02.5		18.7	71	34.6		34.6	359	12.5		02.3
4	281	14.9	279	29.9		45.3	215	03.1		19.0	86	37.3		34.5	14	15.0		02.3
5	296	17.4	294	30.9	+1	45.5	230	03.8	+22	19.3	101	40.0	-4	34.4	29	17.6	-22	02.3
6	311	19.9	309	31.9	+1	45.6	245	04.4	+22	19.6	116	42.7	-4	34.3	44	20.2	-22	02.3
7	326	22.3	324	32.9		45.8	260	05.1		19.9	131	45.4		34.2	59	22.8		02.3
8	341	24.8	339	34.0		46.0	275	05.7		20.2	146	48.1		34.1	74	25.4		02.3
9	356	27.2	354	35.0		46.2	290	06.4		20.5	161	50.8		34.0	89	27.9		02.3
10	11	29.7	9	36.0		46.4	305	07.0		20.7	176	53.5		33.9	104	30.5		02.3
11	26	32.2	24	37.0	+1	46.6	320	07.6	+22	21.0	191	56.2	-4	33.8	119	33.1	-22	02.3
12	41	34.6	39	38.1	+1	46.7	335	08.3	+22	21.3	206	58.9	-4	33.7	134	35.7	-22	02.3
13	56	37.1	54	39.1		46.9	350	08.9		21.6	222	01.6		33.6	149	38.2		02.3
14	71	39.6	69	40.1		47.1	5	09.6		21.9	237	04.3		33.6	164	40.8		02.3
15	86	42.0	84	41.1		47.3	20	10.2		22.2	252	07.0		33.5	179	43.4		02.3
16	101	44.5	99	42.1		47.5	35	10.8		22.5	267	09.7		33.4	194	46.0		02.3
17	116	47.0	114	43.1	+1	47.7	50	11.5	+22	22.8	282	12.4	-4	33.3	209	48.6	-22	02.3
18	131	49.4	129	44.1	+1	47.9	65	12.1	+22	23.1	297	15.1	-4	33.2	224	51.1	-22	02.3
19	146	51.9	144	45.1		48.1	80	12.8		23.4	312	17.8		33.1	239	53.7		02.3
20	161	54.3	159	46.1		48.3	95	13.4		23.6	327	20.5		33.0	254	56.3		02.3
21	176	56.8	174	47.1		48.5	110	14.1		23.9	342	23.2		32.9	269	58.9		02.3
22	191	59.3	189	48.1		48.7	125	14.7		24.2	357	25.9		32.8	285	01.4		02.3
23	207	01.7	204	49.1		48.9	140	15.3		24.5	12	28.6		32.7	300	04.0		02.3
24	222	04.2	219	50.1	+1	49.1	155	16.0	+22	24.8	27	31.3	-4	32.7	315	06.6	-22	02.3
Dif	—		+10		+2		+6		+3		+27		+1		+26			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9		Edad: 7 ^d 5	PHE { 4 ^h : 57/2 12 ^h : 57/0 20 ^h : 56/7	SD: 15 ^h 6				Rº: 47 ^m							
	PMG: 11 ^h 56 ^m 8	PMG: 19 ^h 38 ^m			hG ☉	Dec			hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	47.9	+15	57.4	75	17.7	+12	48.8	60 N	20 06	21 01	22 35	12 05 77	2 33 20		
1	195	48.0		58.1	89	47.4 ¹⁰⁷		40.5 ⁸³	58	19 55	20 45	22 01	11 75	26 22		
2	210	48.0		58.8	104	17.1 ¹⁰⁷		32.2 ⁸³	56		46	32	21 36	17 73	19 25	
3	225	48.1	+15	59.5	118	46.9 ¹⁰⁸		23.8 ⁸⁴	54		37	20	18	22 71	13 22	
4	240	48.1	+16	00.3	133	16.7 ¹⁰⁸		15.4 ⁸⁴	52		30	10	21 02	27 69	08 28	
5	255	48.2	+16	01.0	147	46.6 ¹⁰⁹	+12	06.9 ⁸⁵	50	19 23	20 01	20 49	12 31 68	2 04 29		
6	270	48.3	+16	01.7	162	16.6 ¹¹⁰	+11	58.4 ⁸⁵	45	19 09	19 42	20 23	12 40 64	1 53 33		
7	285	48.3		02.4	176	46.7 ¹¹¹		49.8 ⁸⁶	40	18 58		27	20 04	48 61	45 35	
8	300	48.4		03.2	191	16.8 ¹¹¹		41.1 ⁸⁷	35		48	15	19 48	12 54 59	37 38	
9	315	48.4		03.9	205	47.0 ¹¹²		32.4 ⁸⁷	30		39	19 05	35	13 00 57	31 40	
10	330	48.5		04.6	220	17.3 ¹¹³		23.7 ⁸⁷	20		25	18 48	15	10 53	20 43	
11	345	48.5	+16	05.3	234	47.6 ¹¹³	+11	14.9 ⁸⁸	10 N	18 12	18 34	19 00	13 18 51	1 10 46		
12	0	48.6	+16	06.0	249	18.0 ¹¹⁴	+11	06.1 ⁸⁸	0	18 00	18 22	18 47	13 26 48	1 00 49		
13	15	48.7		06.8	263	48.4 ¹¹⁴	+10	57.2 ⁸⁹	10 S	17 49	18 10	36	34 45	0 51 52		
14	30	48.7		07.5	278	18.9 ¹¹⁵		48.2 ⁹⁰	20		36	17 59	25	43 41	41 54	
15	45	48.8		08.2	292	49.5 ¹¹⁶		39.3 ⁸⁹	30		22	47	16	52 38	29 58	
16	60	48.8		08.9	307	20.1 ¹¹⁶		30.2 ⁹¹	35		14	41	11	13 58 36	22 61	
17	75	48.9	+16	09.6	321	50.8 ¹¹⁷	+10	21.1 ⁹¹	40	17 05	17 34	18 06	14 04 34	0 15 62		
18	90	48.9	+16	10.3	336	21.6 ¹¹⁸	+10	12.0 ⁹¹	45	16 54	17 25	18 00	14 12 31	0 06 65		
19	105	49.0		11.1	350	52.4 ¹¹⁸	+10	02.9 ⁹¹	50		42	16	17 55	21 27	** ** *	
20	120	49.0		11.8	5	23.3 ¹¹⁹	+9	53.7 ⁹²	52		36	12	52	25 26	** ** *	
21	135	49.1		12.5	19	54.2 ¹¹⁹		44.4 ⁹³	54		29	07	50	29 25	** ** *	
22	150	49.2		13.2	34	25.2 ¹²⁰		35.2 ⁹²	56		22	17 02	47	34 23	** ** *	
23	165	49.2		13.9	48	56.3 ¹²¹		25.8 ⁹⁴	58		14	16 57	44	39 21	** ** *	
24	180	49.3	+16	14.6	63	27.4 ¹²¹	+9	16.5 ⁹³	60 S	16 04	16 51	17 41	14 46 18	** ** *		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 9 ^h 10 ^m 2	Mag: -4.7 PMG: 9 ^h 20 ^m	Mag: +1.6 PMG: 13 ^h 38 ^m	Mag: -2.4 PMG: 22 ^h 06 ^m	Mag: +0.2 PMG: 2 ^h 59 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	°	°	°	°	°	°	°	°							
0	222 04.2	219 50.1	+1 49.1	155 16.0	+22 24.8	27 31.3	-4 32.7	315 06.6	-22 02.3							
1	237 06.7	234 51.1	49.3	170 16.6	25.1	42 34.0	32.6	330 09.2	02.3							
2	252 09.1	249 52.1	49.5	185 17.3	25.4	57 36.7	32.5	345 11.8	02.3							
3	267 11.6	264 53.1	49.7	200 17.9	25.7	72 39.4	32.4	0 14.3	02.3							
4	282 14.1	279 54.1	49.9	215 18.5	25.9	87 42.1	32.3	15 16.9	02.3							
5	297 16.5	294 55.0	+1 50.2	230 19.2	+22 26.2	102 44.8	-4 32.2	30 19.5	-22 02.3							
6	312 19.0	309 56.0	+1 50.4	245 19.8	+22 26.5	117 47.5	-4 32.1	45 22.1	-22 02.3							
7	327 21.5	324 57.0	50.6	260 20.5	26.8	132 50.2	32.0	60 24.7	02.2							
8	342 23.9	339 58.0	50.8	275 21.1	27.1	147 52.9	31.9	75 27.2	02.2							
9	357 26.4	354 59.0	51.0	290 21.7	27.4	162 55.6	31.8	90 29.8	02.2							
10	12 28.8	9 59.9	51.2	305 22.4	27.7	177 58.3	31.8	105 32.4	02.2							
11	27 31.3	25 00.9	+1 51.4	320 23.0	+22 27.9	193 01.0	-4 31.7	120 35.0	-22 02.2							
12	42 33.8	40 01.9	+1 51.7	335 23.7	+22 28.2	208 03.7	-4 31.6	135 37.6	-22 02.2							
13	57 36.2	55 02.9	51.9	350 24.3	28.5	223 06.4	31.5	150 40.2	02.2							
14	72 38.7	70 03.8	52.1	5 24.9	28.8	238 09.1	31.4	165 42.7	02.2							
15	87 41.2	85 04.8	52.3	20 25.6	29.1	253 11.8	31.3	180 45.3	02.2							
16	102 43.6	100 05.8	52.6	35 26.2	29.3	268 14.5	31.2	195 47.9	02.2							
17	117 46.1	115 06.7	+1 52.8	50 26.9	+22 29.6	283 17.1	-4 31.1	210 50.5	-22 02.2							
18	132 48.6	130 07.7	+1 53.0	65 27.5	+22 29.9	298 19.8	-4 31.0	225 53.1	-22 02.2							
19	147 51.0	145 08.6	53.2	80 28.1	30.2	313 22.5	31.0	240 55.6	02.2							
20	162 53.5	160 09.6	53.5	95 28.8	30.5	328 25.2	30.9	255 58.2	02.2							
21	177 56.0	175 10.6	53.7	110 29.4	30.7	343 27.9	30.8	271 00.8	02.2							
22	192 58.4	190 11.5	53.9	125 30.1	31.0	358 30.6	30.7	286 03.4	02.2							
23	208 00.9	205 12.5	54.2	140 30.7	31.3	13 33.3	30.6	301 06.0	02.2							
24	223 03.3	220 13.4	+1 54.4	155 31.3	+22 31.6	28 36.0	-4 30.5	316 08.6	-22 02.2							
Dif	—	+10	+2	+6	+3	+27	+1	+26	0							

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 7			Edad: 8 ^d 5 PHE SD: 15'4 PMG: 20 ^h 25 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	49.3	+16	63	27.4	+9 16.5	60 N	1 18	2 51	3 47	13 22	77	2 53	17
1	195	49.3		77	58.6 ¹²²	+9 07.1 ⁹⁴	58	1 52	3 08	3 58	26 74		48	20
2	210	49.4		92	29.8 ¹²²	+8 57.7 ⁹⁴	56	2 16	21	4 07	30 72		44	21
3	225	49.4		107	01.1 ¹²³	48.2 ⁹⁵	54	35	33	15	33 70		40	23
4	240	49.5		121	32.4 ¹²³	38.7 ⁹⁵	52	2 51	43	23	36 68		36	25
5	255	49.5	+16	136	03.8 ¹²⁴	+8 29.2 ⁹⁵	50	3 04	3 52	4 29	13 39	66	2 33	27
6	270	49.6	+16	150	35.3 ¹²⁵	+8 19.6 ⁹⁶	45	3 30	4 11	4 44	13 44	63	2 26	30
7	285	49.6		165	06.8 ¹²⁵	10.0 ⁹⁶	40	3 49	26	4 55	49 60		20	33
8	300	49.7		179	38.3 ¹²⁵	+8 00.4 ⁹⁶	35	4 05	38	5 05	53 58		15	35
9	315	49.7		194	09.9 ¹²⁶	+7 50.7 ⁹⁷	30	18	4 48	14	13 57	55	11	36
10	330	49.8		208	41.6 ¹²⁷	41.0 ⁹⁷	20	38	5 05	29	14 03	52	2 03	40
11	345	49.8	+16	223	13.3 ¹²⁷	+7 31.3 ⁹⁷	10 N	4 54	5 19	5 41	14 09	48	1 56	43
12	0	49.9	+16	237	45.1 ¹²⁸	+7 21.6 ⁹⁷	0	5 07	5 32	5 53	14 14	45	1 49	47
13	15	49.9		252	16.9 ¹²⁸	11.8 ⁹⁸	10 S	18	43	6 05	19 42		43	49
14	30	50.0		266	48.7 ¹²⁸	+7 02.0 ⁹⁸	20	28	5 55	17	24 39		35	53
15	45	50.0		281	20.6 ¹²⁹	+6 52.2 ⁹⁸	30	38	6 07	32	30 36		27	57
16	60	50.1		295	52.6 ¹³⁰	42.3 ⁹⁹	35	43	13	40	34 33		23	58
17	75	50.1	+16	310	24.5 ¹²⁹	+6 32.5 ⁹⁸	40	5 48	6 20	6 49	14 38	31	1 17	61
18	90	50.2	+16	324	56.6 ¹³¹	+6 22.6 ⁹⁹	45	5 54	6 29	7 00	14 43	28	1 11	64
19	105	50.2		339	28.7 ¹³¹	12.7 ⁹⁹	50	5 59	38	13	48 25		03	68
20	120	50.3		354	00.8 ¹³¹	+6 02.7 ¹⁰⁰	52	6 02	42	19	51 23		1 00	69
21	135	50.3		8	33.0 ¹³²	+5 52.8 ⁹⁹	54	05	47	25	54 21		0 56	71
22	150	50.4		23	05.2 ¹³²	42.8 ¹⁰⁰	56	07	52	33	14 57	20	52	72
23	165	50.4		37	37.4 ¹³²	32.8 ¹⁰⁰	58	10	6 58	41	15 00	18	47	75
24	180	50.5	+16	52	09.7 ¹³³	+5 22.8 ¹⁰⁰	60 S	6 14	7 04	7 51	15 04	16	0 42	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 06 ^m 3		Mag: -4.7 PMG: 9 ^h 19 ^m		Mag: +1.6 PMG: 13 ^h 37 ^m		Mag: -2.4 PMG: 22 ^h 02 ^m		Mag: +0.2 PMG: 2 ^h 55 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	223	03.3	220	13.4	+1 54.4	155	31.3	+22 31.6	28	36.0	-4 30.5	316	08.6	-22 02.2
1	238	05.8	235	14.4	54.6	170	32.0	31.9	43	38.7	30.4	331	11.1	02.2
2	253	08.3	250	15.3	54.9	185	32.6	32.1	58	41.4	30.3	346	13.7	02.2
3	268	10.7	265	16.2	55.1	200	33.3	32.4	73	44.1	30.3	1	16.3	02.2
4	283	13.2	280	17.2	55.4	215	33.9	32.7	88	46.8	30.2	16	18.9	02.2
5	298	15.7	295	18.1	+1 55.6	230	34.5	+22 33.0	103	49.5	-4 30.1	31	21.5	-22 02.2
6	313	18.1	310	19.1	+1 55.8	245	35.2	+22 33.2	118	52.2	-4 30.0	46	24.1	-22 02.2
7	328	20.6	325	20.0	56.1	260	35.8	33.5	133	54.9	29.9	61	26.6	02.2
8	343	23.1	340	20.9	56.3	275	36.5	33.8	148	57.5	29.8	76	29.2	02.2
9	358	25.5	355	21.9	56.6	290	37.1	34.1	164	00.2	29.7	91	31.8	02.2
10	13	28.0	10	22.8	56.8	305	37.7	34.4	179	02.9	29.6	106	34.4	02.2
11	28	30.4	25	23.7	+1 57.1	320	38.4	+22 34.6	194	05.6	-4 29.6	121	37.0	-22 02.2
12	43	32.9	40	24.7	+1 57.3	335	39.0	+22 34.9	209	08.3	-4 29.5	136	39.6	-22 02.1
13	58	35.4	55	25.6	57.6	350	39.6	35.2	224	11.0	29.4	151	42.1	02.1
14	73	37.8	70	26.5	57.8	5	40.3	35.4	239	13.7	29.3	166	44.7	02.1
15	88	40.3	85	27.4	58.1	20	40.9	35.7	254	16.4	29.2	181	47.3	02.1
16	103	42.8	100	28.3	58.3	35	41.6	36.0	269	19.1	29.1	196	49.9	02.1
17	118	45.2	115	29.3	+1 58.6	50	42.2	+22 36.3	284	21.8	-4 29.0	211	52.5	-22 02.1
18	133	47.7	130	30.2	+1 58.8	65	42.8	+22 36.5	299	24.5	-4 29.0	226	55.1	-22 02.1
19	148	50.2	145	31.1	59.1	80	43.5	36.8	314	27.1	28.9	241	57.7	02.1
20	163	52.6	160	32.0	59.4	95	44.1	37.1	329	29.8	28.8	257	00.2	02.1
21	178	55.1	175	32.9	59.6	110	44.8	37.4	344	32.5	28.7	272	02.8	02.1
22	193	57.6	190	33.8	+1 59.9	125	45.4	37.6	359	35.2	28.6	287	05.4	02.1
23	209	00.0	205	34.7	+2 00.1	140	46.0	37.9	14	37.9	28.5	302	08.0	02.1
24	224	02.5	220	35.7	+2 00.4	155	46.7	+22 38.2	29	40.6	-4 28.4	317	10.6	-22 02.1
Dif	—		+9	+3		+6	+3		+27	+1		+26		0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9		Edad: 9 ^d 5		PHE {	SD: 15°2			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 56 ^m 6		PMG: 21 ^h 10 ^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	50.5	+16	31.6	52	09.7	+5 22.8	60 N	20 11	21 08	22 49	14 39 75	3 10 15		
1	195	50.5		32.3	66	42.1 ¹³⁴	12.8 ¹⁰⁰	58	19 59	20 51	22 09	40 73	08 17		
2	210	50.6		33.0	81	14.4 ¹³³	+5 02.7 ¹⁰¹	56		50	36	21 43	42 70	05 20	
3	225	50.6		33.7	95	46.8 ¹³⁴	+4 52.7 ¹⁰⁰	54		41	24	23	43 69	03 21	
4	240	50.7		34.4	110	19.3 ¹³⁵	42.6 ¹⁰¹	52		33	14	21 07	44 67	01 23	
5	255	50.7	+16	35.1	124	51.8 ¹³⁵	+4 32.5 ¹⁰¹	50	19 27	20 04	20 53	14 45 65	3 00 24		
6	270	50.8	+16	35.8	139	24.3 ¹³⁵	+4 22.4 ¹⁰¹	45	19 12	19 45	20 26	14 47 62	2 56 27		
7	285	50.8		36.5	153	56.9 ¹³⁶	12.3 ¹⁰¹	40	19 00		30	20 06	49 59	53 30	
8	300	50.8		37.2	168	29.5 ¹³⁶	+4 02.2 ¹⁰¹	35	18 50	17	19 50	51 56	50 33		
9	315	50.9		37.9	183	02.1 ¹³⁶	+3 52.1 ¹⁰¹	30		41	19 06	37	52 55	47 35	
10	330	50.9		38.6	197	34.8 ¹³⁷	41.9 ¹⁰²	20		25	18 49	16	55 50	43 39	
11	345	51.0	+16	39.3	212	07.5 ¹³⁷	+3 31.8 ¹⁰¹	10 N	18 12	18 34	19 00	14 57 47	2 39 42		
12	0	51.0	+16	40.0	226	40.2 ¹³⁷	+3 21.6 ¹⁰²	0	18 00	18 22	18 47	14 59 44	2 36 45		
13	15	51.1		40.7	241	13.0 ¹³⁸	11.4 ¹⁰²	10 S	17 48	18 10	35	15 01 41	32 48		
14	30	51.1		41.4	255	45.8 ¹³⁸	+3 01.3 ¹⁰¹	20		35	17 58	25	03 38	28 51	
15	45	51.2		42.1	270	18.6 ¹³⁸	+2 51.1 ¹⁰²	30		21	46	14	06 34	24 55	
16	60	51.2		42.8	284	51.5 ¹³⁹	40.9 ¹⁰²	35		12	39	09	07 33	21 57	
17	75	51.2	+16	43.5	299	24.3 ¹³⁸	+2 30.7 ¹⁰²	40	17 03	17 31	18 04	15 09 30	2 18 60		
18	90	51.3	+16	44.2	313	57.3 ¹⁴⁰	+2 20.5 ¹⁰²	45	16 52	17 23	17 58	15 11 27	2 15 62		
19	105	51.3		44.9	328	30.2 ¹³⁹	10.3 ¹⁰²	50		38	13	52	13 24	11 66	
20	120	51.4		45.6	343	03.2 ¹⁴⁰	+2 00.1 ¹⁰²	52		32	09	49	14 23	09 67	
21	135	51.4		46.2	357	36.2 ¹⁴⁰	+1 49.9 ¹⁰²	54		25	17 04	46	15 21	07 69	
22	150	51.5		46.9	12	09.2 ¹⁴⁰	39.7 ¹⁰²	56		18	16 59	43	17 19	04 72	
23	165	51.5		47.6	26	42.2 ¹⁴⁰	29.5 ¹⁰²	58	16 09	53	40	18 17	2 02 73		
24	180	51.5	+16	48.3	41	15.3 ¹⁴¹	+1 19.2 ¹⁰³	60 S	15 59	16 46	17 37	15 20 14	1 59 76		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 02 ^m 3		Mag: -4.7 PMG: 9 ^h 17 ^m		Mag: +1.6 PMG: 13 ^h 36 ^m		Mag: -2.4 PMG: 21 ^h 57 ^m		Mag: +0.2 PMG: 2 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	224	02.5	220	35.7	+2	00.4	155	46.7	+22	38.2
1	239	04.9	235	36.6		00.7	170	47.3		38.4
2	254	07.4	250	37.5		00.9	185	48.0		38.7
3	269	09.9	265	38.4		01.2	200	48.6		39.0
4	284	12.3	280	39.3		01.5	215	49.2		39.2
5	299	14.8	295	40.2	+2	01.8	230	49.9	+22	39.5
6	314	17.3	310	41.1	+2	02.0	245	50.5	+22	39.8
7	329	19.7	325	41.9		02.3	260	51.1		40.0
8	344	22.2	340	42.8		02.6	275	51.8		40.3
9	359	24.7	355	43.7		02.9	290	52.4		40.6
10	14	27.1	10	44.6		03.1	305	53.1		40.9
11	29	29.6	25	45.5	+2	03.4	320	53.7	+22	41.1
12	44	32.0	40	46.4	+2	03.7	335	54.3	+22	41.4
13	59	34.5	55	47.3		04.0	350	55.0		41.6
14	74	37.0	70	48.2		04.2	5	55.6		41.9
15	89	39.4	85	49.0		04.5	20	56.3		42.2
16	104	41.9	100	49.9		04.8	35	56.9		42.4
17	119	44.4	115	50.8	+2	05.1	50	57.5	+22	42.7
18	134	46.8	130	51.7	+2	05.4	65	58.2	+22	43.0
19	149	49.3	145	52.5		05.7	80	58.8		43.2
20	164	51.8	160	53.4		06.0	95	59.4		43.5
21	179	54.2	175	54.3		06.3	111	00.1		43.8
22	194	56.7	190	55.2		06.5	126	00.7		44.0
23	209	59.2	205	56.0		06.8	141	01.4		44.3
24	225	01.6	220	56.9	+2	07.1	156	02.0	+22	44.5
Dif	—		+9		+3		+6		+3	
							+27		+1	
									+26	
									0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 5				Edad: 10 ^d 5 PHE SD: 15 ^h 1 PMG: 21 ^h 54 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	51.5	+16	48.3	41	15.3	+1	19.2	60 N	1	03	2	45	3	42	15	54	73
1	195	51.6		49.0	55	48.4 ¹⁴¹	+1	09.0 ¹⁰²	58	1	43	3	02	3	53	53	71	25
2	210	51.6		49.7	70	21.5 ¹⁴¹	+0	58.8 ¹⁰²	56	2	09		16	4	03	52	69	25
3	225	51.7		50.4	84	54.7 ¹⁴²		48.6 ¹⁰²	54		29		28	11		52	67	24
4	240	51.7		51.1	99	27.8 ¹⁴¹		38.4 ¹⁰²	52		46		39	19		51	66	24
5	255	51.8	+16	51.8	114	01.0 ¹⁴²	+0	28.2 ¹⁰²	50	2	59	3	48	4	26	15	50	65
6	270	51.8	+16	52.4	128	34.2 ¹⁴²	+0	18.0 ¹⁰²	45	3	26	4	08	4	41	15	49	61
7	285	51.8		53.1	143	07.4 ¹⁴²	+0	07.8 ¹⁰²	40	3	46		23	4	53	48	58	23
8	300	51.9		53.8	157	40.7 ¹⁴³	-0	02.3 ¹⁰¹	35	4	03		36	5	03	47	56	23
9	315	51.9		54.5	172	13.9 ¹⁴²		12.5 ¹⁰²	30		16	4	46	12		47	53	22
10	330	52.0		55.2	186	47.2 ¹⁴³		22.7 ¹⁰²	20		37	5	04	27		45	50	22
11	345	52.0	+16	55.9	201	20.5 ¹⁴³	-0	32.9 ¹⁰²	10 N	4	53	5	19	5	41	15	44	47
12	0	52.0	+16	56.6	215	53.8 ¹⁴³	-0	43.0 ¹⁰¹	0	5	06	5	31	5	53	15	43	44
13	15	52.1		57.2	230	27.1 ¹⁴³	-0	53.2 ¹⁰²	10 S		18		43	6	05	42	41	20
14	30	52.1		57.9	245	00.5 ¹⁴⁴	-1	03.3 ¹⁰¹	20		29	5	55	18		41	38	19
15	45	52.1		58.6	259	33.8 ¹⁴³		13.4 ¹⁰¹	30		39	6	08	33		40	34	19
16	60	52.2	+16	59.3	274	07.2 ¹⁴⁴		23.5 ¹⁰¹	35		44		15	41		40	32	18
17	75	52.2	+17	00.0	288	40.6 ¹⁴⁴	-1	33.7 ¹⁰²	40	5	50	6	22	6	51	15	39	30
18	90	52.3	+17	00.7	303	13.9 ¹⁴³	-1	43.7 ¹⁰⁰	45	5	56	6	31	7	02	15	38	27
19	105	52.3		01.3	317	47.3 ¹⁴⁴	-1	53.8 ¹⁰¹	50	6	02		41	16		37	24	17
20	120	52.3		02.0	332	20.8 ¹⁴⁵	-2	03.9 ¹⁰¹	52		05		45	22		37	22	16
21	135	52.4		02.7	346	54.2 ¹⁴⁴		13.9 ¹⁰⁰	54		08		50	29		36	21	16
22	150	52.4		03.4	1	27.6 ¹⁴⁴		24.0 ¹⁰¹	56		11	6	56	37		36	19	16
23	165	52.4		04.1	16	01.1 ¹⁴⁵		34.0 ¹⁰⁰	58		14	7	02	45		35	17	15
24	180	52.5	+17	04.7	30	34.5 ¹⁴⁴	-2	44.0 ¹⁰⁰	60 S	6	17	7	08	7	55	15	34	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 58 ^m 4		Mag: -4.7 PMG: 9 ^h 16 ^m		Mag: +1.6 PMG: 13 ^h 35 ^m		Mag: -2.4 PMG: 21 ^h 53 ^m		Mag: +0.2 PMG: 2 ^h 47 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	225	01.6	220	56.9	+2	07.1	156	02.0	+22	44.5
1	240	04.1	235	57.7		07.4	171	02.6		44.8
2	255	06.5	250	58.6		07.7	186	03.3		45.1
3	270	09.0	265	59.5		08.0	201	03.9		45.3
4	285	11.5	281	00.3		08.3	216	04.5		45.6
5	300	13.9	296	01.2	+2	08.6	231	05.2	+22	45.9
6	315	16.4	311	02.0	+2	08.9	246	05.8	+22	46.1
7	330	18.9	326	02.9		09.2	261	06.5		46.4
8	345	21.3	341	03.7		09.5	276	07.1		46.6
9	0	23.8	356	04.6		09.8	291	07.7		46.9
10	15	26.3	11	05.4		10.1	306	08.4		47.1
11	30	28.7	26	06.3	+2	10.4	321	09.0	+22	47.4
12	45	31.2	41	07.1	+2	10.7	336	09.6	+22	47.7
13	60	33.6	56	08.0		11.0	351	10.3		47.9
14	75	36.1	71	08.8		11.4	6	10.9		48.2
15	90	38.6	86	09.7		11.7	21	11.5		48.4
16	105	41.0	101	10.5		12.0	36	12.2		48.7
17	120	43.5	116	11.3	+2	12.3	51	12.8	+22	48.9
18	135	46.0	131	12.2	+2	12.6	66	13.5	+22	49.2
19	150	48.4	146	13.0		12.9	81	14.1		49.5
20	165	50.9	161	13.8		13.2	96	14.7		49.7
21	180	53.4	176	14.7		13.6	111	15.4		50.0
22	195	55.8	191	15.5		13.9	126	16.0		50.2
23	210	58.3	206	16.3		14.2	141	16.6		50.5
24	226	00.8	221	17.1	+2	14.5	156	17.3	+22	50.7
Dif	—		+8		+3		+6		+3	
							+27		+1	
									+26	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 11 ^d 5 PHE { SD: 15 ^h 0 PMG: 22 ^h 38 ^m 4 ^h : 54 ^m 9 12 ^h : 54 ^m 8 20 ^h : 54 ^m 7 R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	52.5	+17 04.7	30	34.5	-2 44.0	60 N	20 16	21 14	23 07	17 07 73	3 40 15		
1	195	52.5	05.4	45	08.0 ¹⁴⁵	-2 54.0 ¹⁰⁰	58	20 04	20 56	22 19	04 71	42 17		
2	210	52.6	06.1	59	41.4 ¹⁴⁴	-3 04.0 ¹⁰⁰	56	19 54	41	21 50	17 01 69	44 19		
3	225	52.6	06.8	74	14.9 ¹⁴⁵	13.9 ⁹⁹	54	45	28	29	16 59 66	45 21		
4	240	52.6	07.4	88	48.4 ¹⁴⁵	23.9 ¹⁰⁰	52	37	17	21 12	57 64	46 23		
5	255	52.7	+17 08.1	103	21.9 ¹⁴⁵	-3 33.8 ⁹⁹	50	19 29	20 08	20 58	16 55 63	3 48 24		
6	270	52.7	+17 08.8	117	55.4 ¹⁴⁵	-3 43.7 ⁹⁹	45	19 14	19 48	20 30	16 50 60	3 50 28		
7	285	52.7	09.5	132	28.9 ¹⁴⁵	-3 53.5 ⁹⁸	40	19 02	32	20 09	46 58	53 30		
8	300	52.8	10.2	147	02.4 ¹⁴⁵	-4 03.4 ⁹⁹	35	18 51	19	19 52	43 55	55 32		
9	315	52.8	10.8	161	35.9 ¹⁴⁵	13.2 ⁹⁸	30	42	19 08	39	40 53	56 35		
10	330	52.8	11.5	176	09.4 ¹⁴⁵	23.0 ⁹⁸	20	26	18 50	17	35 50	3 59 38		
11	345	52.9	+17 12.2	190	42.9 ¹⁴⁵	-4 32.8 ⁹⁸	10 N	18 13	18 35	19 01	16 31 47	4 02 41		
12	0	52.9	+17 12.8	205	16.4 ¹⁴⁵	-4 42.6 ⁹⁸	0	18 00	18 22	18 47	16 27 44	4 05 43		
13	15	52.9	13.5	219	49.9 ¹⁴⁵	-4 52.3 ⁹⁷	10 S	17 47	18 09	35	23 41	07 47		
14	30	53.0	14.2	234	23.4 ¹⁴⁵	-5 02.0 ⁹⁷	20	34	17 57	24	19 38	10 49		
15	45	53.0	14.9	248	56.9 ¹⁴⁵	11.7 ⁹⁷	30	19	44	13	14 35	13 53		
16	60	53.0	15.5	263	30.4 ¹⁴⁵	21.4 ⁹⁷	35	11	37	07	12 32	14 56		
17	75	53.1	+17 16.2	278	03.9 ¹⁴⁵	-5 31.0 ⁹⁶	40	17 01	17 29	18 02	16 09 30	4 16 58		
18	90	53.1	+17 16.9	292	37.4 ¹⁴⁵	-5 40.6 ⁹⁶	45	16 49	17 21	17 56	16 05 28	4 19 60		
19	105	53.1	17.5	307	10.9 ¹⁴⁵	50.2 ⁹⁶	50	35	10	49	16 01 25	21 64		
20	120	53.2	18.2	321	44.4 ¹⁴⁵	-5 59.8 ⁹⁶	52	29	06	46	15 59 23	23 65		
21	135	53.2	18.9	336	17.9 ¹⁴⁵	-6 09.3 ⁹⁵	54	22	17 01	43	57 22	24 67		
22	150	53.2	19.5	350	51.4 ¹⁴⁵	18.8 ⁹⁵	56	14	16 55	40	55 20	25 69		
23	165	53.2	20.2	5	24.9 ¹⁴⁵	28.2 ⁹⁴	58	16 05	49	37	52 18	27 71		
24	180	53.3	+17 20.9	19	58.4 ¹⁴⁵	-6 37.7 ⁹⁵	60 S	15 54	16 42	17 33	15 49 16	4 29 73		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 54 ^m 5		Mag: -4.7 PMG: 9 ^h 14 ^m		Mag: +1.6 PMG: 13 ^h 34 ^m		Mag: -2.4 PMG: 21 ^h 49 ^m		Mag: +0.2 PMG: 2 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	226	00.8	221	17.1	156	17.3	31	49.4	319	14.9
1	241	03.2	236	18.0	171	17.9	46	52.1	334	17.5
2	256	05.7	251	18.8	186	18.6	61	54.8	349	20.1
3	271	08.1	266	19.6	201	19.2	76	57.4	4	22.7
4	286	10.6	281	20.4	216	19.8	92	00.1	19	25.3
5	301	13.1	296	21.3	231	20.5	107	02.8	34	27.9
6	316	15.5	311	22.1	246	21.1	122	05.5	49	30.5
7	331	18.0	326	22.9	261	21.7	137	08.1	64	33.1
8	346	20.5	341	23.7	276	22.4	152	10.8	79	35.6
9	1	22.9	356	24.5	291	23.0	167	13.5	94	38.2
10	16	25.4	11	25.3	306	23.6	182	16.2	109	40.8
11	31	27.9	26	26.1	321	24.3	197	18.8	124	43.4
12	46	30.3	41	26.9	336	24.9	212	21.5	139	46.0
13	61	32.8	56	27.7	351	25.6	227	24.2	154	48.6
14	76	35.3	71	28.5	6	26.2	242	26.9	169	51.2
15	91	37.7	86	29.3	21	26.8	257	29.5	184	53.8
16	106	40.2	101	30.1	36	27.5	272	32.2	199	56.4
17	121	42.6	116	30.9	51	28.1	287	34.9	214	59.0
18	136	45.1	131	31.7	66	28.7	302	37.6	230	01.6
19	151	47.6	146	32.5	81	29.4	317	40.2	245	04.2
20	166	50.0	161	33.3	96	30.0	332	42.9	260	06.8
21	181	52.5	176	34.1	111	30.6	347	45.6	275	09.4
22	196	55.0	191	34.9	126	31.3	2	48.3	290	12.0
23	211	57.4	206	35.7	141	31.9	17	50.9	305	14.6
24	226	59.9	221	36.5	156	32.5	32	53.6	320	17.2
Dif	—		+8		+3		+27		+1	

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: 12 ^d 5 PHE { SD: 14 ^h 9 PMG: 23 ^h 22 ^m					R ^o : 44 ^m			R ^o		R ^o					
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R ^o			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	53.3	+17	20.9	19	58.4	-6	37.7	94	60 N	0	46	2	38	3	37	18	20	71	
1	195	53.3		21.5	34	31.8 ¹⁴⁴		47.1	94	58	1	34	2	56	48		15	69	3	
2	210	53.3		22.2	49	05.3 ¹⁴⁵		-6	56.4	93	56	2	02	3	11	3	59	10	67	4
3	225	53.4		22.9	63	38.8 ¹⁴⁵		-7	05.8	94	54		23	24	4	08	05	66	06	2
4	240	53.4		23.5	78	12.2 ¹⁴⁴			15.1	93	52		41	35	16		18	01	64	0
5	255	53.4	+17	24.2	92	45.7 ¹⁴⁵		-7	24.3	92	50	2	55	3	45	4	23	17	58	62
6	270	53.5	+17	24.9	107	19.1 ¹⁴⁴		-7	33.6	93	45	3	23	4	05	4	38	17	50	59
7	285	53.5		25.5	121	52.5 ¹⁴⁴			42.7	91	40	3	44	21	4	51	44	56		23
8	300	53.5		26.2	136	26.0 ¹⁴⁵		-7	51.9	92	35	4	00	34	5	01	38	55		27
9	315	53.5		26.9	150	59.4 ¹⁴⁴		-8	01.0	91	30		14	4	45	11	33	53		31
10	330	53.6		27.5	165	32.8 ¹⁴⁴			10.1	91	20		35	5	03	26	25	50		37
11	345	53.6	+17	28.2	180	06.2 ¹⁴⁴		-8	19.2	91	10 N	4	52	5	18	5	40	17	18	47
12	0	53.6	+17	28.8	194	39.6 ¹⁴⁴		-8	28.2	90	0	5	06	5	31	5	53	17	11	44
13	15	53.7		29.5	209	12.9 ¹⁴³			37.1	89	10 S		18	44	6	06	17	04	42	
14	30	53.7		30.2	223	46.3 ¹⁴⁴			46.1	90	20		29	5	56	19	16	57	39	4
15	45	53.7		30.8	238	19.6 ¹⁴³		-8	55.0	89	30	40	6	09	34		49	36		5
16	60	53.7		31.5	252	53.0 ¹⁴⁴		-9	03.8	88	35		46	16	43		44	34		10
17	75	53.8	+17	32.1	267	26.3 ¹⁴³		-9	12.6	88	40	5	52	6	24	6	53	16	39	32
18	90	53.8	+17	32.8	281	59.6 ¹⁴³		-9	21.4	88	45	5	58	6	33	7	04	16	33	30
19	105	53.8		33.4	296	32.9 ¹⁴³			30.1	87	50	6	04	43	18		26	26		25
20	120	53.8		34.1	311	06.2 ¹⁴³			38.8	87	52		07	48	25		22	26		28
21	135	53.9		34.8	325	39.5 ¹⁴³			47.4	86	54		10	53	32		19	24		31
22	150	53.9		35.4	340	12.7 ¹⁴²		-9	56.0	86	56		14	6	59	40	15	22		34
23	165	53.9		36.1	354	46.0 ¹⁴³		-10	04.5	85	58		17	7	05	7	50	10	20	
24	180	53.9	+17	36.7	9	19.2 ¹⁴²		-10	13.0	85	60 S	6	21	7	12	8	00	16	05	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 50 ^m 6		Mag: -4.7 PMG: 9 ^h 13 ^m		Mag: +1.6 PMG: 13 ^h 33 ^m		Mag: -2.4 PMG: 21 ^h 45 ^m		Mag: +0.2 PMG: 2 ^h 38 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	226	59.9	221	36.5	+2	22.6	156	32.5	+22	56.7
1	242	02.4	236	37.3		22.9	171	33.2		56.9
2	257	04.8	251	38.0		23.3	186	33.8		57.2
3	272	07.3	266	38.8		23.6	201	34.5		57.4
4	287	09.7	281	39.6		24.0	216	35.1		57.7
5	302	12.2	296	40.4	+2	24.3	231	35.7	+22	57.9
6	317	14.7	311	41.2	+2	24.7	246	36.4	+22	58.2
7	332	17.1	326	41.9		25.0	261	37.0		58.4
8	347	19.6	341	42.7		25.4	276	37.6		58.6
9	2	22.1	356	43.5		25.7	291	38.3		58.9
10	17	24.5	11	44.3		26.1	306	38.9		59.1
11	32	27.0	26	45.0	+2	26.5	321	39.5	+22	59.4
12	47	29.5	41	45.8	+2	26.8	336	40.2	+22	59.6
13	62	31.9	56	46.6		27.2	351	40.8	+22	59.8
14	77	34.4	71	47.3		27.5	6	41.4	+23	00.1
15	92	36.9	86	48.1		27.9	21	42.1		00.3
16	107	39.3	101	48.9		28.3	36	42.7		00.6
17	122	41.8	116	49.6	+2	28.6	51	43.4	+23	00.8
18	137	44.2	131	50.4	+2	29.0	66	44.0	+23	01.0
19	152	46.7	146	51.1		29.4	81	44.6		01.3
20	167	49.2	161	51.9		29.7	96	45.3		01.5
21	182	51.6	176	52.7		30.1	111	45.9		01.8
22	197	54.1	191	53.4		30.5	126	46.5		02.0
23	212	56.6	206	54.2		30.9	141	47.2		02.2
24	227	59.0	221	54.9	+2	31.2	156	47.8	+23	02.5
Dif	—		+8		+4		+6		+2	
							+27		+1	
									+26	
									0	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8		Edad: 13 ^d 5	PHE { 4 ^h : 54 ^m /3 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2	SD: 14 ^h 8	PMG: **h **m			R°: **m						
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	180	53.9	+17	36.7	9	19.2	-10	13.0	60 N	20 20	21 20	23 34	19 31 70	4 12 20	
1	195	54.0		37.4	23	52.4 ¹⁴²		21.5 ⁸⁵	58	20 08	21 01	22 29	24 67	18 22	
2	210	54.0		38.0	38	25.6 ¹⁴²		29.9 ⁸⁴	56	19 57	20 46	21 57	17 65	24 24	
3	225	54.0		38.7	52	58.8 ¹⁴²		38.3 ⁸⁴	54	48	32	35	11 63	29 25	
4	240	54.0		39.3	67	31.9 ¹⁴¹		46.6 ⁸³	52	40	21	17	05 62	33 27	
5	255	54.1	+17	40.0	82	05.1 ¹⁴²	-10	54.9 ⁸³	50	19 32	20 11	21 02	19 00 61	4 38 28	
6	270	54.1	+17	40.6	96	38.2 ¹⁴¹	-11	03.1 ⁸²	45	19 17	19 50	20 33	18 49 58	4 46 31	
7	285	54.1		41.3	111	11.3 ¹⁴¹		11.2 ⁸¹	40	19 04	34	20 11	40 56	4 54 33	
8	300	54.1		41.9	125	44.4 ¹⁴¹		19.4 ⁸²	35	18 53	21	19 54	33 54	5 00 35	
9	315	54.1		42.6	140	17.5 ¹⁴¹		27.4 ⁸⁰	30	43	19 09	40	26 53	06 37	
10	330	54.2		43.2	154	50.5 ¹⁴⁰		35.4 ⁸⁰	20	27	18 50	18	15 49	16 39	
11	345	54.2	+17	43.9	169	23.6 ¹⁴¹	-11	43.4 ⁸⁰	10 N	18 13	18 35	19 01	18 05 47	5 24 43	
12	0	54.2	+17	44.5	183	56.6 ¹⁴⁰	-11	51.3 ⁷⁹	0	18 00	18 22	18 47	17 55 45	5 32 45	
13	15	54.2		45.2	198	29.6 ¹⁴⁰	-11	59.2 ⁷⁹	10 S	17 47	18 09	34	46 43	40 47	
14	30	54.2		45.8	213	02.6 ¹⁴⁰	-12	07.0 ⁷⁸	20	33	17 56	23	36 41	49 50	
15	45	54.3		46.5	227	35.5 ¹³⁹		14.7 ⁷⁷	30	18	43	12	25 38	5 59 52	
16	60	54.3		47.1	242	08.5 ¹⁴⁰		22.4 ⁷⁷	35	17 09	36	06	18 37	6 05 54	
17	75	54.3	+17	47.8	256	41.4 ¹³⁹	-12	30.1 ⁷⁷	40	16 59	17 27	18 00	17 11 35	6 11 56	
18	90	54.3	+17	48.4	271	14.3 ¹³⁹	-12	37.7 ⁷⁶	45	16 47	17 18	17 54	17 03 32	6 19 58	
19	105	54.4		49.1	285	47.2 ¹³⁹		45.2 ⁷⁵	50	32	07	47	16 52 30	28 61	
20	120	54.4		49.7	300	20.0 ¹³⁸	-12	52.7 ⁷⁵	52	26	17 03	43	48 28	32 63	
21	135	54.4		50.3	314	52.8 ¹³⁸	-13	00.1 ⁷⁴	54	18	16 57	40	43 27	37 64	
22	150	54.4		51.0	329	25.7 ¹³⁹		07.4 ⁷³	56	10	51	37	37 25	42 66	
23	165	54.4		51.6	343	58.4 ¹³⁷		14.7 ⁷³	58	16 00	45	33	30 24	48 68	
24	180	54.4	+17	52.3	358	31.2 ¹³⁸	-13	22.0 ⁷³	60 S	15 50	16 38	17 29	16 23 22	6 54 71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 46 ^m 6		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: +1.6 PMG: 13 ^h 32 ^m		Mag: -2.4 PMG: 21 ^h 40 ^m		Mag: +0.2 PMG: 2 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	227	59.0	221	54.9	+2	31.2	156	47.8	+23	02.5
1	243	01.5	236	55.7		31.6	171	48.4		02.7
2	258	04.0	251	56.4		32.0	186	49.1		02.9
3	273	06.4	266	57.2		32.4	201	49.7		03.2
4	288	08.9	281	57.9		32.7	216	50.3		03.4
5	303	11.4	296	58.6	+2	33.1	231	51.0	+23	03.6
6	318	13.8	311	59.4	+2	33.5	246	51.6	+23	03.9
7	333	16.3	327	00.1		33.9	261	52.2		04.1
8	348	18.7	342	00.9		34.3	276	52.9		04.3
9	3	21.2	357	01.6		34.7	291	53.5		04.6
10	18	23.7	12	02.3		35.0	306	54.1		04.8
11	33	26.1	27	03.1	+2	35.4	321	54.8	+23	05.0
12	48	28.6	42	03.8	+2	35.8	336	55.4	+23	05.3
13	63	31.1	57	04.5		36.2	351	56.0		05.5
14	78	33.5	72	05.3		36.6	6	56.7		05.7
15	93	36.0	87	06.0		37.0	21	57.3		06.0
16	108	38.5	102	06.7		37.4	36	58.0		06.2
17	123	40.9	117	07.4	+2	37.8	51	58.6	+23	06.4
18	138	43.4	132	08.2	+2	38.1	66	59.2	+23	06.7
19	153	45.8	147	08.9		38.5	81	59.9		06.9
20	168	48.3	162	09.6		38.9	97	00.5		07.1
21	183	50.8	177	10.3		39.3	112	01.1		07.3
22	198	53.2	192	11.0		39.7	127	01.8		07.6
23	213	55.7	207	11.8		40.1	142	02.4		07.8
24	228	58.2	222	12.5	+2	40.5	157	03.0	+23	08.0
Dif	—		+7		+4		+6		+2	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15/8 PMG: 11 ^h 56 ^m .4				Edad: 14 ^d 5 PHE SD: 14/7 PMG: 0 ^h 06 ^m R°: 46 ^m																				
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	180	54.4	+17	52.3	358	31.2	-13	22.0	72	58	60 N	0	18	2	32	3	32	20	41	65	4	32	24		
1	195	54.5		52.9	13	04.0		29.2	72	58	58	1	23	2	51		44		31	63		40	26		
2	210	54.5		53.6	27	36.7		36.3	71	56	56	1	55	3	06	3	55		22	62		48	27		
3	225	54.5		54.2	42	09.4		43.4	71	54	54	2	18		20	4	04		14	60		4	54	29	
4	240	54.5		54.8	56	42.1		50.4	70	52	52		36		31		12		07	59		5	00	31	
5	255	54.5	+17	55.5	71	14.7	-13	57.3	69	50	50	2	51	3	41	4	20		20	01	58		5	06	31
6	270	54.6	+17	56.1	85	47.4	-14	04.2	69	45	45	3	20	4	02	4	36		19	47	56		5	17	34
7	285	54.6		56.8	100	20.0		11.0	68	40	40		41		18	4	49		36	55			27	36	
8	300	54.6		57.4	114	52.6		17.8	68	35	35	3	58		32	5	00		27	53			35	38	
9	315	54.6		58.0	129	25.1		24.5	67	30	30	4	12	4	43		09		19	51			43	39	
10	330	54.6		58.7	143	57.7		31.1	66	20	20		34	5	02		26		19	04	50		5	55	42
11	345	54.6	+17	59.3	158	30.2	-14	37.6	65	10 N	10 N	4	52	5	18	5	40		18	52	48		6	07	43
12	0	54.6	+17	59.9	173	02.7	-14	44.1	65	0	0	5	06	5	31	5	53		18	40	47		6	17	46
13	15	54.7	+18	00.6	187	35.2		50.6	65	10 S	10 S		18		44	6	06		29	44			27	48	
14	30	54.7		01.2	202	07.6	-14	56.9	63	20	20		30	5	57		20		17	42			39	49	
15	45	54.7		01.8	216	40.1	-15	03.2	63	30	30		41	6	10		35		18	03	40			51	53
16	60	54.7		02.5	231	12.5		09.5	63	35	35		47		18		44		17	55	39		6	59	53
17	75	54.7	+18	03.1	245	44.9	-15	15.7	62	40	40	5	53	6	26	6	55		17	46	38		7	07	56
18	90	54.7	+18	03.7	260	17.2	-15	21.8	61	45	45	6	00	6	35	7	07		17	35	36		7	17	57
19	105	54.7		04.4	274	49.6		27.8	60	50	50		07		46	21		22	34			29	60		
20	120	54.8		05.0	289	21.9		33.8	60	52	52		10		51	28		16	33			35	61		
21	135	54.8		05.6	303	54.2		39.6	58	54	54		13	6	56		36		10	31			41	62	
22	150	54.8		06.3	318	26.4		45.5	59	56	56		17	7	02		44		17	02	31			48	64
23	165	54.8		06.9	332	58.7		51.2	57	58	58		21		09	7	54		16	54	29		7	56	65
24	180	54.8	+18	07.5	347	30.9	-15	56.9	57	60 S	60 S	6	25	7	16	8	05		16	45	27		8	05	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 42 ^m 7		Mag: -4.7 PMG: 9 ^h 11 ^m		Mag: +1.6 PMG: 13 ^h 31 ^m		Mag: -2.4 PMG: 21 ^h 36 ^m		Mag: +0.2 PMG: 2 ^h 30 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	228	58.2	222	12.5	+2	40.5	157	03.0	+23	08.0
1	244	00.6	237	13.2		40.9	172	03.7		08.3
2	259	03.1	252	13.9		41.3	187	04.3		08.5
3	274	05.6	267	14.6		41.7	202	04.9		08.7
4	289	08.0	282	15.3		42.1	217	05.6		08.9
5	304	10.5	297	16.0	+2	42.5	232	06.2	+23	09.2
6	319	13.0	312	16.7	+2	42.9	247	06.8	+23	09.4
7	334	15.4	327	17.4		43.3	262	07.5		09.6
8	349	17.9	342	18.1		43.8	277	08.1		09.8
9	4	20.3	357	18.8		44.2	292	08.7		10.1
10	19	22.8	12	19.5		44.6	307	09.4		10.3
11	34	25.3	27	20.2	+2	45.0	322	10.0	+23	10.5
12	49	27.7	42	20.9	+2	45.4	337	10.6	+23	10.7
13	64	30.2	57	21.6		45.8	352	11.3		11.0
14	79	32.7	72	22.3		46.2	7	11.9		11.2
15	94	35.1	87	23.0		46.6	22	12.5		11.4
16	109	37.6	102	23.7		47.0	37	13.2		11.6
17	124	40.1	117	24.4	+2	47.5	52	13.8	+23	11.8
18	139	42.5	132	25.1	+2	47.9	67	14.4	+23	12.1
19	154	45.0	147	25.8		48.3	82	15.1		12.3
20	169	47.5	162	26.5		48.7	97	15.7		12.5
21	184	49.9	177	27.2		49.1	112	16.3		12.7
22	199	52.4	192	27.9		49.6	127	17.0		12.9
23	214	54.8	207	28.5		50.0	142	17.6		13.2
24	229	57.3	222	29.2	+2	50.4	157	18.2	+23	13.4
Dif	—		+7		+4		+6		+2	
							+27		+1	
									+26	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 15 ^d 5 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰					Civil			Hora		Hora	
	PMG: 11 ^h 56 ^m 3											R°	R°	R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	54.8	+18 07.5	347	30.9	-15 56.9	56	60 N	20 25	21 27	** **	21 46 59	4 56 30		
1	195	54.8	08.2	2	03.1 ¹³²	-16 02.5	56	58	12	21 07	22 40	34 58	5 06 32		
2	210	54.8	08.8	16	35.2 ¹³¹	08.1	56	56	20 01	20 50	22 05	24 56	15 33		
3	225	54.8	09.4	31	07.4 ¹³²	13.5	54	54	19 52	37	21 40	14 56	23 35		
4	240	54.9	10.0	45	39.5 ¹³¹	18.9	54	52	43	25	21	21 06 56	31 35		
5	255	54.9	+18 10.7	60	11.6 ¹³¹	-16 24.3	54	50	19 35	20 14	21 06	20 59 55	5 37 37		
6	270	54.9	+18 11.3	74	43.7 ¹³¹	-16 29.5	52	45	19 19	19 53	20 36	20 43 54	5 51 39		
7	285	54.9	11.9	89	15.7 ¹³⁰	34.7	52	40	19 06	36	20 14	31 52	6 03 40		
8	300	54.9	12.5	103	47.8 ¹³¹	39.8	51	35	18 54	22	19 56	20 51	13 41		
9	315	54.9	13.2	118	19.8 ¹³⁰	44.8	50	30	45	19 11	42	20 10 51	22 42		
10	330	54.9	13.8	132	51.7 ¹²⁹	49.8	50	20	28	18 51	19	19 54 49	37 44		
11	345	54.9	+18 14.4	147	23.7 ¹³⁰	-16 54.7	49	10 N	18 13	18 36	19 02	19 40 48	6 50 45		
12	0	54.9	+18 15.0	161	55.6 ¹²⁹	-16 59.5	48	0	18 00	18 22	18 47	19 27 47	7 03 46		
13	15	55.0	15.7	176	27.6 ¹³⁰	-17 04.2	47	10 S	17 47	18 09	34	19 13 46	15 48		
14	30	55.0	16.3	190	59.5 ¹²⁹	08.9	47	20	32	17 56	22	18 59 45	28 50		
15	45	55.0	16.9	205	31.3 ¹²⁸	13.5	46	30	16	42	11	43 44	44 51		
16	60	55.0	17.5	220	03.2 ¹²⁹	18.0	45	35	17 07	34	18 04	34 43	7 52 53		
17	75	55.0	+18 18.1	234	35.0 ¹²⁸	-17 22.4	44	40	16 57	17 26	17 58	18 24 41	8 03 53		
18	90	55.0	+18 18.8	249	06.8 ¹²⁸	-17 26.7	43	45	16 44	17 16	17 51	18 11 41	8 14 55		
19	105	55.0	19.4	263	38.6 ¹²⁸	31.0	43	50	29	05	44	17 56 39	29 56		
20	120	55.0	20.0	278	10.3 ¹²⁷	35.2	42	52	22	17 00	41	49 38	36 57		
21	135	55.0	20.6	292	42.1 ¹²⁸	39.3	41	54	15	16 54	37	41 38	43 59		
22	150	55.0	21.2	307	13.8 ¹²⁷	43.3	40	56	16 06	48	34	33 36	8 52 59		
23	165	55.0	21.9	321	45.5 ¹²⁷	47.3	40	58	15 56	41	30	23 35	9 01 61		
24	180	55.0	+18 22.5	336	17.1 ¹²⁶	-17 51.2	39	60 S	15 45	16 34	17 25	17 12 33	9 12 62		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 38 ^m 8		Mag: -4.7 PMG: 9 ^h 10 ^m			Mag: +1.6 PMG: 13 ^h 30 ^m			Mag: -2.4 PMG: 21 ^h 32 ^m			Mag: +0.2 PMG: 2 ^h 26 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	229	57.3	222 29.2	+2 50.4	157 18.2	+23 13.4	36 05.5	-4 17.2	323 24.5	-22 01.6					
1	244	59.8	237 29.9	50.8	172 18.9	13.6	51 08.1	17.1	338 27.1	01.6					
2	260	02.2	252 30.6	51.2	187 19.5	13.8	66 10.8	17.0	353 29.7	01.6					
3	275	04.7	267 31.2	51.7	202 20.1	14.0	81 13.4	16.9	8 32.3	01.6					
4	290	07.2	282 31.9	52.1	217 20.8	14.3	96 16.1	16.9	23 34.9	01.6					
5	305	09.6	297 32.6	+2 52.5	232 21.4	+23 14.5	111 18.8	-4 16.8	38 37.5	-22 01.6					
6	320	12.1	312 33.3	+2 53.0	247 22.0	+23 14.7	126 21.4	-4 16.7	53 40.1	-22 01.6					
7	335	14.6	327 33.9	53.4	262 22.7	14.9	141 24.1	16.7	68 42.7	01.6					
8	350	17.0	342 34.6	53.8	277 23.3	15.1	156 26.7	16.6	83 45.3	01.6					
9	5 19.5	357 35.3	54.3	292 23.9	15.3	171 29.4	16.5	98 47.9	01.5						
10	20 21.9	12 36.0	54.7	307 24.6	15.6	186 32.0	16.5	113 50.5	01.5						
11	35 24.4	27 36.6	+2 55.1	322 25.2	+23 15.8	201 34.7	-4 16.4	128 53.1	-22 01.5						
12	50 26.9	42 37.3	+2 55.6	337 25.8	+23 16.0	216 37.3	-4 16.3	143 55.8	-22 01.5						
13	65 29.3	57 37.9	56.0	352 26.5	16.2	231 40.0	16.2	158 58.4	01.5						
14	80 31.8	72 38.6	56.4	7 27.1	16.4	246 42.6	16.2	174 01.0	01.5						
15	95 34.3	87 39.3	56.9	22 27.7	16.6	261 45.3	16.1	189 03.6	01.5						
16	110 36.7	102 39.9	57.3	37 28.4	16.8	276 47.9	16.0	204 06.2	01.5						
17	125 39.2	117 40.6	+2 57.7	52 29.0	+23 17.1	291 50.6	-4 16.0	219 08.8	-22 01.5						
18	140 41.7	132 41.2	+2 58.2	67 29.6	+23 17.3	306 53.2	-4 15.9	234 11.4	-22 01.5						
19	155 44.1	147 41.9	58.6	82 30.3	17.5	321 55.9	15.8	249 14.0	01.5						
20	170 46.6	162 42.6	59.1	97 30.9	17.7	336 58.6	15.8	264 16.6	01.5						
21	185 49.1	177 43.2	+2 59.5	112 31.5	17.9	352 01.2	15.7	279 19.2	01.5						
22	200 51.5	192 43.9	+3 00.0	127 32.2	18.1	7 03.9	15.6	294 21.8	01.5						
23	215 54.0	207 44.5	+3 00.4	142 32.8	18.3	22 06.5	15.5	309 24.4	01.5						
24	230 56.4	222 45.2	+3 00.8	157 33.4	+23 18.5	37 09.2	-4 15.5	324 27.1	-22 01.5						
Dif	—		+7	+4	+6	+2	+27	+1	+26	0					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 3				Edad: 16 ^d 5 PHE SD: 14/7 PMG: 1 ^h 38 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	55.0	+18	22.5	336	17.1	-17	51.2	60 N	** **	2 25	3 27	22 45	51	5 26	37		
1	195	55.0		23.1	350	48.8 ¹²⁷		54.9 ³⁷	58	1 12	2 45	40	32 51		38 39			
2	210	55.1		23.7	5	20.4 ¹²⁶	-17	58.7 ³⁸	56	1 47	3 02	3 51	20 51		48 40			
3	225	55.1		24.3	19	52.0 ¹²⁶	-18	02.3 ³⁶	54	2 12	16	4 00	10 51	5 58	40			
4	240	55.1		24.9	34	23.6 ¹²⁶		05.8 ³⁵	52	31	27	09	22 02	50	6 06	41		
5	255	55.1	+18	25.6	48	55.2 ¹²⁶	-18	09.3 ³⁵	50	2 46	3 38	4 17	21 54	50	6 14	41		
6	270	55.1	+18	26.2	63	26.7 ¹²⁵	-18	12.7 ³⁴	45	3 16	3 59	4 33	21 37	49	6 30	42		
7	285	55.1		26.8	77	58.3 ¹²⁶		16.0 ³³	40	39	4 16	47	23 49		43 43			
8	300	55.1		27.4	92	29.8 ¹²⁵		19.2 ³²	35	3 56	30	4 58	11 49	6 54	44			
9	315	55.1		28.0	107	01.3 ¹²⁵		22.3 ³¹	30	4 11	4 42	5 08	21 01	49	7 04	45		
10	330	55.1		28.6	121	32.7 ¹²⁴		25.4 ³¹	20	33	5 01	25	20 43	49	21 46			
11	345	55.1	+18	29.2	136	04.2 ¹²⁵	-18	28.4 ³⁰	10 N	4 51	5 17	5 39	20 28	48	7 35	47		
12	0	55.1	+18	29.8	150	35.6 ¹²⁴	-18	31.3 ²⁹	0	5 06	5 31	5 53	20 14	47	7 49	48		
13	15	55.1		30.4	165	07.1 ¹²⁵		34.1 ²⁸	10 S	19	44	6 06	19 59	48	8 03	48		
14	30	55.1		31.1	179	38.4 ¹²³		36.8 ²⁷	20	31	5 57	20	44 47		18 49			
15	45	55.1		31.7	194	09.8 ¹²⁴		39.4 ²⁶	30	42	6 11	37	27 46		35 50			
16	60	55.1		32.3	208	41.2 ¹²⁴		42.0 ²⁶	35	49	19	46	17 46		45 50			
17	75	55.1	+18	32.9	223	12.5 ¹²³	-18	44.4 ²⁴	40	5 55	6 28	6 57	19 05	46	8 56	51		
18	90	55.1	+18	33.5	237	43.9 ¹²⁴	-18	46.8 ²⁴	45	6 02	6 37	7 09	18 52	45	9 09	52		
19	105	55.1		34.1	252	15.2 ¹²³		49.1 ²³	50	09	49	24	35 45		25 53			
20	120	55.1		34.7	266	46.5 ¹²³		51.3 ²²	52	13	54	31	27 45		33 53			
21	135	55.1		35.3	281	17.8 ¹²³		53.4 ²¹	54	16	6 59	39	19 44		42 53			
22	150	55.1		35.9	295	49.0 ¹²²		55.5 ²¹	56	20	7 06	48	18 09	44	9 51	54		
23	165	55.1		36.5	310	20.3 ¹²³		57.4 ¹⁹	58	24	12	7 58	17 58	43	10 02	55		
24	180	55.1	+18	37.1	324	51.5 ¹²²	-18	59.3 ¹⁹	60 S	6 28	7 20	8 09	17 45	43	10 14	56		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 34 ^m 8		Mag: -4.7 PMG: 9 ^h 09 ^m				Mag: +1.6 PMG: 13 ^h 29 ^m				Mag: -2.4 PMG: 21 ^h 28 ^m				Mag: +0.2 PMG: 2 ^h 22 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	230	56.4	222	45.2	+3	00.8	157	33.4	+23	18.5	37	09.2	-4	15.5	324	27.1	-22	01.5
1	245	58.9	237	45.8		01.3	172	34.1		18.7	52	11.8		15.4	339	29.7		01.5
2	261	01.4	252	46.4		01.7	187	34.7		19.0	67	14.5		15.3	354	32.3		01.5
3	276	03.8	267	47.1		02.2	202	35.3		19.2	82	17.1		15.3	9	34.9		01.5
4	291	06.3	282	47.7		02.6	217	36.0		19.4	97	19.8		15.2	24	37.5		01.5
5	306	08.8	297	48.4	+3	03.1	232	36.6	+23	19.6	112	22.4	-4	15.1	39	40.1	-22	01.5
6	321	11.2	312	49.0	+3	03.5	247	37.2	+23	19.8	127	25.1	-4	15.1	54	42.7	-22	01.5
7	336	13.7	327	49.7		04.0	262	37.9		20.0	142	27.7		15.0	69	45.3		01.5
8	351	16.2	342	50.3		04.4	277	38.5		20.2	157	30.4		14.9	84	47.9		01.5
9	6	18.6	357	50.9		04.9	292	39.1		20.4	172	33.0		14.9	99	50.5		01.5
10	21	21.1	12	51.6		05.4	307	39.8		20.6	187	35.7		14.8	114	53.1		01.5
11	36	23.6	27	52.2	+3	05.8	322	40.4	+23	20.8	202	38.3	-4	14.7	129	55.8	-22	01.5
12	51	26.0	42	52.8	+3	06.3	337	41.0	+23	21.0	217	40.9	-4	14.7	144	58.4	-22	01.4
13	66	28.5	57	53.5		06.7	352	41.7		21.2	232	43.6		14.6	160	01.0		01.4
14	81	30.9	72	54.1		07.2	7	42.3		21.4	247	46.2		14.5	175	03.6		01.4
15	96	33.4	87	54.7		07.6	22	42.9		21.6	262	48.9		14.5	190	06.2		01.4
16	111	35.9	102	55.3		08.1	37	43.6		21.9	277	51.5		14.4	205	08.8		01.4
17	126	38.3	117	56.0	+3	08.6	52	44.2	+23	22.1	292	54.2	-4	14.3	220	11.4	-22	01.4
18	141	40.8	132	56.6	+3	09.0	67	44.8	+23	22.3	307	56.8	-4	14.3	235	14.0	-22	01.4
19	156	43.3	147	57.2		09.5	82	45.4		22.5	322	59.5		14.2	250	16.6		01.4
20	171	45.7	162	57.8		10.0	97	46.1		22.7	338	02.1		14.1	265	19.3		01.4
21	186	48.2	177	58.5		10.4	112	46.7		22.9	353	04.8		14.1	280	21.9		01.4
22	201	50.7	192	59.1		10.9	127	47.3		23.1	8	07.4		14.0	295	24.5		01.4
23	216	53.1	207	59.7		11.4	142	48.0		23.3	23	10.1		13.9	310	27.1		01.4
24	231	55.6	223	00.3	+3	11.8	157	48.6	+23	23.5	38	12.7	-4	13.9	325	29.7	-22	01.4
Dif	—		+6		+5		+6		+2		+26		+1		+26			
															0			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8		Edad: 17 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2												
	PMG: 11 ^h 56 ^m 3		SD: 14 ^h 7 PMG: 2 ^h 25 ^m R°: 48 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	180	55.1	+18 37.1	324	51.5	-18 59.3	18	60 N	20 30	21 33	** **	23 36	43	6 03	48
1	195	55.1	37.7	339	22.7 ¹²²	-19 01.1	17	58	17	21 12	22 52	23 43		17 47	
2	210	55.1	38.3	353	53.9 ¹²²	02.8	16	56	20 05	20 55	22 12	11 44		28 48	
3	225	55.1	38.9	8	25.1 ¹²²	04.4	15	54	19 55	41	21 46	23 01	44	38 48	
4	240	55.1	39.5	22	56.3 ¹²²	05.9	15	52	46	28	26	22 52	44	47 48	
5	255	55.1	+18 40.1	37	27.4 ¹²¹	-19 07.3	14	50	19 38	20 18	21 10	22 44	45	6 55	48
6	270	55.1	+18 40.7	51	58.6 ¹²²	-19 08.7	14	45	19 21	19 56	20 39	22 26	46	7 12	48
7	285	55.1	41.3	66	29.7 ¹²¹	09.9	12	40	19 08	38	20 16	12 46		26 48	
8	300	55.1	41.9	81	00.8 ¹²¹	11.1	12	35	18 56	24	19 58	22 00	47	38 48	
9	315	55.1	42.5	95	31.9 ¹²¹	12.2	11	30	46	19 12	43	21 50	47	7 49	48
10	330	55.1	43.1	110	03.0 ¹²¹	13.1	9	20	29	18 52	20	32 47		8 07	48
11	345	55.1	+18 43.7	124	34.1 ¹²¹	-19 14.0	9	10 N	18 14	18 36	19 02	21 16	48	8 22	48
12	0	55.1	+18 44.3	139	05.2 ¹²¹	-19 14.9	9	0	18 00	18 22	18 47	21 01	49	8 37	48
13	15	55.1	44.9	153	36.3 ¹²¹	15.6	7	10 S	17 46	18 08	34	20 47	48	8 51	48
14	30	55.1	45.5	168	07.3 ¹²⁰	16.2	6	20	32	17 55	22	31 49		9 07	48
15	45	55.1	46.1	182	38.4 ¹²¹	16.8	6	30	15	41	09	13 50		25 47	
16	60	55.1	46.7	197	09.4 ¹²⁰	17.2	4	35	17 06	33	18 03	20 03	49	35 48	
17	75	55.1	+18 47.3	211	40.4 ¹²⁰	-19 17.6	4	40	16 55	17 24	17 57	19 51	50	9 47	48
18	90	55.1	+18 47.9	226	11.4 ¹²⁰	-19 17.9	3	45	16 42	17 14	17 50	19 37	50	10 01	47
19	105	55.1	48.5	240	42.4 ¹²⁰	18.0	1	50	27	17 02	42	20 50		18 47	
20	120	55.1	49.1	255	13.4 ¹²⁰	18.1	1	52	19	16 57	38	12 51		26 47	
21	135	55.1	49.7	269	44.4 ¹²⁰	18.1	0	54	11	51	35	19 03	51	35 47	
22	150	55.1	50.3	284	15.4 ¹²⁰	18.1	0	56	16 02	45	31	18 53	51	45 47	
23	165	55.1	50.8	298	46.3 ¹¹⁹	17.9	2	58	15 52	38	26	41 52		10 57	47
24	180	55.1	+18 51.4	313	17.3 ¹²⁰	-19 17.6	3	60 S	15 41	16 30	17 22	18 28	52	11 10	47
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 30 ^m 9		Mag: -4.6 PMG: 9 ^h 08 ^m		Mag: +1.6 PMG: 13 ^h 28 ^m		Mag: -2.4 PMG: 21 ^h 23 ^m		Mag: +0.2 PMG: 2 ^h 18 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	231	55.6	223 00.3	+3 11.8	157 48.6	+23 23.5	38 12.7	-4 13.9	325 29.7	-22 01.4					
1	246	58.1	238 00.9	12.3	172 49.2	23.7	53 15.4	13.8	340 32.3	01.4					
2	262	00.5	253 01.6	12.8	187 49.9	23.9	68 18.0	13.7	355 34.9	01.4					
3	277	03.0	268 02.2	13.2	202 50.5	24.1	83 20.6	13.7	10 37.5	01.4					
4	292	05.4	283 02.8	13.7	217 51.1	24.3	98 23.3	13.6	25 40.2	01.4					
5	307	07.9	298 03.4	+3 14.2	232 51.8	+23 24.5	113 25.9	-4 13.5	40 42.8	-22 01.4					
6	322	10.4	313 04.0	+3 14.7	247 52.4	+23 24.7	128 28.6	-4 13.5	55 45.4	-22 01.4					
7	337	12.8	328 04.6	15.1	262 53.0	24.9	143 31.2	13.4	70 48.0	01.4					
8	352	15.3	343 05.2	15.6	277 53.7	25.1	158 33.9	13.3	85 50.6	01.4					
9	7	17.8	358 05.8	16.1	292 54.3	25.3	173 36.5	13.3	100 53.2	01.4					
10	22	20.2	13 06.4	16.6	307 54.9	25.5	188 39.1	13.2	115 55.8	01.4					
11	37	22.7	28 07.0	+3 17.0	322 55.6	+23 25.7	203 41.8	-4 13.1	130 58.4	-22 01.4					
12	52	25.2	43 07.6	+3 17.5	337 56.2	+23 25.9	218 44.4	-4 13.1	146 01.1	-22 01.4					
13	67	27.6	58 08.2	18.0	352 56.8	26.1	233 47.1	13.0	161 03.7	01.4					
14	82	30.1	73 08.8	18.5	7 57.5	26.3	248 49.7	13.0	176 06.3	01.4					
15	97	32.5	88 09.4	19.0	22 58.1	26.5	263 52.4	12.9	191 08.9	01.3					
16	112	35.0	103 10.0	19.4	37 58.7	26.7	278 55.0	12.8	206 11.5	01.3					
17	127	37.5	118 10.6	+3 19.9	52 59.4	+23 26.9	293 57.6	-4 12.8	221 14.1	-22 01.3					
18	142	39.9	133 11.2	+3 20.4	68 00.0	+23 27.0	309 00.3	-4 12.7	236 16.7	-22 01.3					
19	157	42.4	148 11.8	20.9	83 00.6	27.2	324 02.9	12.6	251 19.4	01.3					
20	172	44.9	163 12.4	21.4	98 01.2	27.4	339 05.6	12.6	266 22.0	01.3					
21	187	47.3	178 13.0	21.9	113 01.9	27.6	354 08.2	12.5	281 24.6	01.3					
22	202	49.8	193 13.6	22.4	128 02.5	27.8	9 10.8	12.4	296 27.2	01.3					
23	217	52.3	208 14.2	22.8	143 03.1	28.0	24 13.5	12.4	311 29.8	01.3					
24	232	54.7	223 14.8	+3 23.3	158 03.8	+23 28.2	39 16.1	-4 12.3	326 32.4	-22 01.3					
Dif	—		+6	+5	+6	+2	+26	+1	+26	0					

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 18 ^d 5 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5 PMG: 3 ^h 13 ^m R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	180	55.1	+18	51.4	313	17.3	-19	17.6	3	58	60 N	** **	2 19	3 22	** **	** **	6 51	56		
1	195	55.0		52.0	327	48.2		17.3	5	58		1 00	40	35	** **	** **	7 04	56		
2	210	55.0		52.6	342	19.2		16.8	5	56		1 40	2 57	47	23 55	37	16	55		
3	225	55.0		53.2	356	50.1		16.3	5	54		2 06	3 11	3 57	45 38		26	54		
4	240	55.0		53.8	11	21.1		15.7	6	52		26	24	4 06	36 39		35	54		
5	255	55.0	+18	54.4	25	52.0	-19	15.0	7	50		2 42	3 35	4 14	23 29	39	7 43	53		
6	270	55.0	+18	55.0	40	22.9	-19	14.2	8	45		3 13	3 57	4 31	23 12	41	8 00	53		
7	285	55.0		55.6	54	53.8		13.3	9	40		36	4 14	45	22 58	43	14	52		
8	300	55.0		56.1	69	24.7		12.3	10	35		3 54	28	4 56	47 43		26	51		
9	315	55.0		56.7	83	55.6		11.2	11	30		4 09	4 40	5 07	37 44		37	50		
10	330	55.0		57.3	98	26.5		10.1	11	20		32	5 00	24	19 46		8 55	49		
11	345	55.0	+18	57.9	112	57.4	-19	08.8	13	10 N		4 50	5 17	5 39	22 04	47	9 10	49		
12	0	55.0	+18	58.5	127	28.3	-19	07.5	13	0		5 06	5 31	5 53	21 50	48	9 25	48		
13	15	55.0		59.1	141	59.2		06.1	14	10 S		19	44	6 07	35 50		39	48		
14	30	54.9	+18	59.6	156	30.1		04.5	16	20		31	5 58	21	20 51		9 55	46		
15	45	54.9	+19	00.2	171	01.0		02.9	16	30		44	6 12	38	21 03	52	10 12	46		
16	60	54.9		00.8	185	31.8	-19	01.2	17	35		50	20	47	20 52	53	23	45		
17	75	54.9	+19	01.4	200	02.7	-18	59.4	18	40		5 56	6 29	6 58	20 41	53	10 35	44		
18	90	54.9	+19	02.0	214	33.6	-18	57.6	18	45		6 04	6 39	7 11	20 27	55	10 48	44		
19	105	54.9		02.6	229	04.5		55.6	20	50		12	51	27	10 57		11 05	43		
20	120	54.9		03.1	243	35.3		53.5	21	52		15	6 56	34	20 03	56	13	42		
21	135	54.9		03.7	258	06.2		51.4	21	54		19	7 02	42	19 54	57	22	41		
22	150	54.9		04.3	272	37.1		49.1	23	56		23	09	7 51	44 58		32	40		
23	165	54.9		04.9	287	07.9		46.8	23	58		27	16	8 02	33 59		44	39		
24	180	54.8	+19	05.4	301	38.8	-18	44.4	24	60 S		6 32	7 24	8 14	19 20	61	11 57	38		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 27 ^m 0		Mag: -4.6 PMG: 9 ^h 07 ^m		Mag: +1.6 PMG: 13 ^h 27 ^m		Mag: -2.4 PMG: 21 ^h 19 ^m		Mag: +0.2 PMG: 2 ^h 13 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	232	54.7	223	14.8	+3	158	03.8	+23	39	16.1	-22	326	32.4	-22	01.3
1	247	57.2	238	15.3		173	04.4		54	18.8		341	35.0		01.3
2	262	59.7	253	15.9		188	05.0		69	21.4		356	37.7		01.3
3	278	02.1	268	16.5		203	05.7		84	24.0		11	40.3		01.3
4	293	04.6	283	17.1		218	06.3		99	26.7		26	42.9		01.3
5	308	07.0	298	17.7	+3	233	06.9	+23	114	29.3	-4	41	45.5	-22	01.3
6	323	09.5	313	18.2	+3	248	07.6	+23	129	31.9	-4	56	48.1	-22	01.3
7	338	12.0	328	18.8		263	08.2		144	34.6		71	50.7		01.3
8	353	14.4	343	19.4		278	08.8		159	37.2		86	53.4		01.3
9	8	16.9	358	20.0		293	09.5		174	39.9		101	56.0		01.3
10	23	19.4	13	20.6		308	10.1		189	42.5		116	58.6		01.3
11	38	21.8	28	21.1	+3	323	10.7	+23	204	45.1	-4	132	01.2	-22	01.3
12	53	24.3	43	21.7	+3	338	11.4	+23	219	47.8	-4	147	03.8	-22	01.3
13	68	26.8	58	22.3		353	12.0		234	50.4		162	06.4		01.3
14	83	29.2	73	22.8		8	12.6		249	53.0		177	09.1		01.3
15	98	31.7	88	23.4		23	13.2		264	55.7		192	11.7		01.3
16	113	34.2	103	24.0		38	13.9		279	58.3		207	14.3		01.3
17	128	36.6	118	24.5	+3	53	14.5	+23	295	00.9	-4	222	16.9	-22	01.2
18	143	39.1	133	25.1	+3	68	15.1	+23	310	03.6	-4	237	19.5	-22	01.2
19	158	41.5	148	25.7		83	15.8		325	06.2		252	22.1		01.2
20	173	44.0	163	26.2		98	16.4		340	08.8		267	24.8		01.2
21	188	46.5	178	26.8		113	17.0		355	11.5		282	27.4		01.2
22	203	48.9	193	27.4		128	17.7		10	14.1		297	30.0		01.2
23	218	51.4	208	27.9		143	18.3		25	16.7		312	32.6		01.2
24	233	53.9	223	28.5	+3	158	18.9	+23	40	19.4	-4	327	35.2	-22	01.2
Dif	—		+6		+5	+6		+2	+26		+1	+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 19 ^d 5 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 4			PMG: 4 ^h 01 ^m R°: 48 ^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	180	54.8	+19 05.4	301	38.8	-18 44.4	25	60 N	20 35	21 40	** **	0 19 34	7 47 65		
1	195	54.8	06.0	316	09.7 ¹¹⁹	41.9	25	58	21	18	23 07	0 06 36	8 00 63		
2	210	54.8	06.6	330	40.5 ¹¹⁸	39.3	26	56	20 09	21 00	22 20	** ** *	11 61		
3	225	54.8	07.2	345	11.4 ¹¹⁹	36.6	27	54	19 58	20 45	21 52	** ** *	20 61		
4	240	54.8	07.7	359	42.2 ¹¹⁸	33.8	28	52	49	32	31	** ** *	29 59		
5	255	54.8	+19 08.3	14	13.1 ¹¹⁹	-18 31.0	28	50	19 41	20 21	21 14	** ** *	8 36 59		
6	270	54.8	+19 08.9	28	44.0 ¹¹⁹	-18 28.0	30	45	19 24	19 58	20 42	23 53 38	8 53 56		
7	285	54.8	09.5	43	14.8 ¹¹⁸	25.0	30	40	19 09	40	18	41 39	9 06 55		
8	300	54.7	10.0	57	45.7 ¹¹⁹	21.8	32	35	18 58	26	20 00	30 41	17 54		
9	315	54.7	10.6	72	16.6 ¹¹⁹	18.6	32	30	47	19 13	19 45	21 42	27 53		
10	330	54.7	11.2	86	47.4 ¹¹⁸	15.3	33	20	29	18 53	21	23 05 44	44 51		
11	345	54.7	+19 11.8	101	18.3 ¹¹⁹	-18 11.9	34	10 N	18 14	18 36	19 03	22 51 46	9 59 50		
12	0	54.7	+19 12.3	115	49.2 ¹¹⁹	-18 08.4	35	0	18 00	18 22	18 47	22 38 48	10 13 48		
13	15	54.7	12.9	130	20.0 ¹¹⁸	04.9	35	10 S	17 46	18 08	34	25 50	27 46		
14	30	54.7	13.5	144	50.9 ¹¹⁹	-18 01.2	37	20	31	17 54	21	22 11 51	41 45		
15	45	54.6	14.0	159	21.8 ¹¹⁹	-17 57.5	37	30	14	39	08	21 55 54	10 58 43		
16	60	54.6	14.6	173	52.7 ¹¹⁹	53.6	39	35	17 04	31	18 02	45 56	11 08 42		
17	75	54.6	+19 15.2	188	23.5 ¹¹⁸	-17 49.7	39	40	16 53	17 22	17 55	21 34 57	11 19 41		
18	90	54.6	+19 15.7	202	54.4 ¹¹⁹	-17 45.7	40	45	16 40	17 12	17 48	21 22 59	11 32 39		
19	105	54.6	16.3	217	25.3 ¹¹⁹	41.6	41	50	24	17 00	39	21 07 60	48 37		
20	120	54.6	16.9	231	56.2 ¹¹⁹	37.4	42	52	17	16 54	36	20 59 62	11 55 36		
21	135	54.5	17.4	246	27.1 ¹¹⁹	33.2	42	54	16 08	48	32	51 64	12 03 35		
22	150	54.5	18.0	260	58.0 ¹¹⁹	28.8	44	56	15 59	42	28	42 65	12 34		
23	165	54.5	18.6	275	28.9 ¹¹⁹	24.4	44	58	48	34	23	32 67	23 32		
24	180	54.5	+19 19.1	289	59.8 ¹¹⁹	-17 19.8	46	60 S	15 36	16 26	17 18	20 21 68	12 35 30		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 23 ^m 0		Mag: -4.6 PMG: 9 ^h 06 ^m		Mag: +1.6 PMG: 13 ^h 26 ^m		Mag: -2.4 PMG: 21 ^h 15 ^m		Mag: +0.2 PMG: 2 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	233	53.9	223 28.5	+3 35.3	158 18.9	+23 32.7	40 19.4	-4 10.8	327 35.2	-22 01.2
1	248	56.3	238 29.0	35.9	173 19.6	32.9	55 22.0	10.8	342 37.8	01.2
2	263	58.8	253 29.6	36.4	188 20.2	33.1	70 24.6	10.7	357 40.5	01.2
3	279	01.3	268 30.1	36.9	203 20.8	33.3	85 27.3	10.6	12 43.1	01.2
4	294	03.7	283 30.7	37.4	218 21.5	33.5	100 29.9	10.6	27 45.7	01.2
5	309	06.2	298 31.2	+3 37.9	233 22.1	+23 33.7	115 32.5	-4 10.5	42 48.3	-22 01.2
6	324	08.7	313 31.8	+3 38.4	248 22.7	+23 33.8	130 35.2	-4 10.5	57 50.9	-22 01.2
7	339	11.1	328 32.3	38.9	263 23.3	34.0	145 37.8	10.4	72 53.6	01.2
8	354	13.6	343 32.9	39.5	278 24.0	34.2	160 40.4	10.3	87 56.2	01.2
9	9	16.0	358 33.4	40.0	293 24.6	34.4	175 43.1	10.3	102 58.8	01.2
10	24	18.5	13 34.0	40.5	308 25.2	34.6	190 45.7	10.2	118 01.4	01.2
11	39	21.0	28 34.5	+3 41.0	323 25.9	+23 34.8	205 48.3	-4 10.2	133 04.0	-22 01.2
12	54	23.4	43 35.1	+3 41.5	338 26.5	+23 34.9	220 51.0	-4 10.1	148 06.7	-22 01.2
13	69	25.9	58 35.6	42.1	353 27.1	35.1	235 53.6	10.0	163 09.3	01.2
14	84	28.4	73 36.1	42.6	8 27.8	35.3	250 56.2	10.0	178 11.9	01.2
15	99	30.8	88 36.7	43.1	23 28.4	35.5	265 58.8	09.9	193 14.5	01.2
16	114	33.3	103 37.2	43.6	38 29.0	35.6	281 01.5	09.9	208 17.1	01.2
17	129	35.8	118 37.8	+3 44.1	53 29.7	+23 35.8	296 04.1	-4 09.8	223 19.8	-22 01.2
18	144	38.2	133 38.3	+3 44.7	68 30.3	+23 36.0	311 06.7	-4 09.7	238 22.4	-22 01.2
19	159	40.7	148 38.8	45.2	83 30.9	36.2	326 09.4	09.7	253 25.0	01.1
20	174	43.1	163 39.4	45.7	98 31.6	36.4	341 12.0	09.6	268 27.6	01.1
21	189	45.6	178 39.9	46.2	113 32.2	36.5	356 14.6	09.6	283 30.2	01.1
22	204	48.1	193 40.4	46.8	128 32.8	36.7	11 17.2	09.5	298 32.9	01.1
23	219	50.5	208 41.0	47.3	143 33.4	36.9	26 19.9	09.5	313 35.5	01.1
24	234	53.0	223 41.5	+3 47.8	158 34.1	+23 37.1	41 22.5	-4 09.4	328 38.1	-22 01.1
Dif	—		+5	+5	+6	+2	+26	+1	+26	0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 11 ^h 56 ^m 4				Edad: 20 ^d 5 PHE SD: 15°0 PMG: 4 ^h 49 ^m R°: 48 ^m 4^h: 55°1 12^h: 55°3 20^h: 55°5															
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	54.5	+19	19.1	289	59.8	-17	19.8	60 N	**	**	2	12	3	17	0	53	27		
1	195	54.5		19.7	304	30.7 ¹¹⁹		15.2	58	0	46	35	31	42	29	9	03	69		
2	210	54.5		20.3	319	01.6 ¹¹⁹		10.5	56	1	32	2	53	43	32	31	12	67		
3	225	54.4		20.8	333	32.5 ¹¹⁹		05.7	54	2	00	3	08	3	54	23	33	21	65	
4	240	54.4		21.4	348	03.4 ¹¹⁹	-17	00.9	52	21	20	4	03	15	34	28	64			
5	255	54.4	+19	21.9	2	34.3 ¹¹⁹	-16	55.9	50	2	38	3	31	4	11	0	08	35		
6	270	54.4	+19	22.5	17	05.2 ¹¹⁹	-16	50.9	51	3	10	3	54	4	29	**	**	**		
7	285	54.4		23.1	31	36.1 ¹¹⁹		45.8	40	34	4	12	43	**	**	**	**	10	01	59
8	300	54.3		23.6	46	07.0 ¹¹⁹		40.6	35	3	52	27	4	55	**	**	**	11	57	
9	315	54.3		24.2	60	38.0 ¹²⁰		35.3	30	4	08	39	5	05	**	**	**	20	55	
10	330	54.3		24.7	75	08.9 ¹¹⁹		29.9	20	31	4	59	23	23	49	43	35	53		
11	345	54.3	+19	25.3	89	39.8 ¹¹⁹	-16	24.5	10 N	4	50	5	16	5	39	23	37	46		
12	0	54.3	+19	25.9	104	10.8 ¹²⁰	-16	18.9	0	5	05	5	31	5	53	23	26	48		
13	15	54.2		26.4	118	41.7 ¹¹⁹		13.3	10 S	19	45	6	07	15	50	13	46			
14	30	54.2		27.0	133	12.6 ¹¹⁹		07.6	20	32	5	59	22	23	02	53	26	44		
15	45	54.2		27.5	147	43.6 ¹²⁰	-16	01.8	30	45	6	14	39	22	49	55	41	41		
16	60	54.2		28.1	162	14.5 ¹¹⁹	-15	55.9	35	51	22	6	49	41	57	11	50	39		
17	75	54.2	+19	28.6	176	45.5 ¹²⁰	-15	50.0	40	5	58	6	31	7	00	22	31	60		
18	90	54.1	+19	29.2	191	16.4 ¹¹⁹	-15	44.0	45	6	06	6	41	7	13	22	21	61		
19	105	54.1		29.7	205	47.4 ¹²⁰		37.9	50	14	54	30	07	65	25	33				
20	120	54.1		30.3	220	18.3 ¹¹⁹		31.7	52	18	6	59	37	22	01	67	31	32		
21	135	54.1		30.8	234	49.3 ¹²⁰		25.4	54	21	7	05	45	21	55	67	38	31		
22	150	54.0		31.4	249	20.3 ¹²⁰		19.1	56	26	12	7	55	47	70	46	29			
23	165	54.0		31.9	263	51.2 ¹¹⁹		12.6	58	30	19	8	06	39	71	12	55	27		
24	180	54.0	+19	32.5	278	22.2 ¹²⁰	-15	06.1	60 S	6	35	7	28	8	18	21	29	74		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 19 ^m 1		Mag: -4.6 PMG: 9 ^h 05 ^m		Mag: +1.6 PMG: 13 ^h 25 ^m		Mag: -2.4 PMG: 21 ^h 11 ^m		Mag: +0.2 PMG: 2 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	234	53.0	223	41.5	158	34.1	41	22.5	328	38.1
1	249	55.5	238	42.0	173	34.7	56	25.1	343	40.7
2	264	57.9	253	42.6	188	35.3	71	27.8	358	43.3
3	280	00.4	268	43.1	203	36.0	86	30.4	13	46.0
4	295	02.9	283	43.6	218	36.6	101	33.0	28	48.6
5	310	05.3	298	44.1	233	37.2	116	35.6	43	51.2
6	325	07.8	313	44.6	248	37.9	131	38.3	58	53.8
7	340	10.3	328	45.2	263	38.5	146	40.9	73	56.4
8	355	12.7	343	45.7	278	39.1	161	43.5	88	59.1
9	10	15.2	358	46.2	293	39.8	176	46.1	104	01.7
10	25	17.6	13	46.7	308	40.4	191	48.8	119	04.3
11	40	20.1	28	47.2	323	41.0	206	51.4	134	06.9
12	55	22.6	43	47.8	338	41.6	221	54.0	149	09.6
13	70	25.0	58	48.3	353	42.3	236	56.6	164	12.2
14	85	27.5	73	48.8	8	42.9	251	59.3	179	14.8
15	100	30.0	88	49.3	23	43.5	267	01.9	194	17.4
16	115	32.4	103	49.8	38	44.2	282	04.5	209	20.0
17	130	34.9	118	50.3	53	44.8	297	07.1	224	22.7
18	145	37.4	133	50.8	68	45.4	312	09.7	239	25.3
19	160	39.8	148	51.3	83	46.1	327	12.4	254	27.9
20	175	42.3	163	51.8	98	46.7	342	15.0	269	30.5
21	190	44.8	178	52.4	113	47.3	357	17.6	284	33.2
22	205	47.2	193	52.9	128	47.9	12	20.2	299	35.8
23	220	49.7	208	53.4	143	48.6	27	22.9	314	38.4
24	235	52.1	223	53.9	158	49.2	42	25.5	329	41.0
Dif	—		+5		+6		+26		+26	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 21 ^d 5	PHE { 4 ^h : 55 ^h 7 12 ^h : 56 ^h 0 20 ^h : 56 ^h 2										
	PMG: 11 ^h 56 ^m 4					SD: 15 ^h 1			PMG: 5 ^h 37 ^m		R°: 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	54.0	+19	32.5	278	22.2	-15	06.1	60 N	20 39	21 47	** **	1 20 23	10 03 76	
1	195	54.0		33.0	292	53.2 ¹²⁰	-14	59.5 ⁶⁶	58	25	23	23 27	11 25	12 73	
2	210	53.9		33.6	307	24.1 ¹¹⁹		52.9 ⁶⁶	56	12	21 04	22 28	1 03 27	19 72	
3	225	53.9		34.1	321	55.1 ¹²⁰		46.1 ⁶⁸	54	20 02	20 49	21 58	0 56 28	26 70	
4	240	53.9		34.7	336	26.1 ¹²⁰		39.3 ⁶⁸	52	19 52	35	36	49 30	32 68	
5	255	53.9	+19	35.2	350	57.0 ¹¹⁹	-14	32.4 ⁶⁹	50	19 44	20 24	21 18	0 43 32	10 38 66	
6	270	53.8	+19	35.8	5	28.0 ¹²⁰	-14	25.4 ⁷⁰	45	19 26	20 01	20 45	0 31 34	10 50 63	
7	285	53.8		36.3	19	59.0 ¹²⁰		18.4 ⁷⁰	40	19 11	19 42	21	20 36	11 00 60	
8	300	53.8		36.9	34	30.0 ¹²⁰		11.2 ⁷²	35	18 59	27	20 02	11 38	08 58	
9	315	53.8		37.4	49	01.0 ¹²⁰	-14	04.0 ⁷²	30	48	19 15	19 47	0 03 40	15 57	
10	330	53.7		38.0	63	31.9 ¹¹⁹	-13	56.8 ⁷²	20	30	18 54	22	** ** *	28 53	
11	345	53.7	+19	38.5	78	02.9 ¹²⁰	-13	49.4 ⁷⁴	10 N	18 15	18 37	19 03	** ** *	11 39 50	
12	0	53.7	+19	39.0	92	33.9 ¹²⁰	-13	42.0 ⁷⁴	0	18 00	18 22	18 47	** ** *	11 49 48	
13	15	53.7		39.6	107	04.9 ¹²⁰		34.5 ⁷⁵	10 S	17 46	18 08	34	** ** *	11 59 45	
14	30	53.6		40.1	121	35.8 ¹¹⁹		26.9 ⁷⁶	20	30	17 54	20	23 55 55	12 10 42	
15	45	53.6		40.7	136	06.8 ¹²⁰		19.2 ⁷⁷	30	13	38	07	44 58	22 40	
16	60	53.6		41.2	150	37.8 ¹²⁰		11.5 ⁷⁷	35	17 03	30	18 01	38 60	29 38	
17	75	53.6	+19	41.7	165	08.7 ¹¹⁹	-13	03.7 ⁷⁸	40	16 51	17 21	17 54	23 31 62	12 37 36	
18	90	53.5	+19	42.3	179	39.7 ¹²⁰	-12	55.8 ⁷⁹	45	16 38	17 10	17 46	23 22 65	12 47 32	
19	105	53.5		42.8	194	10.7 ¹²⁰		47.9 ⁷⁹	50	22	16 58	37	12 68	12 58 30	
20	120	53.5		43.4	208	41.6 ¹¹⁹		39.9 ⁸⁰	52	14	52	34	08 69	13 03 28	
21	135	53.4		43.9	223	12.6 ¹²⁰		31.8 ⁸¹	54	16 05	46	30	23 02 72	09 26	
22	150	53.4		44.4	237	43.6 ¹²⁰		23.6 ⁸²	56	15 56	39	25	22 57 73	15 25	
23	165	53.4		45.0	252	14.5 ¹¹⁹		15.4 ⁸²	58	45	31	20	50 76	22 23	
24	180	53.4	+19	45.5	266	45.5 ¹²⁰	-12	07.1 ⁸³	60 S	15 32	16 23	17 15	22 43 78	13 30 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 15 ^m 2		Mag: -4.6 PMG: 9 ^h 04 ^m		Mag: +1.6 PMG: 13 ^h 24 ^m		Mag: -2.4 PMG: 21 ^h 07 ^m		Mag: +0.2 PMG: 2 ^h 01 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	235	52.1	223	53.9	+4	00.8	158	49.2	+23	41.2	42	25.5	-4	08.0	329	41.0	-22	01.0
1	250	54.6	238	54.4		01.3	173	49.8		41.3	57	28.1		08.0	344	43.6		01.0
2	265	57.1	253	54.9		01.9	188	50.5		41.5	72	30.7		07.9	359	46.3		01.0
3	280	59.5	268	55.4		02.4	203	51.1		41.7	87	33.3		07.9	14	48.9		01.0
4	296	02.0	283	55.9		03.0	218	51.7		41.8	102	36.0		07.8	29	51.5		01.0
5	311	04.5	298	56.4	+4	03.5	233	52.4	+23	42.0	117	38.6	-4	07.8	44	54.1	-22	01.0
6	326	06.9	313	56.9	+4	04.1	248	53.0	+23	42.2	132	41.2	-4	07.7	59	56.8	-22	01.0
7	341	09.4	328	57.3		04.6	263	53.6		42.3	147	43.8		07.7	74	59.4		01.0
8	356	11.9	343	57.8		05.2	278	54.3		42.5	162	46.4		07.6	90	02.0		01.0
9	11	14.3	358	58.3		05.8	293	54.9		42.7	177	49.0		07.5	105	04.6		01.0
10	26	16.8	13	58.8		06.3	308	55.5		42.8	192	51.7		07.5	120	07.3		01.0
11	41	19.2	28	59.3	+4	06.9	323	56.1	+23	43.0	207	54.3	-4	07.4	135	09.9	-22	01.0
12	56	21.7	43	59.8	+4	07.4	338	56.8	+23	43.2	222	56.9	-4	07.4	150	12.5	-22	01.0
13	71	24.2	59	00.3		08.0	353	57.4		43.3	237	59.5		07.3	165	15.1		01.0
14	86	26.6	74	00.8		08.5	8	58.0		43.5	253	02.1		07.3	180	17.8		01.0
15	101	29.1	89	01.3		09.1	23	58.7		43.6	268	04.8		07.2	195	20.4		01.0
16	116	31.6	104	01.8		09.7	38	59.3		43.8	283	07.4		07.2	210	23.0		01.0
17	131	34.0	119	02.2	+4	10.2	53	59.9	+23	44.0	298	10.0	-4	07.1	225	25.6	-22	01.0
18	146	36.5	134	02.7	+4	10.8	69	00.6	+23	44.1	313	12.6	-4	07.1	240	28.3	-22	01.0
19	161	39.0	149	03.2		11.3	84	01.2		44.3	328	15.2		07.0	255	30.9		01.0
20	176	41.4	164	03.7		11.9	99	01.8		44.5	343	17.8		07.0	270	33.5		01.0
21	191	43.9	179	04.2		12.5	114	02.4		44.6	358	20.5		06.9	285	36.1		01.0
22	206	46.4	194	04.6		13.0	129	03.1		44.8	13	23.1		06.8	300	38.8		01.0
23	221	48.8	209	05.1		13.6	144	03.7		44.9	28	25.7		06.8	315	41.4		00.9
24	236	51.3	224	05.6	+4	14.2	159	04.3	+23	45.1	43	28.3	-4	06.7	330	44.0	-22	00.9
Dif	—		+5		+6		+6		+2		+26		+1		+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 5				Edad: 22 ^d 5 PHE { 4 ^h : 56/5 12 ^h : 56/8 20 ^h : 57/0 SD: 15/3 PMG: 6 ^h 25 ^m R°: 49 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	53.4	+19	45.5	266	45.5	-12	07.1	60 N	** **	2 06	3 13	1 43	19	11 19	80	
1	195	53.3		46.0	281	16.4 ¹¹⁹	-11	58.8 ⁸³	58	0 26	30	28	36	21	25	78	
2	210	53.3		46.6	295	47.3 ¹¹⁹		50.3 ⁸⁵	56	1 24	2 48	40	30	23	31	75	
3	225	53.3		47.1	310	18.3 ¹²⁰		41.8 ⁸⁵	54	1 54	3 04	3 51	24	26	36	73	
4	240	53.2		47.7	324	49.2 ¹¹⁹		33.3 ⁸⁵	52	2 16	17	4 00	19	27	40	71	
5	255	53.2	+19	48.2	339	20.1 ¹¹⁹	-11	24.6 ⁸⁷	50	2 34	3 29	4 09	1 15	28	11 44	70	
6	270	53.2	+19	48.7	353	51.0 ¹¹⁹	-11	15.9 ⁸⁷	45	3 07	3 52	4 27	1 05	32	11 53	66	
7	285	53.1		49.2	8	22.0 ¹²⁰	-11	07.1 ⁸⁸	40	32	4 10	41	0 56	35	12 00	63	
8	300	53.1		49.8	22	52.9 ¹¹⁹	-10	58.3 ⁸⁸	35	3 51	25	4 54	49	37	06	61	
9	315	53.1		50.3	37	23.8 ¹¹⁹		49.4 ⁸⁹	30	4 06	38	5 04	43	39	12	58	
10	330	53.0		50.8	51	54.6 ¹¹⁸		40.4 ⁹⁰	20	31	4 59	23	32	43	21	55	
11	345	53.0	+19	51.4	66	25.5 ¹¹⁹	-10	31.4 ⁹⁰	10 N	4 50	5 16	5 38	0 23	45	12 29	52	
12	0	53.0	+19	51.9	80	56.4 ¹¹⁹	-10	22.3 ⁹¹	0	5 05	5 31	5 53	0 14	48	12 37	48	
13	15	52.9		52.4	95	27.2 ¹¹⁸		13.2 ⁹¹	10 S	19	45	6 07	0 05	51	44	46	
14	30	52.9		53.0	109	58.1 ¹¹⁹	-10	04.0 ⁹²	20	33	5 59	23	** ** *	**	12 52	43	
15	45	52.9		53.5	124	28.9 ¹¹⁸	-9	54.7 ⁹³	30	46	6 15	40	** ** *	**	13 02	38	
16	60	52.8		54.0	138	59.8 ¹¹⁹		45.3 ⁹⁴	35	5 52	23	6 50	** ** *	**	07	36	
17	75	52.8	+19	54.5	153	30.6 ¹¹⁸	-9	35.9 ⁹⁴	40	6 00	6 33	7 02	** ** *	**	13 13	34	
18	90	52.8	+19	55.1	168	01.4 ¹¹⁸	-9	26.5 ⁹⁴	45	6 07	6 43	7 16	** ** *	**	13 19	32	
19	105	52.7		55.6	182	32.2 ¹¹⁸		16.9 ⁹⁶	50	16	6 56	32	** ** *	**	28	27	
20	120	52.7		56.1	197	03.0 ¹¹⁸	-9	07.4 ⁹⁵	52	20	7 02	40	** ** *	**	31	27	
21	135	52.7		56.6	211	33.7 ¹¹⁷	-8	57.7 ⁹⁷	54	24	08	49	** ** *	**	35	25	
22	150	52.6		57.2	226	04.5 ¹¹⁸		48.0 ⁹⁷	56	28	15	7 58	** ** *	**	40	23	
23	165	52.6		57.7	240	35.2 ¹¹⁷		38.3 ⁹⁷	58	33	23	8 09	** ** *	**	45	20	
24	180	52.6	+19	58.2	255	06.0 ¹¹⁸	-8	28.5 ⁹⁸	60 S	6 38	7 31	8 22	** ** *	**	13 51	18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 11 ^m 2		Mag: -4.6 PMG: 9 ^h 03 ^m		Mag: +1.6 PMG: 13 ^h 23 ^m		Mag: -2.4 PMG: 21 ^h 02 ^m		Mag: +0.1 PMG: 1 ^h 57 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	236	51.3	224	05.6	+4	14.2	159	04.3	+23	45.1	43	28.3	-4	06.7	330	44.0	-22	00.9
1	251	53.7	239	06.1		14.7	174	05.0		45.2	58	30.9		06.7	345	46.6		00.9
2	266	56.2	254	06.5		15.3	189	05.6		45.4	73	33.5		06.6	0	49.3		00.9
3	281	58.7	269	07.0		15.9	204	06.2		45.6	88	36.1		06.6	15	51.9		00.9
4	297	01.1	284	07.5		16.4	219	06.9		45.7	103	38.8		06.5	30	54.5		00.9
5	312	03.6	299	08.0	+4	17.0	234	07.5	+23	45.9	118	41.4	-4	06.5	45	57.2	-22	00.9
6	327	06.1	314	08.4	+4	17.6	249	08.1	+23	46.0	133	44.0	-4	06.4	60	59.8	-22	00.9
7	342	08.5	329	08.9		18.2	264	08.8		46.2	148	46.6		06.4	76	02.4		00.9
8	357	11.0	344	09.4		18.7	279	09.4		46.3	163	49.2		06.3	91	05.0		00.9
9	12	13.5	359	09.8		19.3	294	10.0		46.5	178	51.8		06.3	106	07.7		00.9
10	27	15.9	14	10.3		19.9	309	10.6		46.7	193	54.4		06.2	121	10.3		00.9
11	42	18.4	29	10.8	+4	20.4	324	11.3	+23	46.8	208	57.0	-4	06.2	136	12.9	-22	00.9
12	57	20.9	44	11.2	+4	21.0	339	11.9	+23	47.0	223	59.7	-4	06.1	151	15.5	-22	00.9
13	72	23.3	59	11.7		21.6	354	12.5		47.1	239	02.3		06.1	166	18.2		00.9
14	87	25.8	74	12.1		22.2	9	13.2		47.3	254	04.9		06.0	181	20.8		00.9
15	102	28.2	89	12.6		22.8	24	13.8		47.4	269	07.5		06.0	196	23.4		00.9
16	117	30.7	104	13.1		23.3	39	14.4		47.6	284	10.1		05.9	211	26.1		00.9
17	132	33.2	119	13.5	+4	23.9	54	15.1	+23	47.7	299	12.7	-4	05.9	226	28.7	-22	00.9
18	147	35.6	134	14.0	+4	24.5	69	15.7	+23	47.9	314	15.3	-4	05.8	241	31.3	-22	00.9
19	162	38.1	149	14.4		25.1	84	16.3		48.0	329	17.9		05.8	256	33.9		00.9
20	177	40.6	164	14.9		25.6	99	16.9		48.2	344	20.5		05.7	271	36.6		00.9
21	192	43.0	179	15.3		26.2	114	17.6		48.3	359	23.1		05.7	286	39.2		00.9
22	207	45.5	194	15.8		26.8	129	18.2		48.5	14	25.8		05.6	301	41.8		00.9
23	222	48.0	209	16.2		27.4	144	18.8		48.6	29	28.4		05.6	316	44.4		00.9
24	237	50.4	224	16.7	+4	28.0	159	19.5	+23	48.8	44	31.0	-4	05.5	331	47.1	-22	00.9
Dif	—		+5	+6		+6	+2			+26	+1		+26	0				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°8 PMG: 11 ^h 56 ^m 5			Edad: 23 ^d 5 PHE { 4 ^h : 57°3 12 ^h : 57°7 20 ^h : 58°0 PMG: 7 ^h 14 ^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	180	52.6	+19 58.2	255	06.0	-8 28.5	60 N	20 44	21 53	** **	2 02 18		12 39 83		
1	195	52.5	58.7	269	36.7 ¹¹⁷	18.6 ⁹⁹	58	29	28	** **	1 57 20		43 80		
2	210	52.5	59.2	284	07.4 ¹¹⁷	-8 08.7 ⁹⁹	56	16	21 09	22 37	53 22		46 78		
3	225	52.5	+19 59.8	298	38.0 ¹¹⁶	-7 58.7 ¹⁰⁰	54	20 05	20 52	22 04	50 24		49 76		
4	240	52.4	+20 00.3	313	08.7 ¹¹⁷	48.7 ¹⁰⁰	52	19 55	39 21	41	46 26		51 75		
5	255	52.4	+20 00.8	327	39.3 ¹¹⁶	-7 38.6 ¹⁰¹	50	19 46	20 27	21 22	1 43 28		12 54 72		
6	270	52.4	+20 01.3	342	10.0 ¹¹⁷	-7 28.4 ¹⁰²	45	19 28	20 03	20 48	1 37 31		12 59 69		
7	285	52.3	01.8	356	40.6 ¹¹⁶	18.3 ¹⁰¹	40	13	19 44	23	31 34		13 03 66		
8	300	52.3	02.4	11	11.1 ¹¹⁵	-7 08.0 ¹⁰³	35	19 01	29	20 04	26 37		07 63		
9	315	52.2	02.9	25	41.7 ¹¹⁶	-6 57.7 ¹⁰³	30	18 50	19 16	19 48	22 39		10 61		
10	330	52.2	03.4	40	12.2 ¹¹⁵	47.4 ¹⁰³	20	31	18 55	23	15 42		16 56		
11	345	52.2	+20 03.9	54	42.8 ¹¹⁶	-6 37.0 ¹⁰⁴	10 N	18 15	18 37	19 04	1 08 46		13 21 53		
12	0	52.1	+20 04.4	69	13.3 ¹¹⁵	-6 26.5 ¹⁰⁵	0	18 00	18 22	18 48	1 02 49		13 25 50		
13	15	52.1	04.9	83	43.7 ¹¹⁴	16.1 ¹⁰⁴	10 S	17 45	18 08	33	0 56 52		30 46		
14	30	52.1	05.4	98	14.2 ¹¹⁵	-6 05.5 ¹⁰⁶	20	30	17 53	20	50 55		35 42		
15	45	52.0	06.0	112	44.6 ¹¹⁴	-5 54.9 ¹⁰⁶	30	12	38	07	42 60		40 39		
16	60	52.0	06.5	127	15.0 ¹¹⁴	44.3 ¹⁰⁶	35	17 02	29	18 00	38 62		43 36		
17	75	51.9	+20 07.0	141	45.4 ¹¹⁴	-5 33.6 ¹⁰⁷	40	16 50	17 19	17 52	0 33 64		13 47 33		
18	90	51.9	+20 07.5	156	15.8 ¹¹⁴	-5 22.9 ¹⁰⁷	45	16 36	17 08	17 44	0 27 68		13 51 30		
19	105	51.9	08.0	170	46.1 ¹¹³	12.2 ¹⁰⁷	50	19	16 55	35	20 72		55 27		
20	120	51.8	08.5	185	16.4 ¹¹³	-5 01.4 ¹⁰⁸	52	11	50	31	17 73		13 58 25		
21	135	51.8	09.0	199	46.7 ¹¹³	-4 50.5 ¹⁰⁹	54	16 02	43	27	14 74		14 00 24		
22	150	51.7	09.5	214	16.9 ¹¹²	39.6 ¹⁰⁹	56	15 53	36	23	10 77		03 21		
23	165	51.7	10.0	228	47.1 ¹¹²	28.7 ¹⁰⁹	58	41	28	18	06 79		05 20		
24	180	51.7	+20 10.6	243	17.3 ¹¹²	-4 17.8 ¹⁰⁹	60 S	15 28	16 19	17 12	0 01 82		14 09 17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 07 ^m 3		Mag: -4.6 PMG: 9 ^h 03 ^m		Mag: +1.6 PMG: 13 ^h 22 ^m		Mag: -2.4 PMG: 20 ^h 58 ^m		Mag: +0.1 PMG: 1 ^h 53 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	237	50.4	224	16.7	+4 28.0	159 19.5	+23 48.8	44 31.0	-4 05.5	331 47.1	-22 00.9
1	252	52.9	239	17.2	28.6	174 20.1	48.9	59 33.6	05.5	346 49.7	00.8
2	267	55.3	254	17.6	29.1	189 20.7	49.1	74 36.2	05.4	1 52.3	00.8
3	282	57.8	269	18.0	29.7	204 21.4	49.2	89 38.8	05.4	16 55.0	00.8
4	298	00.3	284	18.5	30.3	219 22.0	49.4	104 41.4	05.3	31 57.6	00.8
5	313	02.7	299	18.9	+4 30.9	234 22.6	+23 49.5	119 44.0	-4 05.3	47 00.2	-22 00.8
6	328	05.2	314	19.4	+4 31.5	249 23.2	+23 49.7	134 46.6	-4 05.2	62 02.9	-22 00.8
7	343	07.7	329	19.8	32.1	264 23.9	49.8	149 49.2	05.2	77 05.5	00.8
8	358	10.1	344	20.3	32.7	279 24.5	50.0	164 51.8	05.1	92 08.1	00.8
9	13	12.6	359	20.7	33.3	294 25.1	50.1	179 54.4	05.1	107 10.7	00.8
10	28	15.1	14	21.2	33.8	309 25.8	50.3	194 57.0	05.0	122 13.4	00.8
11	43	17.5	29	21.6	+4 34.4	324 26.4	+23 50.4	209 59.6	-4 05.0	137 16.0	-22 00.8
12	58	20.0	44	22.0	+4 35.0	339 27.0	+23 50.6	225 02.3	-4 04.9	152 18.6	-22 00.8
13	73	22.5	59	22.5	35.6	354 27.7	50.7	240 04.9	04.9	167 21.3	00.8
14	88	24.9	74	22.9	36.2	9 28.3	50.8	255 07.5	04.8	182 23.9	00.8
15	103	27.4	89	23.3	36.8	24 28.9	51.0	270 10.1	04.8	197 26.5	00.8
16	118	29.8	104	23.8	37.4	39 29.5	51.1	285 12.7	04.7	212 29.2	00.8
17	133	32.3	119	24.2	+4 38.0	54 30.2	+23 51.3	300 15.3	-4 04.7	227 31.8	-22 00.8
18	148	34.8	134	24.6	+4 38.6	69 30.8	+23 51.4	315 17.9	-4 04.6	242 34.4	-22 00.8
19	163	37.2	149	25.1	39.2	84 31.4	51.6	330 20.5	04.6	257 37.0	00.8
20	178	39.7	164	25.5	39.8	99 32.1	51.7	345 23.1	04.5	272 39.7	00.8
21	193	42.2	179	25.9	40.4	114 32.7	51.9	0 25.7	04.5	287 42.3	00.8
22	208	44.6	194	26.4	41.0	129 33.3	52.0	15 28.3	04.4	302 44.9	00.8
23	223	47.1	209	26.8	41.6	144 34.0	52.1	30 30.9	04.4	317 47.6	00.8
24	238	49.6	224	27.2	+4 42.2	159 34.6	+23 52.3	45 33.5	-4 04.3	332 50.2	-22 00.8
Dif	—		+4	+6	+6	+6	+1	+26	0	+26	0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 24 ^d 5 PHE SD: 15 ^h 8 PMG: 8 ^h 03 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	51.7	+20	10.6	243	17.3	-4	17.8	60 N	** **	1 59	3 09	2 20	17	14 02	87		
1	195	51.6		11.1	257	47.5 ¹¹²	-4	06.7 ¹¹¹	58	** **	2 24	24	17 20		03 84			
2	210	51.6		11.6	272	17.6 ¹¹¹	-3	55.7 ¹¹⁰	56	1 16	2 44	37	15 22		04 82			
3	225	51.5		12.1	286	47.7 ¹¹¹		44.6 ¹¹¹	54	1 49	3 00	48	14 24		05 79			
4	240	51.5		12.6	301	17.8 ¹¹¹		33.5 ¹¹¹	52	2 12	14	3 58	12 26		06 77			
5	255	51.4	+20	13.1	315	47.8 ¹¹⁰	-3	22.4 ¹¹¹	50	2 30	3 26	4 06	2 11	27	14 06	76		
6	270	51.4	+20	13.6	330	17.8 ¹¹⁰	-3	11.2 ¹¹²	45	3 05	3 50	4 25	2 08	30	14 08	71		
7	285	51.4		14.1	344	47.8 ¹¹⁰	-3	00.0 ¹¹²	40	30	4 08	40	05 34		09 68			
8	300	51.3		14.6	359	17.7 ¹⁰⁹	-2	48.7 ¹¹³	35	3 49	24	4 52	03 36		10 65			
9	315	51.3		15.1	13	47.6 ¹⁰⁹		37.4 ¹¹³	30	4 05	37	5 03	2 01	39	11 63			
10	330	51.2		15.6	28	17.4 ¹⁰⁸		26.1 ¹¹³	20	30	4 58	22	1 57	43	12 59			
11	345	51.2	+20	16.1	42	47.2 ¹⁰⁸	-2	14.8 ¹¹³	10 N	4 49	5 16	5 38	1 54	47	14 14	54		
12	0	51.1	+20	16.6	57	17.0 ¹⁰⁸	-2	03.4 ¹¹⁴	0	5 05	5 31	5 53	1 51	50	14 15	51		
13	15	51.1		17.1	71	46.7 ¹⁰⁷	-1	52.0 ¹¹⁴	10 S	20	5 46	6 08	48 54		16 48			
14	30	51.0		17.6	86	16.4 ¹⁰⁷		40.6 ¹¹⁴	20	33	6 00	24	45 58		17 44			
15	45	51.0		18.1	100	46.1 ¹⁰⁷		29.2 ¹¹⁴	30	47	16	42	42 61		19 39			
16	60	51.0		18.6	115	15.7 ¹⁰⁶		17.7 ¹¹⁵	35	5 54	25	6 52	40 64		19 38			
17	75	50.9	+20	19.1	129	45.3 ¹⁰⁶	-1	06.2 ¹¹⁵	40	6 01	6 34	7 04	1 37	67	14 20	35		
18	90	50.9	+20	19.6	144	14.8 ¹⁰⁵	-0	54.7 ¹¹⁵	45	6 09	6 45	7 18	1 35	70	14 21	32		
19	105	50.8		20.1	158	44.3 ¹⁰⁵		43.1 ¹¹⁶	50	18	6 58	35	32 74		22 28			
20	120	50.8		20.6	173	13.8 ¹⁰⁵		31.6 ¹¹⁵	52	22	7 04	43	30 76		23 26			
21	135	50.7		21.1	187	43.2 ¹⁰⁴		20.0 ¹¹⁶	54	27	11	7 52	28 78		24 24			
22	150	50.7		21.6	202	12.5 ¹⁰³	-0	08.4 ¹¹⁶	56	31	18	8 02	27 80		24 22			
23	165	50.6		22.1	216	41.9 ¹⁰⁴	+0	03.2 ¹¹⁶	58	36	26	13	25 82		25 20			
24	180	50.6	+20	22.6	231	11.1 ¹⁰²	+0	14.8 ¹¹⁶	60 S	6 42	7 35	8 26	1 23	85	14 26	17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 03 ^m 4		Mag: -4.6 PMG: 9 ^h 02 ^m		Mag: +1.7 PMG: 13 ^h 21 ^m		Mag: -2.3 PMG: 20 ^h 54 ^m		Mag: +0.1 PMG: 1 ^h 48 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	238	49.6	224	27.2	+4	42.2	159	34.6	+23	52.3	45	33.5	-4	04.3	332	50.2	-22	00.8
1	253	52.0	239	27.6		42.8	174	35.2		52.4	60	36.1		04.3	347	52.8		00.8
2	268	54.5	254	28.1		43.4	189	35.8		52.6	75	38.7		04.2	2	55.5		00.7
3	283	57.0	269	28.5		44.0	204	36.5		52.7	90	41.3		04.2	17	58.1		00.7
4	298	59.4	284	28.9		44.6	219	37.1		52.8	105	43.9		04.2	33	00.7		00.7
5	314	01.9	299	29.3	+4	45.2	234	37.7	+23	53.0	120	46.5	-4	04.1	48	03.4	-22	00.7
6	329	04.3	314	29.8	+4	45.8	249	38.4	+23	53.1	135	49.1	-4	04.1	63	06.0	-22	00.7
7	344	06.8	329	30.2		46.4	264	39.0		53.3	150	51.7		04.0	78	08.6		00.7
8	359	09.3	344	30.6		47.0	279	39.6		53.4	165	54.3		04.0	93	11.2		00.7
9	14	11.7	359	31.0		47.6	294	40.3		53.5	180	56.9		03.9	108	13.9		00.7
10	29	14.2	14	31.4		48.2	309	40.9		53.7	195	59.5		03.9	123	16.5		00.7
11	44	16.7	29	31.8	+4	48.8	324	41.5	+23	53.8	211	02.1	-4	03.8	138	19.1	-22	00.7
12	59	19.1	44	32.3	+4	49.4	339	42.1	+23	53.9	226	04.7	-4	03.8	153	21.8	-22	00.7
13	74	21.6	59	32.7		50.0	354	42.8		54.1	241	07.3		03.7	168	24.4		00.7
14	89	24.1	74	33.1		50.6	9	43.4		54.2	256	09.9		03.7	183	27.0		00.7
15	104	26.5	89	33.5		51.2	24	44.0		54.4	271	12.5		03.6	198	29.7		00.7
16	119	29.0	104	33.9		51.9	39	44.7		54.5	286	15.1		03.6	213	32.3		00.7
17	134	31.4	119	34.3	+4	52.5	54	45.3	+23	54.6	301	17.7	-4	03.6	228	34.9	-22	00.7
18	149	33.9	134	34.7	+4	53.1	69	45.9	+23	54.8	316	20.3	-4	03.5	243	37.6	-22	00.7
19	164	36.4	149	35.1		53.7	84	46.6		54.9	331	22.9		03.5	258	40.2		00.7
20	179	38.8	164	35.5		54.3	99	47.2		55.0	346	25.5		03.4	273	42.8		00.7
21	194	41.3	179	35.9		54.9	114	47.8		55.2	1	28.1		03.4	288	45.5		00.7
22	209	43.8	194	36.4		55.5	129	48.4		55.3	16	30.7		03.3	303	48.1		00.7
23	224	46.2	209	36.8		56.1	144	49.1		55.4	31	33.3		03.3	318	50.7		00.7
24	239	48.7	224	37.2	+4	56.8	159	49.7	+23	55.6	46	35.9	-4	03.2	333	53.4	-22	00.7
Dif	—		+4		+6		+6		+1		+26		0		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15/8 PMG: 11 ^h 56 ^m 7			Edad: 25 ^d 5 PHE { SD: 16/1 PMG: 8 ^h 54 ^m 4 ^h : 59/2 12 ^h : 59/5 20 ^h : 59/8 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	180	50.6	+20	22.6	231	11.1	+0	14.8	60 N	20 48	22 00	** **	2 37	18	15 29	90	
1	195	50.5		23.1	245	40.3 ¹⁰²		26.5 ¹¹⁷	58	33	21 33	** **	37	21	27	87	
2	210	50.5		23.5	260	09.5 ¹⁰²		38.1 ¹¹⁶	56	19	21 13	22 46	37	23	26	84	
3	225	50.4		24.0	274	38.6 ¹⁰¹	+0	49.8 ¹¹⁷	54	20 08	20 56	22 10	38	25	24	82	
4	240	50.4		24.5	289	07.7 ¹⁰¹	+1	01.5 ¹¹⁷	52	19 58	42	21 45	38	27	23	80	
5	255	50.4	+20	25.0	303	36.7 ¹⁰⁰	+1	13.2 ¹¹⁷	50	19 49	20 30	21 26	2 38	29	15 22	78	
6	270	50.3	+20	25.5	318	05.7 ¹⁰⁰	+1	24.9 ¹¹⁷	45	19 30	20 05	20 51	2 38	33	15 19	74	
7	285	50.3		26.0	332	34.6 ⁹⁹		36.6 ¹¹⁷	40	15	19 46	25	39	36	17	71	
8	300	50.2		26.5	347	03.5 ⁹⁹	+1	48.3 ¹¹⁷	35	19 02	31	20 06	39	39	15	68	
9	315	50.2		27.0	1	32.3 ⁹⁸	+2	00.0 ¹¹⁷	30	18 51	19 17	19 50	40	40	14	65	
10	330	50.1		27.5	16	01.1 ⁹⁸	+2	11.8 ¹¹⁸	20	32	18 56	24	40	45	11	61	
11	345	50.1	+20	27.9	30	29.8 ⁹⁷	+2	23.5 ¹¹⁷	10 N	18 15	18 38	19 04	2 41	49	15 08	57	
12	0	50.0	+20	28.4	44	58.5 ⁹⁷	+2	35.2 ¹¹⁷	0	18 00	18 22	18 48	2 41	53	15 06	54	
13	15	50.0		28.9	59	27.1 ⁹⁶		47.0 ¹¹⁸	10 S	17 45	18 08	33	42	56	04	50	
14	30	49.9		29.4	73	55.6 ⁹⁵	+2	58.7 ¹¹⁷	20	29	17 53	20	43	59	15	01	46
15	45	49.9		29.9	88	24.1 ⁹⁵	+3	10.4 ¹¹⁷	30	11	37	18 06	43	64	14	58	42
16	60	49.8		30.4	102	52.5 ⁹⁴		22.2 ¹¹⁸	35	17 00	28	17 59	44	66	57	39	
17	75	49.8	+20	30.9	117	20.9 ⁹⁴	+3	33.9 ¹¹⁷	40	16 48	17 18	17 51	2 44	70	14	55	37
18	90	49.7	+20	31.3	131	49.2 ⁹³	+3	45.6 ¹¹⁷	45	16 34	17 07	17 43	2 45	73	14	53	33
19	105	49.7		31.8	146	17.5 ⁹³	+3	57.3 ¹¹⁷	50	17	16 53	34	46	77	50	30	
20	120	49.6		32.3	160	45.7 ⁹²	+4	09.0 ¹¹⁷	52	09	47	29	46	79	49	28	
21	135	49.6		32.8	175	13.8 ⁹¹		20.7 ¹¹⁷	54	16 00	41	25	46	81	48	26	
22	150	49.5		33.3	189	41.9 ⁹¹		32.4 ¹¹⁷	56	15 50	33	20	47	83	46	24	
23	165	49.4		33.7	204	09.9 ⁹⁰		44.1 ¹¹⁷	58	38	25	15	47	86	45	21	
24	180	49.4	+20	34.2	218	37.9 ⁹⁰	+4	55.7 ¹¹⁶	60 S	15 24	16 16	17 10	2 48	88	14	43	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 59 ^m 4		Mag: -4.6 PMG: 9 ^h 01 ^m		Mag: +1.7 PMG: 13 ^h 20 ^m		Mag: -2.3 PMG: 20 ^h 50 ^m		Mag: +0.1 PMG: 1 ^h 44 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	239	48.7	224	37.2	+4	56.8	159	49.7	+23	55.6	46	35.9	-4	03.2	333	53.4	-22	00.7
1	254	51.2	239	37.6		57.4	174	50.3		55.7	61	38.5		03.2	348	56.0		00.7
2	269	53.6	254	38.0		58.0	189	51.0		55.8	76	41.1		03.2	3	58.6		00.7
3	284	56.1	269	38.4		58.6	204	51.6		56.0	91	43.6		03.1	19	01.3		00.6
4	299	58.6	284	38.8		59.2	219	52.2		56.1	106	46.2		03.1	34	03.9		00.6
5	315	01.0	299	39.2	+4	59.8	234	52.9	+23	56.2	121	48.8	-4	03.0	49	06.5	-22	00.6
6	330	03.5	314	39.6	+5	00.5	249	53.5	+23	56.3	136	51.4	-4	03.0	64	09.2	-22	00.6
7	345	05.9	329	40.0		01.1	264	54.1		56.5	151	54.0		02.9	79	11.8		00.6
8	0	08.4	344	40.3		01.7	279	54.7		56.6	166	56.6		02.9	94	14.4		00.6
9	15	10.9	359	40.7		02.3	294	55.4		56.7	181	59.2		02.9	109	17.1		00.6
10	30	13.3	14	41.1		02.9	309	56.0		56.9	197	01.8		02.8	124	19.7		00.6
11	45	15.8	29	41.5	+5	03.6	324	56.6	+23	57.0	212	04.4	-4	02.8	139	22.3	-22	00.6
12	60	18.3	44	41.9	+5	04.2	339	57.3	+23	57.1	227	07.0	-4	02.7	154	25.0	-22	00.6
13	75	20.7	59	42.3		04.8	354	57.9		57.2	242	09.6		02.7	169	27.6		00.6
14	90	23.2	74	42.7		05.4	9	58.5		57.4	257	12.2		02.6	184	30.3		00.6
15	105	25.7	89	43.1		06.1	24	59.1		57.5	272	14.8		02.6	199	32.9		00.6
16	120	28.1	104	43.5		06.7	39	59.8		57.6	287	17.4		02.6	214	35.5		00.6
17	135	30.6	119	43.9	+5	07.3	55	00.4	+23	57.8	302	19.9	-4	02.5	229	38.2	-22	00.6
18	150	33.1	134	44.2	+5	07.9	70	01.0	+23	57.9	317	22.5	-4	02.5	244	40.8	-22	00.6
19	165	35.5	149	44.6		08.6	85	01.7		58.0	332	25.1		02.4	259	43.4		00.6
20	180	38.0	164	45.0		09.2	100	02.3		58.1	347	27.7		02.4	274	46.1		00.6
21	195	40.4	179	45.4		09.8	115	02.9		58.3	2	30.3		02.3	289	48.7		00.6
22	210	42.9	194	45.8		10.4	130	03.6		58.4	17	32.9		02.3	304	51.3		00.6
23	225	45.4	209	46.2		11.1	145	04.2		58.5	32	35.5		02.3	319	54.0		00.6
24	240	47.8	224	46.5	+5	11.7	160	04.8	+23	58.6	47	38.1	-4	02.2	334	56.6	-22	00.6
Dif	—		+4		+6		+6		+1		+26		0		+26		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 7				Edad: 26 ^d 5 PHE { 4 ^h : 60 [°] 1 12 ^h : 60 [°] 4 20 ^h : 60 [°] 6 R°: 55 ^m																			
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m						
0	180	49.4	+20	34.2	218	37.9	+4	55.7	60 N	** **	1 53	3 05	2 55	20	16 59	91								
1	195	49.3		34.7	233	05.8	89	+5 07.4 ¹¹⁷	58	** **	2 20	20	2 58	23	54	89								
2	210	49.3		35.2	247	33.6	88	19.0 ¹¹⁶	56	1 07	40	34	3 00	26	50	86								
3	225	49.2		35.6	262	01.4	88	30.6 ¹¹⁶	54	1 43	2 57	45	03	27	46	84								
4	240	49.2		36.1	276	29.1	87	42.2 ¹¹⁶	52	2 08	3 11	3 55	05	30	43	82								
5	255	49.1	+20	36.6	290	56.7	86	+5 53.8 ¹¹⁶	50	2 27	3 23	4 04	3 07	31	16 40	80								
6	270	49.1	+20	37.1	305	24.3	86	+6 05.3 ¹¹⁵	45	3 02	3 48	4 23	3 11	35	16 33	76								
7	285	49.0		37.5	319	51.8	85	16.9 ¹¹⁶	40	28	4 07	38	15	38	28	72								
8	300	49.0		38.0	334	19.2	84	28.3 ¹¹⁴	35	3 48	23	4 51	18	41	23	70								
9	315	48.9		38.5	348	46.6	84	39.8 ¹¹⁵	30	4 04	36	5 02	20	44	19	67								
10	330	48.9		39.0	3	13.9	83	+6 51.3 ¹¹⁵	20	29	4 57	21	25	48	12	63								
11	345	48.8	+20	39.4	17	41.2	83	+7 02.7 ¹¹⁴	10 N	4 49	5 15	5 38	3 30	51	16 05	60								
12	0	48.7	+20	39.9	32	08.3	81	+7 14.1 ¹¹⁴	0	5 05	5 31	5 53	3 34	55	16 00	56								
13	15	48.7		40.4	46	35.4	81	25.4 ¹¹³	10 S	20	5 46	6 08	38	59	15 54	53								
14	30	48.6		40.9	61	02.5	81	36.7 ¹¹³	20	34	6 01	24	42	63	47	50								
15	45	48.6		41.3	75	29.5	80	48.0 ¹¹³	30	48	17	43	47	67	40	46								
16	60	48.5		41.8	89	56.4	79	+7 59.2 ¹¹²	35	5 55	26	6 53	50	70	36	43								
17	75	48.5	+20	42.3	104	23.2	78	+8 10.4 ¹¹²	40	6 03	6 36	7 05	3 54	72	15 32	40								
18	90	48.4	+20	42.7	118	49.9	77	+8 21.6 ¹¹²	45	6 11	6 47	7 20	3 58	75	15 26	38								
19	105	48.4		43.2	133	16.6	77	32.7 ¹¹¹	50	20	7 01	37	4 03	79	20	33								
20	120	48.3		43.7	147	43.3	77	43.8 ¹¹¹	52	24	07	45	05	81	17	32								
21	135	48.2		44.1	162	09.8	75	+8 54.8 ¹¹⁰	54	29	13	7 55	07	84	14	30								
22	150	48.2		44.6	176	36.3	75	+9 05.8 ¹¹⁰	56	34	21	8 05	10	86	10	28								
23	165	48.1		45.1	191	02.7	74	16.8 ¹¹⁰	58	39	29	17	13	88	06	25								
24	180	48.1	+20	45.5	205	29.0	73	+9 27.7 ¹⁰⁹	60 S	6 45	7 38	8 30	4 16	91	15 02	22								
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG 7 ^h 55 ^m 5				Mag: -4.6 PMG: 9 ^h 01 ^m				Mag: +1.7 PMG: 13 ^h 19 ^m				Mag: -2.3 PMG: 20 ^h 46 ^m				Mag: +0.1 PMG: 1 ^h 40 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	240	47.8	224	46.5	+5	11.7	160	04.8	+23	58.6	47	38.1	-4	02.2	334	56.6	-22	00.6						
1	255	50.3	239	46.9		12.3	175	05.4		58.8	62	40.7		02.2	349	59.2		00.6						
2	270	52.8	254	47.3		13.0	190	06.1		58.9	77	43.3		02.1	5	01.9		00.6						
3	285	55.2	269	47.7		13.6	205	06.7		59.0	92	45.8		02.1	20	04.5		00.5						
4	300	57.7	284	48.1		14.2	220	07.3		59.1	107	48.4		02.0	35	07.2		00.5						
5	316	00.2	299	48.4	+5	14.9	235	08.0	+23	59.2	122	51.0	-4	02.0	50	09.8	-22	00.5						
6	331	02.6	314	48.8	+5	15.5	250	08.6	+23	59.4	137	53.6	-4	02.0	65	12.4	-22	00.5						
7	346	05.1	329	49.2		16.1	265	09.2		59.5	152	56.2		01.9	80	15.1		00.5						
8	1	07.5	344	49.6		16.8	280	09.9		59.6	167	58.8		01.9	95	17.7		00.5						
9	16	10.0	359	49.9		17.4	295	10.5		59.7	183	01.4		01.8	110	20.3		00.5						
10	31	12.5	14	50.3		18.0	310	11.1	+23	59.8	198	04.0		01.8	125	23.0		00.5						
11	46	14.9	29	50.7	+5	18.7	325	11.7	+24	00.0	213	06.5	-4	01.8	140	25.6	-22	00.5						
12	61	17.4	44	51.0	+5	19.3	340	12.4	+24	00.1	228	09.1	-4	01.7	155	28.2	-22	00.5						
13	76	19.9	59	51.4		19.9	355	13.0		00.2	243	11.7		01.7	170	30.9		00.5						
14	91	22.3	74	51.8		20.6	10	13.6		00.3	258	14.3		01.6	185	33.5		00.5						
15	106	24.8	89	52.1		21.2	25	14.3		00.4	273	16.9		01.6	200	36.2		00.5						
16	121	27.3	104	52.5		21.9	40	14.9		00.6	288	19.5		01.6	215	38.8		00.5						
17	136	29.7	119	52.9	+5	22.5	55	15.5	+24	00.7	303	22.0	-4	01.5	230	41.4	-22	00.5						
18	151	32.2	134	53.2	+5	23.1	70	16.2	+24	00.8	318	24.6	-4	01.5	245	44.1	-22	00.5						
19	166	34.7	149	53.6		23.8	85	16.8		00.9	333	27.2		01.4	260	46.7		00.5						
20	181	37.1	164	54.0		24.4	100	17.4		01.0	348	29.8		01.4	275	49.3		00.5						
21	196	39.6	179	54.3		25.1	115	18.1		01.1	3	32.4		01.4	290	52.0		00.5						
22	211	42.0	194	54.7		25.7	130	18.7		01.3	18	35.0		01.3	305	54.6		00.5						
23	226	44.5	209	55.0		26.3	145	19.3		01.4	33	37.5		01.3	320	57.3		00.5						
24	241	47.0	224	55.4	+5	27.0	160	19.9	+24	01.5	48	40.1	-4	01.3	335	59.9	-22	00.5						
Dif	—				+4				+6				+26				0				+26			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		Edad: 27 ^d 5 PHE { 4 ^h : 60 ^h 8 12 ^h : 61 ^h 0 20 ^h : 61 ^h 1 R°: 59 ^m												
	PMG: 11 ^h 56 ^m 8		SD: 16 ^h 5 PMG: 10 ^h 42 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	180	48.1	+20 45.5		205	29.0	+9 27.7	60 N	20 52	22 06	** **	3 15 26	18 30 91		
1	195	48.0	46.0		219	55.3	73 38.5	58	36	21 38	** **	21 28	23 87		
2	210	48.0	46.4		234	21.5	72 +9 49.3	56	23	17	22 56	26 31	16 85		
3	225	47.9	46.9		248	47.6	71 +10 00.0	54	11	21 00	22 16	30 33	10 83		
4	240	47.8	47.4		263	13.7	71 +10 10.7	52	20 01	20 45	21 50	35 34	05 81		
5	255	47.8	+20 47.8		277	39.7	70 +10 21.3	50	19 52	20 33	21 30	3 38 37	18 00 79		
6	270	47.7	+20 48.3		292	05.6	69 +10 31.8	45	19 32	20 08	20 54	3 46 40	17 49 76		
7	285	47.7	48.8		306	31.4	68 42.3	40	17	19 48	28	53 43	40 74		
8	300	47.6	49.2		320	57.2	68 +10 52.8	35	19 03	32	20 07	3 59 46	33 71		
9	315	47.5	49.7		335	22.9	67 +11 03.1	30	18 52	19 19	19 51	4 04 48	26 69		
10	330	47.5	50.1		349	48.5	66 13.4	20	33	18 57	25	13 52	15 66		
11	345	47.4	+20 50.6		4	14.1	66 +11 23.7	10 N	18 16	18 39	19 05	4 21 55	17 05 63		
12	0	47.4	+20 51.0		18	39.5	64 +11 33.8	0	18 00	18 23	18 48	4 29 58	16 56 60		
13	15	47.3	51.5		33	05.0	65 43.9	10 S	17 45	18 07	33	37 61	47 57		
14	30	47.2	52.0		47	30.3	63 +11 54.0	20	29	17 52	19	45 64	37 54		
15	45	47.2	52.4		61	55.6	63 +12 03.9	30	17 10	36	18 05	4 54 69	26 50		
16	60	47.1	52.9		76	20.8	62 13.8	35	16 59	27	17 58	5 00 70	19 49		
17	75	47.0	+20 53.3		90	45.9	61 +12 23.6	40	16 47	17 17	17 50	5 06 73	16 12 46		
18	90	47.0	+20 53.8		105	10.9	60 +12 33.3	45	16 33	17 05	17 41	5 13 77	16 04 43		
19	105	46.9	54.2		119	35.9	60 42.9	50	15	16 52	32	22 80	15 53 40		
20	120	46.9	54.7		134	00.8	59 +12 52.5	52	16 07	45	28	26 82	49 38		
21	135	46.8	55.1		148	25.7	59 +13 02.0	54	15 57	39	23	31 84	44 36		
22	150	46.7	55.6		162	50.5	58 11.4	56	47	31	18	36 86	38 34		
23	165	46.7	56.0		177	15.2	57 20.7	58	35	23	13	41 89	31 32		
24	180	46.6	+20 56.5		191	39.8	56 +13 29.9	60 S	15 21	16 13	17 07	5 47 92	15 24 29		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 7 ^h 51 ^m 6		Mag: -4.5 PMG: 9 ^h 00 ^m		Mag: +1.7 PMG: 13 ^h 18 ^m		Mag: -2.3 PMG: 20 ^h 42 ^m			Mag: +0.1 PMG: 1 ^h 36 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	241	47.0	224 55.4	+5 27.0	160 19.9	+24 01.5	48 40.1	-4 01.3	335 59.9	-22 00.5					
1	256	49.4	239 55.7	27.6	175 20.6	01.6	63 42.7	01.2	351 02.5	00.5					
2	271	51.9	254 56.1	28.3	190 21.2	01.7	78 45.3	01.2	6 05.2	00.5					
3	286	54.4	269 56.5	28.9	205 21.8	01.8	93 47.9	01.1	21 07.8	00.5					
4	301	56.8	284 56.8	29.6	220 22.5	01.9	108 50.5	01.1	36 10.5	00.4					
5	316	59.3	299 57.2	+5 30.2	235 23.1	+24 02.1	123 53.0	-4 01.1	51 13.1	-22 00.4					
6	332	01.8	314 57.5	+5 30.9	250 23.7	+24 02.2	138 55.6	-4 01.0	66 15.7	-22 00.4					
7	347	04.2	329 57.9	31.5	265 24.4	02.3	153 58.2	01.0	81 18.4	00.4					
8	2	06.7	344 58.2	32.1	280 25.0	02.4	169 00.8	00.9	96 21.0	00.4					
9	17	09.1	359 58.6	32.8	295 25.6	02.5	184 03.4	00.9	111 23.6	00.4					
10	32	11.6	14 58.9	33.4	310 26.2	02.6	199 05.9	00.9	126 26.3	00.4					
11	47	14.1	29 59.3	+5 34.1	325 26.9	+24 02.7	214 08.5	-4 00.8	141 28.9	-22 00.4					
12	62	16.5	44 59.6	+5 34.7	340 27.5	+24 02.8	229 11.1	-4 00.8	156 31.6	-22 00.4					
13	77	19.0	60 00.0	35.4	355 28.1	03.0	244 13.7	00.8	171 34.2	00.4					
14	92	21.5	75 00.3	36.0	10 28.8	03.1	259 16.3	00.7	186 36.8	00.4					
15	107	23.9	90 00.7	36.7	25 29.4	03.2	274 18.8	00.7	201 39.5	00.4					
16	122	26.4	105 01.0	37.3	40 30.0	03.3	289 21.4	00.6	216 42.1	00.4					
17	137	28.9	120 01.3	+5 38.0	55 30.7	+24 03.4	304 24.0	-4 00.6	231 44.8	-22 00.4					
18	152	31.3	135 01.7	+5 38.7	70 31.3	+24 03.5	319 26.6	-4 00.6	246 47.4	-22 00.4					
19	167	33.8	150 02.0	39.3	85 31.9	03.6	334 29.1	00.5	261 50.0	00.4					
20	182	36.3	165 02.4	40.0	100 32.5	03.7	349 31.7	00.5	276 52.7	00.4					
21	197	38.7	180 02.7	40.6	115 33.2	03.8	4 34.3	00.5	291 55.3	00.4					
22	212	41.2	195 03.0	41.3	130 33.8	03.9	19 36.9	00.4	306 58.0	00.4					
23	227	43.6	210 03.4	41.9	145 34.4	04.0	34 39.5	00.4	322 00.6	00.4					
24	242	46.1	225 03.7	+5 42.6	160 35.1	+24 04.1	49 42.0	-4 00.4	337 03.2	-22 00.4					
Dif	—		+3	+6	+6	+1	+26	0	+26	0					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9				Edad: 28 ^d 5 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 3 20 ^h : 61 ^h 4 PMG: 11 ^h 41 ^m R°: 62 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	46.6	+20	56.5	191	39.8	+13	29.9	60 N	** **	1 47	3 01	3 41	33	20 01	83		
1	195	46.5		56.9	206	04.4	56	39.0	58	** **	2 15	17	49	36	19 50	82		
2	210	46.5		57.4	220	28.9	55	48.0	56	0 57	36	31	3 57	38	41	80		
3	225	46.4		57.8	234	53.4	55	+13 57.0	54	1 37	2 53	42	4 03	40	33	78		
4	240	46.4		58.3	249	17.7	53	+14 05.8	52	2 03	3 08	3 53	09	42	26	77		
5	255	46.3	+20	58.7	263	42.1	54	+14 14.6	50	2 23	3 20	4 02	4 15	43	19 19	76		
6	270	46.2	+20	59.1	278	06.3	52	+14 23.2	45	3 00	3 46	4 21	4 26	47	19 05	73		
7	285	46.2	+20	59.6	292	30.5	52	31.8	40	26	4 05	37	36	49	18 54	71		
8	300	46.1	+21	00.0	306	54.6	51	40.2	35	3 46	21	4 50	45	51	44	69		
9	315	46.0	+21	00.5	321	18.7	51	48.6	30	4 03	35	5 02	4 52	53	35	68		
10	330	46.0		00.9	335	42.7	50	+14 56.9	20	28	4 57	21	5 05	56	21	65		
11	345	45.9	+21	01.4	350	06.6	49	+15 05.0	10 N	4 49	5 15	5 38	5 16	59	18 08	63		
12	0	45.8	+21	01.8	4	30.5	49	+15 13.0	0	5 05	5 31	5 53	5 27	61	17 56	61		
13	15	45.8		02.2	18	54.3	48	21.0	10 S	20	5 46	6 09	38	63	44	59		
14	30	45.7		02.7	33	18.1	48	28.8	20	35	6 02	25	5 49	66	31	57		
15	45	45.6		03.1	47	41.8	47	36.5	30	49	18	44	6 03	68	16	55		
16	60	45.6		03.6	62	05.4	46	44.1	35	5 56	27	6 55	10	71	17 08	53		
17	75	45.5	+21	04.0	76	29.0	46	+15 51.6	40	6 04	6 37	7 07	6 19	73	16 58	52		
18	90	45.4	+21	04.4	90	52.5	45	+15 59.0	45	6 13	6 49	7 22	6 30	75	16 47	49		
19	105	45.4		04.9	105	16.0	45	+16 06.2	50	22	7 03	40	42	78	33	47		
20	120	45.3		05.3	119	39.5	45	13.4	52	27	09	48	48	80	27	45		
21	135	45.2		05.8	134	02.8	43	20.4	54	31	16	7 57	6 55	81	20	44		
22	150	45.2		06.2	148	26.2	44	27.3	56	36	23	8 08	7 02	83	12	42		
23	165	45.1		06.6	162	49.5	43	34.1	58	42	32	20	10	86	16 03	41		
24	180	45.0	+21	07.1	177	12.7	42	+16 40.8	60 S	6 48	7 42	8 34	7 19	89	15 53	38		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 47 ^m 6		Mag: -4.5 PMG: 9 ^h 00 ^m				Mag: +1.7 PMG: 13 ^h 17 ^m				Mag: -2.3 PMG: 20 ^h 38 ^m				Mag: +0.1 PMG: 1 ^h 32 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	242	46.1	225	03.7	+5	42.6	160	35.1	+24	04.1	49	42.0	-4	00.4	337	03.2	-22	00.4
1	257	48.6	240	04.1		43.2	175	35.7		04.3	64	44.6		00.3	352	05.9		00.4
2	272	51.0	255	04.4		43.9	190	36.3		04.4	79	47.2		00.3	7	08.5		00.4
3	287	53.5	270	04.7		44.6	205	37.0		04.5	94	49.8		00.3	22	11.2		00.4
4	302	56.0	285	05.1		45.2	220	37.6		04.6	109	52.3		00.2	37	13.8		00.3
5	317	58.4	300	05.4	+5	45.9	235	38.2	+24	04.7	124	54.9	-4	00.2	52	16.4	-22	00.3
6	333	00.9	315	05.7	+5	46.5	250	38.8	+24	04.8	139	57.5	-4	00.1	67	19.1	-22	00.3
7	348	03.4	330	06.1		47.2	265	39.5		04.9	155	00.0		00.1	82	21.7		00.3
8	3	05.8	345	06.4		47.8	280	40.1		05.0	170	02.6	-4	00.1	97	24.4		00.3
9	18	08.3	0	06.7		48.5	295	40.7		05.1	185	05.2	-4	00.0	112	27.0		00.3
10	33	10.8	15	07.0		49.2	310	41.4		05.2	200	07.8		00.0	127	29.6		00.3
11	48	13.2	30	07.4	+5	49.8	325	42.0	+24	05.3	215	10.3	-4	00.0	142	32.3	-22	00.3
12	63	15.7	45	07.7	+5	50.5	340	42.6	+24	05.4	230	12.9	-3	59.9	157	34.9	-22	00.3
13	78	18.1	60	08.0		51.2	355	43.3		05.5	245	15.5		59.9	172	37.6		00.3
14	93	20.6	75	08.3		51.8	10	43.9		05.6	260	18.1		59.9	187	40.2		00.3
15	108	23.1	90	08.7		52.5	25	44.5		05.7	275	20.6		59.8	202	42.9		00.3
16	123	25.5	105	09.0		53.1	40	45.2		05.8	290	23.2		59.8	217	45.5		00.3
17	138	28.0	120	09.3	+5	53.8	55	45.8	+24	05.9	305	25.8	-3	59.8	232	48.1	-22	00.3
18	153	30.5	135	09.6	+5	54.5	70	46.4	+24	06.0	320	28.3	-3	59.7	247	50.8	-22	00.3
19	168	32.9	150	10.0		55.1	85	47.0		06.1	335	30.9		59.7	262	53.4		00.3
20	183	35.4	165	10.3		55.8	100	47.7		06.2	350	33.5		59.7	277	56.1		00.3
21	198	37.9	180	10.6		56.5	115	48.3		06.3	5	36.1		59.6	292	58.7		00.3
22	213	40.3	195	10.9		57.1	130	48.9		06.4	20	38.6		59.6	308	01.3		00.3
23	228	42.8	210	11.2		57.8	145	49.6		06.5	35	41.2		59.6	323	04.0		00.3
24	243	45.3	225	11.5	+5	58.5	160	50.2	+24	06.6	50	43.8	-3	59.5	338	06.6	-22	00.3
Dif	—		+3		+7		+6		+1		+26		0		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 1			Edad: 29 ^d 5 PHE { 4 ^h : 61'4 12 ^h : 61'4 20 ^h : 61'3 R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m		h m m	h m m	h m m	h m m
0	180	45.0	+21	07.1	177	12.7	+16 40.8	60 N	20 57	22 13	** **	4 14 45	21 24 71		
1	195	45.0		07.5	191	35.9	47.3	58	40	21 43	** **	25 47	12 70		
2	210	44.9		07.9	205	59.0	+16 53.7	56	26	21	23 07	35 48	21 01 69		
3	225	44.8		08.4	220	22.1	+17 00.0	54	14	21 03	22 22	43 50	20 51 69		
4	240	44.8		08.8	234	45.2	+17 06.2	52	20 03	20 49	21 55	51 51	43 68		
5	255	44.7	+21	09.2	249	08.2	+17 12.2	50	19 54	20 36	21 34	4 58 52	20 35 68		
6	270	44.6	+21	09.6	263	31.2	+17 18.1	45	19 34	20 10	20 56	5 13 54	20 18 67		
7	285	44.5		10.1	277	54.1	23.9	40	18	19 50	30	25 55	20 05 66		
8	300	44.5		10.5	292	17.1	29.6	35	19 05	34	20 09	36 56	19 53 66		
9	315	44.4		10.9	306	39.9	35.1	30	18 53	19 20	19 52	5 45 57	43 66		
10	330	44.3		11.4	321	02.8	40.5	20	33	18 58	26	6 01 59	26 64		
11	345	44.3	+21	11.8	335	25.6	+17 45.8	10 N	18 16	18 39	19 06	6 15 61	19 11 64		
12	0	44.2	+21	12.2	349	48.4	+17 50.9	0	18 01	18 23	18 49	6 28 62	18 57 63		
13	15	44.1		12.6	4	11.1	+17 55.9	10 S	17 45	18 07	33	41 64	43 62		
14	30	44.1		13.1	18	33.8	+18 00.7	20	28	17 52	19	6 55 65	28 61		
15	45	44.0		13.5	32	56.5	05.4	30	17 09	35	18 05	7 11 67	11 60		
16	60	43.9		13.9	47	19.2	10.0	35	16 58	26	17 57	21 68	18 01 59		
17	75	43.8	+21	14.3	61	41.8	+18 14.5	40	16 46	17 16	17 49	7 32 69	17 50 58		
18	90	43.8	+21	14.8	76	04.5	+18 18.8	45	16 31	17 04	17 40	7 45 70	17 36 58		
19	105	43.7		15.2	90	27.1	22.9	50	13	16 50	30	8 00 73	20 56		
20	120	43.6		15.6	104	49.7	27.0	52	16 04	44	26	08 73	12 56		
21	135	43.5		16.0	119	12.3	30.9	54	15 55	37	21	16 74	17 04 55		
22	150	43.5		16.4	133	34.8	34.6	56	44	29	16	25 75	16 54 54		
23	165	43.4		16.9	147	57.4	38.2	58	32	20	11	36 76	44 52		
24	180	43.3	+21	17.3	162	19.9	+18 41.7	60 S	15 17	16 10	17 05	8 48 78	16 31 52		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 43 ^m 7		Mag: -4.5 PMG: 8 ^h 59 ^m		Mag: +1.7 PMG: 13 ^h 16 ^m		Mag: -2.3 PMG: 20 ^h 34 ^m		Mag: +0.1 PMG: 1 ^h 27 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	243	45.3	225	11.5	+5 58.5	+24 06.6	50	43.8	-3 59.5	338	06.6
1	258	47.7	240	11.9	59.1	06.7	65	46.3	59.5	353	09.3
2	273	50.2	255	12.2	+5 59.8	06.8	80	48.9	59.5	8	11.9
3	288	52.6	270	12.5	+6 00.5	06.9	95	51.5	59.4	23	14.6
4	303	55.1	285	12.8	01.2	07.0	110	54.0	59.4	38	17.2
5	318	57.6	300	13.1	+6 01.8	07.1	125	56.6	-3 59.4	53	19.8
6	334	00.0	315	13.4	+6 02.5	07.2	140	59.2	-3 59.3	68	22.5
7	349	02.5	330	13.7	03.2	07.3	156	01.7	59.3	83	25.1
8	4	05.0	345	14.0	03.8	07.4	171	04.3	59.3	98	27.8
9	19	07.4	0	14.3	04.5	07.5	186	06.9	59.2	113	30.4
10	34	09.9	15	14.7	05.2	07.6	201	09.4	59.2	128	33.1
11	49	12.4	30	15.0	+6 05.9	07.6	216	12.0	-3 59.2	143	35.7
12	64	14.8	45	15.3	+6 06.5	07.7	231	14.6	-3 59.2	158	38.3
13	79	17.3	60	15.6	07.2	07.8	246	17.1	59.1	173	41.0
14	94	19.8	75	15.9	07.9	07.9	261	19.7	59.1	188	43.6
15	109	22.2	90	16.2	08.6	08.0	276	22.3	59.1	203	46.3
16	124	24.7	105	16.5	09.2	08.1	291	24.8	59.0	218	48.9
17	139	27.1	120	16.8	+6 09.9	08.2	306	27.4	-3 59.0	233	51.6
18	154	29.6	135	17.1	+6 10.6	08.3	321	30.0	-3 59.0	248	54.2
19	169	32.1	150	17.4	11.3	08.4	336	32.5	58.9	263	56.8
20	184	34.5	165	17.7	11.9	08.5	351	35.1	58.9	278	59.5
21	199	37.0	180	18.0	12.6	08.6	6	37.6	58.9	294	02.1
22	214	39.5	195	18.3	13.3	08.7	21	40.2	58.8	309	04.8
23	229	41.9	210	18.6	14.0	08.7	36	42.8	58.8	324	07.4
24	244	44.4	225	18.9	+6 14.7	08.8	51	45.3	-3 58.8	339	10.1
Dif	—		+3		+7		+26		0		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 2				Edad: 1 ^d 2 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 0 20 ^h : 60 ^m 9 Rº: 62 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	43.3	+21	17.3	162	19.9	+18	41.7	60 N	** **	1 41	2 57	4 59	58	22 35	55				
1	195	43.3		17.7	176	42.5		45.0	58	** *	2 10	3 14	5 12	59	22	55				
2	210	43.2		18.1	191	05.0		48.2	56	0 46	33	28	23	60	10	56				
3	225	43.1		18.5	205	27.5		51.2	54	1 32	2 50	40	33	60	22	00	56			
4	240	43.0		18.9	219	50.0		54.1	52	1 59	3 05	3 51	42	60	21	51	57			
5	255	43.0	+21	19.4	234	12.5	+18	56.9	50	2 20	3 18	4 00	5 50	60	21	43	57			
6	270	42.9	+21	19.8	248	35.1	+18	59.5	45	2 58	3 44	4 20	6 07	60	21	25	59			
7	285	42.8		20.2	262	57.6	+19	01.9	40	3 24	4 04	36	20	61	21	11	59			
8	300	42.7		20.6	277	20.1		04.3	35	3 45	20	4 49	32	61	20	59	59			
9	315	42.7		21.0	291	42.7		06.4	30	4 02	34	5 01	6	42	62	49	59			
10	330	42.6		21.4	306	05.2		08.5	20	28	4 57	21	7	00	62	30	61			
11	345	42.5	+21	21.8	320	27.7	+19	10.4	10 N	4 48	5 15	5 38	7	16	62	20	15	61		
12	0	42.4	+21	22.3	334	50.3	+19	12.1	0	5 06	5 31	5 54	7	30	62	20	00	61		
13	15	42.4		22.7	349	12.9		13.7	10 S	21	5 47	6 09	7	45	62	19	45	62		
14	30	42.3		23.1	3	35.5		15.1	20	35	6 02	26	8	00	63	29	62			
15	45	42.2		23.5	17	58.1		16.5	30	50	19	45	18	63		11	63			
16	60	42.1		23.9	32	20.7		17.6	35	5 57	29	6 56	29	62	19	00	63			
17	75	42.1	+21	24.3	46	43.4	+19	18.6	40	6 05	6 39	7 09	8	41	63	18	48	63		
18	90	42.0	+21	24.7	61	06.0	+19	19.5	45	6 14	6 51	7 24	8	55	63	18	34	63		
19	105	41.9		25.1	75	28.7		20.3	50	24	7 05	42	9	13	62	16	64			
20	120	41.8		25.5	89	51.5		20.8	5	29	11	7 51	21	62	18	08	64			
21	135	41.7		25.9	104	14.2		21.3	54	33	18	8 00	30	63	17	59	64			
22	150	41.7		26.3	118	37.0		21.6	56	39	26	11	40	63	48	65				
23	165	41.6		26.7	132	59.8		21.7	58	44	35	23	9	52	63	36	65			
24	180	41.5	+21	27.1	147	22.6	+19	21.8	60 S	6 50	7 45	8 38	10	06	62	17	23	65		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 39 ^m 8				Mag: -4.5 PMG: 8 ^h 59 ^m				Mag: +1.7 PMG: 13 ^h 15 ^m				Mag: -2.3 PMG: 20 ^h 29 ^m				Mag: +0.1 PMG: 1 ^h 23 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	244	44.4	225	18.9	+6	14.7	161	05.3	+24	08.8	51	45.3	-3	58.8	339	10.1	-22	00.2		
1	259	46.9	240	19.2		15.3	176	06.0		08.9	66	47.9		58.8	354	12.7		00.2		
2	274	49.3	255	19.5		16.0	191	06.6		09.0	81	50.5		58.7	9	15.4		00.2		
3	289	51.8	270	19.8		16.7	206	07.2		09.1	96	53.0		58.7	24	18.0		00.2		
4	304	54.2	285	20.1		17.4	221	07.9		09.2	111	55.6		58.7	39	20.6		00.1		
5	319	56.7	300	20.3	+6	18.1	236	08.5	+24	09.3	126	58.1	-3	58.6	54	23.3	-22	00.1		
6	334	59.2	315	20.6	+6	18.7	251	09.1	+24	09.4	142	00.7	-3	58.6	69	25.9	-22	00.1		
7	350	01.6	330	20.9		19.4	266	09.8		09.4	157	03.3		58.6	84	28.6		00.1		
8	5	04.1	345	21.2		20.1	281	10.4		09.5	172	05.8		58.5	99	31.2		00.1		
9	20	06.6	0	21.5		20.8	296	11.0		09.6	187	08.4		58.5	114	33.9		00.1		
10	35	09.0	15	21.8		21.5	311	11.7		09.7	202	10.9		58.5	129	36.5		00.1		
11	50	11.5	30	22.1	+6	22.2	326	12.3	+24	09.8	217	13.5	-3	58.5	144	39.2	-22	00.1		
12	65	14.0	45	22.4	+6	22.9	341	12.9	+24	09.9	232	16.1	-3	58.4	159	41.8	-22	00.1		
13	80	16.4	60	22.6		23.5	356	13.6		10.0	247	18.6		58.4	174	44.5		00.1		
14	95	18.9	75	22.9		24.2	11	14.2		10.0	262	21.2		58.4	189	47.1		00.1		
15	110	21.4	90	23.2		24.9	26	14.8		10.1	277	23.7		58.3	204	49.7		00.1		
16	125	23.8	105	23.5		25.6	41	15.4		10.2	292	26.3		58.3	219	52.4		00.1		
17	140	26.3	120	23.8	+6	26.3	56	16.1	+24	10.3	307	28.9	-3	58.3	234	55.0	-22	00.1		
18	155	28.7	135	24.1	+6	27.0	71	16.7	+24	10.4	322	31.4	-3	58.3	249	57.7	-22	00.1		
19	170	31.2	150	24.3		27.7	86	17.3		10.5	337	34.0		58.2	265	00.3		00.1		
20	185	33.7	165	24.6		28.3	101	18.0		10.5	352	36.5		58.2	280	03.0		00.1		
21	200	36.1	180	24.9		29.0	116	18.6		10.6	7	39.1		58.2	295	05.6		00.1		
22	215	38.6	195	25.2		29.7	131	19.2		10.7	22	41.6		58.2	310	08.3		00.1		
23	230	41.1	210	25.5		30.4	146	19.9		10.8	37	44.2		58.1	325	10.9		00.1		
24	245	43.5	225	25.7	+6	31.1	161	20.5	+24	10.9	52	46.7	-3	58.1	340	13.6	-22	00.1		
Dif	—				+3 +7				+6 +1				+26 0				+26 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 57 ^m 3			Edad: 2 ^d 2 PHE { 4 ^h : 60'7 12 ^h : 60'5 20 ^h : 60'2 PMG: 14 ^h 47 ^m R°: 59 ^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	41.5	+21	27.1	147	22.6	+19	21.8	60 N	21 00	22 20	** **	5 57 71	23 30 40
1	195	41.4		27.5	161	45.5		21.6	58	20 43	21 48	** **	6 11 70	17 42
2	210	41.4		27.9	176	08.4		21.4	56	29	25	23 20	23 68	23 06 44
3	225	41.3		28.3	190	31.4		21.0	54	17	21 07	22 28	33 68	22 56 45
4	240	41.2		28.7	204	54.4		20.4	52	20 06	20 52	21 59	42 67	48 46
5	255	41.1	+21	29.1	219	17.4	+19	19.7	50	19 56	20 38	21 38	6 50 67	22 40 47
6	270	41.0	+21	29.5	233	40.5	+19	18.9	45	19 36	20 12	20 59	7 07 66	22 24 49
7	285	41.0		29.9	248	03.6		17.9	40	20	19 52	32	21 65	22 10 51
8	300	40.9		30.3	262	26.8		16.8	35	19 06	35	20 11	33 64	21 58 53
9	315	40.8		30.7	276	50.0		15.6	30	18 54	19 21	19 54	7 44 63	48 54
10	330	40.7		31.1	291	13.3		14.2	20	34	18 58	27	8 02 62	31 55
11	345	40.6	+21	31.5	305	36.6	+19	12.7	10 N	18 17	18 40	19 06	8 18 61	21 16 57
12	0	40.6	+21	31.9	320	00.0	+19	11.0	0	18 01	18 23	18 49	8 32 60	21 01 59
13	15	40.5		32.3	334	23.4		09.2	10 S	17 45	18 08	34	8 47 59	20 47 60
14	30	40.4		32.7	348	46.9		07.3	20	28	17 52	19	9 03 58	31 62
15	45	40.3		33.1	3	10.4		05.2	30	17 09	35	18 04	21 56	14 63
16	60	40.2		33.5	17	34.0		03.0	35	16 58	25	17 56	31 56	20 03 65
17	75	40.2	+21	33.9	31	57.7	+19	00.7	40	16 45	17 15	17 48	9 44 54	19 51 66
18	90	40.1	+21	34.3	46	21.4	+18	58.2	45	16 30	17 03	17 39	9 58 53	19 37 68
19	105	40.0		34.7	60	45.2		55.6	50	11	16 48	29	10 15 52	20 70
20	120	39.9		35.1	75	09.0		52.9	52	16 03	42	24	23 52	12 70
21	135	39.8		35.5	89	32.9		50.1	54	15 53	35	20	33 50	19 03 72
22	150	39.7		35.8	103	56.9		47.1	56	42	27	14	43 49	18 53 73
23	165	39.7		36.2	118	21.0		44.0	58	29	18	09	10 55 48	41 75
24	180	39.6	+21	36.6	132	45.1	+18	40.7	60 S	15 14	16 08	17 02	11 08 47	18 28 76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 35 ^m 8		Mag: -4.5 PMG: 8 ^h 58 ^m		Mag: +1.7 PMG: 13 ^h 14 ^m		Mag: -2.3 PMG: 20 ^h 25 ^m		Mag: +0.1 PMG: 1 ^h 19 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	245	43.5	225	25.7	+6	31.1	161	20.5	+24	10.9	52	46.7	-3	58.1	340	13.6	-22	00.1
1	260	46.0	240	26.0		31.8	176	21.1		10.9	67	49.3		58.1	355	16.2		00.1
2	275	48.5	255	26.3		32.5	191	21.8		11.0	82	51.9		58.0	10	18.8	-22	00.1
3	290	50.9	270	26.6		33.2	206	22.4		11.1	97	54.4		58.0	25	21.5	-22	00.0
4	305	53.4	285	26.8		33.9	221	23.0		11.2	112	57.0		58.0	40	24.1		00.0
5	320	55.9	300	27.1	+6	34.6	236	23.7	+24	11.3	127	59.5	-3	58.0	55	26.8	-22	00.0
6	335	58.3	315	27.4	+6	35.3	251	24.3	+24	11.3	143	02.1	-3	57.9	70	29.4	-22	00.0
7	351	00.8	330	27.6		36.0	266	24.9		11.4	158	04.6		57.9	85	32.1		00.0
8	6	03.2	345	27.9		36.6	281	25.6		11.5	173	07.2		57.9	100	34.7		00.0
9	21	05.7	0	28.2		37.3	296	26.2		11.6	188	09.7		57.9	115	37.4		00.0
10	36	08.2	15	28.5		38.0	311	26.8		11.6	203	12.3		57.8	130	40.0		00.0
11	51	10.6	30	28.7	+6	38.7	326	27.5	+24	11.7	218	14.8	-3	57.8	145	42.7	-22	00.0
12	66	13.1	45	29.0	+6	39.4	341	28.1	+24	11.8	233	17.4	-3	57.8	160	45.3	-22	00.0
13	81	15.6	60	29.3		40.1	356	28.7		11.9	248	19.9		57.8	175	48.0		00.0
14	96	18.0	75	29.5		40.8	11	29.4		11.9	263	22.5		57.7	190	50.6		00.0
15	111	20.5	90	29.8		41.5	26	30.0		12.0	278	25.0		57.7	205	53.3		00.0
16	126	23.0	105	30.0		42.2	41	30.6		12.1	293	27.6		57.7	220	55.9		00.0
17	141	25.4	120	30.3	+6	42.9	56	31.2	+24	12.2	308	30.1	-3	57.7	235	58.5	-22	00.0
18	156	27.9	135	30.6	+6	43.6	71	31.9	+24	12.2	323	32.7	-3	57.6	251	01.2	-22	00.0
19	171	30.4	150	30.8		44.3	86	32.5		12.3	338	35.2		57.6	266	03.8		00.0
20	186	32.8	165	31.1		45.0	101	33.1		12.4	353	37.8		57.6	281	06.5		00.0
21	201	35.3	180	31.4		45.7	116	33.8		12.5	8	40.3		57.6	296	09.1		00.0
22	216	37.7	195	31.6		46.4	131	34.4		12.5	23	42.9		57.5	311	11.8		00.0
23	231	40.2	210	31.9		47.1	146	35.0		12.6	38	45.4		57.5	326	14.4		00.0
24	246	42.7	225	32.1	+6	47.8	161	35.7	+24	12.7	53	48.0	-3	57.5	341	17.1	-22	00.0
Dif	—		+3 +7		+6 +1		+26 0		+26 0									

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 4			Edad: 3 ^d 2 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 7 20 ^h : 59 ^m 4 PMG: 15 ^h 46 ^m R ^o : 56 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m										
0	180	39.6	+21	36.6	132	45.1	+18	40.7	33	60 N	** **	1 35	2 54	7 08	79	** **	** **										
1	195	39.5		37.0	147	09.3	52	37.4	35	58	** **	2 06	3 11	21	76	23 59	32										
2	210	39.4		37.4	161	33.5	52	33.9	35	56	0 34	29	25	31	75	50	33										
3	225	39.3		37.8	175	57.8	53	30.3	36	54	1 26	2 47	38	41	73	41	36										
4	240	39.2		38.2	190	22.2	54	26.6	37	52	1 55	3 03	49	49	72	34	37										
5	255	39.2	+21	38.6	204	46.7	55	+18	22.7	39	50	2 17	3 16	3 58	7 57	70	23 27										
6	270	39.1	+21	38.9	219	11.2	55	+18	18.8	39	45	2 56	3 42	4 18	8 13	68	23 13										
7	285	39.0		39.3	233	35.9	57	14.7	41	40	3 23	4 03	35	26	66	23 01	44										
8	300	38.9		39.7	248	00.6	57	10.5	42	35	3 44	19	4 48	37	65	22 51	45										
9	315	38.8		40.1	262	25.3	57	06.1	44	30	4 01	33	5 00	8 47	63	42	47										
10	330	38.7		40.5	276	50.2	59	+18	01.7	44	20	27	4 56	20	9 04	61	26 50										
11	345	38.7	+21	40.8	291	15.1	59	+17	57.1	46	10 N	4 48	5 15	5 38	9 19	58	22 13										
12	0	38.6	+21	41.2	305	40.1	60	+17	52.5	46	0	5 06	5 32	5 54	9 32	57	22 00										
13	15	38.5		41.6	320	05.2	61	47.7	48	10 S	21	5 47	6 10	9 46	55	21 47	57										
14	30	38.4		42.0	334	30.4	62	42.8	49	20	36	6 03	27	10 01	52	33	60										
15	45	38.3		42.4	348	55.7	63	37.8	50	30	51	20	46	17	50	17	63										
16	60	38.2		42.7	3	21.0	63	32.7	51	35	5 59	30	6 57	27	49	21 08	64										
17	75	38.1	+21	43.1	17	46.4	64	+17	27.4	53	40	6 07	6 40	7 10	10 38	47	20 57										
18	90	38.1	+21	43.5	32	11.9	65	+17	22.1	53	45	6 16	6 52	7 25	10 51	45	20 45										
19	105	38.0		43.9	46	37.5	66	16.7	54	50	26	7 07	44	11 07	42	30	71										
20	120	37.9		44.2	61	03.2	67	11.1	56	52	31	13	7 53	15	41	22	73										
21	135	37.8		44.6	75	28.9	67	+17	05.5	56	54	36	21	8 03	23	39	15 74										
22	150	37.7		45.0	89	54.8	69	+16	59.8	57	56	41	29	14	32	38	20 06										
23	165	37.6		45.4	104	20.7	69	53.9	59	58	47	38	27	43	36	19 56	78										
24	180	37.5	+21	45.7	118	46.7	70	+16	48.0	59	60 S	6 53	7 48	8 42	11 55	33	19 44										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 7 ^h 31 ^m 9			Mag: -4.5 PMG: 8 ^h 58 ^m			Mag: +1.7 PMG: 13 ^h 13 ^m			Mag: -2.3 PMG: 20 ^h 21 ^m			Mag: +0.1 PMG: 1 ^h 15 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°										
0	246	42.7		225	32.1	+6	161	35.7	+24	53	48.0	-3	57.5	341	17.1	-22	00.0										
1	261	45.1		240	32.4		176	36.3		68	50.5		57.5	356	19.7		00.0										
2	276	47.6		255	32.6		191	36.9		83	53.1		57.4	11	22.4	-22	00.0										
3	291	50.1		270	32.9		206	37.6		98	55.6		57.4	26	25.0	-21	59.9										
4	306	52.5		285	33.1		221	38.2		113	58.2		57.4	41	27.7		59.9										
5	321	55.0		300	33.4	+6	236	38.8	+24	129	00.7	-3	57.4	56	30.3	-21	59.9										
6	336	57.5		315	33.7	+6	251	39.5	+24	144	03.3	-3	57.3	71	33.0	-21	59.9										
7	351	59.9		330	33.9		266	40.1		159	05.8		57.3	86	35.6		59.9										
8	7	02.4		345	34.2		281	40.7		174	08.4		57.3	101	38.3		59.9										
9	22	04.9		0	34.4		296	41.4		189	10.9		57.3	116	40.9		59.9										
10	37	07.3		15	34.7		311	42.0		204	13.5		57.3	131	43.6		59.9										
11	52	09.8		30	34.9	+6	326	42.6	+24	219	16.0	-3	57.2	146	46.2	-21	59.9										
12	67	12.2		45	35.2	+6	341	43.3	+24	234	18.6	-3	57.2	161	48.9	-21	59.9										
13	82	14.7		60	35.4		356	43.9		249	21.1		57.2	176	51.5		59.9										
14	97	17.2		75	35.6		11	44.5		264	23.6		57.2	191	54.2		59.9										
15	112	19.6		90	35.9		26	45.2		279	26.2		57.1	206	56.8		59.9										
16	127	22.1		105	36.1		41	45.8		294	28.7		57.1	221	59.5		59.9										
17	142	24.6		120	36.4	+6	56	46.4	+24	309	31.3	-3	57.1	237	02.1	-21	59.9										
18	157	27.0		135	36.6	+7	71	47.1	+24	324	33.8	-3	57.1	252	04.8	-21	59.9										
19	172	29.5		150	36.9		86	47.7		339	36.4		57.1	267	07.4		59.9										
20	187	32.0		165	37.1		101	48.3		354	38.9		57.0	282	10.1		59.9										
21	202	34.4		180	37.3		116	49.0		9	41.4		57.0	297	12.7		59.9										
22	217	36.9		195	37.6		131	49.6		24	44.0		57.0	312	15.4		59.9										
23	232	39.4		210	37.8		146	50.2		39	46.5		57.0	327	18.0		59.9										
24	247	41.8		225	38.1	+7	161	50.9	+24	54	49.1	-3	56.9	342	20.7	-21	59.9										
Dif	—			+2			+7			+6			+1			+25			0			+26			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8			Edad: 4 ^d 2	PHE {	4 ^h : 59 ^h :1			Civil		Náutico		Hora		R°		
	PMG: 11 ^h 57 ^m 6					12 ^h : 58 ^m :8											20 ^h : 58 ^m :5
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	180	37.5	+21 45.7	118	46.7	+16 48.0	61	60 N	21 04	22 26	** **	8 27 81	0 10 29	** **	** **	** **	
1	195	37.5	46.1	133	12.8	41.9	61	58	20 47	21 53	** **	37 79	** **	** **	** **	** **	
2	210	37.4	46.5	147	39.0	35.8	62	56	32	29	23 40	46 76	** **	** **	** **	** **	
3	225	37.3	46.8	162	05.3	29.6	61	54	19	21 10	22 34	8 54 74	** **	** **	** **	** **	
4	240	37.2	47.2	176	31.7	23.2	64	52	20 08	20 54	22 03	9 01 73	** **	** **	** **	** **	
5	255	37.1	+21 47.6	190	58.1	+16 16.8	64	50	19 58	20 41	21 41	9 07 71	** **	** **	** **	** **	
6	270	37.0	+21 48.0	205	24.7	+16 10.3	65	45	19 38	20 14	21 01	9 21 68	23 54 35				
7	285	36.9	48.3	219	51.3	+16 03.7	66	40	21	19 53	20 34	32 66	45 37				
8	300	36.8	48.7	234	18.0	+15 57.0	67	35	19 08	37	20 12	42 63	36 40				
9	315	36.8	49.1	248	44.8	50.2	68	30	18 56	19 22	19 55	9 50 62	29 42				
10	330	36.7	49.4	263	11.7	43.3	69	20	35	18 59	28	10 05 58	16 46				
11	345	36.6	+21 49.8	277	38.7	+15 36.4	69	10 N	18 18	18 40	19 07	10 17 56	23 05 49				
12	0	36.5	+21 50.1	292	05.8	+15 29.3	71	0	18 01	18 23	18 49	10 29 53	22 55 51				
13	15	36.4	50.5	306	33.0	22.2	71	10 S	17 45	18 08	34	41 50	44 54				
14	30	36.3	50.9	321	00.2	15.0	72	20	28	17 52	19	10 53 48	33 57				
15	45	36.2	51.2	335	27.5	07.7	73	30	17 08	34	18 04	11 07 45	20 60				
16	60	36.1	51.6	349	55.0	+15 00.3	74	35	16 57	25	17 56	16 42	12 63				
17	75	36.0	+21 52.0	4	22.5	+14 52.9	74	40	16 44	17 14	17 47	11 25 41	22 03 65				
18	90	35.9	+21 52.3	18	50.1	+14 45.3	76	45	16 28	17 02	17 38	11 36 38	21 53 68				
19	105	35.9	52.7	33	17.8	37.7	76	50	10	16 47	28	49 35	41 71				
20	120	35.8	53.0	47	45.6	30.1	76	52	16 01	40	23	11 56 33	35 73				
21	135	35.7	53.4	62	13.4	22.3	78	54	15 51	33	18	12 02 32	29 74				
22	150	35.6	53.8	76	41.4	14.5	78	56	40	25	13	10 30	22 76				
23	165	35.5	54.1	91	09.4	+14 06.6	79	58	27	16	07	19 27	14 78				
24	180	35.4	+21 54.5	105	37.6	+13 58.6	80	60 S	15 11	16 06	17 00	12 28 25	21 05 81				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 28 ^m 0		Mag: -4.5 PMG: 8 ^h 57 ^m		Mag: +1.7 PMG: 13 ^h 12 ^m		Mag: -2.3 PMG: 20 ^h 17 ^m		Mag: +0.1 PMG: 1 ^h 10 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	247	41.8	225	38.1	+7	04.7	161	50.9	+24	14.3	54	49.1	-3	56.9	342	20.7	-21	59.9
1	262	44.3	240	38.3		05.4	176	51.5		14.4	69	51.6		56.9	357	23.3		59.9
2	277	46.7	255	38.5		06.1	191	52.1		14.4	84	54.2		56.9	12	26.0		59.9
3	292	49.2	270	38.8		06.9	206	52.8		14.5	99	56.7		56.9	27	28.6		59.8
4	307	51.7	285	39.0		07.6	221	53.4		14.5	114	59.2		56.9	42	31.3		59.8
5	322	54.1	300	39.2	+7	08.3	236	54.0	+24	14.6	130	01.8	-3	56.8	57	33.9	-21	59.8
6	337	56.6	315	39.5	+7	09.0	251	54.7	+24	14.7	145	04.3	-3	56.8	72	36.6	-21	59.8
7	352	59.1	330	39.7		09.7	266	55.3		14.7	160	06.9		56.8	87	39.2		59.8
8	8	01.5	345	39.9		10.4	281	55.9		14.8	175	09.4		56.8	102	41.9		59.8
9	23	04.0	0	40.2		11.1	296	56.6		14.8	190	11.9		56.8	117	44.5		59.8
10	38	06.5	15	40.4		11.8	311	57.2		14.9	205	14.5		56.7	132	47.2		59.8
11	53	08.9	30	40.6	+7	12.5	326	57.8	+24	15.0	220	17.0	-3	56.7	147	49.8	-21	59.8
12	68	11.4	45	40.9	+7	13.3	341	58.5	+24	15.0	235	19.6	-3	56.7	162	52.5	-21	59.8
13	83	13.8	60	41.1		14.0	356	59.1		15.1	250	22.1		56.7	177	55.1		59.8
14	98	16.3	75	41.3		14.7	11	59.7		15.1	265	24.6		56.7	192	57.8		59.8
15	113	18.8	90	41.5		15.4	27	00.4		15.2	280	27.2		56.6	208	00.4		59.8
16	128	21.2	105	41.8		16.1	42	01.0		15.3	295	29.7		56.6	223	03.1		59.8
17	143	23.7	120	42.0	+7	16.8	57	01.6	+24	15.3	310	32.2	-3	56.6	238	05.7	-21	59.8
18	158	26.2	135	42.2	+7	17.6	72	02.3	+24	15.4	325	34.8	-3	56.6	253	08.4	-21	59.8
19	173	28.6	150	42.4		18.3	87	02.9		15.4	340	37.3		56.6	268	11.0		59.8
20	188	31.1	165	42.7		19.0	102	03.5		15.5	355	39.8		56.6	283	13.7		59.8
21	203	33.6	180	42.9		19.7	117	04.2		15.5	10	42.4		56.5	298	16.3		59.8
22	218	36.0	195	43.1		20.4	132	04.8		15.6	25	44.9		56.5	313	19.0		59.8
23	233	38.5	210	43.3		21.1	147	05.4		15.6	40	47.5		56.5	328	21.6		59.8
24	248	41.0	225	43.6	+7	21.9	162	06.1	+24	15.7	55	50.0	-3	56.5	343	24.3	-21	59.8
Dif	—		+2		+7		+6		+1		+25		0		+27			0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 57 ^m 7				Edad: 5 ^d 2 SD: 15'9 PMG: 17 ^h 34 ^m													
					PHE { 4 ^h : 58'2 12 ^h : 57'8 20 ^h : 57'5 R°: 49 ^m													
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	35.4	+21	54.5	105	37.6	+13	58.6	80	60 N	** **	1 29	2 51	9 48	80	0 39	22	
1	195	35.3		54.8	120	05.8	92	50.6	81	58	** **	2 02	3 08	9 56	77	31	25	
2	210	35.2		55.2	134	34.1	93	42.5	81	56	0 15	26	23	10 02	76	23	27	
3	225	35.1		55.5	149	02.5	94	34.3	82	54	1 21	2 45	36	08 73	17	27		
4	240	35.0		55.9	163	30.9	94	26.1	82	52	1 52	3 01	47	14 71	11	31		
5	255	34.9	+21	56.2	177	59.5	96	+13 17.8	83	50	2 14	3 14	3 57	10 18	70	0 06	32	
6	270	34.9	+21	56.6	192	28.1	96	+13 09.4	84	45	2 54	3 41	4 17	10 29	66	** **	**	
7	285	34.8		56.9	206	56.9	98	+13 01.0	84	40	3 21	4 02	34	38 63		** **	**	
8	300	34.7		57.3	221	25.7	98	+12 52.5	85	35	3 43	18	4 48	45 61		** **	**	
9	315	34.6		57.6	235	54.6	99	43.9	86	30	4 00	33	5 00	10 52	59	** **	**	
10	330	34.5		58.0	250	23.6	100	35.3	86	20	27	4 56	20	11 03	55	** **	**	
11	345	34.4	+21	58.3	264	52.6	100	+12 26.7	86	10 N	4 48	5 15	5 38	11 13	52	23 54	45	
12	0	34.3	+21	58.7	279	21.8	102	+12 17.9	88	0	5 06	5 32	5 54	11 22	49	23 46	48	
13	15	34.2		59.0	293	51.0	102	09.2	87	10 S	22	5 48	6 10	31 47		38 51		
14	30	34.1		59.4	308	20.3	103	+12 00.3	89	20	37	6 04	28	41 43		30 54		
15	45	34.0	+21	59.7	322	49.7	104	+11 51.5	88	30	5 52	21	47	52 40		20 58		
16	60	33.9	+22	00.1	337	19.2	105	42.5	90	35	6 00	31	6 59	11 58	38	15 60		
17	75	33.8	+22	00.4	351	48.7	105	+11 33.5	90	40	6 08	6 42	7 12	12 06	35	23 08	63	
18	90	33.7	+22	00.8	6	18.3	106	+11 24.5	90	45	6 17	6 54	7 27	12 14	33	23 01	65	
19	105	33.6		01.1	20	48.0	107	15.4	91	50	28	7 09	46	24 30		22 52	69	
20	120	33.5		01.4	35	17.8	108	+11 06.3	91	52	33	15	7 55	29 28		48 70		
21	135	33.5		01.8	49	47.7	109	+10 57.1	92	54	38	23	8 05	34 26		43 73		
22	150	33.4		02.1	64	17.6	109	47.9	92	56	43	31	17	40 24		38 75		
23	165	33.3		02.5	78	47.6	110	38.6	93	58	49	40	30	46 22		32 77		
24	180	33.2	+22	02.8	93	17.7	111	+10 29.3	93	60 S	6 56	7 51	8 45	12 53	20	22 26	79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 7 ^h 24 ^m 1		Mag: -4.5 PMG: 8 ^h 57 ^m		Mag: +1.7 PMG: 13 ^h 11 ^m		Mag: -2.3 PMG: 20 ^h 13 ^m		Mag: +0.1 PMG: 1 ^h 06 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	248	41.0	225	43.6	+7 21.9	162	06.1	+24 15.7	55	50.0	-3 56.5						
1	263	43.4	240	43.8	22.6	177	06.7	15.8	70	52.5	56.5						
2	278	45.9	255	44.0	23.3	192	07.3	15.8	85	55.1	56.4						
3	293	48.3	270	44.2	24.0	207	08.0	15.9	100	57.6	56.4						
4	308	50.8	285	44.4	24.7	222	08.6	15.9	116	00.1	56.4						
5	323	53.3	300	44.6	+7 25.5	237	09.3	+24 16.0	131	02.7	-3 56.4						
6	338	55.7	315	44.9	+7 26.2	252	09.9	+24 16.0	146	05.2	-3 56.4						
7	353	58.2	330	45.1	26.9	267	10.5	16.1	161	07.7	56.4						
8	9	00.7	345	45.3	27.6	282	11.2	16.1	176	10.3	56.3						
9	24	03.1	0	45.5	28.3	297	11.8	16.2	191	12.8	56.3						
10	39	05.6	15	45.7	29.1	312	12.4	16.2	206	15.3	56.3						
11	54	08.1	30	45.9	+7 29.8	327	13.1	+24 16.3	221	17.9	-3 56.3						
12	69	10.5	45	46.1	+7 30.5	342	13.7	+24 16.3	236	20.4	-3 56.3						
13	84	13.0	60	46.3	31.2	357	14.3	16.4	251	22.9	56.3						
14	99	15.5	75	46.6	31.9	12	15.0	16.4	266	25.4	56.2						
15	114	17.9	90	46.8	32.7	27	15.6	16.5	281	28.0	56.2						
16	129	20.4	105	47.0	33.4	42	16.2	16.5	296	30.5	56.2						
17	144	22.8	120	47.2	+7 34.1	57	16.9	+24 16.6	311	33.0	-3 56.2						
18	159	25.3	135	47.4	+7 34.8	72	17.5	+24 16.6	326	35.6	-3 56.2						
19	174	27.8	150	47.6	35.6	87	18.1	16.7	341	38.1	56.2						
20	189	30.2	165	47.8	36.3	102	18.8	16.7	356	40.6	56.1						
21	204	32.7	180	48.0	37.0	117	19.4	16.8	11	43.2	56.1						
22	219	35.2	195	48.2	37.7	132	20.0	16.8	26	45.7	56.1						
23	234	37.6	210	48.4	38.5	147	20.7	16.9	41	48.2	56.1						
24	249	40.1	225	48.6	+7 39.2	162	21.3	+24 16.9	56	50.7	-3 56.1						
Dif	—		+2	+7		+6	0		+25	0		+27	0				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 6 ^d 2	PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 0 20 ^h : 56 ^m 7										
	PMG: 11 ^h 57 ^m 9					SD: 15 ^h 6			PMG: 18 ^h 23 ^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	180	33.2	+22 02.8	93	17.7	+10 29.3		60 N	21 08	22 33	** **	11 08 78		1 01 18	
1	195	33.1		107	47.9 ¹¹²		93	58	20 50	21 57	** **	13 76		0 56 20	
2	210	33.0	03.5	122	18.1 ¹¹²		94	56	35	33	** **	18 73		50 23	
3	225	32.9	03.8	136	48.4 ¹¹³	+10 01.1	95	54	22	21 13	22 40	21 72		46 24	
4	240	32.8	04.2	151	18.8 ¹¹⁴	+9 51.7	94	52	11	20 57	22 08	25 70		42 26	
5	255	32.7	+22 04.5	165	49.2 ¹¹⁴	+9 42.1	96	50	20 01	20 43	21 44	11 28 68		0 38 27	
6	270	32.6	+22 04.8	180	19.7 ¹¹⁵	+9 32.6	95	45	19 40	20 16	21 04	11 35 65		0 29 31	
7	285	32.5	05.2	194	50.3 ¹¹⁶		96	40	23	19 55	20 36	41 62		22 34	
8	300	32.4	05.5	209	21.0 ¹¹⁷		96	35	19 09	38	20 14	46 59		16 37	
9	315	32.3	05.8	223	51.7 ¹¹⁷	+9 03.7	97	30	18 57	24	19 56	51 56		11 38	
10	330	32.2	06.2	238	22.5 ¹¹⁸	+8 54.1	96	20	36	19 00	29	11 58 53		0 02 42	
11	345	32.1	+22 06.5	252	53.4 ¹¹⁹	+8 44.3	98	10 N	18 18	18 41	19 08	12 05 50		** ** *	
12	0	32.0	+22 06.8	267	24.3 ¹¹⁹	+8 34.6	97	0	18 02	18 24	18 50	12 11 47		** ** *	
13	15	31.9	07.2	281	55.3 ¹²⁰		98	10 S	17 45	18 08	34	18 43		** ** *	
14	30	31.8	07.5	296	26.4 ¹²¹		98	20	28	17 51	19	24 41		** ** *	
15	45	31.7	07.8	310	57.5 ¹²¹	+8 05.1	99	30	17 08	34	18 03	32 36		** ** *	
16	60	31.6	08.2	325	28.7 ¹²²	+7 55.3	98	35	16 56	24	17 55	36 35		** ** *	
17	75	31.5	+22 08.5	340	00.0 ¹²³	+7 45.4	99	40	16 43	17 13	17 47	12 41 32		** ** *	
18	90	31.4	+22 08.8	354	31.3 ¹²³	+7 35.5	99	45	16 27	17 01	17 37	12 47 29		** ** *	
19	105	31.3	09.1	9	02.6 ¹²³		100	50	16 08	16 46	27	54 26		** ** *	
20	120	31.2	09.5	23	34.1 ¹²⁵		100	52	15 59	39	22	12 57 24		23 58 69	
21	135	31.1	09.8	38	05.6 ¹²⁵	+7 05.5	100	54	49	32	17	13 00 23		56 70	
22	150	31.0	10.1	52	37.1 ¹²⁵	+6 55.5	100	56	38	23	11	04 21		53 72	
23	165	30.9	10.5	67	08.7 ¹²⁶		100	58	24	14	17 05	08 19		49 75	
24	180	30.8	+22 10.8	81	40.4 ¹²⁷	+6 35.4 ¹⁰¹		60 S	15 09	16 03	16 59	13 13 16		23 45 78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 20 ^m 1		Mag: -4.5 PMG: 8 ^h 57 ^m			Mag: +1.7 PMG: 13 ^h 10 ^m			Mag: -2.3 PMG: 20 ^h 09 ^m			Mag: +0.1 PMG: 1 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	249	40.1	225	48.6	+7 39.2	162	21.3	+24 16.9	56	50.7	-3 56.1	344	27.9	-21 59.7	
1	264	42.6	240	48.8		177	22.0		71	53.3	56.1	359	30.6	59.6	
2	279	45.0	255	49.0		192	22.6		86	55.8	56.0	14	33.2	59.6	
3	294	47.5	270	49.2		207	23.2		101	58.3	56.0	29	35.9	59.6	
4	309	49.9	285	49.4		222	23.9		117	00.9	56.0	44	38.5	59.6	
5	324	52.4	300	49.6	+7 42.8	237	24.5	+24 17.1	132	03.4	-3 56.0	59	41.2	-21 59.6	
6	339	54.9	315	49.8	+7 43.5	252	25.1	+24 17.2	147	05.9	-3 56.0	74	43.8	-21 59.6	
7	354	57.3	330	50.0		267	25.8		162	08.4	56.0	89	46.5	59.6	
8	9	59.8	345	50.2		282	26.4		177	11.0	56.0	104	49.1	59.6	
9	25	02.3	0	50.4		297	27.0		192	13.5	55.9	119	51.8	59.6	
10	40	04.7	15	50.6		312	27.7		207	16.0	55.9	134	54.4	59.6	
11	55	07.2	30	50.8	+7 47.2	327	28.3	+24 17.4	222	18.5	-3 55.9	149	57.1	-21 59.6	
12	70	09.7	45	51.0	+7 47.9	342	28.9	+24 17.4	237	21.1	-3 55.9	164	59.7	-21 59.6	
13	85	12.1	60	51.2		357	29.6		252	23.6	55.9	180	02.4	59.6	
14	100	14.6	75	51.4		12	30.2		267	26.1	55.9	195	05.0	59.6	
15	115	17.1	90	51.6		27	30.9		282	28.6	55.9	210	07.7	59.6	
16	130	19.5	105	51.7		42	31.5		297	31.2	55.9	225	10.4	59.6	
17	145	22.0	120	51.9	+7 51.6	57	32.1	+24 17.6	312	33.7	-3 55.8	240	13.0	-21 59.6	
18	160	24.4	135	52.1	+7 52.3	72	32.8	+24 17.7	327	36.2	-3 55.8	255	15.7	-21 59.6	
19	175	26.9	150	52.3		87	33.4		342	38.7	55.8	270	18.3	59.6	
20	190	29.4	165	52.5		102	34.0		357	41.2	55.8	285	21.0	59.6	
21	205	31.8	180	52.7		117	34.7		12	43.8	55.8	300	23.6	59.6	
22	220	34.3	195	52.9		132	35.3		27	46.3	55.8	315	26.3	59.6	
23	235	36.8	210	53.1		147	35.9		42	48.8	55.8	330	28.9	59.6	
24	250	39.2	225	53.2	+7 56.7	162	36.6	+24 17.9	57	51.3	-3 55.8	345	31.6	-21 59.6	
Dif	—		+2		+7	+6		0	+25		0	+27		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 7 ^d 2	PHE { 4 ^h : 56 ^h /4 12 ^h : 56 ^h /2 20 ^h : 55 ^h /9									
	PMG: 11 ^h 58 ^m 0					SD: 15 ^h 4		PMG: 19 ^h 09 ^m			R°: 44 ^m			
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	30.8	+22 10.8	81	40.4	+6 35.4	60 N	** **	1 23	2 48	12 26	76	1 19	16
1	195	30.7	11.1	96	12.1 ¹²⁷	25.4 ¹⁰⁰	58	** **	1 58	3 06	29 73		16	18
2	210	30.6	11.4	110	43.9 ¹²⁸	15.3 ¹⁰¹	56	** **	2 23	21	31 71		13	20
3	225	30.5	11.7	125	15.7 ¹²⁸	+6 05.1 ¹⁰²	54	1 15	42	34	33 69		10	22
4	240	30.4	12.1	139	47.6 ¹²⁹	+5 55.0 ¹⁰¹	52	1 48	2 58	45	35 67		08	23
5	255	30.3	+22 12.4	154	19.6 ¹³⁰	+5 44.9 ¹⁰¹	50	2 11	3 12	3 55	12 36	66	1 05	25
6	270	30.2	+22 12.7	168	51.6 ¹³⁰	+5 34.7 ¹⁰²	45	2 52	3 40	4 16	12 40	62	1 00	29
7	285	30.1	13.0	183	23.6 ¹³⁰	24.5 ¹⁰²	40	3 20	4 01	33	43 59		0 56	31
8	300	30.0	13.3	197	55.7 ¹³¹	14.3 ¹⁰²	35	42	18	47	45 57		53	33
9	315	29.9	13.7	212	27.9 ¹³²	+5 04.1 ¹⁰²	30	3 59	32	4 59	47 55		49	36
10	330	29.8	14.0	227	00.0 ¹³¹	+4 53.9 ¹⁰²	20	4 27	4 56	5 20	51 52		44	39
11	345	29.7	+22 14.3	241	32.3 ¹³³	+4 43.7 ¹⁰²	10 N	4 48	5 15	5 38	12 55	48	0 39	42
12	0	29.6	+22 14.6	256	04.6 ¹³³	+4 33.4 ¹⁰³	0	5 06	5 32	5 54	12 58	45	0 34	46
13	15	29.5	14.9	270	36.9 ¹³³	23.2 ¹⁰²	10 S	22	5 48	6 11	13 01	42	29	49
14	30	29.4	15.2	285	09.3 ¹³⁴	12.9 ¹⁰³	20	37	6 05	28	05 38		24	52
15	45	29.3	15.6	299	41.7 ¹³⁴	+4 02.6 ¹⁰³	30	5 53	22	6 48	08 35		18	56
16	60	29.2	15.9	314	14.2 ¹³⁵	+3 52.3 ¹⁰³	35	6 01	32	7 00	11 32		15	58
17	75	29.1	+22 16.2	328	46.7 ¹³⁵	+3 42.1 ¹⁰²	40	6 09	6 43	7 13	13 13	30	0 11	61
18	90	29.0	+22 16.5	343	19.2 ¹³⁵	+3 31.8 ¹⁰³	45	6 19	6 56	7 29	13 16	27	0 06	64
19	105	28.9	16.8	357	51.8 ¹³⁶	21.5 ¹⁰³	50	30	7 10	48	20 24		0 01	67
20	120	28.8	17.1	12	24.5 ¹³⁷	11.2 ¹⁰³	52	34	17	7 57	21 23		** ** *	**
21	135	28.7	17.4	26	57.2 ¹³⁷	+3 00.9 ¹⁰³	54	39	25	8 08	23 21		** ** *	**
22	150	28.6	17.7	41	29.9 ¹³⁷	+2 50.5 ¹⁰⁴	56	45	33	19	25 19		** ** *	**
23	165	28.5	18.0	56	02.6 ¹³⁷	40.2 ¹⁰³	58	51	43	33	27 17		** ** *	**
24	180	28.4	+22 18.4	70	35.4 ¹³⁸	+2 29.9 ¹⁰³	60 S	6 58	7 53	8 48	13 29	15	** ** *	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 16 ^m 2		Mag: -4.4 PMG: 8 ^h 56 ^m			Mag: +1.7 PMG: 13 ^h 09 ^m			Mag: -2.3 PMG: 20 ^h 05 ^m			Mag: +0.1 PMG: 0 ^h 58 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	39.2	225	53.2	+7 56.7	162	36.6	+24 17.9	57	51.3	-3 55.8	345	31.6	-21 59.6
1	265	41.7	240	53.4	57.4	177	37.2	17.9	72	53.8	55.7	0	34.2	59.5
2	280	44.2	255	53.6	58.2	192	37.8	18.0	87	56.4	55.7	15	36.9	59.5
3	295	46.6	270	53.8	58.9	207	38.5	18.0	102	58.9	55.7	30	39.5	59.5
4	310	49.1	285	54.0	+7 59.6	222	39.1	18.0	118	01.4	55.7	45	42.2	59.5
5	325	51.6	300	54.1	+8 00.4	237	39.8	+24 18.1	133	03.9	-3 55.7	60	44.9	-21 59.5
6	340	54.0	315	54.3	+8 01.1	252	40.4	+24 18.1	148	06.4	-3 55.7	75	47.5	-21 59.5
7	355	56.5	330	54.5	01.8	267	41.0	18.1	163	09.0	55.7	90	50.2	59.5
8	10	58.9	345	54.7	02.6	282	41.7	18.2	178	11.5	55.7	105	52.8	59.5
9	26	01.4	0	54.9	03.3	297	42.3	18.2	193	14.0	55.6	120	55.5	59.5
10	41	03.9	15	55.0	04.0	312	42.9	18.2	208	16.5	55.6	135	58.1	59.5
11	56	06.3	30	55.2	+8 04.8	327	43.6	+24 18.3	223	19.0	-3 55.6	151	00.8	-21 59.5
12	71	08.8	45	55.4	+8 05.5	342	44.2	+24 18.3	238	21.6	-3 55.6	166	03.4	-21 59.5
13	86	11.3	60	55.6	06.2	357	44.9	18.3	253	24.1	55.6	181	06.1	59.5
14	101	13.7	75	55.7	07.0	12	45.5	18.4	268	26.6	55.6	196	08.7	59.5
15	116	16.2	90	55.9	07.7	27	46.1	18.4	283	29.1	55.6	211	11.4	59.5
16	131	18.7	105	56.1	08.5	42	46.8	18.4	298	31.6	55.6	226	14.1	59.5
17	146	21.1	120	56.3	+8 09.2	57	47.4	+24 18.5	313	34.1	-3 55.6	241	16.7	-21 59.5
18	161	23.6	135	56.4	+8 09.9	72	48.0	+24 18.5	328	36.7	-3 55.5	256	19.4	-21 59.5
19	176	26.0	150	56.6	10.7	87	48.7	18.5	343	39.2	55.5	271	22.0	59.5
20	191	28.5	165	56.8	11.4	102	49.3	18.6	358	41.7	55.5	286	24.7	59.5
21	206	31.0	180	56.9	12.1	117	50.0	18.6	13	44.2	55.5	301	27.3	59.5
22	221	33.4	195	57.1	12.9	132	50.6	18.6	28	46.7	55.5	316	30.0	59.5
23	236	35.9	210	57.3	13.6	147	51.2	18.6	43	49.2	55.5	331	32.6	59.4
24	251	38.4	225	57.4	+8 14.4	162	51.9	+24 18.7	58	51.7	-3 55.5	346	35.3	-21 59.4
Dif	—		+2		+7	+6		0	+25		0	+27		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2			Edad: 8 ^d 2 SD: 15 ^h 2 PMG: 19 ^h 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	28.4	+22	18.4	70	35.4	+2 29.9	60 N	21 11	22 39	** **	13 42 74	1 35 15	
1	195	28.3		18.7	85	08.2 ¹³⁸	19.6 ¹⁰³	58	20 53	22 02	** **	42 72	34 17	
2	210	28.2		19.0	99	41.1 ¹³⁹	+2 09.3 ¹⁰³	56	37	21 36	** **	42 70	33 19	
3	225	28.1		19.3	114	14.0 ¹³⁹	+1 59.0 ¹⁰³	54	24	16	22 46	42 68	32 2	
4	240	28.0		19.6	128	46.9 ¹³⁹	48.6 ¹⁰⁴	52	13	21 00	22 11	42 66	31 22	
5	255	27.9	+22	19.9	143	19.9 ¹⁴⁰	+1 38.3 ¹⁰³	50	20 02	20 46	21 47	13 42 65	1 30 24	
6	270	27.8	+22	20.2	157	52.9 ¹⁴⁰	+1 28.0 ¹⁰³	45	19 41	20 18	21 06	13 42 61	1 29 27	
7	285	27.7		20.5	172	25.9 ¹⁴⁰	17.7 ¹⁰³	40	24	19 57	20 37	42 59	27 30	
8	300	27.6		20.8	186	59.0 ¹⁴¹	+1 07.4 ¹⁰³	35	19 10	39	20 15	42 56	26 32	
9	315	27.5		21.1	201	32.0 ¹⁴⁰	+0 57.1 ¹⁰³	30	18 58	25	19 58	42 54	25 34	
10	330	27.4		21.4	216	05.2 ¹⁴²	46.8 ¹⁰³	20	37	19 01	30	43 50	23 38	
11	345	27.3	+22	21.7	230	38.3 ¹⁴¹	+0 36.5 ¹⁰³	10 N	18 19	18 41	19 08	13 43 46	1 21 41	
12	0	27.2	+22	22.0	245	11.5 ¹⁴²	+0 26.2 ¹⁰³	0	18 02	18 24	18 50	13 43 43	1 20 44	
13	15	27.1		22.3	259	44.7 ¹⁴²	15.9 ¹⁰³	10 S	17 45	18 08	34	43 41	18 47	
14	30	27.0		22.6	274	17.9 ¹⁴²	+0 05.7 ¹⁰²	20	28	17 51	19	43 37	16 51	
15	45	26.9		22.9	288	51.1 ¹⁴²	-0 04.6 ¹⁰³	30	17 07	34	18 03	43 34	14 54	
16	60	26.8		23.2	303	24.4 ¹⁴³	14.9 ¹⁰³	35	16 56	24	17 55	43 32	13 56	
17	75	26.7	+22	23.5	317	57.7 ¹⁴³	-0 25.1 ¹⁰²	40	16 42	17 13	17 46	13 43 30	1 12 59	
18	90	26.5	+22	23.8	332	31.0 ¹⁴³	-0 35.3 ¹⁰²	45	16 26	17 00	17 37	13 43 27	1 10 62	
19	105	26.4		24.1	347	04.4 ¹⁴⁴	45.6 ¹⁰³	50	16 07	16 45	26	44 23	08 65	
20	120	26.3		24.4	1	37.7 ¹⁴³	-0 55.8 ¹⁰²	52	15 58	38	21	44 22	07 67	
21	135	26.2		24.7	16	11.1 ¹⁴⁴	-1 06.0 ¹⁰²	54	47	30	16	44 20	06 69	
22	150	26.1		25.0	30	44.5 ¹⁴⁴	16.2 ¹⁰²	56	36	22	10	44 19	05 71	
23	165	26.0		25.2	45	17.9 ¹⁴⁴	26.4 ¹⁰²	58	22	12	17 04	44 17	04 73	
24	180	25.9	+22	25.5	59	51.3 ¹⁴⁴	-1 36.5 ¹⁰¹	60 S	15 06	16 02	16 57	13 44 15	1 03 75	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 12 ^m 3		Mag: -4.4 PMG: 8 ^h 56 ^m		Mag: +1.7 PMG: 13 ^h 08 ^m		Mag: -2.3 PMG: 20 ^h 01 ^m		Mag: +0.1 PMG: 0 ^h 53 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	251	38.4	225	57.4	+8	14.4	162	51.9	+24	18.7
1	266	40.8	240	57.6		15.1	177	52.5		18.7
2	281	43.3	255	57.8		15.8	192	53.1		18.7
3	296	45.8	270	57.9		16.6	207	53.8		18.8
4	311	48.2	285	58.1		17.3	222	54.4		18.8
5	326	50.7	300	58.3	+8	18.1	237	55.1	+24	18.8
6	341	53.2	315	58.4	+8	18.8	252	55.7	+24	18.8
7	356	55.6	330	58.6		19.5	267	56.3		18.9
8	11	58.1	345	58.7		20.3	282	57.0		18.9
9	27	00.5	0	58.9		21.0	297	57.6		18.9
10	42	03.0	15	59.1		21.8	312	58.2		18.9
11	57	05.5	30	59.2	+8	22.5	327	58.9	+24	19.0
12	72	07.9	45	59.4	+8	23.3	342	59.5	+24	19.0
13	87	10.4	60	59.5		24.0	358	00.2		19.0
14	102	12.9	75	59.7		24.7	13	00.8		19.0
15	117	15.3	90	59.8		25.5	28	01.4		19.1
16	132	17.8	106	00.0		26.2	43	02.1		19.1
17	147	20.3	121	00.2	+8	27.0	58	02.7	+24	19.1
18	162	22.7	136	00.3	+8	27.7	73	03.4	+24	19.1
19	177	25.2	151	00.5		28.5	88	04.0		19.1
20	192	27.7	166	00.6		29.2	103	04.6		19.2
21	207	30.1	181	00.8		29.9	118	05.3		19.2
22	222	32.6	196	00.9		30.7	133	05.9		19.2
23	237	35.0	211	01.1		31.4	148	06.5		19.2
24	252	37.5	226	01.2	+8	32.2	163	07.2	+24	19.2
Dif	—		+2		+7		+6		0	
									+25	
										0
										+27
										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 4			Edad: 9 ^d 2 PHE { SD: 15/0 PMG: 20 ^h 37 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	25.9	+22 25.5	59	51.3	-1 36.5	60 N	** **	1 17	2 45	14 56	73	1 50	14	
1	195	25.8	25.8	74	24.8 ¹⁴⁵	46.7 ¹⁰²	58	** **	1 55	3 04	54	70	51	17	
2	210	25.7	26.1	88	58.3 ¹⁴⁵	-1 56.8 ¹⁰¹	56	** **	2 20	19	52	68	52	19	
3	225	25.6	26.4	103	31.8 ¹⁴⁵	-2 06.9 ¹⁰¹	54	1 10	40	32	50	67	53	20	
4	240	25.5	26.7	118	05.3 ¹⁴⁵	17.0 ¹⁰¹	52	1 45	2 57	44	48	65	53	23	
5	255	25.4	+22 27.0	132	38.8 ¹⁴⁵	-2 27.1 ¹⁰¹	50	2 09	3 11	3 54	14 47	63	1 54	24	
6	270	25.3	+22 27.3	147	12.3 ¹⁴⁵	-2 37.2 ¹⁰¹	45	2 50	3 38	4 15	14 43	61	1 56	26	
7	285	25.2	27.6	161	45.8 ¹⁴⁵	47.2 ¹⁰⁰	40	3 19	4 00	32	41	57	57	29	
8	300	25.1	27.8	176	19.4 ¹⁴⁶	-2 57.3 ¹⁰¹	35	41	17	46	38	55	58	32	
9	315	25.0	28.1	190	53.0 ¹⁴⁶	-3 07.3 ¹⁰⁰	30	3 59	32	4 59	36	53	1 59	34	
10	330	24.8	28.4	205	26.5 ¹⁴⁵	17.3 ¹⁰⁰	20	4 27	4 55	5 20	33	49	2 01	37	
11	345	24.7	+22 28.7	220	00.1 ¹⁴⁶	-3 27.2 ⁹⁹	10 N	4 48	5 15	5 38	14 29	47	2 02	41	
12	0	24.6	+22 29.0	234	33.7 ¹⁴⁶	-3 37.2 ¹⁰⁰	0	5 06	5 32	5 55	14 26	44	2 04	43	
13	15	24.5	29.3	249	07.3 ¹⁴⁶	47.1 ⁹⁹	10 S	23	5 49	6 11	24	40	05	47	
14	30	24.4	29.5	263	40.9 ¹⁴⁶	-3 57.0 ⁹⁹	20	38	6 05	29	20	38	07	49	
15	45	24.3	29.8	278	14.5 ¹⁴⁶	-4 06.9 ⁹⁹	30	5 53	23	6 49	17	34	08	54	
16	60	24.2	30.1	292	48.2 ¹⁴⁷	16.8 ⁹⁹	35	6 02	33	7 01	15	32	09	56	
17	75	24.1	+22 30.4	307	21.8 ¹⁴⁶	-4 26.6 ⁹⁸	40	6 10	6 44	7 15	14 13	30	2 11	57	
18	90	24.0	+22 30.7	321	55.4 ¹⁴⁶	-4 36.4 ⁹⁸	45	6 20	6 57	7 30	14 10	27	2 12	60	
19	105	23.9	30.9	336	29.1 ¹⁴⁷	46.2 ⁹⁸	50	31	7 12	50	07	24	13	64	
20	120	23.8	31.2	351	02.7 ¹⁴⁶	-4 56.0 ⁹⁸	52	36	19	7 59	06	22	14	66	
21	135	23.7	31.5	5	36.3 ¹⁴⁶	-5 05.7 ⁹⁷	54	41	27	8 10	04	21	15	67	
22	150	23.5	31.8	20	10.0 ¹⁴⁷	15.4 ⁹⁷	56	47	35	22	03	19	16	69	
23	165	23.4	32.1	34	43.6 ¹⁴⁶	25.1 ⁹⁷	58	6 53	45	35	14 01	17	17	71	
24	180	23.3	+22 32.3	49	17.3 ¹⁴⁷	-5 34.8 ⁹⁷	60 S	7 00	7 56	8 51	13 59	15	2 18	73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 08 ^m 3		Mag: -4.4 PMG: 8 ^h 56 ^m		Mag: +1.7 PMG: 13 ^h 07 ^m		Mag: -2.3 PMG: 19 ^h 57 ^m		Mag: +0.1 PMG: 0 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	252	37.5	226 01.2	+8 32.2	163 07.2	+24 19.2	59 52.0	-3 55.3	347 39.0	-21 59.3
1	267	40.0	241 01.4	32.9	178 07.8	19.3	74 54.5	55.3	2 41.7	59.3
2	282	42.4	256 01.5	33.7	193 08.5	19.3	89 57.0	55.3	17 44.3	59.3
3	297	44.9	271 01.7	34.4	208 09.1	19.3	104 59.5	55.3	32 47.0	59.3
4	312	47.4	286 01.8	35.2	223 09.7	19.3	120 02.0	55.3	47 49.7	59.3
5	327	49.8	301 02.0	+8 35.9	238 10.4	+24 19.3	135 04.5	-3 55.3	62 52.3	-21 59.3
6	342	52.3	316 02.1	+8 36.7	253 11.0	+24 19.4	150 07.0	-3 55.3	77 55.0	-21 59.3
7	357	54.8	331 02.2	37.4	268 11.7	19.4	165 09.5	55.3	92 57.6	59.3
8	12	57.2	346 02.4	38.1	283 12.3	19.4	180 12.0	55.3	108 00.3	59.3
9	27	59.7	1 02.5	38.9	298 12.9	19.4	195 14.6	55.3	123 02.9	59.3
10	43	02.1	16 02.7	39.6	313 13.6	19.4	210 17.1	55.2	138 05.6	59.3
11	58	04.6	31 02.8	+8 40.4	328 14.2	+24 19.4	225 19.6	-3 55.2	153 08.3	-21 59.3
12	73	07.1	46 03.0	+8 41.1	343 14.9	+24 19.5	240 22.1	-3 55.2	168 10.9	-21 59.3
13	88	09.5	61 03.1	41.9	358 15.5	19.5	255 24.6	55.2	183 13.6	59.3
14	103	12.0	76 03.2	42.6	13 16.1	19.5	270 27.1	55.2	198 16.2	59.3
15	118	14.5	91 03.4	43.4	28 16.8	19.5	285 29.6	55.2	213 18.9	59.3
16	133	16.9	106 03.5	44.1	43 17.4	19.5	300 32.1	55.2	228 21.5	59.3
17	148	19.4	121 03.6	+8 44.9	58 18.1	+24 19.5	315 34.6	-3 55.2	243 24.2	-21 59.3
18	163	21.9	136 03.8	+8 45.6	73 18.7	+24 19.5	330 37.1	-3 55.2	258 26.9	-21 59.3
19	178	24.3	151 03.9	46.4	88 19.3	19.6	345 39.6	55.2	273 29.5	59.3
20	193	26.8	166 04.1	47.1	103 20.0	19.6	0 42.1	55.2	288 32.2	59.3
21	208	29.3	181 04.2	47.9	118 20.6	19.6	15 44.6	55.2	303 34.8	59.2
22	223	31.7	196 04.3	48.6	133 21.3	19.6	30 47.1	55.2	318 37.5	59.2
23	238	34.2	211 04.5	49.4	148 21.9	19.6	45 49.6	55.2	333 40.1	59.2
24	253	36.6	226 04.6	+8 50.1	163 22.5	+24 19.6	60 52.1	-3 55.2	348 42.8	-21 59.2
Dif	—		+1	+7	+6	0	+25	0	+27	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 5			Edad: 10 ^d 2 PHE { SD: 14 ^h 9 PMG: 21 ^h 20 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	180	23.3	+22	32.3	49	17.3	-5	34.8	60 N	21 14	22 45	** **	16 09	72	2 04	16
1	195	23.2		32.6	63	50.9 ¹⁴⁶		44.4	58	20 55	22 06	** **	04 70		08	18
2	210	23.1		32.9	78	24.6 ¹⁴⁷		54.0	56	40	21 39	** **	16 00	68	11	19
3	225	23.0		33.1	92	58.2 ¹⁴⁶		03.5	54	26	19	22 51	15 57	65	13	22
4	240	22.9		33.4	107	31.9 ¹⁴⁷		13.1	52	15	21 02	22 15	53 64		16	23
5	255	22.8	+22	33.7	122	05.5 ¹⁴⁶		22.6	50	20 04	20 48	21 50	15 50	63	2 18	24
6	270	22.7	+22	34.0	136	39.2 ¹⁴⁷		32.1	45	19 43	20 20	21 08	15 44	59	2 22	28
7	285	22.6		34.2	151	12.8 ¹⁴⁶		41.5	40	26	19 58	20 39	38 57		26	31
8	300	22.4		34.5	165	46.4 ¹⁴⁶		50.9	35	19 11	40	20 17	33 55		30	32
9	315	22.3		34.8	180	20.1 ¹⁴⁷		00.3	30	18 59	26	19 59	29 53		33	34
10	330	22.2		35.0	194	53.7 ¹⁴⁶		09.6	20	37	19 02	31	22 49		38	38
11	345	22.1	+22	35.3	209	27.3 ¹⁴⁶		19.0	10 N	18 19	18 42	19 09	15 16	46	2 43	41
12	0	22.0	+22	35.6	224	00.9 ¹⁴⁶		28.2	0	18 02	18 25	18 51	15 10	44	2 47	44
13	15	21.9		35.8	238	34.5 ¹⁴⁶		37.5	10 S	17 45	18 08	34	15 04	41	52	46
14	30	21.8		36.1	253	08.1 ¹⁴⁶		46.7	20	28	17 51	19	14 58	38	2 56	50
15	45	21.7		36.4	267	41.7 ¹⁴⁶		55.8	30	17 07	33	18 03	51 35		3 02	53
16	60	21.6		36.6	282	15.3 ¹⁴⁶		05.0	35	16 55	23	17 55	47 33		05	55
17	75	21.4	+22	36.9	296	48.9 ¹⁴⁶		14.1	40	16 42	17 12	17 46	14 43	31	3 08	57
18	90	21.3	+22	37.2	311	22.4 ¹⁴⁵		23.1	45	16 26	16 59	17 36	14 37	29	3 12	60
19	105	21.2		37.4	325	56.0 ¹⁴⁶		32.1	50	16 06	44	25	31 26		17	63
20	120	21.1		37.7	340	29.5 ¹⁴⁵		41.1	52	15 57	37	20	28 24		20	64
21	135	21.0		37.9	355	03.1 ¹⁴⁶		50.1	54	46	29	15	25 23		22	66
22	150	20.9		38.2	9	36.6 ¹⁴⁵		59.0	56	34	20	09	22 21		25	68
23	165	20.8		38.5	24	10.1 ¹⁴⁵		9 07.8	58	20	11	17 03	18 19		28	70
24	180	20.7	+22	38.7	38	43.6 ¹⁴⁵		9 16.6	60 S	15 04	16 00	16 56	14 14	16	3 31	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 04 ^m 4		Mag: -4.4 PMG: 8 ^h 56 ^m		Mag: +1.7 PMG: 13 ^h 06 ^m		Mag: -2.3 PMG: 19 ^h 53 ^m		Mag: +0.1 PMG: 0 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	253	36.6	226	04.6	+8	50.1	163	22.5	+24	19.6
1	268	39.1	241	04.7		50.9	178	23.2		19.6
2	283	41.6	256	04.8		51.6	193	23.8		19.6
3	298	44.0	271	05.0		52.4	208	24.5		19.7
4	313	46.5	286	05.1		53.1	223	25.1		19.7
5	328	49.0	301	05.2	+8	53.9	238	25.7	+24	19.7
6	343	51.4	316	05.4	+8	54.6	253	26.4	+24	19.7
7	358	53.9	331	05.5		55.4	268	27.0		19.7
8	13	56.4	346	05.6		56.1	283	27.7		19.7
9	28	58.8	1	05.7		56.9	298	28.3		19.7
10	44	01.3	16	05.9		57.6	313	28.9		19.7
11	59	03.7	31	06.0	+8	58.4	328	29.6	+24	19.7
12	74	06.2	46	06.1	+8	59.1	343	30.2	+24	19.7
13	89	08.7	61	06.2	+8	59.9	358	30.9		19.7
14	104	11.1	76	06.4	+9	00.7	13	31.5		19.7
15	119	13.6	91	06.5		01.4	28	32.1		19.7
16	134	16.1	106	06.6		02.2	43	32.8		19.8
17	149	18.5	121	06.7	+9	02.9	58	33.4	+24	19.8
18	164	21.0	136	06.8	+9	03.7	73	34.1	+24	19.8
19	179	23.5	151	07.0		04.4	88	34.7		19.8
20	194	25.9	166	07.1		05.2	103	35.4		19.8
21	209	28.4	181	07.2		05.9	118	36.0		19.8
22	224	30.9	196	07.3		06.7	133	36.6		19.8
23	239	33.3	211	07.4		07.4	148	37.3		19.8
24	254	35.8	226	07.5	+9	08.2	163	37.9	+24	19.8
Dif	—		+1		+8		+6		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 7			Edad: 11 ^d 2 PHE { SD: 14/8 PMG: 22 ^h 04 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	20.7	+22 38.7	38	43.6	-9 16.6	88	60 N	** **	1 12	2 43	17 21	70	2 20	18	
1	195	20.5	39.0	53	17.1 ¹⁴⁵	25.4	88	58	** **	1 51	3 02	14 68		26	20	
2	210	20.4	39.2	67	50.5 ¹⁴⁴	34.1	87	56	** **	2 18	17	08 65		30	23	
3	225	20.3	39.5	82	24.0 ¹⁴⁵	42.8	87	54	1 06	38	31	17 02	64	35	22	
4	240	20.2	39.7	96	57.4 ¹⁴⁴	-9 51.5	87	52	1 42	2 55	42	16 57	63	39	25	
5	255	20.1	+22 40.0	111	30.8 ¹⁴⁴	-10 00.1	86	50	2 07	3 09	3 53	16 53	61	2 42	27	
6	270	20.0	+22 40.3	126	04.2 ¹⁴⁴	-10 08.6	85	45	2 49	3 37	4 14	16 43	58	2 50	30	
7	285	19.9	40.5	140	37.6 ¹⁴⁴	17.1	85	40	3 18	3 59	32	35 56		2 57	32	
8	300	19.8	40.8	155	11.0 ¹⁴⁴	25.6	85	35	40	4 17	46	28 54		3 02	35	
9	315	19.6	41.0	169	44.4 ¹⁴⁴	34.0	84	30	3 58	31	4 59	22 52		07	36	
10	330	19.5	41.3	184	17.7 ¹⁴³	42.4	84	20	4 26	4 55	5 20	11 50		16	39	
11	345	19.4	+22 41.5	198	51.0 ¹⁴³	-10 50.7	83	10 N	4 48	5 15	5 38	16 02	47	3 24	41	
12	0	19.3	+22 41.8	213	24.3 ¹⁴³	-10 59.0	83	0	5 07	5 33	5 55	15 54	44	3 31	44	
13	15	19.2	42.0	227	57.6 ¹⁴³	-11 07.2	82	10 S	23	5 49	6 12	45 43		38	47	
14	30	19.1	42.3	242	30.9 ¹⁴³	15.4	82	20	39	6 06	30	36 40		46	49	
15	45	19.0	42.5	257	04.1 ¹⁴²	23.6	82	30	5 54	24	6 50	26 37		3 55	52	
16	60	18.8	42.8	271	37.4 ¹⁴³	31.6	80	35	6 03	34	7 02	20 35		4 00	54	
17	75	18.7	+22 43.0	286	10.6 ¹⁴²	-11 39.7	81	40	6 12	6 45	7 16	15 14	33	4 05	57	
18	90	18.6	+22 43.3	300	43.7 ¹⁴¹	-11 47.6	79	45	6 21	6 58	7 32	15 06	31	4 12	59	
19	105	18.5	43.5	315	16.9 ¹⁴²	-11 55.6	80	50	33	7 14	7 52	14 57	28	20	62	
20	120	18.4	43.7	329	50.1 ¹⁴²	-12 03.5	79	52	38	21	8 01	52 27		24	63	
21	135	18.3	44.0	344	23.2 ¹⁴¹	11.3	78	54	43	29	12	48 25		28	65	
22	150	18.1	44.2	358	56.3 ¹⁴¹	19.0	77	56	49	37	24	43 23		33	66	
23	165	18.0	44.5	13	29.4 ¹⁴¹	26.8	78	58	6 55	47	38	37 22		38	68	
24	180	17.9	+22 44.7	28	02.4 ¹⁴⁰	-12 34.4	76	60 S	7 02	7 58	8 54	14 30	20	4 44	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 00 ^m 5		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 13 ^h 05 ^m		Mag: -2.3 PMG: 19 ^h 49 ^m		Mag: 0.0 PMG: 0 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	254	35.8	226 07.5	+9 08.2	163 37.9	+24 19.8	61 52.0	-3 55.1	349 46.6	-21 59.1
1	269	38.2	241 07.7	09.0	178 38.6	19.8	76 54.5	55.1	4 49.2	59.1
2	284	40.7	256 07.8	09.7	193 39.2	19.8	91 57.0	55.1	19 51.9	59.1
3	299	43.2	271 07.9	10.5	208 39.8	19.8	106 59.5	55.1	34 54.6	59.1
4	314	45.6	286 08.0	11.2	223 40.5	19.8	122 02.0	55.1	49 57.2	59.1
5	329	48.1	301 08.1	+9 12.0	238 41.1	+24 19.8	137 04.5	-3 55.1	64 59.9	-21 59.1
6	344	50.6	316 08.2	+9 12.7	253 41.8	+24 19.8	152 07.0	-3 55.1	80 02.5	-21 59.1
7	359	53.0	331 08.3	13.5	268 42.4	19.8	167 09.5	55.1	95 05.2	59.1
8	14	55.5	346 08.4	14.2	283 43.1	19.8	182 11.9	55.1	110 07.9	59.1
9	29	58.0	1 08.5	15.0	298 43.7	19.8	197 14.4	55.1	125 10.5	59.1
10	45	00.4	16 08.7	15.8	313 44.3	19.8	212 16.9	55.1	140 13.2	59.1
11	60	02.9	31 08.8	+9 16.5	328 45.0	+24 19.8	227 19.4	-3 55.1	155 15.8	-21 59.1
12	75	05.4	46 08.9	+9 17.3	343 45.6	+24 19.8	242 21.9	-3 55.1	170 18.5	-21 59.1
13	90	07.8	61 09.0	18.0	358 46.3	19.8	257 24.4	55.1	185 21.1	59.1
14	105	10.3	76 09.1	18.8	13 46.9	19.8	272 26.9	55.2	200 23.8	59.1
15	120	12.7	91 09.2	19.5	28 47.6	19.8	287 29.4	55.2	215 26.5	59.1
16	135	15.2	106 09.3	20.3	43 48.2	19.8	302 31.9	55.2	230 29.1	59.1
17	150	17.7	121 09.4	+9 21.1	58 48.8	+24 19.8	317 34.4	-3 55.2	245 31.8	-21 59.1
18	165	20.1	136 09.5	+9 21.8	73 49.5	+24 19.8	332 36.8	-3 55.2	260 34.4	-21 59.0
19	180	22.6	151 09.6	22.6	88 50.1	19.8	347 39.3	55.2	275 37.1	59.0
20	195	25.1	166 09.7	23.3	103 50.8	19.8	2 41.8	55.2	290 39.8	59.0
21	210	27.5	181 09.8	24.1	118 51.4	19.8	17 44.3	55.2	305 42.4	59.0
22	225	30.0	196 09.9	24.8	133 52.1	19.8	32 46.8	55.2	320 45.1	59.0
23	240	32.5	211 10.0	25.6	148 52.7	19.7	47 49.3	55.2	335 47.7	59.0
24	255	34.9	226 10.1	+9 26.4	163 53.3	+24 19.7	62 51.8	-3 55.2	350 50.4	-21 59.0
Dif	—		+1	+8	+6	0	+25	0	+27	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 12 ^d 2 PHE	4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0										
	PMG: 11 ^h 58 ^m 9				SD: 14 ^h 7										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	17.9	+22 44.7	28	02.4	-12 34.4	76	60 N	21 17	22 51	** **	18 31 67	2 38 22		
1	195	17.8	45.0	42	35.5 ¹⁴¹	42.0	76	58	20 58	22 09	** **	22 64	46 24		
2	210	17.7	45.2	57	08.5 ¹⁴⁰	49.6	76	56	42	21 42	** **	13 64	53 25		
3	225	17.6	45.4	71	41.5 ¹⁴⁰	-12 57.1	75	54	28	21	22 57	06 62	2 59 27		
4	240	17.5	45.7	86	14.4 ¹³⁹	-13 04.5	74	52	16	21 04	22 18	18 00 60	3 04 29		
5	255	17.3	+22 45.9	100	47.4 ¹⁴⁰	-13 11.9	74	50	20 06	20 50	21 53	17 54 59	3 09 30		
6	270	17.2	+22 46.2	115	20.3 ¹³⁹	-13 19.2	73	45	19 44	20 21	21 10	17 41 57	3 20 33		
7	285	17.1	46.4	129	53.2 ¹³⁹	26.5	73	40	27	19 59	20 40	31 55	29 35		
8	300	17.0	46.6	144	26.1 ¹³⁹	33.7	72	35	12	42	18	22 53	37 36		
9	315	16.9	46.9	158	58.9 ¹³⁸	40.9	72	30	19 00	27	20 00	14 52	43 38		
10	330	16.8	47.1	173	31.7 ¹³⁸	47.9	70	20	18 38	19 03	19 32	17 01 49	3 55 41		
11	345	16.6	+22 47.3	188	04.5 ¹³⁸	-13 55.0	71	10 N	18 20	18 43	19 10	16 49 48	4 05 43		
12	0	16.5	+22 47.6	202	37.3 ¹³⁸	-14 01.9	69	0	18 03	18 25	18 51	16 38 46	4 15 45		
13	15	16.4	47.8	217	10.0 ¹³⁷	08.9	70	10 S	17 46	18 08	35	28 43	25 47		
14	30	16.3	48.0	231	42.8 ¹³⁸	15.7	68	20	28	17 52	19	16 42	35 50		
15	45	16.2	48.3	246	15.4 ¹³⁶	22.5	68	30	17 07	33	18 03	16 03 39	47 52		
16	60	16.1	48.5	260	48.1 ¹³⁷	29.2	67	35	16 55	23	17 55	15 55 38	4 54 54		
17	75	15.9	+22 48.7	275	20.8 ¹³⁷	-14 35.9	67	40	16 41	17 12	17 46	15 47 36	5 02 55		
18	90	15.8	+22 49.0	289	53.4 ¹³⁶	-14 42.5	66	45	16 25	16 59	17 36	15 37 34	5 11 58		
19	105	15.7	49.2	304	26.0 ¹³⁶	49.0	65	50	16 05	43	24	25 32	22 60		
20	120	15.6	49.4	318	58.5 ¹³⁵	-14 55.5	65	52	15 56	36	19	19 31	27 62		
21	135	15.5	49.6	333	31.1 ¹³⁶	-15 01.9	64	54	45	28	14	13 30	33 63		
22	150	15.3	49.9	348	03.6 ¹³⁵	08.2	63	56	33	19	08	15 06 29	39 65		
23	165	15.2	50.1	2	36.1 ¹³⁵	14.5	63	58	19	16 10	17 02	14 59 26	46 67		
24	180	15.1	+22 50.3	17	08.5 ¹³⁴	-15 20.7	62	60 S	15 02	15 59	16 55	14 50 25	5 54 69		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 6 ^h 56 ^m 5		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 13 ^h 04 ^m		Mag: -2.2 PMG: 19 ^h 45 ^m		Mag: 0.0 PMG: 0 ^h 37 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	255	34.9	226	10.1	+9 26.4	163 53.3	+24 19.7	62 51.8	-3 55.2	350 50.4	-21 59.0
1	270	37.4	241	10.2	27.1	178 54.0	19.7	77 54.2	55.2	5 53.1	59.0
2	285	39.8	256	10.3	27.9	193 54.6	19.7	92 56.7	55.2	20 55.7	59.0
3	300	42.3	271	10.4	28.6	208 55.3	19.7	107 59.2	55.2	35 58.4	59.0
4	315	44.8	286	10.5	29.4	223 55.9	19.7	123 01.7	55.2	51 01.0	59.0
5	330	47.2	301	10.6	+9 30.2	238 56.6	+24 19.7	138 04.2	-3 55.2	66 03.7	-21 59.0
6	345	49.7	316	10.7	+9 30.9	253 57.2	+24 19.7	153 06.7	-3 55.2	81 06.4	-21 59.0
7	0	52.2	331	10.8	31.7	268 57.8	19.7	168 09.2	55.2	96 09.0	59.0
8	15	54.6	346	10.9	32.4	283 58.5	19.7	183 11.6	55.2	111 11.7	59.0
9	30	57.1	1	10.9	33.2	298 59.1	19.7	198 14.1	55.2	126 14.3	59.0
10	45	59.6	16	11.0	34.0	313 59.8	19.7	213 16.6	55.2	141 17.0	59.0
11	61	02.0	31	11.1	+9 34.7	329 00.4	+24 19.7	228 19.1	-3 55.2	156 19.7	-21 59.0
12	76	04.5	46	11.2	+9 35.5	344 01.1	+24 19.6	243 21.6	-3 55.2	171 22.3	-21 59.0
13	91	07.0	61	11.3	36.2	359 01.7	19.6	258 24.1	55.2	186 25.0	59.0
14	106	09.4	76	11.4	37.0	14 02.4	19.6	273 26.5	55.2	201 27.6	59.0
15	121	11.9	91	11.5	37.8	29 03.0	19.6	288 29.0	55.2	216 30.3	59.0
16	136	14.3	106	11.6	38.5	44 03.6	19.6	303 31.5	55.2	231 33.0	59.0
17	151	16.8	121	11.7	+9 39.3	59 04.3	+24 19.6	318 34.0	-3 55.2	246 35.6	-21 58.9
18	166	19.3	136	11.7	+9 40.0	74 04.9	+24 19.6	333 36.5	-3 55.2	261 38.3	-21 58.9
19	181	21.7	151	11.8	40.8	89 05.6	19.6	348 38.9	55.2	276 40.9	58.9
20	196	24.2	166	11.9	41.6	104 06.2	19.5	3 41.4	55.2	291 43.6	58.9
21	211	26.7	181	12.0	42.3	119 06.9	19.5	18 43.9	55.3	306 46.3	58.9
22	226	29.1	196	12.1	43.1	134 07.5	19.5	33 46.4	55.3	321 48.9	58.9
23	241	31.6	211	12.2	43.9	149 08.2	19.5	48 48.9	55.3	336 51.6	58.9
24	256	34.1	226	12.2	+9 44.6	164 08.8	+24 19.5	63 51.3	-3 55.3	351 54.2	-21 58.9
Dif	—		+1	+8	+6	0		+25	0	+27	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 59 ^m 1				Edad: 13 ^d 2 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 PMG: 23 ^h 35 ^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	15.1	+22	50.3	17	08.5	-15	20.7	60 N	** **	1 07	2 41	19 38	62	3 00	27		
1	195	15.0		50.5	31	40.9 ¹³⁴		26.8	58	** **	1 48	3 00	26 61		10 29			
2	210	14.9		50.8	46	13.3 ¹³⁴		32.9	56	** **	2 16	16	17 59		18 31			
3	225	14.7		51.0	60	45.7 ¹³⁴		38.9	54	1 01	37	30	08 58		26 32			
4	240	14.6		51.2	75	18.1 ¹³⁴		44.8	52	1 39	2 54	41	19 00	57	33 33			
5	255	14.5	+22	51.4	89	50.4 ¹³³	-15	50.7	50	2 05	3 08	3 52	18 53	56	3 39	35		
6	270	14.4	+22	51.7	104	22.7 ¹³³	-15	56.5	45	2 48	3 37	4 14	18 38	55	3 53	36		
7	285	14.3		51.9	118	55.0 ¹³³	-16	02.2	40	3 17	3 59	31	26 53		4 04	38		
8	300	14.2		52.1	133	27.2 ¹³²		07.9	35	40	4 16	46	15 52		13 40			
9	315	14.0		52.3	147	59.4 ¹³²		13.4	30	3 58	31	4 58	18 06	51	21 41			
10	330	13.9		52.5	162	31.6 ¹³²		18.9	20	4 26	4 55	5 20	17 50	50	36 43			
11	345	13.8	+22	52.7	177	03.7 ¹³¹	-16	24.4	10 N	4 48	5 15	5 38	17 37	48	4 48	45		
12	0	13.7	+22	53.0	191	35.9 ¹³²	-16	29.8	0	5 07	5 33	5 55	17 24	47	5 00	47		
13	15	13.6		53.2	206	08.0 ¹³¹		35.1	10 S	23	5 50	6 12	17 11	46	12 48			
14	30	13.4		53.4	220	40.1 ¹³¹		40.3	20	39	6 07	30	16 58	44	25 49			
15	45	13.3		53.6	235	12.1 ¹³⁰		45.4	30	5 55	25	6 51	42 43		39 52			
16	60	13.2		53.8	249	44.1 ¹³⁰		50.5	35	6 04	35	7 03	33 42		48 53			
17	75	13.1	+22	54.0	264	16.1 ¹³⁰	-16	55.5	40	6 13	6 47	7 17	16 23	40	5 57	55		
18	90	13.0	+22	54.3	278	48.1 ¹³⁰	-17	00.4	45	6 23	7 00	7 33	16 11	39	6 09	55		
19	105	12.8		54.5	293	20.1 ¹³⁰		05.3	50	34	15	7 53	15 57	37	22 58			
20	120	12.7		54.7	307	52.0 ¹²⁹		10.0	52	39	22	8 03	50 36		29 59			
21	135	12.6		54.9	322	23.9 ¹²⁹		14.7	54	44	30	14	43 35		36 60			
22	150	12.5		55.1	336	55.7 ¹²⁸		19.4	56	50	39	26	35 33		44 61			
23	165	12.4		55.3	351	27.6 ¹²⁹		23.9	58	6 57	7 49	40	25 33		6 53	63		
24	180	12.2	+22	55.5	5	59.4 ¹²⁸	-17	28.4	60 S	7 04	8 00	8 56	15 15	30	7 03	65		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 52 ^m 6		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 13 ^h 03 ^m		Mag: -2.2 PMG: 19 ^h 41 ^m		Mag: 0.0 PMG: 0 ^h 32 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	256	34.1	226	12.2	+9	44.6	164	08.8	+24	19.5	63	51.3	-3	55.3	351	54.2	-21	58.9
1	271	36.5	241	12.3		45.4	179	09.4		19.5	78	53.8		55.3	6	56.9		58.9
2	286	39.0	256	12.4		46.1	194	10.1		19.5	93	56.3		55.3	21	59.6		58.9
3	301	41.5	271	12.5		46.9	209	10.7		19.4	108	58.8		55.3	37	02.2		58.9
4	316	43.9	286	12.6		47.7	224	11.4		19.4	124	01.3		55.3	52	04.9		58.9
5	331	46.4	301	12.6	+9	48.4	239	12.0	+24	19.4	139	03.7	-3	55.3	67	07.5	-21	58.9
6	346	48.8	316	12.7	+9	49.2	254	12.7	+24	19.4	154	06.2	-3	55.3	82	10.2	-21	58.9
7	1	51.3	331	12.8		50.0	269	13.3		19.4	169	08.7		55.3	97	12.9		58.9
8	16	53.8	346	12.9		50.7	284	14.0		19.4	184	11.2		55.3	112	15.5		58.9
9	31	56.2	1	12.9		51.5	299	14.6		19.3	199	13.7		55.3	127	18.2		58.9
10	46	58.7	16	13.0		52.2	314	15.3		19.3	214	16.1		55.3	142	20.8		58.9
11	62	01.2	31	13.1	+9	53.0	329	15.9	+24	19.3	229	18.6	-3	55.3	157	23.5	-21	58.9
12	77	03.6	46	13.2	+9	53.8	344	16.5	+24	19.3	244	21.1	-3	55.3	172	26.2	-21	58.9
13	92	06.1	61	13.2		54.5	359	17.2		19.3	259	23.6		55.3	187	28.8		58.9
14	107	08.6	76	13.3		55.3	14	17.8		19.3	274	26.0		55.4	202	31.5		58.9
15	122	11.0	91	13.4		56.1	29	18.5		19.2	289	28.5		55.4	217	34.1		58.8
16	137	13.5	106	13.5		56.8	44	19.1		19.2	304	31.0		55.4	232	36.8		58.8
17	152	16.0	121	13.5	+9	57.6	59	19.8	+24	19.2	319	33.5	-3	55.4	247	39.5	-21	58.8
18	167	18.4	136	13.6	+9	58.4	74	20.4	+24	19.2	334	35.9	-3	55.4	262	42.1	-21	58.8
19	182	20.9	151	13.7		59.1	89	21.1		19.2	349	38.4		55.4	277	44.8		58.8
20	197	23.3	166	13.7	+9	59.9	104	21.7		19.1	4	40.9		55.4	292	47.4		58.8
21	212	25.8	181	13.8	+10	00.6	119	22.4		19.1	19	43.4		55.4	307	50.1		58.8
22	227	28.3	196	13.9		01.4	134	23.0		19.1	34	45.8		55.4	322	52.8		58.8
23	242	30.7	211	13.9		02.2	149	23.6		19.1	49	48.3		55.4	337	55.4		58.8
24	257	33.2	226	14.0	+10	02.9	164	24.3	+24	19.0	64	50.8	-3	55.4	352	58.1	-21	58.8
Dif	—		+1		+8		+6		0		+25		0		+27		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 14 ^d 2	PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0										
	PMG: 11 ^h 59 ^m 3					SD: 14 ^h 7			PMG: **h **m		R°: **m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	′	°	°	′	°	′	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	12.2	+22 55.5	5	59.4	-17 28.4	44	60 N	21 20	22 56	** **	20 40 55	3 27 35		
1	195	12.1	55.7	20	31.2 ¹²⁸	32.8	44	58	21 00	22 13	** **	27 54	39 36		
2	210	12.0	55.9	35	02.9 ¹²⁷	37.1	43	56	20 44	21 45	** **	16 53	49 37		
3	225	11.9	56.1	49	34.7 ¹²⁸	41.3	42	54	30	23	23 02	20 06 53	3 58 38		
4	240	11.7	56.3	64	06.4 ¹²⁷	45.5	42	52	18	21 06	22 21	19 57 53	4 06 39		
5	255	11.6	+22 56.5	78	38.1 ¹²⁷	-17 49.5	40	50	20 07	20 51	21 55	19 49 52	4 14 39		
6	270	11.5	+22 56.8	93	09.7 ¹²⁶	-17 53.5	40	45	19 45	20 23	21 12	19 33 51	4 29 41		
7	285	11.4	57.0	107	41.4 ¹²⁷	-17 57.4	39	40	28	20 00	20 42	19 51	42 42		
8	300	11.3	57.2	122	13.0 ¹²⁶	-18 01.3	39	35	13	19 43	19	19 07 51	4 53 43		
9	315	11.1	57.4	136	44.6 ¹²⁶	05.0	37	30	19 00	28	20 01	18 57 50	5 02 44		
10	330	11.0	57.6	151	16.1 ¹²⁵	08.7	37	20	18 39	19 03	19 32	40 49	19 45		
11	345	10.9	+22 57.8	165	47.7 ¹²⁶	-18 12.3	36	10 N	18 20	18 43	19 10	18 25 48	5 33 46		
12	0	10.8	+22 58.0	180	19.2 ¹²⁵	-18 15.8	35	0	18 03	18 25	18 52	18 11 48	5 47 47		
13	15	10.6	58.2	194	50.7 ¹²⁵	19.2	34	10 S	17 46	18 09	35	17 57 47	6 00 48		
14	30	10.5	58.4	209	22.2 ¹²⁵	22.6	34	20	28	17 52	19	42 46	14 50		
15	45	10.4	58.6	223	53.6 ¹²⁴	25.8	32	30	17 07	33	18 03	25 45	31 50		
16	60	10.3	58.8	238	25.1 ¹²⁵	29.0	32	35	16 55	23	17 54	15 45	41 51		
17	75	10.2	+22 59.0	252	56.5 ¹²⁴	-18 32.1	31	40	16 41	17 11	17 45	17 03 45	6 52 52		
18	90	10.0	+22 59.1	267	27.9 ¹²⁴	-18 35.1	30	45	16 25	16 58	17 35	16 50 44	7 04 54		
19	105	09.9	59.3	281	59.2 ¹²³	38.0	29	50	16 04	43	24	34 43	20 55		
20	120	09.8	59.5	296	30.6 ¹²⁴	40.9	29	52	15 55	35	19	26 43	28 55		
21	135	09.7	59.7	311	01.9 ¹²³	43.6	27	54	44	27	13	18 42	36 56		
22	150	09.5	+22 59.9	325	33.2 ¹²³	46.3	27	56	32	19	07	16 08 41	45 57		
23	165	09.4	+23 00.1	340	04.5 ¹²³	48.9	26	58	18	16 09	17 01	15 58 40	7 56 57		
24	180	09.3	+23 00.3	354	35.7 ¹²²	-18 51.4	25	60 S	15 01	15 57	16 54	15 45 39	8 08 58		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 48 ^m 7		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 13 ^h 02 ^m		Mag: -2.2 PMG: 19 ^h 37 ^m		Mag: 0.0 PMG: 0 ^h 28 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	257	33.2	226 14.0	+10 02.9	164 24.3	+24 19.0	64 50.8	-3 55.4	352 58.1	
1	272	35.7	241 14.1	03.7	179 24.9	19.0	79 53.2	55.4	8 00.7	
2	287	38.1	256 14.1	04.5	194 25.6	19.0	94 55.7	55.5	23 03.4	
3	302	40.6	271 14.2	05.2	209 26.2	19.0	109 58.2	55.5	38 06.1	
4	317	43.1	286 14.3	06.0	224 26.9	18.9	125 00.7	55.5	53 08.7	
5	332	45.5	301 14.3	+10 06.8	239 27.5	+24 18.9	140 03.1	-3 55.5	68 11.4	
6	347	48.0	316 14.4	+10 07.5	254 28.2	+24 18.9	155 05.6	-3 55.5	83 14.0	
7	2	50.4	331 14.4	08.3	269 28.8	18.9	170 08.1	55.5	98 16.7	
8	17	52.9	346 14.5	09.1	284 29.5	18.8	185 10.5	55.5	113 19.4	
9	32	55.4	1 14.6	09.8	299 30.1	18.8	200 13.0	55.5	128 22.0	
10	47	57.8	16 14.6	10.6	314 30.8	18.8	215 15.5	55.5	143 24.7	
11	63	00.3	31 14.7	+10 11.4	329 31.4	+24 18.8	230 18.0	-3 55.5	158 27.4	
12	78	02.8	46 14.7	+10 12.1	344 32.1	+24 18.7	245 20.4	-3 55.5	173 30.0	
13	93	05.2	61 14.8	12.9	359 32.7	18.7	260 22.9	55.6	188 32.7	
14	108	07.7	76 14.8	13.7	14 33.4	18.7	275 25.4	55.6	203 35.3	
15	123	10.2	91 14.9	14.4	29 34.0	18.7	290 27.8	55.6	218 38.0	
16	138	12.6	106 14.9	15.2	44 34.6	18.6	305 30.3	55.6	233 40.7	
17	153	15.1	121 15.0	+10 16.0	59 35.3	+24 18.6	320 32.8	-3 55.6	248 43.3	
18	168	17.6	136 15.1	+10 16.7	74 35.9	+24 18.6	335 35.2	-3 55.6	263 46.0	
19	183	20.0	151 15.1	17.5	89 36.6	18.5	350 37.7	55.6	278 48.6	
20	198	22.5	166 15.2	18.3	104 37.2	18.5	5 40.2	55.6	293 51.3	
21	213	24.9	181 15.2	19.0	119 37.9	18.5	20 42.6	55.6	308 54.0	
22	228	27.4	196 15.3	19.8	134 38.5	18.4	35 45.1	55.6	323 56.6	
23	243	29.9	211 15.3	20.6	149 39.2	18.4	50 47.6	55.7	338 59.3	
24	258	32.3	226 15.4	+10 21.3	164 39.8	+24 18.4	65 50.0	-3 55.7	354 01.9	
Dif	—	+1	+8	+6	0	+25	0	+27	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15/8 PMG: 11 ^h 59 ^m 5			Edad: 15 ^d 2 PHE { 4 ^h : 54/0 12 ^h : 54/1 20 ^h : 54/1 PMG: 0 ^h 22 ^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	180	09.3	+23	00.3	354	35.7	18	51.4	24	60 N	1 02	2 39	21 35	45	4 02	44					
1	195	09.2		00.5	9	07.0	123	53.8	24	58	1 46	2 59	21 46		15	44					
2	210	09.0		00.7	23	38.2	122	56.1	23	56	2 14	3 15	21 09	47	26	45					
3	225	08.9		00.9	38	09.4	122	58.4	23	54	0 57	35	20 59	46	36	45					
4	240	08.8		01.1	52	40.6	122	00.5	21	52	1 37	2 52	41	50	46	45					
5	255	08.7	+23	01.3	67	11.8	122	02.6	21	50	2 03	3 07	3 51	20 41	47	4 53	46				
6	270	08.5	+23	01.4	81	42.9	121	04.6	20	45	2 47	3 36	4 13	20 24	47	5 10	46				
7	285	08.4		01.6	96	14.0	121	06.5	19	40	3 17	3 58	31	20 10	47	24	47				
8	300	08.3		01.8	110	45.2	122	08.3	18	35	40	4 16	46	19 58	47	36	47				
9	315	08.2		02.0	125	16.3	121	10.0	17	30	3 58	31	4 58	47	48	5 46	47				
10	330	08.1		02.2	139	47.3	120	11.6	16	20	4 26	4 55	5 20	29	48	6 04	47				
11	345	07.9	+23	02.4	154	18.4	121	13.2	16	10 N	4 49	5 16	5 39	19 13	48	6 19	48				
12	0	07.8	+23	02.6	168	49.5	121	14.6	14	0	5 07	5 33	5 56	18 59	48	6 34	48				
13	15	07.7		02.7	183	20.5	120	16.0	14	10 S	24	5 50	6 13	44	48	6 48	49				
14	30	07.6		02.9	197	51.5	120	17.2	12	20	40	6 07	31	28	49	7 04	48				
15	45	07.4		03.1	212	22.5	120	18.4	12	30	5 56	26	6 52	10	49	21	49				
16	60	07.3		03.3	226	53.5	120	19.5	11	35	6 04	36	7 04	18	00	48	32	49			
17	75	07.2	+23	03.5	241	24.5	120	20.5	10	40	6 14	6 48	7 18	17	48	48	7 44	49			
18	90	07.1	+23	03.6	255	55.5	120	21.5	10	45	6 24	7 01	7 34	17	34	48	7 58	49			
19	105	06.9		03.8	270	26.5	120	22.3	8	50	35	16	7 55	17	48	8 15	49				
20	120	06.8		04.0	284	57.4	119	23.0	7	52	40	24	8 04	09	48	23	49				
21	135	06.7		04.2	299	28.3	119	23.7	7	54	46	32	15	17	00	48	32	49			
22	150	06.6		04.3	313	59.3	120	24.2	5	56	52	41	28	16	49	49	42	50			
23	165	06.4		04.5	328	30.2	119	24.7	5	58	6 58	7 51	42	38	49	8 53	50				
24	180	06.3	+23	04.7	343	01.1	119	25.1	4	60 S	7 06	8 02	8 59	16	24	49	9 06	51			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 6 ^h 44 ^m 7			Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: +1.7 PMG: 13 ^h 01 ^m			Mag: -2.2 PMG: 19 ^h 33 ^m			Mag: 0.0 PMG: 0 ^h 24 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°						
0	258	32.3		226	15.4	+10	21.3	164	39.8	+24	18.4	65	50.0	-3	55.7	354	01.9	-21	58.7		
1	273	34.8		241	15.4		22.1	179	40.5		18.4	80	52.5		55.7	9	04.6		58.7		
2	288	37.3		256	15.4		22.9	194	41.1		18.3	95	55.0		55.7	24	07.3		58.7		
3	303	39.7		271	15.5		23.6	209	41.8		18.3	110	57.4		55.7	39	09.9		58.7		
4	318	42.2		286	15.5		24.4	224	42.4		18.3	125	59.9		55.7	54	12.6		58.7		
5	333	44.7		301	15.6	+10	25.2	239	43.1	+24	18.2	141	02.4	-3	55.7	69	15.3	-21	58.7		
6	348	47.1		316	15.6	+10	25.9	254	43.7	+24	18.2	156	04.8	-3	55.7	84	17.9	-21	58.7		
7	3	49.6		331	15.7		26.7	269	44.4		18.2	171	07.3		55.8	99	20.6		58.7		
8	18	52.1		346	15.7		27.5	284	45.0		18.1	186	09.7		55.8	114	23.2		58.7		
9	33	54.5		1	15.8		28.2	299	45.7		18.1	201	12.2		55.8	129	25.9		58.7		
10	48	57.0		16	15.8		29.0	314	46.3		18.1	216	14.7		55.8	144	28.6		58.7		
11	63	59.4		31	15.8	+10	29.8	329	47.0	+24	18.0	231	17.1	-3	55.8	159	31.2	-21	58.7		
12	79	01.9		46	15.9	+10	30.5	344	47.6	+24	18.0	246	19.6	-3	55.8	174	33.9	-21	58.6		
13	94	04.4		61	15.9		31.3	359	48.3		17.9	261	22.1		55.8	189	36.5		58.6		
14	109	06.8		76	16.0		32.1	14	48.9		17.9	276	24.5		55.8	204	39.2		58.6		
15	124	09.3		91	16.0		32.8	29	49.6		17.9	291	27.0		55.9	219	41.9		58.6		
16	139	11.8		106	16.0		33.6	44	50.2		17.8	306	29.4		55.9	234	44.5		58.6		
17	154	14.2		121	16.1	+10	34.4	59	50.9	+24	17.8	321	31.9	-3	55.9	249	47.2	-21	58.6		
18	169	16.7		136	16.1	+10	35.1	74	51.5	+24	17.8	336	34.4	-3	55.9	264	49.9	-21	58.6		
19	184	19.2		151	16.1		35.9	89	52.2		17.7	351	36.8		55.9	279	52.5		58.6		
20	199	21.6		166	16.2		36.7	104	52.8		17.7	6	39.3		55.9	294	55.2		58.6		
21	214	24.1		181	16.2		37.4	119	53.5		17.6	21	41.7		55.9	309	57.8		58.6		
22	229	26.6		196	16.3		38.2	134	54.1		17.6	36	44.2		56.0	325	00.5		58.6		
23	244	29.0		211	16.3		39.0	149	54.8		17.6	51	46.7		56.0	340	03.2		58.6		
24	259	31.5		226	16.3	+10	39.7	164	55.4	+24	17.5	66	49.1	-3	56.0	355	05.8	-21	58.6		
Dif	—			0			+8			+6			0			+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 2 PHE { 4 ^h : 54 ^h /2 12 ^h : 54 ^h /3 20 ^h : 54 ^h /3										
	PMG: 11 ^h 59 ^m 7			SD: 14 ^h 7										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	06.3	+23 04.7	343	01.1	-19 25.1	3	60 N	21 22	23 01	** **	22 20 37	4 46 53	
1	195	06.2	04.9	357	32.0 ¹¹⁹	25.4	3	58	21 02	22 16	** **	22 07 38	4 59 53	
2	210	06.0	05.0	12	02.9 ¹¹⁹	25.6	2	56	20 45	21 47	** **	21 56 39	5 11 53	
3	225	05.9	05.2	26	33.7 ¹¹⁸	25.7	1	54	32	25	23 06	45 41	21 53	
4	240	05.8	05.4	41	04.6 ¹¹⁹	25.7	0	52	19	21 08	22 24	36 41	31 51	
5	255	05.7	+23 05.6	55	35.5 ¹¹⁹	-19 25.6	1	50	20 09	20 53	21 58	21 28 42	5 39 51	
6	270	05.5	+23 05.7	70	06.3 ¹¹⁸	-19 25.4	2	45	19 47	20 24	21 13	21 11 43	5 56 51	
7	285	05.4	05.9	84	37.2 ¹¹⁹	25.2	2	40	29	20 02	20 43	20 57 44	6 11 50	
8	300	05.3	06.1	99	08.0 ¹¹⁸	24.8	4	35	14	19 44	20	45 45	23 50	
9	315	05.2	06.2	113	38.8 ¹¹⁸	24.4	4	30	19 01	29	20 02	35 45	33 50	
10	330	05.0	06.4	128	09.7 ¹¹⁹	23.9	5	20	18 39	19 04	19 33	17 46	6 51 50	
11	345	04.9	+23 06.6	142	40.5 ¹¹⁸	-19 23.2	7	10 N	18 21	18 44	19 11	20 01 48	7 07 49	
12	0	04.8	+23 06.7	157	11.3 ¹¹⁸	-19 22.5	7	0	18 03	18 26	18 52	19 47 48	7 22 48	
13	15	04.7	06.9	171	42.1 ¹¹⁸	21.7	8	10 S	17 46	18 09	35	32 49	37 47	
14	30	04.5	07.1	186	12.9 ¹¹⁸	20.8	9	20	28	17 52	19	19 17 50	7 52 47	
15	45	04.4	07.2	200	43.7 ¹¹⁸	19.9	9	30	17 07	33	18 03	18 59 51	8 10 47	
16	60	04.3	07.4	215	14.5 ¹¹⁸	18.8	11	35	16 55	23	17 54	48 52	21 46	
17	75	04.1	+23 07.6	229	45.3 ¹¹⁸	-19 17.6	12	40	16 41	17 11	17 45	18 36 53	8 33 45	
18	90	04.0	+23 07.7	244	16.1 ¹¹⁸	-19 16.4	12	45	16 24	16 58	17 35	18 22 54	8 47 45	
19	105	03.9	07.9	258	46.9 ¹¹⁸	15.0	14	50	16 04	42	24	18 05 55	9 04 44	
20	120	03.8	08.0	273	17.7 ¹¹⁸	13.6	14	52	15 54	35	18	17 57 55	12 44	
21	135	03.6	08.2	287	48.5 ¹¹⁸	12.0	16	54	43	27	13	48 56	21 44	
22	150	03.5	08.4	302	19.3 ¹¹⁸	10.4	16	56	31	18	07	38 56	32 42	
23	165	03.4	08.5	316	50.0 ¹¹⁷	08.7	17	58	15 16	16 08	17 00	27 57	43 42	
24	180	03.3	+23 08.7	331	20.8 ¹¹⁸	-19 06.9	18	60 S	14 59	15 56	16 53	17 13 58	9 57 41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 6 ^h 40 ^m 8		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 13 ^h 00 ^m		Mag: -2.2 PMG: 19 ^h 30 ^m		Mag: 0.0 PMG: 0 ^h 20 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	259	31.5	226	16.3	+10 39.7	164 55.4	+24 17.5	66 49.1	-3 56.0	355 05.8	-21 58.6
1	274	33.9	241	16.4	40.5	179 56.1	17.5	81 51.6	56.0	10 08.5	58.6
2	289	36.4	256	16.4	41.3	194 56.7	17.4	96 54.0	56.0	25 11.2	58.6
3	304	38.9	271	16.4	42.0	209 57.4	17.4	111 56.5	56.0	40 13.8	58.6
4	319	41.3	286	16.4	42.8	224 58.0	17.4	126 59.0	56.0	55 16.5	58.6
5	334	43.8	301	16.5	+10 43.6	239 58.7	+24 17.3	142 01.4	-3 56.1	70 19.1	-21 58.6
6	349	46.3	316	16.5	+10 44.3	254 59.3	+24 17.3	157 03.9	-3 56.1	85 21.8	-21 58.6
7	4	48.7	331	16.5	45.1	270 00.0	17.2	172 06.3	56.1	100 24.5	58.6
8	19	51.2	346	16.6	45.9	285 00.6	17.2	187 08.8	56.1	115 27.1	58.6
9	34	53.7	1	16.6	46.7	300 01.3	17.2	202 11.2	56.1	130 29.8	58.6
10	49	56.1	16	16.6	47.4	315 01.9	17.1	217 13.7	56.1	145 32.4	58.5
11	64	58.6	31	16.6	+10 48.2	330 02.6	+24 17.1	232 16.1	-3 56.1	160 35.1	-21 58.5
12	80	01.1	46	16.7	+10 49.0	345 03.2	+24 17.0	247 18.6	-3 56.2	175 37.8	-21 58.5
13	95	03.5	61	16.7	49.7	0 03.9	17.0	262 21.1	56.2	190 40.4	58.5
14	110	06.0	76	16.7	50.5	15 04.5	16.9	277 23.5	56.2	205 43.1	58.5
15	125	08.4	91	16.7	51.3	30 05.2	16.9	292 26.0	56.2	220 45.8	58.5
16	140	10.9	106	16.7	52.0	45 05.8	16.8	307 28.4	56.2	235 48.4	58.5
17	155	13.4	121	16.8	+10 52.8	60 06.5	+24 16.8	322 30.9	-3 56.2	250 51.1	-21 58.5
18	170	15.8	136	16.8	+10 53.6	75 07.1	+24 16.8	337 33.3	-3 56.3	265 53.7	-21 58.5
19	185	18.3	151	16.8	54.3	90 07.8	16.7	352 35.8	56.3	280 56.4	58.5
20	200	20.8	166	16.8	55.1	105 08.4	16.7	7 38.2	56.3	295 59.1	58.5
21	215	23.2	181	16.8	55.9	120 09.1	16.6	22 40.7	56.3	311 01.7	58.5
22	230	25.7	196	16.9	56.6	135 09.7	16.6	37 43.1	56.3	326 04.4	58.5
23	245	28.2	211	16.9	57.4	150 10.4	16.5	52 45.6	56.3	341 07.1	58.5
24	260	30.6	226	16.9	+10 58.2	165 11.0	+24 16.5	67 48.0	-3 56.4	356 09.7	-21 58.5
Dif	—		0	+8	+7	0	+25	0	+27	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 59 ^m 9			Edad: 17 ^d 2 PHE { SD: 14'8 PMG: 1 ^h 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	03.3	+23	08.7	331	20.8	-19	06.9	19	58	2	38	22	57	30
1	195	03.1		08.8	345	51.6 ¹¹⁸		05.0	20	58	1	44	45	32	5
2	210	03.0		09.0	0	22.4 ¹¹⁸		03.0	21	56	2	12	35	33	6
3	225	02.9		09.1	14	53.2 ¹¹⁸	-19	00.9	21	54	0	53	26	34	14
4	240	02.7		09.3	29	24.0 ¹¹⁸	-18	58.8	21	52	1	35	2	52	40
5	255	02.6	+23	09.5	43	54.8 ¹¹⁸	-18	56.5	23	50	2	02	3	06	3
6	270	02.5	+23	09.6	58	25.6 ¹¹⁸	-18	54.2	23	45	2	46	3	36	4
7	285	02.4		09.8	72	56.4 ¹¹⁸		51.7	25	40	3	16	3	58	31
8	300	02.2		09.9	87	27.2 ¹¹⁸		49.2	25	35	39	4	16	45	30
9	315	02.1		10.1	101	58.0 ¹¹⁸		46.6	26	30	3	58	31	4	58
10	330	02.0		10.2	116	28.8 ¹¹⁸		43.9	27	20	4	26	4	56	5
11	345	01.8	+23	10.4	130	59.6 ¹¹⁸	-18	41.1	28	10 N	4	49	5	16	5
12	0	01.7	+23	10.5	145	30.4 ¹¹⁸	-18	38.2	29	0	5	08	5	34	5
13	15	01.6		10.7	160	01.2 ¹¹⁸		35.2	30	10 S	24	5	51	6	13
14	30	01.5		10.8	174	32.1 ¹¹⁹		32.2	30	20	40	6	08	32	20
15	45	01.3		11.0	189	02.9 ¹¹⁸		29.0	32	30	5	57	26	6	53
16	60	01.2		11.1	203	33.7 ¹¹⁸		25.8	32	35	6	05	37	7	05
17	75	01.1	+23	11.3	218	04.6 ¹¹⁹	-18	22.5	33	40	6	14	6	48	7
18	90	00.9	+23	11.4	232	35.4 ¹¹⁸	-18	19.1	34	45	6	25	7	02	7
19	105	00.8		11.5	247	06.3 ¹¹⁹		15.5	36	50	36	18	7	56	7
20	120	00.7		11.7	261	37.2 ¹¹⁹		12.0	35	52	41	25	8	06	18
21	135	00.6		11.8	276	08.0 ¹¹⁸		08.3	37	54	47	33	17		44
22	150	00.4		12.0	290	38.9 ¹¹⁹		04.5	38	56	6	53	42	29	34
23	165	00.3		12.1	305	09.8 ¹¹⁹	-18	00.7	38	58	7	00	7	52	8
24	180	00.2	+23	12.3	319	40.7 ¹¹⁹	-17	56.7	40	60 S	7	07	8	04	9
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 36 ^m 9		Mag: -4.3 PMG: 8 ^h 55 ^m			Mag: +1.7 PMG: 12 ^h 59 ^m			Mag: -2.2 PMG: 19 ^h 26 ^m			Mag: 0.0 PMG: 0 ^h 15 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	260	30.6	226	16.9	+10	58.2	165	11.0	+24	16.5	67	48.0	-3	56.4	
1	275	33.1	241	16.9		59.0	180	11.7		16.4	82	50.5		56.4	
2	290	35.5	256	16.9	+10	59.7	195	12.3		16.4	97	53.0		56.4	
3	305	38.0	271	16.9	+11	00.5	210	13.0		16.3	112	55.4		56.4	
4	320	40.5	286	17.0		01.3	225	13.6		16.3	127	57.9		56.4	
5	335	42.9	301	17.0	+11	02.0	240	14.3	+24	16.2	143	00.3	-3	56.4	
6	350	45.4	316	17.0	+11	02.8	255	14.9	+24	16.2	158	02.8	-3	56.5	
7	5	47.9	331	17.0		03.6	270	15.6		16.1	173	05.2		56.5	
8	20	50.3	346	17.0		04.3	285	16.3		16.1	188	07.7		56.5	
9	35	52.8	1	17.0		05.1	300	16.9		16.0	203	10.1		56.5	
10	50	55.3	16	17.0		05.9	315	17.6		16.0	218	12.6		56.5	
11	65	57.7	31	17.0	+11	06.6	330	18.2	+24	15.9	233	15.0	-3	56.6	
12	81	00.2	46	17.0	+11	07.4	345	18.9	+24	15.9	248	17.4	-3	56.6	
13	96	02.7	61	17.0		08.2	0	19.5		15.8	263	19.9		56.6	
14	111	05.1	76	17.0		08.9	15	20.2		15.8	278	22.3		56.6	
15	126	07.6	91	17.1		09.7	30	20.8		15.7	293	24.8		56.6	
16	141	10.0	106	17.1		10.5	45	21.5		15.7	308	27.2		56.6	
17	156	12.5	121	17.1	+11	11.3	60	22.1	+24	15.6	323	29.7	-3	56.7	
18	171	15.0	136	17.1	+11	12.0	75	22.8	+24	15.5	338	32.1	-3	56.7	
19	186	17.4	151	17.1		12.8	90	23.4		15.5	353	34.6		56.7	
20	201	19.9	166	17.1		13.6	105	24.1		15.4	8	37.0		56.7	
21	216	22.4	181	17.1		14.3	120	24.7		15.4	23	39.5		56.7	
22	231	24.8	196	17.1		15.1	135	25.4		15.3	38	41.9		56.8	
23	246	27.3	211	17.1		15.9	150	26.0		15.3	53	44.4		56.8	
24	261	29.8	226	17.1	+11	16.6	165	26.7	+24	15.2	68	46.8	-3	56.8	
Dif	—		0		+8		+7		-1		+24		0		+27

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 18 ^d 2 PHE { 4 ^h : 54 ^m /8 12 ^h : 54 ^m /9 20 ^h : 55 ^m /1											
	PMG: 12 ^h 00 ^m 1			PMG: 2 ^h 47 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m		h m m	
0	180	00.2	+23	12.3	319	40.7	-17 56.7	60 N	21 24	23 06	** **	23 27 23		6 41 69	
1	195	00.0		12.4	334	11.6 ¹¹⁹	52.7 ⁴⁰	58	21 04	22 18	** **	17 25		6 53 67	
2	209	59.9		12.5	348	42.5 ¹¹⁹	48.6 ⁴¹	56	20 47	21 49	** **	08 27		7 03 65	
3	224	59.8		12.7	3	13.4 ¹¹⁹	44.4 ⁴²	54	33	27	23 10	23 00 29		12 64	
4	239	59.6		12.8	17	44.3 ¹¹⁹	40.1 ⁴³	52	21	21 09	22 26	22 53 31		20 62	
5	254	59.5	+23	12.9	32	15.3 ¹²⁰	-17 35.7 ⁴⁴	50	20 10	20 54	21 59	22 46 32		7 27 61	
6	269	59.4	+23	13.1	46	46.2 ¹¹⁹	-17 31.3 ⁴⁴	45	19 48	20 25	21 14	22 33 34		7 43 58	
7	284	59.3		13.2	61	17.2 ¹²⁰	26.7 ⁴⁶	40	30	20 03	20 44	21 37		7 55 57	
8	299	59.1		13.4	75	48.1 ¹¹⁹	22.1 ⁴⁶	35	15	19 44	21	11 39		8 06 55	
9	314	59.0		13.5	90	19.1 ¹²⁰	17.4 ⁴⁷	30	19 02	29	20 03	22 03 40		15 54	
10	329	58.9		13.6	104	50.1 ¹²⁰	12.6 ⁴⁸	20	18 40	19 05	19 34	21 48 43		31 52	
11	344	58.7	+23	13.8	119	21.1 ¹²⁰	-17 07.7 ⁴⁹	10 N	18 21	18 44	19 11	21 35 46		8 45 50	
12	359	58.6	+23	13.9	133	52.1 ¹²⁰	-17 02.8 ⁴⁹	0	18 04	18 26	18 52	21 23 48		8 58 48	
13	14	58.5		14.0	148	23.1 ¹²⁰	-16 57.7 ⁵¹	10 S	17 46	18 09	36	21 11 50		9 11 46	
14	29	58.3		14.2	162	54.1 ¹²⁰	52.6 ⁵¹	20	28	17 52	20	20 58 52		25 44	
15	44	58.2		14.3	177	25.1 ¹²⁰	47.4 ⁵²	30	17 07	33	18 03	43 55		41 41	
16	59	58.1		14.4	191	56.2 ¹²¹	42.1 ⁵³	35	16 55	23	17 55	34 57		9 50 40	
17	74	57.9	+23	14.5	206	27.2 ¹²⁰	-16 36.7 ⁵⁴	40	16 41	17 11	17 45	20 25 58		10 00 39	
18	89	57.8	+23	14.7	220	58.3 ¹²¹	-16 31.2 ⁵⁵	45	16 24	16 58	17 35	20 13 60		10 13 36	
19	104	57.7		14.8	235	29.3 ¹²⁰	25.7 ⁵⁵	50	16 04	42	23	19 59 63		27 34	
20	119	57.6		14.9	250	00.4 ¹²¹	20.1 ⁵⁶	52	15 54	35	18	52 65		34 33	
21	134	57.4		15.0	264	31.5 ¹²¹	14.4 ⁵⁷	54	43	26	13	45 66		42 31	
22	149	57.3		15.2	279	02.6 ¹²¹	08.6 ⁵⁸	56	30	17	06	37 67		10 50 30	
23	164	57.2		15.3	293	33.7 ¹²¹	-16 02.8 ⁵⁸	58	15 16	16 07	17 00	28 69		11 00 28	
24	179	57.0	+23	15.4	308	04.9 ¹²²	-15 56.8 ⁶⁰	60 S	14 59	15 56	16 52	19 17 72		11 11 26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 32 ^m 9		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 12 ^h 58 ^m		Mag: -2.2 PMG: 19 ^h 22 ^m		Mag: 0.0 PMG: 0 ^h 11 ^m									
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	261	29.8	226	17.1	+11	16.6	165	26.7	+24	15.2	68	46.8	-3	56.8	357	13.6	-21	58.4
1	276	32.2	241	17.1		17.4	180	27.4		15.2	83	49.3		56.8	12	16.3		58.4
2	291	34.7	256	17.1		18.2	195	28.0		15.1	98	51.7		56.8	27	18.9		58.4
3	306	37.2	271	17.1		18.9	210	28.7		15.0	113	54.1		56.9	42	21.6		58.4
4	321	39.6	286	17.1		19.7	225	29.3		15.0	128	56.6		56.9	57	24.3		58.4
5	336	42.1	301	17.1	+11	20.5	240	30.0	+24	14.9	143	59.0	-3	56.9	72	26.9	-21	58.4
6	351	44.5	316	17.1	+11	21.3	255	30.6	+24	14.9	159	01.5	-3	56.9	87	29.6	-21	58.4
7	6	47.0	331	17.1		22.0	270	31.3		14.8	174	03.9		56.9	102	32.3		58.3
8	21	49.5	346	17.1		22.8	285	31.9		14.7	189	06.4		57.0	117	34.9		58.3
9	36	51.9	1	17.1		23.6	300	32.6		14.7	204	08.8		57.0	132	37.6		58.3
10	51	54.4	16	17.0		24.3	315	33.2		14.6	219	11.2		57.0	147	40.2		58.3
11	66	56.9	31	17.0	+11	25.1	330	33.9	+24	14.6	234	13.7	-3	57.0	162	42.9	-21	58.3
12	81	59.3	46	17.0	+11	25.9	345	34.6	+24	14.5	249	16.1	-3	57.1	177	45.6	-21	58.3
13	97	01.8	61	17.0		26.6	0	35.2		14.4	264	18.6		57.1	192	48.2		58.3
14	112	04.3	76	17.0		27.4	15	35.9		14.4	279	21.0		57.1	207	50.9		58.3
15	127	06.7	91	17.0		28.2	30	36.5		14.3	294	23.5		57.1	222	53.6		58.3
16	142	09.2	106	17.0		28.9	45	37.2		14.3	309	25.9		57.1	237	56.2		58.3
17	157	11.7	121	17.0	+11	29.7	60	37.8	+24	14.2	324	28.3	-3	57.2	252	58.9	-21	58.3
18	172	14.1	136	17.0	+11	30.5	75	38.5	+24	14.1	339	30.8	-3	57.2	268	01.5	-21	58.3
19	187	16.6	151	17.0		31.2	90	39.1		14.1	354	33.2		57.2	283	04.2		58.3
20	202	19.0	166	16.9		32.0	105	39.8		14.0	9	35.7		57.2	298	06.9		58.3
21	217	21.5	181	16.9		32.8	120	40.5		13.9	24	38.1		57.3	313	09.5		58.3
22	232	24.0	196	16.9		33.6	135	41.1		13.9	39	40.5		57.3	328	12.2		58.3
23	247	26.4	211	16.9		34.3	150	41.8		13.8	54	43.0		57.3	343	14.9		58.3
24	262	28.9	226	16.9	+11	35.1	165	42.4	+24	13.7	69	45.4	-3	57.3	358	17.5	-21	58.3
Dif	—		0		+8		+7		-1		+24		0		+27			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 00 ^m 3				Edad: 19 ^d 2 PHE { SD: 15'0 PMG: 3 ^h 35 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	57.0	+23	15.4	308	04.9	-15	56.8	60 N	** **	0 55	2 37	23 50	20	7 50	74		
1	194	56.9		15.5	322	36.0 ¹²¹		50.8	60	** **	1 42	2 57	42 22		8 00	71		
2	209	56.8		15.7	337	07.1 ¹²¹		44.7	61	** **	2 11	3 13	35 24		08 69			
3	224	56.6		15.8	351	38.3 ¹²²		38.5	62	0 50	33	27	29 26		16 67			
4	239	56.5		15.9	6	09.5 ¹²²		32.3	62	1 34	2 51	40	24 27		22 66			
5	254	56.4	+23	16.0	20	40.6 ¹²¹	-15	25.9	64	2 01	3 06	3 50	23 18	29	8 28	65		
6	269	56.2	+23	16.1	35	11.8 ¹²²	-15	19.5	64	2 46	3 35	4 13	23 07	32	8 41	62		
7	284	56.1		16.3	49	43.0 ¹²²		13.0	65	3 16	3 58	31	22 58	35	8 52	59		
8	299	56.0		16.4	64	14.2 ¹²²	-15	06.5	65	39	4 16	45	50 37		9 01	57		
9	314	55.8		16.5	78	45.5 ¹²³	-14	59.9	66	3 58	31	4 58	43 39		09 56			
10	329	55.7		16.6	93	16.7 ¹²²		53.1	68	4 27	4 56	5 20	31 42		23 52			
11	344	55.6	+23	16.7	107	47.9 ¹²²	-14	46.4	67	4 49	5 16	5 39	22 21	44	9 35	50		
12	359	55.4	+23	16.8	122	19.2 ¹²³	-14	39.5	69	5 08	5 34	5 57	22 11	47	9 46	47		
13	14	55.3		17.0	136	50.4 ¹²²		32.6	69	25	5 51	6 14	22 01	50	9 57	45		
14	29	55.2		17.1	151	21.7 ¹²³		25.5	71	41	6 08	32	21 50	53	10 09	42		
15	44	55.0		17.2	165	53.0 ¹²³		18.5	70	5 57	27	6 53	38 56		22 40			
16	59	54.9		17.3	180	24.3 ¹²³		11.3	72	6 06	38	7 06	31 58		30 38			
17	74	54.8	+23	17.4	194	55.6 ¹²³	-14	04.1	72	6 15	6 49	7 20	21 23	60	10 39	35		
18	89	54.6	+23	17.5	209	26.9 ¹²³	-13	56.8	73	6 26	7 03	7 37	21 13	63	10 49	33		
19	104	54.5		17.6	223	58.2 ¹²³		49.4	74	37	19	7 57	21 02	66	11 01	31		
20	119	54.4		17.7	238	29.5 ¹²³		42.0	74	42	26	8 07	20 57	67	07 29			
21	134	54.3		17.9	253	00.8 ¹²³		34.4	76	48	34	18	51 69		13 28			
22	149	54.1		18.0	267	32.2 ¹²⁴		26.9	75	6 54	43	30	44 71		20 26			
23	164	54.0		18.1	282	03.5 ¹²³		19.2	77	7 01	7 53	8 45	37 73		28 24			
24	179	53.9	+23	18.2	296	34.9 ¹²⁴	-13	11.5	77	7 08	8 05	9 02	20 29	75	11 37	22		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 29 ^m 0		Mag: -4.3 PMG: 8 ^h 55 ^m				Mag: +1.7 PMG: 12 ^h 57 ^m				Mag: -2.2 PMG: 19 ^h 18 ^m				Mag: 0.0 PMG: 0 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	28.9	226	16.9	+11	35.1	165	42.4	+24	13.7	69	45.4	-3	57.3	358	17.5	-21	58.3
1	277	31.4	241	16.9		35.9	180	43.1		13.7	84	47.8		57.3	13	20.2		58.3
2	292	33.8	256	16.8		36.6	195	43.7		13.6	99	50.3		57.4	28	22.8		58.3
3	307	36.3	271	16.8		37.4	210	44.4		13.6	114	52.7		57.4	43	25.5		58.3
4	322	38.8	286	16.8		38.2	225	45.0		13.5	129	55.2		57.4	58	28.2		58.3
5	337	41.2	301	16.8	+11	38.9	240	45.7	+24	13.4	144	57.6	-3	57.4	73	30.8	-21	58.3
6	352	43.7	316	16.8	+11	39.7	255	46.4	+24	13.4	160	00.0	-3	57.5	88	33.5	-21	58.2
7	7	46.1	331	16.8		40.5	270	47.0		13.3	175	02.5		57.5	103	36.2		58.2
8	22	48.6	346	16.7		41.2	285	47.7		13.2	190	04.9		57.5	118	38.8		58.2
9	37	51.1	1	16.7		42.0	300	48.3		13.1	205	07.3		57.5	133	41.5		58.2
10	52	53.5	16	16.7		42.8	315	49.0		13.1	220	09.8		57.6	148	44.1		58.2
11	67	56.0	31	16.7	+11	43.5	330	49.6	+24	13.0	235	12.2	-3	57.6	163	46.8	-21	58.2
12	82	58.5	46	16.6	+11	44.3	345	50.3	+24	12.9	250	14.6	-3	57.6	178	49.5	-21	58.2
13	98	00.9	61	16.6		45.1	0	51.0		12.9	265	17.1		57.6	193	52.1		58.2
14	113	03.4	76	16.6		45.8	15	51.6		12.8	280	19.5		57.7	208	54.8		58.2
15	128	05.9	91	16.6		46.6	30	52.3		12.7	295	21.9		57.7	223	57.5		58.2
16	143	08.3	106	16.5		47.4	45	52.9		12.7	310	24.4		57.7	239	00.1		58.2
17	158	10.8	121	16.5	+11	48.1	60	53.6	+24	12.6	325	26.8	-3	57.7	254	02.8	-21	58.2
18	173	13.3	136	16.5	+11	48.9	75	54.2	+24	12.5	340	29.2	-3	57.8	269	05.5	-21	58.2
19	188	15.7	151	16.5		49.7	90	54.9		12.5	355	31.7		57.8	284	08.1		58.2
20	203	18.2	166	16.4		50.5	105	55.6		12.4	10	34.1		57.8	299	10.8		58.2
21	218	20.6	181	16.4		51.2	120	56.2		12.3	25	36.5		57.8	314	13.4		58.2
22	233	23.1	196	16.4		52.0	135	56.9		12.2	40	39.0		57.9	329	16.1		58.2
23	248	25.6	211	16.3		52.8	150	57.5		12.2	55	41.4		57.9	344	18.8		58.2
24	263	28.0	226	16.3	+11	53.5	165	58.2	+24	12.1	70	43.8	-3	57.9	359	21.4	-21	58.2
Dif	—		0 +8				+7 -1				+24 0				+27 0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 20 ^d 2	PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/2										
	PMG: 12 ^h 00 ^m 5					SD: 15/2			PMG: 4 ^h 22 ^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	179	53.9	+23	18.2	296	34.9	-13	11.5	60 N	21 25	23 09	** ** *	** ** *	9 04	77
1	194	53.7		18.3	311	06.2 ¹²³	-13	03.7	58	21 05	22 20	** ** *	** ** *	11	75
2	209	53.6		18.4	325	37.6 ¹²⁴	-12	55.8	56	20 48	21 51	** ** *	23 59	22	73
3	224	53.5		18.5	340	09.0 ¹²⁴		47.9	54	34	28	23 14	55	24	71
4	239	53.3		18.6	354	40.3 ¹²³		39.9	52	22	21 11	22 28	51	25	69
5	254	53.2	+23	18.7	9	11.7 ¹²⁴	-12	31.8	50	20 11	20 56	22 01	23 47	27	67
6	269	53.1	+23	18.8	23	43.1 ¹²⁴	-12	23.7	45	19 49	20 26	21 16	23 39	31	64
7	284	52.9		18.9	38	14.5 ¹²⁴		15.5	40	31	20 03	20 45	33	33	61
8	299	52.8		19.0	52	45.9 ¹²⁴	-12	07.3	35	16	19 45	22	27	35	59
9	314	52.7		19.1	67	17.3 ¹²⁴	-11	58.9	30	19 03	30	20 03	22	37	56
10	329	52.5		19.2	81	48.7 ¹²⁴		50.5	20	18 41	19 05	19 34	13	41	53
11	344	52.4	+23	19.3	96	20.2 ¹²⁵	-11	42.1	10 N	18 22	18 45	19 12	23 05	45	50
12	359	52.3	+23	19.4	110	51.6 ¹²⁴	-11	33.6	0	18 04	18 27	18 53	22 58	47	48
13	14	52.1		19.5	125	23.0 ¹²⁴		25.0	10 S	17 47	18 10	36	51	50	44
14	29	52.0		19.6	139	54.4 ¹²⁴		16.4	20	28	17 52	20	43	53	42
15	44	51.9		19.7	154	25.9 ¹²⁵	-11	07.7	30	17 07	34	18 03	34	57	37
16	59	51.7		19.8	168	57.3 ¹²⁴	-10	58.9	35	16 55	23	17 55	29	59	35
17	74	51.6	+23	19.9	183	28.7 ¹²⁴	-10	50.1	40	16 41	17 11	17 45	22 23	62	34
18	89	51.5	+23	20.0	198	00.2 ¹²⁵	-10	41.2	45	16 24	16 58	17 35	22 16	65	31
19	104	51.3		20.1	212	31.6 ¹²⁴		32.3	50	16 03	42	23	08	68	27
20	119	51.2		20.2	227	03.0 ¹²⁴		23.2	52	15 54	34	18	04	70	26
21	134	51.0		20.3	241	34.5 ¹²⁵		14.2	54	42	26	12	22 00	71	24
22	149	50.9		20.3	256	05.9 ¹²⁴	-10	05.1	56	30	17	06	21 55	74	23
23	164	50.8		20.4	270	37.3 ¹²⁴	-9	55.9	58	15 15	16 07	17 00	50	76	21
24	179	50.6	+23	20.5	285	08.8 ¹²⁵	-9	46.7	60 S	14 58	15 55	16 52	21 44	79	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 25 ^m 1		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 12 ^h 56 ^m		Mag: -2.2 PMG: 19 ^h 14 ^m		Mag: 0.0 PMG: 0 ^h 03 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	263	28.0	226	16.3	165	58.2	70	43.8	359	21.4
1	278	30.5	241	16.3	180	58.8	85	46.3	14	24.1
2	293	33.0	256	16.2	195	59.5	100	48.7	29	26.8
3	308	35.4	271	16.2	211	00.2	115	51.1	44	29.4
4	323	37.9	286	16.2	226	00.8	130	53.6	59	32.1
5	338	40.4	301	16.1	241	01.5	145	56.0	74	34.7
6	353	42.8	316	16.1	256	02.1	160	58.4	89	37.4
7	8	45.3	331	16.1	271	02.8	176	00.9	104	40.1
8	23	47.8	346	16.0	286	03.4	191	03.3	119	42.7
9	38	50.2	1	16.0	301	04.1	206	05.7	134	45.4
10	53	52.7	16	15.9	316	04.8	221	08.1	149	48.1
11	68	55.1	31	15.9	331	05.4	236	10.6	164	50.7
12	83	57.6	46	15.9	346	06.1	251	13.0	179	53.4
13	99	00.1	61	15.8	1	06.7	266	15.4	194	56.0
14	114	02.5	76	15.8	16	07.4	281	17.8	209	58.7
15	129	05.0	91	15.7	31	08.1	296	20.3	225	01.4
16	144	07.5	106	15.7	46	08.7	311	22.7	240	04.0
17	159	09.9	121	15.7	61	09.4	326	25.1	255	06.7
18	174	12.4	136	15.6	76	10.0	341	27.6	270	09.4
19	189	14.9	151	15.6	91	10.7	356	30.0	285	12.0
20	204	17.3	166	15.5	106	11.4	11	32.4	300	14.7
21	219	19.8	181	15.5	121	12.0	26	34.8	315	17.4
22	234	22.3	196	15.4	136	12.7	41	37.3	330	20.0
23	249	24.7	211	15.4	151	13.3	56	39.7	345	22.7
24	264	27.2	226	15.3	166	14.0	71	42.1	0	25.3
Dif	—		0 +8		+7 -1		+24 0		-8973 0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 00 ^m 7			Edad: 21 ^d 2 PHE { SD: 15'3 PMG: 5 ^h 09 ^m										
				R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	179	50.6	+23 20.5	285	08.8	-9 46.7		60 N	** **	0 52	2 36	0 10	17	10 21 80
1	194	50.5		299	40.2 ¹²⁴	37.4 ⁹³		58	** **	1 41	2 56	0 04	20	26 77
2	209	50.4		314	11.6 ¹²⁴	28.0 ⁹⁴		56	** **	2 11	3 13	** **	**	30 75
3	224	50.2		328	43.0 ¹²⁴	18.6 ⁹⁴		54	0 47	33	27	** **	**	34 72
4	239	50.1		343	14.4 ¹²⁴	-9 09.2 ⁹⁴		52	1 33	2 51	39	** **	**	37 71
5	254	50.0	+23 21.0	357	45.9 ¹²⁵	-8 59.7 ⁹⁵		50	2 00	3 06	3 50	** **	**	10 40 69
6	269	49.8	+23 21.0	12	17.3 ¹²⁴	-8 50.1 ⁹⁶		45	2 46	3 35	4 13	** **	**	10 47 65
7	284	49.7		26	48.7 ¹²⁴	40.5 ⁹⁶		40	3 16	3 58	31	** **	**	52 63
8	299	49.6		41	20.1 ¹²⁴	30.9 ⁹⁶		35	39	4 16	46	** **	**	10 57 60
9	314	49.4		55	51.5 ¹²⁴	21.1 ⁹⁸		30	3 58	31	4 59	23 59	38	11 01 58
10	329	49.3		70	22.9 ¹²⁴	11.4 ⁹⁷		20	4 27	4 56	5 21	54	41	08 55
11	344	49.2	+23 21.5	84	54.2 ¹²³	-8 01.6 ⁹⁸		10 N	4 49	5 16	5 40	23 50	44	11 15 50
12	359	49.0	+23 21.5	99	25.6 ¹²⁴	-7 51.7 ⁹⁹		0	5 08	5 35	5 57	23 45	48	11 21 47
13	14	48.9		113	57.0 ¹²⁴	41.8 ⁹⁹		10 S	25	5 52	6 14	41	51	26 45
14	29	48.8		128	28.3 ¹²³	31.8 ¹⁰⁰		20	41	6 09	33	36	55	33 41
15	44	48.6		142	59.7 ¹²⁴	21.8 ¹⁰⁰		30	5 58	28	6 54	31	59	39 38
16	59	48.5		157	31.0 ¹²³	11.8 ¹⁰⁰		35	6 07	38	7 06	28	61	43 36
17	74	48.4	+23 21.9	172	02.3 ¹²³	-7 01.7 ¹⁰¹		40	6 16	6 50	7 21	23 25	64	11 48 33
18	89	48.2	+23 22.0	186	33.6 ¹²³	-6 51.5 ¹⁰²		45	6 26	7 04	7 37	23 21	67	11 53 30
19	104	48.1		201	04.9 ¹²³	41.3 ¹⁰²		50	38	20	7 58	16	71	11 59 27
20	119	48.0		215	36.2 ¹²³	31.1 ¹⁰²		52	43	27	8 08	14	72	12 02 25
21	134	47.8		230	07.5 ¹²³	20.8 ¹⁰³		54	49	35	19	11	75	05 23
22	149	47.7		244	38.7 ¹²²	10.5 ¹⁰³		56	6 55	44	32	09	76	09 21
23	164	47.5		259	10.0 ¹²³	-6 00.1 ¹⁰⁴		58	7 02	7 54	8 46	06	78	13 19
24	179	47.4	+23 22.5	273	41.2 ¹²²	-5 49.7 ¹⁰⁴		60 S	7 09	8 06	9 04	23 03	81	12 17 16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG 6 ^h 21 ^m 1		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 12 ^h 54 ^m		Mag: -2.2 PMG: 19 ^h 10 ^m		Mag: 0.0 PMG: 23 ^h 54 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	264	27.2	226	15.3	+12 11.9	166	14.0	+24 10.2	71	42.1	-3 58.6	0 25.3	-21 58.1
1	279	29.6	241	15.3	12.7	181	14.7	10.1	86	44.5	58.6	15 28.0	58.1
2	294	32.1	256	15.2	13.5	196	15.3	10.1	101	47.0	58.6	30 30.7	58.1
3	309	34.6	271	15.2	14.2	211	16.0	10.0	116	49.4	58.6	45 33.3	58.0
4	324	37.0	286	15.1	15.0	226	16.6	09.9	131	51.8	58.7	60 36.0	58.0
5	339	39.5	301	15.1	+12 15.7	241	17.3	+24 09.8	146	54.2	-3 58.7	75 38.7	-21 58.0
6	354	42.0	316	15.0	+12 16.5	256	18.0	+24 09.7	161	56.7	-3 58.7	90 41.3	-21 58.0
7	9	44.4	331	15.0	17.3	271	18.6	09.6	176	59.1	58.8	105 44.0	58.0
8	24	46.9	346	14.9	18.0	286	19.3	09.6	192	01.5	58.8	120 46.6	58.0
9	39	49.4	1	14.9	18.8	301	19.9	09.5	207	03.9	58.8	135 49.3	58.0
10	54	51.8	16	14.8	19.6	316	20.6	09.4	222	06.3	58.9	150 52.0	58.0
11	69	54.3	31	14.8	+12 20.3	331	21.3	+24 09.3	237	08.8	-3 58.9	165 54.6	-21 58.0
12	84	56.7	46	14.7	+12 21.1	346	21.9	+24 09.2	252	11.2	-3 58.9	180 57.3	-21 58.0
13	99	59.2	61	14.7	21.9	1	22.6	09.1	267	13.6	58.9	196 00.0	58.0
14	115	01.7	76	14.6	22.6	16	23.2	09.1	282	16.0	59.0	211 02.6	58.0
15	130	04.1	91	14.5	23.4	31	23.9	09.0	297	18.4	59.0	226 05.3	58.0
16	145	06.6	106	14.5	24.2	46	24.6	08.9	312	20.9	59.0	241 07.9	58.0
17	160	09.1	121	14.4	+12 24.9	61	25.2	+24 08.8	327	23.3	-3 59.1	256 10.6	-21 58.0
18	175	11.5	136	14.4	+12 25.7	76	25.9	+24 08.7	342	25.7	-3 59.1	271 13.3	-21 58.0
19	190	14.0	151	14.3	26.5	91	26.6	08.6	357	28.1	59.1	286 15.9	58.0
20	205	16.5	166	14.3	27.2	106	27.2	08.5	12	30.5	59.2	301 18.6	58.0
21	220	18.9	181	14.2	28.0	121	27.9	08.4	27	33.0	59.2	316 21.3	58.0
22	235	21.4	196	14.1	28.7	136	28.5	08.3	42	35.4	59.2	331 23.9	58.0
23	250	23.9	211	14.1	29.5	151	29.2	08.3	57	37.8	59.3	346 26.6	58.0
24	265	26.3	226	14.0	+12 30.3	166	29.9	+24 08.2	72	40.2	-3 59.3	1 29.3	-21 58.0
Dif	—		-1	+8		+7	-1		+24	0		+27	0

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 22 ^d 2 PHE { 4 ^h : 57 ^m /2 12 ^h : 57 ^m /5 20 ^h : 57 ^m /8												
	PMG: 12 ^h 00 ^m 9				SD: 15 ^h 5 PMG: 5 ^h 57 ^m R°: 48 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	47.4	+23	22.5	273	41.2	-5	49.7	60 N	21 26	23 12	** **	0 27 17		11 41 82		
1	194	47.3		22.5	288	12.4 ¹²²		39.3 ¹⁰⁴	58	21 06	22 22	** **	24 19		43 80		
2	209	47.1		22.6	302	43.6 ¹²²		28.8 ¹⁰⁵	56	20 49	21 52	** **	21 21		45 77		
3	224	47.0		22.7	317	14.8 ¹²²		18.3 ¹⁰⁵	54	35	30	23 16	19 23		46 76		
4	239	46.9		22.7	331	45.9 ¹²¹		-5 07.7 ¹⁰⁶	52	23	21 12	22 30	16 25		48 73		
5	254	46.7	+23	22.8	346	17.0 ¹²¹		-4 57.1 ¹⁰⁶	50	20 12	20 56	22 02	0 14 26		11 49 72		
6	269	46.6	+23	22.9	0	48.2 ¹²²		-4 46.5 ¹⁰⁶	45	19 49	20 27	21 16	0 10 29		11 52 68		
7	284	46.5		22.9	15	19.2 ¹²⁰		35.8 ¹⁰⁷	40	31	20 04	20 46	06 32		55 65		
8	299	46.3		23.0	29	50.3 ¹²¹		25.1 ¹⁰⁷	35	16	19 46	23	0 02 35		57 62		
9	314	46.2		23.1	44	21.4 ¹²¹		14.4 ¹⁰⁷	30	19 03	31	20 04	** ** *		11 59 60		
10	329	46.1		23.1	58	52.4 ¹²⁰		-4 03.6 ¹⁰⁸	20	18 41	19 06	19 35	** ** *		12 03 55		
11	344	45.9	+23	23.2	73	23.4 ¹²⁰		-3 52.8 ¹⁰⁸	10 N	18 22	18 45	19 12	** ** *		12 05 52		
12	359	45.8	+23	23.3	87	54.4 ¹²⁰		-3 41.9 ¹⁰⁹	0	18 05	18 27	18 53	** ** *		12 08 49		
13	14	45.7		23.3	102	25.3 ¹¹⁹		31.0 ¹⁰⁹	10 S	17 47	18 10	36	** ** *		11 45		
14	29	45.5		23.4	116	56.3 ¹²⁰		20.1 ¹⁰⁹	20	29	17 53	20	** ** *		14 41		
15	44	45.4		23.5	131	27.2 ¹¹⁹		-3 09.2 ¹⁰⁹	30	17 07	34	18 04	** ** *		17 37		
16	59	45.2		23.5	145	58.0 ¹¹⁸		-2 58.2 ¹¹⁰	35	16 55	23	17 55	** ** *		19 35		
17	74	45.1	+23	23.6	160	28.9 ¹¹⁹		-2 47.3 ¹⁰⁹	40	16 41	17 11	17 46	** ** *		12 21 32		
18	89	45.0	+23	23.6	174	59.7 ¹¹⁸		-2 36.2 ¹¹¹	45	16 24	16 58	17 35	** ** *		12 23 30		
19	104	44.8		23.7	189	30.5 ¹¹⁸		25.2 ¹¹⁰	50	16 03	42	23	** ** *		26 26		
20	119	44.7		23.8	204	01.2 ¹¹⁷		14.1 ¹¹¹	52	15 54	34	18	** ** *		27 24		
21	134	44.6		23.8	218	32.0 ¹¹⁸		-2 03.0 ¹¹¹	54	42	26	13	** ** *		28 23		
22	149	44.4		23.9	233	02.7 ¹¹⁷		-1 51.9 ¹¹¹	56	30	17	06	** ** *		30 21		
23	164	44.3		23.9	247	33.3 ¹¹⁶		40.7 ¹¹²	58	15 15	16 07	17 00	** ** *		32 18		
24	179	44.2	+23	24.0	262	04.0 ¹¹⁷		-1 29.6 ¹¹¹	60 S	14 58	15 55	16 52	** ** *		12 33 17		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 6 ^h 17 ^m 2		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 12 ^h 53 ^m		Mag: -2.2 PMG: 19 ^h 06 ^m		Mag: 0.0 PMG: 23 ^h 50 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	265	26.3	226	14.0	166	29.9	72	40.2	1	29.3							
1	280	28.8	241	13.9	181	30.5	87	42.6	16	31.9							
2	295	31.2	256	13.9	196	31.2	102	45.0	31	34.6							
3	310	33.7	271	13.8	211	31.8	117	47.5	46	37.2							
4	325	36.2	286	13.7	226	32.5	132	49.9	61	39.9							
5	340	38.6	301	13.7	241	33.2	147	52.3	76	42.6							
6	355	41.1	316	13.6	256	33.8	162	54.7	91	45.2							
7	10	43.6	331	13.5	271	34.5	177	57.1	106	47.9							
8	25	46.0	346	13.5	286	35.2	192	59.5	121	50.6							
9	40	48.5	1	13.4	301	35.8	208	02.0	136	53.2							
10	55	51.0	16	13.3	316	36.5	223	04.4	151	55.9							
11	70	53.4	31	13.3	331	37.2	238	06.8	166	58.5							
12	85	55.9	46	13.2	346	37.8	253	09.2	182	01.2							
13	100	58.3	61	13.1	1	38.5	268	11.6	197	03.9							
14	116	00.8	76	13.0	16	39.1	283	14.0	212	06.5							
15	131	03.3	91	13.0	31	39.8	298	16.4	227	09.2							
16	146	05.7	106	12.9	46	40.5	313	18.9	242	11.9							
17	161	08.2	121	12.8	61	41.1	328	21.3	257	14.5							
18	176	10.7	136	12.7	76	41.8	343	23.7	272	17.2							
19	191	13.1	151	12.7	91	42.5	358	26.1	287	19.8							
20	206	15.6	166	12.6	106	43.1	13	28.5	302	22.5							
21	221	18.1	181	12.5	121	43.8	28	30.9	317	25.2							
22	236	20.5	196	12.4	136	44.5	43	33.3	332	27.8							
23	251	23.0	211	12.4	151	45.1	58	35.7	347	30.5							
24	266	25.5	226	12.3	166	45.8	73	38.2	2	33.2							
Dif	—		-1		+8		+24		+27								
							0		0								

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 ^m PMG: 12 ^h 01 ^m 2 ^s				Edad: 23 ^d 2 ^h PHE { SD: 15 ^h 8 ^m PMG: 6 ^h 45 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	44.2	+23	24.0	262	04.0	-1	29.6	60 N	** **	0 50	2 36	0 44	16	13	03	86	
1	194	44.0		24.0	276	34.5 ¹¹⁵		18.4 ¹¹²	58	** **	1 40	2 56	43	19		03	82	
2	209	43.9		24.1	291	05.1 ¹¹⁶	-1	07.2 ¹¹²	56	** **	2 10	3 13	42	21		02	80	
3	224	43.8		24.1	305	35.6 ¹¹⁵	-0	55.9 ¹¹³	54	0 46	33	27	42	23		02	78	
4	239	43.6		24.2	320	06.1 ¹¹⁵		44.7 ¹¹²	52	1 32	2 51	39	41	25		01	77	
5	254	43.5	+23	24.2	334	36.6 ¹¹⁵	-0	33.4 ¹¹³	50	2 00	3 06	3 50	0 40	27	13	01	74	
6	269	43.3	+23	24.3	349	07.0 ¹¹⁴	-0	22.1 ¹¹³	45	2 46	3 35	4 13	0 39	31	13	00	71	
7	284	43.2		24.3	3	37.3 ¹¹³	-0	10.8 ¹¹³	40	3 16	3 58	31	38	34		13	00	67
8	299	43.1		24.4	18	07.7 ¹¹⁴	+0	00.5 ¹¹³	35	39	4 16	46	37	37		12	59	65
9	314	42.9		24.4	32	37.9 ¹¹²		11.8 ¹¹³	30	3 58	31	4 59	37	38		59	62	
10	329	42.8		24.5	47	08.2 ¹¹³		23.2 ¹¹⁴	20	4 27	4 56	5 21	35	43		58	58	
11	344	42.7	+23	24.5	61	38.4 ¹¹²	+0	34.5 ¹¹³	10 N	4 50	5 17	5 40	0 34	47		12	57	54
12	359	42.5	+23	24.6	76	08.6 ¹¹²	+0	45.9 ¹¹⁴	0	5 09	5 35	5 57	0 33	50		12	57	50
13	14	42.4		24.6	90	38.7 ¹¹¹	+0	57.3 ¹¹⁴	10 S	26	5 52	6 15	32	53		56	47	
14	29	42.3		24.7	105	08.8 ¹¹¹	+1	08.7 ¹¹⁴	20	42	6 09	33	31	57		55	44	
15	44	42.1		24.7	119	38.8 ¹¹⁰		20.1 ¹¹⁴	30	5 58	28	6 55	30	61		54	40	
16	59	42.0		24.8	134	08.8 ¹¹⁰		31.5 ¹¹⁴	35	6 07	39	7 07	29	64		54	37	
17	74	41.8	+23	24.8	148	38.7 ¹⁰⁹	+1	42.9 ¹¹⁴	40	6 17	6 51	7 21	0 29	66		12	53	35
18	89	41.7	+23	24.8	163	08.6 ¹⁰⁹	+1	54.3 ¹¹⁴	45	6 27	7 04	7 38	0 28	69		12	53	31
19	104	41.6		24.9	177	38.4 ¹⁰⁸	+2	05.7 ¹¹⁴	50	39	20	7 59	27	73		52	27	
20	119	41.4		24.9	192	08.2 ¹⁰⁸		17.1 ¹¹⁴	52	44	28	8 09	26	75		51	26	
21	134	41.3		25.0	206	37.9 ¹⁰⁷		28.6 ¹¹⁵	54	50	36	20	26	77		51	24	
22	149	41.2		25.0	221	07.6 ¹⁰⁷		40.0 ¹¹⁴	56	6 56	45	32	25	79		51	21	
23	164	41.0		25.0	235	37.2 ¹⁰⁶	+2	51.4 ¹¹⁴	58	7 03	7 55	8 47	24	82		50	20	
24	179	40.9	+23	25.1	250	06.8 ¹⁰⁶	+3	02.9 ¹¹⁵	60 S	7 10	8 07	9 05	0 24	84		12	50	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 13 ^m 3 ^s		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.7 PMG: 12 ^h 52 ^m		Mag: -2.2 PMG: 19 ^h 02 ^m		Mag: 0.0 PMG: 23 ^h 46 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	266	25.5	226	12.3	+12	48.6	166	45.8	+24	05.9
1	281	27.9	241	12.2		49.3	181	46.4		05.8
2	296	30.4	256	12.1		50.1	196	47.1		05.7
3	311	32.8	271	12.0		50.8	211	47.8		05.6
4	326	35.3	286	12.0		51.6	226	48.4		05.5
5	341	37.8	301	11.9	+12	52.4	241	49.1	+24	05.4
6	356	40.2	316	11.8	+12	53.1	256	49.8	+24	05.3
7	11	42.7	331	11.7		53.9	271	50.4		05.2
8	26	45.2	346	11.6		54.6	286	51.1		05.1
9	41	47.6	1	11.5		55.4	301	51.8		05.0
10	56	50.1	16	11.5		56.2	316	52.4		04.9
11	71	52.6	31	11.4	+12	56.9	331	53.1	+24	04.8
12	86	55.0	46	11.3	+12	57.7	346	53.8	+24	04.7
13	101	57.5	61	11.2		58.4	1	54.4		04.6
14	117	00.0	76	11.1	+12	59.2	16	55.1		04.5
15	132	02.4	91	11.0	+13	00.0	31	55.8		04.4
16	147	04.9	106	10.9	+13	00.7	46	56.4		04.3
17	162	07.3	121	10.8	+13	01.5	61	57.1	+24	04.2
18	177	09.8	136	10.8	+13	02.2	76	57.8	+24	04.1
19	192	12.3	151	10.7		03.0	91	58.4		04.0
20	207	14.7	166	10.6		03.7	106	59.1		03.9
21	222	17.2	181	10.5		04.5	121	59.8		03.8
22	237	19.7	196	10.4		05.3	137	00.4		03.7
23	252	22.1	211	10.3		06.0	152	01.1		03.6
24	267	24.6	226	10.2	+13	06.8	167	01.8	+24	03.5
Dif	—		-1 +8		+7		-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 01 ^m 4				Edad: 24 ^d 2 PHE { 4 ^h : 58/9 12 ^h : 59/2 20 ^h : 59/5 PMG: 7 ^h 35 ^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	179	40.9	+23	25.1	250	06.8	+3	02.9	60 N	21 27	23 14	** **	1 00 19		14 29 88			
1	194	40.8		25.1	264	36.4 ¹⁰⁶		14.3 ¹¹⁴	58	21 07	22 23	** **	02 21		25 86			
2	209	40.6		25.2	279	05.8 ¹⁰⁴		25.7 ¹¹⁴	56	20 50	21 53	** **	03 24		22 83			
3	224	40.5		25.2	293	35.2 ¹⁰⁴		37.1 ¹¹⁴	54	36	30	23 18	05 25		20 81			
4	239	40.3		25.2	308	04.6 ¹⁰⁴		48.5 ¹¹⁴	52	23	21 12	22 31	06 27		18 78			
5	254	40.2	+23	25.3	322	33.9 ¹⁰³	+3	59.9 ¹¹⁴	50	20 12	20 57	22 03	1 07 29		14 15 77			
6	269	40.1	+23	25.3	337	03.2 ¹⁰³	+4	11.3 ¹¹⁴	45	19 50	20 27	21 17	1 10 32		14 11 73			
7	284	39.9		25.3	351	32.3 ¹⁰¹		22.7 ¹¹⁴	40	32	20 05	20 46	12 35		07 70			
8	299	39.8		25.4	6	01.5 ¹⁰²		34.1 ¹¹⁴	35	17	19 47	23	14 38		04 67			
9	314	39.7		25.4	20	30.5 ¹⁰⁰		45.5 ¹¹⁴	30	19 04	31	20 05	15 41		14 01 64			
10	329	39.5		25.4	34	59.5 ¹⁰⁰	+4	56.8 ¹¹³	20	18 42	19 06	19 35	18 45		13 56 60			
11	344	39.4	+23	25.5	49	28.5 ¹⁰⁰	+5	08.2 ¹¹⁴	10 N	18 23	18 46	19 13	1 21 48		13 51 57			
12	359	39.2	+23	25.5	63	57.4 ⁹⁹	+5	19.5 ¹¹³	0	18 05	18 28	18 54	1 23 52		13 47 54			
13	14	39.1		25.5	78	26.2 ⁹⁸		30.8 ¹¹³	10 S	17 48	18 10	37	25 56		43 50			
14	29	39.0		25.5	92	55.0 ⁹⁸		42.1 ¹¹³	20	29	17 53	21	28 59		39 46			
15	44	38.8		25.6	107	23.7 ⁹⁷	+5	53.4 ¹¹³	30	17 08	34	18 04	31 63		34 42			
16	59	38.7		25.6	121	52.3 ⁹⁶	+6	04.7 ¹¹³	35	16 55	24	17 55	33 66		31 40			
17	74	38.6	+23	25.6	136	20.9 ⁹⁶	+6	15.9 ¹¹²	40	16 41	17 12	17 46	1 35 68		13 28 37			
18	89	38.4	+23	25.6	150	49.4 ⁹⁵	+6	27.1 ¹¹²	45	16 24	16 58	17 36	1 37 72		13 24 34			
19	104	38.3		25.7	165	17.8 ⁹⁴		38.3 ¹¹²	50	16 04	42	24	40 76		19 31			
20	119	38.2		25.7	179	46.2 ⁹⁴	+6	49.5 ¹¹²	52	15 54	35	18	41 78		17 29			
21	134	38.0		25.7	194	14.5 ⁹³	+7	00.6 ¹¹¹	54	43	26	13	43 79		15 27			
22	149	37.9		25.7	208	42.7 ⁹²		11.7 ¹¹¹	56	30	17	07	44 82		12 25			
23	164	37.7		25.8	223	10.8 ⁹¹		22.8 ¹¹¹	58	15 15	16 07	17 00	46 84		10 22			
24	179	37.6	+23	25.8	237	38.9 ⁹¹	+7	33.8 ¹¹⁰	60 S	14 58	15 55	16 52	1 48 87		13 07 19			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 09 ^m 3		Mag: -4.3 PMG: 8 ^h 55 ^m				Mag: +1.7 PMG: 12 ^h 51 ^m				Mag: -2.2 PMG: 18 ^h 59 ^m				Mag: 0.0 PMG: 23 ^h 41 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	267	24.6	226	10.2	+13	06.8	167	01.8	+24	03.5	74	35.9	-4	00.9	3	37.1	-21	57.7
1	282	27.1	241	10.1		07.5	182	02.4		03.4	89	38.3		01.0	18	39.7		57.7
2	297	29.5	256	10.0		08.3	197	03.1		03.2	104	40.7		01.0	33	42.4		57.7
3	312	32.0	271	09.9		09.0	212	03.8		03.1	119	43.1		01.0	48	45.0		57.7
4	327	34.4	286	09.8		09.8	227	04.4		03.0	134	45.6		01.1	63	47.7		57.7
5	342	36.9	301	09.7	+13	10.6	242	05.1	+24	02.9	149	48.0	-4	01.1	78	50.4	-21	57.7
6	357	39.4	316	09.6	+13	11.3	257	05.8	+24	02.8	164	50.4	-4	01.2	93	53.0	-21	57.7
7	12	41.8	331	09.5		12.1	272	06.4		02.7	179	52.8		01.2	108	55.7		57.7
8	27	44.3	346	09.4		12.8	287	07.1		02.6	194	55.2		01.2	123	58.4		57.7
9	42	46.8	1	09.3		13.6	302	07.8		02.5	209	57.6		01.3	139	01.0		57.7
10	57	49.2	16	09.2		14.3	317	08.4		02.4	225	00.0		01.3	154	03.7		57.7
11	72	51.7	31	09.1	+13	15.1	332	09.1	+24	02.3	240	02.4	-4	01.3	169	06.3	-21	57.7
12	87	54.2	46	09.0	+13	15.8	347	09.8	+24	02.2	255	04.8	-4	01.4	184	09.0	-21	57.7
13	102	56.6	61	08.9		16.6	2	10.4		02.1	270	07.2		01.4	199	11.7		57.7
14	117	59.1	76	08.8		17.4	17	11.1		01.9	285	09.6		01.5	214	14.3		57.7
15	133	01.6	91	08.7		18.1	32	11.8		01.8	300	12.0		01.5	229	17.0		57.7
16	148	04.0	106	08.6		18.9	47	12.4		01.7	315	14.4		01.5	244	19.7		57.7
17	163	06.5	121	08.5	+13	19.6	62	13.1	+24	01.6	330	16.8	-4	01.6	259	22.3	-21	57.7
18	178	08.9	136	08.4	+13	20.4	77	13.8	+24	01.5	345	19.2	-4	01.6	274	25.0	-21	57.7
19	193	11.4	151	08.3		21.1	92	14.4		01.4	0	21.6		01.7	289	27.6		57.7
20	208	13.9	166	08.2		21.9	107	15.1		01.3	15	24.0		01.7	304	30.3		57.7
21	223	16.3	181	08.1		22.6	122	15.8		01.2	30	26.4		01.7	319	33.0		57.7
22	238	18.8	196	07.9		23.4	137	16.4		01.0	45	28.8		01.8	334	35.6		57.6
23	253	21.3	211	07.8		24.1	152	17.1		00.9	60	31.2		01.8	349	38.3		57.6
24	268	23.7	226	07.7	+13	24.9	167	17.8	+24	00.8	75	33.6	-4	01.9	4	41.0	-21	57.6
Dif	—		-1 +8				+7 -1				+24 0				+27 0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°7' PMG: 12 ^h 01 ^m 6			Edad: 25 ^d 2 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'3 R°: 55 ^m	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾												
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	37.6	+23 25.8	237	38.9	+7 33.8	60 N	** *	0 49	2 36	1 19	21	15 57	89	
1	194	37.5	25.8	252	07.0	91 44.9	58	** *	1 40	2 56	23	24	51	86	
2	209	37.3	25.8	266	34.9	89 +7 55.8	56	** *	2 10	3 13	27	26	45	85	
3	224	37.2	25.8	281	02.8	89 +8 06.8	54	0 45	33	27	30	29	41	82	
4	239	37.1	25.9	295	30.6	88 17.7	52	1 32	2 51	40	33	31	36	80	
5	254	36.9	+23 25.9	309	58.3	87 +8 28.6	50	2 00	3 06	3 50	1 36	33	15 32	79	
6	269	36.8	+23 25.9	324	26.0	87 +8 39.4	45	2 46	3 36	4 13	1 42	36	15 24	74	
7	284	36.6	25.9	338	53.6	86 +8 50.2	40	3 16	3 58	31	47	40	17	71	
8	299	36.5	25.9	353	21.1	85 +9 01.0	35	40	4 16	46	52	42	11	69	
9	314	36.4	25.9	7	48.5	84 11.7	30	3 58	32	4 59	1 56	44	15 05	67	
10	329	36.2	25.9	22	15.9	84 22.4	20	4 28	4 57	5 21	2 03	48	14 56	63	
11	344	36.1	+23 26.0	36	43.2	83 +9 33.0	10 N	4 50	5 17	5 40	2 09	52	14 48	60	
12	359	36.0	+23 26.0	51	10.4	82 +9 43.6	0	5 09	5 35	5 58	2 15	55	14 41	56	
13	14	35.8	26.0	65	37.5	81 +9 54.1	10 S	26	5 53	6 15	21	58	33	53	
14	29	35.7	26.0	80	04.6	81 +10 04.6	20	42	6 10	34	27	62	25	50	
15	44	35.6	26.0	94	31.5	79 15.1	30	5 59	29	6 55	34	66	16	46	
16	59	35.4	26.0	108	58.5	80 25.4	35	6 08	39	7 08	39	68	11	44	
17	74	35.3	+23 26.0	123	25.3	78 +10 35.8	40	6 17	6 51	7 22	2 43	71	14 05	41	
18	89	35.1	+23 26.0	137	52.0	77 +10 46.0	45	6 27	7 05	7 39	2 49	74	13 58	38	
19	104	35.0	26.0	152	18.7	77 +10 56.2	50	39	21	7 59	56	78	50	35	
20	119	34.9	26.0	166	45.3	76 +11 06.4	52	45	28	8 09	2 59	80	46	33	
21	134	34.7	26.0	181	11.8	75 16.5	54	50	37	20	3 02	82	42	31	
22	149	34.6	26.1	195	38.2	74 26.5	56	6 56	46	33	06	84	37	29	
23	164	34.5	26.1	210	04.6	74 36.5	58	7 03	7 56	8 48	10	87	32	27	
24	179	34.3	+23 26.1	224	30.9	73 +11 46.4	60 S	7 11	8 08	9 05	3 15	90	13 26	24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 05 ^m 4		Mag: -4.3 PMG: 8 ^h 56 ^m		Mag: +1.7 PMG: 12 ^h 50 ^m		Mag: -2.2 PMG: 18 ^h 55 ^m		Mag: 0.0 PMG: 23 ^h 37 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	268	23.7	226	07.7	+13 167	17.8	+24 75	33.6	-4 185	12.9				
1	283	26.2	241	07.6	25.6	182	18.5	00.7	19	43.6				
2	298	28.7	256	07.5	26.4	197	19.1	00.6	34	46.3				
3	313	31.1	271	07.4	27.1	212	19.8	00.5	49	48.9				
4	328	33.6	286	07.3	27.9	227	20.5	00.4	64	51.6				
5	343	36.1	301	07.2	+13 28.7	242	21.1	+24 00.2	79	54.3				
6	358	38.5	316	07.1	+13 29.4	257	21.8	+24 00.1	94	56.9				
7	13	41.0	331	06.9	30.2	272	22.5	+24 00.0	109	59.6				
8	28	43.4	346	06.8	30.9	287	23.1	+23 59.9	125	02.2				
9	43	45.9	1	06.7	31.7	302	23.8	59.8	140	04.9				
10	58	48.4	16	06.6	32.4	317	24.5	59.7	155	07.6				
11	73	50.8	31	06.5	+13 33.2	332	25.2	+23 59.5	170	10.2				
12	88	53.3	46	06.4	+13 33.9	347	25.8	+23 59.4	185	12.9				
13	103	55.8	61	06.2	34.7	2	26.5	59.3	200	15.6				
14	118	58.2	76	06.1	35.4	17	27.2	59.2	215	18.2				
15	134	00.7	91	06.0	36.2	32	27.8	59.1	230	20.9				
16	149	03.2	106	05.9	36.9	47	28.5	58.9	245	23.5				
17	164	05.6	121	05.8	+13 37.7	62	29.2	+23 58.8	260	26.2				
18	179	08.1	136	05.6	+13 38.4	77	29.8	+23 58.7	275	28.9				
19	194	10.5	151	05.5	39.2	92	30.5	58.6	290	31.5				
20	209	13.0	166	05.4	39.9	107	31.2	58.5	305	34.2				
21	224	15.5	181	05.3	40.7	122	31.9	58.3	320	36.9				
22	239	17.9	196	05.1	41.4	137	32.5	58.2	335	39.5				
23	254	20.4	211	05.0	42.2	152	33.2	58.1	350	42.2				
24	269	22.9	226	04.9	+13 42.9	167	33.9	+23 58.0	5	44.8				
Dif	—		-1		+8	+7		-1	+24		0		+27	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 01 ^m 8				Edad: 26 ^d 2 PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'9 SD: 16'4 PMG: 9 ^h 23 ^m R°: 59 ^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	34.3	+23	26.1	224	30.9	+11	46.4	60 N	21 28	23 14	** **	1 40 28	17 26 88				
1	194	34.2		26.1	238	57.1	+11	56.2	58	21 07	22 23	** **	47 31	17 85				
2	209	34.0		26.1	253	23.2	+12	06.0	56	20 50	21 53	** **	53 33	10 82				
3	224	33.9		26.1	267	49.2		15.7	54	36	31	23 18	1 59 35	17 03 80				
4	239	33.8		26.1	282	15.2		25.3	52	24	21 13	22 31	2 04 37	16 56 79				
5	254	33.6	+23	26.1	296	41.1	+12	34.9	50	20 13	20 58	22 03	2 09 38	16 51 77				
6	269	33.5	+23	26.1	311	06.9	+12	44.4	45	19 50	20 28	21 18	2 18 42	16 38 75				
7	284	33.4		26.1	325	32.6	+12	53.8	40	32	20 05	20 47	27 44	28 72				
8	299	33.2		26.1	339	58.2	+13	03.1	35	17	19 47	24	34 47	20 69				
9	314	33.1		26.1	354	23.8		12.4	30	19 04	32	20 05	40 49	16 12 68				
10	329	33.0		26.1	8	49.3		21.5	20	18 42	19 07	19 36	2 51 52	15 59 65				
11	344	32.8	+23	26.1	23	14.7	+13	30.6	10 N	18 23	18 46	19 13	3 01 55	15 48 62				
12	359	32.7	+23	26.0	37	40.0	+13	39.6	0	18 06	18 28	18 54	3 10 58	15 37 60				
13	14	32.5		26.0	52	05.3		48.6	10 S	17 48	18 11	37	19 61	26 58				
14	29	32.4		26.0	66	30.5	+13	57.4	20	29	17 54	21	29 64	15 55				
15	44	32.3		26.0	80	55.6	+14	06.1	30	17 08	35	18 04	40 68	15 02 52				
16	59	32.1		26.0	95	20.6		14.8	35	16 56	24	17 56	47 69	14 55 49				
17	74	32.0	+23	26.0	109	45.5	+14	23.4	40	16 42	17 12	17 46	3 54 72	14 46 48				
18	89	31.9	+23	26.0	124	10.4	+14	31.9	45	16 25	16 59	17 36	4 03 75	14 36 46				
19	104	31.7		26.0	138	35.2		40.2	50	16 04	43	24	14 78	25 42				
20	119	31.6		26.0	152	59.9		48.5	52	15 54	35	19	19 80	19 41				
21	134	31.4		26.0	167	24.5	+14	56.7	54	43	27	13	24 82	13 39				
22	149	31.3		26.0	181	49.1	+15	04.8	56	30	18	07	30 84	14 06 37				
23	164	31.2		25.9	196	13.6		12.8	58	15 16	16 07	17 00	37 87	13 59 34				
24	179	31.0	+23	25.9	210	38.0	+15	20.7	60 S	14 58	15 56	16 53	4 45 89	13 50 32				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 01 ^m 5		Mag: -4.3 PMG: 8 ^h 56 ^m				Mag: +1.7 PMG: 12 ^h 49 ^m				Mag: -2.2 PMG: 18 ^h 51 ^m				Mag: 0.0 PMG: 23 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	269	22.9	226	04.9	+13	42.9	167	33.9	+23	58.0	76	31.0	-4	02.8	5	44.8	-21	57.5
1	284	25.3	241	04.8		43.7	182	34.5		57.8	91	33.4		02.9	20	47.5		57.5
2	299	27.8	256	04.6		44.4	197	35.2		57.7	106	35.8		02.9	35	50.2		57.5
3	314	30.3	271	04.5		45.1	212	35.9		57.6	121	38.2		03.0	50	52.8		57.5
4	329	32.7	286	04.4		45.9	227	36.6		57.5	136	40.6		03.0	65	55.5		57.5
5	344	35.2	301	04.3	+13	46.6	242	37.2	+23	57.4	151	43.0	-4	03.1	80	58.1	-21	57.5
6	359	37.7	316	04.1	+13	47.4	257	37.9	+23	57.2	166	45.3	-4	03.1	96	00.8	-21	57.5
7	14	40.1	331	04.0		48.1	272	38.6		57.1	181	47.7		03.2	111	03.5		57.5
8	29	42.6	346	03.9		48.9	287	39.2		57.0	196	50.1		03.2	126	06.1		57.5
9	44	45.0	1	03.7		49.6	302	39.9		56.9	211	52.5		03.2	141	08.8		57.5
10	59	47.5	16	03.6		50.4	317	40.6		56.7	226	54.9		03.3	156	11.5		57.5
11	74	50.0	31	03.5	+13	51.1	332	41.3	+23	56.6	241	57.3	-4	03.3	171	14.1	-21	57.5
12	89	52.4	46	03.3	+13	51.9	347	41.9	+23	56.5	256	59.7	-4	03.4	186	16.8	-21	57.5
13	104	54.9	61	03.2		52.6	2	42.6		56.3	272	02.1		03.4	201	19.4		57.5
14	119	57.4	76	03.1		53.4	17	43.3		56.2	287	04.4		03.5	216	22.1		57.5
15	134	59.8	91	02.9		54.1	32	44.0		56.1	302	06.8		03.5	231	24.8		57.5
16	150	02.3	106	02.8		54.8	47	44.6		56.0	317	09.2		03.5	246	27.4		57.5
17	165	04.8	121	02.7	+13	55.6	62	45.3	+23	55.8	332	11.6	-4	03.6	261	30.1	-21	57.5
18	180	07.2	136	02.5	+13	56.3	77	46.0	+23	55.7	347	14.0	-4	03.6	276	32.7	-21	57.5
19	195	09.7	151	02.4		57.1	92	46.7		55.6	2	16.4		03.7	291	35.4		57.5
20	210	12.2	166	02.3		57.8	107	47.3		55.5	17	18.8		03.7	306	38.1		57.4
21	225	14.6	181	02.1		58.6	122	48.0		55.3	32	21.1		03.8	321	40.7		57.4
22	240	17.1	196	02.0	+13	59.3	137	48.7		55.2	47	23.5		03.8	336	43.4		57.4
23	255	19.5	211	01.8	+14	00.1	152	49.3		55.1	62	25.9		03.9	351	46.0		57.4
24	270	22.0	226	01.7	+14	00.8	167	50.0	+23	54.9	77	28.3	-4	03.9	6	48.7	-21	57.4
Dif	—		-1		+7		+7		-1		+24		0		+27			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 02 ^m 0				Edad: 27 ^d 2 PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'2 Rº: 62 ^m														
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	31.0	+23	25.9	210	38.0	+15	20.7	60 N	** **	0 50	2 36	2 08	38	18 54	78			
1	194	30.9		25.9	225	02.3	53	28.5	58	** **	1 41	2 57	18 40	42	77				
2	209	30.8		25.9	239	26.6	53	36.2	56	** **	2 11	3 13	26 42	32	75				
3	224	30.6		25.9	253	50.8	52	43.8	54	0 45	33	28	34 44	23	74				
4	239	30.5		25.9	268	14.9	51	51.3	52	1 33	2 51	40	41 45	15	73				
5	254	30.4	+23	25.8	282	39.0	51	+15 58.6	50	2 01	3 06	3 51	2 47	46	18 08	72			
6	269	30.2	+23	25.8	297	03.0	50	+16 05.9	45	2 46	3 36	4 14	3 00	49	17 53	70			
7	284	30.1		25.8	311	26.9	49	13.1	70	3 17	3 59	32	11 51	40	69				
8	299	29.9		25.8	325	50.7	48	20.1	70	40	4 17	4 47	21 53	29	68				
9	314	29.8		25.8	340	14.5	48	27.0	69	3 59	32	5 00	29 54	20	67				
10	329	29.7		25.8	354	38.3	48	33.8	68	4 28	4 57	22	43 57	17 04	65				
11	344	29.5	+23	25.7	9	01.9	46	+16 40.5	67	4 51	5 18	5 41	3 56	59	16 50	64			
12	359	29.4	+23	25.7	23	25.5	46	+16 47.1	66	5 10	5 36	5 58	4 08	61	16 37	62			
13	14	29.3		25.7	37	49.0	45	53.6	65	27	5 53	6 16	20 63	24	60				
14	29	29.1		25.7	52	12.5	45	+16 59.9	63	43	6 10	34	33 65	16 10	59				
15	44	29.0		25.6	66	35.9	44	+17 06.1	62	5 59	29	6 56	48 68	15 54	57				
16	59	28.9		25.6	80	59.3	44	12.2	61	6 08	40	7 08	4 56	70	44 57				
17	74	28.7	+23	25.6	95	22.6	43	+17 18.2	60	6 18	6 52	7 22	5 06	71	15 34	55			
18	89	28.6	+23	25.6	109	45.8	42	+17 24.0	58	6 28	7 05	7 39	5 18	73	15 22	53			
19	104	28.4		25.5	124	09.0	42	29.8	58	40	21	8 00	32 76	07 50					
20	119	28.3		25.5	138	32.1	41	35.4	56	45	29	10	39 76	15 00	49				
21	134	28.2		25.5	152	55.2	41	40.8	54	51	37	21	46 78	14 52	48				
22	149	28.0		25.4	167	18.3	41	46.2	54	6 57	46	34	5 54	80	43 47				
23	164	27.9		25.4	181	41.2	39	51.4	52	7 04	7 56	8 48	6 04	81	33 46				
24	179	27.8	+23	25.4	196	04.2	40	+17 56.5	51	7 11	8 08	9 06	6 14	84	14 22	44			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 57 ^m 6		Mag: -4.3 PMG: 8 ^h 56 ^m		Mag: +1.7 PMG: 12 ^h 48 ^m		Mag: -2.2 PMG: 18 ^h 47 ^m		Mag: 0.0 PMG: 23 ^h 29 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	270	22.0	226	01.7	+14	00.8	167	50.0	+23	54.9
1	285	24.5	241	01.6		01.5	182	50.7		54.8
2	300	26.9	256	01.4		02.3	197	51.4		54.7
3	315	29.4	271	01.3		03.0	212	52.0		54.5
4	330	31.9	286	01.1		03.8	227	52.7		54.4
5	345	34.3	301	01.0	+14	04.5	242	53.4	+23	54.3
6	0	36.8	316	00.8	+14	05.3	257	54.1	+23	54.1
7	15	39.3	331	00.7		06.0	272	54.7		54.0
8	30	41.7	346	00.5		06.7	287	55.4		53.9
9	45	44.2	1	00.4		07.5	302	56.1		53.7
10	60	46.7	16	00.3		08.2	317	56.8		53.6
11	75	49.1	31	00.1	+14	09.0	332	57.4	+23	53.5
12	90	51.6	46	00.0	+14	09.7	347	58.1	+23	53.3
13	105	54.0	60	59.8		10.4	2	58.8		53.2
14	120	56.5	75	59.7		11.2	17	59.5		53.1
15	135	59.0	90	59.5		11.9	33	00.1		52.9
16	151	01.4	105	59.4		12.7	48	00.8		52.8
17	166	03.9	120	59.2	+14	13.4	63	01.5	+23	52.7
18	181	06.4	135	59.1	+14	14.1	78	02.2	+23	52.5
19	196	08.8	150	58.9		14.9	93	02.8		52.4
20	211	11.3	165	58.8		15.6	108	03.5		52.3
21	226	13.8	180	58.6		16.3	123	04.2		52.1
22	241	16.2	195	58.4		17.1	138	04.9		52.0
23	256	18.7	210	58.3		17.8	153	05.6		51.8
24	271	21.1	225	58.1	+14	18.6	168	06.2	+23	51.7
Dif	—		-1		+7		+7		-1	

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 3				Edad: 28 ^d 2 PHE { 4 ^h : 61 ^h 2 12 ^h : 61 ^h 3 20 ^h : 61 ^h 2 PMG: 11 ^h 24 ^m R°: 63 ^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	179	27.8	+23	25.4	196	04.2	+17	56.5	60 N	21 28	23 14	** **	2 46	51	20 12	65		
1	194	27.6		25.4	210	27.0	+18	01.4	58	21 07	22 23	** **	2 58	52	19 59	64		
2	209	27.5		25.3	224	49.9		06.2	56	20 51	21 53	** **	3 08	54	47	65		
3	224	27.4		25.3	239	12.7		10.9	54	36	31	23 18	18	54	37	65		
4	239	27.2		25.3	253	35.4		15.5	52	24	21 13	22 31	26	55	28	65		
5	254	27.1	+23	25.2	267	58.2	+18	19.9	50	20 13	20 58	22 03	3 33	56	19 20	65		
6	269	26.9	+23	25.2	282	20.8	+18	24.2	45	19 51	20 28	21 18	3 49	57	19 03	64		
7	284	26.8		25.1	296	43.5		28.3	40	33	20 06	20 47	4 02	59	18 49	64		
8	299	26.7		25.1	311	06.1		32.3	35	18	19 47	24	14	59	37	64		
9	314	26.5		25.1	325	28.6		36.2	30	19 05	32	20 05	23	60	27	64		
10	329	26.4		25.0	339	51.2		39.9	20	18 43	19 07	19 36	40	61	18 09	64		
11	344	26.3	+23	25.0	354	13.7	+18	43.5	10 N	18 24	18 47	19 14	4 55	62	17 54	63		
12	359	26.1	+23	25.0	8	36.2	+18	46.9	0	18 06	18 28	18 55	5 09	63	17 39	63		
13	14	26.0		24.9	22	58.6		50.2	10 S	17 48	18 11	38	23	64	24	63		
14	29	25.9		24.9	37	21.0		53.4	20	30	17 54	21	38	65	17 09	62		
15	44	25.7		24.8	51	43.4		56.4	30	17 09	35	18 05	5 56	65	16 51	62		
16	59	25.6		24.8	66	05.8	+18	59.2	35	16 56	25	17 56	6 06	66	41	61		
17	74	25.5	+23	24.7	80	28.2	+19	02.0	40	16 42	17 13	17 47	6 17	67	16 29	61		
18	89	25.3	+23	24.7	94	50.5	+19	04.6	45	16 25	16 59	17 36	6 31	68	16 15	60		
19	104	25.2		24.7	109	12.9		07.0	50	16 05	43	25	48	68	15 57	61		
20	119	25.1		24.6	123	35.2		09.3	52	15 55	36	19	6 55	70	49	60		
21	134	24.9		24.6	137	57.5		11.4	54	44	27	14	7 04	70	40	60		
22	149	24.8		24.5	152	19.8		13.4	56	31	18	08	14	71	30	60		
23	164	24.6		24.5	166	42.1		15.3	58	15 16	16 08	17 01	25	72	19	59		
24	179	24.5	+23	24.4	181	04.4	+19	17.0	60 S	14 59	15 56	16 53	7 38	72	15 06	58		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 53 ^m 6		Mag: -4.3 PMG: 8 ^h 56 ^m				Mag: +1.7 PMG: 12 ^h 47 ^m				Mag: -2.1 PMG: 18 ^h 43 ^m				Mag: 0.0 PMG: 23 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	271	21.1	225	58.1	+14	18.6	168	06.2	+23	51.7	78	25.4	-4	05.0	7	52.6	-21	57.3
1	286	23.6	240	58.0		19.3	183	06.9		51.6	93	27.8		05.1	22	55.2		57.3
2	301	26.1	255	57.8		20.0	198	07.6		51.4	108	30.2		05.1	37	57.9		57.3
3	316	28.5	270	57.7		20.8	213	08.3		51.3	123	32.6		05.2	53	00.5		57.3
4	331	31.0	285	57.5		21.5	228	08.9		51.1	138	34.9		05.2	68	03.2		57.3
5	346	33.5	300	57.3	+14	22.2	243	09.6	+23	51.0	153	37.3	-4	05.3	83	05.9	-21	57.3
6	1	35.9	315	57.2	+14	23.0	258	10.3	+23	50.9	168	39.7	-4	05.3	98	08.5	-21	57.3
7	16	38.4	330	57.0		23.7	273	11.0		50.7	183	42.1		05.4	113	11.2		57.3
8	31	40.9	345	56.9		24.4	288	11.6		50.6	198	44.4		05.4	128	13.8		57.3
9	46	43.3	0	56.7		25.2	303	12.3		50.4	213	46.8		05.5	143	16.5		57.3
10	61	45.8	15	56.5		25.9	318	13.0		50.3	228	49.2		05.5	158	19.2		57.3
11	76	48.3	30	56.4	+14	26.6	333	13.7	+23	50.2	243	51.6	-4	05.6	173	21.8	-21	57.3
12	91	50.7	45	56.2	+14	27.4	348	14.4	+23	50.0	258	53.9	-4	05.6	188	24.5	-21	57.3
13	106	53.2	60	56.1		28.1	3	15.0		49.9	273	56.3		05.7	203	27.1		57.3
14	121	55.6	75	55.9		28.8	18	15.7		49.7	288	58.7		05.7	218	29.8		57.3
15	136	58.1	90	55.7		29.6	33	16.4		49.6	304	01.1		05.8	233	32.5		57.3
16	152	00.6	105	55.6		30.3	48	17.1		49.4	319	03.4		05.8	248	35.1		57.3
17	167	03.0	120	55.4	+14	31.0	63	17.8	+23	49.3	334	05.8	-4	05.9	263	37.8	-21	57.3
18	182	05.5	135	55.2	+14	31.8	78	18.4	+23	49.2	349	08.2	-4	05.9	278	40.4	-21	57.3
19	197	08.0	150	55.1		32.5	93	19.1		49.0	4	10.6		06.0	293	43.1		57.2
20	212	10.4	165	54.9		33.2	108	19.8		48.9	19	12.9		06.0	308	45.8		57.2
21	227	12.9	180	54.7		34.0	123	20.5		48.7	34	15.3		06.1	323	48.4		57.2
22	242	15.4	195	54.5		34.7	138	21.1		48.6	49	17.7		06.1	338	51.1		57.2
23	257	17.8	210	54.4		35.4	153	21.8		48.4	64	20.0		06.2	353	53.7		57.2
24	272	20.3	225	54.2	+14	36.2	168	22.5	+23	48.3	79	22.4	-4	06.2	8	56.4	-21	57.2
Dif	—		-2		+7		+7		-1		+24		0		+27		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15'7 PMG: 12 ^h 02 ^m 5				Edad: 29 ^d 2 PHE { SD: 16'7 PMG: 12 ^h 27 ^m R°: 62 ^m 4 ^h : 61'2 12 ^h : 61'1 20 ^h : 61'0																			
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m						
0	179	24.5	+23	24.4	181	04.4	+19	17.0	60 N	** **	0 51	2 37	3 37	65	21 17	48								
1	194	24.4		24.4	195	26.6		18.6	58	** **	1 42	2 57	3 50	65	21 03	50								
2	209	24.2		24.3	209	48.9		20.0	56	** **	2 12	3 14	4 02	65	20 52	51								
3	224	24.1		24.3	224	11.2		21.3	54	0 47	34	28	12	65	42	52								
4	239	24.0		24.2	238	33.5		22.4	52	1 33	2 52	41	21	65	33	53								
5	254	23.8	+23	24.2	252	55.8	+19	23.4	50	2 01	3 07	3 52	4 29	65	20 25	53								
6	269	23.7	+23	24.1	267	18.0	+19	24.2	45	2 47	3 37	4 14	4 46	65	20 07	55								
7	284	23.6		24.1	281	40.3		24.9	40	3 18	3 59	32	5 01	64	19 53	57								
8	299	23.4		24.0	296	02.7		25.4	35	41	4 17	4 47	13	63	41	57								
9	314	23.3		24.0	310	25.0		25.8	30	3 59	33	5 00	23	64	31	58								
10	329	23.2		23.9	324	47.3		26.0	20	4 28	4 58	22	41	64	19 13	59								
11	344	23.0	+23	23.9	339	09.7	+19	26.1	10 N	4 51	5 18	5 41	5 57	63	18 57	60								
12	359	22.9	+23	23.8	353	32.0	+19	26.1	0	5 10	5 36	5 59	6 12	62	18 42	61								
13	14	22.8		23.7	7	54.4		25.9	10 S	27	5 53	6 16	27	62	27	63								
14	29	22.6		23.7	22	16.8		25.6	20	5 43	6 11	35	6 43	61	18 11	64								
15	44	22.5		23.6	36	39.3		25.1	30	6 00	30	6 56	7 01	61	17 53	65								
16	59	22.4		23.6	51	01.7		24.4	35	08	40	7 08	12	61	42	66								
17	74	22.2	+23	23.5	65	24.2	+19	23.6	40	6 18	6 52	7 23	7 24	60	17 30	66								
18	89	22.1	+23	23.4	79	46.7	+19	22.7	45	6 28	7 05	7 39	7 39	59	17 15	68								
19	104	21.9		23.4	94	09.3		21.7	50	40	22	8 00	7 56	59	16 58	68								
20	119	21.8		23.3	108	31.8		20.4	52	45	29	10	8 05	58	49	69								
21	134	21.7		23.3	122	54.5		19.1	54	51	37	21	14	58	40	70								
22	149	21.5		23.2	137	17.1		17.6	56	6 57	46	34	25	57	30	70								
23	164	21.4		23.1	151	39.8		16.0	58	7 04	7 57	8 48	37	56	18	71								
24	179	21.3	+23	23.1	166	02.5	+19	14.2	60 S	7 11	8 08	9 06	8 50	56	16 04	72								
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG 5 ^h 49 ^m 7				Mag: -4.2 PMG: 8 ^h 56 ^m				Mag: +1.7 PMG: 12 ^h 46 ^m				Mag: -2.1 PMG: 18 ^h 40 ^m				Mag: 0.0 PMG: 23 ^h 20 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	272	20.3			225	54.2	+14	36.2	168	22.5	+23	48.3	79	22.4	-4	06.2	8	56.4	-21	57.2				
1	287	22.8			240	54.0		36.9	183	23.2		48.1	94	24.8		06.3	23	59.1		57.2				
2	302	25.2			255	53.9		37.6	198	23.9		48.0	109	27.1		06.3	39	01.7		57.2				
3	317	27.7			270	53.7		38.4	213	24.5		47.8	124	29.5		06.4	54	04.4		57.2				
4	332	30.1			285	53.5		39.1	228	25.2		47.7	139	31.9		06.4	69	07.0		57.2				
5	347	32.6			300	53.3	+14	39.8	243	25.9	+23	47.5	154	34.3	-4	06.5	84	09.7	-21	57.2				
6	2	35.1			315	53.2	+14	40.5	258	26.6	+23	47.4	169	36.6	-4	06.5	99	12.4	-21	57.2				
7	17	37.5			330	53.0		41.3	273	27.3		47.3	184	39.0		06.6	114	15.0		57.2				
8	32	40.0			345	52.8		42.0	288	27.9		47.1	199	41.4		06.6	129	17.7		57.2				
9	47	42.5			0	52.6		42.7	303	28.6		47.0	214	43.7		06.7	144	20.3		57.2				
10	62	44.9			15	52.5		43.5	318	29.3		46.8	229	46.1		06.8	159	23.0		57.2				
11	77	47.4			30	52.3	+14	44.2	333	30.0	+23	46.7	244	48.5	-4	06.8	174	25.7	-21	57.2				
12	92	49.9			45	52.1	+14	44.9	348	30.7	+23	46.5	259	50.8	-4	06.9	189	28.3	-21	57.2				
13	107	52.3			60	51.9		45.6	3	31.3		46.4	274	53.2		06.9	204	31.0		57.2				
14	122	54.8			75	51.7		46.4	18	32.0		46.2	289	55.6		07.0	219	33.6		57.2				
15	137	57.3			90	51.6		47.1	33	32.7		46.1	304	57.9		07.0	234	36.3		57.2				
16	152	59.7			105	51.4		47.8	48	33.4		45.9	320	00.3		07.1	249	38.9		57.2				
17	168	02.2			120	51.2	+14	48.5	63	34.1	+23	45.7	335	02.7	-4	07.1	264	41.6	-21	57.2				
18	183	04.6			135	51.0	+14	49.3	78	34.8	+23	45.6	350	05.0	-4	07.2	279	44.3	-21	57.2				
19	198	07.1			150	50.8		50.0	93	35.4		45.4	5	07.4		07.2	294	46.9		57.1				
20	213	09.6			165	50.7		50.7	108	36.1		45.3	20	09.8		07.3	309	49.6		57.1				
21	228	12.0			180	50.5		51.4	123	36.8		45.1	35	12.1		07.3	324	52.2		57.1				
22	243	14.5			195	50.3		52.2	138	37.5		45.0	50	14.5		07.4	339	54.9		57.1				
23	258	17.0			210	50.1		52.9	153	38.2		44.8	65	16.9		07.4	354	57.6		57.1				
24	273	19.4			225	49.9	+14	53.6	168	38.8	+23	44.7	80	19.2	-4	07.5	10	00.2	-21	57.1				
Dif	—				-2				+7				+24				-1				+27			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 02 ^m 7			Edad: 30 ^d 2 PHE { 4 ^h : 60'8 12 ^h : 60'6 20 ^h : 60'4 R°: 59 ^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	21.3	+23 23.1	166	02.5	+19 14.2	20	60 N	21 28	23 12	** **	4 42 77	22 05 35	
1	194	21.1	23.0	180	25.3	12.2	38	58	21 07	22 23	** **	4 55 76	21 53 38	
2	209	21.0	22.9	194	48.1	10.2	20	56	20 51	21 53	** **	5 07 74	43 39	
3	224	20.9	22.9	209	11.0	08.0	22	54	36	31	23 16	17 73	34 41	
4	239	20.7	22.8	223	33.9	05.6	24	52	24	21 13	22 31	26 72	26 42	
5	254	20.6	+23 22.7	237	56.9	+19 03.2	24	50	20 13	20 58	22 03	5 34 71	21 18 44	
6	269	20.5	+23 22.7	252	19.9	+19 00.5	27	45	19 51	20 28	21 18	5 51 69	21 02 47	
7	284	20.3	22.6	266	42.9	+18 57.8	27	40	33	20 06	20 47	6 05 67	20 50 48	
8	299	20.2	22.5	281	06.1	54.9	29	35	18	19 48	24	16 67	38 51	
9	314	20.1	22.4	295	29.2	51.9	30	30	19 05	32	20 06	27 65	29 52	
10	329	19.9	22.4	309	52.5	48.7	32	20	18 43	19 07	19 37	6 45 63	20 12 54	
11	344	19.8	+23 22.3	324	15.7	+18 45.4	33	10 N	18 24	18 47	19 14	7 00 62	19 57 57	
12	359	19.7	+23 22.2	338	39.1	+18 42.0	34	0	18 06	18 29	18 55	7 14 61	19 43 59	
13	14	19.5	22.1	353	02.5	38.4	36	10 S	17 49	18 12	38	29 58	30 60	
14	29	19.4	22.1	7	26.0	34.7	37	20	30	17 54	22	7 44 57	19 15 62	
15	44	19.3	22.0	21	49.5	30.9	38	30	17 09	36	18 06	8 02 55	18 58 65	
16	59	19.1	21.9	36	13.1	27.0	39	35	16 57	25	17 57	13 53	48 66	
17	74	19.0	+23 21.8	50	36.8	+18 22.9	41	40	16 43	17 13	17 47	8 24 53	18 36 68	
18	89	18.9	+23 21.8	65	00.5	+18 18.7	42	45	16 26	17 00	17 37	8 38 51	18 23 70	
19	104	18.7	21.7	79	24.3	14.4	43	50	16 05	16 44	25	8 55 49	18 06 73	
20	119	18.6	21.6	93	48.2	09.9	45	52	15 55	36	20	9 03 48	17 58 74	
21	134	18.5	21.5	108	12.2	05.4	45	54	44	28	14	12 46	50 75	
22	149	18.3	21.4	122	36.2	+18 00.7	47	56	32	19	08	22 45	40 77	
23	164	18.2	21.4	137	00.3	+17 55.8	49	58	17	16 09	17 02	33 43	29 79	
24	179	18.1	+23 21.3	151	24.5	+17 50.9	49	60 S	15 00	15 57	16 54	9 46 41	17 16 81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 45 ^m 8		Mag: -4.2 PMG: 8 ^h 57 ^m		Mag: +1.7 PMG: 12 ^h 45 ^m		Mag: -2.1 PMG: 18 ^h 36 ^m		Mag: 0.0 PMG: 23 ^h 16 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	273	19.4	225 49.9	+14 53.6	168 38.8	+23 44.7	80 19.2	-4 07.5	10 00.2	-21 57.1
1	288	21.9	240 49.7	54.3	183 39.5	44.5	95 21.6	07.5	25 02.9	57.1
2	303	24.4	255 49.5	55.1	198 40.2	44.4	110 23.9	07.6	40 05.5	57.1
3	318	26.8	270 49.4	55.8	213 40.9	44.2	125 26.3	07.7	55 08.2	57.1
4	333	29.3	285 49.2	56.5	228 41.6	44.1	140 28.7	07.7	70 10.9	57.1
5	348	31.8	300 49.0	+14 57.2	243 42.3	+23 43.9	155 31.0	-4 07.8	85 13.5	-21 57.1
6	3	34.2	315 48.8	+14 58.0	258 42.9	+23 43.7	170 33.4	-4 07.8	100 16.2	-21 57.1
7	18	36.7	330 48.6	58.7	273 43.6	43.6	185 35.8	07.9	115 18.8	57.1
8	33	39.1	345 48.4	+14 59.4	288 44.3	43.4	200 38.1	07.9	130 21.5	57.1
9	48	41.6	0 48.2	+15 00.1	303 45.0	43.3	215 40.5	08.0	145 24.1	57.1
10	63	44.1	15 48.0	00.8	318 45.7	43.1	230 42.8	08.0	160 26.8	57.1
11	78	46.5	30 47.8	+15 01.6	333 46.4	+23 43.0	245 45.2	-4 08.1	175 29.5	-21 57.1
12	93	49.0	45 47.6	+15 02.3	348 47.0	+23 42.8	260 47.6	-4 08.1	190 32.1	-21 57.1
13	108	51.5	60 47.4	03.0	3 47.7	42.6	275 49.9	08.2	205 34.8	57.1
14	123	53.9	75 47.3	03.7	18 48.4	42.5	290 52.3	08.3	220 37.4	57.1
15	138	56.4	90 47.1	04.4	33 49.1	42.3	305 54.6	08.3	235 40.1	57.1
16	153	58.9	105 46.9	05.2	48 49.8	42.2	320 57.0	08.4	250 42.7	57.1
17	169	01.3	120 46.7	+15 05.9	63 50.5	+23 42.0	335 59.4	-4 08.4	265 45.4	-21 57.1
18	184	03.8	135 46.5	+15 06.6	78 51.1	+23 41.8	351 01.7	-4 08.5	280 48.1	-21 57.1
19	199	06.3	150 46.3	07.3	93 51.8	41.7	6 04.1	08.5	295 50.7	57.0
20	214	08.7	165 46.1	08.0	108 52.5	41.5	21 06.4	08.6	310 53.4	57.0
21	229	11.2	180 45.9	08.7	123 53.2	41.4	36 08.8	08.7	325 56.0	57.0
22	244	13.6	195 45.7	09.5	138 53.9	41.2	51 11.2	08.7	340 58.7	57.0
23	259	16.1	210 45.5	10.2	153 54.6	41.0	66 13.5	08.8	356 01.4	57.0
24	274	18.6	225 45.3	+15 10.9	168 55.3	+23 40.9	81 15.9	-4 08.8	11 04.0	-21 57.0
Dif	—		-2	+7	+7	-2	+24	-1	+27	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 9				Edad: 1 ^d 9 PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 9 20 ^h : 59 ^h 6 R°: 56 ^m													
	hG ☉ Dec		hG ☾ Dif		Dec Dif					Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	m
0	179	18.1	+23	21.3	151	24.5	+17	50.9	50	60 N	** **	0 54	2 38	5 59	83	22 40	26	
1	194	17.9		21.2	165	48.7 52		45.9 50	58	58	** **	1 43	2 58	6 11	80	31	28	
2	209	17.8		21.1	180	13.0 53		40.7 52	56	56	** **	2 13	3 15	21	78	22	31	
3	224	17.7		21.0	194	37.5 55		35.4 53	54	54	0 49	35	29	30	76	15	33	
4	239	17.5		20.9	209	01.9 54		30.0 54	52	52	1 35	2 53	42	38	74	08	35	
5	254	17.4	+23	20.9	223	26.5 56	+17	24.5 55	50	50	2 02	3 08	3 52	6 45	73	22 02	36	
6	269	17.3	+23	20.8	237	51.2 57	+17	18.8 57	45	45	2 48	3 37	4 15	7 00	70	21 49	39	
7	284	17.2		20.7	252	15.9 57		13.1 57	40	40	3 18	4 00	33	12	68	38	42	
8	299	17.0		20.6	266	40.7 58		07.3 58	35	35	3 41	18	4 48	23	66	29	44	
9	314	16.9		20.5	281	05.6 59	+17	01.3 60	30	30	4 00	33	5 01	32	64	21	45	
10	329	16.8		20.4	295	30.6 60	+16	55.2 61	20	20	29	4 58	23	7 48	61	21 06	49	
11	344	16.6	+23	20.3	309	55.6 60	+16	49.1 61	10 N	10 N	4 52	5 19	5 42	8 02	58	20 54	52	
12	359	16.5	+23	20.2	324	20.8 62	+16	42.8 63	0	0	5 10	5 37	5 59	8 15	56	20 42	55	
13	14	16.4		20.1	338	46.0 62		36.4 64	10 S	10 S	27	5 54	6 17	27	55	30	57	
14	29	16.2		20.1	353	11.3 63		29.9 65	20	20	5 44	6 11	35	41	52	17	61	
15	44	16.1		20.0	7	36.7 64		23.3 66	30	30	6 00	30	6 56	8 57	49	20 03	63	
16	59	16.0		19.9	22	02.2 65		16.7 66	35	35	09	40	7 09	9 06	47	19 54	66	
17	74	15.8	+23	19.8	36	27.8 66	+16	09.9 68	40	40	6 18	6 52	7 23	9 17	44	19 44	68	
18	89	15.7	+23	19.7	50	53.5 67	+16	03.0 69	45	45	6 28	7 06	7 39	9 29	42	19 33	70	
19	104	15.6		19.6	65	19.3 68	+15	56.0 70	50	50	40	22	8 00	44	39	19	74	
20	119	15.4		19.5	79	45.1 68		49.0 70	52	52	45	29	10	51	37	12	76	
21	134	15.3		19.4	94	11.1 70		41.8 72	54	54	51	37	21	9 58	36	19 05	77	
22	149	15.2		19.3	108	37.1 70		34.5 73	56	56	6 57	46	34	10 07	34	18 57	79	
23	164	15.0		19.2	123	03.2 71		27.2 73	58	58	7 04	7 57	8 48	16	33	48	81	
24	179	14.9	+23	19.1	137	29.4 72	+15	19.8 74	60 S	60 S	7 11	8 08	9 06	10 27	30	18 37	85	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 41 ^m 8		Mag: -4.2 PMG: 8 ^h 57 ^m				Mag: +1.7 PMG: 12 ^h 44 ^m				Mag: -2.1 PMG: 18 ^h 32 ^m				Mag: +0.1 PMG: 23 ^h 12 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	274	18.6	225	45.3	+15	10.9	168	55.3	+23	40.9	81	15.9	-4	08.8	11	04.0	-21	57.0
1	289	21.0	240	45.1		11.6	183	55.9		40.7	96	18.2		08.9	26	06.7		57.0
2	304	23.5	255	44.9		12.3	198	56.6		40.6	111	20.6		08.9	41	09.3		57.0
3	319	26.0	270	44.7		13.0	213	57.3		40.4	126	22.9		09.0	56	12.0		57.0
4	334	28.4	285	44.5		13.7	228	58.0		40.2	141	25.3		09.0	71	14.6		57.0
5	349	30.9	300	44.3	+15	14.5	243	58.7	+23	40.1	156	27.7	-4	09.1	86	17.3	-21	57.0
6	4	33.4	315	44.1	+15	15.2	258	59.4	+23	39.9	171	30.0	-4	09.2	101	20.0	-21	57.0
7	19	35.8	330	43.9		15.9	274	00.1		39.7	186	32.4		09.2	116	22.6		57.0
8	34	38.3	345	43.6		16.6	289	00.7		39.6	201	34.7		09.3	131	25.3		57.0
9	49	40.8	0	43.4		17.3	304	01.4		39.4	216	37.1		09.3	146	27.9		57.0
10	64	43.2	15	43.2		18.0	319	02.1		39.2	231	39.4		09.4	161	30.6		57.0
11	79	45.7	30	43.0	+15	18.7	334	02.8	+23	39.1	246	41.8	-4	09.4	176	33.2	-21	57.0
12	94	48.1	45	42.8	+15	19.5	349	03.5	+23	38.9	261	44.1	-4	09.5	191	35.9	-21	57.0
13	109	50.6	60	42.6		20.2	4	04.2		38.7	276	46.5		09.6	206	38.6		57.0
14	124	53.1	75	42.4		20.9	19	04.9		38.6	291	48.9		09.6	221	41.2		57.0
15	139	55.5	90	42.2		21.6	34	05.5		38.4	306	51.2		09.7	236	43.9		57.0
16	154	58.0	105	42.0		22.3	49	06.2		38.2	321	53.6		09.7	251	46.5		57.0
17	170	00.5	120	41.8	+15	23.0	64	06.9	+23	38.1	336	55.9	-4	09.8	266	49.2	-21	57.0
18	185	02.9	135	41.6	+15	23.7	79	07.6	+23	37.9	351	58.3	-4	09.9	281	51.8	-21	57.0
19	200	05.4	150	41.3		24.4	94	08.3		37.7	7	00.6		09.9	296	54.5		56.9
20	215	07.9	165	41.1		25.1	109	09.0		37.6	22	03.0		10.0	311	57.2		56.9
21	230	10.3	180	40.9		25.8	124	09.7		37.4	37	05.3		10.0	326	59.8		56.9
22	245	12.8	195	40.7		26.6	139	10.4		37.2	52	07.7		10.1	342	02.5		56.9
23	260	15.2	210	40.5		27.3	154	11.0		37.1	67	10.0		10.2	357	05.1		56.9
24	275	17.7	225	40.3	+15	28.0	169	11.7	+23	36.9	82	12.4	-4	10.2	12	07.8	-21	56.9
Dif	—		-2		+7		+7		-2		+24		-1		+27		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 2 ^d 9	PHE { 4 ^h : 59/3 12 ^h : 59/0 20 ^h : 58/7 R°: 52 ^m	Civil			Náutico		Hora	R°	Hora	R°		
	PMG: 12 ^h 03 ^m 1	hG ☉	Dec			hG ☾			Dif	Dec					Dif	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	179	14.9	+23 19.1	137	29.4	+15 19.8	75	60 N	21 27	23 10	** **	7 22	84	23 06	21	
1	194	14.8		151	55.7	12.3	75	58	21 07	22 22	** **	31	81	22 59	23	
2	209	14.7		166	22.1	+15 04.7	76	56	20 50	21 52	** **	39	79	53	25	
3	224	14.5		180	48.6	+14 57.0	77	54		36	30	23 14	46	77	48	22
4	239	14.4		195	15.2	49.2	78	52		24	21 13	22 30	52	75	43	28
5	254	14.3	+23 18.6	209	41.8	+14 41.4	78	50	20 13	20 58	22 03	7 58	73	22 38	30	
6	269	14.1	+23 18.5	224	08.6	+14 33.4	80	45	19 51	20 28	21 18	8 10	70	22 28	34	
7	284	14.0		238	35.4	25.4	80	40		33	20 06	20 47	20	67	20	36
8	299	13.9		253	02.4	17.3	81	35		18	19 48	24	29	64	13	39
9	314	13.7		267	29.4	09.2	81	30	19 05	32	20 06	36	62	22 06	42	
10	329	13.6		281	56.5	+14 00.9	83	20	18 43	19 08	19 37	8 49	59	21 55	45	
11	344	13.5	+23 17.9	296	23.7	+13 52.6	83	10 N	18 24	18 47	19 14	9 00	56	21 46	48	
12	359	13.4	+23 17.8	310	51.1	+13 44.2	84	0	18 07	18 29	18 55	9 11	53	21 37	51	
13	14	13.2		325	18.4	35.8	84	10 S	17 49	18 12	39	22	49	27	54	
14	29	13.1		339	45.9	27.2	86	20		31	17 55	22	33	47	18	57
15	44	13.0		354	13.5	18.7	85	30	17 10	36	18 06	46	43	06	61	
16	59	12.8		8	41.2	10.0	87	35	16 58	26	17 57	9 53	41	21 00	63	
17	74	12.7	+23 17.3	23	08.9	+13 01.3	87	40	16 44	17 14	17 48	10 01	39	20 52	66	
18	89	12.6	+23 17.2	37	36.8	+12 52.5	88	45	16 27	17 01	17 38	10 11	36	20 43	69	
19	104	12.4		52	04.7	43.6	89	50	16 06	16 45	26	23	33	33	72	
20	119	12.3		66	32.7	34.7	89	52	15 56	37	21	28	32	28	74	
21	134	12.2		81	00.8	25.7	90	54		45	29	34	30	22	76	
22	149	12.1		95	29.0	16.7	90	56		33	20	41	27	16	78	
23	164	11.9		109	57.3	+12 07.6	91	58		18	16 10	49	25	09	81	
24	179	11.8	+23 16.5	124	25.7	+11 58.5	91	60 S	15 01	15 58	16 55	10 57	22	20 02	83	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: -4.2		Mag: +1.7		Mag: -2.1		Mag: +0.1						
	5 ^h 37 ^m 9		PMG: 8 ^h 57 ^m		PMG: 12 ^h 43 ^m		PMG: 18 ^h 28 ^m		PMG: 23 ^h 07 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	275	17.7	225	40.3	+15 28.0	169	11.7	+23 36.9	82	12.4	-4 10.2	12 07.8	-21 56.9		
1	290	20.2	240	40.1	28.7	184	12.4	36.7	97	14.7	10.3	27 10.4	56.9		
2	305	22.6	255	39.8	29.4	199	13.1	36.6	112	17.1	10.3	42 13.1	56.9		
3	320	25.1	270	39.6	30.1	214	13.8	36.4	127	19.4	10.4	57 15.7	56.9		
4	335	27.6	285	39.4	30.8	229	14.5	36.2	142	21.8	10.4	72 18.4	56.9		
5	350	30.0	300	39.2	+15 31.5	244	15.2	+23 36.0	157	24.1	-4 10.5	87 21.1	-21 56.9		
6	5	32.5	315	39.0	+15 32.2	259	15.9	+23 35.9	172	26.5	-4 10.6	102 23.7	-21 56.9		
7	20	35.0	330	38.7	32.9	274	16.6	35.7	187	28.8	10.6	117 26.4	56.9		
8	35	37.4	345	38.5	33.6	289	17.2	35.5	202	31.2	10.7	132 29.0	56.9		
9	50	39.9	0	38.3	34.3	304	17.9	35.3	217	33.5	10.7	147 31.7	56.9		
10	65	42.4	15	38.1	35.0	319	18.6	35.2	232	35.9	10.8	162 34.3	56.9		
11	80	44.8	30	37.9	+15 35.7	334	19.3	+23 35.0	247	38.2	-4 10.9	177 37.0	-21 56.9		
12	95	47.3	45	37.6	+15 36.4	349	20.0	+23 34.8	262	40.6	-4 10.9	192 39.7	-21 56.9		
13	110	49.7	60	37.4	37.1	4	20.7	34.7	277	42.9	11.0	207 42.3	56.9		
14	125	52.2	75	37.2	37.8	19	21.4	34.5	292	45.3	11.1	222 45.0	56.9		
15	140	54.7	90	37.0	38.5	34	22.1	34.3	307	47.6	11.1	237 47.6	56.9		
16	155	57.1	105	36.7	39.2	49	22.8	34.1	322	50.0	11.2	252 50.3	56.9		
17	170	59.6	120	36.5	+15 39.9	64	23.5	+23 34.0	337	52.3	-4 11.2	267 52.9	-21 56.9		
18	186	02.1	135	36.3	+15 40.6	79	24.1	+23 33.8	352	54.6	-4 11.3	282 55.6	-21 56.9		
19	201	04.5	150	36.1	41.3	94	24.8	33.6	7	57.0	11.4	297 58.2	56.9		
20	216	07.0	165	35.8	42.1	109	25.5	33.4	22	59.3	11.4	313 00.9	56.8		
21	231	09.5	180	35.6	42.8	124	26.2	33.3	38	01.7	11.5	328 03.6	56.8		
22	246	11.9	195	35.4	43.5	139	26.9	33.1	53	04.0	11.5	343 06.2	56.8		
23	261	14.4	210	35.1	44.1	154	27.6	32.9	68	06.4	11.6	358 08.9	56.8		
24	276	16.9	225	34.9	+15 44.8	169	28.3	+23 32.7	83	08.7	-4 11.7	13 11.5	-21 56.8		
Dif	—		-2	+7		+7	-2		+23		-1		+27		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15:7 PMG: 12 ^h 03 ^m 3				Edad: 3 ^d 9 PHE { 4 ^h : 58'4 12 ^h : 58'0 20 ^h : 57'7 Rº: 48 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	11.8	+23	16.5	124	25.7	+11	58.5	92	60 N	** *	0 57	2 39	8 46	82	23 27	17			
1	194	11.7		16.4	138	54.2	95	49.3	92	58	** *	1 45	3 00	52	79	22	20			
2	209	11.5		16.3	153	22.7	95	40.0	93	56	** *	2 14	16	8 58	76	18	22			
3	224	11.4		16.1	167	51.4	97	30.7	93	54	0 52	36	30	9 03	74	15	23			
4	239	11.3		16.0	182	20.1	97	21.3	94	52	1 37	2 54	43	07	73	11	25			
5	254	11.2	+23	15.9	196	48.9	98	+11	11.9	94	50	2 04	3 09	3 53	9 11	71	23 08	27		
6	269	11.0	+23	15.8	211	17.8	99	+11	02.5	94	45	2 49	3 38	4 16	9 20	67	23 02	30		
7	284	10.9		15.7	225	46.8	100	+10	53.0	95	40	3 19	4 01	34	27	64	22 56	33		
8	299	10.8		15.5	240	15.8	100		43.4	96	35	3 42	19	4 49	33	62	52	35		
9	314	10.6		15.4	254	45.0	102		33.8	96	30	4 01	34	5 01	38	60	48	37		
10	329	10.5		15.3	269	14.2	102		24.2	96	20	30	4 59	23	48	56	40	42		
11	344	10.4	+23	15.2	283	43.5	103	+10	14.5	97	10 N	4 52	5 19	5 42	9 56	52	22 34	44		
12	359	10.3	+23	15.0	298	12.9	104	+10	04.8	97	0	5 11	5 37	6 00	10 04	49	22 28	48		
13	14	10.1		14.9	312	42.3	104	+9	55.0	98	10 S	28	5 54	17	11 47	21	52			
14	29	10.0		14.8	327	11.9	106		45.2	98	20	5 44	6 11	35	20 42	15	54			
15	44	09.9		14.7	341	41.5	106		35.3	99	30	6 00	30	6 56	29 39	07	59			
16	59	09.8		14.5	356	11.2	107		25.5	98	35	09	41	7 09	34 37	22 03	61			
17	74	09.6	+23	14.4	10	41.0	108	+9	15.5	100	40	6 18	6 52	7 23	10 40	35	21 58	63		
18	89	09.5	+23	14.3	25	10.9	109	+9	05.6	99	45	6 28	7 06	7 39	10 47	32	21 52	66		
19	104	09.4		14.1	39	40.8	109	+8	55.6	100	50	40	22	8 00	10 56	28	45	70		
20	119	09.2		14.0	54	10.8	110		45.6	100	52	45	29	10	11 00	26	42	71		
21	134	09.1		13.9	68	40.9	111		35.5	101	54	51	37	21	04 24	38	74			
22	149	09.0		13.7	83	11.1	112		25.4	101	56	6 57	46	33	08 23	34	76			
23	164	08.9		13.6	97	41.3	112		15.3	101	58	7 04	7 56	8 48	14 20	30	78			
24	179	08.7	+23	13.5	112	11.6	113	+8	05.2	101	60 S	7 11	8 08	9 05	11 19	19	21 25	80		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 34 ^m 0				Mag: -4.2 PMG: 8 ^h 58 ^m				Mag: +1.7 PMG: 12 ^h 42 ^m				Mag: -2.1 PMG: 18 ^h 25 ^m				Mag: +0.1 PMG: 23 ^h 03 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	276	16.9	225	34.9	+15	44.8	169	28.3	+23	32.7	83	08.7	-4	11.7	13	11.5	-21	56.8		
1	291	19.3	240	34.7		45.5	184	29.0		32.5	98	11.1		11.7	28	14.2		56.8		
2	306	21.8	255	34.5		46.2	199	29.7		32.4	113	13.4		11.8	43	16.8		56.8		
3	321	24.2	270	34.2		46.9	214	30.4		32.2	128	15.7		11.9	58	19.5		56.8		
4	336	26.7	285	34.0		47.6	229	31.1		32.0	143	18.1		11.9	73	22.1		56.8		
5	351	29.2	300	33.8	+15	48.3	244	31.7	+23	31.8	158	20.4	-4	12.0	88	24.8	-21	56.8		
6	6	31.6	315	33.5	+15	49.0	259	32.4	+23	31.6	173	22.8	-4	12.0	103	27.5	-21	56.8		
7	21	34.1	330	33.3		49.7	274	33.1		31.5	188	25.1		12.1	118	30.1		56.8		
8	36	36.6	345	33.1		50.4	289	33.8		31.3	203	27.5		12.2	133	32.8		56.8		
9	51	39.0	0	32.8		51.1	304	34.5		31.1	218	29.8		12.2	148	35.4		56.8		
10	66	41.5	15	32.6		51.8	319	35.2		30.9	233	32.1		12.3	163	38.1		56.8		
11	81	44.0	30	32.3	+15	52.5	334	35.9	+23	30.7	248	34.5	-4	12.4	178	40.7	-21	56.8		
12	96	46.4	45	32.1	+15	53.2	349	36.6	+23	30.6	263	36.8	-4	12.4	193	43.4	-21	56.8		
13	111	48.9	60	31.9		53.9	4	37.3		30.4	278	39.2		12.5	208	46.0		56.8		
14	126	51.3	75	31.6		54.6	19	38.0		30.2	293	41.5		12.5	223	48.7		56.8		
15	141	53.8	90	31.4		55.3	34	38.7		30.0	308	43.8		12.6	238	51.3		56.8		
16	156	56.3	105	31.1		56.0	49	39.4		29.8	323	46.2		12.7	253	54.0		56.8		
17	171	58.7	120	30.9	+15	56.7	64	40.1	+23	29.7	338	48.5	-4	12.7	268	56.7	-21	56.8		
18	187	01.2	135	30.7	+15	57.4	79	40.8	+23	29.5	353	50.9	-4	12.8	283	59.3	-21	56.8		
19	202	03.7	150	30.4		58.1	94	41.4		29.3	8	53.2		12.9	299	02.0		56.8		
20	217	06.1	165	30.2		58.7	109	42.1		29.1	23	55.5		12.9	314	04.6		56.8		
21	232	08.6	180	29.9	+15	59.4	124	42.8		28.9	38	57.9		13.0	329	07.3		56.8		
22	247	11.1	195	29.7	+16	00.1	139	43.5		28.7	54	00.2		13.1	344	09.9		56.7		
23	262	13.5	210	29.5		00.8	154	44.2		28.5	69	02.6		13.1	359	12.6		56.7		
24	277	16.0	225	29.2	+16	01.5	169	44.9	+23	28.4	84	04.9	-4	13.2	14	15.2	-21	56.7		
Dif	—		-2		+7		+7		-2		+23		-1		+27					

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7		Edad: 4 ^d 9	PHE $\left\{ \begin{array}{l} 4^h: 57.4 \\ 12^h: 57.1 \\ 20^h: 56.8 \end{array} \right.$	SD: 15 ^h 7									
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	08.7	+23 13.5	112	11.6	+8 05.2	60 N	21 26	23 06	** **	10 08 78	23 44 15		
1	194	08.6	13.3	126	42.0 ¹¹⁴	+7 55.0 ¹⁰²	58	21 06	22 20	** **	11 76	42 17		
2	209	08.5	13.2	141	12.5 ¹¹⁵	44.8 ¹⁰²	56	20 50	21 51	** **	14 74	40 19		
3	224	08.4	13.1	155	43.0 ¹¹⁵	34.6 ¹⁰²	54	36	30	23 11	17 72	38 21		
4	239	08.2	12.9	170	13.6 ¹¹⁶	24.4 ¹⁰²	52	24	21 12	22 29	20 70	36 23		
5	254	08.1	+23 12.8	184	44.3 ¹¹⁷	+7 14.1 ¹⁰³	50	20 13	20 57	22 02	10 22 68	23 35 25		
6	269	08.0	+23 12.7	199	15.0 ¹¹⁷	+7 03.8 ¹⁰³	45	19 51	20 28	21 17	10 27 65	23 32 28		
7	284	07.9	12.5	213	45.8 ¹¹⁸	+6 53.5 ¹⁰³	40	33	20 06	20 47	31 62	29 31		
8	299	07.7	12.4	228	16.7 ¹¹⁹	43.2 ¹⁰³	35	18	19 48	24	35 59	27 33		
9	314	07.6	12.2	242	47.6 ¹¹⁹	32.8 ¹⁰⁴	30	19 05	33	20 06	38 57	25 35		
10	329	07.5	12.1	257	18.6 ¹²⁰	22.5 ¹⁰³	20	18 43	19 08	19 37	44 53	22 39		
11	344	07.4	+23 12.0	271	49.7 ¹²¹	+6 12.1 ¹⁰⁴	10 N	18 25	18 48	19 15	10 48 50	23 18 43		
12	359	07.2	+23 11.8	286	20.8 ¹²¹	+6 01.7 ¹⁰⁴	0	18 07	18 30	18 56	10 53 47	23 16 45		
13	14	07.1	11.7	300	52.0 ¹²²	+5 51.3 ¹⁰⁴	10 S	17 50	18 13	39	10 58 43	13 48		
14	29	07.0	11.5	315	23.3 ¹²³	40.8 ¹⁰⁵	20	32	17 56	23	11 02 40	09 53		
15	44	06.9	11.4	329	54.6 ¹²³	30.4 ¹⁰⁴	30	17 11	37	18 07	08 36	06 56		
16	59	06.7	11.3	344	25.9 ¹²³	19.9 ¹⁰⁵	35	16 58	26	17 58	11 34	04 58		
17	74	06.6	+23 11.1	358	57.4 ¹²⁵	+5 09.5 ¹⁰⁴	40	16 44	17 15	17 49	11 15 31	23 01 61		
18	89	06.5	+23 11.0	13	28.9 ¹²⁵	+4 59.0 ¹⁰⁵	45	16 28	17 02	17 39	11 19 28	22 58 64		
19	104	06.4	10.8	28	00.4 ¹²⁵	48.5 ¹⁰⁵	50	16 07	16 46	27	24 25	55 67		
20	119	06.2	10.7	42	32.0 ¹²⁶	38.0 ¹⁰⁵	52	15 58	38	22	26 24	53 69		
21	134	06.1	10.5	57	03.7 ¹²⁷	27.5 ¹⁰⁵	54	47	30	16	28 22	52 70		
22	149	06.0	10.4	71	35.4 ¹²⁷	17.0 ¹⁰⁵	56	34	21	10	31 20	50 73		
23	164	05.9	10.2	86	07.2 ¹²⁸	+4 06.5 ¹⁰⁵	58	20	11	17 04	34 18	48 75		
24	179	05.7	+23 10.1	100	39.0 ¹²⁸	+3 55.9 ¹⁰⁶	60 S	15 02	16 00	16 56	11 38 15	22 45 78		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 30 ^m 0		Mag: -4.2 PMG: 8 ^h 58 ^m		Mag: +1.7 PMG: 12 ^h 40 ^m		Mag: -2.1 PMG: 18 ^h 21 ^m		Mag: +0.1 PMG: 22 ^h 59 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	277	16.0	225 29.2	+16 01.5	169 44.9	+23 28.4	84 04.9	-4 13.2	14 15.2					
1	292	18.5	240 29.0	02.2	184 45.6	28.2	99 07.2	13.2	29 17.9					
2	307	20.9	255 28.7	02.9	199 46.3	28.0	114 09.6	13.3	44 20.5					
3	322	23.4	270 28.5	03.6	214 47.0	27.8	129 11.9	13.4	59 23.2					
4	337	25.8	285 28.2	04.3	229 47.7	27.6	144 14.3	13.4	74 25.8					
5	352	28.3	300 28.0	+16 05.0	244 48.4	+23 27.4	159 16.6	-4 13.5	89 28.5					
6	7	30.8	315 27.7	+16 05.6	259 49.1	+23 27.2	174 18.9	-4 13.6	104 31.2					
7	22	33.2	330 27.5	06.3	274 49.8	27.1	189 21.3	13.6	119 33.8					
8	37	35.7	345 27.2	07.0	289 50.5	26.9	204 23.6	13.7	134 36.5					
9	52	38.2	0 27.0	07.7	304 51.2	26.7	219 25.9	13.8	149 39.1					
10	67	40.6	15 26.7	08.4	319 51.9	26.5	234 28.3	13.8	164 41.8					
11	82	43.1	30 26.5	+16 09.1	334 52.6	+23 26.3	249 30.6	-4 13.9	179 44.4					
12	97	45.6	45 26.2	+16 09.8	349 53.3	+23 26.1	264 32.9	-4 14.0	194 47.1					
13	112	48.0	60 26.0	10.4	4 54.0	25.9	279 35.3	14.0	209 49.7					
14	127	50.5	75 25.7	11.1	19 54.7	25.7	294 37.6	14.1	224 52.4					
15	142	53.0	90 25.5	11.8	34 55.3	25.5	309 39.9	14.2	239 55.0					
16	157	55.4	105 25.2	12.5	49 56.0	25.4	324 42.3	14.2	254 57.7					
17	172	57.9	120 24.9	+16 13.2	64 56.7	+23 25.2	339 44.6	-4 14.3	270 00.3					
18	188	00.3	135 24.7	+16 13.9	79 57.4	+23 25.0	354 46.9	-4 14.4	285 03.0					
19	203	02.8	150 24.4	14.5	94 58.1	24.8	9 49.3	14.4	300 05.6					
20	218	05.3	165 24.2	15.2	109 58.8	24.6	24 51.6	14.5	315 08.3					
21	233	07.7	180 23.9	15.9	124 59.5	24.4	39 53.9	14.6	330 11.0					
22	248	10.2	195 23.7	16.6	140 00.2	24.2	54 56.3	14.6	345 13.6					
23	263	12.7	210 23.4	17.3	155 00.9	24.0	69 58.6	14.7	0 16.3					
24	278	15.1	225 23.1	+16 17.9	170 01.6	+23 23.8	85 00.9	-4 14.8	15 18.9					
Dif	—	—	-3	+7	+7	-2	+23	-1	+27					
									0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 03 ^m 7			Edad: 5 ^d 9 SD: 15'4 PMG: 17 ^h 50 ^m	PHE { 4 ^h : 56'5 12 ^h : 56'3 20 ^h : 56'0 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	05.7	+23 10.1	100	39.0	+3 55.9	105	60 N	** **	1 01	2 41	11 26	76	23 59	14	
1	194	05.6	09.9	115	10.9	45.4	105	58	** **	1 47	3 01	27 74		59	17	
2	209	05.5	09.8	129	42.8	34.9	105	56	** **	2 16	18	28 72		59	19	
3	224	05.4	09.6	144	14.8	24.3	106	54	0 56	38	32	29 70		59	21	
4	239	05.2	09.5	158	46.8	13.8	105	52	1 39	2 55	44	30 67	23 59	23		
5	254	05.1	+23 09.3	173	18.9	+3 03.2	106	50	2 06	3 10	3 54	11 30	67	** **	**	
6	269	05.0	+23 09.1	187	51.0	+2 52.7	105	45	2 50	3 39	4 17	11 32	63	** **	**	
7	284	04.9	09.0	202	23.2	42.1	106	40	3 20	4 02	34	33 60		** **	**	
8	299	04.8	08.8	216	55.4	31.6	105	35	3 43	20	4 49	34 57		** **	**	
9	314	04.6	08.7	231	27.7	21.1	105	30	4 02	35	5 02	35 55		** **	**	
10	329	04.5	08.5	246	00.0	+2 10.5	106	20	30	4 59	24	37 51		** **	**	
11	344	04.4	+23 08.4	260	32.4	+2 00.0	105	10 N	4 53	5 20	5 43	11 38	48	** **	**	
12	359	04.3	+23 08.2	275	04.8	+1 49.5	105	0	5 11	5 38	6 00	11 40	44	** **	**	
13	14	04.1	08.0	289	37.2	38.9	106	10 S	28	5 54	17	41 42		** **	**	
14	29	04.0	07.9	304	09.7	28.4	105	20	5 44	6 12	36	42 39		** **	**	
15	44	03.9	07.7	318	42.2	17.9	105	30	6 00	30	6 57	44 35		** **	**	
16	59	03.8	07.6	333	14.8	+1 07.4	105	35	09	41	7 09	45 32		** **	**	
17	74	03.6	+23 07.4	347	47.4	+0 56.9	105	40	6 18	6 52	7 23	11 46	30	** **	**	
18	89	03.5	+23 07.2	2	20.0	+0 46.4	105	45	6 28	7 06	7 39	11 47	28	** **	**	
19	104	03.4	07.1	16	52.7	35.9	105	50	40	21	8 00	49 24		** **	**	
20	119	03.3	06.9	31	25.4	25.4	105	52	45	29	09	50 22		** **	**	
21	134	03.2	06.7	45	58.1	14.9	105	54	51	37	20	50 21		** **	**	
22	149	03.0	06.6	60	30.9	+0 04.5	104	56	6 57	46	33	51 19		** **	**	
23	164	02.9	06.4	75	03.7	-0 06.0	105	58	7 03	7 56	8 47	52 17		** **	**	
24	179	02.8	+23 06.2	89	36.6	-0 16.4	104	60 S	7 11	8 07	9 04	11 53	15	** **	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 5 ^h 26 ^m 1			Mag: -4.2 PMG: 8 ^h 59 ^m			Mag: +1.7 PMG: 12 ^h 39 ^m			Mag: -2.1 PMG: 18 ^h 17 ^m			Mag: +0.1 PMG: 22 ^h 55 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	278	15.1	225 23.1	+16 17.9	170 01.6	+23 23.8	170 01.6	+23 23.8	85 00.9	-4 14.8	15 18.9	-21 56.6	15 18.9	-21 56.6		
1	293	17.6	240 22.9	18.6	185 02.3	23.6	185 02.3	23.6	100 03.3	14.8	30 21.6	56.6	30 21.6	56.6		
2	308	20.1	255 22.6	19.3	200 03.0	23.4	200 03.0	23.4	115 05.6	14.9	45 24.2	56.6	45 24.2	56.6		
3	323	22.5	270 22.4	20.0	215 03.7	23.2	215 03.7	23.2	130 07.9	15.0	60 26.9	56.6	60 26.9	56.6		
4	338	25.0	285 22.1	20.7	230 04.4	23.0	230 04.4	23.0	145 10.3	15.0	75 29.5	56.6	75 29.5	56.6		
5	353	27.4	300 21.8	+16 21.3	245 05.1	+23 22.9	245 05.1	+23 22.9	160 12.6	-4 15.1	90 32.2	56.6	90 32.2	56.6		
6	8	29.9	315 21.6	+16 22.0	260 05.8	+23 22.7	260 05.8	+23 22.7	175 14.9	-4 15.2	105 34.8	56.6	105 34.8	56.6		
7	23	32.4	330 21.3	22.7	275 06.5	22.5	275 06.5	22.5	190 17.2	15.2	120 37.5	56.6	120 37.5	56.6		
8	38	34.8	345 21.0	23.4	290 07.2	22.3	290 07.2	22.3	205 19.6	15.3	135 40.1	56.6	135 40.1	56.6		
9	53	37.3	0 20.8	24.0	305 07.9	22.1	305 07.9	22.1	220 21.9	15.4	150 42.8	56.6	150 42.8	56.6		
10	68	39.8	15 20.5	24.7	320 08.6	21.9	320 08.6	21.9	235 24.2	15.4	165 45.4	56.6	165 45.4	56.6		
11	83	42.2	30 20.2	+16 25.4	335 09.3	+23 21.7	335 09.3	+23 21.7	250 26.6	-4 15.5	180 48.1	56.6	180 48.1	56.6		
12	98	44.7	45 20.0	+16 26.1	350 10.0	+23 21.5	350 10.0	+23 21.5	265 28.9	-4 15.6	195 50.7	56.6	195 50.7	56.6		
13	113	47.2	60 19.7	26.7	5 10.7	21.3	5 10.7	21.3	280 31.2	15.6	210 53.4	56.6	210 53.4	56.6		
14	128	49.6	75 19.4	27.4	20 11.4	21.1	20 11.4	21.1	295 33.5	15.7	225 56.0	56.6	225 56.0	56.6		
15	143	52.1	90 19.2	28.1	35 12.1	20.9	35 12.1	20.9	310 35.9	15.8	240 58.7	56.6	240 58.7	56.6		
16	158	54.6	105 18.9	28.8	50 12.8	20.7	50 12.8	20.7	325 38.2	15.9	256 01.3	56.6	256 01.3	56.6		
17	173	57.0	120 18.6	+16 29.4	65 13.5	+23 20.5	65 13.5	+23 20.5	340 40.5	-4 15.9	271 04.0	56.6	271 04.0	56.6		
18	188	59.5	135 18.4	+16 30.1	80 14.2	+23 20.3	80 14.2	+23 20.3	355 42.9	-4 16.0	286 06.6	56.6	286 06.6	56.6		
19	204	01.9	150 18.1	30.8	95 14.9	20.1	95 14.9	20.1	10 45.2	16.1	301 09.3	56.6	301 09.3	56.6		
20	219	04.4	165 17.8	31.4	110 15.6	19.9	110 15.6	19.9	25 47.5	16.1	316 11.9	56.6	316 11.9	56.6		
21	234	06.9	180 17.5	32.1	125 16.3	19.7	125 16.3	19.7	40 49.8	16.2	331 14.6	56.6	331 14.6	56.6		
22	249	09.3	195 17.3	32.8	140 17.0	19.5	140 17.0	19.5	55 52.2	16.3	346 17.2	56.6	346 17.2	56.6		
23	264	11.8	210 17.0	33.5	155 17.7	19.3	155 17.7	19.3	70 54.5	16.3	1 19.9	56.6	1 19.9	56.6		
24	279	14.3	225 16.7	+16 34.1	170 18.4	+23 19.1	170 18.4	+23 19.1	85 56.8	-4 16.4	16 22.6	56.6	16 22.6	56.6		
Dif	—		-3	+7	+7	-2	+7	-2	+23	-1	+27	0	+27	0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna			
	SD: 15 ^h 7			Edad: 6 ^d 9	PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /5 20 ^h : 55 ^m /3										
	PMG: 12 ^h 03 ^m 9					SD: 15 ^h 2			PMG: 18 ^h 35 ^m			R°: 44 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	02.8	+23 06.2	89	36.6	-0 16.4		60 N	21 25	23 02	** ** *	12 42 74	** ** *	** ** *	** ** *
1	194	02.7		104	09.5 ¹³⁹	26.8 ¹⁰⁴		58	21 05	22 18	** ** *	41 72	** ** *	** ** *	** ** *
2	209	02.6		118	42.4 ¹³⁹	37.2 ¹⁰⁴		56	20 49	21 50	** ** *	40 69	** ** *	** ** *	** ** *
3	224	02.4		133	15.3 ¹³⁹	47.6 ¹⁰⁴		54	35	29	23 07	39 67	** ** *	** ** *	** ** *
4	239	02.3		147	48.3 ¹⁴⁰	-0 58.0 ¹⁰⁴		52	23	21 11	22 27	37 66	** ** *	** ** *	** ** *
5	254	02.2	+23 05.4	162	21.3 ¹⁴⁰	-1 08.4 ¹⁰⁴		50	20 12	20 56	22 01	12 37 64	0 00 23		
6	269	02.1	+23 05.2	176	54.3 ¹⁴⁰	-1 18.7 ¹⁰³		45	19 50	20 27	21 17	12 35 61	0 00 27		
7	284	02.0		191	27.3 ¹⁴⁰	29.1 ¹⁰⁴		40	33	20 05	20 47	33 58	00 30		
8	299	01.8		206	00.4 ¹⁴¹	39.4 ¹⁰³		35	18	19 48	24	31 56	00 32		
9	314	01.7		220	33.5 ¹⁴¹	49.7 ¹⁰³		30	19 05	33	20 06	30 54	00 35		
10	329	01.6		235	06.7 ¹⁴²	-1 59.9 ¹⁰²		20	18 44	19 08	19 37	28 50	01 38		
11	344	01.5	+23 04.4	249	39.8 ¹⁴¹	-2 10.2 ¹⁰³		10 N	18 25	18 48	19 15	12 26 47	0 01 41		
12	359	01.4	+23 04.2	264	13.0 ¹⁴²	-2 20.4 ¹⁰²		0	18 08	18 30	18 56	12 24 44	0 01 44		
13	14	01.2	04.0	278	46.2 ¹⁴²	30.7 ¹⁰³		10 S	17 50	18 13	39	23 40	01 48		
14	29	01.1	03.8	293	19.4 ¹⁴²	40.9 ¹⁰²		20	32	17 56	24	21 37	02 50		
15	44	01.0	03.7	307	52.6 ¹⁴²	-2 51.0 ¹⁰¹		30	17 11	38	18 07	19 34	02 54		
16	59	00.9	03.5	322	25.9 ¹⁴³	-3 01.2 ¹⁰²		35	16 59	27	17 59	17 33	02 56		
17	74	00.8	+23 03.3	336	59.1 ¹⁴²	-3 11.3 ¹⁰¹		40	16 45	17 16	17 50	12 16 30	0 02 59		
18	89	00.6	+23 03.1	351	32.4 ¹⁴³	-3 21.4 ¹⁰¹		45	16 29	17 02	17 40	12 15 27	0 02 62		
19	104	00.5	02.9	6	05.7 ¹⁴³	31.5 ¹⁰¹		50	16 08	16 47	28	13 24	02 66		
20	119	00.4	02.8	20	39.1 ¹⁴⁴	41.6 ¹⁰¹		52	15 59	39	23	12 22	02 67		
21	134	00.3	02.6	35	12.4 ¹⁴³	-3 51.6 ¹⁰⁰		54	48	31	17	11 21	02 69		
22	149	00.2	02.4	49	45.8 ¹⁴⁴	-4 01.6 ¹⁰⁰		56	36	23	11	10 19	03 70		
23	164	00.0	02.2	64	19.1 ¹⁴³	11.6 ¹⁰⁰		58	21	13	17 05	09 17	03 72		
24	178	59.9	+23 02.0	78	52.5 ¹⁴⁴	-4 21.6 ¹⁰⁰		60 S	15 04	16 01	16 58	12 08 15	0 03 75		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 22 ^m 2		Mag: -4.2 PMG: 8 ^h 59 ^m		Mag: +1.7 PMG: 12 ^h 38 ^m		Mag: -2.1 PMG: 18 ^h 13 ^m		Mag: +0.1 PMG: 22 ^h 50 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	279	14.3	225 16.7	+16 34.1	170 18.4	+23 19.1	85 56.8	-4 16.4	16 22.6						
1	294	16.7	240 16.4	34.8	185 19.1	18.9	100 59.1	16.5	31 25.2						
2	309	19.2	255 16.2	35.5	200 19.8	18.7	116 01.5	16.5	46 27.9						
3	324	21.7	270 15.9	36.1	215 20.5	18.5	131 03.8	16.6	61 30.5						
4	339	24.1	285 15.6	36.8	230 21.2	18.3	146 06.1	16.7	76 33.2						
5	354	26.6	300 15.3	+16 37.5	245 21.9	+23 18.1	161 08.4	-4 16.8	91 35.8						
6	9	29.1	315 15.1	+16 38.1	260 22.6	+23 17.9	176 10.8	-4 16.8	106 38.5						
7	24	31.5	330 14.8	38.8	275 23.3	17.7	191 13.1	16.9	121 41.1						
8	39	34.0	345 14.5	39.5	290 24.0	17.5	206 15.4	17.0	136 43.8						
9	54	36.4	0 14.2	40.1	305 24.7	17.3	221 17.7	17.0	151 46.4						
10	69	38.9	15 13.9	40.8	320 25.4	17.1	236 20.0	17.1	166 49.1						
11	84	41.4	30 13.7	+16 41.5	335 26.1	+23 16.9	251 22.4	-4 17.2	181 51.7						
12	99	43.8	45 13.4	+16 42.1	350 26.8	+23 16.7	266 24.7	-4 17.3	196 54.4						
13	114	46.3	60 13.1	42.8	5 27.5	16.5	281 27.0	17.3	211 57.0						
14	129	48.8	75 12.8	43.5	20 28.2	16.3	296 29.3	17.4	226 59.7						
15	144	51.2	90 12.5	44.1	35 28.9	16.1	311 31.7	17.5	242 02.3						
16	159	53.7	105 12.2	44.8	50 29.6	15.8	326 34.0	17.5	257 05.0						
17	174	56.2	120 12.0	+16 45.4	65 30.3	+23 15.6	341 36.3	-4 17.6	272 07.6						
18	189	58.6	135 11.7	+16 46.1	80 31.0	+23 15.4	356 38.6	-4 17.7	287 10.3						
19	205	01.1	150 11.4	46.8	95 31.7	15.2	11 40.9	17.8	302 12.9						
20	220	03.5	165 11.1	47.4	110 32.4	15.0	26 43.3	17.8	317 15.6						
21	235	06.0	180 10.8	48.1	125 33.2	14.8	41 45.6	17.9	332 18.2						
22	250	08.5	195 10.5	48.7	140 33.9	14.6	56 47.9	18.0	347 20.9						
23	265	10.9	210 10.2	49.4	155 34.6	14.4	71 50.2	18.0	2 23.5						
24	280	13.4	225 10.0	+16 50.1	170 35.3	+23 14.2	86 52.5	-4 18.1	17 26.2						
Dif	—	—	-3	+7	+7	-2	+23	-1	+27						
									0						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 04 ^m 1			Edad: 7 ^d 9 PHE { SD: 15'0 PMG: 19 ^h 19 ^m										
				R ^o : 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	178	59.9	+23 02.0	78	52.5	-4 21.6	60 N	** **	1 06	2 43	13 56	73	0 13	16
1	193	59.8	01.8	93	25.9 ¹⁴⁴	31.5 99	58	** **	1 50	3 03	53 70		16 17	
2	208	59.7	01.6	107	59.3 ¹⁴⁴	41.4 99	56	** **	2 18	19	49 68		18 20	
3	223	59.6	01.5	122	32.7 ¹⁴⁴	-4 51.3 99	54	1 01	40	33	46 66		20 21	
4	238	59.5	01.3	137	06.1 ¹⁴⁴	-5 01.1 98	52	1 41	2 57	45	43 65		22 23	
5	253	59.3	+23 01.1	151	39.6 ¹⁴⁵	-5 11.0 99	50	2 08	3 12	3 56	13 41	63	0 23	25
6	268	59.2	+23 00.9	166	13.0 ¹⁴⁴	-5 20.7 97	45	2 52	3 41	4 18	13 36	59	0 27	27
7	283	59.1	00.7	180	46.5 ¹⁴⁵	30.5 98	40	3 21	4 03	35	31 57		30 30	
8	298	59.0	00.5	195	19.9 ¹⁴⁴	40.2 97	35	3 44	21	4 50	27 55		32 33	
9	313	58.9	00.3	209	53.4 ¹⁴⁵	49.9 97	30	4 02	4 36	5 03	24 53		35 34	
10	328	58.8	+23 00.1	224	26.9 ¹⁴⁵	-5 59.6 97	20	31	5 00	25	18 50		39 38	
11	343	58.6	+22 59.9	239	00.3 ¹⁴⁴	-6 09.2 96	10 N	4 53	5 20	5 43	13 13	46	0 42	41
12	358	58.5	+22 59.8	253	33.8 ¹⁴⁵	-6 18.8 96	0	5 12	5 38	6 00	13 08	44	0 45	44
13	13	58.4	59.6	268	07.3 ¹⁴⁵	28.4 96	10 S	29	5 55	18	13 03	41	49	46
14	28	58.3	59.4	282	40.8 ¹⁴⁵	37.9 95	20	5 44	6 12	36	12 58	38	52	50
15	43	58.2	59.2	297	14.3 ¹⁴⁵	47.4 95	30	6 00	30	6 57	53 34		56 53	
16	58	58.1	59.0	311	47.8 ¹⁴⁵	-6 56.8 94	35	09	41	7 09	50 32		0 58 56	
17	73	57.9	+22 58.8	326	21.3 ¹⁴⁵	-7 06.3 95	40	6 18	6 52	7 23	12 46	30	1 01	58
18	88	57.8	+22 58.6	340	54.7 ¹⁴⁴	-7 15.7 94	45	6 28	7 05	7 39	12 42	28	1 04	60
19	103	57.7	58.4	355	28.2 ¹⁴⁵	25.0 93	50	40	21	7 59	37 25		08 63	
20	118	57.6	58.2	10	01.7 ¹⁴⁵	34.3 93	52	45	28	8 09	34 24		09 66	
21	133	57.5	58.0	24	35.2 ¹⁴⁵	43.6 93	54	50	36	20	32 22		11 67	
22	148	57.4	57.8	39	08.7 ¹⁴⁵	-7 52.8 92	56	6 56	45	32	29 20		13 69	
23	163	57.2	57.6	53	42.2 ¹⁴⁵	-8 02.0 92	58	7 03	7 55	8 46	26 18		15 71	
24	178	57.1	+22 57.4	68	15.6 ¹⁴⁴	-8 11.2 92	60 S	7 10	8 06	9 03	12 23	16	1 18	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 18 ^m 2		Mag: -4.2 PMG: 9 ^h 00 ^m		Mag: +1.7 PMG: 12 ^h 37 ^m		Mag: -2.1 PMG: 18 ^h 10 ^m		Mag: +0.1 PMG: 22 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	280	13.4	225 10.0	+16 50.1	170 35.3	+23 14.2	86 52.5	-4 18.1	17 26.2	-21 56.5
1	295	15.9	240 09.7	50.7	185 36.0	14.0	101 54.9	18.2	32 28.8	56.5
2	310	18.3	255 09.4	51.4	200 36.7	13.8	116 57.2	18.3	47 31.5	56.5
3	325	20.8	270 09.1	52.0	215 37.4	13.6	131 59.5	18.3	62 34.1	56.5
4	340	23.3	285 08.8	52.7	230 38.1	13.4	147 01.8	18.4	77 36.8	56.5
5	355	25.7	300 08.5	+16 53.3	245 38.8	+23 13.1	162 04.1	-4 18.5	92 39.4	-21 56.4
6	10	28.2	315 08.2	+16 54.0	260 39.5	+23 12.9	177 06.4	-4 18.5	107 42.1	-21 56.4
7	25	30.7	330 07.9	54.7	275 40.2	12.7	192 08.8	18.6	122 44.7	56.4
8	40	33.1	345 07.6	55.3	290 40.9	12.5	207 11.1	18.7	137 47.4	56.4
9	55	35.6	0 07.3	56.0	305 41.6	12.3	222 13.4	18.8	152 50.0	56.4
10	70	38.0	15 07.0	56.6	320 42.3	12.1	237 15.7	18.8	167 52.6	56.4
11	85	40.5	30 06.7	+16 57.3	335 43.0	+23 11.9	252 18.0	-4 18.9	182 55.3	-21 56.4
12	100	43.0	45 06.4	+16 57.9	350 43.7	+23 11.7	267 20.3	-4 19.0	197 57.9	-21 56.4
13	115	45.4	60 06.1	58.6	5 44.4	11.5	282 22.7	19.1	213 00.6	56.4
14	130	47.9	75 05.8	59.2	20 45.1	11.2	297 25.0	19.1	228 03.2	56.4
15	145	50.4	90 05.5	+16 59.9	35 45.8	11.0	312 27.3	19.2	243 05.9	56.4
16	160	52.8	105 05.2	+17 00.5	50 46.6	10.8	327 29.6	19.3	258 08.5	56.4
17	175	55.3	120 04.9	+17 01.2	65 47.3	+23 10.6	342 31.9	-4 19.4	273 11.2	-21 56.4
18	190	57.8	135 04.6	+17 01.8	80 48.0	+23 10.4	357 34.2	-4 19.4	288 13.8	-21 56.4
19	206	00.2	150 04.3	02.5	95 48.7	10.2	12 36.5	19.5	303 16.5	56.4
20	221	02.7	165 04.0	03.1	110 49.4	10.0	27 38.9	19.6	318 19.1	56.4
21	236	05.2	180 03.7	03.8	125 50.1	09.8	42 41.2	19.7	333 21.8	56.4
22	251	07.6	195 03.4	04.4	140 50.8	09.5	57 43.5	19.7	348 24.4	56.4
23	266	10.1	210 03.1	05.1	155 51.5	09.3	72 45.8	19.8	3 27.1	56.4
24	281	12.5	225 02.8	+17 05.7	170 52.2	+23 09.1	87 48.1	-4 19.9	18 29.7	-21 56.4
Dif	—		-3	+7	+7	-2	+23	-1	+26	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 8 ^d 9	PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 R°: 44 ^m									
	PMG: 12 ^h 04 ^m 3	hG ☉	Dec			hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	57.1	+22 57.4	68	15.6	-8 11.2	91	60 N	21 23	22 57	** **	15 09 71	0 29 17	
1	193	57.0	57.2	82	49.1 ¹⁴⁵	20.3	91	58	21 04	22 16	** **	15 03 68	33 20	
2	208	56.9	57.0	97	22.6 ¹⁴⁵	29.4	91	56	20 48	21 48	** **	14 57 67	38 21	
3	223	56.8	56.8	111	56.1 ¹⁴⁵	38.4	90	54	34	27	23 03	52 65	41 21	
4	238	56.7	56.6	126	29.5 ¹⁴⁴	47.4	90	52	22	21 10	22 25	48 63	45 24	
5	253	56.6	+22 56.4	141	03.0 ¹⁴⁵	-8 56.4	90	50	20 12	20 56	21 59	14 44 62	0 48 26	
6	268	56.4	+22 56.2	155	36.4 ¹⁴⁴	-9 05.3	89	45	19 50	20 27	21 16	14 35 59	0 54 29	
7	283	56.3	56.0	170	09.8 ¹⁴⁴	14.1	88	40	32	20 05	20 46	28 57	1 00 31	
8	298	56.2	55.8	184	43.3 ¹⁴⁵	23.0	89	35	18	19 47	24	22 54	05 33	
9	313	56.1	55.6	199	16.7 ¹⁴⁴	31.7	87	30	19 05	32	20 05	17 52	09 35	
10	328	56.0	55.3	213	50.1 ¹⁴⁴	40.5	88	20	18 44	19 08	19 37	14 08 49	17 38	
11	343	55.9	+22 55.1	228	23.5 ¹⁴⁴	-9 49.2	87	10 N	18 25	18 48	19 15	13 59 47	1 23 41	
12	358	55.8	+22 54.9	242	56.9 ¹⁴⁴	-9 57.8	86	0	18 08	18 30	18 57	13 52 44	1 29 44	
13	13	55.6	54.7	257	30.2 ¹⁴³	-10 06.4	86	10 S	17 51	18 14	40	44 42	35 47	
14	28	55.5	54.5	272	03.6 ¹⁴⁴	15.0	86	20	33	17 57	24	36 40	42 49	
15	43	55.4	54.3	286	36.9 ¹⁴³	23.5	85	30	12	38	08	27 37	49 53	
16	58	55.3	54.1	301	10.3 ¹⁴⁴	31.9	84	35	17 00	28	18 00	22 35	54 54	
17	73	55.2	+22 53.9	315	43.6 ¹⁴³	-10 40.3	84	40	16 46	17 17	17 51	13 16 33	1 59 56	
18	88	55.1	+22 53.7	330	16.9 ¹⁴³	-10 48.7	84	45	16 30	17 04	17 41	13 10 30	2 04 60	
19	103	55.0	53.4	344	50.2 ¹⁴³	-10 57.0	83	50	10	16 48	29	13 02 27	11 63	
20	118	54.9	53.2	359	23.5 ¹⁴³	-11 05.3	83	52	16 00	41	24	12 58 26	15 63	
21	133	54.7	53.0	13	56.7 ¹⁴²	13.5	82	54	15 50	33	19	54 24	18 65	
22	148	54.6	52.8	28	30.0 ¹⁴³	21.7	82	56	37	24	13	49 23	22 67	
23	163	54.5	52.6	43	03.2 ¹⁴²	29.8	81	58	23	14	17 06	44 21	26 70	
24	178	54.4	+22 52.4	57	36.4 ¹⁴²	-11 37.8	80	60 S	15 07	16 03	16 59	12 39 18	2 31 72	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 14 ^m 3		Mag: -4.2 PMG: 9 ^h 00 ^m			Mag: +1.7 PMG: 12 ^h 36 ^m			Mag: -2.1 PMG: 18 ^h 06 ^m			Mag: +0.1 PMG: 22 ^h 42 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	281	12.5	225 02.8	+17 05.7		170 52.2	+23 09.1		87 48.1	-4 19.9		18 29.7	-21 56.4	
1	296	15.0	240 02.5	06.4		185 52.9	08.9		102 50.4	20.0		33 32.4	56.4	
2	311	17.5	255 02.2	07.0		200 53.6	08.7		117 52.7	20.0		48 35.0	56.4	
3	326	19.9	270 01.9	07.7		215 54.3	08.5		132 55.1	20.1		63 37.7	56.4	
4	341	22.4	285 01.6	08.3		230 55.0	08.2		147 57.4	20.2		78 40.3	56.4	
5	356	24.9	300 01.3	+17 09.0		245 55.7	+23 08.0		162 59.7	-4 20.3		93 43.0	-21 56.4	
6	11	27.3	315 01.0	+17 09.6		260 56.5	+23 07.8		178 02.0	-4 20.3		108 45.6	-21 56.4	
7	26	29.8	330 00.7	10.2		275 57.2	07.6		193 04.3	20.4		123 48.3	56.4	
8	41	32.3	345 00.4	10.9		290 57.9	07.4		208 06.6	20.5		138 50.9	56.3	
9	56	34.7	0 00.1	11.5		305 58.6	07.2		223 08.9	20.6		153 53.5	56.3	
10	71	37.2	14 59.8	12.2		320 59.3	06.9		238 11.2	20.6		168 56.2	56.3	
11	86	39.6	29 59.4	+17 12.8		336 00.0	+23 06.7		253 13.5	-4 20.7		183 58.8	-21 56.3	
12	101	42.1	44 59.1	+17 13.5		351 00.7	+23 06.5		268 15.8	-4 20.8		199 01.5	-21 56.3	
13	116	44.6	59 58.8	14.1		6 01.4	06.3		283 18.2	20.9		214 04.1	56.3	
14	131	47.0	74 58.5	14.7		21 02.1	06.1		298 20.5	20.9		229 06.8	56.3	
15	146	49.5	89 58.2	15.4		36 02.8	05.8		313 22.8	21.0		244 09.4	56.3	
16	161	52.0	104 57.9	16.0		51 03.5	05.6		328 25.1	21.1		259 12.1	56.3	
17	176	54.4	119 57.6	+17 16.7		66 04.3	+23 05.4		343 27.4	-4 21.2		274 14.7	-21 56.3	
18	191	56.9	134 57.3	+17 17.3		81 05.0	+23 05.2		358 29.7	-4 21.2		289 17.4	-21 56.3	
19	206	59.4	149 56.9	17.9		96 05.7	05.0		13 32.0	21.3		304 20.0	56.3	
20	222	01.8	164 56.6	18.6		111 06.4	04.7		28 34.3	21.4		319 22.7	56.3	
21	237	04.3	179 56.3	19.2		126 07.1	04.5		43 36.6	21.5		334 25.3	56.3	
22	252	06.8	194 56.0	19.8		141 07.8	04.3		58 38.9	21.6		349 28.0	56.3	
23	267	09.2	209 55.7	20.5		156 08.5	04.1		73 41.2	21.6		4 30.6	56.3	
24	282	11.7	224 55.4	+17 21.1		171 09.2	+23 03.8		88 43.5	-4 21.7		19 33.2	-21 56.3	
Dif	—		-3	+6		+7	-2		+23	-1		+26		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 9 ^d 9	PHE { 4 ^h : 54 ^m /3 12 ^h : 54 ^m /2 20 ^h : 54 ^m /1	SD: 14 ^h 8									PMG: 20 ^h 47 ^m	Rº: 45 ^m		
	hG ☉	Dec						hG ☾	Dif		Dec	Dif	Náutico	Civil			Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	54.4	+22	52.4		57	36.4	-11	37.8	60 N	** *	1 12	2 46	16 20	68	0 46	20	
1	193	54.3		52.1		72	09.6 ¹⁴²		45.8	58	** *	1 53	3 05	11 66		53	22	
2	208	54.2		51.9		86	42.8 ¹⁴²	-11	53.8	80	** *	2 21	21	16 04	64	0 59	24	
3	223	54.1		51.7		101	16.0 ¹⁴²	-12	01.7	79	1 06	42	35	15 57	63	1 04	26	
4	238	54.0		51.5		115	49.1 ¹⁴¹		09.5	78	1 44	2 59	47	51 61		09	27	
5	253	53.9	+22	51.3		130	22.2 ¹⁴¹	-12	17.3	78	2 10	3 13	3 57	15 46	60	1 14	28	
6	268	53.7	+22	51.0		144	55.3 ¹⁴¹	-12	25.1	78	2 53	3 42	4 19	15 34	58	1 23	32	
7	283	53.6		50.8		159	28.4 ¹⁴¹		32.8	77	3 23	4 04	36	25 55		31	34	
8	298	53.5		50.6		174	01.5 ¹⁴¹		40.4	76	3 45	22	4 51	16 54		38	36	
9	313	53.4		50.4		188	34.5 ¹⁴⁰		48.0	76	4 03	4 36	5 04	15 09	52	44	38	
10	328	53.3		50.1		203	07.5 ¹⁴⁰	-12	55.5	75	32	5 01	25	14 57	49	1 55	40	
11	343	53.2	+22	49.9		217	40.5 ¹⁴⁰	-13	02.9	74	4 54	5 21	5 44	14 46	47	2 04	43	
12	358	53.1	+22	49.7		232	13.5 ¹⁴⁰	-13	10.4	75	5 12	5 38	6 01	14 36	45	2 13	45	
13	13	53.0		49.5		246	46.5 ¹⁴⁰		17.7	73	29	5 55	18	26 43		22	47	
14	28	52.9		49.2		261	19.4 ¹³⁹		25.0	73	20	5 45	6 12	36	16 41	31	50	
15	43	52.8		49.0		275	52.3 ¹³⁹		32.2	72	30	6 00	30	6 56	14 04	38	42	52
16	58	52.6		48.8		290	25.2 ¹³⁹		39.4	72	35	09	40	7 08	13 57	36	48	54
17	73	52.5	+22	48.6		304	58.0 ¹³⁸	-13	46.5	71	40	6 18	6 52	7 22	13 49	35	2 55	56
18	88	52.4	+22	48.3		319	30.9 ¹³⁹	-13	53.5	70	45	6 28	7 05	7 38	13 40	33	3 04	58
19	103	52.3		48.1		334	03.7 ¹³⁸	-14	00.5	70	50	39	20	7 59	29 30	14	61	
20	118	52.2		47.9		348	36.5 ¹³⁸		07.5	70	52	44	28	8 08	24 29	18	63	
21	133	52.1		47.6		3	09.3 ¹³⁸		14.3	68	54	50	35	19	18 28	23	64	
22	148	52.0		47.4		17	42.0 ¹³⁷		21.1	68	56	6 56	44	31	12 26	29	66	
23	163	51.9		47.2		32	14.7 ¹³⁷		27.9	68	58	7 02	7 54	8 45	13 05	24	36	67
24	178	51.8	+22	46.9		46	47.4 ¹³⁷	-14	34.6	67	60 S	7 09	8 05	9 01	12 57	22	3 43	69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 10 ^m 4		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: +1.7 PMG: 12 ^h 35 ^m		Mag: -2.1 PMG: 18 ^h 02 ^m		Mag: +0.1 PMG: 22 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	282	11.7	224	55.4	+17	21.1	171	09.2	+23	03.8
1	297	14.1	239	55.0		21.7	186	09.9		03.6
2	312	16.6	254	54.7		22.4	201	10.7		03.4
3	327	19.1	269	54.4		23.0	216	11.4		03.2
4	342	21.5	284	54.1		23.6	231	12.1		02.9
5	357	24.0	299	53.8	+17	24.3	246	12.8	+23	02.7
6	12	26.5	314	53.4	+17	24.9	261	13.5	+23	02.5
7	27	28.9	329	53.1		25.5	276	14.2		02.3
8	42	31.4	344	52.8		26.2	291	14.9		02.0
9	57	33.9	359	52.5		26.8	306	15.6		01.8
10	72	36.3	14	52.1		27.4	321	16.3		01.6
11	87	38.8	29	51.8	+17	28.1	336	17.1	+23	01.4
12	102	41.3	44	51.5	+17	28.7	351	17.8	+23	01.1
13	117	43.7	59	51.2		29.3	6	18.5		00.9
14	132	46.2	74	50.8		30.0	21	19.2		00.7
15	147	48.6	89	50.5		30.6	36	19.9		00.5
16	162	51.1	104	50.2		31.2	51	20.6	+23	00.2
17	177	53.6	119	49.9	+17	31.8	66	21.3	+23	00.0
18	192	56.0	134	49.5	+17	32.5	81	22.0	+22	59.8
19	207	58.5	149	49.2		33.1	96	22.8		59.5
20	223	01.0	164	48.9		33.7	111	23.5		59.3
21	238	03.4	179	48.5		34.3	126	24.2		59.1
22	253	05.9	194	48.2		35.0	141	24.9		58.9
23	268	08.4	209	47.9		35.6	156	25.6		58.6
24	283	10.8	224	47.5	+17	36.2	171	26.3	+22	58.4
Dif	—		-3		+6		+7		-2	
							+23		-1	
									+26	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 04 ^m 6			Edad: 10 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	51.8	+22 46.9	46	47.4	-14	34.6	60 N	21 21	22 52	** **	17 28 64	1 06 25	
1	193	51.7	46.7	61	20.1 ¹³⁷		41.2 ⁶⁶	58	21 02	22 13	** **	17 63	15 27	
2	208	51.6	46.5	75	52.7 ¹³⁶		47.7 ⁶⁵	56	20 46	21 46	** **	08 61	23 29	
3	223	51.5	46.2	90	25.3 ¹³⁶	-14	54.2 ⁶⁵	54	33	26	22 59	17 00 59	30 30	
4	238	51.4	46.0	104	57.9 ¹³⁶	-15	00.6 ⁶⁴	52	21	21 09	22 22	16 52 59	36 32	
5	253	51.2	+22 45.8	119	30.5 ¹³⁶	-15	07.0 ⁶⁴	50	20 11	20 54	21 57	16 46 57	1 42 33	
6	268	51.1	+22 45.5	134	03.0 ¹³⁵	-15	13.3 ⁶³	45	19 49	20 26	21 15	16 32 55	1 55 34	
7	283	51.0	45.3	148	35.5 ¹³⁵		19.5 ⁶²	40	32	20 04	20 45	20 54	2 05 37	
8	298	50.9	45.0	163	08.0 ¹³⁵		25.7 ⁶²	35	17	19 47	23	10 53	14 38	
9	313	50.8	44.8	177	40.4 ¹³⁴		31.7 ⁶⁰	30	19 05	32	20 05	16 01 52	22 39	
10	328	50.7	44.6	192	12.9 ¹³⁵		37.8 ⁶¹	20	18 44	19 08	19 37	15 46 50	35 42	
11	343	50.6	+22 44.3	206	45.3 ¹³⁴	-15	43.7 ⁵⁹	10 N	18 25	18 48	19 15	15 33 48	2 47 44	
12	358	50.5	+22 44.1	221	17.6 ¹³³	-15	49.6 ⁵⁹	0	18 08	18 31	18 57	15 21 47	2 58 46	
13	13	50.4	43.8	235	50.0 ¹³⁴	-15	55.4 ⁵⁸	10 S	17 51	18 14	40	15 09 45	3 09 48	
14	28	50.3	43.6	250	22.3 ¹³³	-16	01.2 ⁵⁸	20	34	17 57	25	14 57 43	21 49	
15	43	50.2	43.3	264	54.6 ¹³³		06.8 ⁵⁶	30	13	39	09	42 41	34 52	
16	58	50.1	43.1	279	26.8 ¹³²		12.4 ⁵⁶	35	17 01	29	18 01	33 40	42 54	
17	73	50.0	+22 42.9	293	59.1 ¹³³	-16	18.0 ⁵⁶	40	16 47	17 18	17 52	14 24 38	3 51 55	
18	88	49.9	+22 42.6	308	31.3 ¹³²	-16	23.4 ⁵⁴	45	16 31	17 05	17 42	14 13 37	4 02 56	
19	103	49.8	42.4	323	03.4 ¹³¹		28.8 ⁵⁴	50	11	16 49	31	13 59 35	15 59	
20	118	49.7	42.1	337	35.6 ¹³²		34.1 ⁵³	52	16 02	42	26	53 34	21 60	
21	133	49.5	41.9	352	07.7 ¹³¹		39.4 ⁵³	54	15 51	34	20	46 33	27 61	
22	148	49.4	41.6	6	39.8 ¹³¹		44.6 ⁵²	56	39	26	14	38 32	35 62	
23	163	49.3	41.4	21	11.8 ¹³⁰		49.7 ⁵¹	58	25	16	08	29 30	43 64	
24	178	49.2	+22 41.1	35	43.9 ¹³¹	-16	54.7 ⁵⁰	60 S	15 09	16 05	17 01	13 19 28	4 52 67	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 06 ^m 4		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: +1.7 PMG: 12 ^h 34 ^m		Mag: -2.1 PMG: 17 ^h 59 ^m		Mag: +0.1 PMG: 22 ^h 34 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec					
h	°	'	°	°	'	°	'	°	'	°	'			
0	283	10.8	224 47.5	+17 36.2	171 26.3	+22 58.4	89 38.8	-4 23.6	20 36.7	-21 56.2				
1	298	13.3	239 47.2	36.8	186 27.0	58.2	104 41.1	23.7	35 39.4	56.2				
2	313	15.7	254 46.9	37.4	201 27.8	57.9	119 43.4	23.8	50 42.0	56.2				
3	328	18.2	269 46.5	38.1	216 28.5	57.7	134 45.7	23.8	65 44.7	56.2				
4	343	20.7	284 46.2	38.7	231 29.2	57.5	149 48.0	23.9	80 47.3	56.2				
5	358	23.1	299 45.9	+17 39.3	246 29.9	+22 57.2	164 50.3	-4 24.0	95 49.9	-21 56.2				
6	13	25.6	314 45.5	+17 39.9	261 30.6	+22 57.0	179 52.6	-4 24.1	110 52.6	-21 56.2				
7	28	28.1	329 45.2	40.5	276 31.3	56.8	194 54.9	24.2	125 55.2	56.2				
8	43	30.5	344 44.8	41.2	291 32.1	56.5	209 57.2	24.2	140 57.9	56.2				
9	58	33.0	359 44.5	41.8	306 32.8	56.3	224 59.5	24.3	156 00.5	56.2				
10	73	35.5	14 44.2	42.4	321 33.5	56.1	240 01.8	24.4	171 03.2	56.2				
11	88	37.9	29 43.8	+17 43.0	336 34.2	+22 55.8	255 04.1	-4 24.5	186 05.8	-21 56.2				
12	103	40.4	44 43.5	+17 43.6	351 34.9	+22 55.6	270 06.4	-4 24.6	201 08.5	-21 56.2				
13	118	42.9	59 43.2	44.3	6 35.6	55.4	285 08.7	24.6	216 11.1	56.2				
14	133	45.3	74 42.8	44.9	21 36.3	55.1	300 11.0	24.7	231 13.7	56.2				
15	148	47.8	89 42.5	45.5	36 37.1	54.9	315 13.3	24.8	246 16.4	56.2				
16	163	50.2	104 42.1	46.1	51 37.8	54.7	330 15.6	24.9	261 19.0	56.2				
17	178	52.7	119 41.8	+17 46.7	66 38.5	+22 54.4	345 17.9	-4 25.0	276 21.7	-21 56.2				
18	193	55.2	134 41.4	+17 47.3	81 39.2	+22 54.2	0 20.2	-4 25.0	291 24.3	-21 56.1				
19	208	57.6	149 41.1	47.9	96 39.9	54.0	15 22.5	25.1	306 27.0	56.1				
20	224	00.1	164 40.7	48.5	111 40.7	53.7	30 24.8	25.2	321 29.6	56.1				
21	239	02.6	179 40.4	49.2	126 41.4	53.5	45 27.1	25.3	336 32.2	56.1				
22	254	05.0	194 40.1	49.8	141 42.1	53.3	60 29.4	25.4	351 34.9	56.1				
23	269	07.5	209 39.7	50.4	156 42.8	53.0	75 31.7	25.5	6 37.5	56.1				
24	284	10.0	224 39.4	+17 51.0	171 43.5	+22 52.8	90 34.0	-4 25.5	21 40.2	-21 56.1				
Dif	—		-3	+6	+7	-2	+23	-1	+26					

UT	SOL			O LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 11 ^d 9	PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0	SD: 14 ^h 7	PMG: 22 ^h 19 ^m		R ^o : 48 ^m							
	hG ☉	Dec	Dif							Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	178	49.2	+22	41.1	35	43.9	-16	54.7	60 N	** **	1 17	2 49	18 32	58	1 31 31	
1	193	49.1		40.9	50	15.9 ¹³⁰	-16	59.6 ⁴⁹	58	** **	1 57	3 08	20 56		42 33	
2	208	49.0		40.6	64	47.9 ¹³⁰	-17	04.5 ⁴⁹	56	** **	2 24	23	18 09	56	1 52 34	
3	223	48.9		40.4	79	19.8 ¹²⁹		09.3 ⁴⁸	54	1 11	2 44	37	17 59	55	2 00 36	
4	238	48.8		40.1	93	51.7 ¹²⁹		14.0 ⁴⁷	52	1 48	3 01	48	51 54		08 36	
5	253	48.7	+22	39.9	108	23.6 ¹²⁹	-17	18.7 ⁴⁷	50	2 13	3 15	3 59	17 43	54	2 15 37	
6	268	48.6	+22	39.6	122	55.5 ¹²⁹	-17	23.2 ⁴⁵	45	2 55	3 44	4 20	17 27	53	2 29 40	
7	283	48.5		39.3	137	27.3 ¹²⁸		27.7 ⁴⁵	40	3 24	4 05	38	14 52		42 40	
8	298	48.4		39.1	151	59.1 ¹²⁸		32.2 ⁴⁵	35	3 46	23	4 52	17 03	51	2 52 42	
9	313	48.3		38.8	166	30.9 ¹²⁸		36.5 ⁴³	30	4 04	4 37	5 05	16 53	50	3 01 43	
10	328	48.2		38.6	181	02.7 ¹²⁸		40.7 ⁴²	20	32	5 01	26	36 49		17 44	
11	343	48.1	+22	38.3	195	34.4 ¹²⁷	-17	44.9 ⁴²	10 N	4 54	5 21	5 44	16 21	49	3 31 45	
12	358	48.0	+22	38.1	210	06.1 ¹²⁷	-17	49.0 ⁴¹	0	5 13	5 39	6 01	16 08	47	3 44 47	
13	13	47.9		37.8	224	37.8 ¹²⁷		53.0 ⁴⁰	10 S	29	5 55	18	15 54	47	3 57 48	
14	28	47.8		37.5	239	09.4 ¹²⁶	-17	57.0 ⁴⁰	20	5 45	6 12	36	40 45		4 10 50	
15	43	47.7		37.3	253	41.0 ¹²⁶	-18	00.9 ³⁹	30	6 00	30	6 56	23 44		26 51	
16	58	47.6		37.0	268	12.6 ¹²⁶		04.6 ³⁷	35	09	40	7 08	13 44		36 51	
17	73	47.5	+22	36.8	282	44.2 ¹²⁶	-18	08.3 ³⁷	40	6 18	6 51	7 22	15 02	43	4 46 53	
18	88	47.4	+22	36.5	297	15.7 ¹²⁵	-18	12.0 ³⁷	45	6 27	7 04	7 38	14 50	41	4 58 55	
19	103	47.3		36.2	311	47.2 ¹²⁵		15.5 ³⁵	50	39	20	7 58	34 41		5 14 55	
20	118	47.2		36.0	326	18.7 ¹²⁵		18.9 ³⁴	52	44	27	8 07	27 40		21 56	
21	133	47.1		35.7	340	50.2 ¹²⁵		22.3 ³⁴	54	49	35	18	19 39		28 58	
22	148	47.0		35.4	355	21.6 ¹²⁴		25.6 ³³	56	6 55	43	30	14 10	38	37 59	
23	163	46.9		35.2	9	53.0 ¹²⁴		28.8 ³²	58	7 01	7 53	8 43	13 59	37	47 60	
24	178	46.8	+22	34.9	24	24.4 ¹²⁴	-18	31.9 ³¹	60 S	7 08	8 04	9 00	13 47	36	5 59 61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 02 ^m 5		Mag: -4.2 PMG: 9 ^h 02 ^m		Mag: +1.7 PMG: 12 ^h 32 ^m		Mag: -2.1 PMG: 17 ^h 55 ^m		Mag: +0.1 PMG: 22 ^h 29 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	284	10.0	224	39.4	+17	51.0	171	43.5	+22	52.8	90	34.0	-4	25.5	21	40.2	-21	56.1
1	299	12.4	239	39.0		51.6	186	44.2		52.5	105	36.3		25.6	36	42.8		56.1
2	314	14.9	254	38.7		52.2	201	45.0		52.3	120	38.5		25.7	51	45.4		56.1
3	329	17.4	269	38.3		52.8	216	45.7		52.1	135	40.8		25.8	66	48.1		56.1
4	344	19.8	284	38.0		53.4	231	46.4		51.8	150	43.1		25.9	81	50.7		56.1
5	359	22.3	299	37.6	+17	54.0	246	47.1	+22	51.6	165	45.4	-4	26.0	96	53.4	-21	56.1
6	14	24.7	314	37.3	+17	54.6	261	47.8	+22	51.3	180	47.7	-4	26.0	111	56.0	-21	56.1
7	29	27.2	329	36.9		55.2	276	48.5		51.1	195	50.0		26.1	126	58.7		56.1
8	44	29.7	344	36.6		55.8	291	49.3		50.9	210	52.3		26.2	142	01.3		56.1
9	59	32.1	359	36.2		56.5	306	50.0		50.6	225	54.6		26.3	157	03.9		56.1
10	74	34.6	14	35.9		57.1	321	50.7		50.4	240	56.9		26.4	172	06.6		56.1
11	89	37.1	29	35.5	+17	57.7	336	51.4	+22	50.1	255	59.2	-4	26.4	187	09.2	-21	56.1
12	104	39.5	44	35.1	+17	58.3	351	52.1	+22	49.9	271	01.5	-4	26.5	202	11.9	-21	56.1
13	119	42.0	59	34.8		58.9	6	52.9		49.7	286	03.8		26.6	217	14.5		56.1
14	134	44.5	74	34.4	+17	59.5	21	53.6		49.4	301	06.1		26.7	232	17.1		56.1
15	149	46.9	89	34.1	+18	00.1	36	54.3		49.2	316	08.3		26.8	247	19.8		56.1
16	164	49.4	104	33.7		00.7	51	55.0		48.9	331	10.6		26.9	262	22.4		56.1
17	179	51.9	119	33.4	+18	01.3	66	55.7	+22	48.7	346	12.9	-4	27.0	277	25.1	-21	56.1
18	194	54.3	134	33.0	+18	01.9	81	56.5	+22	48.4	1	15.2	-4	27.0	292	27.7	-21	56.1
19	209	56.8	149	32.7		02.5	96	57.2		48.2	16	17.5		27.1	307	30.4		56.1
20	224	59.2	164	32.3		03.1	111	57.9		48.0	31	19.8		27.2	322	33.0		56.1
21	240	01.7	179	31.9		03.7	126	58.6		47.7	46	22.1		27.3	337	35.6		56.1
22	255	04.2	194	31.6		04.3	141	59.4		47.5	61	24.4		27.4	352	38.3		56.1
23	270	06.6	209	31.2		04.9	157	00.1		47.2	76	26.7		27.5	7	40.9		56.1
24	285	09.1	224	30.8	+18	05.5	172	00.8	+22	47.0	91	29.0	-4	27.5	22	43.6	-21	56.1
Dif	—		-4		+6		+7		-2		+23		-1		+26			0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2 R°: 48 ^m										
	PMG: 12 ^h 05 ^m 0			SD: 14 ^h 7 PMG: 23 ^h 07 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m
0	178	46.8	+22 34.9	24	24.4	-18 31.9		60 N	21 19	22 47	** **		19 30	49
1	193	46.7	34.6	38	55.8 ¹²⁴	35.0	31	58	21 00	22 10	** **		16 50	15 41
2	208	46.6	34.4	53	27.1 ¹²³	37.9	29	56	20 45	21 44	** **		19 05	49
3	223	46.5	34.1	67	58.4 ¹²³	40.8	29	54	32	24	22 54		18 54	50
4	238	46.4	33.8	82	29.7 ¹²³	43.6	28	52	20	21 07	22 19		45 50	44 43
5	253	46.3	+22 33.6	97	00.9 ¹²²	-18 46.3	27	50	20 10	20 53	21 55		18 37	49
6	268	46.2	+22 33.3	111	32.2 ¹²³	-18 48.9	26	45	19 48	20 25	21 13		18 20	49
7	283	46.1	33.0	126	03.4 ¹²²	51.4	25	40	31	20 04	20 45		18 06	49
8	298	46.0	32.7	140	34.6 ¹²²	53.9	25	35	17	19 46	23		17 54	49
9	313	45.9	32.5	155	05.8 ¹²²	56.2	23	30	19 05	32	20 05		43 49	3 44 46
10	328	45.8	32.2	169	36.9 ¹²¹	-18 58.5	23	20	18 44	19 08	19 37		25 49	4 01 47
11	343	45.7	+22 31.9	184	08.0 ¹²¹	-19 00.7	22	10 N	18 25	18 48	19 15		17 10	48
12	358	45.6	+22 31.6	198	39.1 ¹²¹	-19 02.8	21	0	18 09	18 31	18 57		16 55	49
13	13	45.5	31.4	213	10.2 ¹²¹	04.8	20	10 S	17 52	18 15	41		41 48	4 45 48
14	28	45.4	31.1	227	41.3 ¹²¹	06.7	19	20	34	17 58	25		25 48	5 00 49
15	43	45.3	30.8	242	12.3 ¹²⁰	08.5	18	30	14	40	10		16 07	48
16	58	45.2	30.5	256	43.3 ¹²⁰	10.3	18	35	17 02	30	18 01		15 57	48
17	73	45.1	+22 30.3	271	14.4 ¹²¹	-19 11.9	16	40	16 49	17 19	17 53		15 45	48
18	88	45.0	+22 30.0	285	45.3 ¹¹⁹	-19 13.5	16	45	16 33	17 06	17 43		15 31	47
19	103	44.9	29.7	300	16.3 ¹²⁰	15.0	15	50	13	16 51	32		15 46	6 09 52
20	118	44.8	29.4	314	47.2 ¹¹⁹	16.4	14	52	16 04	44	27		15 07	46
21	133	44.7	29.1	329	18.2 ¹²⁰	17.7	13	54	15 53	36	22		14 58	46
22	148	44.6	28.9	343	49.1 ¹¹⁹	18.9	12	56	41	28	16		48 46	36 52
23	163	44.5	28.6	358	20.0 ¹¹⁹	20.0	11	58	28	18	10		36 46	6 47 53
24	178	44.4	+22 28.3	12	50.9 ¹¹⁹	-19 21.0	10	60 S	15 12	16 07	17 03		14 23	46
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 58 ^m 6		Mag: -4.1 PMG: 9 ^h 02 ^m			Mag: +1.7 PMG: 12 ^h 31 ^m			Mag: -2.1 PMG: 17 ^h 51 ^m			Mag: +0.1 PMG: 22 ^h 25 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	285	09.1	224	30.8	+18 05.5	172	00.8	+22 47.0	91	29.0	-4 27.5	22	43.6	-21 56.1
1	300	11.6	239	30.5	06.1	187	01.5	46.7	106	31.2	27.6	37	46.2	56.0
2	315	14.0	254	30.1	06.6	202	02.2	46.5	121	33.5	27.7	52	48.8	56.0
3	330	16.5	269	29.8	07.2	217	03.0	46.2	136	35.8	27.8	67	51.5	56.0
4	345	19.0	284	29.4	07.8	232	03.7	46.0	151	38.1	27.9	82	54.1	56.0
5	0	21.4	299	29.0	+18 08.4	247	04.4	+22 45.8	166	40.4	-4 28.0	97	56.8	-21 56.0
6	15	23.9	314	28.7	+18 09.0	262	05.1	+22 45.5	181	42.7	-4 28.1	112	59.4	-21 56.0
7	30	26.3	329	28.3	09.6	277	05.8	45.3	196	45.0	28.1	128	02.0	56.0
8	45	28.8	344	27.9	10.2	292	06.6	45.0	211	47.2	28.2	143	04.7	56.0
9	60	31.3	359	27.6	10.8	307	07.3	44.8	226	49.5	28.3	158	07.3	56.0
10	75	33.7	14	27.2	11.4	322	08.0	44.5	241	51.8	28.4	173	10.0	56.0
11	90	36.2	29	26.8	+18 12.0	337	08.7	+22 44.3	256	54.1	-4 28.5	188	12.6	-21 56.0
12	105	38.7	44	26.5	+18 12.6	352	09.5	+22 44.0	271	56.4	-4 28.6	203	15.2	-21 56.0
13	120	41.1	59	26.1	13.2	7	10.2	43.8	286	58.7	28.7	218	17.9	56.0
14	135	43.6	74	25.7	13.7	22	10.9	43.5	302	01.0	28.7	233	20.5	56.0
15	150	46.1	89	25.4	14.3	37	11.6	43.3	317	03.2	28.8	248	23.1	56.0
16	165	48.5	104	25.0	14.9	52	12.4	43.0	332	05.5	28.9	263	25.8	56.0
17	180	51.0	119	24.6	+18 15.5	67	13.1	+22 42.8	347	07.8	-4 29.0	278	28.4	-21 56.0
18	195	53.5	134	24.2	+18 16.1	82	13.8	+22 42.5	2	10.1	-4 29.1	293	31.1	-21 56.0
19	210	55.9	149	23.9	16.7	97	14.5	42.3	17	12.4	29.2	308	33.7	56.0
20	225	58.4	164	23.5	17.3	112	15.2	42.0	32	14.7	29.3	323	36.3	56.0
21	241	00.8	179	23.1	17.8	127	16.0	41.8	47	16.9	29.3	338	39.0	56.0
22	256	03.3	194	22.7	18.4	142	16.7	41.5	62	19.2	29.4	353	41.6	56.0
23	271	05.8	209	22.4	19.0	157	17.4	41.3	77	21.5	29.5	8	44.3	56.0
24	286	08.2	224	22.0	+18 19.6	172	18.1	+22 41.0	92	23.8	-4 29.6	23	46.9	-21 56.0
Dif	—		-4	+6		+7	-2		+23		-1		+26	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 1			Edad: 13 ^d 9 PHE { SD: 14 ^h 8 PMG: 23 ^h 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	44.4	+22	28.3	12	50.9	-19	21.0	10	60 N	22.0	10	20	19	41
1	193	44.3		28.0	27	21.7 ¹¹⁸		22.0	8	58	27	10	20	06	41
2	208	44.2		27.7	41	52.6 ¹¹⁹		22.8	8	56	27	26	19	54	42
3	223	44.1		27.4	56	23.4 ¹¹⁸		23.6	6	54	1	39	44	43	
4	238	44.0		27.2	70	54.2 ¹¹⁸		24.2	6	52	1	51	35	43	
5	253	43.9	+22	26.9	85	25.0 ¹¹⁸	-19	24.8	6	50	2	15	3	17	
6	268	43.9	+22	26.6	99	55.8 ¹¹⁸	-19	25.3	5	45	2	57	3	45	
7	283	43.8		26.3	114	26.5 ¹¹⁷		25.7	4	40	3	26	4	07	
8	298	43.7		26.0	128	57.3 ¹¹⁸		26.0	3	35	3	48	24	4	
9	313	43.6		25.7	143	28.1 ¹¹⁸		26.2	2	30	4	06	4	38	
10	328	43.5		25.4	157	58.8 ¹¹⁷		26.3	1	20	33	5	02	27	
11	343	43.4	+22	25.1	172	29.5 ¹¹⁷	-19	26.3	0	10 N	4	55	5	22	
12	358	43.3	+22	24.8	187	00.2 ¹¹⁷	-19	26.3	0	0	5	13	5	39	
13	13	43.2		24.6	201	30.9 ¹¹⁷		26.1	2	10 S	29	5	55	18	
14	28	43.1		24.3	216	01.6 ¹¹⁷		25.9	2	20	5	45	6	12	
15	43	43.0		24.0	230	32.3 ¹¹⁷		25.5	4	30	6	00	30	6	
16	58	42.9		23.7	245	02.9 ¹¹⁶		25.1	4	35	08	40	7	08	
17	73	42.8	+22	23.4	259	33.6 ¹¹⁷	-19	24.6	5	40	6	17	6	51	
18	88	42.7	+22	23.1	274	04.2 ¹¹⁶	-19	24.0	6	45	6	27	7	04	
19	103	42.6		22.8	288	34.9 ¹¹⁷		23.3	7	50	38	19	7	57	
20	118	42.5		22.5	303	05.5 ¹¹⁶		22.5	8	52	43	26	8	06	
21	133	42.4		22.2	317	36.2 ¹¹⁷		21.6	9	54	48	33	16	44	
22	148	42.4		21.9	332	06.8 ¹¹⁶		20.6	10	56	6	54	42	28	
23	163	42.3		21.6	346	37.4 ¹¹⁶		19.5	11	58	7	00	7	51	
24	178	42.2	+22	21.3	1	08.0 ¹¹⁶	-19	18.3	12	60 S	7	07	8	02	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 54 ^m 6			Mag: -4.1 PMG: 9 ^h 03 ^m			Mag: +1.7 PMG: 12 ^h 30 ^m			Mag: -2.1 PMG: 17 ^h 48 ^m			Mag: +0.1 PMG: 22 ^h 21 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	286	08.2		224	22.0	+18	172	18.1	+22	92	23.8	-4	204	46.9	-21
1	301	10.7		239	21.6		187	18.9		107	26.1		38	49.5	
2	316	13.2		254	21.2		202	19.6		122	28.4		53	52.2	
3	331	15.6		269	20.9		217	20.3		137	30.6		68	54.8	
4	346	18.1		284	20.5		232	21.0		152	32.9		83	57.4	
5	1	20.6		299	20.1	+18	247	21.8	+22	167	35.2	-4	99	00.1	-21
6	16	23.0		314	19.7	+18	262	22.5	+22	182	37.5	-4	114	02.7	-21
7	31	25.5		329	19.3		277	23.2		197	39.8		129	05.4	
8	46	28.0		344	19.0		292	24.0		212	42.0		144	08.0	
9	61	30.4		359	18.6		307	24.7		227	44.3		159	10.6	
10	76	32.9		14	18.2		322	25.4		242	46.6		174	13.3	
11	91	35.3		29	17.8	+18	337	26.1	+22	257	48.9	-4	189	15.9	-21
12	106	37.8		44	17.4	+18	352	26.9	+22	272	51.2	-4	204	18.5	-21
13	121	40.3		59	17.0		7	27.6		287	53.4		219	21.2	
14	136	42.7		74	16.7		22	28.3		302	55.7		234	23.8	
15	151	45.2		89	16.3		37	29.0		317	58.0		249	26.5	
16	166	47.7		104	15.9		52	29.8		333	00.3		264	29.1	
17	181	50.1		119	15.5	+18	67	30.5	+22	348	02.6	-4	279	31.7	-21
18	196	52.6		134	15.1	+18	82	31.2	+22	3	04.8	-4	294	34.4	-21
19	211	55.1		149	14.7		97	31.9		18	07.1		309	37.0	
20	226	57.5		164	14.3		112	32.7		33	09.4		324	39.6	
21	242	00.0		179	14.0		127	33.4		48	11.7		339	42.3	
22	257	02.5		194	13.6		142	34.1		63	13.9		354	44.9	
23	272	04.9		209	13.2		157	34.9		78	16.2		9	47.5	
24	287	07.4		224	12.8	+18	172	35.6	+22	93	18.5	-4	24	50.2	-21
Dif	—			-4	+6		+7	-3		+23	-1		+26	0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 3			Edad: 14 ^d 9 PHE { SD: 14 ^h 8 PMG: **h ***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	42.2	+22	21.3	1	08.0	-19	18.3	60 N	21 16	22 42	** **	21 00 32	3 33 59
1	193	42.1		21.0	15	38.6 ¹¹⁶		17.1 ¹²	58	20 58	22 06	** **	20 47 34	46 59
2	208	42.0		20.7	30	09.2 ¹¹⁶		15.7 ¹⁴	56	43	21 41	** **	36 35	3 58 58
3	223	41.9		20.4	44	39.8 ¹¹⁶		14.3 ¹⁴	54	30	21	22 49	27 36	4 08 57
4	238	41.8		20.1	59	10.4 ¹¹⁶		12.7 ¹⁶	52	19	21 05	22 16	18 37	17 56
5	253	41.7	+22	19.8	73	41.0 ¹¹⁶	-19	11.1 ¹⁶	50	20 09	20 51	21 53	20 10 39	4 25 56
6	268	41.6	+22	19.5	88	11.6 ¹¹⁶	-19	09.4 ¹⁷	45	19 48	20 24	21 12	19 54 40	4 43 54
7	283	41.5		19.2	102	42.1 ¹¹⁵		07.6 ¹⁸	40	31	20 03	20 43	40 42	4 57 53
8	298	41.4		18.9	117	12.7 ¹¹⁶		05.7 ¹⁹	35	17	19 46	22	29 43	5 09 52
9	313	41.3		18.6	131	43.3 ¹¹⁶		03.7 ²⁰	30	19 04	31	20 04	19 44	19 52
10	328	41.3		18.3	146	13.9 ¹¹⁶	-19	01.6 ²¹	20	18 43	19 08	19 37	19 01 46	37 51
11	343	41.2	+22	18.0	160	44.5 ¹¹⁶	-18	59.4 ²²	10 N	18 26	18 48	19 15	18 46 48	5 53 49
12	358	41.1	+22	17.7	175	15.0 ¹¹⁵	-18	57.1 ²³	0	18 09	18 31	18 57	18 32 49	6 07 49
13	13	41.0		17.3	189	45.6 ¹¹⁶		54.8 ²³	10 S	17 52	18 15	41	18 50	22 47
14	28	40.9		17.0	204	16.2 ¹¹⁶		52.3 ²⁵	20	35	17 59	26	18 03 51	37 47
15	43	40.8		16.7	218	46.8 ¹¹⁶		49.7 ²⁶	30	15	41	11	17 46 53	6 55 45
16	58	40.7		16.4	233	17.4 ¹¹⁶		47.1 ²⁶	35	17 03	31	18 02	36 54	7 05 45
17	73	40.6	+22	16.1	247	47.9 ¹¹⁵	-18	44.4 ²⁷	40	16 50	17 20	17 54	17 24 55	7 17 43
18	88	40.5	+22	15.8	262	18.5 ¹¹⁶	-18	41.6 ²⁸	45	16 34	17 07	17 44	17 10 57	7 31 42
19	103	40.5		15.5	276	49.1 ¹¹⁶		38.6 ³⁰	50	15	16 52	33	16 54 58	48 41
20	118	40.4		15.2	291	19.7 ¹¹⁶		35.6 ³⁰	52	16 06	46	29	46 59	7 55 41
21	133	40.3		14.9	305	50.3 ¹¹⁶		32.5 ³¹	54	15 55	38	24	37 60	8 04 40
22	148	40.2		14.5	320	20.9 ¹¹⁶		29.4 ³¹	56	44	30	18	28 61	14 39
23	163	40.1		14.2	334	51.5 ¹¹⁶		26.1 ³³	58	30	20	12	16 63	26 37
24	178	40.0	+22	13.9	349	22.1 ¹¹⁶	-18	22.7 ³⁴	60 S	15 14	16 10	17 05	16 04 63	8 39 36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 4 ^h 50 ^m 7		Mag: -4.1 PMG: 9 ^h 03 ^m		Mag: +1.7 PMG: 12 ^h 29 ^m		Mag: -2.0 PMG: 17 ^h 44 ^m		Mag: +0.1 PMG: 22 ^h 17 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	287	07.4	224	12.8	+18	33.4	172	35.6	+22	34.9	93	18.5	-4	31.7	24	50.2	-21	55.9	
1	302	09.8	239	12.4		34.0	187	36.3		34.6	108	20.8		31.8	39	52.8		55.9	
2	317	12.3	254	12.0		34.5	202	37.0		34.4	123	23.1		31.9	54	55.5		55.9	
3	332	14.8	269	11.6		35.1	217	37.8		34.1	138	25.3		32.0	69	58.1		55.9	
4	347	17.2	284	11.2		35.7	232	38.5		33.8	153	27.6		32.1	85	00.7		55.9	
5	2	19.7	299	10.8	+18	36.2	247	39.2	+22	33.6	168	29.9	-4	32.2	100	03.4	-21	55.9	
6	17	22.2	314	10.4	+18	36.8	262	40.0	+22	33.3	183	32.2	-4	32.3	115	06.0	-21	55.9	
7	32	24.6	329	10.0		37.4	277	40.7		33.1	198	34.4		32.4	130	08.6		55.9	
8	47	27.1	344	09.6		37.9	292	41.4		32.8	213	36.7		32.4	145	11.3		55.9	
9	62	29.6	359	09.2		38.5	307	42.2		32.5	228	39.0		32.5	160	13.9		55.9	
10	77	32.0	14	08.9		39.0	322	42.9		32.3	243	41.3		32.6	175	16.5		55.9	
11	92	34.5	29	08.5	+18	39.6	337	43.6	+22	32.0	258	43.5	-4	32.7	190	19.2	-21	55.9	
12	107	37.0	44	08.1	+18	40.2	352	44.3	+22	31.7	273	45.8	-4	32.8	205	21.8	-21	55.9	
13	122	39.4	59	07.7		40.7	7	45.1		31.5	288	48.1		32.9	220	24.4		55.9	
14	137	41.9	74	07.3		41.3	22	45.8		31.2	303	50.3		33.0	235	27.1		55.9	
15	152	44.3	89	06.9		41.8	37	46.5		31.0	318	52.6		33.1	250	29.7		55.9	
16	167	46.8	104	06.5		42.4	52	47.3		30.7	333	54.9		33.2	265	32.3		55.9	
17	182	49.3	119	06.1	+18	43.0	67	48.0	+22	30.4	348	57.2	-4	33.3	280	35.0	-21	55.9	
18	197	51.7	134	05.7	+18	43.5	82	48.7	+22	30.2	3	59.4	-4	33.4	295	37.6	-21	55.9	
19	212	54.2	149	05.3		44.1	97	49.5		29.9	19	01.7		33.4	310	40.2		55.9	
20	227	56.7	164	04.9		44.6	112	50.2		29.6	34	04.0		33.5	325	42.9		55.8	
21	242	59.1	179	04.5		45.2	127	50.9		29.4	49	06.3		33.6	340	45.5		55.8	
22	258	01.6	194	04.1		45.7	142	51.7		29.1	64	08.5		33.7	355	48.1		55.8	
23	273	04.1	209	03.7		46.3	157	52.4		28.8	79	10.8		33.8	10	50.8		55.8	
24	288	06.5	224	03.2	+18	46.8	172	53.1	+22	28.6	94	13.1	-4	33.9	25	53.4	-21	55.8	
Dif	—		-4		+6		+7		-3		+23		-1		+26				

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: 15 ^d 9 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0 PMG: 0 ^h 44 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	178	40.0	+22	13.9	349	22.1	-18	22.7	34	60 N	** **	1 29	2 55	21 32	25	4 32	68	
1	193	39.9		13.6	3	52.7 ¹¹⁶		19.3	34	58	** **	2 05	3 13	21 28		45	65	
2	208	39.8		13.3	18	23.4 ¹¹⁷		15.7	36	56	** **	30	28	11 30		4 56	63	
3	223	39.8		13.0	32	54.0 ¹¹⁶		12.1	36	54	1 22	2 50	41	21 03	31	5 05	62	
4	238	39.7		12.6	47	24.6 ¹¹⁶		08.4	37	52	1 55	3 06	3 52	20 55	33	13	62	
5	253	39.6	+22	12.3	61	55.3 ¹¹⁷	-18	04.6	38	50	2 18	3 19	4 02	20 49	33	5 21	60	
6	268	39.5	+22	12.0	76	25.9 ¹¹⁶	-18	00.7	39	45	2 59	3 47	4 23	20 34	36	5 37	58	
7	283	39.4		11.7	90	56.6 ¹¹⁷	-17	56.7	40	40	3 27	4 08	40	22 38		5 50	56	
8	298	39.3		11.4	105	27.2 ¹¹⁶		52.6	41	35	3 49	25	4 54	12 40		6 01	55	
9	313	39.2		11.1	119	57.9 ¹¹⁷		48.4	42	30	4 07	4 39	5 07	20 03	41	11	54	
10	328	39.2		10.7	134	28.6 ¹¹⁷		44.2	42	20	34	5 03	27	19 47	44	28	51	
11	343	39.1	+22	10.4	148	59.3 ¹¹⁷	-17	39.8	44	10 N	4 56	5 22	5 45	19 34	46	6 42	50	
12	358	39.0	+22	10.1	163	30.0 ¹¹⁷	-17	35.4	44	0	5 13	5 39	6 02	19 21	48	6 56	48	
13	13	38.9		09.8	178	00.7 ¹¹⁷		30.9	45	10 S	29	5 56	18	19 08	50	7 09	47	
14	28	38.8		09.4	192	31.4 ¹¹⁷		26.3	46	20	5 45	6 12	36	18 54	52	24	44	
15	43	38.7		09.1	207	02.2 ¹¹⁸		21.6	47	30	6 00	30	6 56	39 54		40	43	
16	58	38.6		08.8	221	32.9 ¹¹⁷		16.8	48	35	08	39	7 07	30 56		7 50	41	
17	73	38.6	+22	08.5	236	03.7 ¹¹⁸	-17	12.0	48	40	6 17	6 50	7 20	18 19	58	8 00	40	
18	88	38.5	+22	08.1	250	34.4 ¹¹⁷	-17	07.1	49	45	6 26	7 03	7 36	18 07	60	8 13	38	
19	103	38.4		07.8	265	05.2 ¹¹⁸	-17	02.0	51	50	37	18	7 55	17 52	62	29	36	
20	118	38.3		07.5	279	36.0 ¹¹⁸	-16	56.9	51	52	42	25	8 04	45 63		36	35	
21	133	38.2		07.1	294	06.8 ¹¹⁸		51.7	52	54	47	32	15	37 65		44	34	
22	148	38.1		06.8	308	37.6 ¹¹⁸		46.5	52	56	52	40	26	29 66		8 53	32	
23	163	38.1		06.5	323	08.4 ¹¹⁸		41.1	54	58	6 58	7 50	40	19 68		9 03	31	
24	178	38.0	+22	06.2	337	39.2 ¹¹⁸	-16	35.7	54	60 S	7 05	8 00	8 55	17 07	71	9 15	28	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 46 ^m 8		Mag: -4.1 PMG: 9 ^h 04 ^m		Mag: +1.7 PMG: 12 ^h 28 ^m		Mag: -2.0 PMG: 17 ^h 40 ^m		Mag: +0.1 PMG: 22 ^h 13 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	288	06.5	224	03.2	+18	46.8	172	53.1	+22	28.6	94	13.1	-4	33.9	25	53.4	-21	55.8
1	303	09.0	239	02.8		47.4	187	53.8		28.3	109	15.3		34.0	40	56.0		55.8
2	318	11.4	254	02.4		47.9	202	54.6		28.0	124	17.6		34.1	55	58.7		55.8
3	333	13.9	269	02.0		48.5	217	55.3		27.8	139	19.9		34.2	71	01.3		55.8
4	348	16.4	284	01.6		49.0	232	56.0		27.5	154	22.1		34.3	86	03.9		55.8
5	3	18.8	299	01.2	+18	49.6	247	56.8	+22	27.2	169	24.4	-4	34.4	101	06.6	-21	55.8
6	18	21.3	314	00.8	+18	50.1	262	57.5	+22	27.0	184	26.7	-4	34.5	116	09.2	-21	55.8
7	33	23.8	329	00.4		50.7	277	58.2		26.7	199	29.0		34.5	131	11.8		55.8
8	48	26.2	344	00.0		51.2	292	59.0		26.4	214	31.2		34.6	146	14.5		55.8
9	63	28.7	358	59.6		51.8	307	59.7		26.2	229	33.5		34.7	161	17.1		55.8
10	78	31.2	13	59.2		52.3	323	00.4		25.9	244	35.8		34.8	176	19.7		55.8
11	93	33.6	28	58.8	+18	52.9	338	01.2	+22	25.6	259	38.0	-4	34.9	191	22.4	-21	55.8
12	108	36.1	43	58.4	+18	53.4	353	01.9	+22	25.3	274	40.3	-4	35.0	206	25.0	-21	55.8
13	123	38.6	58	57.9		54.0	8	02.6		25.1	289	42.6		35.1	221	27.6		55.8
14	138	41.0	73	57.5		54.5	23	03.4		24.8	304	44.8		35.2	236	30.3		55.8
15	153	43.5	88	57.1		55.1	38	04.1		24.5	319	47.1		35.3	251	32.9		55.8
16	168	45.9	103	56.7		55.6	53	04.8		24.3	334	49.4		35.4	266	35.5		55.8
17	183	48.4	118	56.3	+18	56.1	68	05.6	+22	24.0	349	51.6	-4	35.5	281	38.2	-21	55.8
18	198	50.9	133	55.9	+18	56.7	83	06.3	+22	23.7	4	53.9	-4	35.6	296	40.8	-21	55.8
19	213	53.3	148	55.5		57.2	98	07.1		23.4	19	56.2		35.7	311	43.4		55.8
20	228	55.8	163	55.0		57.8	113	07.8		23.2	34	58.4		35.8	326	46.1		55.8
21	243	58.3	178	54.6		58.3	128	08.5		22.9	50	00.7		35.9	341	48.7		55.8
22	259	00.7	193	54.2		58.8	143	09.3		22.6	65	03.0		35.9	356	51.3		55.8
23	274	03.2	208	53.8		59.4	158	10.0		22.4	80	05.2		36.0	11	54.0		55.8
24	289	05.7	223	53.4	+18	59.9	173	10.7	+22	22.1	95	07.5	-4	36.1	26	56.6	-21	55.8
Dif	—		-4		+5		+7		-3		+23		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 05 ^m 5			Edad: 16 ^d 9 PHE { SD: 15/0 PMG: 1 ^h 32 ^m R°: 48 ^m 4 ^h : 55/2 12 ^h : 55/3 20 ^h : 55/4										
	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	38.0	+22 06.2	337	39.2	-16 35.7	56	60 N	21 13	22 36	** **	21 57 21	5 40 72	
1	193	37.9	05.8	352	10.1 ¹¹⁹	30.1	56	58	20 56	22 02	** **	49 23	50 71	
2	208	37.8	05.5	6	40.9 ¹¹⁸	24.5	56	56	41	21 38	** **	41 25	5 59 69	
3	223	37.7	05.2	21	11.8 ¹¹⁹	18.8	57	54	28	19	22 44	34 27	6 07 67	
4	238	37.6	04.8	35	42.7 ¹¹⁹	13.1	57	52	17	21 03	22 12	28 29	15 65	
5	253	37.6	+22 04.5	50	13.6 ¹¹⁹	-16 07.2	59	50	20 07	20 50	21 50	21 22 30	6 21 64	
6	268	37.5	+22 04.2	64	44.5 ¹¹⁹	-16 01.3	59	45	19 46	20 23	21 10	21 10 33	6 35 61	
7	283	37.4	03.8	79	15.4 ¹¹⁹	-15 55.3	60	40	30	20 02	20 42	21 00 36	46 59	
8	298	37.3	03.5	93	46.4 ¹²⁰	49.2	61	35	16	19 45	21	20 52 37	6 56 57	
9	313	37.2	03.1	108	17.3 ¹¹⁹	43.0	62	30	19 04	31	20 03	44 39	7 05 55	
10	328	37.1	02.8	122	48.3 ¹²⁰	36.8	62	20	18 43	19 08	19 36	31 42	19 53	
11	343	37.1	+22 02.5	137	19.3 ¹²⁰	-15 30.4	64	10 N	18 26	18 48	19 15	20 20 45	7 32 50	
12	358	37.0	+22 02.1	151	50.3 ¹²⁰	-15 24.0	64	0	18 09	18 31	18 57	20 09 47	7 44 48	
13	13	36.9	01.8	166	21.3 ¹²⁰	17.6	64	10 S	17 53	18 15	42	19 58 50	7 56 45	
14	28	36.8	01.5	180	52.3 ¹²⁰	11.0	66	20	36	17 59	27	46 53	8 08 43	
15	43	36.7	01.1	195	23.3 ¹²⁰	-15 04.4	66	30	16	42	11	33 56	23 40	
16	58	36.7	00.8	209	54.4 ¹²¹	-14 57.7	67	35	17 04	32	18 03	26 57	31 39	
17	73	36.6	+22 00.4	224	25.4 ¹²⁰	-14 50.9	68	40	16 51	17 21	17 55	19 17 60	8 40 37	
18	88	36.5	+22 00.1	238	56.5 ¹²¹	-14 44.0	69	45	16 36	17 09	17 46	19 07 62	8 51 35	
19	103	36.4	+21 59.7	253	27.6 ¹²¹	37.1	69	50	17	16 54	35	18 54 65	9 05 31	
20	118	36.3	59.4	267	58.7 ¹²¹	30.1	70	52	16 08	47	30	48 67	11 30	
21	133	36.3	59.0	282	29.8 ¹²¹	23.0	71	54	15 58	40	25	42 68	18 28	
22	148	36.2	58.7	297	01.0 ¹²²	15.8	72	56	46	32	20	35 70	25 27	
23	163	36.1	58.4	311	32.1 ¹²¹	08.6	72	58	33	23	14	27 72	34 25	
24	178	36.0	+21 58.0	326	03.3 ¹²²	-14 01.3	73	60 S	15 18	16 12	17 07	18 18 74	9 43 23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 42 ^m 8		Mag: -4.1 PMG: 9 ^h 05 ^m		Mag: +1.7 PMG: 12 ^h 27 ^m		Mag: -2.0 PMG: 17 ^h 37 ^m		Mag: +0.1 PMG: 22 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	289	05.7	223 53.4	+18 59.9	173 10.7	+22 22.1	95 07.5	-4 36.1	26 56.6	-21 55.8
1	304	08.1	238 53.0	+19 00.5	188 11.5	21.8	110 09.8	36.2	41 59.2	55.8
2	319	10.6	253 52.5	01.0	203 12.2	21.5	125 12.0	36.3	57 01.9	55.8
3	334	13.1	268 52.1	01.5	218 12.9	21.3	140 14.3	36.4	72 04.5	55.8
4	349	15.5	283 51.7	02.1	233 13.7	21.0	155 16.5	36.5	87 07.1	55.8
5	4	18.0	298 51.3	+19 02.6	248 14.4	+22 20.7	170 18.8	-4 36.6	102 09.7	-21 55.8
6	19	20.4	313 50.9	+19 03.1	263 15.1	+22 20.4	185 21.1	-4 36.7	117 12.4	-21 55.8
7	34	22.9	328 50.4	03.7	278 15.9	20.2	200 23.3	36.8	132 15.0	55.8
8	49	25.4	343 50.0	04.2	293 16.6	19.9	215 25.6	36.9	147 17.6	55.8
9	64	27.8	358 49.6	04.7	308 17.4	19.6	230 27.9	37.0	162 20.3	55.7
10	79	30.3	13 49.2	05.3	323 18.1	19.3	245 30.1	37.1	177 22.9	55.7
11	94	32.8	28 48.7	+19 05.8	338 18.8	+22 19.1	260 32.4	-4 37.2	192 25.5	-21 55.7
12	109	35.2	43 48.3	+19 06.3	353 19.6	+22 18.8	275 34.6	-4 37.3	207 28.2	-21 55.7
13	124	37.7	58 47.9	06.9	8 20.3	18.5	290 36.9	37.4	222 30.8	55.7
14	139	40.2	73 47.5	07.4	23 21.0	18.2	305 39.2	37.5	237 33.4	55.7
15	154	42.6	88 47.0	07.9	38 21.8	18.0	320 41.4	37.6	252 36.1	55.7
16	169	45.1	103 46.6	08.4	53 22.5	17.7	335 43.7	37.7	267 38.7	55.7
17	184	47.6	118 46.2	+19 09.0	68 23.3	+22 17.4	350 46.0	-4 37.8	282 41.3	-21 55.7
18	199	50.0	133 45.8	+19 09.5	83 24.0	+22 17.1	5 48.2	-4 37.8	297 43.9	-21 55.7
19	214	52.5	148 45.3	10.0	98 24.7	16.8	20 50.5	37.9	312 46.6	55.7
20	229	54.9	163 44.9	10.5	113 25.5	16.6	35 52.7	38.0	327 49.2	55.7
21	244	57.4	178 44.5	11.1	128 26.2	16.3	50 55.0	38.1	342 51.8	55.7
22	259	59.9	193 44.0	11.6	143 27.0	16.0	65 57.3	38.2	357 54.5	55.7
23	275	02.3	208 43.6	12.1	158 27.7	15.7	80 59.5	38.3	12 57.1	55.7
24	290	04.8	223 43.2	+19 12.6	173 28.4	+22 15.4	96 01.8	-4 38.4	27 59.7	-21 55.7
Dif	—		-4	+5	+7	-3	+23	-1	+26	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 17 ^d 9	PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 55 ^m 9	SD: 15 ^h 1		R°: 48 ^m	R°		R°					
	PMG: 12 ^h 05 ^m 7					PMG: 2 ^h 20 ^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	178	36.0	+21	58.0	326	03.3	-14 01.3	60 N	** *	1 36	2 58	22	18	18	6 52	77
1	193	36.0		57.7	340	34.4 ¹²¹	-13 53.9 ⁷⁴	58	** *	2 09	3 16		12	20	7 01	73
2	208	35.9		57.3	355	05.6 ¹²²	46.5 ⁷⁵	56	** *		33		06	23	08	71
3	223	35.8		57.0	9	36.8 ¹²²	39.0 ⁷⁴	54	1 28	2 52	43	22	01	24	14	70
4	238	35.7		56.6	24	08.0 ¹²²	31.4 ⁷⁶	52	1 59	3 08	3 55	21	57	25	20	68
5	253	35.6	+21	56.3	38	39.3 ¹²³	-13 23.7 ⁷⁷	50	2 22	3 22	4 04	21	52	28	7 25	66
6	268	35.6	+21	55.9	53	10.5 ¹²²	-13 16.0 ⁷⁷	45	3 01	3 49	4 25	21	43	31	7 36	63
7	283	35.5		55.6	67	41.8 ¹²³	08.2 ⁷⁸	40	29	4 10	42		36	33	45	61
8	298	35.4		55.2	82	13.0 ¹²²	-13 00.4 ⁷⁸	35	3 51	26	4 56	29	36		7 53	58
9	313	35.3		54.9	96	44.3 ¹²³	-12 52.5 ⁷⁹	30	4 08	4 41	5 08	23	38		8 00	56
10	328	35.3		54.5	111	15.6 ¹²³	44.5 ⁸⁰	20	35	5 04	28	13	42		12	53
11	343	35.2	+21	54.2	125	46.9 ¹²³	-12 36.4 ⁸¹	10 N	4 56	5 23	5 46	21	05	44	8 22	50
12	358	35.1	+21	53.8	140	18.2 ¹²³	-12 28.3 ⁸¹	0	5 14	5 40	6 02	20	56	47	8 32	47
13	13	35.0		53.4	154	49.6 ¹²⁴	20.1 ⁸²	10 S	30	5 56	18	48	50		41	45
14	28	35.0		53.1	169	20.9 ¹²³	11.9 ⁸²	20	5 45	6 12	35	39	53		8 51	42
15	43	34.9		52.7	183	52.2 ¹²³	-12 03.6 ⁸³	30	6 00	29	6 55	29	57		9 03	38
16	58	34.8		52.4	198	23.6 ¹²⁴	-11 55.2 ⁸⁴	35	08	39	7 07	23	59		10	36
17	73	34.7	+21	52.0	212	55.0 ¹²⁴	-11 46.7 ⁸⁵	40	6 16	6 50	7 20	20	17	61	9 17	34
18	88	34.7	+21	51.7	227	26.4 ¹²⁴	-11 38.2 ⁸⁵	45	6 25	7 02	7 35	20	09	64	9 26	31
19	103	34.6		51.3	241	57.8 ¹²⁴	29.7 ⁸⁵	50	36	17	7 54	19	59	68	36	29
20	118	34.5		50.9	256	29.2 ¹²⁴	21.1 ⁸⁶	52	40	23	8 03	55	69		41	27
21	133	34.4		50.6	271	00.6 ¹²⁴	12.4 ⁸⁷	54	45	31	13	50	71		46	26
22	148	34.4		50.2	285	32.0 ¹²⁴	-11 03.6 ⁸⁸	56	51	39	24	45	73		52	24
23	163	34.3		49.9	300	03.4 ¹²⁴	-10 54.8 ⁸⁸	58	6 57	48	37	39	75		9 59	21
24	178	34.2	+21	49.5	314	34.9 ¹²⁵	-10 46.0 ⁸⁸	60 S	7 03	7 58	8 53	19	32	78	10 06	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 38 ^m 9		Mag: -4.1 PMG: 9 ^h 05 ^m		Mag: +1.7 PMG: 12 ^h 25 ^m		Mag: -2.0 PMG: 17 ^h 33 ^m		Mag: +0.1 PMG: 22 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	290	04.8	223	43.2	+19	12.6	173	28.4	+22	15.4	96	01.8	-4	38.4	27	59.7	-21	55.7
1	305	07.3	238	42.7		13.1	188	29.2		15.2	111	04.0		38.5	43	02.3		55.7
2	320	09.7	253	42.3		13.7	203	29.9		14.9	126	06.3		38.6	58	05.0		55.7
3	335	12.2	268	41.9		14.2	218	30.6		14.6	141	08.5		38.7	73	07.6		55.7
4	350	14.7	283	41.4		14.7	233	31.4		14.3	156	10.8		38.8	88	10.2		55.7
5	5	17.1	298	41.0	+19	15.2	248	32.1	+22	14.0	171	13.1	-4	38.9	103	12.9	-21	55.7
6	20	19.6	313	40.6	+19	15.7	263	32.9	+22	13.8	186	15.3	-4	39.0	118	15.5	-21	55.7
7	35	22.0	328	40.1		16.3	278	33.6		13.5	201	17.6		39.1	133	18.1		55.7
8	50	24.5	343	39.7		16.8	293	34.4		13.2	216	19.8		39.2	148	20.7		55.7
9	65	27.0	358	39.3		17.3	308	35.1		12.9	231	22.1		39.3	163	23.4		55.7
10	80	29.4	13	38.8		17.8	323	35.8		12.6	246	24.3		39.4	178	26.0		55.7
11	95	31.9	28	38.4	+19	18.3	338	36.6	+22	12.3	261	26.6	-4	39.5	193	28.6	-21	55.7
12	110	34.4	43	37.9	+19	18.8	353	37.3	+22	12.1	276	28.9	-4	39.6	208	31.3	-21	55.7
13	125	36.8	58	37.5		19.3	8	38.1		11.8	291	31.1		39.7	223	33.9		55.7
14	140	39.3	73	37.1		19.9	23	38.8		11.5	306	33.4		39.8	238	36.5		55.7
15	155	41.8	88	36.6		20.4	38	39.5		11.2	321	35.6		39.9	253	39.1		55.7
16	170	44.2	103	36.2		20.9	53	40.3		10.9	336	37.9		40.0	268	41.8		55.7
17	185	46.7	118	35.7	+19	21.4	68	41.0	+22	10.6	351	40.1	-4	40.1	283	44.4	-21	55.7
18	200	49.2	133	35.3	+19	21.9	83	41.8	+22	10.3	6	42.4	-4	40.2	298	47.0	-21	55.7
19	215	51.6	148	34.9		22.4	98	42.5		10.1	21	44.6		40.3	313	49.6		55.7
20	230	54.1	163	34.4		22.9	113	43.2		09.8	36	46.9		40.4	328	52.3		55.7
21	245	56.5	178	34.0		23.4	128	44.0		09.5	51	49.2		40.5	343	54.9		55.7
22	260	59.0	193	33.5		23.9	143	44.7		09.2	66	51.4		40.6	358	57.5		55.7
23	276	01.5	208	33.1		24.4	158	45.5		08.9	81	53.7		40.7	14	00.2		55.7
24	291	03.9	223	32.6	+19	24.9	173	46.2	+22	08.6	96	55.9	-4	40.8	29	02.8	-21	55.7
Dif	—		-4		+5		+7		-3		+23		-1		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 18 ^d 9	PHE {	4 ^h : 56 ^m 1 12 ^h : 56 ^m 3 20 ^h : 56 ^m 5									
	PMG: 12 ^h 05 ^m 8								SD: 15 ^h 3		PMG: 3 ^h 08 ^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	
0	178	34.2	+21 49.5	314	34.9	-10 46.0		60 N	21 10	22 30	** **	22 36 16		8 09 78	
1	193	34.1		329	06.3 ¹²⁴	37.1 ⁸⁹		58	20 53	21 58	** **	32 19		14 76	
2	208	34.1		343	37.8 ¹²⁵	28.1 ⁹⁰		56	38	35	23 33	29 20		19 74	
3	223	34.0		358	09.3 ¹²⁵	19.1 ⁹⁰		54	26	16	22 38	25 23		24 71	
4	238	33.9		12	40.7 ¹²⁴	10.0 ⁹¹		52	15	21 01	22 09	22 25		28 69	
5	253	33.8	+21 47.7	27	12.2 ¹²⁵	-10 00.8 ⁹²		50	20 05	20 48	21 47	22 20 26		8 31 68	
6	268	33.8	+21 47.3	41	43.7 ¹²⁵	-9 51.7 ⁹¹		45	19 45	20 21	21 08	22 14 29		8 39 65	
7	283	33.7		56	15.2 ¹²⁵	42.4 ⁹³		40	29	20 01	20 41	09 32		46 61	
8	298	33.6		70	46.7 ¹²⁵	33.1 ⁹³		35	15	19 44	20	05 34		51 60	
9	313	33.6		85	18.2 ¹²⁵	23.8 ⁹³		30	19 03	30	20 03	22 01 37		8 56 57	
10	328	33.5		99	49.7 ¹²⁵	14.4 ⁹⁴		20	18 43	19 07	19 36	21 55 40		9 05 53	
11	343	33.4	+21 45.5	114	21.2 ¹²⁵	-9 04.9 ⁹⁵		10 N	18 26	18 48	19 15	21 49 44		9 12 50	
12	358	33.3	+21 45.1	128	52.7 ¹²⁵	-8 55.4 ⁹⁵		0	18 09	18 32	18 58	21 43 48		9 19 47	
13	13	33.3		143	24.3 ¹²⁶	45.8 ⁹⁶		10 S	17 53	16	42	38 50		26 44	
14	28	33.2		157	55.8 ¹²⁵	36.2 ⁹⁶		20	36	18 00	27	32 54		33 41	
15	43	33.1		172	27.3 ¹²⁵	26.6 ⁹⁶		30	17	17 43	12	26 57		41 37	
16	58	33.1		186	58.8 ¹²⁵	16.9 ⁹⁷		35	17 06	33	18 05	22 60		46 35	
17	73	33.0	+21 43.2	201	30.4 ¹²⁶	-8 07.1 ⁹⁸		40	16 53	17 23	17 56	21 18 62		9 51 33	
18	88	32.9	+21 42.9	216	01.9 ¹²⁵	-7 57.4 ⁹⁷		45	16 37	17 10	17 47	21 13 65		9 57 30	
19	103	32.8		230	33.4 ¹²⁵	47.5 ⁹⁹		50	19	16 56	37	07 69		10 05 26	
20	118	32.8		245	05.0 ¹²⁶	37.6 ⁹⁹		52	10	49	32	04 71		08 25	
21	133	32.7		259	36.5 ¹²⁵	27.7 ⁹⁹		54	16 00	42	27	21 01 72		12 23	
22	148	32.6		274	08.0 ¹²⁵	17.7 ¹⁰⁰		56	15 49	34	22	20 58 74		16 21	
23	163	32.6		41.0	288 39.6 ¹²⁶	-7 07.7 ¹⁰⁰		58	36	25	16	54 77		20 20	
24	178	32.5	+21 40.6	303	11.1 ¹²⁵	-6 57.7 ¹⁰⁰		60 S	15 21	16 15	17 10	20 50 79		10 25 17	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 35 ^m 0		Mag: -4.1 PMG: 9 ^h 06 ^m		Mag: +1.7 PMG: 12 ^h 24 ^m		Mag: -2.0 PMG: 17 ^h 30 ^m		Mag: +0.1 PMG: 22 ^h 00 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	291	03.9	223	32.6	+19 24.9	173	46.2	+22 08.6	96	55.9	-4 40.8	29 02.8	-21 55.7		
1	306	06.4	238	32.2	25.4	188	47.0	08.3	111	58.2	40.9	44 05.4	55.6		
2	321	08.9	253	31.7	25.9	203	47.7	08.1	127	00.4	41.0	59 08.0	55.6		
3	336	11.3	268	31.3	26.5	218	48.4	07.8	142	02.7	41.1	74 10.7	55.6		
4	351	13.8	283	30.8	27.0	233	49.2	07.5	157	04.9	41.2	89 13.3	55.6		
5	6	16.3	298	30.4	+19 27.5	248	49.9	+22 07.2	172	07.2	-4 41.3	104 15.9	-21 55.6		
6	21	18.7	313	30.0	+19 28.0	263	50.7	+22 06.9	187	09.4	-4 41.4	119 18.5	-21 55.6		
7	36	21.2	328	29.5	28.5	278	51.4	06.6	202	11.7	41.5	134 21.2	55.6		
8	51	23.7	343	29.1	29.0	293	52.2	06.3	217	13.9	41.6	149 23.8	55.6		
9	66	26.1	358	28.6	29.5	308	52.9	06.0	232	16.2	41.7	164 26.4	55.6		
10	81	28.6	13	28.1	30.0	323	53.7	05.7	247	18.4	41.8	179 29.0	55.6		
11	96	31.0	28	27.7	+19 30.5	338	54.4	+22 05.5	262	20.7	-4 41.9	194 31.7	-21 55.6		
12	111	33.5	43	27.2	+19 31.0	353	55.1	+22 05.2	277	22.9	-4 42.0	209 34.3	-21 55.6		
13	126	36.0	58	26.8	31.4	8	55.9	04.9	292	25.2	42.1	224 36.9	55.6		
14	141	38.4	73	26.3	31.9	23	56.6	04.6	307	27.4	42.2	239 39.5	55.6		
15	156	40.9	88	25.9	32.4	38	57.4	04.3	322	29.7	42.3	254 42.2	55.6		
16	171	43.4	103	25.4	32.9	53	58.1	04.0	337	31.9	42.4	269 44.8	55.6		
17	186	45.8	118	25.0	+19 33.4	68	58.9	+22 03.7	352	34.2	-4 42.5	284 47.4	-21 55.6		
18	201	48.3	133	24.5	+19 33.9	83	59.6	+22 03.4	7	36.4	-4 42.6	299 50.0	-21 55.6		
19	216	50.8	148	24.1	34.4	99	00.4	03.1	22	38.7	42.7	314 52.7	55.6		
20	231	53.2	163	23.6	34.9	114	01.1	02.8	37	40.9	42.8	329 55.3	55.6		
21	246	55.7	178	23.2	35.4	129	01.9	02.5	52	43.2	42.9	344 57.9	55.6		
22	261	58.1	193	22.7	35.9	144	02.6	02.2	67	45.4	43.0	0 00.5	55.6		
23	277	00.6	208	22.2	36.4	159	03.3	01.9	82	47.7	43.1	15 03.2	55.6		
24	292	03.1	223	21.8	+19 36.9	174	04.1	+22 01.7	97	49.9	-4 43.2	30 05.8	-21 55.6		
Dif	—		-5		+5	+7		-3	+23		-1		+26		

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 9			Edad: 19 ^d 9 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 9 20 ^h : 57 ^m 1 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	32.5	+21	40.6	303	11.1	-6	57.7	60 N	** *	1 42	3 02	22 52	16	9 27	80
1	193	32.4		40.2	317	42.6		47.6	58	** *	2 14	19	51	18	30	78
2	208	32.4		39.8	332	14.2		37.4	56	0 39	37	34	49	21	33	75
3	223	32.3		39.5	346	45.7		27.3	54	1 34	2 56	46	48	22	35	74
4	238	32.2		39.1	1	17.2		17.0	52	2 03	3 11	3 57	47	24	37	72
5	253	32.2	+21	38.7	15	48.7		-6 06.8	50	2 25	3 24	4 07	22 46	25	9 39	70
6	268	32.1	+21	38.3	30	20.2		-5 56.5	45	3 04	3 51	4 27	22 43	30	9 44	66
7	283	32.0		37.9	44	51.7		46.2	40	31	4 11	43	41	32	47	63
8	298	32.0		37.6	59	23.2		35.8	35	3 52	28	4 57	39	35	51	60
9	313	31.9		37.2	73	54.7		25.4	30	4 09	4 42	5 09	38	37	53	58
10	328	31.8		36.8	88	26.2		15.0	20	36	5 05	29	35	41	9 58	54
11	343	31.8	+21	36.4	102	57.6		-5 04.5	10 N	4 57	5 23	5 46	22 33	44	10 02	51
12	358	31.7	+21	36.0	117	29.1		-4 54.0	0	5 14	5 40	6 02	22 31	48	10 06	47
13	13	31.6		35.6	132	00.5		43.4	10 S	30	5 56	18	28	52	10 44	
14	28	31.6		35.2	146	32.0		32.9	20	44	6 12	35	26	55	14 40	
15	43	31.5		34.9	161	03.4		22.3	30	5 59	29	6 55	23	59	18 37	
16	58	31.4		34.5	175	34.8		11.7	35	6 07	38	7 06	22	61	21 34	
17	73	31.4	+21	34.1	190	06.2		-4 01.0	40	6 15	6 49	7 19	22 20	64	10 24	32
18	88	31.3	+21	33.7	204	37.6		-3 50.3	45	6 24	7 01	7 34	22 18	67	10 27	29
19	103	31.2		33.3	219	09.0		39.6	50	35	15	7 52	16	71	31 26	
20	118	31.2		32.9	233	40.4		28.8	52	39	22	8 01	15	72	33 24	
21	133	31.1		32.5	248	11.7		18.1	54	44	29	11	13	75	35 22	
22	148	31.0		32.1	262	43.0		-3 07.3	56	49	37	22	12	77	37 21	
23	163	31.0		31.7	277	14.4		-2 56.5	58	6 55	46	35	11	78	40 18	
24	178	30.9	+21	31.3	291	45.7		-2 45.6	60 S	7 01	7 56	8 50	22 09	81	10 42	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 31 ^m 1		Mag: -4.1 PMG: 9 ^h 07 ^m		Mag: +1.7 PMG: 12 ^h 23 ^m		Mag: -2.0 PMG: 17 ^h 26 ^m		Mag: +0.2 PMG: 21 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	292	03.1	223	21.8	+19	36.9	174	04.1	+22	01.7	97	49.9	-4	43.2	30	05.8	-21	55.6
1	307	05.5	238	21.3		37.3	189	04.8		01.4	112	52.2		43.3	45	08.4		55.6
2	322	08.0	253	20.9		37.8	204	05.6		01.1	127	54.4		43.4	60	11.0		55.6
3	337	10.5	268	20.4		38.3	219	06.3		00.8	142	56.7		43.5	75	13.7		55.6
4	352	12.9	283	19.9		38.8	234	07.1		00.5	157	58.9		43.6	90	16.3		55.6
5	7	15.4	298	19.5	+19	39.3	249	07.8	+22	00.2	173	01.2	-4	43.7	105	18.9	-21	55.6
6	22	17.9	313	19.0	+19	39.8	264	08.6	+21	59.9	188	03.4	-4	43.8	120	21.5	-21	55.6
7	37	20.3	328	18.6		40.3	279	09.3		59.6	203	05.7		43.9	135	24.1		55.6
8	52	22.8	343	18.1		40.7	294	10.1		59.3	218	07.9		44.0	150	26.8		55.6
9	67	25.3	358	17.6		41.2	309	10.8		59.0	233	10.1		44.1	165	29.4		55.6
10	82	27.7	13	17.2		41.7	324	11.6		58.7	248	12.4		44.2	180	32.0		55.6
11	97	30.2	28	16.7	+19	42.2	339	12.3	+21	58.4	263	14.6	-4	44.3	195	34.6	-21	55.6
12	112	32.6	43	16.2	+19	42.7	354	13.1	+21	58.1	278	16.9	-4	44.4	210	37.3	-21	55.6
13	127	35.1	58	15.8		43.1	9	13.8		57.8	293	19.1		44.5	225	39.9		55.6
14	142	37.6	73	15.3		43.6	24	14.6		57.5	308	21.4		44.6	240	42.5		55.6
15	157	40.0	88	14.8		44.1	39	15.3		57.2	323	23.6		44.7	255	45.1		55.6
16	172	42.5	103	14.4		44.6	54	16.1		56.9	338	25.9		44.8	270	47.8		55.6
17	187	45.0	118	13.9	+19	45.1	69	16.8	+21	56.6	353	28.1	-4	44.9	285	50.4	-21	55.6
18	202	47.4	133	13.4	+19	45.5	84	17.6	+21	56.3	8	30.3	-4	45.0	300	53.0	-21	55.6
19	217	49.9	148	13.0		46.0	99	18.3		56.0	23	32.6		45.1	315	55.6		55.6
20	232	52.4	163	12.5		46.5	114	19.1		55.7	38	34.8		45.2	330	58.2		55.6
21	247	54.8	178	12.0		46.9	129	19.8		55.4	53	37.1		45.3	346	00.9		55.6
22	262	57.3	193	11.5		47.4	144	20.6		55.1	68	39.3		45.4	1	03.5		55.5
23	277	59.7	208	11.1		47.9	159	21.3		54.8	83	41.6		45.5	16	06.1		55.5
24	293	02.2	223	10.6	+19	48.4	174	22.1	+21	54.5	98	43.8	-4	45.6	31	08.7	-21	55.5
Dif	—		-5 +5		+7 -3		+22 -1		-1 +26									

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7				Edad: 20 ^d 9 PHE	SD: 15 ^h 6					R°: 48 ^m	Civil			Náutico		Hora R°			
	hG ☉	Dec				hG ☾	Dif					Dec	Dif	Civil			Náutico		Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	178	30.9	+21	31.3	291	45.7	-2	45.6	60 N	21 07	22 24	** **	23 08 17	10 47 82						
1	193	30.8		30.9	306	16.9 ¹²²		34.8 ¹⁰⁸	58	20 50	21 54	** **	09 19	48 79						
2	208	30.8		30.5	320	48.2 ¹²³		23.9 ¹⁰⁹	56	36	31	23 19	10 21	48 77						
3	223	30.7		30.2	335	19.4 ¹²²		13.0 ¹⁰⁹	54	24	21 14	22 33	10 24	49 75						
4	238	30.7		29.8	349	50.7 ¹²³		-2 02.0 ¹¹⁰	52	13	20 58	22 05	11 25	49 73						
5	253	30.6	+21	29.4	4	21.9 ¹²²		-1 51.1 ¹⁰⁹	50	20 04	20 46	21 44	23 11 27	10 49 72						
6	268	30.5	+21	29.0	18	53.0 ¹²¹		-1 40.1 ¹¹⁰	45	19 44	20 20	21 06	23 13 30	10 50 68						
7	283	30.5		28.6	33	24.2 ¹²²		29.1 ¹¹⁰	40	28	20 00	20 39	13 34	50 65						
8	298	30.4		28.2	47	55.3 ¹²¹		18.1 ¹¹⁰	35	14	19 43	19	14 36	51 62						
9	313	30.3		27.8	62	26.4 ¹²¹		-1 07.1 ¹¹⁰	30	19 03	29	20 02	15 39	51 60						
10	328	30.3		27.4	76	57.5 ¹²¹		-0 56.1 ¹¹⁰	20	18 43	19 07	19 35	16 43	52 56						
11	343	30.2	+21	27.0	91	28.6 ¹²¹		-0 45.0 ¹¹¹	10 N	18 26	18 48	19 15	23 17 47	10 53 52						
12	358	30.2	+21	26.6	105	59.6 ¹²⁰		-0 33.9 ¹¹¹	0	18 10	18 32	18 58	23 19 49	10 53 49						
13	13	30.1		26.2	120	30.6 ¹²⁰		22.9 ¹¹⁰	10 S	17 54	16	42	20 53	54 45						
14	28	30.0		25.8	135	01.6 ¹²⁰		11.8 ¹¹¹	20	37	18 01	28	21 56	54 42						
15	43	30.0		25.4	149	32.5 ¹¹⁹		-0 00.7 ¹¹¹	30	18	17 44	13	22 61	55 38						
16	58	29.9		25.0	164	03.4 ¹¹⁹		+0 10.4 ¹¹¹	35	17 07	34	18 06	23 63	55 36						
17	73	29.9	+21	24.6	178	34.3 ¹¹⁹		+0 21.6 ¹¹²	40	16 54	17 24	17 57	23 24 66	10 56 33						
18	88	29.8	+21	24.1	193	05.2 ¹¹⁹		+0 32.7 ¹¹¹	45	16 39	17 12	17 49	23 25 69	10 56 30						
19	103	29.7		23.7	207	36.0 ¹¹⁸		43.8 ¹¹¹	50	21	16 58	39	27 72	57 26						
20	118	29.7		23.3	222	06.8 ¹¹⁸		+0 55.0 ¹¹²	52	12	51	34	27 75	57 24						
21	133	29.6		22.9	236	37.6 ¹¹⁸		+1 06.1 ¹¹¹	54	16 02	44	29	28 76	57 23						
22	148	29.6		22.5	251	08.3 ¹¹⁷		17.3 ¹¹²	56	15 52	37	24	29 78	58 20						
23	163	29.5		22.1	265	39.0 ¹¹⁷		28.4 ¹¹¹	58	39	28	18	29 81	58 18						
24	178	29.4	+21	21.7	280	09.6 ¹¹⁶		+1 39.6 ¹¹²	60 S	15 24	16 18	17 12	23 30 84	10 58 16						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 27 ^m 1				Mag: -4.1 PMG: 9 ^h 08 ^m				Mag: +1.7 PMG: 12 ^h 22 ^m				Mag: -2.0 PMG: 17 ^h 22 ^m				Mag: +0.2 PMG: 21 ^h 52 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	293	02.2	223	10.6	+19	48.4	174	22.1	+21	54.5	98	43.8	-4	45.6	31	08.7	-21	55.5		
1	308	04.7	238	10.1		48.8	189	22.8		54.2	113	46.0		45.7	46	11.3		55.5		
2	323	07.1	253	09.7		49.3	204	23.6		53.9	128	48.3		45.8	61	14.0		55.5		
3	338	09.6	268	09.2		49.8	219	24.3		53.6	143	50.5		45.9	76	16.6		55.5		
4	353	12.1	283	08.7		50.2	234	25.1		53.3	158	52.8		46.0	91	19.2		55.5		
5	8	14.5	298	08.2	+19	50.7	249	25.8	+21	53.0	173	55.0	-4	46.1	106	21.8	-21	55.5		
6	23	17.0	313	07.8	+19	51.2	264	26.6	+21	52.7	188	57.2	-4	46.2	121	24.5	-21	55.5		
7	38	19.5	328	07.3		51.6	279	27.3		52.4	203	59.5		46.3	136	27.1		55.5		
8	53	21.9	343	06.8		52.1	294	28.1		52.1	219	01.7		46.4	151	29.7		55.5		
9	68	24.4	358	06.3		52.6	309	28.8		51.8	234	04.0		46.5	166	32.3		55.5		
10	83	26.9	13	05.9		53.0	324	29.6		51.5	249	06.2		46.7	181	34.9		55.5		
11	98	29.3	28	05.4	+19	53.5	339	30.3	+21	51.2	264	08.4	-4	46.8	196	37.6	-21	55.5		
12	113	31.8	43	04.9	+19	54.0	354	31.1	+21	50.9	279	10.7	-4	46.9	211	40.2	-21	55.5		
13	128	34.2	58	04.4		54.4	9	31.8		50.6	294	12.9		47.0	226	42.8		55.5		
14	143	36.7	73	03.9		54.9	24	32.6		50.3	309	15.2		47.1	241	45.4		55.5		
15	158	39.2	88	03.5		55.3	39	33.3		50.0	324	17.4		47.2	256	48.0		55.5		
16	173	41.6	103	03.0		55.8	54	34.1		49.7	339	19.6		47.3	271	50.7		55.5		
17	188	44.1	118	02.5	+19	56.3	69	34.8	+21	49.4	354	21.9	-4	47.4	286	53.3	-21	55.5		
18	203	46.6	133	02.0	+19	56.7	84	35.6	+21	49.0	9	24.1	-4	47.5	301	55.9	-21	55.5		
19	218	49.0	148	01.5		57.2	99	36.3		48.7	24	26.4		47.6	316	58.5		55.5		
20	233	51.5	163	01.1		57.6	114	37.1		48.4	39	28.6		47.7	332	01.1		55.5		
21	248	54.0	178	00.6		58.1	129	37.8		48.1	54	30.8		47.8	347	03.7		55.5		
22	263	56.4	193	00.1		58.5	144	38.6		47.8	69	33.1		47.9	2	06.4		55.5		
23	278	58.9	207	59.6		59.0	159	39.4		47.5	84	35.3		48.0	17	09.0		55.5		
24	294	01.4	222	59.1	+19	59.4	174	40.1	+21	47.2	99	37.5	-4	48.1	32	11.6	-21	55.5		
Dif	—				-5 +5				+8 -3				+22 -1				+26 0			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 ^m PMG: 12 ^h 06 ^m 1				Edad: 21 ^d 9 ^h PHE { SD: 15 ^h 8 ^m PMG: 5 ^h 30 ^m R°: 50 ^m 4 ^h : 58 ^h 0 ^m 12 ^h : 58 ^h 2 ^m 20 ^h : 58 ^h 4 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	29.4	+21	21.7	280	09.6	+1	39.6	60 N	** **	1 49	3 06	23 25	20	12 09	85
1	193	29.4		21.3	294	40.3 ¹¹⁷	+1	50.8 ¹¹²	58	** **	2 19	22	28 22		07 82	
2	208	29.3		20.9	309	10.8 ¹¹⁵	+2	01.9 ¹¹¹	56	0 53	41	37	31 24		05 80	
3	223	29.3		20.5	323	41.4 ¹¹⁶		13.1 ¹¹²	54	1 40	2 59	49	34 26		04 77	
4	238	29.2		20.1	338	11.9 ¹¹⁵		24.3 ¹¹²	52	2 08	3 14	3 59	36 28		02 76	
5	253	29.2	+21	19.7	352	42.4 ¹¹⁵	+2	35.4 ¹¹¹	50	2 28	3 27	4 09	23 38	30	12 01	73
6	268	29.1	+21	19.2	7	12.8 ¹¹⁴	+2	46.6 ¹¹²	45	3 06	3 53	4 29	23 43	33	11 58	69
7	283	29.0		18.8	21	43.2 ¹¹⁴	+2	57.8 ¹¹²	40	33	4 13	45	47 36		55 67	
8	298	29.0		18.4	36	13.5 ¹¹³	+3	08.9 ¹¹¹	35	3 54	29	4 58	50 39		53 64	
9	313	28.9		18.0	50	43.8 ¹¹³		20.1 ¹¹²	30	4 10	4 43	5 10	54 41		51 62	
10	328	28.9		17.6	65	14.1 ¹¹³		31.2 ¹¹¹	20	37	5 05	30	23 59	45	48 57	
11	343	28.8	+21	17.2	79	44.3 ¹¹²	+3	42.3 ¹¹¹	10 N	4 57	5 24	5 47	** ** *		11 45	53
12	358	28.8	+21	16.8	94	14.4 ¹¹¹	+3	53.4 ¹¹¹	0	5 14	5 40	6 02	** ** *		11 42	50
13	13	28.7		16.3	108	44.5 ¹¹¹	+4	04.6 ¹¹²	10 S	30	5 56	18	** ** *		39 47	
14	28	28.6		15.9	123	14.6 ¹¹¹		15.7 ¹¹¹	20	44	6 11	35	** ** *		36 44	
15	43	28.6		15.5	137	44.6 ¹¹⁰		26.8 ¹¹¹	30	5 59	28	6 54	** ** *		33 39	
16	58	28.5		15.1	152	14.6 ¹¹⁰		37.8 ¹¹⁰	35	6 06	37	7 05	** ** *		31 37	
17	73	28.5	+21	14.7	166	44.5 ¹⁰⁹	+4	48.9 ¹¹¹	40	6 14	6 48	7 18	** ** *		11 29	34
18	88	28.4	+21	14.2	181	14.4 ¹⁰⁹	+5	00.0 ¹¹¹	45	6 23	7 00	7 32	** ** *		11 26	32
19	103	28.4		13.8	195	44.2 ¹⁰⁸	+5	11.0 ¹¹⁰	50	33	14	51	** ** *		23 28	
20	118	28.3		13.4	210	14.0 ¹⁰⁸		22.0 ¹¹⁰	52	38	20	7 59	** ** *		21 27	
21	133	28.3		13.0	224	43.7 ¹⁰⁷		33.0 ¹¹⁰	54	42	27	8 09	** ** *		20 24	
22	148	28.2		12.6	239	13.4 ¹⁰⁷		44.0 ¹¹⁰	56	47	35	20	** ** *		18 23	
23	163	28.1		12.1	253	43.0 ¹⁰⁶	+5	54.9 ¹⁰⁹	58	53	44	32	** ** *		16 21	
24	178	28.1	+21	11.7	268	12.6 ¹⁰⁶	+6	05.9 ¹¹⁰	60 S	6 59	7 53	8 46	** ** *		11 14	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 23 ^m 2		Mag: -4.1 PMG: 9 ^h 08 ^m		Mag: +1.7 PMG: 12 ^h 21 ^m		Mag: -2.0 PMG: 17 ^h 19 ^m		Mag: +0.2 PMG: 21 ^h 47 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	294	01.4	222	59.1	+19	59.4	174	40.1	+21	47.2	99	37.5	-4	48.1	32	11.6	-21	55.5
1	309	03.8	237	58.6	+19	59.9	189	40.9		46.9	114	39.8		48.2	47	14.2		55.5
2	324	06.3	252	58.1	+20	00.4	204	41.6		46.6	129	42.0		48.3	62	16.8		55.5
3	339	08.7	267	57.7		00.8	219	42.4		46.3	144	44.3		48.4	77	19.5		55.5
4	354	11.2	282	57.2		01.3	234	43.1		46.0	159	46.5		48.5	92	22.1		55.5
5	9	13.7	297	56.7	+20	01.7	249	43.9	+21	45.7	174	48.7	-4	48.6	107	24.7	-21	55.5
6	24	16.1	312	56.2	+20	02.2	264	44.6	+21	45.4	189	51.0	-4	48.8	122	27.3	-21	55.5
7	39	18.6	327	55.7		02.6	279	45.4		45.0	204	53.2		48.9	137	29.9		55.5
8	54	21.1	342	55.2		03.0	294	46.1		44.7	219	55.4		49.0	152	32.5		55.5
9	69	23.5	357	54.7		03.5	309	46.9		44.4	234	57.7		49.1	167	35.2		55.5
10	84	26.0	12	54.2		03.9	324	47.7		44.1	249	59.9		49.2	182	37.8		55.5
11	99	28.5	27	53.7	+20	04.4	339	48.4	+21	43.8	265	02.1	-4	49.3	197	40.4	-21	55.5
12	114	30.9	42	53.3	+20	04.8	354	49.2	+21	43.5	280	04.4	-4	49.4	212	43.0	-21	55.5
13	129	33.4	57	52.8		05.3	9	49.9		43.2	295	06.6		49.5	227	45.6		55.5
14	144	35.8	72	52.3		05.7	24	50.7		42.9	310	08.8		49.6	242	48.3		55.5
15	159	38.3	87	51.8		06.2	39	51.4		42.6	325	11.1		49.7	257	50.9		55.5
16	174	40.8	102	51.3		06.6	54	52.2		42.3	340	13.3		49.8	272	53.5		55.5
17	189	43.2	117	50.8	+20	07.0	69	52.9	+21	41.9	355	15.5	-4	49.9	287	56.1	-21	55.5
18	204	45.7	132	50.3	+20	07.5	84	53.7	+21	41.6	10	17.8	-4	50.0	302	58.7	-21	55.5
19	219	48.2	147	49.8		07.9	99	54.5		41.3	25	20.0		50.1	318	01.3		55.5
20	234	50.6	162	49.3		08.4	114	55.2		41.0	40	22.2		50.2	333	04.0		55.5
21	249	53.1	177	48.8		08.8	129	56.0		40.7	55	24.5		50.3	348	06.6		55.5
22	264	55.6	192	48.3		09.2	144	56.7		40.4	70	26.7		50.5	3	09.2		55.5
23	279	58.0	207	47.8		09.7	159	57.5		40.1	85	28.9		50.6	18	11.8		55.5
24	295	00.5	222	47.3	+20	10.1	174	58.2	+21	39.7	100	31.1	-4	50.7	33	14.4	-21	55.5
Dif	—		-5		+4		+8		-3		+22		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 2			Edad: 22 ^d 9 PHE { 4 ^h : 58'7 12 ^h : 58'9 20 ^h : 59'1 SD: 15'9 PMG: 6 ^h 20 ^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
0	178	28.1	+21	11.7	268	12.6	+6	05.9	60 N	21 03	22 18	** ** *	23 45	24	13 34	86
1	193	28.0		11.3	282	42.1 ¹⁰⁵		16.8 ¹⁰⁹	58	20 47	21 49	** ** *	50 27		29 84	
2	208	28.0		10.9	297	11.6 ¹⁰⁵		27.7 ¹⁰⁹	56		33	28	23 08		23 55	29
3	223	27.9		10.4	311	41.0 ¹⁰⁴		38.6 ¹⁰⁹	54		21	21	22 27		** ** *	21
4	238	27.9		10.0	326	10.3 ¹⁰³	+6	49.4 ¹⁰⁸	52		11	20	56 22	01	** ** *	18 76
5	253	27.8	+21	09.6	340	39.6 ¹⁰³	+7	00.2 ¹⁰⁸	50	20 02	20 43	21 41	** ** *		13 14	75
6	268	27.8	+21	09.2	355	08.8 ¹⁰²	+7	11.0 ¹⁰⁸	45	19 42	20 18	21 04	** ** *		13 07	72
7	283	27.7		08.7	9	38.0 ¹⁰²		21.8 ¹⁰⁸	40		27	19 58	20 38		** ** *	13 02
8	298	27.7		08.3	24	07.1 ¹⁰¹		32.5 ¹⁰⁷	35		13	42	17		** ** *	12 57
9	313	27.6		07.9	38	36.1 ¹⁰⁰		43.2 ¹⁰⁷	30	19 02	29	20 01			** ** *	53 63
10	328	27.6		07.4	53	05.1 ¹⁰⁰	+7	53.8 ¹⁰⁶	20	18 42	19 06	19 35			** ** *	45 60
11	343	27.5	+21	07.0	67	34.0 ⁹⁹	+8	04.5 ¹⁰⁷	10 N	18 25	18 48	19 15	0 04	48	12 38	57
12	358	27.5	+21	06.6	82	02.9 ⁹⁹	+8	15.1 ¹⁰⁶	0	18 10	18 32	18 58	0 08	52	12 32	53
13	13	27.4		06.2	96	31.6 ⁹⁷		25.6 ¹⁰⁵	10 S	17 54	17	43	13 55		26 50	
14	28	27.4		05.7	111	00.4 ⁹⁸		36.1 ¹⁰⁵	20		38	18 01	28		17 59	20 46
15	43	27.3		05.3	125	29.0 ⁹⁶		46.6 ¹⁰⁵	30		19	17 45	14		23 63	12 43
16	58	27.3		04.9	139	57.6 ⁹⁶	+8	57.1 ¹⁰⁵	35	17 08		36	18 07		26 65	08 41
17	73	27.2	+21	04.4	154	26.2 ⁹⁶	+9	07.5 ¹⁰⁴	40	16 56	17 25	17 59	0 30	67	12 03	38
18	88	27.2	+21	04.0	168	54.6 ⁹⁴	+9	17.8 ¹⁰³	45	16 41	17 14	17 50	0 34	71	11 58	35
19	103	27.1		03.5	183	23.0 ⁹⁴		28.1 ¹⁰³	50		23	17 00	40		39 75	51 31
20	118	27.1		03.1	197	51.4 ⁹⁴		38.4 ¹⁰³	52		15	16 54	36		42 76	48 30
21	133	27.0		02.7	212	19.6 ⁹²		48.6 ¹⁰²	54	16 05	47	31	44 79		44 28	
22	148	27.0		02.2	226	47.8 ⁹²	+9	58.8 ¹⁰²	56	15 54	39	26	47 81		41 26	
23	163	26.9		01.8	241	16.0 ⁹²	+10	08.9 ¹⁰¹	58		42	31	21		50 83	37 23
24	178	26.9	+21	01.4	255	44.0 ⁹⁰	+10	19.0 ¹⁰¹	60 S	15 28	16 21	17 15	0 54	86	11 32	21
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 19 ^m 3		Mag: -4.1 PMG: 9 ^h 09 ^m			Mag: +1.7 PMG: 12 ^h 19 ^m			Mag: -2.0 PMG: 17 ^h 15 ^m			Mag: +0.2 PMG: 21 ^h 43 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	295	00.5	222	47.3	+20	10.1	174	58.2	+21	39.7	100	31.1	-4	50.7	33	14.4
1	310	03.0	237	46.8		10.5	189	59.0		39.4	115	33.4		50.8	48	17.0
2	325	05.4	252	46.3		11.0	204	59.8		39.1	130	35.6		50.9	63	19.6
3	340	07.9	267	45.8		11.4	220	00.5		38.8	145	37.8		51.0	78	22.3
4	355	10.3	282	45.3		11.8	235	01.3		38.5	160	40.1		51.1	93	24.9
5	10	12.8	297	44.8	+20	12.3	250	02.0	+21	38.2	175	42.3	-4	51.2	108	27.5
6	25	15.3	312	44.3	+20	12.7	265	02.8	+21	37.9	190	44.5	-4	51.3	123	30.1
7	40	17.7	327	43.8		13.1	280	03.6		37.5	205	46.8		51.4	138	32.7
8	55	20.2	342	43.3		13.6	295	04.3		37.2	220	49.0		51.5	153	35.3
9	70	22.7	357	42.8		14.0	310	05.1		36.9	235	51.2		51.6	168	38.0
10	85	25.1	12	42.3		14.4	325	05.8		36.6	250	53.4		51.8	183	40.6
11	100	27.6	27	41.8	+20	14.8	340	06.6	+21	36.3	265	55.7	-4	51.9	198	43.2
12	115	30.1	42	41.3	+20	15.3	355	07.4	+21	36.0	280	57.9	-4	52.0	213	45.8
13	130	32.5	57	40.8		15.7	10	08.1		35.6	296	00.1		52.1	228	48.4
14	145	35.0	72	40.3		16.1	25	08.9		35.3	311	02.4		52.2	243	51.0
15	160	37.5	87	39.8		16.5	40	09.6		35.0	326	04.6		52.3	258	53.6
16	175	39.9	102	39.3		17.0	55	10.4		34.7	341	06.8		52.4	273	56.3
17	190	42.4	117	38.8	+20	17.4	70	11.2	+21	34.4	356	09.0	-4	52.5	288	58.9
18	205	44.8	132	38.3	+20	17.8	85	11.9	+21	34.0	11	11.3	-4	52.6	304	01.5
19	220	47.3	147	37.8		18.2	100	12.7		33.7	26	13.5		52.7	319	04.1
20	235	49.8	162	37.3		18.6	115	13.4		33.4	41	15.7		52.8	334	06.7
21	250	52.2	177	36.8		19.1	130	14.2		33.1	56	17.9		52.9	349	09.3
22	265	54.7	192	36.2		19.5	145	15.0		32.8	71	20.2		53.1	4	11.9
23	280	57.2	207	35.7		19.9	160	15.7		32.4	86	22.4		53.2	19	14.5
24	295	59.6	222	35.2	+20	20.3	175	16.5	+21	32.1	101	24.6	-4	53.3	34	17.2
Dif	—		-5 +4			+8 -3			+22 -1			+26 0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 23 ^d 9	PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 5 20 ^h : 59 ^h 7										
	PMG: 12 ^h 06 ^m 2					SD: 16 ^h 1		PMG: 7 ^h 13 ^m			R°: 55 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	26.9	+21	01.4	255	44.0	+10	19.0	60 N	** ** *	1 55	3 10	** ** *	15 00	86
1	193	26.8		00.9	270	12.0	90	29.0	58	** ** *	2 24	26	** ** *	14 53	83
2	208	26.8	+21	00.5	284	39.9	89	39.0	56	1 04	2 45	40	** ** *	46	81
3	223	26.7	+21	00.0	299	07.8	89	48.9	54	1 46	3 02	3 51	0 00	31	40 79
4	238	26.7	+20	59.6	313	35.6	88	+10	52	2 12	17	4 02	04	33	34 77
5	253	26.6	+20	59.2	328	03.3	87	+11	50	2 32	3 30	4 11	0 08	34	14 29 76
6	268	26.6	+20	58.7	342	30.9	86	+11	45	3 09	3 55	4 30	0 16	38	14 19 72
7	283	26.5		58.3	356	58.5	86	28.1	40	35	4 15	46	23	41	10 70
8	298	26.5		57.8	11	26.0	85	37.7	35	3 55	31	4 59	29	43	14 03 67
9	313	26.5		57.4	25	53.4	84	47.3	30	4 12	4 44	5 11	35	45	13 56 65
10	328	26.4		56.9	40	20.7	83	+11	20	38	5 06	30	44	49	45 62
11	343	26.4	+20	56.5	54	48.0	83	+12	10 N	4 58	5 24	5 47	0 52	52	13 35 59
12	358	26.3	+20	56.1	69	15.2	82	+12	0	5 15	5 41	6 03	1 00	55	13 25 57
13	13	26.3		55.6	83	42.3	81	24.9	10 S	30	5 56	18	08	57	16 54
14	28	26.2		55.2	98	09.4	81	34.2	20	44	6 11	34	16	61	13 06 51
15	43	26.2		54.7	112	36.3	79	43.3	30	5 58	27	6 53	26	64	12 55 47
16	58	26.1		54.3	127	03.2	79	+12	35	6 05	37	7 04	31	67	49 45
17	73	26.1	+20	53.8	141	30.1	79	+13	40	6 13	6 47	7 16	1 37	70	12 41 43
18	88	26.0	+20	53.4	155	56.8	77	+13	45	6 22	6 58	7 31	1 45	72	12 33 40
19	103	26.0		52.9	170	23.5	77	19.3	50	32	7 12	49	54	76	22 38
20	118	26.0		52.5	184	50.1	76	28.1	52	36	18	7 57	1 58	77	18 35
21	133	25.9		52.0	199	16.6	75	36.9	54	40	25	8 06	2 03	79	12 34
22	148	25.9		51.6	213	43.0	74	45.5	56	45	33	17	08	81	07 32
23	163	25.8		51.1	228	09.4	74	+13	58	51	41	29	13	84	12 00 30
24	178	25.8	+20	50.7	242	35.7	73	+14	60 S	6 57	7 51	8 43	2 20	87	11 53 27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 15 ^m 3		Mag: -4.1 PMG: 9 ^h 10 ^m		Mag: +1.7 PMG: 12 ^h 18 ^m		Mag: -2.0 PMG: 17 ^h 12 ^m		Mag: +0.2 PMG: 21 ^h 39 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	295	59.6	222	35.2	+20	20.3	175	16.5	+21	32.1	101	24.6	-4	53.3	34	17.2	-21	55.4
1	311	02.1	237	34.7		20.7	190	17.2		31.8	116	26.9		53.4	49	19.8		55.4
2	326	04.6	252	34.2		21.1	205	18.0		31.5	131	29.1		53.5	64	22.4		55.4
3	341	07.0	267	33.7		21.6	220	18.8		31.2	146	31.3		53.6	79	25.0		55.4
4	356	09.5	282	33.2		22.0	235	19.5		30.8	161	33.5		53.7	94	27.6		55.4
5	11	11.9	297	32.7	+20	22.4	250	20.3	+21	30.5	176	35.7	-4	53.8	109	30.2	-21	55.4
6	26	14.4	312	32.2	+20	22.8	265	21.0	+21	30.2	191	38.0	-4	53.9	124	32.8	-21	55.4
7	41	16.9	327	31.6		23.2	280	21.8		29.9	206	40.2		54.0	139	35.4		55.4
8	56	19.3	342	31.1		23.6	295	22.6		29.5	221	42.4		54.2	154	38.1		55.4
9	71	21.8	357	30.6		24.0	310	23.3		29.2	236	44.6		54.3	169	40.7		55.4
10	86	24.3	12	30.1		24.4	325	24.1		28.9	251	46.9		54.4	184	43.3		55.4
11	101	26.7	27	29.6	+20	24.8	340	24.9	+21	28.6	266	49.1	-4	54.5	199	45.9	-21	55.4
12	116	29.2	42	29.1	+20	25.2	355	25.6	+21	28.3	281	51.3	-4	54.6	214	48.5	-21	55.4
13	131	31.7	57	28.6		25.7	10	26.4		27.9	296	53.5		54.7	229	51.1		55.4
14	146	34.1	72	28.0		26.1	25	27.2		27.6	311	55.8		54.8	244	53.7		55.4
15	161	36.6	87	27.5		26.5	40	27.9		27.3	326	58.0		54.9	259	56.3		55.4
16	176	39.1	102	27.0		26.9	55	28.7		27.0	342	00.2		55.0	274	58.9		55.4
17	191	41.5	117	26.5	+20	27.3	70	29.4	+21	26.6	357	02.4	-4	55.2	290	01.6	-21	55.4
18	206	44.0	132	26.0	+20	27.7	85	30.2	+21	26.3	12	04.6	-4	55.3	305	04.2	-21	55.4
19	221	46.4	147	25.4		28.1	100	31.0		26.0	27	06.9		55.4	320	06.8		55.4
20	236	48.9	162	24.9		28.5	115	31.7		25.7	42	09.1		55.5	335	09.4		55.4
21	251	51.4	177	24.4		28.9	130	32.5		25.3	57	11.3		55.6	350	12.0		55.4
22	266	53.8	192	23.9		29.3	145	33.3		25.0	72	13.5		55.7	5	14.6		55.4
23	281	56.3	207	23.4		29.7	160	34.0		24.7	87	15.7		55.8	20	17.2		55.4
24	296	58.8	222	22.8	+20	30.1	175	34.8	+21	24.3	102	18.0	-4	55.9	35	19.8	-21	55.4
Dif	—		-5 +4		+8 -3		+22 -1		+26 0									

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 06 ^m 3			Edad: 24 ^d 9 PHE { 4 ^h : 59'9 12 ^h : 60'1 SD: 16'3 20 ^h : 60'3 PMG: 8 ^h 08 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	25.8	+20 50.7	242	35.7	+14 02.6	84	60 N	20 59	22 11	** **	0 09 31		16 26 81	
1	193	25.7	50.2	257	01.9	72	11.0	58	44	21 45	** **	17 34		16 79	
2	208	25.7	49.7	271	28.1	72	19.3	56	30	24	22 59	24 36		16 07 77	
3	223	25.7	49.3	285	54.2	71	27.6	54	19	21 07	22 22	31 38		15 59 75	
4	238	25.6	48.8	300	20.2	70	35.7	52	09	20 53	21 57	37 39		51 75	
5	253	25.6	+20 48.4	314	46.1	69	+14 43.8	50	20 00	20 41	21 37	0 42 41		15 45 73	
6	268	25.5	+20 47.9	329	11.9	68	+14 51.8	45	19 41	20 16	21 01	0 54 44		15 31 71	
7	283	25.5	47.5	343	37.7	68	+14 59.7	40	25	19 57	20 36	1 04 46		20 68	
8	298	25.5	47.0	358	03.4	67	+15 07.5	35	12	41	16	12 49		10 67	
9	313	25.4	46.5	12	29.0	66	15.2	30	19 01	28	20 00	20 50		15 01 66	
10	328	25.4	46.1	26	54.6	66	22.8	20	18 42	19 06	19 34	33 53		14 47 63	
11	343	25.3	+20 45.6	41	20.1	65	+15 30.3	10 N	18 25	18 48	19 14	1 44 55		14 34 61	
12	358	25.3	+20 45.2	55	45.5	64	+15 37.7	0	18 10	18 32	18 58	1 55 58		14 22 59	
13	13	25.3	44.7	70	10.8	63	45.0	10 S	17 55	17	43	2 05 61		14 10 57	
14	28	25.2	44.2	84	36.1	63	52.3	20	39	18 02	29	17 63		13 57 55	
15	43	25.2	43.8	99	01.3	62	+15 59.4	30	20	17 46	15	30 66		42 53	
16	58	25.1	43.3	113	26.4	61	+16 06.4	35	17 09	37	08	38 67		34 51	
17	73	25.1	+20 42.9	127	51.5	61	+16 13.3	40	16 57	17 27	18 00	2 47 69		13 24 50	
18	88	25.1	+20 42.4	142	16.4	59	+16 20.1	45	16 43	17 15	17 52	2 57 72		13 13 48	
19	103	25.0	41.9	156	41.4	60	26.8	50	25	17 02	42	3 10 74		13 00 44	
20	118	25.0	41.5	171	06.2	58	33.4	52	17	16 56	38	15 77		12 53 44	
21	133	24.9	41.0	185	31.0	58	39.9	54	16 08	49	34	22 78		46 42	
22	148	24.9	40.5	199	55.7	57	46.3	56	15 57	42	29	29 80		39 40	
23	163	24.9	40.1	214	20.3	56	52.6	58	46	33	24	37 82		30 38	
24	178	24.8	+20 39.6	228	44.9	56	+16 58.7	60 S	15 32	16 24	17 18	3 47 84		12 20 36	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 4 ^h 11 ^m 4		Mag: -4.1 PMG: 9 ^h 11 ^m			Mag: +1.7 PMG: 12 ^h 17 ^m			Mag: -2.0 PMG: 17 ^h 08 ^m			Mag: +0.2 PMG: 21 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	296	58.8	222 22.8	+20 30.1	175 34.8	+21 24.3	102 18.0	-4 55.9	35 19.8	-21 55.4					
1	312	01.2	237 22.3	30.5	190 35.6	24.0	117 20.2	56.0	50 22.4	55.4					
2	327	03.7	252 21.8	30.9	205 36.3	23.7	132 22.4	56.2	65 25.1	55.4					
3	342	06.2	267 21.3	31.3	220 37.1	23.4	147 24.6	56.3	80 27.7	55.4					
4	357	08.6	282 20.8	31.6	235 37.9	23.0	162 26.8	56.4	95 30.3	55.4					
5	12	11.1	297 20.2	+20 32.0	250 38.6	+21 22.7	177 29.1	-4 56.5	110 32.9	-21 55.4					
6	27	13.6	312 19.7	+20 32.4	265 39.4	+21 22.4	192 31.3	-4 56.6	125 35.5	-21 55.4					
7	42	16.0	327 19.2	32.8	280 40.2	22.0	207 33.5	56.7	140 38.1	55.4					
8	57	18.5	342 18.7	33.2	295 40.9	21.7	222 35.7	56.8	155 40.7	55.4					
9	72	20.9	357 18.1	33.6	310 41.7	21.4	237 37.9	56.9	170 43.3	55.4					
10	87	23.4	12 17.6	34.0	325 42.5	21.1	252 40.2	57.1	185 45.9	55.4					
11	102	25.9	27 17.1	+20 34.4	340 43.2	+21 20.7	267 42.4	-4 57.2	200 48.5	-21 55.4					
12	117	28.3	42 16.5	+20 34.8	355 44.0	+21 20.4	282 44.6	-4 57.3	215 51.1	-21 55.4					
13	132	30.8	57 16.0	35.2	10 44.8	20.1	297 46.8	57.4	230 53.8	55.4					
14	147	33.3	72 15.5	35.5	25 45.5	19.7	312 49.0	57.5	245 56.4	55.4					
15	162	35.7	87 15.0	35.9	40 46.3	19.4	327 51.2	57.6	260 59.0	55.4					
16	177	38.2	102 14.4	36.3	55 47.1	19.1	342 53.5	57.7	276 01.6	55.4					
17	192	40.7	117 13.9	+20 36.7	70 47.8	+21 18.7	357 55.7	-4 57.9	291 04.2	-21 55.4					
18	207	43.1	132 13.4	+20 37.1	85 48.6	+21 18.4	12 57.9	-4 58.0	306 06.8	-21 55.3					
19	222	45.6	147 12.8	37.5	100 49.4	18.1	28 00.1	58.1	321 09.4	55.3					
20	237	48.0	162 12.3	37.8	115 50.1	17.7	43 02.3	58.2	336 12.0	55.3					
21	252	50.5	177 11.8	38.2	130 50.9	17.4	58 04.5	58.3	351 14.6	55.3					
22	267	53.0	192 11.2	38.6	145 51.7	17.1	73 06.8	58.4	6 17.2	55.3					
23	282	55.4	207 10.7	39.0	160 52.4	16.7	88 09.0	58.5	21 19.8	55.3					
24	297	57.9	222 10.2	+20 39.4	175 53.2	+21 16.4	103 11.2	-4 58.6	36 22.4	-21 55.3					
Dif	—		-5 +4		+8 -3		+22 -1		+26 0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 25 ^d 9 PHE { 4 ^h : 60 ^h 4 12 ^h : 60 ^h 5 20 ^h : 60 ^h 6												
	PMG: 12 ^h 06 ^m 4			SD: 16 ^h 4 PMG: 9 ^h 07 ^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	24.8	+20 39.6	228	44.9	+16 58.7	61	60 N	*** **	2 02	3 14	0 40	42	17 47	71	
1	193	24.8	39.1	243	09.4 55	+17 04.8 61	59	58	*** **	29	30	0 51	44	35	70	
2	208	24.8	38.7	257	33.9 55	10.7 59	58	56	1 15	2 49	43	1 00	46	24	69	
3	223	24.7	38.2	271	58.3 54	16.5 58	57	54	1 51	3 06	3 54	09	47	14	69	
4	238	24.7	37.7	286	22.6 53	22.2 57	56	52	2 16	20	4 04	16	49	17 06	68	
5	253	24.6	+20 37.2	300	46.8 52	+17 27.8 56	55	50	2 36	3 32	4 13	1 23	50	16 58	67	
6	268	24.6	+20 36.8	315	11.0 52	+17 33.2 54	54	45	3 12	3 57	4 32	1 38	52	16 42	66	
7	283	24.6	36.3	329	35.2 52	38.6 52	53	40	37	4 16	4 48	1 50	53	28	66	
8	298	24.5	35.8	343	59.3 51	43.8 50	52	35	3 57	32	5 01	2 01	54	17	65	
9	313	24.5	35.4	358	23.3 50	48.9 51	51	30	4 13	4 45	12	10	55	16 07	64	
10	328	24.5	34.9	12	47.3 50	53.9 50	50	20	39	5 07	31	26	57	15 50	63	
11	343	24.4	+20 34.4	27	11.2 49	+17 58.7 48	49	10 N	4 58	5 25	5 48	2 39	60	15 35	62	
12	358	24.4	+20 33.9	41	35.0 48	+18 03.5 48	48	0	5 15	5 41	6 03	2 53	60	15 21	61	
13	13	24.4	33.5	55	58.8 48	08.1 46	47	10 S	30	5 56	18	3 06	62	15 07	61	
14	28	24.3	33.0	70	22.6 48	12.6 45	20	20	44	6 10	34	20	63	14 52	60	
15	43	24.3	32.5	84	46.3 47	16.9 43	43	30	5 57	27	6 52	36	65	35	58	
16	58	24.3	32.0	99	10.0 47	21.1 42	42	35	6 05	36	7 03	45	67	25	58	
17	73	24.2	+20 31.5	113	33.6 46	+18 25.2 41	41	40	6 12	6 45	7 15	3 56	68	14 14	57	
18	88	24.2	+20 31.1	127	57.1 45	+18 29.2 40	40	45	6 21	6 57	7 29	4 09	69	14 01	55	
19	103	24.2	30.6	142	20.7 46	33.0 38	38	50	30	7 10	47	24	71	13 44	55	
20	118	24.1	30.1	156	44.1 44	36.7 37	37	52	34	16	7 55	32	71	37	53	
21	133	24.1	29.6	171	07.6 45	40.3 36	36	54	38	23	8 04	40	72	28	53	
22	148	24.1	29.1	185	31.0 44	43.7 34	34	56	43	30	14	49	74	19	52	
23	163	24.0	28.7	199	54.3 43	47.0 33	33	58	48	38	26	4	59	76	13 08	51
24	178	24.0	+20 28.2	214	17.6 43	+18 50.2 32	32	60 S	6 54	7 48	8 40	5 11	77	12 56	49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 07 ^m 5		Mag: -4.1 PMG: 9 ^h 12 ^m		Mag: +1.7 PMG: 12 ^h 16 ^m		Mag: -2.0 PMG: 17 ^h 05 ^m		Mag: +0.2 PMG: 21 ^h 31 ^m						
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec						
h	°	'	°	°	'	°	°	'	°	°	'				
0	297	57.9	222	10.2	+20 39.4	175	53.2	+21 16.4	103	11.2	-4 58.6	36	22.4	-21 55.3	
1	313	00.4	237	09.6	39.7	190	54.0	16.1	118	13.4	58.8	51	25.0	55.3	
2	328	02.8	252	09.1	40.1	205	54.7	15.7	133	15.6	58.9	66	27.6	55.3	
3	343	05.3	267	08.6	40.5	220	55.5	15.4	148	17.8	59.0	81	30.3	55.3	
4	358	07.8	282	08.0	40.9	235	56.3	15.1	163	20.0	59.1	96	32.9	55.3	
5	13	10.2	297	07.5	+20 41.2	250	57.1	+21 14.7	178	22.3	-4 59.2	111	35.5	-21 55.3	
6	28	12.7	312	07.0	+20 41.6	265	57.8	+21 14.4	193	24.5	-4 59.3	126	38.1	-21 55.3	
7	43	15.2	327	06.4	42.0	280	58.6	14.1	208	26.7	59.4	141	40.7	55.3	
8	58	17.6	342	05.9	42.4	295	59.4	13.7	223	28.9	59.6	156	43.3	55.3	
9	73	20.1	357	05.4	42.7	311	00.1	13.4	238	31.1	59.7	171	45.9	55.3	
10	88	22.5	12	04.8	43.1	326	00.9	13.1	253	33.3	59.8	186	48.5	55.3	
11	103	25.0	27	04.3	+20 43.5	341	01.7	+21 12.7	268	35.5	-4 59.9	201	51.1	-21 55.3	
12	118	27.5	42	03.7	+20 43.8	356	02.4	+21 12.4	283	37.7	-5 00.0	216	53.7	-21 55.3	
13	133	29.9	57	03.2	44.2	11	03.2	12.0	298	40.0	-5 00.1	231	56.3	55.3	
14	148	32.4	72	02.7	44.6	26	04.0	11.7	313	42.2	00.2	246	58.9	55.3	
15	163	34.9	87	02.1	44.9	41	04.8	11.4	328	44.4	00.4	262	01.5	55.3	
16	178	37.3	102	01.6	45.3	56	05.5	11.0	343	46.6	00.5	277	04.1	55.3	
17	193	39.8	117	01.0	+20 45.7	71	06.3	+21 10.7	358	48.8	-5 00.6	292	06.7	-21 55.3	
18	208	42.3	132	00.5	+20 46.0	86	07.1	+21 10.4	13	51.0	-5 00.7	307	09.3	-21 55.3	
19	223	44.7	146	59.9	46.4	101	07.8	10.0	28	53.2	00.8	322	11.9	55.3	
20	238	47.2	161	59.4	46.7	116	08.6	09.7	43	55.4	00.9	337	14.5	55.3	
21	253	49.7	176	58.9	47.1	131	09.4	09.3	58	57.6	01.1	352	17.2	55.3	
22	268	52.1	191	58.3	47.5	146	10.2	09.0	73	59.9	01.2	7	19.8	55.3	
23	283	54.6	206	57.8	47.8	161	10.9	08.7	89	02.1	01.3	22	22.4	55.3	
24	298	57.0	221	57.2	+20 48.2	176	11.7	+21 08.3	104	04.3	-5 01.4	37	25.0	-21 55.3	
Dif	—		-5 +4		+8 -3		+22 -1		+26 -1		+26				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 26 ^d 9 PHE { 4 ^h : 60 ^h 7 12 ^h : 60 ^h 7 20 ^h : 60 ^h 7 R°: 62 ^m											
	PMG: 12 ^h 06 ^m 4			SD: 16 ^h 5 PMG: 10 ^h 08 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m
0	178	24.0	+20 28.2	214	17.6	+18 50.2	30	60 N	20 55	22 05	** **	1 22 57	18 58 56		
1	193	24.0	27.7	228	40.9	53.2	43	58	40	21 40	** **	35 58	45 57		
2	208	23.9	27.2	243	04.1	56.1	29	56	27	20	22 50	46 58	33 57		
3	223	23.9	26.7	257	27.3	+18 58.9	28	54	16	21 04	22 16	1 56 59	23 58		
4	238	23.9	26.2	271	50.5	+19 01.5	26	52	20 06	20 50	21 52	2 05 59	14 58		
5	253	23.9	+20 25.8	286	13.7	+19 04.0	25	50	19 57	20 38	21 34	2 13 59	18 05 59		
6	268	23.8	+20 25.3	300	36.8	+19 06.3	23	45	19 39	20 14	20 59	2 30 59	17 48 59		
7	283	23.8	24.8	314	59.9	08.6	23	40	24	19 55	34	43 61	34 60		
8	298	23.8	24.3	329	22.9	10.6	20	35	11	40	20 14	2 55 61	22 60		
9	313	23.7	23.8	343	46.0	12.6	20	30	19 00	27	19 58	3 05 61	17 11 61		
10	328	23.7	23.3	358	09.0	14.3	17	20	18 41	19 05	33	23 61	16 53 61		
11	343	23.7	+20 22.8	12	32.0	+19 16.0	17	10 N	18 25	18 48	19 14	3 39 61	16 37 62		
12	358	23.6	+20 22.4	26	55.0	+19 17.5	15	0	18 10	18 32	18 58	3 53 62	16 22 62		
13	13	23.6	21.9	41	17.9	18.9	14	10 S	17 55	17	43	4 08 62	16 08 62		
14	28	23.6	21.4	55	40.9	20.1	12	20	39	18 03	30	23 63	15 52 62		
15	43	23.6	20.9	70	03.8	21.2	11	30	21	17 47	16	41 63	33 63		
16	58	23.5	20.4	84	26.7	22.1	9	35	17 11	38	09	4 52 62	23 63		
17	73	23.5	+20 19.9	98	49.7	+19 22.9	8	40	16 59	17 28	18 02	5 04 63	15 11 63		
18	88	23.5	+20 19.4	113	12.6	+19 23.6	7	45	16 45	17 17	17 53	5 18 63	14 56 64		
19	103	23.5	18.9	127	35.5	24.1	5	50	28	17 04	44	35 63	39 63		
20	118	23.4	18.4	141	58.4	24.5	4	52	20	16 58	40	43 64	30 64		
21	133	23.4	17.9	156	21.3	24.7	2	54	11	52	36	5 52 64	21 64		
22	148	23.4	17.4	170	44.1	24.8	1	56	16 01	44	31	6 03 63	14 11 64		
23	163	23.3	16.9	185	07.0	24.7	1	58	15 49	36	26	15 63	13 59 64		
24	178	23.3	+20 16.4	199	29.9	+19 24.5	2	60 S	15 36	16 27	17 21	6 28 64	13 45 65		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 03 ^m 5		Mag: -4.1 PMG: 9 ^h 13 ^m		Mag: +1.7 PMG: 12 ^h 15 ^m		Mag: -2.0 PMG: 17 ^h 01 ^m		Mag: +0.2 PMG: 21 ^h 27 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	298	57.0	221	57.2	+20 48.2	176	11.7	+21 08.3	104	04.3	-5 01.4	37	25.0	-21 55.3	
1	313	59.5	236	56.7	48.5	191	12.5	08.0	119	06.5	01.5	52	27.6	55.3	
2	329	02.0	251	56.1	48.9	206	13.3	07.6	134	08.7	01.6	67	30.2	55.3	
3	344	04.4	266	55.6	49.3	221	14.0	07.3	149	10.9	01.8	82	32.8	55.3	
4	359	06.9	281	55.0	49.6	236	14.8	07.0	164	13.1	01.9	97	35.4	55.3	
5	14	09.4	296	54.5	+20 50.0	251	15.6	+21 06.6	179	15.3	-5 02.0	112	38.0	-21 55.3	
6	29	11.8	311	54.0	+20 50.3	266	16.3	+21 06.3	194	17.5	-5 02.1	127	40.6	-21 55.3	
7	44	14.3	326	53.4	50.7	281	17.1	05.9	209	19.7	02.2	142	43.2	55.3	
8	59	16.8	341	52.9	51.0	296	17.9	05.6	224	21.9	02.3	157	45.8	55.3	
9	74	19.2	356	52.3	51.4	311	18.7	05.2	239	24.1	02.5	172	48.4	55.3	
10	89	21.7	11	51.8	51.7	326	19.4	04.9	254	26.4	02.6	187	51.0	55.3	
11	104	24.2	26	51.2	+20 52.1	341	20.2	+21 04.6	269	28.6	-5 02.7	202	53.6	-21 55.3	
12	119	26.6	41	50.7	+20 52.4	356	21.0	+21 04.2	284	30.8	-5 02.8	217	56.2	-21 55.3	
13	134	29.1	56	50.1	52.8	11	21.8	03.9	299	33.0	02.9	232	58.8	55.3	
14	149	31.5	71	49.6	53.1	26	22.5	03.5	314	35.2	03.0	248	01.4	55.3	
15	164	34.0	86	49.0	53.5	41	23.3	03.2	329	37.4	03.2	263	04.0	55.3	
16	179	36.5	101	48.5	53.8	56	24.1	02.8	344	39.6	03.3	278	06.6	55.3	
17	194	38.9	116	47.9	+20 54.1	71	24.9	+21 02.5	359	41.8	-5 03.4	293	09.2	-21 55.3	
18	209	41.4	131	47.3	+20 54.5	86	25.6	+21 02.2	14	44.0	-5 03.5	308	11.8	-21 55.3	
19	224	43.9	146	46.8	54.8	101	26.4	01.8	29	46.2	03.6	323	14.4	55.3	
20	239	46.3	161	46.2	55.2	116	27.2	01.5	44	48.4	03.7	338	17.0	55.3	
21	254	48.8	176	45.7	55.5	131	28.0	01.1	59	50.6	03.9	353	19.6	55.3	
22	269	51.3	191	45.1	55.8	146	28.7	00.8	74	52.8	04.0	8	22.2	55.3	
23	284	53.7	206	44.6	56.2	161	29.5	00.4	89	55.0	04.1	23	24.8	55.3	
24	299	56.2	221	44.0	+20 56.5	176	30.3	+21 00.1	104	57.2	-5 04.2	38	27.4	-21 55.3	
Dif	—		-6	+3		+8	-3		+22		-1		+26		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 5				Edad: 27 ^d 9 PHE { 4 ^h : 60'7 12 ^h : 60'6 20 ^h : 60'5 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	178	23.3	+20	16.4	199	29.9	+19	24.5	3	58	2 08	3 18	2 19	71	19 54	42	
1	193	23.3		15.9	213	52.8		24.2	5	58	34	33	33	70	42	43	
2	208	23.3		15.4	228	15.7		23.7	6	56	1 24	2 53	46	44	70	30	46
3	223	23.2		14.9	242	38.7		23.1	8	54	1 57	3 10	3 57	2 55	68	21	46
4	238	23.2		14.4	257	01.6		22.3	9	52	2 21	23	4 07	3 04	68	12	48
5	253	23.2	+20	13.9	271	24.5	+19	21.4	10	50	2 40	3 35	4 16	3 12	68	19 04	49
6	268	23.2	+20	13.4	285	47.5	+19	20.4	12	45	3 14	3 59	4 34	3 29	67	18 47	51
7	283	23.1		12.9	300	10.4		19.2	14	40	39	4 18	4 49	44	65	34	52
8	298	23.1		12.4	314	33.4		17.8	14	35	3 59	34	5 02	3 56	64	22	54
9	313	23.1		11.9	328	56.4		16.4	17	30	4 15	4 47	13	4 06	64	18 12	55
10	328	23.1		11.4	343	19.4		14.7	19	20	40	5 08	32	24	63	17 54	57
11	343	23.1	+20	10.9	357	42.5	+19	13.0	20	10 N	4 59	5 25	5 48	4 40	62	17 39	58
12	358	23.0	+20	10.4	12	05.6	+19	11.1	21	0	5 15	5 41	6 03	4 55	61	17 24	60
13	13	23.0		09.9	26	28.7		09.1	22	10 S	30	5 55	18	5 10	60	17 10	61
14	28	23.0		09.4	40	51.8		06.9	23	20	43	6 10	33	26	59	16 54	63
15	43	23.0		08.9	55	14.9		04.6	25	30	5 57	26	6 51	44	58	36	65
16	58	22.9		08.4	69	38.1	+19	02.1	26	35	6 04	34	7 02	5 54	58	26	66
17	73	22.9	+20	07.9	84	01.3	+18	59.5	27	40	6 11	6 44	7 14	6 07	56	16 14	67
18	88	22.9	+20	07.4	98	24.6	+18	56.8	28	45	6 19	6 55	7 27	6 21	55	16 00	69
19	103	22.9		06.9	112	47.9		54.0	30	50	28	7 08	44	38	54	15 42	71
20	118	22.9		06.4	127	11.2		51.0	32	52	32	14	7 52	47	53	34	72
21	133	22.8		05.9	141	34.6		47.8	33	54	36	20	8 01	6 56	52	25	73
22	148	22.8		05.4	155	58.0		44.6	34	56	41	28	11	7 06	51	15	74
23	163	22.8		04.9	170	21.4		41.2	35	58	46	36	23	18	50	15 03	76
24	178	22.8	+20	04.3	184	44.9	+18	37.7		60 S	6 51	7 44	8 36	7 32	48	14 50	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 59 ^m 6		Mag: -4.1 PMG: 9 ^h 13 ^m		Mag: +1.7 PMG: 12 ^h 13 ^m		Mag: -2.0 PMG: 16 ^h 58 ^m		Mag: +0.2 PMG: 21 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	299	56.2	221	44.0	+20	56.5	176	30.3	+21	00.1	104	57.2	-5	04.2	38	27.4	-21	55.3
1	314	58.7	236	43.5		56.9	191	31.1	+20	59.7	119	59.4		04.3	53	30.0		55.3
2	330	01.1	251	42.9		57.2	206	31.9		59.4	135	01.6		04.4	68	32.6		55.3
3	345	03.6	266	42.3		57.5	221	32.6		59.0	150	03.8		04.6	83	35.2		55.3
4	0	06.0	281	41.8		57.9	236	33.4		58.7	165	06.0		04.7	98	37.8		55.3
5	15	08.5	296	41.2	+20	58.2	251	34.2	+20	58.3	180	08.2	-5	04.8	113	40.4	-21	55.3
6	30	11.0	311	40.7	+20	58.5	266	35.0	+20	58.0	195	10.4	-5	04.9	128	43.0	-21	55.3
7	45	13.4	326	40.1		58.9	281	35.7		57.6	210	12.7		05.0	143	45.6		55.3
8	60	15.9	341	39.6		59.2	296	36.5		57.3	225	14.9		05.2	158	48.2		55.3
9	75	18.4	356	39.0		59.5	311	37.3		57.0	240	17.1		05.3	173	50.8		55.3
10	90	20.8	11	38.4	+20	59.9	326	38.1		56.6	255	19.3		05.4	188	53.4		55.3
11	105	23.3	26	37.9	+21	00.2	341	38.8	+20	56.3	270	21.5	-5	05.5	203	56.0	-21	55.3
12	120	25.8	41	37.3	+21	00.5	356	39.6	+20	55.9	285	23.7	-5	05.6	218	58.6	-21	55.3
13	135	28.2	56	36.8		00.8	11	40.4		55.6	300	25.9		05.8	234	01.2		55.3
14	150	30.7	71	36.2		01.2	26	41.2		55.2	315	28.1		05.9	249	03.8		55.3
15	165	33.2	86	35.6		01.5	41	42.0		54.9	330	30.3		06.0	264	06.4		55.3
16	180	35.6	101	35.1		01.8	56	42.7		54.5	345	32.5		06.1	279	09.0		55.3
17	195	38.1	116	34.5	+21	02.1	71	43.5	+20	54.2	0	34.7	-5	06.2	294	11.6	-21	55.3
18	210	40.5	131	33.9	+21	02.5	86	44.3	+20	53.8	15	36.9	-5	06.4	309	14.2	-21	55.3
19	225	43.0	146	33.4		02.8	101	45.1		53.5	30	39.1		06.5	324	16.8		55.3
20	240	45.5	161	32.8		03.1	116	45.9		53.1	45	41.3		06.6	339	19.4		55.3
21	255	47.9	176	32.2		03.4	131	46.6		52.7	60	43.5		06.7	354	22.0		55.3
22	270	50.4	191	31.7		03.7	146	47.4		52.4	75	45.7		06.8	9	24.6		55.3
23	285	52.9	206	31.1		04.1	161	48.2		52.0	90	47.9		07.0	24	27.2		55.3
24	300	55.3	221	30.5	+21	04.4	176	49.0	+20	51.7	105	50.1	-5	07.1	39	29.8	-21	55.3
Dif	—		-6 +3		+8 -3		+22 -1		-1		+26							

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 28 ^d 9 PHE { 4 ^h : 60 ^h /4 12 ^h : 60 ^h /3 20 ^h : 60 ^h /1 R°: 59 ^m										
	PMG: 12 ^h 06 ^m 5			SD: 16 ^h 5 PMG: 12 ^h 10 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	22.8	+20 04.3	184	44.9	+18 37.7	37	60 N	20 51	21 59	** **	3 30 82	20 36 31	
1	193	22.8	03.8	199	08.4	34.0	37	58	36	35	** **	43 79	25 34	
2	208	22.7	03.3	213	32.0	30.2	38	56	24	16	22 41	3 54 77	16 35	
3	223	22.7	02.8	227	55.7	26.3	39	54	13	21 00	22 10	4 03 76	07 38	
4	238	22.7	02.3	242	19.3	22.2	41	52	20 03	20 47	21 48	12 74	20 00 39	
5	253	22.7	+20 01.8	256	43.1	+18 18.0	42	50	19 55	20 35	21 30	4 20 73	19 53 41	
6	268	22.7	+20 01.3	271	06.9	+18 13.7	43	45	19 37	20 12	20 56	4 36 70	19 38 44	
7	283	22.6	00.8	285	30.7	09.3	44	40	22	19 53	32	4 49 69	26 46	
8	298	22.6	+20 00.2	299	54.6	04.8	45	35	19 10	38	20 13	5 00 67	16 48	
9	313	22.6	+19 59.7	314	18.6	+18 00.1	47	30	18 59	25	19 57	10 66	19 07 49	
10	328	22.6	59.2	328	42.6	+17 55.3	48	20	41	19 04	33	27 63	18 51 53	
11	343	22.6	+19 58.7	343	06.6	+17 50.3	50	10 N	18 25	18 47	19 14	5 42 61	18 37 56	
12	358	22.6	+19 58.2	357	30.8	+17 45.3	50	0	18 10	18 32	18 58	5 56 59	18 24 58	
13	13	22.5	57.7	11	55.0	40.1	52	10 S	17 55	18	43	6 10 57	18 11 60	
14	28	22.5	57.1	26	19.2	34.8	53	20	40	18 03	30	25 55	17 57 63	
15	43	22.5	56.6	40	43.5	29.4	54	30	22	17 48	17	42 52	41 66	
16	58	22.5	56.1	55	07.9	23.9	55	35	12	39	10	6 52 50	32 67	
17	73	22.5	+19 55.6	69	32.4	+17 18.2	57	40	17 01	17 30	18 03	7 03 49	17 21 69	
18	88	22.5	+19 55.1	83	56.9	+17 12.5	57	45	16 47	17 19	17 55	7 16 47	17 09 71	
19	103	22.5	54.5	98	21.5	06.6	59	50	30	06	46	32 45	16 53 75	
20	118	22.4	54.0	112	46.1	+17 00.6	60	52	22	17 01	42	40 43	46 76	
21	133	22.4	53.5	127	10.8	+16 54.5	61	54	14	16 54	38	48 42	38 77	
22	148	22.4	53.0	141	35.6	48.3	62	56	16 04	47	34	7 57 40	29 79	
23	163	22.4	52.4	156	00.5	42.0	63	58	15 53	40	29	8 08 38	19 81	
24	178	22.4	+19 51.9	170	25.4	+16 35.6	64	60 S	15 40	16 31	17 24	8 20 36	16 07 84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 55 ^m 7		Mag: -4.0 PMG: 9 ^h 14 ^m		Mag: +1.7 PMG: 12 ^h 12 ^m		Mag: -2.0 PMG: 16 ^h 54 ^m		Mag: +0.2 PMG: 21 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	300	55.3	221 30.5	+21 04.4	176 49.0	+20 51.7	105 50.1	-5 07.1	39 29.8	-21 55.3
1	315	57.8	236 30.0	04.7	191 49.8	51.3	120 52.3	07.2	54 32.4	55.3
2	331	00.3	251 29.4	05.0	206 50.5	51.0	135 54.5	07.3	69 35.0	55.3
3	346	02.7	266 28.8	05.3	221 51.3	50.6	150 56.7	07.4	84 37.6	55.3
4	1	05.2	281 28.3	05.6	236 52.1	50.3	165 58.9	07.6	99 40.2	55.3
5	16	07.6	296 27.7	+21 05.9	251 52.9	+20 49.9	181 01.1	-5 07.7	114 42.8	-21 55.3
6	31	10.1	311 27.1	+21 06.3	266 53.7	+20 49.6	196 03.2	-5 07.8	129 45.4	-21 55.3
7	46	12.6	326 26.6	06.6	281 54.4	49.2	211 05.4	07.9	144 48.0	55.3
8	61	15.0	341 26.0	06.9	296 55.2	48.9	226 07.6	08.0	159 50.6	55.3
9	76	17.5	356 25.4	07.2	311 56.0	48.5	241 09.8	08.2	174 53.2	55.3
10	91	20.0	11 24.9	07.5	326 56.8	48.2	256 12.0	08.3	189 55.8	55.3
11	106	22.4	26 24.3	+21 07.8	341 57.6	+20 47.8	271 14.2	-5 08.4	204 58.4	-21 55.3
12	121	24.9	41 23.7	+21 08.1	356 58.4	+20 47.4	286 16.4	-5 08.5	220 01.0	-21 55.3
13	136	27.4	56 23.1	08.4	11 59.1	47.1	301 18.6	08.6	235 03.5	55.3
14	151	29.8	71 22.6	08.7	26 59.9	46.7	316 20.8	08.8	250 06.1	55.3
15	166	32.3	86 22.0	09.0	42 00.7	46.4	331 23.0	08.9	265 08.7	55.3
16	181	34.8	101 21.4	09.3	57 01.5	46.0	346 25.2	09.0	280 11.3	55.3
17	196	37.2	116 20.9	+21 09.6	72 02.3	+20 45.7	1 27.4	-5 09.1	295 13.9	-21 55.3
18	211	39.7	131 20.3	+21 09.9	87 03.1	+20 45.3	16 29.6	-5 09.2	310 16.5	-21 55.3
19	226	42.1	146 19.7	10.2	102 03.8	44.9	31 31.8	09.4	325 19.1	55.3
20	241	44.6	161 19.1	10.5	117 04.6	44.6	46 34.0	09.5	340 21.7	55.3
21	256	47.1	176 18.6	10.8	132 05.4	44.2	61 36.2	09.6	355 24.3	55.3
22	271	49.5	191 18.0	11.1	147 06.2	43.9	76 38.4	09.7	10 26.9	55.3
23	286	52.0	206 17.4	11.4	162 07.0	43.5	91 40.6	09.9	25 29.5	55.3
24	301	54.5	221 16.8	+21 11.7	177 07.8	+20 43.2	106 42.8	-5 10.0	40 32.1	-21 55.3
Dif	—		-6 +3		+8 -4		+22 -1		+26 0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 0 ^d 6	PHE {	4 ^h : 59 ^m 9 12 ^h : 59 ^m 7 20 ^h : 59 ^m 5		R°: 54 ^m							
	PMG: 12 ^h 06 ^m 5								SD: 16 ^h 3		PMG: 13 ^h 09 ^m		R°: 54 ^m		
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	22.4	+19 51.9	170	25.4	+16 35.6	65	60 N	** **	2 15	3 23	4 52	85	21 07	23
1	193	22.4	51.4	184	50.4	29.1	65	58	0 29	39	37	5 02	82	20 59	26
2	208	22.4	50.9	199	15.5	22.5	66	56	1 32	2 58	3 50	11 80		51 29	
3	223	22.3	50.3	213	40.7	15.7	68	54	2 03	3 13	4 00	19 78		45 30	
4	238	22.3	49.8	228	05.9	08.9	68	52	26	27	10	26 76		39 32	
5	253	22.3	+19 49.3	242	31.2	+16 01.9	70	50	2 44	3 38	4 19	5 33	74	20 34	33
6	268	22.3	+19 48.8	256	56.6	+15 54.9	70	45	3 17	4 02	4 37	5 46	72	20 22	37
7	283	22.3	48.2	271	22.1	47.8	71	40	3 42	20	4 51	5 58	68	12 40	
8	298	22.3	47.7	285	47.6	40.5	73	35	4 01	35	5 04	6 07	67	20 04	42
9	313	22.3	47.2	300	13.2	33.2	73	30	16	4 48	14	16 64		19 56	45
10	328	22.3	46.6	314	39.0	25.8	74	20	4 41	5 09	33	30 62		44 48	
11	343	22.2	+19 46.1	329	04.7	+15 18.3	75	10 N	5 00	5 26	5 48	6 43	58	19 33	51
12	358	22.2	+19 45.6	343	30.6	+15 10.6	77	0	5 15	5 41	6 03	6 55	56	19 22	54
13	13	22.2	45.0	357	56.5	+15 02.9	77	10 S	29	5 55	17	7 07	53	11 57	
14	28	22.2	44.5	12	22.6	+14 55.2	77	20	43	6 09	33	20 50		19 00	60
15	43	22.2	44.0	26	48.7	47.3	79	30	5 56	25	6 50	34 47		18 47	63
16	58	22.2	43.4	41	14.8	39.3	80	35	6 02	33	7 00	42 45		39 66	
17	73	22.2	+19 42.9	55	41.1	+14 31.3	80	40	6 10	6 43	7 12	7 52	42	18 30	69
18	88	22.2	+19 42.4	70	07.5	+14 23.1	82	45	6 17	6 53	7 26	8 03	40	18 20	71
19	103	22.2	41.8	84	33.9	14.9	82	50	26	7 06	42	17 36		08 74	
20	118	22.2	41.3	99	00.4	+14 06.6	83	52	30	12	50	23 35		18 02	76
21	133	22.2	40.8	113	27.0	+13 58.2	84	54	34	18	7 58	30 33		17 55	79
22	148	22.1	40.2	127	53.7	49.8	84	56	38	25	8 08	37 32		48 81	
23	163	22.1	39.7	142	20.4	41.3	85	58	43	33	19	46 29		40 83	
24	178	22.1	+19 39.2	156	47.3	+13 32.7	86	60 S	6 48	7 41	8 32	8 56	26	17 31	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 51 ^m 7		Mag: -4.0 PMG: 9 ^h 15 ^m		Mag: +1.7 PMG: 12 ^h 11 ^m		Mag: -2.0 PMG: 16 ^h 51 ^m		Mag: +0.2 PMG: 21 ^h 14 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	301	54.5	221	16.8	+21 11.7	177	07.8	+20 43.2	106	42.8	-5 10.0	40	32.1	-21 55.3
1	316	56.9	236	16.3	12.0	192	08.5	42.8	121	45.0	10.1	55	34.7	55.3
2	331	59.4	251	15.7	12.3	207	09.3	42.4	136	47.2	10.2	70	37.3	55.3
3	347	01.9	266	15.1	12.6	222	10.1	42.1	151	49.3	10.3	85	39.9	55.3
4	2	04.3	281	14.5	12.9	237	10.9	41.7	166	51.5	10.5	100	42.5	55.3
5	17	06.8	296	13.9	+21 13.2	252	11.7	+20 41.4	181	53.7	-5 10.6	115	45.1	-21 55.3
6	32	09.3	311	13.4	+21 13.5	267	12.5	+20 41.0	196	55.9	-5 10.7	130	47.7	-21 55.3
7	47	11.7	326	12.8	13.8	282	13.3	40.6	211	58.1	10.8	145	50.2	55.3
8	62	14.2	341	12.2	14.1	297	14.0	40.3	227	00.3	11.0	160	52.8	55.3
9	77	16.6	356	11.6	14.4	312	14.8	39.9	242	02.5	11.1	175	55.4	55.3
10	92	19.1	11	11.0	14.6	327	15.6	39.6	257	04.7	11.2	190	58.0	55.3
11	107	21.6	26	10.5	+21 14.9	342	16.4	+20 39.2	272	06.9	-5 11.3	206	00.6	-21 55.3
12	122	24.0	41	09.9	+21 15.2	357	17.2	+20 38.8	287	09.1	-5 11.4	221	03.2	-21 55.3
13	137	26.5	56	09.3	15.5	12	18.0	38.5	302	11.3	11.6	236	05.8	55.3
14	152	29.0	71	08.7	15.8	27	18.8	38.1	317	13.5	11.7	251	08.4	55.3
15	167	31.4	86	08.1	16.1	42	19.5	37.7	332	15.6	11.8	266	11.0	55.3
16	182	33.9	101	07.6	16.3	57	20.3	37.4	347	17.8	11.9	281	13.6	55.3
17	197	36.4	116	07.0	+21 16.6	72	21.1	+20 37.0	2	20.0	-5 12.1	296	16.2	-21 55.3
18	212	38.8	131	06.4	+21 16.9	87	21.9	+20 36.7	17	22.2	-5 12.2	311	18.8	-21 55.3
19	227	41.3	146	05.8	17.2	102	22.7	36.3	32	24.4	12.3	326	21.4	55.3
20	242	43.8	161	05.2	17.5	117	23.5	35.9	47	26.6	12.4	341	23.9	55.3
21	257	46.2	176	04.6	17.7	132	24.3	35.6	62	28.8	12.6	356	26.5	55.3
22	272	48.7	191	04.0	18.0	147	25.1	35.2	77	31.0	12.7	11	29.1	55.3
23	287	51.1	206	03.5	18.3	162	25.8	34.8	92	33.2	12.8	26	31.7	55.3
24	302	53.6	221	02.9	+21 18.6	177	26.6	+20 34.5	107	35.4	-5 12.9	41	34.3	-21 55.3
Dif	—		-6 +3		+8 -4		+22 -1		+26 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 06 ^m 5			Edad: 1 ^d 6 PHE { 4 ^h : 59/2 12 ^h : 58/9 20 ^h : 58/6 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	22.1	+19 39.2	156	47.3	+13 32.7	87	60 N	20 47	21 52	** **	6 17 84	21 30 19		
1	193	22.1	38.6	171	14.2	79 24.0	87	58	33	30	23 22	24 82	25 21		
2	208	22.1	38.1	185	41.2	80 15.2	88	56	20	21 11	22 33	31 79	20 23		
3	223	22.1	37.5	200	08.3	81 +13 06.4	88	54	10	20 56	22 04	37 77	15 26		
4	238	22.1	37.0	214	35.5	82 +12 57.5	89	52	20 01	43	21 43	42 76	11 27		
5	253	22.1	+19 36.5	229	02.8	83 +12 48.6	89	50	19 52	20 32	21 26	6 47 74	21 07 29		
6	268	22.1	+19 35.9	243	30.1	83 +12 39.5	91	45	19 35	20 09	20 53	6 58 70	20 59 32		
7	283	22.1	35.4	257	57.5	84 30.4	91	40	20	19 51	30	7 06 67	52 35		
8	298	22.1	34.8	272	25.0	85 21.3	91	35	19 08	37	20 11	14 64	46 38		
9	313	22.1	34.3	286	52.6	86 12.1	92	30	18 58	24	19 56	20 63	41 40		
10	328	22.1	33.7	301	20.3	87 +12 02.8	93	20	40	19 04	32	32 58	32 44		
11	343	22.1	+19 33.2	315	48.1	88 +11 53.4	94	10 N	18 24	18 47	19 13	7 41 56	20 24 47		
12	358	22.1	+19 32.7	330	15.9	88 +11 44.0	94	0	18 10	18 32	18 57	7 51 52	20 16 50		
13	13	22.1	32.1	344	43.8	89 34.6	94	10 S	17 56	18	44	8 00 49	08 54		
14	28	22.1	31.6	359	11.8	90 25.1	95	20	41	18 04	31	10 45	20 00 57		
15	43	22.1	31.0	13	39.9	91 15.5	96	30	24	17 49	18	21 42	19 50 62		
16	58	22.0	30.5	28	08.1	92 +11 05.9	96	35	14	41	11	27 40	45 63		
17	73	22.0	+19 29.9	42	36.3	92 +10 56.2	97	40	17 02	17 31	18 04	8 34 38	19 39 66		
18	88	22.0	+19 29.4	57	04.7	94 +10 46.5	97	45	16 49	17 21	17 57	8 43 34	19 31 69		
19	103	22.0	28.8	71	33.1	94 36.7	98	50	33	09	48	53 31	22 73		
20	118	22.0	28.3	86	01.6	95 26.9	98	52	25	17 03	45	8 58 29	18 75		
21	133	22.0	27.7	100	30.1	95 17.0	99	54	17	16 57	41	9 03 27	14 76		
22	148	22.0	27.2	114	58.8	97 +10 07.1	99	56	16 07	50	37	09 25	09 78		
23	163	22.0	26.6	129	27.5	97 +9 57.1	100	58	15 56	43	32	15 23	19 03 81		
24	178	22.0	+19 26.1	143	56.3	98 +9 47.1	100	60 S	15 44	16 34	17 27	9 22 21	18 57 83		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 47 ^m 8		Mag: -4.0 PMG: 9 ^h 16 ^m			Mag: +1.7 PMG: 12 ^h 10 ^m			Mag: -2.0 PMG: 16 ^h 47 ^m			Mag: +0.2 PMG: 21 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	302	53.6	221 02.9	+21 18.6	177 26.6	+20 34.5	107 35.4	-5 12.9	41 34.3	-21 55.3					
1	317	56.1	236 02.3	18.8	192 27.4	34.1	122 37.5	13.1	56 36.9	55.3					
2	332	58.5	251 01.7	19.1	207 28.2	33.7	137 39.7	13.2	71 39.5	55.3					
3	348	01.0	266 01.1	19.4	222 29.0	33.4	152 41.9	13.3	86 42.1	55.3					
4	3	03.5	281 00.5	19.7	237 29.8	33.0	167 44.1	13.4	101 44.7	55.3					
5	18	05.9	295 59.9	+21 19.9	252 30.6	+20 32.6	182 46.3	-5 13.5	116 47.3	-21 55.3					
6	33	08.4	310 59.3	+21 20.2	267 31.4	+20 32.3	197 48.5	-5 13.7	131 49.9	-21 55.3					
7	48	10.9	325 58.8	20.5	282 32.2	31.9	212 50.7	13.8	146 52.4	55.3					
8	63	13.3	340 58.2	20.7	297 32.9	31.5	227 52.9	13.9	161 55.0	55.3					
9	78	15.8	355 57.6	21.0	312 33.7	31.2	242 55.0	14.0	176 57.6	55.3					
10	93	18.2	10 57.0	21.3	327 34.5	30.8	257 57.2	14.2	192 00.2	55.3					
11	108	20.7	25 56.4	+21 21.5	342 35.3	+20 30.4	272 59.4	-5 14.3	207 02.8	-21 55.3					
12	123	23.2	40 55.8	+21 21.8	357 36.1	+20 30.1	288 01.6	-5 14.4	222 05.4	-21 55.3					
13	138	25.6	55 55.2	22.1	12 36.9	29.7	303 03.8	14.5	237 08.0	55.3					
14	153	28.1	70 54.6	22.3	27 37.7	29.3	318 06.0	14.7	252 10.6	55.3					
15	168	30.6	85 54.0	22.6	42 38.5	29.0	333 08.2	14.8	267 13.2	55.3					
16	183	33.0	100 53.4	22.8	57 39.3	28.6	348 10.3	14.9	282 15.7	55.2					
17	198	35.5	115 52.8	+21 23.1	72 40.1	+20 28.2	3 12.5	-5 15.0	297 18.3	-21 55.2					
18	213	38.0	130 52.3	+21 23.4	87 40.8	+20 27.9	18 14.7	-5 15.2	312 20.9	-21 55.2					
19	228	40.4	145 51.7	23.6	102 41.6	27.5	33 16.9	15.3	327 23.5	55.2					
20	243	42.9	160 51.1	23.9	117 42.4	27.1	48 19.1	15.4	342 26.1	55.2					
21	258	45.4	175 50.5	24.1	132 43.2	26.8	63 21.3	15.5	357 28.7	55.2					
22	273	47.8	190 49.9	24.4	147 44.0	26.4	78 23.4	15.7	12 31.3	55.2					
23	288	50.3	205 49.3	24.6	162 44.8	26.0	93 25.6	15.8	27 33.9	55.2					
24	303	52.7	220 48.7	+21 24.9	177 45.6	+20 25.6	108 27.8	-5 15.9	42 36.4	-21 55.2					
Dif	—		-6 +3		+8 -4		+22 -1		+26 0						

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 5				Edad: 2 ^d 6 PHE { SD: 15'9 PMG: 14 ^h 55 ^m 4 ^h : 58'4 12 ^h : 58'1 20 ^h : 57'8 R°: 48 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.0	+19	26.1	143	56.3	+9	47.1	60 N	** **	2 21	3 27	7 41	83	21 49	17	
1	193	22.0		25.5	158	25.2	99	37.1	58	0 52	2 44	41	46	80	46	19	
2	208	22.0		25.0	172	54.1	99	27.0	56	1 41	3 02	3 53	50	78	43	21	
3	223	22.0		24.4	187	23.2	101	16.8	54	2 09	17	4 04	54	75	41	22	
4	238	22.0		23.9	201	52.3	101	+9 06.7	52	31	30	13	7 58	73	38	25	
5	253	22.0	+19	23.3	216	21.5	102	+8 56.5	50	2 48	3 41	4 21	8 01	71	21 36	26	
6	268	22.0	+19	22.8	230	50.7	102	+8 46.2	45	3 20	4 04	4 39	8 08	68	21 31	30	
7	283	22.0		22.2	245	20.1	104	36.0	40	3 44	22	4 53	13	65	27	33	
8	298	22.0		21.6	259	49.5	104	25.7	35	4 02	37	5 05	18	62	24	35	
9	313	22.0		21.1	274	19.0	105	15.3	30	18	4 49	15	23	59	21	37	
10	328	22.0		20.5	288	48.5	105	+8 05.0	20	4 41	5 10	33	30	56	16	41	
11	343	22.0	+19	20.0	303	18.2	107	+7 54.6	10 N	5 00	5 26	5 49	8 37	52	21 11	45	
12	358	22.0	+19	19.4	317	47.9	107	+7 44.1	0	5 16	5 41	6 03	8 43	49	21 06	48	
13	13	22.0		18.9	332	17.6	107	33.7	10 S	29	5 55	17	49	46	21 02	51	
14	28	22.0		18.3	346	47.5	109	23.2	20	42	6 09	32	8 55	43	20 57	55	
15	43	22.0		17.7	1	17.4	109	12.7	30	5 55	24	49	9 03	38	52	58	
16	58	22.1		17.2	15	47.4	110	+7 02.2	35	6 01	32	6 59	07	36	48	61	
17	73	22.1	+19	16.6	30	17.4	110	+6 51.6	40	6 08	6 41	7 10	9 12	33	20 45	63	
18	88	22.1	+19	16.1	44	47.5	111	+6 41.1	45	6 16	6 51	7 24	9 17	31	20 40	67	
19	103	22.1		15.5	59	17.7	112	30.5	50	24	7 04	40	24	27	35	71	
20	118	22.1		14.9	73	48.0	113	19.8	52	28	09	47	27	25	33	72	
21	133	22.1		14.4	88	18.3	113	+6 09.2	54	32	15	7 55	30	24	30	74	
22	148	22.1		13.8	102	48.7	114	+5 58.6	56	36	22	8 05	34	22	27	76	
23	163	22.1		13.2	117	19.1	114	47.9	58	40	29	15	38	20	24	78	
24	178	22.1	+19	12.7	131	49.6	115	+5 37.2	60 S	6 45	7 38	8 28	9 43	17	20 20	81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 43 ^m 9		Mag: -4.0 PMG: 9 ^h 17 ^m		Mag: +1.7 PMG: 12 ^h 08 ^m		Mag: -1.9 PMG: 16 ^h 44 ^m		Mag: +0.2 PMG: 21 ^h 06 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	303	52.7	220	48.7	+21	24.9	177	45.6	+20	25.6
1	318	55.2	235	48.1		25.1	192	46.4		25.3
2	333	57.7	250	47.5		25.4	207	47.2		24.9
3	349	00.1	265	46.9		25.6	222	48.0		24.5
4	4	02.6	280	46.3		25.9	237	48.8		24.2
5	19	05.1	295	45.7	+21	26.1	252	49.6	+20	23.8
6	34	07.5	310	45.1	+21	26.4	267	50.4	+20	23.4
7	49	10.0	325	44.5		26.6	282	51.1		23.0
8	64	12.5	340	43.9		26.9	297	51.9		22.7
9	79	14.9	355	43.3		27.1	312	52.7		22.3
10	94	17.4	10	42.7		27.4	327	53.5		21.9
11	109	19.9	25	42.1	+21	27.6	342	54.3	+20	21.5
12	124	22.3	40	41.5	+21	27.9	357	55.1	+20	21.2
13	139	24.8	55	40.9		28.1	12	55.9		20.8
14	154	27.2	70	40.3		28.3	27	56.7		20.4
15	169	29.7	85	39.7		28.6	42	57.5		20.0
16	184	32.2	100	39.1		28.8	57	58.3		19.7
17	199	34.6	115	38.5	+21	29.1	72	59.1	+20	19.3
18	214	37.1	130	37.9	+21	29.3	87	59.9	+20	18.9
19	229	39.6	145	37.3		29.5	103	00.7		18.5
20	244	42.0	160	36.7		29.8	118	01.5		18.2
21	259	44.5	175	36.1		30.0	133	02.3		17.8
22	274	47.0	190	35.5		30.2	148	03.1		17.4
23	289	49.4	205	34.9		30.5	163	03.9		17.0
24	304	51.9	220	34.3	+21	30.7	178	04.7	+20	16.7
Dif	—		-6 +2		+8 -4		+22 -1		-1	

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: 3 ^d 6 SD: 15'7 PMG: 15 ^h 43 ^m	PHE { 4 ^h : 57'5 12 ^h : 57'2 20 ^h : 56'9 R°: 46 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	22.1	+19 12.7	131	49.6	+5 37.2	60 N	20 42	21 46	** **	9 04 79		22 06 15	
1	193	22.1	12.1	146	20.2 ¹¹⁶	26.5 ¹⁰⁷	58	28	24	23 06	06 76		05 17	
2	208	22.1	11.5	160	50.9 ¹¹⁷	15.8 ¹⁰⁷	56	17	21 07	22 25	08 74		04 20	
3	223	22.1	11.0	175	21.6 ¹¹⁷	+5 05.1 ¹⁰⁷	54	20 07	20 52	21 59	09 73		03 22	
4	238	22.1	10.4	189	52.3 ¹¹⁷	+4 54.4 ¹⁰⁷	52	19 58	40	38	11 71		03 23	
5	253	22.1	+19 09.8	204	23.1 ¹¹⁸	+4 43.6 ¹⁰⁸	50	19 50	20 29	21 22	9 12 69		22 02 25	
6	268	22.1	+19 09.3	218	54.0 ¹¹⁹	+4 32.9 ¹⁰⁷	45	19 33	20 07	20 50	9 16 65		22 01 28	
7	283	22.1	08.7	233	25.0 ¹²⁰	22.1 ¹⁰⁸	40	19	19 49	27	18 62		22 00 31	
8	298	22.1	08.1	247	56.0 ¹²⁰	11.4 ¹⁰⁷	35	19 07	35	20 09	20 60		21 59 33	
9	313	22.1	07.6	262	27.0 ¹²⁰	+4 00.6 ¹⁰⁸	30	18 57	23	19 54	22 58		58 36	
10	328	22.2	07.0	276	58.1 ¹²¹	+3 49.8 ¹⁰⁸	20	39	19 03	31	26 53		57 39	
11	343	22.2	+19 06.4	291	29.3 ¹²²	+3 39.0 ¹⁰⁸	10 N	18 24	18 46	19 13	9 29 50		21 56 42	
12	358	22.2	+19 05.9	306	00.5 ¹²²	+3 28.3 ¹⁰⁷	0	18 10	18 32	18 57	9 32 46		21 54 46	
13	13	22.2	05.3	320	31.8 ¹²³	17.5 ¹⁰⁸	10 S	17 56	18	44	35 43		53 49	
14	28	22.2	04.7	335	03.1 ¹²³	+3 06.7 ¹⁰⁸	20	41	18 05	31	38 40		52 52	
15	43	22.2	04.1	349	34.5 ¹²⁴	+2 55.9 ¹⁰⁸	30	25	17 50	19	41 36		50 57	
16	58	22.2	03.6	4	05.9 ¹²⁴	45.1 ¹⁰⁸	35	15	42	13	43 34		49 59	
17	73	22.2	+19 03.0	18	37.4 ¹²⁵	+2 34.3 ¹⁰⁸	40	17 04	17 33	18 06	9 45 32		21 48 61	
18	88	22.2	+19 02.4	33	09.0 ¹²⁶	+2 23.5 ¹⁰⁸	45	16 51	17 23	17 59	9 48 28		21 47 64	
19	103	22.2	01.8	47	40.5 ¹²⁵	12.8 ¹⁰⁷	50	35	11	51	51 25		46 67	
20	118	22.2	01.3	62	12.2 ¹²⁷	+2 02.0 ¹⁰⁸	52	28	06	47	52 24		45 69	
21	133	22.3	00.7	76	43.9 ¹²⁷	+1 51.2 ¹⁰⁸	54	20	17 00	43	54 22		44 71	
22	148	22.3	+19 00.1	91	15.6 ¹²⁷	40.4 ¹⁰⁸	56	11	16 53	39	56 20		43 74	
23	163	22.3	+18 59.5	105	47.4 ¹²⁸	29.7 ¹⁰⁷	58	16 00	46	35	9 58 17		42 76	
24	178	22.3	+18 59.0	120	19.2 ¹²⁸	+1 18.9 ¹⁰⁸	60 S	15 48	16 38	17 30	10 00 15		21 41 78	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 39 ^m 9		Mag: -4.0 PMG: 9 ^h 18 ^m		Mag: +1.7 PMG: 12 ^h 07 ^m		Mag: -1.9 PMG: 16 ^h 40 ^m		Mag: +0.2 PMG: 21 ^h 02 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	304	51.9	220	34.3	+21 30.7	178	04.7	+20 16.7	109	20.2	-5 19.0	43	38.5	-21 55.3
1	319	54.3	235	33.7	30.9	193	05.5	16.3	124	22.3	19.1	58	41.1	55.3
2	334	56.8	250	33.1	31.2	208	06.3	15.9	139	24.5	19.2	73	43.7	55.3
3	349	59.3	265	32.5	31.4	223	07.1	15.5	154	26.7	19.4	88	46.3	55.3
4	5	01.7	280	31.9	31.6	238	07.8	15.2	169	28.9	19.5	103	48.8	55.3
5	20	04.2	295	31.3	+21 31.8	253	08.6	+20 14.8	184	31.0	-5 19.6	118	51.4	-21 55.3
6	35	06.7	310	30.6	+21 32.1	268	09.4	+20 14.4	199	33.2	-5 19.7	133	54.0	-21 55.3
7	50	09.1	325	30.0	32.3	283	10.2	14.0	214	35.4	19.9	148	56.6	55.3
8	65	11.6	340	29.4	32.5	298	11.0	13.6	229	37.6	20.0	163	59.2	55.3
9	80	14.1	355	28.8	32.7	313	11.8	13.3	244	39.8	20.1	179	01.8	55.3
10	95	16.5	10	28.2	33.0	328	12.6	12.9	259	41.9	20.3	194	04.3	55.3
11	110	19.0	25	27.6	+21 33.2	343	13.4	+20 12.5	274	44.1	-5 20.4	209	06.9	-21 55.3
12	125	21.5	40	27.0	+21 33.4	358	14.2	+20 12.1	289	46.3	-5 20.5	224	09.5	-21 55.3
13	140	23.9	55	26.4	33.6	13	15.0	11.7	304	48.5	20.6	239	12.1	55.3
14	155	26.4	70	25.8	33.8	28	15.8	11.4	319	50.6	20.8	254	14.7	55.3
15	170	28.8	85	25.2	34.0	43	16.6	11.0	334	52.8	20.9	269	17.2	55.3
16	185	31.3	100	24.6	34.3	58	17.4	10.6	349	55.0	21.0	284	19.8	55.3
17	200	33.8	115	24.0	+21 34.5	73	18.2	+20 10.2	4	57.2	-5 21.2	299	22.4	-21 55.3
18	215	36.2	130	23.3	+21 34.7	88	19.0	+20 09.8	19	59.3	-5 21.3	314	25.0	-21 55.3
19	230	38.7	145	22.7	34.9	103	19.8	09.5	35	01.5	21.4	329	27.6	55.3
20	245	41.2	160	22.1	35.1	118	20.6	09.1	50	03.7	21.5	344	30.2	55.3
21	260	43.6	175	21.5	35.3	133	21.4	08.7	65	05.9	21.7	359	32.7	55.3
22	275	46.1	190	20.9	35.5	148	22.2	08.3	80	08.0	21.8	14	35.3	55.3
23	290	48.6	205	20.3	35.8	163	23.0	07.9	95	10.2	21.9	29	37.9	55.3
24	305	51.0	220	19.7	+21 36.0	178	23.8	+20 07.6	110	12.4	-5 22.1	44	40.5	-21 55.3
Dif	—		-6	+2	+8	-4	-4	+22	-1		+26			

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: 4 ^d 6 SD: 15 ^h 5 PMG: 16 ^h 29 ^m	PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 3 20 ^h : 56 ^m 1 R°: 45 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.3	+18 59.0	120	19.2	+1 18.9		60 N	** **	2 28	3 32	10 23	76	22 21	15	
1	193	22.3		134	51.0 ¹²⁸	+1 08.2 ¹⁰⁷		58	1 07	2 49	45	22 74		22 18		
2	208	22.3		149	22.9 ¹²⁹	+0 57.4 ¹⁰⁸		56	1 48	3 07	3 57	22 72		24 19		
3	223	22.3		163	54.9 ¹³⁰	46.7 ¹⁰⁷		54	2 15	21	4 07	22 70		25 2		
4	238	22.3		178	26.9 ¹³⁰	36.0 ¹⁰⁷		52	35	34	16	22 68		26 23		
5	253	22.4	+18 56.1	192	58.9 ¹³⁰	+0 25.3 ¹⁰⁷		50	2 52	3 44	4 24	10 21	67	22 27	24	
6	268	22.4	+18 55.5	207	31.0 ¹³¹	+0 14.6 ¹⁰⁷		45	3 23	4 07	4 41	10 21	63	22 29	28	
7	283	22.4		222	03.1 ¹³¹	+0 03.9 ¹⁰⁷		40	3 46	24	4 55	20 60		31 30		
8	298	22.4		236	35.3 ¹³²	-0 06.8 ¹⁰⁷		35	4 04	38	5 06	20 58		32 33		
9	313	22.4		251	07.4 ¹³¹	17.4 ¹⁰⁶		30	19	4 50	17	20 55		34 35		
10	328	22.4		265	39.7 ¹³³	28.1 ¹⁰⁷		20	4 42	5 10	34	19 52		36 39		
11	343	22.4	+18 52.6	280	11.9 ¹³²	-0 38.7 ¹⁰⁶		10 N	5 01	5 27	5 49	10 19	48	22 38	42	
12	358	22.5	+18 52.0	294	44.2 ¹³³	-0 49.3 ¹⁰⁶		0	5 16	5 41	6 03	10 18	46	22 40	45	
13	13	22.5		309	16.6 ¹³⁴	-0 59.9 ¹⁰⁶		10 S	29	5 55	17	18 42		42 48		
14	28	22.5		323	48.9 ¹³³	-1 10.5 ¹⁰⁶		20	41	6 08	31	18 38		44 51		
15	43	22.5		338	21.3 ¹³⁴	21.0 ¹⁰⁵		30	5 54	23	48	17 35		47 54		
16	58	22.5		352	53.8 ¹³⁵	31.6 ¹⁰⁶		35	6 00	31	6 58	17 33		48 57		
17	73	22.5	+18 49.0	7	26.2 ¹³⁴	-1 42.1 ¹⁰⁵		40	6 07	6 39	7 09	10 17	30	22 49	60	
18	88	22.5	+18 48.5	21	58.7 ¹³⁵	-1 52.6 ¹⁰⁵		45	6 14	6 49	7 21	10 16	28	22 51	62	
19	103	22.6		36	31.2 ¹³⁵	-2 03.0 ¹⁰⁴		50	22	7 01	37	16 24		53 66		
20	118	22.6		51	03.8 ¹³⁶	13.5 ¹⁰⁵		52	25	07	44	16 23		54 67		
21	133	22.6		65	36.4 ¹³⁶	23.9 ¹⁰⁴		54	29	12	7 52	16 21		55 69		
22	148	22.6		80	09.0 ¹³⁶	34.3 ¹⁰⁴		56	33	19	8 01	16 19		57 70		
23	163	22.6		94	41.6 ¹³⁶	44.7 ¹⁰⁴		58	37	26	12	15 18		58 73		
24	178	22.7	+18 44.9	109	14.3 ¹³⁷	-2 55.1 ¹⁰⁴		60 S	6 42	7 34	8 23	10 15	15	22 59	76	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 36 ^m 0		Mag: -4.0 PMG: 9 ^h 19 ^m			Mag: +1.7 PMG: 12 ^h 06 ^m			Mag: -1.9 PMG: 16 ^h 37 ^m			Mag: +0.2 PMG: 20 ^h 58 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	305	51.0	220	19.7	+21 36.0	178	23.8	+20 07.6	110	12.4	-5 22.1	44	40.5	-21 55.3	
1	320	53.5	235	19.1	36.2	193	24.6	07.2	125	14.6	22.2	59	43.1	55.3	
2	335	55.9	250	18.4	36.4	208	25.4	06.8	140	16.7	22.3	74	45.6	55.3	
3	350	58.4	265	17.8	36.6	223	26.2	06.4	155	18.9	22.4	89	48.2	55.3	
4	6	00.9	280	17.2	36.8	238	27.0	06.0	170	21.1	22.6	104	50.8	55.3	
5	21	03.3	295	16.6	+21 37.0	253	27.8	+20 05.6	185	23.2	-5 22.7	119	53.4	-21 55.3	
6	36	05.8	310	16.0	+21 37.2	268	28.6	+20 05.2	200	25.4	-5 22.8	134	56.0	-21 55.3	
7	51	08.3	325	15.4	37.4	283	29.4	04.9	215	27.6	23.0	149	58.5	55.3	
8	66	10.7	340	14.7	37.6	298	30.2	04.5	230	29.8	23.1	165	01.1	55.3	
9	81	13.2	355	14.1	37.8	313	31.0	04.1	245	31.9	23.2	180	03.7	55.3	
10	96	15.7	10	13.5	38.0	328	31.8	03.7	260	34.1	23.4	195	06.3	55.3	
11	111	18.1	25	12.9	+21 38.2	343	32.6	+20 03.3	275	36.3	-5 23.5	210	08.9	-21 55.3	
12	126	20.6	40	12.3	+21 38.4	358	33.4	+20 02.9	290	38.4	-5 23.6	225	11.4	-21 55.3	
13	141	23.1	55	11.7	38.6	13	34.2	02.6	305	40.6	23.7	240	14.0	55.3	
14	156	25.5	70	11.0	38.8	28	35.0	02.2	320	42.8	23.9	255	16.6	55.3	
15	171	28.0	85	10.4	39.0	43	35.8	01.8	335	45.0	24.0	270	19.2	55.3	
16	186	30.4	100	09.8	39.2	58	36.6	01.4	350	47.1	24.1	285	21.7	55.3	
17	201	32.9	115	09.2	+21 39.4	73	37.5	+20 01.0	5	49.3	-5 24.3	300	24.3	-21 55.3	
18	216	35.4	130	08.6	+21 39.6	88	38.3	+20 00.6	20	51.5	-5 24.4	315	26.9	-21 55.3	
19	231	37.8	145	08.0	39.7	103	39.1	+20 00.2	35	53.6	24.5	330	29.5	55.3	
20	246	40.3	160	07.3	39.9	118	39.9	+19 59.8	50	55.8	24.7	345	32.1	55.3	
21	261	42.8	175	06.7	40.1	133	40.7	59.5	65	58.0	24.8	0	34.6	55.3	
22	276	45.2	190	06.1	40.3	148	41.5	59.1	81	00.1	24.9	15	37.2	55.3	
23	291	47.7	205	05.5	40.5	163	42.3	58.7	96	02.3	25.1	30	39.8	55.3	
24	306	50.2	220	04.8	+21 40.7	178	43.1	+19 58.3	111	04.5	-5 25.2	45	42.4	-21 55.3	
Dif	—		-6		+2		+8	-4		+22	-1		+26		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5			Edad: 5 ^d 6 SD: 15 ^h 2 PMG: 17 ^h 14 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	178	22.7	+18 44.9	109	14.3	-2 55.1	60 N	20 37	21 39	** **	11 39 74	22 36 17		
1	193	22.7		123	47.0 ¹³⁷	-3 05.4 ¹⁰³	58	24	19	22 54	36 72	40 19		
2	208	22.7		138	19.7 ¹³⁷	15.7 ¹⁰³	56	13	21 02	22 17	34 70	43 21		
3	223	22.7		152	52.4 ¹³⁷	26.0 ¹⁰³	54	20 03	20 48	21 53	32 67	46 23		
4	238	22.7		167	25.2 ¹³⁸	36.3 ¹⁰³	52	19 55	36	33	30 66	49 24		
5	253	22.7	+18 42.0	181	58.0 ¹³⁸	-3 46.5 ¹⁰²	50	19 47	20 26	21 18	11 28 64	22 51 26		
6	268	22.8	+18 41.4	196	30.8 ¹³⁸	-3 56.7 ¹⁰²	45	19 30	20 04	20 47	11 24 61	22 57 28		
7	283	22.8		211	03.6 ¹³⁸	-4 06.9 ¹⁰²	40	17	19 47	25	20 59	23 01 31		
8	298	22.8		225	36.4 ¹³⁸	17.0 ¹⁰¹	35	19 05	33	20 07	18 56	05 34		
9	313	22.8		240	09.3 ¹³⁹	27.1 ¹⁰¹	30	18 55	21	19 53	15 54	09 35		
10	328	22.9		254	42.2 ¹³⁹	37.2 ¹⁰¹	20	38	19 02	30	11 50	15 38		
11	343	22.9	+18 38.4	269	15.1 ¹³⁹	-4 47.2 ¹⁰⁰	10 N	18 24	18 46	19 12	11 07 47	23 20 42		
12	358	22.9	+18 37.8	283	48.0 ¹³⁹	-4 57.3 ¹⁰¹	0	18 10	18 32	18 57	11 04 44	23 25 44		
13	13	22.9		298	20.9 ¹³⁹	-5 07.2 ⁹⁹	10 S	17 56	19	44	11 00 42	30 47		
14	28	22.9		312	53.9 ¹⁴⁰	17.2 ¹⁰⁰	20	42	18 05	32	10 56 39	35 50		
15	43	23.0		327	26.8 ¹³⁹	27.1 ⁹⁹	30	26	17 51	20	52 35	41 54		
16	58	23.0		341	59.8 ¹⁴⁰	37.0 ⁹⁹	35	16	43	14	50 33	45 55		
17	73	23.0	+18 34.8	356	32.8 ¹⁴⁰	-5 46.8 ⁹⁸	40	17 06	17 35	18 07	10 47 31	23 49 58		
18	88	23.0	+18 34.2	11	05.8 ¹⁴⁰	-5 56.7 ⁹⁹	45	16 53	17 25	18 01	10 44 28	23 53 61		
19	103	23.1		25	38.8 ¹⁴⁰	-6 06.4 ⁹⁷	50	38	14	17 53	40 25	23 59 64		
20	118	23.1		40	11.8 ¹⁴⁰	16.2 ⁹⁸	52	31	08	50	39 23	** ** *		
21	133	23.1		54	44.9 ¹⁴¹	25.9 ⁹⁷	54	23	17 03	46	37 22	** ** *		
22	148	23.1		69	17.9 ¹⁴⁰	35.6 ⁹⁷	56	14	16 56	42	35 20	** ** *		
23	163	23.1		83	51.0 ¹⁴¹	45.2 ⁹⁶	58	16 04	49	38	33 18	** ** *		
24	178	23.2	+18 30.6	98	24.0 ¹⁴⁰	-6 54.8 ⁹⁶	60 S	15 52	16 42	17 33	10 30 16	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 32 ^m 1		Mag: -4.0 PMG: 9 ^h 20 ^m		Mag: +1.7 PMG: 12 ^h 04 ^m		Mag: -1.9 PMG: 16 ^h 33 ^m		Mag: +0.2 PMG: 20 ^h 54 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	306	50.2	220	04.8	+21 40.7	178	43.1	+19 58.3	111	04.5	-5 25.2	45	42.4	-21 55.3
1	321	52.6	235	04.2	40.9	193	43.9	57.9	126	06.7	25.3	60	44.9	55.3
2	336	55.1	250	03.6	41.1	208	44.7	57.5	141	08.8	25.5	75	47.5	55.3
3	351	57.6	265	03.0	41.2	223	45.5	57.1	156	11.0	25.6	90	50.1	55.3
4	7	00.0	280	02.4	41.4	238	46.3	56.7	171	13.2	25.7	105	52.7	55.3
5	22	02.5	295	01.7	+21 41.6	253	47.1	+19 56.3	186	15.3	-5 25.8	120	55.2	-21 55.3
6	37	04.9	310	01.1	+21 41.8	268	47.9	+19 56.0	201	17.5	-5 26.0	135	57.8	-21 55.3
7	52	07.4	325	00.5	42.0	283	48.7	55.6	216	19.7	26.1	151	00.4	55.3
8	67	09.9	339	59.9	42.1	298	49.5	55.2	231	21.8	26.2	166	03.0	55.3
9	82	12.3	354	59.2	42.3	313	50.3	54.8	246	24.0	26.4	181	05.5	55.3
10	97	14.8	9	58.6	42.5	328	51.1	54.4	261	26.2	26.5	196	08.1	55.3
11	112	17.3	24	58.0	+21 42.7	343	51.9	+19 54.0	276	28.3	-5 26.6	211	10.7	-21 55.3
12	127	19.7	39	57.4	+21 42.8	358	52.7	+19 53.6	291	30.5	-5 26.8	226	13.3	-21 55.3
13	142	22.2	54	56.7	43.0	13	53.5	53.2	306	32.7	26.9	241	15.8	55.3
14	157	24.7	69	56.1	43.2	28	54.4	52.8	321	34.8	27.0	256	18.4	55.3
15	172	27.1	84	55.5	43.4	43	55.2	52.4	336	37.0	27.2	271	21.0	55.3
16	187	29.6	99	54.9	43.5	58	56.0	52.0	351	39.2	27.3	286	23.6	55.3
17	202	32.0	114	54.2	+21 43.7	73	56.8	+19 51.7	6	41.3	-5 27.4	301	26.1	-21 55.3
18	217	34.5	129	53.6	+21 43.9	88	57.6	+19 51.3	21	43.5	-5 27.6	316	28.7	-21 55.3
19	232	37.0	144	53.0	44.0	103	58.4	50.9	36	45.7	27.7	331	31.3	55.3
20	247	39.4	159	52.4	44.2	118	59.2	50.5	51	47.8	27.8	346	33.9	55.3
21	262	41.9	174	51.7	44.4	134	00.0	50.1	66	50.0	28.0	1	36.4	55.3
22	277	44.4	189	51.1	44.5	149	00.8	49.7	81	52.1	28.1	16	39.0	55.3
23	292	46.8	204	50.5	44.7	164	01.6	49.3	96	54.3	28.2	31	41.6	55.3
24	307	49.3	219	49.8	+21 44.9	179	02.4	+19 48.9	111	56.5	-5 28.4	46	44.2	-21 55.3
Dif	—		-6	+2		+8	-4		+22		-1		+26	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 06 ^m 4			Edad: 6 ^d 6 PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/8 R°: 44 ^m	hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾													
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	23.2	+18	30.6	98	24.0	-6	54.8	60 N	**	**	2	34	12	53	73
1	193	23.2		30.0	112	57.1 ¹⁴¹	-7	04.3 ⁹⁵	58	1	20	2	55	48	70	22
2	208	23.2		29.4	127	30.2 ¹⁴¹		13.8 ⁹⁵	56	1	56	3	11	44	67	23
3	223	23.2		28.8	142	03.3 ¹⁴¹		23.3 ⁹⁵	54	2	21		25	39	66	09
4	238	23.3		28.2	156	36.4 ¹⁴¹		32.7 ⁹⁴	52		40		37	19	36	64
5	253	23.3	+18	27.6	171	09.4 ¹⁴⁰	-7	42.1 ⁹⁴	50	2	56	3	48	12	32	63
6	268	23.3	+18	26.9	185	42.5 ¹⁴¹	-7	51.5 ⁹⁴	45	3	26	4	09	12	25	60
7	283	23.4		26.3	200	15.6 ¹⁴¹	-8	00.8 ⁹³	40	3	48		26	19	57	
8	298	23.4		25.7	214	48.7 ¹⁴¹		10.1 ⁹³	35	4	06		40	14	55	
9	313	23.4		25.1	229	21.9 ¹⁴²		19.3 ⁹²	30		21	4	52	18	09	53
10	328	23.4		24.5	243	55.0 ¹⁴¹		28.5 ⁹²	20	4	43	5	11	12	01	50
11	343	23.5	+18	23.9	258	28.1 ¹⁴¹	-8	37.6 ⁹¹	10 N	5	01	5	27	11	54	47
12	358	23.5	+18	23.3	273	01.2 ¹⁴¹	-8	46.7 ⁹¹	0	5	16	5	41	11	48	44
13	13	23.5		22.7	287	34.3 ¹⁴¹	-8	55.7 ⁹⁰	10 S		29	5	54	42	41	
14	28	23.5		22.1	302	07.4 ¹⁴¹	-9	04.7 ⁹⁰	20		41	6	07	31	35	39
15	43	23.6		21.5	316	40.5 ¹⁴¹		13.7 ⁹⁰	30		53		21	27	36	
16	58	23.6		20.8	331	13.6 ¹⁴¹		22.6 ⁸⁹	35	5	59		29	23	34	
17	73	23.6	+18	20.2	345	46.7 ¹⁴¹	-9	31.4 ⁸⁸	40	6	05	6	38	11	18	32
18	88	23.7	+18	19.6	0	19.8 ¹⁴¹	-9	40.3 ⁸⁹	45	6	12	6	47	7	19	
19	103	23.7		19.0	14	52.9 ¹⁴¹		49.0 ⁸⁷	50		19	6	59	34	05	27
20	118	23.7		18.4	29	26.0 ¹⁴¹	-9	57.7 ⁸⁷	52		23	7	04	41	11	02
21	133	23.8		17.8	43	59.0 ¹⁴⁰	-10	06.4 ⁸⁷	54		26		09	49	10	59
22	148	23.8		17.2	58	32.1 ¹⁴¹		15.0 ⁸⁶	56		30		16	7	58	
23	163	23.8		16.6	73	05.2 ¹⁴¹		23.6 ⁸⁶	58		34		22	8	08	
24	178	23.8	+18	15.9	87	38.3 ¹⁴¹	-10	32.1 ⁸⁵	60 S	6	38	7	30	8	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 28 ^m 1		Mag: -4.0 PMG: 9 ^h 21 ^m		Mag: +1.7 PMG: 12 ^h 03 ^m		Mag: -1.9 PMG: 16 ^h 30 ^m		Mag: +0.2 PMG: 20 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	307	49.3	219	49.8	+21	44.9	179	02.4	+19	48.9	111	56.5	-5	28.4	46	44.2	-21	55.3
1	322	51.8	234	49.2		45.0	194	03.2		48.5	126	58.6		28.5	61	46.7		55.3
2	337	54.2	249	48.6		45.2	209	04.0		48.1	142	00.8		28.6	76	49.3		55.3
3	352	56.7	264	48.0		45.4	224	04.9		47.7	157	03.0		28.8	91	51.9		55.3
4	7	59.2	279	47.3		45.5	239	05.7		47.3	172	05.1		28.9	106	54.5		55.3
5	23	01.6	294	46.7	+21	45.7	254	06.5	+19	46.9	187	07.3	-5	29.0	121	57.0	-21	55.3
6	38	04.1	309	46.1	+21	45.8	269	07.3	+19	46.5	202	09.5	-5	29.2	136	59.6	-21	55.3
7	53	06.5	324	45.4		46.0	284	08.1		46.1	217	11.6		29.3	152	02.2		55.3
8	68	09.0	339	44.8		46.1	299	08.9		45.7	232	13.8		29.4	167	04.7		55.3
9	83	11.5	354	44.2		46.3	314	09.7		45.3	247	15.9		29.6	182	07.3		55.3
10	98	13.9	9	43.5		46.5	329	10.5		44.9	262	18.1		29.7	197	09.9		55.3
11	113	16.4	24	42.9	+21	46.6	344	11.3	+19	44.5	277	20.3	-5	29.8	212	12.5	-21	55.3
12	128	18.9	39	42.3	+21	46.8	359	12.1	+19	44.1	292	22.4	-5	30.0	227	15.0	-21	55.3
13	143	21.3	54	41.6		46.9	14	12.9		43.7	307	24.6		30.1	242	17.6		55.3
14	158	23.8	69	41.0		47.1	29	13.8		43.4	322	26.7		30.2	257	20.2		55.3
15	173	26.3	84	40.4		47.2	44	14.6		43.0	337	28.9		30.4	272	22.7		55.3
16	188	28.7	99	39.7		47.4	59	15.4		42.6	352	31.1		30.5	287	25.3		55.3
17	203	31.2	114	39.1	+21	47.5	74	16.2	+19	42.2	7	33.2	-5	30.6	302	27.9	-21	55.3
18	218	33.7	129	38.5	+21	47.6	89	17.0	+19	41.8	22	35.4	-5	30.8	317	30.5	-21	55.3
19	233	36.1	144	37.8		47.8	104	17.8		41.4	37	37.6		30.9	332	33.0		55.3
20	248	38.6	159	37.2		47.9	119	18.6		41.0	52	39.7		31.0	347	35.6		55.3
21	263	41.0	174	36.6		48.1	134	19.4		40.6	67	41.9		31.2	2	38.2		55.3
22	278	43.5	189	35.9		48.2	149	20.3		40.2	82	44.0		31.3	17	40.7		55.3
23	293	46.0	204	35.3		48.4	164	21.1		39.8	97	46.2		31.5	32	43.3		55.3
24	308	48.4	219	34.7	+21	48.5	179	21.9	+19	39.4	112	48.3	-5	31.6	47	45.9	-21	55.3
Dif	—		-6		+2		+8		-4		+22		-1		+26			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4			Edad: 7 ^d 6 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 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	178	23.8	+18	15.9	87	38.3	-10	32.1	60 N	20 32	21 33	** **	14 06	69	23 12	23		
1	193	23.9		15.3	102	11.3 ¹⁴⁰		40.6 ⁸⁵	58	20	21 14	22 42	13 58	67	20 25			
2	208	23.9		14.7	116	44.4 ¹⁴¹		49.0 ⁸⁴	56	09	20 58	22 10	51 66		27 27			
3	223	23.9		14.1	131	17.4 ¹⁴⁰	-10	57.4 ⁸⁴	54	20 00	44	21 47	45 64		33 29			
4	238	24.0		13.5	145	50.4 ¹⁴⁰	-11	05.7 ⁸³	52	19 51	33	29	40 62		39 30			
5	253	24.0	+18	12.8	160	23.5 ¹⁴¹	-11	13.9 ⁸²	50	19 44	20 22	21 13	13 35	61	23 44	31		
6	268	24.0	+18	12.2	174	56.5 ¹⁴⁰	-11	22.1 ⁸²	45	19 28	20 02	20 44	13 25	58	23 56	33		
7	283	24.1		11.6	189	29.5 ¹⁴⁰		30.3 ⁸²	40	15	19 45	22	16 56		** **	**		
8	298	24.1		11.0	204	02.4 ¹³⁹		38.4 ⁸¹	35	19 04	31	20 05	09 54		** **	**		
9	313	24.1		10.4	218	35.4 ¹⁴⁰		46.4 ⁸⁰	30	18 54	20	19 51	13 02	53	** **	**		
10	328	24.2		09.7	233	08.4 ¹⁴⁰	-11	54.4 ⁸⁰	20	37	19 01	29	12 51	50	** **	**		
11	343	24.2	+18	09.1	247	41.3 ¹³⁹	-12	02.3 ⁷⁹	10 N	18 23	18 45	19 11	12 41	48	0 02	42		
12	358	24.2	+18	08.5	262	14.3 ¹⁴⁰	-12	10.2 ⁷⁹	0	18 10	18 32	18 57	12 32	45	0 09	45		
13	13	24.3		07.9	276	47.2 ¹³⁹		18.0 ⁷⁸	10 S	17 57	19	44	23 43		17 47			
14	28	24.3		07.3	291	20.1 ¹³⁹		25.8 ⁷⁸	20	43	18 06	33	14 40		25 50			
15	43	24.3		06.6	305	53.0 ¹³⁹		33.5 ⁷⁷	30	27	17 52	21	12 03	38	35 53			
16	58	24.4		06.0	320	25.9 ¹³⁹		41.2 ⁷⁷	35	18	45	15	11 57	36	40 55			
17	73	24.4	+18	05.4	334	58.8 ¹³⁹	-12	48.7 ⁷⁵	40	17 07	17 36	18 09	11 50	34	0 47	56		
18	88	24.5	+18	04.8	349	31.6 ¹³⁸	-12	56.3 ⁷⁶	45	16 55	17 27	18 02	11 41	32	0 54	59		
19	103	24.5		04.1	4	04.4 ¹³⁸	-13	03.7 ⁷⁴	50	41	16	17 55	32 29		1 03	62		
20	118	24.5		03.5	18	37.3 ¹³⁹		11.2 ⁷⁵	52	34	11	52	27 28		07 63			
21	133	24.6		02.9	33	10.1 ¹³⁸		18.5 ⁷³	54	26	05	49	22 26		11 65			
22	148	24.6		02.2	47	42.8 ¹³⁷		25.8 ⁷³	56	18	17 00	45	17 24		16 67			
23	163	24.6		01.6	62	15.6 ¹³⁸		33.0 ⁷²	58	16 08	16 53	41	10 23		22 68			
24	178	24.7	+18	01.0	76	48.4 ¹³⁸	-13	40.2 ⁷²	60 S	15 57	16 45	17 37	11 03	21	1 28	71		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 3 ^h 24 ^m 2		Mag: -4.0 PMG: 9 ^h 22 ^m			Mag: +1.7 PMG: 12 ^h 02 ^m			Mag: -1.9 PMG: 16 ^h 26 ^m				Mag: +0.3 PMG: 20 ^h 45 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	308	48.4	219	34.7	+21	48.5	179	21.9	+19	39.4	112	48.3	-5	31.6	47	45.9	-21	55.3
1	323	50.9	234	34.0		48.6	194	22.7		39.0	127	50.5		31.7	62	48.4		55.3
2	338	53.4	249	33.4		48.8	209	23.5		38.6	142	52.7		31.9	77	51.0		55.3
3	353	55.8	264	32.7		48.9	224	24.3		38.2	157	54.8		32.0	92	53.6		55.3
4	8	58.3	279	32.1		49.1	239	25.1		37.8	172	57.0		32.1	107	56.1		55.3
5	24	00.8	294	31.5	+21	49.2	254	25.9	+19	37.4	187	59.1	-5	32.3	122	58.7	-21	55.3
6	39	03.2	309	30.8	+21	49.3	269	26.8	+19	37.0	203	01.3	-5	32.4	138	01.3	-21	55.3
7	54	05.7	324	30.2		49.5	284	27.6		36.6	218	03.5		32.5	153	03.9		55.3
8	69	08.1	339	29.6		49.6	299	28.4		36.2	233	05.6		32.7	168	06.4		55.3
9	84	10.6	354	28.9		49.7	314	29.2		35.8	248	07.8		32.8	183	09.0		55.3
10	99	13.1	9	28.3		49.8	329	30.0		35.3	263	09.9		32.9	198	11.6		55.3
11	114	15.5	24	27.6	+21	50.0	344	30.8	+19	34.9	278	12.1	-5	33.1	213	14.1	-21	55.3
12	129	18.0	39	27.0	+21	50.1	359	31.6	+19	34.5	293	14.2	-5	33.2	228	16.7	-21	55.3
13	144	20.5	54	26.4		50.2	14	32.4		34.1	308	16.4		33.3	243	19.3		55.3
14	159	22.9	69	25.7		50.4	29	33.3		33.7	323	18.6		33.5	258	21.8		55.3
15	174	25.4	84	25.1		50.5	44	34.1		33.3	338	20.7		33.6	273	24.4		55.3
16	189	27.9	99	24.4		50.6	59	34.9		32.9	353	22.9		33.8	288	27.0		55.3
17	204	30.3	114	23.8	+21	50.7	74	35.7	+19	32.5	8	25.0	-5	33.9	303	29.5	-21	55.3
18	219	32.8	129	23.2	+21	50.9	89	36.5	+19	32.1	23	27.2	-5	34.0	318	32.1	-21	55.3
19	234	35.3	144	22.5		51.0	104	37.3		31.7	38	29.3		34.2	333	34.7		55.3
20	249	37.7	159	21.9		51.1	119	38.2		31.3	53	31.5		34.3	348	37.2		55.3
21	264	40.2	174	21.2		51.2	134	39.0		30.9	68	33.6		34.4	3	39.8		55.3
22	279	42.6	189	20.6		51.3	149	39.8		30.5	83	35.8		34.6	18	42.4		55.3
23	294	45.1	204	19.9		51.5	164	40.6		30.1	98	38.0		34.7	33	44.9		55.3
24	309	47.6	219	19.3	+21	51.6	179	41.4	+19	29.7	113	40.1	-5	34.8	48	47.5	-21	55.3
Dif	—		-6 +1			+8 -4			+22 -1				+26 0					

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3				Edad: 8 ^d 6 PHE { 4 ^h : 54 ^m /3 12 ^h : 54 ^m /3 20 ^h : 54 ^m /2 R°: 47 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	24.7	+18	01.0	76	48.4	-13	40.2	71	58	60 N	**	**	2	41	3	41	15	15	66	23
1	193	24.7	+18	00.4	91	21.1	137	47.3	71	58	58	1	31	3	00	3	53	15	05	64	45
2	208	24.8	+17	59.7	105	53.8	137	-13	54.4	69	56	2	03	16	4	04	14	57	62	23	54
3	223	24.8		59.1	120	26.5	137	-14	01.3	69	54	26	29	14		49	61	**	**	**	32
4	238	24.8		58.5	134	59.2	137		08.3	70	52	2	45	41	22		42	60	**	**	**
5	253	24.9	+17	57.8	149	31.8	136	-14	15.1	68	50	3	00	3	51	4	29	14	36	59	**
6	268	24.9	+17	57.2	164	04.4	136	-14	21.9	68	45	3	29	4	12	4	45	14	23	56	**
7	283	25.0		56.6	178	37.0	136		28.6	67	40	3	51	28	4	58	12	55		0	05
8	298	25.0		55.9	193	09.6	136		35.3	67	35	4	08	42	5	09	14	03	53	13	38
9	313	25.0		55.3	207	42.2	136		41.9	66	30	22	4	53	19		13	55	52	21	38
10	328	25.1		54.7	222	14.7	135		48.4	65	20	4	44	5	12	35		41	50	33	41
11	343	25.1	+17	54.0	236	47.3	136	-14	54.9	65	10 N	5	02	5	27	5	50	13	29	47	0
12	358	25.2	+17	53.4	251	19.8	135	-15	01.3	64	0	5	16	5	41	6	03	13	17	46	0
13	13	25.2		52.8	265	52.2	134		07.6	63	10 S	28	5	54	16		13	06	44	1	04
14	28	25.2		52.1	280	24.7	135		13.9	63	20	40	6	07	30		12	54	42	15	50
15	43	25.3		51.5	294	57.1	134		20.1	62	30	51	20	45			41	40		28	52
16	58	25.3		50.9	309	29.5	134		26.2	61	35	5	57	28	6	54	33	38		35	54
17	73	25.4	+17	50.2	324	01.9	134	-15	32.3	61	40	6	03	6	36	7	05	12	24	37	1
18	88	25.4	+17	49.6	338	34.3	134	-15	38.3	60	45	6	10	6	45	7	17	12	13	36	1
19	103	25.4		49.0	353	06.6	133		44.2	59	50	17	6	56	31		12	01	33	2	05
20	118	25.5		48.3	7	38.9	133		50.1	59	52	20	7	01	38		11	55	32	10	61
21	133	25.5		47.7	22	11.2	133	-15	55.8	57	54	23	06	46			48	31		16	63
22	148	25.6		47.0	36	43.5	133	-16	01.6	58	56	27	12	7	54		41	30		23	64
23	163	25.6		46.4	51	15.7	132		07.2	56	58	31	19	8	03		33	28		30	66
24	178	25.7	+17	45.8	65	48.0	133	-16	12.8	56	60 S	6	35	7	26	8	14	11	24	26	2

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 20 ^m 3		Mag: -4.0 PMG: 9 ^h 23 ^m				Mag: +1.7 PMG: 12 ^h 01 ^m				Mag: -1.9 PMG: 16 ^h 23 ^m				Mag: +0.3 PMG: 20 ^h 41 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	309	47.6	219	19.3	+21	51.6	179	41.4	+19	29.7	113	40.1	-5	34.8	48	47.5	-21	55.3
1	324	50.0	234	18.7		51.7	194	42.2		29.3	128	42.3		35.0	63	50.1		55.3
2	339	52.5	249	18.0		51.8	209	43.1		28.9	143	44.4		35.1	78	52.6		55.3
3	354	55.0	264	17.4		51.9	224	43.9		28.5	158	46.6		35.3	93	55.2		55.3
4	9	57.4	279	16.7		52.0	239	44.7		28.1	173	48.7		35.4	108	57.8		55.3
5	24	59.9	294	16.1	+21	52.1	254	45.5	+19	27.7	188	50.9	-5	35.5	124	00.3	-21	55.3
6	40	02.4	309	15.4	+21	52.3	269	46.3	+19	27.3	203	53.0	-5	35.7	139	02.9	-21	55.3
7	55	04.8	324	14.8		52.4	284	47.1		26.8	218	55.2		35.8	154	05.4		55.3
8	70	07.3	339	14.1		52.5	299	48.0		26.4	233	57.3		35.9	169	08.0		55.3
9	85	09.8	354	13.5		52.6	314	48.8		26.0	248	59.5		36.1	184	10.6		55.4
10	100	12.2	9	12.8		52.7	329	49.6		25.6	264	01.6		36.2	199	13.1		55.4
11	115	14.7	24	12.2	+21	52.8	344	50.4	+19	25.2	279	03.8	-5	36.4	214	15.7	-21	55.4
12	130	17.1	39	11.6	+21	52.9	359	51.2	+19	24.8	294	06.0	-5	36.5	229	18.3	-21	55.4
13	145	19.6	54	10.9		53.0	14	52.0		24.4	309	08.1		36.6	244	20.8		55.4
14	160	22.1	69	10.3		53.1	29	52.9		24.0	324	10.3		36.8	259	23.4		55.4
15	175	24.5	84	09.6		53.2	44	53.7		23.6	339	12.4		36.9	274	26.0		55.4
16	190	27.0	99	09.0		53.3	59	54.5		23.2	354	14.6		37.0	289	28.5		55.4
17	205	29.5	114	08.3	+21	53.4	74	55.3	+19	22.8	9	16.7	-5	37.2	304	31.1	-21	55.4
18	220	31.9	129	07.7	+21	53.5	89	56.1	+19	22.4	24	18.9	-5	37.3	319	33.6	-21	55.4
19	235	34.4	144	07.0		53.6	104	57.0		21.9	39	21.0		37.5	334	36.2		55.4
20	250	36.9	159	06.4		53.7	119	57.8		21.5	54	23.2		37.6	349	38.8		55.4
21	265	39.3	174	05.7		53.8	134	58.6		21.1	69	25.3		37.7	4	41.3		55.4
22	280	41.8	189	05.1		53.9	149	59.4		20.7	84	27.5		37.9	19	43.9		55.4
23	295	44.2	204	04.4		54.0	165	00.2		20.3	99	29.6		38.0	34	46.5		55.4
24	310	46.7	219	03.8	+21	54.1	180	01.1	+19	19.9	114	31.8	-5	38.1	49	49.0	-21	55.4
Dif	—		-6		+1		+8		-4		+22		-1		+26			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 3			Edad: 9 ^d 6 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	25.7	+17 45.8	65	48.0	-16 12.8	55	60 N	20 27	21 26	23 23	16 21 61	*** ** *	*** ** *
1	193	25.7	45.1	80	20.1 ¹³¹	18.3	55	58	16	21 08	22 32	16 09 59	*** ** *	*** ** *
2	208	25.8	44.5	94	52.3 ¹³²	23.7	54	56	20 05	20 53	22 03	15 59 58	*** ** *	*** ** *
3	223	25.8	43.8	109	24.4 ¹³¹	29.0	53	54	19 56	40	21 41	50 57	0 02 33	
4	238	25.8	43.2	123	56.6 ¹³²	34.3	53	52	48	29	24	42 56	09 34	
5	253	25.9	+17 42.5	138	28.7 ¹³¹	-16 39.5	52	50	19 41	20 19	21 09	15 35 55	0 15 36	
6	268	25.9	+17 41.9	153	00.7 ¹³⁰	-16 44.7	52	45	19 25	19 59	20 41	15 19 54	0 29 38	
7	283	26.0	41.3	167	32.8 ¹³¹	49.7	50	40	13	43	20	15 07 52	41 39	
8	298	26.0	40.6	182	04.8 ¹³⁰	54.7	50	35	19 02	29	20 03	14 56 52	51 40	
9	313	26.1	40.0	196	36.7 ¹²⁹	-16 59.6	49	30	18 52	18	19 49	47 51	0 59 42	
10	328	26.1	39.3	211	08.7 ¹³⁰	-17 04.4	48	20	36	19 00	27	31 49	1 14 44	
11	343	26.2	+17 38.7	225	40.6 ¹²⁹	-17 09.2	48	10 N	18 23	18 45	19 11	14 16 49	1 27 45	
12	358	26.2	+17 38.0	240	12.5 ¹²⁹	-17 13.9	47	0	18 10	18 31	18 57	14 03 47	1 40 46	
13	13	26.3	37.4	254	44.4 ¹²⁹	18.5	46	10 S	17 57	19	44	13 50 46	1 52 48	
14	28	26.3	36.7	269	16.3 ¹²⁹	23.0	45	20	43	18 07	33	36 45	2 05 49	
15	43	26.4	36.1	283	48.1 ¹²⁸	27.4	44	30	28	17 53	22	21 43	20 51	
16	58	26.4	35.4	298	19.9 ¹²⁸	31.8	44	35	19	46	16	11 43	29 52	
17	73	26.5	+17 34.8	312	51.7 ¹²⁸	-17 36.1	43	40	17 09	17 38	18 11	13 01 41	2 39 53	
18	88	26.5	+17 34.1	327	23.4 ¹²⁷	-17 40.3	42	45	16 58	17 29	18 04	12 49 40	2 50 56	
19	103	26.6	33.5	341	55.2 ¹²⁸	44.5	42	50	43	18	17 58	34 38	3 05 57	
20	118	26.6	32.8	356	26.9 ¹²⁷	48.5	40	52	37	14	55	27 37	11 58	
21	133	26.7	32.2	10	58.5 ¹²⁶	52.5	40	54	29	08	51	19 37	19 59	
22	148	26.7	31.5	25	30.2 ¹²⁷	-17 56.4	39	56	21	17 03	48	11 35	27 60	
23	163	26.8	30.9	40	01.8 ¹²⁶	-18 00.2	38	58	12	16 56	44	12 01 34	36 62	
24	178	26.8	+17 30.2	54	33.4 ¹²⁶	-18 03.9	37	60 S	16 01	16 49	17 40	11 50 33	3 47 63	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 16 ^m 3		Mag: -4.0 PMG: 9 ^h 24 ^m		Mag: +1.7 PMG: 11 ^h 59 ^m		Mag: -1.9 PMG: 16 ^h 20 ^m		Mag: +0.3 PMG: 20 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	310	46.7	219 03.8	+21 54.1	180 01.1	+19 19.9	114 31.8	-5 38.1	49 49.0	-21 55.4
1	325	49.2	234 03.1	54.2	195 01.9	19.5	129 33.9	38.3	64 51.6	55.4
2	340	51.6	249 02.5	54.3	210 02.7	19.1	144 36.1	38.4	79 54.1	55.4
3	355	54.1	264 01.8	54.4	225 03.5	18.7	159 38.2	38.6	94 56.7	55.4
4	10	56.6	279 01.2	54.4	240 04.3	18.2	174 40.4	38.7	109 59.3	55.4
5	25	59.0	294 00.5	+21 54.5	255 05.2	+19 17.8	189 42.5	-5 38.8	125 01.8	-21 55.4
6	41	01.5	308 59.9	+21 54.6	270 06.0	+19 17.4	204 44.7	-5 39.0	140 04.4	-21 55.4
7	56	04.0	323 59.2	54.7	285 06.8	17.0	219 46.8	39.1	155 07.0	55.4
8	71	06.4	338 58.6	54.8	300 07.6	16.6	234 49.0	39.3	170 09.5	55.4
9	86	08.9	353 57.9	54.9	315 08.4	16.2	249 51.1	39.4	185 12.1	55.4
10	101	11.4	8 57.3	55.0	330 09.3	15.8	264 53.3	39.5	200 14.6	55.4
11	116	13.8	23 56.6	+21 55.0	345 10.1	+19 15.4	279 55.4	-5 39.7	215 17.2	-21 55.4
12	131	16.3	38 56.0	+21 55.1	0 10.9	+19 14.9	294 57.5	-5 39.8	230 19.8	-21 55.4
13	146	18.7	53 55.3	55.2	15 11.7	14.5	309 59.7	40.0	245 22.3	55.4
14	161	21.2	68 54.7	55.3	30 12.6	14.1	325 01.8	40.1	260 24.9	55.4
15	176	23.7	83 54.0	55.4	45 13.4	13.7	340 04.0	40.2	275 27.4	55.4
16	191	26.1	98 53.3	55.4	60 14.2	13.3	355 06.1	40.4	290 30.0	55.4
17	206	28.6	113 52.7	+21 55.5	75 15.0	+19 12.9	10 08.3	-5 40.5	305 32.6	-21 55.4
18	221	31.1	128 52.0	+21 55.6	90 15.8	+19 12.5	25 10.4	-5 40.7	320 35.1	-21 55.4
19	236	33.5	143 51.4	55.7	105 16.7	12.0	40 12.6	40.8	335 37.7	55.4
20	251	36.0	158 50.7	55.7	120 17.5	11.6	55 14.7	40.9	350 40.2	55.4
21	266	38.5	173 50.1	55.8	135 18.3	11.2	70 16.9	41.1	5 42.8	55.4
22	281	40.9	188 49.4	55.9	150 19.1	10.8	85 19.0	41.2	20 45.3	55.4
23	296	43.4	203 48.8	56.0	165 20.0	10.4	100 21.2	41.4	35 47.9	55.4
24	311	45.9	218 48.1	+21 56.0	180 20.8	+19 10.0	115 23.3	-5 41.5	50 50.5	-21 55.4
Dif	—		-7 +1		+8 -4		+21 -1		+26 0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 2			Edad: 10 ^d 6 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2 Rº: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	26.8	+17	30.2	54	33.4	–18	03.9	37	60 N	0 50	2 47	3 46	17 22	52	0 03	37	
1	193	26.9		29.6	69	05.0		07.6	37	58	1 41	3 05	3 58	17 08	53	15	38	
2	208	26.9		28.9	83	36.5		11.1	35	56	2 10	20	4 08	16 57	52	26	39	
3	223	27.0		28.3	98	08.0		14.6	35	54	32	33	17	47	52	35	40	
4	238	27.0		27.6	112	39.5		18.0	34	52	2 49	44	25	38	52	43	41	
5	253	27.1	+17	27.0	127	11.0	–18	21.4	34	50	3 04	3 54	4 32	16 30	51	0 51	41	
6	268	27.1	+17	26.3	141	42.4	–18	24.6	32	45	3 32	4 14	4 48	16 13	51	1 07	42	
7	283	27.2		25.7	156	13.8		27.8	32	40	3 53	30	5 00	15 59	51	20	43	
8	298	27.2		25.0	170	45.2		30.8	30	35	4 10	43	11	48	50	31	44	
9	313	27.3		24.3	185	16.6		33.8	30	30	24	4 54	20	38	49	41	45	
10	328	27.3		23.7	199	47.9		36.7	29	20	4 45	5 13	36	20	49	1 58	45	
11	343	27.4	+17	23.0	214	19.2	–18	39.6	29	10 N	5 02	5 28	5 50	15 05	48	2 12	47	
12	358	27.4	+17	22.4	228	50.5	–18	42.3	27	0	5 16	5 41	6 03	14 50	49	2 26	48	
13	13	27.5		21.7	243	21.8		44.9	26	10 S	28	5 53	15	36	48	40	48	
14	28	27.5		21.0	257	53.0		47.5	26	20	39	6 06	29	21	47	2 54	50	
15	43	27.6		20.4	272	24.2		50.0	25	30	50	19	44	14 04	46	3 11	51	
16	58	27.7		19.7	286	55.4		52.4	24	35	5 56	26	6 53	13 54	46	21	51	
17	73	27.7	+17	19.1	301	26.6	–18	54.7	23	40	6 01	6 34	7 03	13 42	46	3 32	52	
18	88	27.8	+17	18.4	315	57.8	–18	56.9	22	45	6 08	6 43	7 14	13 29	45	3 46	52	
19	103	27.8		17.7	330	28.9	–18	59.0	21	50	14	53	28	12	44	4 02	53	
20	118	27.9		17.1	345	00.0	–19	01.1	21	52	17	6 58	35	13 04	44	09	54	
21	133	27.9		16.4	359	31.1		03.0	19	54	20	7 03	42	12 56	43	18	54	
22	148	28.0		15.8	14	02.1		04.9	19	56	24	09	50	46	43	27	55	
23	163	28.0		15.1	28	33.2		06.7	18	58	27	15	7 59	35	42	38	56	
24	178	28.1	+17	14.4	43	04.2	–19	08.4	17	60 S	6 31	7 22	8 10	12 23	41	4 50	57	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 12 ^m 4		Mag: –4.0 PMG: 9 ^h 25 ^m				Mag: +1.7 PMG: 11 ^h 58 ^m				Mag: –1.9 PMG: 16 ^h 16 ^m				Mag: +0.3 PMG: 20 ^h 33 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	311	45.9	218	48.1	+21	56.0	180	20.8	+19	10.0	115	23.3	–5	41.5	50	50.5	–21	55.4
1	326	48.3	233	47.5		56.1	195	21.6		09.5	130	25.5		41.6	65	53.0		55.4
2	341	50.8	248	46.8		56.2	210	22.4		09.1	145	27.6		41.8	80	55.6		55.4
3	356	53.2	263	46.1		56.2	225	23.3		08.7	160	29.7		41.9	95	58.1		55.4
4	11	55.7	278	45.5		56.3	240	24.1		08.3	175	31.9		42.1	111	00.7		55.4
5	26	58.2	293	44.8	+21	56.4	255	24.9	+19	07.9	190	34.0	–5	42.2	126	03.3	–21	55.4
6	42	00.6	308	44.2	+21	56.4	270	25.7	+19	07.5	205	36.2	–5	42.3	141	05.8	–21	55.4
7	57	03.1	323	43.5		56.5	285	26.6		07.0	220	38.3		42.5	156	08.4		55.4
8	72	05.6	338	42.9		56.5	300	27.4		06.6	235	40.5		42.6	171	10.9		55.4
9	87	08.0	353	42.2		56.6	315	28.2		06.2	250	42.6		42.8	186	13.5		55.4
10	102	10.5	8	41.5		56.7	330	29.0		05.8	265	44.7		42.9	201	16.0		55.4
11	117	13.0	23	40.9	+21	56.7	345	29.9	+19	05.4	280	46.9	–5	43.0	216	18.6	–21	55.4
12	132	15.4	38	40.2	+21	56.8	0	30.7	+19	04.9	295	49.0	–5	43.2	231	21.1	–21	55.4
13	147	17.9	53	39.6		56.8	15	31.5		04.5	310	51.2		43.3	246	23.7		55.4
14	162	20.3	68	38.9		56.9	30	32.3		04.1	325	53.3		43.5	261	26.3		55.4
15	177	22.8	83	38.2		56.9	45	33.2		03.7	340	55.5		43.6	276	28.8		55.4
16	192	25.3	98	37.6		57.0	60	34.0		03.3	355	57.6		43.7	291	31.4		55.4
17	207	27.7	113	36.9	+21	57.0	75	34.8	+19	02.8	10	59.7	–5	43.9	306	33.9	–21	55.4
18	222	30.2	128	36.3	+21	57.1	90	35.7	+19	02.4	26	01.9	–5	44.0	321	36.5	–21	55.4
19	237	32.7	143	35.6		57.2	105	36.5		02.0	41	04.0		44.2	336	39.0		55.4
20	252	35.1	158	34.9		57.2	120	37.3		01.6	56	06.2		44.3	351	41.6		55.5
21	267	37.6	173	34.3		57.2	135	38.1		01.2	71	08.3		44.4	6	44.1		55.5
22	282	40.1	188	33.6		57.3	150	39.0		00.7	86	10.5		44.6	21	46.7		55.5
23	297	42.5	203	33.0		57.3	165	39.8	+19	00.3	101	12.6		44.7	36	49.3		55.5
24	312	45.0	218	32.3	+21	57.4	180	40.6	+18	59.9	116	14.7	–5	44.9	51	51.8	–21	55.5
Dif	—		–7		+1		+8		–4		+21		–1		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 1			Edad: 11 ^d 6 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	28.1	+17	14.4	43	04.2	-19 08.4	60 N	20 22	21 20	23 04	18 14 44	0 40 46	
1	193	28.2		13.8	57	35.2 ¹²⁰	10.0	58	11	21 02	22 22	18 01 44	0 53 47	
2	208	28.2		13.1	72	06.1 ¹¹⁹	11.5	56	20 01	20 48	21 55	17 49 45	1 05 47	
3	223	28.3		12.4	86	37.1 ¹²⁰	12.9	54	19 52		36	39 45	15 47	
4	238	28.3		11.8	101	08.0 ¹¹⁹	14.3	52		45	25	19 30 45	24 47	
5	253	28.4	+17	11.1	115	38.9 ¹¹⁹	-19 15.5	50	19 37	20 15	21 05	17 21 46	1 32 47	
6	268	28.5	+17	10.4	130	09.8 ¹¹⁹	-19 16.7	45	19 23	19 56	20 37	17 04 47	1 49 48	
7	283	28.5		09.8	144	40.7 ¹¹⁹	17.8	40		10	40	16 50 47	2 03 48	
8	298	28.6		09.1	159	11.5 ¹¹⁸	18.7	35	19 00		27	20 01	38 47	
9	313	28.6		08.4	173	42.4 ¹¹⁹	19.6	30	18 51	19 17	19 47	27 48	26 48	
10	328	28.7		07.8	188	13.2 ¹¹⁸	20.4	20		35	18 59	26 16 09 48	43 49	
11	343	28.8	+17	07.1	202	44.0 ¹¹⁸	-19 21.1	10 N	18 22	18 44	19 10	15 53 49	2 59 48	
12	358	28.8	+17	06.4	217	14.8 ¹¹⁸	-19 21.8	0	18 10	18 31	18 56	15 39 48	3 14 48	
13	13	28.9		05.7	231	45.5 ¹¹⁷	22.3	10 S	17 57		19	44 24 49	28 49	
14	28	28.9		05.1	246	16.3 ¹¹⁸	22.7	20		44	18 07	34 15 08 49	3 44 48	
15	43	29.0		04.4	260	47.0 ¹¹⁷	23.1	30	29	17 54	23	14 50 50	4 02 48	
16	58	29.1		03.7	275	17.7 ¹¹⁷	23.3	35		21	47	40 50	12 49	
17	73	29.1	+17	03.1	289	48.4 ¹¹⁷	-19 23.5	40	17 11	17 40	18 12	14 28 50	4 24 49	
18	88	29.2	+17	02.4	304	19.1 ¹¹⁷	-19 23.5	45	17 00	17 31	18 06	14 14 50	4 38 49	
19	103	29.2		01.7	318	49.7 ¹¹⁶	23.5	50	16 46		21	18 00	4 55 49	
20	118	29.3		01.0	333	20.4 ¹¹⁷	23.4	52		40	16	17 57	48 51	
21	133	29.4	+17	00.4	347	51.0 ¹¹⁶	23.2	54		33	11	54 39 51	12 49	
22	148	29.4	+16	59.7	2	21.6 ¹¹⁶	22.9	56		25	06	51 29 51	22 49	
23	163	29.5		59.0	16	52.3 ¹¹⁷	22.5	58		16	17 00	48 17 52	34 48	
24	178	29.6	+16	58.3	31	22.9 ¹¹⁶	-19 22.0	60 S	16 06	16 53	17 44	13 04 52	5 47 49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 08 ^m 5		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: +1.7 PMG: 11 ^h 57 ^m		Mag: -1.9 PMG: 16 ^h 13 ^m		Mag: +0.3 PMG: 20 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	312	45.0	218	32.3	180	40.6	116	14.7	51	51.8
1	327	47.5	233	31.6	195	41.4	131	16.9	66	54.4
2	342	49.9	248	31.0	210	42.3	146	19.0	81	56.9
3	357	52.4	263	30.3	225	43.1	161	21.2	96	59.5
4	12	54.8	278	29.7	240	43.9	176	23.3	112	02.0
5	27	57.3	293	29.0	255	44.8	191	25.4	127	04.6
6	42	59.8	308	28.3	270	45.6	206	27.6	142	07.1
7	58	02.2	323	27.7	285	46.4	221	29.7	157	09.7
8	73	04.7	338	27.0	300	47.2	236	31.9	172	12.2
9	88	07.2	353	26.3	315	48.1	251	34.0	187	14.8
10	103	09.6	8	25.7	330	48.9	266	36.1	202	17.3
11	118	12.1	23	25.0	345	49.7	281	38.3	217	19.9
12	133	14.6	38	24.3	0	50.6	296	40.4	232	22.5
13	148	17.0	53	23.7	15	51.4	311	42.6	247	25.0
14	163	19.5	68	23.0	30	52.2	326	44.7	262	27.6
15	178	22.0	83	22.4	45	53.1	341	46.8	277	30.1
16	193	24.4	98	21.7	60	53.9	356	49.0	292	32.7
17	208	26.9	113	21.0	75	54.7	11	51.1	307	35.2
18	223	29.3	128	20.4	90	55.6	26	53.2	322	37.8
19	238	31.8	143	19.7	105	56.4	41	55.4	337	40.3
20	253	34.3	158	19.0	120	57.2	56	57.5	352	42.9
21	268	36.7	173	18.4	135	58.0	71	59.7	7	45.4
22	283	39.2	188	17.7	150	58.9	87	01.8	22	48.0
23	298	41.7	203	17.0	165	59.7	102	03.9	37	50.5
24	313	44.1	218	16.4	181	00.5	117	06.1	52	53.1
Dif	—		-7		0		+21		-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 0			Edad: 12 ^d 6 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 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	178	29.6	+16	58.3	31	22.9	-19	22.0	6	60 N	1 09	2 53	3 50	18 58 36	1 26 57
1	193	29.6		57.7	45	53.4 ¹¹⁵		21.4	6	58	1 50	3 10	4 02	45 37	40 56
2	208	29.7		57.0	60	24.0 ¹¹⁶		20.8	8	56	2 17	25	12	34 38	1 52 55
3	223	29.8		56.3	74	54.6 ¹¹⁶		20.0	8	54	38	37	20	24 39	2 02 55
4	238	29.8		55.6	89	25.1 ¹¹⁵		19.1	9	52	2 54	48	28	15 40	11 54
5	253	29.9	+16	55.0	103	55.6 ¹¹⁵	-19	18.2	9	50	3 08	3 57	4 35	18 07 41	2 19 54
6	268	29.9	+16	54.3	118	26.2 ¹¹⁶	-19	17.2	10	45	3 35	4 17	4 50	17 51 42	2 37 53
7	283	30.0		53.6	132	56.7 ¹¹⁵		16.0	12	40	3 56	32	5 02	37 43	2 51 52
8	298	30.1		52.9	147	27.2 ¹¹⁵		14.8	12	35	4 12	45	12	25 44	3 03 52
9	313	30.1		52.2	161	57.7 ¹¹⁵		13.5	13	30	25	4 56	21	17 15 45	14 51
10	328	30.2		51.6	176	28.2 ¹¹⁵		12.1	14	20	4 46	5 14	37	16 57 47	32 50
11	343	30.3	+16	50.9	190	58.7 ¹¹⁵	-19	10.5	16	10 N	5 02	5 28	5 50	16 42 48	3 47 50
12	358	30.3	+16	50.2	205	29.1 ¹¹⁴	-19	08.9	16	0	5 16	5 41	6 03	16 27 49	4 02 49
13	13	30.4		49.5	219	59.6 ¹¹⁵		07.3	16	10 S	28	5 53	15	16 13 50	17 48
14	28	30.5		48.8	234	30.1 ¹¹⁵		05.5	18	20	38	6 05	28	15 57 52	32 48
15	43	30.5		48.1	249	00.5 ¹¹⁴		03.6	19	30	49	17	42	40 52	4 50 47
16	58	30.6		47.5	263	31.0 ¹¹⁵	-19	01.6	20	35	54	24	6 51	30 53	5 01 46
17	73	30.7	+16	46.8	278	01.4 ¹¹⁴	-18	59.5	21	40	5 59	6 32	7 00	15 18 54	5 13 45
18	88	30.7	+16	46.1	292	31.8 ¹¹⁴	-18	57.4	21	45	6 05	6 40	7 12	15 04 55	5 27 44
19	103	30.8		45.4	307	02.3 ¹¹⁵		55.1	23	50	12	50	25	14 47 56	44 43
20	118	30.9		44.7	321	32.7 ¹¹⁴		52.8	23	52	14	6 55	31	39 57	5 52 43
21	133	31.0		44.0	336	03.1 ¹¹⁴		50.4	24	54	17	7 00	38	30 58	6 01 42
22	148	31.0		43.4	350	33.5 ¹¹⁴		47.8	26	56	20	05	46	20 59	11 41
23	163	31.1		42.7	5	03.9 ¹¹⁴		45.2	26	58	23	11	7 55	14 09 60	22 41
24	178	31.2	+16	42.0	19	34.3 ¹¹⁴	-18	42.5	27	60 S	6 27	7 18	8 05	13 56 61	6 36 39

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 04 ^m 6		Mag: -4.0 PMG: 9 ^h 27 ^m			Mag: +1.7 PMG: 11 ^h 55 ^m			Mag: -1.9 PMG: 16 ^h 09 ^m			Mag: +0.3 PMG: 20 ^h 25 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	313	44.1	218	16.4	+21	181	00.5	+18	117	06.1	-5	52	53.1	-21
1	328	46.6	233	15.7		196	01.4		132	08.2		67	55.6	
2	343	49.1	248	15.0		211	02.2		147	10.3		82	58.2	
3	358	51.5	263	14.4		226	03.0		162	12.5		98	00.7	
4	13	54.0	278	13.7		241	03.9		177	14.6		113	03.3	
5	28	56.5	293	13.0	+21	256	04.7	+18	192	16.7	-5	128	05.8	-21
6	43	58.9	308	12.4	+21	271	05.5	+18	207	18.9	-5	143	08.4	-21
7	59	01.4	323	11.7		286	06.4		222	21.0		158	10.9	
8	74	03.8	338	11.0		301	07.2		237	23.1		173	13.5	
9	89	06.3	353	10.4		316	08.0		252	25.3		188	16.0	
10	104	08.8	8	09.7		331	08.9		267	27.4		203	18.6	
11	119	11.2	23	09.0	+21	346	09.7	+18	282	29.6	-5	218	21.1	-21
12	134	13.7	38	08.4	+21	1	10.5	+18	297	31.7	-5	233	23.7	-21
13	149	16.2	53	07.7		16	11.4		312	33.8		248	26.2	
14	164	18.6	68	07.0		31	12.2		327	36.0		263	28.8	
15	179	21.1	83	06.3		46	13.0		342	38.1		278	31.3	
16	194	23.6	98	05.7		61	13.9		357	40.2		293	33.9	
17	209	26.0	113	05.0	+21	76	14.7	+18	12	42.4	-5	308	36.4	-21
18	224	28.5	128	04.3	+21	91	15.5	+18	27	44.5	-5	323	38.9	-21
19	239	30.9	143	03.7		106	16.4		42	46.6		338	41.5	
20	254	33.4	158	03.0		121	17.2		57	48.8		353	44.0	
21	269	35.9	173	02.3		136	18.1		72	50.9		8	46.6	
22	284	38.3	188	01.7		151	18.9		87	53.0		23	49.1	
23	299	40.8	203	01.0		166	19.7		102	55.2		38	51.7	
24	314	43.3	218	00.3	+21	181	20.6	+18	117	57.3	-5	53	54.2	-21
Dif	—		-7		0	+8		-4	+21		-1	+25		0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 9			Edad: 13 ^d 6 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 SD: 14 ^h 9 20 ^h : 55 ^m 1 PMG: 23 ^h 28 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	31.2	+16	42.0	19	34.3	-18 42.5	60 N	20 17	21 13	22 49	19 34	28	2 23	65
1	193	31.2		41.3	34	04.8 ¹¹⁵	39.7 ²⁸	58	20 06	20 57	22 13	22	30	36	63
2	208	31.3		40.6	48	35.2 ¹¹⁴	36.8 ²⁹	56	19 57	43	21 48	12	32	47	62
3	223	31.4		39.9	63	05.6 ¹¹⁴	33.8 ³⁰	54	48	31	29	19 03	34	2 57	61
4	238	31.4		39.2	77	36.0 ¹¹⁴	30.7 ³¹	52	41	21	13	18 55	35	3 05	60
5	253	31.5	+16	38.5	92	06.4 ¹¹⁴	-18 27.5 ³²	50	19 34	20 12	21 00	18 48	36	3 13	59
6	268	31.6	+16	37.9	106	36.8 ¹¹⁴	-18 24.3 ³²	45	19 20	19 53	20 34	18 33	38	3 30	57
7	283	31.7		37.2	121	07.2 ¹¹⁴	20.9 ³⁴	40	19 08	38	20 14	20	40	43	56
8	298	31.7		36.5	135	37.6 ¹¹⁴	17.4 ³⁵	35	18 58	25	19 58	09	42	3 55	54
9	313	31.8		35.8	150	08.0 ¹¹⁴	13.9 ³⁵	30	49	19 15	45	18 00	43	4 05	53
10	328	31.9		35.1	164	38.4 ¹¹⁴	10.3 ³⁶	20	34	18 58	25	17 44	45	22	52
11	343	31.9	+16	34.4	179	08.8 ¹¹⁴	-18 06.5 ³⁸	10 N	18 21	18 43	19 09	17 30	47	4 37	50
12	358	32.0	+16	33.7	193	39.2 ¹¹⁴	-18 02.7 ³⁸	0	18 09	18 31	18 56	17 16	49	4 51	49
13	13	32.1		33.0	208	09.7 ¹¹⁵	-17 58.8 ³⁹	10 S	17 57	19	45	17 03	50	5 05	47
14	28	32.2		32.3	222	40.1 ¹¹⁴	54.8 ⁴⁰	20	45	18 08	34	16 49	52	20	46
15	43	32.2		31.6	237	10.5 ¹¹⁴	50.7 ⁴¹	30	31	17 56	24	32	55	37	44
16	58	32.3		30.9	251	40.9 ¹¹⁴	46.6 ⁴¹	35	22	49	19	23	56	47	42
17	73	32.4	+16	30.2	266	11.3 ¹¹⁴	-17 42.3 ⁴³	40	17 13	17 41	18 14	16 12	57	5 58	41
18	88	32.5	+16	29.5	280	41.8 ¹¹⁵	-17 37.9 ⁴⁴	45	17 02	17 33	18 08	15 59	59	6 11	40
19	103	32.5		28.8	295	12.2 ¹¹⁴	33.5 ⁴⁴	50	16 49	24	02	43	62	27	38
20	118	32.6		28.1	309	42.7 ¹¹⁵	29.0 ⁴⁵	52	43	19	18 00	36	63	35	37
21	133	32.7		27.4	324	13.1 ¹¹⁴	24.3 ⁴⁷	54	36	14	17 57	28	64	43	36
22	148	32.8		26.8	338	43.6 ¹¹⁵	19.6 ⁴⁷	56	28	09	54	19	65	6	52
23	163	32.8		26.1	353	14.0 ¹¹⁴	14.8 ⁴⁸	58	20	17 04	51	15 09	66	7 03	33
24	178	32.9	+16	25.4	7	44.5 ¹¹⁵	-17 10.0 ⁴⁸	60 S	16 10	16 57	17 48	14 57	68	7 15	32

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 3 ^h 00 ^m 6		Mag: -4.0 PMG: 9 ^h 28 ^m			Mag: +1.7 PMG: 11 ^h 54 ^m			Mag: -1.9 PMG: 16 ^h 06 ^m			Mag: +0.3 PMG: 20 ^h 21 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	314	43.3	218	00.3	+21	58.4	181	20.6	+18	39.4	117	57.3	-5	51.8	53	54.2	-21	55.6		
1	329	45.7	232	59.6		58.4	196	21.4		38.9	132	59.4		51.9	68	56.8		55.6		
2	344	48.2	247	59.0		58.4	211	22.2		38.5	148	01.5		52.0	83	59.3		55.6		
3	359	50.7	262	58.3		58.4	226	23.1		38.1	163	03.7		52.2	99	01.9		55.6		
4	14	53.1	277	57.6		58.4	241	23.9		37.7	178	05.8		52.3	114	04.4		55.6		
5	29	55.6	292	57.0	+21	58.4	256	24.7	+18	37.2	193	07.9	-5	52.5	129	07.0	-21	55.6		
6	44	58.1	307	56.3	+21	58.3	271	25.6	+18	36.8	208	10.1	-5	52.6	144	09.5	-21	55.6		
7	60	00.5	322	55.6		58.3	286	26.4		36.3	223	12.2		52.8	159	12.1		55.6		
8	75	03.0	337	54.9		58.3	301	27.3		35.9	238	14.3		52.9	174	14.6		55.6		
9	90	05.4	352	54.3		58.3	316	28.1		35.5	253	16.5		53.1	189	17.1		55.6		
10	105	07.9	7	53.6		58.3	331	28.9		35.0	268	18.6		53.2	204	19.7		55.6		
11	120	10.4	22	52.9	+21	58.3	346	29.8	+18	34.6	283	20.7	-5	53.4	219	22.2	-21	55.6		
12	135	12.8	37	52.2	+21	58.3	1	30.6	+18	34.2	298	22.9	-5	53.5	234	24.8	-21	55.6		
13	150	15.3	52	51.6		58.3	16	31.4		33.7	313	25.0		53.6	249	27.3		55.6		
14	165	17.8	67	50.9		58.2	31	32.3		33.3	328	27.1		53.8	264	29.9		55.6		
15	180	20.2	82	50.2		58.2	46	33.1		32.9	343	29.2		53.9	279	32.4		55.6		
16	195	22.7	97	49.6		58.2	61	34.0		32.4	358	31.4		54.1	294	35.0		55.6		
17	210	25.2	112	48.9	+21	58.2	76	34.8	+18	32.0	13	33.5	-5	54.2	309	37.5	-21	55.6		
18	225	27.6	127	48.2	+21	58.2	91	35.6	+18	31.6	28	35.6	-5	54.4	324	40.0	-21	55.6		
19	240	30.1	142	47.5		58.1	106	36.5		31.1	43	37.8		54.5	339	42.6		55.6		
20	255	32.6	157	46.9		58.1	121	37.3		30.7	58	39.9		54.7	354	45.1		55.6		
21	270	35.0	172	46.2		58.1	136	38.2		30.3	73	42.0		54.8	9	47.7		55.6		
22	285	37.5	187	45.5		58.1	151	39.0		29.8	88	44.1		55.0	24	50.2		55.6		
23	300	39.9	202	44.8		58.0	166	39.8		29.4	103	46.3		55.1	39	52.8		55.6		
24	315	42.4	217	44.2	+21	58.0	181	40.7	+18	28.9	118	48.4	-5	55.3	54	55.3	-21	55.6		
Dif	—		-7			0	+8			-4		+21		-1		+25				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h /8			Edad: 14 ^d 6	PHE {	SD: 15 ^h 0	R ^o : ***										
	PMG: 12 ^h 05 ^m 7							PMG: *** **m									
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	°	°	°	h	m	h	m	h	m	h	m
0	178	32.9	+16 25.4	7	44.5	-17 10.0	50	60 N	1 23	2 59	3 55	20 02	23	3 28	72		
1	193	33.0	24.7	22	15.0 ¹¹⁵	-17 05.0	51	58	1 59	3 16	4 06	19 52	25	39	70		
2	208	33.1	24.0	36	45.5 ¹¹⁵	-16 59.9	51	56	2 24	29	16	44	27	49	68		
3	223	33.1	23.3	51	15.9 ¹¹⁴	54.8	51	54	43	41	24	37	28	3 58	66		
4	238	33.2	22.6	65	46.4 ¹¹⁵	49.6	52	52	2 59	3 51	31	30	30	4 05	65		
5	253	33.3	+16 21.9	80	17.0 ¹¹⁶	-16 44.2	54	50	3 12	4 01	4 38	19 24	32	4 12	64		
6	268	33.4	+16 21.2	94	47.5 ¹¹⁵	-16 38.8	54	45	3 38	4 19	4 52	19 11	34	4 27	61		
7	283	33.5	20.5	109	18.0 ¹¹⁵	33.4	54	40	3 58	34	5 04	19 00	37	39	59		
8	298	33.5	19.8	123	48.5 ¹¹⁵	27.8	56	35	4 14	47	14	18 51	39	49	57		
9	313	33.6	19.1	138	19.1 ¹¹⁶	22.1	57	30	26	4 57	23	43	40	4 58	56		
10	328	33.7	18.3	152	49.6 ¹¹⁵	16.4	57	20	4 47	5 14	38	29	43	5 14	53		
11	343	33.8	+16 17.6	167	20.2 ¹¹⁶	-16 10.6	58	10 N	5 03	5 28	5 50	18 17	45	5 27	51		
12	358	33.8	+16 16.9	181	50.7 ¹¹⁵	-16 04.7	59	0	5 16	5 41	6 02	18 05	48	5 40	48		
13	13	33.9	16.2	196	21.3 ¹¹⁶	-15 58.7	60	10 S	27	5 52	14	17 53	51	5 52	47		
14	28	34.0	15.5	210	51.9 ¹¹⁶	52.6	61	20	37	6 04	27	41	53	6 06	44		
15	43	34.1	14.8	225	22.5 ¹¹⁶	46.4	62	30	47	16	41	27	56	21	41		
16	58	34.2	14.1	239	53.1 ¹¹⁶	40.2	62	35	52	22	49	19	58	29	41		
17	73	34.2	+16 13.4	254	23.7 ¹¹⁶	-15 33.9	63	40	5 57	6 30	6 58	17 09	60	6 39	39		
18	88	34.3	+16 12.7	268	54.3 ¹¹⁶	-15 27.5	64	45	6 03	6 38	7 09	16 58	63	6 51	36		
19	103	34.4	12.0	283	25.0 ¹¹⁷	21.0	65	50	09	47	22	45	65	7 05	34		
20	118	34.5	11.3	297	55.6 ¹¹⁶	14.5	65	52	11	52	28	39	66	12	32		
21	133	34.6	10.6	312	26.3 ¹¹⁷	07.8	67	54	14	6 56	35	32	68	19	31		
22	148	34.7	09.9	326	57.0 ¹¹⁷	-15 01.1	67	56	17	7 01	42	24	70	27	29		
23	163	34.7	09.2	341	27.7 ¹¹⁷	-14 54.3	68	58	20	07	7 50	15	72	36	28		
24	178	34.8	+16 08.5	355	58.4 ¹¹⁷	-14 47.4	69	60 S	6 23	7 13	8 00	16 05	75	7 47	25		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 56 ^m 7		Mag: -4.0 PMG: 9 ^h 29 ^m			Mag: +1.7 PMG: 11 ^h 53 ^m			Mag: -1.9 PMG: 16 ^h 02 ^m			Mag: +0.3 PMG: 20 ^h 17 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	315	42.4	217	44.2	+21 58.0	181	40.7	+18 28.9	118	48.4	-5 55.3	54	55.3	-21 55.6
1	330	44.9	232	43.5	58.0	196	41.5	28.5	133	50.5	55.4	69	57.8	55.6
2	345	47.3	247	42.8	57.9	211	42.4	28.1	148	52.7	55.5	85	00.4	55.6
3	0	49.8	262	42.1	57.9	226	43.2	27.6	163	54.8	55.7	100	02.9	55.6
4	15	52.3	277	41.5	57.9	241	44.0	27.2	178	56.9	55.8	115	05.5	55.6
5	30	54.7	292	40.8	+21 57.9	256	44.9	+18 26.7	193	59.0	-5 56.0	130	08.0	-21 55.7
6	45	57.2	307	40.1	+21 57.8	271	45.7	+18 26.3	209	01.2	-5 56.1	145	10.6	-21 55.7
7	60	59.7	322	39.4	57.8	286	46.6	25.9	224	03.3	56.3	160	13.1	55.7
8	76	02.1	337	38.7	57.7	301	47.4	25.4	239	05.4	56.4	175	15.6	55.7
9	91	04.6	352	38.1	57.7	316	48.2	25.0	254	07.5	56.6	190	18.2	55.7
10	106	07.1	7	37.4	57.7	331	49.1	24.6	269	09.7	56.7	205	20.7	55.7
11	121	09.5	22	36.7	+21 57.6	346	49.9	+18 24.1	284	11.8	-5 56.9	220	23.3	-21 55.7
12	136	12.0	37	36.0	+21 57.6	1	50.8	+18 23.7	299	13.9	-5 57.0	235	25.8	-21 55.7
13	151	14.4	52	35.4	57.6	16	51.6	23.2	314	16.0	57.2	250	28.3	55.7
14	166	16.9	67	34.7	57.5	31	52.4	22.8	329	18.2	57.3	265	30.9	55.7
15	181	19.4	82	34.0	57.5	46	53.3	22.3	344	20.3	57.5	280	33.4	55.7
16	196	21.8	97	33.3	57.4	61	54.1	21.9	359	22.4	57.6	295	36.0	55.7
17	211	24.3	112	32.6	+21 57.4	76	55.0	+18 21.5	14	24.5	-5 57.8	310	38.5	-21 55.7
18	226	26.8	127	32.0	+21 57.3	91	55.8	+18 21.0	29	26.7	-5 57.9	325	41.0	-21 55.7
19	241	29.2	142	31.3	57.3	106	56.7	20.6	44	28.8	58.1	340	43.6	55.7
20	256	31.7	157	30.6	57.2	121	57.5	20.1	59	30.9	58.2	355	46.1	55.7
21	271	34.2	172	29.9	57.2	136	58.3	19.7	74	33.0	58.3	10	48.7	55.7
22	286	36.6	187	29.3	57.1	151	59.2	19.3	89	35.2	58.5	25	51.2	55.7
23	301	39.1	202	28.6	57.1	167	00.0	18.8	104	37.3	58.6	40	53.7	55.7
24	316	41.5	217	27.9	+21 57.0	182	00.9	+18 18.4	119	39.4	-5 58.8	55	56.3	-21 55.7
Dif	—		-7		0	+8		-4	+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: 15 ^d 6 PHE	SD: 15 ^h 2				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 6				PMG: 0 ^h 17 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	34.8	+16 08.5	355	58.4	-14 47.4	69	60 N	20 12	21 07	22 36	20 25 19	4 40 76	
1	193	34.9	07.8	10	29.1 ¹¹⁷	40.5	70	58	20 01	20 51	22 04	17 22	49 73	
2	208	35.0	07.0	24	59.8 ¹¹⁷	33.5	71	56	19 52	38	21 41	11 24	4 57 71	
3	223	35.1	06.3	39	30.5 ¹¹⁷	26.4	70	54	44	26	23	05 26	5 04 66	
4	238	35.1	05.6	54	01.3 ¹¹⁸	19.2	72	52	37	17	21 08	20 00 27	10 68	
5	253	35.2	+16 04.9	68	32.0 ¹¹⁷	-14 11.9	73	50	19 31	20 08	20 56	19 56 28	5 16 66	
6	268	35.3	+16 04.2	83	02.8 ¹¹⁸	-14 04.6	73	45	19 17	19 50	20 30	19 45 32	5 28 63	
7	283	35.4	03.5	97	33.6 ¹¹⁸	-13 57.2	74	40	19 06	35	20 11	37 34	38 60	
8	298	35.5	02.8	112	04.4 ¹¹⁸	49.7	75	35	18 56	23	19 56	30 36	46 59	
9	313	35.6	02.1	126	35.2 ¹¹⁸	42.2	75	30	48	19 13	43	23 39	5 54 56	
10	328	35.7	01.3	141	06.0 ¹¹⁸	34.6	76	20	33	18 56	24	12 42	6 07 53	
11	343	35.7	+16 00.6	155	36.8 ¹¹⁸	-13 26.9	77	10 N	18 21	18 43	19 08	19 02 46	6 18 50	
12	358	35.8	+15 59.9	170	07.6 ¹¹⁸	-13 19.1	78	0	18 09	18 31	18 56	18 53 48	6 28 48	
13	13	35.9	59.2	184	38.5 ¹¹⁹	11.3	78	10 S	17 58	19	45	44 51	39 45	
14	28	36.0	58.5	199	09.4 ¹¹⁹	-13 03.4	79	20	45	18 08	35	34 54	6 50 42	
15	43	36.1	57.8	213	40.2 ¹¹⁸	-12 55.4	80	30	32	17 57	25	23 57	7 02 40	
16	58	36.2	57.1	228	11.1 ¹¹⁹	47.4	80	35	24	50	20	17 59	10 37	
17	73	36.3	+15 56.3	242	42.0 ¹¹⁹	-12 39.3	81	40	17 15	17 43	18 15	18 09 62	7 18 35	
18	88	36.3	+15 55.6	257	12.9 ¹¹⁹	-12 31.1	82	45	17 04	17 35	18 10	18 01 64	7 27 33	
19	103	36.4	54.9	271	43.8 ¹¹⁹	22.9	82	50	16 52	26	05	17 50 68	39 30	
20	118	36.5	54.2	286	14.8 ¹²⁰	14.6	83	52	46	22	02	45 69	44 29	
21	133	36.6	53.5	300	45.7 ¹¹⁹	-12 06.2	84	54	39	18	18 00	40 71	50 27	
22	148	36.7	52.8	315	16.7 ¹²⁰	-11 57.7	85	56	32	13	17 57	34 73	7 56 25	
23	163	36.8	52.0	329	47.6 ¹¹⁹	49.2	85	58	24	07	54	27 75	8 04 23	
24	178	36.9	+15 51.3	344	18.6 ¹²⁰	-11 40.7	85	60 S	16 15	17 01	17 51	17 20 77	8 12 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 52 ^m 8		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: +1.7 PMG: 11 ^h 51 ^m		Mag: -1.9 PMG: 15 ^h 59 ^m		Mag: +0.3 PMG: 20 ^h 13 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	316	41.5	217 27.9	+21 57.0	182 00.9	+18 18.4	119 39.4	-5 58.8	55 56.3	-21 55.7
1	331	44.0	232 27.2	57.0	197 01.7	17.9	134 41.5	58.9	70 58.8	55.7
2	346	46.5	247 26.5	56.9	212 02.6	17.5	149 43.7	59.1	86 01.4	55.7
3	1 48.9	262 25.9	56.9	227 03.4	17.0	164 45.8	59.2	101 03.9	55.7	
4	16 51.4	277 25.2	56.8	242 04.3	16.6	179 47.9	59.4	116 06.4	55.7	
5	31 53.9	292 24.5	+21 56.8	257 05.1	+18 16.2	194 50.0	-5 59.5	131 09.0	-21 55.7	
6	46 56.3	307 23.8	+21 56.7	272 05.9	+18 15.7	209 52.1	-5 59.7	146 11.5	-21 55.7	
7	61 58.8	322 23.1	56.6	287 06.8	15.3	224 54.3	-5 59.8	161 14.0	55.7	
8	77 01.3	337 22.5	56.6	302 07.6	14.8	239 56.4	-6 00.0	176 16.6	55.7	
9	92 03.7	352 21.8	56.5	317 08.5	14.4	254 58.5	-6 00.1	191 19.1	55.7	
10	107 06.2	7 21.1	56.5	332 09.3	13.9	270 00.6	00.3	206 21.7	55.7	
11	122 08.7	22 20.4	+21 56.4	347 10.2	+18 13.5	285 02.8	-6 00.4	221 24.2	-21 55.7	
12	137 11.1	37 19.7	+21 56.3	2 11.0	+18 13.0	300 04.9	-6 00.6	236 26.7	-21 55.7	
13	152 13.6	52 19.1	56.3	17 11.9	12.6	315 07.0	00.7	251 29.3	55.7	
14	167 16.0	67 18.4	56.2	32 12.7	12.2	330 09.1	00.9	266 31.8	55.8	
15	182 18.5	82 17.7	56.1	47 13.5	11.7	345 11.2	01.0	281 34.3	55.8	
16	197 21.0	97 17.0	56.1	62 14.4	11.3	0 13.4	01.2	296 36.9	55.8	
17	212 23.4	112 16.3	+21 56.0	77 15.2	+18 10.8	15 15.5	-6 01.3	311 39.4	-21 55.8	
18	227 25.9	127 15.7	+21 55.9	92 16.1	+18 10.4	30 17.6	-6 01.5	326 41.9	-21 55.8	
19	242 28.4	142 15.0	55.9	107 16.9	09.9	45 19.7	01.6	341 44.5	55.8	
20	257 30.8	157 14.3	55.8	122 17.8	09.5	60 21.8	01.8	356 47.0	55.8	
21	272 33.3	172 13.6	55.7	137 18.6	09.0	75 24.0	01.9	11 49.5	55.8	
22	287 35.8	187 12.9	55.6	152 19.5	08.6	90 26.1	02.1	26 52.1	55.8	
23	302 38.2	202 12.2	55.6	167 20.3	08.1	105 28.2	02.2	41 54.6	55.8	
24	317 40.7	217 11.6	+21 55.5	182 21.2	+18 07.7	120 30.3	-6 02.4	56 57.2	-21 55.8	
Dif	—	-7	-1	+8	-4	+21	-1	+25	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15/8 PMG: 12 ^h 05 ^m 5			Edad: 16 ^d 6 PHE { SD: 15/3 PMG: 1 ^h 05 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	36.9	+15	51.3	344	18.6	-11	40.7	60 N	1 36	3 05	4 00	20	44	17	5 56	79
1	193	37.0		50.6	358	49.6 ¹²⁰		32.0 ⁸⁷	58	2 08	21	10	39	19		6 02	77
2	208	37.0		49.9	13	20.6 ¹²⁰		23.3 ⁸⁷	56	30	34	19	35	21		08	74
3	223	37.1		49.2	27	51.6 ¹²⁰		14.6 ⁸⁷	54	2 48	45	27	31	23		13	72
4	238	37.2		48.4	42	22.6 ¹²⁰	-11	05.8 ⁸⁸	52	3 03	3 55	35	27	25		18	70
5	253	37.3	+15	47.7	56	53.7 ¹²¹	-10	56.9 ⁸⁹	50	3 16	4 04	4 41	20	24	27	6 22	68
6	268	37.4	+15	47.0	71	24.7 ¹²⁰	-10	48.0 ⁸⁹	45	3 41	4 22	4 55	20	17	30	6 31	65
7	283	37.5		46.3	85	55.8 ¹²¹		39.0 ⁹⁰	40	4 00	36	5 06	11	33		38	63
8	298	37.6		45.5	100	26.8 ¹²⁰		29.9 ⁹¹	35	15	48	16	06	36		45	60
9	313	37.7		44.8	114	57.9 ¹²¹		20.8 ⁹¹	30	28	4 58	24	20	02	37	6 50	58
10	328	37.8		44.1	129	29.0 ¹²¹		11.6 ⁹²	20	4 48	5 15	38	19	54	42	7 00	54
11	343	37.9	+15	43.4	144	00.0 ¹²⁰	-10	02.4 ⁹²	10 N	5 03	5 29	5 51	19	48	44	7 08	51
12	358	37.9	+15	42.6	158	31.1 ¹²¹	-9	53.1 ⁹³	0	5 16	5 41	6 02	19	41	48	7 16	48
13	13	38.0		41.9	173	02.2 ¹²¹		43.8 ⁹⁴	10 S	26	5 52	13	35	51		24	45
14	28	38.1		41.2	187	33.3 ¹²¹		34.4 ⁹⁴	20	36	6 03	25	28	54		32	42
15	43	38.2		40.5	202	04.5 ¹²²		25.0 ⁹⁴	30	46	14	39	20	58		42	38
16	58	38.3		39.7	216	35.6 ¹²¹		15.5 ⁹⁵	35	50	20	47	16	60		47	36
17	73	38.4	+15	39.0	231	06.7 ¹²¹	-9	05.9 ⁹⁶	40	5 55	6 27	6 56	19	11	62	7 53	34
18	88	38.5	+15	38.3	245	37.9 ¹²²	-8	56.4 ⁹⁵	45	6 00	6 35	7 06	19	05	65	8 00	31
19	103	38.6		37.6	260	09.0 ¹²¹		46.7 ⁹⁷	50	06	44	18	18	58	69	09	27
20	118	38.7		36.8	274	40.2 ¹²²		37.0 ⁹⁷	52	08	48	24	54	71		13	25
21	133	38.8		36.1	289	11.3 ¹²¹		27.3 ⁹⁷	54	10	53	31	51	72		17	24
22	148	38.9		35.4	303	42.5 ¹²²		17.5 ⁹⁸	56	13	6 57	38	47	74		21	23
23	163	39.0		34.6	318	13.6 ¹²¹	-8	07.6 ⁹⁹	58	16	7 03	46	42	77		27	20
24	178	39.1	+15	33.9	332	44.8 ¹²²	-7	57.7 ⁹⁹	60 S	6 19	7 09	7 55	18	37	80	8 33	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 48 ^m 8		Mag: -4.0 PMG: 9 ^h 32 ^m		Mag: +1.7 PMG: 11 ^h 50 ^m		Mag: -1.9 PMG: 15 ^h 56 ^m		Mag: +0.3 PMG: 20 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	317	40.7	217	11.6	+21	55.5	182	21.2	+18	07.7	120	30.3	-6	02.4	56	57.2	-21	55.8
1	332	43.2	232	10.9		55.4	197	22.0		07.2	135	32.4		02.5	71	59.7		55.8
2	347	45.6	247	10.2		55.3	212	22.9		06.8	150	34.6		02.7	87	02.2		55.8
3	2	48.1	262	09.5		55.2	227	23.7		06.3	165	36.7		02.8	102	04.8		55.8
4	17	50.5	277	08.8		55.2	242	24.6		05.9	180	38.8		03.0	117	07.3		55.8
5	32	53.0	292	08.1	+21	55.1	257	25.4	+18	05.4	195	40.9	-6	03.1	132	09.8	-21	55.8
6	47	55.5	307	07.5	+21	55.0	272	26.3	+18	05.0	210	43.0	-6	03.3	147	12.4	-21	55.8
7	62	57.9	322	06.8		54.9	287	27.1		04.5	225	45.2		03.4	162	14.9		55.8
8	78	00.4	337	06.1		54.8	302	28.0		04.1	240	47.3		03.6	177	17.4		55.8
9	93	02.9	352	05.4		54.7	317	28.8		03.6	255	49.4		03.7	192	20.0		55.8
10	108	05.3	7	04.7		54.7	332	29.7		03.2	270	51.5		03.9	207	22.5		55.8
11	123	07.8	22	04.0	+21	54.6	347	30.5	+18	02.7	285	53.6	-6	04.0	222	25.0	-21	55.8
12	138	10.3	37	03.4	+21	54.5	2	31.4	+18	02.3	300	55.7	-6	04.2	237	27.6	-21	55.8
13	153	12.7	52	02.7		54.4	17	32.2		01.8	315	57.9		04.3	252	30.1		55.8
14	168	15.2	67	02.0		54.3	32	33.1		01.4	331	00.0		04.5	267	32.6		55.8
15	183	17.6	82	01.3		54.2	47	33.9		00.9	346	02.1		04.6	282	35.2		55.8
16	198	20.1	97	00.6		54.1	62	34.8	+18	00.5	1	04.2		04.8	297	37.7		55.8
17	213	22.6	111	59.9	+21	54.0	77	35.6	+18	00.0	16	06.3	-6	04.9	312	40.2	-21	55.8
18	228	25.0	126	59.3	+21	53.9	92	36.5	+17	59.6	31	08.4	-6	05.1	327	42.7	-21	55.8
19	243	27.5	141	58.6		53.8	107	37.3		59.1	46	10.6		05.2	342	45.3		55.9
20	258	30.0	156	57.9		53.7	122	38.2		58.7	61	12.7		05.4	357	47.8		55.9
21	273	32.4	171	57.2		53.6	137	39.0		58.2	76	14.8		05.5	12	50.3		55.9
22	288	34.9	186	56.5		53.5	152	39.9		57.8	91	16.9		05.7	27	52.9		55.9
23	303	37.4	201	55.8		53.4	167	40.7		57.3	106	19.0		05.8	42	55.4		55.9
24	318	39.8	216	55.1	+21	53.3	182	41.6	+17	56.9	121	21.1	-6	06.0	57	57.9	-21	55.9
Dif	—		-7		-1		+8		-5		+21		-2		+25			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 3				Edad: 17 ^d 6 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 9 20 ^h : 57 ^m 0 R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	39.1	+15	33.9	332	44.8	-7	57.7	60 N	20 06	21 00	22 24	21 01 16		7 15 80			
1	193	39.2		33.2	347	16.0 ¹²²		47.8 ⁹⁹	58	19 57	20 45	21 56	20 58 19		19 77			
2	208	39.2		32.4	1	47.2 ¹²²		37.8 ¹⁰⁰	56	48	33	34	56 21		22 75			
3	223	39.3		31.7	16	18.3 ¹²¹		27.8 ¹⁰⁰	54	40	22	17	54 23		25 74			
4	238	39.4		31.0	30	49.5 ¹²²		17.8 ¹⁰⁰	52	33	12	21 03	52 25		28 71			
5	253	39.5	+15	30.3	45	20.7 ¹²²	-7	07.6 ¹⁰²	50	19 27	20 04	20 51	20 51 26	7 30	70			
6	268	39.6	+15	29.5	59	51.9 ¹²²	-6	57.5 ¹⁰¹	45	19 14	19 46	20 27	20 47 30	7 36	66			
7	283	39.7		28.8	74	23.1 ¹²²		47.3 ¹⁰²	40	19 03	32	20 08	44 33	41	63			
8	298	39.8		28.1	88	54.3 ¹²²		37.1 ¹⁰²	35	18 54	21	19 54	42 35	45	60			
9	313	39.9		27.3	103	25.5 ¹²²		26.8 ¹⁰³	30	46	19 11	41	39 38	48	58			
10	328	40.0		26.6	117	56.7 ¹²²		16.5 ¹⁰³	20	32	18 55	22	36 41	54	54			
11	343	40.1	+15	25.8	132	27.9 ¹²²	-6	06.2 ¹⁰³	10 N	18 20	18 42	19 07	20 32 45	7 59	51			
12	358	40.2	+15	25.1	146	59.1 ¹²²	-5	55.8 ¹⁰⁴	0	18 09	18 30	18 55	20 29 48	8 04	48			
13	13	40.3		24.4	161	30.3 ¹²²		45.4 ¹⁰⁴	10 S	17 58	19	45	26 51	09	44			
14	28	40.4		23.6	176	01.4 ¹²¹		34.9 ¹⁰⁵	20	46	18 09	35	22 55	14	41			
15	43	40.5		22.9	190	32.6 ¹²²		24.4 ¹⁰⁵	30	33	17 58	26	18 59	20	37			
16	58	40.6		22.2	205	03.8 ¹²²		13.9 ¹⁰⁵	35	25	52	22	16 61	23	35			
17	73	40.7	+15	21.4	219	35.0 ¹²²	-5	03.3 ¹⁰⁶	40	17 17	17 45	18 17	20 13 64	8 27	32			
18	88	40.8	+15	20.7	234	06.2 ¹²²	-4	52.8 ¹⁰⁵	45	17 07	17 37	18 12	20 10 67	8 31	29			
19	103	40.9		20.0	248	37.4 ¹²²		42.1 ¹⁰⁷	50	16 55	29	07	07 70	36	26			
20	118	41.0		19.2	263	08.5 ¹²¹		31.5 ¹⁰⁶	52	49	25	05	05 73	38	25			
21	133	41.1		18.5	277	39.7 ¹²²		20.8 ¹⁰⁷	54	43	21	03	03 75	41	23			
22	148	41.2		17.7	292	10.8 ¹²¹	-4	10.1 ¹⁰⁷	56	36	16	18 00	20 01 77	44	21			
23	163	41.3		17.0	306	42.0 ¹²²	-3	59.4 ¹⁰⁷	58	28	11	17 58	19 59 79	47	19			
24	178	41.4	+15	16.3	321	13.1 ¹²¹	-3	48.6 ¹⁰⁸	60 S	16 19	17 05	17 55	19 57 81	8 50	17			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 44 ^m 9		Mag: -4.0 PMG: 9 ^h 33 ^m				Mag: +1.7 PMG: 11 ^h 49 ^m				Mag: -1.9 PMG: 15 ^h 52 ^m				Mag: +0.3 PMG: 20 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	318	39.8	216	55.1	+21	53.3	182	41.6	+17	56.9	121	21.1	-6	06.0	57	57.9	-21	55.9
1	333	42.3	231	54.5		53.2	197	42.4		56.4	136	23.2		06.1	73	00.5		55.9
2	348	44.8	246	53.8		53.1	212	43.3		56.0	151	25.4		06.3	88	03.0		55.9
3	3	47.2	261	53.1		53.0	227	44.1		55.5	166	27.5		06.4	103	05.5		55.9
4	18	49.7	276	52.4		52.9	242	45.0		55.1	181	29.6		06.6	118	08.1		55.9
5	33	52.1	291	51.7	+21	52.8	257	45.8	+17	54.6	196	31.7	-6	06.7	133	10.6	-21	55.9
6	48	54.6	306	51.0	+21	52.7	272	46.7	+17	54.2	211	33.8	-6	06.9	148	13.1	-21	55.9
7	63	57.1	321	50.4		52.6	287	47.5		53.7	226	35.9		07.0	163	15.6		55.9
8	78	59.5	336	49.7		52.5	302	48.4		53.2	241	38.0		07.2	178	18.2		55.9
9	94	02.0	351	49.0		52.4	317	49.2		52.8	256	40.2		07.3	193	20.7		55.9
10	109	04.5	6	48.3		52.3	332	50.1		52.3	271	42.3		07.5	208	23.2		55.9
11	124	06.9	21	47.6	+21	52.1	347	50.9	+17	51.9	286	44.4	-6	07.6	223	25.8	-21	55.9
12	139	09.4	36	46.9	+21	52.0	2	51.8	+17	51.4	301	46.5	-6	07.8	238	28.3	-21	55.9
13	154	11.9	51	46.2		51.9	17	52.6		51.0	316	48.6		07.9	253	30.8		55.9
14	169	14.3	66	45.5		51.8	32	53.5		50.5	331	50.7		08.1	268	33.3		55.9
15	184	16.8	81	44.9		51.7	47	54.3		50.1	346	52.8		08.2	283	35.9		55.9
16	199	19.2	96	44.2		51.6	62	55.2		49.6	1	55.0		08.4	298	38.4		55.9
17	214	21.7	111	43.5	+21	51.4	77	56.1	+17	49.1	16	57.1	-6	08.5	313	40.9	-21	55.9
18	229	24.2	126	42.8	+21	51.3	92	56.9	+17	48.7	31	59.2	-6	08.7	328	43.5	-21	55.9
19	244	26.6	141	42.1		51.2	107	57.8		48.2	47	01.3		08.8	343	46.0		55.9
20	259	29.1	156	41.4		51.1	122	58.6		47.8	62	03.4		09.0	358	48.5		55.9
21	274	31.6	171	40.7		51.0	137	59.5		47.3	77	05.5		09.2	13	51.0		55.9
22	289	34.0	186	40.1		50.8	153	00.3		46.9	92	07.6		09.3	28	53.6		56.0
23	304	36.5	201	39.4		50.7	168	01.2		46.4	107	09.7		09.5	43	56.1		56.0
24	319	39.0	216	38.7	+21	50.6	183	02.0	+17	45.9	122	11.8	-6	09.6	58	58.6	-21	56.0
Dif	—		-7		-1		+9		-5		+21		-2		+25		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 05 ^m 2				Edad: 18 ^d 6 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/5 PMG: 2 ^h 40 ^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	178	41.4	+15	16.3	321	13.1	-3	48.6	60 N	1 47	3 11	4 05	21 17	16		8 35	82
1	193	41.5		15.5	335	44.3		37.8	58	2 16	26	15	17 19			36	80
2	208	41.6		14.8	350	15.4		27.0	56	37	39	23	17 21			37	77
3	223	41.7		14.0	4	46.5		16.2	54	2 54	49	31	17 23			39	74
4	238	41.8		13.3	19	17.7		-3 05.3	52	3 08	3 59	38	17 24			39	73
5	253	41.9	+15	12.5	33	48.8		-2 54.4	50	3 20	4 07	4 44	21 17	26		8 40	72
6	268	42.0	+15	11.8	48	19.8		-2 43.5	45	3 44	4 25	4 57	21 17	30		8 42	68
7	283	42.1		11.1	62	50.9		32.6	40	4 03	38	5 08	17 33			44	64
8	298	42.2		10.3	77	22.0		21.7	35	17	4 50	17	17 35			45	62
9	313	42.3		09.6	91	53.1		-2 10.7	30	29	5 00	25	17 38			46	60
10	328	42.4		08.8	106	24.1		-1 59.7	20	4 49	16	39	17 42			48	55
11	343	42.5	+15	08.1	120	55.1		-1 48.7	10 N	5 03	5 29	5 51	21 17	45		8 50	52
12	358	42.6	+15	07.3	135	26.2		-1 37.7	0	5 15	5 40	6 02	21 17	49		8 52	48
13	13	42.7		06.6	149	57.2		26.7	10 S	26	5 51	13	17 52			53	45
14	28	42.8		05.8	164	28.1		15.7	20	35	6 01	24	17 56			55	41
15	43	42.9		05.1	178	59.1		-1 04.6	30	44	12	37	17 60			57	37
16	58	43.0		04.3	193	30.1		-0 53.5	35	49	18	45	17 62			58	35
17	73	43.1	+15	03.6	208	01.0		-0 42.5	40	5 53	6 25	6 53	21 17	65		8 59	33
18	88	43.2	+15	02.9	222	31.9		-0 31.4	45	5 58	6 32	7 03	21 17	68		9 00	30
19	103	43.3		02.1	237	02.8		20.3	50	6 03	41	15	17 72			02	26
20	118	43.4		01.4	251	33.7		-0 09.2	52	05	45	21	18 73			03	24
21	133	43.6	+15	00.6	266	04.6		+0 02.0	54	07	49	27	18 75			04	22
22	148	43.7	+14	59.9	280	35.4		13.1	56	09	53	33	18 77			05	20
23	163	43.8		59.1	295	06.3		24.2	58	12	6 58	41	18 80			06	18
24	178	43.9	+14	58.4	309	37.1		+0 35.3	60 S	6 14	7 04	7 50	21 18	83		9 07	16

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 41 ^m 0		Mag: -4.0 PMG: 9 ^h 34 ^m				Mag: +1.7 PMG: 11 ^h 47 ^m				Mag: -1.9 PMG: 15 ^h 49 ^m				Mag: +0.3 PMG: 20 ^h 01 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	319	39.0	216	38.7	+21	50.6	183	02.0	+17	45.9	122	11.8	-6	09.6	58	58.6	-21	56.0
1	334	41.4	231	38.0		50.5	198	02.9		45.5	137	14.0		09.8	74	01.1		56.0
2	349	43.9	246	37.3		50.3	213	03.7		45.0	152	16.1		09.9	89	03.7		56.0
3	4	46.4	261	36.6		50.2	228	04.6		44.6	167	18.2		10.1	104	06.2		56.0
4	19	48.8	276	35.9		50.1	243	05.5		44.1	182	20.3		10.2	119	08.7		56.0
5	34	51.3	291	35.2	+21	49.9	258	06.3	+17	43.7	197	22.4	-6	10.4	134	11.2	-21	56.0
6	49	53.7	306	34.6	+21	49.8	273	07.2	+17	43.2	212	24.5	-6	10.5	149	13.8	-21	56.0
7	64	56.2	321	33.9		49.7	288	08.0		42.7	227	26.6		10.7	164	16.3		56.0
8	79	58.7	336	33.2		49.5	303	08.9		42.3	242	28.7		10.8	179	18.8		56.0
9	95	01.1	351	32.5		49.4	318	09.7		41.8	257	30.8		11.0	194	21.3		56.0
10	110	03.6	6	31.8		49.3	333	10.6		41.4	272	32.9		11.1	209	23.9		56.0
11	125	06.1	21	31.1	+21	49.1	348	11.4	+17	40.9	287	35.1	-6	11.3	224	26.4	-21	56.0
12	140	08.5	36	30.4	+21	49.0	3	12.3	+17	40.4	302	37.2	-6	11.4	239	28.9	-21	56.0
13	155	11.0	51	29.7		48.8	18	13.2		40.0	317	39.3		11.6	254	31.4		56.0
14	170	13.5	66	29.0		48.7	33	14.0		39.5	332	41.4		11.7	269	34.0		56.0
15	185	15.9	81	28.4		48.6	48	14.9		39.1	347	43.5		11.9	284	36.5		56.0
16	200	18.4	96	27.7		48.4	63	15.7		38.6	2	45.6		12.1	299	39.0		56.0
17	215	20.9	111	27.0	+21	48.3	78	16.6	+17	38.1	17	47.7	-6	12.2	314	41.5	-21	56.0
18	230	23.3	126	26.3	+21	48.1	93	17.5	+17	37.7	32	49.8	-6	12.4	329	44.1	-21	56.0
19	245	25.8	141	25.6		48.0	108	18.3		37.2	47	51.9		12.5	344	46.6		56.0
20	260	28.2	156	24.9		47.8	123	19.2		36.7	62	54.0		12.7	359	49.1		56.0
21	275	30.7	171	24.2		47.7	138	20.0		36.3	77	56.1		12.8	14	51.6		56.0
22	290	33.2	186	23.5		47.5	153	20.9		35.8	92	58.2		13.0	29	54.2		56.0
23	305	35.6	201	22.8		47.4	168	21.7		35.4	108	00.3		13.1	44	56.7		56.0
24	320	38.1	216	22.2	+21	47.2	183	22.6	+17	34.9	123	02.5	-6	13.3	59	59.2	-21	56.1
Dif	—		-7		-1		+9		-5		+21		-2		+25		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 19 ^d 6	PHE { 4 ^h : 57 ^h :7 12 ^h : 57 ^h :9 20 ^h : 58 ^h :0									
	PMG: 12 ^h 05 ^m 0													
	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	43.9	+14 58.4	309	37.1	+0 35.3	60 N	20 01	20 53	22 13	21 33 18	9 57 83		
1	193	44.0		324	07.8 ¹¹⁷	46.5 ¹¹²	58	19 52	39	21 47	36 20	56 80		
2	208	44.1	56.9	338	38.6 ¹¹⁸	+0 57.6 ¹¹¹	56	43	27	28	38 23	54 79		
3	223	44.2	56.1	353	09.3 ¹¹⁷	+1 08.8 ¹¹²	54	36	17	21 11	40 25	53 76		
4	238	44.3	55.3	7	40.0 ¹¹⁷	19.9 ¹¹¹	52	30	08	20 58	41 27	52 75		
5	253	44.4	+14 54.6	22	10.7 ¹¹⁷	+1 31.1 ¹¹²	50	19 24	20 00	20 46	21 43 28	9 52 72		
6	268	44.5	+14 53.8	36	41.4 ¹¹⁷	+1 42.2 ¹¹¹	45	19 11	19 43	20 23	21 47 31	9 50 68		
7	283	44.6	53.1	51	12.0 ¹¹⁶	+1 53.4 ¹¹²	40	19 01	30	20 05	50 34	48 66		
8	298	44.7	52.3	65	42.6 ¹¹⁶	+2 04.5 ¹¹¹	35	18 52	19	19 51	52 38	47 63		
9	313	44.8	51.6	80	13.2 ¹¹⁶	15.6 ¹¹¹	30	44	19 09	39	55 39	46 60		
10	328	44.9	50.8	94	43.7 ¹¹⁵	26.8 ¹¹²	20	31	18 54	21	21 59 43	43 57		
11	343	45.0	+14 50.1	109	14.2 ¹¹⁵	+2 37.9 ¹¹¹	10 N	18 19	18 41	19 06	22 02 47	9 42 52		
12	358	45.2	+14 49.3	123	44.7 ¹¹⁵	+2 49.0 ¹¹¹	0	18 08	18 30	18 55	22 06 50	9 40 49		
13	13	45.3	48.6	138	15.2 ¹¹⁵	+3 00.1 ¹¹¹	10 S	17 58	19	45	09 54	38 46		
14	28	45.4	47.8	152	45.6 ¹¹⁴	11.2 ¹¹¹	20	47	18 09	36	13 57	36 43		
15	43	45.5	47.0	167	16.0 ¹¹⁴	22.3 ¹¹¹	30	34	17 59	27	17 61	34 39		
16	58	45.6	46.3	181	46.4 ¹¹⁴	33.4 ¹¹¹	35	27	53	23	19 64	33 36		
17	73	45.7	+14 45.5	196	16.7 ¹¹³	+3 44.5 ¹¹¹	40	17 18	17 47	18 19	22 22 66	9 32 33		
18	88	45.8	+14 44.8	210	47.0 ¹¹³	+3 55.5 ¹¹⁰	45	17 09	17 40	18 14	22 25 70	9 30 31		
19	103	45.9	44.0	225	17.3 ¹¹³	+4 06.6 ¹¹¹	50	16 57	31	10	29 73	28 27		
20	118	46.0	43.3	239	47.5 ¹¹²	17.6 ¹¹⁰	52	52	28	08	31 75	27 26		
21	133	46.1	42.5	254	17.7 ¹¹²	28.6 ¹¹⁰	54	46	24	06	33 77	26 24		
22	148	46.3	41.7	268	47.8 ¹¹¹	39.6 ¹¹⁰	56	40	19	04	35 79	25 22		
23	163	46.4	41.0	283	17.9 ¹¹¹	+4 50.6 ¹¹⁰	58	32	15	18 01	38 81	24 19		
24	178	46.5	+14 40.2	297	48.0 ¹¹¹	+5 01.6 ¹¹⁰	60 S	16 24	17 09	17 59	22 41 84	9 23 17		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 37 ^m 0		Mag: -4.0 PMG: 9 ^h 35 ^m		Mag: +1.7 PMG: 11 ^h 46 ^m		Mag: -1.9 PMG: 15 ^h 46 ^m		Mag: +0.3 PMG: 19 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	320	38.1	216	22.2	+21 47.2	183 22.6	+17 34.9	123 02.5	-6 13.3	59 59.2	-21 56.1			
1	335	40.6	231	21.5	47.1	198 23.5	34.4	138 04.6	13.4	75 01.7	56.1			
2	350	43.0	246	20.8	46.9	213 24.3	34.0	153 06.7	13.6	90 04.2	56.1			
3	5 45.5	261 20.1	46.8		46.8	228 25.2	33.5	168 08.8	13.7	105 06.8	56.1			
4	20 48.0	276 19.4	46.6		46.6	243 26.0	33.0	183 10.9	13.9	120 09.3	56.1			
5	35 50.4	291 18.7	+21 46.5		46.5	258 26.9	+17 32.6	198 13.0	-6 14.1	135 11.8	-21 56.1			
6	50 52.9	306 18.0	+21 46.3		46.3	273 27.8	+17 32.1	213 15.1	-6 14.2	150 14.3	-21 56.1			
7	65 55.3	321 17.3	46.1		46.1	288 28.6	31.7	228 17.2	14.4	165 16.9	56.1			
8	80 57.8	336 16.6	46.0		46.0	303 29.5	31.2	243 19.3	14.5	180 19.4	56.1			
9	96 00.3	351 16.0	45.8		45.8	318 30.3	30.7	258 21.4	14.7	195 21.9	56.1			
10	111 02.7	6 15.3	45.7		45.7	333 31.2	30.3	273 23.5	14.8	210 24.4	56.1			
11	126 05.2	21 14.6	+21 45.5		45.5	348 32.1	+17 29.8	288 25.6	-6 15.0	225 26.9	-21 56.1			
12	141 07.7	36 13.9	+21 45.3		45.3	3 32.9	+17 29.3	303 27.7	-6 15.1	240 29.5	-21 56.1			
13	156 10.1	51 13.2	45.2		45.2	18 33.8	28.9	318 29.8	15.3	255 32.0	56.1			
14	171 12.6	66 12.5	45.0		45.0	33 34.6	28.4	333 31.9	15.4	270 34.5	56.1			
15	186 15.1	81 11.8	44.8		44.8	48 35.5	27.9	348 34.0	15.6	285 37.0	56.1			
16	201 17.5	96 11.1	44.7		44.7	63 36.4	27.5	3 36.1	15.8	300 39.5	56.1			
17	216 20.0	111 10.4	+21 44.5		44.5	78 37.2	+17 27.0	18 38.2	-6 15.9	315 42.1	-21 56.1			
18	231 22.5	126 09.7	+21 44.3		44.3	93 38.1	+17 26.5	33 40.4	-6 16.1	330 44.6	-21 56.1			
19	246 24.9	141 09.1	44.2		44.2	108 38.9	26.1	48 42.5	16.2	345 47.1	56.1			
20	261 27.4	156 08.4	44.0		44.0	123 39.8	25.6	63 44.6	16.4	0 49.6	56.1			
21	276 29.8	171 07.7	43.8		43.8	138 40.7	25.1	78 46.7	16.5	15 52.1	56.1			
22	291 32.3	186 07.0	43.6		43.6	153 41.5	24.7	93 48.8	16.7	30 54.7	56.1			
23	306 34.8	201 06.3	43.5		43.5	168 42.4	24.2	108 50.9	16.8	45 57.2	56.2			
24	321 37.2	216 05.6	+21 43.3		43.3	183 43.3	+17 23.7	123 53.0	-6 17.0	60 59.7	-21 56.2			
Dif	—	-7	-2		+9	-5		+21	-2		+25	0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 8			Edad: 20 ^d 6 PHE { 4 ^h : 58 ^m /2 12 ^h : 58 ^m /4 20 ^h : 58 ^m /5 PMG: 4 ^h 17 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	46.5	+14	40.2	297	48.0	+5	01.6	60 N	1 57	3 17	4 10	21 51	22	11 20 84
1	193	46.6		39.5	312	18.1	111	12.5	58	2 23	31	19	21 56	24	16 82
2	208	46.7		38.7	326	48.1	110	23.4	56	43	43	27	22 01	26	13 79
3	223	46.8		37.9	341	18.0	109	34.3	54	2 59	3 53	34	05 28		09 77
4	238	46.9		37.2	355	47.9	109	45.2	52	3 13	4 02	41	08 30		07 75
5	253	47.0	+14	36.4	10	17.8	109	56.1	50	3 24	4 10	4 47	22 11	32	11 04 73
6	268	47.1	+14	35.6	24	47.7	109	06.9	45	3 47	4 27	4 59	22 18	36	10 58 70
7	283	47.3		34.9	39	17.5	108	17.7	40	4 05	41	5 10	24 39		54 66
8	298	47.4		34.1	53	47.2	107	28.5	35	19	4 52	19	30 40		50 64
9	313	47.5		33.4	68	16.9	107	39.2	30	31	5 01	26	34 43		46 62
10	328	47.6		32.6	82	46.6	107	49.9	20	4 49	16	39	42 47		40 58
11	343	47.7	+14	31.8	97	16.2	106	00.6	10 N	5 04	5 29	5 51	22 49	50	10 34 55
12	358	47.8	+14	31.1	111	45.8	106	11.3	0	5 15	5 40	6 01	22 56	52	10 29 52
13	13	47.9		30.3	126	15.3	105	21.9	10 S	25	5 50	12	23 03	55	24 48
14	28	48.1		29.5	140	44.8	105	32.5	20	34	6 00	23	10 59		19 45
15	43	48.2		28.8	155	14.2	104	43.1	30	42	11	35	18 63		13 41
16	58	48.3		28.0	169	43.6	104	53.6	35	47	16	43	23 65		09 39
17	73	48.4	+14	27.2	184	12.9	103	04.1	40	5 51	6 23	6 51	23 28	68	10 05 36
18	88	48.5	+14	26.5	198	42.2	103	14.5	45	5 55	6 30	7 00	23 35	70	10 01 33
19	103	48.6		25.7	213	11.5	103	24.9	50	5 59	38	11	42 74		9 55 30
20	118	48.8		24.9	227	40.6	101	35.3	52	6 01	41	17	46 76		53 28
21	133	48.9		24.2	242	09.8	102	45.6	54	03	45	22	50 77		50 26
22	148	49.0		23.4	256	38.9	101	55.9	56	05	49	29	54 80		47 24
23	163	49.1		22.6	271	07.9	100	06.1	58	07	54	36	23 59	82	43 22
24	178	49.2	+14	21.8	285	36.9	100	16.3	60 S	6 10	6 59	7 44	** ** *		9 40 19
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 33 ^m 1			Mag: -4.0 PMG: 9 ^h 36 ^m			Mag: +1.7 PMG: 11 ^h 44 ^m			Mag: -1.9 PMG: 15 ^h 42 ^m			Mag: +0.3 PMG: 19 ^h 53 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	321	37.2		216	05.6	+21	183	43.3	+17	123	53.0	-6	60	59.7	-21
1	336	39.7		231	04.9		198	44.1		138	55.1		76	02.2	
2	351	42.2		246	04.2		213	45.0		153	57.2		91	04.7	
3	6	44.6		261	03.5		228	45.8		168	59.3		106	07.2	
4	21	47.1		276	02.8		243	46.7		184	01.4		121	09.8	
5	36	49.6		291	02.1	+21	258	47.6	+17	199	03.5	-6	136	12.3	-21
6	51	52.0		306	01.5	+21	273	48.4	+17	214	05.6	-6	151	14.8	-21
7	66	54.5		321	00.8		288	49.3		229	07.7		166	17.3	
8	81	56.9		336	00.1		303	50.2		244	09.8		181	19.8	
9	96	59.4		350	59.4		318	51.0		259	11.9		196	22.3	
10	112	01.9		5	58.7		333	51.9		274	14.0		211	24.9	
11	127	04.3		20	58.0	+21	348	52.8	+17	289	16.1	-6	226	27.4	-21
12	142	06.8		35	57.3	+21	3	53.6	+17	304	18.2	-6	241	29.9	-21
13	157	09.3		50	56.6		18	54.5		319	20.3		256	32.4	
14	172	11.7		65	55.9		33	55.3		334	22.4		271	34.9	
15	187	14.2		80	55.2		48	56.2		349	24.5		286	37.4	
16	202	16.7		95	54.5		63	57.1		4	26.6		301	40.0	
17	217	19.1		110	53.9	+21	78	57.9	+17	19	28.7	-6	316	42.5	-21
18	232	21.6		125	53.2	+21	93	58.8	+17	34	30.8	-6	331	45.0	-21
19	247	24.1		140	52.5		108	59.7		49	32.9		346	47.5	
20	262	26.5		155	51.8		124	00.5		64	35.0		1	50.0	
21	277	29.0		170	51.1		139	01.4		79	37.1		16	52.5	
22	292	31.4		185	50.4		154	02.3		94	39.2		31	55.0	
23	307	33.9		200	49.7		169	03.1		109	41.3		46	57.6	
24	322	36.4		215	49.0	+21	184	04.0	+17	124	43.4	-6	62	00.1	-21
Dif	—			-7		-2	+9		-5	+21		-2	+25		0

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8				Edad: 21 ^d 6 PHE	4 ^h : 58 ^m /7 12 ^h : 58 ^m /8 20 ^h : 59 ^m /0					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 04 ^m 6					SD: 16 ^h 0					Civil			Náutico		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			
0	178	49.2	+14	21.8	285	36.9	+9	16.3	60 N	19 55	20 47	22 03	22 13 27		12 44 85			
1	193	49.3		21.1	300	05.8	99	26.5	58	47	34	21 39	20 30		38 81			
2	208	49.5		20.3	314	34.7	99	36.6	56	39	22	21	27 32		32 79			
3	223	49.6		19.5	329	03.5	98	46.6	54	32	12	21 06	33 34		26 78			
4	238	49.7		18.8	343	32.3	98	+9 56.6	52	26	20 04	20 53	38 36		22 75			
5	253	49.8	+14	18.0	358	01.0	97	+10 06.6	50	19 20	19 56	20 42	22 43 37		12 17 74			
6	268	49.9	+14	17.2	12	29.6	96	+10 16.5	45	19 08	19 40	20 19	22 54 40		12 08 70			
7	283	50.0		16.4	26	58.2	96	26.3	40	18 58	27	20 02	23 03 42		12 00 68			
8	298	50.2		15.7	41	26.8	96	36.1	35	49	16	19 48	10 45		11 54 65			
9	313	50.3		14.9	55	55.3	95	45.9	30	42	19 07	37	17 47		48 63			
10	328	50.4		14.1	70	23.7	94	+10 55.5	20	29	18 52	19	29 49		38 59			
11	343	50.5	+14	13.3	84	52.1	94	+11 05.2	10 N	18 18	18 40	19 05	23 39 52		11 29 57			
12	358	50.6	+14	12.6	99	20.4	93	+11 14.7	0	18 08	18 29	18 54	23 48 56		11 21 53			
13	13	50.8		11.8	113	48.6	92	24.3	10 S	17 58	19	44	23 58 58		12 51			
14	28	50.9		11.0	128	16.8	92	33.7	20	47	10	36	*** ** *		11 04 48			
15	43	51.0		10.2	142	45.0	92	43.1	30	35	18 00	28	*** ** *		10 54 44			
16	58	51.1		09.5	157	13.1	91	+11 52.4	35	28	17 54	24	*** ** *		48 42			
17	73	51.2	+14	08.7	171	41.1	90	+12 01.7	40	17 20	17 48	18 20	*** ** *		10 41 41			
18	88	51.4	+14	07.9	186	09.0	89	+12 10.9	45	17 11	17 42	18 16	*** ** *		10 34 37			
19	103	51.5		07.1	200	36.9	89	20.0	50	17 00	34	12	*** ** *		25 34			
20	118	51.6		06.4	215	04.8	89	29.1	52	16 55	31	11	*** ** *		21 32			
21	133	51.7		05.6	229	32.5	87	38.1	54	50	27	09	*** ** *		16 31			
22	148	51.8		04.8	244	00.3	88	47.0	56	43	23	07	*** ** *		11 29			
23	163	52.0		04.0	258	27.9	86	+12 55.9	58	36	18	05	*** ** *		10 05 27			
24	178	52.1	+14	03.2	272	55.5	86	+13 04.6	60 S	16 29	17 14	18 03	0 05 85		9 59 24			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 29 ^m 2		Mag: -4.0 PMG: 9 ^h 37 ^m				Mag: +1.7 PMG: 11 ^h 43 ^m				Mag: -1.8 PMG: 15 ^h 39 ^m				Mag: +0.3 PMG: 19 ^h 49 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	322	36.4	215	49.0	+21	38.7	184	04.0	+17	12.5	124	43.4	-6	20.7	62	00.1		
1	337	38.8	230	48.3		38.5	199	04.9		12.0	139	45.5		20.9	77	02.6		
2	352	41.3	245	47.6		38.3	214	05.7		11.5	154	47.6		21.0	92	05.1		
3	7	43.8	260	46.9		38.1	229	06.6		11.0	169	49.7		21.2	107	07.6		
4	22	46.2	275	46.2		37.9	244	07.5		10.6	184	51.8		21.4	122	10.1		
5	37	48.7	290	45.6	+21	37.7	259	08.3	+17	10.1	199	53.9	-6	21.5	137	12.6		
6	52	51.2	305	44.9	+21	37.5	274	09.2	+17	09.6	214	56.0	-6	21.7	152	15.2		
7	67	53.6	320	44.2		37.3	289	10.1		09.2	229	58.1		21.8	167	17.7		
8	82	56.1	335	43.5		37.1	304	10.9		08.7	245	00.2		22.0	182	20.2		
9	97	58.6	350	42.8		36.9	319	11.8		08.2	260	02.3		22.1	197	22.7		
10	113	01.0	5	42.1		36.7	334	12.7		07.7	275	04.4		22.3	212	25.2		
11	128	03.5	20	41.4	+21	36.5	349	13.5	+17	07.3	290	06.5	-6	22.5	227	27.7		
12	143	05.9	35	40.7	+21	36.3	4	14.4	+17	06.8	305	08.6	-6	22.6	242	30.2		
13	158	08.4	50	40.0		36.0	19	15.3		06.3	320	10.7		22.8	257	32.7		
14	173	10.9	65	39.3		35.8	34	16.1		05.8	335	12.8		22.9	272	35.3		
15	188	13.3	80	38.6		35.6	49	17.0		05.4	350	14.9		23.1	287	37.8		
16	203	15.8	95	38.0		35.4	64	17.9		04.9	5	16.9		23.2	302	40.3		
17	218	18.3	110	37.3	+21	35.2	79	18.7	+17	04.4	20	19.0	-6	23.4	317	42.8		
18	233	20.7	125	36.6	+21	34.9	94	19.6	+17	03.9	35	21.1	-6	23.6	332	45.3		
19	248	23.2	140	35.9		34.7	109	20.5		03.5	50	23.2		23.7	347	47.8		
20	263	25.7	155	35.2		34.5	124	21.4		03.0	65	25.3		23.9	2	50.3		
21	278	28.1	170	34.5		34.3	139	22.2		02.5	80	27.4		24.0	17	52.8		
22	293	30.6	185	33.8		34.1	154	23.1		02.0	95	29.5		24.2	32	55.3		
23	308	33.0	200	33.1		33.8	169	24.0		01.6	110	31.6		24.4	47	57.9		
24	323	35.5	215	32.4	+21	33.6	184	24.8	+17	01.1	125	33.7	-6	24.5	63	00.4		
Dif	—		-7	-2			+9	-5			+21	-2			+25	0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 04 ^m 4				Edad: 22 ^d 6 PHE { 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/3 R°: 56 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	52.1	+14	03.2	272	55.5	+13	04.6	60 N	2 07	3 23	4 14	22 40	37	14 09	80		
1	193	52.2		02.5	287	23.0		13.4	58	30	36	23	50	39	13 59	79		
2	208	52.3		01.7	301	50.5		22.0	56	2 49	48	31	22 59	41	51	76		
3	223	52.5		00.9	316	17.9		30.6	54	3 04	3 57	38	23 07	42	44	74		
4	238	52.6	+14	00.1	330	45.3		39.0	52	17	4 06	44	14	43	37	73		
5	253	52.7	+13	59.3	345	12.6	+13	47.4	50	3 28	4 14	4 50	23 20	45	13 31	72		
6	268	52.8	+13	58.6	359	39.8	+13	55.8	45	3 50	4 30	5 02	23 34	47	13 18	70		
7	283	53.0		57.8	14	06.9	+14	04.0	40	4 07	43	12	45	49	13 08	67		
8	298	53.1		57.0	28	34.0		12.2	35	21	4 53	20	23 55	50	12 59	65		
9	313	53.2		56.2	43	01.1		20.3	30	32	5 02	27	** ** *	**	51	64		
10	328	53.3		55.4	57	28.1		28.3	20	4 50	17	40	** ** *	**	37	61		
11	343	53.4	+13	54.6	71	55.0	+14	36.2	10 N	5 04	5 29	5 51	** ** *	**	12 26	58		
12	358	53.6	+13	53.9	86	21.8	+14	44.0	0	5 15	5 40	6 01	** ** *	**	12 14	57		
13	13	53.7		53.1	100	48.6		51.8	10 S	24	49	11	** ** *	**	12 03	55		
14	28	53.8		52.3	115	15.3	+14	59.4	20	33	5 59	22	0 09	60	11 52	51		
15	43	53.9		51.5	129	42.0	+15	07.0	76	30	41	6 09	33	21	63	38	49	
16	58	54.1		50.7	144	08.6		14.5	75	35	44	14	40	28	65	30	48	
17	73	54.2	+13	49.9	158	35.1	+15	21.9	74	40	5 48	6 20	6 48	0 36	67	11 22	45	
18	88	54.3	+13	49.1	173	01.6	+15	29.2	73	45	5 52	6 27	6 57	0 45	70	11 11	44	
19	103	54.5		48.4	187	28.0		36.4	72	50	56	34	7 08	0 56	74	10 59	40	
20	118	54.6		47.6	201	54.4		43.5	71	52	58	37	13	1 02	74	53	39	
21	133	54.7		46.8	216	20.7		50.5	70	54	5 59	41	18	07	77	47	37	
22	148	54.8		46.0	230	46.9	+15	57.4	69	56	6 01	45	24	14	78	40	36	
23	163	55.0		45.2	245	13.1	+16	04.2	68	58	03	49	31	21	81	32	34	
24	178	55.1	+13	44.4	259	39.2	+16	11.0	68	60 S	6 05	6 54	7 39	1 30	83	10 23	31	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 25 ^m 2		Mag: -4.0 PMG: 9 ^h 38 ^m			Mag: +1.8 PMG: 11 ^h 42 ^m			Mag: -1.8 PMG: 15 ^h 36 ^m			Mag: +0.3 PMG: 19 ^h 45 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'			
0	323	35.5	215	32.4	+21	33.6	184	24.8	+17	01.1	125	33.7	-6	24.5	63	00.4	-21	56.4
1	338	38.0	230	31.7		33.4	199	25.7		00.6	140	35.8		24.7	78	02.9		56.4
2	353	40.4	245	31.0		33.2	214	26.6	+17	00.1	155	37.9		24.8	93	05.4		56.4
3	8	42.9	260	30.3		32.9	229	27.4	+16	59.6	170	40.0		25.0	108	07.9		56.4
4	23	45.4	275	29.7		32.7	244	28.3		59.2	185	42.1		25.1	123	10.4		56.4
5	38	47.8	290	29.0	+21	32.5	259	29.2	+16	58.7	200	44.2	-6	25.3	138	12.9	-21	56.4
6	53	50.3	305	28.3	+21	32.2	274	30.1	+16	58.2	215	46.3	-6	25.5	153	15.4	-21	56.4
7	68	52.8	320	27.6		32.0	289	30.9		57.7	230	48.4		25.6	168	17.9		56.4
8	83	55.2	335	26.9		31.8	304	31.8		57.3	245	50.5		25.8	183	20.4		56.4
9	98	57.7	350	26.2		31.5	319	32.7		56.8	260	52.6		25.9	198	22.9		56.4
10	114	00.2	5	25.5		31.3	334	33.5		56.3	275	54.7		26.1	213	25.5		56.4
11	129	02.6	20	24.8	+21	31.0	349	34.4	+16	55.8	290	56.7	-6	26.2	228	28.0	-21	56.4
12	144	05.1	35	24.1	+21	30.8	4	35.3	+16	55.3	305	58.8	-6	26.4	243	30.5	-21	56.4
13	159	07.5	50	23.4		30.6	19	36.1		54.9	321	00.9		26.6	258	33.0		56.4
14	174	10.0	65	22.7		30.3	34	37.0		54.4	336	03.0		26.7	273	35.5		56.4
15	189	12.5	80	22.0		30.1	49	37.9		53.9	351	05.1		26.9	288	38.0		56.5
16	204	14.9	95	21.3		29.8	64	38.8		53.4	6	07.2		27.0	303	40.5		56.5
17	219	17.4	110	20.7	+21	29.6	79	39.6	+16	52.9	21	09.3	-6	27.2	318	43.0	-21	56.5
18	234	19.9	125	20.0	+21	29.4	94	40.5	+16	52.5	36	11.4	-6	27.4	333	45.5	-21	56.5
19	249	22.3	140	19.3		29.1	109	41.4		52.0	51	13.5		27.5	348	48.0		56.5
20	264	24.8	155	18.6		28.9	124	42.3		51.5	66	15.6		27.7	3	50.5		56.5
21	279	27.3	170	17.9		28.6	139	43.1		51.0	81	17.7		27.8	18	53.0		56.5
22	294	29.7	185	17.2		28.4	154	44.0		50.5	96	19.8		28.0	33	55.5		56.5
23	309	32.2	200	16.5		28.1	169	44.9		50.1	111	21.9		28.2	48	58.0		56.5
24	324	34.7	215	15.8	+21	27.9	184	45.7	+16	49.6	126	23.9	-6	28.3	64	00.6	-21	56.5
Dif	—		-7		-2	+9		-5		+21		-2		+25				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 04 ^m 2			Edad: 23 ^d 6 PHE { SD: 16'2 PMG: 6 ^h 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	55.1	+13	44.4	259	39.2	+16	11.0	60 N	19 50	20 40	21 53	23 17	49	15 29	74
1	193	55.2		43.6	274	05.3		17.6	58	41	28	32	29 50		18 71	
2	208	55.3		42.8	288	31.3		24.1	56	34	17	14	40 51		15 07	71
3	223	55.5		42.0	302	57.2		30.5	54	27	20 08	21 00	49 52		14 58	70
4	238	55.6		41.3	317	23.1		36.8	52	22	19 59	20 47	23 57	53	50	69
5	253	55.7	+13	40.5	331	48.9	+16	43.0	50	19 16	19 52	20 37	** ** *	**	14 43	68
6	268	55.9	+13	39.7	346	14.7	+16	49.2	45	19 05	19 36	20 15	** ** *	**	14 28	66
7	283	56.0		38.9	0	40.4	+16	55.2	40	18 55	24	19 59	** ** *	**	15 65	
8	298	56.1		38.1	15	06.0	+17	01.1	35	47	14	46	** ** *	**	14 04	64
9	313	56.2		37.3	29	31.6		06.8	30	40	19 05	35	0 04	51	13 55	62
10	328	56.4		36.5	43	57.1		12.5	20	28	18 51	18	18 54		38 62	
11	343	56.5	+13	35.7	58	22.6	+17	18.1	10 N	18 17	18 39	19 04	0 31	56	13 24	60
12	358	56.6	+13	34.9	72	48.1	+17	23.5	0	18 08	18 29	18 54	0 44	57	13 11	59
13	13	56.8		34.1	87	13.4		28.9	10 S	17 58	19	44	0 56	59	12 58	57
14	28	56.9		33.3	101	38.8		34.1	20	48	10	36	1 09	61	43 56	
15	43	57.0		32.5	116	04.0		39.3	30	36	18 01	29	24 64		27 55	
16	58	57.2		31.7	130	29.3		44.3	35	30	17 56	26	33 65		18 53	
17	73	57.3	+13	30.9	144	54.4	+17	49.2	40	17 22	17 50	18 22	1 43	67	12 07	52
18	88	57.4	+13	30.2	159	19.5	+17	53.9	45	17 14	17 44	18 18	1 55	68	11 55	50
19	103	57.6		29.4	173	44.6	+17	58.6	50	17 03	37	15	2 10	70	39 49	
20	118	57.7		28.6	188	09.6	+18	03.1	52	16 58	34	13	16 72		32 48	
21	133	57.8		27.8	202	34.6		07.6	54	53	30	12	24 73		24 47	
22	148	57.9		27.0	216	59.5		11.9	56	47	26	10	32 74		16 45	
23	163	58.1		26.2	231	24.4		16.0	58	41	22	09	42 76		11 06	44
24	178	58.2	+13	25.4	245	49.3	+18	20.1	60 S	16 33	17 18	18 07	2 53	78	10 54	42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 21 ^m 3		Mag: -3.9 PMG: 9 ^h 39 ^m		Mag: +1.8 PMG: 11 ^h 40 ^m		Mag: -1.8 PMG: 15 ^h 32 ^m		Mag: +0.3 PMG: 19 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	324	34.7	215	15.8	+21	27.9	184	45.7	+16	49.6	126	23.9	-6	28.3	64	00.6	-21	56.5
1	339	37.1	230	15.1		27.6	199	46.6		49.1	141	26.0		28.5	79	03.1		56.5
2	354	39.6	245	14.4		27.4	214	47.5		48.6	156	28.1		28.6	94	05.6		56.5
3	9	42.0	260	13.7		27.1	229	48.4		48.1	171	30.2		28.8	109	08.1		56.5
4	24	44.5	275	13.1		26.9	244	49.2		47.7	186	32.3		29.0	124	10.6		56.5
5	39	47.0	290	12.4	+21	26.6	259	50.1	+16	47.2	201	34.4	-6	29.1	139	13.1	-21	56.5
6	54	49.4	305	11.7	+21	26.3	274	51.0	+16	46.7	216	36.5	-6	29.3	154	15.6	-21	56.5
7	69	51.9	320	11.0		26.1	289	51.9		46.2	231	38.6		29.4	169	18.1		56.5
8	84	54.4	335	10.3		25.8	304	52.7		45.7	246	40.7		29.6	184	20.6		56.5
9	99	56.8	350	09.6		25.6	319	53.6		45.2	261	42.8		29.8	199	23.1		56.5
10	114	59.3	5	08.9		25.3	334	54.5		44.8	276	44.8		29.9	214	25.6		56.5
11	130	01.8	20	08.2	+21	25.0	349	55.4	+16	44.3	291	46.9	-6	30.1	229	28.1	-21	56.6
12	145	04.2	35	07.5	+21	24.8	4	56.2	+16	43.8	306	49.0	-6	30.2	244	30.6	-21	56.6
13	160	06.7	50	06.8		24.5	19	57.1		43.3	321	51.1		30.4	259	33.1		56.6
14	175	09.1	65	06.1		24.2	34	58.0		42.8	336	53.2		30.6	274	35.6		56.6
15	190	11.6	80	05.4		24.0	49	58.9		42.3	351	55.3		30.7	289	38.1		56.6
16	205	14.1	95	04.8		23.7	64	59.7		41.9	6	57.4		30.9	304	40.6		56.6
17	220	16.5	110	04.1	+21	23.4	80	00.6	+16	41.4	21	59.5	-6	31.0	319	43.1	-21	56.6
18	235	19.0	125	03.4	+21	23.2	95	01.5	+16	40.9	37	01.6	-6	31.2	334	45.6	-21	56.6
19	250	21.5	140	02.7		22.9	110	02.4		40.4	52	03.6		31.4	349	48.1		56.6
20	265	23.9	155	02.0		22.6	125	03.2		39.9	67	05.7		31.5	4	50.6		56.6
21	280	26.4	170	01.3		22.4	140	04.1		39.4	82	07.8		31.7	19	53.1		56.6
22	295	28.9	185	00.6		22.1	155	05.0		38.9	97	09.9		31.8	34	55.6		56.6
23	310	31.3	199	59.9		21.8	170	05.9		38.5	112	12.0		32.0	49	58.1		56.6
24	325	33.8	214	59.2	+21	21.5	185	06.7	+16	38.0	127	14.1	-6	32.2	65	00.6	-21	56.6
Dif	—		-7		-3		+9		-5		+21		-2		+25			0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15°8 PMG: 12 ^h 04 ^m 0				Edad: 24 ^d 6 PHE { 4 ^h : 59°7 12 ^h : 59°8 20 ^h : 59°8 SD: 16°3 PMG: 7 ^h 55 ^m R°: 60 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	178	58.2	+13	25.4	245	49.3	+18	20.1	60 N	2	16	3	29	4	19	** ** *	16	43 60	
1	193	58.3		24.6	260	14.1 58		24.0 39	58		38		41		28	** ** *	29	61	
2	208	58.5		23.8	274	38.8 57		27.9 39	56	2	55	3	52		35	** ** *	18	61	
3	223	58.6		23.0	289	03.5 57		31.6 37	54	3	09	4	01		42	** ** *	16	08 60	
4	238	58.7		22.2	303	28.2 57		35.1 35	52		21		10		47	** ** *	15	59 60	
5	253	58.9	+13	21.4	317	52.8 56	+18	38.6 35	50	3	32	4	17	4	53	0 05	53	15 51 60	
6	268	59.0	+13	20.6	332	17.4 56	+18	41.9 33	45	3	53	4	32	5	04	0 21	54	15 34 60	
7	283	59.1		19.8	346	42.0 56		45.1 31	40	4	10		45		14	34	56	20 60	
8	298	59.3		19.0	1	06.5 55		48.2 32	35		23	4	55		22	45	57	15 08 60	
9	313	59.4		18.2	15	31.0 55		51.1 29	30		34	5	04		29	0 55	57	14 57 61	
10	328	59.6		17.4	29	55.4 54		53.9 28	20	4	51		18		41	1 12	58	40 60	
11	343	59.7	+13	16.6	44	19.8 54	+18	56.6 27	10 N	5	04		5 29	5	51	1 27	59	14 24 60	
12	358	59.8	+13	15.8	58	44.2 54	+18	59.2 26	0	5	15	5	39	6	01	1 41	60	14 10 59	
13	14	00.0		15.0	73	08.6 54	+19	01.6 24	10 S		24		49		10	1 55	61	13 55 60	
14	29	00.1		14.2	87	32.9 53		03.9 23	20	32	5	58		20		2 10	61	39 60	
15	44	00.2		13.4	101	57.2 53		06.1 22	30	39	6	07		32		28	62	22 59	
16	59	00.4		12.6	116	21.5 53		08.1 20	35	42		12		38		38	62	13 11 59	
17	74	00.5	+13	11.7	130	45.7 52	+19	10.0 19	40	5	46	6	18	6	45	2 50	63	12 59 59	
18	89	00.6	+13	10.9	145	09.9 52	+19	11.8 18	45	5	49	6	24	6	54	3 03	64	12 45 58	
19	104	00.8		10.1	159	34.1 52		13.5 17	50	53		31	7	04		20	65	28 58	
20	119	00.9		09.3	173	58.3 52		15.0 15	52	54		34		09		28	65	20 58	
21	134	01.0		08.5	188	22.5 52		16.4 14	54	56		37		14		37	65	11 57	
22	149	01.2		07.7	202	46.6 51		17.6 12	56	57		41		20		46	66	12 01 57	
23	164	01.3		06.9	217	10.7 51		18.7 11	58	5	59	45		26		3	58	66	11 50 56
24	179	01.5	+13	06.1	231	34.8 51	+19	19.7 10	60 S	6	00	6	49	7	33	4	11	67	11 36 56

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 17 ^m 4		Mag: -3.9 PMG: 9 ^h 40 ^m				Mag: +1.8 PMG: 11 ^h 39 ^m				Mag: -1.8 PMG: 15 ^h 29 ^m				Mag: +0.3 PMG: 19 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	325	33.8	214	59.2	+21	21.5	185	06.7	+16	38.0	127	14.1	-6	32.2	65	00.6	-21	56.6
1	340	36.3	229	58.5		21.3	200	07.6		37.5	142	16.2		32.3	80	03.1		56.6
2	355	38.7	244	57.8		21.0	215	08.5		37.0	157	18.3		32.5	95	05.6		56.6
3	10	41.2	259	57.2		20.7	230	09.4		36.5	172	20.3		32.6	110	08.1		56.6
4	25	43.6	274	56.5		20.4	245	10.3		36.0	187	22.4		32.8	125	10.6		56.6
5	40	46.1	289	55.8	+21	20.1	260	11.1	+16	35.5	202	24.5	-6	33.0	140	13.1	-21	56.7
6	55	48.6	304	55.1	+21	19.9	275	12.0	+16	35.1	217	26.6	-6	33.1	155	15.6	-21	56.7
7	70	51.0	319	54.4		19.6	290	12.9		34.6	232	28.7		33.3	170	18.1		56.7
8	85	53.5	334	53.7		19.3	305	13.8		34.1	247	30.8		33.4	185	20.6		56.7
9	100	56.0	349	53.0		19.0	320	14.6		33.6	262	32.9		33.6	200	23.1		56.7
10	115	58.4	4	52.3		18.7	335	15.5		33.1	277	34.9		33.8	215	25.6		56.7
11	131	00.9	19	51.6	+21	18.4	350	16.4	+16	32.6	292	37.0	-6	33.9	230	28.1	-21	56.7
12	146	03.4	34	50.9	+21	18.1	5	17.3	+16	32.1	307	39.1	-6	34.1	245	30.6	-21	56.7
13	161	05.8	49	50.2		17.8	20	18.2		31.6	322	41.2		34.2	260	33.1		56.7
14	176	08.3	64	49.6		17.6	35	19.0		31.2	337	43.3		34.4	275	35.6		56.7
15	191	10.8	79	48.9		17.3	50	19.9		30.7	352	45.4		34.6	290	38.1		56.7
16	206	13.2	94	48.2		17.0	65	20.8		30.2	7	47.4		34.7	305	40.6		56.7
17	221	15.7	109	47.5	+21	16.7	80	21.7	+16	29.7	22	49.5	-6	34.9	320	43.1	-21	56.7
18	236	18.1	124	46.8	+21	16.4	95	22.6	+16	29.2	37	51.6	-6	35.1	335	45.6	-21	56.7
19	251	20.6	139	46.1		16.1	110	23.4		28.7	52	53.7		35.2	350	48.1		56.7
20	266	23.1	154	45.4		15.8	125	24.3		28.2	67	55.8		35.4	5	50.6		56.7
21	281	25.5	169	44.7		15.5	140	25.2		27.7	82	57.9		35.5	20	53.1		56.7
22	296	28.0	184	44.0		15.2	155	26.1		27.2	98	00.0		35.7	35	55.6		56.7
23	311	30.5	199	43.3		14.9	170	27.0		26.8	113	02.0		35.9	50	58.1		56.8
24	326	32.9	214	42.7	+21	14.6	185	27.8	+16	26.3	128	04.1	-6	36.0	66	00.6	-21	56.8
Dif	—		-7		-3		+9		-5		+21		-2		+25			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 03 ^m 8			Edad: 25 ^d 6 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'9 SD: 16'3 PMG: 8 ^h 55 ^m R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	01.5	+13 06.1	231	34.8	+19 19.7	9	60 N	19 44	20 34	21 44	0 06 63	17 43 47		
1	194	01.6	05.3	245	58.9	20.6	9	58	36	22	24	19 63	30 48		
2	209	01.7	04.5	260	23.0	21.3	7	56	29	12	21 07	31 63	19 49		
3	224	01.9	03.7	274	47.0	21.9	6	54	23	20 03	20 54	41 63	17 08 51		
4	239	02.0	02.9	289	11.1	22.3	4	52	17	19 55	42	50 62	16 59 52		
5	254	02.2	+13 02.1	303	35.1	+19 22.6	3	50	19 12	19 48	20 32	0 58 62	16 51 52		
6	269	02.3	+13 01.3	317	59.2	+19 22.8	2	45	19 01	19 33	20 12	1 15 62	16 34 54		
7	284	02.4	+13 00.5	332	23.2	22.9	1	40	18 52	21	19 56	30 61	20 55		
8	299	02.6	+12 59.6	346	47.2	22.8	1	35	45	11	43	42 61	16 08 56		
9	314	02.7	58.8	1	11.2	22.5	3	30	38	19 03	33	1 52 61	15 58 56		
10	329	02.8	58.0	15	35.3	22.2	3	20	26	18 49	16	2 10 61	40 57		
11	344	03.0	+12 57.2	29	59.3	+19 21.7	5	10 N	18 16	18 38	19 03	2 26 60	15 24 59		
12	359	03.1	+12 56.4	44	23.3	+19 21.1	6	0	18 07	18 28	18 53	2 41 60	15 09 60		
13	14	03.3	55.6	58	47.3	20.3	8	10 S	17 58	19	44	2 56 59	14 55 60		
14	29	03.4	54.8	73	11.3	19.4	9	20	48	11	37	3 11 59	39 61		
15	44	03.6	54.0	87	35.4	18.4	10	30	37	18 02	30	30 58	21 62		
16	59	03.7	53.2	101	59.4	17.2	12	35	31	17 57	27	40 58	14 10 63		
17	74	03.8	+12 52.3	116	23.5	+19 15.9	13	40	17 24	17 52	18 24	3 53 57	13 58 64		
18	89	04.0	+12 51.5	130	47.5	+19 14.5	14	45	17 16	17 46	18 21	4 07 57	13 43 65		
19	104	04.1	50.7	145	11.6	12.9	16	50	06	40	17	25 56	26 66		
20	119	04.3	49.9	159	35.6	11.2	17	52	17 02	37	16	33 56	18 66		
21	134	04.4	49.1	173	59.7	09.4	18	54	16 57	33	15	42 56	13 08 68		
22	149	04.5	48.3	188	23.8	07.4	20	56	51	30	14	4 52 56	12 58 68		
23	164	04.7	47.5	202	48.0	05.3	21	58	45	26	12	5 04 55	46 69		
24	179	04.8	+12 46.6	217	12.1	+19 03.1	22	60 S	16 38	17 22	18 11	5 18 54	12 32 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 2 ^h 13 ^m 4		Mag: -3.9 PMG: 9 ^h 42 ^m		Mag: +1.8 PMG: 11 ^h 37 ^m		Mag: -1.8 PMG: 15 ^h 26 ^m		Mag: +0.4 PMG: 19 ^h 33 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	326	32.9	214	42.7	+21 14.6	185 27.8	+16 26.3	128 04.1	-6 36.0	66 00.6	-21 56.8
1	341	35.4	229	42.0	14.3	200 28.7	25.8	143 06.2	36.2	81 03.1	56.8
2	356	37.9	244	41.3	14.0	215 29.6	25.3	158 08.3	36.3	96 05.6	56.8
3	11	40.3	259	40.6	13.7	230 30.5	24.8	173 10.4	36.5	111 08.1	56.8
4	26	42.8	274	39.9	13.4	245 31.4	24.3	188 12.5	36.7	126 10.6	56.8
5	41	45.3	289	39.2	+21 13.1	260 32.2	+16 23.8	203 14.5	-6 36.8	141 13.1	-21 56.8
6	56	47.7	304	38.5	+21 12.8	275 33.1	+16 23.3	218 16.6	-6 37.0	156 15.6	-21 56.8
7	71	50.2	319	37.8	12.5	290 34.0	22.8	233 18.7	37.2	171 18.1	56.8
8	86	52.6	334	37.1	12.2	305 34.9	22.3	248 20.8	37.3	186 20.6	56.8
9	101	55.1	349	36.5	11.8	320 35.8	21.8	263 22.9	37.5	201 23.1	56.8
10	116	57.6	4	35.8	11.5	335 36.6	21.3	278 24.9	37.6	216 25.6	56.8
11	132	00.0	19	35.1	+21 11.2	350 37.5	+16 20.9	293 27.0	-6 37.8	231 28.1	-21 56.8
12	147	02.5	34	34.4	+21 10.9	5 38.4	+16 20.4	308 29.1	-6 38.0	246 30.6	-21 56.8
13	162	05.0	49	33.7	10.6	20 39.3	19.9	323 31.2	38.1	261 33.1	56.8
14	177	07.4	64	33.0	10.3	35 40.2	19.4	338 33.3	38.3	276 35.6	56.8
15	192	09.9	79	32.3	10.0	50 41.1	18.9	353 35.4	38.5	291 38.1	56.8
16	207	12.4	94	31.6	09.6	65 41.9	18.4	8 37.4	38.6	306 40.6	56.9
17	222	14.8	109	30.9	+21 09.3	80 42.8	+16 17.9	23 39.5	-6 38.8	321 43.0	-21 56.9
18	237	17.3	124	30.3	+21 09.0	95 43.7	+16 17.4	38 41.6	-6 38.9	336 45.5	-21 56.9
19	252	19.8	139	29.6	08.7	110 44.6	16.9	53 43.7	39.1	351 48.0	56.9
20	267	22.2	154	28.9	08.4	125 45.5	16.4	68 45.8	39.3	6 50.5	56.9
21	282	24.7	169	28.2	08.0	140 46.4	15.9	83 47.8	39.4	21 53.0	56.9
22	297	27.1	184	27.5	07.7	155 47.2	15.4	98 49.9	39.6	36 55.5	56.9
23	312	29.6	199	26.8	07.4	170 48.1	14.9	113 52.0	39.8	51 58.0	56.9
24	327	32.1	214	26.1	+21 07.1	185 49.0	+16 14.4	128 54.1	-6 39.9	67 00.5	-21 56.9
Dif	—		-7	-3		+9	-5	+21	-2	+25	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 03 ^m 6			Edad: 26 ^d 6 PHE { 4 ^h : 59'9 12 ^h : 59'8 20 ^h : 59'7 SD: 16'3 PMG: 9 ^h 55 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	04.8	+12 46.6	217	12.1	+19 03.1	60 N	2 24	3 35	4 24	1 09 76	18 30 35		
1	194	05.0	45.8	231	36.3	+19 00.7	58	2 44	46	32	22 74	18 38		
2	209	05.1	45.0	246	00.4	+18 58.2	56	3 01	3 57	39	34 72	18 08 39		
3	224	05.3	44.2	260	24.6	55.6	54	14	4 05	45	44 71	17 59 41		
4	239	05.4	43.4	274	48.9	52.8	52	26	13	51	1 52 71	51 42		
5	254	05.5	+12 42.6	289	13.1	+18 50.0	50	3 36	4 20	4 56	2 00 70	17 43 44		
6	269	05.7	+12 41.7	303	37.4	+18 46.9	45	3 56	4 35	5 07	2 17 68	17 28 46		
7	284	05.8	40.9	318	01.7	43.8	40	4 12	47	15	31 66	15 48		
8	299	06.0	40.1	332	26.0	40.5	35	25	4 57	23	43 65	17 04 50		
9	314	06.1	39.3	346	50.4	37.1	30	35	5 05	30	2 53 64	16 54 51		
10	329	06.3	38.5	1	14.8	33.6	20	4 52	18	41	3 11 62	37 54		
11	344	06.4	+12 37.6	15	39.2	+18 29.9	10 N	5 04	5 29	5 51	3 26 61	16 23 56		
12	359	06.6	+12 36.8	30	03.7	+18 26.2	0	5 14	5 39	6 00	3 41 58	16 09 58		
13	14	06.7	36.0	44	28.2	22.3	10 S	23	48	09	3 55 57	15 55 60		
14	29	06.8	35.2	58	52.7	18.2	20	30	5 56	19	4 10 56	40 62		
15	44	07.0	34.4	73	17.3	14.1	30	37	6 05	30	28 54	23 64		
16	59	07.1	33.5	87	41.9	09.8	35	40	10	36	38 53	13 66		
17	74	07.3	+12 32.7	102	06.5	+18 05.4	40	5 43	6 15	6 43	4 50 52	15 02 67		
18	89	07.4	+12 31.9	116	31.2	+18 00.9	45	5 46	6 21	6 51	5 04 50	14 48 70		
19	104	07.6	31.1	130	56.0	+17 56.3	50	49	27	7 00	21 48	32 72		
20	119	07.7	30.3	145	20.7	51.5	52	50	30	05	29 46	24 73		
21	134	07.9	29.4	159	45.6	46.6	54	52	33	10	38 45	16 74		
22	149	08.0	28.6	174	10.4	41.6	56	53	36	15	48 44	14 06 76		
23	164	08.2	27.8	188	35.3	36.5	58	54	40	21	5 59 42	13 55 78		
24	179	08.3	+12 27.0	203	00.3	+17 31.3	60 S	5 55	6 44	7 28	6 12 40	13 42 80		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 2 ^h 09 ^m 5		Mag: -3.9 PMG: 9 ^h 43 ^m			Mag: +1.8 PMG: 11 ^h 36 ^m			Mag: -1.8 PMG: 15 ^h 22 ^m			Mag: +0.4 PMG: 19 ^h 29 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°
0	327	32.1	214	26.1	+21 07.1	185	49.0	+16 14.4	128	54.1	-6 39.9	67	00.5	-21 56.9
1	342	34.5	229	25.4	06.7	200	49.9	13.9	143	56.2	40.1	82	03.0	56.9
2	357	37.0	244	24.7	06.4	215	50.8	13.5	158	58.2	40.3	97	05.5	56.9
3	12	39.5	259	24.1	06.1	230	51.7	13.0	174	00.3	40.4	112	08.0	56.9
4	27	41.9	274	23.4	05.8	245	52.5	12.5	189	02.4	40.6	127	10.5	56.9
5	42	44.4	289	22.7	+21 05.4	260	53.4	+16 12.0	204	04.5	-6 40.7	142	13.0	-21 56.9
6	57	46.9	304	22.0	+21 05.1	275	54.3	+16 11.5	219	06.5	-6 40.9	157	15.5	-21 56.9
7	72	49.3	319	21.3	04.8	290	55.2	11.0	234	08.6	41.1	172	17.9	56.9
8	87	51.8	334	20.6	04.4	305	56.1	10.5	249	10.7	41.2	187	20.4	56.9
9	102	54.2	349	19.9	04.1	320	57.0	10.0	264	12.8	41.4	202	22.9	57.0
10	117	56.7	4	19.2	03.8	335	57.9	09.5	279	14.9	41.6	217	25.4	57.0
11	132	59.2	19	18.6	+21 03.4	350	58.7	+16 09.0	294	16.9	-6 41.7	232	27.9	-21 57.0
12	148	01.6	34	17.9	+21 03.1	5	59.6	+16 08.5	309	19.0	-6 41.9	247	30.4	-21 57.0
13	163	04.1	49	17.2	02.7	21	00.5	08.0	324	21.1	42.0	262	32.9	57.0
14	178	06.6	64	16.5	02.4	36	01.4	07.5	339	23.2	42.2	277	35.4	57.0
15	193	09.0	79	15.8	02.1	51	02.3	07.0	354	25.2	42.4	292	37.9	57.0
16	208	11.5	94	15.1	01.7	66	03.2	06.5	9	27.3	42.5	307	40.4	57.0
17	223	14.0	109	14.4	+21 01.4	81	04.1	+16 06.0	24	29.4	-6 42.7	322	42.9	-21 57.0
18	238	16.4	124	13.8	+21 01.0	96	04.9	+16 05.5	39	31.5	-6 42.9	337	45.3	-21 57.0
19	253	18.9	139	13.1	00.7	111	05.8	05.0	54	33.6	43.0	352	47.8	57.0
20	268	21.4	154	12.4	+21 00.3	126	06.7	04.5	69	35.6	43.2	7	50.3	57.0
21	283	23.8	169	11.7	+21 00.0	141	07.6	04.0	84	37.7	43.4	22	52.8	57.0
22	298	26.3	184	11.0	+20 59.6	156	08.5	03.5	99	39.8	43.5	37	55.3	57.0
23	313	28.7	199	10.3	59.3	171	09.4	03.0	114	41.9	43.7	52	57.8	57.0
24	328	31.2	214	09.6	+20 58.9	186	10.3	+16 02.5	129	43.9	-6 43.9	68	00.3	-21 57.0
Dif	—		-7 -3			+9 -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: 12 ^h 03 ^m 3			Edad: 27 ^d 6 PHE { 4 ^h : 59'6 12 ^h : 59'5 20 ^h : 59'4 R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	08.3	+12 27.0	203	00.3	+17 31.3	60	60 N	19 38	20 27	21 35	2 25 82	19 05 27		
1	194	08.5	26.1	217	25.3	25.9	54	58	31	16	16	36 80	18 56 29		
2	209	08.6	25.3	231	50.4	20.5	54	56	24	20 06	21 01	46 78	47 32		
3	224	08.8	24.5	246	15.5	14.9	56	54	19	19 58	20 48	2 55 76	40 33		
4	239	08.9	23.7	260	40.7	09.2	57	52	13	50	37	3 03 74	33 35		
5	254	09.1	+12 22.8	275	05.9	+17 03.4	58	50	19 08	19 43	20 27	3 10 73	18 27 36		
6	269	09.2	+12 22.0	289	31.1	+16 57.5	59	45	18 58	19 29	20 08	3 25 70	18 14 40		
7	284	09.4	21.2	303	56.5	51.5	60	40	50	18	19 52	37 68	18 03 42		
8	299	09.5	20.4	318	21.8	45.3	62	35	42	09	40	48 66	17 54 44		
9	314	09.7	19.5	332	47.3	39.1	62	30	36	19 01	30	3 57 64	45 47		
10	329	09.8	18.7	347	12.8	32.8	63	20	25	18 48	14	4 13 61	31 50		
11	344	10.0	+12 17.9	1	38.3	+16 26.3	65	10 N	18 15	18 37	19 02	4 27 58	17 19 52		
12	359	10.1	+12 17.1	16	03.9	+16 19.8	65	0	18 07	18 28	18 52	4 39 57	17 07 55		
13	14	10.3	16.2	30	29.6	13.1	67	10 S	17 58	19	44	4 52 55	16 55 58		
14	29	10.4	15.4	44	55.3	+16 06.3	68	20	49	11	37	5 06 52	42 61		
15	44	10.6	14.6	59	21.1	+15 59.5	68	30	39	18 03	31	22 49	27 65		
16	59	10.7	13.7	73	46.9	52.5	70	35	33	17 58	28	31 47	19 66		
17	74	10.9	+12 12.9	88	12.9	+15 45.5	70	40	17 26	17 54	18 25	5 42 45	16 09 69		
18	89	11.0	+12 12.1	102	38.8	+15 38.3	72	45	17 18	17 48	18 23	5 54 42	15 58 71		
19	104	11.2	11.3	117	04.9	31.1	72	50	09	42	20	6 09 39	44 74		
20	119	11.3	10.4	131	30.9	23.7	74	52	05	40	19	15 39	37 76		
21	134	11.5	09.6	145	57.1	16.3	74	54	17 00	37	18	23 37	30 78		
22	149	11.6	08.8	160	23.3	08.7	76	56	16 55	34	17	32 34	22 80		
23	164	11.8	07.9	174	49.6	+15 01.1	76	58	49	30	16	41 33	13 82		
24	179	11.9	+12 07.1	189	16.0	+14 53.4	77	60 S	16 42	17 26	18 15	6 52 30	15 02 85		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 05 ^m 6		Mag: -3.9 PMG: 9 ^h 44 ^m			Mag: +1.8 PMG: 11 ^h 35 ^m			Mag: -1.8 PMG: 15 ^h 19 ^m			Mag: +0.4 PMG: 19 ^h 25 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	328	31.2	214	09.6	+20 58.9	186	10.3	+16 02.5	129	43.9	-6 43.9	68	00.3	-21 57.0
1	343	33.7	229	09.0	58.6	201	11.2	02.0	144	46.0	44.0	83	02.8	57.1
2	358	36.1	244	08.3	58.2	216	12.0	01.5	159	48.1	44.2	98	05.3	57.1
3	13	38.6	259	07.6	57.9	231	12.9	01.0	174	50.2	44.3	113	07.7	57.1
4	28	41.1	274	06.9	57.5	246	13.8	+16 00.5	189	52.2	44.5	128	10.2	57.1
5	43	43.5	289	06.2	+20 57.2	261	14.7	+16 00.0	204	54.3	-6 44.7	143	12.7	-21 57.1
6	58	46.0	304	05.5	+20 56.8	276	15.6	+15 59.5	219	56.4	-6 44.8	158	15.2	-21 57.1
7	73	48.5	319	04.8	56.5	291	16.5	59.0	234	58.5	45.0	173	17.7	57.1
8	88	50.9	334	04.2	56.1	306	17.4	58.5	250	00.5	45.2	188	20.2	57.1
9	103	53.4	349	03.5	55.7	321	18.3	58.0	265	02.6	45.3	203	22.7	57.1
10	118	55.9	4	02.8	55.4	336	19.1	57.5	280	04.7	45.5	218	25.2	57.1
11	133	58.3	19	02.1	+20 55.0	351	20.0	+15 57.0	295	06.8	-6 45.7	233	27.6	-21 57.1
12	149	00.8	34	01.4	+20 54.7	6	20.9	+15 56.5	310	08.8	-6 45.8	248	30.1	-21 57.1
13	164	03.2	49	00.7	54.3	21	21.8	56.0	325	10.9	46.0	263	32.6	57.1
14	179	05.7	64	00.0	53.9	36	22.7	55.5	340	13.0	46.2	278	35.1	57.1
15	194	08.2	78	59.4	53.6	51	23.6	55.0	355	15.1	46.3	293	37.6	57.1
16	209	10.6	93	58.7	53.2	66	24.5	54.5	10	17.1	46.5	308	40.1	57.1
17	224	13.1	108	58.0	+20 52.8	81	25.4	+15 54.0	25	19.2	-6 46.7	323	42.6	-21 57.2
18	239	15.6	123	57.3	+20 52.5	96	26.3	+15 53.5	40	21.3	-6 46.8	338	45.0	-21 57.2
19	254	18.0	138	56.6	52.1	111	27.2	53.0	55	23.4	47.0	353	47.5	57.2
20	269	20.5	153	55.9	51.7	126	28.0	52.5	70	25.4	47.2	8	50.0	57.2
21	284	23.0	168	55.3	51.4	141	28.9	52.0	85	27.5	47.3	23	52.5	57.2
22	299	25.4	183	54.6	51.0	156	29.8	51.5	100	29.6	47.5	38	55.0	57.2
23	314	27.9	198	53.9	50.6	171	30.7	51.0	115	31.6	47.6	53	57.5	57.2
24	329	30.3	213	53.2	+20 50.2	186	31.6	+15 50.5	130	33.7	-6 47.8	69	00.0	-21 57.2
Dif	—		-7	-4		+9	-5		+21	-2		+25		

UT	SOL				● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 03 ^m 1				Edad: 28 ^d 6 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 58/9 R°: 53 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	11.9	+12	07.1	189	16.0	+14	53.4	78	58	60 N	2	32	3	40	4	29	3	47	85
1	194	12.1		06.3	203	42.4	74	45.6	78	58		2	51	3	51	36		3	56	82
2	209	12.2		05.4	218	08.9	75	37.7	79	56		3	06	4	01	43		4	04	80
3	224	12.4		04.6	232	35.4	75	29.7	80	54			19		09	49		11	78	13
4	239	12.5		03.8	247	02.1	77	21.6	81	52			30		17	54		17	76	08
5	254	12.7	+12	02.9	261	28.7	76	+14	13.5	81	50	3	40	4	24	4	59	4	23	74
6	269	12.8	+12	02.1	275	55.5	78	+14	05.3	82	45	3	59	4	38	5	09	4	35	71
7	284	13.0		01.3	290	22.3	78	+13	56.9	84	40	4	14		49	17		45	68	45
8	299	13.1	+12	00.4	304	49.2	79		48.6	83	35		27	4	58	25		4	54	65
9	314	13.3	+11	59.6	319	16.2	80		40.1	85	30		37	5	06	31		5	01	64
10	329	13.5		58.8	333	43.2	80		31.5	86	20	4	52		19	42		14	60	21
11	344	13.6	+11	57.9	348	10.3	81	+13	22.9	86	10 N	5	04	5	30	5	51	5	25	57
12	359	13.8	+11	57.1	2	37.4	81	+13	14.2	87	0	5	14	5	39	6	00	5	36	54
13	14	13.9		56.3	17	04.7	83	+13	05.4	88	10 S		22		47	08		47	50	17
14	29	14.1		55.4	31	32.0	83	+12	56.6	88	20		29	5	55	17		5	58	48
15	44	14.2		54.6	45	59.4	84		47.6	90	30		35	6	03	27		6	11	44
16	59	14.4		53.7	60	26.8	84		38.6	90	35		38		07	33		18	42	25
17	74	14.5	+11	52.9	74	54.3	85	+12	29.6	90	40	5	41	6	12	6	40	6	27	39
18	89	14.7	+11	52.1	89	21.9	86	+12	20.5	91	45	5	43	6	17	6	47	6	36	37
19	104	14.9		51.2	103	49.5	86		11.3	92	50		46	23	6	56		48	33	16
20	119	15.0		50.4	118	17.2	87	+12	02.0	93	52		47	26		7	01	6	54	31
21	134	15.2		49.6	132	45.0	88	+11	52.7	93	54		48	29		05		7	00	30
22	149	15.3		48.7	147	12.9	89		43.3	94	56		48		32	10		06	28	42
23	164	15.5		47.9	161	40.8	89		33.8	95	58		49	35		16		14	25	35
24	179	15.6	+11	47.0	176	08.8	90	+11	24.3	95	60 S	5	50	6	39	7	22	7	22	23
UT	ARIES			VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 2 ^h 01 ^m 6			Mag: -3.9 PMG: 9 ^h 45 ^m				Mag: +1.8 PMG: 11 ^h 33 ^m				Mag: -1.8 PMG: 15 ^h 16 ^m				Mag: +0.4 PMG: 19 ^h 21 ^m				
	hG ♈			hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	329	30.3	213	53.2	+20	50.2	186	31.6	+15	50.5	130	33.7	-6	47.8	69	00.0	-21	57.2		
1	344	32.8	228	52.5		49.9	201	32.5		50.0	145	35.8		48.0	84	02.4		57.2		
2	359	35.3	243	51.8		49.5	216	33.4		49.5	160	37.9		48.1	99	04.9		57.2		
3	14	37.7	258	51.2		49.1	231	34.3		49.0	175	39.9		48.3	114	07.4		57.2		
4	29	40.2	273	50.5		48.7	246	35.2		48.5	190	42.0		48.5	129	09.9		57.2		
5	44	42.7	288	49.8	+20	48.3	261	36.1	+15	48.0	205	44.1	-6	48.6	144	12.4	-21	57.2		
6	59	45.1	303	49.1	+20	48.0	276	37.0	+15	47.5	220	46.1	-6	48.8	159	14.9	-21	57.2		
7	74	47.6	318	48.4		47.6	291	37.8		47.0	235	48.2		49.0	174	17.3		57.2		
8	89	50.1	333	47.7		47.2	306	38.7		46.5	250	50.3		49.1	189	19.8		57.3		
9	104	52.5	348	47.1		46.8	321	39.6		46.0	265	52.4		49.3	204	22.3		57.3		
10	119	55.0	3	46.4		46.4	336	40.5		45.5	280	54.4		49.5	219	24.8		57.3		
11	134	57.5	18	45.7	+20	46.0	351	41.4	+15	45.0	295	56.5	-6	49.6	234	27.3	-21	57.3		
12	149	59.9	33	45.0	+20	45.7	6	42.3	+15	44.4	310	58.6	-6	49.8	249	29.8	-21	57.3		
13	165	02.4	48	44.3		45.3	21	43.2		43.9	326	00.6		50.0	264	32.2		57.3		
14	180	04.8	63	43.7		44.9	36	44.1		43.4	341	02.7		50.1	279	34.7		57.3		
15	195	07.3	78	43.0		44.5	51	45.0		42.9	356	04.8		50.3	294	37.2		57.3		
16	210	09.8	93	42.3		44.1	66	45.9		42.4	11	06.8		50.5	309	39.7		57.3		
17	225	12.2	108	41.6	+20	43.7	81	46.8	+15	41.9	26	08.9	-6	50.6	324	42.2	-21	57.3		
18	240	14.7	123	40.9	+20	43.3	96	47.7	+15	41.4	41	11.0	-6	50.8	339	44.6	-21	57.3		
19	255	17.2	138	40.2		42.9	111	48.6		40.9	56	13.1		51.0	354	47.1		57.3		
20	270	19.6	153	39.6		42.5	126	49.5		40.4	71	15.1		51.1	9	49.6		57.3		
21	285	22.1	168	38.9		42.1	141	50.4		39.9	86	17.2		51.3	24	52.1		57.3		
22	300	24.6	183	38.2		41.7	156	51.2		39.4	101	19.3		51.5	39	54.6		57.3		
23	315	27.0	198	37.5		41.3	171	52.1		38.9	116	21.3		51.6	54	57.0		57.4		
24	330	29.5	213	36.8	+20	40.9	186	53.0	+15	38.4	131	23.4	-6	51.8	69	59.5	-21	57.4		
Dif	—			-7 -4				+9 -5				+21 -2				+25 0				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 29 ^d 6 PHE { 4 ^h : 58 ^m /7 12 ^h : 58 ^m /5 20 ^h : 58 ^m /2										
	PMG: 12 ^h 02 ^m 8			SD: 16 ^h 0 PMG: 12 ^h 42 ^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	
0	179	15.6	+11 47.0	176	08.8	+11 24.3	60 N	19 33	20 21	21 26	5 12 84	19 53 17		
1	194	15.8	46.2	190	36.9 91	14.8 95	58	26	10	21 09	18 82	48 20		
2	209	16.0	45.4	205	05.0 91	+11 05.1 97	56	19	20 01	20 54	24 79	44 23		
3	224	16.1	44.5	219	33.2 92	+10 55.5 96	54	14	19 53	42	29 77	41 24		
4	239	16.3	43.7	234	01.4 92	45.7 98	52	09	46	32	33 75	38 26		
5	254	16.4	+11 42.8	248	29.8 94	+10 35.9 98	50	19 04	19 39	20 22	5 37 73	19 35 27		
6	269	16.6	+11 42.0	262	58.2 94	+10 26.1 98	45	18 55	19 26	20 04	5 46 69	19 28 31		
7	284	16.7	41.2	277	26.7 95	16.2 99	40	47	15	19 49	53 66	23 34		
8	299	16.9	40.3	291	55.2 95	+10 06.3 99	35	40	19 06	37	5 59 64	18 37		
9	314	17.1	39.5	306	23.8 96	+9 56.3 100	30	34	18 58	28	6 05 61	14 39		
10	329	17.2	38.6	320	52.5 97	46.2 101	20	23	46	13	14 57	07 43		
11	344	17.4	+11 37.8	335	21.2 97	+9 36.2 100	10 N	18 14	18 36	19 01	6 22 54	19 00 47		
12	359	17.5	+11 36.9	349	50.0 98	+9 26.0 102	0	18 06	18 27	18 52	6 30 51	18 54 50		
13	14	17.7	36.1	4	18.9 99	15.9 101	10 S	17 58	19	44	37 48	48 53		
14	29	17.9	35.3	18	47.8 99	+9 05.6 103	20	49	12	38	46 44	42 56		
15	44	18.0	34.4	33	16.8 100	+8 55.4 102	30	40	04	32	6 55 40	34 61		
16	59	18.2	33.6	47	45.9 101	45.1 103	35	34	18 00	29	7 00 38	30 63		
17	74	18.3	+11 32.7	62	15.0 101	+8 34.8 103	40	17 28	17 55	18 27	7 06 36	18 25 65		
18	89	18.5	+11 31.9	76	44.2 102	+8 24.4 104	45	17 21	17 51	18 25	7 13 33	18 19 69		
19	104	18.7	31.0	91	13.5 103	14.0 104	50	12	45	23	21 30	12 73		
20	119	18.8	30.2	105	42.8 103	+8 03.6 104	52	08	43	22	25 28	09 74		
21	134	19.0	29.3	120	12.2 104	+7 53.1 105	54	17 03	40	21	30 25	05 76		
22	149	19.2	28.5	134	41.7 105	42.6 105	56	16 59	37	20	34 24	18 01 79		
23	164	19.3	27.6	149	11.2 105	32.1 105	58	53	34	20	39 22	17 57 81		
24	179	19.5	+11 26.8	163	40.7 105	+7 21.5 106	60 S	16 47	17 31	18 19	7 45 19	17 52 83		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 57 ^m 7		Mag: -3.9 PMG: 9 ^h 46 ^m		Mag: +1.8 PMG: 11 ^h 32 ^m		Mag: -1.8 PMG: 15 ^h 12 ^m		Mag: +0.4 PMG: 19 ^h 17 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	°	'	°	'
0	330	29.5	213 36.8	+20 40.9	186 53.0	+15 38.4	131 23.4	-6 51.8	69 59.5	-21 57.4	
1	345	32.0	228 36.2	40.5	201 53.9	37.9	146 25.5	52.0	85 02.0	57.4	
2	0	34.4	243 35.5	40.1	216 54.8	37.4	161 27.5	52.1	100 04.5	57.4	
3	15	36.9	258 34.8	39.7	231 55.7	36.9	176 29.6	52.3	115 07.0	57.4	
4	30	39.3	273 34.1	39.3	246 56.6	36.3	191 31.7	52.5	130 09.4	57.4	
5	45	41.8	288 33.4	+20 38.9	261 57.5	+15 35.8	206 33.7	-6 52.6	145 11.9	-21 57.4	
6	60	44.3	303 32.8	+20 38.5	276 58.4	+15 35.3	221 35.8	-6 52.8	160 14.4	-21 57.4	
7	75	46.7	318 32.1	38.1	291 59.3	34.8	236 37.9	53.0	175 16.9	57.4	
8	90	49.2	333 31.4	37.7	307 00.2	34.3	251 39.9	53.1	190 19.4	57.4	
9	105	51.7	348 30.7	37.3	322 01.1	33.8	266 42.0	53.3	205 21.8	57.4	
10	120	54.1	3 30.1	36.9	337 02.0	33.3	281 44.1	53.5	220 24.3	57.4	
11	135	56.6	18 29.4	+20 36.5	352 02.9	+15 32.8	296 46.1	-6 53.6	235 26.8	-21 57.4	
12	150	59.1	33 28.7	+20 36.1	7 03.8	+15 32.3	311 48.2	-6 53.8	250 29.3	-21 57.4	
13	166	01.5	48 28.0	35.7	22 04.7	31.8	326 50.3	54.0	265 31.7	57.5	
14	181	04.0	63 27.3	35.2	37 05.6	31.3	341 52.3	54.1	280 34.2	57.5	
15	196	06.4	78 26.7	34.8	52 06.5	30.7	356 54.4	54.3	295 36.7	57.5	
16	211	08.9	93 26.0	34.4	67 07.4	30.2	11 56.5	54.5	310 39.2	57.5	
17	226	11.4	108 25.3	+20 34.0	82 08.3	+15 29.7	26 58.5	-6 54.6	325 41.7	-21 57.5	
18	241	13.8	123 24.6	+20 33.6	97 09.2	+15 29.2	42 00.6	-6 54.8	340 44.1	-21 57.5	
19	256	16.3	138 23.9	33.2	112 10.1	28.7	57 02.7	55.0	355 46.6	57.5	
20	271	18.8	153 23.3	32.7	127 11.0	28.2	72 04.7	55.1	10 49.1	57.5	
21	286	21.2	168 22.6	32.3	142 11.8	27.7	87 06.8	55.3	25 51.6	57.5	
22	301	23.7	183 21.9	31.9	157 12.7	27.2	102 08.9	55.5	40 54.0	57.5	
23	316	26.2	198 21.2	31.5	172 13.6	26.7	117 10.9	55.6	55 56.5	57.5	
24	331	28.6	213 20.6	+20 31.1	187 14.5	+15 26.2	132 13.0	-6 55.8	70 59.0	-21 57.5	
Dif	—		-7 -4		+9 -5		+21 -2		+25 0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 12 ^h 02 ^m 6			Edad: 1 ^d 2 PHE { 4 ^h : 58°0 12 ^h : 57°7 20 ^h : 57°5 R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	19.5	+11	26.8	163	40.7	+7	21.5	60 N	2 40	3 46	4 34	6 36	82	20 10	16		
1	194	19.6		25.9	178	10.4 ¹⁰⁷		10.9 ¹⁰⁶	58	2 57	3 56	41	40	79	08	19		
2	209	19.8		25.1	192	40.1 ¹⁰⁷	+7	00.3 ¹⁰⁶	56	3 12	4 05	47	43	77	07	20		
3	224	20.0		24.2	207	09.8 ¹⁰⁷	+6	49.6 ¹⁰⁷	54	24	13	52	46	74	05	22		
4	239	20.1		23.4	221	39.7 ¹⁰⁹		39.0 ¹⁰⁶	52	34	21	4 57	48	73	04	24		
5	254	20.3	+11	22.6	236	09.5 ¹⁰⁸	+6	28.3 ¹⁰⁷	50	3 44	4 27	5 02	6 50	72	20 02	26		
6	269	20.5	+11	21.7	250	39.5 ¹¹⁰	+6	17.6 ¹⁰⁷	45	4 02	4 40	5 11	6 55	68	19 59	29		
7	284	20.6		20.9	265	09.5 ¹¹⁰	+6	06.8 ¹⁰⁸	40	17	4 51	19	6 59	65	57	32		
8	299	20.8		20.0	279	39.5 ¹¹⁰	+5	56.1 ¹⁰⁷	35	28	5 00	26	7 03	62	55	34		
9	314	20.9		19.2	294	09.6 ¹¹¹		45.3 ¹⁰⁸	30	38	07	32	06	59	53	37		
10	329	21.1		18.3	308	39.8 ¹¹²		34.5 ¹⁰⁸	20	4 53	20	42	11	56	50	40		
11	344	21.3	+11	17.5	323	10.0 ¹¹²	+5	23.7 ¹⁰⁸	10 N	5 05	5 30	5 51	7 16	52	19 47	44		
12	359	21.4	+11	16.6	337	40.3 ¹¹³	+5	12.8 ¹⁰⁹	0	5 14	5 38	5 59	7 21	48	19 44	48		
13	14	21.6		15.8	352	10.6 ¹¹³	+5	02.0 ¹⁰⁸	10 S	21	46	6 07	25	45	41	51		
14	29	21.8		14.9	6	41.0 ¹¹⁴	+4	51.1 ¹⁰⁹	20	28	5 53	16	30	41	38	55		
15	44	21.9		14.0	21	11.5 ¹¹⁵		40.3 ¹⁰⁸	30	33	6 01	25	35	38	35	58		
16	59	22.1		13.2	35	42.0 ¹¹⁵		29.4 ¹⁰⁹	35	36	05	31	38	36	33	60		
17	74	22.3	+11	12.3	50	12.5 ¹¹⁵	+4	18.5 ¹⁰⁹	40	5 38	6 09	6 37	7 42	32	19 30	64		
18	89	22.4	+11	11.5	64	43.1 ¹¹⁶	+4	07.6 ¹⁰⁹	45	5 40	6 14	6 44	7 46	30	19 28	66		
19	104	22.6		10.6	79	13.8 ¹¹⁷	+3	56.7 ¹⁰⁹	50	42	19	53	51	26	25	70		
20	119	22.8		09.8	93	44.5 ¹¹⁷		45.8 ¹⁰⁹	52	43	22	6 56	53	24	23	72		
21	134	22.9		08.9	108	15.2 ¹¹⁷		34.8 ¹¹⁰	54	43	24	7 01	55	23	21	74		
22	149	23.1		08.1	122	46.0 ¹¹⁸		23.9 ¹⁰⁹	56	44	27	06	7 58	21	20	75		
23	164	23.3		07.2	137	16.9 ¹¹⁹		13.0 ¹⁰⁹	58	45	30	11	8 01	19	18	78		
24	179	23.4	+11	06.4	151	47.8 ¹¹⁹	+3	02.0 ¹¹⁰	60 S	5 45	6 34	7 17	8 04	16	19 15	81		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 1 ^h 53 ^m 8			Mag: -3.9 PMG: 9 ^h 47 ^m			Mag: +1.8 PMG: 11 ^h 30 ^m			Mag: -1.8 PMG: 15 ^h 09 ^m			Mag: +0.4 PMG: 19 ^h 13 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	331	28.6	213	20.6	+20	31.1	187	14.5	+15	26.2	132	13.0	-6	55.8	70	59.0	-21	57.5
1	346	31.1	228	19.9		30.6	202	15.4		25.6	147	15.1		56.0	86	01.5		57.5
2	1	33.6	243	19.2		30.2	217	16.3		25.1	162	17.1		56.1	101	03.9		57.5
3	16	36.0	258	18.5		29.8	232	17.2		24.6	177	19.2		56.3	116	06.4		57.6
4	31	38.5	273	17.9		29.4	247	18.1		24.1	192	21.3		56.5	131	08.9		57.6
5	46	40.9	288	17.2	+20	28.9	262	19.0	+15	23.6	207	23.3	-6	56.6	146	11.4	-21	57.6
6	61	43.4	303	16.5	+20	28.5	277	19.9	+15	23.1	222	25.4	-6	56.8	161	13.8	-21	57.6
7	76	45.9	318	15.8		28.1	292	20.8		22.6	237	27.5		57.0	176	16.3		57.6
8	91	48.3	333	15.2		27.6	307	21.7		22.1	252	29.5		57.2	191	18.8		57.6
9	106	50.8	348	14.5		27.2	322	22.6		21.5	267	31.6		57.3	206	21.3		57.6
10	121	53.3	3	13.8		26.8	337	23.5		21.0	282	33.6		57.5	221	23.7		57.6
11	136	55.7	18	13.1	+20	26.3	352	24.4	+15	20.5	297	35.7	-6	57.7	236	26.2	-21	57.6
12	151	58.2	33	12.5	+20	25.9	7	25.3	+15	20.0	312	37.8	-6	57.8	251	28.7	-21	57.6
13	167	00.7	48	11.8		25.5	22	26.2		19.5	327	39.8		58.0	266	31.2		57.6
14	182	03.1	63	11.1		25.0	37	27.1		19.0	342	41.9		58.2	281	33.6		57.6
15	197	05.6	78	10.4		24.6	52	28.0		18.5	357	44.0		58.3	296	36.1		57.6
16	212	08.1	93	09.8		24.1	67	28.9		18.0	12	46.0		58.5	311	38.6		57.6
17	227	10.5	108	09.1	+20	23.7	82	29.8	+15	17.4	27	48.1	-6	58.7	326	41.0	-21	57.7
18	242	13.0	123	08.4	+20	23.3	97	30.7	+15	16.9	42	50.2	-6	58.8	341	43.5	-21	57.7
19	257	15.4	138	07.7		22.8	112	31.6		16.4	57	52.2		59.0	356	46.0		57.7
20	272	17.9	153	07.1		22.4	127	32.5		15.9	72	54.3		59.2	11	48.5		57.7
21	287	20.4	168	06.4		21.9	142	33.4		15.4	87	56.3		59.3	26	50.9		57.7
22	302	22.8	183	05.7		21.5	157	34.3		14.9	102	58.4		59.5	41	53.4		57.7
23	317	25.3	198	05.0		21.0	172	35.2		14.4	118	00.5		59.7	56	55.9		57.7
24	332	27.8	213	04.4	+20	20.6	187	36.1	+15	13.8	133	02.5	-6	59.8	71	58.3	-21	57.7
Dif	—			-7 -4			+9 -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: 12 ^h 02 ^m 3			Edad: 2 ^d 2 PHE { SD: 15'6 PMG: 14 ^h 20 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	23.4	+11 06.4	151	47.8	+3 02.0		60 N	19 27	20 14	21 18	7 58 79	20 26 16		
1	194	23.6	05.5	166	18.7 ¹¹⁹	+2 51.1 ¹⁰⁹		58	20	20 04	21 01	7 59 77	27 17		
2	209	23.8	04.7	180	49.7 ¹²⁰	40.1 ¹¹⁰		56	14	19 55	20 48	8 00 74	27 20		
3	224	23.9	03.8	195	20.8 ¹²¹	29.2 ¹⁰⁹		54	09	48	36	00 73	27 22		
4	239	24.1	02.9	209	51.8 ¹²⁰	18.2 ¹¹⁰		52	05	41	26	01 71	28 23		
5	254	24.3	+11 02.1	224	23.0 ¹²²	+2 07.3 ¹⁰⁹		50	19 00	19 35	20 18	8 02 68	20 28 25		
6	269	24.4	+11 01.2	238	54.2 ¹²²	+1 56.4 ¹⁰⁹		45	18 51	19 22	20 00	8 03 65	20 28 29		
7	284	24.6	+11 00.4	253	25.4 ¹²²	45.4 ¹¹⁰		40	44	12	19 46	04 62	29 31		
8	299	24.8	+10 59.5	267	56.7 ¹²³	34.5 ¹⁰⁹		35	37	19 03	35	05 59	29 34		
9	314	24.9	58.7	282	28.0 ¹²³	23.6 ¹⁰⁹		30	32	18 56	25	05 58	30 36		
10	329	25.1	57.8	296	59.3 ¹²³	12.7 ¹⁰⁹		20	22	44	11	07 53	30 40		
11	344	25.3	+10 56.9	311	30.7 ¹²⁴	+1 01.7 ¹¹⁰		10 N	18 13	18 35	19 00	8 08 50	20 31 43		
12	359	25.4	+10 56.1	326	02.1 ¹²⁴	+0 50.8 ¹⁰⁹		0	18 06	18 27	18 51	8 09 47	20 32 46		
13	14	25.6	55.2	340	33.6 ¹²⁵	39.9 ¹⁰⁹		10 S	17 58	19	44	10 44	32 49		
14	29	25.8	54.4	355	05.1 ¹²⁵	29.0 ¹⁰⁹		20	50	12	38	11 40	33 52		
15	44	25.9	53.5	9	36.7 ¹²⁶	18.2 ¹⁰⁸		30	41	05	33	13 36	33 57		
16	59	26.1	52.6	24	08.3 ¹²⁶	+0 07.3 ¹⁰⁹		35	36	18 01	31	14 33	33 59		
17	74	26.3	+10 51.8	38	39.9 ¹²⁶	-0 03.5 ¹⁰⁸		40	17 30	17 57	18 29	8 14 32	20 34 61		
18	89	26.4	+10 50.9	53	11.5 ¹²⁶	-0 14.4 ¹⁰⁹		45	17 23	17 53	18 27	8 16 28	20 34 64		
19	104	26.6	50.1	67	43.2 ¹²⁷	25.2 ¹⁰⁸		50	15	48	25	17 25	35 68		
20	119	26.8	49.2	82	15.0 ¹²⁸	36.0 ¹⁰⁸		52	11	46	25	17 24	35 69		
21	134	27.0	48.3	96	46.7 ¹²⁷	46.8 ¹⁰⁸		54	07	43	24	18 22	35 71		
22	149	27.1	47.5	111	18.5 ¹²⁸	-0 57.6 ¹⁰⁸		56	17 02	41	24	19 20	35 74		
23	164	27.3	46.6	125	50.4 ¹²⁹	-1 08.4 ¹⁰⁸		58	16 57	38	24	20 17	36 75		
24	179	27.5	+10 45.8	140	22.3 ¹²⁹	-1 19.1 ¹⁰⁷		60 S	16 52	17 35	18 23	8 20 16	20 36 78		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 49 ^m 8		Mag: -3.9 PMG: 9 ^h 48 ^m			Mag: +1.8 PMG: 11 ^h 29 ^m			Mag: -1.8 PMG: 15 ^h 06 ^m			Mag: +0.4 PMG: 19 ^h 09 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	332	27.8	213 04.4	+20 20.6	187 36.1	+15 13.8	133 02.5	-6 59.8	71 58.3	-21 57.7					
1	347	30.2	228 03.7	20.1	202 37.0	13.3	148 04.6	-7 00.0	87 00.8	57.7					
2	2	32.7	243 03.0	19.7	217 37.9	12.8	163 06.6	-7 00.2	102 03.3	57.7					
3	17	35.2	258 02.4	19.2	232 38.8	12.3	178 08.7	00.4	117 05.8	57.7					
4	32	37.6	273 01.7	18.8	247 39.7	11.8	193 10.8	00.5	132 08.2	57.7					
5	47	40.1	288 01.0	+20 18.3	262 40.6	+15 11.3	208 12.8	-7 00.7	147 10.7	-21 57.7					
6	62	42.5	303 00.3	+20 17.9	277 41.5	+15 10.7	223 14.9	-7 00.9	162 13.2	-21 57.7					
7	77	45.0	317 59.7	17.4	292 42.4	10.2	238 17.0	01.0	177 15.6	57.8					
8	92	47.5	332 59.0	17.0	307 43.4	09.7	253 19.0	01.2	192 18.1	57.8					
9	107	49.9	347 58.3	16.5	322 44.3	09.2	268 21.1	01.4	207 20.6	57.8					
10	122	52.4	2 57.6	16.1	337 45.2	08.7	283 23.1	01.5	222 23.1	57.8					
11	137	54.9	17 57.0	+20 15.6	352 46.1	+15 08.2	298 25.2	-7 01.7	237 25.5	-21 57.8					
12	152	57.3	32 56.3	+20 15.1	7 47.0	+15 07.6	313 27.3	-7 01.9	252 28.0	-21 57.8					
13	167	59.8	47 55.6	14.7	22 47.9	07.1	328 29.3	02.0	267 30.5	57.8					
14	183	02.3	62 55.0	14.2	37 48.8	06.6	343 31.4	02.2	282 32.9	57.8					
15	198	04.7	77 54.3	13.8	52 49.7	06.1	358 33.4	02.4	297 35.4	57.8					
16	213	07.2	92 53.6	13.3	67 50.6	05.6	13 35.5	02.6	312 37.9	57.8					
17	228	09.7	107 53.0	+20 12.8	82 51.5	+15 05.1	28 37.6	-7 02.7	327 40.3	-21 57.8					
18	243	12.1	122 52.3	+20 12.4	97 52.4	+15 04.5	43 39.6	-7 02.9	342 42.8	-21 57.8					
19	258	14.6	137 51.6	11.9	112 53.3	04.0	58 41.7	03.1	357 45.3	57.8					
20	273	17.0	152 50.9	11.4	127 54.2	03.5	73 43.7	03.2	12 47.7	57.9					
21	288	19.5	167 50.3	11.0	142 55.1	03.0	88 45.8	03.4	27 50.2	57.9					
22	303	22.0	182 49.6	10.5	157 56.0	02.5	103 47.8	03.6	42 52.7	57.9					
23	318	24.4	197 48.9	10.0	172 56.9	01.9	118 49.9	03.7	57 55.1	57.9					
24	333	26.9	212 48.3	+20 09.6	187 57.8	+15 01.4	133 52.0	-7 03.9	72 57.6	-21 57.9					
Dif	—		-7	-5	+9	-5	+21	-2	+25	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 0			Edad: 3 ^d 2 PHE { 4 ^h : 56'5 12 ^h : 56'2 20 ^h : 56'0 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	27.5	+10 45.8	140	22.3	-1 19.1	107	60 N	2 47	3 51	4 39	9 17	77	20 42	16
1	194	27.6		154	54.2 ¹²⁹		29.8 ¹⁰⁷	58	3 04	4 01	45	16	74	44	19
2	209	27.8		169	26.1 ¹²⁹		40.5 ¹⁰⁷	56	17	10	51	14	72	47	20
3	224	28.0		183	58.0 ¹²⁹	-1 51.2 ¹⁰⁷		54	29	17	4 56	13	70	49	22
4	239	28.2		198	30.0 ¹³⁰	-2 01.9 ¹⁰⁷		52	39	24	5 00	12	68	51	24
5	254	28.3	+10 41.4	213	02.1 ¹³¹	-2 12.5 ¹⁰⁶		50	3 47	4 30	5 05	9 10	67	20 53	25
6	269	28.5	+10 40.6	227	34.1 ¹³⁰	-2 23.1 ¹⁰⁶		45	4 05	4 43	5 14	9 08	63	20 57	28
7	284	28.7		242	06.2 ¹³¹		33.7 ¹⁰⁶	40	19	4 53	21	06	60	21 00	31
8	299	28.8		256	38.3 ¹³¹		44.3 ¹⁰⁶	35	30	5 01	28	04	58	03	34
9	314	29.0		271	10.4 ¹³¹	-2 54.8 ¹⁰⁵		30	39	08	33	03	55	06	35
10	329	29.2		285	42.6 ¹³²	-3 05.4 ¹⁰⁶		20	4 54	20	43	9 00	52	10	39
11	344	29.4	+10 36.3	300	14.8 ¹³²	-3 15.8 ¹⁰⁴		10 N	5 05	5 30	5 51	8 58	48	21 14	42
12	359	29.5	+10 35.4	314	47.0 ¹³²	-3 26.3 ¹⁰⁵		0	5 13	5 38	5 59	8 56	45	21 18	45
13	14	29.7		329	19.2 ¹³²		36.7 ¹⁰⁴	10 S	20	45	6 06	54	42	21	49
14	29	29.9		343	51.4 ¹³²		47.2 ¹⁰⁵	20	26	52	14	51	40	25	52
15	44	30.1		358	23.7 ¹³³	-3 57.5 ¹⁰³		30	31	5 59	23	49	35	30	55
16	59	30.2		12	56.0 ¹³³	-4 07.9 ¹⁰⁴		35	33	6 03	28	47	34	32	57
17	74	30.4	+10 31.1	27	28.3 ¹³³	-4 18.2 ¹⁰³		40	5 35	6 07	6 34	8 46	31	21 35	60
18	89	30.6	+10 30.2	42	00.7 ¹³⁴	-4 28.5 ¹⁰³		45	5 37	6 11	6 41	8 44	28	21 38	63
19	104	30.8		56	33.0 ¹³³		38.7 ¹⁰²	50	38	16	49	42	25	43	65
20	119	30.9		71	05.4 ¹³⁴		49.0 ¹⁰³	52	39	18	52	41	23	44	68
21	134	31.1		85	37.8 ¹³⁴	-4 59.2 ¹⁰²		54	39	20	6 56	40	21	46	69
22	149	31.3		26.7	100 10.2 ¹³⁴	-5 09.3 ¹⁰¹		56	39	23	7 01	39	19	49	71
23	164	31.5		25.9	114 42.6 ¹³⁴		19.4 ¹⁰¹	58	40	25	06	37	18	51	73
24	179	31.6	+10 25.0	129	15.1 ¹³⁵	-5 29.5 ¹⁰¹		60 S	5 40	6 28	7 11	8 36	15	21 54	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 45 ^m 9		Mag: -3.9 PMG: 9 ^h 49 ^m		Mag: +1.8 PMG: 11 ^h 27 ^m		Mag: -1.8 PMG: 15 ^h 02 ^m		Mag: +0.4 PMG: 19 ^h 05 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	333	26.9	212	48.3	+20 09.6	187 57.8	+15 01.4	133 52.0	-7 03.9	72 57.6	-21 57.9
1	348	29.4	227	47.6	09.1	202 58.7	00.9	148 54.0	04.1	88 00.1	57.9
2	3	31.8	242	46.9	08.6	217 59.6	+15 00.4	163 56.1	04.3	103 02.5	57.9
3	18	34.3	257	46.3	08.1	233 00.5	+14 59.9	178 58.1	04.4	118 05.0	57.9
4	33	36.8	272	45.6	07.7	248 01.4	59.3	194 00.2	04.6	133 07.5	57.9
5	48	39.2	287	44.9	+20 07.2	263 02.3	+14 58.8	209 02.2	-7 04.8	148 09.9	-21 57.9
6	63	41.7	302	44.3	+20 06.7	278 03.2	+14 58.3	224 04.3	-7 04.9	163 12.4	-21 57.9
7	78	44.1	317	43.6	06.2	293 04.1	57.8	239 06.4	05.1	178 14.9	57.9
8	93	46.6	332	42.9	05.8	308 05.1	57.3	254 08.4	05.3	193 17.3	57.9
9	108	49.1	347	42.3	05.3	323 06.0	56.7	269 10.5	05.4	208 19.8	58.0
10	123	51.5	2	41.6	04.8	338 06.9	56.2	284 12.5	05.6	223 22.3	58.0
11	138	54.0	17	40.9	+20 04.3	353 07.8	+14 55.7	299 14.6	-7 05.8	238 24.7	-21 58.0
12	153	56.5	32	40.3	+20 03.8	8 08.7	+14 55.2	314 16.6	-7 06.0	253 27.2	-21 58.0
13	168	58.9	47	39.6	03.3	23 09.6	54.7	329 18.7	06.1	268 29.7	58.0
14	184	01.4	62	38.9	02.9	38 10.5	54.1	344 20.8	06.3	283 32.1	58.0
15	199	03.9	77	38.3	02.4	53 11.4	53.6	359 22.8	06.5	298 34.6	58.0
16	214	06.3	92	37.6	01.9	68 12.3	53.1	14 24.9	06.6	313 37.1	58.0
17	229	08.8	107	36.9	+20 01.4	83 13.2	+14 52.6	29 26.9	-7 06.8	328 39.5	-21 58.0
18	244	11.3	122	36.3	+20 00.9	98 14.1	+14 52.1	44 29.0	-7 07.0	343 42.0	-21 58.0
19	259	13.7	137	35.6	+20 00.4	113 15.0	51.5	59 31.0	07.1	358 44.4	58.0
20	274	16.2	152	34.9	+19 59.9	128 15.9	51.0	74 33.1	07.3	13 46.9	58.0
21	289	18.6	167	34.3	59.4	143 16.8	50.5	89 35.2	07.5	28 49.4	58.0
22	304	21.1	182	33.6	58.9	158 17.8	50.0	104 37.2	07.7	43 51.8	58.1
23	319	23.6	197	32.9	58.4	173 18.7	49.4	119 39.3	07.8	58 54.3	58.1
24	334	26.0	212	32.3	+19 57.9	188 19.6	+14 48.9	134 41.3	-7 08.0	73 56.8	-21 58.1
Dif	—		-7		-5	+9	-5	+21	-2	+25	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 7			Edad: 4 ^d 2 PHE { 4 ^h : 55 ^s 8 12 ^h : 55 ^s 6 20 ^h : 55 ^s 4 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	31.6	+10	25.0	129	15.1	-5	29.5	60 N	19 21	20 07	21 10	10 34	74	20 58	18		
1	194	31.8		24.1	143	47.6 ¹³⁵		39.6 ¹⁰¹	58	15	19 58	20 54	30	72	21 03	20		
2	209	32.0		23.3	158	20.0 ¹³⁴		49.6 ¹⁰⁰	56	09	50	41	26	70	07	22		
3	224	32.2		22.4	172	52.5 ¹³⁵		-5 59.5 ⁹⁹	54	05	43	31	23	68	11	22		
4	239	32.3		21.5	187	25.0 ¹³⁵		-6 09.5 ¹⁰⁰	52	19 00	36	21	20	66	15	25		
5	254	32.5	+10	20.6	201	57.6 ¹³⁶		-6 19.4 ⁹⁹	50	18 56	19 31	20 13	10 17	65	21 18	27		
6	269	32.7	+10	19.8	216	30.1 ¹³⁵		-6 29.2 ⁹⁸	45	18 48	19 18	19 56	10 11	62	21 25	30		
7	284	32.9		18.9	231	02.6 ¹³⁵		39.1 ⁹⁹	40	41	09	42	06	59	31	33		
8	299	33.0		18.0	245	35.2 ¹³⁶		48.8 ⁹⁷	35	35	19 01	32	10	02	56	37		
9	314	33.2		17.2	260	07.8 ¹³⁶		-6 58.6 ⁹⁸	30	29	18 54	23	9	58	55	41		
10	329	33.4		16.3	274	40.3 ¹³⁵		-7 08.3 ⁹⁷	20	20	43	19 09	52	51	49	40		
11	344	33.6	+10	15.4	289	12.9 ¹³⁶		-7 17.9 ⁹⁶	10 N	18 12	18 34	18 59	9	46	48	21		
12	359	33.7	+10	14.5	303	45.5 ¹³⁶		-7 27.6 ⁹⁷	0	18 05	18 26	18 50	9	41	45	22		
13	14	33.9		13.7	318	18.1 ¹³⁶		37.1 ⁹⁵	10 S	17 58	19	44	36	42	10	47		
14	29	34.1		12.8	332	50.8 ¹³⁷		46.6 ⁹⁵	20	50	13	38	31	39	17	50		
15	44	34.3		11.9	347	23.4 ¹³⁶		-7 56.1 ⁹⁵	30	42	06	34	24	36	25	54		
16	59	34.5		11.0	1	56.0 ¹³⁶		-8 05.6 ⁹⁵	35	37	18 03	32	21	34	29	56		
17	74	34.6	+10	10.2	16	28.6 ¹³⁶		-8 15.0 ⁹⁴	40	17 32	17 59	18 31	9	17	32	22		
18	89	34.8	+10	09.3	31	01.3 ¹³⁷		-8 24.3 ⁹³	45	17 25	17 55	18 29	9	12	29	22		
19	104	35.0		08.4	45	33.9 ¹³⁶		33.6 ⁹³	50	18	51	28	07	26	48	64		
20	119	35.2		07.6	60	06.6 ¹³⁷		42.9 ⁹³	52	14	49	28	04	25	52	65		
21	134	35.4		06.7	74	39.2 ¹³⁶		-8 52.1 ⁹²	54	10	47	28	9	01	23	22		
22	149	35.5		05.8	89	11.9 ¹³⁷		-9 01.2 ⁹¹	56	06	44	27	8	58	22	23		
23	164	35.7		04.9	103	44.5 ¹³⁶		10.3 ⁹¹	58	17 02	42	27	55	19	04	71		
24	179	35.9	+10	04.1	118	17.2 ¹³⁷		-9 19.4 ⁹¹	60 S	16 56	17 39	18 27	8	51	17	23		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 42 ^m 0		Mag: -3.9 PMG: 9 ^h 50 ^m				Mag: +1.8 PMG: 11 ^h 26 ^m				Mag: -1.8 PMG: 14 ^h 59 ^m				Mag: +0.4 PMG: 19 ^h 01 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	334	26.0	212	32.3	+19	57.9	188	19.6	+14	48.9	134	41.3	-7	08.0	73	56.8	-21	58.1
1	349	28.5	227	31.6		57.5	203	20.5		48.4	149	43.4		08.2	88	59.2		58.1
2	4	31.0	242	31.0		57.0	218	21.4		47.9	164	45.4		08.3	104	01.7		58.1
3	19	33.4	257	30.3		56.5	233	22.3		47.4	179	47.5		08.5	119	04.1		58.1
4	34	35.9	272	29.6		56.0	248	23.2		46.8	194	49.5		08.7	134	06.6		58.1
5	49	38.4	287	29.0	+19	55.5	263	24.1	+14	46.3	209	51.6	-7	08.9	149	09.1	-21	58.1
6	64	40.8	302	28.3	+19	55.0	278	25.0	+14	45.8	224	53.6	-7	09.0	164	11.5	-21	58.1
7	79	43.3	317	27.6		54.5	293	25.9		45.3	239	55.7		09.2	179	14.0		58.1
8	94	45.7	332	27.0		54.0	308	26.8		44.7	254	57.7		09.4	194	16.4		58.1
9	109	48.2	347	26.3		53.4	323	27.7		44.2	269	59.8		09.5	209	18.9		58.1
10	124	50.7	2	25.7		52.9	338	28.7		43.7	285	01.9		09.7	224	21.4		58.1
11	139	53.1	17	25.0	+19	52.4	353	29.6	+14	43.2	300	03.9	-7	09.9	239	23.8	-21	58.2
12	154	55.6	32	24.3	+19	51.9	8	30.5	+14	42.6	315	06.0	-7	10.1	254	26.3	-21	58.2
13	169	58.1	47	23.7		51.4	23	31.4		42.1	330	08.0		10.2	269	28.8		58.2
14	185	00.5	62	23.0		50.9	38	32.3		41.6	345	10.1		10.4	284	31.2		58.2
15	200	03.0	77	22.4		50.4	53	33.2		41.1	0	12.1		10.6	299	33.7		58.2
16	215	05.5	92	21.7		49.9	68	34.1		40.5	15	14.2		10.7	314	36.1		58.2
17	230	07.9	107	21.0	+19	49.4	83	35.0	+14	40.0	30	16.2	-7	10.9	329	38.6	-21	58.2
18	245	10.4	122	20.4	+19	48.9	98	35.9	+14	39.5	45	18.3	-7	11.1	344	41.1	-21	58.2
19	260	12.9	137	19.7		48.4	113	36.9		39.0	60	20.3		11.3	359	43.5		58.2
20	275	15.3	152	19.0		47.8	128	37.8		38.4	75	22.4		11.4	14	46.0		58.2
21	290	17.8	167	18.4		47.3	143	38.7		37.9	90	24.4		11.6	29	48.4		58.2
22	305	20.2	182	17.7		46.8	158	39.6		37.4	105	26.5		11.8	44	50.9		58.2
23	320	22.7	197	17.1		46.3	173	40.5		36.9	120	28.5		11.9	59	53.3		58.3
24	335	25.2	212	16.4	+19	45.8	188	41.4	+14	36.3	135	30.6	-7	12.1	74	55.8	-21	58.3
Dif	—		-7		-5		+9		-5		+21		-2		+25		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 5			Edad: 5 ^d 2 SD: 15 ^h 0 PMG: 16 ^h 37 ^m	PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /0 20 ^h : 54 ^m /8 Rº: 46 ^m																			
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora	Rº							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m				
0	179	35.9	+10	04.1	118	17.2	-9	19.4	60 N	2	55	3	57	4	43	11	48	72	21	16	21			
1	194	36.1		03.2	132	49.9 ¹³⁷		28.4	58	3	10	4	06		49	42	69		23	24				
2	209	36.2		02.3	147	22.5 ¹³⁶		37.4	56		23		14		55	36	67		29	26				
3	224	36.4		01.4	161	55.2 ¹³⁷		46.3	54		33		21		4	59	31	65		35	22			
4	239	36.6	+10	00.5	176	27.9 ¹³⁷		-9	55.1	52		43		28		5	04	26	64		40	29		
5	254	36.8	+9	59.7	191	00.5 ¹³⁶		-10	03.9	50		3	51	4	33	5	08	11	22	62	21	45	30	
6	269	37.0	+9	58.8	205	33.2 ¹³⁷		-10	12.7	45		4	08	4	45	5	16	11	13	59	21	55	33	
7	284	37.2		57.9	220	05.9 ¹³⁷		21.4	40		21		4	55		23	11	05	57		22	04	35	
8	299	37.3		57.0	234	38.5 ¹³⁶		30.0	35		32		5	03		29	10	58	56		11	37		
9	314	37.5		56.2	249	11.2 ¹³⁷		38.6	30		41		10		34	53	53		18	38				
10	329	37.7		55.3	263	43.8 ¹³⁶		47.2	20		4	54		21		43	43	50		29	41			
11	344	37.9	+9	54.4	278	16.5 ¹³⁷		-10	55.7	10 N		5	05		5	51	10	34	48		22	39	43	
12	359	38.1	+9	53.5	292	49.1 ¹³⁶		-11	04.1	0		5	13		5	58	10	26	46		22	48	46	
13	14	38.2		52.6	307	21.8 ¹³⁷		12.5	10 S		19		44		6	05		18	43		22	57	48	
14	29	38.4		51.8	321	54.4 ¹³⁶		20.8	20		25		50		13		10	40			23	07	50	
15	44	38.6		50.9	336	27.1 ¹³⁷		29.1	30		29		5	57		21	10	00	38			19	52	
16	59	38.8		50.0	350	59.7 ¹³⁶		37.3	35		31		6	00		26	9	55	35			25	55	
17	74	39.0	+9	49.1	5	32.3 ¹³⁶		-11	45.4	40		5	32		6	04	6	31	9	49	33	23	33	56
18	89	39.1	+9	48.2	20	04.9 ¹³⁶		-11	53.5	45		5	33		6	07	9	41	31		23	41	59	
19	104	39.3		47.4	34	37.5 ¹³⁶		-12	01.5	50		34		12		45	33	28			52	61		
20	119	39.5		46.5	49	10.1 ¹³⁶		09.5	52		35		14		48		29	27			23	57	62	
21	134	39.7		45.6	63	42.7 ¹³⁶		17.4	54		35		16		52		24	26			**	**	**	
22	149	39.9		44.7	78	15.3 ¹³⁶		25.3	56		35		18		6	56	20	23			**	**	**	
23	164	40.1		43.8	92	47.9 ¹³⁶		33.1	58		35		20		7	00	14	22			**	**	**	
24	179	40.2	+9	43.0	107	20.4 ¹³⁵		-12	40.8	60 S		5	35		6	23	7	05			**	**	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 1 ^h 38 ^m 1			Mag: -3.9 PMG: 9 ^h 51 ^m			Mag: +1.8 PMG: 11 ^h 25 ^m			Mag: -1.8 PMG: 14 ^h 56 ^m			Mag: +0.4 PMG: 18 ^h 57 ^m											
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	335	25.2	212	16.4	+19	45.8	188	41.4	+14	36.3	135	30.6	-7	12.1	74	55.8	-21	58.3						
1	350	27.6	227	15.8		45.3	203	42.3		35.8	150	32.6		12.3	89	58.3		58.3						
2	5	30.1	242	15.1		44.7	218	43.2		35.3	165	34.7		12.5	105	00.7		58.3						
3	20	32.6	257	14.4		44.2	233	44.1		34.7	180	36.7		12.6	120	03.2		58.3						
4	35	35.0	272	13.8		43.7	248	45.1		34.2	195	38.8		12.8	135	05.6		58.3						
5	50	37.5	287	13.1	+19	43.2	263	46.0	+14	33.7	210	40.8	-7	13.0	150	08.1	-21	58.3						
6	65	40.0	302	12.5	+19	42.6	278	46.9	+14	33.2	225	42.9	-7	13.2	165	10.5	-21	58.3						
7	80	42.4	317	11.8		42.1	293	47.8		32.6	240	44.9		13.3	180	13.0		58.3						
8	95	44.9	332	11.1		41.6	308	48.7		32.1	255	47.0		13.5	195	15.5		58.3						
9	110	47.4	347	10.5		41.1	323	49.6		31.6	270	49.0		13.7	210	17.9		58.3						
10	125	49.8		2	09.8	40.5	338	50.5		31.1	285	51.1		13.8	225	20.4		58.3						
11	140	52.3	17	09.2	+19	40.0	353	51.4	+14	30.5	300	53.1	-7	14.0	240	22.8	-21	58.4						
12	155	54.7	32	08.5	+19	39.5	8	52.4	+14	30.0	315	55.2	-7	14.2	255	25.3	-21	58.4						
13	170	57.2	47	07.9		38.9	23	53.3		29.5	330	57.2		14.4	270	27.7		58.4						
14	185	59.7	62	07.2		38.4	38	54.2		28.9	345	59.3		14.5	285	30.2		58.4						
15	201	02.1	77	06.6		37.9	53	55.1		28.4	1	01.3		14.7	300	32.7		58.4						
16	216	04.6	92	05.9		37.3	68	56.0		27.9	16	03.4		14.9	315	35.1		58.4						
17	231	07.1	107	05.2	+19	36.8	83	56.9	+14	27.4	31	05.4	-7	15.0	330	37.6	-21	58.4						
18	246	09.5	122	04.6	+19	36.3	98	57.8	+14	26.8	46	07.5	-7	15.2	345	40.0	-21	58.4						
19	261	12.0	137	03.9		35.7	113	58.8		26.3	61	09.5		15.4	0	42.5		58.4						
20	276	14.5	152	03.3		35.2	128	59.7		25.8	76	11.6		15.6	15	44.9		58.4						
21	291	16.9	167	02.6		34.7	144	00.6		25.2	91	13.6		15.7	30	47.4		58.4						
22	306	19.4	182	02.0		34.1	159	01.5		24.7	106	15.7		15.9	45	49.8		58.4						
23	321	21.8	197	01.3		33.6	174	02.4		24.2	121	17.7		16.1	60	52.3		58.5						
24	336	24.3	212	00.7	+19	33.0	189	03.3	+14	23.6	136	19.8	-7	16.3	75	54.7	-21	58.5						
Dif	—			-7			+9			-5			+20			-2			+25					

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 2		Edad: 6 ^d 2 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 PMG: 17 ^h 23 ^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	179	40.2	+9	43.0	107	20.4	-12	40.8	60 N	19 15	20 01	21 01	13 00	68	21 37 26			
1	194	40.4		42.1	121	53.0 ¹³⁶		48.5	58	09	19 52	20 47	12 51	66	47 28			
2	209	40.6		41.2	136	25.5 ¹³⁵	-12	56.1	56	04		44	35	43 64	21 55 30			
3	224	40.8		40.3	150	58.1 ¹³⁶	-13	03.7	54	19 00	38	25	36 63		22 02 32			
4	239	41.0		39.4	165	30.6 ¹³⁵		11.2	52	18 56	32	16	30 61		09 33			
5	254	41.2	+9	38.5	180	03.1 ¹³⁵	-13	18.6	50	18 52	19 26	20 08	12 24	60	22 15 34			
6	269	41.4	+9	37.7	194	35.6 ¹³⁵	-13	26.0	45	18 44	19 15	19 52	12 12	58	22 28 36			
7	284	41.5		36.8	209	08.1 ¹³⁵		33.3	40	38	19 06	39	12 02	56	39 37			
8	299	41.7		35.9	223	40.6 ¹³⁵		40.5	35	32	18 58	29	11 54	53	48 39			
9	314	41.9		35.0	238	13.0 ¹³⁴		47.7	30	27	52	20	46 53		22 56 40			
10	329	42.1		34.1	252	45.5 ¹³⁵	-13	54.8	20	19	41	19 07	33 50		23 10 43			
11	344	42.3	+9	33.2	267	17.9 ¹³⁴	-14	01.8	10 N	18 11	18 33	18 57	11 22	48	23 22 45			
12	359	42.5	+9	32.4	281	50.3 ¹³⁴	-14	08.8	0	18 04	18 25	18 50	11 12	45	23 34 46			
13	14	42.6		31.5	296	22.7 ¹³⁴		15.7	10 S	17 58	19	44	11 01	44	45 48			
14	29	42.8		30.6	310	55.1 ¹³⁴		22.5	20	51	13	39	10 50	42	23 57 50			
15	44	43.0		29.7	325	27.5 ¹³⁴		29.3	30	43	07	35	38 39		** ** *			
16	59	43.2		28.8	339	59.9 ¹³⁴		36.0	35	38	04	33	30 38		** ** *			
17	74	43.4	+9	27.9	354	32.2 ¹³³	-14	42.7	40	17 33	18 01	18 32	10 22	36	** ** *			
18	89	43.6	+9	27.0	9	04.6 ¹³⁴	-14	49.2	45	17 28	17 57	18 31	10 12	35	** ** *			
19	104	43.8		26.1	23	36.9 ¹³³	-14	55.8	50	21	53	31	10 01	32	** ** *			
20	119	44.0		25.3	38	09.2 ¹³³	-15	02.2	52	17	52	31	9 56	30	** ** *			
21	134	44.1		24.4	52	41.5 ¹³³		08.6	54	14	50	31	50 29		0 02 64			
22	149	44.3		23.5	67	13.7 ¹³²		14.9	56	10	48	31	43 28		08 66			
23	164	44.5		22.6	81	46.0 ¹³³		21.1	58	06	46	31	36 26		15 68			
24	179	44.7	+9	21.7	96	18.2 ¹³²	-15	27.2	60 S	17 01	17 44	18 32	9 28	23	0 23 70			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 34 ^m 1		Mag: -3.9 PMG: 9 ^h 52 ^m			Mag: +1.8 PMG: 11 ^h 23 ^m			Mag: -1.8 PMG: 14 ^h 53 ^m			Mag: +0.4 PMG: 18 ^h 53 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	336	24.3	212	00.7	+19	33.0	189	03.3	+14	23.6	136	19.8	-7	16.3	75	54.7	-21	58.5
1	351	26.8	227	00.0		32.5	204	04.2		23.1	151	21.8		16.4	90	57.2		58.5
2	6	29.2	241	59.4		31.9	219	05.2		22.6	166	23.9		16.6	105	59.6		58.5
3	21	31.7	256	58.7		31.4	234	06.1		22.1	181	25.9		16.8	121	02.1		58.5
4	36	34.2	271	58.1		30.9	249	07.0		21.5	196	28.0		16.9	136	04.6		58.5
5	51	36.6	286	57.4	+19	30.3	264	07.9	+14	21.0	211	30.0	-7	17.1	151	07.0	-21	58.5
6	66	39.1	301	56.7	+19	29.8	279	08.8	+14	20.5	226	32.1	-7	17.3	166	09.5	-21	58.5
7	81	41.6	316	56.1		29.2	294	09.7		19.9	241	34.1		17.5	181	11.9		58.5
8	96	44.0	331	55.4		28.7	309	10.7		19.4	256	36.2		17.6	196	14.4		58.5
9	111	46.5	346	54.8		28.1	324	11.6		18.9	271	38.2		17.8	211	16.8		58.5
10	126	49.0	1	54.1		27.6	339	12.5		18.3	286	40.3		18.0	226	19.3		58.5
11	141	51.4	16	53.5	+19	27.0	354	13.4	+14	17.8	301	42.3	-7	18.2	241	21.7	-21	58.6
12	156	53.9	31	52.8	+19	26.5	9	14.3	+14	17.3	316	44.4	-7	18.3	256	24.2	-21	58.6
13	171	56.3	46	52.2		25.9	24	15.2		16.7	331	46.4		18.5	271	26.6		58.6
14	186	58.8	61	51.5		25.3	39	16.2		16.2	346	48.4		18.7	286	29.1		58.6
15	202	01.3	76	50.9		24.8	54	17.1		15.7	1	50.5		18.9	301	31.5		58.6
16	217	03.7	91	50.2		24.2	69	18.0		15.1	16	52.5		19.0	316	34.0		58.6
17	232	06.2	106	49.6	+19	23.7	84	18.9	+14	14.6	31	54.6	-7	19.2	331	36.4	-21	58.6
18	247	08.7	121	48.9	+19	23.1	99	19.8	+14	14.1	46	56.6	-7	19.4	346	38.9	-21	58.6
19	262	11.1	136	48.3		22.6	114	20.7		13.5	61	58.7		19.6	1	41.3		58.6
20	277	13.6	151	47.6		22.0	129	21.7		13.0	77	00.7		19.7	16	43.8		58.6
21	292	16.1	166	47.0		21.4	144	22.6		12.5	92	02.8		19.9	31	46.2		58.6
22	307	18.5	181	46.3		20.9	159	23.5		11.9	107	04.8		20.1	46	48.7		58.6
23	322	21.0	196	45.7		20.3	174	24.4		11.4	122	06.9		20.2	61	51.1		58.7
24	337	23.4	211	45.0	+19	19.7	189	25.3	+14	10.9	137	08.9	-7	20.4	76	53.6	-21	58.7
Dif	—		-7		-6		+9		-5		+20		-2		+25			0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 00 ^m 9			Edad: 7 ^d 2	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 47 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	44.7	+9	96	18.2	-15	27.2	60 N	3	01	4	02	4	48	14	08
1	194	44.9		110	50.4 ¹³²		33.3	58		16	11		54	13	57	
2	209	45.1		125	22.6 ¹³²		39.3	60	56	28	19	4	59	47	60	
3	224	45.3		139	54.8 ¹³²		45.3	60	54	38	25	5	03	39	58	
4	239	45.5		154	26.9 ¹³¹		51.2	59	52	47	31		07	31	58	
5	254	45.6	+9	168	59.1 ¹³²	-15	57.0	58	50	3	55	4	37	5	11	
6	269	45.8	+9	183	31.2 ¹³¹	-16	02.7	57	45	4	11	4	48	5	18	
7	284	46.0		198	03.3 ¹³¹		08.3	56	40	24	4	57	25	12	58	
8	299	46.2		212	35.4 ¹³¹		13.9	56	35	34	5	05	31	47	53	
9	314	46.4		227	07.4 ¹³⁰		19.4	55	30	42	11	35	39	51	36	
10	329	46.6		241	39.5 ¹³¹		24.9	55	20	4	55	21	44	23	50	
11	344	46.8	+9	256	11.5 ¹³⁰	-16	30.2	53	10 N	5	05	5	30	5	51	
12	359	47.0	+9	270	43.5 ¹³⁰	-16	35.5	52	0	5	12	5	37	5	58	
13	14	47.2		285	15.5 ¹³⁰		40.7	52	10 S	18	43	6	04	45	45	
14	29	47.3		299	47.5 ¹³⁰		45.8	51	20	23	49	11		32	44	
15	44	47.5		314	19.4 ¹²⁹		50.9	51	30	27	55	19		17	42	
16	59	47.7		328	51.3 ¹²⁹	-16	55.9	50	35	28	5	58	23	11	08	
17	74	47.9	+9	343	23.2 ¹²⁹	-17	00.8	49	40	5	29	6	01	6	28	
18	89	48.1	+9	357	55.1 ¹²⁹	-17	05.6	48	45	5	30	6	04	6	34	
19	104	48.3		12	27.0 ¹²⁹		10.4	48	50	30	08	40		33	36	
20	119	48.5		26	58.8 ¹²⁸		15.0	46	52	30	09	44		26	35	
21	134	48.7		41	30.7 ¹²⁹		19.6	46	54	30	11	47		19	34	
22	149	48.9		56	02.5 ¹²⁸		24.1	45	56	30	13	51		11	33	
23	164	49.1		70	34.2 ¹²⁷		28.6	45	58	30	15	6	55	10	02	
24	179	49.2	+9	85	06.0 ¹²⁸	-17	32.9	43	60 S	5	29	6	17	7	00	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 1 ^h 30 ^m 2		Mag: -3.9 PMG: 9 ^h 53 ^m		Mag: +1.8 PMG: 11 ^h 22 ^m		Mag: -1.8 PMG: 14 ^h 49 ^m		Mag: +0.4 PMG: 18 ^h 49 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	337	23.4	211	45.0	+19	189	25.3	+14	10.9	137	08.9
1	352	25.9	226	44.4		204	26.2		10.3	152	11.0
2	7	28.4	241	43.7		219	27.2		09.8	167	13.0
3	22	30.8	256	43.1		234	28.1		09.3	182	15.0
4	37	33.3	271	42.5		249	29.0		08.7	197	17.1
5	52	35.8	286	41.8	+19	264	29.9	+14	08.2	212	19.1
6	67	38.2	301	41.2	+19	279	30.8	+14	07.7	227	21.2
7	82	40.7	316	40.5		294	31.8		07.1	242	23.2
8	97	43.2	331	39.9		309	32.7		06.6	257	25.3
9	112	45.6	346	39.2		324	33.6		06.1	272	27.3
10	127	48.1	1	38.6		339	34.5		05.5	287	29.4
11	142	50.6	16	37.9	+19	354	35.4	+14	05.0	302	31.4
12	157	53.0	31	37.3	+19	9	36.4	+14	04.5	317	33.4
13	172	55.5	46	36.6		24	37.3		03.9	332	35.5
14	187	57.9	61	36.0		39	38.2		03.4	347	37.5
15	203	00.4	76	35.4		54	39.1		02.8	2	39.6
16	218	02.9	91	34.7		69	40.0		02.3	17	41.6
17	233	05.3	106	34.1	+19	84	41.0	+14	01.8	32	43.7
18	248	07.8	121	33.4	+19	99	41.9	+14	01.2	47	45.7
19	263	10.3	136	32.8		114	42.8		00.7	62	47.7
20	278	12.7	151	32.1		129	43.7	+14	00.2	77	49.8
21	293	15.2	166	31.5		144	44.6	+13	59.6	92	51.8
22	308	17.7	181	30.8		159	45.6		59.1	107	53.9
23	323	20.1	196	30.2		174	46.5		58.5	122	55.9
24	338	22.6	211	29.6	+19	189	47.4	+13	58.0	137	57.9
Dif	—		-6	-6		+9	-5			+20	-2

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 8 ^d 2	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 00 ^m 6					R ^o : 47 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	179	49.2	+9 00.3	85	06.0	-17 32.9	43	60 N	19 09	19 54	20 54	15 11 56	22 37 42	
1	194	49.4	+8 59.4	99	37.7 ¹²⁷	37.2	43	58	19 04	46	40	14 58 55	22 50 43	
2	209	49.6	58.5	114	09.4 ¹²⁷	41.4	42	56	18 59	39	29	47 54	23 01 43	
3	224	49.8	57.6	128	41.1 ¹²⁷	45.5	41	54	55	32	19	37 54	11 44	
4	239	50.0	56.7	143	12.8 ¹²⁷	49.6	41	52	51	27	11	29 53	20 44	
5	254	50.2	+8 55.8	157	44.5 ¹²⁷	-17 53.5	39	50	18 48	19 22	20 03	14 21 53	23 27 45	
6	269	50.4	+8 54.9	172	16.1 ¹²⁶	-17 57.4	39	45	18 41	19 11	19 48	14 05 52	23 44 46	
7	284	50.6	54.0	186	47.7 ¹²⁶	-18 01.2	38	40	35	19 02	36	13 51 51	23 58 46	
8	299	50.8	53.1	201	19.3 ¹²⁶	04.9	37	35	29	18 55	26	40 50	** ** *	
9	314	51.0	52.2	215	50.8 ¹²⁵	08.6	37	30	25	49	18	30 50	** ** *	
10	329	51.2	51.4	230	22.4 ¹²⁶	12.1	35	20	17	39	19 05	13 13 49	** ** *	
11	344	51.4	+8 50.5	244	53.9 ¹²⁵	-18 15.6	35	10 N	18 10	18 31	18 56	12 58 48	0 07 46	
12	359	51.6	+8 49.6	259	25.4 ¹²⁵	-18 19.0	34	0	18 04	18 25	18 49	12 44 48	0 20 47	
13	14	51.7	48.7	273	56.9 ¹²⁵	22.3	33	10 S	17 58	19	43	30 47	33 48	
14	29	51.9	47.8	288	28.3 ¹²⁴	25.5	32	20	51	13	39	12 16 45	0 47 50	
15	44	52.1	46.9	302	59.8 ¹²⁵	28.6	31	30	44	08	36	11 59 45	1 03 51	
16	59	52.3	46.0	317	31.2 ¹²⁴	31.7	31	35	40	05	35	49 44	13 51	
17	74	52.5	+8 45.1	332	02.6 ¹²⁴	-18 34.6	29	40	17 35	18 03	18 34	11 38 43	1 24 52	
18	89	52.7	+8 44.2	346	34.0 ¹²⁴	-18 37.5	29	45	17 30	18 00	18 34	11 25 42	1 36 54	
19	104	52.9	43.3	1	05.3 ¹²³	40.3	28	50	24	17 56	34	09 41	52 55	
20	119	53.1	42.4	15	36.6 ¹²³	43.0	27	52	21	55	34	11 01 41	1 59 56	
21	134	53.3	41.5	30	08.0 ¹²⁴	45.6	26	54	17	53	34	10 53 40	2 07 56	
22	149	53.5	40.6	44	39.3 ¹²³	48.2	26	56	14	52	35	44 39	16 57	
23	164	53.7	39.7	59	10.5 ¹²²	50.6	24	58	10	50	35	33 39	26 59	
24	179	53.9	+8 38.8	73	41.8 ¹²³	-18 53.0	24	60 S	17 06	17 48	18 36	10 21 38	2 38 60	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -3.9			Mag: +1.8			Mag: -1.8			Mag: +0.4		
	1 ^h 26 ^m 3		PMG: 9 ^h 54 ^m			PMG: 11 ^h 20 ^m			PMG: 14 ^h 46 ^m			PMG: 18 ^h 45 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	338	22.6	211	29.6	+19 05.9	189	47.4	+13 58.0	137	57.9	-7 24.6	77	52.3	-21 58.9
1	353	25.1	226	28.9	05.3	204	48.3	57.5	153	00.0	24.8	92	54.8	58.9
2	8	27.5	241	28.3	04.7	219	49.2	56.9	168	02.0	25.0	107	57.2	58.9
3	23	30.0	256	27.6	04.1	234	50.2	56.4	183	04.1	25.1	122	59.6	58.9
4	38	32.4	271	27.0	03.5	249	51.1	55.9	198	06.1	25.3	138	02.1	58.9
5	53	34.9	286	26.4	+19 02.9	264	52.0	+13 55.3	213	08.2	-7 25.5	153	04.5	-21 58.9
6	68	37.4	301	25.7	+19 02.4	279	52.9	+13 54.8	228	10.2	-7 25.7	168	07.0	-21 58.9
7	83	39.8	316	25.1	01.8	294	53.9	54.2	243	12.2	25.8	183	09.4	58.9
8	98	42.3	331	24.4	01.2	309	54.8	53.7	258	14.3	26.0	198	11.9	59.0
9	113	44.8	346	23.8	+19 00.6	324	55.7	53.2	273	16.3	26.2	213	14.3	59.0
10	128	47.2	1	23.2	+19 00.0	339	56.6	52.6	288	18.4	26.4	228	16.7	59.0
11	143	49.7	16	22.5	+18 59.4	354	57.6	+13 52.1	303	20.4	-7 26.5	243	19.2	-21 59.0
12	158	52.2	31	21.9	+18 58.8	9	58.5	+13 51.5	318	22.4	-7 26.7	258	21.6	-21 59.0
13	173	54.6	46	21.2	58.2	24	59.4	51.0	333	24.5	26.9	273	24.1	59.0
14	188	57.1	61	20.6	57.6	40	00.3	50.5	348	26.5	27.1	288	26.5	59.0
15	203	59.6	76	20.0	57.0	55	01.2	49.9	3	28.6	27.2	303	29.0	59.0
16	219	02.0	91	19.3	56.4	70	02.2	49.4	18	30.6	27.4	318	31.4	59.0
17	234	04.5	106	18.7	+18 55.8	85	03.1	+13 48.9	33	32.6	-7 27.6	333	33.8	-21 59.0
18	249	06.9	121	18.0	+18 55.2	100	04.0	+13 48.3	48	34.7	-7 27.8	348	36.3	-21 59.0
19	264	09.4	136	17.4	54.6	115	04.9	47.8	63	36.7	27.9	3	38.7	59.1
20	279	11.9	151	16.8	54.0	130	05.9	47.2	78	38.8	28.1	18	41.2	59.1
21	294	14.3	166	16.1	53.3	145	06.8	46.7	93	40.8	28.3	33	43.6	59.1
22	309	16.8	181	15.5	52.7	160	07.7	46.1	108	42.8	28.5	48	46.1	59.1
23	324	19.3	196	14.9	52.1	175	08.6	45.6	123	44.9	28.6	63	48.5	59.1
24	339	21.7	211	14.2	+18 51.5	190	09.6	+13 45.1	138	46.9	-7 28.8	78	50.9	-21 59.1
Dif	—		-6	-6		+9	-5		+20		-2	+24		0

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 00 ^m 3			Edad: 9 ^d 2 PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/4 Rº: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	53.9	+8	38.8	73	41.8	-18	53.0	60 N	3 08	4 07	4 53	16 07	47	23 19	52
1	194	54.1		37.9	88	13.0 ¹²²		55.3 ²³	58	22	16	4 58	15 53	48	33	52
2	209	54.3		37.0	102	44.2 ¹²²		57.5 ²²	56	33	23	5 02	41	48	44	52
3	224	54.5		36.1	117	15.4 ¹²²		-18 59.6	54	43	29	07	31	48	23 55	51
4	239	54.7		35.2	131	46.6 ¹²²		-19 01.6	52	51	35	10	22	48	**	**
5	254	54.9	+8	34.3	146	17.7 ¹²¹		-19 03.5	50	3 58	4 40	5 14	15 14	48	**	**
6	269	55.1	+8	33.4	160	48.8 ¹²¹		-19 05.4	45	4 14	4 50	5 21	14 57	48	**	**
7	284	55.2		32.5	175	20.0 ¹²²		07.1 ¹⁷	40	26	4 59	27	42	49	**	**
8	299	55.4		31.6	189	51.1 ¹²¹		08.8 ¹⁷	35	35	5 06	32	30	49	0 10	46
9	314	55.6		30.7	204	22.1 ¹²⁰		10.4 ¹⁶	30	43	12	36	20	48	20	46
10	329	55.8		29.8	218	53.2 ¹²¹		11.9 ¹⁵	20	4 56	22	44	14 02	48	37	47
11	344	56.0	+8	28.9	233	24.2 ¹²⁰		-19 13.3 ¹⁴	10 N	5 05	5 30	5 51	13 46	49	0 53	47
12	359	56.2	+8	27.9	247	55.2 ¹²⁰		-19 14.6 ¹³	0	5 12	5 36	5 57	13 32	48	1 07	48
13	14	56.4		27.0	262	26.2 ¹²⁰		15.8 ¹²	10 S	17	42	6 03	17	48	21	49
14	29	56.6		26.1	276	57.2 ¹²⁰		17.0 ¹²	20	21	47	09	13 01	49	37	48
15	44	56.8		25.2	291	28.2 ¹²⁰		18.0 ¹⁰	30	24	52	16	12 44	48	1 54	49
16	59	57.0		24.3	305	59.1 ¹¹⁹		19.0 ¹⁰	35	26	55	20	33	48	2 04	50
17	74	57.2	+8	23.4	320	30.0 ¹¹⁹		-19 19.8 ⁸	40	5 26	5 58	6 25	12 21	48	2 16	50
18	89	57.4	+8	22.5	335	01.0 ¹²⁰		-19 20.6 ⁸	45	5 27	6 01	6 30	12 07	48	2 30	50
19	104	57.6		21.6	349	31.8 ¹¹⁸		21.3 ⁷	50	26	04	36	11 50	48	47	50
20	119	57.8		20.7	4	02.7 ¹¹⁹		21.9 ⁶	52	26	05	39	42	48	2 55	50
21	134	58.0		19.8	18	33.6 ¹¹⁹		22.4 ⁵	54	26	07	42	33	48	3 03	51
22	149	58.2		18.9	33	04.4 ¹¹⁸		22.8 ⁴	56	25	08	46	23	48	13	52
23	164	58.4		18.0	47	35.3 ¹¹⁹		23.1 ³	58	24	10	49	11 12	47	25	51
24	179	58.6	+8	17.1	62	06.1 ¹¹⁸		-19 23.4 ³	60 S	5 24	6 12	6 54	10 59	47	3 38	52
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 1 ^h 22 ^m 3			Mag: -3.9 PMG: 9 ^h 55 ^m			Mag: +1.8 PMG: 11 ^h 19 ^m			Mag: -1.8 PMG: 14 ^h 43 ^m			Mag: +0.4 PMG: 18 ^h 42 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	339	21.7	211	14.2	+18	51.5	190	09.6	+13	45.1	138	46.9	-7	28.8	78	50.9
1	354	24.2	226	13.6		50.9	205	10.5		44.5	153	49.0		29.0	93	53.4
2	9	26.7	241	13.0		50.3	220	11.4		44.0	168	51.0		29.2	108	55.8
3	24	29.1	256	12.3		49.7	235	12.3		43.4	183	53.0		29.3	123	58.3
4	39	31.6	271	11.7		49.1	250	13.3		42.9	198	55.1		29.5	139	00.7
5	54	34.0	286	11.0	+18	48.5	265	14.2	+13	42.4	213	57.1	-7	29.7	154	03.1
6	69	36.5	301	10.4	+18	47.8	280	15.1	+13	41.8	228	59.1	-7	29.9	169	05.6
7	84	39.0	316	09.8		47.2	295	16.0		41.3	244	01.2		30.0	184	08.0
8	99	41.4	331	09.1		46.6	310	17.0		40.7	259	03.2		30.2	199	10.5
9	114	43.9	346	08.5		46.0	325	17.9		40.2	274	05.3		30.4	214	12.9
10	129	46.4	1	07.9		45.4	340	18.8		39.6	289	07.3		30.6	229	15.3
11	144	48.8	16	07.2	+18	44.7	355	19.7	+13	39.1	304	09.3	-7	30.7	244	17.8
12	159	51.3	31	06.6	+18	44.1	10	20.7	+13	38.6	319	11.4	-7	30.9	259	20.2
13	174	53.8	46	06.0		43.5	25	21.6		38.0	334	13.4		31.1	274	22.6
14	189	56.2	61	05.3		42.9	40	22.5		37.5	349	15.4		31.3	289	25.1
15	204	58.7	76	04.7		42.3	55	23.4		36.9	4	17.5		31.4	304	27.5
16	220	01.2	91	04.1		41.6	70	24.4		36.4	19	19.5		31.6	319	30.0
17	235	03.6	106	03.5	+18	41.0	85	25.3	+13	35.8	34	21.6	-7	31.8	334	32.4
18	250	06.1	121	02.8	+18	40.4	100	26.2	+13	35.3	49	23.6	-7	32.0	349	34.8
19	265	08.5	136	02.2		39.7	115	27.2		34.8	64	25.6		32.2	4	37.3
20	280	11.0	151	01.6		39.1	130	28.1		34.2	79	27.7		32.3	19	39.7
21	295	13.5	166	00.9		38.5	145	29.0		33.7	94	29.7		32.5	34	42.1
22	310	15.9	181	00.3		37.9	160	29.9		33.1	109	31.7		32.7	49	44.6
23	325	18.4	195	59.7		37.2	175	30.9		32.6	124	33.8		32.9	64	47.0
24	340	20.9	210	59.0	+18	36.6	190	31.8	+13	32.0	139	35.8	-7	33.0	79	49.5
Dif	—		-6	-6	+9	-5	+20	-2	+24	0			+24	0		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 59 ^m 9		Edad: 10 ^d 2 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 Rº: 49 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	58.6	+8	17.1	62	06.1	-19 23.4	60 N	19 03	19 48	20 46	16 54 39	** ** *	** ** *		
1	194	58.8			76	36.9 ¹¹⁸	23.5	58	18 58	40	33	41 40	** ** *	** ** *		
2	209	59.0			91	07.7 ¹¹⁸	23.6	56	54	33	23	29 41	** ** *	** ** *		
3	224	59.2			105	38.4 ¹¹⁷	23.5	54	50	27	13	19 42	** ** *	** ** *		
4	239	59.4			120	09.2 ¹¹⁸	23.4	52	47	22	20 05	10 42	0 04 51			
5	254	59.6	+8	12.6	134	39.9 ¹¹⁷	-19 23.2	50	18 44	19 17	19 58	16 02 43	0 12 51			
6	269	59.8	+8	11.7	149	10.6 ¹¹⁷	-19 22.8	45	18 37	19 07	19 44	15 45 44	0 30 50			
7	285	00.0			163	41.3 ¹¹⁷	22.4	40	31	18 59	32	31 44	44 50			
8	300	00.2			178	12.0 ¹¹⁷	21.9	35	27	52	23	19 45	0 56 50			
9	315	00.4			192	42.7 ¹¹⁷	21.3	30	22	47	15	15 08 46	1 06 50			
10	330	00.6			207	13.4 ¹¹⁷	20.7	20	15	37	19 04	14 50 47	24 50			
11	345	00.8	+8	07.1	221	44.1 ¹¹⁷	-19 19.9	10 N	18 09	18 30	18 55	14 35 48	1 40 49			
12	0	01.0	+8	06.2	236	14.7 ¹¹⁶	-19 19.0	0	18 03	18 24	18 48	14 20 49	1 55 49			
13	15	01.2			250	45.3 ¹¹⁶	18.0	10 S	17 58	19	43	14 05 50	2 10 48			
14	30	01.4			265	16.0 ¹¹⁷	17.0	20	52	14	40	13 50 50	25 48			
15	45	01.6			279	46.6 ¹¹⁶	15.8	30	45	09	37	32 51	43 48			
16	60	01.8			294	17.2 ¹¹⁶	14.6	35	41	07	36	21 52	2 54 47			
17	75	02.0	+8	01.7	308	47.8 ¹¹⁶	-19 13.3	40	17 37	18 04	18 36	13 09 53	3 06 46			
18	90	02.2	+8	00.7	323	18.3 ¹¹⁵	-19 11.8	45	17 32	18 02	18 36	12 55 54	3 20 46			
19	105	02.4	+7	59.8	337	48.9 ¹¹⁶	10.3	50	26	17 59	36	38 54	37 46			
20	120	02.6			352	19.5 ¹¹⁶	08.7	52	24	58	37	30 55	45 45			
21	135	02.8			6	50.0 ¹¹⁵	07.0	54	21	57	38	21 55	3 54 45			
22	150	03.0			21	20.6 ¹¹⁶	05.2	56	18	55	38	12 11 56	4 05 44			
23	165	03.2			35	51.1 ¹¹⁵	03.3	58	14	54	39	11 59 57	16 44			
24	180	03.4	+7	55.3	50	21.6 ¹¹⁵	-19 01.3	60 S	17 10	17 52	18 40	11 46 57	4 30 43			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 18 ^m 4		Mag: -3.9 PMG: 9 ^h 56 ^m		Mag: +1.8 PMG: 11 ^h 17 ^m		Mag: -1.8 PMG: 14 ^h 40 ^m		Mag: +0.4 PMG: 18 ^h 38 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	340	20.9	210	59.0	190	31.8	+13	32.0	139	35.8	-7	33.0	79	49.5	-21	59.3
1	355	23.3	225	58.4		36.0	205	32.7		31.5	154	37.8		33.2	94	51.9
2	10	25.8	240	57.8		35.3	220	33.6		31.0	169	39.9		33.4	109	54.3
3	25	28.3	255	57.1		34.7	235	34.6		30.4	184	41.9		33.6	124	56.8
4	40	30.7	270	56.5		34.1	250	35.5		29.9	199	44.0		33.7	139	59.2
5	55	33.2	285	55.9	+18	33.4	265	36.4	+13	29.3	214	46.0	-7	33.9	155	01.6
6	70	35.7	300	55.3	+18	32.8	280	37.4	+13	28.8	229	48.0	-7	34.1	170	04.1
7	85	38.1	315	54.6		32.1	295	38.3		28.2	244	50.1		34.3	185	06.5
8	100	40.6	330	54.0		31.5	310	39.2		27.7	259	52.1		34.5	200	08.9
9	115	43.0	345	53.4		30.9	325	40.1		27.1	274	54.1		34.6	215	11.4
10	130	45.5	0	52.8		30.2	340	41.1		26.6	289	56.2		34.8	230	13.8
11	145	48.0	15	52.1	+18	29.6	355	42.0	+13	26.0	304	58.2	-7	35.0	245	16.2
12	160	50.4	30	51.5	+18	28.9	10	42.9	+13	25.5	320	00.2	-7	35.2	260	18.7
13	175	52.9	45	50.9		28.3	25	43.9		25.0	335	02.3		35.3	275	21.1
14	190	55.4	60	50.2		27.6	40	44.8		24.4	350	04.3		35.5	290	23.5
15	205	57.8	75	49.6		27.0	55	45.7		23.9	5	06.3		35.7	305	26.0
16	221	00.3	90	49.0		26.4	70	46.7		23.3	20	08.4		35.9	320	28.4
17	236	02.8	105	48.4	+18	25.7	85	47.6	+13	22.8	35	10.4	-7	36.0	335	30.8
18	251	05.2	120	47.7	+18	25.1	100	48.5	+13	22.2	50	12.4	-7	36.2	350	33.3
19	266	07.7	135	47.1		24.4	115	49.4		21.7	65	14.5		36.4	5	35.7
20	281	10.1	150	46.5		23.8	130	50.4		21.1	80	16.5		36.6	20	38.1
21	296	12.6	165	45.9		23.1	145	51.3		20.6	95	18.5		36.8	35	40.6
22	311	15.1	180	45.2		22.4	160	52.2		20.0	110	20.6		36.9	50	43.0
23	326	17.5	195	44.6		21.8	175	53.2		19.5	125	22.6		37.1	65	45.4
24	341	20.0	210	44.0	+18	21.1	190	54.1	+13	18.9	140	24.6	-7	37.3	80	47.9
Dif	—		-6	-6			+9	-5			+20	-2			+24	0

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 11 ^d 2	PHE	SD: 14'9	R ^o : 49 ^m									
	PMG: 11 ^h 59 ^m 6	PMG: 21 ^h 21 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	03.4	+7 55.3	50	21.6	-19 01.3	21	60 N	3 15	4 13	4 58	17 33	31	0 11	62	
1	195	03.6	54.4	64	52.1 ¹¹⁵	-18 59.2	21	58	27	20	5 02	21 32		25	60	
2	210	03.8	53.5	79	22.6 ¹¹⁵	57.1	23	56	38	27	06	10 34		36	60	
3	225	04.0	52.5	93	53.1 ¹¹⁵	54.8	23	54	47	33	10	17 01	35	46	59	
4	240	04.2	51.6	108	23.6 ¹¹⁵	52.5	23	52	3 55	38	14	16 52	37	0 55	58	
5	255	04.4	+7 50.7	122	54.1 ¹¹⁵	-18 50.0	25	50	4 02	4 43	5 17	16 45	38	1 03	57	
6	270	04.6	+7 49.8	137	24.6 ¹¹⁵	-18 47.5	25	45	4 17	4 53	5 23	16 29	39	1 20	56	
7	285	04.8	48.9	151	55.1 ¹¹⁵	44.8	27	40	28	5 01	29	15 42		34	54	
8	300	05.0	48.0	166	25.5 ¹¹⁴	42.1	27	35	37	08	33	16 04	43	46	53	
9	315	05.2	47.1	180	56.0 ¹¹⁵	39.3	28	30	45	13	38	15 54	44	1 56	53	
10	330	05.4	46.2	195	26.4 ¹¹⁴	36.4	29	20	4 56	22	45	37 46		2 14	51	
11	345	05.6	+7 45.2	209	56.9 ¹¹⁵	-18 33.4	30	10 N	5 05	5 29	5 51	15 23	47	2 29	50	
12	0	05.8	+7 44.3	224	27.3 ¹¹⁴	-18 30.3	31	0	5 11	5 35	5 56	15 09	49	2 44	48	
13	15	06.0	43.4	238	57.8 ¹¹⁵	27.1	32	10 S	16	41	6 02	14 55	50	2 58	48	
14	30	06.2	42.5	253	28.2 ¹¹⁴	23.8	33	20	20	45	08	40 52		3 13	47	
15	45	06.4	41.6	267	58.7 ¹¹⁵	20.4	34	30	22	50	14	23 54		31	45	
16	60	06.6	40.7	282	29.1 ¹¹⁴	17.0	34	35	23	52	18	13 55		41	44	
17	75	06.8	+7 39.8	296	59.5 ¹¹⁴	-18 13.4	36	40	5 23	5 55	6 22	14 02	56	3 52	43	
18	90	07.0	+7 38.8	311	29.9 ¹¹⁴	-18 09.8	36	45	5 23	5 57	6 26	13 49	57	4 06	42	
19	105	07.2	37.9	326	00.4 ¹¹⁵	06.0	38	50	22	6 00	32	32 60		23	40	
20	120	07.4	37.0	340	30.8 ¹¹⁴	-18 02.2	38	52	22	01	35	25 60		30	40	
21	135	07.6	36.1	355	01.2 ¹¹⁴	-17 58.3	39	54	21	02	37	16 62		39	38	
22	150	07.8	35.2	9	31.6 ¹¹⁴	54.3	40	56	20	03	41	13 07	63	4 49	37	
23	165	08.1	34.3	24	02.0 ¹¹⁴	50.2	41	58	19	04	44	12 56	64	5 00	36	
24	180	08.3	+7 33.3	38	32.4 ¹¹⁴	-17 46.0	42	60 S	5 18	6 06	6 48	12 43	66	5 13	34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 1 ^h 14 ^m 5	Mag: -3.9 PMG: 9 ^h 57 ^m		Mag: +1.8 PMG: 11 ^h 16 ^m		Mag: -1.8 PMG: 14 ^h 36 ^m		Mag: +0.4 PMG: 18 ^h 34 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	341	20.0	210 44.0	+18 21.1	190 54.1	+13 18.9	140 24.6	-7 37.3	80 47.9	-21 59.6		
1	356	22.5	225 43.4	20.5	205 55.0	18.4	155 26.7	37.5	95 50.3	59.6		
2	11	24.9	240 42.8	19.8	220 56.0	17.8	170 28.7	37.6	110 52.7	59.6		
3	26	27.4	255 42.1	19.2	235 56.9	17.3	185 30.7	37.8	125 55.2	59.6		
4	41	29.9	270 41.5	18.5	250 57.8	16.7	200 32.8	38.0	140 57.6	59.6		
5	56	32.3	285 40.9	+18 17.9	265 58.8	+13 16.2	215 34.8	-7 38.2	156 00.0	-21 59.6		
6	71	34.8	300 40.3	+18 17.2	280 59.7	+13 15.6	230 36.8	-7 38.4	171 02.5	-21 59.6		
7	86	37.3	315 39.6	16.5	296 00.6	15.1	245 38.9	38.5	186 04.9	59.6		
8	101	39.7	330 39.0	15.9	311 01.6	14.5	260 40.9	38.7	201 07.3	59.6		
9	116	42.2	345 38.4	15.2	326 02.5	14.0	275 42.9	38.9	216 09.7	59.6		
10	131	44.6	0 37.8	14.5	341 03.4	13.4	290 45.0	39.1	231 12.2	59.7		
11	146	47.1	15 37.2	+18 13.9	356 04.3	+13 12.9	305 47.0	-7 39.2	246 14.6	-21 59.7		
12	161	49.6	30 36.5	+18 13.2	11 05.3	+13 12.4	320 49.0	-7 39.4	261 17.0	-21 59.7		
13	176	52.0	45 35.9	12.6	26 06.2	11.8	335 51.1	39.6	276 19.5	59.7		
14	191	54.5	60 35.3	11.9	41 07.1	11.3	350 53.1	39.8	291 21.9	59.7		
15	206	57.0	75 34.7	11.2	56 08.1	10.7	5 55.1	40.0	306 24.3	59.7		
16	221	59.4	90 34.1	10.5	71 09.0	10.2	20 57.1	40.1	321 26.8	59.7		
17	237	01.9	105 33.4	+18 09.9	86 09.9	+13 09.6	35 59.2	-7 40.3	336 29.2	-21 59.7		
18	252	04.4	120 32.8	+18 09.2	101 10.9	+13 09.1	51 01.2	-7 40.5	351 31.6	-21 59.7		
19	267	06.8	135 32.2	08.5	116 11.8	08.5	66 03.2	40.7	6 34.0	59.7		
20	282	09.3	150 31.6	07.9	131 12.7	08.0	81 05.3	40.8	21 36.5	59.8		
21	297	11.8	165 31.0	07.2	146 13.7	07.4	96 07.3	41.0	36 38.9	59.8		
22	312	14.2	180 30.4	06.5	161 14.6	06.8	111 09.3	41.2	51 41.3	59.8		
23	327	16.7	195 29.7	05.8	176 15.5	06.3	126 11.4	41.4	66 43.8	59.8		
24	342	19.1	210 29.1	+18 05.2	191 16.5	+13 05.7	141 13.4	-7 41.6	81 46.2	-21 59.8		
Dif	—		-6	-7	+9		-5	+20	-2	+24		0

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 59 ^m 3		Edad: 12 ^d 2 PHE { 4 ^h : 55/3 12 ^h : 55/4 20 ^h : 55/6 Rº: 48 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	08.3	+7 33.3		38	32.4	-17 46.0	60 N	18 57	19 41	20 38	18 04 25	1 13 70		
1	195	08.5		32.4	53	02.9 ¹¹⁵	41.7 43	58	53	34	26	17 53 27	25 68		
2	210	08.7		31.5	67	33.3 ¹¹⁴	37.3 44	56	49	28	16	44 29	36 65		
3	225	08.9		30.6	82	03.7 ¹¹⁴	32.8 45	54	45	22	08	36 31	45 64		
4	240	09.1		29.7	96	34.1 ¹¹⁴	28.3 45	52	42	17	20 00	29 32	1 53 63		
5	255	09.3	+7 28.8		111	04.5 ¹¹⁴	-17 23.6 47	50	18 39	19 13	19 53	17 23 33	2 00 62		
6	270	09.5	+7 27.8		125	34.9 ¹¹⁴	-17 18.9 47	45	18 33	19 03	19 39	17 08 37	2 16 59		
7	285	09.7		26.9	140	05.3 ¹¹⁴	14.1 48	40	28	18 56	29	16 57 38	28 58		
8	300	09.9		26.0	154	35.7 ¹¹⁴	09.2 49	35	24	50	20	47 40	39 57		
9	315	10.1		25.1	169	06.2 ¹¹⁵	-17 04.2 50	30	20	44	13	38 42	2 49 55		
10	330	10.3		24.2	183	36.6 ¹¹⁴	-16 59.1 51	20	13	36	19 02	23 45	3 05 53		
11	345	10.5	+7 23.3		198	07.0 ¹¹⁴	-16 53.9 52	10 N	18 08	18 29	18 54	16 10 47	3 19 51		
12	0	10.7	+7 22.3		212	37.4 ¹¹⁴	-16 48.6 53	0	18 03	18 23	18 48	15 58 49	3 32 49		
13	15	10.9		21.4	227	07.8 ¹¹⁴	43.3 53	10 S	17 57	19	43	45 51	3 46 47		
14	30	11.1		20.5	241	38.3 ¹¹⁵	37.9 54	20	52	14	40	32 54	4 00 45		
15	45	11.3		19.6	256	08.7 ¹¹⁴	32.3 56	30	46	10	38	17 56	16 42		
16	60	11.5		18.7	270	39.1 ¹¹⁴	26.7 56	35	43	08	38	15 08 58	25 41		
17	75	11.7	+7 17.7		285	09.5 ¹¹⁴	-16 21.0 57	40	17 39	18 06	18 38	14 58 60	4 35 40		
18	90	12.0	+7 16.8		299	40.0 ¹¹⁵	-16 15.2 58	45	17 35	18 04	18 38	14 46 62	4 48 38		
19	105	12.2		15.9	314	10.4 ¹¹⁴	09.4 58	50	29	02	39	32 64	5 03 35		
20	120	12.4		15.0	328	40.9 ¹¹⁵	-16 03.4 60	52	27	01	40	25 66	10 34		
21	135	12.6		14.1	343	11.3 ¹¹⁴	-15 57.4 60	54	24	18 00	41	18 67	17 33		
22	150	12.8		13.1	357	41.8 ¹¹⁵	51.2 62	56	22	17 59	42	10 68	26 32		
23	165	13.0		12.2	12	12.2 ¹¹⁴	45.0 62	58	18	58	43	14 00 71	36 30		
24	180	13.2	+7 11.3		26	42.7 ¹¹⁵	-15 38.7 63	60 S	17 15	17 57	18 45	13 49 73	5 47 28		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 1 ^h 10 ^m 5		Mag: -3.9 PMG: 9 ^h 58 ^m		Mag: +1.8 PMG: 11 ^h 14 ^m		Mag: -1.8 PMG: 14 ^h 33 ^m			Mag: +0.4 PMG: 18 ^h 30 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	342	19.1	210	29.1	+18 05.2		191	16.5	+13 05.7	141	13.4	-7 41.6	81	46.2	-21 59.8
1	357	21.6	225	28.5	04.5		206	17.4	05.2	156	15.4	41.7	96	48.6	59.8
2	12	24.1	240	27.9	03.8		221	18.3	04.6	171	17.5	41.9	111	51.0	59.8
3	27	26.5	255	27.3	03.1		236	19.3	04.1	186	19.5	42.1	126	53.5	59.8
4	42	29.0	270	26.7	02.5		251	20.2	03.5	201	21.5	42.3	141	55.9	59.8
5	57	31.5	285	26.0	+18 01.8		266	21.2	+13 03.0	216	23.5	-7 42.4	156	58.3	-21 59.8
6	72	33.9	300	25.4	+18 01.1		281	22.1	+13 02.4	231	25.6	-7 42.6	172	00.7	-21 59.9
7	87	36.4	315	24.8	+18 00.4		296	23.0	01.9	246	27.6	42.8	187	03.2	59.9
8	102	38.9	330	24.2	+17 59.7		311	24.0	01.3	261	29.6	43.0	202	05.6	59.9
9	117	41.3	345	23.6	59.0		326	24.9	00.8	276	31.7	43.2	217	08.0	59.9
10	132	43.8	0	23.0	58.4		341	25.8	+13 00.2	291	33.7	43.3	232	10.4	59.9
11	147	46.2	15	22.4	+17 57.7		356	26.8	+12 59.7	306	35.7	-7 43.5	247	12.9	-21 59.9
12	162	48.7	30	21.7	+17 57.0		11	27.7	+12 59.1	321	37.7	-7 43.7	262	15.3	-21 59.9
13	177	51.2	45	21.1	56.3		26	28.6	58.6	336	39.8	43.9	277	17.7	59.9
14	192	53.6	60	20.5	55.6		41	29.6	58.0	351	41.8	44.1	292	20.1	59.9
15	207	56.1	75	19.9	54.9		56	30.5	57.5	6	43.8	44.2	307	22.6	-21 59.9
16	222	58.6	90	19.3	54.2		71	31.4	56.9	21	45.9	44.4	322	25.0	-22 00.0
17	238	01.0	105	18.7	+17 53.5		86	32.4	+12 56.4	36	47.9	-7 44.6	337	27.4	-22 00.0
18	253	03.5	120	18.1	+17 52.8		101	33.3	+12 55.8	51	49.9	-7 44.8	352	29.8	-22 00.0
19	268	06.0	135	17.5	52.2		116	34.2	55.3	66	51.9	44.9	7	32.3	00.0
20	283	08.4	150	16.9	51.5		131	35.2	54.7	81	54.0	45.1	22	34.7	00.0
21	298	10.9	165	16.2	50.8		146	36.1	54.1	96	56.0	45.3	37	37.1	00.0
22	313	13.4	180	15.6	50.1		161	37.1	53.6	111	58.0	45.5	52	39.5	00.0
23	328	15.8	195	15.0	49.4		176	38.0	53.0	127	00.0	45.7	67	42.0	00.0
24	343	18.3	210	14.4	+17 48.7		191	38.9	+12 52.5	142	02.1	-7 45.8	82	44.4	-22 00.0
Dif	—		-6		-7		+9		-6	+20		-2	+24		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 59 ^m 0			Edad: 13 ^d 2 PHE { 4 ^h : 55°8 12 ^h : 56°0 20 ^h : 56°2 PMG: 22 ^h 58 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	13.2	+7	11.3	26	42.7	-15	38.7	60 N	3	21	4	18	5	02	18	29
1	195	13.4		10.4	41	13.1 ¹¹⁴		32.4 ⁶³	58		33	25		07	20	23	
2	210	13.6		09.4	55	43.6 ¹¹⁵		25.9 ⁶⁵	56		43	31		10	13	25	
3	225	13.8		08.5	70	14.1 ¹¹⁵		19.4 ⁶⁵	54		51	37		14	07	27	
4	240	14.0		07.6	84	44.5 ¹¹⁴		12.8 ⁶⁶	52	3	59	42	17	18	01	29	
5	255	14.2	+7	06.7	99	15.0 ¹¹⁵	-15	06.1 ⁶⁷	50	4	06	4	46	5	20	17	56
6	270	14.4	+7	05.8	113	45.5 ¹¹⁵	-14	59.3 ⁶⁸	45	4	19	4	56	5	26	17	45
7	285	14.6		04.8	128	16.0 ¹¹⁵		52.4 ⁶⁹	40		30	5	03	31	35	36	
8	300	14.9		03.9	142	46.5 ¹¹⁵		45.5 ⁶⁹	35		39	09	35	27	38	36	
9	315	15.1		03.0	157	17.0 ¹¹⁵		38.4 ⁷¹	30		46	14	39	20	40	44	
10	330	15.3		02.1	171	47.5 ¹¹⁵		31.3 ⁷¹	20	4	57	23	45	17	08	43	
11	345	15.5	+7	01.1	186	18.0 ¹¹⁵	-14	24.1 ⁷²	10 N	5	05	5	29	5	51	16	57
12	0	15.7	+7	00.2	200	48.5 ¹¹⁵	-14	16.9 ⁷²	0	5	11	5	35	5	56	16	47
13	15	15.9	+6	59.3	215	19.0 ¹¹⁵		09.5 ⁷⁴	10 S		15	40	6	01	36	52	
14	30	16.1		58.4	229	49.5 ¹¹⁵	-14	02.1 ⁷⁴	20		18	44	06	26	54		
15	45	16.3		57.4	244	20.1 ¹¹⁶	-13	54.6 ⁷⁵	30		20	48	12	13	58		
16	60	16.5		56.5	258	50.6 ¹¹⁵		47.1 ⁷⁵	35		20	50	15	16	06		
17	75	16.7	+6	55.6	273	21.1 ¹¹⁵	-13	39.4 ⁷⁷	40	5	20	5	51	6	19		
18	90	16.9	+6	54.7	287	51.7 ¹¹⁶	-13	31.7 ⁷⁷	45	5	20	5	53	6	23		
19	105	17.1		53.7	302	22.2 ¹¹⁵		23.9 ⁷⁸	50		18	55	28	36	68		
20	120	17.4		52.8	316	52.8 ¹¹⁶		16.0 ⁷⁹	52		17	56	30	31	69		
21	135	17.6		51.9	331	23.4 ¹¹⁶		08.1 ⁷⁹	54		16	57	33	25	71		
22	150	17.8		51.0	345	53.9 ¹¹⁵	-13	00.1 ⁸⁰	56		15	58	35	18	73		
23	165	18.0		50.0	0	24.5 ¹¹⁶	-12	52.0 ⁸¹	58		14	5	59	38	11		
24	180	18.2	+6	49.1	14	55.1 ¹¹⁶	-12	43.8 ⁸²	60 S	5	12	6	00	6	42		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 06 ^m 6		Mag: -3.9 PMG: 9 ^h 59 ^m			Mag: +1.8 PMG: 11 ^h 13 ^m			Mag: -1.8 PMG: 14 ^h 30 ^m			Mag: +0.4 PMG: 18 ^h 26 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	343	18.3	210	14.4	+17	48.7	191	38.9	+12	52.5	142	02.1	-7	45.8
1	358	20.7	225	13.8		48.0	206	39.9		51.9	157	04.1		46.0
2	13	23.2	240	13.2		47.3	221	40.8		51.4	172	06.1		46.2
3	28	25.7	255	12.6		46.6	236	41.7		50.8	187	08.2		46.4
4	43	28.1	270	12.0		45.9	251	42.7		50.3	202	10.2		46.6
5	58	30.6	285	11.4	+17	45.2	266	43.6	+12	49.7	217	12.2	-7	46.7
6	73	33.1	300	10.8	+17	44.5	281	44.6	+12	49.2	232	14.2	-7	46.9
7	88	35.5	315	10.2		43.8	296	45.5		48.6	247	16.3		47.1
8	103	38.0	330	09.5		43.1	311	46.4		48.0	262	18.3		47.3
9	118	40.5	345	08.9		42.4	326	47.4		47.5	277	20.3		47.5
10	133	42.9	0	08.3		41.7	341	48.3		46.9	292	22.3		47.6
11	148	45.4	15	07.7	+17	40.9	356	49.2	+12	46.4	307	24.4	-7	47.8
12	163	47.9	30	07.1	+17	40.2	11	50.2	+12	45.8	322	26.4	-7	48.0
13	178	50.3	45	06.5		39.5	26	51.1		45.3	337	28.4		48.2
14	193	52.8	60	05.9		38.8	41	52.1		44.7	352	30.4		48.3
15	208	55.2	75	05.3		38.1	56	53.0		44.2	7	32.5		48.5
16	223	57.7	90	04.7		37.4	71	53.9		43.6	22	34.5		48.7
17	239	00.2	105	04.1	+17	36.7	86	54.9	+12	43.0	37	36.5	-7	48.9
18	254	02.6	120	03.5	+17	36.0	101	55.8	+12	42.5	52	38.5	-7	49.1
19	269	05.1	135	02.9		35.3	116	56.8		41.9	67	40.6		49.2
20	284	07.6	150	02.3		34.5	131	57.7		41.4	82	42.6		49.4
21	299	10.0	165	01.7		33.8	146	58.6		40.8	97	44.6		49.6
22	314	12.5	180	01.1		33.1	161	59.6		40.3	112	46.6		49.8
23	329	15.0	195	00.5		32.4	177	00.5		39.7	127	48.7		50.0
24	344	17.4	209	59.9	+17	31.7	192	01.5	+12	39.1	142	50.7	-7	50.1
Dif	—		-6	-7			+9	-6			+20	-2		

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 6		Edad: 14 ^d 2 PHE { 4 ^h : 56/4 12 ^h : 56/6 20 ^h : 56/8 R°: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	18.2	+6 49.1	14	55.1	-12 43.8	60 N	18 51	19 35	20 31	18 49 18	3 38 79		
1	195	18.4	48.2	29	25.6 ¹¹⁵	35.6 ⁸²	58	47	28	20	43 21	46 76		
2	210	18.6	47.3	43	56.2 ¹¹⁶	27.3 ⁸³	56	44	22	10	38 23	52 74		
3	225	18.8	46.3	58	26.8 ¹¹⁶	18.9 ⁸⁴	54	41	17	20 02	34 24	3 58 72		
4	240	19.0	45.4	72	57.4 ¹¹⁶	10.5 ⁸⁴	52	38	12	19 55	30 26	4 03 71		
5	255	19.2	+6 44.5	87	28.0 ¹¹⁶	-12 02.0 ⁸⁵	50	18 35	19 08	19 48	18 26 28	4 08 69		
6	270	19.5	+6 43.6	101	58.6 ¹¹⁶	-11 53.4 ⁸⁶	45	18 30	19 00	19 35	18 18 31	4 18 66		
7	285	19.7	42.6	116	29.2 ¹¹⁶	44.8 ⁸⁶	40	25	18 52	25	11 34	27 63		
8	300	19.9	41.7	130	59.9 ¹¹⁷	36.0 ⁸⁸	35	21	47	17	05 36	34 60		
9	315	20.1	40.8	145	30.5 ¹¹⁶	27.3 ⁸⁷	30	18	42	10	18 00 38	41 58		
10	330	20.3	39.8	160	01.1 ¹¹⁶	18.4 ⁸⁹	20	12	34	19 00	17 51 42	4 52 54		
11	345	20.5	+6 38.9	174	31.7 ¹¹⁶	-11 09.5 ⁸⁹	10 N	18 07	18 28	18 52	17 43 45	5 01 51		
12	0	20.7	+6 38.0	189	02.4 ¹¹⁷	-11 00.5 ⁹⁰	0	18 02	18 23	18 47	17 35 49	5 10 48		
13	15	20.9	37.1	203	33.0 ¹¹⁶	-10 51.5 ⁹⁰	10 S	17 57	18	43	28 51	19 45		
14	30	21.1	36.1	218	03.6 ¹¹⁶	42.4 ⁹¹	20	53	15	40	20 55	28 43		
15	45	21.3	35.2	232	34.3 ¹¹⁷	33.2 ⁹²	30	47	11	39	11 58	39 39		
16	60	21.6	34.3	247	04.9 ¹¹⁶	24.0 ⁹²	35	44	10	39	17 05 61	45 37		
17	75	21.8	+6 33.3	261	35.6 ¹¹⁷	-10 14.7 ⁹³	40	17 41	18 08	18 39	16 59 64	5 52 35		
18	90	22.0	+6 32.4	276	06.2 ¹¹⁶	-10 05.4 ⁹³	45	17 37	18 06	18 40	16 52 67	6 00 32		
19	105	22.2	31.5	290	36.9 ¹¹⁷	-9 56.0 ⁹⁴	50	32	05	42	44 70	10 28		
20	120	22.4	30.6	305	07.5 ¹¹⁶	46.5 ⁹⁵	52	30	04	43	40 72	14 27		
21	135	22.6	29.6	319	38.2 ¹¹⁷	37.0 ⁹⁵	54	28	03	44	36 73	19 25		
22	150	22.8	28.7	334	08.9 ¹¹⁷	27.4 ⁹⁶	56	25	03	46	31 75	24 24		
23	165	23.0	27.8	348	39.5 ¹¹⁶	17.8 ⁹⁶	58	23	02	47	26 77	30 22		
24	180	23.3	+6 26.8	3	10.2 ¹¹⁷	-9 08.1 ⁹⁷	60 S	17 19	18 01	18 49	16 20 80	6 37 19		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 02 ^m 7		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +1.8 PMG: 11 ^h 11 ^m		Mag: -1.8 PMG: 14 ^h 27 ^m			Mag: +0.4 PMG: 18 ^h 22 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	344	17.4	209 59.9	+17 31.7	192 01.5	+12 39.1	142 50.7	-7 50.1	83 42.5	-22 00.3				
1	359	19.9	224 59.3	31.0	207 02.4	38.6	157 52.7	50.3	98 44.9	00.3				
2	14	22.3	239 58.7	30.2	222 03.3	38.0	172 54.7	50.5	113 47.3	00.3				
3	29	24.8	254 58.1	29.5	237 04.3	37.5	187 56.8	50.7	128 49.7	00.3				
4	44	27.3	269 57.5	28.8	252 05.2	36.9	202 58.8	50.9	143 52.2	00.3				
5	59	29.7	284 56.9	+17 28.1	267 06.2	+12 36.4	218 00.8	-7 51.0	158 54.6	-22 00.3				
6	74	32.2	299 56.3	+17 27.3	282 07.1	+12 35.8	233 02.8	-7 51.2	173 57.0	-22 00.3				
7	89	34.7	314 55.7	26.6	297 08.0	35.2	248 04.9	51.4	188 59.4	00.4				
8	104	37.1	329 55.1	25.9	312 09.0	34.7	263 06.9	51.6	204 01.8	00.4				
9	119	39.6	344 54.5	25.2	327 09.9	34.1	278 08.9	51.8	219 04.3	00.4				
10	134	42.1	359 53.9	24.4	342 10.9	33.6	293 10.9	51.9	234 06.7	00.4				
11	149	44.5	14 53.3	+17 23.7	357 11.8	+12 33.0	308 12.9	-7 52.1	249 09.1	-22 00.4				
12	164	47.0	29 52.7	+17 23.0	12 12.7	+12 32.4	323 15.0	-7 52.3	264 11.5	-22 00.4				
13	179	49.5	44 52.1	22.3	27 13.7	31.9	338 17.0	52.5	279 13.9	00.4				
14	194	51.9	59 51.5	21.5	42 14.6	31.3	353 19.0	52.7	294 16.3	00.4				
15	209	54.4	74 50.9	20.8	57 15.6	30.8	8 21.0	52.8	309 18.8	00.4				
16	224	56.8	89 50.3	20.1	72 16.5	30.2	23 23.1	53.0	324 21.2	00.5				
17	239	59.3	104 49.7	+17 19.3	87 17.5	+12 29.6	38 25.1	-7 53.2	339 23.6	-22 00.5				
18	255	01.8	119 49.1	+17 18.6	102 18.4	+12 29.1	53 27.1	-7 53.4	354 26.0	-22 00.5				
19	270	04.2	134 48.5	17.9	117 19.3	28.5	68 29.1	53.6	9 28.4	00.5				
20	285	06.7	149 47.9	17.1	132 20.3	28.0	83 31.1	53.7	24 30.8	00.5				
21	300	09.2	164 47.3	16.4	147 21.2	27.4	98 33.2	53.9	39 33.2	00.5				
22	315	11.6	179 46.7	15.7	162 22.2	26.8	113 35.2	54.1	54 35.7	00.5				
23	330	14.1	194 46.1	14.9	177 23.1	26.3	128 37.2	54.3	69 38.1	00.5				
24	345	16.6	209 45.5	+17 14.2	192 24.1	+12 25.7	143 39.2	-7 54.5	84 40.5	-22 00.5				
Dif	—		-6	-7	+9	-6	+20	-2	+24	0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 3			Edad: 15 ^d 2 PHE { SD: 15'5 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	23.3	+6 26.8	3	10.2	-9 08.1	60 N	3 27	4 23	5 07	19 07	16	4 57	82	
1	195	23.5	25.9	17	40.9 ¹¹⁷	-8 58.4 ⁹⁷	58	38	30	11	04	19	5 02	79	
2	210	23.7	25.0	32	11.5 ¹¹⁶	48.6 ⁹⁸	56	48	36	14	19 01	21	06	77	
3	225	23.9	24.0	46	42.2 ¹¹⁷	38.7 ⁹⁹	54	3 56	41	17	18 58	23	10	75	
4	240	24.1	23.1	61	12.9 ¹¹⁷	28.8 ⁹⁹	52	4 03	45	20	56	25	14	72	
5	255	24.3	+6 22.2	75	43.5 ¹¹⁶	-8 18.9 ⁹⁹	50	4 09	4 49	5 23	18 54	26	5 17	71	
6	270	24.5	+6 21.3	90	14.2 ¹¹⁷	-8 08.9 ¹⁰⁰	45	4 22	4 58	5 28	18 49	30	5 24	67	
7	285	24.7	20.3	104	44.9 ¹¹⁷	-7 58.8 ¹⁰¹	40	32	5 05	32	45	33	30	64	
8	300	25.0	19.4	119	15.5 ¹¹⁶	48.7 ¹⁰¹	35	40	11	36	41	36	34	62	
9	315	25.2	18.5	133	46.2 ¹¹⁷	38.6 ¹⁰¹	30	47	16	40	38	38	39	59	
10	330	25.4	17.5	148	16.9 ¹¹⁷	28.4 ¹⁰²	20	4 57	23	45	33	42	46	55	
11	345	25.6	+6 16.6	162	47.5 ¹¹⁶	-7 18.1 ¹⁰³	10 N	5 05	5 29	5 50	18 28	46	5 52	52	
12	0	25.8	+6 15.7	177	18.2 ¹¹⁷	-7 07.8 ¹⁰³	0	5 10	5 34	5 55	18 24	49	5 58	49	
13	15	26.0	14.7	191	48.9 ¹¹⁷	-6 57.5 ¹⁰³	10 S	14	38	5 59	19 53		6 04	46	
14	30	26.2	13.8	206	19.5 ¹¹⁶	47.1 ¹⁰⁴	20	16	42	6 04	15 55		11	42	
15	45	26.4	12.9	220	50.2 ¹¹⁷	36.7 ¹⁰⁴	30	18	45	09	09 60		18	38	
16	60	26.7	11.9	235	20.8 ¹¹⁶	26.2 ¹⁰⁵	35	18	47	12	06 62		22	36	
17	75	26.9	+6 11.0	249	51.5 ¹¹⁷	-6 15.7 ¹⁰⁵	40	5 17	5 48	6 15	18 03	65	6 27	33	
18	90	27.1	+6 10.1	264	22.1 ¹¹⁶	-6 05.2 ¹⁰⁵	45	5 16	5 50	6 19	17 59	68	6 32	30	
19	105	27.3	09.1	278	52.8 ¹¹⁷	-5 54.6 ¹⁰⁶	50	14	51	24	54	71	38	27	
20	120	27.5	08.2	293	23.4 ¹¹⁶	44.0 ¹⁰⁶	52	13	52	26	52	73	41	25	
21	135	27.7	07.3	307	54.0 ¹¹⁶	33.3 ¹⁰⁷	54	12	52	28	49	75	44	24	
22	150	27.9	06.3	322	24.7 ¹¹⁷	22.6 ¹⁰⁷	56	10	53	30	46	78	48	21	
23	165	28.1	05.4	336	55.3 ¹¹⁶	11.9 ¹⁰⁷	58	08	54	33	43	80	52	19	
24	180	28.4	+6 04.4	351	25.9 ¹¹⁶	-5 01.1 ¹⁰⁸	60 S	5 06	5 54	6 36	17 40	82	6 56	17	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 0 ^h 58 ^m 7			Mag: -3.9 PMG: 10 ^h 01 ^m			Mag: +1.8 PMG: 11 ^h 10 ^m			Mag: -1.8 PMG: 14 ^h 23 ^m			Mag: +0.4 PMG: 18 ^h 18 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	345	16.6	209 45.5	+17 14.2	192 24.1	+12 25.7	143 39.2	-7 54.5	84 40.5	-22 00.5					
1	0	19.0	224 44.9	13.4	207 25.0	25.2	158 41.3	54.6	99 42.9	00.6					
2	15	21.5	239 44.3	12.7	222 25.9	24.6	173 43.3	54.8	114 45.3	00.6					
3	30	24.0	254 43.7	12.0	237 26.9	24.0	188 45.3	55.0	129 47.7	00.6					
4	45	26.4	269 43.1	11.2	252 27.8	23.5	203 47.3	55.2	144 50.1	00.6					
5	60	28.9	284 42.5	+17 10.5	267 28.8	+12 22.9	218 49.3	-7 55.4	159 52.6	-22 00.6					
6	75	31.3	299 41.9	+17 09.7	282 29.7	+12 22.4	233 51.4	-7 55.6	174 55.0	-22 00.6					
7	90	33.8	314 41.3	09.0	297 30.7	21.8	248 53.4	55.7	189 57.4	00.6					
8	105	36.3	329 40.7	08.2	312 31.6	21.2	263 55.4	55.9	204 59.8	00.6					
9	120	38.7	344 40.1	07.5	327 32.5	20.7	278 57.4	56.1	220 02.2	00.6					
10	135	41.2	359 39.6	06.7	342 33.5	20.1	293 59.4	56.3	235 04.6	00.6					
11	150	43.7	14 39.0	+17 06.0	357 34.4	+12 19.6	309 01.5	-7 56.5	250 07.0	-22 00.7					
12	165	46.1	29 38.4	+17 05.2	12 35.4	+12 19.0	324 03.5	-7 56.6	265 09.5	-22 00.7					
13	180	48.6	44 37.8	04.5	27 36.3	18.4	339 05.5	56.8	280 11.9	00.7					
14	195	51.1	59 37.2	03.7	42 37.3	17.9	354 07.5	57.0	295 14.3	00.7					
15	210	53.5	74 36.6	03.0	57 38.2	17.3	9 09.5	57.2	310 16.7	00.7					
16	225	56.0	89 36.0	02.2	72 39.2	16.7	24 11.6	57.4	325 19.1	00.7					
17	240	58.4	104 35.4	+17 01.5	87 40.1	+12 16.2	39 13.6	-7 57.5	340 21.5	-22 00.7					
18	256	00.9	119 34.8	+17 00.7	102 41.0	+12 15.6	54 15.6	-7 57.7	355 23.9	-22 00.7					
19	271	03.4	134 34.2	+17 00.0	117 42.0	15.1	69 17.6	57.9	10 26.3	00.7					
20	286	05.8	149 33.6	+16 59.2	132 42.9	14.5	84 19.6	58.1	25 28.7	00.8					
21	301	08.3	164 33.1	58.5	147 43.9	13.9	99 21.7	58.3	40 31.2	00.8					
22	316	10.8	179 32.5	57.7	162 44.8	13.4	114 23.7	58.4	55 33.6	00.8					
23	331	13.2	194 31.9	56.9	177 45.8	12.8	129 25.7	58.6	70 36.0	00.8					
24	346	15.7	209 31.3	+16 56.2	192 46.7	+12 12.2	144 27.7	-7 58.8	85 38.4	-22 00.8					
Dif	—		-6	-7	+9	-6	+20	-2	+24	0					

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 9		Edad: 16 ^d 2 PHE { 4 ^h : 57'5 12 ^h : 57'7 20 ^h : 57'9 SD: 15'6 PMG: 0 ^h 35 ^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	180	28.4	+6 04.4	351	25.9	-5 01.1	60 N	18 45	19 28	20 23	19 23 17	6 19 83		
1	195	28.6	03.5	5	56.5 ¹¹⁶	-4 50.3 ¹⁰⁸	58	42	22	13	23 19	21 80		
2	210	28.8	02.6	20	27.1 ¹¹⁶	39.4 ¹⁰⁹	56	38	17	20 04	22 21	23 78		
3	225	29.0	01.6	34	57.7 ¹¹⁶	28.6 ¹⁰⁸	54	36	12	19 56	21 23	25 76		
4	240	29.2	+6 00.7	49	28.3 ¹¹⁶	17.7 ¹⁰⁹	52	33	08	50	21 25	26 74		
5	255	29.4	+5 59.8	63	58.8 ¹¹⁵	-4 06.7 ¹¹⁰	50	18 31	19 04	19 44	19 20 27	6 28 72		
6	270	29.6	+5 58.8	78	29.4 ¹¹⁶	-3 55.8 ¹⁰⁹	45	18 26	18 56	19 31	19 19 30	6 31 68		
7	285	29.9	57.9	92	59.9 ¹¹⁵	44.8 ¹¹⁰	40	22	49	22	18 33	34 65		
8	300	30.1	57.0	107	30.5 ¹¹⁶	33.8 ¹¹⁰	35	18	44	14	17 36	36 62		
9	315	30.3	56.0	122	01.0 ¹¹⁵	22.7 ¹¹¹	30	15	39	19 08	16 38	38 60		
10	330	30.5	55.1	136	31.6 ¹¹⁶	11.7 ¹¹⁰	20	10	32	18 58	15 42	41 56		
11	345	30.7	+5 54.2	151	02.1 ¹¹⁵	-3 00.6 ¹¹¹	10 N	18 05	18 26	18 51	19 14 46	6 44 53		
12	0	30.9	+5 53.2	165	32.6 ¹¹⁵	-2 49.4 ¹¹²	0	18 01	18 22	18 46	19 13 49	6 47 49		
13	15	31.2	52.3	180	03.1 ¹¹⁵	38.3 ¹¹¹	10 S	17 57	18	43	12 52	50 45		
14	30	31.4	51.3	194	33.5 ¹¹⁴	27.1 ¹¹²	20	53	15	41	10 57	53 42		
15	45	31.6	50.4	209	04.0 ¹¹⁵	16.0 ¹¹¹	30	48	12	40	09 61	56 38		
16	60	31.8	49.5	223	34.4 ¹¹⁴	-2 04.7 ¹¹³	35	46	11	40	08 64	6 58 35		
17	75	32.0	+5 48.5	238	04.9 ¹¹⁵	-1 53.5 ¹¹²	40	17 43	18 10	18 41	19 08 66	7 00 33		
18	90	32.2	+5 47.6	252	35.3 ¹¹⁴	-1 42.3 ¹¹²	45	17 39	18 09	18 43	19 07 69	7 02 30		
19	105	32.4	46.7	267	05.7 ¹¹⁴	31.0 ¹¹³	50	35	08	45	05 73	05 27		
20	120	32.7	45.7	281	36.1 ¹¹⁴	19.8 ¹¹²	52	33	07	46	05 75	06 25		
21	135	32.9	44.8	296	06.5 ¹¹⁴	-1 08.5 ¹¹³	54	31	07	48	04 77	08 23		
22	150	33.1	43.8	310	36.8 ¹¹³	-0 57.2 ¹¹³	56	29	06	50	04 79	09 21		
23	165	33.3	42.9	325	07.2 ¹¹⁴	45.9 ¹¹³	58	27	06	52	03 81	11 19		
24	180	33.5	+5 42.0	339	37.5 ¹¹³	-0 34.5 ¹¹⁴	60 S	17 24	18 06	18 54	19 02 84	7 13 16		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 54 ^m 8		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: +1.8 PMG: 11 ^h 08 ^m		Mag: -1.8 PMG: 14 ^h 20 ^m		Mag: +0.4 PMG: 18 ^h 15 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	346	15.7	209 31.3	+16 56.2	192 46.7	+12 12.2	144 27.7	-7 58.8	85 38.4	-22 00.8				
1	1	18.2	224 30.7	55.4	207 47.7	11.7	159 29.7	59.0	100 40.8	00.8				
2	16	20.6	239 30.1	54.7	222 48.6	11.1	174 31.8	59.2	115 43.2	00.8				
3	31	23.1	254 29.5	53.9	237 49.6	10.6	189 33.8	59.4	130 45.6	00.8				
4	46	25.6	269 28.9	53.1	252 50.5	10.0	204 35.8	59.5	145 48.0	00.8				
5	61	28.0	284 28.3	+16 52.4	267 51.4	+12 09.4	219 37.8	-7 59.7	160 50.4	-22 00.9				
6	76	30.5	299 27.8	+16 51.6	282 52.4	+12 08.9	234 39.8	-7 59.9	175 52.8	-22 00.9				
7	91	32.9	314 27.2	50.8	297 53.3	08.3	249 41.8	-8 00.1	190 55.3	00.9				
8	106	35.4	329 26.6	50.1	312 54.3	07.7	264 43.9	00.3	205 57.7	00.9				
9	121	37.9	344 26.0	49.3	327 55.2	07.2	279 45.9	00.4	221 00.1	00.9				
10	136	40.3	359 25.4	48.5	342 56.2	06.6	294 47.9	00.6	236 02.5	00.9				
11	151	42.8	14 24.8	+16 47.8	357 57.1	+12 06.0	309 49.9	-8 00.8	251 04.9	-22 00.9				
12	166	45.3	29 24.3	+16 47.0	12 58.1	+12 05.5	324 51.9	-8 01.0	266 07.3	-22 00.9				
13	181	47.7	44 23.7	46.2	27 59.0	04.9	339 53.9	01.2	281 09.7	00.9				
14	196	50.2	59 23.1	45.5	43 00.0	04.3	354 56.0	01.3	296 12.1	01.0				
15	211	52.7	74 22.5	44.7	58 00.9	03.8	9 58.0	01.5	311 14.5	01.0				
16	226	55.1	89 21.9	43.9	73 01.9	03.2	25 00.0	01.7	326 16.9	01.0				
17	241	57.6	104 21.3	+16 43.2	88 02.8	+12 02.6	40 02.0	-8 01.9	341 19.3	-22 01.0				
18	257	00.0	119 20.7	+16 42.4	103 03.8	+12 02.1	55 04.0	-8 02.1	356 21.7	-22 01.0				
19	272	02.5	134 20.2	41.6	118 04.7	01.5	70 06.1	02.3	11 24.1	01.0				
20	287	05.0	149 19.6	40.8	133 05.6	00.9	85 08.1	02.4	26 26.6	01.0				
21	302	07.4	164 19.0	40.0	148 06.6	+12 00.4	100 10.1	02.6	41 29.0	01.0				
22	317	09.9	179 18.4	39.3	163 07.5	+11 59.8	115 12.1	02.8	56 31.4	01.0				
23	332	12.4	194 17.8	38.5	178 08.5	59.2	130 14.1	03.0	71 33.8	01.1				
24	347	14.8	209 17.3	+16 37.7	193 09.4	+11 58.7	145 16.1	-8 03.2	86 36.2	-22 01.1				
Dif	—		-6	-8	+9	-6	+20	-2	+24	0				

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 6			Edad: 17 ^d 2 PHE { 4 ^h : 58 ^h 0 12 ^h : 58 ^h 2 20 ^h : 58 ^h 3 PMG: 1 ^h 24 ^m R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	33.5	+5 42.0	339	37.5	-0 34.5		60 N	3 33	4 28	5 12	19 40	18		7 42	84	
1	195	33.7		41.0	354 07.8 ¹¹³	23.2 ¹¹³		58	44	34	15	42	20		41	82	
2	210	34.0		40.1	8 38.1 ¹¹³	11.9 ¹¹³		56	3 52	40	18	43	23		41	79	
3	225	34.2		39.1	23 08.3 ¹¹²	-0 00.5 ¹¹⁴		54	4 00	44	21	44	25		41	77	
4	240	34.4		38.2	37 38.6 ¹¹³	+0 10.8 ¹¹³		52	07	49	23	46	26		40	76	
5	255	34.6	+5 37.3	52 08.8 ¹¹²	+0 22.2 ¹¹⁴			50	4 13	4 52	5 26	19 47	28		7 40	74	
6	270	34.8	+5 36.3	66 39.0 ¹¹²	+0 33.6 ¹¹⁴			45	4 25	5 01	5 30	19 49	32		7 39	70	
7	285	35.0		35.4	81 09.2 ¹¹²	44.9 ¹¹³		40	34	07	34	51	35		39	66	
8	300	35.3		34.4	95 39.4 ¹¹²	+0 56.3 ¹¹⁴		35	42	12	38	53	37		38	64	
9	315	35.5		33.5	110 09.5 ¹¹¹	+1 07.7 ¹¹⁴		30	48	17	41	54	40		38	61	
10	330	35.7		32.6	124 39.6 ¹¹¹	19.1 ¹¹⁴		20	4 58	24	46	19 57	44		37	57	
11	345	35.9	+5 31.6	139 09.7 ¹¹¹	+1 30.5 ¹¹⁴			10 N	5 05	5 29	5 50	20 00	47		7 37	53	
12	0	36.1	+5 30.7	153 39.8 ¹¹¹	+1 41.8 ¹¹³			0	5 09	5 34	5 54	20 02	51		7 36	50	
13	15	36.3		29.7	168 09.8 ¹¹⁰	+1 53.2 ¹¹⁴		10 S	13	37	5 58	04	54		35	47	
14	30	36.5		28.8	182 39.8 ¹¹⁰	+2 04.6 ¹¹⁴		20	15	40	6 02	07	58		35	43	
15	45	36.8		27.9	197 09.8 ¹¹⁰	15.9 ¹¹³		30	15	43	07	10	62		34	39	
16	60	37.0		26.9	211 39.8 ¹¹⁰	27.3 ¹¹⁴		35	15	44	09	12	64		33	37	
17	75	37.2	+5 26.0	226 09.7 ¹⁰⁹	+2 38.7 ¹¹⁴			40	5 14	5 45	6 12	20 14	66		7 33	34	
18	90	37.4	+5 25.0	240 39.6 ¹⁰⁹	+2 50.0 ¹¹³			45	5 12	5 46	6 15	20 16	70		7 32	31	
19	105	37.6		24.1	255 09.5 ¹⁰⁹	+3 01.3 ¹¹³		50	10	47	19	18	75		32	27	
20	120	37.9		23.1	269 39.4 ¹⁰⁹	12.7 ¹¹⁴		52	08	47	21	20	76		31	26	
21	135	38.1		22.2	284 09.2 ¹⁰⁸	24.0 ¹¹³		54	07	48	23	21	78		31	23	
22	150	38.3		21.3	298 39.0 ¹⁰⁸	35.3 ¹¹³		56	05	48	25	23	80		30	22	
23	165	38.5		20.3	313 08.8 ¹⁰⁸	46.6 ¹¹³		58	03	48	27	24	83		30	19	
24	180	38.7	+5 19.4	327 38.5 ¹⁰⁷	+3 57.9 ¹¹³			60 S	5 00	5 49	6 30	20 26	85		7 29	17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 50 ^m 9		Mag: -3.9 PMG: 10 ^h 03 ^m			Mag: +1.8 PMG: 11 ^h 07 ^m			Mag: -1.7 PMG: 14 ^h 17 ^m			Mag: +0.4 PMG: 18 ^h 11 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	347	14.8	209	17.3	+16 37.7	193	09.4	+11 58.7	145	16.1	-8 03.2	86	36.2	-22 01.1			
1	2	17.3	224	16.7	36.9	208	10.4	58.1	160	18.1	03.3	101	38.6	01.1			
2	17	19.8	239	16.1	36.2	223	11.3	57.5	175	20.2	03.5	116	41.0	01.1			
3	32	22.2	254	15.5	35.4	238	12.3	57.0	190	22.2	03.7	131	43.4	01.1			
4	47	24.7	269	14.9	34.6	253	13.2	56.4	205	24.2	03.9	146	45.8	01.1			
5	62	27.2	284	14.4	+16 33.8	268	14.2	+11 55.8	220	26.2	-8 04.1	161	48.2	-22 01.1			
6	77	29.6	299	13.8	+16 33.0	283	15.1	+11 55.3	235	28.2	-8 04.3	176	50.6	-22 01.1			
7	92	32.1	314	13.2	32.2	298	16.1	54.7	250	30.2	04.4	191	53.0	01.1			
8	107	34.5	329	12.6	31.4	313	17.0	54.1	265	32.3	04.6	206	55.4	01.2			
9	122	37.0	344	12.0	30.7	328	18.0	53.6	280	34.3	04.8	221	57.8	01.2			
10	137	39.5	359	11.5	29.9	343	18.9	53.0	295	36.3	05.0	237	00.2	01.2			
11	152	41.9	14	10.9	+16 29.1	358	19.9	+11 52.4	310	38.3	-8 05.2	252	02.6	-22 01.2			
12	167	44.4	29	10.3	+16 28.3	13	20.8	+11 51.9	325	40.3	-8 05.3	267	05.0	-22 01.2			
13	182	46.9	44	09.7	27.5	28	21.8	51.3	340	42.3	05.5	282	07.4	01.2			
14	197	49.3	59	09.2	26.7	43	22.7	50.7	355	44.3	05.7	297	09.8	01.2			
15	212	51.8	74	08.6	25.9	58	23.7	50.2	10	46.4	05.9	312	12.2	01.2			
16	227	54.3	89	08.0	25.1	73	24.6	49.6	25	48.4	06.1	327	14.7	01.2			
17	242	56.7	104	07.4	+16 24.3	88	25.6	+11 49.0	40	50.4	-8 06.3	342	17.1	-22 01.3			
18	257	59.2	119	06.9	+16 23.5	103	26.5	+11 48.5	55	52.4	-8 06.4	357	19.5	-22 01.3			
19	273	01.6	134	06.3	22.7	118	27.5	47.9	70	54.4	06.6	12	21.9	01.3			
20	288	04.1	149	05.7	22.0	133	28.4	47.3	85	56.4	06.8	27	24.3	01.3			
21	303	06.6	164	05.1	21.2	148	29.4	46.8	100	58.4	07.0	42	26.7	01.3			
22	318	09.0	179	04.6	20.4	163	30.3	46.2	116	00.5	07.2	57	29.1	01.3			
23	333	11.5	194	04.0	19.6	178	31.3	45.6	131	02.5	07.4	72	31.5	01.3			
24	348	14.0	209	03.4	+16 18.8	193	32.2	+11 45.1	146	04.5	-8 07.5	87	33.9	-22 01.3			
Dif	—		-6 -8			+9 -6			+20 -2			-2 +24					

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9		Edad: 18 ^d 2 PHE { 4 ^h : 58'5 12 ^h : 58'6 20 ^h : 58'7											
	PMG: 11 ^h 57 ^m 2		SD: 15°9 PMG: 2 ^h 14 ^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	180	38.7	+5 19.4		327 38.5	+3 57.9	60 N	18 39	19 22	20 16	19 58 20		9 06 86	
1	195	38.9		18.4	342 08.2 ¹⁰⁷	+4 09.1 ¹¹²	58	36	16	20 06	20 02 23		03 83	
2	210	39.2		17.5	356 37.9 ¹⁰⁷	20.4 ¹¹³	56	33	11	19 58	06 25		9 00 81	
3	225	39.4		16.5	11 07.5 ¹⁰⁶	31.6 ¹¹²	54	31	07	51	09 27		8 58 78	
4	240	39.6		15.6	25 37.2 ¹⁰⁷	42.8 ¹¹²	52	29	19 03	44	12 29		56 76	
5	255	39.8	+5 14.7		40 06.7 ¹⁰⁵	+4 54.0 ¹¹²	50	18 26	18 59	19 39	20 15 31		8 54 74	
6	270	40.0	+5 13.7		54 36.3 ¹⁰⁶	+5 05.1 ¹¹¹	45	18 22	18 52	19 27	20 21 34		8 49 71	
7	285	40.2		12.8	69 05.8 ¹⁰⁵	16.3 ¹¹²	40	18	46	18	26 37		45 68	
8	300	40.5		11.8	83 35.3 ¹⁰⁵	27.4 ¹¹¹	35	15	41	11	30 40		42 65	
9	315	40.7		10.9	98 04.7 ¹⁰⁴	38.5 ¹¹¹	30	13	37	19 05	34 42		39 63	
10	330	40.9		09.9	112 34.1 ¹⁰⁴	+5 49.5 ¹¹⁰	20	08	30	18 56	41 46		34 59	
11	345	41.1	+5 09.0		127 03.5 ¹⁰⁴	+6 00.6 ¹¹¹	10 N	18 04	18 25	18 50	20 47 49		8 30 55	
12	0	41.3	+5 08.1		141 32.8 ¹⁰³	+6 11.6 ¹¹⁰	0	18 01	18 21	18 45	20 53 52		8 26 51	
13	15	41.6		07.1	156 02.1 ¹⁰³	22.6 ¹¹⁰	10 S	17 57	18	42	20 58 56		22 48	
14	30	41.8		06.2	170 31.4 ¹⁰³	33.5 ¹⁰⁹	20	53	15	41	21 05 59		18 44	
15	45	42.0		05.2	185 00.6 ¹⁰²	44.4 ¹⁰⁹	30	49	13	41	12 63		13 40	
16	60	42.2		04.3	199 29.8 ¹⁰²	+6 55.3 ¹⁰⁹	35	47	12	42	16 65		10 38	
17	75	42.4	+5 03.3		213 58.9 ¹⁰¹	+7 06.2 ¹⁰⁹	40	17 45	18 12	18 43	21 20 68		8 07 35	
18	90	42.6	+5 02.4		228 28.0 ¹⁰¹	+7 17.0 ¹⁰⁸	45	17 42	18 11	18 45	21 26 71		8 03 33	
19	105	42.9		01.4	242 57.1 ¹⁰¹	27.8 ¹⁰⁸	50	38	11	48	33 74		7 59 29	
20	120	43.1	+5 00.5		257 26.1 ¹⁰⁰	38.5 ¹⁰⁷	52	37	10	49	36 76		57 27	
21	135	43.3	+4 59.5		271 55.1 ¹⁰⁰	49.2 ¹⁰⁷	54	35	10	51	39 78		54 26	
22	150	43.5		58.6	286 24.0 ⁹⁹	+7 59.9 ¹⁰⁷	56	33	10	53	43 80		52 23	
23	165	43.7		57.6	300 52.9 ⁹⁹	+8 10.5 ¹⁰⁶	58	31	10	56	47 83		49 22	
24	180	44.0	+4 56.7		315 21.8 ⁹⁹	+8 21.1 ¹⁰⁶	60 S	17 29	18 10	18 59	21 51 86		7 46 19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 0 ^h 46 ^m 9		Mag: -3.9 PMG: 10 ^h 04 ^m			Mag: +1.8 PMG: 11 ^h 05 ^m			Mag: -1.7 PMG: 14 ^h 14 ^m			Mag: +0.5 PMG: 18 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	348	14.0	209 03.4	+16 18.8	193 32.2	+11 45.1	146 04.5	-8 07.5	87 33.9	-22 01.3				
1	3	16.4	224 02.8	18.0	208 33.2	44.5	161 06.5	07.7	102 36.3	01.4				
2	18	18.9	239 02.3	17.2	223 34.1	43.9	176 08.5	07.9	117 38.7	01.4				
3	33	21.4	254 01.7	16.4	238 35.1	43.3	191 10.5	08.1	132 41.1	01.4				
4	48	23.8	269 01.1	15.6	253 36.0	42.8	206 12.5	08.3	147 43.5	01.4				
5	63	26.3	284 00.5	+16 14.8	268 37.0	+11 42.2	221 14.5	-8 08.4	162 45.9	-22 01.4				
6	78	28.8	299 00.0	+16 14.0	283 37.9	+11 41.6	236 16.6	-8 08.6	177 48.3	-22 01.4				
7	93	31.2	313 59.4	13.1	298 38.9	41.1	251 18.6	08.8	192 50.7	01.4				
8	108	33.7	328 58.8	12.3	313 39.8	40.5	266 20.6	09.0	207 53.1	01.4				
9	123	36.1	343 58.3	11.5	328 40.8	39.9	281 22.6	09.2	222 55.5	01.4				
10	138	38.6	358 57.7	10.7	343 41.8	39.4	296 24.6	09.4	237 57.9	01.5				
11	153	41.1	13 57.1	+16 09.9	358 42.7	+11 38.8	311 26.6	-8 09.5	253 00.3	-22 01.5				
12	168	43.5	28 56.5	+16 09.1	13 43.7	+11 38.2	326 28.6	-8 09.7	268 02.7	-22 01.5				
13	183	46.0	43 56.0	08.3	28 44.6	37.6	341 30.6	09.9	283 05.1	01.5				
14	198	48.5	58 55.4	07.5	43 45.6	37.1	356 32.7	10.1	298 07.5	01.5				
15	213	50.9	73 54.8	06.7	58 46.5	36.5	11 34.7	10.3	313 09.9	01.5				
16	228	53.4	88 54.3	05.9	73 47.5	35.9	26 36.7	10.5	328 12.3	01.5				
17	243	55.9	103 53.7	+16 05.1	88 48.4	+11 35.4	41 38.7	-8 10.6	343 14.7	-22 01.5				
18	258	58.3	118 53.1	+16 04.2	103 49.4	+11 34.8	56 40.7	-8 10.8	358 17.1	-22 01.5				
19	274	00.8	133 52.6	03.4	118 50.3	34.2	71 42.7	11.0	13 19.5	01.6				
20	289	03.2	148 52.0	02.6	133 51.3	33.6	86 44.7	11.2	28 21.9	01.6				
21	304	05.7	163 51.4	01.8	148 52.2	33.1	101 46.7	11.4	43 24.3	01.6				
22	319	08.2	178 50.9	01.0	163 53.2	32.5	116 48.7	11.6	58 26.7	01.6				
23	334	10.6	193 50.3	+16 00.2	178 54.1	31.9	131 50.8	11.7	73 29.1	01.6				
24	349	13.1	208 49.7	+15 59.3	193 55.1	+11 31.4	146 52.8	-8 11.9	88 31.5	-22 01.6				
Dif	—		-6	-8	+10	-6	+20	-2	+24	0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9			Edad: 19 ^d 2 PHE { 4 ^h : 58'8 12 ^h : 58'9 20 ^h : 59'0														
	PMG: 11 ^h 56 ^m 9			SD: 16'0 PMG: 3 ^h 05 ^m R°: 53 ^m														
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	44.0	+4	56.7	315	21.8	+8	21.1	60 N	3	39	4	33	5	16	20	18	
1	195	44.2		55.8	329	50.6	98	31.6	58	49	39	19	25	28	26	82		
2	210	44.4		54.8	344	19.4	98	42.1	56	3	57	44	22	31	30	21	79	
3	225	44.6		53.9	358	48.1	97	+8	52.5	54	4	04	48	24	36	32	16	78
4	240	44.8		52.9	13	16.8	97	+9	02.9	52	10	52	27	41	34	12	75	
5	255	45.1	+4	52.0	27	45.4	96	+9	13.3	50	4	16	4	56	5	28	20	46
6	270	45.3	+4	51.0	42	14.0	96	+9	23.6	45	4	28	5	03	5	33	20	55
7	285	45.5		50.1	56	42.6	96	33.8	40	37	09	36	21	03	41	9	53	
8	300	45.7		49.1	71	11.1	95	44.0	35	44	14	39	10	44		47	65	
9	315	45.9		48.2	85	39.6	95	+9	54.2	30	50	18	42	16	46	42	63	
10	330	46.1		47.2	100	08.0	94	+10	04.3	20	4	58	24	46	27	49	33	59
11	345	46.4	+4	46.3	114	36.4	94	+10	14.3	10 N	5	05	5	29	5	50	21	36
12	0	46.6	+4	45.3	129	04.7	93	+10	24.3	0	5	09	5	33	5	54	21	45
13	15	46.8		44.4	143	33.0	93	34.2	10 S	12	36	5	57	21	54	57	10	50
14	30	47.0		43.4	158	01.2	92	44.1	20	13	38	6	01	22	04	60	9	02
15	45	47.2		42.5	172	29.4	92	+10	53.9	30	13	40	04	15	63	8	53	
16	60	47.5		41.5	186	57.5	91	+11	03.7	35	12	41	07	21	65	48	42	
17	75	47.7	+4	40.6	201	25.6	91	+11	13.3	40	5	11	5	42	6	09	22	28
18	90	47.9	+4	39.6	215	53.7	91	+11	23.0	45	5	09	5	42	6	12	22	37
19	105	48.1		38.7	230	21.7	90	32.5	50	05	43	15	47	74	28	36		
20	120	48.3		37.7	244	49.6	89	42.0	52	04	43	16	52	75	24	31		
21	135	48.6		36.8	259	17.5	89	+11	51.4	54	02	43	18	22	57	77	20	29
22	150	48.8		35.8	273	45.4	89	+12	00.8	56	5	00	43	20	23	03	79	15
23	165	49.0		34.9	288	13.2	88	10.1	58	4	57	43	22	10	81	11	25	
24	180	49.2	+4	33.9	302	40.9	87	+12	19.3	60 S	4	54	5	43	6	24	23	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 43 ^m 0		Mag: -3.9 PMG: 10 ^h 05 ^m		Mag: +1.8 PMG: 11 ^h 04 ^m		Mag: -1.7 PMG: 14 ^h 11 ^m		Mag: +0.5 PMG: 18 ^h 03 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	349	13.1	208	49.7	+15	59.3	193	55.1	+11	31.4
1	4	15.6	223	49.2		58.5	208	56.0		30.8
2	19	18.0	238	48.6		57.7	223	57.0		30.2
3	34	20.5	253	48.0		56.9	238	58.0		29.6
4	49	23.0	268	47.5		56.1	253	58.9		29.1
5	64	25.4	283	46.9	+15	55.2	268	59.9	+11	28.5
6	79	27.9	298	46.3	+15	54.4	284	00.8	+11	27.9
7	94	30.4	313	45.8		53.6	299	01.8		27.3
8	109	32.8	328	45.2		52.8	314	02.7		26.8
9	124	35.3	343	44.6		51.9	329	03.7		26.2
10	139	37.7	358	44.1		51.1	344	04.6		25.6
11	154	40.2	13	43.5	+15	50.3	359	05.6	+11	25.1
12	169	42.7	28	43.0	+15	49.5	14	06.5	+11	24.5
13	184	45.1	43	42.4		48.6	29	07.5		23.9
14	199	47.6	58	41.8		47.8	44	08.5		23.3
15	214	50.1	73	41.3		47.0	59	09.4		22.8
16	229	52.5	88	40.7		46.1	74	10.4		22.2
17	244	55.0	103	40.2	+15	45.3	89	11.3	+11	21.6
18	259	57.5	118	39.6	+15	44.5	104	12.3	+11	21.0
19	274	59.9	133	39.0		43.6	119	13.2		20.5
20	290	02.4	148	38.5		42.8	134	14.2		19.9
21	305	04.9	163	37.9		42.0	149	15.1		19.3
22	320	07.3	178	37.4		41.1	164	16.1		18.7
23	335	09.8	193	36.8		40.3	179	17.1		18.2
24	350	12.2	208	36.2	+15	39.5	194	18.0	+11	17.6
Dif	—		-6		-8		+10		-6	
							+20		-2	
									+24	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 20 ^d 2	PHE {	4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'2									
	PMG: 11 ^h 56 ^m 5					SD: 16'1			PMG: 3 ^h 58 ^m		R°: 55 ^m			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	49.2	+4 33.9	302	40.9	+12 19.3	92	60 N	18 33	19 16	20 09	20 44 33	11 57 82	
1	195	49.4		317	08.6	28.5	92	58	30	10	20 00	20 53 35	48 79	
2	210	49.7		331	36.3	37.5	90	56	28	06	19 52	21 01 37	40 78	
3	225	49.9		346	03.9	46.5	90	54	26	19 02	45	08 39	34 75	
4	240	50.1		0	31.5	+12 55.5	90	52	24	18 58	39	15 40	27 74	
5	255	50.3	+4 29.2	14	59.0	+13 04.3	88	50	18 22	18 55	19 34	21 21 42	11 22 72	
6	270	50.5	+4 28.2	29	26.4	+13 13.1	88	45	18 18	18 48	19 23	21 34 44	11 10 70	
7	285	50.8		43	53.8	21.8	87	40	15	42	15	44 47	11 00 67	
8	300	51.0		58	21.2	30.4	86	35	13	38	08	21 54 48	10 52 65	
9	315	51.2		72	48.5	39.0	86	30	10	34	19 02	22 02 49	45 63	
10	330	51.4		87	15.8	47.4	84	20	06	28	18 54	16 52	32 60	
11	345	51.6	+4 23.5	101	43.0	+13 55.8	84	10 N	18 03	18 24	18 48	22 28 54	10 21 58	
12	0	51.9	+4 22.5	116	10.2	+14 04.1	83	0	18 00	18 21	18 45	22 39 57	10 11 55	
13	15	52.1		130	37.3	12.3	82	10 S	17 57	18	42	22 51 59	10 00 53	
14	30	52.3		145	04.3	20.5	82	20	54	16	41	23 04 60	9 49 51	
15	45	52.5		159	31.4	28.5	80	30	50	14	42	18 63	37 47	
16	60	52.7		173	58.3	36.4	79	35	49	14	43	26 65	30 45	
17	75	53.0	+4 17.8	188	25.2	+14 44.3	79	40	17 46	18 13	18 45	23 36 66	9 22 43	
18	90	53.2	+4 16.8	202	52.1	+14 52.1	78	45	17 44	18 13	18 47	23 47 68	9 12 41	
19	105	53.4		217	18.9	+14 59.8	77	50	41	13	51	** ** *	9 00 39	
20	120	53.6		231	45.7	+15 07.4	76	52	40	14	53	** ** *	8 55 37	
21	135	53.9		246	12.4	14.9	75	54	38	14	55	** ** *	49 35	
22	150	54.1		260	39.1	22.3	74	56	37	14	18 57	** ** *	43 33	
23	165	54.3		275	05.7	29.6	73	58	35	14	19 00	** ** *	36 31	
24	180	54.5	+4 11.1	289	32.3	+15 36.8	72	60 S	17 33	18 15	19 03	** ** *	8 27 29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 39 ^m 1		Mag: -3.9 PMG: 10 ^h 06 ^m		Mag: +1.8 PMG: 11 ^h 02 ^m		Mag: -1.7 PMG: 14 ^h 07 ^m		Mag: +0.5 PMG: 17 ^h 59 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	350	12.2	208 36.2	+15 39.5	194 18.0	+11 17.6	147 41.0	-8 16.3	89 28.9	-22 01.9
1	5	14.7	223 35.7	38.6	209 19.0	17.0	162 43.0	16.5	104 31.3	01.9
2	20	17.2	238 35.1	37.8	224 19.9	16.4	177 45.0	16.7	119 33.7	01.9
3	35	19.6	253 34.6	37.0	239 20.9	15.9	192 47.0	16.9	134 36.1	01.9
4	50	22.1	268 34.0	36.1	254 21.8	15.3	207 49.0	17.1	149 38.5	01.9
5	65	24.6	283 33.4	+15 35.3	269 22.8	+11 14.7	222 51.0	-8 17.2	164 40.9	-22 02.0
6	80	27.0	298 32.9	+15 34.4	284 23.7	+11 14.1	237 53.0	-8 17.4	179 43.3	-22 02.0
7	95	29.5	313 32.3	33.6	299 24.7	13.6	252 55.0	17.6	194 45.7	02.0
8	110	32.0	328 31.8	32.7	314 25.7	13.0	267 57.1	17.8	209 48.1	02.0
9	125	34.4	343 31.2	31.9	329 26.6	12.4	282 59.1	18.0	224 50.5	02.0
10	140	36.9	358 30.7	31.1	344 27.6	11.8	298 01.1	18.2	239 52.9	02.0
11	155	39.3	13 30.1	+15 30.2	359 28.5	+11 11.3	313 03.1	-8 18.3	254 55.3	-22 02.0
12	170	41.8	28 29.6	+15 29.4	14 29.5	+11 10.7	328 05.1	-8 18.5	269 57.6	-22 02.0
13	185	44.3	43 29.0	28.5	29 30.4	10.1	343 07.1	18.7	285 00.0	02.1
14	200	46.7	58 28.4	27.7	44 31.4	09.5	358 09.1	18.9	300 02.4	02.1
15	215	49.2	73 27.9	26.8	59 32.4	08.9	13 11.1	19.1	315 04.8	02.1
16	230	51.7	88 27.3	26.0	74 33.3	08.4	28 13.1	19.3	330 07.2	02.1
17	245	54.1	103 26.8	+15 25.1	89 34.3	+11 07.8	43 15.1	-8 19.5	345 09.6	-22 02.1
18	260	56.6	118 26.2	+15 24.3	104 35.2	+11 07.2	58 17.1	-8 19.6	0 12.0	-22 02.1
19	275	59.1	133 25.7	23.4	119 36.2	06.6	73 19.1	19.8	15 14.4	02.1
20	291	01.5	148 25.1	22.6	134 37.2	06.1	88 21.1	20.0	30 16.8	02.1
21	306	04.0	163 24.6	21.7	149 38.1	05.5	103 23.1	20.2	45 19.2	02.1
22	321	06.5	178 24.0	20.9	164 39.1	04.9	118 25.1	20.4	60 21.5	02.2
23	336	08.9	193 23.5	20.0	179 40.0	04.3	133 27.2	20.6	75 23.9	02.2
24	351	11.4	208 22.9	+15 19.1	194 41.0	+11 03.8	148 29.2	-8 20.7	90 26.3	-22 02.2
Dif	—		-6	-8	+10	-6	+20	-2	+24	0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 55 ^m 8			Edad: 22 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 SD: 16'1 PMG: 5 ^h 50 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	59.8	+3	48.2	275	57.1	+17 59.3	60 N	18 27	19 09	20 02	22 00 57	14 34 63	
1	196	00.0		47.2	290	22.6	65 +18 03.8	58	25	04	19 53	14 57	21 63	
2	211	00.3		46.3	304	48.1	65 08.3	56	23	19 00	46	25 58	09 63	
3	226	00.5		45.3	319	13.6	65 12.6	54	21	18 57	40	35 58	14 00 62	
4	241	00.7		44.4	333	39.1	65 16.8	52	19	53	34	44 58	13 51 62	
5	256	00.9	+3	43.4	348	04.5	64 +18 20.9	50	18 18	18 50	19 29	22 52 58	13 43 62	
6	271	01.2	+3	42.4	2	29.8	63 +18 24.8	45	18 15	18 44	19 19	23 09 58	13 26 61	
7	286	01.4		41.5	16	55.2	64 28.7	40	12	39	11	23 58	12 61	
8	301	01.6		40.5	31	20.5	63 32.4	35	10	35	05	35 58	13 01 60	
9	316	01.8		39.6	45	45.8	63 36.0	30	08	32	19 00	23 46 58	12 50 60	
10	331	02.0		38.6	60	11.1	63 39.5	20	04	26	18 52	** ** *	33 59	
11	346	02.3	+3	37.7	74	36.3	62 +18 42.9	10 N	18 02	18 23	18 47	** ** *	12 18 58	
12	1	02.5	+3	36.7	89	01.5	62 +18 46.1	0	17 59	18 20	18 44	** ** *	12 03 59	
13	16	02.7		35.7	103	26.7	62 49.2	10 S	57	18	42	** ** *	11 49 58	
14	31	02.9		34.8	117	51.9	62 52.2	20	54	16	42	0 04 60	34 57	
15	46	03.1		33.8	132	17.0	61 55.1	30	51	15	43	21 61	16 57	
16	61	03.4		32.9	146	42.1	61 +18 57.8	35	50	15	45	31 62	11 06 56	
17	76	03.6	+3	31.9	161	07.2	61 +19 00.4	40	17 48	18 15	18 47	0 42 63	10 54 56	
18	91	03.8	+3	31.0	175	32.3	61 +19 02.9	45	17 46	18 16	18 50	0 55 64	10 41 54	
19	106	04.0		30.0	189	57.4	61 05.3	50	44	16	54	1 12 65	24 54	
20	121	04.3		29.0	204	22.4	60 07.5	52	43	17	56	19 66	16 53	
21	136	04.5		28.1	218	47.4	60 09.7	54	42	17	18 58	28 67	10 07 53	
22	151	04.7		27.1	233	12.4	60 11.6	56	41	18	19 01	37 68	9 58 52	
23	166	04.9		26.2	247	37.4	60 13.5	58	39	19	04	1 48 69	47 51	
24	181	05.1	+3	25.2	262	02.4	60 +19 15.2	60 S	17 38	18 19	19 08	2 01 70	9 34 50	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 0 ^h 31 ^m 2		Mag: -3.9 PMG: 10 ^h 08 ^m		Mag: +1.8 PMG: 10 ^h 59 ^m		Mag: -1.7 PMG: 14 ^h 01 ^m		Mag: +0.5 PMG: 17 ^h 52 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	352	10.5	208	09.8	+14 58.4	195	04.0	+10 49.9	149	17.3	-8 25.2	91	23.6	-22 02.5
1	7	13.0	223	09.2	57.5	210	05.0	49.3	164	19.3	25.4	106	26.0	02.5
2	22	15.4	238	08.7	56.6	225	05.9	48.7	179	21.3	25.5	121	28.4	02.5
3	37	17.9	253	08.1	55.8	240	06.9	48.1	194	23.3	25.7	136	30.8	02.5
4	52	20.4	268	07.6	54.9	255	07.9	47.5	209	25.3	25.9	151	33.1	02.5
5	67	22.8	283	07.1	+14 54.0	270	08.8	+10 47.0	224	27.3	-8 26.1	166	35.5	-22 02.5
6	82	25.3	298	06.5	+14 53.1	285	09.8	+10 46.4	239	29.3	-8 26.3	181	37.9	-22 02.6
7	97	27.8	313	06.0	52.2	300	10.8	45.8	254	31.3	26.5	196	40.3	02.6
8	112	30.2	328	05.4	51.4	315	11.7	45.2	269	33.3	26.7	211	42.7	02.6
9	127	32.7	343	04.9	50.5	330	12.7	44.6	284	35.3	26.8	226	45.1	02.6
10	142	35.2	358	04.4	49.6	345	13.6	44.0	299	37.3	27.0	241	47.4	02.6
11	157	37.6	13	03.8	+14 48.7	0	14.6	+10 43.5	314	39.3	-8 27.2	256	49.8	-22 02.6
12	172	40.1	28	03.3	+14 47.8	15	15.6	+10 42.9	329	41.3	-8 27.4	271	52.2	-22 02.6
13	187	42.6	43	02.7	47.0	30	16.5	42.3	344	43.3	27.6	286	54.6	02.6
14	202	45.0	58	02.2	46.1	45	17.5	41.7	359	45.3	27.8	301	57.0	02.6
15	217	47.5	73	01.7	45.2	60	18.5	41.1	14	47.3	28.0	316	59.4	02.7
16	232	49.9	88	01.1	44.3	75	19.4	40.6	29	49.3	28.1	332	01.7	02.7
17	247	52.4	103	00.6	+14 43.4	90	20.4	+10 40.0	44	51.3	-8 28.3	347	04.1	-22 02.7
18	262	54.9	118	00.0	+14 42.5	105	21.3	+10 39.4	59	53.3	-8 28.5	2	06.5	-22 02.7
19	277	57.3	132	59.5	41.6	120	22.3	38.8	74	55.3	28.7	17	08.9	02.7
20	292	59.8	147	59.0	40.8	135	23.3	38.2	89	57.3	28.9	32	11.3	02.7
21	308	02.3	162	58.4	39.9	150	24.2	37.6	104	59.3	29.1	47	13.6	02.7
22	323	04.7	177	57.9	39.0	165	25.2	37.1	120	01.3	29.3	62	16.0	02.7
23	338	07.2	192	57.4	38.1	180	26.2	36.5	135	03.3	29.4	77	18.4	02.8
24	353	09.7	207	56.8	+14 37.2	195	27.1	+10 35.9	150	05.3	-8 29.6	92	20.8	-22 02.8
Dif	—	—	-5	-9	-9	+10	-6	-6	+20	-2	-2	+24	0	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9			Edad: 23 ^d 2	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2											
	PMG: 11 ^h 55 ^m 5															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	
0	181	05.1	+3	25.2	262	02.4	+19	15.2	17	60 N	3	51	4	43	5	26
1	196	05.4		24.2	276	27.4	60	16.9	17	58	3	59	48	28	23	11
2	211	05.6		23.3	290	52.4	60	18.3	14	56	4	06	52	30	23	67
3	226	05.8		22.3	305	17.3	59	19.7	14	54	12	56	31	33	66	15
4	241	06.0		21.4	319	42.2	59	20.9	12	52	18	4	59	33	42	66
5	256	06.3	+3	20.4	334	07.2	60	+19	11	50	4	23	5	02	5	34
6	271	06.5	+3	19.4	348	32.1	59	+19	10	45	4	33	5	08	5	37
7	286	06.7		18.5	2	57.0	59	23.8	8	40	41	13	40	**	**	**
8	301	06.9		17.5	17	21.9	59	24.5	7	35	47	17	42	**	**	**
9	316	07.1		16.6	31	46.9	60	25.1	6	30	52	20	44	**	**	**
10	331	07.4		15.6	46	11.8	59	25.6	5	20	4	59	25	47	0	03
11	346	07.6	+3	14.6	60	36.7	59	+19	3	10 N	5	04	5	29	5	50
12	1	07.8	+3	13.7	75	01.6	59	+19	1	0	5	07	5	32	5	52
13	16	08.0		12.7	89	26.5	59	26.2	1	10 S	09	34	55	0	49	58
14	31	08.3		11.8	103	51.4	59	26.1	1	20	09	35	57	1	04	59
15	46	08.5		10.8	118	16.3	59	25.9	2	30	08	36	5	59	22	59
16	61	08.7		09.8	132	41.3	60	25.6	3	35	06	36	6	01	33	58
17	76	08.9	+3	08.9	147	06.2	59	+19	4	40	5	04	5	35	6	02
18	91	09.1	+3	07.9	161	31.1	59	+19	6	45	5	01	5	35	6	04
19	106	09.4		07.0	175	56.1	60	23.9	7	50	4	57	34	06	2	17
20	121	09.6		06.0	190	21.0	59	23.1	8	52	54	34	07	25	58	
21	136	09.8		05.0	204	46.0	60	22.1	10	54	52	33	08	35	57	11
22	151	10.0		04.1	219	10.9	59	21.0	11	56	49	32	09	45	57	10
23	166	10.3		03.1	233	35.9	60	19.8	12	58	46	32	11	2	57	57
24	181	10.5	+3	02.2	248	00.9	60	+19	13	60 S	4	42	5	31	6	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 27 ^m 3		Mag: -3.9 PMG: 10 ^h 09 ^m		Mag: +1.8 PMG: 10 ^h 57 ^m		Mag: -1.7 PMG: 13 ^h 58 ^m		Mag: +0.5 PMG: 17 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	353	09.7	207	56.8	+14	37.2	195	27.1	+10	35.9
1	8	12.1	222	56.3		36.3	210	28.1		35.3
2	23	14.6	237	55.7		35.4	225	29.0		34.7
3	38	17.1	252	55.2		34.5	240	30.0		34.1
4	53	19.5	267	54.7		33.6	255	31.0		33.6
5	68	22.0	282	54.1	+14	32.7	270	31.9	+10	33.0
6	83	24.4	297	53.6	+14	31.8	285	32.9	+10	32.4
7	98	26.9	312	53.1		30.9	300	33.9		31.8
8	113	29.4	327	52.5		30.0	315	34.8		31.2
9	128	31.8	342	52.0		29.1	330	35.8		30.6
10	143	34.3	357	51.5		28.2	345	36.8		30.1
11	158	36.8	12	50.9	+14	27.3	0	37.7	+10	29.5
12	173	39.2	27	50.4	+14	26.4	15	38.7	+10	28.9
13	188	41.7	42	49.9		25.5	30	39.7		28.3
14	203	44.2	57	49.3		24.6	45	40.6		27.7
15	218	46.6	72	48.8		23.7	60	41.6		27.1
16	233	49.1	87	48.3		22.8	75	42.5		26.6
17	248	51.6	102	47.8	+14	21.9	90	43.5	+10	26.0
18	263	54.0	117	47.2	+14	21.0	105	44.5	+10	25.4
19	278	56.5	132	46.7		20.1	120	45.4		24.8
20	293	58.9	147	46.2		19.2	135	46.4		24.2
21	309	01.4	162	45.6		18.3	150	47.4		23.6
22	324	03.9	177	45.1		17.4	165	48.3		23.0
23	339	06.3	192	44.6		16.5	180	49.3		22.5
24	354	08.8	207	44.0	+14	15.6	195	50.3	+10	21.9
Dif	—		-5	-9		+10	-6	+20		-2
										+24

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 24 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/1 20 ^h : 59/1											
	PMG: 11 ^h 55 ^m 1			SD: 16 ^h 1 PMG: 7 ^h 46 ^m R°: 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	m
0	181	10.5	+3 02.2	248	00.9	+19 18.5	15	60 N	18 21	19 03	19 55	** ** *	16 28	37	
1	196	10.7		262	25.9	17.0	16	58	19	18 59	47	** ** *	15	40	
2	211	10.9	+3 00.2	276	51.0	15.4	16	56	17	55	40	** ** *	16 04	42	
3	226	11.1	+2 59.3	291	16.0	13.7	17	54	16	51	34	** ** *	15 55	42	
4	241	11.4		305	41.1	11.8	19	52	15	48	29	** ** *	46	44	
5	256	11.6	+2 57.3	320	06.2	+19 09.8	20	50	18 13	18 46	19 24	** ** *	15 38	45	
6	271	11.8	+2 56.4	334	31.3	+19 07.7	21	45	18 11	18 40	19 15	0 07 64	15 22	47	
7	286	12.0		348	56.4	05.5	22	40	09	36	08	21 63	15 08	49	
8	301	12.3	54.5	3	21.5	03.2	23	35	07	32	19 02	33 62	14 57	50	
9	316	12.5	53.5	17	46.7	+19 00.7	25	30	05	29	18 57	0 44 61	47	51	
10	331	12.7	52.5	32	11.9	+18 58.1	26	20	03	25	50	1 02 60	29	54	
11	346	12.9	+2 51.6	46	37.1	+18 55.4	27	10 N	18 00	18 21	18 46	1 17 59	14 14	55	
12	1	13.2	+2 50.6	61	02.4	+18 52.5	29	0	17 58	18 19	18 43	1 32 58	14 00	57	
13	16	13.4	49.6	75	27.6	49.5	30	10 S	56	17	42	1 47 56	13 46	58	
14	31	13.6	48.7	89	52.9	46.4	31	20	55	17	42	2 03 55	30	60	
15	46	13.8	47.7	104	18.3	43.2	32	30	53	16	44	21 54	13	62	
16	61	14.0	46.8	118	43.6	39.9	33	35	51	17	46	31 53	13 02	63	
17	76	14.3	+2 45.8	133	09.0	+18 36.4	35	40	17 50	18 17	18 49	2 43 52	12 50	65	
18	91	14.5	+2 44.8	147	34.5	+18 32.8	36	45	17 49	18 18	18 52	2 57 51	12 36	67	
19	106	14.7	43.9	161	59.9	29.2	36	50	47	19	57	3 15 49	19	69	
20	121	14.9	42.9	176	25.4	25.3	39	52	46	20	18 59	23 48	11	69	
21	136	15.2	41.9	190	51.0	21.4	39	54	46	21	19 02	32 48	12 02	71	
22	151	15.4	41.0	205	16.5	17.3	41	56	45	22	05	42 47	11 52	72	
23	166	15.6	40.0	219	42.1	13.2	41	58	44	23	09	3 54 45	41	73	
24	181	15.8	+2 39.0	234	07.8	+18 08.9	43	60 S	17 43	18 24	19 13	4 07 44	11 28	74	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 23 ^m 3		Mag: -3.9 PMG: 10 ^h 09 ^m		Mag: +1.8 PMG: 10 ^h 56 ^m		Mag: -1.7 PMG: 13 ^h 55 ^m		Mag: +0.5 PMG: 17 ^h 44 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	354	08.8	207	44.0	+14 15.6	195	50.3	+10 21.9	150	53.3	-8 34.1	93 17.9	-22 03.1	
1	9	11.3	222	43.5	14.7	210	51.2	21.3	165	55.3	34.3	108 20.2	03.1	
2	24	13.7	237	43.0	13.8	225	52.2	20.7	180	57.3	34.5	123 22.6	03.1	
3	39	16.2	252	42.5	12.9	240	53.2	20.1	195	59.3	34.6	138 25.0	03.1	
4	54	18.7	267	41.9	11.9	255	54.1	19.5	211	01.3	34.8	153 27.4	03.1	
5	69	21.1	282	41.4	+14 11.0	270	55.1	+10 18.9	226	03.3	-8 35.0	168 29.7	-22 03.1	
6	84	23.6	297	40.9	+14 10.1	285	56.1	+10 18.4	241	05.3	-8 35.2	183 32.1	-22 03.2	
7	99	26.0	312	40.4	09.2	300	57.0	17.8	256	07.3	35.4	198 34.5	03.2	
8	114	28.5	327	39.8	08.3	315	58.0	17.2	271	09.3	35.6	213 36.9	03.2	
9	129	31.0	342	39.3	07.4	330	59.0	16.6	286	11.3	35.8	228 39.2	03.2	
10	144	33.4	357	38.8	06.5	345	59.9	16.0	301	13.3	35.9	243 41.6	03.2	
11	159	35.9	12	38.2	+14 05.5	1	00.9	+10 15.4	316	15.3	-8 36.1	258 44.0	-22 03.2	
12	174	38.4	27	37.7	+14 04.6	16	01.9	+10 14.8	331	17.3	-8 36.3	273 46.4	-22 03.2	
13	189	40.8	42	37.2	03.7	31	02.8	14.3	346	19.3	36.5	288 48.7	03.2	
14	204	43.3	57	36.7	02.8	46	03.8	13.7	1	21.2	36.7	303 51.1	03.3	
15	219	45.8	72	36.1	01.9	61	04.8	13.1	16	23.2	36.9	318 53.5	03.3	
16	234	48.2	87	35.6	+14 00.9	76	05.7	12.5	31	25.2	37.1	333 55.9	03.3	
17	249	50.7	102	35.1	+14 00.0	91	06.7	+10 11.9	46	27.2	-8 37.2	348 58.2	-22 03.3	
18	264	53.2	117	34.6	+13 59.1	106	07.7	+10 11.3	61	29.2	-8 37.4	4 00.6	-22 03.3	
19	279	55.6	132	34.1	58.2	121	08.6	10.7	76	31.2	37.6	19 03.0	03.3	
20	294	58.1	147	33.5	57.3	136	09.6	10.1	91	33.2	37.8	34 05.3	03.3	
21	310	00.5	162	33.0	56.3	151	10.6	09.6	106	35.2	38.0	49 07.7	03.3	
22	325	03.0	177	32.5	55.4	166	11.5	09.0	121	37.2	38.2	64 10.1	03.4	
23	340	05.5	192	32.0	54.5	181	12.5	08.4	136	39.2	38.4	79 12.5	03.4	
24	355	07.9	207	31.4	+13 53.6	196	13.5	+10 07.8	151	41.2	-8 38.6	94 14.8	-22 03.4	
Dif	—		-5		-9	+10		-6	+20		-2	+24		0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 25 ^d 2 PHE { 4 ^h : 59'0 12 ^h : 58'9 20 ^h : 58'8												
	PMG: 11 ^h 54 ^m 8			SD: 16'1 PMG: 8 ^h 43 ^m R°: 56 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m		h m m	
0	181	15.8	+2 39.0	234	07.8	+18 08.9	44	58	60 N	3 56	4 48	5 30	0 07 78	17 05 29		
1	196	16.0		248	33.4	+18 04.5	44	58		4 04	52	32	19 76	16 55 31		
2	211	16.3		262	59.2	+18 00.0	45	56		11	56	34	30 74	46 33		
3	226	16.5		277	24.9	+17 55.3	47	54		17	4 59	35	39 73	37 35		
4	241	16.7		291	50.7	50.6	47	52		22	5 02	36	48 71	30 37		
5	256	16.9	+2 34.2	306	16.6	+17 45.7	49	50		4 26	5 05	5 37	0 55 70	16 23 38		
6	271	17.2	+2 33.3	320	42.4	+17 40.8	49	45		4 36	5 10	5 40	1 11 68	16 09 41		
7	286	17.4		335	08.4	35.7	51	40		43	15	42	24 66	15 57 44		
8	301	17.6		349	34.4	30.5	52	35		49	18	44	35 64	47 46		
9	316	17.8		4	00.4	25.2	53	30		4 53	21	45	1 45 62	38 47		
10	331	18.0		18	26.4	19.8	54	20		5 00	26	48	2 02 60	23 50		
11	346	18.3	+2 28.4	32	52.5	+17 14.3	55	10 N		5 04	5 29	5 50	2 16 58	15 09 53		
12	1	18.5	+2 27.5	47	18.7	+17 08.6	57	0		5 07	5 31	5 52	2 30 56	14 57 55		
13	16	18.7		61	44.9	+17 02.9	57	10 S		08	32	53	43 54	44 57		
14	31	18.9		76	11.2	+16 57.1	58	20		08	33	55	2 58 52	30 60		
15	46	19.2		90	37.5	51.1	60	30		05	33	57	3 15 49	15 62		
16	61	19.4		105	03.8	45.1	60	35		03	33	58	24 48	14 05 65		
17	76	19.6	+2 22.6	119	30.2	+16 38.9	62	40		5 01	5 32	5 59	3 35 46	13 55 66		
18	91	19.8	+2 21.7	133	56.7	+16 32.7	62	45		4 57	5 31	6 00	3 48 44	13 43 68		
19	106	20.0		148	23.2	26.3	64	50		52	30	02	4 04 41	28 71		
20	121	20.3		162	49.7	19.9	64	52		50	29	03	11 40	20 74		
21	136	20.5		177	16.3	13.3	66	54		47	28	03	20 38	13 74		
22	151	20.7		191	43.0	+16 06.7	66	56		44	27	04	29 37	13 04 76		
23	166	20.9		206	09.7	+15 59.9	68	58		40	26	05	39 35	12 54 79		
24	181	21.2	+2 15.9	220	36.5	+15 53.1	68	60 S		4 36	5 25	6 06	4 51 32	12 42 82		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 19 ^m 4		Mag: -3.9 PMG: 10 ^h 10 ^m			Mag: +1.8 PMG: 10 ^h 54 ^m			Mag: -1.7 PMG: 13 ^h 51 ^m			Mag: +0.5 PMG: 17 ^h 40 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	355	07.9	207 31.4	+13 53.6	196 13.5	+10 07.8	151 41.2	-8 38.6	94 14.8	-22 03.4						
1	10	10.4	222 30.9	52.6	211 14.4	07.2	166 43.2	38.7	109 17.2	03.4						
2	25	12.9	237 30.4	51.7	226 15.4	06.6	181 45.2	38.9	124 19.6	03.4						
3	40	15.3	252 29.9	50.8	241 16.4	06.0	196 47.2	39.1	139 21.9	03.4						
4	55	17.8	267 29.4	49.9	256 17.4	05.4	211 49.2	39.3	154 24.3	03.4						
5	70	20.3	282 28.8	+13 48.9	271 18.3	+10 04.9	226 51.2	-8 39.5	169 26.7	03.5						
6	85	22.7	297 28.3	+13 48.0	286 19.3	+10 04.3	241 53.2	-8 39.7	184 29.1	03.5						
7	100	25.2	312 27.8	47.1	301 20.3	03.7	256 55.2	39.9	199 31.4	03.5						
8	115	27.7	327 27.3	46.1	316 21.2	03.1	271 57.2	40.0	214 33.8	03.5						
9	130	30.1	342 26.8	45.2	331 22.2	02.5	286 59.2	40.2	229 36.2	03.5						
10	145	32.6	357 26.3	44.3	346 23.2	01.9	302 01.2	40.4	244 38.5	03.5						
11	160	35.0	12 25.7	+13 43.3	1 24.1	+10 01.3	317 03.2	-8 40.6	259 40.9	03.5						
12	175	37.5	27 25.2	+13 42.4	16 25.1	+10 00.7	332 05.2	-8 40.8	274 43.3	03.5						
13	190	40.0	42 24.7	41.5	31 26.1	+10 00.1	347 07.1	41.0	289 45.7	03.6						
14	205	42.4	57 24.2	40.5	46 27.0	+9 59.6	2 09.1	41.2	304 48.0	03.6						
15	220	44.9	72 23.7	39.6	61 28.0	59.0	17 11.1	41.4	319 50.4	03.6						
16	235	47.4	87 23.1	38.7	76 29.0	58.4	32 13.1	41.5	334 52.8	03.6						
17	250	49.8	102 22.6	+13 37.7	91 30.0	+9 57.8	47 15.1	-8 41.7	349 55.1	03.6						
18	265	52.3	117 22.1	+13 36.8	106 30.9	+9 57.2	62 17.1	-8 41.9	4 57.5	03.6						
19	280	54.8	132 21.6	35.8	121 31.9	56.6	77 19.1	42.1	19 59.9	03.6						
20	295	57.2	147 21.1	34.9	136 32.9	56.0	92 21.1	42.3	35 02.2	03.6						
21	310	59.7	162 20.6	34.0	151 33.8	55.4	107 23.1	42.5	50 04.6	03.7						
22	326	02.2	177 20.1	33.0	166 34.8	54.8	122 25.1	42.7	65 07.0	03.7						
23	341	04.6	192 19.5	32.1	181 35.8	54.3	137 27.1	42.8	80 09.3	03.7						
24	356	07.1	207 19.0	+13 31.1	196 36.7	+9 53.7	152 29.1	-8 43.0	95 11.7	03.7						
Dif	—		-5	-9	+10		-6	+20	-2	+24		0				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 26 ^d 2	PHE { 4 ^h : 58 ^h /7 12 ^h : 58 ^h /6 20 ^h : 58 ^h /5										
	PMG: 11 ^h 54 ^m 4					SD: 16 ^h 0			PMG: 9 ^h 39 ^m		R°: 53 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	181	21.2	+2 15.9	220	36.5	+15 53.1	70	60 N	18 15	18 57	19 48	1 25	83	17 34	22
1	196	21.4		235	03.3	46.1	70	58	13	53	41	35	80	26	25
2	211	21.6		249	30.2	39.1	70	56	12	49	34	44	78	19	27
3	226	21.8		263	57.1	32.0	71	54	11	46	29	52	76	12	29
4	241	22.1		278	24.1	24.8	72	52	10	44	24	1 59	74	07	30
5	256	22.3	+2 11.1	292	51.1	+15 17.5	73	50	18 09	18 41	19 20	2 05	73	17 01	33
6	271	22.5	+2 10.1	307	18.2	+15 10.1	74	45	18 07	18 36	19 11	2 19	69	16 50	36
7	286	22.7		321	45.3	+15 02.6	75	40	05	32	19 04	30	66	41	38
8	301	22.9		336	12.5	+14 55.0	76	35	04	29	18 59	39	65	33	40
9	316	23.2		350	39.8	47.3	77	30	03	27	55	2 47	63	25	43
10	331	23.4		5	07.1	39.6	77	20	18 01	23	48	3 02	59	13	46
11	346	23.6	+2 05.3	19	34.5	+14 31.8	78	10 N	17 59	18 20	18 45	3 14	56	16 02	49
12	1	23.8	+2 04.3	34	01.9	+14 23.8	80	0	17 58	18 18	18 42	3 26	53	15 52	52
13	16	24.1		48	29.4	15.8	80	10 S	56	17	42	37	51	41	56
14	31	24.3		62	57.0	+14 07.8	80	20	55	17	43	3 50	48	30	59
15	46	24.5		77	24.6	+13 59.6	82	30	54	17	45	4 04	45	17	62
16	61	24.7	+2 00.4	91	52.2	51.4	82	35	53	18	47	12	43	10	64
17	76	24.9	+1 59.5	106	20.0	+13 43.1	83	40	17 52	18 19	18 51	4 21	41	15 01	67
18	91	25.2	+1 58.5	120	47.7	+13 34.7	84	45	17 51	18 20	18 55	4 32	38	14 51	70
19	106	25.4		135	15.6	26.2	85	50	50	22	19 00	45	35	39	73
20	121	25.6		149	43.5	17.6	86	52	50	23	03	51	34	34	74
21	136	25.8		164	11.4	09.0	86	54	49	24	06	4 58	32	27	77
22	151	26.1		178	39.4	+13 00.3	87	56	49	26	09	5 06	29	20	79
23	166	26.3		193	07.5	+12 51.6	87	58	48	27	13	14	27	13	81
24	181	26.5	+1 52.7	207	35.6	+12 42.7	89	60 S	17 47	18 29	19 18	5 23	25	14 04	83
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 15 ^m 5		Mag: -3.9 PMG: 10 ^h 11 ^m			Mag: +1.8 PMG: 10 ^h 53 ^m			Mag: -1.7 PMG: 13 ^h 48 ^m			Mag: +0.5 PMG: 17 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	356	07.1	207	19.0	+13 31.1	196	36.7	+9 53.7	152	29.1	-8 43.0	95	11.7	-22 03.7	
1	11	09.5	222	18.5	30.2	211	37.7	53.1	167	31.1	43.2	110	14.1	03.7	
2	26	12.0	237	18.0	29.3	226	38.7	52.5	182	33.1	43.4	125	16.4	03.7	
3	41	14.5	252	17.5	28.3	241	39.7	51.9	197	35.1	43.6	140	18.8	03.7	
4	56	16.9	267	17.0	27.4	256	40.6	51.3	212	37.1	43.8	155	21.2	03.8	
5	71	19.4	282	16.5	+13 26.4	271	41.6	+9 50.7	227	39.0	-8 44.0	170	23.5	-22 03.8	
6	86	21.9	297	16.0	+13 25.5	286	42.6	+9 50.1	242	41.0	-8 44.2	185	25.9	-22 03.8	
7	101	24.3	312	15.4	24.5	301	43.5	49.5	257	43.0	44.3	200	28.3	03.8	
8	116	26.8	327	14.9	23.6	316	44.5	48.9	272	45.0	44.5	215	30.6	03.8	
9	131	29.3	342	14.4	22.6	331	45.5	48.3	287	47.0	44.7	230	33.0	03.8	
10	146	31.7	357	13.9	21.7	346	46.5	47.8	302	49.0	44.9	245	35.4	03.8	
11	161	34.2	12	13.4	+13 20.7	1	47.4	+9 47.2	317	51.0	-8 45.1	260	37.7	-22 03.8	
12	176	36.6	27	12.9	+13 19.8	16	48.4	+9 46.6	332	53.0	-8 45.3	275	40.1	-22 03.9	
13	191	39.1	42	12.4	18.8	31	49.4	46.0	347	55.0	45.5	290	42.5	03.9	
14	206	41.6	57	11.9	17.9	46	50.3	45.4	2	57.0	45.7	305	44.8	03.9	
15	221	44.0	72	11.4	16.9	61	51.3	44.8	17	59.0	45.8	320	47.2	03.9	
16	236	46.5	87	10.8	16.0	76	52.3	44.2	33	01.0	46.0	335	49.6	03.9	
17	251	49.0	102	10.3	+13 15.0	91	53.3	+9 43.6	48	03.0	-8 46.2	350	51.9	-22 03.9	
18	266	51.4	117	09.8	+13 14.1	106	54.2	+9 43.0	63	04.9	-8 46.4	5	54.3	-22 03.9	
19	281	53.9	132	09.3	13.1	121	55.2	42.4	78	06.9	46.6	20	56.7	04.0	
20	296	56.4	147	08.8	12.2	136	56.2	41.8	93	08.9	46.8	35	59.0	04.0	
21	311	58.8	162	08.3	11.2	151	57.1	41.2	108	10.9	47.0	51	01.4	04.0	
22	327	01.3	177	07.8	10.3	166	58.1	40.7	123	12.9	47.2	66	03.8	04.0	
23	342	03.8	192	07.3	09.3	181	59.1	40.1	138	14.9	47.3	81	06.1	04.0	
24	357	06.2	207	06.8	+13 08.3	197	00.1	+9 39.5	153	16.9	-8 47.5	96	08.5	-22 04.0	
Dif	—		-5		-10	+10		-6	+20		-2	+24		0	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 54 ^m 1			Edad: 27 ^d 2 PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 58'1 Rº: 50 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	26.5	+1 52.7	207	35.6	+12 42.7	89	58	60 N	4 02	4 53	5 35	2 48	84	17 56	19	19
1	196	26.7	51.7	222	03.8	92	33.8	89	58	09	4 57	36	2 55	81	51	21	21
2	211	26.9	50.7	236	32.0	92	24.9	89	56	15	5 00	38	3 02	78	46	23	23
3	226	27.2	49.8	251	00.3	93	15.8	91	54	21	03	39	08	76	41	25	25
4	241	27.4	48.8	265	28.7	94	+12 06.7	91	52	25	06	40	13	74	37	27	27
5	256	27.6	+1 47.8	279	57.1	94	+11 57.6	91	50	4 29	5 08	5 40	3 18	72	17 34	28	28
6	271	27.8	+1 46.9	294	25.6	95	+11 48.3	93	45	4 38	5 13	5 42	3 28	69	17 26	32	32
7	286	28.1	45.9	308	54.1	95	39.1	92	40	45	17	44	36	66	19	35	35
8	301	28.3	44.9	323	22.7	96	29.7	94	35	50	20	45	44	63	13	38	38
9	316	28.5	44.0	337	51.4	97	20.3	94	30	4 54	22	46	3 50	61	17 08	40	40
10	331	28.7	43.0	352	20.1	97	10.8	95	20	5 00	26	48	4 01	57	16 59	44	44
11	346	28.9	+1 42.0	6	48.8	97	+11 01.3	95	10 N	5 04	5 28	5 50	4 10	55	16 51	47	47
12	1	29.2	+1 41.1	21	17.6	98	+10 51.7	96	0	5 06	5 30	5 51	4 19	51	16 44	50	50
13	16	29.4	40.1	35	46.5	99	42.1	96	10 S	07	31	52	28	48	37	53	53
14	31	29.6	39.1	50	15.4	99	32.4	97	20	06	31	53	38	45	29	56	56
15	46	29.8	38.2	64	44.4	100	22.6	98	30	03	31	54	49	41	19	61	61
16	61	30.0	37.2	79	13.5	101	12.8	98	35	5 01	30	55	4 55	39	14	63	63
17	76	30.3	+1 36.2	93	42.6	101	+10 03.0	98	40	4 57	5 29	5 56	5 02	36	16 08	66	66
18	91	30.5	+1 35.2	108	11.7	101	+9 53.1	99	45	4 53	5 27	5 57	5 10	34	16 01	68	68
19	106	30.7	34.3	122	40.9	102	43.1	100	50	48	25	57	20	30	15 52	73	73
20	121	30.9	33.3	137	10.2	103	33.1	100	52	45	24	58	25	28	48	74	74
21	136	31.2	32.3	151	39.5	103	23.1	100	54	42	23	58	30	26	44	76	76
22	151	31.4	31.4	166	08.9	104	13.0	101	56	38	22	59	35	25	39	78	78
23	166	31.6	30.4	180	38.3	104	+9 02.9	101	58	34	20	5 59	41	23	34	80	80
24	181	31.8	+1 29.4	195	07.8	105	+8 52.7	102	60 S	4 29	5 18	6 00	5 48	20	15 27	84	84
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 11 ^m 6			Mag: -3.9 PMG: 10 ^h 12 ^m			Mag: +1.8 PMG: 10 ^h 51 ^m			Mag: -1.7 PMG: 13 ^h 45 ^m			Mag: +0.5 PMG: 17 ^h 33 ^m				
	hG ♂		Dec	hG ♀		Dec	hG ♂		Dec	hG ♀		Dec	hG ♀		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	357	06.2	207 06.8	+13 08.3	197 00.1	+9 39.5	153 16.9	-8 47.5	96 08.5	-22 04.0	04.0	04.0	111 10.8	04.0	04.0	04.0	04.0
1	12	08.7	222 06.3	07.4	212 01.0	38.9	168 18.9	47.7	111 10.8	04.0	04.0	126 13.2	04.0	04.0	04.0	04.0	04.0
2	27	11.1	237 05.8	06.4	227 02.0	38.3	183 20.9	47.9	141 15.6	04.1	04.1	141 15.6	04.1	04.1	04.1	04.1	04.1
3	42	13.6	252 05.3	05.5	242 03.0	37.7	198 22.9	48.1	156 17.9	04.1	04.1	156 17.9	04.1	04.1	04.1	04.1	04.1
4	57	16.1	267 04.8	04.5	257 03.9	37.1	213 24.9	48.3	171 20.3	-22 04.1	04.1	171 20.3	-22 04.1	04.1	04.1	04.1	04.1
5	72	18.5	282 04.3	+13 03.5	272 04.9	+9 36.5	228 26.9	-8 48.5	186 22.7	-22 04.1	04.1	186 22.7	-22 04.1	04.1	04.1	04.1	04.1
6	87	21.0	297 03.8	+13 02.6	287 05.9	+9 35.9	243 28.8	-8 48.7	201 25.0	04.1	04.1	201 25.0	04.1	04.1	04.1	04.1	04.1
7	102	23.5	312 03.2	01.6	302 06.9	35.3	258 30.8	48.8	216 27.4	04.1	04.1	216 27.4	04.1	04.1	04.1	04.1	04.1
8	117	25.9	327 02.7	+13 00.6	317 07.8	34.7	273 32.8	49.0	231 29.7	04.1	04.1	231 29.7	04.1	04.1	04.1	04.1	04.1
9	132	28.4	342 02.2	+12 59.7	332 08.8	34.1	288 34.8	49.2	246 32.1	04.2	04.2	246 32.1	04.2	04.2	04.2	04.2	04.2
10	147	30.9	357 01.7	58.7	347 09.8	33.5	303 36.8	49.4	261 34.5	-22 04.2	04.2	261 34.5	-22 04.2	04.2	04.2	04.2	04.2
11	162	33.3	12 01.2	+12 57.8	2 10.8	+9 32.9	318 38.8	-8 49.6	276 36.8	-22 04.2	04.2	276 36.8	-22 04.2	04.2	04.2	04.2	04.2
12	177	35.8	27 00.7	+12 56.8	17 11.7	+9 32.4	333 40.8	-8 49.8	291 39.2	04.2	04.2	291 39.2	04.2	04.2	04.2	04.2	04.2
13	192	38.2	42 00.2	55.8	32 12.7	31.8	348 42.8	50.0	306 41.6	04.2	04.2	306 41.6	04.2	04.2	04.2	04.2	04.2
14	207	40.7	56 59.7	54.9	47 13.7	31.2	3 44.8	50.2	321 43.9	04.2	04.2	321 43.9	04.2	04.2	04.2	04.2	04.2
15	222	43.2	71 59.2	53.9	62 14.7	30.6	18 46.8	50.3	336 46.3	04.2	04.2	336 46.3	04.2	04.2	04.2	04.2	04.2
16	237	45.6	86 58.7	52.9	77 15.6	30.0	33 48.7	50.5	351 48.6	-22 04.2	04.2	351 48.6	-22 04.2	04.2	04.2	04.2	04.2
17	252	48.1	101 58.2	+12 52.0	92 16.6	+9 29.4	48 50.7	-8 50.7	6 51.0	-22 04.3	04.3	6 51.0	-22 04.3	04.3	04.3	04.3	04.3
18	267	50.6	116 57.7	+12 51.0	107 17.6	+9 28.8	63 52.7	-8 50.9	21 53.4	04.3	04.3	21 53.4	04.3	04.3	04.3	04.3	04.3
19	282	53.0	131 57.2	50.0	122 18.6	28.2	78 54.7	51.1	36 55.7	04.3	04.3	36 55.7	04.3	04.3	04.3	04.3	04.3
20	297	55.5	146 56.7	49.0	137 19.5	27.6	93 56.7	51.3	51 58.1	04.3	04.3	51 58.1	04.3	04.3	04.3	04.3	04.3
21	312	58.0	161 56.2	48.1	152 20.5	27.0	108 58.7	51.5	67 00.4	04.3	04.3	67 00.4	04.3	04.3	04.3	04.3	04.3
22	328	00.4	176 55.7	47.1	167 21.5	26.4	124 00.7	51.7	82 02.8	04.3	04.3	82 02.8	04.3	04.3	04.3	04.3	04.3
23	343	02.9	191 55.2	46.1	182 22.5	25.8	139 02.7	51.8	97 05.2	-22 04.3	04.3	97 05.2	-22 04.3	04.3	04.3	04.3	04.3
24	358	05.4	206 54.7	+12 45.2	197 23.4	+9 25.2	154 04.7	-8 52.0									
Dif	—		-5	-10	+10		-6	+20		-2	+24		0				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 28 ^d 2 PHE { 4 ^h : 57/9 12 ^h : 57/7 20 ^h : 57/5 R°: 49 ^m											
	PMG: 11 ^h 53 ^m 7			SD: 15°8 PMG: 11 ^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		h m m		
0	181	31.8	+1 29.4	195	07.8	+8 52.7	60 N	18 09	18 50	19 41	4 12 82		18 15 16		
1	196	32.0	28.5	209	37.3 ¹⁰⁵	42.5 ¹⁰²	58	08	47	34	16 80		12 18		
2	211	32.3	27.5	224	06.9 ¹⁰⁶	32.3 ¹⁰²	56	07	44	28	20 78		09 21		
3	226	32.5	26.5	238	36.5 ¹⁰⁶	22.0 ¹⁰³	54	06	41	23	24 75		06 22		
4	241	32.7	25.6	253	06.2 ¹⁰⁷	11.6 ¹⁰⁴	52	05	39	19	27 74		04 25		
5	256	32.9	+1 24.6	267	36.0 ¹⁰⁸	+8 01.3 ¹⁰³	50	18 05	18 37	19 15	4 30 72		18 02 26		
6	271	33.2	+1 23.6	282	05.8 ¹⁰⁸	+7 50.9 ¹⁰⁴	45	18 03	18 32	19 07	4 37 68		17 58 29		
7	286	33.4	22.6	296	35.6 ¹⁰⁸	40.4 ¹⁰⁵	40	02	29	19 01	42 65		54 33		
8	301	33.6	21.7	311	05.5 ¹⁰⁹	30.0 ¹⁰⁴	35	01	26	18 56	47 62		51 35		
9	316	33.8	20.7	325	35.5 ¹¹⁰	19.5 ¹⁰⁵	30	18 00	24	52	51 60		48 37		
10	331	34.0	19.7	340	05.5 ¹¹⁰	+7 08.9 ¹⁰⁶	20	17 59	21	47	4 58 56		43 41		
11	346	34.3	+1 18.8	354	35.5 ¹¹⁰	+6 58.4 ¹⁰⁵	10 N	17 58	18 19	18 43	5 05 52		17 38 45		
12	1	34.5	+1 17.8	9	05.6 ¹¹¹	+6 47.8 ¹⁰⁶	0	17 57	18 18	18 42	5 10 49		17 34 48		
13	16	34.7	16.8	23	35.7 ¹¹¹	37.2 ¹⁰⁶	10 S	56	17	42	16 46		30 51		
14	31	34.9	15.9	38	05.9 ¹¹²	26.5 ¹⁰⁷	20	55	17	43	23 42		25 55		
15	46	35.1	14.9	52	36.2 ¹¹³	15.8 ¹⁰⁷	30	55	19	46	30 38		20 59		
16	61	35.4	13.9	67	06.5 ¹¹³	+6 05.1 ¹⁰⁷	35	54	20	49	34 36		17 61		
17	76	35.6	+1 12.9	81	36.8 ¹¹³	+5 54.4 ¹⁰⁷	40	17 54	18 21	18 52	5 38 34		17 14 64		
18	91	35.8	+1 12.0	96	07.2 ¹¹⁴	+5 43.7 ¹⁰⁷	45	17 54	18 23	18 57	5 44 30		17 09 68		
19	106	36.0	11.0	110	37.6 ¹¹⁴	32.9 ¹⁰⁸	50	53	25	19 03	50 27		05 71		
20	121	36.3	10.0	125	08.1 ¹¹⁵	22.1 ¹⁰⁸	52	53	27	06	53 25		02 73		
21	136	36.5	09.1	139	38.6 ¹¹⁵	11.3 ¹⁰⁸	54	53	28	10	5 56 24		17 00 74		
22	151	36.7	08.1	154	09.1 ¹¹⁵	+5 00.5 ¹⁰⁸	56	52	30	13	6 00 21		16 57 77		
23	166	36.9	07.1	168	39.8 ¹¹⁷	+4 49.7 ¹⁰⁸	58	52	31	18	04 19		54 79		
24	181	37.1	+1 06.1	183	10.4 ¹¹⁶	+4 38.8 ¹⁰⁹	60 S	17 52	18 33	19 23	6 08 17		16 51 81		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 07 ^m 6		Mag: -3.9 PMG: 10 ^h 13 ^m			Mag: +1.8 PMG: 10 ^h 50 ^m			Mag: -1.7 PMG: 13 ^h 42 ^m			Mag: +0.5 PMG: 17 ^h 29 ^m			
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	358	05.4	206 54.7	+12 45.2	197 23.4	+9 25.2	154 04.7	-8 52.0	97 05.2	-22 04.3					
1	13	07.8	221 54.2	44.2	212 24.4	24.6	169 06.6	52.2	112 07.5	04.4					
2	28	10.3	236 53.7	43.2	227 25.4	24.0	184 08.6	52.4	127 09.9	04.4					
3	43	12.7	251 53.2	42.2	242 26.4	23.4	199 10.6	52.6	142 12.2	04.4					
4	58	15.2	266 52.7	41.3	257 27.3	22.8	214 12.6	52.8	157 14.6	04.4					
5	73	17.7	281 52.2	+12 40.3	272 28.3	+9 22.2	229 14.6	-8 53.0	172 16.9	-22 04.4					
6	88	20.1	296 51.7	+12 39.3	287 29.3	+9 21.7	244 16.6	-8 53.2	187 19.3	-22 04.4					
7	103	22.6	311 51.2	38.3	302 30.3	21.1	259 18.6	53.3	202 21.7	04.4					
8	118	25.1	326 50.7	37.3	317 31.2	20.5	274 20.6	53.5	217 24.0	04.4					
9	133	27.5	341 50.2	36.4	332 32.2	19.9	289 22.6	53.7	232 26.4	04.5					
10	148	30.0	356 49.7	35.4	347 33.2	19.3	304 24.5	53.9	247 28.7	04.5					
11	163	32.5	11 49.3	+12 34.4	2 34.2	+9 18.7	319 26.5	-8 54.1	262 31.1	-22 04.5					
12	178	34.9	26 48.8	+12 33.4	17 35.1	+9 18.1	334 28.5	-8 54.3	277 33.5	-22 04.5					
13	193	37.4	41 48.3	32.4	32 36.1	17.5	349 30.5	54.5	292 35.8	04.5					
14	208	39.9	56 47.8	31.5	47 37.1	16.9	4 32.5	54.7	307 38.2	04.5					
15	223	42.3	71 47.3	30.5	62 38.1	16.3	19 34.5	54.8	322 40.5	04.5					
16	238	44.8	86 46.8	29.5	77 39.0	15.7	34 36.5	55.0	337 42.9	04.6					
17	253	47.2	101 46.3	+12 28.5	92 40.0	+9 15.1	49 38.5	-8 55.2	352 45.2	-22 04.6					
18	268	49.7	116 45.8	+12 27.5	107 41.0	+9 14.5	64 40.4	-8 55.4	7 47.6	-22 04.6					
19	283	52.2	131 45.3	26.5	122 42.0	13.9	79 42.4	55.6	22 50.0	04.6					
20	298	54.6	146 44.8	25.5	137 42.9	13.3	94 44.4	55.8	37 52.3	04.6					
21	313	57.1	161 44.3	24.6	152 43.9	12.7	109 46.4	56.0	52 54.7	04.6					
22	328	59.6	176 43.8	23.6	167 44.9	12.1	124 48.4	56.2	67 57.0	04.6					
23	344	02.0	191 43.3	22.6	182 45.9	11.5	139 50.4	56.4	82 59.4	04.7					
24	359	04.5	206 42.8	+12 21.6	197 46.8	+9 10.9	154 52.4	-8 56.5	98 01.7	-22 04.7					
Dif	—		-5	-10	+10	-6	+20	-2	+24	0					

ALMANAQUE NÁUTICO PERSEUS

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 53 ^m 0		Edad: 30 ^d 2 PHE { 4 ^h : 56/7 12 ^h : 56/5 20 ^h : 56/3 PMG: 12 ^h 58 ^m R°: 46 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	181	42.4	+0	42.8	171	37.6	+0	16.1	60 N	18 02	18 44	19 34	6 54 79	18 46 16				
1	196	42.7		41.9	186	09.1 ¹²⁵	+0	05.2 ¹⁰⁹	58	02	41	28	54 76	48 18				
2	211	42.9		40.9	200	40.7 ¹²⁶	-0	05.7 ¹⁰⁹	56	01	38	23	53 74	50 20				
3	226	43.1		39.9	215	12.3 ¹²⁶		16.6 ¹⁰⁹	54	01	36	18	53 71	51 22				
4	241	43.3		38.9	229	44.0 ¹²⁷		27.5 ¹⁰⁹	52	00	34	14	52 70	52 24				
5	256	43.5	+0	38.0	244	15.7 ¹²⁷	-0	38.4 ¹⁰⁹	50	18 00	18 32	19 10	6 52 68	18 53 25				
6	271	43.8	+0	37.0	258	47.4 ¹²⁷	-0	49.3 ¹⁰⁹	45	17 59	18 29	19 03	6 51 65	18 56 28				
7	286	44.0		36.0	273	19.1 ¹²⁷	-1	00.1 ¹⁰⁸	40	59	26	18 57	50 62	18 58 31				
8	301	44.2		35.1	287	50.8 ¹²⁷		11.0 ¹⁰⁹	35	58	23	53	50 59	19 00 34				
9	316	44.4		34.1	302	22.6 ¹²⁸		21.8 ¹⁰⁸	30	58	22	49	49 57	01 36				
10	331	44.6		33.1	316	54.4 ¹²⁸		32.6 ¹⁰⁸	20	57	19	45	48 53	04 40				
11	346	44.9	+0	32.1	331	26.2 ¹²⁸	-1	43.4 ¹⁰⁸	10 N	17 57	18 18	18 42	6 48 49	19 07 43				
12	1	45.1	+0	31.2	345	58.1 ¹²⁹	-1	54.2 ¹⁰⁸	0	17 56	18 17	18 41	6 47 46	19 09 46				
13	16	45.3		30.2	0	30.0 ¹²⁹	-2	04.9 ¹⁰⁷	10 S	56	17	41	46 43	11 49				
14	31	45.5		29.2	15	01.9 ¹²⁹		15.7 ¹⁰⁸	20	56	18	43	45 40	14 52				
15	46	45.7		28.3	29	33.8 ¹²⁹		26.4 ¹⁰⁷	30	56	20	47	45 35	17 56				
16	61	46.0		27.3	44	05.7 ¹²⁹		37.1 ¹⁰⁷	35	56	21	51	44 34	18 59				
17	76	46.2	+0	26.3	58	37.7 ¹³⁰	-2	47.8 ¹⁰⁷	40	17 56	18 23	18 54	6 44 31	19 20 61				
18	91	46.4	+0	25.3	73	09.6 ¹²⁹	-2	58.4 ¹⁰⁶	45	17 56	18 25	19 00	6 43 28	19 22 64				
19	106	46.6		24.4	87	41.6 ¹³⁰	-3	09.0 ¹⁰⁶	50	56	28	06	42 25	25 67				
20	121	46.8		23.4	102	13.7 ¹³¹		19.6 ¹⁰⁶	52	56	30	10	42 23	26 69				
21	136	47.1		22.4	116	45.7 ¹³⁰		30.2 ¹⁰⁶	54	56	32	13	42 21	27 71				
22	151	47.3		21.4	131	17.7 ¹³⁰		40.8 ¹⁰⁶	56	56	34	18	41 20	28 73				
23	166	47.5		20.5	145	49.8 ¹³¹	-3	51.3 ¹⁰⁵	58	56	36	23	41 18	30 75				
24	181	47.7	+0	19.5	160	21.9 ¹³¹	-4	01.8 ¹⁰⁵	60 S	17 57	18 38	19 28	6 41 15	19 32 77				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 55 ^m 8		Mag: -3.9 PMG: 10 ^h 14 ^m			Mag: +1.8 PMG: 10 ^h 47 ^m			Mag: -1.7 PMG: 13 ^h 36 ^m			Mag: +0.5 PMG: 17 ^h 21 ^m						
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♊	Dec		hG ♏	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	0	03.6	206	31.1	+11	57.7	198	10.3	+8	56.6	155	40.0	-9	01.1	98	58.2	-22	05.0
1	15	06.1	221	30.6		56.7	213	11.3		56.0	170	42.0		01.3	114	00.6		05.0
2	30	08.6	236	30.1		55.7	228	12.3		55.4	185	44.0		01.4	129	02.9		05.0
3	45	11.0	251	29.7		54.7	243	13.3		54.8	200	46.0		01.6	144	05.3		05.0
4	60	13.5	266	29.2		53.7	258	14.2		54.2	215	48.0		01.8	159	07.6		05.1
5	75	15.9	281	28.7	+11	52.7	273	15.2	+8	53.6	230	49.9	-9	02.0	174	10.0	-22	05.1
6	90	18.4	296	28.2	+11	51.7	288	16.2	+8	53.0	245	51.9	-9	02.2	189	12.3	-22	05.1
7	105	20.9	311	27.7		50.7	303	17.2		52.4	260	53.9		02.4	204	14.7		05.1
8	120	23.3	326	27.2		49.6	318	18.2		51.8	275	55.9		02.6	219	17.0		05.1
9	135	25.8	341	26.8		48.6	333	19.1		51.2	290	57.9		02.8	234	19.4		05.1
10	150	28.3	356	26.3		47.6	348	20.1		50.6	305	59.9		03.0	249	21.7		05.1
11	165	30.7	11	25.8	+11	46.6	3	21.1	+8	50.0	321	01.8	-9	03.1	264	24.1	-22	05.1
12	180	33.2	26	25.3	+11	45.6	18	22.1	+8	49.4	336	03.8	-9	03.3	279	26.4	-22	05.2
13	195	35.7	41	24.8		44.6	33	23.1		48.8	351	05.8		03.5	294	28.8		05.2
14	210	38.1	56	24.4		43.6	48	24.0		48.2	6	07.8		03.7	309	31.1		05.2
15	225	40.6	71	23.9		42.6	63	25.0		47.6	21	09.8		03.9	324	33.5		05.2
16	240	43.1	86	23.4		41.6	78	26.0		47.0	36	11.8		04.1	339	35.8		05.2
17	255	45.5	101	22.9	+11	40.5	93	27.0	+8	46.4	51	13.7	-9	04.3	354	38.1	-22	05.2
18	270	48.0	116	22.4	+11	39.5	108	28.0	+8	45.8	66	15.7	-9	04.5	9	40.5	-22	05.2
19	285	50.4	131	22.0		38.5	123	28.9		45.2	81	17.7		04.6	24	42.8		05.3
20	300	52.9	146	21.5		37.5	138	29.9		44.6	96	19.7		04.8	39	45.2		05.3
21	315	55.4	161	21.0		36.5	153	30.9		44.0	111	21.7		05.0	54	47.5		05.3
22	330	57.8	176	20.5		35.5	168	31.9		43.4	126	23.7		05.2	69	49.9		05.3
23	346	00.3	191	20.0		34.5	183	32.9		42.8	141	25.6		05.4	84	52.2		05.3
24	1	02.8	206	19.6	+11	33.4	198	33.8	+8	42.2	156	27.6	-9	05.6	99	54.6	-22	05.3
Dif	—		-5		-10		+10		-6		+20		-2		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 52 ^m 6			Edad: 1 ^d 8 SD: 15'3 PMG: 13 ^h 44 ^m	PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7 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	181	47.7	+0	19.5	160	21.9	-4 01.8	60 N	4 13	5 03	5 44	8 13	76	19 02	17			
1	196	47.9		18.5	174	54.0 ¹³¹	12.2 ¹⁰⁴	58	19	06	45	10	73	06	19			
2	211	48.2		17.6	189	26.1 ¹³¹	22.7 ¹⁰⁵	56	24	08	45	07	71	10	21			
3	226	48.4		16.6	203	58.3 ¹³²	33.1 ¹⁰⁴	54	28	10	46	04	70	13	23			
4	241	48.6		15.6	218	30.4 ¹³¹	43.4 ¹⁰³	52	32	12	46	02	68	16	25			
5	256	48.8	+0	14.6	233	02.6 ¹³²	-4 53.8 ¹⁰⁴	50	4 36	5 14	5 46	8 00	66	19 18	27			
6	271	49.0	+0	13.7	247	34.7 ¹³¹	-5 04.1 ¹⁰³	45	4 43	5 18	5 47	7 56	62	19 24	30			
7	286	49.3		12.7	262	06.9 ¹³²	14.4 ¹⁰³	40	49	21	48	52	60	29	32			
8	301	49.5		11.7	276	39.1 ¹³²	24.6 ¹⁰²	35	53	23	48	49	57	34	34			
9	316	49.7		10.7	291	11.4 ¹³³	34.8 ¹⁰²	30	4 57	24	48	46	55	37	37			
10	331	49.9		09.8	305	43.6 ¹³²	45.0 ¹⁰²	20	5 01	27	49	41	52	44	40			
11	346	50.1	+0	08.8	320	15.8 ¹³²	-5 55.1 ¹⁰¹	10 N	5 04	5 28	5 49	7 37	49	19 50	42			
12	1	50.4	+0	07.8	334	48.1 ¹³³	-6 05.2 ¹⁰¹	0	5 05	5 29	5 49	7 33	46	19 55	46			
13	16	50.6		06.9	349	20.3 ¹³²	15.3 ¹⁰¹	10 S	04	29	50	29	43	20 00	49			
14	31	50.8		05.9	3	52.6 ¹³³	25.3 ¹⁰⁰	20	5 02	28	50	25	40	06	52			
15	46	51.0		04.9	18	24.9 ¹³³	35.3 ¹⁰⁰	30	4 58	26	49	20	36	13	55			
16	61	51.2		03.9	32	57.2 ¹³³	45.2 ⁹⁹	35	55	24	49	18	34	17	57			
17	76	51.5	+0	03.0	47	29.5 ¹³³	-6 55.1 ⁹⁹	40	4 51	5 22	5 49	7 15	31	20 21	59			
18	91	51.7	+0	02.0	62	01.8 ¹³³	-7 05.0 ⁹⁹	45	4 45	5 20	5 49	7 11	29	20 26	62			
19	106	51.9	+0	01.0	76	34.1 ¹³³	14.8 ⁹⁸	50	39	16	49	07	26	32	65			
20	121	52.1	+0	00.0	91	06.4 ¹³³	24.6 ⁹⁸	52	35	15	49	05	24	35	67			
21	136	52.3	-0	00.9	105	38.7 ¹³³	34.3 ⁹⁷	54	31	13	48	03	23	38	68			
22	151	52.5		01.9	120	11.0 ¹³³	44.0 ⁹⁷	56	27	11	48	7 01	21	41	71			
23	166	52.8		02.9	134	43.4 ¹³⁴	-7 53.7 ⁹⁷	58	22	09	48	6 59	18	45	73			
24	181	53.0	-0	03.9	149	15.7 ¹³³	-8 03.3 ⁹⁶	60 S	4 16	5 06	5 48	6 56	16	20 49	75			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 23 ^h 51 ^m 9			Mag: -3.9 PMG: 10 ^h 15 ^m			Mag: +1.8 PMG: 10 ^h 45 ^m			Mag: -1.7 PMG: 13 ^h 32 ^m			Mag: +0.5 PMG: 17 ^h 18 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	1	02.8	206	19.6	+11	33.4	198	33.8	+8	42.2	156	27.6	-9	05.6	99	54.6	-22	05.3
1	16	05.2	221	19.1		32.4	213	34.8		41.6	171	29.6		05.8	114	56.9		05.3
2	31	07.7	236	18.6		31.4	228	35.8		41.0	186	31.6		06.0	129	59.3		05.4
3	46	10.2	251	18.1		30.4	243	36.8		40.4	201	33.6		06.2	145	01.6		05.4
4	61	12.6	266	17.7		29.4	258	37.8		39.8	216	35.6		06.4	160	04.0		05.4
5	76	15.1	281	17.2	+11	28.3	273	38.8	+8	39.2	231	37.5	-9	06.5	175	06.3	-22	05.4
6	91	17.5	296	16.7	+11	27.3	288	39.7	+8	38.6	246	39.5	-9	06.7	190	08.7	-22	05.4
7	106	20.0	311	16.2		26.3	303	40.7		38.0	261	41.5		06.9	205	11.0		05.4
8	121	22.5	326	15.8		25.3	318	41.7		37.4	276	43.5		07.1	220	13.4		05.4
9	136	24.9	341	15.3		24.3	333	42.7		36.8	291	45.5		07.3	235	15.7		05.5
10	151	27.4	356	14.8		23.2	348	43.7		36.2	306	47.4		07.5	250	18.0		05.5
11	166	29.9	11	14.3	+11	22.2	3	44.6	+8	35.6	321	49.4	-9	07.7	265	20.4	-22	05.5
12	181	32.3	26	13.9	+11	21.2	18	45.6	+8	35.0	336	51.4	-9	07.9	280	22.7	-22	05.5
13	196	34.8	41	13.4		20.2	33	46.6		34.4	351	53.4		08.1	295	25.1		05.5
14	211	37.3	56	12.9		19.1	48	47.6		33.8	6	55.4		08.2	310	27.4		05.5
15	226	39.7	71	12.4		18.1	63	48.6		33.2	21	57.4		08.4	325	29.8		05.5
16	241	42.2	86	12.0		17.1	78	49.6		32.6	36	59.3		08.6	340	32.1		05.6
17	256	44.7	101	11.5	+11	16.1	93	50.5	+8	32.0	52	01.3	-9	08.8	355	34.5	-22	05.6
18	271	47.1	116	11.0	+11	15.0	108	51.5	+8	31.3	67	03.3	-9	09.0	10	36.8	-22	05.6
19	286	49.6	131	10.5		14.0	123	52.5		30.7	82	05.3		09.2	25	39.1		05.6
20	301	52.0	146	10.1		13.0	138	53.5		30.1	97	07.3		09.4	40	41.5		05.6
21	316	54.5	161	09.6		11.9	153	54.5		29.5	112	09.2		09.6	55	43.8		05.6
22	331	57.0	176	09.1		10.9	168	55.5		28.9	127	11.2		09.8	70	46.2		05.6
23	346	59.4	191	08.7		09.9	183	56.4		28.3	142	13.2		09.9	85	48.5		05.7
24	2	01.9	206	08.2	+11	08.8	198	57.4	+8	27.7	157	15.2	-9	10.1	100	50.9	-22	05.7
Dif	—			-5 -10			+10 -6			+20 -2			+23 0					

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 52 ^m 3		Edad: 2 ^d 8 PHE { 4 ^h : 55/5 12 ^h : 55/3 20 ^h : 55/2 R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	53.0	-0	03.9	149	15.7	-8 03.3	60 N	17 56	18 38	19 28	9 29 74	19 19 20	20
1	196	53.2		04.8	163	48.0 ¹³³	12.9 ⁹⁶	58	56	35	22	23 72	25 22	
2	211	53.4		05.8	178	20.4 ¹³⁴	22.4 ⁹⁵	56	56	33	17	18 70	31 24	
3	226	53.6		06.8	192	52.7 ¹³³	31.8 ⁹⁴	54	56	31	13	14 67	36 26	
4	241	53.9		07.7	207	25.1 ¹³⁴	41.3 ⁹⁵	52	56	29	09	10 66	41 27	
5	256	54.1	-0	08.7	221	57.4 ¹³³	-8 50.6 ⁹³	50	17 56	18 28	19 06	9 06 65	19 45 29	
6	271	54.3	-0	09.7	236	29.8 ¹³⁴	-9 00.0 ⁹⁴	45	17 56	18 25	18 59	8 58 62	19 54 31	
7	286	54.5		10.7	251	02.2 ¹³⁴	-9 09.2 ⁹²	40	55	22	54	52 58	20 01 34	
8	301	54.7		11.6	265	34.5 ¹³³	18.5 ⁹³	35	55	21	50	46 57	08 36	
9	316	54.9		12.6	280	06.9 ¹³⁴	27.6 ⁹¹	30	55	19	47	41 55	14 37	
10	331	55.2		13.6	294	39.2 ¹³³	36.8 ⁹²	20	55	17	43	33 51	24 40	
11	346	55.4	-0	14.6	309	11.6 ¹³⁴	-9 45.8 ⁹⁰	10 N	17 55	18 16	18 41	8 26 48	20 32 44	
12	1	55.6	-0	15.5	323	44.0 ¹³⁴	-9 54.9 ⁹¹	0	17 56	18 16	18 40	8 19 45	20 41 45	
13	16	55.8		16.5	338	16.3 ¹³³	-10 03.8 ⁸⁹	10 S	56	17	41	12 43	49 48	
14	31	56.0		17.5	352	48.7 ¹³⁴	12.7 ⁸⁹	20	56	18	44	8 05 40	20 58 51	
15	46	56.3		18.5	7	21.0 ¹³³	21.6 ⁸⁹	30	57	21	49	7 56 37	21 08 54	
16	61	56.5		19.4	21	53.4 ¹³⁴	30.4 ⁸⁸	35	57	23	52	52 35	14 55	
17	76	56.7	-0	20.4	36	25.7 ¹³³	-10 39.2 ⁸⁸	40	17 58	18 25	18 56	7 46 33	21 20 58	
18	91	56.9	-0	21.4	50	58.1 ¹³⁴	-10 47.9 ⁸⁷	45	17 58	18 28	19 02	7 40 31	21 28 60	
19	106	57.1		22.3	65	30.4 ¹³³	-10 56.5 ⁸⁶	50	59	31	10	33 27	37 63	
20	121	57.3		23.3	80	02.8 ¹³⁴	-11 05.1 ⁸⁶	52	17 59	33	13	29 26	42 64	
21	136	57.6		24.3	94	35.1 ¹³³	13.6 ⁸⁵	54	18 00	35	17	26 24	46 67	
22	151	57.8		25.3	109	07.4 ¹³³	22.1 ⁸⁵	56	00	38	22	22 22	52 68	
23	166	58.0		26.2	123	39.8 ¹³⁴	30.5 ⁸⁴	58	01	40	27	17 21	21 58 70	
24	181	58.2	-0	27.2	138	12.1 ¹³³	-11 38.9 ⁸⁴	60 S	18 01	18 43	19 33	7 12 18	22 04 73	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 48 ^m 0		Mag: -3.9 PMG: 10 ^h 16 ^m		Mag: +1.8 PMG: 10 ^h 43 ^m		Mag: -1.7 PMG: 13 ^h 29 ^m		Mag: +0.5 PMG: 17 ^h 14 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	2	01.9	206	08.2	+11	08.8	157	15.2	-9	10.1				
1	17	04.4	221	07.7		07.8	172	17.2		10.3				
2	32	06.8	236	07.2		06.8	187	19.1		10.5				
3	47	09.3	251	06.8		05.8	202	21.1		10.7				
4	62	11.8	266	06.3		04.7	217	23.1		10.9				
5	77	14.2	281	05.8	+11	03.7	232	25.1	-9	11.1				
6	92	16.7	296	05.4	+11	02.7	247	27.1	-9	11.3				
7	107	19.1	311	04.9		01.6	262	29.0		11.5				
8	122	21.6	326	04.4	+11	00.6	277	31.0		11.6				
9	137	24.1	341	04.0	+10	59.5	292	33.0		11.8				
10	152	26.5	356	03.5		58.5	307	35.0		12.0				
11	167	29.0	11	03.0	+10	57.5	322	37.0	-9	12.2				
12	182	31.5	26	02.6	+10	56.4	337	38.9	-9	12.4				
13	197	33.9	41	02.1		55.4	352	40.9		12.6				
14	212	36.4	56	01.6		54.4	7	42.9		12.8				
15	227	38.9	71	01.2		53.3	22	44.9		13.0				
16	242	41.3	86	00.7		52.3	37	46.9		13.2				
17	257	43.8	101	00.2	+10	51.2	52	48.8	-9	13.4				
18	272	46.3	115	59.8	+10	50.2	67	50.8	-9	13.5				
19	287	48.7	130	59.3		49.2	82	52.8		13.7				
20	302	51.2	145	58.8		48.1	97	54.8		13.9				
21	317	53.6	160	58.4		47.1	112	56.8		14.1				
22	332	56.1	175	57.9		46.0	127	58.7		14.3				
23	347	58.6	190	57.4		45.0	143	00.7		14.5				
24	3	01.0	205	57.0	+10	43.9	158	02.7	-9	14.7				
Dif	—		-5		-10		+10		-6		+20		-2	
											+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 51 ^m 9			Edad: 3 ^d 8 PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'7 R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	181	58.2	-0	138	12.1	-11	38.9	4 18	5 08	5 49	10 43	70	19 39	24
1	196	58.4		152	44.4 ¹³³		47.2 ⁸³	23	10	49	35	68	47	27
2	211	58.6		167	16.7 ¹³³	-11	55.4 ⁸²	28	12	49	28	66	19 55	28
3	226	58.9		181	49.0 ¹³³	-12	03.6 ⁸²	32	14	49	21	65	20 02	29
4	241	59.1		196	21.3 ¹³³		11.7 ⁸¹	36	16	49	16	63	08	31
5	256	59.3	-0	210	53.6 ¹³³	-12	19.8 ⁸¹	4 39	5 17	5 49	10 11	61	20 14	32
6	271	59.5	-0	225	25.9 ¹³³	-12	27.8 ⁸⁰	4 46	5 20	5 50	10 00	59	20 25	35
7	286	59.7		239	58.2 ¹³³		35.7 ⁷⁹	51	23	50	9 50	57	35	37
8	301	59.9		254	30.4 ¹³²		43.6 ⁷⁹	55	24	50	43	55	44	38
9	317	00.2		269	02.7 ¹³³		51.4 ⁷⁸	4 58	26	49	36	53	20 51	40
10	332	00.4		283	34.9 ¹³²	-12	59.1 ⁷⁷	5 02	27	49	24	51	21 04	43
11	347	00.6	-0	298	07.2 ¹³³	-13	06.8 ⁷⁷	5 04	5 28	5 49	9 14	48	21 16	44
12	2	00.8	-0	312	39.4 ¹³²	-13	14.4 ⁷⁶	5 04	5 28	5 49	9 04	46	21 26	47
13	17	01.0		327	11.6 ¹³²		22.0 ⁷⁶	03	27	48	8 55	44	37	48
14	32	01.2		341	43.9 ¹³³		29.5 ⁷⁵	5 00	26	48	45	41	21 49	50
15	47	01.5		356	16.1 ¹³²		36.9 ⁷⁴	4 55	23	47	33	39	22 02	53
16	62	01.7		10	48.3 ¹³²		44.3 ⁷⁴	52	21	46	27	37	09	55
17	77	01.9	-0	25	20.4 ¹³¹	-13	51.6 ⁷³	4 47	5 19	5 46	8 19	35	22 18	56
18	92	02.1	-0	39	52.6 ¹³²	-13	58.8 ⁷²	4 41	5 16	5 45	8 11	33	22 28	58
19	107	02.3		54	24.8 ¹³²	-14	05.9 ⁷¹	34	12	44	8 00	30	40	61
20	122	02.5		68	56.9 ¹³¹		13.0 ⁷¹	30	10	44	7 55	29	46	62
21	137	02.8		83	29.1 ¹³²		20.0 ⁷⁰	26	08	43	50	28	22 53	62
22	152	03.0		98	01.2 ¹³¹		27.0 ⁷⁰	21	06	43	44	26	23 00	64
23	167	03.2		112	33.3 ¹³¹		33.9 ⁶⁹	16	03	42	38	24	08	66
24	182	03.4	-0	127	05.4 ¹³¹	-14	40.7 ⁶⁸	4 10	5 00	5 42	7 30	22	23 17	68
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 44 ^m 0		Mag: -3.9 PMG: 10 ^h 17 ^m		Mag: +1.8 PMG: 10 ^h 42 ^m		Mag: -1.7 PMG: 13 ^h 26 ^m		Mag: +0.5 PMG: 17 ^h 10 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	3	01.0	205	57.0	+10	43.9	158	02.7	-9	14.7				
1	18	03.5	220	56.5		42.9	173	04.7		14.9				
2	33	06.0	235	56.0		41.8	188	06.7		15.1				
3	48	08.4	250	55.6		40.8	203	08.6		15.2				
4	63	10.9	265	55.1		39.8	218	10.6		15.4				
5	78	13.4	280	54.6	+10	38.7	233	12.6	-9	15.6				
6	93	15.8	295	54.2	+10	37.7	248	14.6	-9	15.8				
7	108	18.3	310	53.7		36.6	263	16.5		16.0				
8	123	20.8	325	53.3		35.6	278	18.5		16.2				
9	138	23.2	340	52.8		34.5	293	20.5		16.4				
10	153	25.7	355	52.3		33.5	308	22.5		16.6				
11	168	28.1	10	51.9	+10	32.4	323	24.5	-9	16.8				
12	183	30.6	25	51.4	+10	31.4	338	26.4	-9	17.0				
13	198	33.1	40	51.0		30.3	353	28.4		17.1				
14	213	35.5	55	50.5		29.3	8	30.4		17.3				
15	228	38.0	70	50.0		28.2	23	32.4		17.5				
16	243	40.5	85	49.6		27.2	38	34.3		17.7				
17	258	42.9	100	49.1	+10	26.1	53	36.3	-9	17.9				
18	273	45.4	115	48.7	+10	25.0	68	38.3	-9	18.1				
19	288	47.9	130	48.2		24.0	83	40.3		18.3				
20	303	50.3	145	47.7		22.9	98	42.3		18.5				
21	318	52.8	160	47.3		21.9	113	44.2		18.7				
22	333	55.2	175	46.8		20.8	128	46.2		18.8				
23	348	57.7	190	46.4		19.8	143	48.2		19.0				
24	4	00.2	205	45.9	+10	18.7	158	50.2	-9	19.2				
Dif	—		-5	-11	+10	-6	+20	-2	+23	0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9			Edad: 4 ^d 8	PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4	PMG: 11 ^h 51 ^m 6			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	182	03.4	-0	50.6	127	05.4	-14 40.7	60 N	17 50	18 32	19 21	11 53 66	20 03 30					
1	197	03.6		51.6	141	37.5 ¹³¹	47.4 67	58	51	30	16	43 64	14 32					
2	212	03.8		52.5	156	09.6 ¹³¹	-14 54.1 67	56	51	28	11	34 62	23 34					
3	227	04.1		53.5	170	41.7 ¹³¹	-15 00.7 66	54	51	26	08	26 61	31 35					
4	242	04.3		54.5	185	13.7 ¹³⁰	07.2 65	52	51	25	04	19 60	39 36					
5	257	04.5	-0	55.5	199	45.8 ¹³¹	-15 13.7 65	50	17 51	18 23	19 01	11 12 59	20 46 36					
6	272	04.7	-0	56.4	214	17.8 ¹³⁰	-15 20.1 64	45	17 52	18 21	18 55	10 59 56	21 00 39					
7	287	04.9		57.4	228	49.8 ¹³⁰	26.4 63	40	52	19	51	47 55	12 40					
8	302	05.1		58.4	243	21.8 ¹³⁰	32.7 63	35	52	18	47	38 53	22 41					
9	317	05.3	-0	59.4	257	53.8 ¹³⁰	38.8 61	30	53	17	44	29 52	31 42					
10	332	05.6	-1	00.3	272	25.8 ¹³⁰	44.9 61	20	53	15	41	15 50	21 47 44					
11	347	05.8	-1	01.3	286	57.8 ¹³⁰	-15 50.9 60	10 N	17 54	18 15	18 39	10 02 48	22 00 46					
12	2	06.0	-1	02.3	301	29.7 ¹²⁹	-15 56.9 60	0	17 55	18 16	18 40	9 50 47	22 13 47					
13	17	06.2		03.2	316	01.7 ¹³⁰	-16 02.8 59	10 S	56	17	41	39 45	25 49					
14	32	06.4		04.2	330	33.6 ¹²⁹	08.6 58	20	57	19	44	26 43	39 50					
15	47	06.6		05.2	345	05.5 ¹²⁹	14.3 57	30	58	22	50	12 41	22 55 51					
16	62	06.8		06.2	359	37.4 ¹²⁹	19.9 56	35	17 59	24	54	9 04 39	23 04 52					
17	77	07.1	-1	07.1	14	09.3 ¹²⁹	-16 25.5 56	40	18 00	18 27	18 59	8 54 39	23 14 54					
18	92	07.3	-1	08.1	28	41.1 ¹²⁸	-16 31.0 55	45	18 01	18 30	19 05	8 44 36	23 26 55					
19	107	07.5		09.1	43	13.0 ¹²⁹	36.4 54	50	02	34	13	30 35	41 57					
20	122	07.7		10.1	57	44.8 ¹²⁸	41.8 54	52	03	37	17	24 33	48 57					
21	137	07.9		11.0	72	16.6 ¹²⁸	47.0 52	54	03	39	21	18 32	23 55 59					
22	152	08.1		12.0	86	48.4 ¹²⁸	52.2 52	56	04	42	26	10 31	** ** *					
23	167	08.4		13.0	101	20.2 ¹²⁸	-16 57.3 51	58	05	45	32	8 02 29	** ** *					
24	182	08.6	-1	14.0	115	52.0 ¹²⁸	-17 02.4 51	60 S	18 06	18 48	19 39	7 52 27	** ** *					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 40 ^m 1		Mag: -3.9 PMG: 10 ^h 17 ^m			Mag: +1.8 PMG: 10 ^h 40 ^m			Mag: -1.7 PMG: 13 ^h 23 ^m			Mag: +0.5 PMG: 17 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	4	00.2	205	45.9	+10	18.7	199	44.7	+7	58.7	158	50.2	-9	19.2	102	43.1	-22	06.4
1	19	02.6	220	45.4		17.7	214	45.7		58.1	173	52.1		19.4	117	45.5		06.4
2	34	05.1	235	45.0		16.6	229	46.7		57.5	188	54.1		19.6	132	47.8		06.4
3	49	07.6	250	44.5		15.5	244	47.7		56.9	203	56.1		19.8	147	50.1		06.4
4	64	10.0	265	44.1		14.5	259	48.7		56.3	218	58.1		20.0	162	52.5		06.4
5	79	12.5	280	43.6	+10	13.4	274	49.6	+7	55.7	234	00.0	-9	20.2	177	54.8	-22	06.4
6	94	15.0	295	43.2	+10	12.4	289	50.6	+7	55.1	249	02.0	-9	20.4	192	57.1	-22	06.4
7	109	17.4	310	42.7		11.3	304	51.6		54.5	264	04.0		20.6	207	59.5		06.5
8	124	19.9	325	42.2		10.2	319	52.6		53.9	279	06.0		20.7	223	01.8		06.5
9	139	22.4	340	41.8		09.2	334	53.6		53.2	294	07.9		20.9	238	04.1		06.5
10	154	24.8	355	41.3		08.1	349	54.6		52.6	309	09.9		21.1	253	06.5		06.5
11	169	27.3	10	40.9	+10	07.1	4	55.6	+7	52.0	324	11.9	-9	21.3	268	08.8	-22	06.5
12	184	29.7	25	40.4	+10	06.0	19	56.6	+7	51.4	339	13.9	-9	21.5	283	11.1	-22	06.5
13	199	32.2	40	40.0		04.9	34	57.6		50.8	354	15.8		21.7	298	13.5		06.5
14	214	34.7	55	39.5		03.9	49	58.5		50.2	9	17.8		21.9	313	15.8		06.6
15	229	37.1	70	39.1		02.8	64	59.5		49.6	24	19.8		22.1	328	18.1		06.6
16	244	39.6	85	38.6		01.7	80	00.5		49.0	39	21.8		22.3	343	20.5		06.6
17	259	42.1	100	38.2	+10	00.7	95	01.5	+7	48.4	54	23.8	-9	22.5	358	22.8	-22	06.6
18	274	44.5	115	37.7	+9	59.6	110	02.5	+7	47.8	69	25.7	-9	22.6	13	25.1	-22	06.6
19	289	47.0	130	37.2		58.5	125	03.5		47.2	84	27.7		22.8	28	27.5		06.6
20	304	49.5	145	36.8		57.5	140	04.5		46.6	99	29.7		23.0	43	29.8		06.6
21	319	51.9	160	36.3		56.4	155	05.5		46.0	114	31.7		23.2	58	32.1		06.7
22	334	54.4	175	35.9		55.3	170	06.4		45.3	129	33.6		23.4	73	34.5		06.7
23	349	56.9	190	35.4		54.3	185	07.4		44.7	144	35.6		23.6	88	36.8		06.7
24	4	59.3	205	35.0	+9	53.2	200	08.4	+7	44.1	159	37.6	-9	23.8	103	39.1	-22	06.7
Dif	—		-5		-11		+10		-6		+20		-2		+23		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51 ^m 3			Edad: 5 ^d 8 SD: 14'8 PMG: 16 ^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	182	08.6	-1	115	52.0	-17	02.4	60 N	4 23	5 12	5 54	12 59	59	20 33	38
1	197	08.8		130	23.8 ¹²⁸		07.3 ⁴⁹	58	28	14	54	47	58	46	39
2	212	09.0		144	55.5 ¹²⁷		12.2 ⁴⁹	56	32	16	53	36	57	20 57	40
3	227	09.2		159	27.2 ¹²⁷		17.0 ⁴⁸	54	36	18	53	27	56	21 06	40
4	242	09.4		173	58.9 ¹²⁷		21.7 ⁴⁷	52	39	19	53	19	55	15	41
5	257	09.6	-1	188	30.6 ¹²⁷	-17	26.3 ⁴⁶	50	4 42	5 20	5 52	12 11	55	21 22	42
6	272	09.8	-1	203	02.3 ¹²⁷	-17	30.9 ⁴⁶	45	4 48	5 23	5 52	11 55	53	21 39	43
7	287	10.1		217	34.0 ¹²⁷		35.4 ⁴⁵	40	53	24	51	42	52	21 52	44
8	302	10.3		232	05.6 ¹²⁶		39.8 ⁴⁴	35	56	26	51	31	51	22 03	45
9	317	10.5		246	37.3 ¹²⁷		44.1 ⁴³	30	4 59	27	51	21	51	13	46
10	332	10.7		261	08.9 ¹²⁶		48.3 ⁴²	20	5 02	28	50	11 05	49	31	46
11	347	10.9	-1	275	40.5 ¹²⁶	-17	52.5 ⁴²	10 N	5 04	5 28	5 49	10 50	49	22 46	46
12	2	11.1	-1	290	12.1 ¹²⁶	-17	56.5 ⁴⁰	0	5 03	5 27	5 48	10 37	47	23 00	47
13	17	11.3		304	43.6 ¹²⁵	-18	00.5 ⁴⁰	10 S	5 02	26	47	24	46	14	48
14	32	11.6		319	15.2 ¹²⁶		04.4 ³⁹	20	4 58	24	46	10 09	45	29	49
15	47	11.8		333	46.7 ¹²⁵		08.2 ³⁸	30	53	21	44	9 53	44	46	50
16	62	12.0		348	18.3 ¹²⁶		12.0 ³⁸	35	49	18	44	43	43	23 56	50
17	77	12.2	-1	2	49.8 ¹²⁵	-18	15.6 ³⁶	40	4 44	5 16	5 43	9 33	42	***	***
18	92	12.4	-1	17	21.3 ¹²⁵	-18	19.2 ³⁶	45	4 37	5 12	5 41	9 20	41	***	***
19	107	12.6		31	52.8 ¹²⁵		22.7 ³⁵	50	29	08	40	9 05	39	***	***
20	122	12.8		46	24.2 ¹²⁴		26.1 ³⁴	52	25	05	39	8 57	39	***	***
21	137	13.0		60	55.7 ¹²⁵		29.4 ³³	54	21	03	38	50	37	***	***
22	152	13.3		75	27.1 ¹²⁴		32.6 ³²	56	16	5 00	38	41	36	0 04	60
23	167	13.5		89	58.5 ¹²⁴		35.8 ³²	58	10	4 57	37	31	35	14	61
24	182	13.7	-1	104	29.9 ¹²⁴	-18	38.8 ³⁰	60 S	4 03	4 54	5 35	8 19	34	0 25	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 36 ^m 2		Mag: -3.9 PMG: 10 ^h 18 ^m		Mag: +1.8 PMG: 10 ^h 39 ^m		Mag: -1.7 PMG: 13 ^h 20 ^m		Mag: +0.5 PMG: 17 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	4	59.3	205	35.0	200	08.4	159	37.6	103	39.1
1	20	01.8	220	34.5	215	09.4	174	39.6	118	41.4
2	35	04.2	235	34.1	230	10.4	189	41.5	133	43.8
3	50	06.7	250	33.6	245	11.4	204	43.5	148	46.1
4	65	09.2	265	33.2	260	12.4	219	45.5	163	48.4
5	80	11.6	280	32.7	275	13.4	234	47.4	178	50.8
6	95	14.1	295	32.3	290	14.4	249	49.4	193	53.1
7	110	16.6	310	31.8	305	15.4	264	51.4	208	55.4
8	125	19.0	325	31.4	320	16.3	279	53.4	223	57.8
9	140	21.5	340	30.9	335	17.3	294	55.3	239	00.1
10	155	24.0	355	30.5	350	18.3	309	57.3	254	02.4
11	170	26.4	10	30.0	5	19.3	324	59.3	269	04.7
12	185	28.9	25	29.6	20	20.3	340	01.3	284	07.1
13	200	31.3	40	29.1	35	21.3	355	03.2	299	09.4
14	215	33.8	55	28.7	50	22.3	10	05.2	314	11.7
15	230	36.3	70	28.2	65	23.3	25	07.2	329	14.1
16	245	38.7	85	27.8	80	24.3	40	09.2	344	16.4
17	260	41.2	100	27.3	95	25.3	55	11.1	359	18.7
18	275	43.7	115	26.9	110	26.2	70	13.1	14	21.0
19	290	46.1	130	26.5	125	27.2	85	15.1	29	23.4
20	305	48.6	145	26.0	140	28.2	100	17.1	44	25.7
21	320	51.1	160	25.6	155	29.2	115	19.0	59	28.0
22	335	53.5	175	25.1	170	30.2	130	21.0	74	30.4
23	350	56.0	190	24.7	185	31.2	145	23.0	89	32.7
24	5	58.5	205	24.2	200	32.2	160	24.9	104	35.0
Dif	—		-4	-11	+10	-6	+20	-2	+23	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/0 PMG: 11 ^h 50 ^m 9			Edad: 6 ^d 8 PHE { SD: 14/8 PMG: 17 ^h 36 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	182	13.7	-1 37.3	104	29.9	-18 38.8	30	60 N	17 44	18 26	19 15	13 58	51	21 11	48
1	197	13.9	38.3	119	01.3 ¹²⁴	41.8	30	58	45	24	10	45	50	25	48
2	212	14.1	39.3	133	32.7 ¹²⁴	44.7	29	56	45	22	06	33	50	37	48
3	227	14.3	40.2	148	04.0 ¹²³	47.5	28	54	46	21	19 02	23	50	47	48
4	242	14.5	41.2	162	35.4 ¹²⁴	50.2	27	52	46	20	18 59	14	50	21	56
5	257	14.7	-1 42.2	177	06.7 ¹²³	-18 52.9	27	50	17 47	18 19	18 57	13 06	50	22	04
6	272	15.0	-1 43.2	191	38.0 ¹²³	-18 55.4	25	45	17 48	18 17	18 51	12 48	50	22	22
7	287	15.2	44.1	206	09.3 ¹²³	-18 57.9	24	40	49	16	47	34	50	36	48
8	302	15.4	45.1	220	40.6 ¹²³	-19 00.3	25	35	50	15	44	22	49	48	48
9	317	15.6	46.1	235	11.9 ¹²³	02.5	22	30	50	14	42	12 12	49	22	59
10	332	15.8	47.1	249	43.2 ¹²³	04.7	22	20	52	14	39	11 54	49	23	17
11	347	16.0	-1 48.0	264	14.4 ¹²²	-19 06.9	22	10 N	17 53	18 14	18 38	11 39	48	23	32
12	2	16.2	-1 49.0	278	45.6 ¹²²	-19 08.9	20	0	17 54	18 15	18 39	11 24	48	23	47
13	17	16.4	50.0	293	16.8 ¹²²	10.8	19	10 S	56	17	41	11 10	47	**	**
14	32	16.6	50.9	307	48.1 ¹²³	12.7	19	20	57	19	45	10 54	47	**	**
15	47	16.9	51.9	322	19.2 ¹²¹	14.4	17	30	17 59	23	51	37	46	**	**
16	62	17.1	52.9	336	50.4 ¹²²	16.1	17	35	18 00	26	18 55	26	47	**	**
17	77	17.3	-1 53.9	351	21.6 ¹²²	-19 17.7	16	40	18 02	18 29	19 01	10 15	46	0	08
18	92	17.5	-1 54.8	5	52.7 ¹²¹	-19 19.2	15	45	18 03	18 33	19 07	10 01	45	0	21
19	107	17.7	55.8	20	23.9 ¹²²	20.6	14	50	05	38	16	9 44	45	38	52
20	122	17.9	56.8	34	55.0 ¹²¹	21.9	13	52	06	40	20	36	45	45	53
21	137	18.1	57.8	49	26.1 ¹²¹	23.1	12	54	07	43	25	27	45	0	54
22	152	18.3	58.7	63	57.2 ¹²¹	24.3	12	56	08	46	31	17	44	1	04
23	167	18.5	-1 59.7	78	28.3 ¹²¹	25.3	10	58	09	49	37	9 06	44	15	54
24	182	18.7	-2 00.7	92	59.4 ¹²¹	-19 26.3	10	60 S	18 11	18 53	19 44	8 53	43	1	28
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 32 ^m 2		Mag: -3.9 PMG: 10 ^h 19 ^m			Mag: +1.8 PMG: 10 ^h 37 ^m			Mag: -1.7 PMG: 13 ^h 17 ^m			Mag: +0.5 PMG: 16 ^h 59 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	5	58.5	205	24.2	+9 27.4	200	32.2	+7 29.5	160	24.9	-9 28.4	104	35.0	-22 07.1	
1	21	00.9	220	23.8	26.3	215	33.2	28.9	175	26.9	28.5	119	37.3	07.1	
2	36	03.4	235	23.3	25.2	230	34.2	28.3	190	28.9	28.7	134	39.7	07.1	
3	51	05.8	250	22.9	24.1	245	35.2	27.7	205	30.9	28.9	149	42.0	07.1	
4	66	08.3	265	22.4	23.0	260	36.2	27.1	220	32.8	29.1	164	44.3	07.1	
5	81	10.8	280	22.0	+9 22.0	275	37.1	+7 26.5	235	34.8	-9 29.3	179	46.6	-22 07.1	
6	96	13.2	295	21.6	+9 20.9	290	38.1	+7 25.8	250	36.8	-9 29.5	194	49.0	-22 07.1	
7	111	15.7	310	21.1	19.8	305	39.1	25.2	265	38.8	29.7	209	51.3	07.2	
8	126	18.2	325	20.7	18.7	320	40.1	24.6	280	40.7	29.9	224	53.6	07.2	
9	141	20.6	340	20.2	17.6	335	41.1	24.0	295	42.7	30.1	239	55.9	07.2	
10	156	23.1	355	19.8	16.5	350	42.1	23.4	310	44.7	30.3	254	58.3	07.2	
11	171	25.6	10	19.3	+9 15.4	5	43.1	+7 22.8	325	46.6	-9 30.4	270	00.6	-22 07.2	
12	186	28.0	25	18.9	+9 14.4	20	44.1	+7 22.2	340	48.6	-9 30.6	285	02.9	-22 07.2	
13	201	30.5	40	18.5	13.3	35	45.1	21.6	355	50.6	30.8	300	05.2	07.2	
14	216	33.0	55	18.0	12.2	50	46.1	21.0	10	52.6	31.0	315	07.6	07.3	
15	231	35.4	70	17.6	11.1	65	47.1	20.4	25	54.5	31.2	330	09.9	07.3	
16	246	37.9	85	17.1	10.0	80	48.1	19.7	40	56.5	31.4	345	12.2	07.3	
17	261	40.3	100	16.7	+9 08.9	95	49.0	+7 19.1	55	58.5	-9 31.6	0	14.5	-22 07.3	
18	276	42.8	115	16.2	+9 07.8	110	50.0	+7 18.5	71	00.5	-9 31.8	15	16.9	-22 07.3	
19	291	45.3	130	15.8	06.7	125	51.0	17.9	86	02.4	32.0	30	19.2	07.3	
20	306	47.7	145	15.4	05.6	140	52.0	17.3	101	04.4	32.2	45	21.5	07.4	
21	321	50.2	160	14.9	04.6	155	53.0	16.7	116	06.4	32.3	60	23.8	07.4	
22	336	52.7	175	14.5	03.5	170	54.0	16.1	131	08.3	32.5	75	26.2	07.4	
23	351	55.1	190	14.0	02.4	185	55.0	15.5	146	10.3	32.7	90	28.5	07.4	
24	6	57.6	205	13.6	+9 01.3	200	56.0	+7 14.9	161	12.3	-9 32.9	105	30.8	-22 07.4	
Dif	—		-4		-11	+10		-6	+20		-2	+23		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 50 ^m 6			Edad: 7 ^d 8 PHE { SD: 14'8 PMG: 18 ^h 24 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	18.7	-2	00.7	92	59.4	-19	26.3	8	60 N	4	28	5	17	5	59
1	197	19.0		01.6	107	30.4 ¹²⁰		27.1	8	58	33	19		58	35	43
2	212	19.2		02.6	122	01.5 ¹²¹		27.9	7	56	37	20		57	23	44
3	227	19.4		03.6	136	32.5 ¹²⁰		28.6	7	54	40	21		57	13	44
4	242	19.6		04.6	151	03.6 ¹²¹		29.2	6	52	43	22		56	14	04
5	257	19.8	-2	05.5	165	34.6 ¹²⁰	-19	29.7	5	50	4	46	5	23	5	56
6	272	20.0	-2	06.5	180	05.6 ¹²⁰	-19	30.1	4	45	4	51	5	25	5	54
7	287	20.2		07.5	194	36.6 ¹²⁰		30.5	4	40	55	26		53	24	45
8	302	20.4		08.5	209	07.6 ¹²⁰		30.7	2	35	4	58	27	52	11	47
9	317	20.6		09.4	223	38.6 ¹²⁰		30.8	1	30	5	00	28	52	13	01
10	332	20.8		10.4	238	09.5 ¹¹⁹		30.9	1	20		03	28	50	12	43
11	347	21.1	-2	11.4	252	40.5 ¹²⁰	-19	30.9	0	10 N	5	03	5	28	5	49
12	2	21.3	-2	12.3	267	11.4 ¹¹⁹	-19	30.7	2	0	5	03	5	27	5	47
13	17	21.5		13.3	281	42.4 ¹²⁰		30.5	2	10 S	5	00	25	46	11	57
14	32	21.7		14.3	296	13.3 ¹¹⁹		30.2	3	20	4	56	22	44	41	50
15	47	21.9		15.3	310	44.2 ¹¹⁹		29.8	4	30	50	18	42	23	50	36
16	62	22.1		16.2	325	15.1 ¹¹⁹		29.3	5	35	46	15	41	13	50	46
17	77	22.3	-2	17.2	339	46.0 ¹¹⁹	-19	28.7	6	40	4	40	5	12	5	39
18	92	22.5	-2	18.2	354	16.9 ¹¹⁹	-19	28.1	6	45	4	33	5	08	5	38
19	107	22.7		19.1	8	47.8 ¹¹⁹		27.3	8	50	25	03	35	29	51	30
20	122	22.9		20.1	23	18.7 ¹¹⁹		26.5	8	52	20	5	01	34	21	51
21	137	23.1		21.1	37	49.6 ¹¹⁹		25.5	10	54	15	4	58	33	12	51
22	152	23.4		22.1	52	20.4 ¹¹⁸		24.5	10	56	10	55	32	10	01	
23	167	23.6		23.0	66	51.3 ¹¹⁹		23.3	12	58	4	04	51	31	9	50
24	182	23.8	-2	24.0	81	22.1 ¹¹⁸	-19	22.1	12	60 S	3	56	4	47	5	29
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 28 ^m 3		Mag: -3.9 PMG: 10 ^h 19 ^m		Mag: +1.8 PMG: 10 ^h 36 ^m		Mag: -1.7 PMG: 13 ^h 13 ^m		Mag: +0.5 PMG: 16 ^h 55 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	6	57.6	205	13.6	+9	01.3	200	56.0	+7	14.9						
1	22	00.1	220	13.2	+9	00.2	215	57.0		14.2						
2	37	02.5	235	12.7	+8	59.1	230	58.0		13.6						
3	52	05.0	250	12.3		58.0	245	59.0		13.0						
4	67	07.4	265	11.8		56.9	261	00.0		12.4						
5	82	09.9	280	11.4	+8	55.8	276	01.0	+7	11.8						
6	97	12.4	295	11.0	+8	54.7	291	01.9	+7	11.2						
7	112	14.8	310	10.5		53.6	306	02.9		10.6						
8	127	17.3	325	10.1		52.5	321	03.9		10.0						
9	142	19.8	340	09.6		51.4	336	04.9		09.3						
10	157	22.2	355	09.2		50.3	351	05.9		08.7						
11	172	24.7	10	08.8	+8	49.2	6	06.9	+7	08.1						
12	187	27.2	25	08.3	+8	48.1	21	07.9	+7	07.5						
13	202	29.6	40	07.9		47.0	36	08.9		06.9						
14	217	32.1	55	07.5		45.9	51	09.9		06.3						
15	232	34.6	70	07.0		44.8	66	10.9		05.7						
16	247	37.0	85	06.6		43.7	81	11.9		05.1						
17	262	39.5	100	06.2	+8	42.6	96	12.9	+7	04.4						
18	277	41.9	115	05.7	+8	41.5	111	13.9	+7	03.8						
19	292	44.4	130	05.3		40.4	126	14.9		03.2						
20	307	46.9	145	04.8		39.3	141	15.9		02.6						
21	322	49.3	160	04.4		38.2	156	16.9		02.0						
22	337	51.8	175	04.0		37.1	171	17.8		01.4						
23	352	54.3	190	03.5		36.0	186	18.8		00.8						
24	7	56.7	205	03.1	+8	34.9	201	19.8	+7	00.2						
Dif	—		-4	-11	+10	-6	+20	-2	+23	0						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0			Edad: 8 ^d 8 PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 Rº: 48 ^m	Latitud	Puesta de Sol			Final del crepúsculo		Salida de Luna		Puesta de Luna					
	PMG: 11 ^h 50 ^m 3	PMG: 19 ^h 12 ^m	Rº: 48 ^m						Civil	Náutico	Hora	Rº	Hora	Rº				
	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	182	23.8	-2	24.0	81	22.1	-19 22.1	60 N	17 38	18 20	19 08	15 31 33	22 57 66					
1	197	24.0		25.0	95	53.0 ¹¹⁹	20.8	14	58	39	18 04	18 35	23 09 65					
2	212	24.2		26.0	110	23.8 ¹¹⁸	19.4	14	56	40	17 19 00	15 07 36	20 63					
3	227	24.4		26.9	124	54.6 ¹¹⁸	17.9	15	54	41	16 18 57	14 57 37	30 62					
4	242	24.6		27.9	139	25.4 ¹¹⁸	16.3	16	52	42	15 55	48 38	39 60					
5	257	24.8	-2	28.9	153	56.2 ¹¹⁸	-19 14.6	17	50	17 43	18 15 18 52	14 40 39	23 47 59					
6	272	25.0	-2	29.8	168	27.1 ¹¹⁹	-19 12.8	18	45	17 44	18 13 18 47	14 23 41	*** ** *					
7	287	25.2		30.8	182	57.9 ¹¹⁸	11.0	18	40	45	12 44	14 09 43	*** ** *					
8	302	25.4		31.8	197	28.7 ¹¹⁸	09.0	20	35	47	12 41	13 58 43	*** ** *					
9	317	25.6		32.8	211	59.4 ¹¹⁷	07.0	20	30	48	12 39	48 44	*** ** *					
10	332	25.8		33.7	226	30.2 ¹¹⁸	04.8	22	20	50	12 37	30 46	0 05 50					
11	347	26.0	-2	34.7	241	01.0 ¹¹⁸	-19 02.6	22	10 N	17 52	18 13 18 37	13 15 47	0 21 49					
12	2	26.3	-2	35.7	255	31.8 ¹¹⁸	-19 00.3	23	0	17 54	18 14 18 38	13 00 49	0 35 49					
13	17	26.5		36.6	270	02.5 ¹¹⁷	-18 57.9	24	10 S	55	16 41	12 46 50	0 50 47					
14	32	26.7		37.6	284	33.3 ¹¹⁸	55.4	25	20	17 58	20 45	31 50	1 06 46					
15	47	26.9		38.6	299	04.1 ¹¹⁸	52.8	26	30	18 00	24 52	13 52	24 45					
16	62	27.1		39.6	313	34.8 ¹¹⁷	50.1	27	35	02	27 18 57	12 03 53	34 45					
17	77	27.3	-2	40.5	328	05.6 ¹¹⁸	-18 47.3	28	40	18 04	18 31 19 03	11 51 54	1 46 44					
18	92	27.5	-2	41.5	342	36.3 ¹¹⁷	-18 44.4	29	45	18 06	18 35 19 10	11 37 56	2 00 43					
19	107	27.7		42.5	357	07.1 ¹¹⁸	41.5	29	50	08	41 20	20 57	17 42					
20	122	27.9		43.4	11	37.8 ¹¹⁷	38.4	31	52	09	43 24	12 58	25 41					
21	137	28.1		44.4	26	08.6 ¹¹⁸	35.3	31	54	11	46 29	11 03 59	34 41					
22	152	28.3		45.4	40	39.3 ¹¹⁷	32.0	33	56	12	50 35	10 53 60	44 40					
23	167	28.5		46.3	55	10.0 ¹¹⁷	28.7	33	58	14	54 42	42 61	2 56 38					
24	182	28.7	-2	47.3	69	40.8 ¹¹⁸	-18 25.3	34	60 S	18 16	18 58 19 50	10 29 62	3 09 37					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 24 ^m 4		Mag: -3.9 PMG: 10 ^h 20 ^m			Mag: +1.8 PMG: 10 ^h 34 ^m			Mag: -1.7 PMG: 13 ^h 10 ^m			Mag: +0.5 PMG: 16 ^h 52 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	7	56.7	205	03.1	+8	34.9	201	19.8	+7	00.2	161	59.6	-9	37.5				
1	22	59.2	220	02.7		33.8	216	20.8	+6	59.5	177	01.5		37.7				
2	38	01.7	235	02.2		32.7	231	21.8		58.9	192	03.5		37.9				
3	53	04.1	250	01.8		31.6	246	22.8		58.3	207	05.5		38.1				
4	68	06.6	265	01.4		30.5	261	23.8		57.7	222	07.4		38.3				
5	83	09.1	280	00.9	+8	29.4	276	24.8	+6	57.1	237	09.4	-9	38.4				
6	98	11.5	295	00.5	+8	28.3	291	25.8	+6	56.5	252	11.4	-9	38.6				
7	113	14.0	310	00.1		27.2	306	26.8		55.9	267	13.4		38.8				
8	128	16.4	324	59.6		26.1	321	27.8		55.2	282	15.3		39.0				
9	143	18.9	339	59.2		25.0	336	28.8		54.6	297	17.3		39.2				
10	158	21.4	354	58.8		23.9	351	29.8		54.0	312	19.3		39.4				
11	173	23.8	9	58.3	+8	22.7	6	30.8	+6	53.4	327	21.2	-9	39.6				
12	188	26.3	24	57.9	+8	21.6	21	31.8	+6	52.8	342	23.2	-9	39.8				
13	203	28.8	39	57.5		20.5	36	32.8		52.2	357	25.2		40.0				
14	218	31.2	54	57.1		19.4	51	33.8		51.6	12	27.1		40.2				
15	233	33.7	69	56.6		18.3	66	34.8		51.0	27	29.1		40.4				
16	248	36.2	84	56.2		17.2	81	35.8		50.3	42	31.1		40.5				
17	263	38.6	99	55.8	+8	16.1	96	36.8	+6	49.7	57	33.0	-9	40.7				
18	278	41.1	114	55.3	+8	15.0	111	37.7	+6	49.1	72	35.0	-9	40.9				
19	293	43.5	129	54.9		13.9	126	38.7		48.5	87	37.0		41.1				
20	308	46.0	144	54.5		12.7	141	39.7		47.9	102	38.9		41.3				
21	323	48.5	159	54.0		11.6	156	40.7		47.3	117	40.9		41.5				
22	338	50.9	174	53.6		10.5	171	41.7		46.7	132	42.9		41.7				
23	353	53.4	189	53.2		09.4	186	42.7		46.0	147	44.9		41.9				
24	8	55.9	204	52.8	+8	08.3	201	43.7	+6	45.4	162	46.8	-9	42.1				
Dif	—		-4		-11		+10		-6		+20		-2		+23		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 49 ^m 9			Edad: 9 ^d 8 PHE { 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'3 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m		
0	182	28.7	-2	69	40.8	-18	25.3	60 N	4	33	5	22	6	03	16	04	27	
1	197	28.9		84	11.5 ¹¹⁷		21.8 ³⁵	58	37	23	02	15	53	29	***	***	***	
2	212	29.1		98	42.2 ¹¹⁷		18.2 ³⁶	56	41	24	01	43	31		***	***	***	
3	227	29.3		113	12.9 ¹¹⁷		14.5 ³⁷	54	44	25	6	00	34	33	***	***	***	
4	242	29.5		127	43.7 ¹¹⁸		10.7 ³⁸	52	46	26	5	59	26	34	***	***	***	
5	257	29.8	-2	142	14.4 ¹¹⁷	-18	06.8 ³⁹	50	4	49	5	26	5	59	15	19	35	
6	272	30.0	-2	156	45.1 ¹¹⁷	-18	02.9 ³⁹	45	4	53	5	28	5	57	15	04	38	
7	287	30.2		171	15.8 ¹¹⁷	-17	58.8 ⁴¹	40	57	28	55	14	52	39		16	56	
8	302	30.4		185	46.5 ¹¹⁷		54.7 ⁴²	35	4	59	29	54	41	41		28	54	
9	317	30.6		200	17.2 ¹¹⁷		50.5 ⁴²	30	5	01	29	53	32	42		38	53	
10	332	30.8		214	47.9 ¹¹⁷		46.2 ⁴³	20	03	29	51	16	44		0	55	51	
11	347	31.0	-2	229	18.6 ¹¹⁷	-17	41.8 ⁴⁴	10 N	5	03	5	28	5	49	14	02	46	
12	2	31.2	-2	243	49.4 ¹¹⁸	-17	37.3 ⁴⁵	0	5	02	5	26	5	47	13	49	48	
13	17	31.4	-2	258	20.1 ¹¹⁷		32.7 ⁴⁶	10 S	4	59	24	45	36	50		37	47	
14	32	31.6	-3	272	50.8 ¹¹⁷		28.0 ⁴⁷	20	55	20	42	21	53		1	52	45	
15	47	31.8		287	21.5 ¹¹⁷		23.2 ⁴⁸	30	48	16	39	13	05	55		2	09	43
16	62	32.0		301	52.2 ¹¹⁷		18.4 ⁴⁸	35	43	13	38	12	56	56		19	42	
17	77	32.2	-3	316	22.9 ¹¹⁷	-17	13.5 ⁴⁹	40	4	37	5	09	5	36	12	45	58	
18	92	32.4	-3	330	53.6 ¹¹⁷	-17	08.4 ⁵¹	45	4	29	5	04	5	34	12	33	59	
19	107	32.6		345	24.3 ¹¹⁷	-17	03.3 ⁵¹	50	20	4	59	31	17	62		2	43	39
20	122	32.8		359	55.0 ¹¹⁷	-16	58.1 ⁵²	52	15	56	30	10	63		3	06	36	
21	137	33.0		14	25.7 ¹¹⁷		52.8 ⁵³	54	10	53	28	12	02	64		15	34	
22	152	33.2		28	56.4 ¹¹⁷		47.5 ⁵³	56	4	04	49	27	11	53	66		24	33
23	167	33.4		43	27.1 ¹¹⁷		42.0 ⁵⁵	58	3	57	46	25	43	67		34	32	
24	182	33.6	-3	57	57.8 ¹¹⁷	-16	36.5 ⁵⁵	60 S	3	49	4	41	5	23	11	31	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 20 ^m 4		Mag: -3.9 PMG: 10 ^h 21 ^m		Mag: +1.8 PMG: 10 ^h 32 ^m		Mag: -1.7 PMG: 13 ^h 07 ^m		Mag: +0.5 PMG: 16 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	8	55.9	204	52.8	+8	08.3	201	43.7	+6	45.4
1	23	58.3	219	52.3		07.2	216	44.7		44.8
2	39	00.8	234	51.9		06.1	231	45.7		44.2
3	54	03.3	249	51.5		04.9	246	46.7		43.6
4	69	05.7	264	51.0		03.8	261	47.7		43.0
5	84	08.2	279	50.6	+8	02.7	276	48.7	+6	42.3
6	99	10.7	294	50.2	+8	01.6	291	49.7	+6	41.7
7	114	13.1	309	49.8	+8	00.5	306	50.7		41.1
8	129	15.6	324	49.3	+7	59.4	321	51.7		40.5
9	144	18.0	339	48.9		58.2	336	52.7		39.9
10	159	20.5	354	48.5		57.1	351	53.7		39.3
11	174	23.0	9	48.0	+7	56.0	6	54.7	+6	38.7
12	189	25.4	24	47.6	+7	54.9	21	55.7	+6	38.0
13	204	27.9	39	47.2		53.8	36	56.7		37.4
14	219	30.4	54	46.8		52.7	51	57.7		36.8
15	234	32.8	69	46.3		51.5	66	58.7		36.2
16	249	35.3	84	45.9		50.4	81	59.7		35.6
17	264	37.8	99	45.5	+7	49.3	97	00.7	+6	35.0
18	279	40.2	114	45.1	+7	48.2	112	01.7	+6	34.4
19	294	42.7	129	44.6		47.0	127	02.7		33.7
20	309	45.2	144	44.2		45.9	142	03.7		33.1
21	324	47.6	159	43.8		44.8	157	04.7		32.5
22	339	50.1	174	43.4		43.7	172	05.7		31.9
23	354	52.5	189	42.9		42.6	187	06.6		31.3
24	9	55.0	204	42.5	+7	41.4	202	07.6	+6	30.7
Dif	—		-4		-11		+10		-6	
							+20		-2	
									+23	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 49 ^m 6			Edad: 10 ^d 8 PHE { 4 ^h : 55/5 12 ^h : 55/7 20 ^h : 55/9 SD: 15:1 PMG: 20 ^h 49 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	33.6	-3 10.6	57	57.8	-16 36.5	57	60 N	17 32	18 13	19 02	16 31 22	0 03 73	
1	197	33.8		72	28.5 ¹¹⁷	30.8	57	58	34	13	18 58	22 24	14 70	
2	212	34.0		86	59.2 ¹¹⁷	25.1	57	56	35	12	55	14 26	23 69	
3	227	34.2		101	29.9 ¹¹⁷	19.3	58	54	36	11	52	07 28	32 67	
4	242	34.4		116	00.6 ¹¹⁷	13.4	59	52	37	11	50	16 00 30	39 66	
5	257	34.6	-3 15.4	130	31.3 ¹¹⁷	-16 07.5	59	50	17 38	18 10	18 48	15 54 31	0 46 64	
6	272	34.8	-3 16.4	145	02.0 ¹¹⁷	-16 01.4	61	45	17 40	18 10	18 44	15 42 34	1 00 62	
7	287	35.0		159	32.7 ¹¹⁷	-15 55.3	61	40	42	09	41	31 36	12 59	
8	302	35.2		174	03.4 ¹¹⁷	49.0	63	35	44	09	38	22 39	22 58	
9	317	35.4		188	34.2 ¹¹⁸	42.7	63	30	45	09	37	14 40	31 56	
10	332	35.6		203	04.9 ¹¹⁷	36.3	64	20	48	10	36	15 00 44	1 46 53	
11	347	35.8	-3 21.3	217	35.6 ¹¹⁷	-15 29.9	64	10 N	17 50	18 11	18 36	14 48 46	2 00 50	
12	2	36.0	-3 22.2	232	06.3 ¹¹⁷	-15 23.3	66	0	17 53	18 14	18 38	14 37 49	2 12 48	
13	17	36.2		246	37.0 ¹¹⁷	16.7	66	10 S	55	16	41	26 51	24 46	
14	32	36.4		261	07.7 ¹¹⁷	10.0	67	20	17 58	20	46	14 53	37 44	
15	47	36.6		275	38.4 ¹¹⁷	-15 03.2	68	30	18 01	25	54	14 00 57	2 52 41	
16	62	36.8		290	09.1 ¹¹⁷	-14 56.3	69	35	03	29	18 59	13 52 58	3 01 39	
17	77	37.0	-3 27.1	304	39.8 ¹¹⁷	-14 49.3	70	40	18 06	18 33	19 05	13 43 60	3 11 37	
18	92	37.2	-3 28.0	319	10.5 ¹¹⁷	-14 42.3	70	45	18 08	18 38	19 13	13 32 63	3 22 35	
19	107	37.4		333	41.2 ¹¹⁷	35.1	72	50	11	44	23	19 66	36 33	
20	122	37.6		348	11.9 ¹¹⁷	27.9	72	52	13	47	28	13 67	42 32	
21	137	37.8		2	42.6 ¹¹⁷	20.7	72	54	14	50	33	13 06 69	49 30	
22	152	38.0		17	13.3 ¹¹⁷	13.3	74	56	16	54	40	12 59 71	3 57 29	
23	167	38.2		31	44.0 ¹¹⁷	-14 05.9	74	58	18	18 58	47	50 73	4 06 26	
24	182	38.4	-3 33.8	46	14.7 ¹¹⁷	-13 58.3	76	60 S	18 20	19 03	19 55	12 41 75	4 16 24	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 16 ^m 5		Mag: -3.9 PMG: 10 ^h 21 ^m			Mag: +1.8 PMG: 10 ^h 31 ^m			Mag: -1.7 PMG: 13 ^h 04 ^m			Mag: +0.5 PMG: 16 ^h 44 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	
0	9	55.0	204	42.5	+7 41.4	202	07.6	+6 30.7	163	34.0	-9 46.6	108	17.7	-22 08.5
1	24	57.5	219	42.1		217	08.6		178	36.0		123	20.0	
2	39	59.9	234	41.7		232	09.6		193	38.0		138	22.3	
3	55	02.4	249	41.2		247	10.6		208	39.9		153	24.6	
4	70	04.9	264	40.8		262	11.6		223	41.9		168	26.9	
5	85	07.3	279	40.4	+7 35.8	277	12.6	+6 27.6	238	43.9	-9 47.6	183	29.2	-22 08.6
6	100	09.8	294	40.0	+7 34.7	292	13.6	+6 27.0	253	45.8	-9 47.8	198	31.5	-22 08.6
7	115	12.3	309	39.6		307	14.6		268	47.8		213	33.8	
8	130	14.7	324	39.1		322	15.6		283	49.8		228	36.1	
9	145	17.2	339	38.7		337	16.6		298	51.7		243	38.5	
10	160	19.6	354	38.3		352	17.6		313	53.7		258	40.8	
11	175	22.1	9	37.9	+7 29.0	7	18.6	+6 23.9	328	55.7	-9 48.7	273	43.1	-22 08.7
12	190	24.6	24	37.4	+7 27.9	22	19.6	+6 23.3	343	57.6	-9 48.9	288	45.4	-22 08.7
13	205	27.0	39	37.0		37	20.6		358	59.6		303	47.7	
14	220	29.5	54	36.6		52	21.6		14	01.6		318	50.0	
15	235	32.0	69	36.2		67	22.6		29	03.5		333	52.3	
16	250	34.4	84	35.8		82	23.6		44	05.5		348	54.6	
17	265	36.9	99	35.3	+7 22.3	97	24.6	+6 20.2	59	07.4	-9 49.9	3	56.9	-22 08.8
18	280	39.4	114	34.9	+7 21.1	112	25.6	+6 19.6	74	09.4	-9 50.1	18	59.2	-22 08.8
19	295	41.8	129	34.5		127	26.6		89	11.4		34	01.5	
20	310	44.3	144	34.1		142	27.6		104	13.3		49	03.9	
21	325	46.8	159	33.7		157	28.6		119	15.3		64	06.2	
22	340	49.2	174	33.2		172	29.6		134	17.3		79	08.5	
23	355	51.7	189	32.8		187	30.6		149	19.2		94	10.8	
24	10	54.1	204	32.4	+7 14.3	202	31.6	+6 15.9	164	21.2	-9 51.2	109	13.1	-22 08.9
Dif	—		-4		-11	+10		-6	+20		-2	+23		0

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 11 ^d 8 PHE { 4 ^h : 56'2 12 ^h : 56'4 20 ^h : 56'6 R°: 49 ^m													
	PMG: 11 ^h 49 ^m 3			SD: 15'3 PMG: 21 ^h 37 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	182	38.4	-3 33.8	46	14.7	-13 58.3	76	58	60 N	4 38	5 27	6 08	16 53	19	1 16	77	
1	197	38.6	34.8	60	45.4 ¹¹⁷	50.7	76	58		42	27	07	46	21	24	75	
2	212	38.8	35.8	75	16.1 ¹¹⁷	43.1	76	56		45	28	05	40	23	32	73	
3	227	39.0	36.7	89	46.8 ¹¹⁷	35.3	78	54		47	29	04	35	25	39	70	
4	242	39.2	37.7	104	17.5 ¹¹⁷	27.5	78	52		50	29	03	30	27	45	69	
5	257	39.4	-3 38.7	118	48.2 ¹¹⁷	-13 19.6	79	50		4 52	5 29	6 02	16 25	29	1 50	68	
6	272	39.6	-3 39.6	133	18.9 ¹¹⁷	-13 11.6	80	45		4 56	5 30	5 59	16 16	31	2 02	64	
7	287	39.8	40.6	147	49.6 ¹¹⁷	-13 03.6	80	40		4 59	30	57	07	35	11	62	
8	302	40.0	41.6	162	20.3 ¹¹⁷	-12 55.4	82	35		5 01	30	56	16 01	36	20	59	
9	317	40.2	42.6	176	51.0 ¹¹⁷	47.2	82	30		02	30	54	15 54	39	27	57	
10	332	40.4	43.5	191	21.7 ¹¹⁷	39.0	82	20		04	29	51	44	42	39	55	
11	347	40.6	-3 44.5	205	52.4 ¹¹⁷	-12 30.6	84	10 N		5 03	5 28	5 49	15 34	46	2 50	52	
12	2	40.8	-3 45.5	220	23.1 ¹¹⁷	-12 22.2	84	0		5 01	5 25	5 46	15 26	48	3 00	49	
13	17	41.0	46.4	234	53.8 ¹¹⁷	13.7	85	10 S		4 58	22	43	17	51	10	46	
14	32	41.2	47.4	249	24.5 ¹¹⁷	-12 05.2	85	20		53	18	40	15 07	55	21	43	
15	47	41.4	48.4	263	55.2 ¹¹⁷	-11 56.5	87	30		45	13	37	14 57	58	33	40	
16	62	41.6	49.3	278	25.8 ¹¹⁶	47.9	86	35		40	10	35	50	61	40	38	
17	77	41.8	-3 50.3	292	56.5 ¹¹⁷	-11 39.1	88	40		4 33	5 06	5 33	14 43	63	3 48	36	
18	92	42.0	-3 51.3	307	27.2 ¹¹⁷	-11 30.3	88	45		4 25	5 00	5 30	14 35	66	3 57	33	
19	107	42.2	52.2	321	57.8 ¹¹⁶	21.3	90	50		15	4 54	27	25	69	4 09	29	
20	122	42.4	53.2	336	28.5 ¹¹⁷	12.4	89	52		10	51	25	20	71	14	28	
21	137	42.6	54.1	350	59.2 ¹¹⁷	-11 03.3	91	54		4 05	48	24	15	73	19	27	
22	152	42.8	55.1	5	29.8 ¹¹⁶	-10 54.2	91	56		3 58	44	22	10	74	26	24	
23	167	43.0	56.1	20	00.5 ¹¹⁷	45.1	91	58		51	40	20	14 03	77	32	23	
24	182	43.2	-3 57.0	34	31.1 ¹¹⁶	-10 35.8	93	60 S		3 42	4 35	5 17	13 56	80	4 40	20	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 12 ^m 6			Mag: -3.9 PMG: 10 ^h 22 ^m			Mag: +1.8 PMG: 10 ^h 29 ^m			Mag: -1.7 PMG: 13 ^h 01 ^m			Mag: +0.5 PMG: 16 ^h 41 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	10	54.1	204	32.4	+7 14.3	202	31.6	+6 15.9	164	21.2	-9 51.2	109	13.1	-22 08.9			
1	25	56.6	219	32.0	13.2	217	32.6	15.2	179	23.2	51.4	124	15.4	08.9			
2	40	59.1	234	31.6	12.1	232	33.6	14.6	194	25.1	51.6	139	17.7	08.9			
3	56	01.5	249	31.1	10.9	247	34.6	14.0	209	27.1	51.8	154	20.0	08.9			
4	71	04.0	264	30.7	09.8	262	35.6	13.4	224	29.1	52.0	169	22.3	08.9			
5	86	06.5	279	30.3	+7 08.7	277	36.6	+6 12.8	239	31.0	-9 52.2	184	24.6	-22 08.9			
6	101	08.9	294	29.9	+7 07.5	292	37.6	+6 12.2	254	33.0	-9 52.4	199	26.9	-22 09.0			
7	116	11.4	309	29.5	06.4	307	38.6	11.5	269	35.0	52.6	214	29.2	09.0			
8	131	13.9	324	29.0	05.3	322	39.6	10.9	284	36.9	52.8	229	31.5	09.0			
9	146	16.3	339	28.6	04.1	337	40.6	10.3	299	38.9	52.9	244	33.8	09.0			
10	161	18.8	354	28.2	03.0	352	41.6	09.7	314	40.8	53.1	259	36.2	09.0			
11	176	21.3	9	27.8	+7 01.8	7	42.6	+6 09.1	329	42.8	-9 53.3	274	38.5	-22 09.0			
12	191	23.7	24	27.4	+7 00.7	22	43.6	+6 08.4	344	44.8	-9 53.5	289	40.8	-22 09.0			
13	206	26.2	39	27.0	+6 59.6	37	44.6	07.8	359	46.7	53.7	304	43.1	09.1			
14	221	28.6	54	26.5	58.4	52	45.6	07.2	14	48.7	53.9	319	45.4	09.1			
15	236	31.1	69	26.1	57.3	67	46.6	06.6	29	50.7	54.1	334	47.7	09.1			
16	251	33.6	84	25.7	56.1	82	47.6	06.0	44	52.6	54.3	349	50.0	09.1			
17	266	36.0	99	25.3	+6 55.0	97	48.6	+6 05.4	59	54.6	-9 54.5	4	52.3	-22 09.1			
18	281	38.5	114	24.9	+6 53.9	112	49.6	+6 04.7	74	56.6	-9 54.7	19	54.6	-22 09.1			
19	296	41.0	129	24.5	52.7	127	50.6	04.1	89	58.5	54.9	34	56.9	09.2			
20	311	43.4	144	24.0	51.6	142	51.6	03.5	105	00.5	55.0	49	59.2	09.2			
21	326	45.9	159	23.6	50.4	157	52.6	02.9	120	02.4	55.2	65	01.5	09.2			
22	341	48.4	174	23.2	49.3	172	53.6	02.3	135	04.4	55.4	80	03.8	09.2			
23	356	50.8	189	22.8	48.2	187	54.6	01.6	150	06.4	55.6	95	06.1	09.2			
24	11	53.3	204	22.4	+6 47.0	202	55.6	+6 01.0	165	08.3	-9 55.8	110	08.4	-22 09.2			
Dif	—		-4	-11		+10	-6		+20	-2		+23	0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 0			Edad: 12 ^d 8 PHE { 4 ^h : 56'9 12 ^h : 57'1 20 ^h : 57'4 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	182	43.2	-3	57.0	34	31.1	-10 35.8	60 N	17 26	18 08	18 56	17 12 16	2 33 81		
1	197	43.4		58.0	49	01.8 ¹¹⁷	26.5 ⁹³	58	28	07	53	07 20	39 79		
2	212	43.6		59.0	63	32.4 ¹¹⁶	17.2 ⁹³	56	30	07	50	03 22	45 76		
3	227	43.8	-3	59.9	78	03.0 ¹¹⁶	-10 07.7 ⁹⁵	54	31	06	47	17 00 23	49 75		
4	242	44.0	-4	00.9	92	33.7 ¹¹⁷	-9 58.3 ⁹⁴	52	33	06	45	16 57 25	54 72		
5	257	44.2	-4	01.9	107	04.3 ¹¹⁶	-9 48.7 ⁹⁶	50	17 34	18 06	18 43	16 54 27	2 58 70		
6	272	44.4	-4	02.8	121	34.9 ¹¹⁶	-9 39.1 ⁹⁶	45	17 37	18 06	18 40	16 47 31	3 06 67		
7	287	44.6		03.8	136	05.5 ¹¹⁶	29.4 ⁹⁷	40	39	06	37	42 34	13 64		
8	302	44.8		04.8	150	36.1 ¹¹⁶	19.7 ⁹⁷	35	41	06	36	37 37	19 62		
9	317	45.0		05.7	165	06.7 ¹¹⁶	09.9 ⁹⁸	30	43	07	35	33 39	24 60		
10	332	45.2		06.7	179	37.3 ¹¹⁶	-9 00.1 ⁹⁸	20	46	08	34	26 43	34 55		
11	347	45.4	-4	07.7	194	07.8 ¹¹⁵	-8 50.1 ¹⁰⁰	10 N	17 49	18 10	18 35	16 20 46	3 42 51		
12	2	45.6	-4	08.6	208	38.4 ¹¹⁶	-8 40.2 ⁹⁹	0	17 52	18 13	18 37	16 14 49	3 49 49		
13	17	45.7		09.6	223	09.0 ¹¹⁶	30.2 ¹⁰⁰	10 S	55	16	41	08 53	3 56 46		
14	32	45.9		10.6	237	39.5 ¹¹⁵	20.1 ¹⁰¹	20	17 59	21	47	16 02 56	4 04 42		
15	47	46.1		11.5	252	10.0 ¹¹⁵	-8 10.0 ¹⁰¹	30	18 03	27	18 55	15 55 60	13 38		
16	62	46.3		12.5	266	40.6 ¹¹⁶	-7 59.8 ¹⁰²	35	05	30	19 00	51 62	18 36		
17	77	46.5	-4	13.5	281	11.1 ¹¹⁵	-7 49.6 ¹⁰²	40	18 08	18 35	19 07	15 46 65	4 24 33		
18	92	46.7	-4	14.4	295	41.6 ¹¹⁵	-7 39.3 ¹⁰³	45	18 11	18 40	19 16	15 41 68	4 30 31		
19	107	46.9		15.4	310	12.1 ¹¹⁵	28.9 ¹⁰⁴	50	14	47	26	34 72	38 28		
20	122	47.1		16.3	324	42.6 ¹¹⁵	18.5 ¹⁰⁴	52	16	50	32	31 74	42 26		
21	137	47.3		17.3	339	13.1 ¹¹⁵	-7 08.1 ¹⁰⁴	54	18	54	38	28 75	46 24		
22	152	47.5		18.3	353	43.5 ¹¹⁴	-6 57.6 ¹⁰⁵	56	20	18 58	45	24 78	50 22		
23	167	47.7		19.2	8	14.0 ¹¹⁵	47.1 ¹⁰⁵	58	23	19 03	19 52	20 80	4 55 20		
24	182	47.9	-4	20.2	22	44.4 ¹¹⁴	-6 36.5 ¹⁰⁶	60 S	18 25	19 08	20 01	15 16 82	5 00 18		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 08 ^m 6		Mag: -3.9 PMG: 10 ^h 23 ^m			Mag: +1.8 PMG: 10 ^h 28 ^m			Mag: -1.7 PMG: 12 ^h 58 ^m			Mag: +0.5 PMG: 16 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	11	53.3	204	22.4	+6	47.0	202	55.6	+6	01.0	165	08.3	-9	55.8	
1	26	55.7	219	22.0		45.9	217	56.6	+6	00.4	180	10.3		56.0	
2	41	58.2	234	21.5		44.7	232	57.6	+5	59.8	195	12.3		56.2	
3	57	00.7	249	21.1		43.6	247	58.6		59.2	210	14.2		56.4	
4	72	03.1	264	20.7		42.4	262	59.6		58.6	225	16.2		56.6	
5	87	05.6	279	20.3	+6	41.3	278	00.6	+5	57.9	240	18.2	-9	56.8	
6	102	08.1	294	19.9	+6	40.2	293	01.6	+5	57.3	255	20.1	-9	57.0	
7	117	10.5	309	19.5		39.0	308	02.6		56.7	270	22.1		57.1	
8	132	13.0	324	19.1		37.9	323	03.6		56.1	285	24.0		57.3	
9	147	15.5	339	18.6		36.7	338	04.6		55.5	300	26.0		57.5	
10	162	17.9	354	18.2		35.6	353	05.6		54.8	315	28.0		57.7	
11	177	20.4	9	17.8	+6	34.4	8	06.6	+5	54.2	330	29.9	-9	57.9	
12	192	22.9	24	17.4	+6	33.3	23	07.6	+5	53.6	345	31.9	-9	58.1	
13	207	25.3	39	17.0		32.1	38	08.6		53.0	0	33.9		58.3	
14	222	27.8	54	16.6		31.0	53	09.6		52.4	15	35.8		58.5	
15	237	30.2	69	16.2		29.8	68	10.6		51.7	30	37.8		58.7	
16	252	32.7	84	15.8		28.7	83	11.6		51.1	45	39.7		58.9	
17	267	35.2	99	15.3	+6	27.5	98	12.6	+5	50.5	60	41.7	-9	59.1	
18	282	37.6	114	14.9	+6	26.4	113	13.6	+5	49.9	75	43.7	-9	59.2	
19	297	40.1	129	14.5		25.2	128	14.6		49.3	90	45.6		59.4	
20	312	42.6	144	14.1		24.1	143	15.6		48.6	105	47.6		59.6	
21	327	45.0	159	13.7		22.9	158	16.6		48.0	120	49.6	-9	59.8	
22	342	47.5	174	13.3		21.8	173	17.6		47.4	135	51.5	-10	00.0	
23	357	50.0	189	12.9		20.6	188	18.6		46.8	150	53.5	-10	00.2	
24	12	52.4	204	12.5	+6	19.5	203	19.6	+5	46.2	165	55.4	-10	00.4	
Dif	—		-4	-11		+10	-6		+20	-2		+23		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 48 ^m 7			Edad: 13 ^d 8 PHE { 4 ^h : 57'6 12 ^h : 57'9 20 ^h : 58'1 R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	47.9	-4	20.2	22	44.4	-6	36.5	60 N	4	43	5	31	6	13	17	28
1	197	48.1		21.2	37	14.8 ¹¹⁴		25.9 ¹⁰⁶	58	46	32	11		27	19	3	58
2	212	48.3		22.1	51	45.2 ¹¹⁴		15.2 ¹⁰⁷	56	49	32	09		25	21	4	01
3	227	48.5		23.1	66	15.6 ¹¹⁴	-6	04.5 ¹⁰⁷	54	51	32	08		23	24		04
4	242	48.7		24.1	80	46.0 ¹¹⁴	-5	53.7 ¹⁰⁸	52	53	32	06		22	25		06
5	257	48.8	-4	25.0	95	16.4 ¹¹⁴	-5	42.9 ¹⁰⁸	50	4	55	5	32	6	05	17	21
6	272	49.0	-4	26.0	109	46.7 ¹¹³	-5	32.1 ¹⁰⁸	45	4	58	5	32	6	02	17	18
7	287	49.2		26.9	124	17.1 ¹¹⁴		21.2 ¹⁰⁹	40	5	01	32	5	59	16	33	
8	302	49.4		27.9	138	47.4 ¹¹³	-5	10.2 ¹¹⁰	35		02	32	57	14	36		21
9	317	49.6		28.9	153	17.7 ¹¹³	-4	59.3 ¹⁰⁹	30		03	31	55	12	38		24
10	332	49.8		29.8	167	48.0 ¹¹³		48.3 ¹¹⁰	20		04	30	52	09	42		29
11	347	50.0	-4	30.8	182	18.3 ¹¹³	-4	37.2 ¹¹¹	10 N	5	03	5	27	5	48	17	06
12	2	50.2	-4	31.8	196	48.5 ¹¹²	-4	26.1 ¹¹¹	0	5	01	5	25	5	45	17	03
13	17	50.4		32.7	211	18.8 ¹¹³		15.0 ¹¹¹	10 S	4	57	21	42	17	01	53	
14	32	50.6		33.7	225	49.0 ¹¹²	-4	03.9 ¹¹¹	20		51	17	39	16	58	57	
15	47	50.8		34.6	240	19.2 ¹¹²	-3	52.7 ¹¹²	30		42	11	35	55	62		51
16	62	50.9		35.6	254	49.3 ¹¹¹		41.5 ¹¹²	35		37	07	32	53	64		54
17	77	51.1	-4	36.6	269	19.5 ¹¹²	-3	30.2 ¹¹³	40	4	30	5	02	5	29	16	51
18	92	51.3	-4	37.5	283	49.6 ¹¹¹	-3	18.9 ¹¹³	45	4	21	4	57	5	26	16	49
19	107	51.5		38.5	298	19.7 ¹¹¹	-3	07.6 ¹¹³	50		10	50	22	46	74		06
20	122	51.7		39.5	312	49.8 ¹¹¹	-2	56.3 ¹¹³	52	4	05	46	21	45	76		08
21	137	51.9		40.4	327	19.9 ¹¹¹		44.9 ¹¹⁴	54	3	59	43	19	43	78		10
22	152	52.1		41.4	341	50.0 ¹¹¹		33.5 ¹¹⁴	56		52	38	16	42	80		12
23	167	52.3		42.3	356	20.0 ¹¹⁰		22.1 ¹¹⁴	58		44	34	14	40	83		15
24	182	52.5	-4	43.3	10	50.0 ¹¹⁰	-2	10.7 ¹¹⁴	60 S	3	35	4	28	5	11	16	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 04 ^m 7		Mag: -3.9 PMG: 10 ^h 23 ^m		Mag: +1.8 PMG: 10 ^h 26 ^m		Mag: -1.7 PMG: 12 ^h 55 ^m		Mag: +0.5 PMG: 16 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	12	52.4	204	12.5	+6	19.5	203	19.6	+5	46.2
1	27	54.9	219	12.1		18.3	218	20.6		45.5
2	42	57.3	234	11.6		17.2	233	21.6		44.9
3	57	59.8	249	11.2		16.0	248	22.6		44.3
4	73	02.3	264	10.8		14.9	263	23.6		43.7
5	88	04.7	279	10.4	+6	13.7	278	24.6	+5	43.1
6	103	07.2	294	10.0	+6	12.6	293	25.7	+5	42.4
7	118	09.7	309	09.6		11.4	308	26.7		41.8
8	133	12.1	324	09.2		10.3	323	27.7		41.2
9	148	14.6	339	08.8		09.1	338	28.7		40.6
10	163	17.1	354	08.4		08.0	353	29.7		40.0
11	178	19.5	9	08.0	+6	06.8	8	30.7	+5	39.3
12	193	22.0	24	07.5	+6	05.6	23	31.7	+5	38.7
13	208	24.5	39	07.1		04.5	38	32.7		38.1
14	223	26.9	54	06.7		03.3	53	33.7		37.5
15	238	29.4	69	06.3		02.2	68	34.7		36.9
16	253	31.8	84	05.9	+6	01.0	83	35.7		36.2
17	268	34.3	99	05.5	+5	59.9	98	36.7	+5	35.6
18	283	36.8	114	05.1	+5	58.7	113	37.7	+5	35.0
19	298	39.2	129	04.7		57.6	128	38.7		34.4
20	313	41.7	144	04.3		56.4	143	39.7		33.8
21	328	44.2	159	03.9		55.2	158	40.7		33.1
22	343	46.6	174	03.5		54.1	173	41.7		32.5
23	358	49.1	189	03.1		52.9	188	42.7		31.9
24	13	51.6	204	02.6	+5	51.8	203	43.7	+5	31.3
Dif	—		-4	-12		+10	-6		+20	-2

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: 14 ^d 8 PHE { 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'8 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	182	52.5	-4	43.3	10	50.0	-2 10.7	60 N	17 20	18 02	18 50	17 45 17	5 18 86	
1	197	52.7		44.3	25	20.0 ¹¹⁰	-1 59.2 ¹¹⁵	58	22	02	47	46 19	19 83	
2	212	52.8		45.2	39	49.9 ¹⁰⁹	47.7 ¹¹⁵	56	24	02	45	46 22	19 81	
3	227	53.0		46.2	54	19.8 ¹⁰⁹	36.2 ¹¹⁵	54	26	02	42	47 24	20 79	
4	242	53.2		47.2	68	49.7 ¹⁰⁹	24.7 ¹¹⁵	52	28	02	41	47 26	21 76	
5	257	53.4	-4	48.1	83	19.6 ¹⁰⁹	-1 13.1 ¹¹⁶	50	17 30	18 02	18 39	17 47 28	5 21 75	
6	272	53.6	-4	49.1	97	49.5 ¹⁰⁹	-1 01.6 ¹¹⁵	45	17 33	18 02	18 36	17 48 32	5 22 71	
7	287	53.8		50.0	112	19.3 ¹⁰⁸	-0 50.0 ¹¹⁶	40	36	03	34	49 35	23 67	
8	302	54.0		51.0	126	49.1 ¹⁰⁸	38.4 ¹¹⁶	35	38	04	33	50 37	24 64	
9	317	54.2		52.0	141	18.9 ¹⁰⁸	26.8 ¹¹⁶	30	41	04	32	50 40	24 62	
10	332	54.4		52.9	155	48.6 ¹⁰⁷	15.2 ¹¹⁶	20	45	07	32	51 45	25 58	
11	347	54.5	-4	53.9	170	18.3 ¹⁰⁷	-0 03.5 ¹¹⁷	10 N	17 48	18 09	18 34	17 52 48	5 26 54	
12	2	54.7	-4	54.8	184	48.0 ¹⁰⁷	+0 08.1 ¹¹⁶	0	17 52	18 12	18 36	17 53 52	5 27 51	
13	17	54.9		55.8	199	17.7 ¹⁰⁷	19.8 ¹¹⁷	10 S	55	16	41	54 55	28 47	
14	32	55.1		56.8	213	47.3 ¹⁰⁶	31.5 ¹¹⁷	20	17 59	21	47	55 59	29 43	
15	47	55.3		57.7	228	16.9 ¹⁰⁶	43.1 ¹¹⁶	30	18 04	28	18 56	57 63	30 39	
16	62	55.5		58.7	242	46.4 ¹⁰⁵	+0 54.8 ¹¹⁷	35	06	32	19 02	57 66	30 37	
17	77	55.7	-4	59.6	257	16.0 ¹⁰⁶	+1 06.5 ¹¹⁷	40	18 10	18 37	19 09	17 58 68	5 31 34	
18	92	55.9	-5	00.6	271	45.5 ¹⁰⁵	+1 18.2 ¹¹⁷	45	18 13	18 43	19 18	17 59 72	5 31 31	
19	107	56.0		01.6	286	14.9 ¹⁰⁴	29.9 ¹¹⁷	50	18	50	30	18 00 76	32 27	
20	122	56.2		02.5	300	44.3 ¹⁰⁴	41.6 ¹¹⁷	52	20	54	36	01 77	33 25	
21	137	56.4		03.5	315	13.7 ¹⁰⁴	+1 53.3 ¹¹⁷	54	22	18 58	42	01 80	33 23	
22	152	56.6		04.4	329	43.1 ¹⁰⁴	+2 05.0 ¹¹⁷	56	24	19 02	49	02 82	33 22	
23	167	56.8		05.4	344	12.4 ¹⁰³	16.7 ¹¹⁷	58	27	07	19 58	03 84	34 19	
24	182	57.0	-5	06.3	358	41.7 ¹⁰³	+2 28.4 ¹¹⁷	60 S	18 30	19 13	20 07	18 03 88	5 34 17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 00 ^m 8		Mag: -3.9 PMG: 10 ^h 24 ^m			Mag: +1.8 PMG: 10 ^h 24 ^m			Mag: -1.7 PMG: 12 ^h 51 ^m			Mag: +0.5 PMG: 16 ^h 30 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	13	51.6	204	02.6	+5	51.8	203	43.7	+5	31.3	166	42.5	-10	05.0
1	28	54.0	219	02.2		50.6	218	44.7		30.7	181	44.5		05.2
2	43	56.5	234	01.8		49.4	233	45.7		30.0	196	46.4		05.4
3	58	58.9	249	01.4		48.3	248	46.7		29.4	211	48.4		05.6
4	74	01.4	264	01.0		47.1	263	47.7		28.8	226	50.3		05.7
5	89	03.9	279	00.6	+5	46.0	278	48.7	+5	28.2	241	52.3	-10	05.9
6	104	06.3	294	00.2	+5	44.8	293	49.7	+5	27.5	256	54.3	-10	06.1
7	119	08.8	308	59.8		43.6	308	50.7		26.9	271	56.2		06.3
8	134	11.3	323	59.4		42.5	323	51.7		26.3	286	58.2		06.5
9	149	13.7	338	59.0		41.3	338	52.7		25.7	302	00.1		06.7
10	164	16.2	353	58.6		40.1	353	53.7		25.1	317	02.1		06.9
11	179	18.7	8	58.2	+5	39.0	8	54.7	+5	24.4	332	04.1	-10	07.1
12	194	21.1	23	57.8	+5	37.8	23	55.7	+5	23.8	347	06.0	-10	07.3
13	209	23.6	38	57.4		36.7	38	56.7		23.2	2	08.0		07.5
14	224	26.1	53	57.0		35.5	53	57.8		22.6	17	09.9		07.7
15	239	28.5	68	56.5		34.3	68	58.8		22.0	32	11.9		07.8
16	254	31.0	83	56.1		33.2	83	59.8		21.3	47	13.9		08.0
17	269	33.4	98	55.7	+5	32.0	99	00.8	+5	20.7	62	15.8	-10	08.2
18	284	35.9	113	55.3	+5	30.8	114	01.8	+5	20.1	77	17.8	-10	08.4
19	299	38.4	128	54.9		29.7	129	02.8		19.5	92	19.7		08.6
20	314	40.8	143	54.5		28.5	144	03.8		18.8	107	21.7		08.8
21	329	43.3	158	54.1		27.3	159	04.8		18.2	122	23.7		09.0
22	344	45.8	173	53.7		26.2	174	05.8		17.6	137	25.6		09.2
23	359	48.2	188	53.3		25.0	189	06.8		17.0	152	27.6		09.4
24	14	50.7	203	52.9	+5	23.8	204	07.8	+5	16.4	167	29.5	-10	09.6
Dif	—		-4		-12		+10		-6		+20		-2	
											+23		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 48 ^m 1			Edad: 15 ^d 8 PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'3 R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°		Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	182	57.0	-5 06.3	358	41.7	+2 28.4		60 N	4 48	5 36	6 18	18 02	20		6 44	88		
1	197	57.2	07.3	13	11.0 ¹⁰³	40.1 ¹¹⁷		58	51	36	15	05	23		42	85		
2	212	57.3	08.3	27	40.2 ¹⁰²	+2 51.7 ¹¹⁶		56	53	36	13	08	25		40	83		
3	227	57.5	09.2	42	09.4 ¹⁰²	+3 03.4 ¹¹⁷		54	55	36	11	11	26		39	80		
4	242	57.7	10.2	56	38.5 ¹⁰¹	15.1 ¹¹⁷		52	57	36	09	13	29		37	78		
5	257	57.9	-5 11.1	71	07.6 ¹⁰¹	+3 26.7 ¹¹⁶		50	4 58	5 36	6 08	18 15	31		6 36	76		
6	272	58.1	-5 12.1	85	36.7 ¹⁰¹	+3 38.4 ¹¹⁷		45	5 01	5 35	6 04	18 20	34		6 33	72		
7	287	58.3	13.1	100	05.8 ¹⁰¹	+3 50.0 ¹¹⁶		40	03	34	6 01	24	37		30	69		
8	302	58.4	14.0	114	34.7 ⁹⁹	+4 01.7 ¹¹⁷		35	04	33	5 59	27	40		28	66		
9	317	58.6	15.0	129	03.7 ¹⁰⁰	13.3 ¹¹⁶		30	05	32	56	30	42		26	64		
10	332	58.8	15.9	143	32.6 ⁹⁹	24.9 ¹¹⁶		20	05	30	52	36	46		23	60		
11	347	59.0	-5 16.9	158	01.5 ⁹⁹	+4 36.4 ¹¹⁵		10 N	5 03	5 27	5 48	18 40	50		6 20	56		
12	2	59.2	-5 17.8	172	30.3 ⁹⁸	+4 48.0 ¹¹⁶		0	5 00	5 24	5 45	18 45	53		6 18	52		
13	17	59.4	18.8	186	59.1 ⁹⁸	+4 59.5 ¹¹⁵		10 S	4 55	20	41	49	57		15	49		
14	32	59.5	19.8	201	27.9 ⁹⁸	+5 11.0 ¹¹⁵		20	49	15	37	18 54	60		12	45		
15	47	59.7	20.7	215	56.6 ⁹⁷	22.5 ¹¹⁵		30	40	08	32	19 00	64		09	40		
16	62	59.9	21.7	230	25.3 ⁹⁷	34.0 ¹¹⁵		35	34	5 04	29	03	67		07	38		
17	78	00.1	-5 22.6	244	53.9 ⁹⁶	+5 45.4 ¹¹⁴		40	4 27	4 59	5 26	19 06	70		6 05	35		
18	93	00.3	-5 23.6	259	22.5 ⁹⁶	+5 56.9 ¹¹⁵		45	4 17	4 53	5 23	19 11	73		6 02	33		
19	108	00.5	24.5	273	51.0 ⁹⁵	+6 08.3 ¹¹⁴		50	06	45	18	16	77		5 59	29		
20	123	00.6	25.5	288	19.5 ⁹⁵	19.6 ¹¹³		52	4 00	42	16	18	79		58	27		
21	138	00.8	26.5	302	48.0 ⁹⁵	31.0 ¹¹⁴		54	3 54	38	14	21	80		56	25		
22	153	01.0	27.4	317	16.4 ⁹⁴	42.3 ¹¹³		56	46	33	11	24	83		55	23		
23	168	01.2	28.4	331	44.7 ⁹³	+6 53.5 ¹¹²		58	38	28	08	27	85		53	21		
24	183	01.4	-5 29.3	346	13.1 ⁹⁴	+7 04.8 ¹¹³		60 S	3 28	4 22	5 05	19 31	88		5 51	18		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 22 ^h 56 ^m 9			Mag: -3.9 PMG: 10 ^h 25 ^m			Mag: +1.8 PMG: 10 ^h 23 ^m			Mag: -1.7 PMG: 12 ^h 48 ^m			Mag: +0.5 PMG: 16 ^h 26 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	°	°	°	'	°		
0	14	50.7	203	52.9	+5 23.8	204	07.8	+5 16.4	167	29.5	-10 09.6	112	53.9	-22 10.4				
1	29	53.2	218	52.5	22.7	219	08.8	15.7	182	31.5	09.8	127	56.2	10.4				
2	44	55.6	233	52.1	21.5	234	09.8	15.1	197	33.5	09.9	142	58.5	10.4				
3	59	58.1	248	51.7	20.3	249	10.8	14.5	212	35.4	10.1	158	00.8	10.4				
4	75	00.6	263	51.3	19.2	264	11.8	13.9	227	37.4	10.3	173	03.1	10.4				
5	90	03.0	278	50.9	+5 18.0	279	12.8	+5 13.2	242	39.3	-10 10.5	188	05.4	-22 10.4				
6	105	05.5	293	50.5	+5 16.8	294	13.8	+5 12.6	257	41.3	-10 10.7	203	07.7	-22 10.4				
7	120	07.9	308	50.1	15.7	309	14.8	12.0	272	43.2	10.9	218	10.0	10.5				
8	135	10.4	323	49.7	14.5	324	15.8	11.4	287	45.2	11.1	233	12.3	10.5				
9	150	12.9	338	49.3	13.3	339	16.8	10.8	302	47.2	11.3	248	14.6	10.5				
10	165	15.3	353	48.9	12.2	354	17.8	10.1	317	49.1	11.5	263	16.8	10.5				
11	180	17.8	8	48.5	+5 11.0	9	18.8	+5 09.5	332	51.1	-10 11.7	278	19.1	-22 10.5				
12	195	20.3	23	48.1	+5 09.8	24	19.9	+5 08.9	347	53.0	-10 11.9	293	21.4	-22 10.5				
13	210	22.7	38	47.7	08.6	39	20.9	08.3	2	55.0	12.0	308	23.7	10.6				
14	225	25.2	53	47.3	07.5	54	21.9	07.6	17	57.0	12.2	323	26.0	10.6				
15	240	27.7	68	46.9	06.3	69	22.9	07.0	32	58.9	12.4	338	28.3	10.6				
16	255	30.1	83	46.5	05.1	84	23.9	06.4	48	00.9	12.6	353	30.6	10.6				
17	270	32.6	98	46.1	+5 04.0	99	24.9	+5 05.8	63	02.8	-10 12.8	8	32.9	-22 10.6				
18	285	35.0	113	45.7	+5 02.8	114	25.9	+5 05.2	78	04.8	-10 13.0	23	35.2	-22 10.6				
19	300	37.5	128	45.2	01.6	129	26.9	04.5	93	06.7	13.2	38	37.5	10.6				
20	315	40.0	143	44.8	+5 00.4	144	27.9	03.9	108	08.7	13.4	53	39.8	10.7				
21	330	42.4	158	44.4	+4 59.3	159	28.9	03.3	123	10.7	13.6	68	42.0	10.7				
22	345	44.9	173	44.0	58.1	174	29.9	02.7	138	12.6	13.8	83	44.3	10.7				
23	0	47.4	188	43.6	56.9	189	30.9	02.0	153	14.6	14.0	98	46.6	10.7				
24	15	49.8	203	43.2	+4 55.7	204	31.9	+5 01.4	168	16.5	-10 14.1	113	48.9	-22 10.7				
Dif	—			-4	-12	+10	-6		+20	-2		+23						

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 47 ^m 8		Edad: 16 ^d 8 PHE { 4 ^h : 59'4 12 ^h : 59'5 20 ^h : 59'6 R°: 54 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	01.4	-5 29.3	346	13.1	+7 04.8	60 N	17 14	17 56	18 44	18 22 24	8 12 88		
1	198	01.6	30.3	0	41.3	92	58	17	56	41	28 26	07 85		
2	213	01.7	31.2	15	09.6	93	56	19	56	39	33 29	8 03 82		
3	228	01.9	32.2	29	37.8	92	54	21	57	38	37 31	7 59 80		
4	243	02.1	33.2	44	05.9	91	52	23	57	36	42 32	55 79		
5	258	02.3	-5 34.1	58	34.0	91	50	17 25	17 58	18 35	18 46 34	7 52 77		
6	273	02.5	-5 35.1	73	02.0	90	45	17 29	17 59	18 32	18 54 38	7 45 73		
7	288	02.6	36.0	87	30.0	90	40	33	18 00	31	19 01 41	39 70		
8	303	02.8	37.0	101	58.0	90	35	36	01	30	07 43	34 68		
9	318	03.0	37.9	116	25.9	89	30	38	02	30	12 46	30 65		
10	333	03.2	38.9	130	53.7	88	20	43	05	30	22 49	23 60		
11	348	03.4	-5 39.8	145	21.5	88	10 N	17 47	18 08	18 33	19 30 52	7 16 57		
12	3	03.5	-5 40.8	159	49.3	88	0	17 51	18 12	18 36	19 38 55	7 10 54		
13	18	03.7	41.7	174	17.0	87	10 S	17 55	16	41	46 58	7 04 50		
14	33	03.9	42.7	188	44.7	87	20	18 00	22	48	19 54 62	6 57 47		
15	48	04.1	43.7	203	12.3	86	30	05	29	18 57	20 04 65	49 44		
16	63	04.2	44.6	217	39.8	85	35	08	34	19 04	10 67	45 41		
17	78	04.4	-5 45.6	232	07.3	85	40	18 12	18 39	19 12	20 16 70	6 40 39		
18	93	04.6	-5 46.5	246	34.8	85	45	18 16	18 46	19 21	20 24 72	6 35 35		
19	108	04.8	47.5	261	02.2	84	50	21	54	34	33 76	28 32		
20	123	05.0	48.4	275	29.6	84	52	23	18 58	40	37 78	25 30		
21	138	05.1	49.4	289	56.9	83	54	26	19 02	46	41 81	21 29		
22	153	05.3	50.3	304	24.2	83	56	28	07	19 54	47 82	18 26		
23	168	05.5	51.3	318	51.4	82	58	31	12	20 03	52 85	14 23		
24	183	05.7	-5 52.2	333	18.6	82	60 S	18 35	19 18	20 14	20 59 88	6 09 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 22 ^h 52 ^m 9		Mag: -3.9 PMG: 10 ^h 25 ^m		Mag: +1.8 PMG: 10 ^h 21 ^m		Mag: -1.7 PMG: 12 ^h 45 ^m		Mag: +0.5 PMG: 16 ^h 22 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	15	49.8	203	43.2	+4 55.7	204	31.9	+5 01.4	168	16.5 -10 14.1	113	48.9 -22 10.7
1	30	52.3	218	42.8	54.6	219	32.9	00.8	183	18.5 14.3	128	51.2 10.7
2	45	54.8	233	42.4	53.4	234	33.9	+5 00.2	198	20.4 14.5	143	53.5 10.8
3	60	57.2	248	42.0	52.2	249	34.9	+4 59.5	213	22.4 14.7	158	55.8 10.8
4	75	59.7	263	41.6	51.1	264	35.9	58.9	228	24.4 14.9	173	58.1 10.8
5	91	02.2	278	41.2	+4 49.9	279	36.9	+4 58.3	243	26.3 -10 15.1	189	00.4 -22 10.8
6	106	04.6	293	40.8	+4 48.7	294	38.0	+4 57.7	258	28.3 -10 15.3	204	02.6 -22 10.8
7	121	07.1	308	40.4	47.5	309	39.0	57.1	273	30.2 15.5	219	04.9 10.8
8	136	09.5	323	40.0	46.3	324	40.0	56.4	288	32.2 15.7	234	07.2 10.9
9	151	12.0	338	39.6	45.2	339	41.0	55.8	303	34.1 15.9	249	09.5 10.9
10	166	14.5	353	39.2	44.0	354	42.0	55.2	318	36.1 16.1	264	11.8 10.9
11	181	16.9	8	38.8	+4 42.8	9	43.0	+4 54.6	333	38.1 -10 16.2	279	14.1 -22 10.9
12	196	19.4	23	38.4	+4 41.6	24	44.0	+4 53.9	348	40.0 -10 16.4	294	16.4 -22 10.9
13	211	21.9	38	38.0	40.5	39	45.0	53.3	3	42.0 16.6	309	18.7 10.9
14	226	24.3	53	37.6	39.3	54	46.0	52.7	18	43.9 16.8	324	21.0 10.9
15	241	26.8	68	37.2	38.1	69	47.0	52.1	33	45.9 17.0	339	23.2 11.0
16	256	29.3	83	36.8	36.9	84	48.0	51.4	48	47.8 17.2	354	25.5 11.0
17	271	31.7	98	36.4	+4 35.7	99	49.0	+4 50.8	63	49.8 -10 17.4	9	27.8 -22 11.0
18	286	34.2	113	36.0	+4 34.6	114	50.0	+4 50.2	78	51.8 -10 17.6	24	30.1 -22 11.0
19	301	36.6	128	35.6	33.4	129	51.0	49.6	93	53.7 17.8	39	32.4 11.0
20	316	39.1	143	35.2	32.2	144	52.0	48.9	108	55.7 18.0	54	34.7 11.0
21	331	41.6	158	34.8	31.0	159	53.0	48.3	123	57.6 18.2	69	37.0 11.1
22	346	44.0	173	34.4	29.9	174	54.1	47.7	138	59.6 18.3	84	39.2 11.1
23	1	46.5	188	34.0	28.7	189	55.1	47.1	154	01.5 18.5	99	41.5 11.1
24	16	49.0	203	33.6	+4 27.5	204	56.1	+4 46.4	169	03.5 -10 18.7	114	43.8 -22 11.1
Dif	—		-4 -12		+10 -6		+20 -2		+23 0			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 5			Edad: 17 ^d 8 PHE { 4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'8 SD: 16'2 PMG: 1 ^h 51 ^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	183	05.7	-5	52.2	333	18.6	+11	20.7	60 N	4	53	5	41	6	23	18	46	30
1	198	05.8		53.2	347	45.7		30.7	58		55		40	20		18	54	33
2	213	06.0		54.1	2	12.8		40.6	56		57		40	17		19	02	35
3	228	06.2		55.1	16	39.8		50.4	54	4	59		40	15		08	38	
4	243	06.4		56.1	31	06.7		00.1	52	5	00		39	13		14	39	
5	258	06.5	-5	57.0	45	33.7		09.8	50	5	01	5	39	6	11	19	20	40
6	273	06.7	-5	58.0	60	00.5		19.4	45	5	03	5	37	6	07	19	32	43
7	288	06.9		58.9	74	27.4		28.9	40		05		36	03		42	45	
8	303	07.1	-5	59.9	88	54.1		38.3	35		06		35	6	00	50	48	
9	318	07.3	-6	00.8	103	20.8		47.7	30		06		34	5	58	19	58	49
10	333	07.4		01.8	117	47.5		57.0	20		05		31	53		20	11	52
11	348	07.6	-6	02.7	132	14.1		06.2	10 N	5	03	5	27	5	48	20	22	55
12	3	07.8	-6	03.7	146	40.7		15.3	0	4	59	5	23	5	44	20	33	57
13	18	08.0		04.6	161	07.2		24.4	10 S		54		19	40		44	60	
14	33	08.1		05.6	175	33.7		33.3	20		47		13	35		20	56	62
15	48	08.3		06.5	190	00.2		42.2	30		37		06	30		21	09	65
16	63	08.5		07.5	204	26.5		51.0	35		31	5	01	27		17	67	
17	78	08.6	-6	08.4	218	52.9		59.7	40	4	23	4	56	5	23	21	26	69
18	93	08.8	-6	09.4	233	19.2		08.3	45	4	13	4	49	5	19	21	36	71
19	108	09.0		10.3	247	45.4		16.8	50	4	01		41	14		49	74	
20	123	09.2		11.3	262	11.6		25.3	52	3	55		37	11		21	55	76
21	138	09.3		12.2	276	37.8		33.6	54		48		32	09		22	02	77
22	153	09.5		13.2	291	03.9		41.9	56		40		28	06		09	79	
23	168	09.7		14.1	305	29.9		50.0	58		31		22	5	03	17	81	
24	183	09.9	-6	15.1	319	55.9		58.1	60 S	3	21	4	16	4	59	22	27	84
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 49 ^m 0		Mag: -3.9 PMG: 10 ^h 26 ^m				Mag: +1.8 PMG: 10 ^h 20 ^m				Mag: -1.7 PMG: 12 ^h 42 ^m				Mag: +0.5 PMG: 16 ^h 19 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	16	49.0	203	33.6	+4	27.5	204	56.1	+4	46.4	169	03.5	-10	18.7	114	43.8	-22	11.1
1	31	51.4	218	33.2		26.3	219	57.1		45.8	184	05.5		18.9	129	46.1		11.1
2	46	53.9	233	32.8		25.1	234	58.1		45.2	199	07.4		19.1	144	48.4		11.1
3	61	56.4	248	32.5		23.9	249	59.1		44.6	214	09.4		19.3	159	50.7		11.2
4	76	58.8	263	32.1		22.8	265	00.1		43.9	229	11.3		19.5	174	53.0		11.2
5	92	01.3	278	31.7	+4	21.6	280	01.1	+4	43.3	244	13.3	-10	19.7	189	55.2	-22	11.2
6	107	03.8	293	31.3	+4	20.4	295	02.1	+4	42.7	259	15.2	-10	19.9	204	57.5	-22	11.2
7	122	06.2	308	30.9		19.2	310	03.1		42.1	274	17.2		20.1	219	59.8		11.2
8	137	08.7	323	30.5		18.0	325	04.1		41.5	289	19.1		20.3	235	02.1		11.2
9	152	11.1	338	30.1		16.9	340	05.1		40.8	304	21.1		20.4	250	04.4		11.2
10	167	13.6	353	29.7		15.7	355	06.1		40.2	319	23.1		20.6	265	06.7		11.3
11	182	16.1	8	29.3	+4	14.5	10	07.1	+4	39.6	334	25.0	-10	20.8	280	09.0	-22	11.3
12	197	18.5	23	28.9	+4	13.3	25	08.1	+4	39.0	349	27.0	-10	21.0	295	11.2	-22	11.3
13	212	21.0	38	28.5		12.1	40	09.2		38.3	4	28.9		21.2	310	13.5		11.3
14	227	23.5	53	28.1		10.9	55	10.2		37.7	19	30.9		21.4	325	15.8		11.3
15	242	25.9	68	27.7		09.8	70	11.2		37.1	34	32.8		21.6	340	18.1		11.3
16	257	28.4	83	27.3		08.6	85	12.2		36.5	49	34.8		21.8	355	20.4		11.4
17	272	30.9	98	26.9	+4	07.4	100	13.2	+4	35.8	64	36.7	-10	22.0	10	22.7	-22	11.4
18	287	33.3	113	26.5	+4	06.2	115	14.2	+4	35.2	79	38.7	-10	22.2	25	24.9	-22	11.4
19	302	35.8	128	26.1		05.0	130	15.2		34.6	94	40.7		22.4	40	27.2		11.4
20	317	38.3	143	25.7		03.8	145	16.2		34.0	109	42.6		22.5	55	29.5		11.4
21	332	40.7	158	25.3		02.6	160	17.2		33.3	124	44.6		22.7	70	31.8		11.4
22	347	43.2	173	24.9		01.5	175	18.2		32.7	139	46.5		22.9	85	34.1		11.5
23	2	45.6	188	24.5	+4	00.3	190	19.2		32.1	154	48.5		23.1	100	36.4		11.5
24	17	48.1	203	24.1	+3	59.1	205	20.2	+4	31.5	169	50.4	-10	23.3	115	38.6	-22	11.5
Dif	—		-4		-12		+10		-6		+20		-2		+23			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 47 ^m 2			Edad: 18 ^d 8 PHE	SD: 16'3 PMG: 2 ^h 47 ^m				4 ^h : 59'8 12 ^h : 59'8 20 ^h : 59'7 R°: 57 ^m			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	183	09.9	-6	15.1	319	55.9	+14 58.1	60 N	17 08	17 50	18 38	19 16 41	11 06 80		
1	198	10.0		16.0	334	21.9	70 +15 06.0	58	11	51	36	27 43	10 56 77		
2	213	10.2		17.0	348	47.8	69 13.9	56	14	51	34	37 44	46 76		
3	228	10.4		17.9	3	13.7	69 21.7	54	17	52	33	46 45	38 74		
4	243	10.5		18.9	17	39.5	68 29.3	52	19	53	32	19 53 47	31 73		
5	258	10.7	-6	19.8	32	05.3	68 +15 36.9	50	17 21	17 53	18 31	20 00 48	10 24 72		
6	273	10.9	-6	20.8	46	31.1	68 +15 44.4	45	17 26	17 55	18 29	20 15 50	10 10 69		
7	288	11.1		21.7	60	56.8	67 51.7	40	30	57	28	27 52	9 59 67		
8	303	11.2		22.7	75	22.4	66 +15 59.0	35	33	17 58	27	38 52	49 65		
9	318	11.4		23.6	89	48.1	67 +16 06.1	30	36	18 00	28	20 47 54	40 64		
10	333	11.6		24.6	104	13.7	66 13.2	20	41	03	29	21 03 56	25 62		
11	348	11.7	-6	25.5	118	39.2	65 +16 20.1	10 N	17 46	18 07	18 31	21 17 57	9 12 60		
12	3	11.9	-6	26.5	133	04.7	65 +16 27.0	0	17 50	18 11	18 35	21 30 59	9 00 58		
13	18	12.1		27.4	147	30.2	65 33.7	10 S	17 55	16	41	44 59	8 48 56		
14	33	12.2		28.4	161	55.6	64 40.3	20	18 00	23	48	21 58 61	35 54		
15	48	12.4		29.3	176	21.0	64 46.8	30	06	30	18 59	22 14 63	20 52		
16	63	12.6		30.3	190	46.4	64 53.2	35	10	35	19 06	24 64	12 50		
17	78	12.8	-6	31.2	205	11.7	63 +16 59.5	40	18 14	18 41	19 14	22 35 65	8 02 48		
18	93	12.9	-6	32.1	219	37.0	63 +17 05.6	45	18 18	18 48	19 24	22 47 67	7 51 46		
19	108	13.1		33.1	234	02.2	62 11.7	50	24	18 57	37	23 03 69	37 44		
20	123	13.3		34.0	248	27.4	62 17.6	52	26	19 01	44	11 69	31 42		
21	138	13.4		35.0	262	52.6	62 23.5	54	29	06	51	19 70	23 42		
22	153	13.6		35.9	277	17.8	62 29.2	56	32	11	19 59	28 72	16 39		
23	168	13.8		36.9	291	42.9	61 34.8	58	36	17	20 09	38 73	7 07 37		
24	183	13.9	-6	37.8	306	08.0	61 +17 40.2	60 S	18 40	19 24	20 20	23 51 74	6 57 35		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO			
	PMG: 22 ^h 45 ^m 1		Mag: -3.9 PMG: 10 ^h 27 ^m		Mag: +1.8 PMG: 10 ^h 18 ^m		Mag: -1.7 PMG: 12 ^h 39 ^m			Mag: +0.5 PMG: 16 ^h 15 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	
0	17	48.1	203	24.1	+3	59.1	205	20.2	+4	31.5	169	50.4	-10 23.3
1	32	50.6	218	23.7		57.9	220	21.2		30.8	184	52.4	23.5
2	47	53.0	233	23.3		56.7	235	22.3		30.2	199	54.3	23.7
3	62	55.5	248	22.9		55.5	250	23.3		29.6	214	56.3	23.9
4	77	58.0	263	22.5		54.3	265	24.3		29.0	229	58.2	24.1
5	93	00.4	278	22.1	+3	53.1	280	25.3	+4	28.3	245	00.2	-10 24.3
6	108	02.9	293	21.7	+3	52.0	295	26.3	+4	27.7	260	02.2	-10 24.5
7	123	05.4	308	21.3		50.8	310	27.3		27.1	275	04.1	24.6
8	138	07.8	323	20.9		49.6	325	28.3		26.5	290	06.1	24.8
9	153	10.3	338	20.5		48.4	340	29.3		25.8	305	08.0	25.0
10	168	12.7	353	20.1		47.2	355	30.3		25.2	320	10.0	25.2
11	183	15.2	8	19.8	+3	46.0	10	31.3	+4	24.6	335	11.9	-10 25.4
12	198	17.7	23	19.4	+3	44.8	25	32.3	+4	23.9	350	13.9	-10 25.6
13	213	20.1	38	19.0		43.6	40	33.3		23.3	5	15.8	25.8
14	228	22.6	53	18.6		42.4	55	34.4		22.7	20	17.8	26.0
15	243	25.1	68	18.2		41.3	70	35.4		22.1	35	19.7	26.2
16	258	27.5	83	17.8		40.1	85	36.4		21.4	50	21.7	26.4
17	273	30.0	98	17.4	+3	38.9	100	37.4	+4	20.8	65	23.7	-10 26.6
18	288	32.5	113	17.0	+3	37.7	115	38.4	+4	20.2	80	25.6	-10 26.7
19	303	34.9	128	16.6		36.5	130	39.4		19.6	95	27.6	26.9
20	318	37.4	143	16.2		35.3	145	40.4		18.9	110	29.5	27.1
21	333	39.9	158	15.8		34.1	160	41.4		18.3	125	31.5	27.3
22	348	42.3	173	15.4		32.9	175	42.4		17.7	140	33.4	27.5
23	3	44.8	188	15.0		31.7	190	43.4		17.1	155	35.4	27.7
24	18	47.2	203	14.6	+3	30.5	205	44.4	+4	16.4	170	37.3	-10 27.9
Dif	—		-4 -12		+10 -6		+20 -2			+23 0			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 46 ^m 9			Edad: 19 ^d 8 PHE { 4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'6 SD: 16'3 PMG: 3 ^h 44 ^m R°: 59 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	183	13.9	-6	37.8	306	08.0	+17	40.2	60 N	4	57	5	46	6	27	19	57	53	
1	198	14.1		38.8	320	33.1		45.6	58	4	59		45	24		20	10	54	
2	213	14.3		39.7	334	58.1		50.8	52	5	01		44	21		21	55	12	
3	228	14.4		40.7	349	23.1	+17	55.9	51		02		43	19		31	55	11	
4	243	14.6		41.6	3	48.1	+18	00.9	50		03		42	16		40	55	44	
5	258	14.8	-6	42.6	18	13.1	+18	05.8	49	50	5	04	5	42	6	14	20	48	56
6	273	14.9	-6	43.5	32	38.0	+18	10.5	47	45	5	06	5	40	6	09	21	05	56
7	288	15.1		44.4	47	02.9		15.2	47	40		07		38	05		19	56	11
8	303	15.3		45.4	61	27.8		19.7	45	35		07		36	6	02	30	58	10
9	318	15.4		46.3	75	52.7		24.1	44	30		07		35	5	59	41	57	44
10	333	15.6		47.3	90	17.5		28.3	42	20		06		31	53		21	59	58
11	348	15.8	-6	48.2	104	42.4	+18	32.4	41	10 N	5	03	5	27	5	48	22	14	59
12	3	15.9	-6	49.2	119	07.2	+18	36.4	40	0	4	59	5	23	5	44	22	29	59
13	18	16.1		50.1	133	32.0		40.3	39	10 S		53		18	39		43	60	44
14	33	16.3		51.1	147	56.8		44.1	38	20		45		11	34		22	59	60
15	48	16.4		52.0	162	21.5		47.7	36	30		35	5	03	28		23	17	60
16	63	16.6		53.0	176	46.3		51.2	35	35		28	4	58	24		28	60	9
17	78	16.7	-6	53.9	191	11.0	+18	54.6	34	40	4	20	4	52	5	20	23	40	60
18	93	16.9	-6	54.8	205	35.7	+18	57.8	32	45	4	09	4	45	5	15	23	54	61
19	108	17.1		55.8	220	00.4	+19	00.9	31	50	3	56		36	09		**	**	**
20	123	17.2		56.7	234	25.1		03.9	30	52		50		32	07		**	**	**
21	138	17.4		57.7	248	49.8		06.8	29	54		42		27	04		**	**	**
22	153	17.6		58.6	263	14.5		09.5	27	56		34		22	5	01	**	**	**
23	168	17.7	-6	59.6	277	39.2		12.1	26	58		25		16	4	57	**	**	**
24	183	17.9	-7	00.5	292	03.9	+19	14.6	25	60 S	3	13	4	09	4	53	**	**	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 41 ^m 1		Mag: -3.9 PMG: 10 ^h 27 ^m			Mag: +1.8 PMG: 10 ^h 16 ^m			Mag: -1.7 PMG: 12 ^h 36 ^m			Mag: +0.5 PMG: 16 ^h 11 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	18	47.2	203	14.6	+3	30.5	205	44.4	+4	16.4	170	37.3	-10	27.9	116	33.4	-22	11.9	
1	33	49.7	218	14.2		29.3	220	45.4		15.8	185	39.3		28.1	131	35.7		11.9	
2	48	52.2	233	13.8		28.1	235	46.5		15.2	200	41.2		28.3	146	37.9		11.9	
3	63	54.6	248	13.4		26.9	250	47.5		14.6	215	43.2		28.5	161	40.2		11.9	
4	78	57.1	263	13.0		25.8	265	48.5		13.9	230	45.1		28.7	176	42.5		11.9	
5	93	59.6	278	12.6	+3	24.6	280	49.5	+4	13.3	245	47.1	-10	28.8	191	44.8	-22	11.9	
6	109	02.0	293	12.3	+3	23.4	295	50.5	+4	12.7	260	49.1	-10	29.0	206	47.0	-22	12.0	
7	124	04.5	308	11.9		22.2	310	51.5		12.1	275	51.0		29.2	221	49.3		12.0	
8	139	07.0	323	11.5		21.0	325	52.5		11.4	290	53.0		29.4	236	51.6		12.0	
9	154	09.4	338	11.1		19.8	340	53.5		10.8	305	54.9		29.6	251	53.9		12.0	
10	169	11.9	353	10.7		18.6	355	54.5		10.2	320	56.9		29.8	266	56.2		12.0	
11	184	14.4	8	10.3	+3	17.4	10	55.5	+4	09.5	335	58.8	-10	30.0	281	58.4	-22	12.0	
12	199	16.8	23	09.9	+3	16.2	25	56.5	+4	08.9	351	00.8	-10	30.2	297	00.7	-22	12.1	
13	214	19.3	38	09.5		15.0	40	57.6		08.3	6	02.7		30.4	312	03.0		12.1	
14	229	21.7	53	09.1		13.8	55	58.6		07.7	21	04.7		30.6	327	05.3		12.1	
15	244	24.2	68	08.7		12.6	70	59.6		07.0	36	06.6		30.8	342	07.5		12.1	
16	259	26.7	83	08.3		11.4	86	00.6		06.4	51	08.6		30.9	357	09.8		12.1	
17	274	29.1	98	07.9	+3	10.2	101	01.6	+4	05.8	66	10.5	-10	31.1	12	12.1	-22	12.1	
18	289	31.6	113	07.5	+3	09.0	116	02.6	+4	05.2	81	12.5	-10	31.3	27	14.4	-22	12.1	
19	304	34.1	128	07.1		07.8	131	03.6		04.5	96	14.4		31.5	42	16.6		12.2	
20	319	36.5	143	06.7		06.6	146	04.6		03.9	111	16.4		31.7	57	18.9		12.2	
21	334	39.0	158	06.4		05.4	161	05.6		03.3	126	18.4		31.9	72	21.2		12.2	
22	349	41.5	173	06.0		04.2	176	06.6		02.7	141	20.3		32.1	87	23.5		12.2	
23	4	43.9	188	05.6		03.0	191	07.6		02.0	156	22.3		32.3	102	25.7		12.2	
24	19	46.4	203	05.2	+3	01.8	206	08.7	+4	01.4	171	24.2	-10	32.5	117	28.0	-22	12.2	
Dif	—		-4		-12		+10		-6		+20		-2		+23		0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 7			Edad: 20 ^d 8 PHE { SD: 16'2 PMG: 4 ^h 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	183	17.9	-7	00.5	292	03.9	+19 14.6	60 N	17 02	17 44	18 32	20 50 66	13 34 54		
1	198	18.0		01.4	306	28.5	56 16.9	58	06	45	31	21 04 65	20 55		
2	213	18.2		02.4	320	53.2	57 19.1	56	09	46	29	16 64	13 09 55		
3	228	18.4		03.3	335	17.9	57 21.2	54	12	47	28	26 64	12 58 56		
4	243	18.5		04.3	349	42.5	56 23.2	52	15	48	27	35 64	49 56		
5	258	18.7	-7	05.2	4	07.2	57 +19 25.0	50	17 17	17 49	18 27	21 44 62	12 41 56		
6	273	18.9	-7	06.1	18	31.9	57 +19 26.7	45	17 22	17 51	18 25	22 01 62	12 23 57		
7	288	19.0		07.1	32	56.5	56 28.2	40	26	54	25	15 62	12 09 57		
8	303	19.2		08.0	47	21.2	57 29.6	35	30	56	25	28 60	11 57 57		
9	318	19.3		09.0	61	45.9	57 30.9	30	34	17 58	25	38 61	46 58		
10	333	19.5		09.9	76	10.6	57 32.1	20	40	18 02	27	22 57 59	28 58		
11	348	19.7	-7	10.9	90	35.3	57 +19 33.1	10 N	17 45	18 06	18 30	23 13 58	11 12 58		
12	3	19.8	-7	11.8	105	00.0	57 +19 34.0	0	17 50	18 11	18 35	23 28 57	10 57 58		
13	18	20.0		12.7	119	24.7	57 34.8	10 S	17 55	16	41	43 56	42 59		
14	33	20.1		13.7	133	49.4	57 35.4	20	18 01	23	18 49	23 59 56	26 59		
15	48	20.3		14.6	148	14.2	58 35.9	30	07	32	19 00	*** ** *	10 08 59		
16	63	20.4		15.6	162	38.9	57 36.3	35	11	37	08	*** ** *	9 57 59		
17	78	20.6	-7	16.5	177	03.7	58 +19 36.6	40	18 16	18 43	19 16	*** ** *	9 45 59		
18	93	20.8	-7	17.4	191	28.5	58 +19 36.7	45	18 21	18 51	19 27	*** ** *	9 30 59		
19	108	20.9		18.4	205	53.3	58 36.7	50	27	19 00	41	0 12 60	12 60		
20	123	21.1		19.3	220	18.1	58 36.5	52	30	05	48	20 61	9 04 60		
21	138	21.2		20.3	234	42.9	58 36.2	54	33	10	19 56	29 61	8 55 59		
22	153	21.4		21.2	249	07.8	59 35.8	56	37	16	20 04	40 61	44 60		
23	168	21.6		22.1	263	32.6	58 35.3	58	40	22	14	0 51 62	32 60		
24	183	21.7	-7	23.1	277	57.5	59 +19 34.6	60 S	18 45	19 29	20 26	1 05 62	8 18 60		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 37 ^m 2		Mag: -3.9 PMG: 10 ^h 28 ^m		Mag: +1.8 PMG: 10 ^h 15 ^m		Mag: -1.7 PMG: 12 ^h 33 ^m		Mag: +0.5 PMG: 16 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	46.4	203	05.2	+3	01.8	206	08.7	+4	01.4
1	34	48.9	218	04.8	+3	00.6	221	09.7		00.8
2	49	51.3	233	04.4	+2	59.4	236	10.7	+4	00.1
3	64	53.8	248	04.0		58.3	251	11.7	+3	59.5
4	79	56.2	263	03.6		57.1	266	12.7		58.9
5	94	58.7	278	03.2	+2	55.9	281	13.7	+3	58.3
6	110	01.2	293	02.8	+2	54.7	296	14.7	+3	57.6
7	125	03.6	308	02.4		53.5	311	15.7		57.0
8	140	06.1	323	02.0		52.3	326	16.7		56.4
9	155	08.6	338	01.6		51.1	341	17.7		55.8
10	170	11.0	353	01.2		49.9	356	18.8		55.1
11	185	13.5	8	00.9	+2	48.7	11	19.8	+3	54.5
12	200	16.0	23	00.5	+2	47.5	26	20.8	+3	53.9
13	215	18.4	38	00.1		46.3	41	21.8		53.3
14	230	20.9	52	59.7		45.1	56	22.8		52.6
15	245	23.3	67	59.3		43.9	71	23.8		52.0
16	260	25.8	82	58.9		42.7	86	24.8		51.4
17	275	28.3	97	58.5	+2	41.5	101	25.8	+3	50.7
18	290	30.7	112	58.1	+2	40.3	116	26.8	+3	50.1
19	305	33.2	127	57.7		39.1	131	27.8		49.5
20	320	35.7	142	57.3		37.9	146	28.9		48.9
21	335	38.1	157	56.9		36.7	161	29.9		48.2
22	350	40.6	172	56.5		35.4	176	30.9		47.6
23	5	43.1	187	56.1		34.2	191	31.9		47.0
24	20	45.5	202	55.8	+2	33.0	206	32.9	+3	46.3
Dif	—	—	-4	-12		+10	-6	+20		-2
										+23
										0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:0 PMG: 11 ^h 46 ^m 4			Edad: 21 ^d 8 PHE { SD: 16:1 PMG: 5 ^h 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	21.7	-7	23.1	277	57.5	+19	34.6	60 N	5 02	5 50	6 32	21 56	75	14 28	41		
1	198	21.9		24.0	292	22.5	60	33.8	58	04	49	29	22 09	73	15	43		
2	213	22.0		24.9	306	47.4	59	32.9	56	05	48	25	20 72		14 04	44		
3	228	22.2		25.9	321	12.4	60	31.9	54	06	47	22	30 70		13 54	45		
4	243	22.3		26.8	335	37.4	60	30.7	52	07	46	20	39 69		45	46		
5	258	22.5	-7	27.8	350	02.4	60	+19	50	5 07	5 45	6 17	22 46	69	13 37	47		
6	273	22.6	-7	28.7	4	27.5	61	+19	45	5 08	5 42	6 12	23 03	66	13 20	49		
7	288	22.8		29.6	18	52.5	60	26.4	40	09	40	07	17 64		13 06	50		
8	303	23.0		30.6	33	17.7	62	24.7	35	09	38	03	28 63		12 54	52		
9	318	23.1		31.5	47	42.8	61	22.9	30	08	36	6 00	39 61		44	52		
10	333	23.3		32.4	62	08.0	62	20.9	20	06	32	5 54	23 56	59	26	54		
11	348	23.4	-7	33.4	76	33.2	62	+19	10 N	5 03	5 27	5 48	** ** *	**	12 10	56		
12	3	23.6	-7	34.3	90	58.5	63	+19	0	4 58	5 22	5 43	** ** *	**	11 55	57		
13	18	23.7		35.3	105	23.8	63	14.4	10 S	52	17	38	** ** *	**	41	58		
14	33	23.9		36.2	119	49.1	63	11.9	20	44	10	32	** ** *	**	25	59		
15	48	24.0		37.1	134	14.4	63	09.4	30	32	5 01	25	0 17	55	11 07	61		
16	63	24.2		38.1	148	39.8	64	06.7	35	25	4 56	21	28 54		10 56	62		
17	78	24.3	-7	39.0	163	05.3	65	+19	40	4 16	4 49	5 17	0 40	54	10 44	63		
18	93	24.5	-7	39.9	177	30.8	65	+19	45	4 05	4 41	5 12	0 55	52	10 29	65		
19	108	24.6		40.9	191	56.3	65	+18	50	3 51	32	05	1 12	52	12	66		
20	123	24.8		41.8	206	21.9	66	54.7	52	44	27	5 02	21	50	10 04	66		
21	138	25.0		42.7	220	47.5	66	51.4	54	37	22	4 59	30	50	9 54	68		
22	153	25.1		43.7	235	13.1	66	48.0	56	28	17	56	41	49	44	69		
23	168	25.3		44.6	249	38.8	67	44.5	58	18	10	52	1 53	48	32	70		
24	183	25.4	-7	45.5	264	04.6	68	+18	60 S	3 06	4 03	4 47	2 07	46	9 18	72		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 33 ^m 3		Mag: -3.9 PMG: 10 ^h 29 ^m			Mag: +1.8 PMG: 10 ^h 13 ^m			Mag: -1.7 PMG: 12 ^h 30 ^m			Mag: +0.5 PMG: 16 ^h 04 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	20	45.5	202	55.8	+2	33.0	206	32.9	+3	46.3	172	11.1	-10	37.0	118	22.6	-22	12.6
1	35	48.0	217	55.4		31.8	221	33.9		45.7	187	13.0		37.2	133	24.9		12.6
2	50	50.5	232	55.0		30.6	236	34.9		45.1	202	15.0		37.4	148	27.1		12.7
3	65	52.9	247	54.6		29.4	251	35.9		44.5	217	16.9		37.6	163	29.4		12.7
4	80	55.4	262	54.2		28.2	266	36.9		43.8	232	18.9		37.8	178	31.7		12.7
5	95	57.8	277	53.8	+2	27.0	281	37.9	+3	43.2	247	20.8	-10	38.0	193	33.9	-22	12.7
6	111	00.3	292	53.4	+2	25.8	296	39.0	+3	42.6	262	22.8	-10	38.2	208	36.2	-22	12.7
7	126	02.8	307	53.0		24.6	311	40.0		42.0	277	24.7		38.4	223	38.5		12.7
8	141	05.2	322	52.6		23.4	326	41.0		41.3	292	26.7		38.6	238	40.8		12.8
9	156	07.7	337	52.2		22.2	341	42.0		40.7	307	28.6		38.8	253	43.0		12.8
10	171	10.2	352	51.8		21.0	356	43.0		40.1	322	30.6		38.9	268	45.3		12.8
11	186	12.6	7	51.4	+2	19.8	11	44.0	+3	39.4	337	32.5	-10	39.1	283	47.6	-22	12.8
12	201	15.1	22	51.1	+2	18.6	26	45.0	+3	38.8	352	34.5	-10	39.3	298	49.8	-22	12.8
13	216	17.6	37	50.7		17.4	41	46.0		38.2	7	36.4		39.5	313	52.1		12.8
14	231	20.0	52	50.3		16.2	56	47.0		37.6	22	38.4		39.7	328	54.4		12.8
15	246	22.5	67	49.9		15.0	71	48.1		36.9	37	40.3		39.9	343	56.7		12.9
16	261	25.0	82	49.5		13.8	86	49.1		36.3	52	42.3		40.1	358	58.9		12.9
17	276	27.4	97	49.1	+2	12.6	101	50.1	+3	35.7	67	44.2	-10	40.3	14	01.2	-22	12.9
18	291	29.9	112	48.7	+2	11.4	116	51.1	+3	35.0	82	46.2	-10	40.5	29	03.5	-22	12.9
19	306	32.3	127	48.3		10.2	131	52.1		34.4	97	48.1		40.7	44	05.7		12.9
20	321	34.8	142	47.9		09.0	146	53.1		33.8	112	50.1		40.9	59	08.0		12.9
21	336	37.3	157	47.5		07.8	161	54.1		33.2	127	52.0		41.0	74	10.3		13.0
22	351	39.7	172	47.1		06.6	176	55.1		32.5	142	54.0		41.2	89	12.5		13.0
23	6	42.2	187	46.8		05.3	191	56.1		31.9	157	55.9		41.4	104	14.8		13.0
24	21	44.7	202	46.4	+2	04.1	206	57.2	+3	31.3	172	57.9	-10	41.6	119	17.1	-22	13.0
Dif	—		-4		-12		+10		-6		+20		-2		+23		0	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0		Edad: 22 ^d 8	PHE {	4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'6	SD: 16'0			PMG: 6 ^h 39 ^m	R°: 55 ^m	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 46 ^m 2	hG ☉									Dec	hG ☾	Dif	Dec	Dif	Civil
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	183	25.4	-7	45.5	264	04.6	+18 40.8	60 N	16 57	17 38	18 26	23 11 81	15 09 30			
1	198	25.6		46.5	278	30.3	37	58	17 00	40	25	22 78	14 58 32			
2	213	25.7		47.4	292	56.2	69	56	04	41	24	32 76	48 34			
3	228	25.9		48.3	307	22.1	69	54	07	43	24	40 74	39 36			
4	243	26.0		49.3	321	48.0	69	52	10	44	23	48 72	31 38			
5	258	26.2	-7	50.2	336	14.0	70	50	17 13	17 45	18 23	23 55 70	14 24 39			
6	273	26.3	-7	51.1	350	40.0	70	45	17 19	17 48	18 22	** ** *	14 09 42			
7	288	26.5		52.1	5	06.1	71	40	23	51	22	** ** *	13 56 44			
8	303	26.6		53.0	19	32.2	71	35	28	53	22	** ** *	46 45			
9	318	26.8		53.9	33	58.4	72	30	31	17 55	23	** ** *	36 48			
10	333	26.9		54.9	48	24.6	72	20	38	18 00	26	** ** *	20 50			
11	348	27.1	-7	55.8	62	50.9	73	10 N	17 44	18 05	18 30	0 11 58	13 06 52			
12	3	27.2	-7	56.7	77	17.3	74	0	17 49	18 10	18 35	0 25 56	12 52 55			
13	18	27.4		57.7	91	43.7	74	10 S	17 55	16	41	39 54	39 56			
14	33	27.5		58.6	106	10.1	74	20	18 02	24	18 50	0 55 52	24 59			
15	48	27.6	-7	59.5	120	36.6	75	30	09	33	19 02	1 12 50	12 08 61			
16	63	27.8	-8	00.5	135	03.2	76	35	13	39	09	22 49	11 58 63			
17	78	27.9	-8	01.4	149	29.8	76	40	18 18	18 46	19 19	1 34 47	11 47 65			
18	93	28.1	-8	02.3	163	56.5	77	45	18 23	18 54	19 30	1 47 45	11 34 67			
19	108	28.2		03.3	178	23.2	77	50	30	19 04	45	2 04 43	18 70			
20	123	28.4		04.2	192	50.0	78	52	33	09	19 52	11 42	10 72			
21	138	28.5		05.1	207	16.8	78	54	37	14	20 00	20 40	11 02 73			
22	153	28.7		06.1	221	43.7	79	56	41	20	10	30 39	10 53 74			
23	168	28.8		07.0	236	10.7	80	58	45	27	20	41 37	42 76			
24	183	29.0	-8	07.9	250	37.7	80	60 S	18 50	19 35	20 33	2 53 35	10 30 79			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 29 ^m 3		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: +1.8 PMG: 10 ^h 12 ^m		Mag: -1.7 PMG: 12 ^h 27 ^m		Mag: +0.5 PMG: 16 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	21	44.7	202	46.4	+2	04.1	206	57.2	+3	31.3
1	36	47.1	217	46.0		02.9	221	58.2		30.6
2	51	49.6	232	45.6		01.7	236	59.2		30.0
3	66	52.1	247	45.2	+2	00.5	252	00.2	29.4	
4	81	54.5	262	44.8	+1	59.3	267	01.2	28.8	
5	96	57.0	277	44.4	+1	58.1	282	02.2	+3	28.1
6	111	59.5	292	44.0	+1	56.9	297	03.2	+3	27.5
7	127	01.9	307	43.6		55.7	312	04.2		26.9
8	142	04.4	322	43.2		54.5	327	05.2		26.3
9	157	06.8	337	42.8		53.3	342	06.3		25.6
10	172	09.3	352	42.5		52.1	357	07.3		25.0
11	187	11.8	7	42.1	+1	50.9	12	08.3	+3	24.4
12	202	14.2	22	41.7	+1	49.6	27	09.3	+3	23.7
13	217	16.7	37	41.3		48.4	42	10.3		23.1
14	232	19.2	52	40.9		47.2	57	11.3		22.5
15	247	21.6	67	40.5		46.0	72	12.3		21.9
16	262	24.1	82	40.1		44.8	87	13.3		21.2
17	277	26.6	97	39.7	+1	43.6	102	14.3	+3	20.6
18	292	29.0	112	39.3	+1	42.4	117	15.4	+3	20.0
19	307	31.5	127	38.9		41.2	132	16.4		19.3
20	322	33.9	142	38.5		40.0	147	17.4		18.7
21	337	36.4	157	38.2		38.8	162	18.4		18.1
22	352	38.9	172	37.8		37.6	177	19.4		17.4
23	7	41.3	187	37.4		36.3	192	20.4		16.8
24	22	43.8	202	37.0	+1	35.1	207	21.4	+3	16.2
Dif	—		-4		-12		+10		-6	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG: 11 ^h 46 ^m 0			Edad: 23 ^d 8 PHE { 4 ^h : 58'4 12 ^h : 58'3 20 ^h : 58'1 PMG: 7 ^h 34 ^m R°: 53 ^m									Hora R°		Hora R°							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m					
0	183	29.0	-8	07.9	250	37.7	+16	40.1	60 N	5	07	5	55	6	37	15	39	24				
1	198	29.1		08.8	265	04.8		33.8	58		08		53	33		30	26					
2	213	29.3		09.8	279	31.9		27.3	56		09		52	29		22	28					
3	228	29.4		10.7	293	59.1		20.8	54		09		50	26		15	30					
4	243	29.5		11.6	308	26.3		14.2	52		10		49	23		09	32					
5	258	29.7	-8	12.6	322	53.7	+16	07.5	50	5	10	5	48	6	20	15	03	33				
6	273	29.8	-8	13.5	337	21.0	+16	00.7	45	5	11	5	45	6	14	0	09	68				
7	288	30.0		14.4	351	48.5	+15	53.8	40		11		42	09		21	65	40	39			
8	303	30.1		15.3	6	16.0		46.8	35		10		40	05		31	63	31	42			
9	318	30.3		16.3	20	43.5		39.8	30		09		37	6	01	40	61	24	43			
10	333	30.4		17.2	35	11.1		32.6	20		07		32	5	54	0	55	59	14	10	46	
11	348	30.6	-8	18.1	49	38.8	+15	25.4	10 N	5	03	5	27	5	48	1	09	55	13	58	49	
12	3	30.7	-8	19.1	64	06.5	+15	18.0	0	4	58	5	22	5	43	1	21	53	13	47	52	
13	18	30.8		20.0	78	34.3		10.6	10 S		51		16	37		33	51		35	55		
14	33	31.0		20.9	93	02.2	+15	03.1	20		42		5	08	30	1	47	48		23	58	
15	48	31.1		21.8	107	30.1	+14	55.5	30		30	4	59	23		2	02	45		09	61	
16	63	31.3		22.8	121	58.1		47.9	35		22		53	19		11	43		13	01	63	
17	78	31.4	-8	23.7	136	26.1	+14	40.1	40	4	13	4	46	5	14	2	21	41		12	52	65
18	93	31.5	-8	24.6	150	54.2	+14	32.3	45	4	01	4	38	5	08	2	32	39		12	41	68
19	108	31.7		25.5	165	22.3		24.4	50	3	46		27	5	01		47	35		28	71	
20	123	31.8		26.5	179	50.6		16.4	52		39		23	4	58	2	53	34		22	73	
21	138	32.0		27.4	194	18.8		08.3	54		31		17	54		3	00	33		15	75	
22	153	32.1		28.3	208	47.2	+14	00.2	56		22		11	50		09	30		12	07	77	
23	168	32.2		29.2	223	15.6	+13	52.0	58	3	11	4	04	46		18	28		11	58	80	
24	183	32.4	-8	30.2	237	44.0	+13	43.7	60 S	2	58	3	56	4	41	3	28	26		11	49	81
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 22 ^h 25 ^m 4			Mag: -3.9 PMG: 10 ^h 30 ^m			Mag: +1.8 PMG: 10 ^h 10 ^m			Mag: -1.7 PMG: 12 ^h 23 ^m			Mag: +0.5 PMG: 15 ^h 57 ^m									
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'						
0	22	43.8		202	37.0	+1	207	21.4	+3	173	44.7	-10	120	11.5	-22	13.4						
1	37	46.3		217	36.6		222	22.4		188	46.6		135	13.7		13.4						
2	52	48.7		232	36.2		237	23.5		203	48.6		150	16.0		13.4						
3	67	51.2		247	35.8		252	24.5		218	50.5		165	18.3		13.4						
4	82	53.7		262	35.4		267	25.5		233	52.5		180	20.5		13.5						
5	97	56.1		277	35.0	+1	282	26.5	+3	248	54.4	-10	195	22.8	-22	13.5						
6	112	58.6		292	34.6	+1	297	27.5	+3	263	56.4	-10	210	25.1	-22	13.5						
7	128	01.1		307	34.2		312	28.5		278	58.3		225	27.3		13.5						
8	143	03.5		322	33.9		327	29.5		294	00.3		240	29.6		13.5						
9	158	06.0		337	33.5		342	30.5		309	02.2		255	31.9		13.5						
10	173	08.4		352	33.1		357	31.5		324	04.2		270	34.1		13.6						
11	188	10.9		7	32.7	+1	12	32.6	+3	339	06.1	-10	285	36.4	-22	13.6						
12	203	13.4		22	32.3	+1	27	33.6	+3	354	08.1	-10	300	38.7	-22	13.6						
13	218	15.8		37	31.9		42	34.6		9	10.0		315	40.9		13.6						
14	233	18.3		52	31.5		57	35.6		24	11.9		330	43.2		13.6						
15	248	20.8		67	31.1		72	36.6		39	13.9		345	45.4		13.6						
16	263	23.2		82	30.7		87	37.6		54	15.8		0	47.7		13.6						
17	278	25.7		97	30.3	+1	102	38.6	+3	69	17.8	-10	15	50.0	-22	13.7						
18	293	28.2		112	30.0	+1	117	39.6	+3	84	19.7	-10	30	52.2	-22	13.7						
19	308	30.6		127	29.6		132	40.7		99	21.7		45	54.5		13.7						
20	323	33.1		142	29.2		147	41.7		114	23.6		60	56.8		13.7						
21	338	35.6		157	28.8		162	42.7		129	25.6		75	59.0		13.7						
22	353	38.0		172	28.4		177	43.7		144	27.5		91	01.3		13.7						
23	8	40.5		187	28.0		192	44.7		159	29.5		106	03.5		13.8						
24	23	42.9		202	27.6	+1	207	45.7	+3	174	31.4	-10	121	05.8	-22	13.8						
Dif	—			-4		-12	+10		-6	+19		-2	+23			0						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 24 ^d 8 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'7										
	PMG: 11 ^h 45 ^m 7			SD: 15'8 PMG: 8 ^h 27 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	32.4	-8 30.2	237	44.0	+13 43.7	83	60 N	16 51	17 33	18 21	0 32 82	16 03 18	
1	198	32.5		252	12.6	35.4	85	58	55	35	20	40 79	15 56 21	
2	213	32.7		266	41.1	26.9	85	56	16 59	37	20	48 76	50 24	
3	228	32.8		281	09.8	18.4	85	54	17 03	38	19	0 54 75	45 26	
4	243	32.9		295	38.5	09.9	85	52	06	40	19	1 00 73	41 27	
5	258	33.1	-8 34.8	310	07.2	+13 01.2	87	50	17 09	17 41	18 19	1 05 72	15 36 29	
6	273	33.2	-8 35.7	324	36.0	+12 52.5	87	45	17 15	17 45	18 19	1 17 68	15 27 32	
7	288	33.4		339	04.9	43.7	88	40	20	48	19	26 65	19 35	
8	303	33.5		353	33.8	34.9	88	35	25	50	20	34 63	13 37	
9	318	33.6		8	02.8	26.0	89	30	29	53	21	41 61	15 07 39	
10	333	33.8		22	31.9	17.0	90	20	36	17 59	24	1 54 56	14 56 44	
11	348	33.9	-8 40.3	37	01.0	+12 08.0	90	10 N	17 43	18 04	18 29	2 04 54	14 47 47	
12	3	34.0	-8 41.3	51	30.2	+11 58.9	91	0	17 49	18 10	18 34	2 14 51	14 39 50	
13	18	34.2		65	59.4	49.8	92	10 S	17 55	17	41	24 48	30 53	
14	33	34.3		80	28.7	40.6	92	20	18 02	25	18 51	35 45	21 56	
15	48	34.5		94	58.0	31.3	93	30	10	34	19 03	47 41	10 60	
16	63	34.6		109	27.4	22.0	93	35	15	41	11	2 54 39	14 04 62	
17	78	34.7	-8 45.9	123	56.8	+11 12.6	94	40	18 20	18 48	19 21	3 02 37	13 57 65	
18	93	34.9	-8 46.8	138	26.3	+11 03.2	94	45	18 26	18 57	19 33	3 11 34	13 49 68	
19	108	35.0		152	55.9	+10 53.7	95	50	33	19 07	49	22 31	39 71	
20	123	35.1		167	25.5	44.1	96	52	37	13	19 56	27 29	35 73	
21	138	35.3		181	55.2	34.5	96	54	41	18	20 05	33 27	30 74	
22	153	35.4		196	24.9	24.9	96	56	45	25	15	39 25	24 77	
23	168	35.5		210	54.7	15.2	97	58	50	32	26	46 23	18 79	
24	183	35.7	-8 52.3	225	24.5	+10 05.4	98	60 S	18 55	19 40	20 40	3 54 21	13 10 82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 22 ^h 21 ^m 5		Mag: -3.9 PMG: 10 ^h 30 ^m		Mag: +1.8 PMG: 10 ^h 08 ^m		Mag: -1.7 PMG: 12 ^h 20 ^m		Mag: +0.5 PMG: 15 ^h 53 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	23	42.9	202	27.6	+1 06.1	207 45.7	+3 01.1	174 31.4	-10 50.7	121 05.8	-22 13.8
1	38	45.4	217	27.2	04.8	222 46.7	+3 00.5	189 33.4	50.9	136 08.1	13.8
2	53	47.9	232	26.8	03.6	237 47.7	+2 59.8	204 35.3	51.1	151 10.3	13.8
3	68	50.3	247	26.4	02.4	252 48.8	59.2	219 37.3	51.3	166 12.6	13.8
4	83	52.8	262	26.0	+1 01.2	267 49.8	58.6	234 39.2	51.5	181 14.9	13.8
5	98	55.3	277	25.7	+1 00.0	282 50.8	+2 57.9	249 41.2	-10 51.7	196 17.1	-22 13.9
6	113	57.7	292	25.3	+0 58.8	297 51.8	+2 57.3	264 43.1	-10 51.9	211 19.4	-22 13.9
7	129	00.2	307	24.9	57.6	312 52.8	56.7	279 45.1	52.1	226 21.6	13.9
8	144	02.7	322	24.5	56.3	327 53.8	56.1	294 47.0	52.3	241 23.9	13.9
9	159	05.1	337	24.1	55.1	342 54.8	55.4	309 49.0	52.5	256 26.2	13.9
10	174	07.6	352	23.7	53.9	357 55.8	54.8	324 50.9	52.6	271 28.4	13.9
11	189	10.0	7	23.3	+0 52.7	12 56.9	+2 54.2	339 52.9	-10 52.8	286 30.7	-22 14.0
12	204	12.5	22	22.9	+0 51.5	27 57.9	+2 53.5	354 54.8	-10 53.0	301 32.9	-22 14.0
13	219	15.0	37	22.5	50.3	42 58.9	52.9	9 56.8	53.2	316 35.2	14.0
14	234	17.4	52	22.1	49.1	57 59.9	52.3	24 58.7	53.4	331 37.5	14.0
15	249	19.9	67	21.8	47.8	73 00.9	51.6	40 00.6	53.6	346 39.7	14.0
16	264	22.4	82	21.4	46.6	88 01.9	51.0	55 02.6	53.8	1 42.0	14.0
17	279	24.8	97	21.0	+0 45.4	103 02.9	+2 50.4	70 04.5	-10 54.0	16 44.2	-22 14.0
18	294	27.3	112	20.6	+0 44.2	118 03.9	+2 49.8	85 06.5	-10 54.2	31 46.5	-22 14.1
19	309	29.8	127	20.2	43.0	133 05.0	49.1	100 08.4	54.4	46 48.8	14.1
20	324	32.2	142	19.8	41.8	148 06.0	48.5	115 10.4	54.5	61 51.0	14.1
21	339	34.7	157	19.4	40.6	163 07.0	47.9	130 12.3	54.7	76 53.3	14.1
22	354	37.2	172	19.0	39.3	178 08.0	47.2	145 14.3	54.9	91 55.5	14.1
23	9	39.6	187	18.6	38.1	193 09.0	46.6	160 16.2	55.1	106 57.8	14.1
24	24	42.1	202	18.2	+0 36.9	208 10.0	+2 46.0	175 18.2	-10 55.3	122 00.1	-22 14.2
Dif	—		-4	-12	+10	-6	-6	+19	-2	+23	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 45 ^m 5			Edad: 25 ^d 8 PHE { 4 ^h : 57/5 12 ^h : 57/4 20 ^h : 57/2 SD: 15'7 PMG: 9 ^h 17 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	35.7	-8 52.3	225	24.5	+10 05.4	60 N	5 12	6 00	6 42		1 54	81	16 21	16
1	198	35.8		239	54.4 ¹⁰⁹	+9 55.7 ⁹⁷	58	12	5 58	38		1 59	79	17	19
2	213	35.9		254	24.3 ¹⁰⁹	45.8 ⁹⁹	56	13	56	34		2 04	77	14	20
3	228	36.1		268	54.3 ¹¹⁰	35.9 ⁹⁹	54	13	54	30		09	74	11	22
4	243	36.2		283	24.3 ¹¹⁰	26.0 ⁹⁹	52	13	52	27		13	72	08	24
5	258	36.3	-8 56.9	297	54.4 ¹¹¹	+9 16.0 ¹⁰⁰	50	5 13	5 51	6 24		2 17	70	16 05	26
6	273	36.5	-8 57.8	312	24.6 ¹¹²	+9 06.0 ¹⁰⁰	45	5 13	5 47	6 17		2 25	67	15 59	30
7	288	36.6		326	54.7 ¹¹¹	+8 56.0 ¹⁰⁰	40	13	44	12		31	64	54	33
8	303	36.7	-8 59.7	341	25.0 ¹¹³	45.9 ¹⁰¹	35	12	41	07		37	61	50	35
9	318	36.9	-9 00.6	355	55.3 ¹¹³	35.7 ¹⁰²	30	11	38	6 03		42	59	46	38
10	333	37.0		10	25.6 ¹¹³	25.6 ¹⁰¹	20	07	33	5 55		50	56	40	41
11	348	37.1	-9 02.4	24	56.0 ¹¹⁴	+8 15.4 ¹⁰²	10 N	5 03	5 27	5 49		2 58	52	15 34	45
12	3	37.3	-9 03.3	39	26.4 ¹¹⁴	+8 05.1 ¹⁰³	0	4 57	5 21	5 42		3 05	49	15 29	47
13	18	37.4		53	56.9 ¹¹⁵	+7 54.8 ¹⁰³	10 S	50	14	36		12	46	23	51
14	33	37.5		68	27.4 ¹¹⁵	44.5 ¹⁰³	20	40	5 06	29		20	42	17	55
15	48	37.6		82	58.0 ¹¹⁶	34.2 ¹⁰³	30	28	4 56	21		28	38	10	59
16	63	37.8		97	28.6 ¹¹⁶	23.8 ¹⁰⁴	35	19	50	16		33	36	06	61
17	78	37.9	-9 07.9	111	59.3 ¹¹⁷	+7 13.4 ¹⁰⁴	40	4 10	4 43	5 11		3 39	33	15 02	63
18	93	38.0	-9 08.8	126	30.0 ¹¹⁷	+7 02.9 ¹⁰⁵	45	3 57	4 34	5 04		3 45	31	14 57	66
19	108	38.2		141	00.7 ¹¹⁷	+6 52.4 ¹⁰⁵	50	42	23	4 57		53	27	50	71
20	123	38.3		155	31.5 ¹¹⁸	41.9 ¹⁰⁵	52	34	18	53		3 56	26	48	71
21	138	38.4		170	02.4 ¹¹⁹	31.4 ¹⁰⁵	54	25	12	50		4 00	24	44	74
22	153	38.5		184	33.2 ¹¹⁸	20.8 ¹⁰⁶	56	15	4 06	45		04	22	41	76
23	168	38.7		199	04.2 ¹²⁰	+6 10.3 ¹⁰⁵	58	3 04	3 58	41		09	20	37	78
24	183	38.8	-9 14.3	213	35.1 ¹¹⁹	+5 59.7 ¹⁰⁶	60 S	2 50	3 50	4 35		4 15	17	14 32	81
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 22 ^h 17 ^m 5			Mag: -3.9 PMG: 10 ^h 31 ^m			Mag: +1.8 PMG: 10 ^h 07 ^m			Mag: -1.7 PMG: 12 ^h 17 ^m			Mag: +0.5 PMG: 15 ^h 50 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	24	42.1	202 18.2	+0 36.9	208 10.0	+2 46.0	175 18.2	-10 55.3	122 00.1	-22 14.2			122 00.1	-22 14.2	
1	39	44.5	217 17.8		35.7	223 11.0	190 20.1	55.5	137 02.3				137 02.3		14.2
2	54	47.0	232 17.5		34.5	238 12.1	205 22.1	55.7	152 04.6				152 04.6		14.2
3	69	49.5	247 17.1		33.3	253 13.1	220 24.0	55.9	167 06.8				167 06.8		14.2
4	84	51.9	262 16.7		32.0	268 14.1	235 26.0	56.1	182 09.1				182 09.1		14.2
5	99	54.4	277 16.3	+0 30.8	283 15.1	+2 42.8	250 27.9	-10 56.3	197 11.3	-22 14.2			197 11.3	-22 14.2	
6	114	56.9	292 15.9	+0 29.6	298 16.1	+2 42.2	265 29.9	-10 56.4	212 13.6	-22 14.3			212 13.6	-22 14.3	
7	129	59.3	307 15.5		28.4	313 17.1	280 31.8	56.6	227 15.9				227 15.9		14.3
8	145	01.8	322 15.1		27.2	328 18.1	295 33.7	56.8	242 18.1				242 18.1		14.3
9	160	04.3	337 14.7		26.0	343 19.1	310 35.7	57.0	257 20.4				257 20.4		14.3
10	175	06.7	352 14.3		24.7	358 20.2	325 37.6	57.2	272 22.6				272 22.6		14.3
11	190	09.2	7 13.9	+0 23.5	13 21.2	+2 39.0	340 39.6	-10 57.4	287 24.9	-22 14.3			287 24.9	-22 14.3	
12	205	11.6	22 13.5	+0 22.3	28 22.2	+2 38.4	355 41.5	-10 57.6	302 27.1	-22 14.3			302 27.1	-22 14.3	
13	220	14.1	37 13.2		21.1	43 23.2	10 43.5	57.8	317 29.4				317 29.4		14.4
14	235	16.6	52 12.8		19.9	58 24.2	25 45.4	58.0	332 31.7				332 31.7		14.4
15	250	19.0	67 12.4		18.7	73 25.2	40 47.4	58.2	347 33.9				347 33.9		14.4
16	265	21.5	82 12.0		17.4	88 26.2	55 49.3	58.3	2 36.2				2 36.2		14.4
17	280	24.0	97 11.6	+0 16.2	103 27.3	+2 35.3	70 51.3	-10 58.5	17 38.4	-22 14.4			17 38.4	-22 14.4	
18	295	26.4	112 11.2	+0 15.0	118 28.3	+2 34.6	85 53.2	-10 58.7	32 40.7	-22 14.4			32 40.7	-22 14.4	
19	310	28.9	127 10.8		13.8	133 29.3	100 55.2	58.9	47 42.9				47 42.9		14.5
20	325	31.4	142 10.4		12.6	148 30.3	115 57.1	59.1	62 45.2				62 45.2		14.5
21	340	33.8	157 10.0		11.4	163 31.3	130 59.1	59.3	77 47.5				77 47.5		14.5
22	355	36.3	172 09.6		10.1	178 32.3	146 01.0	59.5	92 49.7				92 49.7		14.5
23	10	38.8	187 09.2		08.9	193 33.3	161 02.9	59.7	107 52.0				107 52.0		14.5
24	25	41.2	202 08.8	+0 07.7	208 34.4	+2 30.9	176 04.9	-10 59.9	122 54.2	-22 14.5			122 54.2	-22 14.5	
Dif	—		-4	-12	+10	-6	+19	-2	+23	0					

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 26 ^d 8	PHE { 4 ^h : 57'0 12 ^h : 56'9 20 ^h : 56'7	SD: 15'6	PMG: 10 ^h 05 ^m			Rº: 47 ^m									
	PMG: 11 ^h 45 ^m 3																	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m				
0	183	38.8	-9	14.3	213	35.1	+5 59.7	60 N	16 45	17 27	18 15	3 15 80	16 37 15					
1	198	38.9		15.2	228	06.1 ¹²⁰	49.0 ¹⁰⁷	58	50	30	15	18 78	36 17					
2	213	39.1		16.2	242	37.2 ¹²¹	38.4 ¹⁰⁶	56	54	32	15	21 75	34 20					
3	228	39.2		17.1	257	08.3 ¹²¹	27.7 ¹⁰⁷	54	16 58	34	15	23 73	33 22					
4	243	39.3		18.0	271	39.4 ¹²¹	17.0 ¹⁰⁷	52	17 01	36	15	25 72	32 23					
5	258	39.4	-9	18.9	286	10.5 ¹²¹	+5 06.3 ¹⁰⁷	50	17 05	17 37	18 15	3 27 70	16 31 25					
6	273	39.6	-9	19.8	300	41.7 ¹²²	+4 55.6 ¹⁰⁷	45	17 12	17 41	18 15	3 32 65	16 29 28					
7	288	39.7		20.7	315	13.0 ¹²³	44.8 ¹⁰⁸	40	17	45	16	35 63	27 31					
8	303	39.8		21.6	329	44.2 ¹²²	34.0 ¹⁰⁸	35	22	48	17	38 60	25 34					
9	318	39.9		22.5	344	15.5 ¹²³	23.3 ¹⁰⁷	30	27	51	19	41 58	24 35					
10	333	40.1		23.5	358	46.9 ¹²⁴	12.5 ¹⁰⁸	20	35	17 57	23	46 53	21 40					
11	348	40.2	-9	24.4	13	18.3 ¹²⁴	+4 01.6 ¹⁰⁹	10 N	17 42	18 03	18 28	3 50 50	16 19 43					
12	3	40.3	-9	25.3	27	49.7 ¹²⁴	+3 50.8 ¹⁰⁸	0	17 49	18 10	18 34	3 54 47	16 16 47					
13	18	40.4		26.2	42	21.1 ¹²⁴	40.0 ¹⁰⁸	10 S	17 55	17	42	3 58 43	14 50					
14	33	40.6		27.1	56	52.6 ¹²⁵	29.1 ¹⁰⁹	20	18 03	25	18 52	4 02 40	12 53					
15	48	40.7		28.0	71	24.1 ¹²⁵	18.3 ¹⁰⁸	30	11	36	19 05	06 37	09 57					
16	63	40.8		28.9	85	55.7 ¹²⁶	+3 07.4 ¹⁰⁹	35	16	42	13	09 34	07 60					
17	78	40.9	-9	29.8	100	27.2 ¹²⁵	+2 56.5 ¹⁰⁹	40	18 22	18 50	19 24	4 12 32	16 05 63					
18	93	41.0	-9	30.8	114	58.8 ¹²⁶	+2 45.6 ¹⁰⁹	45	18 29	18 59	19 36	4 16 28	16 03 65					
19	108	41.2		31.7	129	30.5 ¹²⁷	34.8 ¹⁰⁸	50	37	19 11	19 53	20 25	16 01 69					
20	123	41.3		32.6	144	02.1 ¹²⁶	23.9 ¹⁰⁹	52	40	16	20 01	22 23	15 59 71					
21	138	41.4		33.5	158	33.8 ¹²⁷	13.0 ¹⁰⁹	54	45	22	10	24 22	58 73					
22	153	41.5		34.4	173	05.6 ¹²⁸	+2 02.1 ¹⁰⁹	56	49	29	20	26 20	57 74					
23	168	41.7		35.3	187	37.3 ¹²⁷	+1 51.2 ¹⁰⁹	58	18 54	37	33	29 17	55 77					
24	183	41.8	-9	36.2	202	09.1 ¹²⁸	+1 40.2 ¹¹⁰	60 S	19 00	19 46	20 47	4 32 15	15 53 80					
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG 22 ^h 13 ^m 6		Mag: -3.9 PMG: 10 ^h 32 ^m		Mag: +1.8 PMG: 10 ^h 05 ^m		Mag: -1.7 PMG: 12 ^h 14 ^m		Mag: +0.5 PMG: 15 ^h 46 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	25	41.2	202	08.8	+0	07.7	208	34.4	+2	30.9	176	04.9	-10	59.9	122	54.2	-22	14.5
1	40	43.7	217	08.5		06.5	223	35.4		30.2	191	06.8	-11	00.1	137	56.5		14.6
2	55	46.1	232	08.1		05.3	238	36.4		29.6	206	08.8		00.2	152	58.7		14.6
3	70	48.6	247	07.7		04.0	253	37.4		29.0	221	10.7		00.4	168	01.0		14.6
4	85	51.1	262	07.3		02.8	268	38.4		28.3	236	12.7		00.6	183	03.2		14.6
5	100	53.5	277	06.9	+0	01.6	283	39.4	+2	27.7	251	14.6	-11	00.8	198	05.5	-22	14.6
6	115	56.0	292	06.5	+0	00.4	298	40.4	+2	27.1	266	16.6	-11	01.0	213	07.7	-22	14.6
7	130	58.5	307	06.1	-0	00.8	313	41.4		26.4	281	18.5		01.2	228	10.0		14.7
8	146	00.9	322	05.7		02.0	328	42.5		25.8	296	20.5		01.4	243	12.3		14.7
9	161	03.4	337	05.3		03.3	343	43.5		25.2	311	22.4		01.6	258	14.5		14.7
10	176	05.9	352	04.9		04.5	358	44.5		24.5	326	24.4		01.8	273	16.8		14.7
11	191	08.3	7	04.5	-0	05.7	13	45.5	+2	23.9	341	26.3	-11	01.9	288	19.0	-22	14.7
12	206	10.8	22	04.1	-0	06.9	28	46.5	+2	23.3	356	28.2	-11	02.1	303	21.3	-22	14.7
13	221	13.2	37	03.8		08.1	43	47.5		22.7	11	30.2		02.3	318	23.5		14.7
14	236	15.7	52	03.4		09.4	58	48.5		22.0	26	32.1		02.5	333	25.8		14.8
15	251	18.2	67	03.0		10.6	73	49.6		21.4	41	34.1		02.7	348	28.0		14.8
16	266	20.6	82	02.6		11.8	88	50.6		20.8	56	36.0		02.9	3	30.3		14.8
17	281	23.1	97	02.2	-0	13.0	103	51.6	+2	20.1	71	38.0	-11	03.1	18	32.5	-22	14.8
18	296	25.6	112	01.8	-0	14.2	118	52.6	+2	19.5	86	39.9	-11	03.3	33	34.8	-22	14.8
19	311	28.0	127	01.4		15.5	133	53.6		18.9	101	41.9		03.5	48	37.0		14.8
20	326	30.5	142	01.0		16.7	148	54.6		18.2	116	43.8		03.7	63	39.3		14.9
21	341	33.0	157	00.6		17.9	163	55.6		17.6	131	45.8		03.8	78	41.5		14.9
22	356	35.4	172	00.2		19.1	178	56.7		17.0	146	47.7		04.0	93	43.8		14.9
23	11	37.9	186	59.8		20.3	193	57.7		16.4	161	49.6		04.2	108	46.1		14.9
24	26	40.4	201	59.4	-0	21.5	208	58.7	+2	15.7	176	51.6	-11	04.4	123	48.3	-22	14.9
Dif	—		-4		-12		+10		-6		+19		-2		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 27 ^d 8	PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 4 20 ^h : 56 ^s 2											
	PMG: 11 ^h 45 ^m 1					SD: 15 ^h 4		PMG: 10 ^h 52 ^m			R ^o : 46 ^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	41.8	-9 36.2	202	09.1	+1 40.2		60 N	5 16	6 04	6 47	4 35	79	16 52	15	
1	198	41.9	37.1	216	40.9 ¹²⁸	29.3 ¹⁰⁹		58	16	02	42	36	76	53	17	
2	213	42.0	38.0	231	12.7 ¹²⁸	18.4 ¹⁰⁹		56	17	6 00	38	36	74	54	19	
3	228	42.1	38.9	245	44.6 ¹²⁹	+1 07.5 ¹⁰⁹		54	17	5 58	34	36	72	55	20	
4	243	42.3	39.8	260	16.5 ¹²⁹	+0 56.6 ¹⁰⁹		52	17	56	30	37	69	55	23	
5	258	42.4	-9 40.8	274	48.4 ¹²⁹	+0 45.7 ¹⁰⁹		50	5 17	5 54	6 27	4 37	68	16 56	24	
6	273	42.5	-9 41.7	289	20.3 ¹²⁹	+0 34.8 ¹⁰⁹		45	5 16	5 50	6 20	4 37	65	16 57	28	
7	288	42.6	42.6	303	52.2 ¹²⁹	23.9 ¹⁰⁹		40	15	46	14	38	61	58	30	
8	303	42.7	43.5	318	24.2 ¹³⁰	13.0 ¹⁰⁹		35	13	43	08	38	59	59	33	
9	318	42.9	44.4	332	56.2 ¹³⁰	+0 02.1 ¹⁰⁹		30	12	40	6 04	39	56	16 59	36	
10	333	43.0	45.3	347	28.2 ¹³⁰	-0 08.7 ¹⁰⁸		20	08	34	5 56	39	53	17 01	39	
11	348	43.1	-9 46.2	2	00.3 ¹³¹	-0 19.6 ¹⁰⁹		10 N	5 03	5 27	5 49	4 40	49	17 02	42	
12	3	43.2	-9 47.1	16	32.3 ¹³⁰	-0 30.5 ¹⁰⁹		0	4 56	5 21	5 42	4 41	46	17 03	45	
13	18	43.3	48.0	31	04.4 ¹³¹	41.3 ¹⁰⁸		10 S	49	14	35	41	43	04	49	
14	33	43.4	48.9	45	36.5 ¹³¹	-0 52.2 ¹⁰⁹		20	39	5 05	27	42	39	05	52	
15	48	43.6	49.8	60	08.6 ¹³¹	-1 03.0 ¹⁰⁸		30	25	4 54	19	43	35	06	56	
16	63	43.7	50.7	74	40.7 ¹³¹	13.8 ¹⁰⁸		35	17	48	14	43	33	07	58	
17	78	43.8	-9 51.6	89	12.9 ¹³²	-1 24.6 ¹⁰⁸		40	4 06	4 40	5 08	4 44	30	17 08	61	
18	93	43.9	-9 52.5	103	45.1 ¹³²	-1 35.4 ¹⁰⁸		45	3 53	4 30	5 01	4 44	28	17 08	65	
19	108	44.0	53.4	118	17.2 ¹³¹	46.2 ¹⁰⁸		50	37	19	4 53	45	24	10	67	
20	123	44.1	54.3	132	49.4 ¹³²	-1 56.9 ¹⁰⁷		52	29	13	49	45	23	10	69	
21	138	44.3	55.2	147	21.7 ¹³³	-2 07.7 ¹⁰⁸		54	20	07	45	46	21	11	71	
22	153	44.4	56.1	161	53.9 ¹³²	18.4 ¹⁰⁷		56	3 09	4 00	40	46	19	11	73	
23	168	44.5	57.1	176	26.1 ¹³²	29.1 ¹⁰⁷		58	2 57	3 52	35	46	17	12	75	
24	183	44.6	-9 58.0	190	58.4 ¹³³	-2 39.8 ¹⁰⁷		60 S	2 42	3 43	4 29	4 47	15	17 13	77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 09 ^m 7		Mag: -3.9 PMG: 10 ^h 32 ^m		Mag: +1.8 PMG: 10 ^h 03 ^m		Mag: -1.7 PMG: 12 ^h 11 ^m		Mag: +0.5 PMG: 15 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	26	40.4	201	59.4	-0	21.5	208	58.7	+2	15.7
1	41	42.8	216	59.1		22.8	223	59.7		15.1
2	56	45.3	231	58.7		24.0	239	00.7		14.5
3	71	47.7	246	58.3		25.2	254	01.7		13.8
4	86	50.2	261	57.9		26.4	269	02.7		13.2
5	101	52.7	276	57.5	-0	27.6	284	03.8	+2	12.6
6	116	55.1	291	57.1	-0	28.9	299	04.8	+2	11.9
7	131	57.6	306	56.7		30.1	314	05.8		11.3
8	147	00.1	321	56.3		31.3	329	06.8		10.7
9	162	02.5	336	55.9		32.5	344	07.8		10.0
10	177	05.0	351	55.5		33.7	359	08.8		09.4
11	192	07.5	6	55.1	-0	35.0	14	09.8	+2	08.8
12	207	09.9	21	54.7	-0	36.2	29	10.9	+2	08.2
13	222	12.4	36	54.3		37.4	44	11.9		07.5
14	237	14.9	51	53.9		38.6	59	12.9		06.9
15	252	17.3	66	53.6		39.8	74	13.9		06.3
16	267	19.8	81	53.2		41.1	89	14.9		05.6
17	282	22.2	96	52.8	-0	42.3	104	15.9	+2	05.0
18	297	24.7	111	52.4	-0	43.5	119	16.9	+2	04.4
19	312	27.2	126	52.0		44.7	134	18.0		03.7
20	327	29.6	141	51.6		45.9	149	19.0		03.1
21	342	32.1	156	51.2		47.2	164	20.0		02.5
22	357	34.6	171	50.8		48.4	179	21.0		01.8
23	12	37.0	186	50.4		49.6	194	22.0		01.2
24	27	39.5	201	50.0	-0	50.8	209	23.0	+2	00.6
Dif	—		-4		-12		+10		-6	
									+19	-2
										+23

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 28 ^d 8 PHE { 4 ^h : 56 ^o 0 12 ^h : 55 ^o 9 20 ^h : 55 ^o 7										
	PMG: 11 ^h 44 ^m 9			SD: 15 ^h 3 PMG: 11 ^h 38 ^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	183	44.6	-9 58.0	190	58.4	-2 39.8	60 N	16 39	17 22	18 10	5 54 77	17 07 16		
1	198	44.7		205	30.7 ¹³³	-2 50.5 ¹⁰⁷	58	44	25	10	52 74	10 19		
2	213	44.8	-9 59.8	220	02.9 ¹³²	-3 01.1 ¹⁰⁶	56	49	27	10	50 72	13 21		
3	228	44.9	-10 00.7	234	35.2 ¹³³	11.7 ¹⁰⁶	54	53	29	10	48 70	16 22		
4	243	45.1		249	07.5 ¹³³	22.4 ¹⁰⁷	52	16 57	31	11	46 69	18 24		
5	258	45.2	-10 02.5	263	39.9 ¹³⁴	-3 32.9 ¹⁰⁵	50	17 01	17 33	18 11	5 45 67	17 20 26		
6	273	45.3	-10 03.4	278	12.2 ¹³³	-3 43.5 ¹⁰⁶	45	17 08	17 38	18 12	5 42 63	17 25 28		
7	288	45.4	04.3	292	44.5 ¹³³	-3 54.0 ¹⁰⁵	40	15	42	13	39 61	28 32		
8	303	45.5	05.2	307	16.9 ¹³⁴	-4 04.6 ¹⁰⁶	35	20	46	15	37 58	32 34		
9	318	45.6	06.1	321	49.2 ¹³³	15.0 ¹⁰⁴	30	25	49	17	35 56	35 36		
10	333	45.7	07.0	336	21.6 ¹³⁴	25.5 ¹⁰⁵	20	33	17 56	22	32 52	40 39		
11	348	45.8	-10 07.9	350	53.9 ¹³³	-4 35.9 ¹⁰⁴	10 N	17 41	18 02	18 27	5 29 49	17 44 43		
12	3	46.0	-10 08.8	5	26.3 ¹³⁴	-4 46.3 ¹⁰⁴	0	17 48	18 09	18 34	5 27 45	17 48 46		
13	18	46.1	09.7	19	58.7 ¹³⁴	-4 56.7 ¹⁰⁴	10 S	17 56	17	42	24 42	53 48		
14	33	46.2	10.6	34	31.1 ¹³⁴	-5 07.1 ¹⁰⁴	20	18 04	26	18 52	21 39	17 57 52		
15	48	46.3	11.5	49	03.5 ¹³⁴	17.4 ¹⁰³	30	13	37	19 06	18 36	18 02 56		
16	63	46.4	12.4	63	35.9 ¹³⁴	27.7 ¹⁰³	35	18	44	15	16 34	05 58		
17	78	46.5	-10 13.3	78	08.3 ¹³⁴	-5 37.9 ¹⁰²	40	18 24	18 52	19 26	5 14 31	18 09 60		
18	93	46.6	-10 14.2	92	40.7 ¹³⁴	-5 48.1 ¹⁰²	45	18 31	19 02	19 40	5 12 28	18 13 62		
19	108	46.7	15.1	107	13.1 ¹³⁴	-5 58.3 ¹⁰²	50	40	14	19 57	09 25	17 66		
20	123	46.8	16.0	121	45.5 ¹³⁴	-6 08.5 ¹⁰²	52	44	20	20 05	08 23	19 68		
21	138	46.9	16.9	136	18.0 ¹³⁵	18.6 ¹⁰¹	54	48	27	15	07 21	22 69		
22	153	47.1	17.8	150	50.4 ¹³⁴	28.7 ¹⁰¹	56	53	34	26	05 20	24 72		
23	168	47.2	18.7	165	22.8 ¹³⁴	38.7 ¹⁰⁰	58	18 59	42	39	03 18	27 74		
24	183	47.3	-10 19.6	179	55.2 ¹³⁴	-6 48.7 ¹⁰⁰	60 S	19 05	19 52	20 55	5 02 15	18 30 77		
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 22 ^h 05 ^m 7		Mag: -3.9 PMG: 10 ^h 33 ^m			Mag: +1.8 PMG: 10 ^h 02 ^m			Mag: -1.7 PMG: 12 ^h 08 ^m		Mag: +0.5 PMG: 15 ^h 39 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	°	°	'	°	°	'	
0	27	39.5	201 50.0	-0 50.8		209 23.0	+2 00.6		177 38.3	-11 08.9		124 42.3	-22 15.3	
1	42	42.0	216 49.6	52.1		224 24.1	+1 59.9		192 40.2	09.1		139 44.6	15.3	
2	57	44.4	231 49.2	53.3		239 25.1	59.3		207 42.2	09.3		154 46.8	15.3	
3	72	46.9	246 48.8	54.5		254 26.1	58.7		222 44.1	09.5		169 49.1	15.4	
4	87	49.3	261 48.4	55.7		269 27.1	58.1		237 46.1	09.7		184 51.3	15.4	
5	102	51.8	276 48.0	-0 56.9		284 28.1	+1 57.4		252 48.0	-11 09.9		199 53.6	-22 15.4	
6	117	54.3	291 47.6	-0 58.2		299 29.1	+1 56.8		267 49.9	-11 10.1		214 55.8	-22 15.4	
7	132	56.7	306 47.3	-0 59.4		314 30.1	56.2		282 51.9	10.3		229 58.1	15.4	
8	147	59.2	321 46.9	-1 00.6		329 31.2	55.5		297 53.8	10.5		245 00.3	15.4	
9	163	01.7	336 46.5	01.8		344 32.2	54.9		312 55.8	10.6		260 02.6	15.4	
10	178	04.1	351 46.1	03.0		359 33.2	54.3		327 57.7	10.8		275 04.8	15.5	
11	193	06.6	6 45.7	-1 04.3		14 34.2	+1 53.6		342 59.7	-11 11.0		290 07.0	-22 15.5	
12	208	09.1	21 45.3	-1 05.5		29 35.2	+1 53.0		358 01.6	-11 11.2		305 09.3	-22 15.5	
13	223	11.5	36 44.9	06.7		44 36.2	52.4		13 03.5	11.4		320 11.5	15.5	
14	238	14.0	51 44.5	07.9		59 37.2	51.7		28 05.5	11.6		335 13.8	15.5	
15	253	16.5	66 44.1	09.1		74 38.3	51.1		43 07.4	11.8		350 16.0	15.5	
16	268	18.9	81 43.7	10.4		89 39.3	50.5		58 09.4	12.0		5 18.3	15.6	
17	283	21.4	96 43.3	-1 11.6		104 40.3	+1 49.9		73 11.3	-11 12.2		20 20.5	-22 15.6	
18	298	23.8	111 42.9	-1 12.8		119 41.3	+1 49.2		88 13.3	-11 12.3		35 22.8	-22 15.6	
19	313	26.3	126 42.5	14.0		134 42.3	48.6		103 15.2	12.5		50 25.0	15.6	
20	328	28.8	141 42.1	15.2		149 43.3	48.0		118 17.2	12.7		65 27.3	15.6	
21	343	31.2	156 41.7	16.5		164 44.4	47.3		133 19.1	12.9		80 29.5	15.6	
22	358	33.7	171 41.3	17.7		179 45.4	46.7		148 21.0	13.1		95 31.8	15.7	
23	13	36.2	186 40.9	18.9		194 46.4	46.1		163 23.0	13.3		110 34.0	15.7	
24	28	38.6	201 40.5	-1 20.1		209 47.4	+1 45.4		178 24.9	-11 13.5		125 36.3	-22 15.7	
Dif	—		-4	-12		+10	-6		+19	-2		+22	0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 8			Edad: 0 ^d 2 PHE { SD: 15 ^h 1 PMG: 12 ^h 23 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m				
0	183	47.3	-10	179	55.2	-6	48.7	60 N	5 21	6 09	6 52	7 11	75	17 23	18				
1	198	47.4		194	27.7 ¹³⁵	-6	58.7 ¹⁰⁰	58	21	06	47	06	73	29	20				
2	213	47.5		209	00.1 ¹³⁴	-7	08.6 ⁹⁹	56	21	04	42	7 02	70	34	22				
3	228	47.6		223	32.5 ¹³⁴		18.5 ⁹⁹	54	20	6 01	38	6 58	69	38	24				
4	243	47.7		238	04.9 ¹³⁴		28.4 ⁹⁹	52	20	5 59	34	55	67	42	26				
5	258	47.8	-10	252	37.4 ¹³⁵	-7	38.2 ⁹⁸	50	5 20	5 57	6 30	6 52	65	17 46	27				
6	273	47.9	-10	267	09.8 ¹³⁴	-7	47.9 ⁹⁷	45	5 18	5 52	6 22	6 45	62	17 53	31				
7	288	48.0		281	42.2 ¹³⁴	-7	57.7 ⁹⁸	40	17	48	16	40	59	18 00	33				
8	303	48.1		296	14.6 ¹³⁴	-8	07.3 ⁹⁶	35	15	45	10	35	57	06	35				
9	318	48.2		310	47.0 ¹³⁴		17.0 ⁹⁷	30	13	41	6 05	31	55	11	37				
10	333	48.3		325	19.5 ¹³⁵		26.6 ⁹⁶	20	08	34	5 57	24	52	19	41				
11	348	48.4	-10	339	51.9 ¹³⁴	-8	36.1 ⁹⁵	10 N	5 03	5 27	5 49	6 18	48	18 27	43				
12	3	48.5	-10	354	24.3 ¹³⁴	-8	45.7 ⁹⁶	0	4 56	5 20	5 41	6 12	46	18 34	46				
13	18	48.7		8	56.7 ¹³⁴	-8	55.1 ⁹⁴	10 S	48	13	34	06	43	41	49				
14	33	48.8		23	29.1 ¹³⁴	-9	04.5 ⁹⁴	20	37	5 03	26	6 00	40	49	51				
15	48	48.9		38	01.5 ¹³⁴		13.9 ⁹⁴	30	23	4 52	17	5 54	36	18 58	54				
16	63	49.0		52	33.9 ¹³⁴		23.2 ⁹³	35	14	45	11	50	34	19 03	56				
17	78	49.1	-10	67	06.3 ¹³⁴	-9	32.5 ⁹³	40	4 03	4 37	5 05	5 45	32	19 09	58				
18	93	49.2	-10	81	38.7 ¹³⁴	-9	41.7 ⁹²	45	3 50	4 27	4 58	5 40	30	19 15	62				
19	108	49.3		96	11.0 ¹³³	-9	50.9 ⁹²	50	32	15	49	34	26	23	65				
20	123	49.4		110	43.4 ¹³⁴	-10	00.0 ⁹¹	52	24	09	45	31	25	27	66				
21	138	49.5		125	15.8 ¹³⁴	-10	09.1 ⁹¹	54	14	4 02	40	28	23	31	68				
22	153	49.6		139	48.1 ¹³³		18.1 ⁹⁰	56	3 03	3 55	35	25	21	36	69				
23	168	49.7		154	20.5 ¹³⁴		27.1 ⁹⁰	58	2 50	46	30	21	19	41	72				
24	183	49.8	-10	168	52.8 ¹³³	-10	36.0 ⁸⁹	60 S	2 34	3 37	4 24	5 17	17	19 47	74				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 01 ^m 8		Mag: -3.9 PMG: 10 ^h 34 ^m			Mag: +1.8 PMG: 10 ^h 00 ^m			Mag: -1.7 PMG: 12 ^h 05 ^m			Mag: +0.5 PMG: 15 ^h 35 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	28	38.6	201	40.5	-1	20.1	209	47.4	+1	45.4	178	24.9	-11	13.5	125	36.3	-22	15.7	
1	43	41.1	216	40.1		21.4	224	48.4		44.8	193	26.9		13.7	140	38.5		15.7	
2	58	43.6	231	39.7		22.6	239	49.4		44.2	208	28.8		13.9	155	40.7		15.7	
3	73	46.0	246	39.3		23.8	254	50.4		43.5	223	30.8		14.0	170	43.0		15.7	
4	88	48.5	261	39.0		25.0	269	51.5		42.9	238	32.7		14.2	185	45.2		15.8	
5	103	50.9	276	38.6	-1	26.2	284	52.5	+1	42.3	253	34.7	-11	14.4	200	47.5	-22	15.8	
6	118	53.4	291	38.2	-1	27.5	299	53.5	+1	41.6	268	36.6	-11	14.6	215	49.7	-22	15.8	
7	133	55.9	306	37.8		28.7	314	54.5		41.0	283	38.5		14.8	230	52.0		15.8	
8	148	58.3	321	37.4		29.9	329	55.5		40.4	298	40.5		15.0	245	54.2		15.8	
9	164	00.8	336	37.0		31.1	344	56.5		39.8	313	42.4		15.2	260	56.5		15.8	
10	179	03.3	351	36.6		32.3	359	57.6		39.1	328	44.4		15.4	275	58.7		15.8	
11	194	05.7	6	36.2	-1	33.6	14	58.6	+1	38.5	343	46.3	-11	15.6	291	00.9	-22	15.9	
12	209	08.2	21	35.8	-1	34.8	29	59.6	+1	37.9	358	48.3	-11	15.7	306	03.2	-22	15.9	
13	224	10.7	36	35.4		36.0	45	00.6		37.2	13	50.2		15.9	321	05.4		15.9	
14	239	13.1	51	35.0		37.2	60	01.6		36.6	28	52.1		16.1	336	07.7		15.9	
15	254	15.6	66	34.6		38.5	75	02.6		36.0	43	54.1		16.3	351	09.9		15.9	
16	269	18.1	81	34.2		39.7	90	03.6		35.3	58	56.0		16.5	6	12.2		15.9	
17	284	20.5	96	33.8	-1	40.9	105	04.7	+1	34.7	73	58.0	-11	16.7	21	14.4	-22	16.0	
18	299	23.0	111	33.4	-1	42.1	120	05.7	+1	34.1	88	59.9	-11	16.9	36	16.7	-22	16.0	
19	314	25.4	126	33.0		43.3	135	06.7		33.4	104	01.9		17.1	51	18.9		16.0	
20	329	27.9	141	32.6		44.6	150	07.7		32.8	119	03.8		17.3	66	21.1		16.0	
21	344	30.4	156	32.2		45.8	165	08.7		32.2	134	05.7		17.4	81	23.4		16.0	
22	359	32.8	171	31.8		47.0	180	09.7		31.5	149	07.7		17.6	96	25.6		16.0	
23	14	35.3	186	31.4		48.2	195	10.8		30.9	164	09.6		17.8	111	27.9		16.1	
24	29	37.8	201	31.0	-1	49.4	210	11.8	+1	30.3	179	11.6	-11	18.0	126	30.1	-22	16.1	
Dif	—		-4		-12		+10		-6		+19		-2		+22			0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 1 ^d 2	PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 0 20 ^h : 54 ^m 8										
	PMG: 11 ^h 44 ^m 6					SD: 15 ^h 0			PMG: 13 ^h 09 ^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	183	49.8	-10 41.0	168	52.8	-10 36.0		60 N	16 34	17 17	18 05	8 26 73		17 41 22	
1	198	49.9		183	25.2 ¹³⁴		44.8 ⁸⁸	58	39	20	05	19 70		49 24	
2	213	50.0	42.8	197	57.5 ¹³³	-10 53.7 ⁸⁹		56	44	22	06	12 69		17 56 26	
3	228	50.1	43.7	212	29.8 ¹³³	-11 02.4 ⁸⁷		54	49	25	06	07 66		18 02 28	
4	243	50.2	44.6	227	02.1 ¹³³		11.1 ⁸⁷	52	53	27	07	8 02 65		08 29	
5	258	50.3	-10 45.5	241	34.4 ¹³³	-11 19.7 ⁸⁶		50	16 57	17 30	18 07	7 57 64		18 13 30	
6	273	50.4	-10 46.3	256	06.7 ¹³³	-11 28.3 ⁸⁶		45	17 05	17 35	18 09	7 47 61		18 24 33	
7	288	50.5	47.2	270	39.0 ¹³³		36.9 ⁸⁶	40	12	39	11	39 58		33 35	
8	303	50.6	48.1	285	11.2 ¹³²		45.3 ⁸⁴	35	18	43	13	32 56		41 37	
9	318	50.7	49.0	299	43.5 ¹³³	-11 53.7 ⁸⁴		30	23	47	15	26 54		18 48 39	
10	333	50.8	49.9	314	15.8 ¹³³	-12 02.1 ⁸⁴		20	32	17 54	20	16 51		19 00 41	
11	348	50.9	-10 50.8	328	48.0 ¹³²	-12 10.4 ⁸³		10 N	17 40	18 02	18 26	7 06 49		19 10 44	
12	3	51.0	-10 51.7	343	20.2 ¹³²	-12 18.6 ⁸²		0	17 48	18 09	18 33	6 58 46		19 20 46	
13	18	51.1	52.6	357	52.4 ¹³²		26.8 ⁸²	10 S	17 56	17	42	49 44		30 48	
14	33	51.2	53.4	12	24.7 ¹³³		34.9 ⁸¹	20	18 04	27	18 53	40 41		40 51	
15	48	51.3	54.3	26	56.8 ¹³¹		42.9 ⁸⁰	30	14	39	19 08	30 38		52 54	
16	63	51.4	55.2	41	29.0 ¹³²		50.9 ⁸⁰	35	20	46	17	24 36		19 59 56	
17	78	51.5	-10 56.1	56	01.2 ¹³²	-12 58.9 ⁸⁰		40	18 26	18 55	19 29	6 17 34		20 07 57	
18	93	51.6	-10 57.0	70	33.4 ¹³²	-13 06.7 ⁷⁸		45	18 34	19 05	19 43	6 10 31		20 17 59	
19	108	51.7	57.9	85	05.5 ¹³¹		14.5 ⁷⁸	50	43	18	20 01	6 00 29		28 62	
20	123	51.7	58.8	99	37.7 ¹³²		22.2 ⁷⁷	52	48	24	10	5 56 27		33 63	
21	138	51.8	-10 59.6	114	09.8 ¹³¹		29.9 ⁷⁷	54	52	31	20	51 26		39 65	
22	153	51.9	-11 00.5	128	41.9 ¹³¹		37.5 ⁷⁶	56	18 58	39	32	46 24		45 67	
23	168	52.0	01.4	143	14.0 ¹³¹		45.1 ⁷⁶	58	19 04	48	20 46	40 22		20 53 68	
24	183	52.1	-11 02.3	157	46.1 ¹³¹	-13 52.5 ⁷⁴		60 S	19 10	19 58	21 02	5 34 20		21 01 71	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 57 ^m 9			Mag: -3.9 PMG: 10 ^h 34 ^m			Mag: +1.8 PMG: 9 ^h 59 ^m			Mag: -1.7 PMG: 12 ^h 02 ^m			Mag: +0.5 PMG: 15 ^h 32 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♉	Dec		hG ♊	Dec		hG ♋	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°
0	29	37.8	201 31.0	-1 49.4		210 11.8	+1 30.3		179 11.6	-11 18.0		126 30.1	-22 16.1		
1	44	40.2	216 30.6	50.7		225 12.8	29.6		194 13.5	18.2		141 32.4	16.1		
2	59	42.7	231 30.2	51.9		240 13.8	29.0		209 15.5	18.4		156 34.6	16.1		
3	74	45.2	246 29.8	53.1		255 14.8	28.4		224 17.4	18.6		171 36.8	16.1		
4	89	47.6	261 29.4	54.3		270 15.8	27.8		239 19.3	18.8		186 39.1	16.1		
5	104	50.1	276 29.0	-1 55.5		285 16.9	+1 27.1		254 21.3	-11 18.9		201 41.3	-22 16.1		
6	119	52.6	291 28.6	-1 56.8		300 17.9	+1 26.5		269 23.2	-11 19.1		216 43.6	-22 16.2		
7	134	55.0	306 28.2	58.0		315 18.9	25.9		284 25.2	19.3		231 45.8	16.2		
8	149	57.5	321 27.8	-1 59.2		330 19.9	25.2		299 27.1	19.5		246 48.1	16.2		
9	164	59.9	336 27.4	-2 00.4		345 20.9	24.6		314 29.1	19.7		261 50.3	16.2		
10	180	02.4	351 27.0	01.7		0 21.9	24.0		329 31.0	19.9		276 52.5	16.2		
11	195	04.9	6 26.6	-2 02.9		15 22.9	+1 23.3		344 32.9	-11 20.1		291 54.8	-22 16.2		
12	210	07.3	21 26.2	-2 04.1		30 24.0	+1 22.7		359 34.9	-11 20.3		306 57.0	-22 16.3		
13	225	09.8	36 25.8	05.3		45 25.0	22.1		14 36.8	20.5		321 59.3	16.3		
14	240	12.3	51 25.4	06.5		60 26.0	21.4		29 38.8	20.6		337 01.5	16.3		
15	255	14.7	66 25.0	07.8		75 27.0	20.8		44 40.7	20.8		352 03.7	16.3		
16	270	17.2	81 24.6	09.0		90 28.0	20.2		59 42.7	21.0		7 06.0	16.3		
17	285	19.7	96 24.2	-2 10.2		105 29.0	+1 19.5		74 44.6	-11 21.2		22 08.2	-22 16.3		
18	300	22.1	111 23.8	-2 11.4		120 30.1	+1 18.9		89 46.5	-11 21.4		37 10.5	-22 16.4		
19	315	24.6	126 23.4	12.6		135 31.1	18.3		104 48.5	21.6		52 12.7	16.4		
20	330	27.0	141 23.0	13.9		150 32.1	17.7		119 50.4	21.8		67 14.9	16.4		
21	345	29.5	156 22.6	15.1		165 33.1	17.0		134 52.4	22.0		82 17.2	16.4		
22	0	32.0	171 22.2	16.3		180 34.1	16.4		149 54.3	22.1		97 19.4	16.4		
23	15	34.4	186 21.8	17.5		195 35.1	15.8		164 56.3	22.3		112 21.7	16.4		
24	30	36.9	201 21.4	-2 18.7		210 36.2	+1 15.1		179 58.2	-11 22.5		127 23.9	-22 16.4		
Dif	—		-4	-12		+10	-6		+19	-2		+22	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 5			Edad: 2 ^d 2 PHE { SD: 14'9 PMG: 13 ^h 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	52.1	-11	02.3	157	46.1	-13	52.5	60 N	5 25	6 14	6 57	9 39	68	18 03	28
1	198	52.2		03.2	172	18.1	-13	59.9	58	25	11	51	29	66	13	30
2	213	52.3		04.1	186	50.2	-14	07.3	56	24	08	46	21	64	22	3
3	228	52.4		04.9	201	22.2		14.5	54	24	05	41	13	63	30	32
4	243	52.5		05.8	215	54.3		21.7	52	23	03	37	07	61	37	34
5	258	52.6	-11	06.7	230	26.3	-14	28.9	50	5 23	6 00	6 33	9 01	60	18 43	35
6	273	52.7	-11	07.6	244	58.3	-14	35.9	45	5 21	5 55	6 25	8 48	58	18 57	37
7	288	52.8		08.5	259	30.3		42.9	40	19	50	18	37	56	19 08	39
8	303	52.9		09.4	274	02.3		49.8	35	17	46	12	28	55	18	40
9	318	53.0		10.2	288	34.2	-14	56.7	30	14	42	6 07	20	53	27	41
10	333	53.1		11.1	303	06.2	-15	03.5	20	09	35	5 57	8 07	50	41	44
11	348	53.1	-11	12.0	317	38.1	-15	10.2	10 N	5 03	5 28	5 49	7 55	48	19 54	45
12	3	53.2	-11	12.9	332	10.0	-15	16.8	0	4 56	5 20	5 41	7 44	46	20 06	47
13	18	53.3		13.8	346	41.9		23.4	10 S	47	12	33	33	44	18	49
14	33	53.4		14.6	1	13.8		29.9	20	35	5 02	24	21	43	31	50
15	48	53.5		15.5	15	45.7		36.3	30	21	4 50	14	08	40	46	52
16	63	53.6		16.4	30	17.6		42.6	35	11	42	09	7 00	39	20 55	53
17	78	53.7	-11	17.3	44	49.4	-15	48.9	40	4 00	4 34	5 02	6 51	37	21 04	55
18	93	53.8	-11	18.2	59	21.3	-15	55.1	45	3 46	4 23	4 54	6 41	35	21 16	57
19	108	53.9		19.0	73	53.1	-16	01.2	50	27	10	45	29	32	30	59
20	123	54.0		19.9	88	24.9		07.3	52	18	4 04	41	23	32	36	60
21	138	54.0		20.8	102	56.7		13.2	54	3 08	3 57	36	17	30	44	61
22	153	54.1		21.7	117	28.5		19.1	56	2 56	49	30	10	29	21 52	62
23	168	54.2		22.5	132	00.2		24.9	58	43	41	24	6 02	27	22 01	64
24	183	54.3	-11	23.4	146	32.0	-16	30.7	60 S	2 26	3 30	4 18	5 54	24	22 12	65

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 53 ^m 9		Mag: -3.9 PMG: 10 ^h 35 ^m		Mag: +1.8 PMG: 9 ^h 57 ^m		Mag: -1.7 PMG: 11 ^h 59 ^m		Mag: +0.5 PMG: 15 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	36.9	201	21.4	210	36.2	+1	15.1	179	58.2
1	45	39.4	216	21.0	225	37.2		14.5	195	00.1
2	60	41.8	231	20.6	240	38.2		13.9	210	02.1
3	75	44.3	246	20.2	255	39.2		13.2	225	04.0
4	90	46.8	261	19.8	270	40.2		12.6	240	06.0
5	105	49.2	276	19.4	285	41.2	+1	12.0	255	07.9
6	120	51.7	291	19.0	300	42.3	+1	11.3	270	09.9
7	135	54.2	306	18.6	315	43.3		10.7	285	11.8
8	150	56.6	321	18.2	330	44.3		10.1	300	13.7
9	165	59.1	336	17.8	345	45.3		09.4	315	15.7
10	181	01.5	351	17.4	0	46.3		08.8	330	17.6
11	196	04.0	6	17.0	15	47.3	+1	08.2	345	19.6
12	211	06.5	21	16.6	30	48.3	+1	07.5	0	21.5
13	226	08.9	36	16.2	45	49.4		06.9	15	23.5
14	241	11.4	51	15.8	60	50.4		06.3	30	25.4
15	256	13.9	66	15.4	75	51.4		05.7	45	27.3
16	271	16.3	81	15.0	90	52.4		05.0	60	29.3
17	286	18.8	96	14.6	105	53.4	+1	04.4	75	31.2
18	301	21.3	111	14.2	120	54.4	+1	03.8	90	33.2
19	316	23.7	126	13.8	135	55.5		03.1	105	35.1
20	331	26.2	141	13.4	150	56.5		02.5	120	37.0
21	346	28.7	156	13.0	165	57.5		01.9	135	39.0
22	1	31.1	171	12.6	180	58.5		01.2	150	40.9
23	16	33.6	186	12.2	195	59.5	+1	00.6	165	42.9
24	31	36.0	201	11.8	211	00.5	+1	00.0	180	44.8
Dif	—		-4		+10		-6		+19	
			-12		-6		-2		+22	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 44 ^m 3				Edad: 3 ^d 2 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2 PMG: 14 ^h 42 ^m R°: 47 ^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	54.3	-11	23.4	146	32.0	-16	30.7	60 N	16 28	17 11	18 00	10 47	63	18 31	34		
1	198	54.4		24.3	161	03.7 ¹²⁷		36.3 ⁵⁶	58	34	15	00	35	61	43	36		
2	213	54.5		25.2	175	35.4 ¹²⁷		41.9 ⁵⁶	56	40	18	01	25	60	18 53	37		
3	228	54.6		26.0	190	07.1 ¹²⁷		47.4 ⁵⁵	54	44	21	02	16	59	19 02	39		
4	243	54.7		26.9	204	38.8 ¹²⁷		52.9 ⁵⁵	52	49	24	03	08	58	11	39		
5	258	54.7	-11	27.8	219	10.5 ¹²⁷	-16	58.2 ⁵³	50	16 53	17 26	18 04	10 01	57	19 18	40		
6	273	54.8	-11	28.7	233	42.2 ¹²⁷	-17	03.5 ⁵³	45	17 02	17 32	18 06	9 46	55	19 34	41		
7	288	54.9		29.5	248	13.8 ¹²⁶		08.7 ⁵²	40	09	37	08	33	54	47	42		
8	303	55.0		30.4	262	45.4 ¹²⁶		13.8 ⁵¹	35	15	41	11	23	52	19 58	43		
9	318	55.1		31.3	277	17.1 ¹²⁷		18.8 ⁵⁰	30	21	45	13	9 13	52	20 08	44		
10	333	55.2		32.2	291	48.7 ¹²⁶		23.8 ⁵⁰	20	31	17 53	19	8 57	50	25	45		
11	348	55.2	-11	33.0	306	20.3 ¹²⁶	-17	28.6 ⁴⁸	10 N	17 39	18 01	18 26	8 43	49	20 39	47		
12	3	55.3	-11	33.9	320	51.8 ¹²⁵	-17	33.4 ⁴⁸	0	17 48	18 09	18 33	8 30	47	20 53	47		
13	18	55.4		34.8	335	23.4 ¹²⁶		38.1 ⁴⁷	10 S	17 56	18	43	17	46	21 07	48		
14	33	55.5		35.7	349	54.9 ¹²⁵		42.7 ⁴⁶	20	18 05	28	18 54	8 04	44	21	50		
15	48	55.6		36.5	4	26.5 ¹²⁶		47.3 ⁴⁶	30	16	40	19 10	7 48	42	38	51		
16	63	55.7		37.4	18	58.0 ¹²⁵		51.7 ⁴⁴	35	22	48	20	39	41	48	51		
17	78	55.7	-11	38.3	33	29.5 ¹²⁵	-17	56.1 ⁴⁴	40	18 29	18 57	19 31	7 28	41	21 59	53		
18	93	55.8	-11	39.1	48	01.0 ¹²⁵	-18	00.4 ⁴³	45	18 37	19 08	19 46	7 16	39	22 13	53		
19	108	55.9		40.0	62	32.5 ¹²⁵		04.6 ⁴²	50	47	22	20 05	7 01	38	29	54		
20	123	56.0		40.9	77	04.0 ¹²⁵		08.7 ⁴¹	52	51	28	15	6 55	36	36	55		
21	138	56.1		41.8	91	35.4 ¹²⁴		12.8 ⁴¹	54	18 56	35	25	47	35	45	55		
22	153	56.2		42.6	106	06.9 ¹²⁵		16.7 ³⁹	56	19 02	44	38	39	33	22 54	57		
23	168	56.2		43.5	120	38.3 ¹²⁴		20.6 ³⁹	58	08	19 53	20 52	29	32	23 05	57		
24	183	56.3	-11	44.4	135	09.7 ¹²⁴	-18	24.4 ³⁸	60 S	19 15	20 04	21 11	6 18	31	23 17	59		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 50 ^m 0		Mag: -3.9 PMG: 10 ^h 35 ^m				Mag: +1.8 PMG: 9 ^h 55 ^m				Mag: -1.7 PMG: 11 ^h 55 ^m				Mag: +0.5 PMG: 15 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	31	36.0	201	11.8	-2	48.0	211	00.5	+1	00.0	180	44.8	-11	27.0	128	17.6	-22	16.8
1	46	38.5	216	11.4		49.3	226	01.6	+0	59.3	195	46.8		27.2	143	19.9		16.8
2	61	41.0	231	11.0		50.5	241	02.6		58.7	210	48.7		27.4	158	22.1		16.9
3	76	43.4	246	10.6		51.7	256	03.6		58.1	225	50.6		27.6	173	24.3		16.9
4	91	45.9	261	10.2		52.9	271	04.6		57.4	240	52.6		27.8	188	26.6		16.9
5	106	48.4	276	09.8	-2	54.1	286	05.6	+0	56.8	255	54.5	-11	28.0	203	28.8	-22	16.9
6	121	50.8	291	09.4	-2	55.4	301	06.6	+0	56.2	270	56.5	-11	28.2	218	31.0	-22	16.9
7	136	53.3	306	09.0		56.6	316	07.7		55.6	285	58.4		28.3	233	33.3		16.9
8	151	55.8	321	08.6		57.8	331	08.7		54.9	301	00.3		28.5	248	35.5		17.0
9	166	58.2	336	08.2	-2	59.0	346	09.7		54.3	316	02.3		28.7	263	37.7		17.0
10	182	00.7	351	07.8	-3	00.2	1	10.7		53.7	331	04.2		28.9	278	40.0		17.0
11	197	03.1	6	07.4	-3	01.4	16	11.7	+0	53.0	346	06.2	-11	29.1	293	42.2	-22	17.0
12	212	05.6	21	07.0	-3	02.7	31	12.7	+0	52.4	1	08.1	-11	29.3	308	44.4	-22	17.0
13	227	08.1	36	06.6		03.9	46	13.8		51.8	16	10.1		29.5	323	46.7		17.0
14	242	10.5	51	06.1		05.1	61	14.8		51.1	31	12.0		29.7	338	48.9		17.0
15	257	13.0	66	05.7		06.3	76	15.8		50.5	46	13.9		29.8	353	51.2		17.1
16	272	15.5	81	05.3		07.5	91	16.8		49.9	61	15.9		30.0	8	53.4		17.1
17	287	17.9	96	04.9	-3	08.8	106	17.8	+0	49.2	76	17.8	-11	30.2	23	55.6	-22	17.1
18	302	20.4	111	04.5	-3	10.0	121	18.8	+0	48.6	91	19.8	-11	30.4	38	57.9	-22	17.1
19	317	22.9	126	04.1		11.2	136	19.9		48.0	106	21.7		30.6	54	00.1		17.1
20	332	25.3	141	03.7		12.4	151	20.9		47.3	121	23.6		30.8	69	02.3		17.1
21	347	27.8	156	03.3		13.6	166	21.9		46.7	136	25.6		31.0	84	04.6		17.2
22	2	30.3	171	02.9		14.9	181	22.9		46.1	151	27.5		31.2	99	06.8		17.2
23	17	32.7	186	02.5		16.1	196	23.9		45.4	166	29.5		31.3	114	09.0		17.2
24	32	35.2	201	02.1	-3	17.3	211	24.9	+0	44.8	181	31.4	-11	31.5	129	11.3	-22	17.2
Dif	—		-4		-12		+10		-6		+19		-2		+22		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 2			Edad: 4 ^d 2	PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 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	56.3	-11	44.4	135	09.7	-18	24.4	60 N	5 30	6 19	7 02	11 50	54	19 05	44
1	198	56.4		45.2	149	41.1 ¹²⁴		28.1 ³⁷	58	29	15	6 56	36	54	19	44
2	213	56.5		46.1	164	12.5 ¹²⁴		31.7 ³⁶	56	28	12	50	25	53	30	45
3	228	56.6		47.0	178	43.9 ¹²⁴		35.3 ³⁶	54	27	09	45	15	53	41	45
4	243	56.6		47.8	193	15.3 ¹²⁴		38.7 ³⁴	52	27	06	41	11 06	52	50	45
5	258	56.7	-11	48.7	207	46.7 ¹²⁴	-18	42.1 ³⁴	50	5 26	6 03	6 37	10 58	52	19 58	45
6	273	56.8	-11	49.6	222	18.0 ¹²³	-18	45.3 ³²	45	5 23	5 58	6 28	10 41	51	20 15	46
7	288	56.9		50.4	236	49.4 ¹²⁴		48.5 ³¹	40	21	53	20	27	50	29	47
8	303	56.9		51.3	251	20.7 ¹²³		51.6 ³²	35	18	48	14	15	50	41	47
9	318	57.0		52.2	265	52.0 ¹²³		54.6 ³⁰	30	16	44	6 08	10 05	49	20 52	47
10	333	57.1		53.0	280	23.3 ¹²³	-18	57.6 ³⁰	20	10	36	5 58	9 47	49	21 10	47
11	348	57.2	-11	53.9	294	54.6 ¹²³	-19	00.4 ²⁸	10 N	5 03	5 28	5 49	9 32	48	21 26	47
12	3	57.3	-11	54.8	309	25.9 ¹²³	-19	03.2 ²⁸	0	4 55	5 20	5 41	9 17	48	21 40	48
13	18	57.3		55.6	323	57.2 ¹²³		05.8 ²⁶	10 S	46	11	32	9 03	47	21 55	48
14	33	57.4		56.5	338	28.4 ¹²²		08.4 ²⁶	20	34	5 00	23	8 48	46	22 11	48
15	48	57.5		57.4	352	59.7 ¹²³		10.9 ²⁵	30	18	4 48	13	30	46	29	48
16	63	57.6		58.2	7	31.0 ¹²³		13.3 ²⁴	35	4 09	40	5 06	20	45	39	49
17	78	57.6	-11	59.1	22	02.2 ¹²²	-19	15.6 ²³	40	3 57	4 31	4 59	8 09	44	22 52	48
18	93	57.7	-12	00.0	36	33.4 ¹²²	-19	17.8 ²²	45	3 42	4 20	4 51	7 55	44	23 06	49
19	108	57.8	-12	00.8	51	04.6 ¹²²		20.0 ²²	50	23	06	41	39	42	23	49
20	123	57.9		01.7	65	35.9 ¹²³		22.0 ²⁰	52	13	4 00	36	31	42	31	50
21	138	57.9		02.6	80	07.1 ¹²²		24.0 ²⁰	54	3 03	3 52	31	22	42	40	50
22	153	58.0		03.4	94	38.3 ¹²²		25.9 ¹⁹	56	2 50	44	26	12	41	23 51	49
23	168	58.1		04.3	109	09.5 ¹²²		27.6 ¹⁷	58	35	35	19	7 01	41	** ** *	**
24	183	58.1	-12	05.1	123	40.6 ¹²¹	-19	29.3 ¹⁷	60 S	2 17	3 24	4 12	6 49	39	** ** *	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 46 ^m 1		Mag: -3.9 PMG: 10 ^h 36 ^m		Mag: +1.8 PMG: 9 ^h 54 ^m		Mag: -1.7 PMG: 11 ^h 52 ^m		Mag: +0.5 PMG: 15 ^h 21 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	32	35.2	201	02.1	-3	17.3	211	24.9	+0	44.8
1	47	37.6	216	01.7		18.5	226	26.0		44.2
2	62	40.1	231	01.3		19.7	241	27.0		43.6
3	77	42.6	246	00.9		20.9	256	28.0		42.9
4	92	45.0	261	00.5		22.2	271	29.0		42.3
5	107	47.5	276	00.1	-3	23.4	286	30.0	+0	41.7
6	122	50.0	290	59.6	-3	24.6	301	31.0	+0	41.0
7	137	52.4	305	59.2		25.8	316	32.1		40.4
8	152	54.9	320	58.8		27.0	331	33.1		39.8
9	167	57.4	335	58.4		28.2	346	34.1		39.1
10	182	59.8	350	58.0		29.5	1	35.1		38.5
11	198	02.3	5	57.6	-3	30.7	16	36.1	+0	37.9
12	213	04.8	20	57.2	-3	31.9	31	37.1	+0	37.2
13	228	07.2	35	56.8		33.1	46	38.2		36.6
14	243	09.7	50	56.4		34.3	61	39.2		36.0
15	258	12.1	65	56.0		35.6	76	40.2		35.3
16	273	14.6	80	55.6		36.8	91	41.2		34.7
17	288	17.1	95	55.2	-3	38.0	106	42.2	+0	34.1
18	303	19.5	110	54.7	-3	39.2	121	43.2	+0	33.5
19	318	22.0	125	54.3		40.4	136	44.3		32.8
20	333	24.5	140	53.9		41.6	151	45.3		32.2
21	348	26.9	155	53.5		42.9	166	46.3		31.6
22	3	29.4	170	53.1		44.1	181	47.3		30.9
23	18	31.9	185	52.7		45.3	196	48.3		30.3
24	33	34.3	200	52.3	-3	46.5	211	49.4	+0	29.7
Dif	—		-4	-12		+10	-6	+19		-2

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 44 ^m 1				Edad: 5 ^d 2 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 2 R°: 47 ^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	183	58.1	-12	05.1	123	40.6	-19	29.3	60 N	16 22	17 06	17 55	12 44 45	19 49 53						
1	198	58.2		06.0	138	11.8 ¹²²		30.9 ¹⁶	58	29	10	56	30 46	20 03 52						
2	213	58.3		06.9	152	43.0 ¹²²		32.4 ¹⁵	56	35	14	57	18 46	15 52						
3	228	58.4		07.7	167	14.1 ¹²¹		33.9 ¹⁵	54	40	17	58	12 08 46	26 51						
4	243	58.4		08.6	181	45.3 ¹²²		35.2 ¹³	52	45	20	17 59	11 58 46	35 51						
5	258	58.5	-12	09.4	196	16.4 ¹²¹	-19	36.4 ¹²	50	16 49	17 22	18 00	11 50 46	20 43 52						
6	273	58.6	-12	10.3	210	47.6 ¹²²	-19	37.6 ¹²	45	16 58	17 29	18 03	11 32 47	21 01 51						
7	288	58.7		11.2	225	18.7 ¹²¹		38.7 ¹¹	40	17 06	34	06	17 47	16 50						
8	303	58.7		12.0	239	49.9 ¹²²		39.6 ⁹	35	13	39	09	11 05 47	28 50						
9	318	58.8		12.9	254	21.0 ¹²¹		40.5 ⁹	30	19	43	11	10 54 48	39 49						
10	333	58.9		13.7	268	52.1 ¹²¹		41.3 ⁸	20	29	17 52	18	36 48	21 57 49						
11	348	58.9	-12	14.6	283	23.2 ¹²¹	-19	42.0 ⁷	10 N	17 39	18 00	18 25	10 20 48	22 13 48						
12	3	59.0	-12	15.5	297	54.3 ¹²¹	-19	42.6 ⁶	0	17 47	18 09	18 33	10 05 48	22 28 48						
13	18	59.1		16.3	312	25.4 ¹²¹		43.1 ⁵	10 S	17 56	18	43	9 50 48	43 47						
14	33	59.1		17.2	326	56.5 ¹²¹		43.6 ⁵	20	18 06	29	18 55	34 48	22 59 47						
15	48	59.2		18.0	341	27.6 ¹²¹		43.9 ³	30	17	42	19 11	16 48	23 17 46						
16	63	59.3		18.9	355	58.7 ¹²¹		44.2 ³	35	24	18 50	22	9 05 48	28 46						
17	78	59.3	-12	19.7	10	29.8 ¹²¹	-19	44.3 ¹	40	18 31	19 00	19 34	8 53 48	23 40 45						
18	93	59.4	-12	20.6	25	00.9 ¹²¹	-19	44.4 ¹	45	18 40	19 11	19 49	8 39 48	23 55 44						
19	108	59.5		21.5	39	32.0 ¹²¹		44.4 ⁰	50	50	25	20 09	21 49	** ** *	** ** *					
20	123	59.5		22.3	54	03.1 ¹²¹		44.2 ²	52	18 55	32	19	13 48	** ** *	** ** *					
21	138	59.6		23.2	68	34.2 ¹²¹		44.0 ²	54	19 00	40	31	8 04 48	** ** *	** ** *					
22	153	59.7		24.0	83	05.2 ¹²⁰		43.7 ³	56	06	48	44	7 53 49	** ** *	** ** *					
23	168	59.7		24.9	97	36.3 ¹²¹		43.3 ⁴	58	13	19 58	20 59	42 48	0 02 50						
24	183	59.8	-12	25.7	112	07.4 ¹²¹	-19	42.9 ⁴	60 S	19 21	20 10	21 19	7 28 48	0 16 50						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 42 ^m 1				Mag: -3.9 PMG: 10 ^h 37 ^m				Mag: +1.8 PMG: 9 ^h 52 ^m				Mag: -1.7 PMG: 11 ^h 49 ^m				Mag: +0.5 PMG: 15 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	33	34.3	200	52.3	-3	46.5	211	49.4	+0	29.7	182	18.0	-11	36.0	130	04.8	-22	17.6		
1	48	36.8	215	51.9		47.7	226	50.4		29.0	197	19.9		36.2	145	07.1		17.6		
2	63	39.2	230	51.5		48.9	241	51.4		28.4	212	21.9		36.4	160	09.3		17.6		
3	78	41.7	245	51.1		50.2	256	52.4		27.8	227	23.8		36.6	175	11.5		17.6		
4	93	44.2	260	50.7		51.4	271	53.4		27.1	242	25.8		36.8	190	13.8		17.6		
5	108	46.6	275	50.2	-3	52.6	286	54.4	+0	26.5	257	27.7	-11	37.0	205	16.0	-22	17.7		
6	123	49.1	290	49.8	-3	53.8	301	55.5	+0	25.9	272	29.6	-11	37.1	220	18.2	-22	17.7		
7	138	51.6	305	49.4		55.0	316	56.5		25.2	287	31.6		37.3	235	20.4		17.7		
8	153	54.0	320	49.0		56.2	331	57.5		24.6	302	33.5		37.5	250	22.7		17.7		
9	168	56.5	335	48.6		57.4	346	58.5		24.0	317	35.5		37.7	265	24.9		17.7		
10	183	59.0	350	48.2		58.7	1	59.5		23.4	332	37.4		37.9	280	27.1		17.7		
11	199	01.4	5	47.8	-3	59.9	17	00.5	+0	22.7	347	39.3	-11	38.1	295	29.4	-22	17.8		
12	214	03.9	20	47.4	-4	01.1	32	01.6	+0	22.1	2	41.3	-11	38.3	310	31.6	-22	17.8		
13	229	06.4	35	46.9		02.3	47	02.6		21.5	17	43.2		38.4	325	33.8		17.8		
14	244	08.8	50	46.5		03.5	62	03.6		20.8	32	45.2		38.6	340	36.0		17.8		
15	259	11.3	65	46.1		04.7	77	04.6		20.2	47	47.1		38.8	355	38.3		17.8		
16	274	13.7	80	45.7		05.9	92	05.6		19.6	62	49.0		39.0	10	40.5		17.8		
17	289	16.2	95	45.3	-4	07.2	107	06.6	+0	18.9	77	51.0	-11	39.2	25	42.7	-22	17.8		
18	304	18.7	110	44.9	-4	08.4	122	07.7	+0	18.3	92	52.9	-11	39.4	40	45.0	-22	17.9		
19	319	21.1	125	44.5		09.6	137	08.7		17.7	107	54.9		39.6	55	47.2		17.9		
20	334	23.6	140	44.1		10.8	152	09.7		17.0	122	56.8		39.8	70	49.4		17.9		
21	349	26.1	155	43.6		12.0	167	10.7		16.4	137	58.7		39.9	85	51.6		17.9		
22	4	28.5	170	43.2		13.2	182	11.7		15.8	153	00.7		40.1	100	53.9		17.9		
23	19	31.0	185	42.8		14.4	197	12.7		15.1	168	02.6		40.3	115	56.1		17.9		
24	34	33.5	200	42.4	-4	15.7	212	13.8	+0	14.5	183	04.6	-11	40.5	130	58.3	-22	18.0		
Dif	—		-4		-12		+10		-6		+19		-2		+22					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 6 ^d 2	PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4									
	PMG: 11 ^h 44 ^m 0					SD: 14'8		SD: 17 ^h 04 ^m			R ^o : 48 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	'	'	°	'	h m	h m	h m	h m m		h m m	
0	183	59.8	-12	25.7	112	07.4	-19 42.9	60 N	5 34	6 23	7 07	13 29 37	20 42 62	
1	198	59.9		26.6	126	38.5 ¹²¹	42.3	58	33	19	7 00	16 37	20 55 61	
2	213	59.9		27.4	141	09.5 ¹²⁰	41.6	56	32	16	6 54	13 04 39	21 07 59	
3	229	00.0		28.3	155	40.6 ¹²¹	40.9	54	31	12	49	12 54 39	17 59	
4	244	00.1		29.1	170	11.7 ¹²¹	40.0	52	30	09	44	44 41	26 58	
5	259	00.1	-12	30.0	184	42.7 ¹²⁰	-19 39.1	50	5 29	6 06	6 40	12 36 41	21 35 56	
6	274	00.2	-12	30.9	199	13.8 ¹²¹	-19 38.1	45	5 26	6 00	6 30	12 19 42	21 52 55	
7	289	00.3		31.7	213	44.9 ¹²¹	37.0	40	23	5 55	22	12 04 44	22 06 54	
8	304	00.3		32.6	228	15.9 ¹²⁰	35.8	35	20	50	16	11 52 44	18 52	
9	319	00.4		33.4	242	47.0 ¹²¹	34.5	30	17	45	6 09	42 45	28 52	
10	334	00.5		34.3	257	18.1 ¹²¹	33.1	20	10	36	5 59	24 45	22 46 50	
11	349	00.5	-12	35.1	271	49.1 ¹²⁰	-19 31.6	10 N	5 03	5 28	5 49	11 08 47	23 01 49	
12	4	00.6	-12	36.0	286	20.2 ¹²¹	-19 30.0	0	4 55	5 19	5 41	10 53 48	23 16 48	
13	19	00.6		36.8	300	51.3 ¹²¹	28.4	10 S	45	5 10	32	38 49	30 47	
14	34	00.7		37.7	315	22.3 ¹²⁰	26.6	20	32	4 59	22	22 50	23 46 45	
15	49	00.8		38.5	329	53.4 ¹²¹	24.8	30	16	46	11	10 04 51	*** ** *	
16	64	00.8		39.4	344	24.5 ¹²¹	22.8	35	4 06	38	5 04	9 53 52	*** ** *	
17	79	00.9	-12	40.2	358	55.5 ¹²⁰	-19 20.8	40	3 53	4 28	4 57	9 41 52	*** ** *	
18	94	00.9	-12	41.0	13	26.6 ¹²¹	-19 18.7	45	3 38	4 16	4 48	9 27 53	*** ** *	
19	109	01.0		41.9	27	57.7 ¹²¹	16.5	50	18	4 02	37	10 54	0 12 44	
20	124	01.1		42.7	42	28.8 ¹²¹	14.2	52	3 08	3 55	32	9 01 55	21 43	
21	139	01.1		43.6	56	59.9 ¹²¹	11.8	54	2 57	47	27	8 52 55	30 43	
22	154	01.2		44.4	71	30.9 ¹²⁰	09.4	56	44	39	21	42 56	40 42	
23	169	01.2		45.3	86	02.0 ¹²¹	06.8	58	28	29	14	30 57	0 52 42	
24	184	01.3	-12	46.1	100	33.1 ¹²¹	-19 04.2	60 S	2 08	3 17	4 06	8 16 58	1 06 41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 38 ^m 2		Mag: -3.9 PMG: 10 ^h 37 ^m		Mag: +1.8 PMG: 9 ^h 50 ^m		Mag: -1.7 PMG: 11 ^h 46 ^m		Mag: +0.5 PMG: 15 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	34	33.5	200	42.4	-4	15.7	212	13.8	+0	14.5
1	49	35.9	215	42.0		16.9	227	14.8		13.9
2	64	38.4	230	41.6		18.1	242	15.8		13.3
3	79	40.9	245	41.2		19.3	257	16.8		12.6
4	94	43.3	260	40.7		20.5	272	17.8		12.0
5	109	45.8	275	40.3	-4	21.7	287	18.8	+0	11.4
6	124	48.2	290	39.9	-4	22.9	302	19.9	+0	10.7
7	139	50.7	305	39.5		24.2	317	20.9		10.1
8	154	53.2	320	39.1		25.4	332	21.9		09.5
9	169	55.6	335	38.7		26.6	347	22.9		08.8
10	184	58.1	350	38.3		27.8	2	23.9		08.2
11	200	00.6	5	37.8	-4	29.0	17	25.0	+0	07.6
12	215	03.0	20	37.4	-4	30.2	32	26.0	+0	06.9
13	230	05.5	35	37.0		31.4	47	27.0		06.3
14	245	08.0	50	36.6		32.6	62	28.0		05.7
15	260	10.4	65	36.2		33.9	77	29.0		05.0
16	275	12.9	80	35.8		35.1	92	30.0		04.4
17	290	15.4	95	35.3	-4	36.3	107	31.1	+0	03.8
18	305	17.8	110	34.9	-4	37.5	122	32.1	+0	03.2
19	320	20.3	125	34.5		38.7	137	33.1		02.5
20	335	22.7	140	34.1		39.9	152	34.1		01.9
21	350	25.2	155	33.7		41.1	167	35.1		01.3
22	5	27.7	170	33.2		42.3	182	36.1	+0	00.6
23	20	30.1	185	32.8		43.5	197	37.2	+0	00.0
24	35	32.6	200	32.4	-4	44.8	212	38.2	-0	00.6
Dif	—		-4		-12		+10		-6	
							+19		-2	
									+22	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 9			Edad: 7 ^d 2 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 R°: 48 ^m SD: 14'8 PMG: 17 ^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
0	184	01.3	-12 46.1	100	33.1	-19 04.2	28	60 N	16 17	17 01	17 50	14 06 28	21 44 69			
1	199	01.4	47.0	115	04.2 ¹²¹	-19 01.4	28	58	24	05	51	13 53 31	21 56 67			
2	214	01.4	47.8	129	35.3 ¹²¹	-18 58.6	28	56	30	09	53	43 32	22 06 66			
3	229	01.5	48.7	144	06.4 ¹²¹	55.7	29	54	36	13	54	33 34	16 63			
4	244	01.5	49.5	158	37.5 ¹²¹	52.7	30	52	41	16	55	25 35	24 62			
5	259	01.6	-12 50.4	173	08.6 ¹²¹	-18 49.6	31	50	16 45	17 19	17 57	13 17 36	22 31 61			
6	274	01.6	-12 51.2	187	39.7 ¹²¹	-18 46.4	32	45	16 55	17 26	18 00	13 01 38	22 47 59			
7	289	01.7	52.0	202	10.8 ¹²¹	43.1	33	40	17 04	31	03	12 48 39	23 00 56			
8	304	01.7	52.9	216	41.9 ¹²¹	39.7	34	35	11	37	06	36 42	10 56			
9	319	01.8	53.7	231	13.1 ¹²²	36.3	34	30	17	42	10	27 42	20 54			
10	334	01.9	54.6	245	44.2 ¹²¹	32.7	36	20	28	51	17	12 09 45	36 52			
11	349	01.9	-12 55.4	260	15.3 ¹²¹	-18 29.1	36	10 N	17 38	17 59	18 24	11 55 46	23 50 50			
12	4	02.0	-12 56.3	274	46.4 ¹²¹	-18 25.4	37	0	17 47	18 08	18 33	11 41 47	*** ** *			
13	19	02.0	57.1	289	17.6 ¹²²	21.6	38	10 S	17 57	18	44	27 49	*** ** *			
14	34	02.1	57.9	303	48.7 ¹²¹	17.7	39	20	18 07	30	18 56	11 12 51	*** ** *			
15	49	02.1	58.8	318	19.9 ¹²²	13.7	40	30	19	44	19 13	10 55 53	0 03 44			
16	64	02.2	-12 59.6	332	51.0 ¹²¹	09.6	41	35	25	18 52	24	45 54	14 42			
17	79	02.2	-13 00.5	347	22.2 ¹²²	-18 05.5	41	40	18 33	19 02	19 37	10 33 56	0 25 42			
18	94	02.3	-13 01.3	1	53.3 ¹²¹	-18 01.2	43	45	18 42	19 14	19 53	10 20 57	0 39 40			
19	109	02.3	02.1	16	24.5 ¹²²	-17 56.9	43	50	53	29	20 14	10 04 59	0 56 38			
20	124	02.4	03.0	30	55.7 ¹²²	52.5	44	52	18 59	36	24	9 56 60	1 04 37			
21	139	02.4	03.8	45	26.8 ¹²¹	48.0	45	54	19 04	44	36	47 61	13 36			
22	154	02.5	04.7	59	58.0 ¹²²	43.4	46	56	11	19 53	20 50	38 62	22 36			
23	169	02.5	05.5	74	29.2 ¹²²	38.7	47	58	18	20 04	21 07	27 64	34 34			
24	184	02.6	-13 06.3	89	00.4 ¹²²	-17 34.0	47	60 S	19 26	20 16	21 28	9 14 66	1 47 32			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 34 ^m 3		Mag: -3.9 PMG: 10 ^h 38 ^m		Mag: +1.8 PMG: 9 ^h 49 ^m		Mag: -1.7 PMG: 11 ^h 43 ^m		Mag: +0.5 PMG: 15 ^h 10 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	35	32.6	200	32.4	-4	44.8	212	38.2	-0	00.6	183	51.1	-11	45.0	131	51.8	-22	18.3
1	50	35.1	215	32.0		46.0	227	39.2		01.3	198	53.1		45.1	146	54.0		18.3
2	65	37.5	230	31.6		47.2	242	40.2		01.9	213	55.0		45.3	161	56.2		18.4
3	80	40.0	245	31.2		48.4	257	41.2		02.5	228	57.0		45.5	176	58.4		18.4
4	95	42.5	260	30.7		49.6	272	42.2		03.2	243	58.9		45.7	192	00.7		18.4
5	110	44.9	275	30.3	-4	50.8	287	43.3	-0	03.8	259	00.8	-11	45.9	207	02.9	-22	18.4
6	125	47.4	290	29.9	-4	52.0	302	44.3	-0	04.4	274	02.8	-11	46.1	222	05.1	-22	18.4
7	140	49.8	305	29.5		53.2	317	45.3		05.0	289	04.7		46.3	237	07.3		18.4
8	155	52.3	320	29.1		54.4	332	46.3		05.7	304	06.7		46.5	252	09.6		18.4
9	170	54.8	335	28.6		55.6	347	47.3		06.3	319	08.6		46.6	267	11.8		18.5
10	185	57.2	350	28.2		56.8	2	48.3		06.9	334	10.5		46.8	282	14.0		18.5
11	200	59.7	5	27.8	-4	58.1	17	49.4	-0	07.6	349	12.5	-11	47.0	297	16.2	-22	18.5
12	216	02.2	20	27.4	-4	59.3	32	50.4	-0	08.2	4	14.4	-11	47.2	312	18.5	-22	18.5
13	231	04.6	35	27.0	-5	00.5	47	51.4		08.8	19	16.4		47.4	327	20.7		18.5
14	246	07.1	50	26.5		01.7	62	52.4		09.5	34	18.3		47.6	342	22.9		18.5
15	261	09.6	65	26.1		02.9	77	53.4		10.1	49	20.2		47.8	357	25.1		18.6
16	276	12.0	80	25.7		04.1	92	54.5		10.7	64	22.2		47.9	12	27.4		18.6
17	291	14.5	95	25.3	-5	05.3	107	55.5	-0	11.4	79	24.1	-11	48.1	27	29.6	-22	18.6
18	306	17.0	110	24.8	-5	06.5	122	56.5	-0	12.0	94	26.1	-11	48.3	42	31.8	-22	18.6
19	321	19.4	125	24.4		07.7	137	57.5		12.6	109	28.0		48.5	57	34.0		18.6
20	336	21.9	140	24.0		08.9	152	58.5		13.2	124	29.9		48.7	72	36.2		18.6
21	351	24.3	155	23.6		10.1	167	59.5		13.9	139	31.9		48.9	87	38.5		18.6
22	6	26.8	170	23.2		11.3	183	00.6		14.5	154	33.8		49.1	102	40.7		18.7
23	21	29.3	185	22.7		12.6	198	01.6		15.1	169	35.8		49.2	117	42.9		18.7
24	36	31.7	200	22.3	-5	13.8	213	02.6	-0	15.8	184	37.7	-11	49.4	132	45.1	-22	18.7
Dif	—		-4		-12		+10		-6		+19		-2		+22			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 8 ^d 2 PHE { SD: 14'9 PMG: 18 ^h 40 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	184	02.6	-13	06.3	89	00.4	-17	34.0	60 N	5 39	6 28	7 12	14 34	23	22 53	75	
1	199	02.6		07.2	103	31.5 ¹²¹		29.1	58	37	24	7 05	24 25		23 03	72	
2	214	02.7		08.0	118	02.7 ¹²²		24.2	56	36	20	6 59	15 27		12 70		
3	229	02.7		08.8	132	33.9 ¹²²		19.2	54	34	16	53	07 29		19 68		
4	244	02.8		09.7	147	05.1 ¹²²		14.1	52	33	13	48	14 00	30	26 67		
5	259	02.8	-13	10.5	161	36.3 ¹²²	-17	08.9	50	5 32	6 10	6 43	13 53	32	23 32	65	
6	274	02.9	-13	11.3	176	07.6 ¹²³	-17	03.6	53	5 28	6 03	6 33	13 39	34	23 46	61	
7	289	02.9		12.2	190	38.8 ¹²²	-16	58.3	53	40	25	5 57	25 27	37	23 56	60	
8	304	03.0		13.0	205	10.0 ¹²²		52.9	54	35	22	51	17 18	38	***	***	
9	319	03.0		13.8	219	41.2 ¹²²		47.3	56	30	18	46	11 13	09 40	***	***	
10	334	03.1		14.7	234	12.4 ¹²²		41.7	56	20	11	37	6 00	12 54	43	***	***
11	349	03.1	-13	15.5	248	43.7 ¹²³	-16	36.1	56	10 N	5 03	5 28	5 50	12 41	45	***	***
12	4	03.2	-13	16.3	263	14.9 ¹²²	-16	30.3	58	0	4 54	5 19	5 40	12 28	48	0 04	47
13	19	03.2		17.2	277	46.1 ¹²²		24.4	59	10 S	44	5 09	31	16 50		17 45	
14	34	03.3		18.0	292	17.4 ¹²³		18.5	59	20	31	4 58	21	12 03	52	31 43	
15	49	03.3		18.8	306	48.6 ¹²²		12.5	60	30	14	44	09	11 48	54	47 41	
16	64	03.4		19.7	321	19.9 ¹²³		06.4	61	35	4 03	35	5 02	39 56		0 56	40
17	79	03.4	-13	20.5	335	51.1 ¹²²	-16	00.2	62	40	3 50	4 25	4 54	11 29	58	1 07	38
18	94	03.4	-13	21.3	350	22.4 ¹²³	-15	54.0	62	45	3 34	4 13	4 45	11 17	60	1 19	36
19	109	03.5		22.2	4	53.7 ¹²³		47.6	64	50	13	3 58	33	11 03	63	34 34	
20	124	03.5		23.0	19	24.9 ¹²²		41.2	64	52	3 03	51	28	10 56	64	41 33	
21	139	03.6		23.8	33	56.2 ¹²³		34.7	65	54	2 51	43	23	48 67		49 31	
22	154	03.6		24.7	48	27.4 ¹²²		28.1	66	56	37	33	16	40 68		1 58	29
23	169	03.7		25.5	62	58.7 ¹²³		21.5	66	58	2 20	23	09	31 69		2 08	27
24	184	03.7	-13	26.3	77	30.0 ¹²³	-15	14.7	68	60 S	1 59	3 11	4 01	10 20	72	2 19	25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 21 ^h 30 ^m 4		Mag: -3.9 PMG: 10 ^h 39 ^m		Mag: +1.8 PMG: 9 ^h 47 ^m		Mag: -1.7 PMG: 11 ^h 40 ^m		Mag: +0.5 PMG: 15 ^h 07 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	36	31.7	200	22.3	-5	13.8	213	02.6	-0	15.8	184	37.7	-11	49.4	132	45.1	-22	18.7	
1	51	34.2	215	21.9		15.0	228	03.6		16.4	199	39.6		49.6	147	47.4		18.7	
2	66	36.7	230	21.5		16.2	243	04.6		17.0	214	41.6		49.8	162	49.6		18.7	
3	81	39.1	245	21.0		17.4	258	05.6		17.7	229	43.5		50.0	177	51.8		18.7	
4	96	41.6	260	20.6		18.6	273	06.7		18.3	244	45.5		50.2	192	54.0		18.8	
5	111	44.1	275	20.2	-5	19.8	288	07.7	-0	18.9	259	47.4	-11	50.3	207	56.2	-22	18.8	
6	126	46.5	290	19.8	-5	21.0	303	08.7	-0	19.5	274	49.3	-11	50.5	222	58.5	-22	18.8	
7	141	49.0	305	19.3		22.2	318	09.7		20.2	289	51.3		50.7	238	00.7		18.8	
8	156	51.5	320	18.9		23.4	333	10.7		20.8	304	53.2		50.9	253	02.9		18.8	
9	171	53.9	335	18.5		24.6	348	11.7		21.4	319	55.2		51.1	268	05.1		18.8	
10	186	56.4	350	18.1		25.8	3	12.8		22.1	334	57.1		51.3	283	07.4		18.9	
11	201	58.8	5	17.6	-5	27.0	18	13.8	-0	22.7	349	59.0	-11	51.5	298	09.6	-22	18.9	
12	217	01.3	20	17.2	-5	28.2	33	14.8	-0	23.3	5	01.0	-11	51.6	313	11.8	-22	18.9	
13	232	03.8	35	16.8		29.4	48	15.8		24.0	20	02.9		51.8	328	14.0		18.9	
14	247	06.2	50	16.4		30.6	63	16.8		24.6	35	04.9		52.0	343	16.2		18.9	
15	262	08.7	65	15.9		31.8	78	17.9		25.2	50	06.8		52.2	358	18.5		18.9	
16	277	11.2	80	15.5		33.0	93	18.9		25.9	65	08.7		52.4	13	20.7		18.9	
17	292	13.6	95	15.1	-5	34.3	108	19.9	-0	26.5	80	10.7	-11	52.6	28	22.9	-22	19.0	
18	307	16.1	110	14.6	-5	35.5	123	20.9	-0	27.1	95	12.6	-11	52.8	43	25.1	-22	19.0	
19	322	18.6	125	14.2		36.7	138	21.9		27.7	110	14.6		52.9	58	27.3		19.0	
20	337	21.0	140	13.8		37.9	153	22.9		28.4	125	16.5		53.1	73	29.6		19.0	
21	352	23.5	155	13.4		39.1	168	24.0		29.0	140	18.4		53.3	88	31.8		19.0	
22	7	25.9	170	12.9		40.3	183	25.0		29.6	155	20.4		53.5	103	34.0		19.0	
23	22	28.4	185	12.5		41.5	198	26.0		30.3	170	22.3		53.7	118	36.2		19.0	
24	37	30.9	200	12.1	-5	42.7	213	27.0	-0	30.9	185	24.3	-11	53.9	133	38.4	-22	19.1	
Dif	—		-4		-12		+10		-6		+19		-2		+22			0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:1		Edad: 9 ^d 2		PHE {	4 ^h : 55/5			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 43 ^m 7		SD: 15:1			12 ^h : 55/7			20 ^h : 56/0		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	184	03.7	-13 26.3	77	30.0	-15 14.7	68	60 N	16 12	16 56	17 45	14 57 19	** ** *	** ** *	
1	199	03.8	27.1	92	01.3 ¹²³	07.9	69	58	19	17 01	47	49 22	** ** *	** ** *	
2	214	03.8	28.0	106	32.5 ¹²²	-15 01.0	70	56	26	05	49	42 24	** ** *	** ** *	
3	229	03.8	28.8	121	03.8 ¹²³	-14 54.0	70	54	32	09	50	36 25	** ** *	** ** *	
4	244	03.9	29.6	135	35.1 ¹²³	47.0	70	52	37	12	52	30 27	** ** *	** ** *	
5	259	03.9	-13 30.5	150	06.4 ¹²³	-14 39.9	71	50	16 42	17 16	17 54	14 25 28	** ** *	** ** *	
6	274	04.0	-13 31.3	164	37.7 ¹²³	-14 32.7	72	45	16 52	17 23	17 57	14 13 32	** ** *	** ** *	
7	289	04.0	32.1	179	09.0 ¹²³	25.4	73	40	17 01	29	18 01	14 04 35	** ** *	** ** *	
8	304	04.0	32.9	193	40.2 ¹²²	18.0	74	35	09	35	05	13 56 37	0 06 57		
9	319	04.1	33.8	208	11.5 ¹²³	10.6	74	30	15	40	08	49 39	14 55		
10	334	04.1	34.6	222	42.8 ¹²³	-14 03.1	75	20	27	50	16	37 42	28 52		
11	349	04.2	-13 35.4	237	14.1 ¹²³	-13 55.5	76	10 N	17 37	17 59	18 24	13 26 45	0 40 50		
12	4	04.2	-13 36.2	251	45.4 ¹²³	-13 47.8	77	0	17 47	18 08	18 33	13 16 47	0 51 48		
13	19	04.2	37.1	266	16.7 ¹²³	40.1	77	10 S	17 57	19	44	13 06 50	1 02 45		
14	34	04.3	37.9	280	47.9 ¹²²	32.3	78	20	18 08	31	18 58	12 55 53	14 43		
15	49	04.3	38.7	295	19.2 ¹²³	24.4	79	30	20	45	19 15	42 57	28 39		
16	64	04.4	39.5	309	50.5 ¹²³	16.5	79	35	27	18 54	26	35 59	36 37		
17	79	04.4	-13 40.3	324	21.8 ¹²³	-13 08.4	81	40	18 35	19 04	19 40	12 27 61	1 45 35		
18	94	04.4	-13 41.2	338	53.1 ¹²³	-13 00.4	80	45	18 45	19 17	19 56	12 17 64	1 55 33		
19	109	04.5	42.0	353	24.3 ¹²²	-12 52.2	82	50	18 57	33	20 18	06 67	2 08 30		
20	124	04.5	42.8	7	55.6 ¹²³	43.9	83	52	19 02	40	29	12 00 69	14 28		
21	139	04.5	43.6	22	26.9 ¹²³	35.6	83	54	08	49	41	11 55 69	20 27		
22	154	04.6	44.5	36	58.1 ¹²²	27.2	84	56	15	19 58	20 56	48 72	27 25		
23	169	04.6	45.3	51	29.4 ¹²³	18.8	84	58	23	20 09	21 14	40 74	35 23		
24	184	04.6	-13 46.1	66	00.7 ¹²³	-12 10.3	85	60 S	19 31	20 22	21 37	11 32 77	2 44 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 26 ^m 4		Mag: -3.9 PMG: 10 ^h 40 ^m		Mag: +1.8 PMG: 9 ^h 46 ^m		Mag: -1.7 PMG: 11 ^h 37 ^m		Mag: +0.5 PMG: 15 ^h 03 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	37	30.9	200 12.1	-5 42.7	213 27.0	-0 30.9	185 24.3	-11 53.9	133 38.4	-22 19.1
1	52	33.3	215 11.7	43.9	228 28.0	31.5	200 26.2	54.1	148 40.7	19.1
2	67	35.8	230 11.2	45.1	243 29.0	32.2	215 28.1	54.2	163 42.9	19.1
3	82	38.3	245 10.8	46.3	258 30.1	32.8	230 30.1	54.4	178 45.1	19.1
4	97	40.7	260 10.4	47.5	273 31.1	33.4	245 32.0	54.6	193 47.3	19.1
5	112	43.2	275 09.9	-5 48.7	288 32.1	-0 34.0	260 34.0	-11 54.8	208 49.5	-22 19.1
6	127	45.7	290 09.5	-5 49.9	303 33.1	-0 34.7	275 35.9	-11 55.0	223 51.8	-22 19.2
7	142	48.1	305 09.1	51.1	318 34.1	35.3	290 37.8	55.2	238 54.0	19.2
8	157	50.6	320 08.6	52.3	333 35.2	35.9	305 39.8	55.3	253 56.2	19.2
9	172	53.1	335 08.2	53.5	348 36.2	36.6	320 41.7	55.5	268 58.4	19.2
10	187	55.5	350 07.8	54.7	3 37.2	37.2	335 43.6	55.7	284 00.6	19.2
11	202	58.0	5 07.4	-5 55.9	18 38.2	-0 37.8	350 45.6	-11 55.9	299 02.8	-22 19.2
12	218	00.4	20 06.9	-5 57.1	33 39.2	-0 38.5	5 47.5	-11 56.1	314 05.1	-22 19.2
13	233	02.9	35 06.5	58.3	48 40.2	39.1	20 49.5	56.3	329 07.3	19.3
14	248	05.4	50 06.1	-5 59.5	63 41.3	39.7	35 51.4	56.5	344 09.5	19.3
15	263	07.8	65 05.6	-6 00.7	78 42.3	40.3	50 53.3	56.6	359 11.7	19.3
16	278	10.3	80 05.2	01.9	93 43.3	41.0	65 55.3	56.8	14 13.9	19.3
17	293	12.8	95 04.8	-6 03.1	108 44.3	-0 41.6	80 57.2	-11 57.0	29 16.2	-22 19.3
18	308	15.2	110 04.3	-6 04.3	123 45.3	-0 42.2	95 59.2	-11 57.2	44 18.4	-22 19.3
19	323	17.7	125 03.9	05.5	138 46.3	42.9	111 01.1	57.4	59 20.6	19.4
20	338	20.2	140 03.5	06.7	153 47.4	43.5	126 03.0	57.6	74 22.8	19.4
21	353	22.6	155 03.0	07.9	168 48.4	44.1	141 05.0	57.7	89 25.0	19.4
22	8	25.1	170 02.6	09.1	183 49.4	44.8	156 06.9	57.9	104 27.2	19.4
23	23	27.6	185 02.2	10.3	198 50.4	45.4	171 08.9	58.1	119 29.5	19.4
24	38	30.0	200 01.7	-6 11.5	213 51.4	-0 46.0	186 10.8	-11 58.3	134 31.7	-22 19.4
Dif	—	-4	-12	+10	-6	-6	+19	-2	+22	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 10 ^d 2 PHE { 4 ^h : 56'2 12 ^h : 56'5 20 ^h : 56'8 Rº: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	184	04.6	-13 46.1	66	00.7	-12 10.3	86	60 N	5 43	6 33	7 17	15 16	17	0 08	78
1	199	04.7	46.9	80	31.9 ¹²²	-12 01.7	86	58	41	28	10	11 19		15	76
2	214	04.7	47.7	95	03.2 ¹²³	-11 53.0	87	56	40	24	7 03	06 21		22	73
3	229	04.7	48.5	109	34.4 ¹²²	44.3	87	54	38	20	6 57	15 01	24	27	72
4	244	04.8	49.4	124	05.6 ¹²²	35.5	88	52	36	16	51	14 57	25	33	69
5	259	04.8	-13 50.2	138	36.9 ¹²³	-11 26.6	89	50	5 35	6 13	6 47	14 53	27	0 37	68
6	274	04.8	-13 51.0	153	08.1 ¹²²	-11 17.7	89	45	5 31	6 05	6 36	14 45	31	0 47	65
7	289	04.9	51.8	167	39.3 ¹²²	-11 08.7	90	40	27	5 59	27	39 33		0 56	62
8	304	04.9	52.6	182	10.5 ¹²²	-10 59.7	90	35	23	53	19	33 35		1 03	60
9	319	04.9	53.5	196	41.7 ¹²²	50.5	92	30	20	48	12	28 37		09	58
10	334	05.0	54.3	211	12.9 ¹²²	41.4	91	20	12	38	6 01	19 41		20	54
11	349	05.0	-13 55.1	225	44.1 ¹²²	-10 32.1	93	10 N	5 04	5 29	5 50	14 11	45	1 30	50
12	4	05.0	-13 55.9	240	15.3 ¹²²	-10 22.8	93	0	4 54	5 19	5 40	14 03	48	1 39	47
13	19	05.1	56.7	254	46.4 ¹²¹	13.4	94	10 S	43	5 09	30	13 56	51	47	45
14	34	05.1	57.5	269	17.6 ¹²²	-10 04.0	94	20	30	4 57	19	48 55		1 57	41
15	49	05.1	58.3	283	48.8 ¹²²	-9 54.5	95	30	12	42	07	39 58		2 07	38
16	64	05.2	-13 59.2	298	19.9 ¹²¹	44.9	96	35	4 01	33	5 00	34 60		13	36
17	79	05.2	-14 00.0	312	51.0 ¹²¹	-9 35.3	96	40	3 47	4 22	4 51	13 28	63	2 20	34
18	94	05.2	-14 00.8	327	22.1 ¹²¹	-9 25.6	97	45	3 31	4 10	4 42	13 21	66	2 28	31
19	109	05.2	01.6	341	53.2 ¹²¹	15.8	98	50	3 09	3 54	30	13 69		38	27
20	124	05.3	02.4	356	24.3 ¹²¹	-9 06.0	98	52	2 58	46	24	09 71		42	26
21	139	05.3	03.2	10	55.4 ¹²¹	-8 56.2	98	54	45	38	18	04 74		47	24
22	154	05.3	04.0	25	26.5 ¹²¹	46.3	99	56	30	28	11	13 00	75	52	23
23	169	05.4	04.8	39	57.5 ¹²⁰	36.3 ¹⁰⁰	100	58	2 12	17	4 04	12 54	78	2 58	21
24	184	05.4	-14 05.7	54	28.5 ¹²⁰	-8 26.3 ¹⁰⁰	100	60 S	1 49	3 04	3 55	12 49	80	3 05	18
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 22 ^m 5			Mag: -3.9 PMG: 10 ^h 40 ^m			Mag: +1.8 PMG: 9 ^h 44 ^m			Mag: -1.7 PMG: 11 ^h 34 ^m			Mag: +0.5 PMG: 15 ^h 00 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	38	30.0	200 01.7	-6 11.5	213 51.4	-0 46.0	186 10.8	-11 58.3	134 31.7	-22 19.4					
1	53	32.5	215 01.3	12.7	228 52.4	46.6	201 12.7	58.5	149 33.9	19.4					
2	68	34.9	230 00.9	13.9	243 53.5	47.3	216 14.7	58.7	164 36.1	19.5					
3	83	37.4	245 00.4	15.1	258 54.5	47.9	231 16.6	58.9	179 38.3	19.5					
4	98	39.9	260 00.0	16.3	273 55.5	48.5	246 18.6	59.0	194 40.5	19.5					
5	113	42.3	274 59.5	-6 17.5	288 56.5	-0 49.2	261 20.5	-11 59.2	209 42.8	-22 19.5					
6	128	44.8	289 59.1	-6 18.7	303 57.5	-0 49.8	276 22.4	-11 59.4	224 45.0	-22 19.5					
7	143	47.3	304 58.7	19.9	318 58.5	50.4	291 24.4	59.6	239 47.2	19.5					
8	158	49.7	319 58.2	21.1	333 59.6	51.1	306 26.3	-11 59.8	254 49.4	19.6					
9	173	52.2	334 57.8	22.3	349 00.6	51.7	321 28.3	-12 00.0	269 51.6	19.6					
10	188	54.7	349 57.4	23.5	4 01.6	52.3	336 30.2	-12 00.1	284 53.8	19.6					
11	203	57.1	4 56.9	-6 24.6	19 02.6	-0 52.9	351 32.1	-12 00.3	299 56.1	-22 19.6					
12	218	59.6	19 56.5	-6 25.8	34 03.6	-0 53.6	6 34.1	-12 00.5	314 58.3	-22 19.6					
13	234	02.0	34 56.1	27.0	49 04.7	54.2	21 36.0	00.7	330 00.5	19.6					
14	249	04.5	49 55.6	28.2	64 05.7	54.8	36 37.9	00.9	345 02.7	19.6					
15	264	07.0	64 55.2	29.4	79 06.7	55.5	51 39.9	01.1	0 04.9	19.7					
16	279	09.4	79 54.7	30.6	94 07.7	56.1	66 41.8	01.2	15 07.1	19.7					
17	294	11.9	94 54.3	-6 31.8	109 08.7	-0 56.7	81 43.8	-12 01.4	30 09.4	-22 19.7					
18	309	14.4	109 53.9	-6 33.0	124 09.7	-0 57.3	96 45.7	-12 01.6	45 11.6	-22 19.7					
19	324	16.8	124 53.4	34.2	139 10.8	58.0	111 47.6	01.8	60 13.8	19.7					
20	339	19.3	139 53.0	35.4	154 11.8	58.6	126 49.6	02.0	75 16.0	19.7					
21	354	21.8	154 52.5	36.6	169 12.8	59.2	141 51.5	02.2	90 18.2	19.7					
22	9	24.2	169 52.1	37.8	184 13.8	-0 59.9	156 53.5	02.4	105 20.4	19.8					
23	24	26.7	184 51.7	39.0	199 14.8	-1 00.5	171 55.4	02.5	120 22.6	19.8					
24	39	29.2	199 51.2	-6 40.2	214 15.8	-1 01.1	186 57.3	-12 02.7	135 24.9	-22 19.8					
Dif	—		-4	-12	+10	-6	+19	-2	+22	0					

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 : 57 ^m 1 12 ^h : 57 ^m 4 20 ^h : 57 ^m 7	SD: 15 ^h 5			PMG: 21 ^h 03 ^m	R°: 49 ^m							
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	184	05.4	-14	05.7	54	28.5	-8	26.3	60 N	16 06	16 51	17 41	15 33	16	1	26	82
1	199	05.4		06.5	68	59.6 ¹²¹		16.2 ¹⁰¹	58	14	16 56	43	30	19		31	79
2	214	05.4		07.3	83	30.6 ¹²⁰	-8	06.0 ¹⁰²	56	21	17 01	45	27	21		35	77
3	229	05.5		08.1	98	01.6 ¹²⁰	-7	55.8 ¹⁰²	54	28	05	47	25	23		39	75
4	244	05.5		08.9	112	32.5 ¹¹⁹		45.6 ¹⁰²	52	33	09	49	22	25		42	73
5	259	05.5	-14	09.7	127	03.5 ¹²⁰	-7	35.3 ¹⁰³	50	16 38	17 12	17 50	15 20	27	1	45	71
6	274	05.5	-14	10.5	141	34.4 ¹¹⁹	-7	24.9 ¹⁰⁴	45	16 49	17 20	17 55	15 16	30	1	52	67
7	289	05.6		11.3	156	05.3 ¹¹⁹		14.5 ¹⁰⁴	40	16 59	27	17 59	12	33	1	58	64
8	304	05.6		12.1	170	36.2 ¹¹⁹	-7	04.1 ¹⁰⁴	35	17 07	33	18 03	08	36	2	03	61
9	319	05.6		12.9	185	07.1 ¹¹⁹	-6	53.6 ¹⁰⁵	30	14	38	07	05	38	07	59	
10	334	05.6		13.7	199	38.0 ¹¹⁹		43.0 ¹⁰⁶	20	26	49	15	15 00	42		14	55
11	349	05.7	-14	14.5	214	08.8 ¹¹⁸	-6	32.4 ¹⁰⁶	10 N	17 37	17 58	18 23	14 56	45	2	20	52
12	4	05.7	-14	15.3	228	39.6 ¹¹⁸	-6	21.8 ¹⁰⁶	0	17 47	18 08	18 33	14 51	49	2	26	49
13	19	05.7		16.1	243	10.4 ¹¹⁸		11.1 ¹⁰⁷	10 S	17 57	19	45	47	53		32	45
14	34	05.7		17.0	257	41.2 ¹¹⁸	-6	00.3 ¹⁰⁸	20	18 09	32	18 59	43	56		38	42
15	49	05.7		17.8	272	12.0 ¹¹⁸	-5	49.5 ¹⁰⁸	30	22	47	19 17	37	61		45	38
16	64	05.8		18.6	286	42.7 ¹¹⁷		38.7 ¹⁰⁸	35	29	18 56	28	34	63		49	36
17	79	05.8	-14	19.4	301	13.4 ¹¹⁷	-5	27.8 ¹⁰⁹	40	18 38	19 07	19 42	14 31	65	2	54	33
18	94	05.8	-14	20.2	315	44.1 ¹¹⁷	-5	16.9 ¹⁰⁹	45	18 48	19 20	20 00	14 27	69	2	59	30
19	109	05.8		21.0	330	14.7 ¹¹⁶	-5	05.9 ¹¹⁰	50	19 00	37	23	22	73	3	05	27
20	124	05.8		21.8	344	45.4 ¹¹⁷	-4	54.9 ¹¹⁰	52	06	44	34	20	74		08	25
21	139	05.9		22.6	359	16.0 ¹¹⁶		43.9 ¹¹⁰	54	12	19 53	20 47	18	76		11	23
22	154	05.9		23.4	13	46.5 ¹¹⁵		32.8 ¹¹¹	56	19	20 03	21 03	15	79		15	21
23	169	05.9		24.2	28	17.1 ¹¹⁶		21.6 ¹¹²	58	27	15	22	12	81		19	18
24	184	05.9	-14	25.0	42	47.6 ¹¹⁵	-4	10.5 ¹¹¹	60 S	19 37	20 29	21 47	14 09	83	3	23	16
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 21 ^h 18 ^m 6			Mag: -3.9 PMG: 10 ^h 41 ^m			Mag: +1.8 PMG: 9 ^h 42 ^m			Mag: -1.7 PMG: 11 ^h 31 ^m			Mag: +0.5 PMG: 14 ^h 56 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	39	29.2	199	51.2	-6	40.2	214	15.8	-1	01.1	186	57.3	-12	02.7	135	24.9	
1	54	31.6	214	50.8		41.4	229	16.9		01.8	201	59.3		02.9	150	27.1	
2	69	34.1	229	50.3		42.6	244	17.9		02.4	217	01.2		03.1	165	29.3	
3	84	36.5	244	49.9		43.7	259	18.9		03.0	232	03.2		03.3	180	31.5	
4	99	39.0	259	49.5		44.9	274	19.9		03.6	247	05.1		03.5	195	33.7	
5	114	41.5	274	49.0	-6	46.1	289	20.9	-1	04.3	262	07.0	-12	03.6	210	35.9	
6	129	43.9	289	48.6	-6	47.3	304	21.9	-1	04.9	277	09.0	-12	03.8	225	38.1	
7	144	46.4	304	48.1		48.5	319	23.0		05.5	292	10.9		04.0	240	40.4	
8	159	48.9	319	47.7		49.7	334	24.0		06.2	307	12.9		04.2	255	42.6	
9	174	51.3	334	47.3		50.9	349	25.0		06.8	322	14.8		04.4	270	44.8	
10	189	53.8	349	46.8		52.1	4	26.0		07.4	337	16.7		04.6	285	47.0	
11	204	56.3	4	46.4	-6	53.3	19	27.0	-1	08.0	352	18.7	-12	04.7	300	49.2	
12	219	58.7	19	45.9	-6	54.5	34	28.0	-1	08.7	7	20.6	-12	04.9	315	51.4	
13	235	01.2	34	45.5		55.7	49	29.1		09.3	22	22.5		05.1	330	53.6	
14	250	03.6	49	45.0		56.8	64	30.1		09.9	37	24.5		05.3	345	55.8	
15	265	06.1	64	44.6		58.0	79	31.1		10.6	52	26.4		05.5	0	58.1	
16	280	08.6	79	44.1	-6	59.2	94	32.1		11.2	67	28.4		05.7	16	00.3	
17	295	11.0	94	43.7	-7	00.4	109	33.1	-1	11.8	82	30.3	-12	05.8	31	02.5	
18	310	13.5	109	43.3	-7	01.6	124	34.2	-1	12.4	97	32.2	-12	06.0	46	04.7	
19	325	16.0	124	42.8		02.8	139	35.2		13.1	112	34.2		06.2	61	06.9	
20	340	18.4	139	42.4		04.0	154	36.2		13.7	127	36.1		06.4	76	09.1	
21	355	20.9	154	41.9		05.2	169	37.2		14.3	142	38.1		06.6	91	11.3	
22	10	23.4	169	41.5		06.4	184	38.2		15.0	157	40.0		06.8	106	13.5	
23	25	25.8	184	41.0		07.5	199	39.2		15.6	172	41.9		06.9	121	15.8	
24	40	28.3	199	40.6	-7	08.7	214	40.3	-1	16.2	187	43.9	-12	07.1	136	18.0	
Dif	—		-4	-12		+10	-6			+19	-2		+22		0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 12 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6 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	184	05.9	-14	25.0	42	47.6	-4	10.5	60 N	5	48	6	37	7	23	15	49
1	199	05.9		25.8	57	18.1 ¹¹⁵	-3	59.3 ¹¹²	58	46	32		14		49	19	
2	214	06.0		26.6	71	48.6 ¹¹⁵		48.0 ¹¹³	56	43	28		07		48	21	
3	229	06.0		27.4	86	19.0 ¹¹⁴		36.8 ¹¹²	54	41	23		7	01	48	23	
4	244	06.0		28.2	100	49.4 ¹¹⁴		25.5 ¹¹³	52	39	19		6	55	47	25	
5	259	06.0	-14	29.0	115	19.8 ¹¹⁴	-3	14.1 ¹¹⁴	50	5	38	6	16	6	50	15	47
6	274	06.0	-14	29.8	129	50.1 ¹¹³	-3	02.7 ¹¹⁴	45	5	33	6	08	6	39	15	46
7	289	06.0		30.6	144	20.4 ¹¹³	-2	51.3 ¹¹⁴	40	29	6	01	29		45	34	
8	304	06.1		31.4	158	50.7 ¹¹³		39.9 ¹¹⁴	35	25	5	55	21		44	37	
9	319	06.1		32.2	173	20.9 ¹¹²		28.4 ¹¹⁵	30	21	49		14		43	39	
10	334	06.1		33.0	187	51.2 ¹¹³		16.9 ¹¹⁵	20	13	39		6	02	42	44	
11	349	06.1	-14	33.8	202	21.3 ¹¹¹	-2	05.4 ¹¹⁵	10 N	5	04	5	29	5	51	15	41
12	4	06.1	-14	34.6	216	51.5 ¹¹²	-1	53.9 ¹¹⁵	0	4	54	5	19	5	40	15	40
13	19	06.1		35.4	231	21.6 ¹¹¹		42.3 ¹¹⁶	10 S	42	5	08	30		40	54	
14	34	06.2		36.2	245	51.6 ¹¹⁰		30.7 ¹¹⁶	20	28	4	55	18		39	58	
15	49	06.2		36.9	260	21.7 ¹¹¹		19.1 ¹¹⁶	30	4	10	40	5	05	38	62	
16	64	06.2		37.7	274	51.6 ¹⁰⁹	-1	07.4 ¹¹⁷	35	3	58	31	4	58	37	65	
17	79	06.2	-14	38.5	289	21.6 ¹¹⁰	-0	55.7 ¹¹⁷	40	3	44	4	20	4	49	15	36
18	94	06.2	-14	39.3	303	51.5 ¹⁰⁹	-0	44.0 ¹¹⁷	45	3	27	4	07	4	39	15	36
19	109	06.2		40.1	318	21.4 ¹⁰⁹		32.3 ¹¹⁷	50	3	04	3	50	26		35	75
20	124	06.2		40.9	332	51.2 ¹⁰⁸		20.6 ¹¹⁷	52	2	53	42	20		34	78	
21	139	06.2		41.7	347	21.0 ¹⁰⁸	-0	08.9 ¹¹⁷	54	39	33	14			34	79	
22	154	06.3		42.5	1	50.7 ¹⁰⁷	+0	02.9 ¹¹⁸	56	24	23	4	07		34	81	
23	169	06.3		43.3	16	20.5 ¹⁰⁸		14.7 ¹¹⁸	58	2	04	3	11	3	59	33	84
24	184	06.3	-14	44.1	30	50.1 ¹⁰⁶	+0	26.5 ¹¹⁸	60 S	1	39	2	58	3	50	15	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 14 ^m 6		Mag: -3.9 PMG: 10 ^h 42 ^m		Mag: +1.8 PMG: 9 ^h 41 ^m		Mag: -1.7 PMG: 11 ^h 28 ^m		Mag: +0.5 PMG: 14 ^h 53 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	40	28.3	199	40.6	214	40.3	187	43.9	136	18.0
1	55	30.8	214	40.1	229	41.3	202	45.8	151	20.2
2	70	33.2	229	39.7	244	42.3	217	47.8	166	22.4
3	85	35.7	244	39.2	259	43.3	232	49.7	181	24.6
4	100	38.1	259	38.8	274	44.3	247	51.6	196	26.8
5	115	40.6	274	38.3	289	45.3	262	53.6	211	29.0
6	130	43.1	289	37.9	304	46.4	277	55.5	226	31.2
7	145	45.5	304	37.4	319	47.4	292	57.4	241	33.4
8	160	48.0	319	37.0	334	48.4	307	59.4	256	35.7
9	175	50.5	334	36.5	349	49.4	323	01.3	271	37.9
10	190	52.9	349	36.1	4	50.4	338	03.3	286	40.1
11	205	55.4	4	35.7	19	51.4	353	05.2	301	42.3
12	220	57.9	19	35.2	34	52.5	8	07.1	316	44.5
13	236	00.3	34	34.8	49	53.5	23	09.1	331	46.7
14	251	02.8	49	34.3	64	54.5	38	11.0	346	48.9
15	266	05.3	64	33.8	79	55.5	53	13.0	1	51.1
16	281	07.7	79	33.4	94	56.5	68	14.9	16	53.3
17	296	10.2	94	32.9	109	57.5	83	16.8	31	55.6
18	311	12.6	109	32.5	124	58.6	98	18.8	46	57.8
19	326	15.1	124	32.0	139	59.6	113	20.7	62	00.0
20	341	17.6	139	31.6	155	00.6	128	22.7	77	02.2
21	356	20.0	154	31.1	170	01.6	143	24.6	92	04.4
22	11	22.5	169	30.7	185	02.6	158	26.5	107	06.6
23	26	25.0	184	30.2	200	03.6	173	28.5	122	08.8
24	41	27.4	199	29.8	215	04.7	188	30.4	137	11.0
Dif	—		-5	-12	+10	-6	+19	-2	+22	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°1 PMG: 11 ^h 43 ^m 6			Edad: 13 ^d 2 PHE { SD: 16°0 PMG: 22 ^h 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	184	06.3	-14	44.1	30	50.1	+0 26.5	60 N	16 01	16 47	17 36	16 06	18	4 13 88
1	199	06.3		44.9	45	19.7 ¹⁰⁶	38.3 ¹¹⁸	58	10	52	39	08	20	12 85
2	214	06.3		45.7	59	49.3 ¹⁰⁶	+0 50.1 ¹¹⁸	56	17	16 57	41	09	23	12 82
3	229	06.3		46.4	74	18.8 ¹⁰⁵	+1 01.9 ¹¹⁸	54	24	17 01	43	11	25	11 80
4	244	06.3		47.2	88	48.3 ¹⁰⁵	13.8 ¹¹⁹	52	30	05	45	12	27	11 78
5	259	06.3	-14	48.0	103	17.8 ¹⁰⁵	+1 25.6 ¹¹⁸	50	16 35	17 09	17 47	16 13	29	4 10 77
6	274	06.3	-14	48.8	117	47.2 ¹⁰⁴	+1 37.5 ¹¹⁹	45	16 47	17 17	17 52	16 16	33	4 09 73
7	289	06.3		49.6	132	16.5 ¹⁰³	+1 49.3 ¹¹⁸	40	16 56	25	17 57	19	36	09 68
8	304	06.3		50.4	146	45.8 ¹⁰³	+2 01.2 ¹¹⁹	35	17 05	31	18 01	21	38	08 66
9	319	06.4		51.2	161	15.0 ¹⁰²	13.1 ¹¹⁹	30	12	37	05	22	42	07 64
10	334	06.4		52.0	175	44.2 ¹⁰²	24.9 ¹¹⁸	20	25	48	14	26	45	06 59
11	349	06.4	-14	52.8	190	13.4 ¹⁰²	+2 36.8 ¹¹⁹	10 N	17 36	17 58	18 23	16 28	50	4 05 55
12	4	06.4	-14	53.5	204	42.5 ¹⁰¹	+2 48.7 ¹¹⁹	0	17 47	18 08	18 33	16 31	53	4 04 52
13	19	06.4		54.3	219	11.5 ¹⁰⁰	+3 00.6 ¹¹⁹	10 S	17 58	20	18 45	34	56	03 48
14	34	06.4		55.1	233	40.5 ¹⁰⁰	12.4 ¹¹⁸	20	18 10	33	19 00	37	60	02 45
15	49	06.4		55.9	248	09.5 ¹⁰⁰	24.3 ¹¹⁹	30	23	48	19	40	65	01 40
16	64	06.4		56.7	262	38.4 ⁹⁹	36.1 ¹¹⁸	35	31	18 58	31	42	67	01 37
17	79	06.4	-14	57.5	277	07.2 ⁹⁸	+3 48.0 ¹¹⁹	40	18 40	19 09	19 45	16 44	71	4 00 35
18	94	06.4	-14	58.2	291	36.0 ⁹⁸	+3 59.8 ¹¹⁸	45	18 51	19 23	20 03	16 47	74	3 59 31
19	109	06.4		59.0	306	04.8 ⁹⁸	+4 11.7 ¹¹⁹	50	19 04	40	27	50	78	58 28
20	124	06.4	-14	59.8	320	33.4 ⁹⁶	23.5 ¹¹⁸	52	10	49	39	52	79	57 26
21	139	06.4	-15	00.6	335	02.1 ⁹⁷	35.3 ¹¹⁸	54	16	19 58	20 53	53	82	57 24
22	154	06.4		01.4	349	30.6 ⁹⁵	47.1 ¹¹⁸	56	24	20 08	21 10	55	84	56 22
23	169	06.4		02.2	3	59.1 ⁹⁵	+4 58.9 ¹¹⁸	58	32	21	30	57	87	56 19
24	184	06.4	-15	02.9	18	27.6 ⁹⁵	+5 10.7 ¹¹⁸	60 S	19 42	20 35	21 58	16 59	90	3 55 17
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 10 ^m 7		Mag: -3.9 PMG: 10 ^h 42 ^m			Mag: +1.8 PMG: 9 ^h 39 ^m			Mag: -1.7 PMG: 11 ^h 24 ^m			Mag: +0.5 PMG: 14 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	41	27.4	199	29.8	-7	37.1	215	04.7	-1	31.3	188	30.4	-12	11.5
1	56	29.9	214	29.3		38.3	230	05.7		31.9	203	32.3		11.7
2	71	32.4	229	28.9		39.5	245	06.7		32.6	218	34.3		11.9
3	86	34.8	244	28.4		40.7	260	07.7		33.2	233	36.2		12.1
4	101	37.3	259	28.0		41.9	275	08.7		33.8	248	38.2		12.2
5	116	39.7	274	27.5	-7	43.0	290	09.7	-1	34.4	263	40.1	-12	12.4
6	131	42.2	289	27.1	-7	44.2	305	10.8	-1	35.1	278	42.0	-12	12.6
7	146	44.7	304	26.6		45.4	320	11.8		35.7	293	44.0		12.8
8	161	47.1	319	26.1		46.6	335	12.8		36.3	308	45.9		13.0
9	176	49.6	334	25.7		47.8	350	13.8		36.9	323	47.9		13.2
10	191	52.1	349	25.2		48.9	5	14.8		37.6	338	49.8		13.3
11	206	54.5	4	24.8	-7	50.1	20	15.8	-1	38.2	353	51.7	-12	13.5
12	221	57.0	19	24.3	-7	51.3	35	16.9	-1	38.8	8	53.7	-12	13.7
13	236	59.5	34	23.9		52.5	50	17.9		39.5	23	55.6		13.9
14	252	01.9	49	23.4		53.6	65	18.9		40.1	38	57.6		14.1
15	267	04.4	64	22.9		54.8	80	19.9		40.7	53	59.5		14.3
16	282	06.9	79	22.5		56.0	95	20.9		41.3	69	01.4		14.4
17	297	09.3	94	22.0	-7	57.2	110	21.9	-1	42.0	84	03.4	-12	14.6
18	312	11.8	109	21.6	-7	58.3	125	23.0	-1	42.6	99	05.3	-12	14.8
19	327	14.2	124	21.1	-7	59.5	140	24.0		43.2	114	07.2		15.0
20	342	16.7	139	20.6	-8	00.7	155	25.0		43.9	129	09.2		15.2
21	357	19.2	154	20.2		01.9	170	26.0		44.5	144	11.1		15.3
22	12	21.6	169	19.7		03.0	185	27.0		45.1	159	13.1		15.5
23	27	24.1	184	19.3		04.2	200	28.0		45.7	174	15.0		15.7
24	42	26.6	199	18.8	-8	05.4	215	29.1	-1	46.4	189	16.9	-12	15.9
Dif	—		-5	-12		+10	-6			+19	-2		+22	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 14 ^d 2 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 8 20 ^h : 60 ^m 0 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	06.4	-15	02.9	18	27.6	+5 10.7	60 N	5 52	6 42	7 28	16 24	21	5 41	90
1	199	06.4		03.7	32	56.0	22.4 ¹¹⁷	58	50	36	19	28	25	37	88
2	214	06.4		04.5	47	24.3	34.1 ¹¹⁷	56	47	31	11	32	27	34	85
3	229	06.4		05.3	61	52.6	45.9 ¹¹⁸	54	45	27	7 05	36	29	31	83
4	244	06.4		06.1	76	20.8	+5 57.5 ¹¹⁶	52	43	23	6 59	39	31	29	80
5	259	06.4	-15	06.8	90	49.0	+6 09.2 ¹¹⁷	50	5 41	6 19	6 53	16 42	33	5 27	78
6	274	06.4	-15	07.6	105	17.1	+6 20.8 ¹¹⁶	45	5 36	6 11	6 41	16 49	37	5 22	74
7	289	06.4		08.4	119	45.2	32.5 ¹¹⁷	40	31	6 03	31	55	39	17	72
8	304	06.4		09.2	134	13.1	44.1 ¹¹⁶	35	27	5 57	23	16 59	43	14	68
9	319	06.4		09.9	148	41.1	+6 55.6 ¹¹⁵	30	22	51	15	17 04	44	11	65
10	334	06.4		10.7	163	08.9	+7 07.1 ¹¹⁵	20	13	40	6 02	11 49		05	62
11	349	06.4	-15	11.5	177	36.7	+7 18.6 ¹¹⁵	10 N	5 04	5 29	5 51	17 18	52	5 00	58
12	4	06.4	-15	12.3	192	04.5	+7 30.1 ¹¹⁵	0	4 54	5 19	5 40	17 24	56	4 56	54
13	19	06.4		13.0	206	32.2	41.5 ¹¹⁴	10 S	42	5 07	29	30 59		51	51
14	34	06.4		13.8	220	59.8	+7 52.9 ¹¹⁴	20	27	4 54	17	37 63		47	47
15	49	06.4		14.6	235	27.3	+8 04.3 ¹¹⁴	30	4 08	38	5 04	45 67		41	43
16	64	06.4		15.4	249	54.8	15.6 ¹¹³	35	3 56	29	4 56	49 70		38	40
17	79	06.4	-15	16.1	264	22.3	+8 26.9 ¹¹³	40	3 42	4 17	4 47	17 55	71	4 35	37
18	94	06.4	-15	16.9	278	49.6	+8 38.1 ¹¹²	45	3 23	4 03	4 36	18 01	75	4 30	35
19	109	06.4		17.7	293	16.9	+8 49.3 ¹¹²	50	3 00	3 46	23	08 79		26	30
20	124	06.4		18.5	307	44.2	+9 00.5 ¹¹²	52	2 48	38	17	11 81		23	29
21	139	06.4		19.2	322	11.4	11.6 ¹¹¹	54	34	29	10	15 83		21	27
22	154	06.4		20.0	336	38.5	22.6 ¹¹⁰	56	2 17	18	4 02	19 85		18	25
23	169	06.4		20.8	351	05.5	33.6 ¹¹⁰	58	1 56	3 06	3 54	24 88		15	22
24	184	06.4	-15	21.5	5	32.5	+9 44.6 ¹¹⁰	60 S	1 29	2 51	3 44	18 29	91	4 12	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 06 ^m 8		Mag: -3.9 PMG: 10 ^h 43 ^m		Mag: +1.8 PMG: 9 ^h 37 ^m		Mag: -1.7 PMG: 11 ^h 21 ^m		Mag: +0.5 PMG: 14 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	42	26.6	199	18.8	215	29.1	189	16.9	138	04.0
1	57	29.0	214	18.3	230	30.1	204	18.9	153	06.2
2	72	31.5	229	17.9	245	31.1	219	20.8	168	08.4
3	87	34.0	244	17.4	260	32.1	234	22.8	183	10.6
4	102	36.4	259	17.0	275	33.1	249	24.7	198	12.8
5	117	38.9	274	16.5	290	34.1	264	26.6	213	15.0
6	132	41.3	289	16.0	305	35.2	279	28.6	228	17.2
7	147	43.8	304	15.6	320	36.2	294	30.5	243	19.5
8	162	46.3	319	15.1	335	37.2	309	32.5	258	21.7
9	177	48.7	334	14.6	350	38.2	324	34.4	273	23.9
10	192	51.2	349	14.2	5	39.2	339	36.3	288	26.1
11	207	53.7	4	13.7	20	40.2	354	38.3	303	28.3
12	222	56.1	19	13.3	35	41.3	9	40.2	318	30.5
13	237	58.6	34	12.8	50	42.3	24	42.1	333	32.7
14	253	01.1	49	12.3	65	43.3	39	44.1	348	34.9
15	268	03.5	64	11.9	80	44.3	54	46.0	3	37.1
16	283	06.0	79	11.4	95	45.3	69	48.0	18	39.3
17	298	08.5	94	10.9	110	46.3	84	49.9	33	41.5
18	313	10.9	109	10.5	125	47.4	99	51.8	48	43.7
19	328	13.4	124	10.0	140	48.4	114	53.8	63	45.9
20	343	15.8	139	09.5	155	49.4	129	55.7	78	48.1
21	358	18.3	154	09.1	170	50.4	144	57.7	93	50.3
22	13	20.8	169	08.6	185	51.4	159	59.6	108	52.5
23	28	23.2	184	08.1	200	52.4	175	01.5	123	54.7
24	43	25.7	199	07.7	215	53.4	190	03.5	138	56.9
Dif	—		-5	-12	+10	-6	+19	-2	+22	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 15 ^d 2 PHE { 4 ^h : 60:2 12 ^h : 60:4 20 ^h : 60:5 R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	184	06.4	-15	21.5	5	32.5	+9 44.6	60 N	15 56	16 42	17 32	16 45	28	7 11	91
1	199	06.4		22.3	19	59.4	+9 55.5	58	16 05		48	35		53	30
2	214	06.4		23.1	34	26.3	+10 06.3	56		13	53	37	16 59	33	6 59 85
3	229	06.4		23.9	48	53.1		54	20	16 58	40	17 05	35		54 83
4	244	06.3		24.6	63	19.8		52	26	17 02	42	10	37		49 81
5	259	06.3	-15	25.4	77	46.4	+10 38.5	50	16 32	17 06	17 44	17 15	38		6 45 79
6	274	06.3	-15	26.2	92	13.0	+10 49.1	45	16 44	17 15	17 50	17 26	41		6 36 75
7	289	06.3		26.9	106	39.6	+10 59.7	40	16 54		22	55	34	45	29 72
8	304	06.3		27.7	121	06.0	+11 10.1	35	17 03		29	17 59	42	47	22 70
9	319	06.3		28.5	135	32.4		30		11	35	18 04	17 48	49	16 68
10	334	06.3		29.2	149	58.7		20		24	47	13	18 00	52	6 07 63
11	349	06.3	-15	30.0	164	25.0	+11 41.2	10 N	17 36	17 58	18 23	18 10	55		5 58 60
12	4	06.3	-15	30.8	178	51.2	+11 51.4	0	17 47	18 09	18 33	18 20	58		5 50 57
13	19	06.3		31.5	193	17.3	+12 01.6	10 S	17 58		20	18 46	29	61	42 54
14	34	06.3		32.3	207	43.4		20	18 11	34	19 01	40	64		34 50
15	49	06.2		33.1	222	09.4		30		25	18 50	21	52	67	24 47
16	64	06.2		33.8	236	35.4		35		33	19 00	33	18 59	69	18 45
17	79	06.2	-15	34.6	251	01.2	+12 41.4	40	18 42	19 12	19 48	19 06	72		5 12 42
18	94	06.2	-15	35.3	265	27.1	+12 51.2	45	18 54	19 26	20 07	19 16	75		5 05 39
19	109	06.2		36.1	279	52.8	+13 00.9	50	19 07		44	32	27	78	4 56 35
20	124	06.2		36.9	294	18.5		52		13	19 53	44	32	80	52 33
21	139	06.2		37.6	308	44.1		54		20	20 02	20 59	38	82	48 31
22	154	06.1		38.4	323	09.7		56		28	14	21 16	44	85	43 29
23	169	06.1		39.1	337	35.2		58		37	26	21 39	19 52	86	37 27
24	184	06.1	-15	39.9	352	00.6	+13 48.1	60 S	19 47	20 42	22 09	20 00	90		4 31 24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 02 ^m 8		Mag: -3.9 PMG: 10 ^h 44 ^m		Mag: +1.8 PMG: 9 ^h 36 ^m		Mag: -1.7 PMG: 11 ^h 18 ^m		Mag: +0.5 PMG: 14 ^h 42 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	43	25.7	199	07.7	-8	33.5	215	53.4	-2	01.4
1	58	28.2	214	07.2		34.6	230	54.5		02.0
2	73	30.6	229	06.7		35.8	245	55.5		02.7
3	88	33.1	244	06.2		37.0	260	56.5		03.3
4	103	35.6	259	05.8		38.1	275	57.5		03.9
5	118	38.0	274	05.3	-8	39.3	290	58.5	-2	04.5
6	133	40.5	289	04.8	-8	40.5	305	59.5	-2	05.2
7	148	43.0	304	04.4		41.6	321	00.6		05.8
8	163	45.4	319	03.9		42.8	336	01.6		06.4
9	178	47.9	334	03.4		44.0	351	02.6		07.1
10	193	50.3	349	03.0		45.1	6	03.6		07.7
11	208	52.8	4	02.5	-8	46.3	21	04.6	-2	08.3
12	223	55.3	19	02.0	-8	47.5	36	05.6	-2	08.9
13	238	57.7	34	01.5		48.6	51	06.7		09.6
14	254	00.2	49	01.1		49.8	66	07.7		10.2
15	269	02.7	64	00.6		50.9	81	08.7		10.8
16	284	05.1	79	00.1		52.1	96	09.7		11.4
17	299	07.6	93	59.6	-8	53.3	111	10.7	-2	12.1
18	314	10.1	108	59.2	-8	54.4	126	11.7	-2	12.7
19	329	12.5	123	58.7		55.6	141	12.7		13.3
20	344	15.0	138	58.2		56.7	156	13.8		13.9
21	359	17.4	153	57.7		57.9	171	14.8		14.6
22	14	19.9	168	57.3	-8	59.1	186	15.8		15.2
23	29	22.4	183	56.8	-9	00.2	201	16.8		15.8
24	44	24.8	198	56.3	-9	01.4	216	17.8	-2	16.4
Dif	—		-5		-12		+10		-6	
							+19		-2	
									+22	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 16 ^d 2 PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'7												
	PMG: 11 ^h 43 ^m 6			SD: 16'5 PMG: 0 ^h 33 ^m R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	06.1	-15	352	00.6	+13	48.1	91	5	56	6	47	7	33	17	13
1	199	06.1		6	26.0	64	+13	57.2	91	54	41		24	23	39	
2	214	06.1		20	51.3	63	+14	06.3	90	51	35		16	32	41	
3	229	06.1		35	16.6	63		15.3	91	48	31		09	40	43	
4	244	06.1		49	41.8	62		24.2	89	46	26		7	47	45	
5	259	06.0	-15	64	06.9	61	+14	33.0	88	5	44	6	22	6	56	
6	274	06.0	-15	78	32.0	61	+14	41.7	87	5	38	6	13	6	44	
7	289	06.0		92	57.0	60		50.4	87	33	6	05		34	19	50
8	304	06.0		107	21.9	59	+14	58.9	85	28	5	58		25	29	52
9	319	06.0		121	46.8	59	+15	07.3	84	24	52		17	37	54	
10	334	06.0		136	11.7	59		15.6	83	14	41	6	03	18	52	
11	349	05.9	-15	150	36.5	58	+15	23.8	82	5	05	5	30	5	51	
12	4	05.9	-15	165	01.2	57	+15	31.9	81	4	54	5	19	5	40	
13	19	05.9		179	25.9	57		39.9	80	41	5	07		29	30	63
14	34	05.9		193	50.5	56		47.8	79	26	4	53	16	44	64	
15	49	05.9		208	15.1	56	+15	55.6	78	4	06	37	5	02	19	59
16	64	05.8		222	39.6	55	+16	03.3	77	3	54	27	4	54	20	08
17	79	05.8	-15	237	04.1	55	+16	10.9	76	3	39	4	15	4	44	
18	94	05.8	-15	251	28.5	54	+16	18.3	74	3	20	4	00	4	33	
19	109	05.8		265	52.8	53		25.7	74	2	55	3	42	19	45	74
20	124	05.7		280	17.2	54		32.9	72	42	34		13	20	52	
21	139	05.7		294	41.4	52		40.0	71	28	24	4	06	21	00	
22	154	05.7		309	05.7	53		47.0	70	2	10	13	3	58	09	78
23	169	05.7		323	29.8	51	+16	53.9	69	1	48	3	00	49	18	81
24	184	05.7	-15	337	54.0	52	+17	00.6	67	1	17	2	45	3	39	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 58 ^m 9		Mag: -3.9 PMG: 10 ^h 45 ^m		Mag: +1.8 PMG: 9 ^h 34 ^m		Mag: -1.7 PMG: 11 ^h 15 ^m		Mag: +0.5 PMG: 14 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	44	24.8	198	56.3	-9	01.4	216	17.8	-2	16.4
1	59	27.3	213	55.8		02.5	231	18.8		17.1
2	74	29.8	228	55.4		03.7	246	19.9		17.7
3	89	32.2	243	54.9		04.9	261	20.9		18.3
4	104	34.7	258	54.4		06.0	276	21.9		18.9
5	119	37.2	273	53.9	-9	07.2	291	22.9	-2	19.6
6	134	39.6	288	53.4	-9	08.3	306	23.9	-2	20.2
7	149	42.1	303	53.0		09.5	321	24.9		20.8
8	164	44.6	318	52.5		10.6	336	25.9		21.4
9	179	47.0	333	52.0		11.8	351	27.0		22.1
10	194	49.5	348	51.5		13.0	6	28.0		22.7
11	209	51.9	3	51.0	-9	14.1	21	29.0	-2	23.3
12	224	54.4	18	50.6	-9	15.3	36	30.0	-2	24.0
13	239	56.9	33	50.1		16.4	51	31.0		24.6
14	254	59.3	48	49.6		17.6	66	32.0		25.2
15	270	01.8	63	49.1		18.7	81	33.1		25.8
16	285	04.3	78	48.6		19.9	96	34.1		26.5
17	300	06.7	93	48.2	-9	21.0	111	35.1	-2	27.1
18	315	09.2	108	47.7	-9	22.2	126	36.1	-2	27.7
19	330	11.7	123	47.2		23.3	141	37.1		28.3
20	345	14.1	138	46.7		24.5	156	38.1		29.0
21	0	16.6	153	46.2		25.6	171	39.1		29.6
22	15	19.1	168	45.7		26.8	186	40.2		30.2
23	30	21.5	183	45.3		27.9	201	41.2		30.8
24	45	24.0	198	44.8	-9	29.1	216	42.2	-2	31.5
Dif	—		-5	-12			+10	-6		
									+19	-2
										+22

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 17 ^d 2 PHE { 4 ^h : 60/7 12 ^h : 60/6 20 ^h : 60/6 SD: 16:5 PMG: 1 ^h 32 ^m R°: 61 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	184	05.7	-15	58.0	337	54.0	+17 00.6	60 N	15 51	16 38	17 28	17 50	50	10 08	77	
1	199	05.6		58.8	352	18.1 51	07.3 67	58	16 00	44	31	18 02	52	9 56	75	
2	214	05.6	-15	59.5	6	42.1 50	13.8 65	56	09	49	34	13 53		46	73	
3	229	05.6	-16	00.3	21	06.1 50	20.2 64	54	16	54	37	23 53		36	73	
4	244	05.6		01.0	35	30.1 50	26.5 63	52	23	16 59	39	32 53		28	72	
5	259	05.5	-16	01.7	49	54.0 49	+17 32.6 61	50	16 29	17 03	17 42	18 39	55	9 21	70	
6	274	05.5	-16	02.5	64	17.9 49	+17 38.6 60	45	16 41	17 12	17 47	18 56	56	9 05	69	
7	289	05.5		03.2	78	41.7 48	44.6 60	40	16 52	20	53	19 09	57	8 52	67	
8	304	05.5		04.0	93	05.6 49	50.3 57	35	17 01	28	17 58	21 57		41	66	
9	319	05.4		04.7	107	29.3 47	+17 56.0 57	30	09	34	18 03	31 58		31	65	
10	334	05.4		05.5	121	53.1 48	+18 01.5 55	20	23	46	12	19 49	59	14	64	
11	349	05.4	-16	06.2	136	16.8 47	+18 06.9 54	10 N	17 35	17 57	18 22	20 04	60	8 00	62	
12	4	05.3	-16	07.0	150	40.5 47	+18 12.1 52	0	17 47	18 09	18 34	20 18	61	7 46	61	
13	19	05.3		07.7	165	04.1 46	17.3 52	10 S	17 59	21	18 47	33 61		33	59	
14	34	05.3		08.4	179	27.8 47	22.3 50	20	18 12	35	19 02	20 48	63	18	58	
15	49	05.3		09.2	193	51.4 46	27.1 48	30	26	18 52	22	21 06	63	7 02	56	
16	64	05.2		09.9	208	14.9 45	31.9 48	35	35	19 02	35	16 64		6 52	55	
17	79	05.2	-16	10.7	222	38.5 46	+18 36.5 46	40	18 45	19 14	19 51	21 28	65	6 41	54	
18	94	05.2	-16	11.4	237	02.0 45	+18 40.9 44	45	18 56	19 29	20 10	21 42	66	6 28	53	
19	109	05.1		12.2	251	25.5 45	45.3 44	50	19 11	48	36	21 59	67	13	50	
20	124	05.1		12.9	265	49.0 45	49.5 42	52	17	19 57	20 49	22 08	66	6 06	49	
21	139	05.1		13.6	280	12.5 45	53.5 40	54	24	20 07	21 05	17 67		5 58	47	
22	154	05.0		14.4	294	36.0 45	+18 57.5 40	56	33	19	24	27 68		48	47	
23	169	05.0		15.1	308	59.4 44	+19 01.2 37	58	42	32	21 48	39 68		38	45	
24	184	05.0	-16	15.8	323	22.8 44	+19 04.9 37	60 S	19 53	20 48	22 22	22 52	70	5 27	42	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 55 ^m 0		Mag: -3.9 PMG: 10 ^h 45 ^m			Mag: +1.8 PMG: 9 ^h 33 ^m			Mag: -1.7 PMG: 11 ^h 12 ^m			Mag: +0.5 PMG: 14 ^h 35 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	45	24.0	198	44.8	-9	29.1	216	42.2	-2	31.5	191	36.5	-12	28.9	140	42.6
1	60	26.4	213	44.3		30.2	231	43.2		32.1	206	38.5		29.1	155	44.8
2	75	28.9	228	43.8		31.4	246	44.2		32.7	221	40.4		29.3	170	47.0
3	90	31.4	243	43.3		32.5	261	45.2		33.3	236	42.4		29.5	185	49.2
4	105	33.8	258	42.8		33.7	276	46.3		34.0	251	44.3		29.6	200	51.4
5	120	36.3	273	42.3	-9	34.8	291	47.3	-2	34.6	266	46.2	-12	29.8	215	53.6
6	135	38.8	288	41.9	-9	36.0	306	48.3	-2	35.2	281	48.2	-12	30.0	230	55.8
7	150	41.2	303	41.4		37.1	321	49.3		35.8	296	50.1		30.2	245	58.0
8	165	43.7	318	40.9		38.3	336	50.3		36.5	311	52.1		30.4	261	00.2
9	180	46.2	333	40.4		39.4	351	51.3		37.1	326	54.0		30.5	276	02.4
10	195	48.6	348	39.9		40.6	6	52.3		37.7	341	55.9		30.7	291	04.6
11	210	51.1	3	39.4	-9	41.7	21	53.4	-2	38.3	356	57.9	-12	30.9	306	06.8
12	225	53.6	18	38.9	-9	42.9	36	54.4	-2	39.0	11	59.8	-12	31.1	321	09.0
13	240	56.0	33	38.4		44.0	51	55.4		39.6	27	01.8		31.3	336	11.2
14	255	58.5	48	38.0		45.2	66	56.4		40.2	42	03.7		31.4	351	13.4
15	271	00.9	63	37.5		46.3	81	57.4		40.8	57	05.6		31.6	6	15.6
16	286	03.4	78	37.0		47.4	96	58.4		41.5	72	07.6		31.8	21	17.8
17	301	05.9	93	36.5	-9	48.6	111	59.4	-2	42.1	87	09.5	-12	32.0	36	20.0
18	316	08.3	108	36.0	-9	49.7	127	00.5	-2	42.7	102	11.4	-12	32.2	51	22.2
19	331	10.8	123	35.5		50.9	142	01.5		43.3	117	13.4		32.3	66	24.4
20	346	13.3	138	35.0		52.0	157	02.5		44.0	132	15.3		32.5	81	26.6
21	1	15.7	153	34.5		53.2	172	03.5		44.6	147	17.3		32.7	96	28.8
22	16	18.2	168	34.0		54.3	187	04.5		45.2	162	19.2		32.9	111	31.0
23	31	20.7	183	33.5		55.4	202	05.5		45.8	177	21.1		33.1	126	33.2
24	46	23.1	198	33.0	-9	56.6	217	06.5	-2	46.4	192	23.1	-12	33.2	141	35.4
Dif	—		-5		-11	+10		-6	+19		-2		+22		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1				Edad: 18 ^d 2 PHE { 4 ^h : 60 ^m 5 12 ^h : 60 ^m 4 20 ^h : 60 ^m 3													
	PMG: 11 ^h 43 ^m 7				PMG: 2 ^h 33 ^m R°: 61 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m		
0	184	05.0	-16	15.8	323	22.8	+19	04.9	35	60 N	6 01	6 51	7 38	18 40	63	11 25	62	
1	199	04.9		16.6	337	46.3		08.4	35	58	5 57	45	28	18 54	63	11 11	62	
2	214	04.9		17.3	352	09.7		11.8	34	56	54	39	20	19 06	63	10 59	62	
3	229	04.9		18.1	6	33.1		15.0	32	54	52	34	13	16 63		49	61	
4	244	04.8		18.8	20	56.4		18.1	31	52	49	29	06	25 63		40	61	
5	259	04.8	-16	19.5	35	19.8	+19	21.0	29	50	5 46	6 25	7 00	19 34	62	10 31	62	
6	274	04.8	-16	20.3	49	43.2	+19	23.9	29	45	5 41	6 16	6 47	19 52	62	10 14	61	
7	289	04.7		21.0	64	06.6		26.5	26	40	35	08	36	20 06	62	9 59	62	
8	304	04.7		21.7	78	30.0		29.1	26	35	30	6 00	27	18 62		47	61	
9	319	04.7		22.5	92	53.3		31.5	24	30	25	5 54	19	29 62		36	62	
10	334	04.6		23.2	107	16.7		33.7	22	20	15	42	6 04	20 48	61	18	61	
11	349	04.6	-16	23.9	121	40.1	+19	35.8	21	10 N	5 05	5 30	5 52	21 04	60	9 02	61	
12	4	04.6	-16	24.7	136	03.5	+19	37.8	20	0	4 54	5 19	5 40	21 19	60	8 47	61	
13	19	04.5		25.4	150	26.9		39.6	18	10 S	41	5 06	28	34 60		32	61	
14	34	04.5		26.1	164	50.3		41.3	17	20	25	4 52	15	21 51	59	8 16	61	
15	49	04.4		26.9	179	13.7		42.8	15	30	4 05	35	5 01	22 09	59	7 58	60	
16	64	04.4		27.6	193	37.1		44.2	14	35	3 52	25	4 52	20 59		47	60	
17	79	04.4	-16	28.3	208	00.6	+19	45.5	13	40	3 36	4 12	4 42	22 33	58	7 35	60	
18	94	04.3	-16	29.0	222	24.0	+19	46.6	11	45	3 17	3 58	4 30	22 48	57	7 21	59	
19	109	04.3		29.8	236	47.5		47.6	10	50	2 51	39	16	23 06	56	7 03	59	
20	124	04.3		30.5	251	11.0		48.4	8	52	37	30	10	14 56		6 55	58	
21	139	04.2		31.2	265	34.5		49.1	7	54	22	20	4 02	24 56		45	59	
22	154	04.2		32.0	279	58.0		49.7	6	56	2 03	3 08	3 54	35 55		35	58	
23	169	04.1		32.7	294	21.5		50.1	4	58	1 39	2 54	45	23 47	54	23	57	
24	184	04.1	-16	33.4	308	45.1	+19	50.4	3	60 S	1 04	2 38	3 34	** ** *		6 09	57	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 20 ^h 51 ^m 0		Mag: -3.9 PMG: 10 ^h 46 ^m		Mag: +1.8 PMG: 9 ^h 31 ^m		Mag: -1.7 PMG: 11 ^h 09 ^m		Mag: +0.5 PMG: 14 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	46	23.1	198	33.0	-9	56.6	217	06.5	-2	46.4
1	61	25.6	213	32.5		57.7	232	07.6		47.1
2	76	28.0	228	32.0	-9	58.9	247	08.6		47.7
3	91	30.5	243	31.6	-10	00.0	262	09.6		48.3
4	106	33.0	258	31.1	-10	01.2	277	10.6		48.9
5	121	35.4	273	30.6	-10	02.3	292	11.6	-2	49.6
6	136	37.9	288	30.1	-10	03.4	307	12.6	-2	50.2
7	151	40.4	303	29.6		04.6	322	13.6		50.8
8	166	42.8	318	29.1		05.7	337	14.7		51.4
9	181	45.3	333	28.6		06.8	352	15.7		52.1
10	196	47.8	348	28.1		08.0	7	16.7		52.7
11	211	50.2	3	27.6	-10	09.1	22	17.7	-2	53.3
12	226	52.7	18	27.1	-10	10.3	37	18.7	-2	53.9
13	241	55.2	33	26.6		11.4	52	19.7		54.6
14	256	57.6	48	26.1		12.5	67	20.7		55.2
15	272	00.1	63	25.6		13.7	82	21.8		55.8
16	287	02.5	78	25.1		14.8	97	22.8		56.4
17	302	05.0	93	24.6	-10	15.9	112	23.8	-2	57.1
18	317	07.5	108	24.1	-10	17.1	127	24.8	-2	57.7
19	332	09.9	123	23.6		18.2	142	25.8		58.3
20	347	12.4	138	23.1		19.3	157	26.8		58.9
21	2	14.9	153	22.6		20.5	172	27.8	-2	59.5
22	17	17.3	168	22.1		21.6	187	28.9	-3	00.2
23	32	19.8	183	21.6		22.7	202	29.9		00.8
24	47	22.3	198	21.1	-10	23.9	217	30.9	-3	01.4
Dif	—		-5		-11		+10		-6	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 8				Edad: 19 ^d 2 PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'8 R°: 59 ^m													
	hG ☉ Dec		hG ☾ Dif Dec Dif					Civil			Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	184	04.1	-16	33.4	308	45.1	+19	50.4	60 N	15 46	16 33	17 24	19 43 75	12 27 46				
1	199	04.0		34.1	323	08.7		50.5	58	15 56		40	19 57 73	13 47				
2	214	04.0		34.9	337	32.3		50.5	56	16 05		46	20 09 71	12 01 49				
3	229	04.0		35.6	351	56.0		50.4	54	12	51	33	19 70	11 50 50				
4	244	03.9		36.3	6	19.7		50.1	52	19	16 56	36	28 69	41 51				
5	259	03.9	-16	37.0	20	43.4	+19	49.7	50	16 25	17 00	17 39	20 36 69	11 33 51				
6	274	03.8	-16	37.8	35	07.1	+19	49.1	45	16 39	17 10	17 45	20 54 66	11 15 53				
7	289	03.8		38.5	49	30.9		48.4	40	50	18	51	21 08 65	11 01 54				
8	304	03.7		39.2	63	54.7		47.6	35	16 59	26	17 56	20 64	10 48 55				
9	319	03.7		39.9	78	18.6		46.6	30	17 08	33	18 01	31 62	38 55				
10	334	03.7		40.6	92	42.5		45.5	20	22	45	12	21 49 61	19 57				
11	349	03.6	-16	41.4	107	06.4	+19	44.2	10 N	17 35	17 57	18 22	22 04 60	10 03 58				
12	4	03.6	-16	42.1	121	30.4	+19	42.8	0	17 47	18 09	18 34	22 19 58	9 48 59				
13	19	03.5		42.8	135	54.4		41.3	10 S	18 00	22	18 47	34 56	33 60				
14	34	03.5		43.5	150	18.4		39.7	20	13	36	19 04	22 50 54	9 17 61				
15	49	03.4		44.2	164	42.5		37.9	30	28	18 54	24	23 08 53	8 58 62				
16	64	03.4		45.0	179	06.7		36.0	35	37	19 04	38	19 51	47 63				
17	79	03.3	-16	45.7	193	30.9	+19	33.9	40	18 47	19 17	19 54	23 31 50	8 35 63				
18	94	03.3	-16	46.4	207	55.1	+19	31.7	45	18 59	19 32	20 14	23 45 48	8 20 64				
19	109	03.2		47.1	222	19.4		29.4	50	19 14	19 52	41	** ** *	8 02 66				
20	124	03.2		47.8	236	43.8		27.0	52	21	20 01	20 55	** ** *	7 53 67				
21	139	03.1		48.6	251	08.2		24.4	54	29	12	21 11	** ** *	44 67				
22	154	03.1		49.3	265	32.6		21.7	56	37	24	31	** ** *	33 68				
23	169	03.0		50.0	279	57.1		18.8	58	47	38	21 57	** ** *	20 69				
24	184	03.0	-16	50.7	294	21.7	+19	15.9	60 S	19 58	20 55	22 37	0 02 53	7 06 70				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 47 ^m 1		Mag: -3.9 PMG: 10 ^h 47 ^m				Mag: +1.8 PMG: 9 ^h 29 ^m				Mag: -1.7 PMG: 11 ^h 06 ^m				Mag: +0.5 PMG: 14 ^h 28 ^m			
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		hG ♅ Dec		hG ♆ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	47	22.3	198	21.1	-10	23.9	217	30.9	-3	01.4	193	09.6	-12	37.5	142	28.1		
1	62	24.7	213	20.6		25.0	232	31.9		02.0	208	11.6		37.7	157	30.3		
2	77	27.2	228	20.1		26.1	247	32.9		02.7	223	13.5		37.9	172	32.5		
3	92	29.7	243	19.6		27.3	262	33.9		03.3	238	15.4		38.1	187	34.7		
4	107	32.1	258	19.1		28.4	277	34.9		03.9	253	17.4		38.3	202	36.9		
5	122	34.6	273	18.6	-10	29.5	292	35.9	-3	04.5	268	19.3	-12	38.4	217	39.1		
6	137	37.0	288	18.1	-10	30.7	307	37.0	-3	05.2	283	21.3	-12	38.6	232	41.3		
7	152	39.5	303	17.5		31.8	322	38.0		05.8	298	23.2		38.8	247	43.5		
8	167	42.0	318	17.0		32.9	337	39.0		06.4	313	25.1		39.0	262	45.7		
9	182	44.4	333	16.5		34.0	352	40.0		07.0	328	27.1		39.2	277	47.9		
10	197	46.9	348	16.0		35.2	7	41.0		07.6	343	29.0		39.3	292	50.0		
11	212	49.4	3	15.5	-10	36.3	22	42.0	-3	08.3	358	31.0	-12	39.5	307	52.2		
12	227	51.8	18	15.0	-10	37.4	37	43.0	-3	08.9	13	32.9	-12	39.7	322	54.4		
13	242	54.3	33	14.5		38.5	52	44.1		09.5	28	34.8		39.9	337	56.6		
14	257	56.8	48	14.0		39.7	67	45.1		10.1	43	36.8		40.0	352	58.8		
15	272	59.2	63	13.5		40.8	82	46.1		10.8	58	38.7		40.2	8	01.0		
16	288	01.7	78	13.0		41.9	97	47.1		11.4	73	40.7		40.4	23	03.2		
17	303	04.2	93	12.5	-10	43.0	112	48.1	-3	12.0	88	42.6	-12	40.6	38	05.4		
18	318	06.6	108	12.0	-10	44.2	127	49.1	-3	12.6	103	44.5	-12	40.8	53	07.6		
19	333	09.1	123	11.5		45.3	142	50.1		13.3	118	46.5		40.9	68	09.8		
20	348	11.5	138	10.9		46.4	157	51.1		13.9	133	48.4		41.1	83	12.0		
21	3	14.0	153	10.4		47.5	172	52.2		14.5	148	50.4		41.3	98	14.2		
22	18	16.5	168	09.9		48.7	187	53.2		15.1	163	52.3		41.5	113	16.4		
23	33	18.9	183	09.4		49.8	202	54.2		15.7	178	54.2		41.6	128	18.6		
24	48	21.4	198	08.9	-10	50.9	217	55.2	-3	16.4	193	56.2	-12	41.8	143	20.8		
Dif	—		-5 -11		+10		-6		+19		-2		+22					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 20 ^d 2 PHE { 4 ^h : 59'6 12 ^h : 59'4 20 ^h : 59'1 SD: 16'2 PMG: 4 ^h 33 ^m R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	03.0	-16	50.7	294	21.7	+19	15.9	60 N	6 05	6 56	7 43	20 58	80	13 13	33		
1	199	02.9		51.4	308	46.3		12.8	58	6 01	49	33	21 10	78	13 00	36		
2	214	02.9		52.1	323	11.0		09.5	56	5 58	43	24	20 76		12 50	37		
3	229	02.8		52.8	337	35.7		06.2	54	55	38	16	29 74		40	40		
4	244	02.8		53.6	352	00.5	+19	02.7	52	52	33	09	37 73		32	41		
5	259	02.7	-16	54.3	6	25.3	+18	59.1	50	5 49	6 28	7 03	21 45	71	12 24	42		
6	274	02.7	-16	55.0	20	50.3	+18	55.4	45	5 43	6 18	6 50	22 00	68	12 08	45		
7	289	02.6		55.7	35	15.2		51.6	40	37	10	38	13 66		11 55	47		
8	304	02.6		56.4	49	40.3		47.6	40	32	6 02	29	24 64		43	49		
9	319	02.5		57.1	64	05.4		43.5	30	27	5 55	20	33 63		33	50		
10	334	02.5		57.8	78	30.5		39.3	20	16	43	6 06	22 50	59	16	53		
11	349	02.4	-16	58.5	92	55.8	+18	35.0	10 N	5 05	5 31	5 53	23 04	57	11 01	55		
12	4	02.4	-16	59.2	107	21.1	+18	30.6	0	4 54	5 19	5 40	23 17	55	10 47	56		
13	19	02.3	-16	59.9	121	46.4		26.0	10 S	40	5 06	28	30 53		33	58		
14	34	02.2	-17	00.7	136	11.9		21.4	20	24	4 51	5 15	23 44	50	18	60		
15	49	02.2		01.4	150	37.4		16.6	30	4 03	34	4 59	*** ** *	**	10 00	63		
16	64	02.1		02.1	165	03.0		11.7	35	3 50	23	50	*** ** *	**	9 50	64		
17	79	02.1	-17	02.8	179	28.6	+18	06.7	40	3 34	4 10	4 40	*** ** *	**	9 38	66		
18	94	02.0	-17	03.5	193	54.3	+18	01.6	45	3 13	3 55	4 28	*** ** *	**	9 24	68		
19	109	02.0		04.2	208	20.1	+17	56.4	50	2 46	35	13	0 02	47	08	70		
20	124	01.9		04.9	222	45.9		51.0	52		26	4 06	10 46		9 00	71		
21	139	01.8		05.6	237	11.9		45.6	54	2 16	15	3 58	20 44		8 51	73		
22	154	01.8		06.3	251	37.9		40.0	56	1 56	3 03	50	30 42		41	74		
23	169	01.7		07.0	266	03.9		34.4	58	1 30	2 49	40	41 41		29	77		
24	184	01.7	-17	07.7	280	30.1	+17	28.6	60 S	0 49	2 32	3 29	0 55	39	8 16	79		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 20 ^h 43 ^m 2		Mag: -3.9 PMG: 10 ^h 48 ^m				Mag: +1.8 PMG: 9 ^h 28 ^m				Mag: -1.7 PMG: 11 ^h 03 ^m				Mag: +0.5 PMG: 14 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	48	21.4	198	08.9	-10	50.9	217	55.2	-3	16.4	193	56.2	-12	41.8	143	20.8	-22	22.9
1	63	23.9	213	08.4		52.0	232	56.2		17.0	208	58.1		42.0	158	22.9		22.9
2	78	26.3	228	07.9		53.2	247	57.2		17.6	224	00.0		42.2	173	25.1		22.9
3	93	28.8	243	07.4		54.3	262	58.2		18.2	239	02.0		42.4	188	27.3		23.0
4	108	31.3	258	06.8		55.4	277	59.3		18.9	254	03.9		42.5	203	29.5		23.0
5	123	33.7	273	06.3	-10	56.5	293	00.3	-3	19.5	269	05.9	-12	42.7	218	31.7	-22	23.0
6	138	36.2	288	05.8	-10	57.6	308	01.3	-3	20.1	284	07.8	-12	42.9	233	33.9	-22	23.0
7	153	38.7	303	05.3		58.8	323	02.3		20.7	299	09.7		43.1	248	36.1		23.0
8	168	41.1	318	04.8	-10	59.9	338	03.3		21.3	314	11.7		43.2	263	38.3		23.0
9	183	43.6	333	04.3	-11	01.0	353	04.3		22.0	329	13.6		43.4	278	40.5		23.0
10	198	46.0	348	03.8		02.1	8	05.3		22.6	344	15.6		43.6	293	42.7		23.1
11	213	48.5	3	03.2	-11	03.2	23	06.3	-3	23.2	359	17.5	-12	43.8	308	44.9	-22	23.1
12	228	51.0	18	02.7	-11	04.3	38	07.4	-3	23.8	14	19.4	-12	44.0	323	47.1	-22	23.1
13	243	53.4	33	02.2		05.5	53	08.4		24.5	29	21.4		44.1	338	49.3		23.1
14	258	55.9	48	01.7		06.6	68	09.4		25.1	44	23.3		44.3	353	51.4		23.1
15	273	58.4	63	01.2		07.7	83	10.4		25.7	59	25.3		44.5	8	53.6		23.1
16	289	00.8	78	00.7		08.8	98	11.4		26.3	74	27.2		44.7	23	55.8		23.1
17	304	03.3	93	00.1	-11	09.9	113	12.4	-3	26.9	89	29.1	-12	44.8	38	58.0	-22	23.1
18	319	05.8	107	59.6	-11	11.0	128	13.4	-3	27.6	104	31.1	-12	45.0	54	00.2	-22	23.2
19	334	08.2	122	59.1		12.1	143	14.4		28.2	119	33.0		45.2	69	02.4		23.2
20	349	10.7	137	58.6		13.3	158	15.5		28.8	134	35.0		45.4	84	04.6		23.2
21	4	13.1	152	58.1		14.4	173	16.5		29.4	149	36.9		45.6	99	06.8		23.2
22	19	15.6	167	57.5		15.5	188	17.5		30.0	164	38.8		45.7	114	09.0		23.2
23	34	18.1	182	57.0		16.6	203	18.5		30.7	179	40.8		45.9	129	11.2		23.2
24	49	20.5	197	56.5	-11	17.7	218	19.5	-3	31.3	194	42.7	-12	46.1	144	13.4	-22	23.2
Dif	—		-5		-11		+10		-6		+19		-2		+22			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 43 ^m 9				Edad: 21 ^d 2 PHE { 4 ^h : 58'9 12 ^h : 58'7 20 ^h : 58'5 PMG: 5 ^h 30 ^m R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	184	01.7	-17	07.7	280	30.1	+17	28.6	60 N	15	41	16	29	17	20	22	18	83
1	199	01.6		08.4	294	56.3		22.7	58	15	52		36		24	28	79	36
2	214	01.5		09.1	309	22.6		16.8	56	16	01		42		27	36	77	27
3	229	01.5		09.8	323	49.0		10.7	54		09		48		30	43	75	20
4	244	01.4		10.5	338	15.4	+17	04.5	52		16		53		33	50	73	13
5	259	01.4	-17	11.2	352	41.9	+16	58.2	50	16	23	16	57	17	36	22	56	71
6	274	01.3	-17	11.9	7	08.5	+16	51.9	45	16	36	17	08	17	43	23	08	68
7	289	01.2		12.6	21	35.2		45.4	40		48		17		49	19	65	42
8	304	01.2		13.3	36	01.9		38.8	35	16	58	25	17	55		28	63	32
9	319	01.1		14.0	50	28.7		32.2	30	17	07	32	18	00		36	60	23
10	334	01.1		14.7	64	55.6		25.4	20		22		45		11	23	49	57
11	349	01.0	-17	15.4	79	22.6	+16	18.6	10 N	17	35	17	57	18	22	**	**	**
12	4	00.9	-17	16.1	93	49.6	+16	11.6	0	17	47	18	09	18	34	**	**	**
13	19	00.9		16.8	108	16.8	+16	04.6	10 S	18	00	22	18	48		**	**	**
14	34	00.8		17.5	122	44.0	+15	57.5	20		14	37	19	05		**	**	**
15	49	00.7		18.2	137	11.2		50.3	30	30	18	55		26	0	01	47	11
16	64	00.7		18.9	151	38.6		43.0	35	39	19	07		40	10	45		10
17	79	00.6	-17	19.6	166	06.0	+15	35.6	40	18	49	19	20	19	57	0	21	43
18	94	00.5	-17	20.3	180	33.5	+15	28.1	45	19	02	19	35	20	17	0	33	41
19	109	00.5		21.0	195	01.1		20.6	50	17	19	56	20	45		49	37	18
20	124	00.4		21.6	209	28.7		12.9	52	25	20	05	21	00	0	56	36	11
21	139	00.3		22.3	223	56.5	+15	05.2	54	33		16		17	1	04	34	10
22	154	00.3		23.0	238	24.3	+14	57.4	56	42	29	21	38		12	33		9
23	169	00.2		23.7	252	52.1		49.5	58	19	52	20	44	22	07	22	31	46
24	184	00.1	-17	24.4	267	20.1	+14	41.6	60 S	20	04	21	02	22	56	1	34	28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 39 ^m 2		Mag: -3.9 PMG: 10 ^h 49 ^m		Mag: +1.8 PMG: 9 ^h 26 ^m		Mag: -1.7 PMG: 11 ^h 00 ^m		Mag: +0.5 PMG: 14 ^h 21 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	49	20.5	197	56.5	-11	17.7	218	19.5	-3	31.3
1	64	23.0	212	56.0		18.8	233	20.5		31.9
2	79	25.5	227	55.4		19.9	248	21.5		32.5
3	94	27.9	242	54.9		21.0	263	22.5		33.1
4	109	30.4	257	54.4		22.1	278	23.5		33.8
5	124	32.9	272	53.9	-11	23.3	293	24.6	-3	34.4
6	139	35.3	287	53.4	-11	24.4	308	25.6	-3	35.0
7	154	37.8	302	52.8		25.5	323	26.6		35.6
8	169	40.3	317	52.3		26.6	338	27.6		36.3
9	184	42.7	332	51.8		27.7	353	28.6		36.9
10	199	45.2	347	51.3		28.8	8	29.6		37.5
11	214	47.6	2	50.7	-11	29.9	23	30.6	-3	38.1
12	229	50.1	17	50.2	-11	31.0	38	31.6	-3	38.7
13	244	52.6	32	49.7		32.1	53	32.7		39.4
14	259	55.0	47	49.1		33.2	68	33.7		40.0
15	274	57.5	62	48.6		34.3	83	34.7		40.6
16	290	00.0	77	48.1		35.4	98	35.7		41.2
17	305	02.4	92	47.6	-11	36.5	113	36.7	-3	41.8
18	320	04.9	107	47.0	-11	37.6	128	37.7	-3	42.5
19	335	07.4	122	46.5		38.7	143	38.7		43.1
20	350	09.8	137	46.0		39.8	158	39.7		43.7
21	5	12.3	152	45.4		40.9	173	40.7		44.3
22	20	14.8	167	44.9		42.0	188	41.8		44.9
23	35	17.2	182	44.4		43.1	203	42.8		45.6
24	50	19.7	197	43.8	-11	44.2	218	43.8	-3	46.2
Dif	—		-5		-11		+10		-6	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 44 ^m 0				Edad: 22 ^d 2 PHE { 4 ^h : 58/2 12 ^h : 58/0 20 ^h : 57/8 PMG: 6 ^h 24 ^m R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	00.1	-17	24.4	267	20.1	+14	41.6	60 N	6 09	7 00	7 48	23 41	81	14 11	19				
1	199	00.1		25.1	281	48.1		33.6	58	05	6 53	38	47	79	14 04	22				
2	214	00.0		25.8	296	16.2		25.5	56	6 02	47	28	53	76	13 57	24				
3	228	59.9		26.5	310	44.4		17.3	54	5 58	41	20	23 58	74	51	26				
4	243	59.9		27.2	325	12.7		09.0	52	55	36	13	** ** *	**	46	28				
5	258	59.8	-17	27.9	339	41.0	+14	00.7	50	5 52	6 31	7 06	** ** *	**	13 41	30				
6	273	59.7	-17	28.5	354	09.4	+13	52.3	45	5 46	6 21	6 52	** ** *	**	13 31	33				
7	288	59.6		29.2	8	37.9		43.8	40	39	12	41	** ** *	**	22	36				
8	303	59.6		29.9	23	06.4		35.3	35	34	6 04	31	** ** *	**	14	39				
9	318	59.5		30.6	37	35.1		26.7	30	28	5 57	22	** ** *	**	13 08	40				
10	333	59.4		31.3	52	03.7		18.0	20	17	44	6 07	** ** *	**	12 56	44				
11	348	59.4	-17	32.0	66	32.5	+13	09.3	10 N	5 06	5 31	5 53	0 01	54	12 46	47				
12	3	59.3	-17	32.7	81	01.4	+13	00.4	0	4 54	5 19	5 41	0 12	51	12 37	50				
13	18	59.2		33.3	95	30.3	+12	51.6	10 S	40	5 06	28	23	48	27	53				
14	33	59.1		34.0	109	59.3		42.6	20	23	4 51	5 14	34	46	17	56				
15	48	59.1		34.7	124	28.3		33.7	30	4 01	32	4 58	48	42	12 05	60				
16	63	59.0		35.4	138	57.4		24.6	35	3 48	21	49	0 55	40	11 58	62				
17	78	58.9	-17	36.1	153	26.6	+12	15.5	40	3 31	4 08	4 38	1 04	38	11 50	65				
18	93	58.8	-17	36.8	167	55.9	+12	06.3	45	3 10	3 52	4 25	1 14	35	11 41	67				
19	108	58.8		37.4	182	25.2	+11	57.1	50	2 42	32	10	26	32	30	71				
20	123	58.7		38.1	196	54.6		47.8	52	28	22	4 03	32	30	24	73				
21	138	58.6		38.8	211	24.1		38.5	54	2 10	3 11	3 55	38	29	19	75				
22	153	58.5		39.5	225	53.6		29.1	56	1 49	2 58	46	45	27	12	77				
23	168	58.5		40.2	240	23.2		19.6	58	1 20	43	36	1 53	24	11 05	80				
24	183	58.4	-17	40.8	254	52.9	+11	10.1	60 S	0 31	2 25	3 24	2 02	22	10 57	82				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 35 ^m 3				Mag: -3.9 PMG: 10 ^h 49 ^m				Mag: +1.8 PMG: 9 ^h 24 ^m				Mag: -1.7 PMG: 10 ^h 57 ^m				Mag: +0.5 PMG: 14 ^h 18 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	50	19.7	197	43.8	-11	44.2	218	43.8	-3	46.2	195	29.3	-12	50.3	145	05.9	-22	23.6		
1	65	22.1	212	43.3		45.3	233	44.8		46.8	210	31.2		50.5	160	08.1		23.6		
2	80	24.6	227	42.8		46.4	248	45.8		47.4	225	33.2		50.7	175	10.3		23.6		
3	95	27.1	242	42.2		47.5	263	46.8		48.0	240	35.1		50.9	190	12.5		23.6		
4	110	29.5	257	41.7		48.6	278	47.8		48.7	255	37.0		51.0	205	14.7		23.6		
5	125	32.0	272	41.2	-11	49.7	293	48.8	-3	49.3	270	39.0	-12	51.2	220	16.8	-22	23.6		
6	140	34.5	287	40.6	-11	50.8	308	49.8	-3	49.9	285	40.9	-12	51.4	235	19.0	-22	23.6		
7	155	36.9	302	40.1		51.9	323	50.9		50.5	300	42.9		51.6	250	21.2		23.7		
8	170	39.4	317	39.6		53.0	338	51.9		51.1	315	44.8		51.7	265	23.4		23.7		
9	185	41.9	332	39.0		54.1	353	52.9		51.8	330	46.7		51.9	280	25.6		23.7		
10	200	44.3	347	38.5		55.2	8	53.9		52.4	345	48.7		52.1	295	27.8		23.7		
11	215	46.8	2	38.0	-11	56.3	23	54.9	-3	53.0	0	50.6	-12	52.3	310	30.0	-22	23.7		
12	230	49.3	17	37.4	-11	57.4	38	55.9	-3	53.6	15	52.6	-12	52.5	325	32.2	-22	23.7		
13	245	51.7	32	36.9		58.5	53	56.9		54.2	30	54.5		52.6	340	34.3		23.7		
14	260	54.2	47	36.4	-11	59.6	68	57.9		54.9	45	56.4		52.8	355	36.5		23.8		
15	275	56.6	62	35.8	-12	00.7	83	58.9		55.5	60	58.4		53.0	10	38.7		23.8		
16	290	59.1	77	35.3		01.8	99	00.0		56.1	76	00.3		53.2	25	40.9		23.8		
17	306	01.6	92	34.7	-12	02.9	114	01.0	-3	56.7	91	02.3	-12	53.3	40	43.1	-22	23.8		
18	321	04.0	107	34.2	-12	04.0	129	02.0	-3	57.3	106	04.2	-12	53.5	55	45.3	-22	23.8		
19	336	06.5	122	33.7		05.1	144	03.0		58.0	121	06.2		53.7	70	47.5		23.8		
20	351	09.0	137	33.1		06.1	159	04.0		58.6	136	08.1		53.9	85	49.7		23.8		
21	6	11.4	152	32.6		07.2	174	05.0		59.2	151	10.0		54.0	100	51.8		23.8		
22	21	13.9	167	32.0		08.3	189	06.0	-3	59.8	166	12.0		54.2	115	54.0		23.9		
23	36	16.4	182	31.5		09.4	204	07.0	-4	00.4	181	13.9		54.4	130	56.2		23.9		
24	51	18.8	197	31.0	-12	10.5	219	08.0	-4	01.0	196	15.9	-12	54.6	145	58.4	-22	23.9		
Dif	—		-5		-11		+10		-6		+19		-2		+22					

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2		Edad: 23 ^d 2 PHE { 4 ^h : 57°6 12 ^h : 57°4 20 ^h : 57°2											
	PMG: 11 ^h 44 ^m 2		SD: 15°7 PMG: 7 ^h 15 ^m R°: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	183	58.4	-17	40.8	254	52.9	+11 10.1	60 N	15 37	16 25	17 16	** ** *	14 30	17
1	198	58.3		41.5	269	22.6 ¹⁰⁷	+11 00.6	58	48	32	20	** ** *	26	18
2	213	58.2		42.2	283	52.4 ¹⁰⁸	+10 51.0	56	15 57	39	24	** ** *	21	21
3	228	58.1		42.9	298	22.3 ¹⁰⁹		54	16 05	45	28	** ** *	17	22
4	243	58.1		43.5	312	52.2 ¹⁰⁹		52	13	50	31		0 03	72
5	258	58.0	-17	44.2	327	22.2 ¹¹⁰	+10 21.9	50	16 20	16 55	17 34	0 07	71	14 11 26
6	273	57.9	-17	44.9	341	52.3 ¹¹¹	+10 12.1	45	16 34	17 06	17 41	0 16	67	14 04 29
7	288	57.8		45.6	356	22.4 ¹¹¹	+10 02.3	40	46	15	48	24	64	13 58 32
8	303	57.7		46.2	10	52.6 ¹¹²	+9 52.4	35	16 56	23	54	31	61	53 35
9	318	57.7		46.9	25	22.8 ¹¹²		30	17 05	31	17 59	36	59	48 37
10	333	57.6		47.6	39	53.1 ¹¹³		20	21	44	18 11	46	56	40 41
11	348	57.5	-17	48.3	54	23.5 ¹¹⁴	+9 22.5	10 N	17 35	17 57	18 22	0 55	52	13 33 45
12	3	57.4	-17	48.9	68	53.9 ¹¹⁴	+9 12.5	0	17 48	18 09	18 35	1 03	49	13 27 57
13	18	57.3		49.6	83	24.4 ¹¹⁵	+9 02.4	10 S	18 01	23	18 49	11	46	20 41
14	33	57.3		50.3	97	54.9 ¹¹⁵	+8 52.3	20	15	38	19 06	20	42	13 54
15	48	57.2		50.9	112	25.5 ¹¹⁶		30	31	18 57	28	30	38	05 58
16	63	57.1		51.6	126	56.1 ¹¹⁶		35	41	19 09	42	35	37	13 00 61
17	78	57.0	-17	52.3	141	26.8 ¹¹⁷	+8 21.7	40	18 52	19 22	19 59	1 42	34	12 55 63
18	93	56.9	-17	52.9	155	57.6 ¹¹⁸	+8 11.5	45	19 05	19 39	20 21	1 49	31	12 48 67
19	108	56.8		53.6	170	28.4 ¹¹⁸	+8 01.2	50	21	19 59	20 50	1 58	28	41 70
20	123	56.7		54.3	184	59.3 ¹¹⁹	+7 50.9	52	28	20 09	21 05	2 02	26	37 72
21	138	56.7		54.9	199	30.2 ¹¹⁹		54	37	21	23	07	24	34 73
22	153	56.6		55.6	214	01.2 ¹²⁰		56	46	34	21 46	12	22	29 76
23	168	56.5		56.3	228	32.2 ¹²⁰		58	19 57	20 50	22 18	17	20	25 78
24	183	56.4	-17	56.9	243	03.3 ¹²¹	+7 09.3	60 S	20 09	21 09	** **	2 24	17	12 19 81
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 31 ^m 4		Mag: -3.9 PMG: 10 ^h 50 ^m			Mag: +1.8 PMG: 9 ^h 23 ^m			Mag: -1.7 PMG: 10 ^h 54 ^m			Mag: +0.5 PMG: 14 ^h 14 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	51	18.8	197	31.0	-12	10.5	219	08.0	-4	01.0	196	15.9	-12	54.6
1	66	21.3	212	30.4		11.6	234	09.1		01.7	211	17.8		54.7
2	81	23.7	227	29.9		12.7	249	10.1		02.3	226	19.7		54.9
3	96	26.2	242	29.3		13.8	264	11.1		02.9	241	21.7		55.1
4	111	28.7	257	28.8		14.8	279	12.1		03.5	256	23.6		55.3
5	126	31.1	272	28.2	-12	15.9	294	13.1	-4	04.1	271	25.6	-12	55.4
6	141	33.6	287	27.7	-12	17.0	309	14.1	-4	04.8	286	27.5	-12	55.6
7	156	36.1	302	27.1		18.1	324	15.1		05.4	301	29.4		55.8
8	171	38.5	317	26.6		19.2	339	16.1		06.0	316	31.4		56.0
9	186	41.0	332	26.1		20.3	354	17.1		06.6	331	33.3		56.1
10	201	43.5	347	25.5		21.4	9	18.1		07.2	346	35.3		56.3
11	216	45.9	2	25.0	-12	22.4	24	19.2	-4	07.9	1	37.2	-12	56.5
12	231	48.4	17	24.4	-12	23.5	39	20.2	-4	08.5	16	39.1	-12	56.7
13	246	50.9	32	23.9		24.6	54	21.2		09.1	31	41.1		56.8
14	261	53.3	47	23.3		25.7	69	22.2		09.7	46	43.0		57.0
15	276	55.8	62	22.8		26.8	84	23.2		10.3	61	45.0		57.2
16	291	58.2	77	22.2		27.8	99	24.2		10.9	76	46.9		57.4
17	307	00.7	92	21.7	-12	28.9	114	25.2	-4	11.6	91	48.8	-12	57.5
18	322	03.2	107	21.1	-12	30.0	129	26.2	-4	12.2	106	50.8	-12	57.7
19	337	05.6	122	20.6		31.1	144	27.2		12.8	121	52.7		57.9
20	352	08.1	137	20.0		32.2	159	28.2		13.4	136	54.7		58.1
21	7	10.6	152	19.5		33.2	174	29.3		14.0	151	56.6		58.2
22	22	13.0	167	18.9		34.3	189	30.3		14.6	166	58.6		58.4
23	37	15.5	182	18.4		35.4	204	31.3		15.3	182	00.5		58.6
24	52	18.0	197	17.8	-12	36.5	219	32.3	-4	15.9	197	02.4	-12	58.8
Dif	—		-5		-11		+10		-6		+19		-2	
													+22	
														0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2			Edad: 24 ^d 2	PHE { 4 ^h : 57'0 12 ^h : 56'8 20 ^h : 56'6	R ^o : 47 ^m		Náutico			Civil		Hora		R ^o		
	PMG: 11 ^h 44 ^m 3																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	m	
0	183	56.4	-17 56.9	243	03.3	+7 09.3		60 N	6 13	7 05	7 53	1 02	79	14 47	14		
1	198	56.3		257	34.4 ¹²¹	+6 58.8 ¹⁰⁵		58	09	6 57	42	06	77	44	17		
2	213	56.2		272	05.6 ¹²²	48.4 ¹⁰⁴		56	05	51	33	09	75	42	19		
3	228	56.1		286	36.8 ¹²²	37.8 ¹⁰⁶		54	6 02	45	24	12	73	40	21		
4	243	56.1	-17 59.6	301	08.1 ¹²³	27.3 ¹⁰⁵		52	5 58	39	17	15	71	38	23		
5	258	56.0	-18 00.3	315	39.4 ¹²³	+6 16.7 ¹⁰⁶		50	5 55	6 34	7 10	1 18	69	14 37	24		
6	273	55.9	-18 00.9	330	10.7 ¹²³	+6 06.2 ¹⁰⁵		45	5 48	6 23	6 55	1 23	66	14 33	28		
7	288	55.8	01.6	344	42.2 ¹²⁵	+5 55.6 ¹⁰⁶		40	41	14	43	28	62	30	31		
8	303	55.7	02.2	359	13.6 ¹²⁴	44.9 ¹⁰⁷		35	35	6 06	33	32	60	28	33		
9	318	55.6	02.9	13	45.1 ¹²⁵	34.3 ¹⁰⁶		30	29	5 58	23	35	58	25	36		
10	333	55.5	03.6	28	16.7 ¹²⁶	23.6 ¹⁰⁷		20	18	45	6 08	42	53	21	40		
11	348	55.4	-18 04.2	42	48.2 ¹²⁵	+5 12.9 ¹⁰⁷		10 N	5 06	5 32	5 54	1 47	50	14 18	43		
12	3	55.3	-18 04.9	57	19.9 ¹²⁷	+5 02.2 ¹⁰⁷		0	4 54	5 19	5 41	1 52	47	14 14	46		
13	18	55.2	05.5	71	51.5 ¹²⁶	+4 51.5 ¹⁰⁷		10 S	39	5 05	28	1 57	43	11	49		
14	33	55.2	06.2	86	23.2 ¹²⁷	40.8 ¹⁰⁷		20	22	4 50	5 13	2 02	40	07	53		
15	48	55.1	06.8	100	55.0 ¹²⁸	30.1 ¹⁰⁷		30	4 00	31	4 57	08	36	03	57		
16	63	55.0	07.5	115	26.8 ¹²⁸	19.3 ¹⁰⁸		35	3 46	19	47	12	34	14	01	59	
17	78	54.9	-18 08.2	129	58.6 ¹²⁸	+4 08.5 ¹⁰⁸		40	3 29	4 06	4 36	2 16	31	13	58	62	
18	93	54.8	-18 08.8	144	30.5 ¹²⁹	+3 57.8 ¹⁰⁷		45	3 07	3 49	4 23	2 20	29	13	55	65	
19	108	54.7	09.5	159	02.4 ¹²⁹	47.0 ¹⁰⁸		50	2 38	29	07	26	24	51	68		
20	123	54.6	10.1	173	34.3 ¹²⁹	36.2 ¹⁰⁸		52	23	18	4 00	28	23	49	70		
21	138	54.5	10.8	188	06.3 ¹³⁰	25.4 ¹⁰⁸		54	2 05	3 07	3 51	31	21	47	72		
22	153	54.4	11.4	202	38.3 ¹³⁰	14.5 ¹⁰⁹		56	1 42	2 54	42	34	19	45	74		
23	168	54.3	12.1	217	10.3 ¹³⁰	+3 03.7 ¹⁰⁸		58	1 10	38	31	37	18	43	76		
24	183	54.2	-18 12.7	231	42.4 ¹³¹	+2 52.9 ¹⁰⁸		60 S	** **	2 19	3 19	2 41	15	13	40	79	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 27 ^m 4		Mag: -3.9 PMG: 10 ^h 51 ^m			Mag: +1.8 PMG: 9 ^h 21 ^m			Mag: -1.7 PMG: 10 ^h 50 ^m			Mag: +0.5 PMG: 14 ^h 11 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	52	18.0	197	17.8	-12 36.5	219	32.3	-4 15.9	197	02.4	-12 58.8	146	50.8	-22 24.2
1	67	20.4	212	17.3	37.5	234	33.3	16.5	212	04.4	58.9	161	53.0	24.2
2	82	22.9	227	16.7	38.6	249	34.3	17.1	227	06.3	59.1	176	55.2	24.2
3	97	25.3	242	16.2	39.7	264	35.3	17.7	242	08.3	59.3	191	57.4	24.2
4	112	27.8	257	15.6	40.8	279	36.3	18.4	257	10.2	59.5	206	59.6	24.3
5	127	30.3	272	15.0	-12 41.8	294	37.3	-4 19.0	272	12.1	-12 59.6	222	01.8	-22 24.3
6	142	32.7	287	14.5	-12 42.9	309	38.3	-4 19.6	287	14.1	-12 59.8	237	03.9	-22 24.3
7	157	35.2	302	13.9	44.0	324	39.4	20.2	302	16.0	-13 00.0	252	06.1	24.3
8	172	37.7	317	13.4	45.1	339	40.4	20.8	317	18.0	-13 00.2	267	08.3	24.3
9	187	40.1	332	12.8	46.1	354	41.4	21.4	332	19.9	00.3	282	10.5	24.3
10	202	42.6	347	12.3	47.2	9	42.4	22.1	347	21.8	00.5	297	12.7	24.3
11	217	45.1	2	11.7	-12 48.3	24	43.4	-4 22.7	2	23.8	-13 00.7	312	14.9	-22 24.3
12	232	47.5	17	11.1	-12 49.3	39	44.4	-4 23.3	17	25.7	-13 00.9	327	17.1	-22 24.4
13	247	50.0	32	10.6	50.4	54	45.4	23.9	32	27.7	01.0	342	19.2	24.4
14	262	52.5	47	10.0	51.5	69	46.4	24.5	47	29.6	01.2	357	21.4	24.4
15	277	54.9	62	09.5	52.5	84	47.4	25.1	62	31.6	01.4	12	23.6	24.4
16	292	57.4	77	08.9	53.6	99	48.4	25.8	77	33.5	01.6	27	25.8	24.4
17	307	59.8	92	08.4	-12 54.7	114	49.4	-4 26.4	92	35.4	-13 01.7	42	28.0	-22 24.4
18	323	02.3	107	07.8	-12 55.7	129	50.5	-4 27.0	107	37.4	-13 01.9	57	30.1	-22 24.4
19	338	04.8	122	07.2	56.8	144	51.5	27.6	122	39.3	02.1	72	32.3	24.4
20	353	07.2	137	06.7	57.9	159	52.5	28.2	137	41.3	02.3	87	34.5	24.5
21	8	09.7	152	06.1	-12 58.9	174	53.5	28.8	152	43.2	02.4	102	36.7	24.5
22	23	12.2	167	05.5	-13 00.0	189	54.5	29.5	167	45.1	02.6	117	38.9	24.5
23	38	14.6	182	05.0	-13 01.1	204	55.5	30.1	182	47.1	02.8	132	41.1	24.5
24	53	17.1	197	04.4	-13 02.1	219	56.5	-4 30.7	197	49.0	-13 03.0	147	43.2	-22 24.5

Dif	—	-6	-11	+10	-6	+19	-2	+22

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna													
	SD: 16 ^h 2 PMG: 11 ^h 44 ^m 5			Edad: 25 ^d 2 PHE { 4 ^h : 56 ^h 4 12 ^h : 56 ^h 2 20 ^h : 56 ^h 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 m		h m m													
0	183	54.2	-18	12.7	231	42.4	+2	52.9	60 N	15 32	16 21	17 13	2 21 78	15 01 14													
1	198	54.1		13.4	246	14.5 ¹³¹		42.0 ¹⁰⁹	58	44	29	17	23 75	01 17													
2	213	54.0		14.0	260	46.6 ¹³¹		31.2 ¹⁰⁸	56	15 54	36	21	24 73	01 19													
3	228	53.9		14.7	275	18.8 ¹³²		20.3 ¹⁰⁹	54	16 02	42	25	25 71	01 20													
4	243	53.8		15.3	289	51.0 ¹³²	+2	09.5 ¹⁰⁸	52	10	47	28	26 69	01 22													
5	258	53.7	-18	16.0	304	23.2 ¹³²	+1	58.6 ¹⁰⁹	50	16 17	16 53	17 32	2 27 67	15 01 24													
6	273	53.6	-18	16.6	318	55.5 ¹³³	+1	47.8 ¹⁰⁸	45	16 32	17 04	17 39	2 29 64	15 01 27													
7	288	53.5		17.3	333	27.8 ¹³³		36.9 ¹⁰⁹	40	44	13	46	30 61	01 30													
8	303	53.4		17.9	348	00.1 ¹³³		26.1 ¹⁰⁸	35	16 55	22	52	32 58	01 32													
9	318	53.3		18.6	2	32.4 ¹³³		15.2 ¹⁰⁹	30	17 04	30	17 58	33 56	01 34													
10	333	53.2		19.2	17	04.8 ¹³⁴	+1	04.4 ¹⁰⁸	20	20	44	18 10	35 52	01 38													
11	348	53.1	-18	19.9	31	37.2 ¹³⁴	+0	53.5 ¹⁰⁹	10 N	17 35	17 57	18 22	2 37 48	15 01 41													
12	3	53.0	-18	20.5	46	09.6 ¹³⁴	+0	42.7 ¹⁰⁸	0	17 48	18 10	18 35	2 39 45	15 00 46													
13	18	52.9		21.2	60	42.0 ¹³⁴		31.8 ¹⁰⁹	10 S	18 02	24	18 50	40 42	00 49													
14	33	52.8		21.8	75	14.5 ¹³⁵		21.0 ¹⁰⁸	20	16	40	19 08	42 39	00 52													
15	48	52.7		22.5	89	47.0 ¹³⁵	+0	10.2 ¹⁰⁸	30	33	18 59	30	44 35	00 56													
16	63	52.6		23.1	104	19.5 ¹³⁵	-0	00.7 ¹⁰⁹	35	43	19 11	19 45	46 32	00 58													
17	78	52.5	-18	23.7	118	52.0 ¹³⁵	-0	11.5 ¹⁰⁸	40	18 54	19 25	20 02	2 47 30	15 00 60													
18	93	52.4	-18	24.4	133	24.5 ¹³⁵	-0	22.3 ¹⁰⁸	45	19 08	19 42	20 25	2 49 27	15 00 63													
19	108	52.3		25.0	147	57.1 ¹³⁶		33.1 ¹⁰⁸	50	24	20 03	20 55	50 24	14 59 67													
20	123	52.2		25.7	162	29.7 ¹³⁶		43.9 ¹⁰⁸	52	32	14	21 11	51 23	59 69													
21	138	52.1		26.3	177	02.3 ¹³⁶	-0	54.7 ¹⁰⁸	54	40	26	30	52 21	59 71													
22	153	52.0		26.9	191	34.9 ¹³⁶	-1	05.4 ¹⁰⁷	56	19 50	39	21 54	53 19	59 73													
23	168	51.9		27.6	206	07.5 ¹³⁶		16.2 ¹⁰⁸	58	20 01	20 56	22 30	55 16	59 75													
24	183	51.8	-18	28.2	220	40.2 ¹³⁷	-1	26.9 ¹⁰⁷	60 S	20 14	21 16	** **	2 56 14	14 59 77													
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 20 ^h 23 ^m 5			Mag: -3.9 PMG: 10 ^h 52 ^m			Mag: +1.8 PMG: 9 ^h 20 ^m			Mag: -1.7 PMG: 10 ^h 47 ^m			Mag: +0.5 PMG: 14 ^h 07 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	53	17.1	197	04.4	-13	02.1	219	56.5	-4	30.7	197	49.0	-13	03.0	147	43.2	-22	24.5									
1	68	19.6	212	03.9		03.2	234	57.5		31.3	212	51.0		03.1	162	45.4		24.5									
2	83	22.0	227	03.3		04.3	249	58.5		31.9	227	52.9		03.3	177	47.6		24.5									
3	98	24.5	242	02.7		05.3	264	59.5		32.5	242	54.9		03.5	192	49.8		24.5									
4	113	27.0	257	02.2		06.4	280	00.5		33.2	257	56.8		03.7	207	52.0		24.6									
5	128	29.4	272	01.6	-13	07.4	295	01.5	-4	33.8	272	58.7	-13	03.8	222	54.2	-22	24.6									
6	143	31.9	287	01.0	-13	08.5	310	02.6	-4	34.4	288	00.7	-13	04.0	237	56.3	-22	24.6									
7	158	34.3	302	00.5		09.6	325	03.6		35.0	303	02.6		04.2	252	58.5		24.6									
8	173	36.8	316	59.9		10.6	340	04.6		35.6	318	04.6		04.4	268	00.7		24.6									
9	188	39.3	331	59.3		11.7	355	05.6		36.2	333	06.5		04.5	283	02.9		24.6									
10	203	41.7	346	58.8		12.7	10	06.6		36.8	348	08.4		04.7	298	05.1		24.6									
11	218	44.2	1	58.2	-13	13.8	25	07.6	-4	37.5	3	10.4	-13	04.9	313	07.2	-22	24.7									
12	233	46.7	16	57.6	-13	14.9	40	08.6	-4	38.1	18	12.3	-13	05.0	328	09.4	-22	24.7									
13	248	49.1	31	57.0		15.9	55	09.6		38.7	33	14.3		05.2	343	11.6		24.7									
14	263	51.6	46	56.5		17.0	70	10.6		39.3	48	16.2		05.4	358	13.8		24.7									
15	278	54.1	61	55.9		18.0	85	11.6		39.9	63	18.2		05.6	13	16.0		24.7									
16	293	56.5	76	55.3		19.1	100	12.6		40.5	78	20.1		05.7	28	18.1		24.7									
17	308	59.0	91	54.8	-13	20.1	115	13.6	-4	41.2	93	22.0	-13	05.9	43	20.3	-22	24.7									
18	324	01.4	106	54.2	-13	21.2	130	14.7	-4	41.8	108	24.0	-13	06.1	58	22.5	-22	24.7									
19	339	03.9	121	53.6		22.2	145	15.7		42.4	123	25.9		06.3	73	24.7		24.8									
20	354	06.4	136	53.1		23.3	160	16.7		43.0	138	27.9		06.4	88	26.9		24.8									
21	9	08.8	151	52.5		24.3	175	17.7		43.6	153	29.8		06.6	103	29.1		24.8									
22	24	11.3	166	51.9		25.4	190	18.7		44.2	168	31.7		06.8	118	31.2		24.8									
23	39	13.8	181	51.3		26.4	205	19.7		44.8	183	33.7		07.0	133	33.4		24.8									
24	54	16.2	196	50.8	-13	27.5	220	20.7	-4	45.5	198	35.6	-13	07.1	148	35.6	-22	24.8									
Dif	—			-6			-11			+10			-6			+19			-2			+22			0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 26 ^d 2	PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5										
	PMG: 11 ^h 44 ^m 6														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	'	'	'	h	m	h	m		h	m	m
0	183	51.8	-18	28.2	220	40.2	-1	26.9	60 N	6 17	7 09	7 58	3 39	77	15 15 15
1	198	51.7		28.9	235	12.8 ¹³⁶		37.7 ¹⁰⁸	58	13	7 01	47	38	74	18 17
2	213	51.6		29.5	249	45.5 ¹³⁷		48.4 ¹⁰⁷	56	09	6 54	37	37	72	20 19
3	228	51.5		30.1	264	18.2 ¹³⁷		-1 59.1 ¹⁰⁷	54	05	48	28	36	70	21 22
4	243	51.4		30.8	278	50.9 ¹³⁷		-2 09.8 ¹⁰⁷	52	6 01	43	20	35	68	23 23
5	258	51.3	-18	31.4	293	23.6 ¹³⁷		-2 20.5 ¹⁰⁷	50	5 58	6 37	7 13	3 34	67	15 25 24
6	273	51.2	-18	32.0	307	56.4 ¹³⁸		-2 31.1 ¹⁰⁶	45	5 50	6 26	6 58	3 33	63	15 28 28
7	288	51.1		32.7	322	29.1 ¹³⁷		41.8 ¹⁰⁷	40	43	16	45	31	60	31 30
8	303	51.0		33.3	337	01.9 ¹³⁸		-2 52.4 ¹⁰⁶	35	37	08	35	30	58	33 33
9	318	50.9		33.9	351	34.6 ¹³⁷		-3 03.0 ¹⁰⁶	30	31	6 00	25	29	55	35 35
10	333	50.8		34.6	6	07.4 ¹³⁸		13.6 ¹⁰⁶	20	19	5 46	6 09	27	51	39 39
11	348	50.6	-18	35.2	20	40.2 ¹³⁸		-3 24.1 ¹⁰⁵	10 N	5 07	5 32	5 55	3 25	48	15 42 42
12	3	50.5	-18	35.8	35	13.0 ¹³⁸		-3 34.7 ¹⁰⁶	0	4 54	5 19	5 41	3 24	45	15 46 44
13	18	50.4		36.5	49	45.8 ¹³⁸		45.2 ¹⁰⁵	10 S	39	5 05	27	22	42	49 48
14	33	50.3		37.1	64	18.6 ¹³⁸		-3 55.7 ¹⁰⁵	20	4 21	4 49	5 13	21	38	52 51
15	48	50.2		37.7	78	51.4 ¹³⁸		-4 06.1 ¹⁰⁴	30	3 58	30	4 56	19	35	56 55
16	63	50.1		38.4	93	24.2 ¹³⁸		16.6 ¹⁰⁵	35	44	18	46	18	33	15 58 57
17	78	50.0	-18	39.0	107	57.0 ¹³⁸		-4 27.0 ¹⁰⁴	40	3 26	4 04	4 34	3 17	30	16 00 60
18	93	49.9	-18	39.6	122	29.8 ¹³⁸		-4 37.4 ¹⁰⁴	45	3 04	3 47	4 21	3 16	27	16 03 63
19	108	49.8		40.2	137	02.6 ¹³⁸		47.8 ¹⁰⁴	50	2 34	25	4 04	14	24	06 66
20	123	49.6		40.9	151	35.5 ¹³⁹		-4 58.1 ¹⁰³	52	2 18	15	3 57	14	22	08 68
21	138	49.5		41.5	166	08.3 ¹³⁸		-5 08.4 ¹⁰³	54	1 59	3 03	48	13	20	10 69
22	153	49.4		42.1	180	41.1 ¹³⁸		18.7 ¹⁰³	56	1 34	2 49	38	12	19	12 71
23	168	49.3		42.7	195	14.0 ¹³⁹		28.9 ¹⁰²	58	0 58	32	27	11	17	14 73
24	183	49.2	-18	43.4	209	46.8 ¹³⁸		-5 39.2 ¹⁰³	60 S	** **	2 12	3 14	3 10	14	16 16 76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 19 ^m 6		Mag: -3.9 PMG: 10 ^h 53 ^m		Mag: +1.8 PMG: 9 ^h 18 ^m		Mag: -1.7 PMG: 10 ^h 44 ^m		Mag: +0.5 PMG: 14 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	54	16.2	196	50.8	-13	27.5	220	20.7	-4	45.5	198	35.6	-13	07.1	148	35.6	-22	24.8
1	69	18.7	211	50.2		28.5	235	21.7		46.1	213	37.6		07.3	163	37.8		24.8
2	84	21.2	226	49.6		29.6	250	22.7		46.7	228	39.5		07.5	178	40.0		24.8
3	99	23.6	241	49.0		30.6	265	23.7		47.3	243	41.5		07.6	193	42.1		24.9
4	114	26.1	256	48.5		31.7	280	24.7		47.9	258	43.4		07.8	208	44.3		24.9
5	129	28.6	271	47.9	-13	32.7	295	25.7	-4	48.5	273	45.3	-13	08.0	223	46.5	-22	24.9
6	144	31.0	286	47.3	-13	33.8	310	26.7	-4	49.1	288	47.3	-13	08.2	238	48.7	-22	24.9
7	159	33.5	301	46.7		34.8	325	27.8		49.8	303	49.2		08.3	253	50.9		24.9
8	174	35.9	316	46.1		35.9	340	28.8		50.4	318	51.2		08.5	268	53.0		24.9
9	189	38.4	331	45.6		36.9	355	29.8		51.0	333	53.1		08.7	283	55.2		24.9
10	204	40.9	346	45.0		38.0	10	30.8		51.6	348	55.1		08.9	298	57.4		24.9
11	219	43.3	1	44.4	-13	39.0	25	31.8	-4	52.2	3	57.0	-13	09.0	313	59.6	-22	25.0
12	234	45.8	16	43.8	-13	40.0	40	32.8	-4	52.8	18	58.9	-13	09.2	329	01.8	-22	25.0
13	249	48.3	31	43.2		41.1	55	33.8		53.4	34	00.9		09.4	344	03.9		25.0
14	264	50.7	46	42.7		42.1	70	34.8		54.1	49	02.8		09.6	359	06.1		25.0
15	279	53.2	61	42.1		43.2	85	35.8		54.7	64	04.8		09.7	14	08.3		25.0
16	294	55.7	76	41.5		44.2	100	36.8		55.3	79	06.7		09.9	29	10.5		25.0
17	309	58.1	91	40.9	-13	45.3	115	37.8	-4	55.9	94	08.7	-13	10.1	44	12.6	-22	25.0
18	325	00.6	106	40.3	-13	46.3	130	38.8	-4	56.5	109	10.6	-13	10.2	59	14.8	-22	25.0
19	340	03.0	121	39.8		47.3	145	39.8		57.1	124	12.5		10.4	74	17.0		25.1
20	355	05.5	136	39.2		48.4	160	40.8		57.7	139	14.5		10.6	89	19.2		25.1
21	10	08.0	151	38.6		49.4	175	41.9		58.4	154	16.4		10.8	104	21.4		25.1
22	25	10.4	166	38.0		50.4	190	42.9		59.0	169	18.4		10.9	119	23.5		25.1
23	40	12.9	181	37.4		51.5	205	43.9	-4	59.6	184	20.3		11.1	134	25.7		25.1
24	55	15.4	196	36.8	-13	52.5	220	44.9	-5	00.2	199	22.3	-13	11.3	149	27.9	-22	25.1
Dif	—		-6		-10		+10		-6		+19		-2		+22			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2		Edad: 27 ^d 2 PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'1 R°: 45 ^m												
	PMG: 11 ^h 44 ^m 8														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m		h m m		
0	183 49.2	-18 43.4	209 46.8		-5 39.2		60 N	15 28	16 18	17 10	4 56 75		15 30 17		
1	198 49.1		224 19.7 ¹³⁹		49.4 ¹⁰²		58	40	26	14	52 73		35 19		
2	213 49.0		238 52.5 ¹³⁸		-5 59.5 ¹⁰¹		56	50	33	19	49 71		39 21		
3	228 48.9		253 25.3 ¹³⁸		-6 09.7 ¹⁰²		54	15 59	39	22	46 69		43 22		
4	243 48.7		267 58.2 ¹³⁹		19.7 ¹⁰⁰		52	16 07	45	26	43 67		46 24		
5	258 48.6	-18 46.5	282 31.0 ¹³⁸		-6 29.8 ¹⁰¹		50	16 15	16 50	17 30	4 41 65		15 49 26		
6	273 48.5	-18 47.1	297 03.8 ¹³⁸		-6 39.8 ¹⁰⁰		45	16 30	17 02	17 38	4 36 62		15 56 29		
7	288 48.4		311 36.7 ¹³⁹		49.8 ¹⁰⁰		40	43	12	45	31 59		16 01 32		
8	303 48.3		326 09.5 ¹³⁸		-6 59.8 ¹⁰⁰		35	16 54	21	51	28 56		06 34		
9	318 48.2		340 42.3 ¹³⁸		-7 09.7 ⁹⁹		30	17 03	29	17 58	24 55		10 36		
10	333 48.0		355 15.1 ¹³⁸		19.6 ⁹⁹		20	20	43	18 10	18 51		18 39		
11	348 47.9	-18 50.2	9 47.9 ¹³⁸		-7 29.5 ⁹⁹		10 N	17 35	17 57	18 22	4 13 48		16 24 43		
12	3 47.8	-18 50.8	24 20.8 ¹³⁹		-7 39.3 ⁹⁸		0	17 48	18 10	18 36	4 09 45		16 30 46		
13	18 47.7		38 53.6 ¹³⁸		49.0 ⁹⁷		10 S	18 02	25	18 51	4 04 42		37 47		
14	33 47.6		53 26.3 ¹³⁷		-7 58.8 ⁹⁸		20	17	18 41	19 09	3 59 39		43 51		
15	48 47.5		67 59.1 ¹³⁸		-8 08.5 ⁹⁷		30	35	19 01	32	54 35		51 54		
16	63 47.3		82 31.9 ¹³⁸		18.1 ⁹⁶		35	45	13	19 47	51 33		16 55 56		
17	78 47.2	-18 53.9	97 04.7 ¹³⁸		-8 27.7 ⁹⁶		40	18 57	19 27	20 05	3 47 31		17 00 59		
18	93 47.1	-18 54.5	111 37.5 ¹³⁸		-8 37.3 ⁹⁶		45	19 10	19 45	20 28	3 43 28		17 06 61		
19	108 47.0		126 10.2 ¹³⁷		46.8 ⁹⁵		50	27	20 07	21 00	38 25		12 65		
20	123 46.9		140 43.0 ¹³⁸		-8 56.3 ⁹⁵		52	35	18	16	36 23		16 66		
21	138 46.7		155 15.7 ¹³⁷		-9 05.7 ⁹⁴		54	44	30	21 36	33 22		19 68		
22	153 46.6		169 48.4 ¹³⁷		15.1 ⁹⁴		56	19 55	20 45	22 03	31 20		23 70		
23	168 46.5		184 21.2 ¹³⁸		24.5 ⁹⁴		58	20 06	21 02	22 44	28 18		27 72		
24	183 46.4	-18 58.2	198 53.9 ¹³⁷		-9 33.8 ⁹³		60 S	20 20	21 23	** **	3 24 16		17 32 75		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 15 ^m 6		Mag: -3.9 PMG: 10 ^h 54 ^m			Mag: +1.7 PMG: 9 ^h 16 ^m			Mag: -1.7 PMG: 10 ^h 41 ^m			Mag: +0.5 PMG: 14 ^h 00 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	55 15.4	196 36.8	-13 52.5	220 44.9	-5 00.2	199 22.3	-13 11.3	149 27.9	-22 25.1						
1	70 17.8	211 36.2		235 45.9		214 24.2		164 30.1		25.1					
2	85 20.3	226 35.7		250 46.9		229 26.1		179 32.3		25.1					
3	100 22.8	241 35.1		265 47.9		244 28.1		194 34.4		25.2					
4	115 25.2	256 34.5		280 48.9		259 30.0		209 36.6		25.2					
5	130 27.7	271 33.9	-13 57.7	295 49.9	-5 03.3	274 32.0	-13 12.1	224 38.8	-22 25.2						
6	145 30.2	286 33.3	-13 58.7	310 50.9	-5 03.9	289 33.9	-13 12.3	239 41.0	-22 25.2						
7	160 32.6	301 32.7	-13 59.8	325 51.9		304 35.9		254 43.1		25.2					
8	175 35.1	316 32.1	-14 00.8	340 52.9		319 37.8		269 45.3		25.2					
9	190 37.5	331 31.5		355 53.9		334 39.7		284 47.5		25.2					
10	205 40.0	346 30.9		10 54.9		349 41.7		299 49.7		25.2					
11	220 42.5	1 30.4	-14 03.9	25 55.9	-5 06.9	4 43.6	-13 13.2	314 51.9	-22 25.3						
12	235 44.9	16 29.8	-14 04.9	40 57.0	-5 07.5	19 45.6	-13 13.3	329 54.0	-22 25.3						
13	250 47.4	31 29.2		55 58.0		34 47.5		344 56.2		25.3					
14	265 49.9	46 28.6		70 59.0		49 49.5		359 58.4		25.3					
15	280 52.3	61 28.0		86 00.0		64 51.4		15 00.6		25.3					
16	295 54.8	76 27.4		101 01.0		79 53.3		30 02.7		25.3					
17	310 57.3	91 26.8	-14 10.0	116 02.0	-5 10.6	94 55.3	-13 14.2	45 04.9	-22 25.3						
18	325 59.7	106 26.2	-14 11.1	131 03.0	-5 11.2	109 57.2	-13 14.4	60 07.1	-22 25.3						
19	341 02.2	121 25.6		146 04.0		124 59.2		75 09.3		25.3					
20	356 04.7	136 25.0		161 05.0		140 01.1		90 11.5		25.4					
21	11 07.1	151 24.4		176 06.0		155 03.1		105 13.6		25.4					
22	26 09.6	166 23.8		191 07.0		170 05.0		120 15.8		25.4					
23	41 12.0	181 23.2		206 08.0		185 06.9		135 18.0		25.4					
24	56 14.5	196 22.6	-14 17.2	221 09.0	-5 14.9	200 08.9	-13 15.4	150 20.2	-22 25.4						
Dif	—	-6	-10	+10	-6	+19	-2	+22	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 28 ^d 2	PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'7										
	PMG: 11 ^h 45 ^m 0														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	183	46.4	-18 58.2	198	53.9	-9 33.8	92	6 21	7 13	8 03	6 11	74	15 47	19	
1	198	46.2	58.8	213	26.6 ¹³⁷	43.0	92	16	7 05	7 51	05	71	15 54	22	
2	213	46.1	-18 59.4	227	59.3 ¹³⁷	-9 52.2	92	12	6 58	41	6 00	69	16 00	24	
3	228	46.0	-19 00.0	242	31.9 ¹³⁶	-10 01.4	92	08	52	32	5 55	67	05	26	
4	243	45.9	-19 00.6	257	04.6 ¹³⁷	10.5	91	04	46	24	50	66	10	28	
5	258	45.8	-19 01.2	271	37.2 ¹³⁶	-10 19.5	90	6 01	6 40	7 16	5 46	64	16 15	29	
6	273	45.6	-19 01.9	286	09.9 ¹³⁷	-10 28.5	90	5 53	6 28	7 00	5 38	60	16 25	31	
7	288	45.5	02.5	300	42.5 ¹³⁶	37.5	90	45	18	6 47	30	59	33	34	
8	303	45.4	03.1	315	15.1 ¹³⁶	46.4	89	39	09	36	24	56	40	36	
9	318	45.3	03.7	329	47.7 ¹³⁶	-10 55.3	89	32	6 01	27	19	54	46	38	
10	333	45.1	04.3	344	20.3 ¹³⁶	-11 04.1	88	20	5 47	6 10	09	51	16 57	41	
11	348	45.0	-19 04.9	358	52.9 ¹³⁶	-11 12.8	87	10 N	5 08	5 33	5 01	48	17 07	43	
12	3	44.9	-19 05.5	13	25.4 ¹³⁵	-11 21.5	87	0	4 54	5 20	4 54	45	17 16	45	
13	18	44.7	06.1	27	58.0 ¹³⁶	30.2	87	10 S	39	5 05	27	46	43	24	49
14	33	44.6	06.7	42	30.5 ¹³⁵	38.8	86	20	4 21	4 49	5 12	38	40	34	51
15	48	44.5	07.3	57	03.0 ¹³⁵	47.3	85	30	3 57	29	4 55	29	37	45	54
16	63	44.4	07.9	71	35.5 ¹³⁵	-11 55.8	85	35	42	17	45	24	35	51	56
17	78	44.2	-19 08.5	86	08.0 ¹³⁵	-12 04.2	84	40	3 24	4 02	4 33	4 18	33	17 59	57
18	93	44.1	-19 09.1	100	40.5 ¹³⁵	-12 12.5	83	45	3 01	3 45	4 19	4 11	30	18 07	60
19	108	44.0	09.7	115	12.9 ¹³⁴	20.8	83	50	2 30	22	4 02	4 03	27	17	63
20	123	43.8	10.3	129	45.3 ¹³⁴	29.1	83	52	2 13	3 12	3 54	3 59	26	22	64
21	138	43.7	10.9	144	17.7 ¹³⁴	37.3	82	54	1 53	2 59	45	55	24	27	66
22	153	43.6	11.5	158	50.1 ¹³⁴	45.4	81	56	1 27	45	35	51	22	33	68
23	168	43.5	12.1	173	22.5 ¹³⁴	-12 53.5	81	58	0 46	27	23	46	20	39	70
24	183	43.3	-19 12.7	187	54.9 ¹³⁴	-13 01.5	80	60 S	** **	2 06	3 10	3 40	18	18 47	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 11 ^m 7		Mag: -3.9 PMG: 10 ^h 55 ^m		Mag: +1.7 PMG: 9 ^h 15 ^m		Mag: -1.7 PMG: 10 ^h 38 ^m		Mag: +0.5 PMG: 13 ^h 57 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	56	14.5	196	22.6	-14 17.2	221	09.0	-5 14.9	200	08.9	-13 15.4	150	20.2	-22 25.4
1	71	17.0	211	22.0	18.2	236	10.0	15.5	215	10.8	15.6	165	22.3	25.4
2	86	19.4	226	21.4	19.2	251	11.0	16.1	230	12.8	15.7	180	24.5	25.4
3	101	21.9	241	20.8	20.3	266	12.0	16.7	245	14.7	15.9	195	26.7	25.4
4	116	24.4	256	20.2	21.3	281	13.0	17.3	260	16.7	16.1	210	28.9	25.5
5	131	26.8	271	19.6	-14 22.3	296	14.1	-5 18.0	275	18.6	-13 16.3	225	31.0	-22 25.5
6	146	29.3	286	19.0	-14 23.3	311	15.1	-5 18.6	290	20.6	-13 16.4	240	33.2	-22 25.5
7	161	31.8	301	18.4	24.3	326	16.1	19.2	305	22.5	16.6	255	35.4	25.5
8	176	34.2	316	17.8	25.3	341	17.1	19.8	320	24.4	16.8	270	37.6	25.5
9	191	36.7	331	17.2	26.4	356	18.1	20.4	335	26.4	16.9	285	39.7	25.5
10	206	39.1	346	16.6	27.4	11	19.1	21.0	350	28.3	17.1	300	41.9	25.5
11	221	41.6	1	16.0	-14 28.4	26	20.1	-5 21.6	5	30.3	-13 17.3	315	44.1	-22 25.5
12	236	44.1	16	15.4	-14 29.4	41	21.1	-5 22.2	20	32.2	-13 17.5	330	46.3	-22 25.6
13	251	46.5	31	14.8	30.4	56	22.1	22.8	35	34.2	17.6	345	48.4	25.6
14	266	49.0	46	14.2	31.4	71	23.1	23.5	50	36.1	17.8	0	50.6	25.6
15	281	51.5	61	13.6	32.4	86	24.1	24.1	65	38.0	18.0	15	52.8	25.6
16	296	53.9	76	13.0	33.5	101	25.1	24.7	80	40.0	18.1	30	55.0	25.6
17	311	56.4	91	12.4	-14 34.5	116	26.1	-5 25.3	95	41.9	-13 18.3	45	57.1	-22 25.6
18	326	58.9	106	11.8	-14 35.5	131	27.1	-5 25.9	110	43.9	-13 18.5	60	59.3	-22 25.6
19	342	01.3	121	11.2	36.5	146	28.1	26.5	125	45.8	18.7	76	01.5	25.6
20	357	03.8	136	10.6	37.5	161	29.1	27.1	140	47.8	18.8	91	03.7	25.7
21	12	06.3	151	10.0	38.5	176	30.1	27.7	155	49.7	19.0	106	05.8	25.7
22	27	08.7	166	09.4	39.5	191	31.1	28.3	170	51.7	19.2	121	08.0	25.7
23	42	11.2	181	08.8	40.5	206	32.1	28.9	185	53.6	19.3	136	10.2	25.7
24	57	13.6	196	08.1	-14 41.5	221	33.2	-5 29.6	200	55.5	-13 19.5	151	12.4	-22 25.7
Dif	—		-6 -10		+10 -6		+19 -2		+22 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16°2 PMG: 11 ^h 45 ^m 2			Edad: 29 ^d 2 PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	43.3	-19	12.7	187	54.9	-13	01.5	60 N	15 24	16 14	17 06	7 25 71	16 06 25				
1	198	43.2		13.3	202	27.2 ¹³³		09.4	58	36	22	11	16 69	16 26				
2	213	43.1		13.9	216	59.6 ¹³⁴		17.3	56	47	30	16	09 66	24 28				
3	228	42.9		14.5	231	31.9 ¹³³		25.1	54	15 56	37	20	7 02 65	31 30				
4	243	42.8		15.1	246	04.2 ¹³³		32.9	52	16 05	43	24	6 56 63	38 31				
5	258	42.7	-19	15.7	260	36.4 ¹³²	-13	40.6	50	16 12	16 48	17 28	6 50 62	16 44 32				
6	273	42.5	-19	16.3	275	08.7 ¹³³	-13	48.2	45	16 28	17 00	17 36	6 38 60	16 56 36				
7	288	42.4		16.8	289	40.9 ¹³²	-13	55.8	40	41	11	44	29 57	17 07 37				
8	303	42.3		17.4	304	13.1 ¹³²	-14	03.3	35	16 53	20	50	20 55	16 39				
9	318	42.1		18.0	318	45.3 ¹³²		10.7	30	17 03	28	17 57	13 53	24 40				
10	333	42.0		18.6	333	17.5 ¹³²		18.1	20	20	43	18 10	6 00 51	38 43				
11	348	41.9	-19	19.2	347	49.7 ¹³²	-14	25.4	10 N	17 35	17 57	18 23	5 49 49	17 50 45				
12	3	41.7	-19	19.8	2	21.8 ¹³¹	-14	32.6	0	17 49	18 11	18 36	5 39 46	18 01 47				
13	18	41.6		20.4	16	53.9 ¹³¹		39.8	10 S	18 03	26	18 52	29 44	13 48				
14	33	41.5		21.0	31	26.0 ¹³¹		46.9	20	19	18 42	19 10	18 42	25 51				
15	48	41.3		21.6	45	58.1 ¹³¹	-14	53.9	30	36	19 03	34	5 06 39	39 53				
16	63	41.2		22.2	60	30.2 ¹³¹	-15	00.9	35	47	15	19 49	4 59 37	47 54				
17	78	41.0	-19	22.7	75	02.2 ¹³⁰	-15	07.7	40	18 59	19 30	20 08	4 51 35	18 56 56				
18	93	40.9	-19	23.3	89	34.3 ¹³¹	-15	14.6	45	19 13	19 48	20 32	4 41 34	19 07 58				
19	108	40.8		23.9	104	06.3 ¹³⁰		21.3	50	31	20 11	21 04	30 31	20 61				
20	123	40.6		24.5	118	38.3 ¹³⁰		28.0	52	39	22	21	25 29	26 62				
21	138	40.5		25.1	133	10.2 ¹²⁹		34.6	54	48	35	21 43	19 28	33 63				
22	153	40.4		25.7	147	42.2 ¹³⁰		41.1	56	19 59	20 50	22 11	13 26	41 64				
23	168	40.2		26.2	162	14.1 ¹²⁹		47.6	58	20 11	21 08	23 00	4 06 24	49 67				
24	183	40.1	-19	26.8	176	46.0 ¹²⁹	-15	54.0	60 S	20 25	21 31	** **	3 58 22	19 59 68				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 07 ^m 8		Mag: -3.9 PMG: 10 ^h 56 ^m			Mag: +1.7 PMG: 9 ^h 13 ^m			Mag: -1.7 PMG: 10 ^h 35 ^m			Mag: +0.5 PMG: 13 ^h 53 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	57	13.6	196	08.1	-14	41.5	221	33.2	-5	29.6	200	55.5	-13	19.5	151	12.4	-22	25.7
1	72	16.1	211	07.5		42.5	236	34.2		30.2	215	57.5		19.7	166	14.5		25.7
2	87	18.6	226	06.9		43.5	251	35.2		30.8	230	59.4		19.9	181	16.7		25.7
3	102	21.0	241	06.3		44.5	266	36.2		31.4	246	01.4		20.0	196	18.9		25.7
4	117	23.5	256	05.7		45.5	281	37.2		32.0	261	03.3		20.2	211	21.1		25.7
5	132	26.0	271	05.1	-14	46.5	296	38.2	-5	32.6	276	05.3	-13	20.4	226	23.2	-22	25.8
6	147	28.4	286	04.5	-14	47.5	311	39.2	-5	33.2	291	07.2	-13	20.5	241	25.4	-22	25.8
7	162	30.9	301	03.9		48.6	326	40.2		33.8	306	09.2		20.7	256	27.6		25.8
8	177	33.4	316	03.3		49.6	341	41.2		34.4	321	11.1		20.9	271	29.8		25.8
9	192	35.8	331	02.6		50.6	356	42.2		35.0	336	13.0		21.0	286	31.9		25.8
10	207	38.3	346	02.0		51.6	371	43.2		35.7	351	15.0		21.2	301	34.1		25.8
11	222	40.8	1	01.4	-14	52.6	386	44.2	-5	36.3	6	16.9	-13	21.4	316	36.3	-22	25.8
12	237	43.2	16	00.8	-14	53.6	401	45.2	-5	36.9	21	18.9	-13	21.6	331	38.5	-22	25.8
13	252	45.7	31	00.2		54.5	416	46.2		37.5	36	20.8		21.7	346	40.6		25.9
14	267	48.1	45	59.6		55.5	431	47.2		38.1	51	22.8		21.9	1	42.8		25.9
15	282	50.6	60	59.0		56.5	446	48.2		38.7	66	24.7		22.1	16	45.0		25.9
16	297	53.1	75	58.3		57.5	461	49.2		39.3	81	26.7		22.2	31	47.2		25.9
17	312	55.5	90	57.7	-14	58.5	476	50.2	-5	39.9	96	28.6	-13	22.4	46	49.3	-22	25.9
18	327	58.0	105	57.1	-14	59.5	491	51.2	-5	40.5	111	30.5	-13	22.6	61	51.5	-22	25.9
19	343	00.5	120	56.5	-15	00.5	506	52.2		41.1	126	32.5		22.7	76	53.7		25.9
20	358	02.9	135	55.9		01.5	521	53.2		41.7	141	34.4		22.9	91	55.9		25.9
21	13	05.4	150	55.2		02.5	536	54.2		42.4	156	36.4		23.1	106	58.0		25.9
22	28	07.9	165	54.6		03.5	551	55.2		43.0	171	38.3		23.3	122	00.2		26.0
23	43	10.3	180	54.0		04.5	566	56.2		43.6	186	40.3		23.4	137	02.4		26.0
24	58	12.8	195	53.4	-15	05.5	581	57.3	-5	44.2	201	42.2	-13	23.6	152	04.5	-22	26.0
Dif	—		-6		-10		+10		-6		+19		-2		+22			

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: 0 ^d 5 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	183	40.1	-19 26.8	176	46.0	-15 54.0	63	6 25	7 18	8 08	8 36	65	16 31	31	
1	198	39.9	27.4	191	17.9 ¹²⁹	-16 00.3	63	20	09	7 56	25	63	42	33	
2	213	39.8	28.0	205	49.8 ¹²⁹	06.5	62	15	7 02	45	15	62	16 52	35	
3	228	39.7	28.6	220	21.6 ¹²⁸	12.7	62	11	6 55	35	8 07	60	17 01	36	
4	243	39.5	29.2	234	53.5 ¹²⁹	18.8	61	07	49	27	7 59	60	09	37	
5	258	39.4	-19 29.7	249	25.3 ¹²⁸	-16 24.8	60	6 04	6 43	7 19	7 52	59	17 16	38	
6	273	39.2	-19 30.3	263	57.1 ¹²⁸	-16 30.7	59	5 55	6 31	7 03	7 38	56	17 32	39	
7	288	39.1	30.9	278	28.8 ¹²⁷	36.6	59	48	20	6 50	26	54	44	41	
8	303	39.0	31.5	293	00.6 ¹²⁸	42.4	58	41	11	38	15	54	17 55	42	
9	318	38.8	32.0	307	32.3 ¹²⁷	48.1	57	34	6 03	28	7 06	53	18 04	43	
10	333	38.7	32.6	322	04.1 ¹²⁸	53.7	56	21	5 48	6 11	6 51	50	21	44	
11	348	38.5	-19 33.2	336	35.8 ¹²⁷	-16 59.3	56	5 08	5 34	5 56	6 38	48	18 35	46	
12	3	38.4	-19 33.8	351	07.5 ¹²⁷	-17 04.7	54	4 54	5 20	5 42	6 25	47	18 48	47	
13	18	38.2	34.3	5	39.1 ¹²⁶	10.1	54	39	5 05	27	13	45	19 01	49	
14	33	38.1	34.9	20	10.8 ¹²⁷	15.4	53	20	4 48	5 12	6 00	43	16	49	
15	48	37.9	35.5	34	42.4 ¹²⁶	20.7	53	3 56	28	4 54	5 45	41	32	51	
16	63	37.8	36.1	49	14.0 ¹²⁶	25.8	51	41	15	44	36	40	41	53	
17	78	37.7	-19 36.6	63	45.6 ¹²⁶	-17 30.9	51	3 22	4 01	4 31	5 26	39	19 52	54	
18	93	37.5	-19 37.2	78	17.2 ¹²⁶	-17 35.9	50	2 58	3 43	4 17	5 15	37	20 05	55	
19	108	37.4	37.8	92	48.7 ¹²⁵	40.8	49	26	20	3 59	5 01	35	21	56	
20	123	37.2	38.4	107	20.3 ¹²⁶	45.6	48	2 09	3 08	51	4 54	34	28	57	
21	138	37.1	38.9	121	51.8 ¹²⁵	50.4	48	1 47	2 55	42	47	33	36	58	
22	153	36.9	39.5	136	23.3 ¹²⁵	55.0	46	1 19	40	31	39	31	45	60	
23	168	36.8	40.1	150	54.8 ¹²⁵	-17 59.6	46	0 30	2 22	19	30	30	20 56	60	
24	183	36.6	-19 40.6	165	26.3 ¹²⁵	-18 04.1	45	** **	1 59	3 05	4 20	27	21 07	63	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 03 ^m 9		Mag: -3.9 PMG: 10 ^h 57 ^m			Mag: +1.7 PMG: 9 ^h 12 ^m			Mag: -1.7 PMG: 10 ^h 32 ^m			Mag: +0.5 PMG: 13 ^h 50 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	'
0	58	12.8	195 53.4	-15 05.5	221 57.3	-5 44.2	201 42.2	-13 23.6	152 04.5	-22 26.0					
1	73	15.2	210 52.8	06.5	236 58.3	44.8	216 44.2	23.8	167 06.7	26.0					
2	88	17.7	225 52.1	07.5	251 59.3	45.4	231 46.1	23.9	182 08.9	26.0					
3	103	20.2	240 51.5	08.5	267 00.3	46.0	246 48.1	24.1	197 11.1	26.0					
4	118	22.6	255 50.9	09.4	282 01.3	46.6	261 50.0	24.3	212 13.2	26.0					
5	133	25.1	270 50.3	-15 10.4	297 02.3	-5 47.2	276 51.9	-13 24.4	227 15.4	-22 26.0					
6	148	27.6	285 49.7	-15 11.4	312 03.3	-5 47.8	291 53.9	-13 24.6	242 17.6	-22 26.1					
7	163	30.0	300 49.0	12.4	327 04.3	48.4	306 55.8	24.8	257 19.8	26.1					
8	178	32.5	315 48.4	13.4	342 05.3	49.0	321 57.8	25.0	272 21.9	26.1					
9	193	35.0	330 47.8	14.4	357 06.3	49.6	336 59.7	25.1	287 24.1	26.1					
10	208	37.4	345 47.2	15.4	12 07.3	50.3	352 01.7	25.3	302 26.3	26.1					
11	223	39.9	0 46.5	-15 16.3	27 08.3	-5 50.9	7 03.6	-13 25.5	317 28.4	-22 26.1					
12	238	42.4	15 45.9	-15 17.3	42 09.3	-5 51.5	22 05.6	-13 25.6	332 30.6	-22 26.1					
13	253	44.8	30 45.3	18.3	57 10.3	52.1	37 07.5	25.8	347 32.8	26.1					
14	268	47.3	45 44.6	19.3	72 11.3	52.7	52 09.5	26.0	2 35.0	26.1					
15	283	49.7	60 44.0	20.3	87 12.3	53.3	67 11.4	26.1	17 37.1	26.2					
16	298	52.2	75 43.4	21.2	102 13.3	53.9	82 13.3	26.3	32 39.3	26.2					
17	313	54.7	90 42.8	-15 22.2	117 14.3	-5 54.5	97 15.3	-13 26.5	47 41.5	-22 26.2					
18	328	57.1	105 42.1	-15 23.2	132 15.3	-5 55.1	112 17.2	-13 26.6	62 43.6	-22 26.2					
19	343	59.6	120 41.5	24.2	147 16.3	55.7	127 19.2	26.8	77 45.8	26.2					
20	359	02.1	135 40.9	25.2	162 17.3	56.3	142 21.1	27.0	92 48.0	26.2					
21	14	04.5	150 40.2	26.1	177 18.3	56.9	157 23.1	27.2	107 50.2	26.2					
22	29	07.0	165 39.6	27.1	192 19.3	57.5	172 25.0	27.3	122 52.3	26.2					
23	44	09.5	180 39.0	28.1	207 20.3	58.2	187 27.0	27.5	137 54.5	26.2					
24	59	11.9	195 38.3	-15 29.1	222 21.3	-5 58.8	202 28.9	-13 27.7	152 56.7	-22 26.3					
Dif	—		-6		+10		-6		+19		-2		+22		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 1 ^d 5	PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0										
	PMG: 11 ^h 45 ^m 7					SD: 14'8			PMG: 13 ^h 24 ^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
0	183	36.6	-19 40.6	165	26.3	-18 04.1	44	60 N	15 20	16 11	17 04	9 41 59	17 02 40		
1	198	36.5	41.2	179	57.8 ¹²⁵	08.5	44	58	33	19 09	28 58	28 58	15 41		
2	213	36.3	41.8	194	29.2 ¹²⁴	12.9	44	56	44	27 14	17 56	27 41			
3	228	36.2	42.3	209	00.6 ¹²⁴	17.1	42	54	15 54	34 18	9 07 56	37 42			
4	243	36.0	42.9	223	32.1 ¹²⁵	21.3	42	52	16 02	40 22	8 59 54	46 43			
5	258	35.9	-19 43.5	238	03.5 ¹²⁴	-18 25.3	40	50	16 10	16 46	17 26	8 51 54	17 54 43		
6	273	35.7	-19 44.0	252	34.8 ¹²³	-18 29.3	40	45	16 27	16 59	17 35	8 34 53	18 11 44		
7	288	35.6	44.6	267	06.2 ¹²⁴	33.2	39	40	40	17 09	42 20 52	25 45			
8	303	35.4	45.1	281	37.6 ¹²⁴	37.1	39	35	16 52	19 50	8 09 51	37 45			
9	318	35.3	45.7	296	08.9 ¹²³	40.8	37	30	17 02	27 17 56	7 59 50	18 47 46			
10	333	35.1	46.3	310	40.2 ¹²³	44.4	36	20	19 43	18 10	41 50	19 05 47			
11	348	35.0	-19 46.8	325	11.6 ¹²⁴	-18 48.0	36	10 N	17 35	17 57	18 23	7 26 49	19 21 47		
12	3 34.8	-19 47.4	339	42.9 ¹²³	-18 51.5	35	35	0	17 49	18 11	18 37	7 12 48	19 35 48		
13	18 34.7	47.9	354	14.2 ¹²³	54.9	34	33	10 S	18 04	26 18 53	6 58 47	19 50 48			
14	33 34.5	48.5	8 45.4 ¹²²	-18 58.2	33	32	20	20	20 18 44	19 12	43 46	20 05 49			
15	48 34.4	49.1	23 16.7 ¹²³	-19 01.4	32	31	30	38	19 04	36 26 45	23 50				
16	63 34.2	49.6	37 48.0 ¹²³	04.5	31	31	35	18 49	17 19 52	16 44	34 50				
17	78 34.1	-19 50.2	52 19.2 ¹²²	-19 07.6	31	29	40	19 01	19 32	20 11	6 05 43	20 46 50			
18	93 33.9	-19 50.7	66 50.4 ¹²²	-19 10.5	29	29	45	19 16	19 51	20 35	5 52 42	21 00 51			
19	108 33.8	51.3	81 21.7 ¹²³	13.4	29	27	50	34	20 14	21 09	36 40	17 52			
20	123 33.6	51.8	95 52.9 ¹²²	16.1	27	27	52	42	26 27	28 40	25 52				
21	138 33.4	52.4	110 24.1 ¹²²	18.8	27	26	54	19 52	39 21 49	20 39	34 53				
22	153 33.3	53.0	124 55.3 ¹²²	21.4	26	25	56	20 03	20 55	22 21	10 38	45 52			
23	168 33.1	53.5	139 26.5 ¹²²	23.9	25	25	58	15 21 14	23 26	5 00 37	21 56 53				
24	183 33.0	-19 54.1	153 57.6 ¹²¹	-19 26.4	25	25	60 S	20 30	21 38	** **	4 47 36	22 10 53			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 59 ^m 9		Mag: -3.9 PMG: 10 ^h 58 ^m			Mag: +1.7 PMG: 9 ^h 10 ^m			Mag: -1.7 PMG: 10 ^h 29 ^m			Mag: +0.5 PMG: 13 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	59	11.9	195 38.3	-15 29.1	222 21.3	-5 58.8	202 28.9	-13 27.7	152 56.7	-22 26.3					
1	74	14.4	210 37.7	30.0	237 22.3	-5 59.4	217 30.9	27.8	167 58.8	26.3					
2	89	16.9	225 37.1	31.0	252 23.3	-6 00.0	232 32.8	28.0	183 01.0	26.3					
3	104	19.3	240 36.4	32.0	267 24.3	-6 00.6	247 34.8	28.2	198 03.2	26.3					
4	119	21.8	255 35.8	32.9	282 25.3	01.2	262 36.7	28.3	213 05.4	26.3					
5	134	24.2	270 35.2	-15 33.9	297 26.3	-6 01.8	277 38.6	-13 28.5	228 07.5	-22 26.3					
6	149	26.7	285 34.5	-15 34.9	312 27.3	-6 02.4	292 40.6	-13 28.7	243 09.7	-22 26.3					
7	164	29.2	300 33.9	35.9	327 28.3	03.0	307 42.5	28.8	258 11.9	26.3					
8	179	31.6	315 33.3	36.8	342 29.3	03.6	322 44.5	29.0	273 14.0	26.4					
9	194	34.1	330 32.6	37.8	357 30.3	04.2	337 46.4	29.2	288 16.2	26.4					
10	209	36.6	345 32.0	38.8	12 31.4	04.8	352 48.4	29.3	303 18.4	26.4					
11	224	39.0	0 31.3	-15 39.7	27 32.4	-6 05.4	7 50.3	-13 29.5	318 20.6	-22 26.4					
12	239	41.5	15 30.7	-15 40.7	42 33.4	-6 06.0	22 52.3	-13 29.7	333 22.7	-22 26.4					
13	254	44.0	30 30.1	41.7	57 34.4	06.6	37 54.2	29.9	348 24.9	26.4					
14	269	46.4	45 29.4	42.6	72 35.4	07.2	52 56.2	30.0	3 27.1	26.4					
15	284	48.9	60 28.8	43.6	87 36.4	07.8	67 58.1	30.2	18 29.2	26.4					
16	299	51.4	75 28.2	44.6	102 37.4	08.5	83 00.1	30.4	33 31.4	26.4					
17	314	53.8	90 27.5	-15 45.5	117 38.4	-6 09.1	98 02.0	-13 30.5	48 33.6	-22 26.5					
18	329	56.3	105 26.9	-15 46.5	132 39.4	-6 09.7	113 03.9	-13 30.7	63 35.8	-22 26.5					
19	344	58.7	120 26.2	47.4	147 40.4	10.3	128 05.9	30.9	78 37.9	26.5					
20	0 01.2	135 25.6	48.4	162 41.4	10.9	10.9	143 07.8	31.0	93 40.1	26.5					
21	15 03.7	150 24.9	49.4	177 42.4	11.5	11.5	158 09.8	31.2	108 42.3	26.5					
22	30 06.1	165 24.3	50.3	192 43.4	12.1	12.1	173 11.7	31.4	123 44.4	26.5					
23	45 08.6	180 23.7	51.3	207 44.4	12.7	12.7	188 13.7	31.5	138 46.6	26.5					
24	60 11.1	195 23.0	-15 52.2	222 45.4	-6 13.3	13.3	203 15.6	-13 31.7	153 48.8	-22 26.5					
Dif	—	-6	-10	+10	-6	-6	+19	-2	+22	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 45 ^m 9			Edad: 2 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	33.0	-19	54.1	153	57.6	-19	26.4	60 N	6 29	7 22	8 13	10 40	49	17 42	49
1	198	32.8		54.6	168	28.8		28.7	58	24	13	8 00	26	48	17 56	49
2	213	32.7		55.2	183	00.0		30.9	56	19	7 05	7 49	13	49	18 08	50
3	228	32.5		55.7	197	31.1		33.1	54	14	6 58	39	10 03	49	19	49
4	243	32.3		56.3	212	02.3		35.1	52	10	52	30	9 53	49	29	49
5	258	32.2	-19	56.8	226	33.4	-19	37.1	50	6 06	6 46	7 22	9 45	49	18 37	49
6	273	32.0	-19	57.4	241	04.5	-19	39.0	45	5 57	6 33	7 06	9 27	49	18 55	49
7	288	31.9		57.9	255	35.6		40.8	40	50	23	6 52	12	49	19 10	48
8	303	31.7		58.5	270	06.8		42.5	35	42	13	40	9 00	49	22	49
9	318	31.6		59.0	284	37.9		44.1	30	35	6 05	30	8 49	49	33	48
10	333	31.4	-19	59.6	299	09.0		45.6	20	22	5 49	6 12	31	48	19 52	48
11	348	31.2	-20	00.1	313	40.1	-19	47.0	10 N	5 09	5 35	5 57	8 15	48	20 08	48
12	3	31.1	-20	00.6	328	11.2	-19	48.4	0	4 55	5 20	5 42	8 00	48	20 23	48
13	18	30.9		01.2	342	42.3		49.6	10 S	39	5 05	28	7 45	48	38	48
14	33	30.7		01.7	357	13.3		50.8	20	4 20	4 48	5 12	29	47	20 54	48
15	48	30.6		02.3	11	44.4		51.8	30	3 55	27	4 53	11	47	21 13	47
16	63	30.4		02.8	26	15.5		52.8	35	39	4 14	42	7 00	47	24	47
17	78	30.3	-20	03.4	40	46.6	-19	53.7	40	3 20	3 59	4 30	6 48	47	21 36	47
18	93	30.1	-20	03.9	55	17.7	-19	54.5	45	2 56	3 41	4 15	6 34	46	21 51	46
19	108	29.9		04.4	69	48.7		55.1	50	22	17	3 57	16	46	22 09	45
20	123	29.8		05.0	84	19.8		55.8	52	2 04	3 05	49	6 08	46	17	46
21	138	29.6		05.5	98	50.9		56.3	54	1 42	2 52	39	5 59	45	27	45
22	153	29.4		06.1	113	22.0		56.7	56	1 11	36	28	48	46	37	45
23	168	29.3		06.6	127	53.0		57.0	58	0 05	2 17	16	37	45	22	49
24	183	29.1	-20	07.1	142	24.1	-19	57.3	60 S	** **	1 53	3 01	5 23	44	23 03	45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 19 ^h 56 ^m 0		Mag: -3.9 PMG: 10 ^h 59 ^m		Mag: +1.7 PMG: 9 ^h 08 ^m		Mag: -1.7 PMG: 10 ^h 26 ^m		Mag: +0.5 PMG: 13 ^h 43 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	60	11.1	195	23.0	-15	52.2	222	45.4	-6	13.3	203	15.6	-13	31.7	153	48.8	-22	26.5	
1	75	13.5	210	22.4		53.2	237	46.4		13.9	218	17.6		31.9	168	50.9		26.5	
2	90	16.0	225	21.7		54.2	252	47.4		14.5	233	19.5		32.0	183	53.1		26.6	
3	105	18.5	240	21.1		55.1	267	48.4		15.1	248	21.5		32.2	198	55.3		26.6	
4	120	20.9	255	20.4		56.1	282	49.4		15.7	263	23.4		32.4	213	57.4		26.6	
5	135	23.4	270	19.8	-15	57.0	297	50.4	-6	16.3	278	25.4	-13	32.5	228	59.6	-22	26.6	
6	150	25.9	285	19.1	-15	58.0	312	51.4	-6	16.9	293	27.3	-13	32.7	244	01.8	-22	26.6	
7	165	28.3	300	18.5		58.9	327	52.4		17.5	308	29.3		32.9	259	04.0		26.6	
8	180	30.8	315	17.8	-15	59.9	342	53.4		18.1	323	31.2		33.0	274	06.1		26.6	
9	195	33.2	330	17.2	-16	00.8	357	54.4		18.7	338	33.2		33.2	289	08.3		26.6	
10	210	35.7	345	16.5		01.8	12	55.4		19.3	353	35.1		33.4	304	10.5		26.6	
11	225	38.2	0	15.9	-16	02.7	27	56.4	-6	19.9	8	37.1	-13	33.5	319	12.6	-22	26.7	
12	240	40.6	15	15.2	-16	03.7	42	57.4	-6	20.5	23	39.0	-13	33.7	334	14.8	-22	26.7	
13	255	43.1	30	14.6		04.6	57	58.4		21.2	38	40.9		33.9	349	17.0		26.7	
14	270	45.6	45	13.9		05.6	72	59.4		21.8	53	42.9		34.0	4	19.1		26.7	
15	285	48.0	60	13.3		06.5	88	00.4		22.4	68	44.8		34.2	19	21.3		26.7	
16	300	50.5	75	12.6		07.5	103	01.4		23.0	83	46.8		34.4	34	23.5		26.7	
17	315	53.0	90	12.0	-16	08.4	118	02.4	-6	23.6	98	48.7	-13	34.5	49	25.6	-22	26.7	
18	330	55.4	105	11.3	-16	09.4	133	03.4	-6	24.2	113	50.7	-13	34.7	64	27.8	-22	26.7	
19	345	57.9	120	10.7		10.3	148	04.4		24.8	128	52.6		34.9	79	30.0		26.7	
20	1	00.3	135	10.0		11.2	163	05.4		25.4	143	54.6		35.1	94	32.1		26.8	
21	16	02.8	150	09.4		12.2	178	06.4		26.0	158	56.5		35.2	109	34.3		26.8	
22	31	05.3	165	08.7		13.1	193	07.4		26.6	173	58.5		35.4	124	36.5		26.8	
23	46	07.7	180	08.0		14.1	208	08.4		27.2	189	00.4		35.6	139	38.7		26.8	
24	61	10.2	195	07.4	-16	15.0	223	09.4	-6	27.8	204	02.4	-13	35.7	154	40.8	-22	26.8	
Dif	—		-7		-9		+10		-6		+19		-2		+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 2			Edad: 3 ^d 5 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/1 SD: 14:7 PMG: 14 ^h 59 ^m Rº: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	29.1	-20	07.1	142	24.1	-19 57.3	60 N	15 16	16 08	17 01	11 29 39	18 31 59	
1	198	29.0		07.7	156	55.2 ¹²¹	57.4	58	30	17	06	14 41	45 58	
2	213	28.8		08.2	171	26.2 ¹²⁰	57.5	56	41	25	11	11 02 41	18 58 56	
3	228	28.6		08.7	185	57.3 ¹²¹	57.4	54	15 51	32	16	10 52 41	19 08 56	
4	243	28.5		09.3	200	28.4 ¹²¹	57.3	52	16 00	38	20	42 43	18 54	
5	258	28.3	-20	09.8	214	59.5 ¹²¹	-19 57.1	50	16 08	16 44	17 24	10 34 43	19 26 54	
6	273	28.1	-20	10.4	229	30.5 ¹²⁰	-19 56.8	45	16 25	16 57	17 33	10 16 44	19 44 53	
7	288	28.0		10.9	244	01.6 ¹²¹	56.4	40	39	17 08	42	10 01 45	19 58 52	
8	303	27.8		11.4	258	32.7 ¹²¹	55.9	35	16 51	18	49	9 49 45	20 11 51	
9	318	27.6		11.9	273	03.8 ¹²¹	55.3	30	17 01	27	56	38 45	21 51	
10	333	27.5		12.5	287	34.9 ¹²¹	54.6	20	19	43	18 10	19 46	40 49	
11	348	27.3	-20	13.0	302	06.0 ¹²¹	-19 53.8	10 N	17 35	17 57	18 23	9 03 47	20 56 48	
12	3	27.1	-20	13.5	316	37.1 ¹²¹	-19 53.0	0	17 50	18 12	18 37	8 48 47	21 11 47	
13	18	26.9		14.1	331	08.2 ¹²¹	52.0	10 S	18 05	27	18 54	33 48	26 46	
14	33	26.8		14.6	345	39.3 ¹²¹	51.0	20	21	18 45	19 13	8 16 49	21 42 45	
15	48	26.6		15.1	0	10.4 ¹²¹	49.9	11	30	40	19 06	38	7 58 49	
16	63	26.4		15.7	14	41.5 ¹²¹	48.6	13	35	18 51	19	19 54	47 50	
17	78	26.3	-20	16.2	29	12.6 ¹²¹	-19 47.3	40	19 03	19 35	20 14	7 35 50	22 23 42	
18	93	26.1	-20	16.7	43	43.8 ¹²²	-19 45.9	45	19 19	19 54	20 39	7 20 51	22 37 41	
19	108	25.9		17.2	58	14.9 ¹²¹	44.4	50	37	20 18	21 14	7 02 52	22 54 41	
20	123	25.8		17.8	72	46.0 ¹²¹	42.8	52	46	30	32	6 54 52	23 03 39	
21	138	25.6		18.3	87	17.2 ¹²²	41.1	54	19 56	20 44	21 56	44 53	12 38	
22	153	25.4		18.8	101	48.3 ¹²¹	39.4	56	20 07	21 00	22 30	34 53	22 38	
23	168	25.2		19.3	116	19.5 ¹²²	37.5	58	20	20	** **	22 53	34 36	
24	183	25.1	-20	19.8	130	50.7 ¹²²	-19 35.6	60 S	20 35	21 45	** **	6 07 54	23 48 35	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 52 ^m 1		Mag: -3.9 PMG: 11 ^h 00 ^m			Mag: +1.7 PMG: 9 ^h 07 ^m			Mag: -1.7 PMG: 10 ^h 22 ^m			Mag: +0.5 PMG: 13 ^h 39 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	61	10.2	195	07.4	-16	15.0	223	09.4	-6	27.8	204	02.4	-13	35.7
1	76	12.7	210	06.7		15.9	238	10.4		28.4	219	04.3		35.9
2	91	15.1	225	06.1		16.9	253	11.4		29.0	234	06.3		36.1
3	106	17.6	240	05.4		17.8	268	12.4		29.6	249	08.2		36.2
4	121	20.1	255	04.7		18.8	283	13.4		30.2	264	10.2		36.4
5	136	22.5	270	04.1	-16	19.7	298	14.4	-6	30.8	279	12.1	-13	36.6
6	151	25.0	285	03.4	-16	20.6	313	15.4	-6	31.4	294	14.1	-13	36.7
7	166	27.5	300	02.8		21.6	328	16.4		32.0	309	16.0		36.9
8	181	29.9	315	02.1		22.5	343	17.4		32.6	324	18.0		37.1
9	196	32.4	330	01.4		23.4	358	18.4		33.2	339	19.9		37.2
10	211	34.8	345	00.8		24.4	13	19.4		33.8	354	21.9		37.4
11	226	37.3	0	00.1	-16	25.3	28	20.4	-6	34.4	9	23.8	-13	37.6
12	241	39.8	14	59.5	-16	26.2	43	21.4	-6	35.0	24	25.8	-13	37.7
13	256	42.2	29	58.8		27.2	58	22.4		35.6	39	27.7		37.9
14	271	44.7	44	58.1		28.1	73	23.4		36.2	54	29.6		38.1
15	286	47.2	59	57.5		29.0	88	24.4		36.8	69	31.6		38.2
16	301	49.6	74	56.8		30.0	103	25.4		37.4	84	33.5		38.4
17	316	52.1	89	56.1	-16	30.9	118	26.4	-6	38.0	99	35.5	-13	38.6
18	331	54.6	104	55.5	-16	31.8	133	27.4	-6	38.6	114	37.4	-13	38.7
19	346	57.0	119	54.8		32.7	148	28.4		39.2	129	39.4		38.9
20	1	59.5	134	54.1		33.7	163	29.4		39.8	144	41.3		39.0
21	17	02.0	149	53.5		34.6	178	30.4		40.4	159	43.3		39.2
22	32	04.4	164	52.8		35.5	193	31.4		41.0	174	45.2		39.4
23	47	06.9	179	52.1		36.4	208	32.4		41.6	189	47.2		39.5
24	62	09.3	194	51.5	-16	37.4	223	33.4	-6	42.2	204	49.1	-13	39.7
Dif	—		-7		-9		+10		-6		+19		-2	
													+22	
													0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 46 ^m 5			Edad: 4 ^d 5 PHE { SD: 14'7 PMG: 15 ^h 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	183	25.1	-20	19.8	130	50.7	-19	35.6	21	60 N	6 33	7 26	8 18	12 08	31
1	198	24.9		20.4	145	21.9 ¹²²		33.5	21	58	27	17	8 04	11 55	33
2	213	24.7		20.9	159	53.0 ¹²¹		31.4	21	56	22	09	7 53	43 35	19 54 62
3	228	24.6		21.4	174	24.2 ¹²²		29.2	22	54	17	7 02	43	33 36	20 04 60
4	243	24.4		21.9	188	55.4 ¹²²		26.9	23	52	13	6 55	34	25 36	12 60
5	258	24.2	-20	22.4	203	26.7 ¹²³	-19	24.5	24	50	6 09	6 49	7 25	11 17	37
6	273	24.0	-20	23.0	217	57.9 ¹²²	-19	22.0	25	45	6 00	6 36	7 08	11 00	39
7	288	23.9		23.5	232	29.1 ¹²²		19.4	26	40	5 51	25	6 54	10 46	40
8	303	23.7		24.0	247	00.4 ¹²³		16.8	26	35	44	15	42	34 41	21 02 54
9	318	23.5		24.5	261	31.6 ¹²²		14.0	28	30	37	6 06	32	23 43	12 52
10	333	23.3		25.0	276	02.9 ¹²³		11.2	28	20	23	5 50	6 14	10 05	45
11	348	23.1	-20	25.5	290	34.2 ¹²³	-19	08.2	30	10 N	5 10	5 35	5 58	9 50	46
12	3	23.0	-20	26.1	305	05.5 ¹²³	-19	05.2	30	0	4 55	5 21	5 43	9 35	48
13	18	22.8		26.6	319	36.8 ¹²³	-19	02.1	31	10 S	39	5 05	28	21 48	22 12 46
14	33	22.6		27.1	334	08.1 ¹²³	-18	58.9	32	20	4 19	4 48	5 11	9 05	50
15	48	22.4		27.6	348	39.4 ¹²³		55.6	33	30	3 54	26	4 53	8 47	52
16	63	22.3		28.1	3	10.7 ¹²³		52.3	33	35	38	4 13	42	37 53	22 54 40
17	78	22.1	-20	28.6	17	42.1 ¹²⁴	-18	48.8	35	40	3 19	3 58	4 29	8 25	54
18	93	21.9	-20	29.1	32	13.4 ¹²³	-18	45.3	35	45	2 54	3 39	4 14	8 11	55
19	108	21.7		29.6	46	44.8 ¹²⁴		41.7	36	50	19	14	3 55	7 54	57
20	123	21.5		30.1	61	16.2 ¹²⁴		37.9	38	52	2 00	3 02	46	46 57	42 34
21	138	21.4		30.7	75	47.5 ¹²³		34.1	38	54	1 36	2 49	36	37 58	23 50 33
22	153	21.2		31.2	90	19.0 ¹²⁵		30.3	38	56	1 02	32	25	27 59	** * *
23	168	21.0		31.7	104	50.4 ¹²⁴		26.3	40	58	** * *	2 12	3 12	15 61	** * *
24	183	20.8	-20	32.2	119	21.8 ¹²⁴	-18	22.2	41	60 S	** * *	1 47	2 57	7 01	63
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 48 ^m 1		Mag: -3.9 PMG: 11 ^h 01 ^m			Mag: +1.7 PMG: 9 ^h 05 ^m			Mag: -1.7 PMG: 10 ^h 19 ^m			Mag: +0.5 PMG: 13 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	62	09.3	194	51.5	-16	37.4	223	33.4	-6	42.2	204	49.1	-13	39.7	155
1	77	11.8	209	50.8		38.3	238	34.4		42.8	219	51.1		39.9	170
2	92	14.3	224	50.1		39.2	253	35.4		43.4	234	53.0		40.0	185
3	107	16.7	239	49.5		40.1	268	36.4		44.0	249	55.0		40.2	200
4	122	19.2	254	48.8		41.0	283	37.4		44.6	264	56.9		40.4	215
5	137	21.7	269	48.1	-16	42.0	298	38.4	-6	45.2	279	58.9	-13	40.5	230
6	152	24.1	284	47.4	-16	42.9	313	39.4	-6	45.8	295	00.8	-13	40.7	245
7	167	26.6	299	46.8		43.8	328	40.4		46.4	310	02.8		40.9	260
8	182	29.1	314	46.1		44.7	343	41.4		47.0	325	04.7		41.0	275
9	197	31.5	329	45.4		45.6	358	42.4		47.6	340	06.7		41.2	290
10	212	34.0	344	44.7		46.5	13	43.4		48.2	355	08.6		41.4	305
11	227	36.5	359	44.1	-16	47.5	28	44.4	-6	48.8	10	10.6	-13	41.5	320
12	242	38.9	14	43.4	-16	48.4	43	45.4	-6	49.4	25	12.5	-13	41.7	335
13	257	41.4	29	42.7		49.3	58	46.4		50.0	40	14.5		41.9	351
14	272	43.8	44	42.0		50.2	73	47.4		50.6	55	16.4		42.0	6
15	287	46.3	59	41.4		51.1	88	48.4		51.2	70	18.4		42.2	21
16	302	48.8	74	40.7		52.0	103	49.4		51.8	85	20.3		42.4	36
17	317	51.2	89	40.0	-16	52.9	118	50.4	-6	52.4	100	22.3	-13	42.5	51
18	332	53.7	104	39.3	-16	53.8	133	51.4	-6	53.0	115	24.2	-13	42.7	66
19	347	56.2	119	38.6		54.7	148	52.4		53.6	130	26.2		42.9	81
20	2	58.6	134	38.0		55.6	163	53.4		54.2	145	28.1		43.0	96
21	18	01.1	149	37.3		56.6	178	54.4		54.8	160	30.1		43.2	111
22	33	03.6	164	36.6		57.5	193	55.4		55.4	175	32.0		43.4	126
23	48	06.0	179	35.9		58.4	208	56.4		56.0	190	34.0		43.5	141
24	63	08.5	194	35.2	-16	59.3	223	57.4	-6	56.6	205	35.9	-13	43.7	156
Dif	—		-7	-9		+10	-6			+19	-2		+22		0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 5 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6					Civil			R°		R°	
	PMG: 11 ^h 46 ^m 8			SD: 14'8 PMG: 16 ^h 34 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	m
0	183	20.8	-20	32.2	119	21.8	-18	22.2	60 N	15 13	16 05	16 59	12 39	24	20 36 71
1	198	20.6		32.7	133	53.2 ¹²⁴		18.1	58	27	14	17 04	28	26	47 69
2	213	20.5		33.2	148	24.7 ¹²⁵		13.9	56	38	23	09	18	28	20 56 67
3	228	20.3		33.7	162	56.2 ¹²⁵		09.5	54	49	30	14	09	30	21 05 67
4	243	20.1		34.2	177	27.6 ¹²⁴		05.2	52	15 58	37	19	12	01	31 12 64
5	258	19.9	-20	34.7	191	59.1 ¹²⁵	-18	00.7	50	16 06	16 43	17 23	11 54	32	21 19 62
6	273	19.7	-20	35.2	206	30.6 ¹²⁵	-17	56.1	45	16 24	16 56	17 32	11 39	35	21 34 59
7	288	19.6		35.7	221	02.1 ¹²⁵		51.5	40	38	17 07	41	26	37	45 58
8	303	19.4		36.2	235	33.7 ¹²⁶		46.7	35	16 50	17	48	15	39	21 56 55
9	318	19.2		36.7	250	05.2 ¹²⁵		41.9	30	17 01	26	17 56	11	06	40 22 04 54
10	333	19.0		37.2	264	36.8 ¹²⁶		37.0	20	19	43	18 10	10	50	43 20 51
11	348	18.8	-20	37.7	279	08.3 ¹²⁵	-17	32.0	10 N	17 35	17 58	18 23	10	36	45 22 33 49
12	3	18.6	-20	38.2	293	39.9 ¹²⁶	-17	27.0	0	17 50	18 12	18 38	10	23	46 22 45 47
13	18	18.5		38.7	308	11.5 ¹²⁶		21.8	10 S	18 06	28	18 55	10	09	49 22 58 44
14	33	18.3		39.2	322	43.1 ¹²⁶		16.6	20	22	18 46	19 15	9	55	51 23 11 41
15	48	18.1		39.7	337	14.7 ¹²⁶		11.3	30	41	19 08	40	39	53	26 39
16	63	17.9		40.2	351	46.4 ¹²⁷		05.9	35	18 53	21	19 56	30	54	34 38
17	78	17.7	-20	40.7	6	18.0 ¹²⁶	-17	00.5	40	19 06	19 37	20 16	9	19	56 23 44 36
18	93	17.5	-20	41.2	20	49.7 ¹²⁷	-16	54.9	45	19 21	19 56	20 42	9	06	58 23 55 34
19	108	17.3		41.7	35	21.3 ¹²⁶		49.3	50	40	20 21	21 18	8	51	60 ** ** **
20	123	17.2		42.2	49	53.0 ¹²⁷		43.6	52	49	34	21 38	43	62	** ** *
21	138	17.0		42.7	64	24.7 ¹²⁷		37.8	54	19 59	20 48	22 03	35	63	** ** *
22	153	16.8		43.1	78	56.4 ¹²⁷		31.9	56	20 11	21 05	22 41	26	65	0 00 31
23	168	16.6		43.6	93	28.2 ¹²⁸		26.0	58	24	26	** **	16	66	10 30
24	183	16.4	-20	44.1	107	59.9 ¹²⁷	-16	20.0	60 S	20 40	21 53	** **	8	04	69 0 23 27
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 44 ^m 2		Mag: -3.9 PMG: 11 ^h 02 ^m		Mag: +1.7 PMG: 9 ^h 04 ^m		Mag: -1.7 PMG: 10 ^h 16 ^m		Mag: +0.5 PMG: 13 ^h 32 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	63	08.5	194	35.2	223	57.4	205	35.9	156	24.8					
1	78	10.9	209	34.6	238	58.3	220	37.9	171	27.0					
2	93	13.4	224	33.9	253	59.3	235	39.8	186	29.1					
3	108	15.9	239	33.2	269	00.3	250	41.8	201	31.3					
4	123	18.3	254	32.5	284	01.3	265	43.7	216	33.5					
5	138	20.8	269	31.8	299	02.3	280	45.7	231	35.6					
6	153	23.3	284	31.1	314	03.3	295	47.6	246	37.8					
7	168	25.7	299	30.5	329	04.3	310	49.6	261	40.0					
8	183	28.2	314	29.8	344	05.3	325	51.5	276	42.1					
9	198	30.7	329	29.1	359	06.3	340	53.5	291	44.3					
10	213	33.1	344	28.4	14	07.3	355	55.4	306	46.5					
11	228	35.6	359	27.7	29	08.3	10	57.4	321	48.6					
12	243	38.1	14	27.0	44	09.3	25	59.3	336	50.8					
13	258	40.5	29	26.3	59	10.3	41	01.3	351	53.0					
14	273	43.0	44	25.6	74	11.3	56	03.2	6	55.1					
15	288	45.4	59	25.0	89	12.3	71	05.2	21	57.3					
16	303	47.9	74	24.3	104	13.3	86	07.1	36	59.5					
17	318	50.4	89	23.6	119	14.3	101	09.1	52	01.6					
18	333	52.8	104	22.9	134	15.3	116	11.0	67	03.8					
19	348	55.3	119	22.2	163	149	131	13.0	82	05.9					
20	3	57.8	134	21.5	17.2	164	146	14.9	97	08.1					
21	19	00.2	149	20.8	18.1	179	161	16.9	112	10.3					
22	34	02.7	164	20.1	19.0	194	176	18.9	127	12.4					
23	49	05.2	179	19.4	19.8	209	191	20.8	142	14.6					
24	64	07.6	194	18.7	-17	20.7	206	22.8	157	16.8					
Dif	—		-7		-9		+20		-2						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 6 ^d 5	PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1									
	PMG: 11 ^h 47 ^m 1					SD: 14'9		PMG: 17 ^h 21 ^m			R°: 46 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	183	16.4	-20 44.1	107	59.9	-16 20.0	61	60 N	6 36	7 30	8 22	13 03	20	21 47 75
1	198	16.2	44.6	122	31.6 ¹²⁷	13.9	61	58	30	21	8 08	12 54	22	21 56 72
2	213	16.0	45.1	137	03.4 ¹²⁸	07.7	62	56	25	12	7 56	46 24		22 03 71
3	228	15.8	45.6	151	35.1 ¹²⁷	-16 01.4	63	54	20	7 05	46	39 26		10 68
4	243	15.6	46.1	166	06.9 ¹²⁸	-15 55.1	63	52	16	6 58	37	32 28		16 67
5	258	15.5	-20 46.6	180	38.7 ¹²⁸	-15 48.7	64	50	6 11	6 52	7 28	12 26	29	22 21 66
6	273	15.3	-20 47.1	195	10.5 ¹²⁸	-15 42.2	65	45	6 02	6 38	7 11	12 14	32	22 33 62
7	288	15.1	47.5	209	42.3 ¹²⁸	35.7	65	40	5 53	27	6 56	12 03	35	43 59
8	303	14.9	48.0	224	14.1 ¹²⁸	29.0	67	35	46	17	44	11 54	37	51 57
9	318	14.7	48.5	238	46.0 ¹²⁹	22.3	67	30	38	6 08	33	46 39		22 58 55
10	333	14.5	49.0	253	17.8 ¹²⁸	15.5	68	20	24	5 51	6 15	33 41		23 11 52
11	348	14.3	-20 49.5	267	49.7 ¹²⁹	-15 08.7	68	10 N	5 10	5 36	5 59	11 21	44	23 22 49
12	3	14.1	-20 50.0	282	21.5 ¹²⁸	-15 01.7	70	0	4 56	5 21	5 43	11 09	47	23 32 46
13	18	13.9	50.4	296	53.4 ¹²⁹	-14 54.7	70	10 S	39	5 05	28	10 58	49	42 43
14	33	13.7	50.9	311	25.3 ¹²⁹	47.7	70	20	4 19	4 47	5 11	46 52		23 52 41
15	48	13.5	51.4	325	57.2 ¹²⁹	40.5	72	30	3 53	25	4 52	32 55		*** ** **
16	63	13.3	51.9	340	29.1 ¹²⁹	33.3	72	35	37	4 12	41	24 57		*** ** **
17	78	13.2	-20 52.4	355	01.0 ¹²⁹	-14 26.0	73	40	3 17	3 56	4 28	10 15	58	*** ** **
18	93	13.0	-20 52.8	9	32.9 ¹²⁹	-14 18.6	74	45	2 51	3 37	4 12	10 04	61	*** ** **
19	108	12.8	53.3	24	04.8 ¹²⁹	11.2	74	50	2 15	12	3 53	9 51	64	0 09 31
20	123	12.6	53.8	38	36.7 ¹²⁹	-14 03.7	75	52	1 56	3 00	44	45 65		16 29
21	138	12.4	54.3	53	08.7 ¹³⁰	-13 56.1	76	54	1 30	2 45	34	38 67		23 28
22	153	12.2	54.7	67	40.6 ¹²⁹	48.4	77	56	0 53	28	22	31 69		31 26
23	168	12.0	55.2	82	12.5 ¹²⁹	40.7	77	58	** ** *	2 08	3 09	22 71		40 24
24	183	11.8	-20 55.7	96	44.5 ¹³⁰	-13 32.9	78	60 S	** ** *	1 40	2 53	9 13	73	0 50 22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 40 ^m 3		Mag: -3.9 PMG: 11 ^h 03 ^m		Mag: +1.7 PMG: 9 ^h 02 ^m		Mag: -1.7 PMG: 10 ^h 13 ^m		Mag: +0.5 PMG: 13 ^h 29 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	64	07.6	194	18.7	-17 20.7	224	21.3	-7 11.0	206	22.8	-13 47.6	157	16.8	-22 27.6
1	79	10.1	209	18.0	21.6	239	22.3	11.6	221	24.7	47.8	172	18.9	27.6
2	94	12.6	224	17.3	22.5	254	23.3	12.2	236	26.7	48.0	187	21.1	27.6
3	109	15.0	239	16.6	23.4	269	24.3	12.8	251	28.6	48.1	202	23.3	27.6
4	124	17.5	254	16.0	24.3	284	25.3	13.4	266	30.6	48.3	217	25.4	27.6
5	139	19.9	269	15.3	-17 25.1	299	26.3	-7 14.0	281	32.5	-13 48.4	232	27.6	-22 27.6
6	154	22.4	284	14.6	-17 26.0	314	27.3	-7 14.6	296	34.5	-13 48.6	247	29.7	-22 27.6
7	169	24.9	299	13.9	26.9	329	28.3	15.2	311	36.4	48.8	262	31.9	27.6
8	184	27.3	314	13.2	27.8	344	29.3	15.8	326	38.4	48.9	277	34.1	27.7
9	199	29.8	329	12.5	28.7	359	30.2	16.4	341	40.3	49.1	292	36.2	27.7
10	214	32.3	344	11.8	29.5	14 31.2	16.9	16.9	356	42.3	49.3	307	38.4	27.7
11	229	34.7	359	11.1	-17 30.4	29 32.2	-7 17.5	17.5	11 44.2	-13 49.4	49.4	322	40.6	-22 27.7
12	244	37.2	14 10.4	-17 31.3	44 33.2	-7 18.1	18.1	18.1	26 46.2	-13 49.6	49.6	337	42.7	-22 27.7
13	259	39.7	29 09.7	32.2	59 34.2	18.7	18.7	18.7	41 48.1	49.8	49.8	352	44.9	27.7
14	274	42.1	44 09.0	33.0	74 35.2	19.3	19.3	19.3	56 50.1	49.9	49.9	7 47.0		27.7
15	289	44.6	59 08.3	33.9	89 36.2	19.9	19.9	19.9	71 52.0	50.1	50.1	22 49.2		27.7
16	304	47.1	74 07.6	34.8	104 37.2	20.5	20.5	20.5	86 54.0	50.2	50.2	37 51.4		27.7
17	319	49.5	89 06.9	-17 35.6	119 38.2	-7 21.1	21.1	21.1	101 55.9	-13 50.4	50.4	52 53.5	-22 27.7	
18	334	52.0	104 06.2	-17 36.5	134 39.2	-7 21.7	21.7	21.7	116 57.9	-13 50.6	50.6	67 55.7	-22 27.8	
19	349	54.4	119 05.4	37.4	149 40.2	22.3	22.3	22.3	131 59.8	50.7	50.7	82 57.9		27.8
20	4	56.9	134 04.7	38.3	164 41.2	22.9	22.9	22.9	147 01.8	50.9	50.9	98 00.0		27.8
21	19	59.4	149 04.0	39.1	179 42.2	23.5	23.5	23.5	162 03.8	51.1	51.1	113 02.2		27.8
22	35	01.8	164 03.3	40.0	194 43.2	24.1	24.1	24.1	177 05.7	51.2	51.2	128 04.3		27.8
23	50	04.3	179 02.6	40.9	209 44.2	24.7	24.7	24.7	192 07.7	51.4	51.4	143 06.5		27.8
24	65	06.8	194 01.9	-17 41.7	224 45.2	-7 25.3	25.3	25.3	207 09.6	-13 51.5	51.5	158 08.7	-22 27.8	
Dif	—		-7	-9	+10	-6			+20	-2		+22		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 7 ^d 5	PHE { 4 ^h : 55 ^h /3 12 ^h : 55 ^h /6 20 ^h : 55 ^h /8									
	PMG: 11 ^h 47 ^m 4					SD: 15 ^h 0			PMG: 18 ^h 07 ^m		R°: 46 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m
0	183	11.8	-20 55.7	96	44.5	-13 32.9	78	60 N	15 10	16 02	16 56	13 23	17	23 02 78
1	198	11.6	56.2	111	16.5 ¹³⁰	25.1	80	58	24	12	17 02	16 20		08 76
2	213	11.4	56.6	125	48.4 ¹²⁹	17.1	80	56	36	20	08	10 22		14 73
3	228	11.2	57.1	140	20.4 ¹³⁰	09.2	79	54	47	28	13	05 23		18 72
4	243	11.0	57.6	154	52.4 ¹³⁰	-13 01.1	81	52	15 56	35	17	13 00	25	23 69
5	258	10.8	-20 58.0	169	24.3 ¹²⁹	-12 53.0	81	50	16 04	16 41	17 22	12 55	27	23 27 67
6	273	10.6	-20 58.5	183	56.3 ¹³⁰	-12 44.8	82	45	16 22	16 55	17 31	12 46	30	23 35 64
7	288	10.4	59.0	198	28.3 ¹³⁰	36.5	83	40	37	17 07	40	38 32		42 61
8	303	10.2	59.5	213	00.3 ¹³⁰	28.2	83	35	16 49	17	48	31 35		48 59
9	318	10.0	-20 59.9	227	32.3 ¹³⁰	19.8	84	30	17 00	26	17 55	25 36		23 53 57
10	333	09.8	-21 00.4	242	04.3 ¹³⁰	11.3	85	20	19	43	18 10	14 40		** ** *
11	348	09.6	-21 00.9	256	36.3 ¹³⁰	-12 02.8	85	10 N	17 36	17 58	18 24	12 05	43	** ** *
12	3	09.4	-21 01.3	271	08.3 ¹³⁰	-11 54.2	86	0	17 51	18 13	18 39	11 56	46	** ** *
13	18	09.2	01.8	285	40.2 ¹²⁹	45.6	86	10 S	18 07	29	18 56	47 49		** ** *
14	33	09.0	02.3	300	12.2 ¹³⁰	36.9	87	20	24	18 48	19 16	38 52		** ** *
15	48	08.8	02.7	314	44.2 ¹³⁰	28.1	88	30	43	19 10	42	27 56		0 05 37
16	63	08.6	03.2	329	16.2 ¹³⁰	19.3	88	35	18 55	23	19 59	21 58		12 35
17	78	08.4	-21 03.6	343	48.2 ¹³⁰	-11 10.4	89	40	19 08	19 40	20 19	11 13	61	0 20 33
18	93	08.2	-21 04.1	358	20.2 ¹³⁰	-11 01.4	90	45	19 24	19 59	20 45	11 05	63	0 29 30
19	108	08.0	04.6	12	52.2 ¹³⁰	-10 52.4	90	50	43	20 25	21 22	10 55	67	40 27
20	123	07.8	05.0	27	24.2 ¹³⁰	43.3	91	52	19 52	37	21 43	50 69		45 26
21	138	07.6	05.5	41	56.2 ¹³⁰	34.2	91	54	20 03	20 52	22 10	45 70		51 24
22	153	07.4	05.9	56	28.1 ¹²⁹	25.0	92	56	15	21 10	22 52	40 72		0 57 22
23	168	07.2	06.4	71	00.1 ¹³⁰	15.7	93	58	29	21 31	** ** *	33 74		1 04 20
24	183	07.0	-21 06.9	85	32.1 ¹³⁰	-10 06.4	93	60 S	20 45	22 00	** ** *	10 26	77	1 12 18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 36 ^m 3		Mag: -3.9 PMG: 11 ^h 04 ^m		Mag: +1.7 PMG: 9 ^h 00 ^m		Mag: -1.7 PMG: 10 ^h 10 ^m		Mag: +0.5 PMG: 13 ^h 25 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	65	06.8	194	01.9	-17	41.7	224	45.2	-7	25.3
1	80	09.2	209	01.2		42.6	239	46.2		25.9
2	95	11.7	224	00.5		43.5	254	47.2		26.5
3	110	14.2	238	59.8		44.3	269	48.2		27.1
4	125	16.6	253	59.1		45.2	284	49.2		27.7
5	140	19.1	268	58.4	-17	46.0	299	50.2	-7	28.3
6	155	21.5	283	57.7	-17	46.9	314	51.2	-7	28.8
7	170	24.0	298	57.0		47.8	329	52.1		29.4
8	185	26.5	313	56.3		48.6	344	53.1		30.0
9	200	28.9	328	55.5		49.5	359	54.1		30.6
10	215	31.4	343	54.8		50.3	14	55.1		31.2
11	230	33.9	358	54.1	-17	51.2	29	56.1	-7	31.8
12	245	36.3	13	53.4	-17	52.0	44	57.1	-7	32.4
13	260	38.8	28	52.7		52.9	59	58.1		33.0
14	275	41.3	43	52.0		53.8	74	59.1		33.6
15	290	43.7	58	51.3		54.6	90	00.1		34.2
16	305	46.2	73	50.5		55.5	105	01.1		34.8
17	320	48.7	88	49.8	-17	56.3	120	02.1	-7	35.4
18	335	51.1	103	49.1	-17	57.2	135	03.1	-7	36.0
19	350	53.6	118	48.4		58.0	150	04.1		36.6
20	5	56.0	133	47.7		58.9	165	05.1		37.2
21	20	58.5	148	47.0	-17	59.7	180	06.1		37.7
22	36	01.0	163	46.2	-18	00.6	195	07.1		38.3
23	51	03.4	178	45.5		01.4	210	08.1		38.9
24	66	05.9	193	44.8	-18	02.2	225	09.0	-7	39.5
Dif	—		-7	-9		+10	-6	+20		-2
									+22	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna								
	SD: 16/2 PMG: 11 ^h 47 ^m 7			Edad: 8 ^d 5 PHE { SD: 15/2 PMG: 18 ^h 53 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m				
0	183	07.0	-21	06.9	85	32.1	-10	06.4	60 N	6	40	7	34	8	27	13	40	15				
1	198	06.8		07.3	100	04.0 ¹²⁹	-9	57.0 ⁹⁴	58	34		24	12		36	17						
2	213	06.6		07.8	114	36.0 ¹³⁰		47.6 ⁹⁴	56	28		15	8	00	32	20						
3	228	06.4		08.2	129	07.9 ¹²⁹		38.1 ⁹⁵	54	23		08	7	49	28	22						
4	243	06.2		08.7	143	39.9 ¹³⁰		28.6 ⁹⁵	52	18		7	01	40	25	24						
5	258	06.0	-21	09.1	158	11.8 ¹²⁹	-9	19.0 ⁹⁶	50	6	14	6	54	7	31	13	22	25				
6	273	05.8	-21	09.6	172	43.7 ¹²⁹	-9	09.3 ⁹⁷	45	6	04	6	40	7	13	13	16	28				
7	288	05.6		10.0	187	15.6 ¹²⁹	-8	59.6 ⁹⁷	40	5	55		29	6	59	10	32					
8	303	05.4		10.5	201	47.5 ¹²⁹		49.8 ⁹⁸	35	47		18	46		06	34						
9	318	05.2		10.9	216	19.4 ¹²⁹		40.0 ⁹⁸	30	40		6	09	35	13	01	37					
10	333	04.9		11.4	230	51.3 ¹²⁹		30.1 ⁹⁹	20	25		5	53	16	12	54	41	0	03	52		
11	348	04.7	-21	11.8	245	23.2 ¹²⁹	-8	20.2 ⁹⁹	10 N	5	11		5	37	6	00		0	11	49		
12	3	04.5	-21	12.3	259	55.0 ¹²⁸	-8	10.3 ⁹⁹	0	4	56		5	22	5	44		0	18	46		
13	18	04.3		12.7	274	26.9 ¹²⁹	-8	00.2 ¹⁰¹	10 S		39		5	06	28	36	50		25	44		
14	33	04.1		13.2	288	58.7 ¹²⁸	-7	50.2 ¹⁰⁰	20	4	19		4	47	5	11	30	54		33	40	
15	48	03.9		13.6	303	30.5 ¹²⁸		40.0 ¹⁰²	30	3	53		25	4	52	23	57		42	36		
16	63	03.7		14.1	318	02.3 ¹²⁸		29.9 ¹⁰¹	35	36		4	11	40	19	59		47	34			
17	78	03.5	-21	14.5	332	34.1 ¹²⁸	-7	19.6 ¹⁰³	40	3	16		3	55	4	27	12	14	62	0	53	32
18	93	03.3	-21	15.0	347	05.9 ¹²⁸	-7	09.4 ¹⁰²	45	2	49		3	35	4	11	12	08	66	0	59	30
19	108	03.1		15.4	1	37.6 ¹²⁷	-6	59.1 ¹⁰³	50	2	12		3	10	3	51	12	02	69	1	07	26
20	123	02.9		15.9	16	09.3 ¹²⁷		48.7 ¹⁰⁴	52	1	52		2	57	42	11	59	71		11	24	
21	138	02.7		16.3	30	41.1 ¹²⁸		38.3 ¹⁰⁴	54	1	25		42	32	55	73		15	22			
22	153	02.4		16.7	45	12.7 ¹²⁶		27.8 ¹⁰⁵	56	0	43		25	20	52	74		19	21			
23	168	02.2		17.2	59	44.4 ¹²⁷		17.3 ¹⁰⁵	58	** **	2	03		3	06	47	78		24	19		
24	183	02.0	-21	17.6	74	16.1 ¹²⁷	-6	06.8 ¹⁰⁵	60 S	** **	1	34		2	50	11	43	80		1	30	16

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 32 ^m 4		Mag: -3.9 PMG: 11 ^h 06 ^m			Mag: +1.7 PMG: 8 ^h 59 ^m			Mag: -1.7 PMG: 10 ^h 07 ^m			Mag: +0.5 PMG: 13 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	66	05.9	193	44.8	-18	02.2	225	09.0	-7	39.5	207	56.5	-13	55.4	159	00.6	-22	28.0
1	81	08.4	208	44.1		03.1	240	10.0		40.1	222	58.4		55.6	174	02.7		28.1
2	96	10.8	223	43.4		03.9	255	11.0		40.7	238	00.4		55.8	189	04.9		28.1
3	111	13.3	238	42.7		04.8	270	12.0		41.3	253	02.4		55.9	204	07.0		28.1
4	126	15.8	253	41.9		05.6	285	13.0		41.9	268	04.3		56.1	219	09.2		28.1
5	141	18.2	268	41.2	-18	06.5	300	14.0	-7	42.5	283	06.3	-13	56.3	234	11.4	-22	28.1
6	156	20.7	283	40.5	-18	07.3	315	15.0	-7	43.1	298	08.2	-13	56.4	249	13.5	-22	28.1
7	171	23.2	298	39.8		08.1	330	16.0		43.7	313	10.2		56.6	264	15.7		28.1
8	186	25.6	313	39.0		09.0	345	17.0		44.3	328	12.1		56.7	279	17.8		28.1
9	201	28.1	328	38.3		09.8	0	18.0		44.9	343	14.1		56.9	294	20.0		28.1
10	216	30.5	343	37.6		10.7	15	19.0		45.4	358	16.0		57.1	309	22.2		28.1
11	231	33.0	358	36.9	-18	11.5	30	20.0	-7	46.0	13	18.0	-13	57.2	324	24.3	-22	28.2
12	246	35.5	13	36.1	-18	12.3	45	21.0	-7	46.6	28	19.9	-13	57.4	339	26.5	-22	28.2
13	261	37.9	28	35.4		13.2	60	22.0		47.2	43	21.9		57.5	354	28.6		28.2
14	276	40.4	43	34.7		14.0	75	23.0		47.8	58	23.9		57.7	9	30.8		28.2
15	291	42.9	58	34.0		14.8	90	23.9		48.4	73	25.8		57.9	24	33.0		28.2
16	306	45.3	73	33.2		15.7	105	24.9		49.0	88	27.8		58.0	39	35.1		28.2
17	321	47.8	88	32.5	-18	16.5	120	25.9	-7	49.6	103	29.7	-13	58.2	54	37.3	-22	28.2
18	336	50.3	103	31.8	-18	17.3	135	26.9	-7	50.2	118	31.7	-13	58.3	69	39.4	-22	28.2
19	351	52.7	118	31.1		18.1	150	27.9		50.8	133	33.6		58.5	84	41.6		28.2
20	6	55.2	133	30.3		19.0	165	28.9		51.4	148	35.6		58.7	99	43.8		28.2
21	21	57.6	148	29.6		19.8	180	29.9		51.9	163	37.5		58.8	114	45.9		28.3
22	37	00.1	163	28.9		20.6	195	30.9		52.5	178	39.5		59.0	129	48.1		28.3
23	52	02.6	178	28.1		21.5	210	31.9		53.1	193	41.5		59.2	144	50.2		28.3
24	67	05.0	193	27.4	-18	22.3	225	32.9	-7	53.7	208	43.4	-13	59.3	159	52.4	-22	28.3
Dif	—		-7	-8			+10	-6			+20	-2			+22			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 9 ^d 5	PHE { 4 ^h : 56'9 12 ^h : 57'2 20 ^h : 57'5									
	PMG: 11 ^h 48 ^m 0					SD: 15°5			PMG: 19 ^h 40 ^m		R°: 49 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	02.0	-21	17.6	74	16.1	-6	06.8	60 N	15 07	16 00	16 54	13 55 16	0 20 81
1	198	01.8		18.1	88	47.7 ¹²⁶	-5	56.2 ¹⁰⁶	58	21	10	17 00	53 18	24 78
2	213	01.6		18.5	103	19.3 ¹²⁶		45.6 ¹⁰⁶	56	34	19	06	52 20	27 76
3	228	01.4		19.0	117	50.9 ¹²⁶		34.9 ¹⁰⁷	54	45	26	11	50 22	30 74
4	243	01.2		19.4	132	22.5 ¹²⁶		24.2 ¹⁰⁷	52	15 54	34	16	49 23	32 72
5	258	01.0	-21	19.8	146	54.0 ¹²⁵	-5	13.4 ¹⁰⁸	50	16 03	16 40	17 21	13 47 26	0 34 71
6	273	00.8	-21	20.3	161	25.5 ¹²⁵	-5	02.6 ¹⁰⁸	45	16 21	16 54	17 31	13 44 29	0 39 67
7	288	00.5		20.7	175	57.0 ¹²⁵	-4	51.8 ¹⁰⁸	40	36	17 06	39	42 32	43 64
8	303	00.3		21.1	190	28.5 ¹²⁵		40.9 ¹⁰⁹	35	16 49	16	48	40 35	47 61
9	318	00.1		21.6	204	59.9 ¹²⁴		30.0 ¹⁰⁹	30	17 00	26	17 55	38 37	50 59
10	332	59.9		22.0	219	31.3 ¹²⁴		19.0 ¹¹⁰	20	19	43	18 10	35 41	0 55 55
11	347	59.7	-21	22.4	234	02.7 ¹²⁴	-4	08.1 ¹⁰⁹	10 N	17 36	17 58	18 24	13 32 45	1 00 51
12	2	59.5	-21	22.9	248	34.0 ¹²³	-3	57.0 ¹¹¹	0	17 52	18 14	18 40	13 29 48	1 04 48
13	17	59.3		23.3	263	05.3 ¹²³		46.0 ¹¹⁰	10 S	18 08	30	18 57	26 52	09 44
14	32	59.0		23.7	277	36.6 ¹²³		34.9 ¹¹¹	20	25	18 49	19 18	24 55	13 41
15	47	58.8		24.2	292	07.9 ¹²³		23.7 ¹¹²	30	45	19 12	19 44	20 60	18 37
16	62	58.6		24.6	306	39.1 ¹²²		12.6 ¹¹¹	35	18 57	25	20 01	18 63	21 35
17	77	58.4	-21	25.0	321	10.3 ¹²²	-3	01.4 ¹¹²	40	19 10	19 42	20 22	13 16 65	1 25 31
18	92	58.2	-21	25.4	335	41.4 ¹²¹	-2	50.2 ¹¹²	45	19 26	20 02	20 49	13 14 68	1 29 28
19	107	58.0		25.9	350	12.6 ¹²²		38.9 ¹¹³	50	46	28	21 27	11 72	33 25
20	122	57.8		26.3	4	43.6 ¹²⁰		27.6 ¹¹³	52	19 56	41	21 48	10 73	35 24
21	137	57.5		26.7	19	14.7 ¹²¹		16.3 ¹¹³	54	20 06	20 56	22 16	08 76	37 22
22	152	57.3		27.2	33	45.7 ¹²⁰	-2	05.0 ¹¹³	56	19	21 14	23 05	06 78	40 20
23	167	57.1		27.6	48	16.7 ¹²⁰	-1	53.6 ¹¹⁴	58	33	21 37	** **	05 80	43 17
24	182	56.9	-21	28.0	62	47.6 ¹¹⁹	-1	42.2 ¹¹⁴	60 S	20 50	22 08	** **	13 03 83	1 46 15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 28 ^m 5		Mag: -3.9 PMG: 11 ^h 07 ^m		Mag: +1.7 PMG: 8 ^h 57 ^m		Mag: -1.7 PMG: 10 ^h 04 ^m		Mag: +0.5 PMG: 13 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	67	05.0	193	27.4	-18	22.3	225	32.9	-7	53.7
1	82	07.5	208	26.7		23.1	240	33.9		54.3
2	97	10.0	223	25.9		23.9	255	34.9		54.9
3	112	12.4	238	25.2		24.8	270	35.9		55.5
4	127	14.9	253	24.5		25.6	285	36.9		56.1
5	142	17.4	268	23.7	-18	26.4	300	37.8	-7	56.7
6	157	19.8	283	23.0	-18	27.2	315	38.8	-7	57.3
7	172	22.3	298	22.3		28.0	330	39.8		57.8
8	187	24.8	313	21.5		28.9	345	40.8		58.4
9	202	27.2	328	20.8		29.7	0	41.8		59.0
10	217	29.7	343	20.1		30.5	15	42.8	-7	59.6
11	232	32.1	358	19.3	-18	31.3	30	43.8	-8	00.2
12	247	34.6	13	18.6	-18	32.1	45	44.8	-8	00.8
13	262	37.1	28	17.8		32.9	60	45.8		01.4
14	277	39.5	43	17.1		33.7	75	46.8		02.0
15	292	42.0	58	16.4		34.6	90	47.8		02.6
16	307	44.5	73	15.6		35.4	105	48.8		03.1
17	322	46.9	88	14.9	-18	36.2	120	49.7	-8	03.7
18	337	49.4	103	14.1	-18	37.0	135	50.7	-8	04.3
19	352	51.9	118	13.4		37.8	150	51.7		04.9
20	7	54.3	133	12.7		38.6	165	52.7		05.5
21	22	56.8	148	11.9		39.4	180	53.7		06.1
22	37	59.2	163	11.2		40.2	195	54.7		06.7
23	53	01.7	178	10.4		41.0	210	55.7		07.3
24	68	04.2	193	09.7	-18	41.8	225	56.7	-8	07.9
Dif	—		-7		-8		+10		-6	
							+20		-2	
									+22	
									0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 48 ^m 4			Edad: 10 ^d 5 SD: 15/7 PMG: 20 ^h 29 ^m	PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/5 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	182	56.9	-21	62	47.6	-1	42.2	60 N	6 43	7 37	8 31	14 11	16	1 41	85
1	197	56.7		77	18.5 ¹¹⁹		30.8 ¹¹⁴	58	37	27	16	11 19		42	82
2	212	56.4		91	49.3 ¹¹⁸		19.3 ¹¹⁵	56	31	19	8 04	12 21		43	79
3	227	56.2		106	20.1 ¹¹⁸	-1	07.9 ¹¹⁴	54	26	11	7 53	12 23		44	77
4	242	56.0		120	50.9 ¹¹⁸	-0	56.4 ¹¹⁵	52	21	7 03	43	12 25		44	75
5	257	55.8	-21	135	21.6 ¹¹⁷	-0	44.9 ¹¹⁵	50	6 16	6 57	7 34	14 13	26	1 45	73
6	272	55.6	-21	149	52.3 ¹¹⁷	-0	33.3 ¹¹⁶	45	6 06	6 43	7 16	14 13	31	1 46	69
7	287	55.4		164	22.9 ¹¹⁶		21.8 ¹¹⁵	40	5 57	31	7 01	14 34		47	66
8	302	55.1		178	53.5 ¹¹⁶	-0	10.2 ¹¹⁶	35	49	20	6 48	15 36		48	63
9	317	54.9		193	24.1 ¹¹⁶	+0	01.4 ¹¹⁶	30	41	6 11	37	15 39		49	60
10	332	54.7		207	54.6 ¹¹⁵		13.0 ¹¹⁶	20	27	5 54	17	16 43		50	56
11	347	54.5	-21	222	25.0 ¹¹⁴	+0	24.6 ¹¹⁶	10 N	5 12	5 38	6 01	14 17	47	1 51	53
12	2	54.2	-21	236	55.4 ¹¹⁴	+0	36.3 ¹¹⁷	0	4 57	5 22	5 45	14 17	51	1 52	49
13	17	54.0		251	25.7 ¹¹³		47.9 ¹¹⁶	10 S	39	5 06	29	18 54		53	46
14	32	53.8		265	56.0 ¹¹³	+0	59.6 ¹¹⁷	20	4 19	4 47	5 11	19 58		54	42
15	47	53.6		280	26.3 ¹¹³	+1	11.3 ¹¹⁷	30	3 52	25	4 51	20 62		55	38
16	62	53.4		294	56.5 ¹¹²		23.0 ¹¹⁷	35	35	4 11	40	21 64		56	35
17	77	53.1	-21	309	26.6 ¹¹¹	+1	34.7 ¹¹⁷	40	3 14	3 54	4 26	14 21	68	1 56	33
18	92	52.9	-21	323	56.7 ¹¹¹	+1	46.4 ¹¹⁷	45	2 47	3 34	4 10	14 22	71	1 57	30
19	107	52.7		338	26.7 ¹¹⁰	+1	58.1 ¹¹⁷	50	2 09	3 08	3 50	23 75		58	26
20	122	52.5		352	56.7 ¹¹⁰	+2	09.8 ¹¹⁷	52	1 48	2 55	40	23 77		59	24
21	137	52.2		7	26.6 ¹⁰⁹		21.6 ¹¹⁸	54	1 20	40	30	24 79		1 59	22
22	152	52.0		21	56.5 ¹⁰⁹		33.3 ¹¹⁷	56	0 31	2 22	17	24 82		2 00	20
23	167	51.8		36	26.3 ¹⁰⁸		45.0 ¹¹⁷	58	** **	1 59	3 03	25 84		00	18
24	182	51.6	-21	50	56.0 ¹⁰⁷	+2	56.8 ¹¹⁸	60 S	** **	1 28	2 46	14 26	86	2 01	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 24 ^m 5		Mag: -3.9 PMG: 11 ^h 08 ^m		Mag: +1.7 PMG: 8 ^h 56 ^m		Mag: -1.7 PMG: 10 ^h 01 ^m		Mag: +0.5 PMG: 13 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	68	04.2	193	09.7	-18	41.8	225	56.7	-8	07.9
1	83	06.6	208	08.9		42.6	240	57.7		08.4
2	98	09.1	223	08.2		43.4	255	58.7		09.0
3	113	11.6	238	07.5		44.2	270	59.7		09.6
4	128	14.0	253	06.7		45.0	286	00.6		10.2
5	143	16.5	268	06.0	-18	45.8	301	01.6	-8	10.8
6	158	19.0	283	05.2	-18	46.6	316	02.6	-8	11.4
7	173	21.4	298	04.5		47.4	331	03.6		12.0
8	188	23.9	313	03.7		48.2	346	04.6		12.6
9	203	26.4	328	03.0		49.0	1	05.6		13.1
10	218	28.8	343	02.2		49.8	16	06.6		13.7
11	233	31.3	358	01.5	-18	50.6	31	07.6	-8	14.3
12	248	33.7	13	00.7	-18	51.4	46	08.6	-8	14.9
13	263	36.2	28	00.0		52.2	61	09.6		15.5
14	278	38.7	42	59.2		53.0	76	10.5		16.1
15	293	41.1	57	58.5		53.8	91	11.5		16.7
16	308	43.6	72	57.7		54.6	106	12.5		17.2
17	323	46.1	87	57.0	-18	55.3	121	13.5	-8	17.8
18	338	48.5	102	56.2	-18	56.1	136	14.5	-8	18.4
19	353	51.0	117	55.5		56.9	151	15.5		19.0
20	8	53.5	132	54.7		57.7	166	16.5		19.6
21	23	55.9	147	54.0		58.5	181	17.5		20.2
22	38	58.4	162	53.2	-18	59.3	196	18.5		20.8
23	54	00.9	177	52.4	-19	00.1	211	19.5		21.3
24	69	03.3	192	51.7	-19	00.8	226	20.4	-8	21.9
Dif	—		-8	-8			+10	-6		+20

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 48 ^m 7			Edad: 11 ^d 5 PHE { SD: 16:0 PMG: 21 ^h 20 ^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	51.6	-21	38.0	50	56.0	+2 56.8	60 N	15 04	15 58	16 53	14 27 19	3 06 88	
1	197	51.4		38.4	65	25.7 ¹⁰⁷	+3 08.5 ¹¹⁷	58	19	16 08	16 59	30 21	04 85	
2	212	51.1		38.8	79	55.4 ¹⁰⁷	20.3 ¹¹⁸	56	32	17	17 05	33 24	02 83	
3	227	50.9		39.2	94	24.9 ¹⁰⁵	32.0 ¹¹⁷	54	43	25	10	35 26	3 01 80	
4	242	50.7		39.6	108	54.4 ¹⁰⁵	43.8 ¹¹⁸	52	15 53	32	15	37 28	2 59 79	
5	257	50.4	-21	40.0	123	23.9 ¹⁰⁵	+3 55.5 ¹¹⁷	50	16 02	16 39	17 20	14 39 30	2 58 77	
6	272	50.2	-21	40.4	137	53.2 ¹⁰³	+4 07.2 ¹¹⁷	45	16 20	16 53	17 30	14 44 34	2 55 73	
7	287	50.0		40.8	152	22.6 ¹⁰⁴	19.0 ¹¹⁸	40	36	17 06	39	48 37	53 69	
8	302	49.8		41.2	166	51.8 ¹⁰²	30.7 ¹¹⁷	35	16 48	16	47	51 40	51 66	
9	317	49.5		41.6	181	21.0 ¹⁰²	42.4 ¹¹⁷	30	17 00	26	17 55	54 42	49 64	
10	332	49.3		42.0	195	50.1 ¹⁰¹	+4 54.1 ¹¹⁷	20	19	43	18 10	14 59 46	46 60	
11	347	49.1	-21	42.4	210	19.2 ¹⁰¹	+5 05.8 ¹¹⁷	10 N	17 36	17 59	18 25	15 04 50	2 44 55	
12	2	48.9	-21	42.8	224	48.2 ¹⁰⁰	+5 17.5 ¹¹⁷	0	17 52	18 15	18 41	15 08 53	2 41 52	
13	17	48.6		43.2	239	17.1 ⁹⁹	29.1 ¹¹⁶	10 S	18 09	31	18 58	12 57	39 48	
14	32	48.4		43.6	253	45.9 ⁹⁸	40.8 ¹¹⁷	20	26	18 50	19 19	17 61	36 44	
15	47	48.2		44.0	268	14.7 ⁹⁸	+5 52.4 ¹¹⁶	30	46	19 13	19 46	22 65	33 40	
16	62	47.9		44.4	282	43.4 ⁹⁷	+6 04.1 ¹¹⁷	35	18 58	27	20 03	25 68	31 38	
17	77	47.7	-21	44.8	297	12.0 ⁹⁶	+6 15.7 ¹¹⁶	40	19 12	19 44	20 24	15 29 70	2 29 35	
18	92	47.5	-21	45.2	311	40.6 ⁹⁶	+6 27.2 ¹¹⁵	45	19 29	20 05	20 52	15 33 74	2 27 31	
19	107	47.3		45.6	326	09.1 ⁹⁵	38.8 ¹¹⁶	50	49	31	21 31	38 78	24 28	
20	122	47.0		45.9	340	37.5 ⁹⁴	+6 50.3 ¹¹⁵	52	19 59	20 45	21 53	40 80	23 26	
21	137	46.8		46.3	355	05.9 ⁹⁴	+7 01.9 ¹¹⁶	54	20 10	21 00	22 23	43 82	21 24	
22	152	46.6		46.7	9	34.1 ⁹²	13.4 ¹¹⁵	56	22	19	23 22	46 84	20 22	
23	167	46.3		47.1	24	02.3 ⁹²	24.8 ¹¹⁴	58	37	21 43	** **	49 87	18 20	
24	182	46.1	-21	47.5	38	30.5 ⁹²	+7 36.3 ¹¹⁵	60 S	20 54	22 15	** **	15 52 90	2 16 17	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 20 ^m 6		Mag: -3.9 PMG: 11 ^h 09 ^m		Mag: +1.7 PMG: 8 ^h 54 ^m		Mag: -1.7 PMG: 9 ^h 58 ^m		Mag: +0.5 PMG: 13 ^h 12 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	69	03.3	192	51.7	226	20.4	210	17.3	161	36.0				
1	84	05.8	207	50.9	241	21.4	225	19.3	176	38.2				
2	99	08.2	222	50.2	256	22.4	240	21.3	191	40.3				
3	114	10.7	237	49.4	271	23.4	255	23.2	206	42.5				
4	129	13.2	252	48.7	286	24.4	270	25.2	221	44.6				
5	144	15.6	267	47.9	301	25.4	285	27.1	236	46.8				
6	159	18.1	282	47.1	316	26.4	300	29.1	251	49.0				
7	174	20.6	297	46.4	331	27.4	315	31.1	266	51.1				
8	189	23.0	312	45.6	346	28.4	330	33.0	281	53.3				
9	204	25.5	327	44.9	1	29.3	345	35.0	296	55.4				
10	219	28.0	342	44.1	16	30.3	0	36.9	311	57.6				
11	234	30.4	357	43.3	31	31.3	15	38.9	326	59.7				
12	249	32.9	12	42.6	46	32.3	30	40.9	342	01.9				
13	264	35.3	27	41.8	61	33.3	45	42.8	357	04.1				
14	279	37.8	42	41.0	76	34.3	60	44.8	12	06.2				
15	294	40.3	57	40.3	91	35.3	75	46.7	27	08.4				
16	309	42.7	72	39.5	106	36.3	90	48.7	42	10.5				
17	324	45.2	87	38.8	121	37.3	105	50.7	57	12.7				
18	339	47.7	102	38.0	136	38.2	120	52.6	72	14.8				
19	354	50.1	117	37.2	151	39.2	135	54.6	87	17.0				
20	9	52.6	132	36.5	166	40.2	150	56.5	102	19.1				
21	24	55.1	147	35.7	181	41.2	165	58.5	117	21.3				
22	39	57.5	162	34.9	196	42.2	181	00.5	132	23.5				
23	55	00.0	177	34.2	211	43.2	196	02.4	147	25.6				
24	70	02.5	192	33.4	226	44.2	211	04.4	162	27.8				
Dif	—		-8	-8	+10	-6	+20	-2	+22	0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 49 ^m 1			Edad: 12 ^d 5 PHE { 4 ^h : 59 ^m 8 12 ^h : 60 ^m 1 20 ^h : 60 ^m 3 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	46.1	-21	47.5	38	30.5	+7	36.3	60 N	6	46	7	41	8	35	14	46
1	197	45.9		47.9	52	58.5	90	47.7	58	40	31		20		51	27	
2	212	45.6		48.3	67	26.5	90	+7	59.0	56	34	22	8	07	14	57	
3	227	45.4		48.7	81	54.4	89	+8	10.4	54	28	13	7	56	15	01	
4	242	45.2		49.1	96	22.2	88		21.7	52	23	7	06	46	05	33	
5	257	44.9	-21	49.4	110	49.9	87	+8	33.0	50	6	19	6	59	7	37	
6	272	44.7	-21	49.8	125	17.6	87	+8	44.2	45	6	08	6	45	7	18	
7	287	44.5		50.2	139	45.2	86	+8	55.4	40	5	59	33	7	03	25	
8	302	44.2		50.6	154	12.7	85	+9	06.5	35	51	22	6	50	31	44	
9	317	44.0		51.0	168	40.1	84		17.7	30	43	6	12	38	36	46	
10	332	43.8		51.4	183	07.4	83		28.7	20	28	5	55	19	45	51	
11	347	43.5	-21	51.7	197	34.7	83	+9	39.8	10 N	5	13	5	39	6	02	
12	2	43.3	-21	52.1	212	01.9	82	+9	50.7	0	4	57	5	23	5	45	
13	17	43.1		52.5	226	29.0	81	+10	01.7	10 S	40	5	06	29	09	60	
14	32	42.8		52.9	240	56.0	80		12.6	20	4	19	4	47	5	12	
15	47	42.6		53.3	255	22.9	79		23.4	30	3	52	24	4	51	27	
16	62	42.4		53.6	269	49.8	79		34.2	35	35	4	10	39	33	70	
17	77	42.1	-21	54.0	284	16.6	78	+10	44.9	40	3	13	3	53	4	25	
18	92	41.9	-21	54.4	298	43.3	77	+10	55.6	45	2	46	3	33	4	09	
19	107	41.7		54.8	313	09.9	76	+11	06.2	50	2	07	3	06	3	49	
20	122	41.4		55.1	327	36.4	75		16.7	52	1	44	2	53	39	17	
21	137	41.2		55.5	342	02.8	74		27.2	54	1	14	37	28	05	84	
22	152	41.0		55.9	356	29.2	74		37.7	56	0	16	2	19	15	10	
23	167	40.7		56.3	10	55.5	73		48.0	58	**	**	1	55	3	01	
24	182	40.5	-21	56.6	25	21.7	72	+11	58.3	60 S	**	**	1	22	2	43	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 16 ^m 7		Mag: -3.9 PMG: 11 ^h 10 ^m			Mag: +1.7 PMG: 8 ^h 52 ^m			Mag: -1.7 PMG: 9 ^h 54 ^m			Mag: +0.5 PMG: 13 ^h 08 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	70	02.5	192	33.4	-19	19.3	226	44.2	-8	36.0	211	04.4	-14	10.8
1	85	04.9	207	32.6		20.1	241	45.2		36.5	226	06.3		10.9
2	100	07.4	222	31.8		20.8	256	46.1		37.1	241	08.3		11.1
3	115	09.8	237	31.1		21.6	271	47.1		37.7	256	10.3		11.2
4	130	12.3	252	30.3		22.4	286	48.1		38.3	271	12.2		11.4
5	145	14.8	267	29.5	-19	23.1	301	49.1	-8	38.9	286	14.2	-14	11.5
6	160	17.2	282	28.8	-19	23.9	316	50.1	-8	39.4	301	16.1	-14	11.7
7	175	19.7	297	28.0		24.6	331	51.1		40.0	316	18.1		11.9
8	190	22.2	312	27.2		25.4	346	52.1		40.6	331	20.1		12.0
9	205	24.6	327	26.4		26.1	1	53.1		41.2	346	22.0		12.2
10	220	27.1	342	25.7		26.9	16	54.0		41.8	1	24.0		12.3
11	235	29.6	357	24.9	-19	27.6	31	55.0	-8	42.4	16	25.9	-14	12.5
12	250	32.0	12	24.1	-19	28.4	46	56.0	-8	42.9	31	27.9	-14	12.6
13	265	34.5	27	23.4		29.1	61	57.0		43.5	46	29.9		12.8
14	280	37.0	42	22.6		29.9	76	58.0		44.1	61	31.8		13.0
15	295	39.4	57	21.8		30.6	91	59.0		44.7	76	33.8		13.1
16	310	41.9	72	21.0		31.4	107	00.0		45.3	91	35.7		13.3
17	325	44.3	87	20.2	-19	32.1	122	00.9	-8	45.8	106	37.7	-14	13.4
18	340	46.8	102	19.5	-19	32.8	137	01.9	-8	46.4	121	39.7	-14	13.6
19	355	49.3	117	18.7		33.6	152	02.9		47.0	136	41.6		13.7
20	10	51.7	132	17.9		34.3	167	03.9		47.6	151	43.6		13.9
21	25	54.2	147	17.1		35.1	182	04.9		48.2	166	45.6		14.1
22	40	56.7	162	16.4		35.8	197	05.9		48.8	181	47.5		14.2
23	55	59.1	177	15.6		36.6	212	06.9		49.3	196	49.5		14.4
24	71	01.6	192	14.8	-19	37.3	227	07.9	-8	49.9	211	51.4	-14	14.5

Dif	—	-8	-7	+10	-6	+20	-2	+22	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 49 ^m 5			Edad: 13 ^d 5 PHE { SD: 16:5 PMG: 23 ^h 12 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	40.5	-21	56.6	25	21.7	+11 58.3	60 N	15 01	15 56	16 51	15 09 32	6 05 91	
1	197	40.2		57.0	39	47.8	71 +12 08.6 ¹⁰³	58	17	16 06	16 58	18 34	5 57 88	
2	212	40.0		57.4	54	13.8	70 18.7 ¹⁰¹	56	30	16	17 04	25 37	50 86	
3	227	39.8		57.8	68	39.7	69 28.8 ¹⁰¹	54	41	24	09	32 39	44 83	
4	242	39.5		58.1	83	05.6	69 38.9 ¹⁰¹	52	15 51	31	14	38 41	38 82	
5	257	39.3	-21	58.5	97	31.4	68 +12 48.8 ⁹⁹	50	16 01	16 38	17 19	15 44 42	5 33 80	
6	272	39.0	-21	58.9	111	57.0	66 +12 58.7 ⁹⁹	45	16 20	16 53	17 29	15 56 45	5 23 75	
7	287	38.8		59.2	126	22.7	67 +13 08.5 ⁹⁸	40	35	17 05	39	16 06 48	14 73	
8	302	38.6	-21	59.6	140	48.2	65 18.2 ⁹⁷	35	16 48	16	47	15 50	5 06 70	
9	317	38.3	-22	00.0	155	13.6	64 27.9 ⁹⁷	30	17 00	26	17 55	22 52	4 59 69	
10	332	38.1	-22	00.3	169	39.0	64 37.4 ⁹⁵	20	20	43	18 11	36 55	48 64	
11	347	37.8	-22	00.7	184	04.2	62 +13 46.9 ⁹⁵	10 N	17 37	17 59	18 26	16 47 58	4 38 61	
12	2	37.6	-22	01.0	198	29.4	62 +13 56.3 ⁹⁴	0	17 53	18 15	18 41	16 58 61	4 28 59	
13	17	37.4		01.4	212	54.6	62 +14 05.6 ⁹³	10 S	18 10	32	18 59	17 09 63	19 55	
14	32	37.1		01.8	227	19.6	60 14.8 ⁹²	20	27	18 52	19 20	21 66	4 08 53	
15	47	36.9		02.1	241	44.5	59 24.0 ⁹²	30	18 48	19 15	19 48	35 69	3 57 49	
16	62	36.6		02.5	256	09.4	59 33.0 ⁹⁰	35	19 00	29	20 05	43 71	50 47	
17	77	36.4	-22	02.9	270	34.2	58 +14 42.0 ⁹⁰	40	19 14	19 46	20 27	17 52 73	3 43 44	
18	92	36.2	-22	03.2	284	58.9	57 +14 50.8 ⁸⁸	45	19 31	20 07	20 55	18 03 75	3 34 42	
19	107	35.9		03.6	299	23.5	56 +14 59.6 ⁸⁸	50	19 52	34	21 35	16 78	24 38	
20	122	35.7		03.9	313	48.1	56 +15 08.2 ⁸⁶	52	20 02	20 48	21 58	22 80	19 36	
21	137	35.4		04.3	328	12.5	54 16.8 ⁸⁶	54	13	21 04	22 30	29 81	13 35	
22	152	35.2		04.6	342	36.9	54 25.3 ⁸⁵	56	26	23	** **	36 84	08 32	
23	167	34.9		05.0	357	01.3	54 33.6 ⁸³	58	41	21 48	** **	45 86	3 01 30	
24	182	34.7	-22	05.4	11	25.5	52 +15 41.9 ⁸³	60 S	20 58	22 22	** **	18 54 90	2 54 26	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 12 ^m 7		Mag: -3.9 PMG: 11 ^h 12 ^m		Mag: +1.7 PMG: 8 ^h 51 ^m		Mag: -1.7 PMG: 9 ^h 51 ^m		Mag: +0.5 PMG: 13 ^h 05 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	71	01.6	192	14.8	-19	37.3	227	07.9	-8	49.9				
1	86	04.1	207	14.0		38.0	242	08.8		50.5				
2	101	06.5	222	13.2		38.8	257	09.8		51.1				
3	116	09.0	237	12.4		39.5	272	10.8		51.7				
4	131	11.4	252	11.7		40.2	287	11.8		52.2				
5	146	13.9	267	10.9	-19	41.0	302	12.8	-8	52.8				
6	161	16.4	282	10.1	-19	41.7	317	13.8	-8	53.4				
7	176	18.8	297	09.3		42.4	332	14.8		54.0				
8	191	21.3	312	08.5		43.2	347	15.7		54.6				
9	206	23.8	327	07.7		43.9	2	16.7		55.1				
10	221	26.2	342	07.0		44.6	17	17.7		55.7				
11	236	28.7	357	06.2	-19	45.3	32	18.7	-8	56.3				
12	251	31.2	12	05.4	-19	46.1	47	19.7	-8	56.9				
13	266	33.6	27	04.6		46.8	62	20.7		57.4				
14	281	36.1	42	03.8		47.5	77	21.6		58.0				
15	296	38.6	57	03.0		48.2	92	22.6		58.6				
16	311	41.0	72	02.2		49.0	107	23.6		59.2				
17	326	43.5	87	01.4	-19	49.7	122	24.6	-8	59.8				
18	341	45.9	102	00.7	-19	50.4	137	25.6	-9	00.3				
19	356	48.4	116	59.9		51.1	152	26.6		00.9				
20	11	50.9	131	59.1		51.8	167	27.6		01.5				
21	26	53.3	146	58.3		52.5	182	28.5		02.1				
22	41	55.8	161	57.5		53.3	197	29.5		02.7				
23	56	58.3	176	56.7		54.0	212	30.5		03.2				
24	72	00.7	191	55.9	-19	54.7	227	31.5	-9	03.8				
Dif	—		-8		-7		+10		-6					
							+20		-2					
									+22					
									0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 49 ^m 9			Edad: 14 ^d 5 PHE { SD: 16/6 PMG: ***h ***m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	34.7	-22	05.4	11	25.5	+15	41.9	60 N	6 49	7 44	8 39	15 41	43	7 36	85	
1	197	34.4		05.7	25	49.7		50.0	58	42	34	24	15 52	46	25	83	
2	212	34.2		06.1	40	13.8	+15	58.1	56	36	24	8 10	16 02	47	16	80	
3	227	34.0		06.4	54	37.8	+16	06.0	54	31	16	7 59	11 49		07	79	
4	242	33.7		06.8	69	01.7		13.8	52	26	09	49	19 50		7 00	77	
5	257	33.5	-22	07.1	83	25.6	+16	21.5	50	6 21	7 02	7 39	16 26	51	6 53	76	
6	272	33.2	-22	07.5	97	49.4	+16	29.1	45	6 10	6 47	7 20	16 41	54	6 38	74	
7	287	33.0		07.8	112	13.1		36.6	40	6 01	35	7 05	16 54	55	27	71	
8	302	32.7		08.2	126	36.8		44.0	35	5 52	24	6 51	17 05	56	16	70	
9	317	32.5		08.5	141	00.4		51.2	30	44	6 14	40	14 58		6 08	68	
10	332	32.2		08.9	155	23.9	+16	58.4	20	29	5 56	20	31 59		5 52	66	
11	347	32.0	-22	09.2	169	47.4	+17	05.4	10 N	5 14	5 40	6 03	17 45	61	5 39	64	
12	2	31.7	-22	09.5	184	10.8	+17	12.3	0	4 58	5 24	5 46	17 59	62	5 27	61	
13	17	31.5		09.9	198	34.1		19.0	10 S	40	5 07	30	18 12	64	14	60	
14	32	31.3		10.2	212	57.4		25.7	20	4 19	4 48	5 12	27 66		5 01	57	
15	47	31.0		10.6	227	20.6		32.2	30	3 51	24	4 51	44 67		4 46	55	
16	62	30.8		10.9	241	43.7		38.6	35	34	4 10	39	18 54	68	37	53	
17	77	30.5	-22	11.3	256	06.8	+17	44.9	40	3 12	3 53	4 25	19 05	70	4 27	51	
18	92	30.3	-22	11.6	270	29.8	+17	51.0	45	2 44	3 32	4 08	19 18	71	4 16	49	
19	107	30.0		11.9	284	52.8	+17	57.0	50	2 04	3 05	3 47	34 74		4 02	46	
20	122	29.8		12.3	299	15.7	+18	02.9	52	1 41	2 51	38	42 74		3 55	45	
21	137	29.5		12.6	313	38.6		08.6	54	1 09	35	26	19 50	76	48	43	
22	152	29.3		13.0	328	01.4		14.3	56	** **	2 16	3 13	20 00	77	40	41	
23	167	29.0		13.3	342	24.2		19.7	58	** **	1 51	2 58	11 78		31	39	
24	182	28.8	-22	13.6	356	46.9	+18	25.1	60 S	** **	1 17	2 41	20 24	79	3 20	37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 08 ^m 8		Mag: -3.9 PMG: 11 ^h 13 ^m		Mag: +1.7 PMG: 8 ^h 49 ^m		Mag: -1.7 PMG: 9 ^h 48 ^m		Mag: +0.5 PMG: 13 ^h 01 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	72	00.7	191	55.9	-19	54.7	227	31.5	-9	03.8	212	38.5	-14	18.3	164	11.2	-22	29.3
1	87	03.2	206	55.1		55.4	242	32.5		04.4	227	40.5		18.4	179	13.4		29.3
2	102	05.7	221	54.3		56.1	257	33.5		05.0	242	42.5		18.6	194	15.5		29.3
3	117	08.1	236	53.5		56.8	272	34.4		05.5	257	44.4		18.7	209	17.7		29.4
4	132	10.6	251	52.7		57.5	287	35.4		06.1	272	46.4		18.9	224	19.8		29.4
5	147	13.1	266	51.9	-19	58.3	302	36.4	-9	06.7	287	48.4	-14	19.0	239	22.0	-22	29.4
6	162	15.5	281	51.1	-19	59.0	317	37.4	-9	07.3	302	50.3	-14	19.2	254	24.1	-22	29.4
7	177	18.0	296	50.3	-19	59.7	332	38.4		07.9	317	52.3		19.3	269	26.3		29.4
8	192	20.4	311	49.5	-20	00.4	347	39.4		08.4	332	54.2		19.5	284	28.5		29.4
9	207	22.9	326	48.7		01.1	2	40.3		09.0	347	56.2		19.7	299	30.6		29.4
10	222	25.4	341	47.9		01.8	17	41.3		09.6	2	58.2		19.8	314	32.8		29.4
11	237	27.8	356	47.2	-20	02.5	32	42.3	-9	10.2	18	00.1	-14	20.0	329	34.9	-22	29.4
12	252	30.3	11	46.4	-20	03.2	47	43.3	-9	10.7	33	02.1	-14	20.1	344	37.1	-22	29.4
13	267	32.8	26	45.6		03.9	62	44.3		11.3	48	04.1		20.3	359	39.2		29.4
14	282	35.2	41	44.8		04.6	77	45.3		11.9	63	06.0		20.4	14	41.4		29.4
15	297	37.7	56	44.0		05.3	92	46.3		12.5	78	08.0		20.6	29	43.5		29.4
16	312	40.2	71	43.2		06.0	107	47.2		13.0	93	10.0		20.7	44	45.7		29.5
17	327	42.6	86	42.4	-20	06.7	122	48.2	-9	13.6	108	11.9	-14	20.9	59	47.8	-22	29.5
18	342	45.1	101	41.5	-20	07.4	137	49.2	-9	14.2	123	13.9	-14	21.0	74	50.0	-22	29.5
19	357	47.6	116	40.7		08.1	152	50.2		14.8	138	15.9		21.2	89	52.1		29.5
20	12	50.0	131	39.9		08.8	167	51.2		15.3	153	17.8		21.4	104	54.3		29.5
21	27	52.5	146	39.1		09.5	182	52.1		15.9	168	19.8		21.5	119	56.5		29.5
22	42	54.9	161	38.3		10.2	197	53.1		16.5	183	21.8		21.7	134	58.6		29.5
23	57	57.4	176	37.5		10.9	212	54.1		17.1	198	23.7		21.8	150	00.8		29.5
24	72	59.9	191	36.7	-20	11.5	227	55.1	-9	17.7	213	25.7	-14	22.0	165	02.9	-22	29.5
Dif	—		-8		-7		+10		-6		+20		-2		+22			

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 50 ^m 3		Edad: 15 ^d 5 PHE { 4 ^h : 61/3 12 ^h : 61/3 20 ^h : 61/3 PMG: 0 ^h 13 ^m R°: 63 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	28.8	-22	13.6	356	46.9	+18 25.1	60 N	14 59	15 54	16 50	16 24 59	9 01 73	
1	197	28.5		14.0	11	09.6	37 30.3	58	15 15	16 05	16 57	38 59	8 48 71	
2	212	28.3		14.3	25	32.2	36 35.3	56	28	14	17 03	16 49 60	36 71	
3	227	28.0		14.6	39	54.8	36 40.3	54	40	23	08	17 00 60	26 70	
4	242	27.8		15.0	54	17.4	36 45.1	52	15 50	30	13	09 61	17 70	
5	257	27.5	-22	15.3	68	39.9	35 +18 49.7	50	16 00	16 37	17 18	17 17 61	8 09 69	
6	272	27.3	-22	15.6	83	02.3	34 +18 54.2	45	16 19	16 52	17 29	17 35 61	7 52 68	
7	287	27.0		16.0	97	24.8	35 +18 58.6	44	35	17 05	39	17 49 62	38 67	
8	302	26.8		16.3	111	47.1	33 +19 02.8	42	35	16 48	16	47	18 01 62	
9	317	26.5		16.6	126	09.5	34 06.9	41	30	17 00	26	17 56	12 62	
10	332	26.2		17.0	140	31.8	33 10.8	39	20	20	17 44	18 11	30 63	
11	347	26.0	-22	17.3	154	54.1	33 +19 14.6	38	10 N	17 37	18 00	18 26	18 46 63	
12	2	25.7	-22	17.6	169	16.4	33 +19 18.2	36	0	17 54	18 16	18 42	19 01 63	
13	17	25.5		17.9	183	38.7	33 21.7	35	10 S	18 11	34	19 00	16 64	
14	32	25.2		18.3	198	00.9	32 25.1	34	20	29	18 53	22	33 63	
15	47	25.0		18.6	212	23.1	32 28.3	32	30	18 50	19 17	19 50	19 51 64	
16	62	24.7		18.9	226	45.3	32 31.3	30	35	19 02	31	20 07	20 02 64	
17	77	24.5	-22	19.2	241	07.4	31 +19 34.3	30	40	19 16	19 48	20 29	20 15 64	
18	92	24.2	-22	19.6	255	29.6	32 +19 37.0	27	45	19 33	20 10	20 58	20 29 64	
19	107	24.0		19.9	269	51.7	31 39.6	26	50	19 54	37	21 39	48 64	
20	122	23.7		20.2	284	13.8	31 42.1	25	52	20 04	20 51	22 03	20 56 64	
21	137	23.5		20.5	298	35.9	31 44.4	23	54	16	21 08	22 37	21 06 64	
22	152	23.2		20.8	312	58.0	31 46.5	21	56	29	27	** **	17 64	
23	167	22.9		21.2	327	20.1	31 48.5	20	58	20 44	21 53	** **	29 64	
24	182	22.7	-22	21.5	341	42.2	31 +19 50.4	19	60 S	21 02	22 29	** **	21 43 64	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 19 ^h 04 ^m 9		Mag: -3.9 PMG: 11 ^h 14 ^m		Mag: +1.7 PMG: 8 ^h 48 ^m		Mag: -1.7 PMG: 9 ^h 45 ^m		Mag: +0.5 PMG: 12 ^h 58 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	72	59.9	191	36.7	-20	11.5	227	55.1	-9	17.7				
1	88	02.3	206	35.9		12.2	242	56.1		18.2				
2	103	04.8	221	35.1		12.9	257	57.1		18.8				
3	118	07.3	236	34.3		13.6	272	58.0		19.4				
4	133	09.7	251	33.5		14.3	287	59.0		20.0				
5	148	12.2	266	32.7	-20	15.0	303	00.0	-9	20.5				
6	163	14.7	281	31.9	-20	15.7	318	01.0	-9	21.1				
7	178	17.1	296	31.1		16.3	333	02.0		21.7				
8	193	19.6	311	30.3		17.0	348	03.0		22.3				
9	208	22.1	326	29.5		17.7	3	03.9		22.8				
10	223	24.5	341	28.7		18.4	18	04.9		23.4				
11	238	27.0	356	27.8	-20	19.1	33	05.9	-9	24.0				
12	253	29.4	11	27.0	-20	19.7	48	06.9	-9	24.5				
13	268	31.9	26	26.2		20.4	63	07.9		25.1				
14	283	34.4	41	25.4		21.1	78	08.8		25.7				
15	298	36.8	56	24.6		21.8	93	09.8		26.3				
16	313	39.3	71	23.8		22.5	108	10.8		26.8				
17	328	41.8	86	23.0	-20	23.1	123	11.8	-9	27.4				
18	343	44.2	101	22.2	-20	23.8	138	12.8	-9	28.0				
19	358	46.7	116	21.3		24.5	153	13.7		28.6				
20	13	49.2	131	20.5		25.1	168	14.7		29.1				
21	28	51.6	146	19.7		25.8	183	15.7		29.7				
22	43	54.1	161	18.9		26.5	198	16.7		30.3				
23	58	56.6	176	18.1		27.1	213	17.7		30.9				
24	73	59.0	191	17.3	-20	27.8	228	18.7	-9	31.4				
Dif	—		-8		-7		+10		-6					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 50 ^m 7			Edad: 16 ^d 5 PHE { 4 ^h : 61/2 12 ^h : 61/1 20 ^h : 61/0 PMG: 1 ^h 16 ^m R°: 63 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	182	22.7	-22	21.5	341	42.2	+19	50.4	60 N	6	52	7	47	8	43	17	23	73	
1	197	22.4		21.8	356	04.3		52.1	58	45	37		27		37	72		9	
2	212	22.2		22.1	10	26.4		53.6	56	39	27		13		17	49	71	47	
3	227	21.9		22.4	24	48.5		55.0	54	33	19		8	02	18	00	70	36	
4	242	21.7		22.8	39	10.6		56.3	52	28	11		7	51	10	69		27	
5	257	21.4	-22	23.1	53	32.7	+19	57.4	50	6	23	7	04	7	42	18	18	69	9
6	272	21.1	-22	23.4	67	54.8	+19	58.3	45	6	12	6	49	7	22	18	36	68	9
7	287	20.9		23.7	82	17.0		59.1	40	6	03		36	7	07	18	51	66	8
8	302	20.6		24.0	96	39.1	+19	59.7	35	5	54	25	6	53	19	03	66		33
9	317	20.4		24.3	111	01.3	+20	00.2	30	46	6	15	41		14	65		22	61
10	332	20.1		24.6	125	23.4		00.5	20	30	5	57	21		33	64		8	03
11	347	19.8	-22	24.9	139	45.6	+20	00.7	10 N	5	15	5	41	6	04	19	49	63	7
12	2	19.6	-22	25.2	154	07.8	+20	00.8	0	4	59	5	25	5	47	20	04	62	7
13	17	19.3		25.6	168	30.1		00.6	10 S	41	5	07	30		20	60		16	63
14	32	19.1		25.9	182	52.3	+20	00.4	20	4	19	4	48	5	12	36	59		7
15	47	18.8		26.2	197	14.6	+19	59.9	30	3	51	24	4	51	20	55	58	6	41
16	62	18.6		26.5	211	36.9		59.4	35		34	4	10	39	21	06	57		30
17	77	18.3	-22	26.8	225	59.2	+19	58.6	40	3	12	3	52	4	25	21	19	55	6
18	92	18.0	-22	27.1	240	21.6	+19	57.8	45	2	43	3	31	4	08	21	33	55	6
19	107	17.8		27.4	254	44.0		56.8	50	2	02	3	03	3	47	21	52	53	5
20	122	17.5		27.7	269	06.5		55.6	52	1	38	2	49	36	22	00	52		35
21	137	17.2		28.0	283	29.0		54.3	54	1	04		33	25		10	51		25
22	152	17.0		28.3	297	51.5		52.8	56	** *	2	13	3	12		21	50		15
23	167	16.7		28.6	312	14.0		51.2	58	** *	1	48	2	57		33	49		5
24	182	16.5	-22	28.9	326	36.6	+19	49.4	60 S	** *	1	11	2	38	22	47	47		4
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 19 ^h 00 ^m 9		Mag: -3.9 PMG: 11 ^h 15 ^m				Mag: +1.7 PMG: 8 ^h 46 ^m				Mag: -1.7 PMG: 9 ^h 42 ^m				Mag: +0.5 PMG: 12 ^h 55 ^m				
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	73	59.0	191	17.3	-20	27.8	228	18.7	-9	31.4	214	12.9	-14	25.6	165	54.6	-22	29.7	
1	89	01.5	206	16.4		28.5	243	19.6		32.0	229	14.8		25.8	180	56.7		29.7	
2	104	03.9	221	15.6		29.1	258	20.6		32.6	244	16.8		26.0	195	58.9		29.7	
3	119	06.4	236	14.8		29.8	273	21.6		33.1	259	18.8		26.1	211	01.0		29.7	
4	134	08.9	251	14.0		30.5	288	22.6		33.7	274	20.7		26.3	226	03.2		29.7	
5	149	11.3	266	13.2	-20	31.1	303	23.6	-9	34.3	289	22.7	-14	26.4	241	05.3	-22	29.7	
6	164	13.8	281	12.4	-20	31.8	318	24.5	-9	34.9	304	24.7	-14	26.6	256	07.5	-22	29.7	
7	179	16.3	296	11.5		32.5	333	25.5		35.4	319	26.6		26.7	271	09.6		29.8	
8	194	18.7	311	10.7		33.1	348	26.5		36.0	334	28.6		26.9	286	11.8		29.8	
9	209	21.2	326	09.9		33.8	3	27.5		36.6	349	30.6		27.0	301	13.9		29.8	
10	224	23.7	341	09.1		34.4	18	28.5		37.1	4	32.5		27.2	316	16.1		29.8	
11	239	26.1	356	08.3	-20	35.1	33	29.4	-9	37.7	19	34.5	-14	27.3	331	18.3	-22	29.8	
12	254	28.6	11	07.4	-20	35.7	48	30.4	-9	38.3	34	36.5	-14	27.5	346	20.4	-22	29.8	
13	269	31.0	26	06.6		36.4	63	31.4		38.9	49	38.4		27.6	1	22.6		29.8	
14	284	33.5	41	05.8		37.0	78	32.4		39.4	64	40.4		27.8	16	24.7		29.8	
15	299	36.0	56	05.0		37.7	93	33.4		40.0	79	42.4		27.9	31	26.9		29.8	
16	314	38.4	71	04.1		38.3	108	34.3		40.6	94	44.3		28.1	46	29.0		29.8	
17	329	40.9	86	03.3	-20	39.0	123	35.3	-9	41.1	109	46.3	-14	28.2	61	31.2	-22	29.8	
18	344	43.4	101	02.5	-20	39.6	138	36.3	-9	41.7	124	48.3	-14	28.4	76	33.3	-22	29.8	
19	359	45.8	116	01.7		40.3	153	37.3		42.3	139	50.3		28.5	91	35.5		29.8	
20	14	48.3	131	00.8		40.9	168	38.3		42.9	154	52.2		28.7	106	37.6		29.8	
21	29	50.8	146	00.0		41.6	183	39.2		43.4	169	54.2		28.8	121	39.8		29.9	
22	44	53.2	160	59.2		42.2	198	40.2		44.0	184	56.2		29.0	136	41.9		29.9	
23	59	55.7	175	58.4		42.9	213	41.2		44.6	199	58.1		29.1	151	44.1		29.9	
24	74	58.2	190	57.5	-20	43.5	228	42.2	-9	45.1	215	00.1	-14	29.3	166	46.2	-22	29.9	
Dif	—		-8		-7		+10		-6		+20		-2		+22				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 51 ^m 1			Edad: 17 ^d 5 PHE { 4 ^h : 60'8 12 ^h : 60'6 20 ^h : 60'4 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	182	16.5	-22	28.9	326	36.6	+19 49.4	60 N	14 57	15 53	16 49	18 36 82	11 09 40	
1	197	16.2		29.2	340	59.3	47.5	58	15 13	16 04	16 56	18 49 80	10 56 42	
2	212	15.9		29.5	355	22.0	45.5	56	27	13	17 02	19 00 78	44 44	
3	227	15.7		29.8	9	44.7	43.3	54	39	22	08	10 76	34 46	
4	242	15.4		30.1	24	07.5	41.0	52	50	30	13	19 74	25 47	
5	257	15.2	-22	30.4	38	30.4	+19 38.5	50	15 59	16 37	17 18	19 27 73	10 17 48	
6	272	14.9	-22	30.7	52	53.3	+19 35.9	45	16 19	16 52	17 29	19 44 70	10 00 50	
7	287	14.6		31.0	67	16.3	33.1	40	35	17 05	39	19 57 69	9 46 51	
8	302	14.4		31.3	81	39.3	30.2	35	16 48	16	48	20 09 67	33 54	
9	317	14.1		31.6	96	02.3	27.2	30	17 00	26	17 56	19 65	23 55	
10	332	13.8		31.9	110	25.5	24.0	20	20	17 44	18 11	37 62	9 05 57	
11	347	13.6	-22	32.2	124	48.7	+19 20.7	10 N	17 38	18 01	18 27	20 52 60	8 49 58	
12	2	13.3	-22	32.5	139	11.9	+19 17.2	0	17 55	18 17	18 43	21 06 58	8 34 60	
13	17	13.0		32.7	153	35.3	13.6	10 S	18 12	35	19 02	20 56	19 62	
14	32	12.8		33.0	167	58.6	09.9	20	30	18 54	23	35 54	8 03 64	
15	47	12.5		33.3	182	22.1	06.0	30	18 51	19 18	19 51	21 53 51	7 45 65	
16	62	12.2		33.6	196	45.6	+19 02.1	35	19 04	33	20 09	22 03 50	34 67	
17	77	12.0	-22	33.9	211	09.2	+18 57.9	40	19 18	19 50	20 31	22 14 48	7 22 68	
18	92	11.7	-22	34.2	225	32.9	+18 53.7	45	19 35	20 12	21 00	22 28 46	7 07 70	
19	107	11.4		34.5	239	56.6	49.3	50	19 57	40	21 42	45 42	6 49 72	
20	122	11.2		34.8	254	20.4	44.8	52	20 07	20 54	22 07	22 52 42	41 72	
21	137	10.9		35.0	268	44.3	40.2	54	19	21 11	22 43	23 01 40	31 74	
22	152	10.6		35.3	283	08.3	35.4	56	32	31	** **	11 38	20 76	
23	167	10.4		35.6	297	32.3	30.5	58	20 47	21 58	** **	22 35	6 08 77	
24	182	10.1	-22	35.9	311	56.4	+18 25.5	60 S	21 06	22 36	** **	23 34 34	5 54 79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 57 ^m 0		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: +1.7 PMG: 8 ^h 45 ^m		Mag: -1.7 PMG: 9 ^h 39 ^m		Mag: +0.5 PMG: 12 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	74	58.2	190	57.5	228	42.2	215	00.1	166	46.2
1	90	00.6	205	56.7	243	43.1	230	02.1	181	48.4
2	105	03.1	220	55.9	258	44.1	245	04.0	196	50.5
3	120	05.5	235	55.0	273	45.1	260	06.0	211	52.7
4	135	08.0	250	54.2	288	46.1	275	08.0	226	54.8
5	150	10.5	265	53.4	303	47.1	290	09.9	241	57.0
6	165	12.9	280	52.5	318	48.0	305	11.9	256	59.1
7	180	15.4	295	51.7	333	49.0	320	13.9	272	01.3
8	195	17.9	310	50.9	348	50.0	335	15.8	287	03.4
9	210	20.3	325	50.0	3	51.0	350	17.8	302	05.6
10	225	22.8	340	49.2	18	52.0	5	19.8	317	07.7
11	240	25.3	355	48.4	33	52.9	20	21.8	332	09.9
12	255	27.7	10	47.5	48	53.9	35	23.7	347	12.0
13	270	30.2	25	46.7	63	54.9	50	25.7	2	14.2
14	285	32.7	40	45.9	78	55.9	65	27.7	17	16.3
15	300	35.1	55	45.0	93	56.8	80	29.6	32	18.5
16	315	37.6	70	44.2	108	57.8	95	31.6	47	20.6
17	330	40.0	85	43.4	123	58.8	110	33.6	62	22.8
18	345	42.5	100	42.5	138	59.8	125	35.5	77	24.9
19	0	45.0	115	41.7	154	00.8	140	37.5	92	27.1
20	15	47.4	130	40.9	169	01.7	155	39.5	107	29.2
21	30	49.9	145	40.0	184	02.7	170	41.5	122	31.4
22	45	52.4	160	39.2	199	03.7	185	43.4	137	33.5
23	60	54.8	175	38.3	214	04.7	200	45.4	152	35.7
24	75	57.3	190	37.5	229	05.6	215	47.4	167	37.8
Dif	—		-8	-6	+10	-6	+20	-2	+22	0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 51 ^m 5			Edad: 18 ^d 5 PHE { 4 ^h : 60/2 12 ^h : 59/9 20 ^h : 59/6 PMG: 3 ^h 20 ^m R°: 58 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	182	10.1	-22	35.9	311	56.4	+18	25.5	51	60 N	6 54	7 50	8 46	19 58	85	11 49	29				
1	197	09.8		36.2	326	20.6		20.4	51	58	47	39	30	20 09	82	38	31				
2	212	09.6		36.4	340	44.9	53	15.1	53	56	41	30	16	18 80		28	34				
3	227	09.3		36.7	355	09.2	53	09.7	54	54	35	21	8 04	26 78		20	35				
4	242	09.0		37.0	9	33.7	55	+18	04.3	54	52	30	13	7 54	33 76		12	37			
5	257	08.8	-22	37.3	23	58.2	55	+17	58.6	57	50	6 25	7 06	7 44	20 40	74	11 05	39			
6	272	08.5	-22	37.6	38	22.8	56	+17	52.9	57	45	6 14	6 51	7 24	20 54	71	10 50	42			
7	287	08.2		37.8	52	47.5	57		47.1	58	40	6 04	38	7 08	21 06	68	37	45			
8	302	08.0		38.1	67	12.2	57		41.1	60	35	5 55	27	6 55	16 65		27	46			
9	317	07.7		38.4	81	37.1	59		35.1	60	30	47	6 17	43	24 64		18	48			
10	332	07.4		38.7	96	02.0	59		28.9	62	20	31	5 59	22	39 60		10 02	51			
11	347	07.2	-22	38.9	110	27.1	61	+17	22.6	63	10 N	5 16	5 42	6 05	21 52	57	9 47	54			
12	2	06.9	-22	39.2	124	52.2	61	+17	16.2	64	0	4 59	5 25	5 48	22 04	55	9 34	57			
13	17	06.6		39.5	139	17.4	62		09.7	65	10 S	41	5 08	31	16 52		21	59			
14	32	06.3		39.8	153	42.6	62	+17	03.1	66	20	4 19	4 48	5 13	29 49		9 07	61			
15	47	06.1		40.0	168	08.0	64	+16	56.4	67	30	3 51	24	4 51	44 45		8 50	65			
16	62	05.8		40.3	182	33.5	65		49.6	68	35	33	4 10	39	22 53	43	41	66			
17	77	05.5	-22	40.6	196	59.0	65	+16	42.7	69	40	3 11	3 52	4 24	23 02	41	8 30	68			
18	92	05.3	-22	40.8	211	24.7	67	+16	35.6	71	45	2 42	3 31	4 07	23 14	38	8 17	71			
19	107	05.0		41.1	225	50.4	67		28.5	71	50	2 00	3 02	3 46	27 35		8 01	74			
20	122	04.7		41.4	240	16.2	68		21.3	72	52	1 35	2 48	36	34 33		7 53	76			
21	137	04.4		41.6	254	42.1	69		14.0	73	54	0 59	31	24	41 31		45	78			
22	152	04.2		41.9	269	08.1	70	+16	06.6	74	56	** **	2 11	3 11	49 29		36	79			
23	167	03.9		42.2	283	34.2	71	+15	59.1	75	58	** **	1 45	2 55	23 57	27	25	82			
24	182	03.6	-22	42.4	298	00.4	72	+15	51.5	76	60 S	** **	1 06	2 36	** **	**	7 13	85			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 18 ^h 53 ^m 1			Mag: -3.9 PMG: 11 ^h 18 ^m			Mag: +1.6 PMG: 8 ^h 43 ^m			Mag: -1.7 PMG: 9 ^h 36 ^m			Mag: +0.5 PMG: 12 ^h 48 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	75	57.3	190	37.5	-20	58.6	229	05.6	-9	58.8	215	47.4	-14	32.9	167	37.8	-22	30.0			
1	90	59.8	205	36.7		59.2	244	06.6		59.3	230	49.3		33.1	182	40.0		30.1			
2	106	02.2	220	35.8	-20	59.8	259	07.6	-9	59.9	245	51.3		33.2	197	42.1		30.1			
3	121	04.7	235	35.0	-21	00.4	274	08.6	-10	00.5	260	53.3		33.4	212	44.3		30.1			
4	136	07.2	250	34.1		01.1	289	09.5		01.0	275	55.3		33.5	227	46.4		30.1			
5	151	09.6	265	33.3	-21	01.7	304	10.5	-10	01.6	290	57.2	-14	33.7	242	48.6	-22	30.1			
6	166	12.1	280	32.5	-21	02.3	319	11.5	-10	02.2	305	59.2	-14	33.8	257	50.7	-22	30.1			
7	181	14.5	295	31.6		02.9	334	12.5		02.7	321	01.2		34.0	272	52.9		30.1			
8	196	17.0	310	30.8		03.5	349	13.4		03.3	336	03.1		34.1	287	55.1		30.1			
9	211	19.5	325	29.9		04.1	4	14.4		03.9	351	05.1		34.3	302	57.2		30.1			
10	226	21.9	340	29.1		04.7	19	15.4		04.4	6	07.1		34.4	317	59.4		30.1			
11	241	24.4	355	28.2	-21	05.3	34	16.4	-10	05.0	21	09.1	-14	34.6	333	01.5	-22	30.1			
12	256	26.9	10	27.4	-21	05.9	49	17.4	-10	05.6	36	11.0	-14	34.7	348	03.7	-22	30.1			
13	271	29.3	25	26.5		06.5	64	18.3		06.1	51	13.0		34.9	3	05.8		30.1			
14	286	31.8	40	25.7		07.1	79	19.3		06.7	66	15.0		35.0	18	08.0		30.1			
15	301	34.3	55	24.9		07.7	94	20.3		07.3	81	16.9		35.2	33	10.1		30.1			
16	316	36.7	70	24.0		08.3	109	21.3		07.8	96	18.9		35.3	48	12.3		30.2			
17	331	39.2	85	23.2	-21	08.9	124	22.2	-10	08.4	111	20.9	-14	35.5	63	14.4	-22	30.2			
18	346	41.7	100	22.3	-21	09.5	139	23.2	-10	09.0	126	22.9	-14	35.6	78	16.6	-22	30.2			
19	1	44.1	115	21.5		10.1	154	24.2		09.5	141	24.8		35.8	93	18.7		30.2			
20	16	46.6	130	20.6		10.7	169	25.2		10.1	156	26.8		35.9	108	20.9		30.2			
21	31	49.0	145	19.8		11.3	184	26.1		10.7	171	28.8		36.1	123	23.0		30.2			
22	46	51.5	160	18.9		11.9	199	27.1		11.2	186	30.7		36.2	138	25.2		30.2			
23	61	54.0	175	18.1		12.5	214	28.1		11.8	201	32.7		36.4	153	27.3		30.2			
24	76	56.4	190	17.2	-21	13.1	229	29.1	-10	12.4	216	34.7	-14	36.5	168	29.5	-22	30.2			
Dif	—			-8 -6			+10 -6			+20 -1			-1			+22					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 19 ^d 5	PHE {	4 ^h : 59'4 12 ^h : 59'1 20 ^h : 58'8			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 52 ^m 0								SD: 16'2			PMG: 4 ^h 18 ^m			R°: 53 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	182	03.6	-22 42.4	298	00.4	+15 51.5	77	60 N	14 56	15 52	16 48	21 23	84	12 18	21
1	197	03.4		312	26.7	43.8	77	58	15 12	16 03	16 55	31	81	09	24
2	212	03.1		326	53.0	36.1	77	56	26	13	17 01	38	78	12 02	26
3	227	02.8		341	19.5	28.2	79	54	38	21	07	44	76	11 55	29
4	242	02.5		355	46.0	20.3	79	52	49	29	13	49	75	49	30
5	257	02.3	-22 43.7	10	12.7	+15 12.2	81	50	15 58	16 36	17 18	21 54	73	11 44	31
6	272	02.0	-22 44.0	24	39.4	+15 04.1	81	45	16 18	16 52	17 29	22 05	69	11 32	35
7	287	01.7		39	06.2	+14 55.9	82	40	35	17 05	39	14	66	22	38
8	302	01.4		53	33.1	47.7	82	35	16 48	16	48	21	64	13	41
9	317	01.2		68	00.1	39.3	84	30	17 00	26	17 56	28	61	11 06	43
10	332	00.9		82	27.2	30.9	84	20	21	17 45	18 12	39	58	10 53	46
11	347	00.6	-22 45.3	96	54.4	+14 22.4	85	10 N	17 39	18 02	18 28	22 49	54	10 41	50
12	2	00.3	-22 45.5	111	21.7	+14 13.8	86	0	17 56	18 18	18 44	22 59	51	10 31	52
13	17	00.1		125	49.1	+14 05.1	87	10 S	18 13	36	19 03	23 08	48	20	56
14	31	59.8		140	16.5	+13 56.4	87	20	31	18 56	25	18	44	10 08	59
15	46	59.5		154	44.1	47.6	88	30	18 53	19 20	19 53	29	41	9 55	62
16	61	59.2		169	11.7	38.7	89	35	19 05	35	20 11	36	38	47	65
17	76	59.0	-22 46.8	183	39.4	+13 29.8	89	40	19 20	19 52	20 33	23 43	36	9 38	67
18	91	58.7	-22 47.0	198	07.2	+13 20.8	90	45	19 37	20 14	21 03	23 52	33	9 28	70
19	106	58.4		212	35.1	11.7	91	50	19 59	43	21 46	** ** *	**	15	74
20	121	58.1		227	03.1	+13 02.5	92	52	20 09	20 57	22 11	** ** *	**	09	76
21	136	57.9		241	31.2	+12 53.3	92	54	21	21 14	22 49	** ** *	**	9 03	77
22	151	57.6		255	59.3	44.1	92	56	35	21 35	** ** *	** ** *	**	8 55	80
23	166	57.3		270	27.6	34.7	94	58	20 51	22 02	** ** *	** ** *	**	47	82
24	181	57.0	-22 48.5	284	55.9	+12 25.3	94	60 S	21 10	22 43	** ** *	0 07	25	8 38	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 49 ^m 1		Mag: -3.9 PMG: 11 ^h 19 ^m		Mag: +1.6 PMG: 8 ^h 41 ^m		Mag: -1.8 PMG: 9 ^h 32 ^m		Mag: +0.5 PMG: 12 ^h 44 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	76	56.4	190	17.2	-21	13.1	229	29.1	-10	12.4
1	91	58.9	205	16.4		13.7	244	30.0		12.9
2	107	01.4	220	15.5		14.3	259	31.0		13.5
3	122	03.8	235	14.7		14.9	274	32.0		14.1
4	137	06.3	250	13.8		15.4	289	33.0		14.6
5	152	08.8	265	13.0	-21	16.0	304	33.9	-10	15.2
6	167	11.2	280	12.1	-21	16.6	319	34.9	-10	15.7
7	182	13.7	295	11.2		17.2	334	35.9		16.3
8	197	16.1	310	10.4		17.8	349	36.9		16.9
9	212	18.6	325	09.5		18.4	4	37.8		17.4
10	227	21.1	340	08.7		18.9	19	38.8		18.0
11	242	23.5	355	07.8	-21	19.5	34	39.8	-10	18.6
12	257	26.0	10	07.0	-21	20.1	49	40.8	-10	19.1
13	272	28.5	25	06.1		20.7	64	41.7		19.7
14	287	30.9	40	05.3		21.3	79	42.7		20.2
15	302	33.4	55	04.4		21.8	94	43.7		20.8
16	317	35.9	70	03.5		22.4	109	44.6		21.4
17	332	38.3	85	02.7	-21	23.0	124	45.6	-10	21.9
18	347	40.8	100	01.8	-21	23.6	139	46.6	-10	22.5
19	2	43.3	115	01.0		24.1	154	47.6		23.1
20	17	45.7	130	00.1		24.7	169	48.5		23.6
21	32	48.2	144	59.2		25.3	184	49.5		24.2
22	47	50.6	159	58.4		25.8	199	50.5		24.7
23	62	53.1	174	57.5		26.4	214	51.5		25.3
24	77	55.6	189	56.7	-21	27.0	229	52.4	-10	25.9
Dif	—		-9		-6		+10		-6	
									+20	-1
										+21

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 52 ^m 4			Edad: 20 ^d 5 PHE { 4 ^h : 58'5 12 ^h : 58'2 20 ^h : 57'9 PMG: 5 ^h 11 ^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	181	57.0	-22 48.5	284	55.9	+12 25.3	60 N	6 57	7 53	8 49	22 47	81	12 39	17	
1	196	56.7	48.8	299	24.3	15.9	58	50	42	33	52	79	33	20	
2	211	56.5	49.0	313	52.8	+12 06.4	56	43	32	19	22 56	77	28	22	
3	226	56.2	49.3	328	21.4	+11 56.8	54	37	23	8 07	23 00	75	24	24	
4	241	55.9	49.5	342	50.1	47.2	52	32	15	7 56	04	72	19	26	
5	256	55.6	-22 49.7	357	18.8	+11 37.5	50	6 27	7 08	7 46	23 07	71	12 15	28	
6	271	55.4	-22 50.0	11	47.7	+11 27.8	45	6 16	6 53	7 26	23 14	67	12 07	31	
7	286	55.1	50.2	26	16.6	18.0	40	6 06	40	7 10	20	63	12 00	34	
8	301	54.8	50.5	40	45.6	+11 08.2	35	5 57	28	6 56	25	61	11 54	37	
9	316	54.5	50.7	55	14.7	+10 58.3	30	48	18	44	29	59	49	38	
10	331	54.2	50.9	69	43.9	48.4	20	32	6 00	24	37	54	39	43	
11	346	54.0	-22 51.2	84	13.1	+10 38.4	10 N	5 17	5 43	6 06	23 43	51	11 31	46	
12	1	53.7	-22 51.4	98	42.4	+10 28.4	0	5 00	5 26	5 49	23 50	47	11 23	50	
13	16	53.4	51.6	113	11.8	18.4	10 S	4 42	5 09	32	23 56	44	16	52	
14	31	53.1	51.9	127	41.3	+10 08.3	20	4 20	4 49	5 13	** ** *	**	11 07	56	
15	46	52.8	52.1	142	10.8	+9 58.1	30	3 51	24	4 52	** ** *	**	10 57	61	
16	61	52.6	52.3	156	40.5	48.0	35	33	4 10	39	** ** *	**	52	62	
17	76	52.3	-22 52.6	171	10.2	+9 37.7	40	3 11	3 52	4 24	** ** *	**	10 45	65	
18	91	52.0	-22 52.8	185	40.0	+9 27.5	45	2 41	3 30	4 07	** ** *	**	10 38	68	
19	106	51.7	53.0	200	09.8	17.2	50	1 58	3 02	3 45	0 02	29	29	72	
20	121	51.4	53.3	214	39.8	+9 06.8	52	1 33	2 47	35	07	28	25	73	
21	136	51.1	53.5	229	09.8	+8 56.5	54	0 55	30	23	12	26	20	76	
22	151	50.9	53.7	243	39.8	46.1	56	** ** *	2 09	3 09	18	24	15	78	
23	166	50.6	53.9	258	10.0	35.6	58	** ** *	1 42	2 54	24	22	09	81	
24	181	50.3	-22 54.2	272	40.2	+8 25.2	60 S	** ** *	1 01	2 34	0 32	18	10 03	83	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 45 ^m 2		Mag: -3.9 PMG: 11 ^h 21 ^m		Mag: +1.6 PMG: 8 ^h 40 ^m		Mag: -1.8 PMG: 9 ^h 29 ^m		Mag: +0.5 PMG: 12 ^h 41 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	77	55.6	189	56.7	-21	27.0	229	52.4	-10	25.9	217	22.1	-14	40.1	169	21.0	-22	30.4
1	92	58.0	204	55.8		27.5	244	53.4		26.4	232	24.0		40.2	184	23.2		30.4
2	108	00.5	219	54.9		28.1	259	54.4		27.0	247	26.0		40.4	199	25.3		30.4
3	123	03.0	234	54.1		28.7	274	55.4		27.5	262	28.0		40.5	214	27.5		30.4
4	138	05.4	249	53.2		29.2	289	56.3		28.1	277	30.0		40.7	229	29.6		30.4
5	153	07.9	264	52.4	-21	29.8	304	57.3	-10	28.7	292	31.9	-14	40.8	244	31.8	-22	30.4
6	168	10.4	279	51.5	-21	30.3	319	58.3	-10	29.2	307	33.9	-14	41.0	259	33.9	-22	30.4
7	183	12.8	294	50.6		30.9	334	59.2		29.8	322	35.9		41.1	274	36.1		30.4
8	198	15.3	309	49.8		31.5	350	00.2		30.4	337	37.9		41.3	289	38.2		30.4
9	213	17.8	324	48.9		32.0	5	01.2		30.9	352	39.8		41.4	304	40.4		30.4
10	228	20.2	339	48.0		32.6	20	02.2		31.5	7	41.8		41.6	319	42.5		30.4
11	243	22.7	354	47.2	-21	33.1	35	03.1	-10	32.0	22	43.8	-14	41.7	334	44.7	-22	30.4
12	258	25.1	9	46.3	-21	33.7	50	04.1	-10	32.6	37	45.8	-14	41.9	349	46.8	-22	30.4
13	273	27.6	24	45.4		34.2	65	05.1		33.2	52	47.7		42.0	4	49.0		30.4
14	288	30.1	39	44.6		34.8	80	06.0		33.7	67	49.7		42.1	19	51.1		30.5
15	303	32.5	54	43.7		35.3	95	07.0		34.3	82	51.7		42.3	34	53.3		30.5
16	318	35.0	69	42.8		35.9	110	08.0		34.8	97	53.7		42.4	49	55.4		30.5
17	333	37.5	84	42.0	-21	36.4	125	09.0	-10	35.4	112	55.6	-14	42.6	64	57.6	-22	30.5
18	348	39.9	99	41.1	-21	37.0	140	09.9	-10	35.9	127	57.6	-14	42.7	79	59.7	-22	30.5
19	3	42.4	114	40.2		37.5	155	10.9		36.5	142	59.6		42.9	95	01.9		30.5
20	18	44.9	129	39.3		38.0	170	11.9		37.1	158	01.6		43.0	110	04.0		30.5
21	33	47.3	144	38.5		38.6	185	12.8		37.6	173	03.5		43.2	125	06.2		30.5
22	48	49.8	159	37.6		39.1	200	13.8		38.2	188	05.5		43.3	140	08.3		30.5
23	63	52.3	174	36.7		39.7	215	14.8		38.7	203	07.5		43.5	155	10.5		30.5
24	78	54.7	189	35.9	-21	40.2	230	15.8	-10	39.3	218	09.5	-14	43.6	170	12.6	-22	30.5

Dif	—	-9	-6	+10	-6	+20	-1	+21

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16 ^h 2				Edad: 21 ^d 5 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 3 20 ^h : 57 ^m 1														
	PMG: 11 ^h 52 ^m 9				SD: 15 ^h 7 PMG: 6 ^h 01 ^m R°: 48 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	° /	° /	° /	° /	° /	° /	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m				
0	181 50.3	-22 54.2	272 40.2	+8 25.2	14.7 ¹⁰⁵	105	60 N	14 55	15 51	16 47	** ** *	** ** *	12 56	15					
1	196 50.0	54.4	287 10.5	+8 04.2	14.7 ¹⁰⁵	105	58	15 11	16 02	16 55	** ** *	** ** *	53	17					
2	211 49.7	54.6	301 40.8	+7 53.6	14.7 ¹⁰⁶	106	56	26	12	17 01	** ** *	** ** *	50	20					
3	226 49.5	54.8	316 11.2	+7 43.0	14.7 ¹⁰⁶	106	54	38	21	07	** ** *	** ** *	48	21					
4	241 49.2	55.1	330 41.7	+7 32.4	14.7 ¹⁰⁶	106	52	49	29	13	** ** *	** ** *	45	23					
5	256 48.9	-22 55.3	345 12.3	+7 21.8	14.7 ¹⁰⁷	107	50	15 58	16 36	17 18	** ** *	** ** *	12 43	25					
6	271 48.6	-22 55.5	359 42.9	+7 11.1	14.7 ¹⁰⁷	107	45	16 18	16 52	17 29	** ** *	** ** *	12 38	28					
7	286 48.3	55.7	14 13.6	+7 00.5	14.7 ¹⁰⁷	107	40	35	17 05	39	** ** *	** ** *	34	31					
8	301 48.0	56.0	28 44.3	+6 49.8	14.7 ¹⁰⁸	108	35	16 49	17	48	** ** *	** ** *	31	33					
9	316 47.7	56.2	43 15.1	+6 39.0	14.7 ¹⁰⁸	108	30	17 01	27	17 57	** ** *	** ** *	27	37					
10	331 47.5	56.4	57 46.0	+6 28.3	14.7 ¹⁰⁸	108	20	21	17 45	18 13	** ** *	** ** *	22	40					
11	346 47.2	-22 56.6	72 17.0	+6 17.5	14.7 ¹⁰⁸	108	10 N	17 40	18 02	18 29	** ** *	** ** *	12 17	44					
12	1 46.9	-22 56.8	86 47.9	+6 06.7	14.7 ¹⁰⁹	109	0	17 57	18 19	18 45	** ** *	** ** *	12 13	47					
13	16 46.6	57.0	101 19.0	+5 55.9	14.7 ¹⁰⁹	109	10 S	18 14	37	19 04	** ** *	** ** *	08	50					
14	31 46.3	57.3	115 50.1	+5 45.1	14.7 ¹⁰⁹	109	20	32	18 57	26	0 02	41	12 03	54					
15	46 46.0	57.5	130 21.3	+5 34.3	14.7 ¹⁰⁹	109	30	18 54	19 21	19 54	10 37		11 58	57					
16	61 45.8	57.7	144 52.5	+5 23.4	14.7 ¹⁰⁹	109	35	19 07	36	20 13	14 35		54	60					
17	76 45.5	-22 57.9	159 23.8	+5 12.6	14.7 ¹⁰⁹	109	40	19 21	19 54	20 35	0 19	32	11 50	63					
18	91 45.2	-22 58.1	173 55.1	+5 01.7	14.7 ¹⁰⁹	109	45	19 39	20 16	21 05	0 25	29	11 46	66					
19	106 44.9	58.3	188 26.5	+4 50.8	14.7 ¹⁰⁹	109	50	20 01	20 45	21 49	31 26		41	70					
20	121 44.6	58.5	202 58.0	+4 39.9	14.7 ¹⁰⁹	109	52	12	21 00	22 15	35 24		38	72					
21	136 44.3	58.7	217 29.5	+4 29.0	14.7 ¹⁰⁹	109	54	24	17	22 55	38 22		36	73					
22	151 44.0	58.9	232 01.0	+4 18.1	14.7 ¹⁰⁹	109	56	37	21 38	** ** *	42 20		33	75					
23	166 43.8	59.2	246 32.6	+4 07.2	14.7 ¹⁰⁹	109	58	20 53	22 06	** ** *	46 18		30	77					
24	181 43.5	-22 59.4	261 04.2				60 S	21 13	22 50	** ** *	0 50	16	11 26	80					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 18 ^h 41 ^m 3		Mag: -3.9 PMG: 11 ^h 22 ^m			Mag: +1.6 PMG: 8 ^h 38 ^m			Mag: -1.8 PMG: 9 ^h 26 ^m			Mag: +0.5 PMG: 12 ^h 37 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♋	Dec	hG ♊	Dec	hG ♉	Dec								
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	78 54.7	189 35.9	-21 40.2	230 15.8	-10 39.3	218 09.5	-14 43.6	170 12.6	-22 30.5										
1	93 57.2	204 35.0	40.8	245 16.7	39.9	233 11.5	43.8	185 14.8	30.5										
2	108 59.6	219 34.1	41.3	260 17.7	40.4	248 13.4	43.9	200 16.9	30.5										
3	124 02.1	234 33.2	41.8	275 18.7	41.0	263 15.4	44.1	215 19.1	30.5										
4	139 04.6	249 32.4	42.4	290 19.6	41.5	278 17.4	44.2	230 21.2	30.5										
5	154 07.0	264 31.5	-21 42.9	305 20.6	-10 42.1	293 19.4	-14 44.3	245 23.3	-22 30.5										
6	169 09.5	279 30.6	-21 43.4	320 21.6	-10 42.6	308 21.3	-14 44.5	260 25.5	-22 30.5										
7	184 12.0	294 29.7	44.0	335 22.6	43.2	323 23.3	44.6	275 27.6	30.6										
8	199 14.4	309 28.9	44.5	350 23.5	43.8	338 25.3	44.8	290 29.8	30.6										
9	214 16.9	324 28.0	45.0	5 24.5	44.3	353 27.3	44.9	305 31.9	30.6										
10	229 19.4	339 27.1	45.5	20 25.5	44.9	8 29.2	45.1	320 34.1	30.6										
11	244 21.8	354 26.2	-21 46.1	35 26.4	-10 45.4	23 31.2	-14 45.2	335 36.2	-22 30.6										
12	259 24.3	9 25.4	-21 46.6	50 27.4	-10 46.0	38 33.2	-14 45.4	350 38.4	-22 30.6										
13	274 26.7	24 24.5	47.1	65 28.4	46.5	53 35.2	45.5	5 40.5	30.6										
14	289 29.2	39 23.6	47.6	80 29.3	47.1	68 37.2	45.7	20 42.7	30.6										
15	304 31.7	54 22.7	48.2	95 30.3	47.7	83 39.1	45.8	35 44.8	30.6										
16	319 34.1	69 21.9	48.7	110 31.3	48.2	98 41.1	46.0	50 47.0	30.6										
17	334 36.6	84 21.0	-21 49.2	125 32.3	-10 48.8	113 43.1	-14 46.1	65 49.1	-22 30.6										
18	349 39.1	99 20.1	-21 49.7	140 33.2	-10 49.3	128 45.1	-14 46.2	80 51.3	-22 30.6										
19	4 41.5	114 19.2	50.3	155 34.2	49.9	143 47.1	46.4	95 53.4	30.6										
20	19 44.0	129 18.3	50.8	170 35.2	50.4	158 49.0	46.5	110 55.6	30.6										
21	34 46.5	144 17.5	51.3	185 36.1	51.0	173 51.0	46.7	125 57.7	30.6										
22	49 48.9	159 16.6	51.8	200 37.1	51.6	188 53.0	46.8	140 59.9	30.6										
23	64 51.4	174 15.7	52.3	215 38.1	52.1	203 55.0	47.0	156 02.0	30.6										
24	79 53.9	189 14.8	-21 52.8	230 39.0	-10 52.7	218 56.9	-14 47.1	171 04.2	-22 30.7										
Dif	—	-9	-5	+10	-6	+20	-1	+21	0										

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 53 ^m 3			Edad: 22 ^d 5 PHE { 4 ^h : 56/8 12 ^h : 56/5 20 ^h : 56/3 PMG: 6 ^h 49 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	181	43.5	-22	59.4	261	04.2	+4	07.2	60 N	6 59	7 56	8 52	0 09	78	13 11	14		
1	196	43.2		59.6	275	35.9 ¹²⁷	+3	56.3 ¹⁰⁹	58	52	44	35	11	76	10	17		
2	211	42.9	-22	59.8	290	07.7 ¹²⁸		45.3 ¹¹⁰	56	45	34	21	13	74	10	18		
3	226	42.6	-23	00.0	304	39.5 ¹²⁸		34.4 ¹⁰⁹	54	39	25	8 09	15	71	09	20		
4	241	42.3	-23	00.2	319	11.3 ¹²⁸		23.4 ¹¹⁰	52	34	17	7 58	16	70	08	22		
5	256	42.0	-23	00.4	333	43.2 ¹²⁹	+3	12.5 ¹⁰⁹	50	6 29	7 10	7 48	0 18	68	13 08	23		
6	271	41.7	-23	00.6	348	15.1 ¹²⁹	+3	01.5 ¹¹⁰	45	6 17	6 54	7 28	0 21	65	13 06	27		
7	286	41.5		00.8	2	47.1 ¹³⁰	+2	50.6 ¹⁰⁹	40	6 07	41	7 12	23	62	05	30		
8	301	41.2		01.0	17	19.1 ¹³⁰		39.6 ¹¹⁰	35	5 58	30	6 58	26	59	04	33		
9	316	40.9		01.2	31	51.2 ¹³¹		28.6 ¹¹⁰	30	50	19	46	28	57	04	34		
10	331	40.6		01.4	46	23.3 ¹³¹		17.7 ¹⁰⁹	20	34	6 01	25	31	53	02	39		
11	346	40.3	-23	01.6	60	55.4 ¹³¹	+2	06.7 ¹¹⁰	10 N	5 18	5 44	6 07	0 34	50	13 01	42		
12	1	40.0	-23	01.8	75	27.6 ¹³²	+1	55.8 ¹⁰⁹	0	5 01	5 27	5 50	0 37	46	13 00	45		
13	16	39.7		02.0	89	59.8 ¹³²		44.8 ¹¹⁰	10 S	4 42	5 09	32	40	43	12 58	49		
14	31	39.4		02.2	104	32.0 ¹³²		33.8 ¹¹⁰	20	4 20	4 49	5 14	43	40	57	52		
15	46	39.1		02.4	119	04.3 ¹³³		22.9 ¹⁰⁹	30	3 52	25	4 52	47	35	55	56		
16	61	38.9		02.6	133	36.6 ¹³³		12.0 ¹⁰⁹	35	33	4 10	39	49	33	54	59		
17	76	38.6	-23	02.8	148	09.0 ¹³⁴	+1	01.0 ¹¹⁰	40	3 11	3 52	4 25	0 51	31	12 53	61		
18	91	38.3	-23	03.0	162	41.4 ¹³⁴	+0	50.1 ¹⁰⁹	45	2 41	3 30	4 07	0 54	27	12 52	64		
19	106	38.0		03.2	177	13.8 ¹³⁴		39.2 ¹⁰⁹	50	1 57	3 01	3 45	57	24	51	67		
20	121	37.7		03.3	191	46.3 ¹³⁵		28.2 ¹¹⁰	52	1 31	2 46	34	0 59	22	50	69		
21	136	37.4		03.5	206	18.8 ¹³⁵		17.3 ¹⁰⁹	54	0 51	29	22	1 00	21	49	71		
22	151	37.1		03.7	220	51.3 ¹³⁵	+0	06.4 ¹⁰⁹	56	** **	2 08	3 09	02	19	48	73		
23	166	36.8		03.9	235	23.8 ¹³⁵	-0	04.5 ¹⁰⁹	58	** **	1 40	2 53	04	16	47	76		
24	181	36.5	-23	04.1	249	56.4 ¹³⁶	-0	15.3 ¹⁰⁸	60 S	** **	0 56	2 33	1 06	14	12 46	78		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 37 ^m 4		Mag: -3.9 PMG: 11 ^h 24 ^m				Mag: +1.6 PMG: 8 ^h 37 ^m				Mag: -1.8 PMG: 9 ^h 23 ^m				Mag: +0.5 PMG: 12 ^h 34 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	79	53.9	189	14.8	-21	52.8	230	39.0	-10	52.7	218	56.9	-14	47.1	171	04.2	-22	30.7
1	94	56.3	204	13.9		53.3	245	40.0		53.2	233	58.9		47.3	186	06.3		30.7
2	109	58.8	219	13.0		53.8	260	41.0		53.8	249	00.9		47.4	201	08.5		30.7
3	125	01.2	234	12.2		54.4	275	42.0		54.3	264	02.9		47.6	216	10.6		30.7
4	140	03.7	249	11.3		54.9	290	42.9		54.9	279	04.9		47.7	231	12.8		30.7
5	155	06.2	264	10.4	-21	55.4	305	43.9	-10	55.4	294	06.8	-14	47.8	246	14.9	-22	30.7
6	170	08.6	279	09.5	-21	55.9	320	44.9	-10	56.0	309	08.8	-14	48.0	261	17.0	-22	30.7
7	185	11.1	294	08.6		56.4	335	45.8		56.5	324	10.8		48.1	276	19.2		30.7
8	200	13.6	309	07.7		56.9	350	46.8		57.1	339	12.8		48.3	291	21.3		30.7
9	215	16.0	324	06.9		57.4	5	47.8		57.7	354	14.8		48.4	306	23.5		30.7
10	230	18.5	339	06.0		57.9	20	48.7		58.2	9	16.7		48.6	321	25.6		30.7
11	245	21.0	354	05.1	-21	58.4	35	49.7	-10	58.8	24	18.7	-14	48.7	336	27.8	-22	30.7
12	260	23.4	9	04.2	-21	58.9	50	50.7	-10	59.3	39	20.7	-14	48.9	351	29.9	-22	30.7
13	275	25.9	24	03.3		59.4	65	51.6	-10	59.9	54	22.7		49.0	6	32.1		30.7
14	290	28.3	39	02.4	-21	59.9	80	52.6	-11	00.4	69	24.7		49.1	21	34.2		30.7
15	305	30.8	54	01.5	-22	00.4	95	53.6		01.0	84	26.6		49.3	36	36.4		30.7
16	320	33.3	69	00.6		00.9	110	54.5		01.5	99	28.6		49.4	51	38.5		30.7
17	335	35.7	83	59.8	-22	01.4	125	55.5	-11	02.1	114	30.6	-14	49.6	66	40.7	-22	30.7
18	350	38.2	98	58.9	-22	01.9	140	56.5	-11	02.6	129	32.6	-14	49.7	81	42.8	-22	30.8
19	5	40.7	113	58.0		02.4	155	57.4		03.2	144	34.6		49.9	96	45.0		30.8
20	20	43.1	128	57.1		02.8	170	58.4		03.7	159	36.5		50.0	111	47.1		30.8
21	35	45.6	143	56.2		03.3	185	59.4		04.3	174	38.5		50.2	126	49.3		30.8
22	50	48.1	158	55.3		03.8	201	00.3		04.8	189	40.5		50.3	141	51.4		30.8
23	65	50.5	173	54.4		04.3	216	01.3		05.4	204	42.5		50.4	156	53.6		30.8
24	80	53.0	188	53.5	-22	04.8	231	02.3	-11	06.0	219	44.5	-14	50.6	171	55.7	-22	30.8
Dif	—		-9 -5				+10 -6				+20		-1		+21			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 53 ^m 8			Edad: 23 ^d 5 PHE { SD: 15:3 PMG: 7 ^h 34 ^m 4 ^h : 56:1 12 ^h : 55:9 20 ^h : 55:7 R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m
0	181	36.5	-23 04.1	249	56.4	-0 15.3		60 N	14 54	15 51	16 47	1 27 77	13 25 14	
1	196	36.2	04.3	264	29.0 ¹³⁶	26.2 ¹⁰⁹		58	15 11	16 02	16 54	27 74	27 16	
2	211	35.9	04.5	279	01.6 ¹³⁶	37.1 ¹⁰⁹		56	25	12	17 01	27 72	28 19	
3	226	35.7	04.7	293	34.3 ¹³⁷	47.9 ¹⁰⁸		54	37	21	07	26 71	29 22	
4	241	35.4	04.9	308	07.0 ¹³⁷	-0 58.7 ¹⁰⁸		52	48	29	13	26 69	30 22	
5	256	35.1	-23 05.0	322	39.7 ¹³⁷	-1 09.5 ¹⁰⁸		50	15 58	16 36	17 18	1 26 67	13 31 24	
6	271	34.8	-23 05.2	337	12.4 ¹³⁷	-1 20.3 ¹⁰⁸		45	16 18	16 52	17 29	1 26 63	13 33 27	
7	286	34.5	05.4	351	45.2 ¹³⁸	31.1 ¹⁰⁸		40	35	17 05	39	25 60	35 30	
8	301	34.2	05.6	6	18.0 ¹³⁸	41.9 ¹⁰⁸		35	16 49	17	49	25 57	37 32	
9	316	33.9	05.8	20	50.8 ¹³⁸	-1 52.6 ¹⁰⁷		30	17 01	27	17 57	25 55	38 35	
10	331	33.6	05.9	35	23.6 ¹³⁸	-2 03.4 ¹⁰⁸		20	22	17 46	18 13	24 51	41 38	
11	346	33.3	-23 06.1	49	56.4 ¹³⁸	-2 14.1 ¹⁰⁷		10 N	17 40	18 03	18 29	1 24 48	13 43 41	
12	1	33.0	-23 06.3	64	29.3 ¹³⁹	-2 24.8 ¹⁰⁷		0	17 58	18 20	18 46	1 23 45	13 45 44	
13	16	32.7	06.5	79	02.1 ¹³⁸	35.5 ¹⁰⁷		10 S	18 15	38	19 05	23 41	47 47	
14	31	32.4	06.7	93	35.0 ¹³⁹	46.1 ¹⁰⁶		20	34	18 58	27	23 38	49 51	
15	46	32.1	06.8	108	07.9 ¹³⁹	-2 56.7 ¹⁰⁶		30	18 55	19 23	19 56	22 34	51 55	
16	61	31.9	07.0	122	40.9 ¹⁴⁰	-3 07.4 ¹⁰⁷		35	19 08	38	20 14	22 32	53 57	
17	76	31.6	-23 07.2	137	13.8 ¹³⁹	-3 17.9 ¹⁰⁵		40	19 23	19 56	20 37	1 22 29	13 54 60	
18	91	31.3	-23 07.4	151	46.8 ¹⁴⁰	-3 28.5 ¹⁰⁶		45	19 41	20 18	21 07	1 21 27	13 56 62	
19	106	31.0	07.5	166	19.7 ¹³⁹	39.1 ¹⁰⁶		50	20 03	20 47	21 52	21 23	58 66	
20	121	30.7	07.7	180	52.7 ¹⁴⁰	-3 49.6 ¹⁰⁵		52	14	21 02	22 18	21 22	13 59 68	
21	136	30.4	07.9	195	25.7 ¹⁴⁰	-4 00.1 ¹⁰⁵		54	26	20	23 00	21 20	14 00 70	
22	151	30.1	08.1	209	58.7 ¹⁴⁰	10.5 ¹⁰⁴		56	40	21 41	** **	21 18	01 72	
23	166	29.8	08.2	224	31.7 ¹⁴⁰	21.0 ¹⁰⁵		58	20 56	22 10	** **	20 16	03 73	
24	181	29.5	-23 08.4	239	04.7 ¹⁴⁰	-4 31.4 ¹⁰⁴		60 S	21 16	22 55	** **	1 20 14	14 04 76	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 33 ^m 4		Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: +1.6 PMG: 8 ^h 35 ^m			Mag: -1.8 PMG: 9 ^h 20 ^m			Mag: +0.5 PMG: 12 ^h 30 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	80	53.0	188	53.5	-22 04.8	231	02.3	-11 06.0	219	44.5	-14 50.6	171	55.7	-22 30.8
1	95	55.5	203	52.6	05.3	246	03.2	06.5	234	46.5	50.7	186	57.8	30.8
2	110	57.9	218	51.7	05.8	261	04.2	07.1	249	48.4	50.9	202	00.0	30.8
3	126	00.4	233	50.8	06.2	276	05.2	07.6	264	50.4	51.0	217	02.1	30.8
4	141	02.8	248	49.9	06.7	291	06.1	08.2	279	52.4	51.2	232	04.3	30.8
5	156	05.3	263	49.1	-22 07.2	306	07.1	-11 08.7	294	54.4	-14 51.3	247	06.4	-22 30.8
6	171	07.8	278	48.2	-22 07.7	321	08.1	-11 09.3	309	56.4	-14 51.5	262	08.6	-22 30.8
7	186	10.2	293	47.3	08.2	336	09.0	09.8	324	58.3	51.6	277	10.7	30.8
8	201	12.7	308	46.4	08.6	351	10.0	10.4	340	00.3	51.7	292	12.9	30.8
9	216	15.2	323	45.5	09.1	6	11.0	10.9	355	02.3	51.9	307	15.0	30.8
10	231	17.6	338	44.6	09.6	21	11.9	11.5	10	04.3	52.0	322	17.2	30.8
11	246	20.1	353	43.7	-22 10.1	36	12.9	-11 12.0	25	06.3	-14 52.2	337	19.3	-22 30.8
12	261	22.6	8	42.8	-22 10.5	51	13.9	-11 12.6	40	08.3	-14 52.3	352	21.5	-22 30.8
13	276	25.0	23	41.9	11.0	66	14.8	13.1	55	10.2	52.5	7	23.6	30.9
14	291	27.5	38	41.0	11.5	81	15.8	13.7	70	12.2	52.6	22	25.8	30.9
15	306	30.0	53	40.1	11.9	96	16.8	14.2	85	14.2	52.7	37	27.9	30.9
16	321	32.4	68	39.2	12.4	111	17.7	14.8	100	16.2	52.9	52	30.1	30.9
17	336	34.9	83	38.3	-22 12.9	126	18.7	-11 15.3	115	18.2	-14 53.0	67	32.2	-22 30.9
18	351	37.3	98	37.4	-22 13.3	141	19.7	-11 15.9	130	20.2	-14 53.2	82	34.3	-22 30.9
19	6	39.8	113	36.5	13.8	156	20.6	16.4	145	22.1	53.3	97	36.5	30.9
20	21	42.3	128	35.6	14.3	171	21.6	17.0	160	24.1	53.5	112	38.6	30.9
21	36	44.7	143	34.7	14.7	186	22.6	17.5	175	26.1	53.6	127	40.8	30.9
22	51	47.2	158	33.8	15.2	201	23.5	18.1	190	28.1	53.7	142	42.9	30.9
23	66	49.7	173	32.9	15.6	216	24.5	18.6	205	30.1	53.9	157	45.1	30.9
24	81	52.1	188	32.0	-22 16.1	231	25.5	-11 19.2	220	32.1	-14 54.0	172	47.2	-22 30.9
Dif	—		-9		-5	+10		-6	+20		-1	+21		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'2 PMG: 11 ^h 54 ^m 3			Edad: 24 ^d 5 PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 SD: 15'1 PMG: 8 ^h 19 ^m R°: 44 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	181	29.5	-23	08.4	239	04.7	-4	31.4	60 N	7 01	7 58	8 55	2 44	76	13 39	16					
1	196	29.2		08.6	253	37.8 ¹⁴¹		41.8 ¹⁰⁴	58	6 54	46	38	41	73	43	18					
2	211	28.9		08.7	268	10.8 ¹⁴⁰	-4	52.1 ¹⁰³	56	47	36	23	39	71	47	19					
3	226	28.6		08.9	282	43.9 ¹⁴¹	-5	02.4 ¹⁰³	54	41	27	11	37	68	50	21					
4	241	28.3		09.1	297	16.9 ¹⁴⁰		12.7 ¹⁰³	52	36	19	8 00	35	66	52	24					
5	256	28.0	-23	09.2	311	50.0 ¹⁴¹	-5	23.0 ¹⁰³	50	6 31	7 12	7 50	2 33	65	13 55	25					
6	271	27.7	-23	09.4	326	23.0 ¹⁴⁰	-5	33.3 ¹⁰³	45	6 19	6 56	7 30	2 29	61	14 00	28					
7	286	27.4		09.6	340	56.1 ¹⁴¹		43.5 ¹⁰²	40	09	43	7 13	25	59	05	31					
8	301	27.1		09.7	355	29.2 ¹⁴¹	-5	53.6 ¹⁰¹	35	6 00	31	6 59	22	57	09	33					
9	316	26.8		09.9	10	02.3 ¹⁴¹	-6	03.8 ¹⁰²	30	5 51	21	47	20	54	13	35					
10	331	26.5		10.0	24	35.3 ¹⁴⁰		13.9 ¹⁰¹	20	35	6 02	26	15	51	19	38					
11	346	26.3	-23	10.2	39	08.4 ¹⁴¹	-6	23.9 ¹⁰⁰	10 N	5 19	5 45	6 08	2 12	47	14 24	42					
12	1	26.0	-23	10.4	53	41.5 ¹⁴¹	-6	34.0 ¹⁰¹	0	5 02	5 28	5 51	2 08	44	14 29	45					
13	16	25.7		10.5	68	14.6 ¹⁴¹		44.0 ¹⁰⁰	10 S	4 43	5 10	33	04	42	34	48					
14	31	25.4		10.7	82	47.7 ¹⁴¹	-6	54.0 ¹⁰⁰	20	4 21	4 50	5 14	2 01	38	40	50					
15	46	25.1		10.8	97	20.8 ¹⁴¹	-7	03.9 ⁹⁹	30	3 52	25	4 53	1 56	35	46	54					
16	61	24.8		11.0	111	53.9 ¹⁴¹		13.8 ⁹⁹	35	34	4 10	40	54	32	50	56					
17	76	24.5	-23	11.1	126	26.9 ¹⁴⁰	-7	23.6 ⁹⁸	40	3 11	3 52	4 25	1 51	30	14 54	58					
18	91	24.2	-23	11.3	141	00.0 ¹⁴¹	-7	33.5 ⁹⁹	45	2 41	3 30	4 07	1 48	27	14 58	62					
19	106	23.9		11.5	155	33.1 ¹⁴¹		43.2 ⁹⁷	50	1 56	3 01	3 45	44	24	15 04	65					
20	121	23.6		11.6	170	06.2 ¹⁴¹	-7	53.0 ⁹⁸	52	1 30	2 46	34	43	22	07	66					
21	136	23.3		11.8	184	39.2 ¹⁴⁰	-8	02.7 ⁹⁷	54	0 47	28	22	41	21	10	68					
22	151	23.0		11.9	199	12.3 ¹⁴¹		12.3 ⁹⁶	56	** **	2 07	3 08	39	19	13	70					
23	166	22.7		12.1	213	45.4 ¹⁴¹		21.9 ⁹⁶	58	** **	1 38	2 52	36	17	16	72					
24	181	22.4	-23	12.2	228	18.4 ¹⁴⁰	-8	31.5 ⁹⁶	60 S	** **	0 53	2 32	1 34	15	15 20	75					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 18 ^h 29 ^m 5			Mag: -3.9 PMG: 11 ^h 27 ^m			Mag: +1.6 PMG: 8 ^h 34 ^m			Mag: -1.8 PMG: 9 ^h 17 ^m			Mag: +0.5 PMG: 12 ^h 27 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°				
0	81	52.1	188	32.0	-22	16.1	231	25.5	-11	19.2	220	32.1	-14	54.0	172	47.2	-22	30.9			
1	96	54.6	203	31.1		16.6	246	26.4		19.7	235	34.0		54.2	187	49.4		30.9			
2	111	57.1	218	30.2		17.0	261	27.4		20.3	250	36.0		54.3	202	51.5		30.9			
3	126	59.5	233	29.3		17.5	276	28.4		20.8	265	38.0		54.5	217	53.7		30.9			
4	142	02.0	248	28.4		17.9	291	29.3		21.4	280	40.0		54.6	232	55.8		30.9			
5	157	04.4	263	27.5	-22	18.4	306	30.3	-11	21.9	295	42.0	-14	54.7	247	58.0	-22	30.9			
6	172	06.9	278	26.6	-22	18.8	321	31.3	-11	22.5	310	44.0	-14	54.9	263	00.1	-22	30.9			
7	187	09.4	293	25.7		19.3	336	32.2		23.0	325	45.9		55.0	278	02.3		30.9			
8	202	11.8	308	24.8		19.7	351	33.2		23.6	340	47.9		55.2	293	04.4		30.9			
9	217	14.3	323	23.9		20.2	6	34.1		24.1	355	49.9		55.3	308	06.5		31.0			
10	232	16.8	338	23.0		20.6	21	35.1		24.6	10	51.9		55.5	323	08.7		31.0			
11	247	19.2	353	22.1	-22	21.1	36	36.1	-11	25.2	25	53.9	-14	55.6	338	10.8	-22	31.0			
12	262	21.7	8	21.2	-22	21.5	51	37.0	-11	25.7	40	55.9	-14	55.7	353	13.0	-22	31.0			
13	277	24.2	23	20.3		22.0	66	38.0		26.3	55	57.8		55.9	8	15.1		31.0			
14	292	26.6	38	19.3		22.4	81	39.0		26.8	70	59.8		56.0	23	17.3		31.0			
15	307	29.1	53	18.4		22.8	96	39.9		27.4	86	01.8		56.2	38	19.4		31.0			
16	322	31.6	68	17.5		23.3	111	40.9		27.9	101	03.8		56.3	53	21.6		31.0			
17	337	34.0	83	16.6	-22	23.7	126	41.9	-11	28.5	116	05.8	-14	56.4	68	23.7	-22	31.0			
18	352	36.5	98	15.7	-22	24.2	141	42.8	-11	29.0	131	07.8	-14	56.6	83	25.9	-22	31.0			
19	7	38.9	113	14.8		24.6	156	43.8		29.6	146	09.8		56.7	98	28.0		31.0			
20	22	41.4	128	13.9		25.0	171	44.7		30.1	161	11.7		56.9	113	30.2		31.0			
21	37	43.9	143	13.0		25.5	186	45.7		30.7	176	13.7		57.0	128	32.3		31.0			
22	52	46.3	158	12.1		25.9	201	46.7		31.2	191	15.7		57.2	143	34.4		31.0			
23	67	48.8	173	11.2		26.3	216	47.6		31.8	206	17.7		57.3	158	36.6		31.0			
24	82	51.3	188	10.3	-22	26.8	231	48.6	-11	32.3	221	19.7	-14	57.4	173	38.7	-22	31.0			
Dif	—			-9			-4			+10			-1			+21					

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 54 ^m 7				Edad: 25 ^d 5 PHE { 4 ^h : 55/0 12 ^h : 54/8 20 ^h : 54/7 PMG: 9 ^h 03 ^m R°: 45 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	181	22.4	-23	12.2	228	18.4	-8	31.5	60 N	14 53	15 50	16 47	4 00 73	13 55 18				
1	196	22.1		12.4	242	51.5 ¹⁴¹		41.1 ⁹⁶	58	15 10	16 02	16 54	3 54 72	14 01 20				
2	211	21.8		12.5	257	24.5 ¹⁴⁰	-8	50.5 ⁹⁴	56	25	12	17 01	50 69	06 23				
3	226	21.5		12.7	271	57.5 ¹⁴⁰	-9	00.0 ⁹⁵	54	37	21	07	45 67	11 24				
4	241	21.2		12.8	286	30.5 ¹⁴⁰	-9	09.4 ⁹⁴	52	48	29	13	41 66	16 25				
5	256	20.9	-23	13.0	301	03.6 ¹⁴¹	-9	18.7 ⁹³	50	15 58	16 37	17 18	3 38 64	14 20 27				
6	271	20.6	-23	13.1	315	36.6 ¹⁴⁰	-9	28.1 ⁹⁴	45	16 19	16 53	17 30	3 30 61	14 28 31				
7	286	20.3		13.2	330	09.6 ¹⁴⁰		37.3 ⁹²	40	35	17 06	40	24 58	36 32				
8	301	20.0		13.4	344	42.6 ¹⁴⁰		46.5 ⁹²	35	16 49	18	49	19 56	42 35				
9	316	19.7		13.5	359	15.5 ¹³⁹	-9	55.7 ⁹²	30	17 02	28	17 58	14 54	48 36				
10	331	19.4		13.7	13	48.5 ¹⁴⁰	-10	04.8 ⁹¹	20	23	17 47	18 14	3 06 50	14 57 40				
11	346	19.1	-23	13.8	28	21.4 ¹³⁹	-10	13.9 ⁹¹	10 N	17 41	18 04	18 30	2 59 47	15 06 42				
12	1	18.8	-23	14.0	42	54.4 ¹⁴⁰	-10	22.9 ⁹⁰	0	17 58	18 21	18 47	2 52 45	15 14 45				
13	16	18.5		14.1	57	27.3 ¹³⁹		31.9 ⁹⁰	10 S	18 16	39	19 06	46 42	22 47				
14	31	18.2		14.2	72	00.2 ¹³⁹		40.8 ⁸⁹	20	35	18 59	29	39 39	30 51				
15	46	17.9		14.4	86	33.1 ¹³⁹		49.7 ⁸⁹	30	18 57	19 24	19 57	31 36	40 54				
16	61	17.6		14.5	101	06.0 ¹³⁹	-10	58.5 ⁸⁸	35	19 10	39	20 16	26 34	46 55				
17	76	17.3	-23	14.6	115	38.9 ¹³⁹	-11	07.3 ⁸⁸	40	19 25	19 57	20 39	2 21 32	15 52 58				
18	91	17.0	-23	14.8	130	11.7 ¹³⁸	-11	16.0 ⁸⁷	45	19 42	20 20	21 09	2 15 29	16 00 60				
19	106	16.7		14.9	144	44.6 ¹³⁹		24.7 ⁸⁷	50	20 05	20 49	21 54	08 26	09 63				
20	121	16.4		15.1	159	17.4 ¹³⁸		33.3 ⁸⁶	52	15	21 04	22 21	05 25	13 65				
21	136	16.1		15.2	173	50.2 ¹³⁸		41.9 ⁸⁶	54	28	22	23 05	2 02 22	18 66				
22	151	15.8		15.3	188	23.0 ¹³⁸		50.4 ⁸⁵	56	42	21 44	** **	1 58 21	23 68				
23	166	15.5		15.4	202	55.8 ¹³⁸	-11	58.8 ⁸⁴	58	20 58	22 13	** **	53 19	28 71				
24	181	15.2	-23	15.6	217	28.6 ¹³⁸	-12	07.2 ⁸⁴	60 S	21 18	23 01	** **	1 49 16	16 35 73				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 25 ^m 6		Mag: -3.9 PMG: 11 ^h 28 ^m				Mag: +1.6 PMG: 8 ^h 32 ^m				Mag: -1.8 PMG: 9 ^h 13 ^m				Mag: +0.5 PMG: 12 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	82	51.3	188	10.3	-22	26.8	231	48.6	-11	32.3	221	19.7	-14	57.4	173	38.7	-22	31.0
1	97	53.7	203	09.4		27.2	246	49.6		32.8	236	21.7		57.6	188	40.9		31.0
2	112	56.2	218	08.4		27.6	261	50.5		33.4	251	23.7		57.7	203	43.0		31.0
3	127	58.7	233	07.5		28.0	276	51.5		33.9	266	25.6		57.9	218	45.2		31.0
4	143	01.1	248	06.6		28.5	291	52.5		34.5	281	27.6		58.0	233	47.3		31.0
5	158	03.6	263	05.7	-22	28.9	306	53.4	-11	35.0	296	29.6	-14	58.1	248	49.5	-22	31.0
6	173	06.1	278	04.8	-22	29.3	321	54.4	-11	35.6	311	31.6	-14	58.3	263	51.6	-22	31.1
7	188	08.5	293	03.9		29.7	336	55.3		36.1	326	33.6		58.4	278	53.8		31.1
8	203	11.0	308	03.0		30.2	351	56.3		36.7	341	35.6		58.6	293	55.9		31.1
9	218	13.4	323	02.1		30.6	6	57.3		37.2	356	37.6		58.7	308	58.1		31.1
10	233	15.9	338	01.1		31.0	21	58.2		37.8	11	39.6		58.9	324	00.2		31.1
11	248	18.4	353	00.2	-22	31.4	36	59.2	-11	38.3	26	41.5	-14	59.0	339	02.3	-22	31.1
12	263	20.8	7	59.3	-22	31.8	52	00.1	-11	38.8	41	43.5	-14	59.1	354	04.5	-22	31.1
13	278	23.3	22	58.4		32.2	67	01.1		39.4	56	45.5		59.3	9	06.6		31.1
14	293	25.8	37	57.5		32.7	82	02.1		39.9	71	47.5		59.4	24	08.8		31.1
15	308	28.2	52	56.6		33.1	97	03.0		40.5	86	49.5		59.6	39	10.9		31.1
16	323	30.7	67	55.7		33.5	112	04.0		41.0	101	51.5		59.7	54	13.1		31.1
17	338	33.2	82	54.7	-22	33.9	127	05.0	-11	41.6	116	53.5	-14	59.8	69	15.2	-22	31.1
18	353	35.6	97	53.8	-22	34.3	142	05.9	-11	42.1	131	55.5	-15	00.0	84	17.4	-22	31.1
19	8	38.1	112	52.9		34.7	157	06.9		42.6	146	57.4	-15	00.1	99	19.5		31.1
20	23	40.5	127	52.0		35.1	172	07.8		43.2	161	59.4		00.3	114	21.7		31.1
21	38	43.0	142	51.1		35.5	187	08.8		43.7	177	01.4		00.4	129	23.8		31.1
22	53	45.5	157	50.2		35.9	202	09.8		44.3	192	03.4		00.5	144	26.0		31.1
23	68	47.9	172	49.2		36.3	217	10.7		44.8	207	05.4		00.7	159	28.1		31.1
24	83	50.4	187	48.3	-22	36.7	232	11.7	-11	45.4	222	07.4	-15	00.8	174	30.2	-22	31.1
Dif	—		-9		-4		+10		-5		+20		-1		+21		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 55 ^m 2			Edad: 26 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 9 ^h 48 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	181	15.2	-23	15.6	217	28.6	-12	07.2	60 N	7 03	8 00	8 57	5 13	72	14 13	22		
1	196	14.9		15.7	232	01.3 ¹³⁷		15.6 ⁸⁴	58	6 56	7 48	40	5 06	69	21	25		
2	211	14.6		15.8	246	34.0 ¹³⁷		23.9 ⁸³	56	49	38	25	4 59	67	29	26		
3	226	14.3		16.0	261	06.7 ¹³⁷		32.1 ⁸²	54	43	29	13	52	66	35	28		
4	241	14.0		16.1	275	39.4 ¹³⁷		40.3 ⁸²	52	37	21	8 02	47	64	41	30		
5	256	13.7	-23	16.2	290	12.1 ¹³⁷	-12	48.4 ⁸¹	50	6 32	7 14	7 52	4 42	62	14 47	31		
6	271	13.4	-23	16.3	304	44.8 ¹³⁷	-12	56.4 ⁸⁰	45	6 20	6 58	7 31	4 31	60	14 59	33		
7	286	13.1		16.5	319	17.4 ¹³⁶	-13	04.4 ⁸⁰	40	10	44	15	22	57	15 08	36		
8	301	12.8		16.6	333	50.0 ¹³⁶		12.3 ⁷⁹	35	6 01	32	7 01	15	55	17	37		
9	316	12.5		16.7	348	22.6 ¹³⁶		20.2 ⁷⁹	30	5 52	22	6 48	4 08	53	24	39		
10	331	12.2		16.8	2	55.2 ¹³⁶		28.0 ⁷⁸	20	36	6 03	27	3 56	51	37	42		
11	346	11.9	-23	17.0	17	27.7 ¹³⁵	-13	35.8 ⁷⁸	10 N	5 20	5 46	6 09	3 46	48	15 48	44		
12	1	11.6	-23	17.1	32	00.3 ¹³⁶	-13	43.4 ⁷⁶	0	5 03	5 29	5 51	3 37	46	15 59	46		
13	16	11.3		17.2	46	32.8 ¹³⁵		51.1 ⁷⁷	10 S	4 44	5 11	34	28	43	16 09	49		
14	31	11.0		17.3	61	05.3 ¹³⁵	-13	58.6 ⁷⁵	20	4 21	4 51	5 15	18	40	21	50		
15	46	10.7		17.4	75	37.7 ¹³⁴	-14	06.1 ⁷⁵	30	3 53	26	4 53	07	37	34	53		
16	61	10.4		17.6	90	10.2 ¹³⁵		13.6 ⁷⁵	35	34	4 11	40	3 00	36	41	55		
17	76	10.1	-23	17.7	104	42.6 ¹³⁴	-14	20.9 ⁷³	40	3 11	3 53	4 25	2 53	34	16 50	56		
18	91	09.8	-23	17.8	119	15.0 ¹³⁴	-14	28.2 ⁷³	45	2 41	3 30	4 07	2 44	32	17 00	58		
19	106	09.5		17.9	133	47.4 ¹³⁴		35.5 ⁷³	50	1 56	3 01	3 45	34	29	12	61		
20	121	09.2		18.0	148	19.8 ¹³⁴		42.6 ⁷¹	52	1 29	2 46	34	30	27	18	62		
21	136	08.9		18.1	162	52.1 ¹³³		49.7 ⁷¹	54	0 45	28	22	24	26	24	64		
22	151	08.5		18.3	177	24.4 ¹³³	-14	56.8 ⁷¹	56	** ** *	2 06	3 08	19	24	31	66		
23	166	08.2		18.4	191	56.7 ¹³³	-15	03.7 ⁶⁹	58	** ** *	1 37	2 51	12	22	39	67		
24	181	07.9	-23	18.5	206	29.0 ¹³³	-15	10.6 ⁶⁹	60 S	** ** *	0 49	2 31	2 05	20	17 48	70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 21 ^m 6		Mag: -3.9 PMG: 11 ^h 29 ^m		Mag: +1.6 PMG: 8 ^h 31 ^m		Mag: -1.8 PMG: 9 ^h 10 ^m		Mag: +0.5 PMG: 12 ^h 20 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	83	50.4	187	48.3	-22	36.7	232	11.7	-11	45.4	222	07.4	-15	00.8	174	30.2	-22	31.1
1	98	52.9	202	47.4		37.1	247	12.6		45.9	237	09.4		01.0	189	32.4		31.1
2	113	55.3	217	46.5		37.5	262	13.6		46.4	252	11.4		01.1	204	34.5		31.1
3	128	57.8	232	45.6		37.9	277	14.6		47.0	267	13.3		01.2	219	36.7		31.1
4	144	00.3	247	44.6		38.3	292	15.5		47.5	282	15.3		01.4	234	38.8		31.2
5	159	02.7	262	43.7	-22	38.7	307	16.5	-11	48.1	297	17.3	-15	01.5	249	41.0	-22	31.2
6	174	05.2	277	42.8	-22	39.1	322	17.5	-11	48.6	312	19.3	-15	01.7	264	43.1	-22	31.2
7	189	07.7	292	41.9		39.5	337	18.4		49.2	327	21.3		01.8	279	45.3		31.2
8	204	10.1	307	41.0		39.9	352	19.4		49.7	342	23.3		01.9	294	47.4		31.2
9	219	12.6	322	40.0		40.3	7	20.3		50.2	357	25.3		02.1	309	49.6		31.2
10	234	15.0	337	39.1		40.7	22	21.3		50.8	12	27.3		02.2	324	51.7		31.2
11	249	17.5	352	38.2	-22	41.1	37	22.3	-11	51.3	27	29.3	-15	02.4	339	53.8	-22	31.2
12	264	20.0	7	37.3	-22	41.5	52	23.2	-11	51.9	42	31.3	-15	02.5	354	56.0	-22	31.2
13	279	22.4	22	36.4		41.8	67	24.2		52.4	57	33.2		02.6	9	58.1		31.2
14	294	24.9	37	35.4		42.2	82	25.1		52.9	72	35.2		02.8	25	00.3		31.2
15	309	27.4	52	34.5		42.6	97	26.1		53.5	87	37.2		02.9	40	02.4		31.2
16	324	29.8	67	33.6		43.0	112	27.1		54.0	102	39.2		03.1	55	04.6		31.2
17	339	32.3	82	32.7	-22	43.4	127	28.0	-11	54.6	117	41.2	-15	03.2	70	06.7	-22	31.2
18	354	34.8	97	31.7	-22	43.8	142	29.0	-11	55.1	132	43.2	-15	03.3	85	08.9	-22	31.2
19	9	37.2	112	30.8		44.1	157	29.9		55.6	147	45.2		03.5	100	11.0		31.2
20	24	39.7	127	29.9		44.5	172	30.9		56.2	162	47.2		03.6	115	13.2		31.2
21	39	42.2	142	29.0		44.9	187	31.9		56.7	177	49.2		03.7	130	15.3		31.2
22	54	44.6	157	28.0		45.3	202	32.8		57.3	192	51.2		03.9	145	17.4		31.2
23	69	47.1	172	27.1		45.7	217	33.8		57.8	207	53.1		04.0	160	19.6		31.2
24	84	49.5	187	26.2	-22	46.0	232	34.7	-11	58.3	222	55.1	-15	04.2	175	21.7	-22	31.2
Dif	—		-9		-4		+10		-5		+20		-1		+21			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 55 ^m 7				Edad: 27 ^d 5 PHE { SD: 14:8 PMG: 10 ^h 34 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	181	07.9	-23	18.5	206	29.0	-15	10.6	60 N	14 53	15 51	16 47	6 25	68	14 35	28		
1	196	07.6		18.6	221	01.2 ¹³²		17.4 ⁶⁸	58	15 10	16 02	16 55	15 65		46 30			
2	211	07.3		18.7	235	33.5 ¹³³		24.2 ⁶⁸	56	25	12	17 02	6 06	63	14 55	32		
3	226	07.0		18.8	250	05.7 ¹³²		30.9 ⁶⁷	54	38	21	08	5 58	62	15 03	34		
4	241	06.7		18.9	264	37.9 ¹³²		37.5 ⁶⁶	52	49	30	13	51 61		11 34			
5	256	06.4	-23	19.0	279	10.0 ¹³¹	-15	44.1 ⁶⁶	50	15 59	16 37	17 19	5 44	60	15 18	35		
6	271	06.1	-23	19.1	293	42.1 ¹³¹	-15	50.5 ⁶⁴	45	16 19	16 53	17 30	5 31	57	15 32	38		
7	286	05.8		19.2	308	14.3 ¹³²	-15	56.9 ⁶⁴	40	36	17 07	41	19 56		44 39			
8	301	05.5		19.3	322	46.3 ¹³⁰	-16	03.3 ⁶⁴	35	16 50	18	50	10 54		15 54	41		
9	316	05.2		19.4	337	18.4 ¹³¹		09.5 ⁶²	30	17 02	29	17 59	5 01	53	16 03	42		
10	331	04.9		19.6	351	50.5 ¹³¹		15.7 ⁶²	20	24	17 48	18 15	4 47	50	19 43			
11	346	04.6	-23	19.7	6	22.5 ¹³⁰	-16	21.8 ⁶¹	10 N	17 42	18 05	18 31	4 34	49	16 32	46		
12	1	04.3	-23	19.8	20	54.5 ¹³⁰	-16	27.9 ⁶¹	0	17 59	18 22	18 48	4 23	46	16 45	47		
13	16	04.0		19.9	35	26.4 ¹²⁹		33.8 ⁵⁹	10 S	18 17	18 40	19 07	4 11	44	16 58	48		
14	31	03.7		20.0	49	58.4 ¹³⁰		39.7 ⁵⁹	20	36	19 00	30	3 58	43	17 11	50		
15	46	03.4		20.1	64	30.3 ¹²⁹		45.5 ⁵⁸	30	18 58	25	19 59	44 41		27 52			
16	61	03.1		20.2	79	02.2 ¹²⁹		51.3 ⁵⁸	35	19 11	41	20 17	36 39		36 53			
17	76	02.8	-23	20.3	93	34.1 ¹²⁹	-16	56.9 ⁵⁶	40	19 26	19 59	20 40	3 27	37	17 46	55		
18	91	02.5	-23	20.4	108	06.0 ¹²⁹	-17	02.5 ⁵⁶	45	19 44	20 21	21 11	3 16	35	17 58	56		
19	106	02.2		20.4	122	37.8 ¹²⁸		08.0 ⁵⁵	50	20 06	20 51	21 56	3 03	33	18 13	58		
20	121	01.8		20.5	137	09.6 ¹²⁸		13.4 ⁵⁴	52	17	21 06	22 24	2 57	32	20 59			
21	136	01.5		20.6	151	41.4 ¹²⁸		18.8 ⁵⁴	54	29	24	23 09	50 31		28 60			
22	151	01.2		20.7	166	13.2 ¹²⁸		24.0 ⁵²	56	20 44	21 46	** **	43 29		37 61			
23	166	00.9		20.8	180	44.9 ¹²⁷		29.2 ⁵²	58	21 00	22 16	** **	34 28		46 63			
24	181	00.6	-23	20.9	195	16.7 ¹²⁸	-17	34.4 ⁵²	60 S	21 21	23 05	** **	2 25	25	18 58	64		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 17 ^m 7		Mag: -3.9 PMG: 11 ^h 31 ^m				Mag: +1.6 PMG: 8 ^h 29 ^m				Mag: -1.8 PMG: 9 ^h 07 ^m				Mag: +0.5 PMG: 12 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	49.5	187	26.2	-22	46.0	232	34.7	-11	58.3	222	55.1	-15	04.2	175	21.7	-22	31.2
1	99	52.0	202	25.3		46.4	247	35.7		58.9	237	57.1		04.3	190	23.9		31.2
2	114	54.5	217	24.3		46.8	262	36.6		59.4	252	59.1		04.4	205	26.0		31.2
3	129	56.9	232	23.4		47.1	277	37.6	-11	59.9	268	01.1		04.6	220	28.2		31.3
4	144	59.4	247	22.5		47.5	292	38.6	-12	00.5	283	03.1		04.7	235	30.3		31.3
5	160	01.9	262	21.6	-22	47.9	307	39.5	-12	01.0	298	05.1	-15	04.9	250	32.5	-22	31.3
6	175	04.3	277	20.6	-22	48.2	322	40.5	-12	01.6	313	07.1	-15	05.0	265	34.6	-22	31.3
7	190	06.8	292	19.7		48.6	337	41.4		02.1	328	09.1		05.1	280	36.8		31.3
8	205	09.3	307	18.8		49.0	352	42.4		02.6	343	11.1		05.3	295	38.9		31.3
9	220	11.7	322	17.8		49.3	7	43.4		03.2	358	13.1		05.4	310	41.0		31.3
10	235	14.2	337	16.9		49.7	22	44.3		03.7	13	15.1		05.6	325	43.2		31.3
11	250	16.7	352	16.0	-22	50.1	37	45.3	-12	04.3	28	17.0	-15	05.7	340	45.3	-22	31.3
12	265	19.1	7	15.0	-22	50.4	52	46.2	-12	04.8	43	19.0	-15	05.8	355	47.5	-22	31.3
13	280	21.6	22	14.1		50.8	67	47.2		05.3	58	21.0		06.0	10	49.6		31.3
14	295	24.0	37	13.2		51.1	82	48.1		05.9	73	23.0		06.1	25	51.8		31.3
15	310	26.5	52	12.3		51.5	97	49.1		06.4	88	25.0		06.2	40	53.9		31.3
16	325	29.0	67	11.3		51.8	112	50.1		06.9	103	27.0		06.4	55	56.1		31.3
17	340	31.4	82	10.4	-22	52.2	127	51.0	-12	07.5	118	29.0	-15	06.5	70	58.2	-22	31.3
18	355	33.9	97	09.5	-22	52.5	142	52.0	-12	08.0	133	31.0	-15	06.7	86	00.4	-22	31.3
19	10	36.4	112	08.5		52.9	157	52.9		08.5	148	33.0		06.8	101	02.5		31.3
20	25	38.8	127	07.6		53.2	172	53.9		09.1	163	35.0		06.9	116	04.6		31.3
21	40	41.3	142	06.7		53.6	187	54.8		09.6	178	37.0		07.1	131	06.8		31.3
22	55	43.8	157	05.7		53.9	202	55.8		10.2	193	39.0		07.2	146	08.9		31.3
23	70	46.2	172	04.8		54.3	217	56.8		10.7	208	41.0		07.3	161	11.1		31.3
24	85	48.7	187	03.9	-22	54.6	232	57.7	-12	11.2	223	43.0	-15	07.5	176	13.2	-22	31.3
Dif	—		-9		-4		+10		-5		+20		-1		+21		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 56 ^m 2			Edad: 28 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	181	00.6	-23	20.9	195	16.7	-17	34.4	50	60 N	7 05	8 02	8 59	7 33	61	15 03	36	
1	196	00.3		21.0	209	48.4 ¹²⁷		39.4	50	58	6 57	7 50	42	20	60	16	37	
2	211	00.0		21.1	224	20.1 ¹²⁷		44.3	49	56	51	40	27	09	59	27	38	
3	225	59.7		21.2	238	51.7 ¹²⁶		49.2	49	54	44	31	14	7 00	58	37	39	
4	240	59.4		21.3	253	23.4 ¹²⁷		54.0	48	52	39	22	8 03	6 52	56	45	40	
5	255	59.1	-23	21.4	267	55.0 ¹²⁶	-17	58.7	47	50	6 33	7 15	7 54	6 44	56	15 53	41	
6	270	58.8	-23	21.5	282	26.6 ¹²⁶	-18	03.3	46	45	6 22	6 59	7 33	6 28	54	16 10	42	
7	285	58.5		21.5	296	58.2 ¹²⁶		07.9	46	40	11	45	16	15	53	23	43	
8	300	58.2		21.6	311	29.7 ¹²⁵		12.3	44	35	6 02	34	7 02	6 04	52	35	44	
9	315	57.9		21.7	326	01.2 ¹²⁵		16.7	44	30	5 53	23	6 50	5 54	51	16 45	45	
10	330	57.6		21.8	340	32.8 ¹²⁶		21.0	43	20	37	6 04	28	37	50	17 02	46	
11	345	57.3	-23	21.9	355	04.3 ¹²⁵	-18	25.2	42	10 N	5 21	5 47	6 10	5 23	48	17 18	46	
12	0	56.9	-23	22.0	9	35.7 ¹²⁴	-18	29.3	41	0	5 04	5 30	5 52	5 09	47	17 32	47	
13	15	56.6		22.0	24	07.2 ¹²⁵		33.4	41	10 S	4 45	5 12	35	4 55	47	17 46	49	
14	30	56.3		22.1	38	38.6 ¹²⁴		37.3	39	20	4 22	4 51	5 16	41	45	18 01	50	
15	45	56.0		22.2	53	10.1 ¹²⁵		41.2	39	30	3 53	27	4 54	25	43	19	50	
16	60	55.7		22.3	67	41.5 ¹²⁴		45.0	38	35	35	4 11	41	15	42	29	51	
17	75	55.4	-23	22.4	82	12.8 ¹²³	-18	48.7	37	40	3 11	3 53	4 26	4 04	41	18 41	51	
18	90	55.1	-23	22.4	96	44.2 ¹²⁴	-18	52.3	36	45	2 41	3 31	4 08	3 51	40	18 54	53	
19	105	54.8		22.5	111	15.6 ¹²⁴		55.8	35	50	1 56	3 01	3 46	36	38	19 11	54	
20	120	54.5		22.6	125	46.9 ¹²³	-18	59.3	35	52	1 28	2 46	35	29	37	19	54	
21	135	54.2		22.7	140	18.2 ¹²³	-19	02.6	33	54	0 43	28	22	21	36	28	55	
22	150	53.9		22.7	154	49.5 ¹²³		05.9	33	56	** ** *	2 06	3 08	12	35	38	55	
23	165	53.6		22.8	169	20.8 ¹²³		09.1	32	58	** ** *	1 36	2 52	3 02	33	19 49	57	
24	180	53.3	-23	22.9	183	52.1 ¹²³	-19	12.2	31	60 S	** ** *	0 47	2 31	2 50	32	20 02	58	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 13 ^m 8		Mag: -3.9 PMG: 11 ^h 32 ^m				Mag: +1.6 PMG: 8 ^h 28 ^m				Mag: -1.8 PMG: 9 ^h 04 ^m				Mag: +0.5 PMG: 12 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	85	48.7	187	03.9	-22	54.6	232	57.7	-12	11.2	223	43.0	-15	07.5	176	13.2	-22	31.3
1	100	51.1	202	02.9		55.0	247	58.7		11.8	238	44.9		07.6	191	15.4		31.3
2	115	53.6	217	02.0		55.3	262	59.6		12.3	253	46.9		07.8	206	17.5		31.3
3	130	56.1	232	01.1		55.7	278	00.6		12.8	268	48.9		07.9	221	19.7		31.3
4	145	58.5	247	00.1		56.0	293	01.5		13.4	283	50.9		08.0	236	21.8		31.3
5	161	01.0	261	59.2	-22	56.3	308	02.5	-12	13.9	298	52.9	-15	08.2	251	23.9	-22	31.4
6	176	03.5	276	58.3	-22	56.7	323	03.5	-12	14.4	313	54.9	-15	08.3	266	26.1	-22	31.4
7	191	05.9	291	57.3		57.0	338	04.4		15.0	328	56.9		08.4	281	28.2		31.4
8	206	08.4	306	56.4		57.4	353	05.4		15.5	343	58.9		08.6	296	30.4		31.4
9	221	10.9	321	55.5		57.7	8	06.3		16.0	359	00.9		08.7	311	32.5		31.4
10	236	13.3	336	54.5		58.0	23	07.3		16.6	14	02.9		08.9	326	34.7		31.4
11	251	15.8	351	53.6	-22	58.3	38	08.2	-12	17.1	29	04.9	-15	09.0	341	36.8	-22	31.4
12	266	18.3	6	52.6	-22	58.7	53	09.2	-12	17.6	44	06.9	-15	09.1	356	39.0	-22	31.4
13	281	20.7	21	51.7		59.0	68	10.2		18.2	59	08.9		09.3	11	41.1		31.4
14	296	23.2	36	50.8		59.3	83	11.1		18.7	74	10.9		09.4	26	43.3		31.4
15	311	25.6	51	49.8	-22	59.7	98	12.1		19.2	89	12.9		09.5	41	45.4		31.4
16	326	28.1	66	48.9	-23	00.0	113	13.0		19.8	104	14.9		09.7	56	47.5		31.4
17	341	30.6	81	48.0	-23	00.3	128	14.0	-12	20.3	119	16.9	-15	09.8	71	49.7	-22	31.4
18	356	33.0	96	47.0	-23	00.6	143	14.9	-12	20.8	134	18.9	-15	09.9	86	51.8	-22	31.4
19	11	35.5	111	46.1		01.0	158	15.9		21.4	149	20.9		10.1	101	54.0		31.4
20	26	38.0	126	45.1		01.3	173	16.8		21.9	164	22.9		10.2	116	56.1		31.4
21	41	40.4	141	44.2		01.6	188	17.8		22.4	179	24.8		10.4	131	58.3		31.4
22	56	42.9	156	43.3		01.9	203	18.8		23.0	194	26.8		10.5	147	00.4		31.4
23	71	45.4	171	42.3		02.2	218	19.7		23.5	209	28.8		10.6	162	02.6		31.4
24	86	47.8	186	41.4	-23	02.6	233	20.7	-12	24.0	224	30.8	-15	10.8	177	04.7	-22	31.4
Dif	—		-9		-3		+10		-5		+20		-1		+21			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 56 ^m 7			Edad: 29 ^d 5 PHE { SD: 14:7 PMG: 12 ^h 08 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	53.3	-23 22.9	183	52.1	-19 12.2	60 N	14 53	15 51	16 48	8 34 53	15 39 46			
1	195	52.9	23.0	198	23.3 ¹²²	15.2 ³⁰	58	15 11	16 03	16 55	20 52	15 53 46			
2	210	52.6	23.0	212	54.6 ¹²³	18.1 ²⁹	56	25	13	17 02	8 08 52	16 05 47			
3	225	52.3	23.1	227	25.8 ¹²²	20.9 ²⁸	54	38	22	08	7 58 51	16 47			
4	240	52.0	23.2	241	57.0 ¹²²	23.7 ²⁸	52	49	30	14	48 52	25 47			
5	255	51.7	-23 23.2	256	28.2 ¹²²	-19 26.3 ²⁶	50	15 59	16 38	17 19	7 40 51	16 34 47			
6	270	51.4	-23 23.3	270	59.4 ¹²²	-19 28.9 ²⁶	45	16 20	16 54	17 31	7 22 51	16 52 47			
7	285	51.1	23.4	285	30.5 ¹²¹	31.4 ²⁵	40	37	17 07	41	7 08 50	17 06 48			
8	300	50.8	23.4	300	01.7 ¹²²	33.7 ²³	35	16 51	19	17 51	6 56 49	19 47			
9	315	50.5	23.5	314	32.8 ¹²¹	36.0 ²³	30	17 03	30	18 00	45 50	30 47			
10	330	50.2	23.6	329	04.0 ¹²²	38.2 ²²	20	24	17 48	16	27 49	17 48 48			
11	345	49.9	-23 23.6	343	35.1 ¹²¹	-19 40.4 ²²	10 N	17 43	18 06	18 32	6 11 48	18 04 48			
12	0	49.6	-23 23.7	358	06.2 ¹²¹	-19 42.4 ²⁰	0	18 00	18 23	18 49	5 56 48	18 19 48			
13	15	49.2	23.8	12	37.3 ¹²¹	44.3 ¹⁹	10 S	18	18 41	19 08	42 47	35 48			
14	30	48.9	23.8	27	08.4 ¹²¹	46.1 ¹⁸	20	37	19 02	19 31	26 47	18 51 48			
15	45	48.6	23.9	41	39.5 ¹²¹	47.9 ¹⁸	30	18 59	27	20 00	5 08 46	19 09 48			
16	60	48.3	23.9	56	10.6 ¹²¹	49.6 ¹⁷	35	19 12	19 42	19	4 57 46	20 48			
17	75	48.0	-23 24.0	70	41.6 ¹²⁰	-19 51.1 ¹⁵	40	19 27	20 00	20 42	4 45 46	19 32 49			
18	90	47.7	-23 24.1	85	12.7 ¹²¹	-19 52.6 ¹⁵	45	19 45	20 23	21 12	4 31 45	19 47 48			
19	105	47.4	24.1	99	43.7 ¹²⁰	54.0 ¹⁴	50	20 08	20 52	21 58	14 44	20 05 48			
20	120	47.1	24.2	114	14.8 ¹²¹	55.3 ¹³	52	19	21 07	22 26	4 06 43	13 49			
21	135	46.8	24.2	128	45.8 ¹²⁰	56.5 ¹²	54	31	25	23 12	3 57 43	23 48			
22	150	46.5	24.3	143	16.8 ¹²⁰	57.6 ¹¹	56	20 45	21 48	** ** *	47 42	33 49			
23	165	46.2	24.3	157	47.8 ¹²⁰	58.6 ¹⁰	58	21 02	22 18	** ** *	35 42	20 46 48			
24	180	45.8	-23 24.4	172	18.9 ¹²¹	-19 59.5 ⁹	60 S	21 22	23 08	** ** *	3 22 41	21 00 48			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 09 ^m 8		Mag: -3.9 PMG: 11 ^h 34 ^m			Mag: +1.6 PMG: 8 ^h 26 ^m			Mag: -1.8 PMG: 9 ^h 01 ^m			Mag: +0.4 PMG: 12 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	86	47.8	186	41.4	-23 02.6	233	20.7	-12 24.0	224	30.8	-15 10.8	177	04.7	-22 31.4	
1	101	50.3	201	40.4	02.9	248	21.6	24.6	239	32.8	10.9	192	06.8	31.4	
2	116	52.8	216	39.5	03.2	263	22.6	25.1	254	34.8	11.0	207	09.0	31.4	
3	131	55.2	231	38.6	03.5	278	23.5	25.6	269	36.8	11.2	222	11.1	31.4	
4	146	57.7	246	37.6	03.8	293	24.5	26.2	284	38.8	11.3	237	13.3	31.4	
5	162	00.1	261	36.7	-23 04.1	308	25.4	-12 26.7	299	40.8	-15 11.4	252	15.4	-22 31.4	
6	177	02.6	276	35.7	-23 04.4	323	26.4	-12 27.2	314	42.8	-15 11.6	267	17.6	-22 31.4	
7	192	05.1	291	34.8	04.7	338	27.3	27.8	329	44.8	11.7	282	19.7	31.4	
8	207	07.5	306	33.9	05.0	353	28.3	28.3	344	46.8	11.8	297	21.9	31.4	
9	222	10.0	321	32.9	05.3	8	29.3	28.8	359	48.8	12.0	312	24.0	31.5	
10	237	12.5	336	32.0	05.6	23	30.2	29.3	14	50.8	12.1	327	26.1	31.5	
11	252	14.9	351	31.0	-23 05.9	38	31.2	-12 29.9	29	52.8	-15 12.3	342	28.3	-22 31.5	
12	267	17.4	6	30.1	-23 06.2	53	32.1	-12 30.4	44	54.8	-15 12.4	357	30.4	-22 31.5	
13	282	19.9	21	29.1	06.5	68	33.1	30.9	59	56.8	12.5	12	32.6	31.5	
14	297	22.3	36	28.2	06.8	83	34.0	31.5	74	58.8	12.7	27	34.7	31.5	
15	312	24.8	51	27.3	07.1	98	35.0	32.0	90	00.8	12.8	42	36.9	31.5	
16	327	27.3	66	26.3	07.4	113	35.9	32.5	105	02.8	12.9	57	39.0	31.5	
17	342	29.7	81	25.4	-23 07.7	128	36.9	-12 33.1	120	04.8	-15 13.1	72	41.2	-22 31.5	
18	357	32.2	96	24.4	-23 08.0	143	37.8	-12 33.6	135	06.8	-15 13.2	87	43.3	-22 31.5	
19	12	34.6	111	23.5	08.3	158	38.8	34.1	150	08.8	13.3	102	45.5	31.5	
20	27	37.1	126	22.5	08.6	173	39.7	34.6	165	10.8	13.5	117	47.6	31.5	
21	42	39.6	141	21.6	08.9	188	40.7	35.2	180	12.8	13.6	132	49.7	31.5	
22	57	42.0	156	20.6	09.2	203	41.7	35.7	195	14.8	13.7	147	51.9	31.5	
23	72	44.5	171	19.7	09.5	218	42.6	36.2	210	16.8	13.9	162	54.0	31.5	
24	87	47.0	186	18.7	-23 09.8	233	43.6	-12 36.8	225	18.8	-15 14.0	177	56.2	-22 31.5	
Dif	—		-9	-3	-3	+10	-5	-5	+20	-1	-1	+21	0	0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 2			Edad: 0 ^d 7 PHE { SD: 14'7 PMG: 12 ^h 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	45.8	-23	24.4	172	18.9	-19 59.5	60 N	7 06	8 03	9 01	9 27	43	16 25	55	
1	195	45.5		24.4	186	49.9 ¹²⁰	-20 00.4	58	6 59	7 51	8 43	12 44		39 55		
2	210	45.2		24.5	201	20.9 ¹²⁰	01.1	56	52	41	29	9 00	44	16 52	54	
3	225	44.9		24.5	215	51.9 ¹²⁰	01.8	54	46	32	16	8 49	45	17 03	53	
4	240	44.6		24.6	230	22.9 ¹²⁰	02.3	52	40	24	8 05	40 45		12 53		
5	255	44.3	-23	24.6	244	53.9 ¹²⁰	-20 02.8	50	6 35	7 16	7 55	8 31	45	17 21	52	
6	270	44.0	-23	24.7	259	24.9 ¹²⁰	-20 03.2	45	6 23	7 00	7 34	8 13	46	17 39	52	
7	285	43.7		24.7	273	55.9 ¹²⁰	03.4	40	13	6 47	17	7 58	46	17 54	51	
8	300	43.4		24.8	288	26.9 ¹²⁰	03.6	35	6 03	35	7 03	45 47		18 06	51	
9	315	43.1		24.8	302	57.9 ¹²⁰	03.7	30	5 54	24	6 51	35 46		17 50		
10	330	42.8		24.9	317	28.8 ¹¹⁹	03.7	20	38	6 05	29	7 16	47	36 49		
11	345	42.4	-23	24.9	331	59.8 ¹²⁰	-20 03.6	10 N	5 22	5 48	6 11	6 59	48	18 52	49	
12	0	42.1	-23	25.0	346	30.8 ¹²⁰	-20 03.4	0	5 05	5 31	5 53	6 44	48	19 07	48	
13	15	41.8		25.0	1	01.8 ¹²⁰	03.2	10 S	4 46	5 13	36	29 48		23 47		
14	30	41.5		25.0	15	32.8 ¹²⁰	02.8	20	4 23	4 52	5 17	6 13	48	39 46		
15	45	41.2		25.1	30	03.8 ¹²⁰	02.3	30	3 54	27	4 55	5 54	49	19 57	46	
16	60	40.9		25.1	44	34.8 ¹²⁰	01.8	35	35	4 12	42	43 49		20 08	45	
17	75	40.6	-23	25.2	59	05.8 ¹²⁰	-20 01.1	40	3 12	3 54	4 27	5 31	49	20 21	44	
18	90	40.3	-23	25.2	73	36.8 ¹²⁰	-20 00.4	45	2 41	3 31	4 09	5 16	49	20 35	44	
19	105	40.0		25.2	88	07.8 ¹²⁰	-19 59.6	50	1 56	3 01	3 46	4 58	50	20 53	42	
20	120	39.7		25.3	102	38.8 ¹²⁰	58.7	52	1 28	2 46	35	49 50		21 02	41	
21	135	39.3		25.3	117	09.9 ¹²¹	57.6	54	0 41	28	23	40 50		11 41		
22	150	39.0		25.3	131	40.9 ¹²⁰	56.5	56	** **	2 06	3 09	29 50		22 40		
23	165	38.7		25.4	146	11.9 ¹²⁰	55.3	58	** **	1 36	2 52	17 50		34 39		
24	180	38.4	-23	25.4	160	42.9 ¹²⁰	-19 54.1	60 S	** **	0 46	2 31	4 03	50	21 48	38	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 18 ^h 05 ^m 9		Mag: -3.9 PMG: 11 ^h 35 ^m			Mag: +1.6 PMG: 8 ^h 25 ^m			Mag: -1.8 PMG: 8 ^h 58 ^m			Mag: +0.4 PMG: 12 ^h 07 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	87	47.0	186	18.7	-23	09.8	233	43.6	-12	36.8	225	18.8	-15	14.0	177	56.2
1	102	49.4	201	17.8		10.1	248	44.5		37.3	240	20.8		14.1	192	58.3
2	117	51.9	216	16.9		10.3	263	45.5		37.8	255	22.8		14.3	208	00.5
3	132	54.4	231	15.9		10.6	278	46.4		38.3	270	24.8		14.4	223	02.6
4	147	56.8	246	15.0		10.9	293	47.4		38.9	285	26.8		14.5	238	04.8
5	162	59.3	261	14.0	-23	11.2	308	48.3	-12	39.4	300	28.8	-15	14.7	253	06.9
6	178	01.8	276	13.1	-23	11.5	323	49.3	-12	39.9	315	30.8	-15	14.8	268	09.0
7	193	04.2	291	12.1		11.7	338	50.2		40.5	330	32.8		15.0	283	11.2
8	208	06.7	306	11.2		12.0	353	51.2		41.0	345	34.8		15.1	298	13.3
9	223	09.1	321	10.2		12.3	8	52.1		41.5	0	36.8		15.2	313	15.5
10	238	11.6	336	09.3		12.6	23	53.1		42.0	15	38.8		15.4	328	17.6
11	253	14.1	351	08.3	-23	12.8	38	54.0	-12	42.6	30	40.8	-15	15.5	343	19.8
12	268	16.5	6	07.4	-23	13.1	53	55.0	-12	43.1	45	42.8	-15	15.6	358	21.9
13	283	19.0	21	06.4		13.4	68	55.9		43.6	60	44.8		15.8	13	24.1
14	298	21.5	36	05.5		13.6	83	56.9		44.1	75	46.8		15.9	28	26.2
15	313	23.9	51	04.5		13.9	98	57.8		44.7	90	48.8		16.0	43	28.3
16	328	26.4	66	03.6		14.2	113	58.8		45.2	105	50.8		16.2	58	30.5
17	343	28.9	81	02.6	-23	14.5	128	59.8	-12	45.7	120	52.8	-15	16.3	73	32.6
18	358	31.3	96	01.7	-23	14.7	144	00.7	-12	46.2	135	54.8	-15	16.4	88	34.8
19	13	33.8	111	00.7		15.0	159	01.7		46.8	150	56.8		16.6	103	36.9
20	28	36.2	125	59.8		15.2	174	02.6		47.3	165	58.8		16.7	118	39.1
21	43	38.7	140	58.8		15.5	189	03.6		47.8	181	00.8		16.8	133	41.2
22	58	41.2	155	57.9		15.8	204	04.5		48.3	196	02.8		17.0	148	43.4
23	73	43.6	170	56.9		16.0	219	05.5		48.9	211	04.8		17.1	163	45.5
24	88	46.1	185	56.0	-23	16.3	234	06.4	-12	49.4	226	06.8	-15	17.2	178	47.6
Dif	—		-9	-3		+10	-5		+20	-1		+21				

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16:3 PMG: 11 ^h 57 ^m 7				Edad: 1 ^d 7 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/1 PMG: 13 ^h 44 ^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						
0	180	38.4	-23	25.4	160	42.9	-19	54.1	14	54	15	52	16	49	10	34	17	20	64			
1	195	38.1		25.4	175	14.0 ¹²¹		52.7	15	58	15	11	16	03	9	56	36	34	62			
2	210	37.8		25.5	189	45.0 ¹²⁰		51.2	14	56		26	14	17	03	44	37	46	60			
3	225	37.5		25.5	204	16.1 ¹²¹		49.6	16	54		39	23	09	34	38	17	56	59			
4	240	37.2		25.5	218	47.1 ¹²⁰		48.0	16	52	15	50	31	15	25	38	18	05	58			
5	255	36.9	-23	25.6	233	18.2 ¹²¹	-19	46.2	18	50	16	00	16	38	17	20	9	16	40			
6	270	36.5	-23	25.6	247	49.3 ¹²¹	-19	44.4	18	45	16	21	16	55	17	32	8	59	41			
7	285	36.2		25.6	262	20.4 ¹²¹		42.5	19	40		38	17	08	42	44	42	45	54			
8	300	35.9		25.7	276	51.5 ¹²¹		40.4	21	35	16	52	20	17	52	32	43	18	57	52		
9	315	35.6		25.7	291	22.6 ¹²¹		38.3	21	30	17	04	31	18	00	21	44	19	07	52		
10	330	35.3		25.7	305	53.7 ¹²¹		36.1	22	20	25	17	49	17	8	03	45	25	50			
11	345	35.0	-23	25.7	320	24.8 ¹²¹	-19	33.8	23	10 N	17	44	18	07	18	33	7	47	46			
12	0	34.7	-23	25.8	334	56.0 ¹²²	-19	31.5	23	0	18	01	18	24	18	50	7	32	48			
13	15	34.4		25.8	349	27.1 ¹²¹		29.0	25	10 S	19	18	42	19	09	17	49	20	10	45		
14	30	34.1		25.8	3	58.3 ¹²²		26.4	26	20	18	38	19	03	19	32	7	01	50	25	44	
15	45	33.7		25.8	18	29.5 ¹²²		23.8	26	30	19	00	28	20	01	6	43	51	43	42		
16	60	33.4		25.8	33	00.6 ¹²¹		21.0	28	35	13	19	43	20	32	52	20	53	41			
17	75	33.1	-23	25.9	47	31.8 ¹²²	-19	18.2	28	40	19	28	20	01	20	43	6	20	52	21	05	40
18	90	32.8	-23	25.9	62	03.1 ¹²³	-19	15.3	29	45	19	46	20	24	21	14	6	05	54	21	19	38
19	105	32.5		25.9	76	34.3 ¹²²		12.3	30	50	20	09	20	54	21	59	5	48	55	35	37	
20	120	32.2		25.9	91	05.5 ¹²²		09.2	31	52	20	21	09	22	27	39	56	43	36			
21	135	31.9		25.9	105	36.8 ¹²³		06.0	32	54	32	27	23	14	30	56	21	52	35			
22	150	31.6		25.9	120	08.0 ¹²²	-19	02.8	32	56	20	46	21	49	** **	19	58	22	02	33		
23	165	31.3		26.0	134	39.3 ¹²³	-18	59.4	34	58	21	03	22	19	** **	5	07	59	13	32		
24	180	30.9	-23	26.0	149	10.6 ¹²³	-18	55.9	35	60 S	21	24	23	10	** **	4	53	60	22	26	30	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 18 ^h 02 ^m 0		Mag: -3.9 PMG: 11 ^h 37 ^m				Mag: +1.6 PMG: 8 ^h 23 ^m				Mag: -1.8 PMG: 8 ^h 54 ^m				Mag: +0.4 PMG: 12 ^h 03 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	88	46.1	185	56.0	-23	16.3	234	06.4	-12	49.4	226	06.8	-15	17.2	178	47.6	-22	31.6				
1	103	48.6	200	55.0		16.5	249	07.4		49.9	241	08.8		17.4	193	49.8		31.6				
2	118	51.0	215	54.1		16.8	264	08.3		50.4	256	10.8		17.5	208	51.9		31.6				
3	133	53.5	230	53.1		17.0	279	09.3		51.0	271	12.8		17.6	223	54.1		31.6				
4	148	56.0	245	52.2		17.3	294	10.2		51.5	286	14.8		17.8	238	56.2		31.6				
5	163	58.4	260	51.2	-23	17.5	309	11.2	-12	52.0	301	16.8	-15	17.9	253	58.4	-22	31.6				
6	179	00.9	275	50.2	-23	17.8	324	12.1	-12	52.5	316	18.8	-15	18.0	269	00.5	-22	31.6				
7	194	03.4	290	49.3		18.0	339	13.1		53.1	331	20.8		18.2	284	02.7		31.6				
8	209	05.8	305	48.3		18.3	354	14.0		53.6	346	22.8		18.3	299	04.8		31.6				
9	224	08.3	320	47.4		18.5	9	15.0		54.1	1	24.8		18.4	314	06.9		31.6				
10	239	10.7	335	46.4		18.8	24	15.9		54.6	16	26.8		18.6	329	09.1		31.6				
11	254	13.2	350	45.5	-23	19.0	39	16.9	-12	55.2	31	28.8	-15	18.7	344	11.2	-22	31.6				
12	269	15.7	5	44.5	-23	19.3	54	17.8	-12	55.7	46	30.8	-15	18.8	359	13.4	-22	31.6				
13	284	18.1	20	43.6		19.5	69	18.8		56.2	61	32.8		19.0	14	15.5		31.6				
14	299	20.6	35	42.6		19.7	84	19.7		56.7	76	34.8		19.1	29	17.7		31.6				
15	314	23.1	50	41.7		20.0	99	20.7		57.3	91	36.8		19.2	44	19.8		31.6				
16	329	25.5	65	40.7		20.2	114	21.6		57.8	106	38.9		19.3	59	22.0		31.6				
17	344	28.0	80	39.7	-23	20.5	129	22.6	-12	58.3	121	40.9	-15	19.5	74	24.1	-22	31.6				
18	359	30.5	95	38.8	-23	20.7	144	23.5	-12	58.8	136	42.9	-15	19.6	89	26.2	-22	31.6				
19	14	32.9	110	37.8		20.9	159	24.5		59.3	151	44.9		19.7	104	28.4		31.6				
20	29	35.4	125	36.9		21.2	174	25.4	-12	59.9	166	46.9		19.9	119	30.5		31.6				
21	44	37.9	140	35.9		21.4	189	26.4	-13	00.4	181	48.9		20.0	134	32.7		31.6				
22	59	40.3	155	35.0		21.6	204	27.3		00.9	196	50.9		20.1	149	34.8		31.6				
23	74	42.8	170	34.0		21.8	219	28.3		01.4	211	52.9		20.3	164	37.0		31.6				
24	89	45.2	185	33.1	-23	22.1	234	29.2	-13	01.9	226	54.9	-15	20.4	179	39.1	-22	31.6				
Dif	—		-10		-2		+9		-5		+20		-1		+21		0					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 58 ^m 2				Edad: 2 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 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	180	30.9	-23	26.0	149	10.6	-18	55.9	60 N	7 07	8 04	9 02	10 44	26	18 24	69		
1	195	30.6		26.0	163	41.9 ¹²³		52.4 ³⁵	58	7 00	7 52	8 44	32	28	36	67		
2	210	30.3		26.0	178	13.3 ¹²⁴		48.8 ³⁶	56	6 53	42	30	21	30	46	65		
3	225	30.0		26.0	192	44.6 ¹²³		45.1 ³⁷	54	47	33	17	12	31	18 55	64		
4	240	29.7		26.0	207	16.0 ¹²⁴		41.3 ³⁸	52	41	25	8 06	10 03	33	19 03	62		
5	255	29.4	-23	26.0	221	47.4 ¹²⁴	-18	37.4 ³⁹	50	6 36	7 17	7 56	9 56	34	19 11	60		
6	270	29.1	-23	26.0	236	18.7 ¹²³	-18	33.5 ³⁹	45	6 24	7 01	7 35	9 40	36	19 26	58		
7	285	28.8		26.0	250	50.2 ¹²⁵		29.4 ⁴¹	40	14	6 48	18	26	39	39	56		
8	300	28.5		26.1	265	21.6 ¹²⁴		25.3 ⁴¹	35	6 04	36	7 04	15	40	49	55		
9	315	28.1		26.1	279	53.0 ¹²⁴		21.1 ⁴²	30	5 55	25	6 52	9 05	41	19 59	53		
10	330	27.8		26.1	294	24.5 ¹²⁵		16.8 ⁴³	20	39	6 06	30	8 48	43	20 15	51		
11	345	27.5	-23	26.1	308	56.0 ¹²⁵	-18	12.4 ⁴⁴	10 N	5 23	5 49	6 12	8 33	46	20 29	49		
12	0	27.2	-23	26.1	323	27.5 ¹²⁵	-18	07.9 ⁴⁵	0	5 06	5 32	5 54	8 20	46	20 42	47		
13	15	26.9		26.1	337	59.0 ¹²⁵	-18	03.4 ⁴⁵	10 S	4 47	5 14	37	8 06	48	20 55	45		
14	30	26.6		26.1	352	30.5 ¹²⁵	-17	58.7 ⁴⁷	20	4 24	4 53	5 18	7 51	50	21 09	42		
15	45	26.3		26.1	7	02.1 ¹²⁶		54.0 ⁴⁷	30	3 55	28	4 56	34	52	25	40		
16	60	26.0		26.1	21	33.7 ¹²⁶		49.2 ⁴⁸	35	36	4 13	43	24	54	34	39		
17	75	25.7	-23	26.1	36	05.2 ¹²⁵	-17	44.3 ⁴⁹	40	3 13	3 55	4 28	7 12	56	21 45	36		
18	90	25.3	-23	26.1	50	36.9 ¹²⁷	-17	39.3 ⁵⁰	45	2 42	3 32	4 10	6 59	57	21 57	34		
19	105	25.0		26.1	65	08.5 ¹²⁶		34.3 ⁵⁰	50	1 57	3 02	3 47	43	59	22 12	32		
20	120	24.7		26.1	79	40.1 ¹²⁶		29.2 ⁵¹	52	1 29	2 47	36	35	60	19	30		
21	135	24.4		26.1	94	11.8 ¹²⁷		24.0 ⁵²	54	0 41	29	24	26	62	27	29		
22	150	24.1		26.1	108	43.5 ¹²⁷		18.7 ⁵³	56	***	2 07	3 09	17	63	35	28		
23	165	23.8		26.1	123	15.2 ¹²⁷		13.3 ⁵⁴	58	***	1 37	2 53	6 06	64	45	25		
24	180	23.5	-23	26.1	137	46.9 ¹²⁷	-17	07.9 ⁵⁴	60 S	***	0 45	2 32	5 53	67	22 56	23		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 58 ^m 0		Mag: -3.9 PMG: 11 ^h 39 ^m				Mag: +1.6 PMG: 8 ^h 22 ^m				Mag: -1.8 PMG: 8 ^h 51 ^m				Mag: +0.4 PMG: 12 ^h 00 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	89	45.2	185	33.1	-23	22.1	234	29.2	-13	01.9	226	54.9	-15	20.4	179	39.1	-22	31.6
1	104	47.7	200	32.1		22.3	249	30.2		02.5	241	56.9		20.5	194	41.3		31.6
2	119	50.2	215	31.1		22.5	264	31.1		03.0	256	58.9		20.7	209	43.4		31.6
3	134	52.6	230	30.2		22.7	279	32.1		03.5	272	00.9		20.8	224	45.5		31.6
4	149	55.1	245	29.2		23.0	294	33.0		04.0	287	02.9		20.9	239	47.7		31.6
5	164	57.6	260	28.3	-23	23.2	309	34.0	-13	04.6	302	04.9	-15	21.1	254	49.8	-22	31.6
6	180	00.0	275	27.3	-23	23.4	324	34.9	-13	05.1	317	06.9	-15	21.2	269	52.0	-22	31.6
7	195	02.5	290	26.4		23.6	339	35.8		05.6	332	08.9		21.3	284	54.1		31.7
8	210	05.0	305	25.4		23.8	354	36.8		06.1	347	10.9		21.5	299	56.3		31.7
9	225	07.4	320	24.4		24.1	9	37.7		06.6	2	12.9		21.6	314	58.4		31.7
10	240	09.9	335	23.5		24.3	24	38.7		07.2	17	14.9		21.7	330	00.6		31.7
11	255	12.4	350	22.5	-23	24.5	39	39.6	-13	07.7	32	17.0	-15	21.9	345	02.7	-22	31.7
12	270	14.8	5	21.6	-23	24.7	54	40.6	-13	08.2	47	19.0	-15	22.0	0	04.8	-22	31.7
13	285	17.3	20	20.6		24.9	69	41.5		08.7	62	21.0		22.1	15	07.0		31.7
14	300	19.7	35	19.6		25.1	84	42.5		09.2	77	23.0		22.2	30	09.1		31.7
15	315	22.2	50	18.7		25.3	99	43.4		09.7	92	25.0		22.4	45	11.3		31.7
16	330	24.7	65	17.7		25.5	114	44.4		10.3	107	27.0		22.5	60	13.4		31.7
17	345	27.1	80	16.8	-23	25.7	129	45.3	-13	10.8	122	29.0	-15	22.6	75	15.6	-22	31.7
18	0	29.6	95	15.8	-23	26.0	144	46.3	-13	11.3	137	31.0	-15	22.8	90	17.7	-22	31.7
19	15	32.1	110	14.8		26.2	159	47.2		11.8	152	33.0		22.9	105	19.9		31.7
20	30	34.5	125	13.9		26.4	174	48.2		12.3	167	35.0		23.0	120	22.0		31.7
21	45	37.0	140	12.9		26.6	189	49.1		12.9	182	37.0		23.2	135	24.1		31.7
22	60	39.5	155	12.0		26.8	204	50.1		13.4	197	39.0		23.3	150	26.3		31.7
23	75	41.9	170	11.0		27.0	219	51.0		13.9	212	41.0		23.4	165	28.4		31.7
24	90	44.4	185	10.0	-23	27.2	234	52.0	-13	14.4	227	43.0	-15	23.6	180	30.6	-22	31.7
Dif	—		-10		-2		+9		-5		+20		-1		+21			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 58 ^m 7			Edad: 3 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	23.5	-23	26.1	137	46.9	-17	07.9	60 N	14	55	15	53	16	50	11	10
1	195	23.2		26.1	152	18.6 ¹²⁷	-17	02.3 ⁵⁶	58	15	12	16	04	16	57	11	00
2	210	22.9		26.1	166	50.4 ¹²⁸	-16	56.7 ⁵⁶	56	27		15	17	04	10	51	
3	225	22.5		26.0	181	22.2 ¹²⁸		51.0 ⁵⁷	54	40		24	10		43	27	
4	240	22.2		26.0	195	54.0 ¹²⁸		45.3 ⁵⁷	52	15	51	32	16		36	29	
5	255	21.9	-23	26.0	210	25.8 ¹²⁸	-16	39.4 ⁵⁹	50	16	01	16	39	17	21	10	30
6	270	21.6	-23	26.0	224	57.6 ¹²⁸	-16	33.5 ⁵⁹	45	16	22	16	56	17	33	10	16
7	285	21.3		26.0	239	29.5 ¹²⁹		27.5 ⁶⁰	40	39		17	09	43	10	05	
8	300	21.0		26.0	254	01.4 ¹²⁹		21.5 ⁶⁰	35	16	53	21	17	53	9	55	
9	315	20.7		26.0	268	33.3 ¹²⁹		15.3 ⁶²	30	17	05	32	18	01	46	39	
10	330	20.4		26.0	283	05.2 ¹²⁹		09.1 ⁶²	20	26		17	50	18	31	42	
11	345	20.0	-23	25.9	297	37.1 ¹²⁹	-16	02.8 ⁶³	10 N	17	45	18	08	18	34	9	19
12	0	19.7	-23	25.9	312	09.1 ¹³⁰	-15	56.4 ⁶⁴	0	18	02	18	25	18	51	9	06
13	15	19.4		25.9	326	41.0 ¹²⁹		50.0 ⁶⁴	10 S	20		18	43	19	10	8	54
14	30	19.1		25.9	341	13.0 ¹³⁰		43.5 ⁶⁵	20	18	39	19	04	19	33	41	51
15	45	18.8		25.9	355	45.0 ¹³⁰		36.9 ⁶⁶	30	19	01	29	20	02	26	54	
16	60	18.5		25.9	10	17.0 ¹³⁰		30.2 ⁶⁷	35	14		19	44	21	18	55	
17	75	18.2	-23	25.8	24	49.1 ¹³¹	-15	23.5 ⁶⁷	40	19	29	20	02	20	44	8	08
18	90	17.9	-23	25.8	39	21.1 ¹³⁰	-15	16.7 ⁶⁸	45	19	47	20	25	21	15	7	56
19	105	17.6		25.8	53	53.2 ¹³¹		09.8 ⁶⁹	50	20	10	20	55	22	00	42	62
20	120	17.2		25.8	68	25.3 ¹³¹	-15	02.9 ⁶⁹	52	21		21	10	22	28	35	64
21	135	16.9		25.8	82	57.4 ¹³¹	-14	55.8 ⁷¹	54	33		28	23	15	28	65	
22	150	16.6		25.7	97	29.6 ¹³²		48.7 ⁷¹	56	20	47	21	50	** **	20	67	
23	165	16.3		25.7	112	01.7 ¹³¹		41.6 ⁷¹	58	21	04	22	20	** **	10	69	
24	180	16.0	-23	25.7	126	33.9 ¹³²	-14	34.4 ⁷²	60 S	21	25	23	11	** **	7	00	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 17 ^h 54 ^m 1		Mag: -3.9 PMG: 11 ^h 40 ^m		Mag: +1.6 PMG: 8 ^h 20 ^m		Mag: -1.8 PMG: 8 ^h 48 ^m		Mag: +0.4 PMG: 11 ^h 56 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	90	44.4	185	10.0	234	52.0	227	43.0	180	30.6							
1	105	46.9	200	09.1	249	52.9	242	45.1	195	32.7							
2	120	49.3	215	08.1	264	53.9	257	47.1	210	34.9							
3	135	51.8	230	07.2	279	54.8	272	49.1	225	37.0							
4	150	54.2	245	06.2	294	55.7	287	51.1	240	39.2							
5	165	56.7	260	05.2	309	56.7	302	53.1	255	41.3							
6	180	59.2	275	04.3	324	57.6	317	55.1	270	43.5							
7	196	01.6	290	03.3	339	58.6	332	57.1	285	45.6							
8	211	04.1	305	02.3	354	59.5	347	59.1	300	47.7							
9	226	06.6	320	01.4	10	00.5	3	01.1	315	49.9							
10	241	09.0	335	00.4	25	01.4	18	03.1	330	52.0							
11	256	11.5	349	59.5	40	02.4	33	05.1	345	54.2							
12	271	14.0	4	58.5	55	03.3	48	07.2	0	56.3							
13	286	16.4	19	57.5	70	04.3	63	09.2	15	58.5							
14	301	18.9	34	56.6	85	05.2	78	11.2	31	00.6							
15	316	21.3	49	55.6	100	06.2	93	13.2	46	02.8							
16	331	23.8	64	54.6	115	07.1	108	15.2	61	04.9							
17	346	26.3	79	53.7	130	08.0	123	17.2	76	07.0							
18	1	28.7	94	52.7	145	09.0	138	19.2	91	09.2							
19	16	31.2	109	51.7	160	09.9	153	21.2	106	11.3							
20	31	33.7	124	50.8	175	10.9	168	23.2	121	13.5							
21	46	36.1	139	49.8	190	11.8	183	25.2	136	15.6							
22	61	38.6	154	48.9	205	12.8	198	27.3	151	17.8							
23	76	41.1	169	47.9	220	13.7	213	29.3	166	19.9							
24	91	43.5	184	46.9	235	14.7	228	31.3	181	22.1							
Dif	—		-10		-2		+9		-5		+20		-1		+21		0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 59 ^m 2				Edad: 4 ^d 7 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1 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	180	16.0	-23	25.7	126	33.9	-14	34.4	60 N	7 08	8 05	9 03	11 31	17	20 46	76				
1	195	15.7		25.7	141	06.1 ¹³²		27.1 ⁷³	58	7 01	7 53	8 45		23 20	20 53	73				
2	210	15.4		25.6	155	38.3 ¹³²		19.7 ⁷⁴	56	6 54	43	31	16 22		21 00	70				
3	225	15.1		25.6	170	10.5 ¹³²		12.3 ⁷⁴	54	48	34	18	10 24		05 69					
4	240	14.8		25.6	184	42.7 ¹³²	-14	04.8 ⁷⁵	52	42	26	8 07	05 25		10 67					
5	255	14.4	-23	25.5	199	15.0 ¹³³	-13	57.2 ⁷⁶	50	6 37	7 18	7 57	11 00	26	21 15	65				
6	270	14.1	-23	25.5	213	47.2 ¹³²	-13	49.6 ⁷⁶	45	6 25	7 02	7 36	10 49	29	21 25	62				
7	285	13.8		25.5	228	19.5 ¹³³		41.8 ⁷⁷	40	15	6 49	19	39 33		33 59					
8	300	13.5		25.5	242	51.8 ¹³³		34.1 ⁷⁸	35	6 05	37	7 05	32 34		40 57					
9	315	13.2		25.4	257	24.1 ¹³³		26.3 ⁷⁸	30	5 56	26	6 53	25 36		46 55					
10	330	12.9		25.4	271	56.4 ¹³³		18.4 ⁷⁹	20	40	6 07	31	13 40		21 57	51				
11	345	12.6	-23	25.4	286	28.7 ¹³³	-13	10.4 ⁸⁰	10 N	5 24	5 50	6 13	10 02	43	22 06	48				
12	0	12.3	-23	25.3	301	01.1 ¹³⁴	-13	02.4 ⁸⁰	0	5 07	5 33	5 55	9 52	46	22 14	46				
13	15	12.0		25.3	315	33.4 ¹³³	-12	54.3 ⁸¹	10 S	4 48	5 15	38	43 48		23 42					
14	30	11.6		25.2	330	05.8 ¹³⁴		46.1 ⁸²	20	4 25	4 54	5 19	32 51		32 39					
15	45	11.3		25.2	344	38.2 ¹³⁴		37.9 ⁸²	30	3 56	29	4 57	20 54		42 36					
16	60	11.0		25.2	359	10.6 ¹³⁴		29.7 ⁸²	35	37	4 14	44	13 56		48 34					
17	75	10.7	-23	25.1	13	43.0 ¹³⁴	-12	21.3 ⁸⁴	40	3 14	3 56	4 29	9 05	59	22 55	31				
18	90	10.4	-23	25.1	28	15.4 ¹³⁴	-12	12.9 ⁸⁴	45	2 43	3 33	4 11	8 56	61	23 03	28				
19	105	10.1		25.0	42	47.9 ¹³⁵	-12	04.5 ⁸⁴	50	1 58	3 03	3 48	44 65		12 25					
20	120	09.8		25.0	57	20.3 ¹³⁴	-11	56.0 ⁸⁵	52	1 30	2 48	37	39 66		16 24					
21	135	09.5		25.0	71	52.7 ¹³⁴		47.4 ⁸⁶	54	0 43	30	25	33 68		21 22					
22	150	09.2		24.9	86	25.2 ¹³⁵		38.8 ⁸⁶	56	** **	2 08	3 11	27 69		26 21					
23	165	08.8		24.9	100	57.7 ¹³⁵		30.1 ⁸⁷	58	** **	1 38	2 54	19 72		32 18					
24	180	08.5	-23	24.8	115	30.2 ¹³⁵	-11	21.3 ⁸⁸	60 S	** **	0 47	2 33	8 11	75	23 38	16				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 17 ^h 50 ^m 2		Mag: -3.9 PMG: 11 ^h 42 ^m				Mag: +1.5 PMG: 8 ^h 18 ^m				Mag: -1.8 PMG: 8 ^h 45 ^m				Mag: +0.4 PMG: 11 ^h 53 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	91	43.5	184	46.9	-23	31.5	235	14.7	-13	26.8	228	31.3	-15	26.7	181	22.1	-22	31.7		
1	106	46.0	199	46.0		31.7	250	15.6		27.3	243	33.3		26.8	196	24.2		31.7		
2	121	48.5	214	45.0		31.8	265	16.5		27.8	258	35.3		26.9	211	26.3		31.7		
3	136	50.9	229	44.0		32.0	280	17.5		28.3	273	37.3		27.1	226	28.5		31.8		
4	151	53.4	244	43.1		32.2	295	18.4		28.8	288	39.3		27.2	241	30.6		31.8		
5	166	55.8	259	42.1	-23	32.3	310	19.4	-13	29.3	303	41.3	-15	27.3	256	32.8	-22	31.8		
6	181	58.3	274	41.1	-23	32.5	325	20.3	-13	29.9	318	43.3	-15	27.4	271	34.9	-22	31.8		
7	197	00.8	289	40.2		32.7	340	21.3		30.4	333	45.4		27.6	286	37.1		31.8		
8	212	03.2	304	39.2		32.8	355	22.2		30.9	348	47.4		27.7	301	39.2		31.8		
9	227	05.7	319	38.2		33.0	10	23.2		31.4	3	49.4		27.8	316	41.4		31.8		
10	242	08.2	334	37.3		33.1	25	24.1		31.9	18	51.4		28.0	331	43.5		31.8		
11	257	10.6	349	36.3	-23	33.3	40	25.0	-13	32.4	33	53.4	-15	28.1	346	45.6	-22	31.8		
12	272	13.1	4	35.3	-23	33.4	55	26.0	-13	32.9	48	55.4	-15	28.2	1	47.8	-22	31.8		
13	287	15.6	19	34.4		33.6	70	26.9		33.4	63	57.4		28.3	16	49.9		31.8		
14	302	18.0	34	33.4		33.7	85	27.9		33.9	78	59.5		28.5	31	52.1		31.8		
15	317	20.5	49	32.4		33.9	100	28.8		34.5	94	01.5		28.6	46	54.2		31.8		
16	332	23.0	64	31.5		34.0	115	29.8		35.0	109	03.5		28.7	61	56.4		31.8		
17	347	25.4	79	30.5	-23	34.2	130	30.7	-13	35.5	124	05.5	-15	28.8	76	58.5	-22	31.8		
18	2	27.9	94	29.5	-23	34.3	145	31.7	-13	36.0	139	07.5	-15	29.0	92	00.7	-22	31.8		
19	17	30.3	109	28.6		34.5	160	32.6		36.5	154	09.5		29.1	107	02.8		31.8		
20	32	32.8	124	27.6		34.6	175	33.5		37.0	169	11.5		29.2	122	04.9		31.8		
21	47	35.3	139	26.6		34.7	190	34.5		37.5	184	13.5		29.4	137	07.1		31.8		
22	62	37.7	154	25.7		34.9	205	35.4		38.0	199	15.6		29.5	152	09.2		31.8		
23	77	40.2	169	24.7		35.0	220	36.4		38.5	214	17.6		29.6	167	11.4		31.8		
24	92	42.7	184	23.7	-23	35.2	235	37.3	-13	39.0	229	19.6	-15	29.7	182	13.5	-22	31.8		
Dif	—		-10		-2		+9		-5		+20		-1		+21					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 11 ^h 59 ^m 7			Edad: 5 ^d 7 PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/7 PMG: 16 ^h 49 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	08.5	-23	24.8	115	30.2	-11 21.3	60 N	14 56	15 54	16 51	11 48 16	22 02 77	
1	195	08.2		24.8	130	02.6 ¹³⁴	12.5 ⁸⁸	58	15 14	16 06	16 58	43 18	06 75	
2	210	07.9		24.7	144	35.1 ¹³⁵	-11 03.7 ⁸⁸	56	28	16	17 05	38 20	10 73	
3	225	07.6		24.7	159	07.6 ¹³⁵	-10 54.7 ⁹⁰	54	41	25	11	34 21	14 71	
4	240	07.3		24.6	173	40.1 ¹³⁵	45.8 ⁸⁹	52	15 52	33	17	30 23	17 69	
5	255	07.0	-23	24.6	188	12.7 ¹³⁶	-10 36.7 ⁹¹	50	16 02	16 41	17 22	11 26 25	22 20 68	
6	270	06.7	-23	24.5	202	45.2 ¹³⁵	-10 27.7 ⁹⁰	45	16 23	16 57	17 34	11 18 29	22 27 64	
7	285	06.4		24.5	217	17.7 ¹³⁵	18.5 ⁹²	40	40	17 10	44	12 31	32 61	
8	300	06.0		24.4	231	50.2 ¹³⁵	09.3 ⁹²	35	16 54	22	17 54	06 34	37 58	
9	315	05.7		24.4	246	22.8 ¹³⁶	-10 00.1 ⁹²	30	17 06	33	18 03	11 01 36	41 56	
10	330	05.4		24.3	260	55.3 ¹³⁵	-9 50.8 ⁹³	20	27	17 51	19	10 53 39	48 52	
11	345	05.1	-23	24.3	275	27.8 ¹³⁵	-9 41.5 ⁹³	10 N	17 46	18 09	18 35	10 45 42	22 54 49	
12	0	04.8	-23	24.2	290	00.4 ¹³⁶	-9 32.1 ⁹⁴	0	18 03	18 26	18 52	10 38 45	23 00 45	
13	15	04.5		24.2	304	32.9 ¹³⁵	22.6 ⁹⁵	10 S	21	18 44	19 11	31 48	05 43	
14	30	04.2		24.1	319	05.4 ¹³⁵	13.1 ⁹⁵	20	18 40	19 05	19 34	23 52	11 39	
15	45	03.9		24.1	333	38.0 ¹³⁶	-9 03.6 ⁹⁵	30	19 02	29	20 03	14 56	18 35	
16	60	03.6		24.0	348	10.5 ¹³⁵	-8 54.0 ⁹⁶	35	15	19 45	22	09 58	22 33	
17	75	03.2	-23	23.9	2	43.1 ¹³⁶	-8 44.3 ⁹⁷	40	19 30	20 03	20 45	10 04 60	23 26 31	
18	90	02.9	-23	23.9	17	15.6 ¹³⁵	-8 34.6 ⁹⁷	45	19 48	20 26	21 15	9 57 63	23 31 28	
19	105	02.6		23.8	31	48.2 ¹³⁶	24.9 ⁹⁷	50	20 11	20 55	22 01	49 66	37 25	
20	120	02.3		23.8	46	20.7 ¹³⁵	15.1 ⁹⁸	52	22	21 10	22 29	45 68	40 23	
21	135	02.0		23.7	60	53.2 ¹³⁵	-8 05.3 ⁹⁸	54	34	28	23 15	41 70	43 21	
22	150	01.7		23.6	75	25.7 ¹³⁵	-7 55.4 ⁹⁹	56	20 48	21 51	** **	36 72	47 19	
23	165	01.4		23.6	89	58.3 ¹³⁶	45.5 ⁹⁹	58	21 05	22 20	** **	31 74	50 17	
24	180	01.1	-23	23.5	104	30.8 ¹³⁵	-7 35.5 ¹⁰⁰	60 S	21 25	23 11	** **	9 26 76	23 54 15	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 46 ^m 2		Mag: -4.0 PMG: 11 ^h 43 ^m		Mag: +1.5 PMG: 8 ^h 17 ^m		Mag: -1.8 PMG: 8 ^h 42 ^m		Mag: +0.4 PMG: 11 ^h 49 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	92	42.7	184	23.7	235	37.3	229	19.6	182	13.5				
1	107	45.1	199	22.8	250	38.3	244	21.6	197	15.7				
2	122	47.6	214	21.8	265	39.2	259	23.6	212	17.8				
3	137	50.1	229	20.8	280	40.1	274	25.6	227	20.0				
4	152	52.5	244	19.9	295	41.1	289	27.6	242	22.1				
5	167	55.0	259	18.9	310	42.0	304	29.7	257	24.2				
6	182	57.4	274	17.9	325	43.0	319	31.7	272	26.4				
7	197	59.9	289	16.9	340	43.9	334	33.7	287	28.5				
8	213	02.4	304	16.0	355	44.8	349	35.7	302	30.7				
9	228	04.8	319	15.0	10	45.8	4	37.7	317	32.8				
10	243	07.3	334	14.0	25	46.7	19	39.7	332	35.0				
11	258	09.8	349	13.1	40	47.7	34	41.8	347	37.1				
12	273	12.2	4	12.1	55	48.6	49	43.8	2	39.3				
13	288	14.7	19	11.1	70	49.6	64	45.8	17	41.4				
14	303	17.2	34	10.2	85	50.5	79	47.8	32	43.5				
15	318	19.6	49	09.2	100	51.4	94	49.8	47	45.7				
16	333	22.1	64	08.2	115	52.4	109	51.8	62	47.8				
17	348	24.6	79	07.3	130	53.3	124	53.9	77	50.0				
18	3	27.0	94	06.3	145	54.3	139	55.9	92	52.1				
19	18	29.5	109	05.3	160	55.2	154	57.9	107	54.3				
20	33	31.9	124	04.3	175	56.1	169	59.9	122	56.4				
21	48	34.4	139	03.4	190	57.1	185	01.9	137	58.6				
22	63	36.9	154	02.4	205	58.0	200	03.9	153	00.7				
23	78	39.3	169	01.4	220	59.0	215	06.0	168	02.8				
24	93	41.8	184	00.5	235	59.9	230	08.0	183	05.0				
Dif	—		-10		+9		+20		+21					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 00 ^m 2			Edad: 6 ^d 7 PHE { 4 ^h : 55/9 12 ^h : 56/2 20 ^h : 56/4 Rº: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	01.1	-23	23.5	104	30.8	-7	35.5	60 N	7 09	8 06	9 03	12 04	14	23 19	81		
1	195	00.8		23.4	119	03.3 ¹³⁵		25.5 ¹⁰⁰	58	7 01	7 54	8 46	12 01	16	21	78		
2	210	00.5		23.4	133	35.8 ¹³⁵		15.5 ¹⁰⁰	56	6 55	44	31	11 58	19	23	75		
3	225	00.1		23.3	148	08.3 ¹³⁵	-7	05.4 ¹⁰¹	54	49	35	19	55	21	25	73		
4	239	59.8		23.2	162	40.8 ¹³⁵	-6	55.2 ¹⁰²	52	43	27	8 07	53	23	26	72		
5	254	59.5	-23	23.2	177	13.3 ¹³⁵	-6	45.1 ¹⁰¹	50	6 38	7 19	7 58	11 51	24	23 28	69		
6	269	59.2	-23	23.1	191	45.7 ¹³⁴	-6	34.8 ¹⁰³	45	6 26	7 03	7 37	11 47	27	23 31	65		
7	284	58.9		23.0	206	18.2 ¹³⁵		24.6 ¹⁰²	40	15	6 50	20	43	31	33	63		
8	299	58.6		23.0	220	50.7 ¹³⁵		14.3 ¹⁰³	35	6 06	38	7 06	40	33	35	60		
9	314	58.3		22.9	235	23.1 ¹³⁴	-6	03.9 ¹⁰⁴	30	5 57	27	6 54	37	35	37	57		
10	329	58.0		22.8	249	55.5 ¹³⁴	-5	53.6 ¹⁰³	20	41	6 08	32	32	39	40	53		
11	344	57.7	-23	22.7	264	27.9 ¹³⁴	-5	43.1 ¹⁰⁵	10 N	5 25	5 51	6 14	11 27	43	23 43	50		
12	359	57.4	-23	22.7	279	00.3 ¹³⁴	-5	32.7 ¹⁰⁴	0	5 08	5 34	5 56	11 23	46	23 45	47		
13	14	57.0		22.6	293	32.7 ¹³⁴		22.2 ¹⁰⁵	10 S	4 49	5 16	39	19	49	48	43		
14	29	56.7		22.5	308	05.1 ¹³⁴		11.7 ¹⁰⁵	20	4 26	4 55	5 20	15	53	50	40		
15	44	56.4		22.4	322	37.4 ¹³³	-5	01.1 ¹⁰⁶	30	3 57	30	4 58	10	57	53	36		
16	59	56.1		22.4	337	09.8 ¹³⁴	-4	50.5 ¹⁰⁶	35	38	4 15	45	07	59	55	33		
17	74	55.8	-23	22.3	351	42.1 ¹³³	-4	39.9 ¹⁰⁶	40	3 15	3 57	4 30	11 04	61	23 57	31		
18	89	55.5	-23	22.2	6	14.4 ¹³³	-4	29.2 ¹⁰⁷	45	2 45	3 34	4 12	11 00	65	23 59	28		
19	104	55.2		22.1	20	46.7 ¹³³		18.5 ¹⁰⁷	50	1 59	3 05	3 49	10 55	69	** ** *	** ** *		
20	119	54.9		22.0	35	18.9 ¹³²	-4	07.8 ¹⁰⁷	52	1 31	2 50	38	53	70	** ** *	** ** *		
21	134	54.6		22.0	49	51.2 ¹³³	-3	57.1 ¹⁰⁷	54	0 45	32	26	51	72	** ** *	** ** *		
22	149	54.3		21.9	64	23.4 ¹³²		46.3 ¹⁰⁸	56	** ** *	2 09	3 12	48	74	** ** *	** ** *		
23	164	54.0		21.8	78	55.6 ¹³²		35.5 ¹⁰⁸	58	** ** *	1 40	2 55	45	77	** ** *	** ** *		
24	179	53.6	-23	21.7	93	27.8 ¹³²	-3	24.6 ¹⁰⁹	60 S	** ** *	0 49	2 35	10 42	79	** ** *	** ** *		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 42 ^m 3			Mag: -4.0 PMG: 11 ^h 45 ^m			Mag: +1.5 PMG: 8 ^h 15 ^m			Mag: -1.8 PMG: 8 ^h 38 ^m			Mag: +0.5 PMG: 11 ^h 46 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	93	41.8	184	00.5	-23	38.1	235	59.9	-13	51.2	230	08.0	-15	32.8	183	05.0	-22	31.8
1	108	44.3	198	59.5		38.2	251	00.9		51.7	245	10.0		32.9	198	07.1		31.8
2	123	46.7	213	58.5		38.3	266	01.8		52.2	260	12.0		33.0	213	09.3		31.8
3	138	49.2	228	57.6		38.4	281	02.7		52.7	275	14.0		33.2	228	11.4		31.8
4	153	51.7	243	56.6		38.5	296	03.7		53.2	290	16.0		33.3	243	13.6		31.8
5	168	54.1	258	55.6	-23	38.6	311	04.6	-13	53.8	305	18.1	-15	33.4	258	15.7	-22	31.8
6	183	56.6	273	54.6	-23	38.7	326	05.6	-13	54.3	320	20.1	-15	33.5	273	17.9	-22	31.8
7	198	59.1	288	53.7		38.8	341	06.5		54.8	335	22.1		33.7	288	20.0		31.8
8	214	01.5	303	52.7		38.9	356	07.4		55.3	350	24.1		33.8	303	22.1		31.8
9	229	04.0	318	51.7		39.0	11	08.4		55.8	5	26.1		33.9	318	24.3		31.8
10	244	06.4	333	50.8		39.1	26	09.3		56.3	20	28.2		34.0	333	26.4		31.8
11	259	08.9	348	49.8	-23	39.1	41	10.3	-13	56.8	35	30.2	-15	34.2	348	28.6	-22	31.8
12	274	11.4	3	48.8	-23	39.2	56	11.2	-13	57.3	50	32.2	-15	34.3	3	30.7	-22	31.8
13	289	13.8	18	47.8		39.3	71	12.1		57.8	65	34.2		34.4	18	32.9		31.8
14	304	16.3	33	46.9		39.4	86	13.1		58.3	80	36.2		34.5	33	35.0		31.8
15	319	18.8	48	45.9		39.5	101	14.0		58.8	95	38.3		34.7	48	37.2		31.8
16	334	21.2	63	44.9		39.6	116	15.0		59.3	110	40.3		34.8	63	39.3		31.8
17	349	23.7	78	44.0	-23	39.7	131	15.9	-13	59.8	125	42.3	-15	34.9	78	41.5	-22	31.8
18	4	26.2	93	43.0	-23	39.8	146	16.8	-14	00.3	140	44.3	-15	35.0	93	43.6	-22	31.8
19	19	28.6	108	42.0		39.8	161	17.8		00.8	155	46.3		35.2	108	45.7		31.8
20	34	31.1	123	41.0		39.9	176	18.7		01.3	170	48.4		35.3	123	47.9		31.8
21	49	33.5	138	40.1		40.0	191	19.6		01.8	185	50.4		35.4	138	50.0		31.9
22	64	36.0	153	39.1		40.1	206	20.6		02.3	200	52.4		35.5	153	52.2		31.9
23	79	38.5	168	38.1		40.2	221	21.5		02.8	215	54.4		35.7	168	54.3		31.9
24	94	40.9	183	37.2	-23	40.2	236	22.5	-14	03.3	230	56.4	-15	35.8	183	56.5	-22	31.9
Dif	—		-10		-1		+9		-5		+20		-1		+21			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 00 ^m 7			Edad: 7 ^d 7 PHE { 4 ^h : 56 ^m 7 12 ^h : 57 ^m 0 20 ^h : 57 ^m 3 Rº: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m	
0	179	53.6	-23	21.7	93	27.8	-3	24.6	60 N	14 58	15 56	16 52	12 18 15	** ** *	** ** *
1	194	53.3		21.6	107	59.9 ¹³¹		13.7 ¹⁰⁹	58	15 15	16 07	17 00	17 18	** ** *	** ** *
2	209	53.0		21.5	122	32.0 ¹³¹		-3 02.8 ¹⁰⁹	56	30	17	06	17 19	** ** *	** ** *
3	224	52.7		21.5	137	04.1 ¹³¹		-2 51.9 ¹⁰⁹	54	43	26	13	16 22	** ** *	** ** *
4	239	52.4		21.4	151	36.2 ¹³¹		40.9 ¹¹⁰	52	15 54	35	18	16 23	** ** *	** ** *
5	254	52.1	-23	21.3	166	08.2 ¹³⁰		-2 30.0 ¹⁰⁹	50	16 04	16 42	17 24	12 15 25	** ** *	** ** *
6	269	51.8	-23	21.2	180	40.3 ¹³¹		-2 18.9 ¹¹¹	45	16 24	16 58	17 35	12 14 29	** ** *	** ** *
7	284	51.5		21.1	195	12.2 ¹²⁹		-2 07.9 ¹¹⁰	40	41	17 11	46	14 31	** ** *	** ** *
8	299	51.2		21.0	209	44.2 ¹³⁰		-1 56.9 ¹¹⁰	35	16 55	23	17 55	13 34	** ** *	** ** *
9	314	50.9		20.9	224	16.1 ¹²⁹		45.8 ¹¹¹	30	17 07	34	18 04	12 37	** ** *	** ** *
10	329	50.6		20.8	238	48.0 ¹²⁹		34.7 ¹¹¹	20	29	17 53	20	11 41	** ** *	** ** *
11	344	50.2	-23	20.7	253	19.9 ¹²⁹		-1 23.6 ¹¹¹	10 N	17 47	18 10	18 36	12 10 44	** ** *	** ** *
12	359	49.9	-23	20.6	267	51.7 ¹²⁸		-1 12.4 ¹¹²	0	18 04	18 27	18 53	12 09 48	** ** *	** ** *
13	14	49.6		20.6	282	23.5 ¹²⁸		-1 01.2 ¹¹²	10 S	22	18 45	19 12	08 51	** ** *	** ** *
14	29	49.3		20.5	296	55.2 ¹²⁷		-0 50.1 ¹¹¹	20	18 41	19 05	19 35	08 54	** ** *	** ** *
15	44	49.0		20.4	311	26.9 ¹²⁷		38.9 ¹¹²	30	19 03	30	20 04	07 58	** ** *	** ** *
16	59	48.7		20.3	325	58.6 ¹²⁷		27.6 ¹¹³	35	16	19 45	22	06 61	** ** *	** ** *
17	74	48.4	-23	20.2	340	30.3 ¹²⁷		-0 16.4 ¹¹²	40	19 31	20 04	20 45	12 05 64	** ** *	** ** *
18	89	48.1	-23	20.1	355	01.9 ¹²⁶		-0 05.2 ¹¹²	45	19 49	20 26	21 16	12 05 67	** ** *	** ** *
19	104	47.8		20.0	9	33.4 ¹²⁵		+0 06.1 ¹¹³	50	20 11	20 56	22 01	04 71	0 02 24	
20	119	47.5		19.9	24	05.0 ¹²⁶		17.4 ¹¹³	52	22	21 11	22 28	03 73	03 23	
21	134	47.2		19.8	38	36.4 ¹²⁴		28.7 ¹¹³	54	34	29	23 14	03 75	04 21	
22	149	46.9		19.7	53	07.9 ¹²⁵		40.0 ¹¹³	56	20 48	21 51	** ** *	02 77	06 18	
23	164	46.6		19.6	67	39.3 ¹²⁴		+0 51.3 ¹¹³	58	21 05	22 20	** ** *	02 79	07 17	
24	179	46.2	-23	19.5	82	10.6 ¹²³		+1 02.6 ¹¹³	60 S	21 25	23 09	** ** *	12 01 82	0 09 14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 38 ^m 4		Mag: -4.0 PMG: 11 ^h 46 ^m			Mag: +1.5 PMG: 8 ^h 14 ^m			Mag: -1.8 PMG: 8 ^h 35 ^m			Mag: +0.5 PMG: 11 ^h 43 ^m			
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	94	40.9	183	37.2	-23 40.2	236	22.5	-14 03.3	230	56.4	-15 35.8	183	56.5	-22 31.9	
1	109	43.4	198	36.2	40.3	251	23.4	03.8	245	58.5	35.9	198	58.6	31.9	
2	124	45.9	213	35.2	40.4	266	24.3	04.3	261	00.5	36.0	214	00.8	31.9	
3	139	48.3	228	34.2	40.5	281	25.3	04.8	276	02.5	36.2	229	02.9	31.9	
4	154	50.8	243	33.3	40.5	296	26.2	05.3	291	04.5	36.3	244	05.0	31.9	
5	169	53.3	258	32.3	-23 40.6	311	27.2	-14 05.8	306	06.5	-15 36.4	259	07.2	-22 31.9	
6	184	55.7	273	31.3	-23 40.7	326	28.1	-14 06.3	321	08.6	-15 36.5	274	09.3	-22 31.9	
7	199	58.2	288	30.3	40.7	341	29.0	06.8	336	10.6	36.7	289	11.5	31.9	
8	215	00.7	303	29.4	40.8	356	30.0	07.3	351	12.6	36.8	304	13.6	31.9	
9	230	03.1	318	28.4	40.9	11	30.9	07.8	6	14.6	36.9	319	15.8	31.9	
10	245	05.6	333	27.4	40.9	26	31.8	08.3	21	16.7	37.0	334	17.9	31.9	
11	260	08.0	348	26.5	-23 41.0	41	32.8	-14 08.8	36	18.7	-15 37.2	349	20.1	-22 31.9	
12	275	10.5	3	25.5	-23 41.0	56	33.7	-14 09.3	51	20.7	-15 37.3	4	22.2	-22 31.9	
13	290	13.0	18	24.5	41.1	71	34.7	09.8	66	22.7	37.4	19	24.4	31.9	
14	305	15.4	33	23.5	41.2	86	35.6	10.3	81	24.7	37.5	34	26.5	31.9	
15	320	17.9	48	22.6	41.2	101	36.5	10.8	96	26.8	37.6	49	28.6	31.9	
16	335	20.4	63	21.6	41.3	116	37.5	11.3	111	28.8	37.8	64	30.8	31.9	
17	350	22.8	78	20.6	-23 41.3	131	38.4	-14 11.8	126	30.8	-15 37.9	79	32.9	-22 31.9	
18	5	25.3	93	19.6	-23 41.4	146	39.3	-14 12.3	141	32.8	-15 38.0	94	35.1	-22 31.9	
19	20	27.8	108	18.7	41.4	161	40.3	12.8	156	34.9	38.1	109	37.2	31.9	
20	35	30.2	123	17.7	41.5	176	41.2	13.3	171	36.9	38.3	124	39.4	31.9	
21	50	32.7	138	16.7	41.5	191	42.2	13.8	186	38.9	38.4	139	41.5	31.9	
22	65	35.2	153	15.8	41.6	206	43.1	14.3	201	40.9	38.5	154	43.7	31.9	
23	80	37.6	168	14.8	41.6	221	44.0	14.8	216	43.0	38.6	169	45.8	31.9	
24	95	40.1	183	13.8	-23 41.7	236	45.0	-14 15.3	231	45.0	-15 38.8	184	47.9	-22 31.9	
Dif	—		-10		-1	+9		-5	+20		-1	+21		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 2			Edad: 8 ^d 7 PHE { SD: 15'6 PMG: 19 ^h 09 ^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	46.2	-23	19.5	82	10.6	+1 02.6	60 N	7 09	8 06	9 04	12 33	16	0 40	83	
1	194	45.9		19.4	96	41.9 ¹²³	14.0 ¹¹⁴	58	7 02	7 54	8 46	35	19	39	81	
2	209	45.6		19.2	111	13.2 ¹²³	25.3 ¹¹³	56	6 55	44	32	36	21	39	78	
3	224	45.3		19.1	125	44.4 ¹²²	36.7 ¹¹⁴	54	49	35	19	38	23	38	76	
4	239	45.0		19.0	140	15.6 ¹²²	48.0 ¹¹³	52	43	27	8 08	39	25	38	74	
5	254	44.7	-23	18.9	154	46.7 ¹²¹	+1 59.4 ¹¹⁴	50	6 38	7 20	7 58	12 40	27	0 37	72	
6	269	44.4	-23	18.8	169	17.8 ¹²¹	+2 10.8 ¹¹⁴	45	6 26	7 04	7 38	12 43	30	0 36	69	
7	284	44.1		18.7	183	48.8 ¹²⁰	22.2 ¹¹⁴	40	16	6 50	21	45	34	36	65	
8	299	43.8		18.6	198	19.7 ¹¹⁹	33.6 ¹¹⁴	35	6 07	39	7 07	47	36	35	62	
9	314	43.5		18.5	212	50.6 ¹¹⁹	44.9 ¹¹³	30	5 58	28	6 54	49	38	34	60	
10	329	43.2		18.4	227	21.5 ¹¹⁹	+2 56.3 ¹¹⁴	20	42	6 09	33	52	43	33	56	
11	344	42.9	-23	18.3	241	52.3 ¹¹⁸	+3 07.7 ¹¹⁴	10 N	5 26	5 52	6 15	12 54	47	0 33	52	
12	359	42.6	-23	18.1	256	23.1 ¹¹⁸	+3 19.1 ¹¹⁴	0	5 09	5 35	5 57	12 57	50	0 32	48	
13	14	42.3		18.0	270	53.7 ¹¹⁶	30.5 ¹¹⁴	10 S	4 50	5 17	40	12 59	54	31	45	
14	29	42.0		17.9	285	24.4 ¹¹⁷	41.9 ¹¹⁴	20	4 27	4 56	5 21	13 02	57	30	41	
15	44	41.6		17.8	299	55.0 ¹¹⁶	+3 53.3 ¹¹⁴	30	3 58	32	4 59	05	62	29	37	
16	59	41.3		17.7	314	25.5 ¹¹⁵	+4 04.6 ¹¹³	35	40	4 16	46	07	64	28	35	
17	74	41.0	-23	17.6	328	55.9 ¹¹⁴	+4 16.0 ¹¹⁴	40	3 17	3 58	4 31	13 09	67	0 28	32	
18	89	40.7	-23	17.5	343	26.3 ¹¹⁴	+4 27.4 ¹¹⁴	45	2 46	3 36	4 13	13 12	70	0 27	29	
19	104	40.4		17.3	357	56.7 ¹¹⁴	38.8 ¹¹⁴	50	2 01	3 06	3 51	15	74	26	25	
20	119	40.1		17.2	12	26.9 ¹¹²	+4 50.1 ¹¹³	52	1 34	2 51	40	16	76	26	23	
21	134	39.8		17.1	26	57.1 ¹¹²	+5 01.4 ¹¹³	54	0 48	33	28	18	77	25	22	
22	149	39.5		17.0	41	27.3 ¹¹²	12.8 ¹¹⁴	56	** ** *	2 11	3 14	19	80	24	20	
23	164	39.2		16.8	55	57.4 ¹¹¹	24.1 ¹¹³	58	** ** *	1 42	2 57	21	83	24	18	
24	179	38.9	-23	16.7	70	27.4 ¹¹⁰	+5 35.4 ¹¹³	60 S	** ** *	0 53	2 37	13 23	85	0 23	15	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 34 ^m 4		Mag: -4.0 PMG: 11 ^h 48 ^m			Mag: +1.5 PMG: 8 ^h 12 ^m			Mag: -1.8 PMG: 8 ^h 32 ^m			Mag: +0.5 PMG: 11 ^h 39 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	95	40.1	183	13.8	-23	41.7	236	45.0	-14	15.3	231	45.0	-15	38.8	184	47.9	-22	31.9
1	110	42.5	198	12.8		41.7	251	45.9		15.8	246	47.0		38.9	199	50.1		31.9
2	125	45.0	213	11.9		41.8	266	46.8		16.3	261	49.0		39.0	214	52.2		31.9
3	140	47.5	228	10.9		41.8	281	47.8		16.8	276	51.1		39.1	229	54.4		31.9
4	155	49.9	243	09.9		41.8	296	48.7		17.3	291	53.1		39.2	244	56.5		31.9
5	170	52.4	258	08.9	-23	41.9	311	49.6	-14	17.8	306	55.1	-15	39.4	259	58.7	-22	31.9
6	185	54.9	273	08.0	-23	41.9	326	50.6	-14	18.3	321	57.1	-15	39.5	275	00.8	-22	31.9
7	200	57.3	288	07.0		42.0	341	51.5		18.8	336	59.2		39.6	290	03.0		31.9
8	215	59.8	303	06.0		42.0	356	52.5		19.3	352	01.2		39.7	305	05.1		31.9
9	231	02.3	318	05.1		42.0	11	53.4		19.8	7	03.2		39.9	320	07.3		31.9
10	246	04.7	333	04.1		42.1	26	54.3		20.3	22	05.2		40.0	335	09.4		31.9
11	261	07.2	348	03.1	-23	42.1	41	55.3	-14	20.8	37	07.3	-15	40.1	350	11.5	-22	31.9
12	276	09.6	3	02.1	-23	42.1	56	56.2	-14	21.2	52	09.3	-15	40.2	5	13.7	-22	31.9
13	291	12.1	18	01.2		42.2	71	57.1		21.7	67	11.3		40.4	20	15.8		31.9
14	306	14.6	33	00.2		42.2	86	58.1		22.2	82	13.3		40.5	35	18.0		31.9
15	321	17.0	47	59.2		42.2	101	59.0		22.7	97	15.4		40.6	50	20.1		31.9
16	336	19.5	62	58.2		42.2	116	59.9		23.2	112	17.4		40.7	65	22.3		31.9
17	351	22.0	77	57.3	-23	42.3	132	00.9	-14	23.7	127	19.4	-15	40.8	80	24.4	-22	31.9
18	6	24.4	92	56.3	-23	42.3	147	01.8	-14	24.2	142	21.4	-15	41.0	95	26.6	-22	31.9
19	21	26.9	107	55.3		42.3	162	02.7		24.7	157	23.5		41.1	110	28.7		31.9
20	36	29.4	122	54.3		42.3	177	03.7		25.2	172	25.5		41.2	125	30.9		31.9
21	51	31.8	137	53.4		42.3	192	04.6		25.7	187	27.5		41.3	140	33.0		31.9
22	66	34.3	152	52.4		42.4	207	05.5		26.2	202	29.6		41.4	155	35.1		31.9
23	81	36.8	167	51.4		42.4	222	06.5		26.7	217	31.6		41.6	170	37.3		31.9
24	96	39.2	182	50.4	-23	42.4	237	07.4	-14	27.2	232	33.6	-15	41.7	185	39.4	-22	31.9
Dif	—		-10		0		+9		-5		+20		-1		+21		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 01 ^m 7			Edad: 9 ^d 7 PHE { SD: 15:9 PMG: 19 ^h 59 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	38.9	-23	16.7	70	27.4	+5	35.4	60 N	15 00	15 57	16 54	12 49 20	2 03 86			
1	194	38.6		16.6	84	57.3 ¹⁰⁹		46.7 ¹¹³	58	17	16 09	17 01	54 22	2 00 83			
2	209	38.3		16.5	99	27.2 ¹⁰⁹	+5	58.0 ¹¹³	56	32	19	08	12 57 25	1 57 81			
3	224	38.0		16.4	113	57.0 ¹⁰⁸	+6	09.3 ¹¹³	54	44	28	14	13 01 27	54 79			
4	239	37.7		16.2	128	26.8 ¹⁰⁸		20.5 ¹¹²	52	15 55	36	20	04 29	52 76			
5	254	37.4	-23	16.1	142	56.4 ¹⁰⁶	+6	31.7 ¹¹²	50	16 05	16 43	17 25	13 07 31	1 49 75			
6	269	37.1	-23	16.0	157	26.0 ¹⁰⁶	+6	42.9 ¹¹²	45	16 26	16 59	17 37	13 13 35	1 45 71			
7	284	36.8		15.8	171	55.6 ¹⁰⁶	+6	54.1 ¹¹²	40	42	17 13	47	19 37	41 68			
8	299	36.5		15.7	186	25.0 ¹⁰⁴	+7	05.3 ¹¹²	35	16 56	25	17 56	23 40	37 65			
9	314	36.1		15.6	200	54.4 ¹⁰⁴		16.4 ¹¹¹	30	17 09	35	18 05	27 43	34 63			
10	329	35.8		15.4	215	23.7 ¹⁰³		27.6 ¹¹²	20	30	17 54	21	35 46	29 59			
11	344	35.5	-23	15.3	229	53.0 ¹⁰³	+7	38.7 ¹¹¹	10 N	17 48	18 11	18 37	13 41 50	1 25 54			
12	359	35.2	-23	15.2	244	22.1 ¹⁰¹	+7	49.7 ¹¹⁰	0	18 05	18 28	18 54	13 47 53	1 20 52			
13	14	34.9		15.1	258	51.2 ¹⁰¹	+8	00.8 ¹¹¹	10 S	23	18 46	19 13	53 56	16 48			
14	29	34.6		14.9	273	20.2 ¹⁰⁰		11.8 ¹¹⁰	20	18 42	19 06	19 35	13 59 60	11 45			
15	44	34.3		14.8	287	49.1 ⁹⁹		22.8 ¹¹⁰	30	19 04	31	20 04	14 07 64	06 41			
16	59	34.0		14.6	302	18.0 ⁹⁹		33.7 ¹⁰⁹	35	16	19 46	23	11 67	03 38			
17	74	33.7	-23	14.5	316	46.8 ⁹⁸	+8	44.6 ¹⁰⁹	40	19 31	20 04	20 46	14 16 69	1 00 35			
18	89	33.4	-23	14.4	331	15.4 ⁹⁶	+8	55.5 ¹⁰⁹	45	19 49	20 26	21 16	14 22 72	0 56 32			
19	104	33.1		14.2	345	44.0 ⁹⁶	+9	06.3 ¹⁰⁸	50	20 12	20 56	22 01	29 76	51 29			
20	119	32.8		14.1	0	12.6 ⁹⁶		17.2 ¹⁰⁹	52	22	21 11	22 28	32 78	49 27			
21	134	32.5		14.0	14	41.0 ⁹⁴		27.9 ¹⁰⁷	54	34	28	23 11	35 81	47 25			
22	149	32.2		13.8	29	09.4 ⁹⁴		38.7 ¹⁰⁸	56	20 48	21 50	** **	39 83	44 23			
23	164	31.9		13.7	43	37.7 ⁹³	+9	49.3 ¹⁰⁶	58	21 05	22 19	** **	44 85	42 20			
24	179	31.6	-23	13.5	58	05.9 ⁹²	+10	00.0 ¹⁰⁷	60 S	21 25	23 06	** **	14 48 89	0 38 18			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO				
	PMG: 17 ^h 30 ^m 5		Mag: -4.0 PMG: 11 ^h 49 ^m			Mag: +1.5 PMG: 8 ^h 11 ^m			Mag: -1.8 PMG: 8 ^h 29 ^m				Mag: +0.5 PMG: 11 ^h 36 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	96	39.2	182	50.4	-23	42.4	237	07.4	-14	27.2	232	33.6	-15	41.7	185	39.4	
1	111	41.7	197	49.5		42.4	252	08.3		27.7	247	35.6		41.8	200	41.6	
2	126	44.1	212	48.5		42.4	267	09.3		28.2	262	37.7		41.9	215	43.7	
3	141	46.6	227	47.5		42.4	282	10.2		28.7	277	39.7		42.1	230	45.9	
4	156	49.1	242	46.6		42.4	297	11.2		29.2	292	41.7		42.2	245	48.0	
5	171	51.5	257	45.6	-23	42.4	312	12.1	-14	29.6	307	43.7	-15	42.3	260	50.2	
6	186	54.0	272	44.6	-23	42.4	327	13.0	-14	30.1	322	45.8	-15	42.4	275	52.3	
7	201	56.5	287	43.6		42.5	342	14.0		30.6	337	47.8		42.5	290	54.5	
8	216	58.9	302	42.7		42.5	357	14.9		31.1	352	49.8		42.7	305	56.6	
9	232	01.4	317	41.7		42.5	12	15.8		31.6	7	51.9		42.8	320	58.7	
10	247	03.9	332	40.7		42.5	27	16.8		32.1	22	53.9		42.9	336	00.9	
11	262	06.3	347	39.7	-23	42.5	42	17.7	-14	32.6	37	55.9	-15	43.0	351	03.0	
12	277	08.8	2	38.8	-23	42.5	57	18.6	-14	33.1	52	58.0	-15	43.1	6	05.2	
13	292	11.3	17	37.8		42.5	72	19.6		33.6	68	00.0		43.3	21	07.3	
14	307	13.7	32	36.8		42.5	87	20.5		34.1	83	02.0		43.4	36	09.5	
15	322	16.2	47	35.8		42.5	102	21.4		34.6	98	04.0		43.5	51	11.6	
16	337	18.6	62	34.9		42.4	117	22.4		35.0	113	06.1		43.6	66	13.8	
17	352	21.1	77	33.9	-23	42.4	132	23.3	-14	35.5	128	08.1	-15	43.7	81	15.9	
18	7	23.6	92	32.9	-23	42.4	147	24.2	-14	36.0	143	10.1	-15	43.9	96	18.1	
19	22	26.0	107	32.0		42.4	162	25.2		36.5	158	12.2		44.0	111	20.2	
20	37	28.5	122	31.0		42.4	177	26.1		37.0	173	14.2		44.1	126	22.3	
21	52	31.0	137	30.0		42.4	192	27.0		37.5	188	16.2		44.2	141	24.5	
22	67	33.4	152	29.0		42.4	207	27.9		38.0	203	18.3		44.3	156	26.6	
23	82	35.9	167	28.1		42.4	222	28.9		38.5	218	20.3		44.5	171	28.8	
24	97	38.4	182	27.1	-23	42.4	237	29.8	-14	39.0	233	22.3	-15	44.6	186	30.9	
Dif	—		-10			0	+9			-5	+20		-1			+21	
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 1			Edad: 10 ^d 7 PHE { SD: 16:1 PMG: 20 ^h 53 ^m 4 ^h : 59/4 12 ^h : 59/7 20 ^h : 60/0 R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	31.6	-23	13.5	58	05.9	+10	00.0	60 N	7	10	8	06	9	03	13	09	
1	194	31.3		13.4	72	34.0	+10	10.6	58	7	02	7	55	8	46	16	29	
2	209	31.0		13.2	87	02.0		21.2	56	6	55		44	32		22	31	
3	224	30.7		13.1	101	29.9		31.7	54		49		36	19		28	33	
4	239	30.4		12.9	115	57.8		42.1	52		44		27	8	08	33	35	
5	254	30.1	-23	12.8	130	25.5	+10	52.6	50	6	39	7	20	7	58	13	38	
6	269	29.8	-23	12.7	144	53.2	+11	02.9	45	6	27	7	04	7	38	13	48	
7	284	29.5		12.5	159	20.8		13.2	40		17		6	51	21	13	56	
8	299	29.2		12.4	173	48.3		23.5	35	6	08		39	7	07	14	03	
9	314	28.9		12.2	188	15.7		33.7	30	5	59		29	6	55	10	47	
10	329	28.6		12.1	202	43.0		43.8	20		43		6	10	34	21	51	
11	344	28.3	-23	11.9	217	10.3	+11	53.9	10 N	5	27		5	53	6	16	14	
12	359	28.0	-23	11.8	231	37.4	+12	04.0	0	5	10		5	36	5	58	14	
13	14	27.7		11.6	246	04.5		13.9	10 S	4	51		5	18	41	49	60	
14	29	27.4		11.4	260	31.4		23.8	20		28		4	58	22	14	59	
15	44	27.1		11.3	274	58.3		33.7	30	4	00		33	5	00	15	11	
16	59	26.7		11.1	289	25.1		43.4	35	3	41		18	4	47	18	68	
17	74	26.4	-23	11.0	303	51.8	+12	53.2	40	3	18		4	00	4	33	15	
18	89	26.1	-23	10.8	318	18.4	+13	02.8	45	2	48		3	37	4	15	15	
19	104	25.8		10.7	332	44.9		12.4	50	2	03		3	08	3	52	45	
20	119	25.5		10.5	347	11.3		21.9	52		1	36		2	53	42	50	
21	134	25.2		10.3	1	37.6		31.3	54		0	53		35	29	15	56	
22	149	24.9		10.2	16	03.8		40.6	56	** **	2	14		3	15	16	02	
23	164	24.6		10.0	30	30.0		49.9	58	** **	1	45		2	59	09	86	
24	179	24.3	-23	09.9	44	56.0	+13	59.1	60 S	** **	0	58		2	39	16	17	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 26 ^m 6			Mag: -4.0 PMG: 11 ^h 51 ^m			Mag: +1.5 PMG: 8 ^h 10 ^m			Mag: -1.8 PMG: 8 ^h 25 ^m			Mag: +0.5 PMG: 11 ^h 32 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	97	38.4	182	27.1	-23	42.4	237	29.8	-14	39.0	233	22.3	-15	44.6	186	30.9		
1	112	40.8	197	26.1		42.3	252	30.7		39.5	248	24.3		44.7	201	33.1		
2	127	43.3	212	25.1		42.3	267	31.7		39.9	263	26.4		44.8	216	35.2		
3	142	45.7	227	24.2		42.3	282	32.6		40.4	278	28.4		44.9	231	37.4		
4	157	48.2	242	23.2		42.3	297	33.5		40.9	293	30.4		45.1	246	39.5		
5	172	50.7	257	22.2	-23	42.3	312	34.5	-14	41.4	308	32.5	-15	45.2	261	41.7		
6	187	53.1	272	21.2	-23	42.2	327	35.4	-14	41.9	323	34.5	-15	45.3	276	43.8		
7	202	55.6	287	20.3		42.2	342	36.3		42.4	338	36.5		45.4	291	46.0		
8	217	58.1	302	19.3		42.2	357	37.3		42.9	353	38.6		45.5	306	48.1		
9	233	00.5	317	18.3		42.2	12	38.2		43.4	8	40.6		45.7	321	50.2		
10	248	03.0	332	17.4		42.1	27	39.1		43.8	23	42.6		45.8	336	52.4		
11	263	05.5	347	16.4	-23	42.1	42	40.1	-14	44.3	38	44.7	-15	45.9	351	54.5		
12	278	07.9	2	15.4	-23	42.1	57	41.0	-14	44.8	53	46.7	-15	46.0	6	56.7		
13	293	10.4	17	14.4		42.0	72	41.9		45.3	68	48.7		46.1	21	58.8		
14	308	12.9	32	13.5		42.0	87	42.9		45.8	83	50.8		46.3	37	01.0		
15	323	15.3	47	12.5		42.0	102	43.8		46.3	98	52.8		46.4	52	03.1		
16	338	17.8	62	11.5		41.9	117	44.7		46.8	113	54.8		46.5	67	05.3		
17	353	20.2	77	10.5	-23	41.9	132	45.6	-14	47.3	128	56.9	-15	46.6	82	07.4		
18	8	22.7	92	09.6	-23	41.9	147	46.6	-14	47.7	143	58.9	-15	46.7	97	09.6		
19	23	25.2	107	08.6		41.8	162	47.5		48.2	159	00.9		46.9	112	11.7		
20	38	27.6	122	07.6		41.8	177	48.4		48.7	174	03.0		47.0	127	13.9		
21	53	30.1	137	06.6		41.7	192	49.4		49.2	189	05.0		47.1	142	16.0		
22	68	32.6	152	05.7		41.7	207	50.3		49.7	204	07.0		47.2	157	18.1		
23	83	35.0	167	04.7		41.6	222	51.2		50.2	219	09.1		47.3	172	20.3		
24	98	37.5	182	03.7	-23	41.6	237	52.2	-14	50.7	234	11.1	-15	47.4	187	22.4		
Dif	—			-10			+9			+20			-1			+21		

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 11 ^d 7 PHE { 4 ^h : 60'3 12 ^h : 60'6 20 ^h : 60'8 R°: 62 ^m												
	PMG: 12 ^h 02 ^m 6			SD: 16°4 PMG: 21 ^h 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m	
0	179	24.3	-23 09.9	44	56.0	+13 59.1	91	60 N	15 02	15 59	16 56	13 35 35	4 58 88			
1	194	24.0	09.7	59	22.0	+14 08.2	91	58	19	16 11	17 03	45 38	49 85			
2	209	23.7	09.5	73	47.8	17.3	89	56	34	21	10	13 53 41	41 83			
3	224	23.4	09.4	88	13.6	26.2	89	54	46	30	16	14 01 42	34 81			
4	239	23.1	09.2	102	39.3	35.1	89	52	15 57	38	21	08 44	27 79			
5	254	22.8	-23 09.0	117	04.9	+14 43.9	88	50	16 07	16 45	17 27	14 14 45	4 22 77			
6	269	22.5	-23 08.9	131	30.3	+14 52.6	87	45	16 27	17 01	17 38	14 28 48	4 09 74			
7	284	22.2	08.7	145	55.7	+15 01.2	86	40	44	14	48	39 50	3 59 71			
8	299	21.9	08.5	160	21.0	09.7	85	35	16 58	26	17 57	49 52	50 69			
9	314	21.6	08.4	174	46.3	18.1	84	30	17 10	36	18 06	14 57 54	42 68			
10	329	21.3	08.2	189	11.4	26.4	83	20	31	17 55	22	15 12 56	29 64			
11	344	21.0	-23 08.0	203	36.4	+15 34.7	83	10 N	17 49	18 12	18 38	15 25 59	3 18 61			
12	359	20.7	-23 07.9	218	01.4	+15 42.8	81	0	18 06	18 29	18 55	15 37 61	3 07 59			
13	14	20.4	07.7	232	26.2	50.9	81	10 S	24	18 47	19 14	15 49 63	2 56 56			
14	29	20.1	07.5	246	51.0	+15 58.8	79	20	18 42	19 07	19 36	16 03 65	44 54			
15	44	19.8	07.3	261	15.7	+16 06.6	78	30	19 04	32	20 05	18 68	31 51			
16	59	19.5	07.2	275	40.3	14.4	78	35	17	19 47	23	26 70	24 48			
17	74	19.2	-23 07.0	290	04.8	+16 22.0	76	40	19 32	20 04	20 46	16 37 71	2 15 46			
18	89	18.9	-23 06.8	304	29.2	+16 29.5	75	45	19 50	20 27	21 16	16 48 74	2 05 44			
19	104	18.6	06.6	318	53.5	37.0	75	50	20 12	20 56	22 00	17 03 76	1 53 40			
20	119	18.4	06.5	333	17.7	44.3	73	52	22	21 11	22 27	10 77	47 39			
21	134	18.1	06.3	347	41.9	51.5	72	54	34	28	23 08	17 79	41 37			
22	149	17.8	06.1	2	06.0	+16 58.6	71	56	20 48	21 50	** **	26 81	34 35			
23	164	17.5	05.9	16	29.9	+17 05.5	69	58	21 05	22 18	** **	35 83	27 32			
24	179	17.2	-23 05.7	30	53.8	+17 12.4	69	60 S	21 24	23 03	** **	17 46 86	1 18 29			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 22 ^m 6		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: +1.5 PMG: 8 ^h 08 ^m		Mag: -1.8 PMG: 8 ^h 22 ^m		Mag: +0.5 PMG: 11 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	98	37.5	182	03.7	237	52.2	234	11.1	187	22.4
1	113	40.0	197	02.8	252	53.1	249	13.1	202	24.6
2	128	42.4	212	01.8	267	54.0	264	15.2	217	26.7
3	143	44.9	227	00.8	282	54.9	279	17.2	232	28.9
4	158	47.4	241	59.8	297	55.9	294	19.3	247	31.0
5	173	49.8	256	58.9	312	56.8	309	21.3	262	33.2
6	188	52.3	271	57.9	327	57.7	324	23.3	277	35.3
7	203	54.7	286	56.9	342	58.7	339	25.4	292	37.5
8	218	57.2	301	56.0	357	59.6	354	27.4	307	39.6
9	233	59.7	316	55.0	13	00.5	9	29.4	322	41.8
10	249	02.1	331	54.0	28	01.5	24	31.5	337	43.9
11	264	04.6	346	53.0	43	02.4	39	33.5	352	46.0
12	279	07.1	1	52.1	58	03.3	54	35.5	7	48.2
13	294	09.5	16	51.1	73	04.2	69	37.6	22	50.3
14	309	12.0	31	50.1	88	05.2	84	39.6	37	52.5
15	324	14.5	46	49.2	103	06.1	99	41.7	52	54.6
16	339	16.9	61	48.2	118	07.0	114	43.7	67	56.8
17	354	19.4	76	47.2	133	08.0	129	45.7	82	58.9
18	9	21.9	91	46.2	148	08.9	144	47.8	98	01.1
19	24	24.3	106	45.3	163	09.8	159	49.8	113	03.2
20	39	26.8	121	44.3	178	10.7	174	51.8	128	05.4
21	54	29.2	136	43.3	193	11.7	189	53.9	143	07.5
22	69	31.7	151	42.4	208	12.6	204	55.9	158	09.7
23	84	34.2	166	41.4	223	13.5	219	58.0	173	11.8
24	99	36.6	181	40.4	238	14.5	235	00.0	188	14.0
Dif	—	-10	+1		+9	-5	+20	-1	+21	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 03 ^m 1			Edad: 12 ^d 7 PHE { 4 ^h : 61'0 12 ^h : 61'2 20 ^h : 61'3 Rº: 63 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	17.2	-23	05.7	30	53.8	+17	12.4	60 N	7	09	8	06	9	03	14	10
1	194	16.9		05.6	45	17.7	49	19.1	58	7	02	7	54	8	46	23	51
2	209	16.6		05.4	59	41.4	47	25.8	56	6	56		44	31	34	52	6
3	224	16.3		05.2	74	05.1	47	32.3	54	50	36	19		43	54	5	55
4	239	16.0		05.0	88	28.7	46	38.7	52	44	28	8	08	52	54	46	75
5	254	15.7	-23	04.8	102	52.2	45	+17 44.9	50	6	39	7	20	7	59	14	59
6	269	15.4	-23	04.6	117	15.6	44	+17 51.1	62	6	27	7	05	7	38	15	16
7	284	15.1		04.4	131	38.9	43	+17 57.1	60	17	6	51		22	29	58	5
8	299	14.8		04.3	146	02.2	43	+18 03.0	59	08	40	7	08		41	59	4
9	314	14.5		04.1	160	25.4	42	08.8	58	6	00	29	6	56	15	51	60
10	329	14.2		03.9	174	48.6	42	14.4	56	5	43	6	11	35	16	08	62
11	344	13.9	-23	03.7	189	11.6	40	+18 19.9	55	5	27	5	54	6	17	16	24
12	359	13.6	-23	03.5	203	34.6	40	+18 25.3	54	5	11	5	37	5	59	16	38
13	14	13.3		03.3	217	57.5	39	30.5	52	4	52	5	19	42	16	52	65
14	29	13.0		03.1	232	20.4	39	35.6	51	20	30	4	59	23	17	08	65
15	44	12.7		02.9	246	43.2	38	40.6	50	30	4	01	34	5	02	26	66
16	59	12.4		02.7	261	05.9	37	45.5	49	35	3	43	19	4	49	36	67
17	74	12.1	-23	02.5	275	28.6	37	+18 50.2	47	40	3	20	4	01	4	34	17
18	89	11.8	-23	02.3	289	51.2	36	+18 54.7	45	45	2	50	3	39	4	16	18
19	104	11.5		02.1	304	13.7	35	+18 59.2	45	50	2	06	3	10	3	54	19
20	119	11.2		01.9	318	36.2	35	+19 03.4	42	52	1	39	2	55		44	27
21	134	10.9		01.7	332	58.7	35	07.6	42	54	0	58		38	32	36	72
22	149	10.6		01.5	347	21.1	34	11.6	40	56	** **	2	16		18	47	72
23	164	10.3		01.3	1	43.4	33	15.5	39	58	** **	1	48	3	01	18	58
24	179	10.1	-23	01.1	16	05.7	33	+19 19.2	37	60 S	** **	1	03	2	42	19	12
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 18 ^m 7		Mag: -4.0 PMG: 11 ^h 54 ^m			Mag: +1.5 PMG: 8 ^h 07 ^m			Mag: -1.8 PMG: 8 ^h 19 ^m			Mag: +0.5 PMG: 11 ^h 25 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	99	36.6	181	40.4	-23	40.1	238	14.5	-15	02.2	235	00.0	-15	50.3	188	14.0	
1	114	39.1	196	39.4		40.0	253	15.4		02.7	250	02.0		50.4	203	16.1	
2	129	41.6	211	38.5		39.9	268	16.3		03.2	265	04.1		50.5	218	18.2	
3	144	44.0	226	37.5		39.9	283	17.2		03.7	280	06.1		50.6	233	20.4	
4	159	46.5	241	36.5		39.8	298	18.2		04.2	295	08.1		50.7	248	22.5	
5	174	49.0	256	35.6	-23	39.7	313	19.1	-15	04.6	310	10.2	-15	50.9	263	24.7	
6	189	51.4	271	34.6	-23	39.6	328	20.0	-15	05.1	325	12.2	-15	51.0	278	26.8	
7	204	53.9	286	33.6		39.5	343	20.9		05.6	340	14.3		51.1	293	29.0	
8	219	56.3	301	32.6		39.4	358	21.9		06.1	355	16.3		51.2	308	31.1	
9	234	58.8	316	31.7		39.3	13	22.8		06.6	10	18.3		51.3	323	33.3	
10	250	01.3	331	30.7		39.2	28	23.7		07.0	25	20.4		51.4	338	35.4	
11	265	03.7	346	29.7	-23	39.2	43	24.7	-15	07.5	40	22.4	-15	51.6	353	37.6	
12	280	06.2	1	28.8	-23	39.1	58	25.6	-15	08.0	55	24.5	-15	51.7	8	39.7	
13	295	08.7	16	27.8		39.0	73	26.5		08.5	70	26.5		51.8	23	41.9	
14	310	11.1	31	26.8		38.9	88	27.4		08.9	85	28.5		51.9	38	44.0	
15	325	13.6	46	25.9		38.8	103	28.4		09.4	100	30.6		52.0	53	46.2	
16	340	16.1	61	24.9		38.7	118	29.3		09.9	115	32.6		52.1	68	48.3	
17	355	18.5	76	23.9	-23	38.6	133	30.2	-15	10.4	130	34.7	-15	52.3	83	50.4	
18	10	21.0	91	22.9	-23	38.5	148	31.1	-15	10.9	145	36.7	-15	52.4	98	52.6	
19	25	23.5	106	22.0		38.4	163	32.1		11.3	160	38.8		52.5	113	54.7	
20	40	25.9	121	21.0		38.3	178	33.0		11.8	175	40.8		52.6	128	56.9	
21	55	28.4	136	20.0		38.2	193	33.9		12.3	190	42.8		52.7	143	59.0	
22	70	30.8	151	19.1		38.1	208	34.8		12.8	205	44.9		52.8	159	01.2	
23	85	33.3	166	18.1		38.0	223	35.8		13.2	220	46.9		52.9	174	03.3	
24	100	35.8	181	17.1	-23	37.9	238	36.7	-15	13.7	235	49.0	-15	53.1	189	05.5	
Dif	—		-10	+1			+9	-5			+20	-1			+21	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 6			Edad: 13 ^d 7 PHE { SD: 16:7 PMG: 23 ^h 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	10.1	-23 01.1	16	05.7	+19 19.2	35	60 N	15 05	16 02	16 58	15 00 66	7 47 66	
1	194	09.8	00.9	30	27.9	22.7	35	58	22	13	17 05	14 66	33 66	
2	209	09.5	00.7	44	50.1	26.2	35	56	36	23	12	26 66	21 66	
3	224	09.2	00.5	59	12.2	29.5	33	54	48	32	18	37 66	10 66	
4	239	08.9	00.3	73	34.3	32.6	31	52	15 59	40	23	46 66	7 01 66	
5	254	08.6	-23 00.1	87	56.4	+19 35.6	30	50	16 09	16 47	17 28	15 55 65	6 53 65	
6	269	08.3	-22 59.9	102	18.4	+19 38.4	28	45	16 29	17 03	17 40	16 13 65	6 35 65	
7	284	08.0	59.7	116	40.4	41.1	27	40	45	16	50	27 66	20 66	
8	299	07.7	59.5	131	02.3	43.6	25	35	16 59	27	17 59	40 65	6 08 65	
9	314	07.4	59.3	145	24.2	46.0	24	30	17 11	38	18 07	16 51 65	5 57 65	
10	329	07.1	59.1	159	46.1	48.2	22	20	32	17 56	23	17 10 64	39 64	
11	344	06.8	-22 58.9	174	08.0	+19 50.3	21	10 N	17 50	18 13	18 39	17 26 64	5 23 64	
12	359	06.5	-22 58.7	188	29.8	+19 52.3	20	0	18 07	18 30	18 56	17 41 64	5 08 64	
13	14	06.2	58.5	202	51.6	54.0	17	10 S	25	18 47	19 14	17 57 63	4 53 63	
14	29	05.9	58.3	217	13.4	55.7	17	20	18 43	19 08	19 37	18 13 63	37 63	
15	44	05.6	58.0	231	35.1	57.1	14	30	19 05	32	20 05	32 63	18 63	
16	59	05.4	57.8	245	56.9	58.4	13	35	17	19 47	23	43 62	4 07 63	
17	74	05.1	-22 57.6	260	18.6	+19 59.6	12	40	19 32	20 05	20 46	18 56 62	3 55 62	
18	89	04.8	-22 57.4	274	40.3	+20 00.6	10	45	19 50	20 27	21 16	19 11 61	3 41 61	
19	104	04.5	57.2	289	02.0	01.5	9	50	20 12	20 55	21 59	29 61	23 61	
20	119	04.2	57.0	303	23.7	02.2	7	52	22	21 10	22 25	38 60	15 60	
21	134	03.9	56.8	317	45.4	02.7	5	54	34	27	23 04	48 60	3 05 60	
22	149	03.6	56.5	332	07.1	03.1	4	56	20 48	21 48	** **	19 59 59	2 55 59	
23	164	03.3	56.3	346	28.7	03.3	2	58	21 04	22 16	** **	20 12 58	43 58	
24	179	03.0	-22 56.1	0	50.4	+20 03.4	1	60 S	21 23	22 59	** **	20 26 58	2 29 58	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 14 ^m 8		Mag: -4.0 PMG: 11 ^h 56 ^m			Mag: +1.5 PMG: 8 ^h 05 ^m			Mag: -1.8 PMG: 8 ^h 16 ^m			Mag: +0.5 PMG: 11 ^h 22 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	100	35.8	181 17.1	-23 37.9	238 36.7	-15 13.7	235 49.0	-15 53.1	189 05.5	-22 31.9				
1	115	38.2	196 16.2	37.7	253 37.6	14.2	250 51.0	53.2	204 07.6	31.9				
2	130	40.7	211 15.2	37.6	268 38.5	14.7	265 53.0	53.3	219 09.8	31.9				
3	145	43.2	226 14.2	37.5	283 39.5	15.1	280 55.1	53.4	234 11.9	31.9				
4	160	45.6	241 13.3	37.4	298 40.4	15.6	295 57.1	53.5	249 14.1	31.9				
5	175	48.1	256 12.3	-23 37.3	313 41.3	-15 16.1	310 59.2	-15 53.6	264 16.2	-22 31.9				
6	190	50.6	271 11.3	-23 37.2	328 42.2	-15 16.6	326 01.2	-15 53.8	279 18.4	-22 31.9				
7	205	53.0	286 10.4	37.1	343 43.2	17.0	341 03.3	53.9	294 20.5	31.9				
8	220	55.5	301 09.4	36.9	358 44.1	17.5	356 05.3	54.0	309 22.7	31.9				
9	235	58.0	316 08.4	36.8	13 45.0	18.0	11 07.4	54.1	324 24.8	31.9				
10	251	00.4	331 07.4	36.7	28 45.9	18.5	26 09.4	54.2	339 27.0	31.9				
11	266	02.9	346 06.5	-23 36.6	43 46.9	-15 18.9	41 11.4	-15 54.3	354 29.1	-22 31.8				
12	281	05.3	1 05.5	-23 36.5	58 47.8	-15 19.4	56 13.5	-15 54.4	9 31.2	-22 31.8				
13	296	07.8	16 04.5	36.3	73 48.7	19.9	71 15.5	54.6	24 33.4	31.8				
14	311	10.3	31 03.6	36.2	88 49.6	20.4	86 17.6	54.7	39 35.5	31.8				
15	326	12.7	46 02.6	36.1	103 50.6	20.8	101 19.6	54.8	54 37.7	31.8				
16	341	15.2	61 01.6	36.0	118 51.5	21.3	116 21.7	54.9	69 39.8	31.8				
17	356	17.7	76 00.7	-23 35.8	133 52.4	-15 21.8	131 23.7	-15 55.0	84 42.0	-22 31.8				
18	11	20.1	90 59.7	-23 35.7	148 53.3	-15 22.3	146 25.8	-15 55.1	99 44.1	-22 31.8				
19	26	22.6	105 58.7	35.6	163 54.3	22.7	161 27.8	55.2	114 46.3	31.8				
20	41	25.1	120 57.8	35.4	178 55.2	23.2	176 29.8	55.4	129 48.4	31.8				
21	56	27.5	135 56.8	35.3	193 56.1	23.7	191 31.9	55.5	144 50.6	31.8				
22	71	30.0	150 55.8	35.2	208 57.0	24.1	206 33.9	55.6	159 52.7	31.8				
23	86	32.5	165 54.9	35.0	223 58.0	24.6	221 36.0	55.7	174 54.9	31.8				
24	101	34.9	180 53.9	-23 34.9	238 58.9	-15 25.1	236 38.0	-15 55.8	189 57.0	-22 31.8				
Dif	—		-10	+1	+9	-5	+20	-1	+21	0				

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	41.1	41.2	41.2	41.1	41.0	40.7	40.5	40.3	40.1	40.1	40.2	40.3
2 - β Cas	<i>Caph</i>	2.3	357	28.6	28.8	28.9	28.8	28.6	28.2	27.8	27.5	27.4	27.3	27.5	27.7
3 - γ Peg	<i>Algenib</i>	2.8	356	28.4	28.5	28.6	28.5	28.3	28.1	27.9	27.7	27.6	27.5	27.6	27.7
4 - α Phe	<i>Ankaa</i>	2.4	353	13.5	13.6	13.7	13.6	13.5	13.2	12.9	12.7	12.5	12.5	12.5	12.7
5 - α Cas	<i>Schedar</i>	2.2	349	37.7	38.0	38.1	38.0	37.8	37.5	37.1	36.8	36.6	36.6	36.6	36.8
6 - β Cet	<i>Diphda</i>	2.0	348	53.6	53.6	53.7	53.7	53.5	53.3	53.1	52.9	52.7	52.7	52.7	52.8
7 - γ Cas	<i>Navi</i>	1.6	345	33.7	34.0	34.1	34.1	33.9	33.5	33.1	32.8	32.5	32.4	32.5	32.7
8 - β And	<i>Mirach</i>	2.1	342	19.7	19.8	19.9	19.9	19.7	19.5	19.2	19.0	18.8	18.7	18.7	18.8
9 - α Eri	<i>Achernar</i>	0.5	335	25.1	25.3	25.5	25.5	25.4	25.2	24.8	24.5	24.2	24.1	24.1	24.3
10 - γ And	<i>Almak</i>	2.3	328	45.6	45.8	45.9	46.0	45.9	45.7	45.4	45.1	44.9	44.7	44.7	44.7
12 - α Ari	<i>Hamal</i>	2.0	327	57.9	58.1	58.1	58.2	58.1	57.9	57.7	57.4	57.2	57.1	57.1	57.1
11 - α UMi	<i>Polaris</i>	2.0	315	88.5	103.1	115.0	122.5	121.9	114.0	101.5	86.4	72.0	62.0	57.8	61.0
13 - θ Eri	<i>Acamar</i>	3.3	315	16.4	16.6	16.7	16.8	16.8	16.7	16.5	16.2	15.9	15.8	15.7	15.7
14 - α Cet	<i>Menkar</i>	2.5	314	12.4	12.5	12.6	12.7	12.6	12.5	12.3	12.1	11.9	11.7	11.6	11.6
15 - β Per	<i>Algol</i>	2.1	312	40.6	40.8	40.9	41.0	41.0	40.8	40.5	40.3	40.0	39.8	39.7	39.6
16 - α Per	<i>Mirfak</i>	1.8	308	36.5	36.7	36.9	37.1	37.0	36.9	36.6	36.3	35.9	35.7	35.5	35.5
17 - η Tau	<i>Alcyone</i>	2.9	302	52.3	52.5	52.6	52.7	52.7	52.6	52.4	52.1	51.9	51.7	51.6	51.5
18 - γ Eri	<i>Zaurak</i>	3.0	300	17.5	17.6	17.8	17.9	17.9	17.8	17.6	17.4	17.2	17.0	16.9	16.8
19 - α Tau	<i>Aldebaran</i>	0.9	290	46.3	46.4	46.6	46.7	46.7	46.6	46.5	46.2	46.0	45.8	45.6	45.6
20 - β Ori	<i>Rigel</i>	0.1	281	9.4	9.5	9.7	9.8	9.9	9.8	9.7	9.5	9.3	9.1	8.9	8.8
21 - α Aur	<i>Capella</i>	0.1	280	30.4	30.6	30.7	30.9	31.0	30.9	30.8	30.5	30.2	29.9	29.6	29.5
22 - γ Ori	<i>Bellatrix</i>	1.6	278	29.1	29.2	29.3	29.4	29.5	29.5	29.3	29.2	28.9	28.7	28.5	28.4
23 - β Tau	<i>Elnath</i>	1.7	278	9.2	9.3	9.4	9.6	9.6	9.6	9.5	9.2	9.0	8.8	8.5	8.4
24 - δ Ori	<i>Mintaka</i>	2.2	276	46.6	46.7	46.8	47.0	47.0	47.0	46.9	46.7	46.5	46.3	46.1	46.0
25 - ε Ori	<i>Alnilam</i>	1.7	275	43.6	43.7	43.8	43.9	44.0	44.0	43.9	43.7	43.5	43.3	43.1	43.0
26 - ζ Ori	<i>Alnitak</i>	1.9	274	35.5	35.6	35.7	35.8	35.9	35.9	35.8	35.6	35.4	35.2	35.0	34.9
27 - κ Ori	<i>Saiph</i>	2.1	272	51.3	51.4	51.5	51.6	51.7	51.7	51.6	51.4	51.2	51.0	50.8	50.7
28 - α Ori	<i>Betelgeuse</i>	0.4	270	58.4	58.4	58.5	58.7	58.8	58.7	58.6	58.5	58.2	58.0	57.8	57.7
29 - β Aur	<i>Menkalinan</i>	1.9	269	48.0	48.1	48.3	48.5	48.6	48.5	48.4	48.2	47.9	47.6	47.3	47.1
30 - β CMa	<i>Mirzam</i>	2.0	264	8.0	8.0	8.2	8.3	8.4	8.4	8.4	8.2	8.0	7.8	7.6	7.4
31 - α Car	<i>Canopus</i>	-0.7	263	54.5	54.7	54.9	55.2	55.4	55.5	55.4	55.3	55.0	54.7	54.4	54.2
32 - γ Gem	<i>Alhena</i>	1.9	260	19.3	19.4	19.5	19.6	19.7	19.7	19.6	19.5	19.3	19.0	18.8	18.6
33 - α CMa	<i>Sirius</i>	-1.5	258	31.2	31.3	31.4	31.6	31.7	31.7	31.6	31.5	31.3	31.1	30.9	30.7
34 - ε CMa	<i>Adhara</i>	1.5	255	10.2	10.3	10.4	10.6	10.7	10.8	10.7	10.6	10.4	10.2	10.0	9.8
35 - δ CMa	<i>Wezen</i>	1.9	252	43.4	43.4	43.6	43.7	43.9	43.9	43.9	43.8	43.6	43.4	43.1	42.9
36 - η CMa	<i>Aludra</i>	2.5	248	48.1	48.1	48.3	48.4	48.6	48.6	48.6	48.5	48.3	48.1	47.9	47.7
37 - α Gem	<i>Castor</i>	2.0	246	4.5	4.5	4.6	4.7	4.8	4.9	4.8	4.7	4.5	4.3	4.0	3.8
38 - α CMi	<i>Procyon</i>	0.4	244	56.9	56.9	56.9	57.1	57.2	57.2	57.2	57.1	56.9	56.7	56.5	56.3
39 - β Gem	<i>Pollux</i>	1.1	243	24.4	24.4	24.5	24.6	24.8	24.8	24.8	24.7	24.5	24.2	24.0	23.7
40 - ζ Pup	<i>Naos</i>	2.3	238	56.8	56.8	56.9	57.1	57.3	57.4	57.4	57.4	57.2	57.0	56.7	56.5
41 - γ Vel	<i>Regor</i>	1.8	237	28.6	28.6	28.8	29.0	29.2	29.3	29.4	29.3	29.1	28.9	28.6	28.3
42 - ε Car	<i>Avior</i>	1.9	234	16.3	16.3	16.5	16.8	17.1	17.4	17.5	17.4	17.2	16.9	16.5	16.2
43 - δ Velorum		2.0	228	41.7	41.7	41.9	42.1	42.3	42.6	42.7	42.7	42.5	42.2	41.9	41.6
44 - ζ Hydrae		3.1	225	55.4	55.3	55.4	55.5	55.6	55.6	55.7	55.6	55.5	55.3	55.1	54.9
45 - λ Vel	<i>Suhail</i>	2.2	222	50.2	50.1	50.2	50.4	50.5	50.7	50.8	50.8	50.7	50.4	50.2	49.9
46 - β Car	<i>Miaplacidus</i>	1.7	221	38.1	38.1	38.3	38.7	39.1	39.6	39.8	39.9	39.7	39.4	38.8	38.4
47 - ι Car	<i>Aspidiske</i>	2.3	220	36.1	36.0	36.1	36.4	36.7	36.9	37.1	37.1	37.0	36.7	36.4	36.0
48 - α Lyn	<i>Elvashak</i>	3.1	219	28.5	28.4	28.4	28.5	28.7	28.8	28.8	28.8	28.6	28.4	28.2	27.9
49 - α Hyd	<i>Alphard</i>	2.0	217	53.4	53.3	53.3	53.4	53.5	53.6	53.7	53.6	53.5	53.4	53.2	52.9
50 - α Leo	<i>Regulus</i>	1.4	207	40.7	40.6	40.6	40.6	40.7	40.8	40.9	40.9	40.8	40.6	40.4	40.2

ESTRELLAS, 2017
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	11.1	11.0	11.0	10.9	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.5
2 - β Cas	<i>Caph</i>	2.3	+59	14.8	14.7	14.6	14.5	14.4	14.4	14.5	14.6	14.8	15.0	15.1	15.1
3 - γ Peg	<i>Algenib</i>	2.8	+15	16.7	16.6	16.6	16.6	16.6	16.7	16.8	16.9	17.0	17.0	17.0	17.0
4 - α Phe	<i>Ankaa</i>	2.4	-42	13.1	13.1	13.0	12.8	12.7	12.6	12.5	12.5	12.5	12.6	12.8	12.8
5 - α Cas	<i>Schedar</i>	2.2	+56	38.0	37.9	37.8	37.7	37.6	37.6	37.7	37.8	38.0	38.1	38.2	38.3
6 - β Cet	<i>Diphda</i>	2.0	-17	53.8	53.8	53.8	53.7	53.6	53.5	53.4	53.3	53.3	53.4	53.4	53.5
7 - γ Cas	<i>Navi</i>	1.6	+60	48.7	48.6	48.5	48.4	48.3	48.3	48.3	48.4	48.6	48.8	48.9	49.0
8 - β And	<i>Mirach</i>	2.1	+35	42.7	42.6	42.6	42.5	42.4	42.5	42.5	42.6	42.8	42.9	43.0	43.0
9 - α Eri	<i>Achernar</i>	0.5	-57	9.5	9.4	9.3	9.1	9.0	8.8	8.7	8.7	8.7	8.9	9.0	9.1
10 - γ And	<i>Almak</i>	2.3	+42	24.7	24.7	24.6	24.5	24.5	24.4	24.5	24.6	24.7	24.8	24.9	25.0
12 - α Ari	<i>Hamal</i>	2.0	+23	32.5	32.5	32.4	32.4	32.4	32.4	32.5	32.6	32.6	32.7	32.8	32.8
11 - α UMi	<i>Polaris</i>	2.0	+89	20.4	20.4	20.3	20.2	20.0	19.9	19.8	19.9	20.0	20.1	20.3	20.5
13 - θ Eri	<i>Acamar</i>	3.3	-40	14.6	14.6	14.6	14.5	14.3	14.1	14.0	13.9	13.9	14.0	14.2	14.3
14 - α Cet	<i>Menkar</i>	2.5	+4	9.2	9.1	9.1	9.1	9.2	9.3	9.3	9.4	9.5	9.5	9.5	9.4
15 - β Per	<i>Algol</i>	2.1	+41	1.2	1.2	1.2	1.1	1.0	1.0	1.0	1.1	1.2	1.3	1.3	1.4
16 - α Per	<i>Mirfak</i>	1.8	+49	55.3	55.3	55.2	55.2	55.1	55.0	55.0	55.0	55.1	55.2	55.3	55.4
17 - η Tau	<i>Alcyone</i>	2.9	+24	9.3	9.3	9.3	9.2	9.2	9.2	9.3	9.3	9.4	9.4	9.5	9.5
18 - γ Eri	<i>Zaurak</i>	3.0	-13	27.9	28.0	28.0	27.9	27.8	27.7	27.6	27.5	27.5	27.5	27.6	27.7
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.5	32.5	32.5	32.5	32.5
20 - β Ori	<i>Rigel</i>	0.1	-8	11.2	11.3	11.3	11.3	11.2	11.1	11.0	10.9	10.9	10.9	11.0	11.1
21 - α Aur	<i>Capella</i>	0.1	+46	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.6	21.6	21.6	21.6	21.6	21.7	21.7	21.8	21.8	21.8	21.8	21.8
23 - β Tau	<i>Elnath</i>	1.7	+28	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.5	17.5	17.5	17.5	17.5	17.4	17.3	17.3	17.2	17.2	17.3	17.3
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.7	11.8	11.8	11.8	11.8	11.7	11.6	11.5	11.5	11.5	11.6	11.6
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	56.0	56.1	56.1	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.1	40.2	40.2	40.2	40.1	40.0	39.9	39.9	39.8	39.8	39.9	40.0
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.5	24.5	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.7	56.8	56.8	56.8	56.8	56.7	56.7	56.6	56.6	56.6	56.6	56.7
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.2	58.2	58.3	58.3	58.2	58.1	58.0	57.9	57.8	57.8	57.9	58.0
31 - α Car	<i>Canopus</i>	-0.7	-52	42.6	42.7	42.8	42.8	42.7	42.5	42.4	42.2	42.1	42.1	42.3	42.4
32 - γ Gem	<i>Alhena</i>	1.9	+16	22.8	22.8	22.8	22.8	22.8	22.9	22.9	22.9	22.9	22.9	22.9	22.8
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.6	44.7	44.8	44.8	44.7	44.6	44.5	44.4	44.4	44.4	44.5	44.6
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	60.0	60.1	60.2	60.2	60.1	60.0	59.9	59.7	59.7	59.7	59.7	59.9
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.5	25.6	25.6	25.7	25.6	25.5	25.4	25.3	25.2	25.2	25.3	25.4
36 - η CMa	<i>Aludra</i>	2.5	-29	20.4	20.5	20.6	20.6	20.6	20.5	20.4	20.2	20.1	20.1	20.2	20.3
37 - α Gem	<i>Castor</i>	2.0	+31	50.8	50.9	50.9	50.9	50.9	50.9	50.9	50.8	50.8	50.8	50.7	50.7
38 - α CMi	<i>Procyon</i>	0.4	+5	10.6	10.6	10.6	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.7	10.6
39 - β Gem	<i>Pollux</i>	1.1	+27	58.8	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.8	58.8	58.8	58.7
40 - ζ Pup	<i>Naos</i>	2.3	-40	3.2	3.4	3.5	3.5	3.5	3.4	3.3	3.1	3.0	3.0	3.1	3.2
41 - γ Vel	<i>Regor</i>	1.8	-47	23.3	23.5	23.6	23.7	23.7	23.6	23.4	23.3	23.2	23.1	23.2	23.3
42 - ϵ Car	<i>Avior</i>	1.9	-59	33.9	34.1	34.3	34.3	34.3	34.2	34.1	33.9	33.8	33.7	33.8	33.9
43 - δ Velorum		2.0	-54	46.3	46.5	46.7	46.7	46.7	46.7	46.5	46.4	46.3	46.2	46.2	46.3
44 - ζ Hydrae		3.1	+5	52.6	52.6	52.6	52.6	52.6	52.6	52.7	52.7	52.7	52.7	52.6	52.5
45 - λ Vel	<i>Suhail</i>	2.2	-43	30.1	30.3	30.4	30.5	30.5	30.5	30.4	30.2	30.1	30.0	30.1	30.2
46 - β Car	<i>Miaplacidus</i>	1.7	-69	47.2	47.4	47.6	47.7	47.7	47.7	47.5	47.4	47.2	47.1	47.1	47.2
47 - ι Car	<i>Aspidiske</i>	2.3	-59	20.8	21.0	21.1	21.2	21.3	21.2	21.1	21.0	20.8	20.7	20.7	20.8
48 - α Lyn	<i>Elvashak</i>	3.1	+34	19.0	19.0	19.1	19.1	19.2	19.2	19.1	19.1	19.0	18.9	18.8	18.8
49 - α Hyd	<i>Alphard</i>	2.0	-8	44.1	44.2	44.2	44.3	44.2	44.2	44.1	44.1	44.0	44.0	44.1	44.2
50 - α Leo	<i>Regulus</i>	1.4	+11	52.9	52.8	52.8	52.9	52.9	52.9	52.9	52.9	52.9	52.9	52.8	52.7

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	7.0	6.8	6.8	6.9	7.0	7.2	7.4	7.5	7.5	7.3	7.0	6.7
52 - ν	Hydrae	3.1	197	22.8	22.7	22.6	22.7	22.8	22.9	22.9	23.0	22.9	22.8	22.6	22.4
53 - β	UMa Merak	2.4	194	17.1	16.8	16.7	16.8	17.0	17.2	17.4	17.5	17.4	17.3	17.0	16.6
54 - α	UMa Dubhe	1.8	193	48.5	48.2	48.1	48.2	48.4	48.7	48.9	49.0	49.0	48.8	48.4	48.0
55 - β	Leo Denebola	2.1	182	31.1	30.9	30.8	30.8	30.8	30.9	31.0	31.1	31.1	31.0	30.9	30.6
56 - γ	Crv Gienah	2.6	175	49.7	49.5	49.4	49.3	49.4	49.5	49.5	49.6	49.7	49.6	49.5	49.2
57 - α	Cru Acrux	1.4	173	6.2	5.9	5.7	5.7	5.8	6.0	6.3	6.5	6.7	6.7	6.4	6.0
58 - γ	Cru Gacrux	1.6	171	57.9	57.6	57.4	57.4	57.5	57.6	57.9	58.1	58.2	58.2	57.9	57.6
59 - γ	Cen Muhlifain	2.2	169	22.9	22.6	22.4	22.4	22.4	22.5	22.7	22.9	23.0	22.9	22.8	22.5
60 - β	Cru Mimosa	1.3	167	48.8	48.5	48.3	48.2	48.3	48.4	48.7	48.9	49.1	49.1	48.9	48.5
61 - ε	UMa Alioth	1.8	166	18.6	18.2	18.0	18.0	18.1	18.2	18.4	18.6	18.8	18.8	18.6	18.3
62 - α^2	CVn Cor Caroli	2.9	165	47.8	47.5	47.4	47.3	47.4	47.5	47.6	47.7	47.8	47.8	47.7	47.4
63 - ε	Vir Vindemiatrix	2.8	164	14.7	14.5	14.3	14.3	14.3	14.4	14.4	14.5	14.6	14.6	14.5	14.3
64 - ζ	UMa Mizar	2.3	158	51.1	50.8	50.5	50.5	50.5	50.7	50.9	51.1	51.2	51.3	51.2	50.9
65 - α	Vir Spica	1.0	158	28.7	28.4	28.3	28.2	28.2	28.2	28.3	28.4	28.5	28.5	28.4	28.2
66 - η	UMa Alkaid	1.9	152	57.1	56.8	56.6	56.5	56.5	56.6	56.7	56.9	57.1	57.1	57.1	56.9
67 - β	Cen Hadar	0.6	148	44.4	44.0	43.7	43.5	43.4	43.5	43.7	44.0	44.2	44.3	44.2	43.9
68 - θ	Cen Menkent	2.1	148	4.7	4.4	4.2	4.1	4.1	4.1	4.2	4.3	4.5	4.5	4.4	4.2
69 - α	Boo Arcturus	0.0	145	53.6	53.4	53.2	53.1	53.0	53.1	53.2	53.3	53.4	53.4	53.4	53.2
70 - α^1	Cen Rigil Kentaurus	0.0	139	48.6	48.2	47.9	47.6	47.5	47.6	47.8	48.1	48.3	48.5	48.4	48.2
71 - α^2	Lib Zubenelgenubi	2.8	137	2.8	2.6	2.4	2.3	2.2	2.2	2.2	2.3	2.4	2.5	2.5	2.3
72 - β	UMi Kochab	2.1	137	20.7	20.0	19.5	19.1	19.1	19.4	19.8	20.4	20.9	21.3	21.4	21.2
73 - β	Lib Zubeneschamali	2.6	130	31.3	31.1	30.9	30.8	30.7	30.6	30.7	30.8	30.9	31.0	31.0	30.8
74 - α	CrB Alphecca	2.2	126	9.2	8.9	8.7	8.5	8.4	8.4	8.5	8.6	8.8	8.9	8.9	8.8
75 - α	Ser Unukalhai	2.7	123	43.7	43.4	43.2	43.1	43.0	42.9	43.0	43.1	43.2	43.3	43.3	43.2
76 - α	Sco Antares	0.9	112	23.5	23.3	23.1	22.8	22.7	22.6	22.6	22.7	22.8	22.9	23.0	22.9
77 - α	TrA Atria	1.9	107	23.6	23.0	22.5	22.0	21.6	21.4	21.4	21.7	22.1	22.4	22.6	22.5
78 - ε	Scorpii	2.3	107	11.4	11.1	10.9	10.6	10.4	10.3	10.3	10.4	10.5	10.7	10.8	10.7
79 - η	Oph Sabik	2.4	102	10.0	9.8	9.6	9.4	9.2	9.1	9.1	9.2	9.3	9.4	9.5	9.4
80 - α	Her Rasalgethi	3.1	101	9.0	8.8	8.6	8.4	8.2	8.1	8.1	8.2	8.3	8.5	8.5	8.5
81 - λ	Sco Shaula	1.6	96	19.0	18.7	18.5	18.2	18.0	17.8	17.8	17.9	18.0	18.2	18.3	18.2
82 - α	Oph Rasalhague	2.1	96	4.5	4.3	4.1	3.9	3.7	3.6	3.6	3.7	3.8	3.9	4.0	4.0
83 - θ	Sco Sargas	1.9	95	22.4	22.1	21.8	21.5	21.3	21.1	21.1	21.1	21.3	21.5	21.6	21.6
84 - γ	Dra Eltanin	2.2	90	45.5	45.3	45.0	44.7	44.5	44.4	44.4	44.5	44.7	45.0	45.2	45.3
85 - ε	Sgr Kaus Australis	1.9	83	41.0	40.8	40.6	40.3	40.0	39.9	39.8	39.8	39.9	40.1	40.2	40.2
86 - α	Lyr Vega	0.0	80	37.7	37.6	37.3	37.1	36.9	36.7	36.7	36.7	36.9	37.1	37.3	37.3
87 - σ	Sgr Nunki	2.0	75	55.7	55.5	55.3	55.1	54.8	54.6	54.5	54.5	54.6	54.8	54.9	54.9
88 - α	Aql Altair	0.8	62	6.2	6.1	5.9	5.7	5.5	5.3	5.2	5.2	5.3	5.4	5.5	5.6
89 - γ	Cyg Sadr	2.2	54	17.8	17.8	17.6	17.4	17.1	16.9	16.7	16.7	16.8	17.0	17.2	17.3
90 - α	Pav Peacock	1.9	53	16.1	16.0	15.7	15.4	15.0	14.6	14.4	14.3	14.4	14.6	14.9	15.0
91 - α	Cyg Deneb	1.3	49	30.2	30.2	30.0	29.8	29.5	29.3	29.1	29.1	29.2	29.3	29.6	29.7
92 - α	Cep Alderamin	2.4	40	15.7	15.8	15.6	15.3	14.9	14.5	14.3	14.2	14.3	14.6	14.9	15.2
93 - ε	Peg Enif	0.7	33	45.0	45.0	44.9	44.8	44.5	44.3	44.1	44.0	44.0	44.1	44.2	44.3
94 - δ	Cap Deneb Algedi	2.9	32	60.7	60.7	60.6	60.5	60.2	60.0	59.8	59.7	59.7	59.7	59.9	60.0
95 - α	Gru Al Na'ir	1.7	27	41.1	41.1	41.1	40.9	40.6	40.2	40.0	39.8	39.8	39.9	40.0	40.2
96 - β	Gruis	2.1	19	5.4	5.5	5.4	5.2	5.0	4.7	4.4	4.2	4.1	4.2	4.3	4.5
97 - α	PsA Fomalhaut	1.2	15	21.6	21.6	21.6	21.5	21.3	21.0	20.7	20.6	20.5	20.5	20.6	20.7
98 - β	Peg Scheat	2.4	13	51.2	51.3	51.2	51.1	50.9	50.7	50.4	50.3	50.2	50.2	50.3	50.5
99 - α	Peg Markab	2.5	13	36.1	36.1	36.1	36.0	35.8	35.6	35.4	35.2	35.1	35.2	35.3	35.3

ESTRELLAS, 2017
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	30.5	30.7	30.8	30.9	31.0	31.0	30.9	30.8	30.7	30.6	30.6	30.6
52 - ν	Hydrae	3.1	-16	17.0	17.1	17.2	17.2	17.2	17.2	17.2	17.1	17.0	17.0	17.0	17.1
53 - β	UMa Merak	2.4	+56	17.2	17.3	17.4	17.5	17.6	17.6	17.6	17.5	17.3	17.2	17.0	16.9
54 - α	UMa Dubhe	1.8	+61	39.2	39.3	39.4	39.6	39.7	39.7	39.6	39.5	39.4	39.2	39.1	39.0
55 - β	Leo Denebola	2.1	+14	28.5	28.5	28.5	28.5	28.5	28.6	28.6	28.6	28.6	28.5	28.4	28.3
56 - γ	Crv Gienah	2.6	-17	38.1	38.2	38.3	38.3	38.4	38.4	38.3	38.3	38.2	38.2	38.2	38.3
57 - α	Cru Acrux	1.4	-63	11.3	11.4	11.6	11.7	11.9	12.0	12.0	11.9	11.7	11.6	11.5	11.5
58 - γ	Cru Gacrux	1.6	-57	12.2	12.3	12.5	12.7	12.8	12.8	12.8	12.8	12.6	12.5	12.4	12.4
59 - γ	Cen Muhlifain	2.2	-49	2.9	3.0	3.2	3.3	3.4	3.5	3.5	3.4	3.3	3.2	3.1	3.1
60 - β	Cru Mimosa	1.3	-59	46.6	46.7	46.8	47.0	47.1	47.2	47.2	47.2	47.0	46.9	46.8	46.8
61 - ϵ	UMa Alioth	1.8	+55	51.8	51.8	51.9	52.1	52.2	52.3	52.3	52.2	52.1	51.9	51.8	51.6
62 - α^2	CVn Cor Caroli	2.9	+38	13.4	13.4	13.5	13.6	13.7	13.7	13.8	13.7	13.7	13.5	13.4	13.2
63 - ϵ	Vir Vindemiatrix	2.8	+10	52.0	52.0	51.9	52.0	52.0	52.1	52.1	52.1	52.1	52.0	51.8	51.8
64 - ζ	UMa Mizar	2.3	+54	50.0	50.0	50.1	50.2	50.3	50.4	50.5	50.4	50.3	50.1	50.0	49.8
65 - α	Vir Spica	1.0	-11	14.9	15.0	15.0	15.1	15.1	15.1	15.0	15.0	15.0	15.0	15.0	15.1
66 - η	UMa Alkaid	1.9	+49	13.5	13.5	13.6	13.7	13.8	13.9	14.0	14.0	13.9	13.7	13.5	13.4
67 - β	Cen Hadar	0.6	-60	26.9	27.0	27.1	27.2	27.4	27.5	27.5	27.5	27.4	27.3	27.2	27.1
68 - θ	Cen Menkent	2.1	-36	26.9	27.0	27.1	27.2	27.3	27.3	27.4	27.3	27.3	27.2	27.1	27.1
69 - α	Boo Arcturus	0.0	+19	5.6	5.5	5.5	5.6	5.7	5.7	5.8	5.8	5.8	5.7	5.6	5.4
70 - α^1	Cen Rigil Kentaurus	0.0	-60	53.9	54.0	54.1	54.2	54.3	54.5	54.5	54.5	54.4	54.3	54.2	54.1
71 - α^2	Lib Zubenelgenubi	2.8	-16	6.5	6.6	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
72 - β	UMi Kochab	2.1	+74	5.0	4.9	5.0	5.1	5.3	5.4	5.5	5.5	5.4	5.2	5.0	4.9
73 - β	Lib Zubeneshamali	2.6	-9	26.6	26.6	26.7	26.7	26.7	26.7	26.7	26.6	26.6	26.6	26.6	26.7
74 - α	CrB Alphecca	2.2	+26	39.5	39.4	39.3	39.4	39.5	39.6	39.7	39.8	39.7	39.7	39.5	39.4
75 - α	Ser Unukalhai	2.7	+6	22.4	22.4	22.3	22.3	22.4	22.5	22.5	22.6	22.6	22.5	22.5	22.4
76 - α	Sco Antares	0.9	-26	27.9	27.9	28.0	28.0	28.0	28.1	28.1	28.1	28.1	28.1	28.0	28.0
77 - α	TrA Atria	1.9	-69	3.1	3.0	3.0	3.1	3.2	3.4	3.5	3.6	3.6	3.5	3.4	3.3
78 - ϵ	Scorpii	2.3	-34	19.1	19.2	19.2	19.2	19.3	19.3	19.3	19.4	19.4	19.3	19.3	19.3
79 - η	Oph Sabik	2.4	-15	44.5	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.5	44.6	44.6
80 - α	Her Rasalgethi	3.1	+14	22.4	22.3	22.2	22.3	22.3	22.4	22.5	22.6	22.6	22.6	22.5	22.4
81 - λ	Sco Shaula	1.6	-37	6.7	6.7	6.7	6.7	6.7	6.8	6.8	6.8	6.9	6.8	6.8	6.8
82 - α	Oph Rasalhague	2.1	+12	33.0	32.9	32.9	32.9	32.9	33.0	33.1	33.2	33.2	33.2	33.1	33.0
83 - θ	Sco Sargas	1.9	-43	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.3
84 - γ	Dra Eltanin	2.2	+51	29.3	29.1	29.0	29.1	29.2	29.4	29.5	29.6	29.7	29.7	29.6	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.4	22.3	22.3	22.3	22.3	22.3	22.4	22.4	22.4	22.4	22.4	22.4
86 - α	Lyr Vega	0.0	+38	48.1	47.9	47.9	47.9	48.0	48.1	48.3	48.4	48.5	48.5	48.4	48.3
87 - σ	Sgr Nunki	2.0	-26	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
88 - α	Aql Altair	0.8	+8	54.9	54.8	54.8	54.8	54.9	55.0	55.1	55.2	55.2	55.2	55.2	55.1
89 - γ	Cyg Sadr	2.2	+40	18.8	18.7	18.6	18.5	18.6	18.7	18.9	19.0	19.2	19.2	19.2	19.1
90 - α	Pav Peacock	1.9	-56	40.7	40.6	40.5	40.4	40.4	40.4	40.5	40.6	40.7	40.7	40.8	40.7
91 - α	Cyg Deneb	1.3	+45	20.6	20.5	20.4	20.3	20.4	20.5	20.6	20.8	20.9	21.0	21.0	20.9
92 - α	Cep Alderamin	2.4	+62	39.7	39.5	39.4	39.3	39.3	39.4	39.5	39.7	39.9	40.0	40.0	40.0
93 - ϵ	Peg Enif	0.7	+9	57.2	57.2	57.1	57.1	57.2	57.3	57.4	57.5	57.6	57.6	57.6	57.5
94 - δ	Cap Deneb Algedi	2.9	-16	3.0	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.8
95 - α	Gru Al Na'ir	1.7	-46	52.8	52.7	52.6	52.5	52.4	52.3	52.3	52.4	52.5	52.6	52.6	52.6
96 - β	Gruis	2.1	-46	47.9	47.8	47.7	47.6	47.4	47.4	47.3	47.4	47.5	47.6	47.7	47.7
97 - α	PsA Fomalhaut	1.2	-29	32.1	32.0	32.0	31.8	31.7	31.6	31.6	31.6	31.6	31.7	31.8	31.8
98 - β	Peg Scheat	2.4	+28	10.6	10.5	10.4	10.4	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.0
99 - α	Peg Markab	2.5	+15	17.8	17.8	17.7	17.7	17.7	17.8	17.9	18.1	18.1	18.2	18.2	18.2

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

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

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

2ª CORRECCIÓN

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2017

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	-28.9	26 00	-38.0	52 00	-39.4	78 00	-32.8	104 00	-19.6	130 00	-2.4	156 00	+15.3
0 30	-29.1	26 30	-38.1	52 30	-39.3	78 30	-32.6	104 30	-19.3	130 30	-2.1	156 30	+15.6
1 00	-29.4	27 00	-38.2	53 00	-39.3	79 00	-32.4	105 00	-19.0	131 00	-1.7	157 00	+15.9
1 30	-29.6	27 30	-38.3	53 30	-39.2	79 30	-32.2	105 30	-18.7	131 30	-1.4	157 30	+16.2
2 00	-29.8	28 00	-38.4	54 00	-39.2	80 00	-32.0	106 00	-18.4	132 00	-1.0	158 00	+16.5
2 30	-30.1	28 30	-38.5	54 30	-39.1	80 30	-31.8	106 30	-18.1	132 30	-0.7	158 30	+16.8
3 00	-30.3	29 00	-38.6	55 00	-39.0	81 00	-31.6	107 00	-17.8	133 00	-0.3	159 00	+17.2
3 30	-30.5	29 30	-38.7	55 30	-39.0	81 30	-31.4	107 30	-17.5	133 30	0.0	159 30	+17.5
4 00	-30.7	30 00	-38.7	56 00	-38.9	82 00	-31.2	108 00	-17.1	134 00	+0.4	160 00	+17.8
4 30	-31.0	30 30	-38.8	56 30	-38.8	82 30	-31.0	108 30	-16.8	134 30	+0.7	160 30	+18.1
5 00	-31.2	31 00	-38.9	57 00	-38.7	83 00	-30.7	109 00	-16.5	135 00	+1.1	161 00	+18.4
5 30	-31.4	31 30	-39.0	57 30	-38.6	83 30	-30.5	109 30	-16.2	135 30	+1.4	161 30	+18.7
6 00	-31.6	32 00	-39.0	58 00	-38.6	84 00	-30.3	110 00	-15.9	136 00	+1.7	162 00	+19.0
6 30	-31.8	32 30	-39.1	58 30	-38.5	84 30	-30.1	110 30	-15.6	136 30	+2.1	162 30	+19.3
7 00	-32.0	33 00	-39.2	59 00	-38.4	85 00	-29.8	111 00	-15.2	137 00	+2.4	163 00	+19.6
7 30	-32.2	33 30	-39.2	59 30	-38.3	85 30	-29.6	111 30	-14.9	137 30	+2.8	163 30	+19.9
8 00	-32.4	34 00	-39.3	60 00	-38.2	86 00	-29.4	112 00	-14.6	138 00	+3.1	164 00	+20.2
8 30	-32.6	34 30	-39.3	60 30	-38.1	86 30	-29.1	112 30	-14.3	138 30	+3.5	164 30	+20.5
9 00	-32.8	35 00	-39.4	61 00	-38.0	87 00	-28.9	113 00	-13.9	139 00	+3.8	165 00	+20.8
9 30	-33.0	35 30	-39.4	61 30	-37.9	87 30	-28.6	113 30	-13.6	139 30	+4.2	165 30	+21.1
10 00	-33.2	36 00	-39.5	62 00	-37.8	88 00	-28.4	114 00	-13.3	140 00	+4.5	166 00	+21.4
10 30	-33.4	36 30	-39.5	62 30	-37.7	88 30	-28.2	114 30	-13.0	140 30	+4.9	166 30	+21.7
11 00	-33.6	37 00	-39.6	63 00	-37.5	89 00	-27.9	115 00	-12.6	141 00	+5.2	167 00	+22.0
11 30	-33.8	37 30	-39.6	63 30	-37.4	89 30	-27.7	115 30	-12.3	141 30	+5.6	167 30	+22.3
12 00	-34.0	38 00	-39.7	64 00	-37.3	90 00	-27.4	116 00	-12.0	142 00	+5.9	168 00	+22.6
12 30	-34.1	38 30	-39.7	64 30	-37.2	90 30	-27.2	116 30	-11.6	142 30	+6.2	168 30	+22.9
13 00	-34.3	39 00	-39.7	65 00	-37.1	91 00	-26.9	117 00	-11.3	143 00	+6.6	169 00	+23.1
13 30	-34.5	39 30	-39.7	65 30	-36.9	91 30	-26.6	117 30	-11.0	143 30	+6.9	169 30	+23.4
14 00	-34.7	40 00	-39.8	66 00	-36.8	92 00	-26.4	118 00	-10.6	144 00	+7.3	170 00	+23.7
14 30	-34.8	40 30	-39.8	66 30	-36.7	92 30	-26.1	118 30	-10.3	144 30	+7.6	170 30	+24.0
15 00	-35.0	41 00	-39.8	67 00	-36.5	93 00	-25.9	119 00	-10.0	145 00	+7.9	171 00	+24.3
15 30	-35.2	41 30	-39.8	67 30	-36.4	93 30	-25.6	119 30	-9.6	145 30	+8.3	171 30	+24.5
16 00	-35.3	42 00	-39.8	68 00	-36.2	94 00	-25.3	120 00	-9.3	146 00	+8.6	172 00	+24.8
16 30	-35.5	42 30	-39.8	68 30	-36.1	94 30	-25.1	120 30	-9.0	146 30	+9.0	172 30	+25.1
17 00	-35.7	43 00	-39.8	69 00	-36.0	95 00	-24.8	121 00	-8.6	147 00	+9.3	173 00	+25.3
17 30	-35.8	43 30	-39.8	69 30	-35.8	95 30	-24.5	121 30	-8.3	147 30	+9.6	173 30	+25.6
18 00	-36.0	44 00	-39.8	70 00	-35.6	96 00	-24.2	122 00	-7.9	148 00	+10.0	174 00	+25.9
18 30	-36.1	44 30	-39.8	70 30	-35.5	96 30	-24.0	122 30	-7.6	148 30	+10.3	174 30	+26.1
19 00	-36.3	45 00	-39.8	71 00	-35.3	97 00	-23.7	123 00	-7.3	149 00	+10.7	175 00	+26.4
19 30	-36.4	45 30	-39.8	71 30	-35.2	97 30	-23.4	123 30	-6.9	149 30	+11.0	175 30	+26.7
20 00	-36.5	46 00	-39.8	72 00	-35.0	98 00	-23.1	124 00	-6.6	150 00	+11.3	176 00	+26.9
20 30	-36.7	46 30	-39.8	72 30	-34.8	98 30	-22.8	124 30	-6.2	150 30	+11.7	176 30	+27.2
21 00	-36.8	47 00	-39.8	73 00	-34.7	99 00	-22.6	125 00	-5.9	151 00	+12.0	177 00	+27.4
21 30	-36.9	47 30	-39.7	73 30	-34.5	99 30	-22.3	125 30	-5.5	151 30	+12.3	177 30	+27.7
22 00	-37.1	48 00	-39.7	74 00	-34.3	100 00	-22.0	126 00	-5.2	152 00	+12.6	178 00	+27.9
22 30	-37.2	48 30	-39.7	74 30	-34.1	100 30	-21.7	126 30	-4.8	152 30	+13.0	178 30	+28.2
23 00	-37.3	49 00	-39.7	75 00	-34.0	101 00	-21.4	127 00	-4.5	153 00	+13.3	179 00	+28.4
23 30	-37.4	49 30	-39.6	75 30	-33.8	101 30	-21.1	127 30	-4.2	153 30	+13.6	179 30	+28.7
24 00	-37.6	50 00	-39.6	76 00	-33.6	102 00	-20.8	128 00	-3.8	154 00	+14.0	180 00	+28.9
24 30	-37.7	50 30	-39.5	76 30	-33.4	102 30	-20.5	128 30	-3.5	154 30	+14.3	180 30	+29.1
25 00	-37.8	51 00	-39.5	77 00	-33.2	103 00	-20.2	129 00	-3.1	155 00	+14.6	181 00	+29.4
25 30	-37.9	51 30	-39.4	77 30	-33.0	103 30	-19.9	129 30	-2.8	155 30	+14.9	181 30	+29.6
26 00	-38.0	52 00	-39.4	78 00	-32.8	104 00	-19.6	130 00	-2.4	156 00	+15.3	182 00	+29.8

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2017

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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	+29.8	208 00	+38.4	234 00	+39.2	260 00	+32.0	286 00	+18.4	312 00	+1.0	338 00	-16.5
182 30	+30.1	208 30	+38.5	234 30	+39.1	260 30	+31.8	286 30	+18.1	312 30	+0.7	338 30	-16.8
183 00	+30.3	209 00	+38.6	235 00	+39.0	261 00	+31.6	287 00	+17.8	313 00	+0.3	339 00	-17.2
183 30	+30.5	209 30	+38.7	235 30	+39.0	261 30	+31.4	287 30	+17.5	313 30	0.0	339 30	-17.5
184 00	+30.7	210 00	+38.7	236 00	+38.9	262 00	+31.2	288 00	+17.1	314 00	-0.4	340 00	-17.8
184 30	+31.0	210 30	+38.8	236 30	+38.8	262 30	+31.0	288 30	+16.8	314 30	-0.7	340 30	-18.1
185 00	+31.2	211 00	+38.9	237 00	+38.7	263 00	+30.7	289 00	+16.5	315 00	-1.1	341 00	-18.4
185 30	+31.4	211 30	+39.0	237 30	+38.6	263 30	+30.5	289 30	+16.2	315 30	-1.4	341 30	-18.7
186 00	+31.6	212 00	+39.0	238 00	+38.6	264 00	+30.3	290 00	+15.9	316 00	-1.7	342 00	-19.0
186 30	+31.8	212 30	+39.1	238 30	+38.5	264 30	+30.1	290 30	+15.6	316 30	-2.1	342 30	-19.3
187 00	+32.0	213 00	+39.2	239 00	+38.4	265 00	+29.8	291 00	+15.2	317 00	-2.4	343 00	-19.6
187 30	+32.2	213 30	+39.2	239 30	+38.3	265 30	+29.6	291 30	+14.9	317 30	-2.8	343 30	-19.9
188 00	+32.4	214 00	+39.3	240 00	+38.2	266 00	+29.4	292 00	+14.6	318 00	-3.1	344 00	-20.2
188 30	+32.6	214 30	+39.3	240 30	+38.1	266 30	+29.1	292 30	+14.3	318 30	-3.5	344 30	-20.5
189 00	+32.8	215 00	+39.4	241 00	+38.0	267 00	+28.9	293 00	+13.9	319 00	-3.8	345 00	-20.8
189 30	+33.0	215 30	+39.4	241 30	+37.9	267 30	+28.6	293 30	+13.6	319 30	-4.2	345 30	-21.1
190 00	+33.2	216 00	+39.5	242 00	+37.8	268 00	+28.4	294 00	+13.3	320 00	-4.5	346 00	-21.4
190 30	+33.4	216 30	+39.5	242 30	+37.7	268 30	+28.2	294 30	+13.0	320 30	-4.9	346 30	-21.7
191 00	+33.6	217 00	+39.6	243 00	+37.5	269 00	+27.9	295 00	+12.6	321 00	-5.2	347 00	-22.0
191 30	+33.8	217 30	+39.6	243 30	+37.4	269 30	+27.7	295 30	+12.3	321 30	-5.6	347 30	-22.3
192 00	+34.0	218 00	+39.7	244 00	+37.3	270 00	+27.4	296 00	+12.0	322 00	-5.9	348 00	-22.6
192 30	+34.1	218 30	+39.7	244 30	+37.2	270 30	+27.2	296 30	+11.6	322 30	-6.2	348 30	-22.9
193 00	+34.3	219 00	+39.7	245 00	+37.1	271 00	+26.9	297 00	+11.3	323 00	-6.6	349 00	-23.1
193 30	+34.5	219 30	+39.7	245 30	+36.9	271 30	+26.6	297 30	+11.0	323 30	-6.9	349 30	-23.4
194 00	+34.7	220 00	+39.8	246 00	+36.8	272 00	+26.4	298 00	+10.6	324 00	-7.3	350 00	-23.7
194 30	+34.8	220 30	+39.8	246 30	+36.7	272 30	+26.1	298 30	+10.3	324 30	-7.6	350 30	-24.0
195 00	+35.0	221 00	+39.8	247 00	+36.5	273 00	+25.9	299 00	+10.0	325 00	-7.9	351 00	-24.3
195 30	+35.2	221 30	+39.8	247 30	+36.4	273 30	+25.6	299 30	+9.6	325 30	-8.3	351 30	-24.5
196 00	+35.3	222 00	+39.8	248 00	+36.2	274 00	+25.3	300 00	+9.3	326 00	-8.6	352 00	-24.8
196 30	+35.5	222 30	+39.8	248 30	+36.1	274 30	+25.1	300 30	+9.0	326 30	-9.0	352 30	-25.1
197 00	+35.7	223 00	+39.8	249 00	+36.0	275 00	+24.8	301 00	+8.6	327 00	-9.3	353 00	-25.3
197 30	+35.8	223 30	+39.8	249 30	+35.8	275 30	+24.5	301 30	+8.3	327 30	-9.6	353 30	-25.6
198 00	+36.0	224 00	+39.8	250 00	+35.6	276 00	+24.2	302 00	+7.9	328 00	-10.0	354 00	-25.9
198 30	+36.1	224 30	+39.8	250 30	+35.5	276 30	+24.0	302 30	+7.6	328 30	-10.3	354 30	-26.1
199 00	+36.3	225 00	+39.8	251 00	+35.3	277 00	+23.7	303 00	+7.3	329 00	-10.7	355 00	-26.4
199 30	+36.4	225 30	+39.8	251 30	+35.2	277 30	+23.4	303 30	+6.9	329 30	-11.0	355 30	-26.7
200 00	+36.5	226 00	+39.8	252 00	+35.0	278 00	+23.1	304 00	+6.6	330 00	-11.3	356 00	-26.9
200 30	+36.7	226 30	+39.8	252 30	+34.8	278 30	+22.8	304 30	+6.2	330 30	-11.7	356 30	-27.2
201 00	+36.8	227 00	+39.8	253 00	+34.7	279 00	+22.6	305 00	+5.9	331 00	-12.0	357 00	-27.4
201 30	+36.9	227 30	+39.7	253 30	+34.5	279 30	+22.3	305 30	+5.5	331 30	-12.3	357 30	-27.7
202 00	+37.1	228 00	+39.7	254 00	+34.3	280 00	+22.0	306 00	+5.2	332 00	-12.6	358 00	-27.9
202 30	+37.2	228 30	+39.7	254 30	+34.1	280 30	+21.7	306 30	+4.8	332 30	-13.0	358 30	-28.2
203 00	+37.3	229 00	+39.7	255 00	+34.0	281 00	+21.4	307 00	+4.5	333 00	-13.3	359 00	-28.4
203 30	+37.4	229 30	+39.6	255 30	+33.8	281 30	+21.1	307 30	+4.2	333 30	-13.6	359 30	-28.7
204 00	+37.6	230 00	+39.6	256 00	+33.6	282 00	+20.8	308 00	+3.8	334 00	-14.0	360 00	-28.9
204 30	+37.7	230 30	+39.5	256 30	+33.4	282 30	+20.5	308 30	+3.5	334 30	-14.3		
205 00	+37.8	231 00	+39.5	257 00	+33.2	283 00	+20.2	309 00	+3.1	335 00	-14.6		
205 30	+37.9	231 30	+39.4	257 30	+33.0	283 30	+19.9	309 30	+2.8	335 30	-14.9		
206 00	+38.0	232 00	+39.4	258 00	+32.8	284 00	+19.6	310 00	+2.4	336 00	-15.3		
206 30	+38.1	232 30	+39.3	258 30	+32.6	284 30	+19.3	310 30	+2.1	336 30	-15.6		
207 00	+38.2	233 00	+39.3	259 00	+32.4	285 00	+19.0	311 00	+1.7	337 00	-15.9		
207 30	+38.3	233 30	+39.2	259 30	+32.2	285 30	+18.7	311 30	+1.4	337 30	-16.2		
208 00	+38.4	234 00	+39.2	260 00	+32.0	286 00	+18.4	312 00	+1.0	338 00	-16.5		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2017

TABLA II

(SIEMPRE POSITIVA)

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

TABLA III

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

Dic 32 corresponde al 1 de enero del año siguiente

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

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2017**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2017)	
Elevación del observador m	Corrección /	Elevación del observador m	Corrección /	Altura apte. ⊙ ° /	Corrección /	Altura apte. ⊙ ° /	Corrección /	Altura apte. ⊙ ° /	Corrección /	Altura apte. ⊙ ° /	Corrección /				
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2	Ene 1	+0'3		
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3	Ene 22	+0'2		
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	Feb 26	+0'1		
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5	Mar 22	0'0		
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	Abr 13	-0'1		
2.3	-2.8	14.8	-6.9	6 53	+8.7	9 47	+10.7	15 45	+12.7	35 16	+14.8	May 7	-0'2		
2.5	-2.9	15.3	-7.0	7 00	+8.8	10 00	+10.8	16 13	+12.8	37 25	+14.9	Jun 12	-0'3		
2.7	-3.0	15.7	-7.1	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0	Jul 27	-0'2		
2.9	-3.1	16.2	-7.2	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1	Sep 1	-0'1		
3.1	-3.2	16.6	-7.3	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2	Sep 25	0'0		
3.3	-3.3	17.1	-7.4	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3	Oct 17	+0'1		
3.5	-3.4	17.6	-7.5	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4	Nov 9	+0'2		
3.7	-3.5	18.0	-7.6	7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5	Dic 15	+0'3		
3.9	-3.6	18.5	-7.7	7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6	Dic 31			
4.2	-3.7	19.0	-7.8	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7				
4.4	-3.8	19.5	-7.9	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8				
4.7	-3.9	20.0	-8.0	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9				
4.9	-4.0	20.5	-8.1	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0				
5.2	-4.1	21.0	-8.2	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00					
5.4	-4.2	21.5	-8.3	8 45		13 23		25 59							
5.7	-4.3	22.1	-8.4	TABLA C = PLANETAS Y ESTRELLAS											
6.0	-4.4	22.6	-8.5	Refracción				Paralaje (2017)							
6.2	-4.5	23.1	-8.6	Altura apte. ° /	Corrección /	Altura apte. ° /	Corrección /	Fechas	Venus para cualquier altura	Marte					
6.5	-4.6	23.7	-8.7							Altura aparente					
6.8	-4.7	24.2	-8.8						< 30°	> 30° < 60°	> 60°				
7.1	-4.8	24.8	-8.9	6 30	-7.8	14 00	-3.8	Ene 1	+0'2	+0'1	+0'1	0'0			
7.4	-4.9	25.4	-9.0	6 40	-7.6	15 00	-3.6	Feb 2	+0'3	+0'1	+0'1	0'0			
7.7	-5.0	25.9	-9.1	6 50	-7.5	16 00	-3.3	Feb 24	+0'4	+0'1	+0'1	0'0			
8.0	-5.1	26.5	-9.2	7 00	-7.3	17 00	-3.1	Mar 6	+0'4	+0'1	0'0	0'0			
8.4	-5.2	27.1	-9.3	7 15	-7.1	18 00	-3.0	Mar 15	+0'4	+0'1	0'0	0'0			
8.7	-5.3	27.7	-9.4	7 30	-6.9	19 00	-2.8	Abr 3	+0'5	+0'1	0'0	0'0			
9.0	-5.4	28.3	-9.5	7 45	-6.7	20 00	-2.6	Abr 21	+0'4	+0'1	0'0	0'0			
9.4	-5.5	28.9	-9.6	8 00	-6.5	21 00	-2.5	May 13	+0'3	+0'1	0'0	0'0			
9.7	-5.6	29.5	-9.7	8 15	-6.3	22 00	-2.4	Jun 26	+0'2	+0'1	0'0	0'0			
10.1	-5.7	30.1	-9.8	8 30	-6.2	24 00	-2.2	Dic 18	+0'1	+0'1	0'0	0'0			
10.4	-5.8	30.7	-9.9	8 45	-6.0	26 00	-2.0	Dic 31	+0'1	+0'1	+0'1	0'0			
10.8	-5.9	31.3	-10.0	9 00	-5.9	28 00	-1.8								
11.2	-6.0	32.0	-10.1	9 20	-5.7	32 00	-1.6								
11.6	-6.1	32.6	-10.2	9 40	-5.5	36 00	-1.3								
11.9	-6.2	33.3	-10.3	10 00	-5.3	40 00	-1.2								
12.3	-6.3	33.9	-10.4	10 30	-5.1	45 00	-1.0								
12.7		34.6		11 00	-4.8	50 00	-0.8								
				11 30	-4.6	60 00	-0.6								
				12 00	-4.5	70 00	-0.4								
				12 30	-4.3	80 00	-0.2								
				13 00	-4.1	90 00	0.0								

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